

SPATIAL ESTIMATION OF SURFACE SOIL TEXTURE USING LANDSAT 8 DATA

by

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ABSTRACT

The current availability of quantitative soil information does not meet the required quality and coverage for environmental monitoring and modelling of regional- to global-scale soil mapping. Conventional soil sampling and laboratory analysis cannot effectively provide this information because these methods are slow, expensive, and cannot capture all temporal and spatial variability. Remote sensing has in the past three decades shown high potential in the determination of soil characteristics. Different methodologies have been proposed for the estimation of soil parameters based on different remote sensors and technologies. Even with these methods, characterising soil parameters has not worked beyond a scale with sufficient homogeneity (with regard to vegetation, soil, topography, and microclimate) due to local calibration models. For policymaking, management of land resources, and monitoring of environmental impacts, these methods need to be extended beyond this scale.

This study evaluated the possibility of utilising Landsat 8 at surface reflectance (L8SR) Operational Land Imager (OLI) and Thermal Infrared Sensor (TIRS) data as auxiliary variables for the estimation of surface soil texture using a limited number of legacy samples provided by the Agricultural Research Council: Institute for Soil, Climate and Water (ARC-ISCW), which were taken from the Lejweleputswa District Municipality in the Free State province, South Africa. Ordinary least squares regression (OLSR) and geographically weighted regression (GWR) were utilised to predict and assess the variability of surface soil texture. The data from OLI and TIRS and L8SR were used as explanatory variables and the ARC-ISCW legacy soil texture attributes as response variables. The methodology followed in this research led to the development of a new Optimised Bare Soil Index (OBI). Unlike previously developed bareness indices, the OBI made use of surface reflectance data, which provided a realistic depiction of the elements on the surface of the earth.

The OBI results showed better contrast between bare soil and other elements identified in the study area, which means that the OBI provided better bare soil delineation than previously developed bare soil indices. The OBI results allowed for only bare soil regions of the study area to be sampled for L8SR data. The correlation analysis showed that ARC-ISCW legacy surface sand, silt, and clay contents were significantly correlated with the L8SR digital number (DN) data of the seven bands. Band 6 explained most of the variability in soil, sand, and silt, while Band 5 explained most of the variability in clay contents. The DN of Band 6 for surface sand and silt and the DN of Band 5 for clay were selected as auxiliary data for the estimation of surface soil texture. Regrettably, the key explanatory variables proved to be too complex to be represented by the global OLSR model. Using the same key explanatory variables, GWR significantly improved the surface soil texture estimates. The prediction accuracies provided

by GWR were deemed to be reasonable considering the high variability in land use practices, environmental variables, and the size of the study area. The methodology proposed in this study is promising for future local- to regional-scale digital soil mapping efforts in data-poor regions. The use of L8SR data was shown to reduce soil sampling efforts and therefore reducing soil mapping costs.

Keywords: soil texture, spatial variation, remote sensing, Landsat 8 at surface reflectance, ordinary least squares regression, geographically weighted regression.

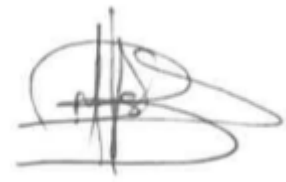
DECLARATION

I, Babalwa Mtshawu, hereby declare that the thesis titled “Spatial Estimation of Surface Soil Texture Using Landsat 8 Data” is my own work, and that it has not been submitted for any degree or examination at this or any other university, and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

BABALWA MTSHAWU

10 July 2020

Signed

A handwritten signature in black ink, appearing to be 'B. Mtshawu', written over a horizontal line.

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LIST OF ABBREVIATIONS

AIC	Akaike Information Criterion
AICc	Akaike Information Criteria
AISA	Airborne Imaging Spectrometer for Applications
ARC-ISCW	Agricultural Research Council: Institute for Soil, Climate and Water
ASE	Average standard error
ASTER	Advanced space-borne thermal emission and reflection radiometer
AVIRIS	Airborne Visible / Infrared Imaging Spectrometer
BI	Bare soil index
DN	Digital number
DSM	Digital soil mapping
EMR	Electromagnetic radiation
ESRI	Environmental Systems Research Institute
ETM+	Enhanced Thematic Mapper Plus
GIS	Geographic information system(s)
GWR	Geographically weighted regression
ha	Hectare(s)
HyspIRI	Hyperspectral Infrared Imager
IDW	Inverse distance weighting
L8SR	Landsat 8 at surface reflectance
LaSRC	Landsat 8 Surface Reflectance Code Product
LEDAPS	Landsat 4-7's Ecosystem Disturbance Adaptive Processing System
MODIS	Moderate Resolution Imaging Spectroradiometer
MSE	Mean standardised error
NDBaI	Normalised Difference Bare Soil Index
NDVI	Normalised Difference Vegetation Index
NIR	Near-infrared [spectrum]
nm	Nanometre(s)
OBI	Optimised Bare Soil Index
OK	Ordinary kriging
OLI	Operational Land Imager

OLSR	Ordinary least squares regression
PLSR	Partial least squares regression
QA	Quality assurance
RMS	Root mean square
RMSE	Root mean square error
RMSSE	Root mean square standardised error
SAR	Synthetic aperture radar
SAVI	Soil-Adjusted Vegetation Index
SNR	Signal-to-noise ratio
SOTERSAF	Soil and Terrain Database for Southern Africa
SPOT	<i>Satellite Pour l'Observation de la Terre</i>
SPSS	Statistical Package for the Social Sciences
SWIR	Shortwave infrared
TCA	Tasselled Cap Angle
TCB	Tasselled Cap Brightness
TCG	Tasselled Cap Greenness
TCT	Tasselled Cap Transformation
TCW	Tasselled Cap Wetness
TIR	Thermal infrared
TIRS	Thermal infrared sensor
TM	Thematic Mapper
TOA	Top of Atmosphere
USGS	United States Geological Survey
VIS	Visible [spectrum]
VNIR	Visible and near-infrared
μm	Micrometre(s)

CHAPTER 1: INTRODUCTION

1.1 MOTIVATION FOR THE STUDY

The assessment, evaluation, and mapping of spatial variability of soil properties are of paramount importance for the protection and sustainable management of soil resources, particularly in the context of the uncertain impact of climate change and the increasing pressures of human activities (Fatholouloumi *et al.*, 2020). Remote sensing offers the possibility to provide timely and reliable information on soils at synoptic scales to assist decision makers to better target soil fertility interventions and implement knowledge-based policies that are aimed at increasing agricultural production. Traditional soil mapping approaches have mostly relied on ground-based surveys (Forkuor *et al.*, 2017). Due to the high cost and time-consuming nature of soil sampling and laboratory analysis, research on developing methods for mapping soil variability is becoming increasingly important. Digital soil mapping (DSM), which incorporates secondary data sources into the soil mapping process, has been identified as a potential means of overcoming the limitations of traditional approaches and improving the detail and spatial coverage of the soil database (Paterson *et al.*, 2015). Apart from the cost-effective nature of DSM efforts, digital approaches also allow for the determination of an objective quantitative measure of predicting uncertainty, which is often not provided when traditional approaches are employed (Forkuor *et al.*, 2017).

During the last decade, remotely sensed data have proved to be a promising secondary data source for DSM at all scales (Mulder *et al.*, 2011). A wide variety of space-borne sensors have been used to map soil. Moderate resolution sensors such as Landsat 8 Operational Land Imager (OLI) and Thermal Infrared Sensor (TIRS) provide more frequent coverage than high-resolution sensors such as IKONOS or QuickBird (Wulf *et al.*, 2014). Landsat 8 spectral data represent real physical properties, as well as environmental covariates that can be derived for vegetation, water, soil, and parental material. The quantitative relationships of these covariates can be used to predict soil distribution. Spectral reflectance data provided by Landsat 8 OLI and TIRS have large spatial coverage and therefore permit mapping of inaccessible areas, produce consistent and comprehensive data both in time and space, and offer possibilities of supplementing, or at least reducing, traditional soil sampling in soil surveys (Forkuor *et al.*, 2017).

Geostatistics provides a set of statistical tools for incorporating spatial and temporal observation in data processing. Until the late 1980s, geostatistics was viewed as a means of describing spatial patterns and predicting soil attribute values of unsampled locations

(Goovaerts, 2000). New tools have recently been developed to address advanced problems, such as the assessment of uncertainty about soil quality, the modelling of space-time processes, and the stochastic simulation of the spatial distribution of attribute values.

Existing prediction methods vary widely; from simple linear regression models such as ordinary least squares regression (OLSR) and geographically weighted regression (GWR) to advanced nonlinear regression methods such as regression trees, and geostatistical methods such as kriging. Whenever secondary attributes are used, they are most commonly sourced from remote sensing.

A limitation of adopting most of these prediction methods on a large scale has been due to the lack of high-resolution secondary information and a lack of interest in quantifying large-scale soil variability (Bishop & McBratney, 2001). Understanding the spatial distribution and variation of soil, particularly soil texture, is essential for land use planning and other activities related to sustainable agriculture and environmental management (Liao *et al.*, 2013). Soil texture (i.e., sand, silt, and clay) is considered an important and influential factor for many of the physical and chemical properties of soil (Soil Science Division Staff, 2017).

Soil texture surveys and determination are important for mapping areas vulnerable to soil erosion driven by water and/or wind (Hewson *et al.*, 2012). On the one hand, coarse-textured soils are more resistant to detachment and transport by raindrops, and are therefore less affected by water-assisted erosion. Soil with a silt content above 40% is considered highly erodible, and clay particles can potentially combine with organic matter to form aggregates or clods that assist in their resistance to erosion (Morgan, 2009). On the other hand, studies of the critical shear wind velocities required for transportation of different-sized soil particles indicate that soil particles with diameters between 0.10 to 0.15 mm are the most vulnerable to wind erosion (Hewson *et al.*, 2012). Another motivation to determine soil texture is to be able to measure the ability of soil to retain water or enable drainage. Clay minerals such as montmorillonite can exhibit swelling behaviour by absorbing and storing water within their layered lattice structure (White, 2013). Such finer-textured clay-rich soils can offer more water for plant growth than sandy soils. Sandy soils are more vulnerable to drought than clayey soils, because sandy soils store less water and are likely to lose water more rapidly to the growing plants (Kosmas *et al.*, 2006). Under flood conditions, clay-rich soils exhibit poor drainage of excess water and may become waterlogged (Gholizadeh *et al.*, 2016).

The estimation and mapping of surface soil texture are important inputs for general-purpose soil classification based on quantifiable properties that define soil morphology, as distinct from its genesis. The overall interest in determining soil texture can be summarised by the need to monitor and map areas vulnerable to desertification, which are typically demonstrated by

increased soil erosion. A detailed study by Kosmas *et al.* (2006) examined the key indicators of desertification, including soil properties, with the aim of mapping areas vulnerable to future desertification. The study described soil parameters and credibility as primarily properties of soil texture. Desertification was found to likely occur on fine sand and silty soils with low clay content, but this could be mitigated by the presence of organic carbon matter.

With the world population expected to reach nine billion by 2050, food security is an issue that can least afford the effects of erosion and desertification, which reduce the existing arable agricultural land to feed a growing world (Food and Agriculture Organization of the United Nations, 2011). Both proximal and remote sensing spectroscopy offer the potential of increasing the speed and reducing the cost of interpreting soil samples for texture. Hyperspectral airborne imaging spectroscopy has been successfully applied to study some soil properties utilising electromagnetic radiation (EMR) within the visible and near-infrared (VNIR) wavelengths (0.4 to 1.0 micrometres [μm]) and shortwave infrared (SWIR) wavelength regions (1.0 to 2.5 μm) (Hewson *et al.*, 2012). Developments in airborne hyperspectral mid infrared and thermal infrared (TIR) remote sensing also indicate the potential for mapping and characterising *in situ* soils (Govender *et al.*, 2007). In the laboratory, TIR spectroscopy within the 7 to 14 μm wavelength region has also shown its potential to provide soil textural information (Hewson *et al.*, 2012). For this reason, high-resolution, accurate, and up-to-date maps that show the spatial variability of soil texture are essential for hydrological, ecological, and precision agriculture.

1.2 PROBLEM STATEMENT

Remote sensing soil texture quantification was first developed with laboratory spectral data (Coleman *et al.*, 1991). Spectral standards obtained in the laboratory allowed for the understanding of satellite standards, since the concept of energy interaction was identical to what occurs in the laboratory, changing only the scale and configuration of the equipment. Understanding the spectral behaviour at the satellite level allowed new prediction models to be tested to improve accuracy (Demattê *et al.*, 2018). In most cases, adjustments are required in the models and methods to improve spectral responses since spectral soil data from satellites are affected by an increased signal-to-noise ratio (SNR), atmospheric attenuations, soil cover, geometric view, pixel size of images, and sensor spectral resolution.

In 2013, Liao *et al.* developed a methodology of predicting and mapping soil texture using stepwise multiple regression, kriging, and co-kriging. In 2016, Da Silva Chagas *et al.* modelled sand, silt, and clay contents using multiple linear regression and the random forest methods. Both groups of authors used all the bands of Landsat Thematic Mapper (TM) 5 and different

indices, which helped to identify bare soil and consequently improved the accuracy of the models. From this, it became clear that techniques that result in areas that contain only bare soil are needed for better prediction of soil texture.

Fongaro (2015) and Demattê *et al.* (2016) also developed methodologies for mapping soil texture using multi-temporal images and visualising an entire region that contains only bare soil. These methodologies are innovative and are essential for soil texture studies. However, prediction models developed with the use of satellite sensors are calibrated based on local conditions, using small areas with low variation, and they do not allow application of these models to different study areas (Teixeira *et al.*, 2017). This occurs because the spectral response behaves according to the interaction of electromagnetic energy with the components in the selected soil samples. Satellite images require the image pixels to be as pure as possible for the energy to interact only with the object under study (Coleman *et al.*, 1991). Energy absorption causes electronic transitions. Molecular vibrations are specific to samples, and result in a standard spectral response for the selected samples (Nanni & Demattê, 2006). The higher the sampling variability, the greater the chances of creating a model that can be extrapolated. The development of a soil texture prediction model that can be applied to different areas makes satellite remote sensing an effective technique for agricultural management. The aim of this thesis was therefore to evaluate the reliability of Landsat 8 at surface reflectance (L8SR) data to provide a unique measure that allows regular or synoptic coverage of surface soil texture at the regional level, as well as to provide a cost-effective, user-friendly, and adoptable methodology that would facilitate the rapid compilation of appropriate scaled surface soil texture maps from the conjunctive use of geographic information systems (GIS) and remote sensing.

1.3 OBJECTIVES

To attain the aim of this thesis, L8SR data were utilised as auxiliary variables for the estimation of surface soil texture, and the performance of two geostatistical methods (OLSR and GWR) were evaluated for their ability to accurately predict and assess surface soil texture variability. More specific objectives are as follows:

- 1) To analyse the relationship between L8SR data and soil texture attributes.
- 2) To develop a methodology for mapping bare soil areas in the study area.
- 3) To outline the spatial statistics (ordinary kriging [OK], OLSR, and GWR models) conceptual framework for predicting and estimating the spatial distribution of surface soil texture.

- 4) To identify the spatial regression model that best predicts and illustrates the spatial variability of surface soil texture using L8SR data as explanatory variables and conventionally analysed soil texture as response variables.
- 5) To assess the accuracy and effectiveness of surface soil texture maps produced by OLSR and GWR.
- 6) To provide an appropriate and applicable methodology (if any) for mapping surface soil texture using remote sensing.

1.4 BRIEF CHAPTER OUTLINE

The first chapter briefly introduced the research rationale, problem statement, aims, and objectives addressed in this thesis. The fulfilment of these aims and objectives is presented in the following six chapters. Chapter 2 provides a theoretical background of the concept of DSM, as well as the current state of knowledge on mapping surface soil texture using remote sensing and geostatistics. It also examines the continuity of Landsat 8 images in mapping soil texture as explanatory variables and conventionally analysed soil texture as response variables. Chapter 3 introduces the spatial context of the study area. Chapter 4 proposes a new methodology for mapping bare soil areas that can be modelled using L8SR-derived spectral indices. Chapter 5 explains the sampling method, as well as the geostatistical techniques and analysis methods used to predict surface soil texture. Chapter 6 consists of three sections, namely the computation, results, and discussion of Pearson's correlation coefficient in the first section, followed by the modelling and results produced by OLSR in the second section, and, lastly, GWR is computed in the third section. Chapter 7 provides the proposed methodology for mapping surface soil texture using remote sensing, summarises the conclusions of this thesis, outlines the main contributions, and points out potential directions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 OVERVIEW

This chapter presents the current state of knowledge on soil geography by reviewing literature relevant to the research objectives set out in Section 1.3. The following topics are discussed in this chapter: conventional soil mapping, legacy soil data, DSM, geostatistics, spatial variability, soil texture, remote sensing, and Landsat 8 OLI and TIRS.

2.2 A BRIEF HISTORY OF SOIL MAPS

Sailors, soldiers, and merchants were the first makers and users of maps (Hartemink *et al.*, 2013). Geographers started collecting information and adding it to these maps, which gradually changed cartography from routing to increased detail between locations. The first possible interpretation of “maps” and/or “hunting plans” are believed to have appeared in the prehistoric Gravettian engravings from Moravia (current-day Czech Republic) (Utrilla *et al.*, 2009). These “maps” show recordings of local landscape features and their relevant qualities.

The world’s oldest known geological map is the Turin Papyrus from Egypt, which dates back to 1150 BC (Harrell & Brown, 1992). This map accurately illustrates a two-dimensional distribution of sedimentary, igneous, and metamorphic rocks, as well as the gold-working settlement at Bir Umm Fawakhir (now the Central Eastern Desert of Egypt approximately 5 km northeast of the Wadi Hammamat). The first scientific soil map was published by William Smith in September 1815 (Hartemink *et al.*, 2013). Smith referred to his map as *A Delineation of Soil Strata*. This map showed England, Wales, and some parts of Scotland. The map displayed some collieries, fen lands, the sea, and the varieties of soil based on the variations in the substrata.

According to Hartemink *et al.* (2013), the first soil classification map was produced in the Xai Dynasty that ruled China around 2070 BC to 1600 BC. This soil map was recorded in the book *Yugong* (Gong *et al.*, 2003). The soil classification in the *Yugong* described the soil fertility, soil colour, soil texture, soil moisture, and vegetation of nine provinces of the Shang Kingdom.

In the 1850s, Germany, France, Austria, the Netherlands, and Belgium became the pioneers of modern-day soil cartography (Hartemink *et al.*, 2013). During this time, soil cartography was based on ideas and classification approaches from agrogeology.

The first recorded soil investigation in South Africa was undertaken as early as the 1890s (De Villiers *et al.*, 2002). In the 1920s, the Department of Agriculture through the then Division of Chemistry carried out a mission to obtain spatial soil information in South Africa (Paterson *et al.*, 2015). Soon after, a series of soil classifications were conducted. Most of the areas classified were along rivers and dams. This was mainly to inform irrigation suitability classes in some instances; with the identification of the presence of gravel or “brak” (salts) within the soil profile. These surveys were very detailed, often at scales of 1:5000 to 1:75000, and were usually confined to narrow strips on either side of the rivers concerned.

The boom of the sugar industry in the 1950s in the then Natal province led to the need for soil surveys to characterise and map the distribution of soils along the southeastern seaboard, mainly to determine the sustainability of sugarcane cultivation (Paterson *et al.*, 2015). Shortly thereafter, another soil survey was conducted in Natal, namely the Soils of the Tugela Basin. This survey led to soil classes that were later accommodated within a formal hierarchical soil classification system. These classes eventually became the soil series and formed part of the first edition of the South African Soil Classification System in 1977. At the same time, a wide range of other surveys were conducted by the Soil and Irrigation Research Institute to further improve and expand South Africa’s soil knowledge base (Paterson *et al.*, 2015).

2.3 SOIL MAPPING

Soil maps were originally created for the assessment of land value and taxation purposes (Schaetzel & Anderson, 2005). Soil maps are still used by banks for this purpose. Vaysse and Lagacherie (2017) described soil maps as simplified representations of complex and partially unknown patterns of soil variations. This description is very simplistic because soil maps cannot only be viewed as visualisations of soil resource inventories – they also have a multitude of other functions, such as spatial planning, environmental quality protection and management, as well as in agriculture and horticulture, to mention a few. The Soil Science Division Staff (2017) agreed with the previous statement and described soil maps as characteristics of soils for a specific area that have been classified according to a standard system of soil taxonomy, and which assist in making informed predictions about the suitability and limitations of each soil for multiple uses.

During the soil mapping process, each kind of soil in the area being studied is associated in an orderly pattern that is related to the geology, landforms, topography, climate, and natural vegetation (Soil Science Division Staff, 2017). A pedologist would then delineate the repeating patterns of landform segments on a map by observing the soils in the survey area and relating

their position to specific segments of the landform. This process is referred to as traditional soil mapping.

Traditional soil mapping, also known as conventional soil mapping, is the most popular form of soil mapping (Scull *et al.*, 2003) and, in many instances, is the only manner in which the highly variable nature of soil can be modelled. In fact, Mathe (2014) subdivided soil mapping practices into two broad categories, namely traditional soil mapping techniques and modern (digital) soil mapping techniques.

According to Scull *et al.* (2003), traditional soil mapping technique consists of three steps. The first step is the direct observation of ancillary data and soil profile characteristics. The second step deals with the observation of soil attributes, which are incorporated into a conceptual model that is used to infer soil variation. The third step involves applying the conceptual model to the study area to predict soil variability at unobserved sites.

The disadvantage of the traditional soil mapping technique is that less than 0.001% of the survey area is actually observed (Scull *et al.*, 2003). This fact reflects on the high cost and labour-intensive nature of field sampling. The traditional soil mapping model has been severely criticised in scientific literature for two reasons (Hudson, 1993). Firstly, the traditional approach uses discrete data models to describe continuous surfaces (Dobos *et al.*, 2006). This results in excessive dependence on tacit knowledge. Secondly, the final product is a soil map that has unknown assumptions, limitations, and accuracy.

Soil mapping generally requires a predefined model of soil formation and data on soil properties for a specific study area. In this sense, both the traditional and digital approaches need input data on soil and covariates that characterise the environment in which the soil formation takes place. The main difference is the way in which the model derives the soil information from the input data (Dobos *et al.*, 2006). As with the traditional approach, DSM is based on hard soil data. Soil profile information is needed to train the models and to understand the soil resources of the area. The major difference is that DSM correlates soil properties with ancillary information derived from remote sensing imagery platforms, and uses geostatistics to interpolate the soil between observations at point locations (Arrouays *et al.*, 2017). The end product is a quantified estimation of error.

2.4 DIGITAL SOIL MAPPING (DSM)

Early literature refers to the process of digitising soil maps to polygons as DSM (Minasny & McBratney, 2016). While one cannot dispute that the product is digital, the process of making these maps is not based on any statistical extrapolation; these maps are therefore not digital

soil maps, but digitised soil maps. Digital soil mapping was defined by Mulder *et al.* (2011) as the process of creating and populating spatial soil information using field and laboratory analysis with spatial and non-spatial extrapolation systems.

The concept of DSM has also been referred to as numerical soil cartography, correlation predictive soil mapping, pedometric mapping, computer-assisted soil cartography, environmental correlation, or predictive soil mapping (Minasny & McBratney, 2016). These terminologies are linked to DSM because of the statistical modelling of relationships between environmental variables and soil properties, which form part of the geographic database used to create soil maps (Mulder *et al.*, 2011). Regardless of the term one chooses to use when referring to DSM, the fact remains that it is a powerful reprocessing, statistical, and conceptual method for describing the distribution of soils on landscapes (Hartemink *et al.*, 2008).

Digital soil mapping deals with creating maps using computer-based, numerical approaches of relationships between environmental and soil properties as previously defined in this study. According to Minasny and McBratney (2016), effective DSM must have the following three main components:

- The input: This could be in the form of field and laboratory observational methods, including the use of legacy soil observations, legacy soil maps, and a collection of newly sampled data using statistical sampling techniques.
- The process used in terms of spatial and non-spatial soil inference systems: This involves building mathematical or statistical models that relate soil observations with their environmental covariates.
- The output in the form of spatial soil information systems: These are outputs in the form of raster predictions, along with the uncertainty of these predictions.

Stumpf *et al.* (2017) suggested that the success of DSM mainly depends on the availability and distribution of soil observations, as well as on the availability and quality of environmental covariates. Admittedly, covariates are derived inexpensively from remote sensing data, but the use of legacy soil data is still reasonable in avoiding cost-intensive sampling.

2.4.1 Legacy soil data

Worldwide, there are many unused and forgotten soil geographic information in the form of soil surveys (also referred to as soil resource inventories) (Rossiter, 2008). This is unfortunate, particularly in areas with sparse soil data infrastructure, because it is more likely that the data will be lost and more unlikely that a new survey can be conducted.

According to Finke (2012), as the number of DSM projects increases, legacy data should also be more appreciated because of sampling cost reduction and poor terrain accessibility. The collection of soil data has been and remains a limiting factor that can severely hamper the DSM process (Mathe, 2014). The term “legacy soil data” refers to soil maps with accompanying legends, or soil observations with site and horizon data (Sulaeman *et al.*, 2013). Legacy soil data can assist in this shortcoming and act as a large reservoir of data that can be used as an input for the DSM procedure and/or in assessment tests. Even if new data can be collected, it is wasteful and scientifically irresponsible to discard existing data. It should be standard practice when starting a new survey to incorporate previous work as far as possible (Rossiter, 2008).

Hartemink and McBratney (2008) stated that legacy data present new opportunities and challenges as input data to DSM. Not only do legacy data act as a provider of soil data, they also function as a source for improved soil geomorphic understanding. A study conducted by Lagacherie and McBratney (2006) showed that existing legacy soil survey data can be used as reference zones, as well as a knowledge base for a new soil survey over a wide area. Bui and Moran (2003) suggested that much value can be extracted from existing and even old soil surveys.

The use of legacy soil data, together with an increasing number of environmental covariables, for DSM poses three major shortcomings: firstly, the lack of consistency; secondly, the lack of rigorously tested accuracy (Brevik *et al.*, 2016); and lastly, imprecise georeferencing (Hartemink & McBratney, 2008). These soil maps lack attribute consistency because they used different classification systems than what are used currently and they were created at different cartographic scales. The differences in classification systems reflect in soil maps through differences in boundaries between classes and different prioritisation of respective soil properties (Paterson *et al.*, 2015).

According to Miller and Schaetzl (2014), developments in global positioning systems and GIS, together with remote sensing, have almost replaced the need for legacy soil data to provide positional reference. From the examples provided in this dissertation, this statement is not entirely true. Legacy data are still useful for geographic correlation. For this reason, the continuing influence of legacy soil data on DSM needs to be clarified, explained, and appreciated. The acknowledgment of the role played by legacy soil data in DSM methods for soil mapping provides a key link between traditional soil mapping and the new wave of DSM (McKenzie & Ryan, 1999).

2.5 THE ROLE OF GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND SPATIAL ANALYSIS IN DSM

The term “GIS” is closely related to a number of other terms, such as geo-base information systems, geospatial systems, and geographical information sciences (Clarke, 1986). Collectively, these terms may be thought of as forming part of spatial science and/or geoscience. There is no standardised definition for GIS; the precise definition may depend on the person giving it, the context in which it is used, and the degree of detail provided (Meaden & Aguilar-Manjarrez, 2013). According to Goodchild (2000), GIS is based on two concepts, namely automated mapmaking, and facilitating the comparison of data on thematic maps. GIS is a computer-based system that is capable of assembling, storing, retrieving, manipulating, and displaying georeferenced data for a range of spatial analyses. In short, GIS adds value to spatial data.

Spatial data analysis deals with the branch of data analysis where georeferenced objects contain important information (Goodchild & Haining, 2004). The importance of GIS to spatial data analysis is in improving either the quality of data inputs or the analysis of data outputs, or both (Rogerson & Fotheringham, 1994). The improvement of data quality and analysis falls within the following three general categories:

- 1) The ability to geographically visualise raw and derived data;
- 2) The provision of flexible spatial tools for collecting, manipulating, transforming, and selecting both raw and derived data; and
- 3) The accessibility of spatial relationships between entities in the study area.

The review of progress made in spatial data analysis is divided into two parts (Goodchild & Haining, 2004). The first review deals with developments in the statistical theories on analysing spatial data. This is followed by a review of newly developed techniques and methods for analysing spatial data. These reviews are discussed in more detail in Section 2.6.

2.6 SPATIAL ANALYSIS AND ASSOCIATED MODELLING TECHNIQUES

This section only discusses spatial analysis techniques identified as potentially useful to achieving the outcomes set out in this dissertation. Two questions are answered in this section, namely “What are the potential benefits of linking geostatistical techniques in GIS and remote sensing?” and “How much progress has been made in achieving these potential benefits in each case?”

2.6.1 Geostatistics

Geostatistics can be defined as a branch of statistical sciences that deals with spatiotemporal phenomena and which capitalises on spatial relationships to model possible values of variables at unsampled locations (Bohling, 2005). Geostatistics is a subsection of traditional statistics that deals with spatial data and accounts for spatial autocorrelation using spatial interpolators (Burrough & McDonnell, 1998).

Geostatistical techniques are used for quantifying and modelling spatial correlation on a spectrum of spatial scales through the use of semivariograms, correlograms, and covariance functions (Liebhold *et al.*, 1993). This is achieved through the process of interpolating between and extrapolating beyond sample points.

Geostatistics is grounded on the concept of spatial correlation of data measured at various points in a three-dimensional space (Hengl, 2009). The fundamental technique of geostatistics is called kriging, in recognition of the work carried out by Dr Krige on gold deposits in South Africa in the 1950s (Cressie, 1990). It took almost a decade until a French mathematician, Georges Matheron, derived the formulas and established the field of geostatistics (Hengl, 2009).

2.6.2 Regionalised variable theory

The regionalised variable theory can be described as an ordinary random function of a probability distribution law, which it follows on the condition that it is normally distributed with a mean and a variance (Henley, 1981). According to Burrough and McDonnell (1998), if this random function fits one of the standard distributions, it will be characterised by a small number of such parameters. In the case of a continuous variable, it is assumed that the observations represent a particular value of a random function that is normally distributed. However, in the case of an ordinary random function, the spatial location is relevant and the most accurate prediction that can be made for any given observation is that which is controlled by the form of the distribution. For normal distribution, it will be the arithmetic mean. The theory considers both the random and structured characteristics of spatially distributed variables to provide quantitative tools for their description and unbiased estimation (Rakshit *et al.*, 2017).

There are two approaches within the regionalised variable theory, namely the transitive approach (rarely used) and the intrinsic approach (Kauffman *et al.*, 1977). When using the transitive approach, the phenomenon under investigation is supposed to be known and defined by its properties. The exact boundaries of the phenomenon are considered to be unknown, and estimation is supposed to extend beyond the phenomenon. This approach

allows for estimation on a global scale, and can be useful when studying resources with diffuse limits such as fish or larvae densities in the sea. In the traditional intrinsic approach, the domain is known, and the variable has intrinsic behaviour independent of the geometry and of the boundaries of the domain. The domain is then considered a window that makes it possible to see the variable, which is assumed to extend with the same behaviour beyond the window boundaries.

The spatial variability of soil characteristics is usually so unpredictable that no simple mathematical expression can describe it (Oliver & Webster, 2014). This is due to the fact that most soil properties appear to be random variables rather than mathematical, but most variations are not unpredictable – there is some spatial structure. The regionalised variable theory takes this aspect of spatial variability into account.

2.6.3 Interpolation techniques

Spatial interpolation was defined by Burrough and McDonnell (1998) as the procedure for predicting the values of primary variables at points within the same region of a sampled location. Predicting values of attributes at sites outside the area covered by existing observation is referred to as extrapolation. Spatial interpolation techniques are based on the principles of spatial autocorrelation, which assume that closer points are more similar than those farther away (Goovaerts, 2000). The fundamental principle that this assumption is based on is known as Tobler's First Law of Geography. Tobler stated that "all things are related but nearby things are more related than distant things" (in Goodchild, 2000:4). Interpolation techniques apply spatial autocorrelation by giving near sample points more importance than those farther away.

A key characteristic of soil data is that each observation relates to a particular location in space and time (Goovaerts, 2000). Knowledge of an attribute value, for example soil texture, is of little interest unless the location or time of measurement is known and accounted for in an analysis. Spatial interpolation provides a set of statistical tools for incorporating these spatial and temporal coordinates of observations into data processing.

The most commonly used geostatistical interpolation method is called kriging (Delbari *et al.*, 2011). The reason for the popularity of kriging is that it attempts to optimise interpolation (Burrough & McDonnell, 1998). When data are abundant, most interpolation techniques tend to produce similar predictions, but when data are sparse, the assumptions made about variations that have been sampled, the choice of interpolation method, and its parameters can be of prime importance to avoid misleading results. To solve this conundrum, kriging divides

spatial variation into three components, namely a deterministic variation, a spatially autocorrelated but physically difficult to explain component, and uncorrelated noise.

2.6.4 The theory of kriging

Hengl (2009) described kriging as a local, exact, and stochastic interpolator. It is local because it uses a sample of known points to estimate an unknown point value. It is exact in that a predicted value at a point location is the same as the known value. This means that kriging interpolation minimises the error variance, and sets the mean of the prediction errors to zero so that there are no over- or underestimates (Mpanza, 2015). Lastly, kriging is a stochastic interpolator because it offers an assessment of prediction errors with estimated variances (Chang, 2010).

According to Burrough and McDonnell (1998), kriging is a multistage method of interpolation that builds upon calculations and models of experimental variograms, where the spatial variation of any variable can be expressed as the sum of three components, namely:

- 1) the standard component with a constant mean or trend;
- 2) a random, but spatially correlated, component known as the regionalised variable; and
- 3) spatially uncorrelated random noise, also referred to as the error.

Discussed below are a set of formulas provided by Burrough and McDonnell (1998) to express these three assumptions.

The value of a random variable Z at x is given as:

$$Z(x) = m(x) + \mathcal{E}'(x) + \mathcal{E}''$$

Where: $m(x)$ is the structural function that describes the structural component, $\mathcal{E}'(x)$ is the stochastic but structurally autocorrelated residual from $m(x)$, and $\mathcal{E}''$ is the residual component that has a normal distribution with a mean 0 and variance σ^2 .

The first step is to decide on a suitable function for $m(x)$. This can be thought of as a flat surface with no trend. The mean value of $m(x)$ is the mean value within the sample area; therefore, the difference in the values for two points x and $x + h$ (where h is the distance between points) is zero.

$$E[Z(x) - Z(x + h)] = 0$$

The variance of the differences is then assumed to be a function of the distance between the points.

$$E \{ [Z(x) - Z(x+h)]^2 \} = E \{ [\varepsilon'(x) - \varepsilon'(x+h)]^2 \} = 2y(h)$$

Where: $y(h)$ is known as the semivariance. Under these two assumptions (i.e., the stationary of difference and stationary in the variance difference), the original model can be expressed as:

$$Z(x) = m(x) + y(h) + \varepsilon''$$

To measure the spatially correlated component, kriging uses a semivariance (Chang, 2010). The semivariance is defined as half the variance of the differences between all possible points positioned a constant distance apart. This provides a means for users to understand and model the directional (e.g., north-south, east-west) trends of their data.

The semivariance can be estimated from sample data using the following formula:

$$y(h) = \frac{1}{2n} \sum_{i=1}^n \{Z(x_i) - Z(x_i+h)\}^2$$

Figure 2.1 shows a semivariogram cloud that plots $y(h)$ against h for all pairs of known points in a dataset.

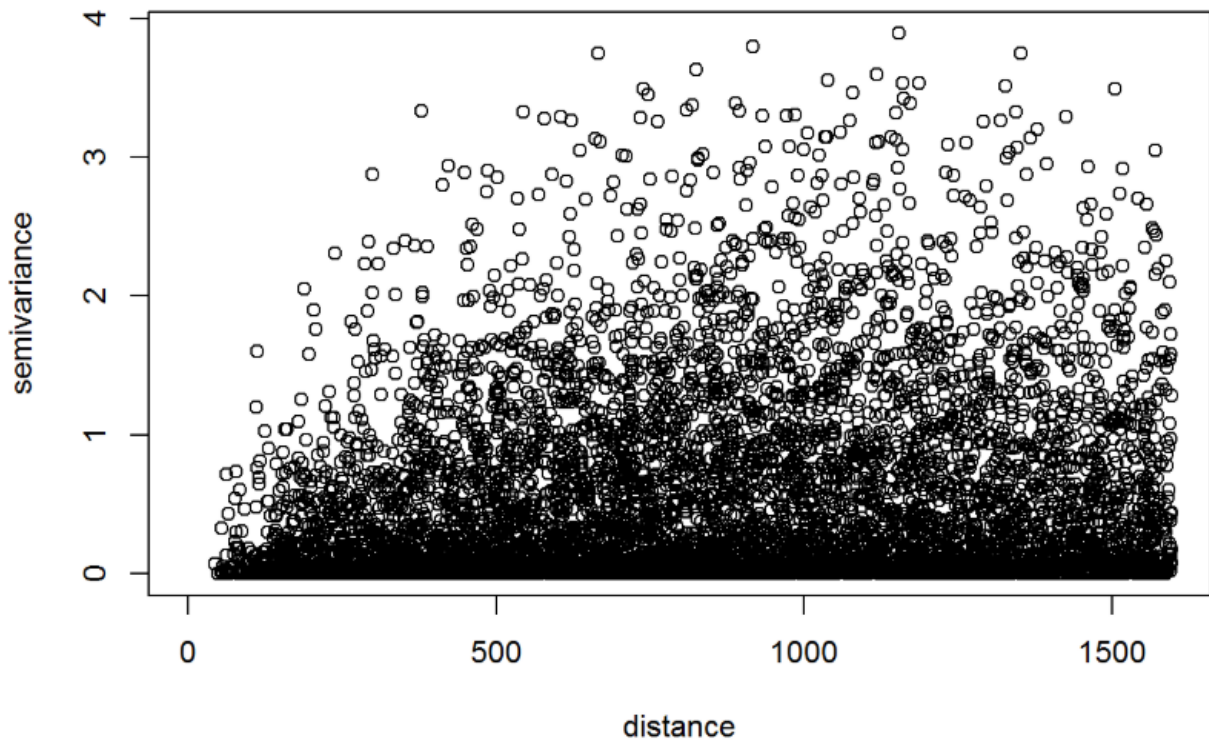


Figure 2.1: A semivariogram cloud

Source: Castillo-Páez *et al.* (2019)

Here, if spatial dependence exists in the dataset, known points that are closer to each other are expected to have small semivariance, while known points that are further apart are expected to have larger semivariance (Chang, 2010). The semivariogram can then be described as a representation of the average rate of change of a property with distance (Figure 2.2).

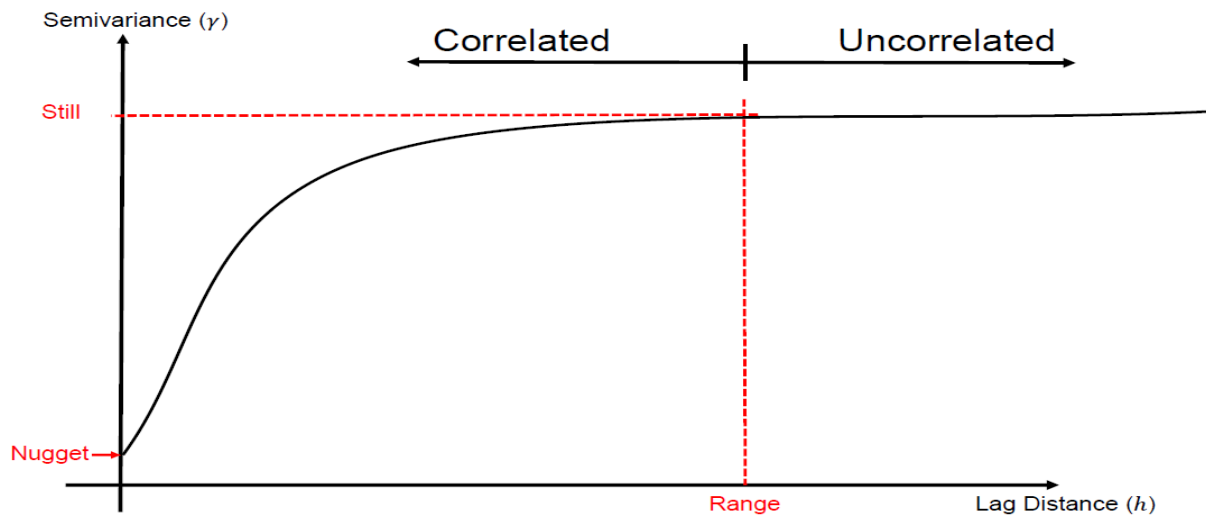


Figure 2.2: A transitional variogram with range, nugget, and sill

Source: Castillo-Páez *et al.* (2019)

Where: Nugget = Noise; Sill = Maximum variance; Range = Distance of the correlation is zero.

There are many variations of kriging, but they are all grounded on the theory discussed above (De Smith *et al.*, 2007). This thesis considered OK, which uses the exact theory as discussed above.

2.6.5 Regression analysis of spatial data

One of the main objectives of spatial analysis is to identify the nature of relationships that exist between variables (Brunsdon *et al.*, 1996). In most cases, this is achieved by calculating statistics or estimating parameters with observations taken from different spatial units across a study area (Fotheringham *et al.*, 2008). According to Shrestha (2006), regression analysis is the most widely used statistical technique for examining and modelling relationships between variables. When used correctly, regression can estimate an equation for predicting a dependent variable from values of one or more independent variables (Lark, 2000). The dependent variable is sometimes referred to as the y-variable (response variable or the regressant), while the independent variable is referred to as the x-variable (predictor variable or the regressor) (Fotheringham *et al.*, 2008).

According to Webster (1997), regression is about prediction, and soil scientists often use regression when they should apply some other technique. Webster (1997) argued that in 1977, when Mark and Church reviewed the application of regression in geomorphology, they found that only two out of 24 studies used the regression technique appropriately for prediction purposes. It is for this reason that there is a need to understand the restrictions on regression and the proper alternatives for expressing functional relations if regression is inappropriate.

The most useful application of regression analysis is when the independent variable can be collected rapidly and inexpensively compared to the dependent variable (Lark, 2000). This is done so that the limited number of costly observed dependent variables can be used to compute the regression equation, which is applied to predict the dependent variable for all locations where the independent variables are measured. Regression analysis can be linear or nonlinear (Ataee *et al.*, 2018). In linear regression, data are modelled using linear independent variables. In nonlinear regression, data are modelled using a function that is a nonlinear combination of model parameters.

Regression analysis has had immense application in almost every domain, including earth sciences and remote sensing (Ataee *et al.*, 2018). Lu and Tan (2004) used regression analysis on forest structural attributes collected from field measurements and spectral responses extracted from coincident remote sensing imagery. De Bruin and Stein (1998) used variables from digital elevation models as independent variables to predict soil properties, and Walker (1996) used remote sensor data as independent variables to predict water quality.

A regression model is expressed as an equation, and a typical linear relationship might be in the following form:

$$y_i = \beta_0 + \beta_1 x_i + \varepsilon_i$$

For $i = 1 \dots n$

Where: y_i is the response variable, i is the location, β is a column vector of p parameters to be determined, x is the independent variable, and ε_i is the error term (De Smith *et al.*, 2007).

The parameters here are to be estimated so that the value of

$$\sum_{i=1}^n (y_i - \hat{y}_i)^2$$

is minimised over the n^{th} observation in the dataset.

Where: $\hat{y}_i$ is the predicted value for the i^{th} observation given the i^{th} value of x , and $(y_i - \hat{y}_i)$ is the unknown residual for the i^{th} observation. The residual should be both independent and drawn identically from a normal distribution with a mean of zero.

For the purpose of mapping forests, Shrestha (2006) developed a seven-step process of regression modelling using remote sensing. This study adopted these steps for surface soil texture mapping. The seven steps are as follows:

- 1) Establish field measurement site (study area);
- 2) Collect data for attributes in study;
- 3) Acquire remote sensing imagery that covers the study area;
- 4) Locate the field measurements sites on the image;
- 5) Extract spectral information from the image for the study area;
- 6) Construct a model that relates to field measurement and spectral information; and
- 7) Utilise the model to predict the attributes for all pixels using spectral information.

Various regression approaches have been used to establish relationships between variables; the review of each of these techniques is beyond the scope of this project. This section mainly focuses on the review of three specific regression techniques, namely Pearson's correlation coefficient, OLSR, and GWR. The concepts and theoretical background summary of each technique are discussed in relation to mapping spatial variation of surface soil texture.

2.6.5.1 Pearson's correlation coefficient

Whenever a researcher has measured two variables, it is natural to wonder whether or not these variables exhibit any coherence (Kozak *et al.*, 2012). The relationship between these variables is in most cases quantified by the covariance between the two random variables, also referred to as the expected value of the product of the deviation from the mean of each variable. This often results in the following three possible outcomes:

- 1) In the case where the variables increase together, the two deviations tend to either be positive together or negative together; this causes their products to be positive and the expected value yields a positive covariance.
- 2) When one variable increases as the other decreases, the positive deviations in one variable are associated with the negative ones in the other so that the products become negative and the expected value yields a negative covariance.
- 3) In the case where there is no apparent pattern in the behaviour of the two variables, the positive and negative products will tend to cancel each other out, and the covariance will be near zero (Pascual & Zhang, 2006).

This process is called the correlation coefficient and should be limited to describing the association between two variables that are not in a cause-and-effect relationship (Rossiter, 2017). Generally, correlation describes the effect that two or more phenomena occur together and are therefore linked (Rossiter, 2008). Pearson's correlation coefficient was discovered by Bravias in 1846, but Karl Pearson was the first to describe this standard method of calculations in 1896 (Hauke & Kossowski, 2011).

Pearson's correlation coefficient was described by Haining (1991) as a measure of the strength of linear relationships between two variables. Kozak *et al.* (2012) referred to Pearson's correlation coefficient as simply "correlation coefficient". Here this method is defined as a statistical method of quantifying the association between variables. Both these definitions are equally important. In this dissertation, Pearson's correlation of coefficients is employed for the variables (surface soil texture and spectral signature of Landsat 8 data) that exhibit a bivariate normal distribution.

According to Webster (1997), a bivariate normal distribution equation that defines two related soil properties of interest that are related random variables X and Y can be written as:

$$z = \frac{1}{2\pi\sigma_x\sigma_y\sqrt{1-\rho^2}} \times \exp \left[-\frac{1}{(1-\rho)^2} \left\{ \frac{(X-\mu_x)^2}{2\sigma_x^2} - \rho \frac{(X-\mu_x)(Y-\mu_y)}{\sigma_x\sigma_y} + \frac{(Y-\mu_y)^2}{2\sigma_y^2} \right\} \right]$$

Where: z is the probability density, μ_x & μ_y are the mean of X and Y , σ_x and σ_y are the standard deviations of X and Y and ρ is the product-moment correlation coefficient between X and Y .

2.6.5.2 Ordinary least squares regression (OLSR)

Ordinary least squares regression is by far the most commonly used linear regression method when making predictions and estimations (Nazim & Ahmad, 2013). Craven and Islam (2011) described OLSR as a generalised linear modelling technique that is used to model a single response variable that has been recorded on at least an interval scale. According to Shrestha (2006), OLSR relies on determining the dependent variable (Y) by producing an unbiased minimum sum of error square in (Y) with regard to the independent variable (X). The OLSR tool in ArcGIS provides information on redundancy among explanatory variables, significant levels of coefficients, distribution of residuals, adjusted R-square (r^2) values, and spatial autocorrelation of residuals (Khalil *et al.*, 2016).

The assumptions when dealing with OLSR are normality, homogeneity, and independence of regression residuals (Jarque & Bera, 1980). The violation of these assumptions may lead to inefficient and biased estimations, which may result in erroneous estimation of the model

parameters by OLSR. In agreement with Jarque and Bera (1980), Shrestha (2006) stated that in a case where these assumptions are violated, it is not appropriate to use OLSR for spatial analysis.

Fernandes and Leblanc (2005) criticised OLSR by arguing that two problematic errors are produced by both the regressor and the response variable. The first error is due to systematic bias in measurement, and the second error is the random error in observation due to noise in measurement or collocation problems. Such criticism has led to the development of alternative regression techniques (Shrestha, 2006), such as GWR. This thesis applied both OLSR and GWR in the analysis stage to determine the best fit model for predicting and estimating surface soil texture.

The equation generally derived for the OLSR model can be written as (Shrestha, 2006):

$$y_i = \beta_0 + \sum_{j=1}^p x_{ij} \beta_j + \varepsilon_i$$

Where: β_0 is the intercept coefficient, β_j is the slope coefficient for the j^{th} independent variable X_j , ε_i is the random error term with $N(0, \sigma^2 1)$, and I is the $n \times n$ identity matrix.

To determine whether or not the model is statistically significant, analysis of variance can be performed (i.e., F-value and corresponding p-test, also known as the T-test).

$$T = \frac{\hat{\beta}}{s/\sqrt{s_{xx}}}$$

Where:

$$\hat{\beta} = \frac{s_{xy}}{s_{xx}}$$

$$s_{xy} = \sum (x - \bar{x})(y - \bar{y})$$

$$s_{xx} = \sum (x - \bar{x})^2$$

The coefficient of determination that shows how well or successful the model is at explaining variability can be calculated as:

$$R^2 = \frac{s_{xy}^2}{s_{xx}s_{yy}}$$

Where:

$$s_{yy} = \sum (y - \bar{y})^2$$

2.6.5.3 Geographically weighted regression (GWR)

Geographically weighted regression was developed by Brunsdon *et al.* in 1996, and Fotheringham *et al.* in 1996, 1997, and 2002 (Fischer *et al.*, 2009). The basic idea behind GWR is to explore how the relationship between a dependent variable (Y) and an independent variable (X) might vary geographically; instead of assuming that a single model can be fitted to the entire study region (Fotheringham *et al.*, 2008). Geographically weighted regression looks for geographical differences. Kumar *et al.* (2012) pointed out that GWR is an extension of the traditional regression framework and is in contrast to global models in that it allows varying coefficients for environmental covariates at different locations. In fact, GWR is an extended version of the traditional OLSR, which takes into account spatial heterogeneity by incorporating the spatial location of data (Shrestha, 2006).

Geographically weighted regression attempts to capture local spatial variation across space by calibrating multiple regressions at each sampled point (Kala *et al.*, 2017). The fitting of regression at each sample point is based on the spatial proximity approach used as a weighting function for an observation, which means observations near the location at which estimations are to be made have more influencing weight on the analysis than those observations farther away (Shrestha, 2006). In agreement with Shrestha (2006), Kala *et al.* (2017) stated that GWR is based on three interrelated principles. Firstly, spatial data are often stationary. Secondly, the spatial structure of data greatly influences the estimation of relationships between variables under study. Lastly, the relationship between variables may be localised and varied across space. Geographically weighted regression is performed within a local window centred on the nodes of a regular grid (Fotheringham *et al.*, 2008), where each observation within the local window is weighted based on its proximity to the centre of the window.

This procedure has three advantages: it avoids abrupt changes in the local statistics computed for adjacent windows, it helps visualise variability within the geographic entity, and it allows analysis of regionally aggregated data (Kala *et al.*, 2017).

According to Kumar *et al.* (2012), the GWR approach has been applied to mapping the spatial distribution of model coefficient values to identify potential missing variables or to suggest other underlying factors associated with the observed non-stationarity. Geographically weighted regression is also useful for explanatory data analysis and visualisation, and extends the global OLSR framework (Shrestha, 2006).

Considering (u_i, v_i) to be the set of location of i^{th} point over space, by utilising location coordinates, the equation is written as:

$$y_i = \beta_0(u_i, v_i) + \sum_{j=1}^p x_{ij} \beta_j(u_i, v_i) + \varepsilon_i$$

Where: $\beta_k(u_i, v_i)$ is the continuous function of the location (u_i, v_i) at point i , and ε_i is the random error term with $N(0, \theta^2 I)$.

This equation takes into account the continuous surface of parameter values taken at certain locations, where the weighting of an observation is not constant but varies with i . This means that the data from the observations close to i are weighted more than those whose observation are farther away.

Geographically weighted regression also provides four important diagnostic statistics at each point, which helps to understand local information (Shrestha, 2006). These are as follows:

1. It provides a set of standardised residuals. The residual is the difference between the calculated value of Y and the actual observed value of Y for a given value of the explanatory variable. The residual tells one how well the model fits the data. Here, values greater than ± 3 are unusual and should therefore be examined carefully. The standardised residuals are calculated as residuals divided by the standard error of the residual.

$$r_i = \frac{e_i}{\sqrt{MS_{res}}}$$

Where: $i = 1, 2, \dots, n$

2. The diagnostic statistics, which are a set of local variations of the R^2 statistics. The values of the diagnostic statistics inform one how a local model can replicate the data observed in the vicinity of the regression point. The local R^2 statistics are calculated as:

$$r_i^2 = \frac{TSS_w - RSS_w}{TSS_w}$$

Where: TSS_w is the geographically weighted total sum of squares, given by:

$$TSS_w = \sum_j W_{ij} (y_j - \bar{y})^2$$

RSS_w is the geographically weighted residual sum of squares, given by:

$$RSS_w = \sum_j W_{ij}(y_j - \widehat{y_j})^2$$

3. The leverage values, which measure the influence of an observation on the model calibration. The leverage values are a standardised measure of the distance of the i^{th} observation from the centroid of the x space. A high leverage value indicates that the particular observation is distant from the centre of the x observation. High leverage points have the potential to dominate a regression analysis but they are not necessarily influential. Observations with large leverage values and large residual values are likely to be influential. The leverage of an observation at x_i of the X matrix can be written as:

$$h_{ii} = x_i (X^T X)^{-1} x_i^T$$

4. Cook's distance, which is another indication of the influence of an observation. An observation that is influential will have a large value of Cook's distance because it has a large studentised residual, a large leverage, or both. Cook's distance can be calculated as:

$$D_i = \frac{r_i^2}{p} \left(\frac{h_{ii}}{1 - h_{ii}} \right)$$

Where: r_i the studentised is residual, h_{ii} is the leverage, and p is the number of variables.

The development of geostatistics has allowed the spatial distribution of soil properties to be better quantified on a finer scale (Paz-González *et al.*, 2003). This is required for effective land management. Soil scientists need to know the variability of soil to decide on the minimum dataset needed to characterise soil properties correctly. Section 2.7 offers a brief background on soil and soil variability.

2.6.5.4 OLSR and GWR models

Ordinary least square regression is by far the most widely used regression technique for estimating soil properties and forest parameters in ecological applications (Zhang & Shi, 2004). Through OLSR, many studies by authors such as Fassnacht *et al.* (1997), Turner *et al.* (1999), and Gerylo *et al.* (2002) have established relationships between field measurement as response variables and spectral response as predictor variables. For instance, Cohen *et al.*

(2003) mapped forest vegetation attributes as continuous variables using Tasseled Cap Transformations (TCTs) extracted from the Landsat TM, and were able to model four attributes through OLSR. Tan *et al.* (2017) predicted spatial distribution of soil properties (pH, soil organic matter, available nitrogen, and available potassium) based on topographical indicators at a regional scale using OLSR and GWR. The results indicated that the GWR models made significant improvements to model performances over OLSR.

According to Foody (2003), GWR models can also improve the reliability of soil environment relationships by reducing the spatial autocorrelations in model residuals. Foody (2003; 2004) and Wang *et al.* (2005) conducted studies on the use of OLSR and GWR with remote sensing data for ecological studies. Foody (2003) analysed the relationship between the Normalised Difference Vegetation Index (NDVI) and rainfall using OLSR and GWR for North Africa and the Middle East over an eight-year period, and observed spatially non-stationary relationships for each year. The results showed a significant relationship for each year, with GWR having a higher R-squared than OLSR. Foody (2003) concluded that location variation is important in remote sensing to investigate the relationship between variables, and that GWR could make an important contribution to remote sensing communities in coming years. Wang *et al.* (2005) studied the relationship between environmental variables (altitude, temperature, and precipitation) and the NDVI in Chinese forest ecosystems using three regression techniques, namely OLSR, spatial auto regression, and GWR. They observed that GWR provided significantly better predictions.

Fernandes and Leblanc (2005) criticised OLSR and GWR for the two problems of errors in both the repressors and response variables errors due to systematic biases in measurement, theory, and random errors of observations due to noise in the measurement methods. Frescino *et al.* (2001) pointed out that some soil properties do not display normal distributions along environmental gradients, and many statistical models that hold this assumption, such as OLSR and GWR, may therefore misrepresent these soil properties. These criticisms led to the development of many alternative regression techniques, including reduced major axis regression, linear mixed model, general additive model, regression trees, multivariate regression, and artificial neural networks (Shrestha, 2006). Scholars such as Frescino *et al.* (2001), Miller and Franklin (2002), and Cohen *et al.* (2003) conducted comparative analyses of different regression techniques based on model performance, accuracy, and errors. They did not consider spatial patterns associated with predictions and residuals over space in their studies.

Even through these different techniques do overcome the problem of OLSR assumptions, and achieved some successes over OLSR and GWR, they are still non-spatial in nature. From a

mapping point of view, the potential ability of spatial models to capture the spatial structuring present in a natural system is particularly interesting (Legendre & Legendre, 2012). The development of an integrated approach (such as the local spatial modelling tools like GWR combined with other analytical and visualisation tools like GIS / remote sensing) that is capable of producing better models makes it easy to understand the complex dynamics of spatial processes (Zhang & Shi, 2004).

2.6.6 Model default settings

Default settings are initial settings provided by the developer that enable the model to be used without the modification of model settings (Arcuri & Fraser, 2013). Defaults are often provided as shortcuts to configuring models because they allow the user to run the model and familiarise themselves with the model's functionality without understanding all of the model's capabilities (Smit & Eiben, 2010). The vast majority of software programs require defaults to prevent the model from initially being too difficult to use and to provide some guidance on parameter selections. This is reasonable and expected; however, in some scientific models (such as evacuation models and human behaviour), the selection of default settings can have a significant impact on the results produced (Gwynne & Kuligowski, 2010). There are both positive and negative aspects to using default settings on a model.

Default parameters can prove useful in computing certain scenarios that are similar to those from which the default data were collected, or for which the program was designed, especially given the lack of an overarching theory. Conversely, the use of default parameters can provide the user with ready-made or just-in-time input that may not be relevant to the scenario being modelled and may provide a ready-made scenario that prevents the user from understanding the input and the results produced (Arcuri & Fraser, 2013).

This is not the case when dealing with ArcGIS (the GIS software used in this thesis). The developers aided understanding the tool's default settings within their software. In the Help section of the program, suggestions are made for improved descriptions of the initial default setting selection, model output, the impact of model settings, the assumptions on which they are based, and the scenarios for which they are intended (Gwynne & Kuligowski, 2010). In this manner, applying default settings is better because the default parameters are understood and are therefore applied more appropriately. Because one of the aims of this thesis is to provide a user-friendly methodology for predicting and mapping soil texture, OLSR, GWR, and OK were used with ArcGIS's default settings to ensure simplicity, uniformity, and adaptability of the models. However, the user must not assume that the default settings employed are

applicable to the project at hand. Attention to detail concerning the parameters selected at default was applied and all the default parameters are discussed.

2.7 DEFINING SOIL

The Soil Survey Staff (1999) defined soil as independent natural bodies, each with a unique morphology resulting from a unique combination of climate, living matter, parent material, relief, and the age of the landforms. Schaetzl and Anderson (2005) argued that the word “soil” has various meanings to various groups of people. For example, to a farmer, soil is a medium for plant growth. To an engineer, soil is something to remove before construction can occur, and it may actually be a type of engineering medium used when building. To a hydrologist, the concept of soil is understood as a function of water purification and supply. To a soil geographer, soil is a natural, three-dimensional body that formed on the earth’s surface through the interactions of five soil-forming factors (time, climate, parent material, topography, and organisms); its genesis involves past processes and it is likely to change in the future. A universal definition of soil describes soil as a biologically active, structured, and porous medium that has developed over time on the earth’s surface.

2.7.1 Soil texture

Soil can be differentiated by its particle size distribution and classified into relative fractions of soil texture classes (sand, silt, and clay) (Bakker, 2012). According to Schaetzl and Anderson (2005:9), “[s]oil texture is referred to as the relative proportions of sand, silt and clay within the fine earth fraction”. Sand and most silt fractions are composed of primary minerals, while many clay-sized particles are composed of secondary minerals formed from the weathering of primary minerals. According to the Soil Science Division Staff (2017), sand particles are between 2 mm and 0.05 mm in size, while silt particles are between 0.05 mm and 0.002 mm in diameter, and clay particles are less than 0.002 mm in diameter.

Conventional soil texture analysis involves the measurement of these mass fractions (clay, silt, and sand) and their use to determine the textural class using a textural diagram (Meskini-Vishkaee & Davatgar, 2018). Soil texture is commonly described as the “feel” of a sample (McBratney *et al.*, 2003). In the field, an experienced pedologist can discern soil texture by rubbing a wet soil sample between the thumb and forefinger; with clayey soils forming a ribbon, while sandy soils feel gritty, and silt has a smooth feel (Schaetzl & Anderson, 2005).

Soil texture can also be determined quantitatively in a laboratory using a process called fractionation (Mohammadi *et al.*, 2017). The most common method for determining soil texture is the pipet method (Soil Science Division Staff, 2017). The pipet method uses particle settling

rate to determine the percentage of sand, silt, and clay in a soil sample. The principal law applied here is Stokes' law, which states that particles will settle out of suspension at different rates over time, based on their particle size. The first step is thus to disperse the sample so that the sand, silt, and clay particles behave as independent units; sand is then sieved out (Schaetzl & Anderson, 2005). Silt and clay contents are both placed in a cylinder with water and mixed to disperse them evenly throughout the suspension. Large particles (silt) settle out of suspension more rapidly than small particles (clay). This method relies on measuring the particle density in a small layer at a target depth and at certain times (Durner *et al.*, 2016). The need for repeated manual sampling of suspension volumes on pipet at predefined times makes the methods laborious and requires skilled operators. Furthermore, each insertion of the pipet leads to a lift of the suspension and may cause disturbances of the settling process, and the data evaluation hinges on simplifying assumptions such as linearity in space (Taubner *et al.*, 2009).

The sand, silt, and clay contents are then plotted on a textural triangle to determine the soil textural class (Figure 2.3) (Mohammadi *et al.*, 2017). The textural triangle breaks the distribution of particle sizes into 12 discrete categories and classifies soil texture based on the percentage of each soil texture class.

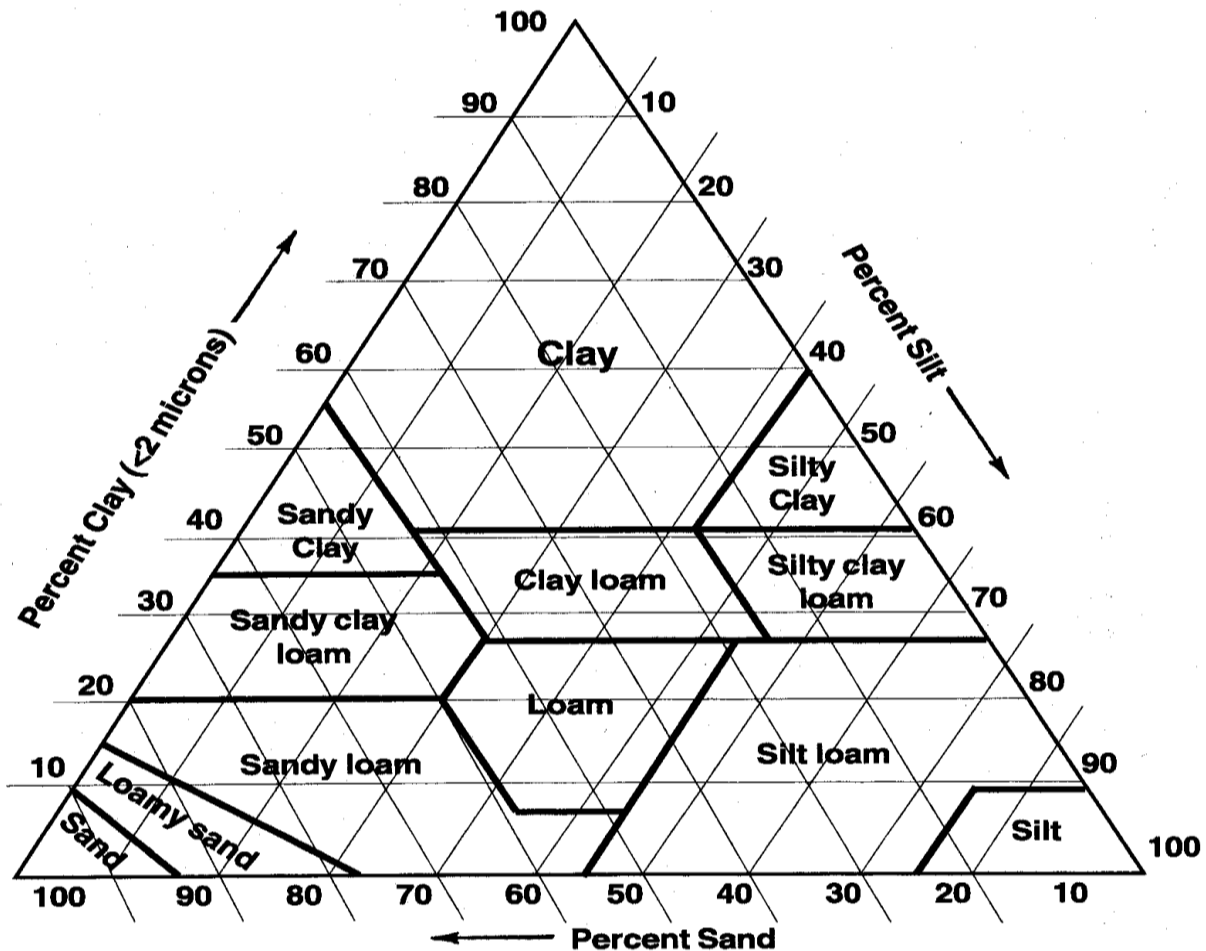


Figure 2.3: Soil textural triangle and textural classes

Source: Soil Survey Staff (1999)

Paterson *et al.* (2018) concluded that soil texture is highly variable. The authors highlighted that there were two consistent trends around soil texture variability. The first was that variability increases with depth. The second was that a significant proportion of soil texture variability occurs at short extents. The following section discusses the spatial variability of soil texture.

2.7.2 Spatial variability of soil texture

Precise information about the spatial variability of soil properties is of prime importance for developing or improving practices such as site-specific soil management (Najafian *et al.*, 2012). The spatial variability of soil properties in any landscape is inherent in nature due to geological and pedological soil-forming factors (Adhikari *et al.*, 2009). The scales of spatial variation may differ for different soil properties, because the processes that cause the variability may occur at different scales (Huber, 2013). Parent material, for instance, constitutes the initial state of a soil system (Barshad, 1966). Rock type has a profound influence on soil formation and also governs parameters such as soil texture. The influence of

parent material on soil characteristics increases with a decreasing degree of weathering (Eberl, 1994).

In semi-arid regions, the variability of soil properties is often very high due to the complex terrain, geology, and sediments and the heterogeneity of vegetation cover (Fitzjohn *et al.*, 2002). This variability can further be increased by human disturbances and through the degradation of geomorphic processes such as erosion and gullying. In these regions, soil variability is often seen as being problematic for scientific research.

According to Scull *et al.* (2003), the way that this variability of soil properties can be modelled depends on a method that consists of three steps. The first step deals with the direct observation of soil profile characteristics and auxiliary data. The second step is through the observation of soil attributes that are incorporated into an accepted conceptual model that is used to infer soil variation. The last step involves applying the conceptual model to a survey area to predict soil variation at unobserved sites. The complex and highly variable nature of soil texture in a landscape complicates the already labour-intensive process of collecting and presenting soil texture data.

2.8 REMOTE SENSING AND SOIL

Remote sensing was defined by Jensen (2007) as the art and science of acquiring information about an object without being in direct physical contact with the object. Mertens *et al.* (2006) provided a more scientific definition by stating that remote sensing is the process of deducing parameters from distant measurements of the emitted or reflected electromagnetic radiation from the land surface. The radiation reflected or emitted by soil varies depending on the range of physical and chemical characteristics of the soil matrix (Moran *et al.*, 1997). This makes it possible to distinguish between different soil surfaces and to hypothesise soil properties based on the measured radiation. Rimjhim *et al.* (2013) alluded that remote sensing has over the years proved to be an important part of soil property surveys and mapping.

The operational remote sensing systems for estimating soil properties include two sensors, namely passive and active sensors (Mertens *et al.*, 2006):

- 1) Passive sensors detect natural radiation that is emitted or reflected by the object being observed. The types of emitted energy may be visible light or invisible energy. Landsat satellites are an example of passive sensors.
- 2) Active sensors generate their own electromagnetic radiation, which is transmitted from the sensor to the observed object and back to the sensor. Radar and lidar are examples of active sensors.

When interpreting remote sensing data, one should be well aware of the general limitation related to remote sensing observation and specific disadvantages related to the extrapolation of soil information (Wulf *et al.*, 2014). Issues to consider include the following:

- 1) Revisit times of polar orbiting satellites, which can generally vary from days to weeks, depending on the satellite orbital and energy constraints, their observation geometry, and downlink capacity.
- 2) The spatial resolution, which depends on both the energy level of the measured radiation and the observation distance.
- 3) Remote sensing data require corrections to account for atmospheric, geometric, radiometric, and topographic effects.

Soil covered by vegetation may restrict investigations (Ge *et al.*, 2011). In such cases, spectral signatures of land cover other than soils need to be masked, which will result in incomplete coverage of the study area. Equally important, Bernardi *et al.* (2017) stated that the majority of remote sensing systems can only distinguish the surface and/or shallow depths of soils. Despite this, remote sensing-derived observations of the soil surface and soil surface variations can be used to predict soil properties (Wulf *et al.*, 2014).

2.8.1 Remote sensing of soil texture

Remote sensing methods have provided data for satellite-based observations over the last 40 years and focused mainly on changes in anthropogenic activities (such as land cover change, urbanisation, and deforestation) and natural processes (such as changes in hydrological process, aquatic environment, vegetation, and coastline) (Chander *et al.*, 2009). Among these approaches, promising techniques such as spectroscopy in the visible (VIS) and near-infrared (NIR) spectroscopy have been used as proximal sensing techniques and enabled the measurement of soil texture (Bousbih *et al.*, 2019). Soil components are sensitive to these portions of the electromagnetic spectrum, which allow the assessment of soil textural composition (Knadel *et al.*, 2018).

In 2013, Curcio *et al.* predicted soil texture (sand, clay, and silt) using VNIR-SWIR band reflectance spectroscopy. High resulting accuracies were found for clay, sand, and silt fractions, using the partial least squares regression (PLSR) method with coefficients of determination of 0.87, 0.8, and 0.6 respectively. Tümsavaş *et al.* (2019) used VIS-NIR spectroscopy to predict and map sand and clay fractions over agricultural fields with regression coefficients of 0.9 and 0.91 respectively.

Landsat satellites (TM, Enhanced Thematic Mapper Plus [ETM+], and OLI) provide adequate spatial and temporal resolution data for the detection of the seasonal variation of objects on the land surface at large scales, free of charge. For soil monitoring purposes, Landsat data have rarely been used to estimate soil texture directly from spectral bands or band ratios (Rijal *et al.*, 2013). However, there are more studies that have estimated soil texture through the use of a combination of the empirical linear relationship between *in situ* measurements (Li *et al.*, 2016) and vegetation-based indices, such as the NDVI, the Temperature Vegetation Dryness Index, and Land Surface Temperature, retrieved from these sensor signals (Sandholt *et al.*, 2002; Gao *et al.*, 2011; Chen *et al.*, 2015). These are restricted mainly to the analysis of bare soils, since the observation of fields with a vegetation cover can be affected by the noise produced by canopies.

For instance, Shabou *et al.* (2015) proposed a method for clay content estimations, based on the mid-infrared index derived from Landsat 5 TM and Landsat 7 ETM+ bands recorded over central Tunisia. Vaudour *et al.* (2019) predicted several topsoil properties (clay, soil organic carbon, iron, and pH) from a chemometric model, using Sentinel-2 spectral band observations. Their clay content predictions were correlated with *in situ* measurements, and a coefficient of determination (R^2) was found to be equal to 0.39 and 0.42 for the Versailles Plain and the La Payne Valley in France respectively. Table 2.1 is a summary of recent research on soil texture using remote sensing.

Laboratory and airborne imaging spectroscopy of soils have been shown to have considerable potential for the estimation of soil texture with promising results. However, only a few studies exist that have determined soil texture directly from satellite imagery. Although this approach holds great potential for DSM, soil texture assessment from image data acquired by space-borne systems is a more difficult issue, mainly due to atmospheric distortions and the low spatial and spectral resolution of sensors (Curcio *et al.*, 2013).

Table 2.1: Current studies on the estimation of soil texture using remote sensing

Reference	Sensor class	Method	Spatial extent	Conclusion
Barnes and Baker (2000)	Multispectral airborne, <i>Satellite Pour l'Observation de la Terre</i> (SPOT), and Landsat TM	Spectral classification	350 hectares (ha)	In this study, multispectral airborne (green, red, NIR, and thermal) and satellite (SPOT and Landsat TM) data were used to derive soil textural class maps for 350 ha. The results were specific to the study area and may not apply to other locations due to the numerous factors that can contribute to a soil's spectral response.
Thomasson <i>et al.</i> (2001)	Remote sensing	Spectral classification	0.4 ha	The aim of this research was to understand the relationships between soil properties and reflectance spectra. No single 50 nm band was highly correlated to any soil property. Soil nutrients were better correlated with spectra in one field, but soil texture was better correlated with spectra in the other.
Apan <i>et al.</i> (2002)	Advanced space-borne thermal emission and reflection radiometer (ASTER)	Spectral classification	6 000 ha	The purpose of this research was to evaluate the utility of multispectral ASTER imagery in the discrimination and mapping of soils. The results of separability analysis indicated that ASTER data provided adequate spectral discrimination of spectral two level broad classes of soil colour and texture. However, some spectral confusion between intermediate soil colour and texture class was observed. Detailed level mapping of soil attributes using ASTER thus does not appear achievable.
Singhroy <i>et al.</i> (2003)	RADARSAT, synthetic aperture radar (SAR), Landsat TM, and digital elevation model	Merged radar and spectral data	Unspecified	This paper showed that regional drainage and soil moisture/texture conditions can be estimated from SAR imagery, while the classification and enhancement of the RADARSAT S2 and S7 images assisted in delineating well-drained coarse grain materials associated with mainly jack pine vegetation.
Sullivan <i>et al.</i> (2005)	IKONOS multispectral scanner	Multivariate regression	52 ha	This paper compared two remote-sensing-based interpretation algorithms and one non-remote-sensing-based algorithm as tools to delineate soil property variability. In nearly all cases, co-kriging with correlated remote sensing imagery reduced the impact of surface conditions (roughness and crusting) and

Reference	Sensor class	Method	Spatial extent	Conclusion
				resulted in the most accurate estimates of total carbon and clay content.
Selige <i>et al.</i> (2006)	HyMap	Multivariate regression	700 ha	The proposed methodology provided a means of simultaneously estimating topsoil organic matter and texture in a rapid and non-destructive manner, while avoiding the spatial accuracy problems associated with spatial interpolation.
Demattê <i>et al.</i> (2007)	EMR	Multiple linear regression	120 000 ha	Evaluated the relationship between analytical and spectral parameters of six important classes of tropical Brazilian soils. The results showed that it is possible to identify the presence of kaolinite, 2:1 minerals, gibbsite, and crystalline and amorphous iron forms using EMR.
Breunig <i>et al.</i> (2008)	ESTER and emissivity data	SWIR clay index	40 x 50 km	The aim of this research was to produce a topsoil texture image, and to relate sand fraction estimates with elevation data in an agricultural area of central Brazil. The results showed that the emissivity ratio of bands 10 and 14 can be used to produce topsoil texture estimates and to detect sandy soil surfaces, as expressed by variation in total sand fraction values.
Gomez <i>et al.</i> (2008)	HyMap	PLSR	Unspecified	VNIR/SWIR airborne hyperspectral data processed by the PLSR technique allowed for accurate mapping of clay and calcium carbonate contents, which contributed significantly to the digital mapping of soil properties.
Hively <i>et al.</i> (2011)	HyperSpecTIR	PLSR	18.1, 14.6, & 9.8 ha	Thirteen out of the 19 soil properties were predicted with R^2 and got 0.5, including sand, silt, and clay.
Gomez <i>et al.</i> (2012)	HyMap	PLSR	2 400 ha	Four out of the eight soil properties (calcium carbonate, iron, clay, and cation exchange capacity) were suitable for mapping using hyperspectral data, and both accurate local predictions and good representations of spatial structures were observed.
Garfagnoli <i>et al.</i> (2013)	Hyper SIM-GA	PLSR	2 000 ha	The comparison between the hyperspectral-derived maps of clay and the correspondent inverse distance weighting (IDW) interpolations of the measured clay content values demonstrated that the results were encouraging and reliable.

Reference	Sensor class	Method	Spatial extent	Conclusion
Ciampalini <i>et al.</i> (2015)	Hyper SIM-GA	Data fusion	5 ha	The ability of combining data from relatively inexpensive and efficient sensing methods for producing reliable and high-resolution maps of clay content was shown.
Dutta <i>et al.</i> (2015)	Airborne Visible / Infrared Imaging Spectrometer (AVIRIS)	VIS and NIR analysis	Unspecified	The approach was feasible and provided insights into the accuracy and certainty of the approach for soil textural properties (sand, silt, and clay).
Castaldi <i>et al.</i> (2016)	Hyperion, EnMAP, PRISMA, and Hyperspectral Infrared Imager (HyspIRI)	PLSR	Unspecified	Hyperspectral data from forthcoming satellite missions could marginally improve mapping and monitoring soil texture as compared to current imagers.
Kanning <i>et al.</i> (2016)	Airborne Imaging Spectrometer for Applications (AISA)	PLSR	20 and 180 ha	Providing a cost-effective possibility to spatially predict soil parameters. The adaptation to hyperspectral satellite data will allow for the regionalisation of soils for larger areas.

2.8.2 Landsat 8 Operational Land Imager (OLI) and Thermal Infrared Sensor (TIRS)

Remotely sensed data used in this study were acquired from the Landsat 8 OLI and TIRS, which are instruments onboard the Landsat 8 satellite (United States Geological Survey [USGS], 2016). The Landsat project is a shared initiative between the USGS and the National Aeronautics and Space Administration. Landsat 8, formally known as the Landsat Data Continuity Mission, was chosen for this study because it is the most recent satellite to provide data continuity of Landsat 4, 5, and 7 (Concha, 2015). Another reason for using Landsat 8 imagery in this study was due to its affordability, with an ever-increasing amount of no-cost to low-cost data being available (Boettinger *et al.*, 2008), which in turn reduces soil mapping costs.

Launched on 11 February 2013, Landsat 8 is an optical passive satellite, with a temporal resolution of 16 days (which means that it images the same location on earth every 16 days) (USGS, 2016). Landsat 8 OLI is considered to be a multispectral instrument, which records data in fewer bands (Wulf *et al.*, 2014). Multispectral data have been used to derive information on terrain attributes, land use, vegetation indices, land degradation, and land cover (Roy *et al.*, 2014). Landsat 8 OLI and TIRS images consist of 11 bands: five in the VNIR region of the electromagnetic spectrum, two in the TIR region, two in the SWIR region, one in the cirrus channel, and one in the panchromatic channel (Jugder & Jalbaa, 2015). The spatial resolution for the panchromatic band is 15 m, and 30 m for the VNIR and SWIR bands. The TIR bands are acquired at 100 m, but are resampled to 30 m in delivered data products. Bands 6 and 7 cover the different slices of SWIR, which means that these two bands are suitable for discriminating the moisture content of soil, and for geology (USGS, 2016). Rocks and soils that might look similar in other bands often have strong contrasts in SWIR.

Nearly all the VNIR wavelength (400 to 1 200 nm) and SWIR wavelength (1 200 to 2 500 nm) regions of the solar radiation in the optical domain on the soil surface of the earth is either absorbed or reflected, and only a little of it is transmitted (Cierniewski & Kuśnierek, 2010). The soil, mainly composed of different-sized opaque particles covered by organic matter and minerals (mostly clay, iron oxides, and calcium carbonate) decide the soil reflectance. These physical and chemical properties of soil, as well as the direction of the incident radiation and the direction along which the reflected radiation is viewed by a sensor, are considered to be the main influences on the reflectance of a soil sample (Gholizadeh *et al.*, 2016).

The reflectance of soils, measured under laboratory conditions on samples, increases with a decrease in the soil particle size (Cierniewski & Kuśnierek, 2010). Bowers and Hanks (1965) tested the reflectance of soil texture (clay and sand) and concluded that the character of the

soil texture relationship was exponential. This was later confirmed by Piech and Walker (1974) that higher soil reflectance in the range of 500 to 900 nm is associated with decreasing soil particle size that ranges from 2 mm to less than 0.062 mm.

Research on soil samples under laboratory conditions has proved that the decrease in soil aggregate size results in an increase in the soil spectral reflectance (Cierniewski & Kuśnierek, 2010). This can be attributed to the fact that smaller aggregates have a more spherical shape, but the larger ones have an irregular shape with a higher number of cracks where the incident light is trapped (Cierniewski, 1987). Gerbermann and Neher (1979) measured the reflectance properties of clay to sand mixture and found that the addition of sand to a clay soil decreases the percentage of soil reflectance. This observation stands in contrast to what is traditionally expected from adding coarse sand to fine clay particles into a soil mixture, which tends to increase soil reflectance. Likewise, Ben-Dor and Banin (1994) concluded that inter-correlations between feature and featureless properties play a major role in assessing unexpected information about soil solely from their reflectance spectra either in the VNIR or in the SWIR regions. This suggests that important information is still hidden in the soil spectrum, and will require development of new approaches to analyse the data.

2.8.3 Comparing Landsat 8 to other satellite sensors

Optical remote sensing data have been successfully used for land cover mapping using earth observation satellites such as SPOT and Landsat since 1972, when the Landsat 1 satellite was launched (Ali *et al.*, 2018). According to Wang *et al.* (2020), multispectral data deliver information from the scattered and radiated energy from the earth's surface, which enables the ability to distinguish between different land cover classes based on spectral variations of the specific land cover feature. For instance, SAR has all-weather capability and high spatial resolution, which enables SAR to be applicable to a wide range of applications in earth observation (Ali *et al.*, 2018). These applications include land cover mapping, ocean observations, forest mapping, biomass estimation, and palaeochannel detection (Qazi *et al.*, 2014). Similarly, Mishra *et al.* (2017) stated that analyses of SAR imagery often provide unique and detailed information about land use and land cover information. Many studies have previously used SAR data for the classification of land cover and land use with different techniques.

A comparative study conducted by Ali *et al.* (2018) evaluated the performance of SAR and Landsat 8 imagery in classifying land cover. They concluded that SAR remote sensing imagery can be used in most weather conditions for land cover and land use classification; however, it is harder to interpret visually due to its unique imaging mechanism. On the contrary, a study

conducted by Davis (2018) on soil spectra and electrical conductivity measurements to compare the ability of Landsat 8 and SAR to map soil salinity extent, concluded that, due to the higher spatial resolution, predictive ability, and return time, SAR offered more superior opportunities for identification of salinity than Landsat 8. However, Davis (2018) stated that the analysis of hyperspectral handheld spectrometer measurements suggested that hyperspectral sensors may have increased predictive ability in the identification of soil salinity.

Astola *et al.* (2019) compared Sentinel-2 and Landsat 8 imagery for forest variable prediction in a boreal region. They concluded that models based on Sentinel-2 data outperformed Landsat 8 models for all variables in terms of root mean square error (RMSE) and coefficient of determination. However, the systematic error showed no significant difference between the two instruments. Astola *et al.* (2019) also found it somewhat surprising that using Landsat 8 image bands in combination with Sentinel-2 data did not improve the prediction accuracy. Pal and Antil (2017) also compared the use of Sentinel-2 and Landsat 8 to distinguish between built-up areas and bare soil in using indices derived from both sensors. A major conclusion from their study was that Sentinel-2 data performed better than Landsat 8 data in differentiating bare soil from built-up areas.

Although the geometric characteristics of Sentinel-2 products have similar geometric accuracy as Landsat 8, the better performance of Sentinel-2 data when compared to Landsat 8 data is the additional red edge bands (red and NIR bands) and the better spatial resolution (Forkuor *et al.*, 2018). The main VIS and NIR Sentinel-2 bands have a spatial resolution of 10 m, while its red edge and two SWIR bands have a 20-m spatial resolution (Drusch *et al.*, 2012). The coastal/aerosol, water vapour, and cirrus bands have a spatial resolution of 60 m. Landsat 8 provides seasonal coverage of the global landmass at a spatial resolution of 30 m for the VIS, NIR, and SWIR bands; 100 m for the thermal bands; and 15 m for the panchromatic band (USGS, 2018).

All the studies discussed here suggest that when compared to the spatial, spectral, and temporal resolution of satellites in the Landsat missions, the Sentinel-2 sensor presents new and interesting properties. Landsat represents the world's longest continuously acquired collection of space-based moderate resolution land remote sensing data, dating back to 1972, providing essential land change data and trending information not otherwise available (Loveland & Irons, 2016). In addition, Landsat 8 data are radiometrically and geometrically superior as compared with data from previous Landsat missions (Concha & Schott, 2016). Landsat 8 radiometry has improved significantly due to the improved SNRs, onboard radiometric calibration devices on both OLI and TIRS, wider dynamic ranges, and the change from 8- to 12-bit measurements (Mishra *et al.*, 2016). Schott *et al.* (2016) agreed with Mishra

et al. (2016) by stating that the improved SNR benefits all tested applications and that performance is strongly controlled by increased SNRs.

Landsat 8 capabilities include the three additional spectral bands, band 1, coastal aerosol blue band (0.433 to 0.453 μm), band 9, cirrus band (1.360 to 1.390 μm), and thermal band that was split into two bands (bands 10 and 11) (Loveland & Irons, 2016). The cirrus band has had a significant impact on a wide range of research studies and operational applications. Senay *et al.* (2016) found that the cirrus band enabled better cloud masking and in return showed improved estimates over large areas. Vermote *et al.* (2016) took a step further and concluded that atmospheric corrections and surface reflectance conversions benefit from both the coastal aerosol and cirrus bands. This is because the coastal aerosol band aided retrieval of aerosol properties and the cirrus band also enhanced cloud and shadow masking. It is clear that Landsat 8 is the most capable of the seven operational Landsat missions. Examining the continuity of Landsat 8 images in mapping soil properties may therefore contribute to important operational applications of Landsat 8 and may lead to new opportunities.

2.9 CONCLUSION

Digital soil mapping techniques present great potential to improve the consistency, accuracy, detail, and speed at which soil survey information is produced. These techniques can be used to update existing soil map information and to create soil maps of unmapped areas. There is currently a lack of clear direction within the soil geography communities in conducting soil surveys, preserving legacy data, and visualising these data for interpretation. The development of geostatistical methodologies and standards for applications in DSM is necessary.

This chapter presented an overview of the fundamental concepts that are relevant to this research. The chapter began by providing a brief review of the history of soil mapping, the advancement of DSM, and the importance of legacy soil data. The discussion continued with the description of DSM techniques, which are based on GIS, including geostatistical techniques and regression models. Finally, a brief description of the Landsat 8 instrument was provided. The following chapters present the methodology that was used to accomplish the research goal.

CHAPTER 3: DESCRIPTION OF THE STUDY AREA

3.1 OVERVIEW

This chapter introduces the spatial context of the study area by presenting some features related to the location and accessibility of the study area.

3.2 STUDY AREA

The Lejweleputswa District Municipality is situated in the northwestern part of the Free State province and is one of four district municipalities in the Free State. The other three are the Fezile Dabi District Municipality in the north, Thabo Mofutsanyane District Municipality in the northeast, and the Xhariep District Municipality in the south. There is one metropolitan municipality named Mangaung, which is located in the central part of the Free State (Figure 3.1). The study area was chosen based on the data resource availability (parcel digitised work, Landsat imagery, and legacy soil texture information) and time considerations, thus limiting the study area to the political boundary of the Lejweleputswa District Municipality.

The Lejweleputswa District Municipality borders the North West province and Fezile Dabi District Municipality in the north, Thabo Mofutsanyane District Municipality on the northeastern border, as well as the Xhariep District Municipality on the southeastern border. The district covers an area of 32 863 km² and comprises five local municipalities, namely Masilonyana, Tokologo, Tswelopele, Nala, and Matjhabeng local municipalities.

According to Kooij and Bredenkamp (1990), the northwestern part of the Free State is one of the most important agricultural regions in South Africa. This is because the region produces 80% of the maize, 75% of the grain sorghum, and 65% of the sunflower seeds in the entire South Africa. The Lejweleputswa District Municipality also thrives on mining activity, which mostly occurs within the Masilonyana and Matjhabeng local municipalities (Department of Trade and Industry, 2009). These activities produce precious metals with many uses, mainly in jewellery manufacturing.

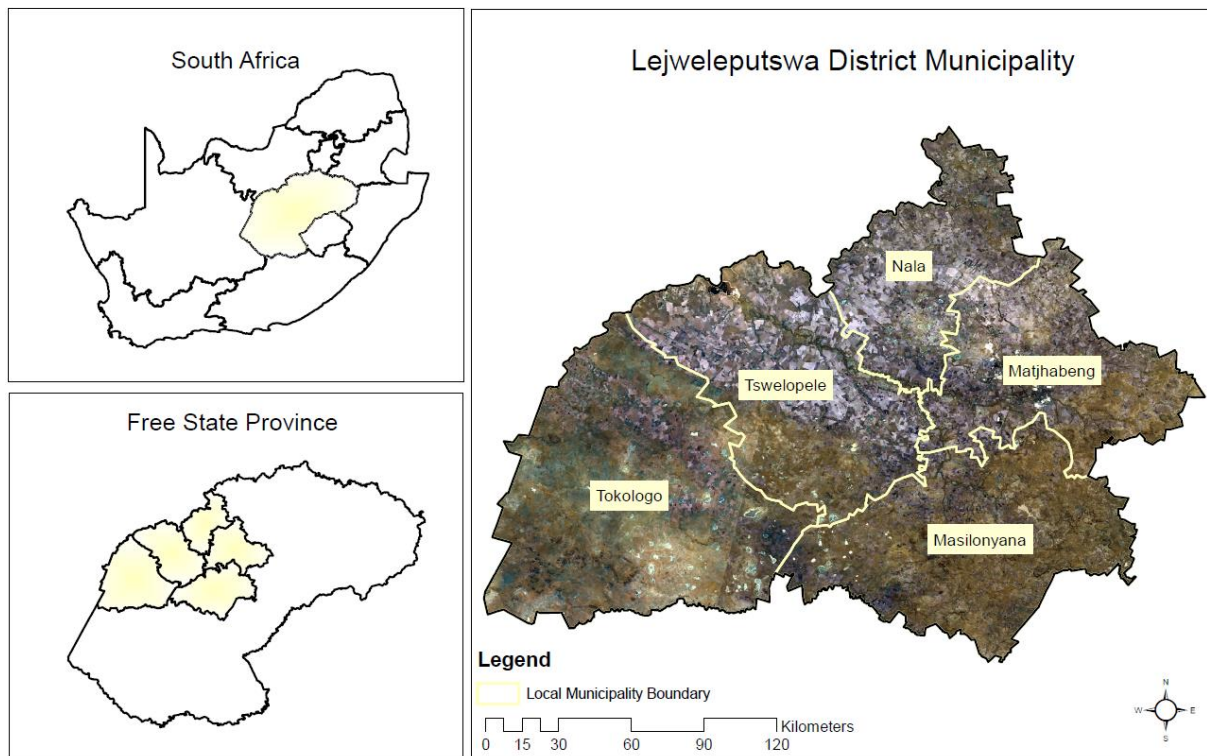


Figure 3.1: Map of the study location

Source: Landsat 8 image courtesy of the USGS (2016)

3.3 GEOLOGY

Parent material is often used to describe the initial state of a soil system. It determines the basic materials available for leaching and mineral formation, helps to interpret soil boundaries, strongly influences soil texture, and influences soil porosity and permeability (Chesworth, 1973). Different parent materials weather at different rates, and the influence of parent material on soil characteristics decreases with the degree of weathering (Eberl, 1994).

The study area is geologically situated in the Karoo Basin of South Africa (Theron, 1969). This basin is linked to the Palaeozoic and Mesozoic eras (Buhmann, 1992). Sedimentary rocks of the Late Permian Adelaide, Early Triassic Tarkastad Supergroup of the Beaufort Group, and the Late Triassic Molteno Formation of the Karoo Supergroup underlie the study area (Bosch, 2001).

The most dominant geological formation in the Lejweleputswa District Municipality is the Ecca Group, which covers the central north-south belt (Figure 3.2). The sediments within the Ecca Group accumulated in intertropical depressions, which resulted in the accumulation of mud and silt sediments (Van der Westhuizen *et al.*, 1991). This explains the shales in Figure 3.3, because shale is a fine-grained clastic sedimentary rock composed of mud, clay minerals, quartz, and calcite (Du Plessis, 1993). The Ecca Group rocks have weathered and eroded

into a flat to undulating landscape, whose relief is only broken by flat-topped, dolerite-capped mesas and buttes (Theron 1970; Holmes & Barker, 2006).

The eastern north-south belt of the district is made up of the Adelaide Subgroup and the Tarkastad Subgroup. The rocks found here have weathered and eroded in a similar fashion as the shales of the Ecça Group. Purple and green shale, sandstone shale, and thick mudstone bands characterise the study area. The northwestern belt is composed of the Kalahari Formation. The sediments in the Kalahari Formation can be subdivided into four units, namely aeolian sand, fine-grained clay-rich calcareous sandstone, red calcareous clay with layers of fine-gravel sandstone, and clay-rich gravel / gravel-rich clays (Du Plessis, 1993).

Figures 3.2 and 3.3 illustrate the geological and dominant parent material distribution in the study area.

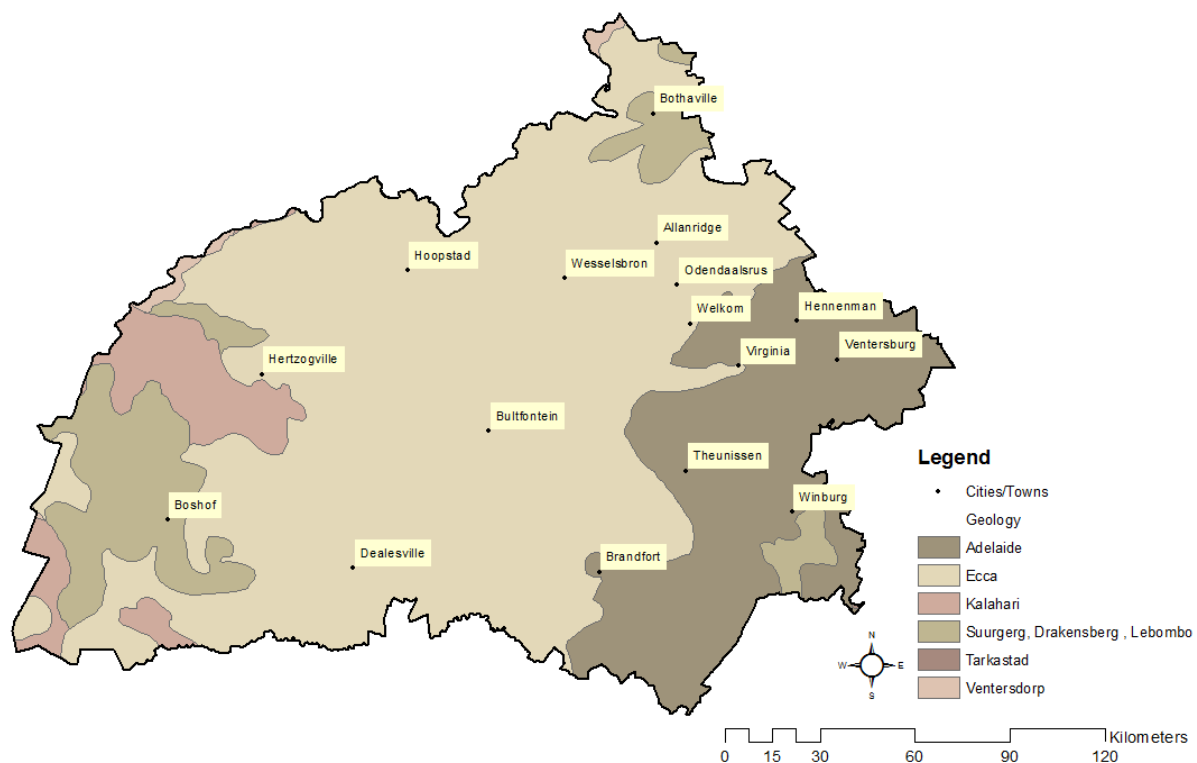


Figure 3.2: Simplified geological map of the Lejweleputswa District Municipality

Source: Soil and Terrain Database for Southern Africa (SOTERSAF, 2004)

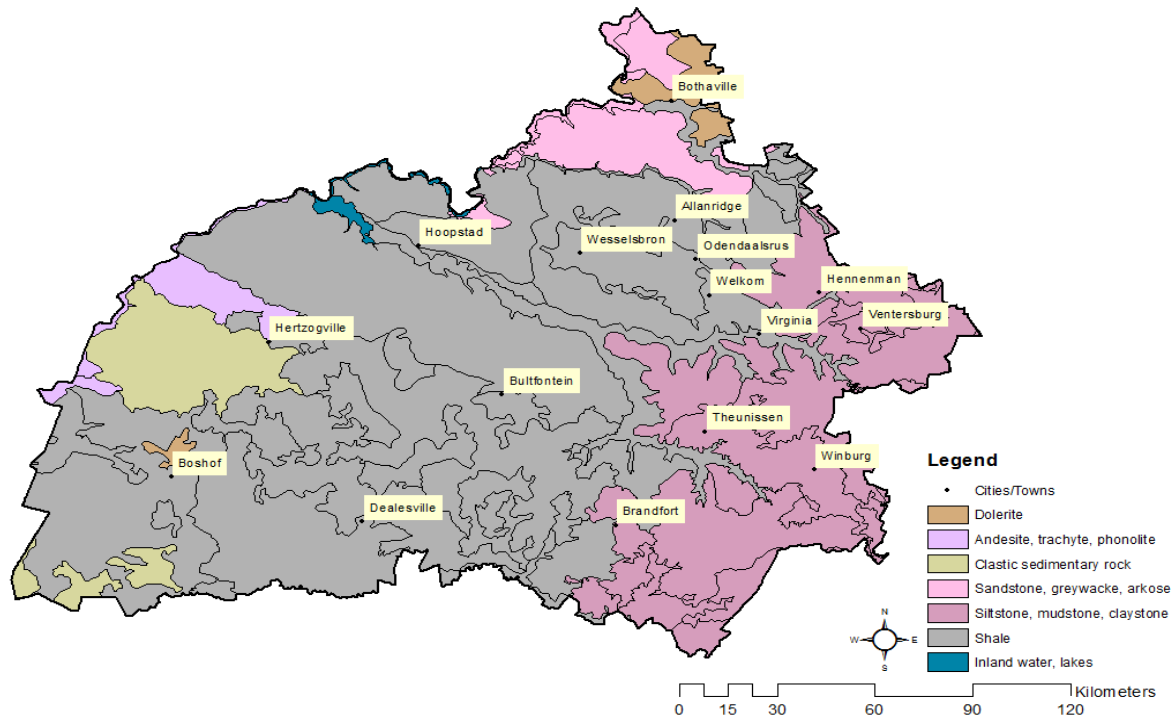


Figure 3.3: Dominant parental material of the Lejweleputswa District Municipality

Source: SOTERSAF (2004)

3.4 REGIONAL VEGETATION

The moist and cool Highveld grassland of the grassland biome covers the Lejweleputswa District Municipality. According to Bosch (2001), the combination of erratic rainfall and cold winters in the region has resulted in the dominance of this grass species. The major vegetation bioregions are shown in Figure 3.4. The general distribution of the vegetation bioregions in the Lejweleputswa District Municipality can be broken down into 12 regional vegetation types, namely:

- 1) Highveld Alluvial Vegetation;
- 2) Highveld Salt Pans;
- 3) Vaal-Vet Sandy Grassland;
- 4) Central Free State Grassland;
- 5) Winburg Grassy Shrubland;
- 6) Bloemfontein Karroid Shrubland;
- 7) Western Free State Clay Grassland;
- 8) Eastern Free State Clay Grassland;
- 9) Northern Upper Karoo;
- 10) Kimberley Thornveld;
- 11) Vaalbos Rocky Shrubland; and
- 12) Schmidtsdrif Thornveld.

In this study, the role of vegetation was considered to contribute little to the spatial variability of soil within the soilscape because the plant species distribution in the study area is reasonably homogeneous.

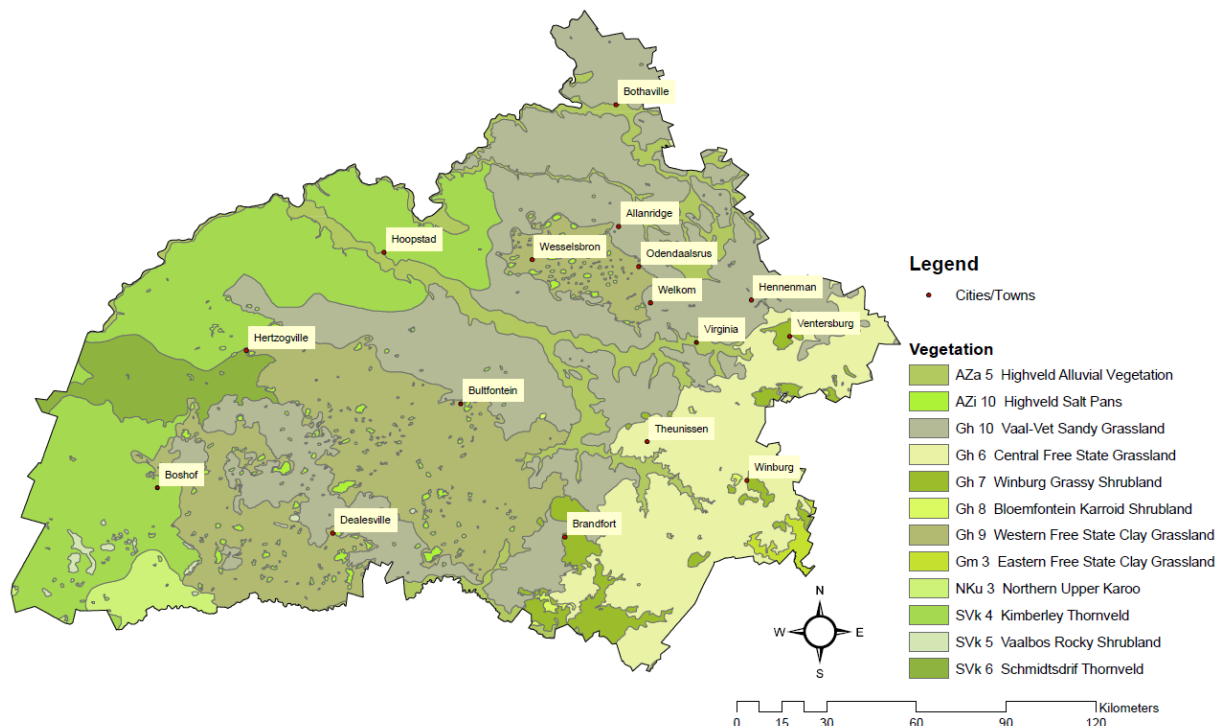


Figure 3.4: Major vegetation bioregions of Lejweleputswa District Municipality

Source: SOTERSAF (2004)

3.5 SOIL

Soils are not randomly distributed in the landscape; they are an organised natural body that is a product of their environment (Sys *et al.*, 1991; Tekle, 2004). Soil forms in the uppermost part of the earth's crust from rocks of many kinds or from transported mixed rock debris, alluvium, colluvium, aeolian material, and/or till. Chapter 2 discussed the formation of soil as a function of climate, organisms, topography, parent material, and time. Several soil studies in arid and semi-arid areas indicate that soils show wide spatial variability that result from differences in parent material, age of land surface, topography, water distribution, amount and intensity of rainfall, and plant heterogeneity (Shmida & Burgess, 1988). These spatial variations in environmental conditions and their interactions result in spatial differentiation of soil characteristics. Figure 3.5 shows the soil spatial variability in the study area.

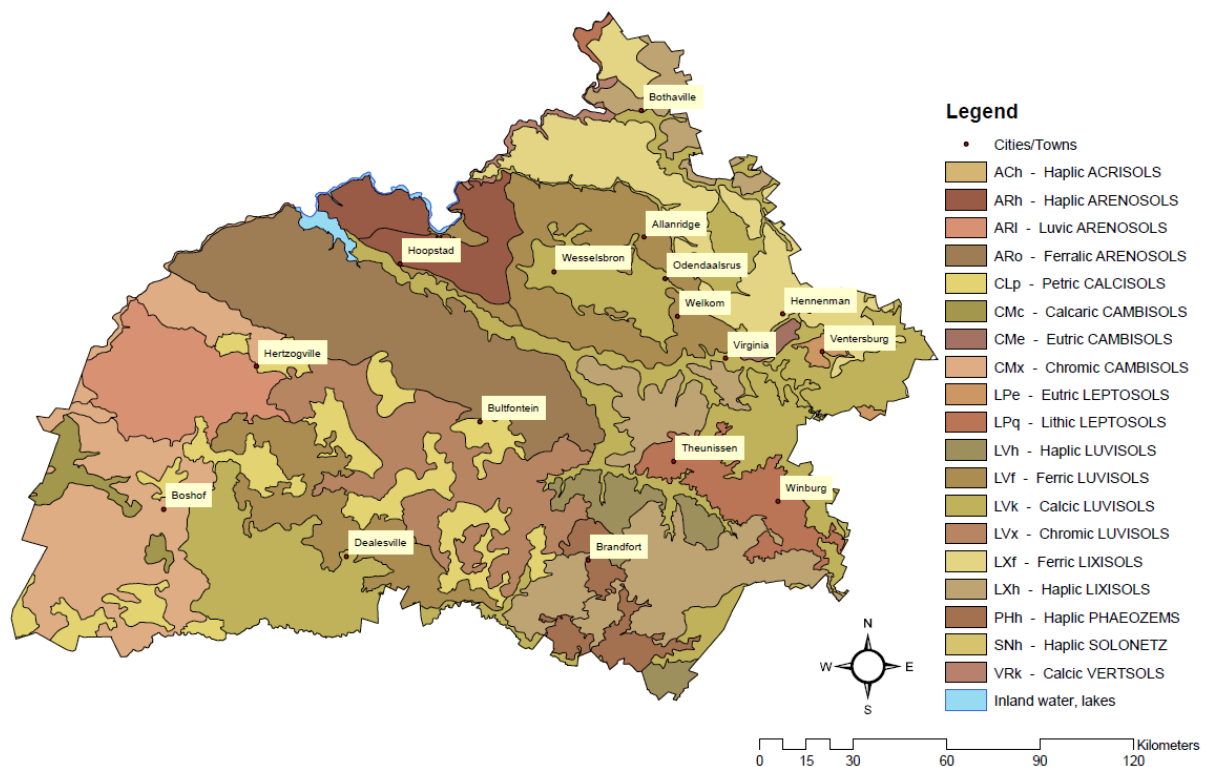


Figure 3.5: Soil map of the Lejweleputswa District Municipality

Source: SOTERSAF (2004)

The soils of the western Free State consist of windblown sand that has been deposited on the rocks and paleosols of the Beaufort and Eccia Groups (Bennie & Hensley, 2004). The sand acts as parent material for the soil, which gives rise to soils of the Group A and B land types as described in Table 3.1. These sands originated mainly from the Vaal River and have been blown out of the river over many centuries, with drier climatic periods probably enhancing the process (Eckhart *et al.*, 1993). The distribution of the sand in the study area is mainly linked to the morphology of the river; where the river is shallow, broad, and meandering, more sand is likely to accumulate (Hensley *et al.*, 2006). The texture of the sand ranges from coarse near the river to medium and fine further downwind to the southeast.

The sandy soils of the western region can be separated into Group A land types occurring in the southwestern region of the study area towards Hertzogville, and Group B land types occurring in the northwestern regions towards Bothaville. In the Group A land types of the southwestern region, Hutton soil forms occur in association with Kimberley and Plooyburg soil forms. The red colour of the apedal B horizon changes to yellow-brown in the northerly direction where Clovelly-form soils occur in association with Avalon-form soils. This gradation is associated with an increase in rainfall. In the Group B land types found mainly on the northwestern part of the study area, plinthic soils of the Avalon-form soils are dominant and are associated with Westleigh- and Pinedene-form soils.

Table 3.1: Brief description of dominant soils found in the study area and their diagnostic horizon

Land type group	Dominant soil forms	Sequence diagnostic horizon	General correlation with World Reference Base Soil Group (Spaargaren & Decker, 1998; Fey, 2010)
A	Hutton	Orthic A / red apedal B / unspecified	Ferralsols, Acrisols, Lixisol, Arenosols, Cambisols
	Clovelly	Orthic A / yellow-brown apedal B / unspecified	Ferralsols, Acrisols, Lixisol, Arenosols, Cambisols
	Kimberley	Orthic A / red apedal B / soft carbonate horizon	Calcisols, Luvisols, Lixisols
	Plooyburg	Orthic A / red apedal B / hardpan carbonate horizon	Calcisols
B	Bainsvlei	Orthic A / red apedal B / soft plinthic B	Plinthosols, Ferralsol, Acrisol, Lixisol, Arenosol
	Avalon	Orthic A / yellow-brown apedal B / soft plinthic B	Plinthosols, Ferralsol, Acrisol, Lixisol, Arenosol
	Longlands	Orthic A / E / Soft plinthic B	Plinthosols, Stagnosols, Acrisol, Arenosol
	Westleigh	Orthic A / soft plinthic B	Plinthosols, Stagnosols, Acrisol, Lixisol, Arenosol
	Pinedene	Orthic A / yellow-brown apedal B / unspecified material with signs of wetness	Ferralsols, Acrisols, Lixisol, Arenosols, Cambisols

Source: Soil Classification Working Group (1991); Hensley *et al.* (2006)

3.5.1 Soil sequence diagnostic horizons

The South African soil classification system (Soil Classification Working Group, 1991) is structured with soil forms as taxons at the highest level. Each soil form is defined by a specific sequence of diagnostic horizons, which are defined in terms of soil morphology. The diagnostic horizons found in the study area are discussed below (Soil Classification Working Group, 1991).

3.5.1.1 Orthic A horizon

This horizon is defined by exclusion, as a surface horizon that does not qualify as organic, humic, vertic, or melanic topsoils, even though it may have been darkened by organic matter. Orthic topsoils will therefore vary widely in organic carbon content, colour, texture, structure, base status, and mineral composition. This variability occurs due to a natural genetic relationship between topsoil and subsoil.

3.5.1.2 *E horizon*

This horizon is greyish in colour and usually paler than the overlying topsoil or the horizon that underlies it. When present in a soil profile, E horizon occurs when it has been exposed to the surface as a result of erosion of the topsoil, or mixed with A horizon through ploughing.

3.5.1.3 *Red apedal B horizon*

When a B horizon has a uniform red colour in its moist state, it is referred to as a red apedal B horizon. The red apedal B horizon is characterised by a microscopically weak structure that embraces the kind of weathering that takes place in a well-drained oxidising environment to produce a coating of hematite iron oxide individual soil particles, hence the diagnostic red colour.

3.5.1.4 *Yellow-brown apedal B horizon*

This diagnostic horizon is the analogue of the red apedal B, being differentiated from it only on the basis of colour, which, instead of red, is yellow or brown. Yellow-brown apedal B horizon occurs over approximately the same climatic spreads as its red counterparts, and thus is also very widely distributed throughout South Africa. As in the case of the red apedal B, individual soil particles are coated with free goethite iron oxide. However, the mineral-chemical nature of these coatings differs – a fact that is attributable to either the composition of the parent material (lower ferrous iron reserve) or a higher average moisture status of the horizon, or both.

3.5.1.5 *Soft plinthic B horizon*

The accumulation of iron or manganese oxides and hydroxides, localised in the form of high-chroma mottles and concretions (often with black centres under conditions of a fluctuating water table), is the predominating feature of this horizon.

3.5.1.6 *Soft carbonate horizon*

This horizon has a morphology that is largely that of the calcium and/or calcium-magnesium carbonates present, whether in powder, nodular, honeycomb, or boulder form. Unless exposed by erosion, the horizon will occur beneath a melanic, orthic A, a red apedal B, a yellow-brown apedal B, a neocutanic B, or a neocarbonate B horizon.

3.5.1.7 *Hardpan carbonate horizon*

This horizon is cemented by calcium and carbonates, which form a barrier to roots and are slowly permeable by water.

3.5.1.8 *Unspecified material with signs of wetness*

This horizon is used to distinguish certain lower-profile horizons that have formed due to the effects of intermittent or prolonged saturation with water. Had the material occupied a different position in the profile, it could have qualified as one of the following: E horizon, G horizon, or lithocutanic B horizon with signs of wetness or unconsolidated material with signs of wetness.

3.6 CLIMATE

Climate, temperature, and moisture are the most influential factors that govern the rate and type of soil formation (Fitzpatrick, 1986). Rain water and warm temperatures will promote weathering, which is the dissolution of rock particles and assists in releasing nutrients that are found in soils with the help of plant roots and microbes (Birkeland, 1999). Soils develop faster in warm, moist climates and the slowest in cold or arid ones. This occurs because low temperatures slow down organic matter decomposition, which in turn slows down the soil-formation process (Fanning & Fanning, 1989).

Moisture content and temperature cause different patterns of weathering and leaching, while wind redistributes sand and other particles, especially in arid regions. The amount, intensity, timing, and kind of precipitation influence soil formation. Seasonal and daily changes in temperature affect water effectiveness, rates of chemical reactions, biological activity, and kinds of vegetation (United States Department of Agriculture, 2004).

According to the Köppen climate classification system, the Free State province falls under the BSk (semi-arid) climatic zone (Dingaane & Du Preez, 2013). This climatic zone is characterised by well-defined seasons, with dry and cold winters and warm and wet summers. According to Rabumbulu (2011), the average summer temperature in the Free State is 23 °C, with rain ranging between 600 mm and 700 mm in the east to less than 300 mm in the west. The winter has very low temperatures, with an average of 7 °C. The Lejweleputswa District Municipality has a typical interior plateau climate with summer rains, chilly winters, and plenty of sunshine. Figure 3.6 illustrates the 2016 meteorological data of the Lejweleputswa District Municipality. The year 2016 is significant to this study because the Landsat image scenes used throughout the study were downloaded in that particular year.

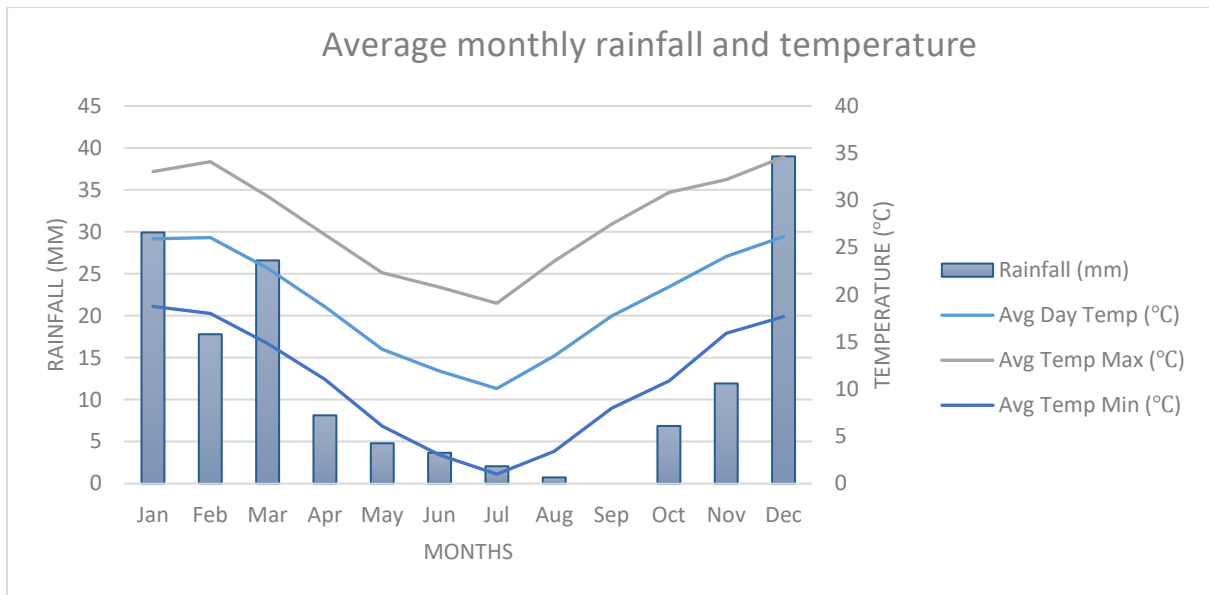


Figure 3.6: 2016 monthly average rainfall and temperature of Lejweleputswa District Municipality
Source: South African Weather Service (2016)

3.7 TOPOGRAPHY

Topography was described by Fitzpatrick (1980) as the outline of the earth's surface that is often used to determine slope, aspect, and curvature on both the down-slope and across-slope direction of a specific land surface. Topography also modifies the distribution of water; gives rise to local differences in soil water regime; affects soil erosion, colluviation, and illuviation patterns; and results in aspects that can have an effect on the microclimate (Clemency, 1975). Topography influences soils in many ways; for example, the thickness of the pedon is often determined by relief. On a flat or gently sloping site, the material tends to remain in place and causes the pedon to be thick. As the angle of the slope increases, so does the erosion hazard, which results in thin soils on strongly sloping ground (Fitzpatrick, 1980).

Figure 3.7 illustrates the various landscapes found in the Lejweleputswa District Municipality. The study area has a typical interior landscape that is characterised by an almost entirely flat plain that is gently broken by medium-gradient hillocks and ridges.

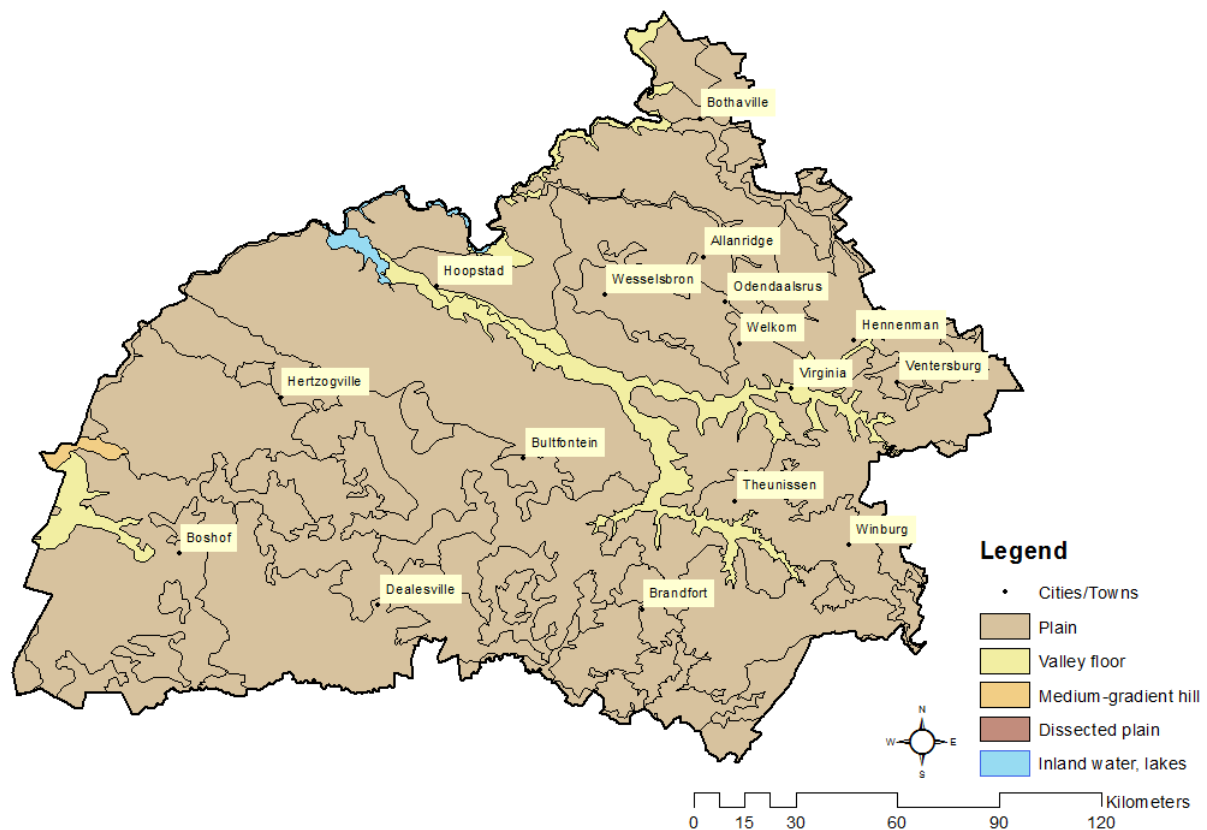


Figure 3.7: Lejweleputswa District Municipality landform map

Source: SOTERSAF (2004)

3.8 CONCLUSION

This chapter described the location of the study area and discussed the physical conditions of the area. Important geomorphological features that might have played a role in the soil distribution of the study area were also mentioned. The following chapter presents the detailed methodology followed when masking land covers that are not bare soil on the remotely sensed data (L8SR data) of the study area to predict the surface soil texture of the bare soil.

CHAPTER 4:

METHODOLOGY TO DELINEATE BARE SOIL

4.1 INTRODUCTION

Soil covered by vegetation or human-made structures can hamper remote sensing investigations. In such cases, spectral signatures of land cover other than bare soil need to be masked (Huete *et al.*, 1985). The simplest and most effective way of masking any land cover in remote sensing is through the use of indices (Li *et al.*, 2017). Many indices have been developed for various uses; for example, the NDVI and Enhanced Vegetation Index were developed to enhance the spectral contribution of green vegetation while minimising those of soil background, sun angle, and senesced vegetation (USGS, 2017), while water indices such as the Normalised Difference Water Index and Modified Normalised Difference Water Index were developed to extract water properties in many applications (Barati *et al.*, 2011). It is, however, very difficult to differentiate bare soil from other land cover using remote sensing because of the high complexity and similarity of spectral response patterns, particularly in areas with pixels that display heterogeneous objects (As-Syakur *et al.*, 2012).

The purpose of this chapter is to demonstrate that a new bare soil index (BI) can be modelled using L8SR-derived spectral indices. The rationale provided by Li and Chen (2014) was applied to map a bare soil area in the Lejweleputswa District Municipality. The idea is to show that L8SR data have a unique spectral signature for soils that are different from other elements. This will illustrate the ability of surface reflectance data to detect and distinguish soil from other elements. Landsat 8 at surface reflectance OLI and TIRS data-derived indices, namely the NDVI, Soil-Adjusted Vegetation Index (SAVI), and Tasselled Cap Brightness (TCB), were computed and their statistical comparison compared to demonstrate each index's ability to discern bare soil areas from other land covers. Based on the same rationale provided by Li and Chen (2014), the two indices that best illustrate bare soil separability were then applied to the new BI model. This new index is referred to as the Optimised Bare Soil Index (OBI).

4.2 BARE SOIL INDEX (BI)

In 2014, Li and Chen developed a methodology for mapping the bare soil area of a 185-km swath in the Pearl River Delta (Guangdong Province of South China) based on the combination of two indices: the TCB and the Normalised Difference Bare Soil Index (NDBaI). This combined formulation of indices was referred to as the BI and was applied to Landsat 8 data. The first step was to convert the Landsat 8 data to Top of Atmosphere (TOA) reflectance

using reflectance rescaling coefficients provided in the product metadata file (MTL file extension). The image was then georeferenced, and resampled using nearest neighbour algorithm with a pixel size of 30 x 30 m for all bands except the TIR band. The RMSE of rectification was controlled to be less than 0.5 pixels.

The second step was the computation of the TCB model as well as the NDBal model; the results were then combined using the newly developed model to map bare soils.

The model was as follows:

$$BI = f(\overline{TCB}, \overline{NDBal})$$

Where: f denotes a function, $\overline{TCB}$ is the normalised values of TCB image, and $\overline{NDBal}$ is the normalised values of the NDBal image.

The results obtained from the BI model showed that bare soil areas could clearly be discernible from the rest of the scene. These bare soil areas were fuzzily represented when modelled by TCB and NDBal individually, but were perfectly isolated when combined in the BI model.

4.2.1 Issues with Li and Chen's (2014) BI

Li and Chen's (2014) work was developed for a small-scale study area, where Landsat 8 data could be converted to TOA reflectance, which made it possible to use the NDBal to derive BI. For larger areas, many users are still concerned with the possible unknown errors that may arise due to ground and atmospheric correction (Huang *et al.*, 2002). According to Barati *et al.* (2011), the application of digital number (DN)-based transformation to multi-scene application can be problematic due to the changing sun illumination geometry that greatly affects DNs. A large part of the illumination geometry can be normalised by converting DN to at surface reflectance. A transformation based on at surface reflectance is therefore more appropriate for regional application where atmospheric correction is not feasible (Barati *et al.*, 2011).

Top of Atmosphere reflectance is defined as a unitless number that can be computed from satellite spectral radiance, the earth to sun distance in astronomical units, the mean solar exoatmospheric irradiance, and the solar zenith angle (Huang *et al.*, 2002). The spectral radiance is then converted from the satellite band DN using satellite sensor gain and bias constants. The importance of the TOA reflectance is that it represents the solar radiation incident on the instrument in standard unitless terms, independent of the position of the sun with respect to the earth (Vermote *et al.*, 2002). The main advantage of TOA reflectance is that it can easily be compared to reflectance spectra archived by the USGS (Dubovik *et al.*,

2002). Although TOA reflectance is more useful than the archived DNs for many purposes, surface reflectance is much more reliable (Roy *et al.*, 2014).

The Landsat 8 spectral bands are narrow and are chosen to avoid atmospheric absorption features (Roy *et al.*, 2014); however, the atmospheric effects are still challenging to correct. Particularly the impact of aerosols can be difficult to correct because of their complex scattering, as well as the absorbing properties that vary spectrally with aerosol size, shape, chemistry, and density (Dubovik *et al.*, 2002). This means that the earth's atmosphere can significantly distort the light incident on the satellite sensor, both on the way down through the atmosphere to the earth's surface, and again on the way back up to the sensor by interaction with aerosols and gases in the earth's atmosphere (Runge & Grosse, 2019). An aerosol is a suspension of fine particles or liquid droplets in a gas. These include, but are not limited to, soot, air pollution, clouds, smoke, oceanic haze, and photochemical smog. One of the key properties of aerosols is their effect on EMR. A number of atmospheric correction methodologies have been developed, but those using radiative transfer algorithms and atmospheric characterisation data provide the most potential for automated large area application (Vermote *et al.*, 2002). Surface reflectance is the TOA reflectance corrected for atmospheric effects (varying scattering and absorbing effects of atmospheric gases and aerosols) and is needed to monitor the surface reliably (Kaufman *et al.*, 1997).

This thesis utilised the L8SR OLI and TIRS data (discussed in Section 4.3) because it provides a high-level data product that is very useful for environmental analysis, especially for supervised classifications (Vermote *et al.*, 2016). The NDVI derived from the surface reflectance data has also shown some improvements when compared to the NDVI computed using TOA reflectance data, which has been shown to be sensitive to atmospheric effects (Justice *et al.*, 1991). Li and Chen's (2014) work was developed for a small-scale study area, where Landsat 8 data were converted to TOA reflectance, which made it possible to use the NDBaI. The formula for NDBaI using Landsat 7 TM/ETM+ images is:

$$\text{NDBaI} = \frac{(\text{Band 5} - \text{Band 6})}{(\text{Band 5} + \text{Band 6})}$$

Where: Band 5 is the DN value of SWIR (1.55 - 1.75) and Band 6 is the DN value of Thermal (10.40 - 12.50).

When the Landsat 7 TM/ETM NDBaI formula is adapted for Landsat 8 OLI and TIRS sensors, it should be as follows:

$$\text{NDBaI} = \frac{(\text{Band 6} - \text{Band 10})}{(\text{Band 6} + \text{Band 10})}$$

The formula for computing NDBal greatly relies on the thermal (TIRS) 1 and the SWIR1 band of the Landsat 8 data at TOA reflectance. Landsat 8 at surface reflectance as provided by the USGS does not contain the TIRS band, which makes it impossible to utilise the NDBal for the computation of the new OBI with L8SR. This study therefore utilised L8SR-derived spectral indices for delineating bare soils, namely the SAVI and NDVI, as well as the TCB (USGS, 2018).

4.3 LANDSAT 8 AT SURFACE REFLECTANCE (L8SR)

The USGS developed a new Landsat surface reflectance product for Landsat 8 (Concha, 2015). In 2015, this product was referred to as the Provisional Landsat 8 Surface Reflectance. This product is generated from specialised software called the Landsat 8 Surface Reflectance Package, which is different from the Landsat 4-7's Ecosystem Disturbance Adaptive Processing System (LEDAPS) algorithm (USGS, 2016). According to the USGS (2017), L8SR is partly in Fortran and makes certain assumptions about its environment and it took a great deal of work to get it to run perfectly. Concha (2015) stated that the product must be used with caution because some artefacts have been reported. These artefacts are particularly near feature transitions such as cloud, water, and land regions, and high topography variation. The product includes a Level 1 data file, and a cloud quality assurance (QA) band for cloud, cloud shadow, snow, and water identification (USGS, 2017).

In March of 2016, Dr Eric Vermote developed specialised software called Landsat 8 Surface Reflectance Code Product (LaSRC) with which L8SR data would be generated (USGS, 2018). The software change brought about a few changes to the product, such as that nearly all “blockiness” was fixed by interpolating missing aerosol data points. A new aerosol interpolation QA band (sr_ipflag) is now provided to show where aerosols have been interpolated versus the actual observations. Reflectance is now retrieved over all pixels except those contaminated with cirrus. A date restriction caveat for when Moderate Resolution Imaging Spectroradiometer (MODIS) Terra is in safe mode is now added. Also added are the dates of the missing auxiliary data gaps.

Table 4.1 shows the six L8SR scenes that were used to cover the study area. The scenes were downloaded from the USGS EarthExplorer website. All the scenes downloaded had to be captured between May 2016 and October 2016 because this was the driest period in the region with minimal precipitation; the images were therefore mostly cloud free, and the soils were mostly bare.

Table 4.1: Study area scenes

Scene #	Path/Row	Acquisition date	Scene ID
1	172/80	23/03/2017	LC08_L1TP_172080_20160714_20170323_01_T1_sr
2	172/79	23/03/2017	LC08_L1TP_172079_20160714_20170323_01_T1_sr
3	171/80	23/03/2017	LC08_L1TP_171080_20160621_20170323_01_T1_sr
4	171/79	23/03/2017	LC08_L1TP_171079_20160621_20170323_01_T1_sr
5	170/80	23/03/2017	LC08_L1TP_170080_20160716_20170323_01_T1_sr
6	170/79	23/03/2017	LC08_L1TP_170079_20160716_20170323_01_T1_sr

4.4 NORMALISED DIFFERENCE VEGETATION INDEX (NDVI)

The NDVI was initially proposed by Rouse *et al.* in 1973 and it is the most widely used index for agricultural monitoring (Lv, 2014). According to Mašková *et al.* (2008), the NDVI is a numerical indicator that uses the VNIR bands of the electromagnetic spectrum. The NDVI is computed by dividing the difference between reflectance values in the VNIR wavelengths by the overall reflectance in these wavelengths, which yields values between -1 and +1 (Montandon & Small, 2008).

The NDVI can be modelled using the following formula:

$$NDVI = \frac{(NIR - Red)}{(NIR + Red)}$$

Where: NIR is the reflectance in the NIR band and Red is the reflectance in the red (VIS) band.

The pixels with the minimum NDVI values are said to be free of vegetation (Montandon & Small, 2008). Table 4.2 shows the reflectance values in the red and infrared channels, and the NDVI for typical cover types (Holben, 1986). Water typically has an NDVI value of less than 0, bare soils between 0 to 0.1, and vegetation over 0.1.

Table 4.2: NDVI values for various land cover types

Cover type	Red (reflectance)	NIR (reflectance)	NDVI
Dense vegetation	0.1	0.5	0.7
Dry bare soil	0.269	0.283	0.025
Clouds	0.227	0.228	0.002
Snow and ice	0.375	0.342	-0.046
Water	0.022	0.013	-0.257

Source: Holben (1986)

According to Flynn (2006), red light reflectance may be as much as 10 times greater from soil as from vegetation, while NIR reflectance from vegetation may be twice that from soils. The NDVI takes account of the reflectance of both the canopy and the soil surface rather than just the canopy (Huang *et al.*, 2014). The NDVI can therefore be used to estimate bare soil. Flynn (2006) also stated that the reflectance properties of soil vary considerably with soil type,

texture, moisture content, organic matter, colour, and the presence of iron oxides. For instance, soils high in organic matter or high in moisture are darker and absorb more red and NIR radiation (Adegoke & Carleton, 2002).

4.5 SOIL-ADJUSTED VEGETATION INDEX (SAVI)

The problem with the NDVI for canopy mapping is external factor effects such as soil background variations (Qi *et al.*, 1994). In areas that consist of little vegetation cover, the influence of soil noise is naturally more significant and the NDVI is strongly affected by these soil properties (Pretorius & Pretorius, 2015). This resulted in various attempts to compute indices that could reduce the effect of soil noise. In an attempt to improve the NDVI, Huete (1988) developed a vegetation index that accounts for first-order vegetation to soil background backscattering and soil variation (Jiang *et al.*, 2007). The SAVI minimises the brightness-related soil effects by considering first-order soil vegetation interaction by means of soil-adjusted parameter L (Gilabert *et al.*, 2002). The SAVI is defined as (Huete, 1988):

$$SAVI = \frac{NIR - Red}{(NIR + Red + L)} \times (L + 1)$$

Where: L is the soil adjustment factor.

The value of $L = 0.5$ was found to be the optimal adjustment factor to reduce soil noise over a full range of canopy covers (Huete, 1988). The multiplied factor $(1 + L)$ is needed only to maintain the dynamic range of the index. Huete (1988) further indicated that L becomes smaller in value as the vegetation becomes denser. For precise results when applying the SAVI, there are three recommended adjustment factors: $L = 1$ for analysing very low vegetation cover; $L = 0.5$ for intermediate vegetation cover or when the extent of vegetation cover is unknown; and $L = 0.25$ for higher vegetation cover (Rondeaux *et al.*, 1996).

4.6 TASSELLED CAP TRANSFORMATION (TCT)

Tasseled Cap Transformation was described by Lea *et al.* (2004) as a guided and scaled principal components analysis, which transforms six Landsat bands into three bands of known characteristics, namely:

- 1) Tasseled Cap Brightness, which is a measure of soil (Huang *et al.*, 2002);
- 2) Tasseled Cap Greenness (TCG), which responds to a combination of high absorption of chlorophyll and high reflectance of the leaf structure in the NIR band; this is a characteristic of healthy vegetation (Liu *et al.*, 2014); and

- 3) Tasselled Cap Wetness (TCW), which responds to the amount of moisture retained in vegetation or soil.

Gomez *et al.* (2011) defined TCT as a linear transformation of original Landsat spectral bands, where all the TCB components of the multispectral bands have positive loadings (Table 4.3). This means that all the Landsat 8 bands contribute to the overall value of the TCB, with Bands 4, 5, and 6 as the contributors (Baig *et al.*, 2014). Table 4.3 shows the coefficients for the TCT for L8SR. Highly vegetated regions are found at low red and higher NIR regions, and in Table 4.3 they both have higher values of loadings. This means that any increase in vegetation cover will not cause significant changes in brightness. In essence, this feature will be responsive to soil characteristics, including the albedo instead of vegetation (Baig *et al.*, 2014).

A study conducted by Gomez *et al.* in 2011 demonstrated that a Tasselled Cap Angle (TCA) can graphically illustrate the separability of bare soil from vegetation using TCT coefficients.

Tasselled Cap Angle is defined as the angle formed by TCB and TCG in a vegetation plane that condenses in a single value the information of the relation TCB/TCG and represents the proportion of vegetation to non-vegetation. Figure 4.1 illustrates TCB and TCG components from the vegetation plane, where the TCA is the arch tangent formed by TCG and TCB. Here, forests would stand in the higher proportion of the vegetation/non-vegetation values of the TCA, while bare soil would show negative TCA values (Gomez *et al.*, 2011).

Table 4.3: TCT coefficients for L8SR

Landsat 8 TCT	(Blue) Band 2	(Green) Band 3	(Red) Band 4	(NIR) Band 5	(SWIR1) Band 6	(SWIR2) Band 7
Brightness	0.3029	0.2786	0.4733	0.5599	0.508	0.1872
Greenness	-0.2941	-0.243	-0.5424	0.7276	0.0713	-0.1608
Wetness	0.1511	0.1973	0.3283	0.3407	-0.7117	-0.4559
TCT4	-0.8239	0.0849	0.4396	-0.058	0.2013	-0.2773
TCT5	-0.3294	0.0557	0.1056	0.1855	-0.4349	0.8085
TCT6	0.1079	-0.9023	0.4119	0.0575	-0.0259	0.0252

Source: Baig *et al.* (2014)

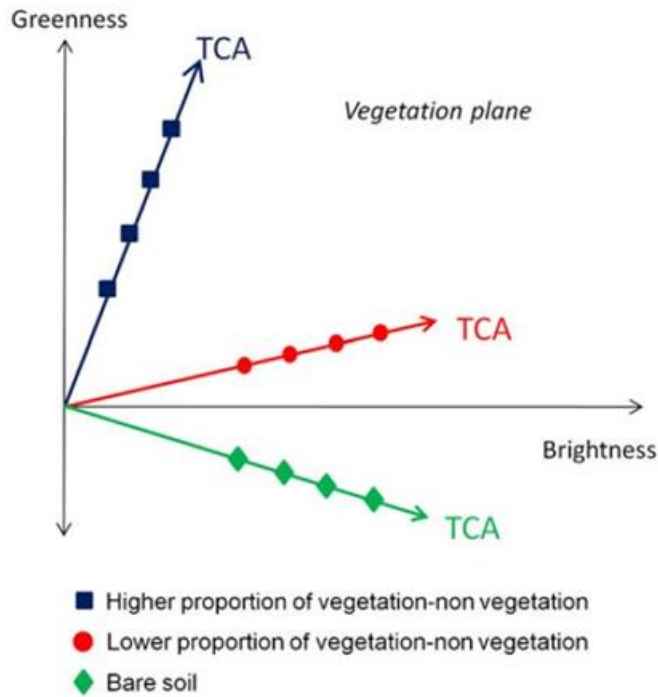


Figure 4.1: Tasselled Cap Brightness (TCB) and Tasselled Cap Greenness (TCG) components forming the vegetation plane

Source: Gomez *et al.* (2011)

In this study, the computational model for TCB is based on Li and Chen's (2014) formula:

$$TCB = [0.3029(OLS_2)] + [0.2786(OLS_3)] + [0.4733(OLS_4)] + [0.5599(OLS_5)] + [0.508(OLS_6)] + [0.1872(OLS_7)]$$

Where: OLS_i represents the L8SR DN values of corresponding bands.

4.7 APPLICATION OF THE OPTIMISED BARE SOIL INDEX (OBI)

This section discusses the application of the methodology developed for delineating bare soil areas from other land covers in the study area.

4.7.1 Data pre-processing

A total number of six scenes covered the Lejweleputswa District Municipality (Section 3.7). As discussed in Chapter 3, L8SR is a multispectral instrument with a total of seven bands: four bands in the VIS, one band in the NIR, and two bands in the SWIR wavelengths. The product is already corrected geometrically and radiometrically by obtaining Level T1 (Ahn, 2014). To ensure that the image was cloud free, the data were acquired for the time period of June to July 2016 because the Lejweleputswa District Municipality is characterised by a dry winter during this period. The downloaded scenes were occupied by background null values that did

not contain any numerical values pertinent to the image; these values were set to zero using ArcGIS 10.6 (data management tool, copy raster). A mosaic of the six scenes was created. Mosaicking is the process of combining multiple individual scenes into a single scene (Capel, 2004). Using the ArcGIS 10.6 tool (data management tool, raster processing), the mosaic image was clipped to the polygon outlining the study area. Landsat 8 at surface reflectance OLI and TIRS data DNs range from -2 000 to 1 600 but they are only valid at the range of 0 to 10 000 (USGS, 2018). Using the extraction by attribute tool in ArcGIS 10.6, the values for each of the seven bands were set to ≥ 0 and $\leq 10\,000$.

4.7.2 Spectral analysis

Spectral analysis, also referred to as spectral pattern analysis, is the way different categories of image features that share similar combinations of spectral reflectance are visualised (Ledoux, 2015). Different features reflect electromagnetic energy differently, and this analysis method takes advantage of this fact. Each type of material (in this case, bare soil, water, vegetation, mine tailing dams, and built-up areas) has a unique signature (Jensen & Lulla, 1987). Benefitting from these details, one can generate a graph (Figure 4.2) to determine the wavelengths and spectral bands that best separate image features and classes.

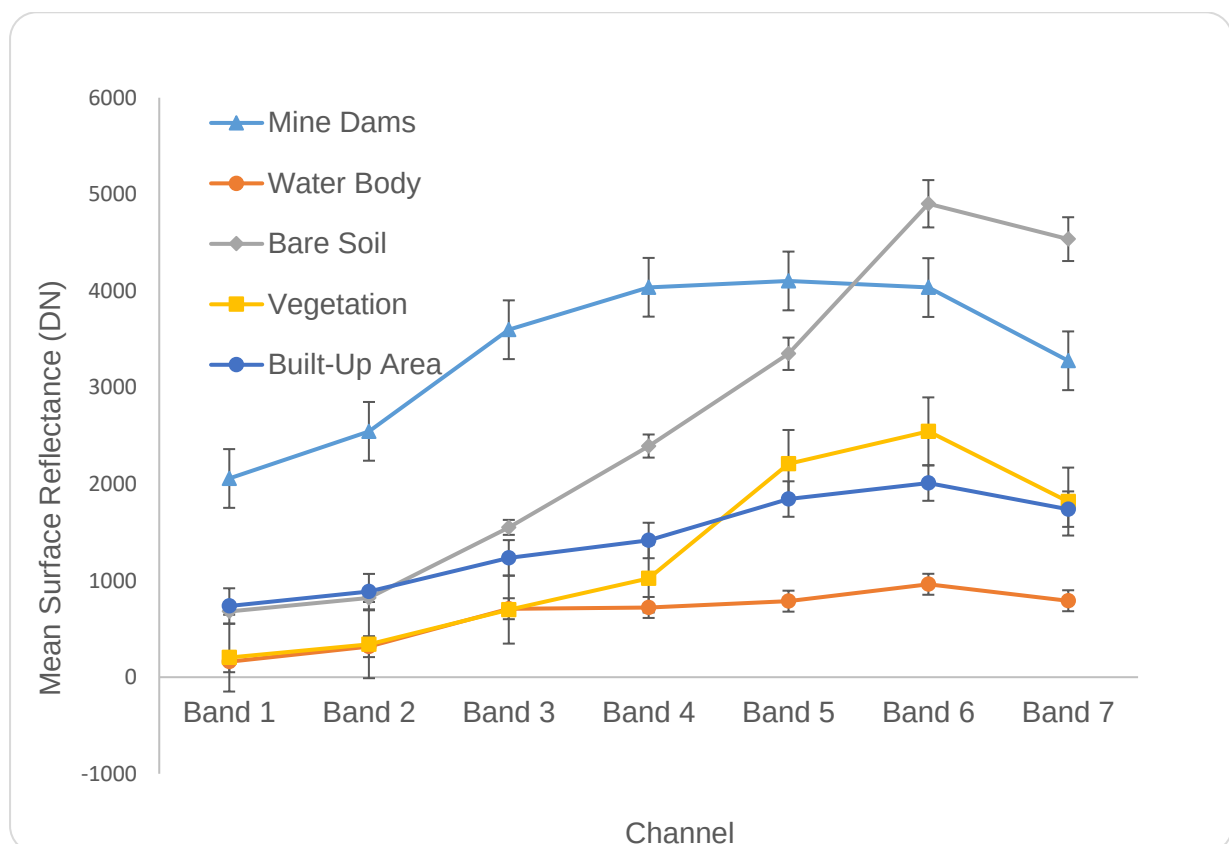


Figure 4.2: Spectral profile of five classes in the study area

In this study, land cover in the Lejweleputswa District Municipality was divided into five typical classes, namely mine tailing dams, water bodies, built-up areas, vegetation, and bare soil. Vegetation was classified as a mixture of croplands, grasslands, and forests. Using the supervised classification tool on ArcGIS 10.6, 20 training samples from the L8SR image were collected for each of the identified classes. A signature file was then created that depicts the spectral signatures of the classes identified in the study area.

Figure 4.2 shows the spectral profile of the study area. From NIR (Band 5), SWIR1 (Band 6), to SWIR2 (Band 7), there is a clear contrast between all land covers. The difference between bare soil and all other land covers is apparent at the red band to SWIR2, which makes sense because these bands are widely used for soil mapping (Liao *et al.*, 2013; Baig *et al.*, 2014; Li *et al.*, 2017). The mine tailing dams and bare soil show similar tendencies from the NIR to SWIR1. The reason for this similarity is that mine tailing dams are by-products left over from mining and extracting resources. These are finely ground rock particles and chemicals used to extract valuable minerals; they range from sand-sized to silt-sized particles (Concha & Lall, 2018). It thus makes sense for mine tailing dams and bare soil to show similarities from NIR to SWIR1. The spectral profile shows that L8SR data have a unique spectral signature for soils that is able to differentiate soil from other elements; thus illustrating the ability of L8SR data to detect and distinguish soil from other elements.

4.7.3 Computing TCB, NDVI, and SAVI

ArcGIS 10.6 (spatial analyst tool) was used to create the NDVI, SAVI, and TCB surfaces. The formulas to compute these indices are as discussed in the preceding sections (NDVI in Section 4.4, SAVI in Section 4.5, and TCB in Section 4.6).

Figures 4.3, 4.4, and 4.5 are illustrations of all three indices. The NDVI and SAVI results were able to highlight vegetated areas well by delineating these areas with bright pixels. Built-up areas and water bodies are shown with darker pixels, while the darkest pixels are areas that show bare soil and mine tailing dams. In contrast, TCB presented bare soil areas well; here, mine tailing dams and bare soil are categorised in bright pixels, while the darker pixels represent other types of land cover.

A visual comparison of the TCB, NDVI, and SAVI results indicates that all three products exhibit the ability to detect and delineate some parts of bare soil areas. The findings on the NDVI and SAVI were unexpected as they provided similar visual outcomes. Neither indices exhibited strong visual results that indicated a clear delineation of bare soil areas. Tasselled Cap Brightness provided the best visual outcomes of the three products.

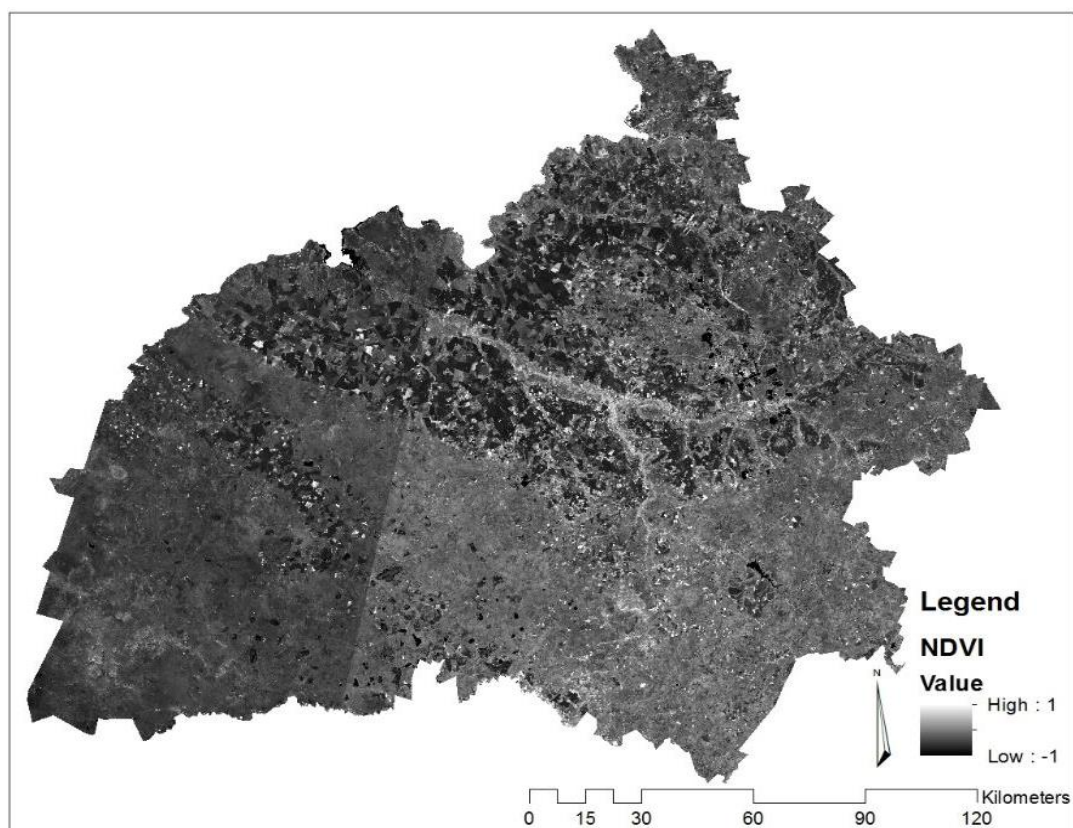


Figure 4.3: NDVI map (Lejweleputswa District Municipality)

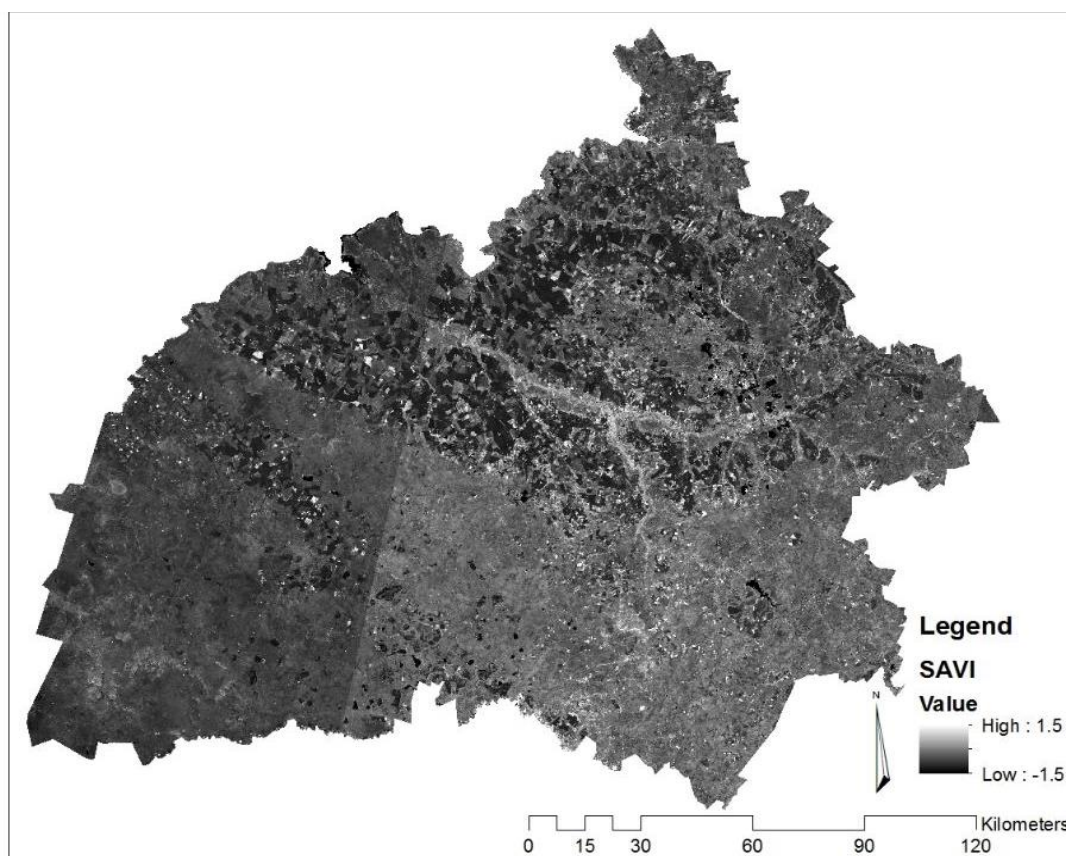


Figure 4.4: SAVI map (Lejweleputswa District Municipality)

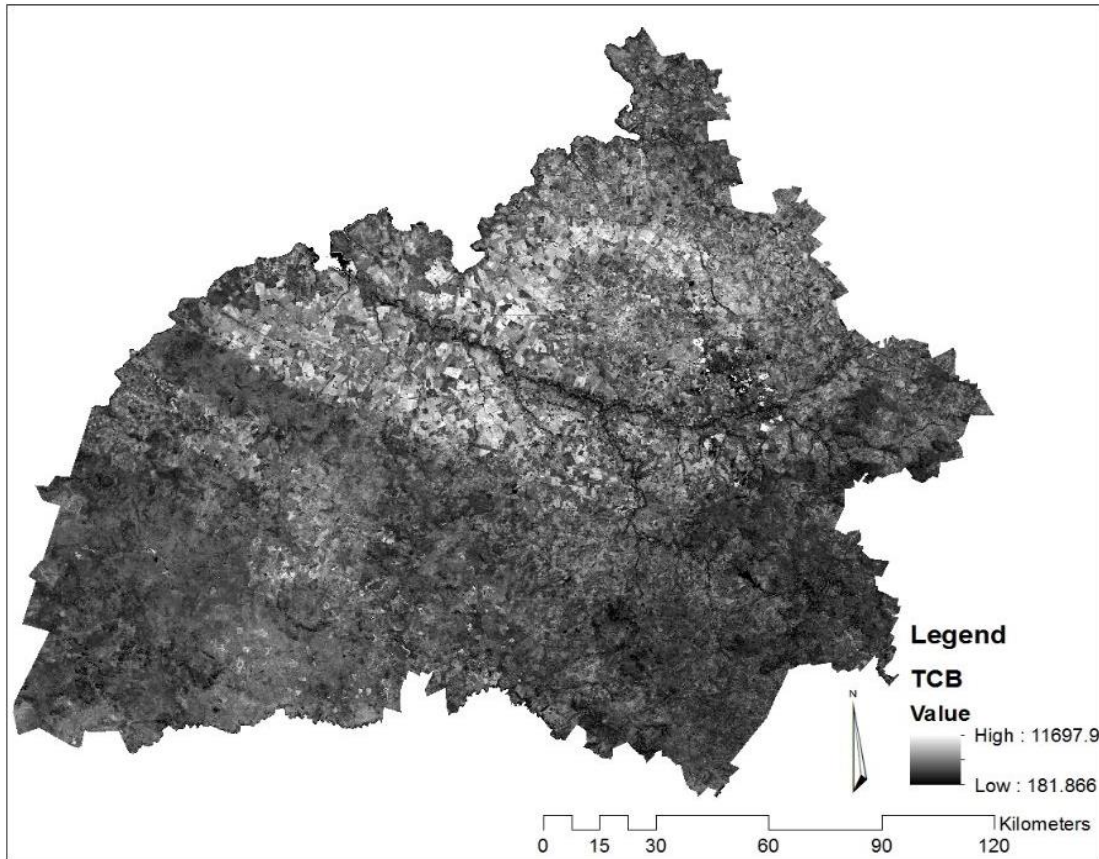


Figure 4.5: TCT map (Lejweleputswa District Municipality)

4.7.4 Statistical comparison of the NDVI, SAVI, and TCB

A major drawback of comparing the NDVI, SAVI, and TCB is that they all possess different ranges; TCB ranges from 181.866 to 1169.900, NDVI ranges from -1 to +1, and SAVI ranges from -1.5 to +1.5. To evaluate the significance of these three indices according to their capacity to detect bare soil from other land covers, they had to be normalised. Normalisation is a statistical rescaling technique where measured values are adjusted on a different scale to a notionally common scale (Bolstad, 2012). All three indices were normalised to range between 0 and +1 using the following equation (Patro & Sahu, 2015):

$$z = \frac{x - \min(x)}{\max(x) - \min(x)}$$

Where: z is the normalised index, x is the index to be normalised, $\min(x)$ is the minimum value of the index, and $\max(x)$ is the maximum value of the index.

Figures 4.6, 4.7, and 4.8 show normalised NDVI, SAVI, and TCB maps. The resulting normalised indices are the same as the regular indices, but the range values were rescaled.

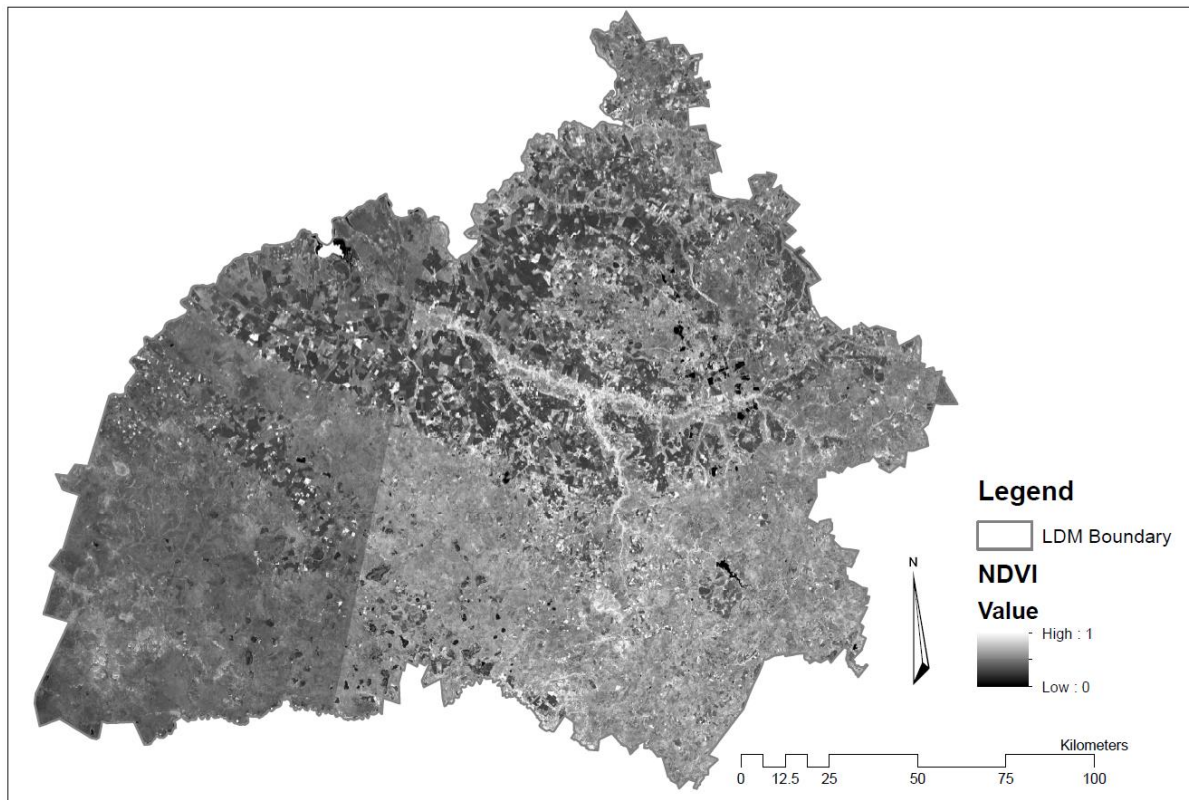


Figure 4.6: Normalised NDVI values (Lejweleputswa District Municipality)

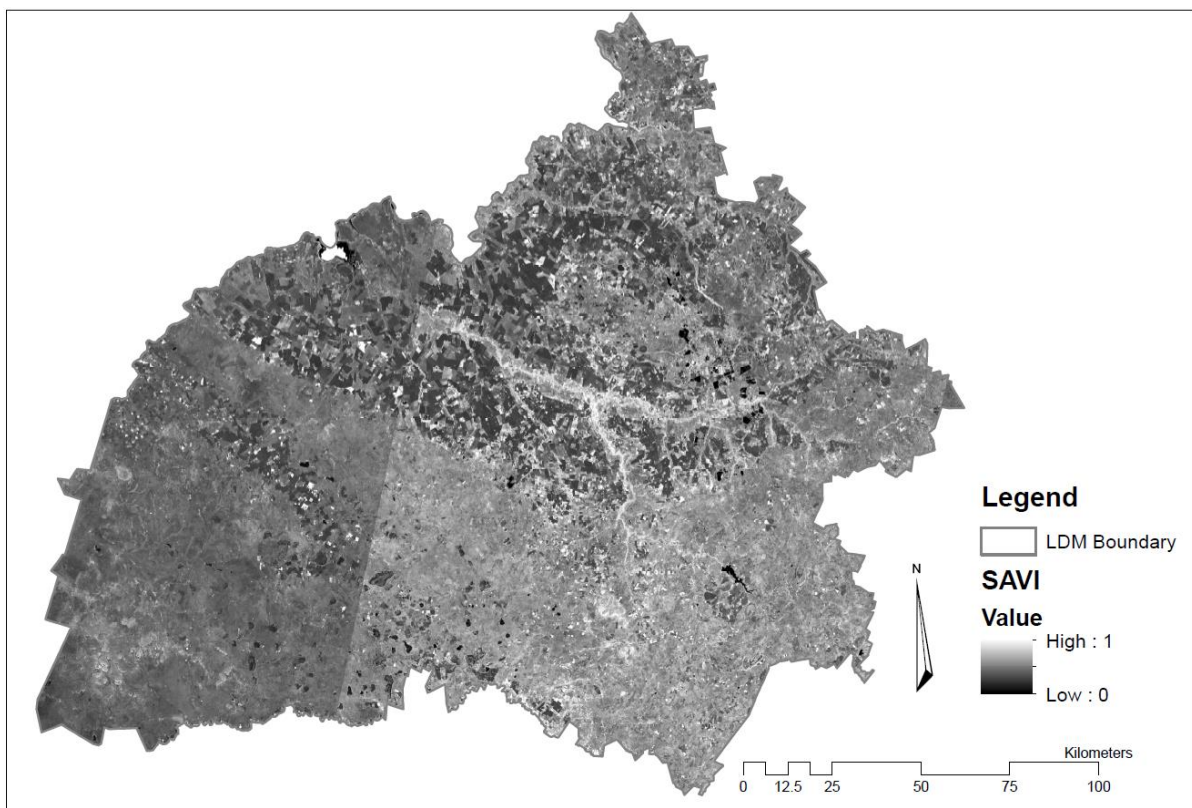


Figure 4.7: Normalised SAVI values (Lejweleputswa District Municipality)

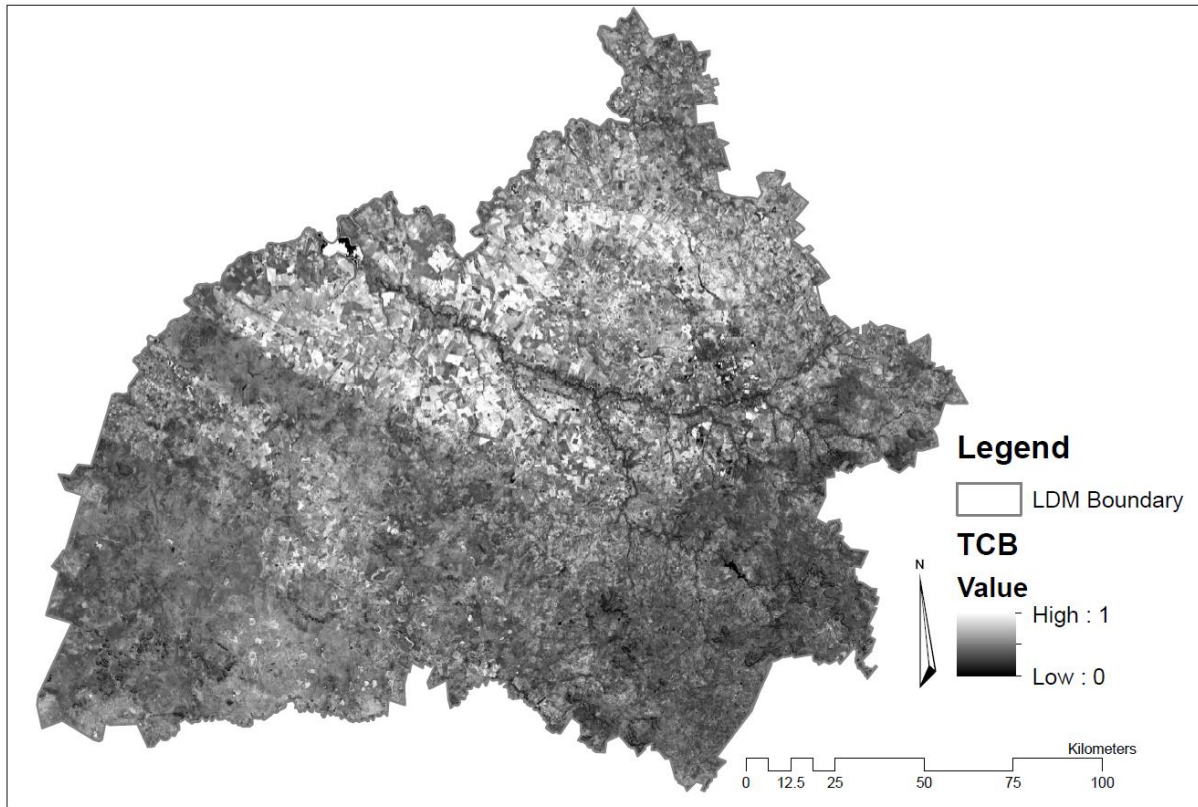


Figure 4.8: Normalised TCB values (Lejweleputswa District Municipality)

To statistically compute and contrast the values of the three indices (NDVI, SAVI, and TCB), the same classification points used for the spectral analysis in Section 4.7.2 were used to extract the pixel values of the normalised indices. These are bare soil, water, vegetation, mine tailing dams, and built-up areas. To evaluate the significance of the contrast, the following equation was utilised (Li & Chen, 2014):

$$C = |\bar{a} - \bar{b}|$$

Where: C is contrast value, $\bar{a}$ is the mean value of bare soil area pixels, and $\bar{b}$ is the mean value of the built-up area pixels (mine tailing dams $\bar{c}$, vegetation $\bar{d}$, and water $\bar{e}$).

The contrast computation results are shown in Table 4.4. Tasselled Cap Brightness provided the best results compared to the NDVI and SAVI in the study areas. The NDVI and SAVI yielded similar results as in the visual comparison. However, the SAVI managed to perform slightly better than the NDVI. It should be noted that even though TCB outperformed the SAVI and NDVI, TCB did not yield the best contrast between bare soil and water; however, TCB remained consistent.

Table 4.4: Mean values of normalised indices and the contrast value (C) between bare soil areas and other features in the Lejweleputswa District Municipality

	a	b	c	d	e				
Indices	Bare soil	Built-up area	Mine tailing dams	Vegetation	Water	$C= \bar{a}-\bar{b} $	$C= \bar{a}-\bar{c} $	$C= \bar{a}-\bar{d} $	$C= \bar{a}-\bar{e} $
TCB	0.4584	0.2014	0.3123	0.2102	0.0163	0.2570	0.1461	0.2482	0.4422
SAVI	0.5823	0.5140	0.5108	0.6758	0.0037	0.0682	0.0714	0.0935	0.5786
NDVI	0.5806	0.5126	0.5094	0.6738	0.0033	0.0680	0.0712	0.0932	0.5773

4.8 OBI

The crispness of index surfaces cannot be considered a measure of accuracy, while fuzziness does not imply low accuracy (Li & Chen, 2014). Even though TCB exhibited better visual and statistical contrast between bare soil and other elements, this does not imply that it provides the best bare soil delineation. To achieve the representation of bare soils, this study proposed a new index, referred to as the OBI. The OBI is an adjustment of the methodology proposed by Li and Chen (2014), and is based on the same logical combination of the two best-performing indices to accurately delineate bare soil from L8SR data. The proposed model for computing OBI is as follows:

$$OBI = f(\bar{x}; \bar{y})$$

Where: f denotes a function, $\bar{x}$ is the normalised values of the best-performing index, and $\bar{y}$ is the normalised values of the second best-performing index.

To compute the OBI, the formula $OBI = f(\overline{TCB}; \overline{SAVI})$ was used. The tool utilised in ArcGIS was image analysis: add function. The function was inserted using the TCB surface as the first input and the SAVI surface as the second input. The arithmetic function tool (addition) was used. Figures 4.9, 4.10, and 4.11 show the overall results of the bare soil areas as produced by the OBI.

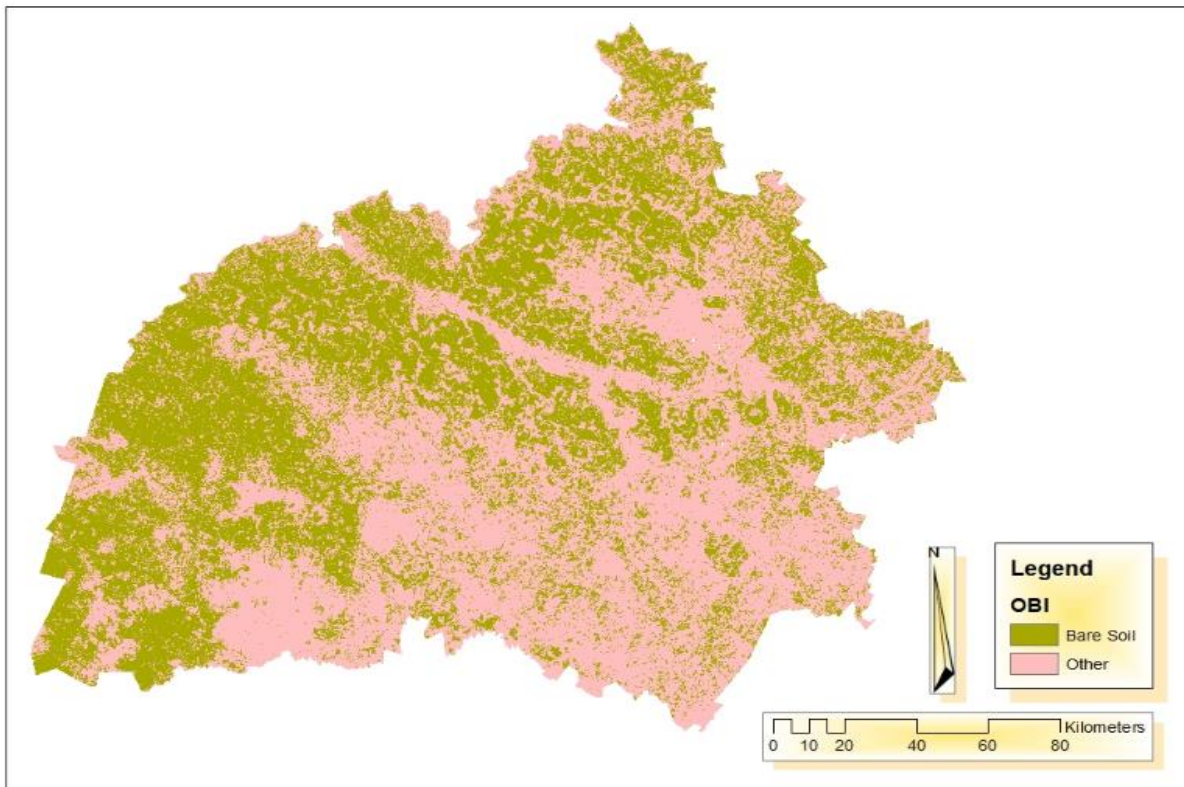


Figure 4.9: A map of OBI results for the Lejweleputswa District Municipality

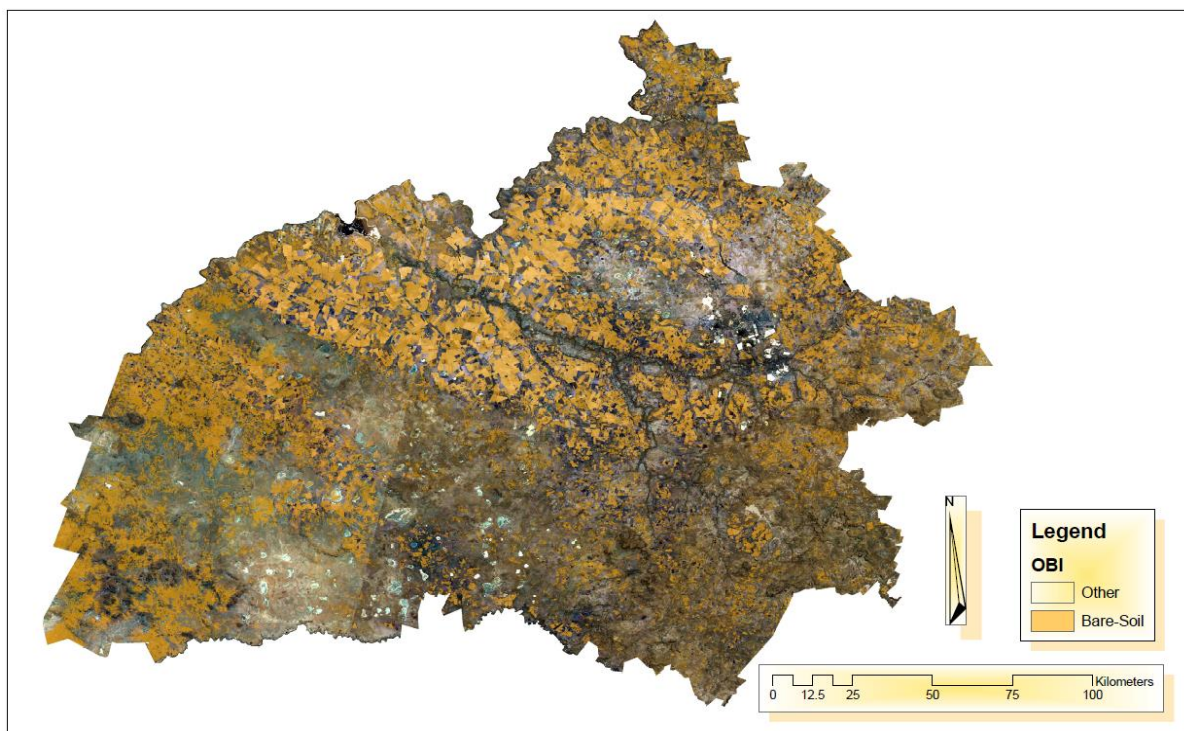


Figure 4.10: An alternative map of OBI results for the Lejweleputswa District Municipality

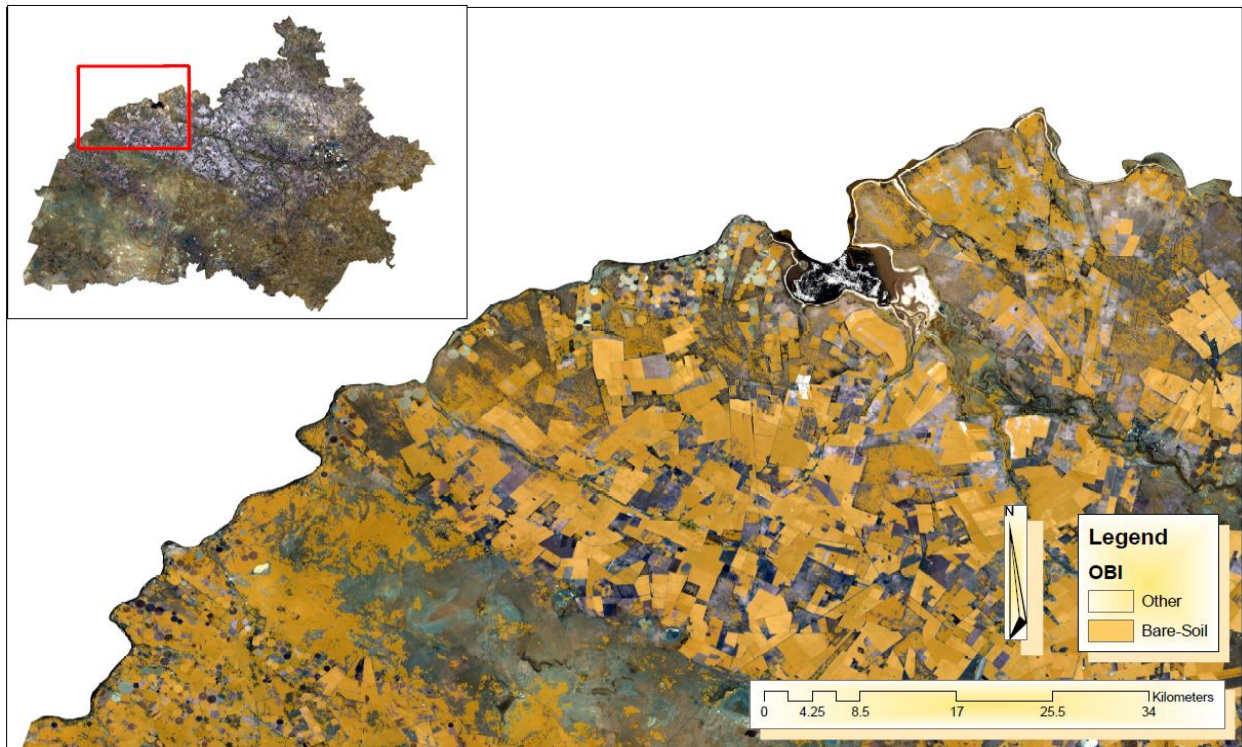


Figure 4.11: A zoomed-in map of OBI results for the Lejweleputswa District Municipality

The proposed methodology for mapping bare soil in the study area consists of three steps. In the first step, the NDVI, SAVI, and TCB are produced using their standardised equations. In the second step, a statistical normalisation model is utilised to allow for uniformity of the index ranges for the evaluation of the best-performing indices. Lastly, the function of the two indices that best differentiate between bare soil and other land cover features is fitted in a model using the basic arithmetic function tool. The resulting map is classified to discern areas that show bare soil. Figure 4.12 summarises the proposed methodology for the OBI.

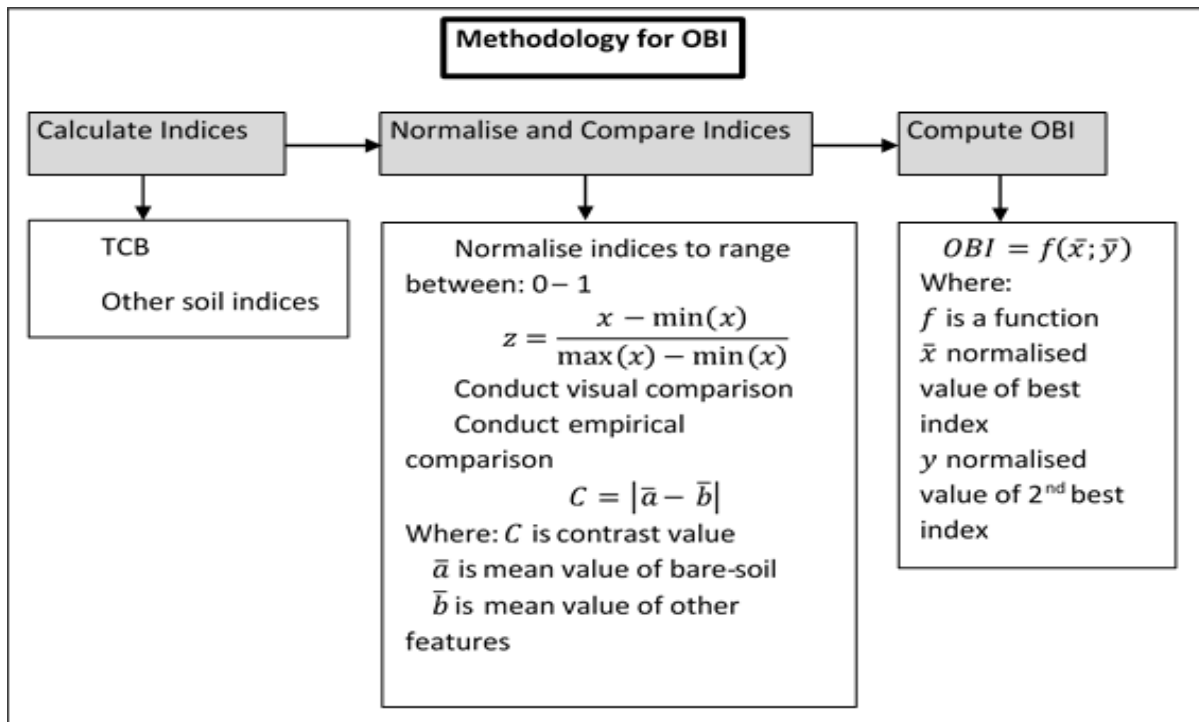


Figure 4.12: Proposed methodology for the OBI

4.9 OBI CLASSIFICATION ACCURACY ASSESSMENT

Assessing map accuracy is one of the most important final steps of the classification process (Rwanga & Ndambuki, 2017). The aim of the accuracy assessment is to quantitatively assess how effectively the pixels were sampled into the correct land cover classes (in this instance, bare soil or other). The accepted model for conducting this assessment is through the comparison of alternative data to determine measures of accuracy that express the degree of correctness of a map or classification (Foody, 2002). The most common approach to assess map accuracy in remote sensing is to compare the classified map with alternative but spatially and temporally coincident data, which are considered to be of higher accuracy (Comber *et al.*, 2012).

A sample of the classified data created by the remote sensing analysis is compared against validation data (in this instance, the pre-classified image). The resulting cross-tabulation of classified data against reference data is commonly known as the error matrix, but is also called the confusion matrix in the literature (Comber *et al.*, 2012). The cross-tabulation provided by the error matrix allows for the computation of a number of standard reporting measures, including the overall accuracy, as well as user's and producer's accuracies (Congalton & Green, 1999).

The OBI accuracy assessment computation was conducted using the ArcMap 10.5 spatial analyst tool. The most common way to assess the accuracy of a classified map is to create a

set of random points from the ground truth data and comparing that to the classified data in a confusion matrix. Although this is a two-step process, it does need the user to compare the results of different classification methods or training sites, or as in the case of this study, the user might not have ground truth data at hand and must therefore rely on the same imagery that was used to create the classification. On ArcMap 10.5, the workflow process uses three reprocessing tools, namely create accuracy assessment points, update accuracy assessment points, and compute confusion matrix. Using the create accuracy assessment points tool, a total number of 250 randomly sampled points were created that covered the study area. The update accuracy assessment points tool was utilised to populate the classified dataset; and lastly, the confusion matrix was compiled using the compute confusion matrix tool (Table 4.5).

Table 4.5: Confusion matrix of OBI classification

Class	Other	Bare soil	Total	User's accuracy	Kappa
Other	140	9	149	94%	0
Bare soil	13	88	101	87%	0
Total	153	97	250	0%	0
Producer's accuracy	92%	91%	0	91%	0
Kappa	0	0	0	0	82%

The overall accuracy is computed on ArcMap by summing the number of correctly classified values and dividing it by the total number of values. The correctly classified values are located along the upper-left to lower-right diagonal of the confusion matrix. The total number of values is the number of values in either the truth or predicted value arrays. On the confusion matrix in Table 4.5, the overall accuracy was computed as follows:

- Correctly classified values: $140 + 88 = 228$
- Total number of classes: 250
- Overall accuracy: $228 / 250 = 0.912$

According to Banko (1998), the producer's accuracy is derived by dividing the number of correct pixels in one class divided by the total number of pixels as derived from reference data. The producer's accuracy measures how well a certain area was classified. It includes the error of omission, which refers to the proportion of observed features on the ground that are not classified in the map. When the correct classified pixels in a class are divided by the total number of the pixels that were classified in that class, this measure is called the user's accuracy. The user's accuracy is therefore a measure of the reliability of the map. It informs the user how well the map represents what is really on the ground.

On the confusion matrix in Table 4.5 and as seen in Figure 4.13, the producer's and user's accuracies were computed by ArcMap as follows:

Producer's accuracy:

Other elements = $140 / 153 = 0.915$

Where: Correctly classified reference sites = 140

Total reference sites = 153

Bare Soil = $88 / 97 = 0.907$

Where: Correctly classified reference sites = 88

Total reference sites = 97

User's accuracy:

Other elements = $140 / 149 = 0.939$

Where: Correctly classified sites = 140

Total classified sites = 149

Bare soil = $88 / 101 = 0.871$

Where: Correctly classified sites = 88

Total classified sites = 101

The kappa index of agreement provides an overall assessment of the accuracy of the classification. A kappa value of 1 represents perfect agreement, while a value of 0 represents no agreement (Fenstermaker, 1991). ArcMap 10.5 automatically computes the kappa coefficient using the following equation:

$$K = \frac{N \sum_{i=1}^n m_{i,i} - \sum_{i=1}^n (G_i C_i)}{N^2 - \sum_{i=1}^n (G_i G_i)}$$

Where: i is the class number, N is the total number of classified values compared to truth values, $m_{i,i}$ is the number of values found along the diagonal of the confusion matrix, C_i is the total number of predicted values belonging to class i , and G_i is the total number of truth values belonging to class i .

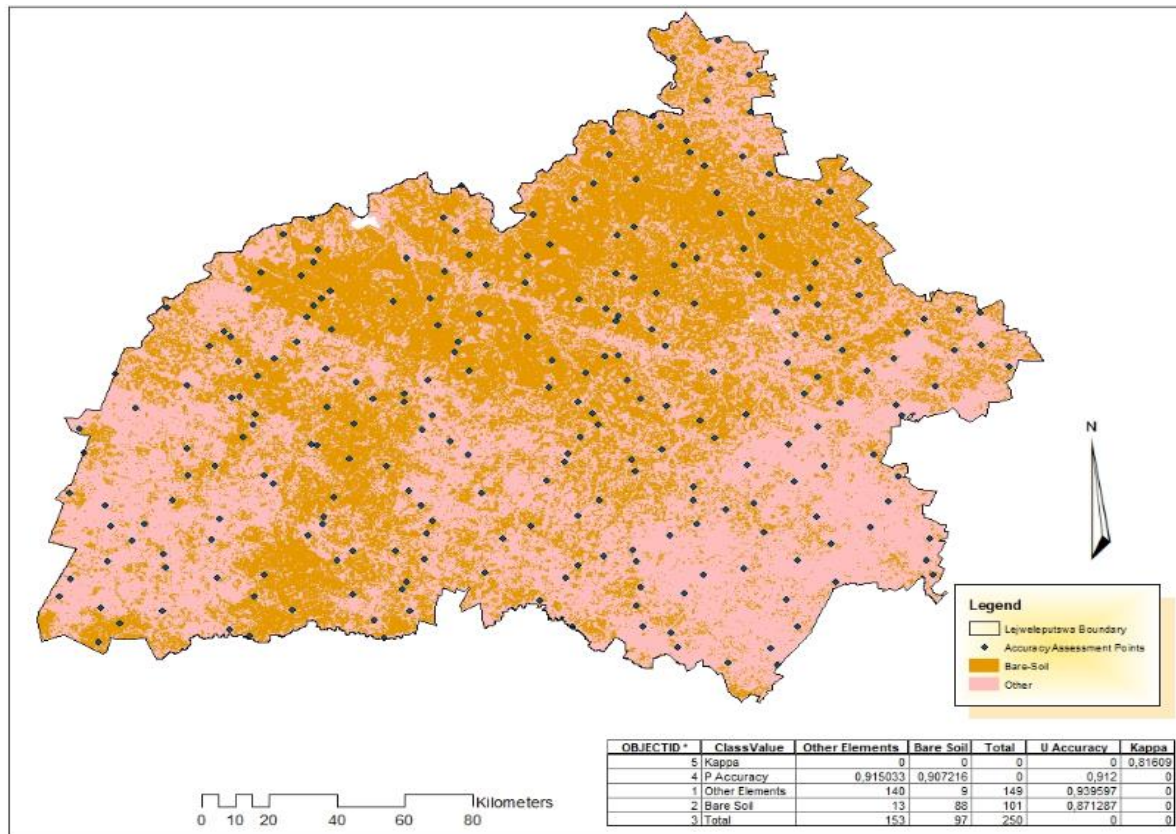


Figure 4.13: OBI confusion matrix (accuracy assessment) map

The results from the accuracy assessment show that the overall accuracy obtained from the 250 randomly sampled points is 91%. This means that out of 250 samples, 228 samples were correctly classified as either being other elements or bare soil. The OBI was able to classify 140 samples of other elements found in the study area out of a possible 149 randomly selected test samples, omitting only nine classes. The OBI managed to classify 88 bare soil classes in the study area out of a possible 101 randomly selected test samples, omitting 13 classes. The confusion matrix computed the kappa coefficient as 82%. The kappa coefficient is rated as substantial and the classified image was therefore found to be fit for further research (Fenstermaker, 1991).

4.10 CONCLUSION

The aim of this chapter was to improve the existing BI proposed by Li and Chen in 2014. This section derived an index (the OBI) from the logical combination of two indices, using the arithmetic function of the OBI and SAVI for delineated bare soils. The OBI distinguished bare soil areas very well in this study. The areas viewed as bare soils when using the OBI are regarded as bare soil areas in this study moving forward and the prediction of surface soil texture is restricted to these bare soil areas.

CHAPTER 5: GEOSTATISTICAL ANALYSIS

5.1 INTRODUCTION

The preceding chapters presented the knowledge available on soil mapping using remote sensing data, and provided background on some technologies and tools relevant to predictive soil mapping. The objective of this chapter is to apply this knowledge to developing a methodology suitable for predicting surface soil texture using L8SR data. The discussion in this chapter begins with a brief summary of the sampling scheme undertaken in this study, as well as the origin and nature of the legacy data (soil texture, sand, silt, and clay) used. To demonstrate the ability of L8SR data to predict surface soil texture, a statistical inferential analyses process is modelled using the kriging interpolation method with the legacy data as the input data.

5.2 SPATIAL SAMPLING

When making inferences about a phenomenon, one is forced to collect a limited number of samples instead of attempting to acquire information from every possible location. A full inventory would yield a clear picture of the variability of the variable of interest, while sparse sampling might miss important features. According to Hall *et al.* (2001), when surveying a phenomenon characterised by spatial variation, it is of prime importance to identify optimal sample locations in the study area. Spatial sampling methods have been consistently used to collect data for natural resources with the main objective of predicting or estimating natural resources in the entire geographic extent (Kumar, 2007). The process of spatial sampling depends on the purpose of the research (Suchecka, n.d.), and generally follows two steps.

The first step in spatial sampling is to construct a frame of a finite population of identifiable geographic units (Wang *et al.*, 2012). This is achieved by overlaying a geometric pattern onto the geographic area of interest to generate a sampling frame by partitioning the geographic extent into a finite number of identifiable units. In the second step, one of the four classic methods of sampling (i.e., simple random sampling, systematic random sampling, stratified random sampling, cluster random sampling, and/or a combination of two or more of these four methods) can be employed to select sample sites from the research area (Maoa *et al.*, 2009).

5.2.1 Random sampling

According to De Smith *et al.* (2007), the basis of most sampling plans in spatial sampling is the concept of random or probabilistic sampling. Random sampling is used when the population is situated in a wide geographical area and it is necessary to select relevant objects from this area (Wang *et al.*, 2012). A sample is the result of several stages (Suchecka, n.d.). After determining the area, limits are defined and part of the surface that is to be analysed is determined. This area is further divided into squares of adequate size, and these squares become units in the research. The entire area displayed on the map is then numbered. An advantage of this method is that it provides an easy way of drawing particular units. The disadvantage, however, is the risk of obtaining an uneven distribution of squares in certain fragments of the analysed area.

5.2.2 Systematic sampling

Systematic sampling is used when attempting to avoid clustered sampling and difficulties associated with finding randomly spaced locations in the field (Warrick, 2001). In this approach, the squares that divide the entire area are evenly distributed in the generated grid (Suchecka, n.d.). Sample locations occur either at the centre of these grid cells or at the intersection of the grid lines. When samples are located at the centre of cells, the resulting values are thought to be representative of the soil within the grid cell. The advantage of this technique is the fact that it does not require the determination of the sampling space prior to the selection (Suchecka, n.d.). The major disadvantage of systematic sampling is that the sample rows may be perfectly aligned with soil or management features that vary systematically (Warrick, 2001); for example, sample rows may be alternately aligned with irrigation furrows and then hills. In either case, the analysis of spatial patterns in the direction of the columns might show periodicity.

5.2.3 Sampling scheme in the study area

Using the fishnet tool in ArcGIS 10.6, a 3 x 3 km grid was constructed over the 32 863 km² study area, which resulted in 3 266 points. These points were then clipped onto the bare soil area discerned using the OBI, which resulted in 957 points (Figure 5.1). Using the features tool on ArcGIS 10.6, the XY coordinates were added to the attribute data of the 957 points. All seven L8SR bands were sampled for pixel values using the extract multiple values to points tool in ArcGIS 10.6, with the 957 sample points as input point features (Appendix A).

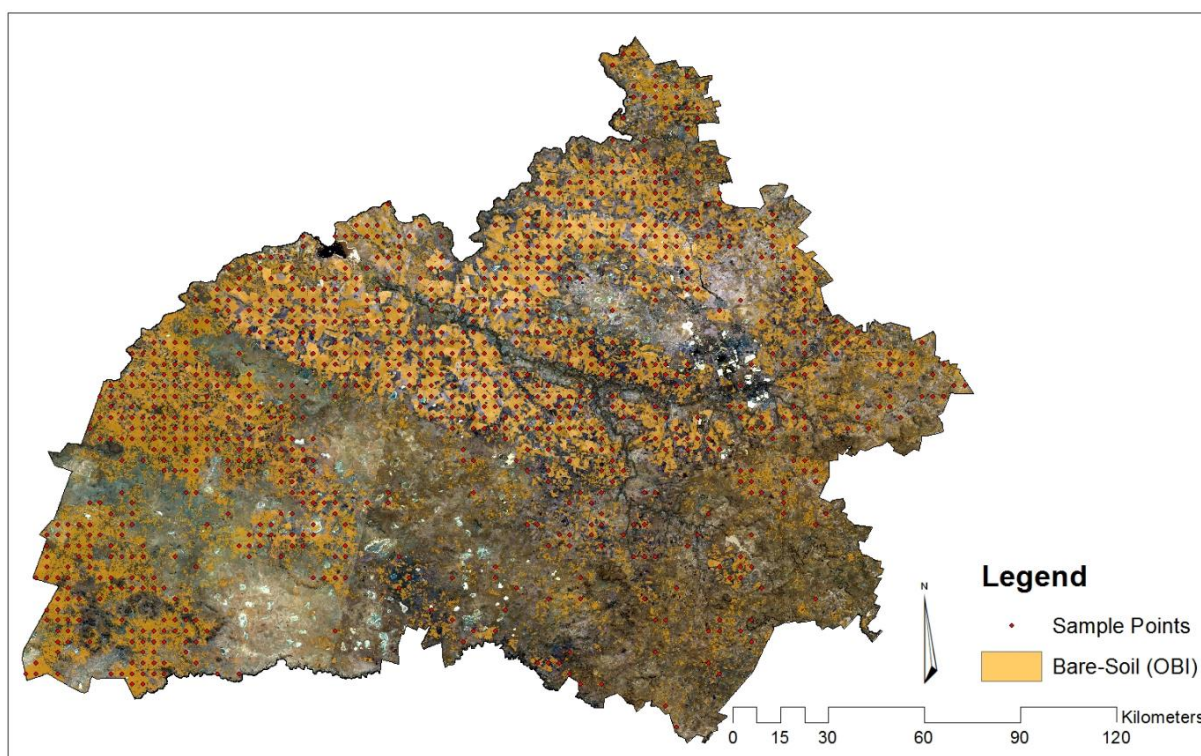


Figure 5.1: Distribution of the 957 sample points collected at 3 x 3 km in the study area

5.3 LEGACY SOIL DATA

The soil texture data used in this research were obtained from the Agricultural Research Council: Institute for Soil, Climate and Water (ARC-ISCW). The ARC-ISCW is the custodian of the South African Soil Information System and the main soil research institute in South Africa (Lambrechts & MacVicar, 2004). The ARC-ISCW's data include a soil profile database, land type data, climate zone information system containing soil types, soil documentation systems containing soil maps, DSM information systems, and soil profile photographs.

The soil texture data provided by the ARC-ISCW covered the entire country of South Africa, with 40 004 georeferenced data points; each point consisting of a combination of master horizons O, A, E, B, C, R, and G based on the stratification at that particular point's profile.

The study area (Lejweleputswa District Municipality) contained 376 of the 40 004 data points (Figure 5.2). The data points that cover the area do not contain any O horizons; all 376 data points therefore consist of A, B, C, and/or G horizons. This study aimed to predict surface soil texture; therefore, only the A horizon data were used in this study. Appendix B contains the attribute table of the A horizon of the 376 data points that cover the study area.

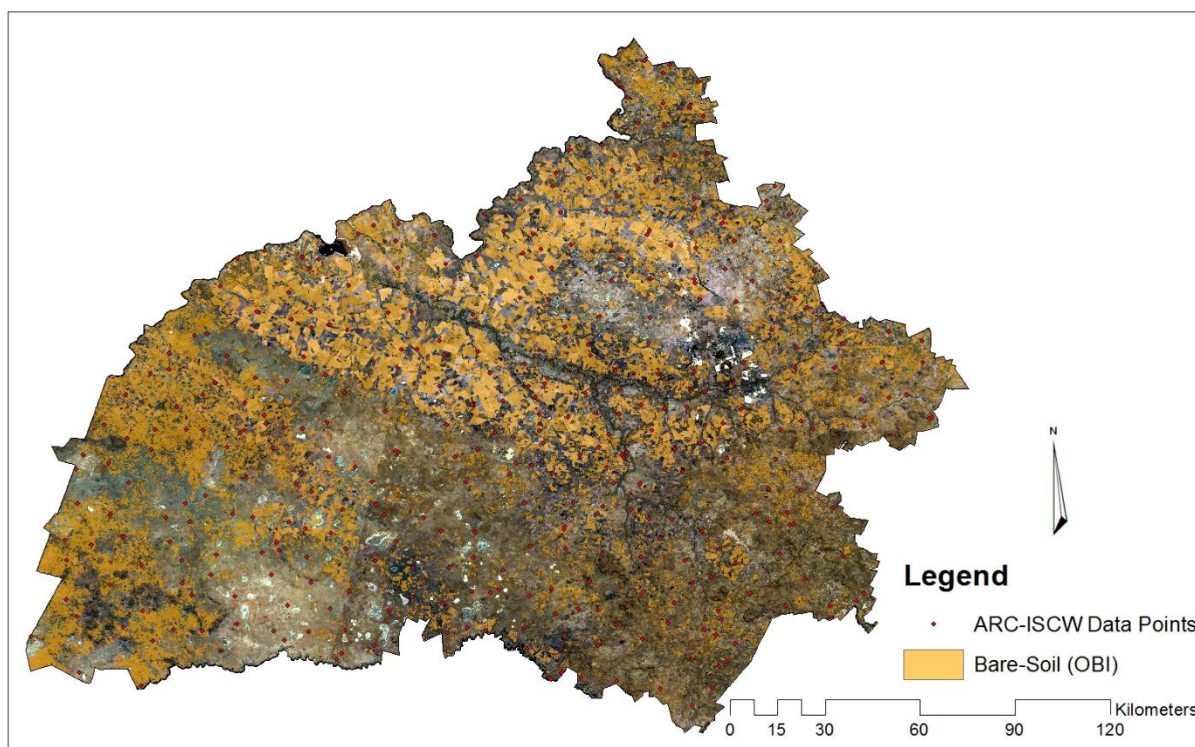


Figure 5.2: Distribution of Agricultural Research Council: Institute for Soil, Climate and Water (ARC-ISCW) data points in the study area

5.4 ORDINARY KRIGING (OK) ANALYSIS

None of the ARC-ISCW soil texture data points corresponded with the 3 x 3 km sampling scheme of the study area. This led to the ARC-ISCW data being interpolated using OK so that the values from the OK predictions could be sampled to correspond with the study area's sampling scheme. All three interpolation surfaces were created using the ArcMap 10.6 geostatistical analyst tool's (OK) default parameters. This interpolation method was chosen based on a comparative study conducted by Mtshawu (2014), which investigated the reliability of the two commonly used interpolation methods for mapping soil property distribution, namely IDW and kriging.

Mtshawu (2014) alluded that OK forms weights from surrounding measured values to predict values at unmeasured locations. As with IDW interpolation, the closest measured values usually have the most influence. The OK weights for the surrounding measured points are, however, more sophisticated than those of IDW, which uses a simple algorithm based on distance, but OK weights come from a semivariogram that is developed by viewing the spatial structure of the data. To create a continuous surface or map of the phenomenon, predictions are made for locations in the study area based on the semivariogram and the spatial arrangement of measured values that are nearby (Chapter 2).

Using the geostatistical wizard tool on ArcGIS 10.6, the 376 A horizon soil textural class (sand, silt, and clay) was interpolated using the OK default parameters (Figures 5.3, 5.4, and 5.5). The empirical semivariogram was used to predict the spatial autocorrelation of the sand, silt, and clay datasets respectively. For this analysis, the default model was fitted on the basis of validation and cross-validation (Appendix J, K, and L).

According to the Environmental Systems Research Institute (ESRI, 2010), cross-validation assists with making informed decisions about how well the model predicts the values at unknown sample locations. During the cross-validation process, a point is omitted and a value for that point's location is then predicted using the rest of the data; a comparison of the measured and predicted values then takes place. The difference between the measured and predicted value is known as a prediction error. The statistics calculated on the prediction errors serve as diagnostics that indicate whether the model is reasonable for decision making and map production.

To assess whether the model provided accurate predictions of sand, silt, and clay, the root mean square (RMS), mean standardised error (MSE), root mean square standardised error (RMSSE), RMSE, and average standard error (ASE) were used to estimate the performance of the developed model.

According to Johnson (2015), a better-fitted model has the least difference between RMS and ASE. An unbiased prediction is indicated by an MSE closest to 0 and an RMSSE closer to 1 (ESRI, 2010). MSE values greater than 0 and RMSSE values less than 1 indicate an overestimation of predictions, while models with MSE values less than 0 and RMSE values greater than 1 indicate underestimated predictions (Johnson, 2015). For a model that provides accurate predictions, the RMSE and ASE should be as small as possible because this is useful when comparing models (Mtshawu, 2014).

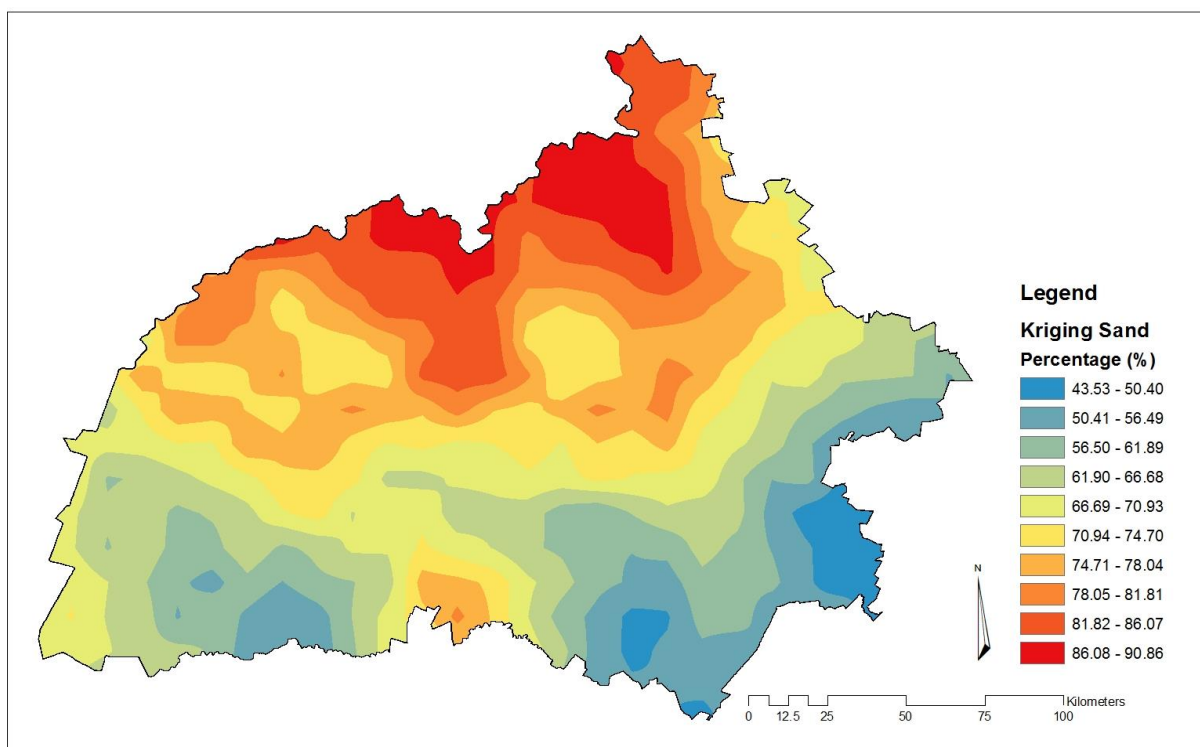


Figure 5.3: Prediction map of A horizon sand content

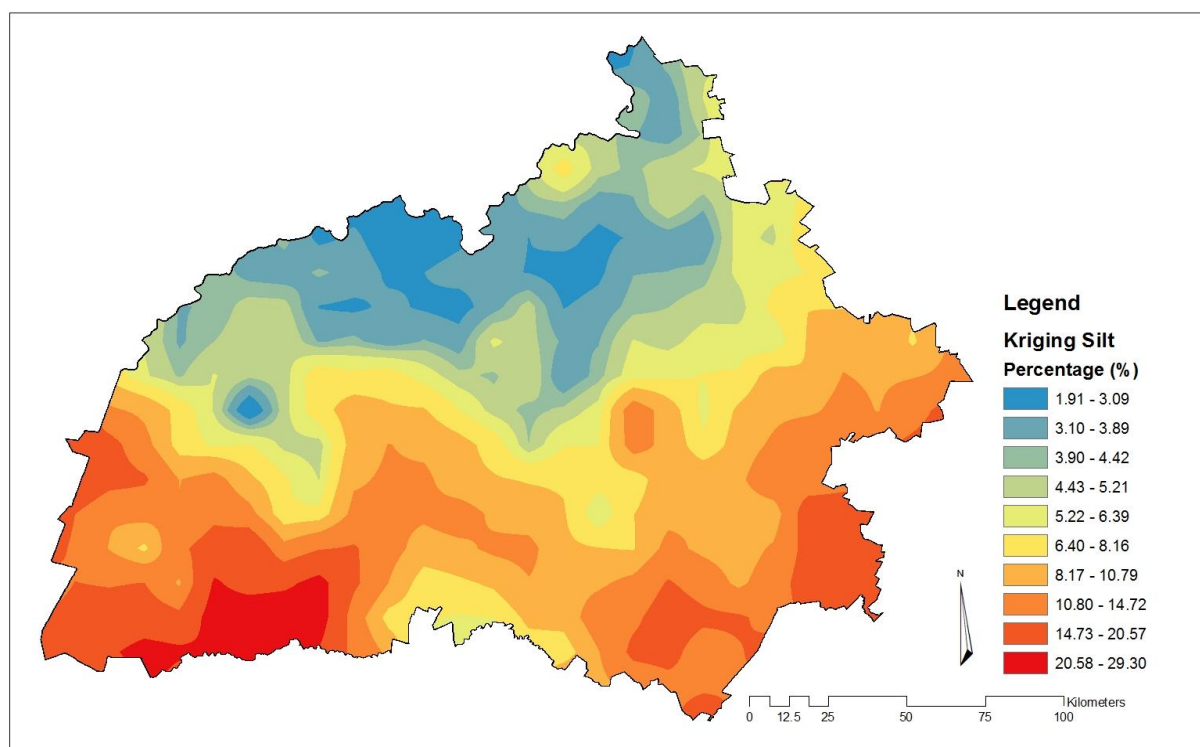


Figure 5.4: Prediction map of A horizon silt content

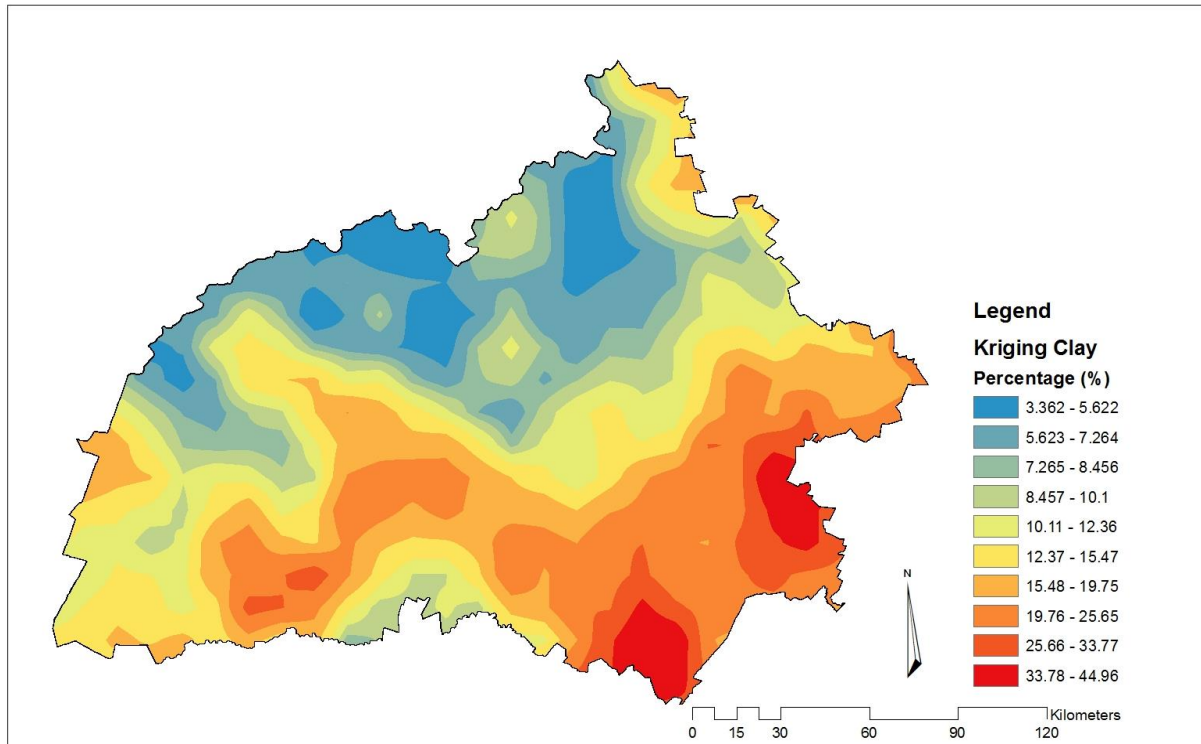


Figure 5.5: Prediction map of A horizon clay content

5.5 RESULTS

Table 5.1 shows the cross-validation prediction errors produced by OK. Ordinary kriging does not provide the RMSE on the cross-validation prediction errors. The RMSE was calculated using the validation/prediction attribute table. To calculate the RMSE, a field was added for each soil textural class validation attribute table, defined as a double and named “Error_Squared”. A field calculator was used to calculate the values of this newly created field with the expression “Error * Error”. The summary statistics provided the mean for these squared errors and, finally, the square root of the mean was calculated, which resulted in the RMSE value.

The results show that the MSE is closer to 0 and the RMSSE is equal to 1 for sand, silt, and clay. This is an indication that the prediction errors are valid for all three textural classes. For sand and silt, the MSE is greater than 0 and equal to 1; the OK predictions for sand and silt were therefore overestimated. While the MSE for clay is less than 0 and the RMSSE is equal to 1, the model underestimated the variability of the predictions. The difference between the RMS and ASE for all three models (sand = 0.27, silt = 0.90, and clay = 0.17) is small enough to confirm that the models are a good fit.

Table 5.1: OK cross-validation prediction errors for sand, silt, and clay

Soil texture	ME	RMS	ASE	RMSSE	RMSE
Sand	0.2254	31.4609	31.7312	0.9919	29.8836
Silt	0.0388	6.8141	7.7157	0.8811	2.4487
Clay	-0.0845	10.7964	10.6224	1.0129	2.8454

5.6 CONCLUSION

Considering the sparsely distributed ARC-ISCW sample points, the prediction model performed extremely well. The results provided by the OK interpolation for the A horizon of the ARC-ISCW soil texture data were satisfactory based on the cross-validation/validation prediction errors.

The main aim of the prediction of A horizon ARC-ISCW soil texture was so that the predicted values could be sampled to correspond with the already sampled pixel values in the study area. Using the extract multiple values to points tool in ArcGIS 10.6, the sand, silt, and clay surfaces were sampled using the 957 sampling points as input point features (Appendix A). The L8SR DNs, together with the ARC-ISCW surface sand, silt, and clay percentages, are used in Chapter 6 to perform the regression analysis.

CHAPTER 6: REGRESSION ANALYSIS

6.1 INTRODUCTION

This chapter describes the regression analysis of L8SR DNs and the kriged ARC-ISCW soil texture percentage values. The chapter consists of three sections, namely the computation, results, and a discussion of Pearson's correlation coefficient in the first section, followed by the modelling and results produced by OLSR in the second section, and, lastly, GWR is computed in the third section.

6.2 PEARSON'S CORRELATION COEFFICIENT

To detect the relationship between surface soil texture and the L8SR DNs of the seven bands, Pearson's correlation coefficient analysis was applied using the Statistical Package for the Social Sciences (SPSS).

A Microsoft Excel spreadsheet containing 957 points of L8SR DNs for the seven bands, as well as surface soil texture in percentages of sand, silt, and clay, was imported into SPSS (Appendix A). The bivariate Pearson's correlation was used to produce a sample correlation, which is a measure of strength and direction of linear relationships between pairs of continuous variables (DNs and surface soil texture). The correlation also evaluates whether or not a linear relationship exists among the same pairs of variables in a population (DataStep Development, 2004).

The hypothesis of the significance test for the correlation was left at default, which is the two-tailed significance test. This means that regardless of the direction of the relationship hypothesised, the testing is for the possibility of a relationship in both directions. The bivariate Pearson's correlation will indicate whether or not a statistically significant linear relationship exists between the two variables, the strength of the linear relationship (how close the relationship is to being a perfectly straight line), as well as to provide the direction of the linear relationship (increasing or decreasing) (Pallant, 2013).

The Pearson's correlation coefficient analysis results for the L8SR DNs and surface soil texture are shown in Table 6.1. All the values in Table 6.1 are significant at the 0.01 level (Appendix C for a full SPSS report). The significance value, also known as the p-value, describes the likelihood or probability that the differences observed between the two samples are due to chance or not (Figueiredo Filho *et al.*, 2013). In a standard approach to significance testing there is usually a null hypothesis (H_0) that denies the existence of a relationship

between variables, while an alternative hypothesis (H_1) supports the existence of a relationship. In this instance, a p-value ≤ 0.01 provides strong evidence against the null hypothesis in favour of the alternative (Hooper *et al.*, 2008).

Table 6.1: Pearson's correlation between surface sand, silt, and clay content and the digital numbers (DNs) of the L8SR imagery

Soil texture	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7
Sand (ARC-ISCW)	0.395	0.455	0.521	0.493	0.506	0.527	0.510
Silt (ARC-ISCW)	-0.314	-0.351	-0.438	-0.421	-0.453	-0.470	-0.456
Clay (ARC-ISCW)	-0.258	-0.342	-0.441	-0.434	-0.443	-0.438	-0.425

A positive correlation exists between surface sand content and the DN's of all seven bands. Surface silt and clay content shows a negative correlation with the DN's of all seven bands. The DN's of Band 6 have the strongest absolute correlation with the surface soil texture of sand and silt, while Band 5 has the strongest absolute correlation with that of clay. These results are as expected if one refers to Figure 4.2 in Section 4.7.2. Figure 4.2 illustrated the spectral profile of the study area, where a clear contrast between all land cover classes, including bare soil, was evident from the NIR (Band 5), SWIR1 (Band 6), to SWIR2 (Band 7). The difference between bare soil and all other land cover classes is apparent in the VIS to SWIR2 bands; this has caused these bands to be widely used for bare soil mapping (Herold *et al.*, 2003). For this reason, the OLSR and GWR analysis was conducted on Band 6 for surface sand and silt, while Band 5 was used for clay.

Spearman's rank correlation test was conducted to test the validity of Pearson's correlation coefficient; the test results show that for all the L8SR bands, ARC-ISCW surface sand had the strongest positive association (0.545) with Band 6, while ARC-ISCW surface silt had the strongest negative association (-0.507) with Band 6, and ARC-ISCW clay showed the strongest negative association (-0.458) with Band 5. The SPSS Spearman's rank correlation test report is attached in Appendix C. This is in agreement with Pearson's correlation coefficient.

Spearman's rank correlation test is a non-parametric test that is used to measure the degree of association or strength of a monotonic relationship between paired data (Schober *et al.*, 2018). Spearman's coefficient is a Pearson's correlation coefficient calculated with the ranks of the values of each of the two variables instead of their actual values (Gauthier, 2001). Because ordinal data can also be ranked, the use of a Spearman's coefficient is therefore not restricted to continuous variables. By using ranks, the coefficient quantifies strictly monotonic relationships between two variables. Ranking the data in turn converts a nonlinear monotonic relationship to a linear relationship (Rodgers & Nicewander, 1988).

Unlike the Pearson's correlation, which measures the linear association between two normally distributed random variables, Spearman's rank correlation test describes the monotonic relationship between the two variables (Schober *et al.*, 2018).

6.3 OLSR AND GWR MODELLING

Both OLSR and GWR determine the ability for one or more independent variables to explain variability in the dependent variable. The difference between the two regression techniques is that, unlike OLSR that uses all observations in the parameter estimation (thus a global method), GWR uses a subset of the observations to estimate the parameters for each prediction point (a local method) (Chan, 2008).

This research used the L8SR DNs as independent variables and the contents of sand, silt, and clay as dependent variables in the regression model. The relationship between surface soil texture and L8SR is captured in a mathematical equation that enables the determination of the overall predictive power of the model, its statistical significance, the contributions of the individual independent variable, and their individual significance. Both OLSR and GWR modelling tools are found on the spatial statistics tool in ArcGIS and were utilised at default settings.

Before executing the tools and examining the results, a review of some terminology is necessary for the interpretation of the OLSR and GWR results.

6.4 OLSR MODELLING

In Chapter 2, OLSR was defined as a generalised linear modelling technique that may be used to model a single response variable that has been recorded on at least an interval scale. According to ESRI (2018), when OLSR is computed on ArcGIS, the diagnostic model produced by OLSR has several "goodness-of-fit" measures. The multiple r^2 measures the proportion of the variation in the dependent variable that is accounted for by the model, and it can range from 0 to 1. Values closer to 1 indicate that the model has a better predictive performance. The problem with r^2 is that it is influenced by the number of independent variables. The adjusted r^2 is a preferred measure because it contains some adjustments for the number of variables in the model.

Another goodness of fit is provided by the Akaike Information Criterion (AIC). Unlike r^2 , the AIC is not an absolute measure; it is a relative measure used to compare different models that have the same independent variable. The AIC is a measure of relative distance between the model that has been fitted and the unknown true model. Models with smaller AIC values are

preferable to models with higher values. The t-statistic tests the hypothesis that the value of an individual coefficient estimate is statistically and significantly different from zero. A positive coefficient means that the relationship between variables is positive, while a negative coefficient means that this relationship is negative. If the coefficient is positive, it means that the dependent values increase as the independent variables increase. The rest of the terminology is explained in the report produced as the results of the model (Appendices D, E, and F).

A map of standard residuals is automatically generated as an output of OLSR modelling (Figures 6.1, 6.2, and 6.3). This map shows standard deviations. The standard residual has a mean of 0 and a standard deviation of 1. Observations that are deemed interesting are those with a standard deviation greater than 2 (model under-prediction) or a negative standard residual less than -2 (model over-prediction).

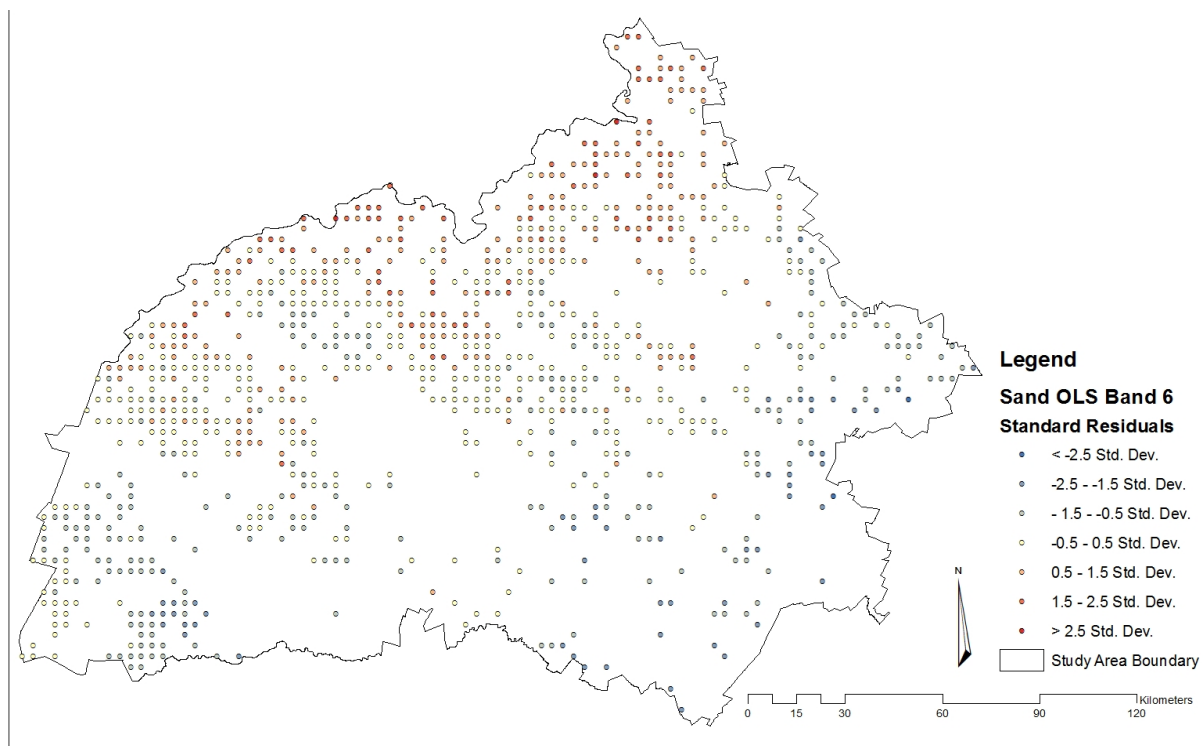


Figure 6.1: OLSR model: Map of standard residuals for surface sand content and DN Band 6

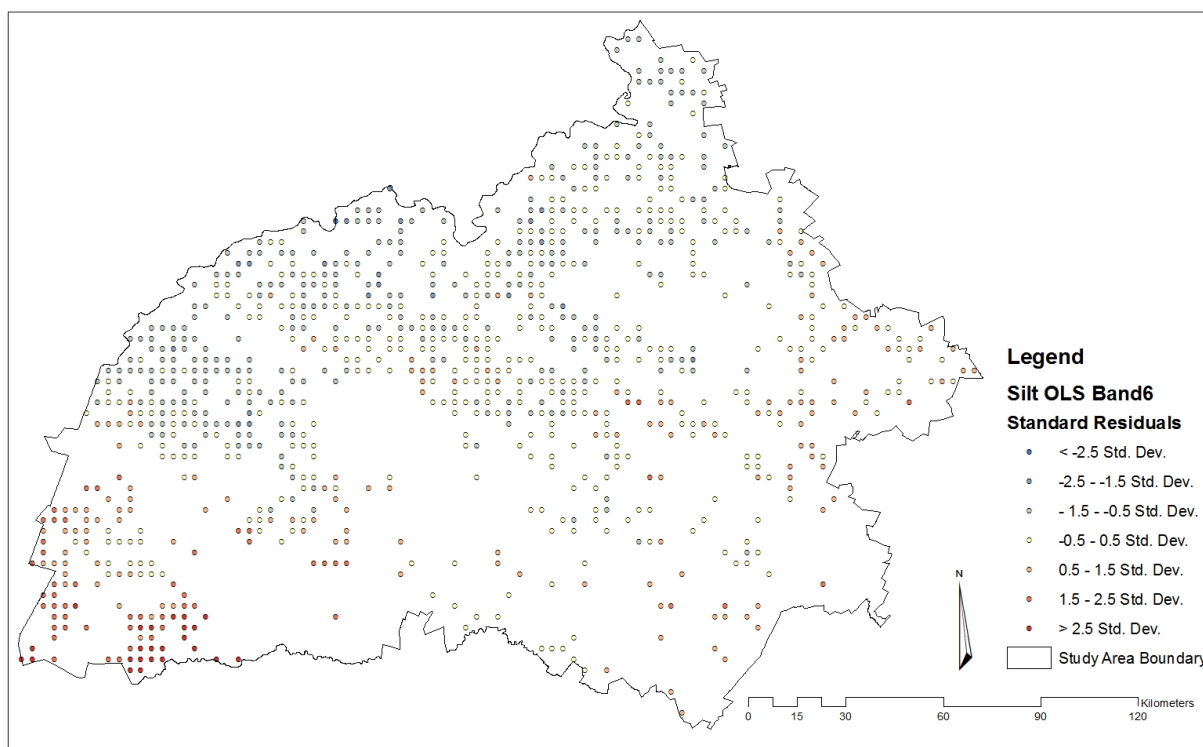


Figure 6.2: OLSR model: Map of standard residuals for surface silt content and DN Band 6

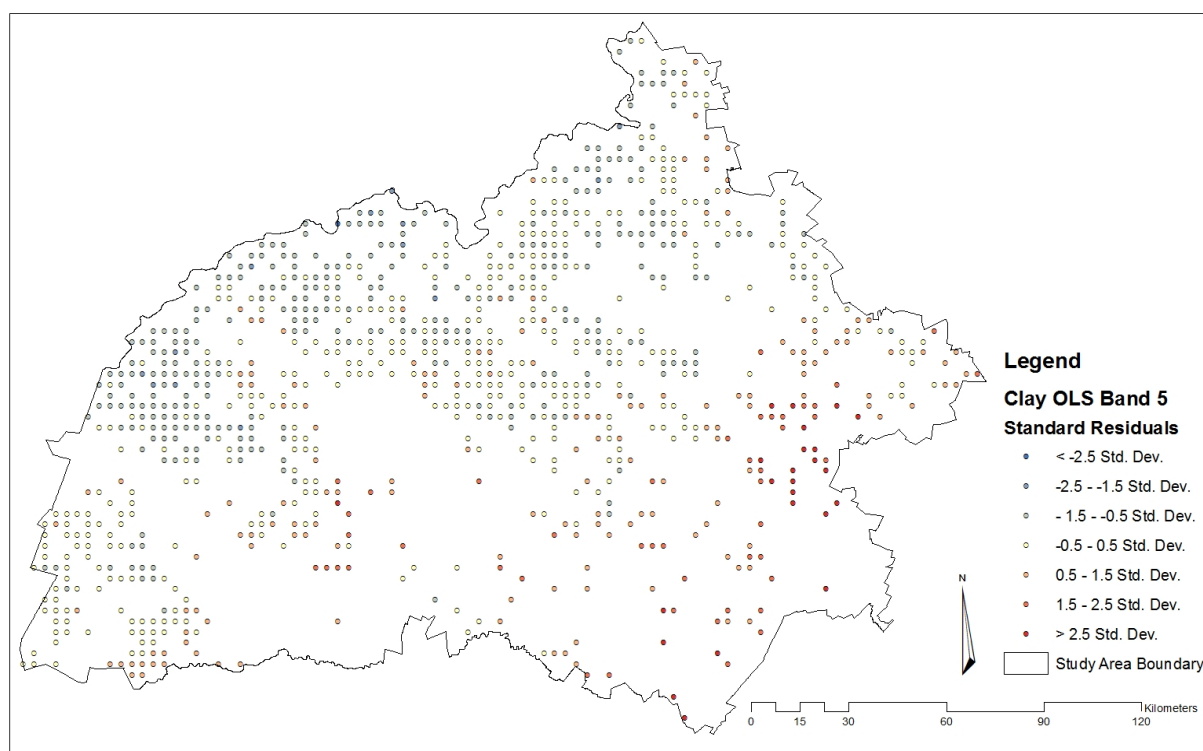


Figure 6.3: OLSR model: Map of standard residuals for surface clay content and DN Band 5

6.4.1 Interpreting OLSR results

The OLSR default output map for surface soil texture and the DNs of the L8SR data are shown in Figure 6.1 for sand and Band 6, Figure 6.2 for silt and Band 6, and Figure 6.3 for clay and Band 5. The red sample points are under-predictions, where the actual percentage of surface soil texture (sand, silt, and clay) is higher than the model predictions. The blue sample points are over-predictions, where the actual percentage of surface soil texture (sand, silt, and clay) is lower than the predictions. When the OLSR model performs well, the over- and under-predictions reflect random noise. The models presented in Figures 6.1, 6.2, and 6.3 show standard residuals with no definitive structure on the over- and under-predictions (the high and low values seem to be evenly distributed across the study area).

Appendices D, E, and F contain the three OLSR model reports for the percentage of surface soil texture (sand, silt, and clay) and L8SR DNs. The coefficient for surface sand texture and Band 6 is positive. This means that when the percentage of sand texture increases, so do the DNs of Band 6. The coefficients of surface silt texture with Band 6, as well as surface clay texture with Band 5, are negative. This means that when the percentage of silt and clay increases, the DNs decrease, and vice versa. This makes it very hard to trust the model.

The adjusted r^2 for the sand OLSR model is 0.27, for the silt model 0.22, and for the clay model 0.20. This means that none of the models show any predictive potential because all three models can only account for less than 30% of the variation in the dependent variable. This suggests that the models are not the best fit, because they are unable to account for more than 70% of the variation in surface soil texture.

To verify the reliability of the model, all the explanatory variables must have statistically significant coefficients. The summary of OLSR results columns (probability and robust probability) measures the coefficient statistical significance. An asterisk next to the probability is a sign that the coefficient is significant. All three OLSR models presented have statistically significant coefficients.

The Jarque-Bera test on the OLSR diagnostics measures whether or not the residuals from the regression model are normally distributed. This test should not be statistically significant. When the Jarque-Bera test is statistically significant, the OLSR model is biased because the residuals are not normally distributed. The Jarque-Bera test for the OLSR surface sand texture model is not significant, which means that the model is not biased, while the Jarque-Bera test for the OLSR surface silt and clay texture model is significant, which means that the model is biased.

The last OLSR diagnostic test discussed is the Koenker's studentised Breusch-Pagan statistic test (hereafter referred to as the Koenker test). A statistically significant Koenker test indicates that the relationships being modelled are not consistent. The OLSR models for surface sand, silt, and clay are all statistically significant, which could be as a result of non-stationary variables or the heteroskedasticity of the variables. This might mean that the L8SR DNs might be an important predictor of surface soil texture in the study area, but perhaps a weak predictor in other locations. Whenever the Koenker test is statistically significant, it indicates that the OLSR model results might improve when modelling is done on GWR.

All three OLSR models for surface soil texture performed extremely poor. This is further corroborated by the spatial autocorrelation results (Appendices M, N, and O). According to ESRI (2010), if the spatial autocorrelation is high (either positively or negatively, respectively, indicating distributions that are more clumped or dispersed than expected from randomly distributed points on a landscape), then there is evidence of nonindependence between sampling locations, and if the spatial autocorrelation is near zero (randomly distributed), then there is evidence of independence of samples between locations. The OLSR model resulted in clustered residuals, indicating a violation of homoscedasticity. Therefore, the modelling cannot be trusted. GWR is thus used in an attempt to improve the reliability of the predictions from the models. This will also enable the process of mapping the values provided by the coefficient estimates to examine whether the process appears to be spatially heterogamous or not. One advantage of GWR is that it incorporates local spatial relationships into the regression framework in an intuitive and explicit manner

6.5 GWR MODELLING

The input feature class for the GWR model is the same as that which is specified for the OLSR models, namely L8SR DNs as independent variables and the contents of sand, silt, and clay as dependent variables. Figure 6.4 illustrates the distribution of the sample points' standard residuals for the sand texture percentages and Band 6 GWR model; Figure 6.5 is for silt and Band 6; and Figure 6.6 for clay and Band 5. The GWR output coefficients and diagnostics database report tables for the three models are presented in Tables 6.2, 6.3, and 6.4.

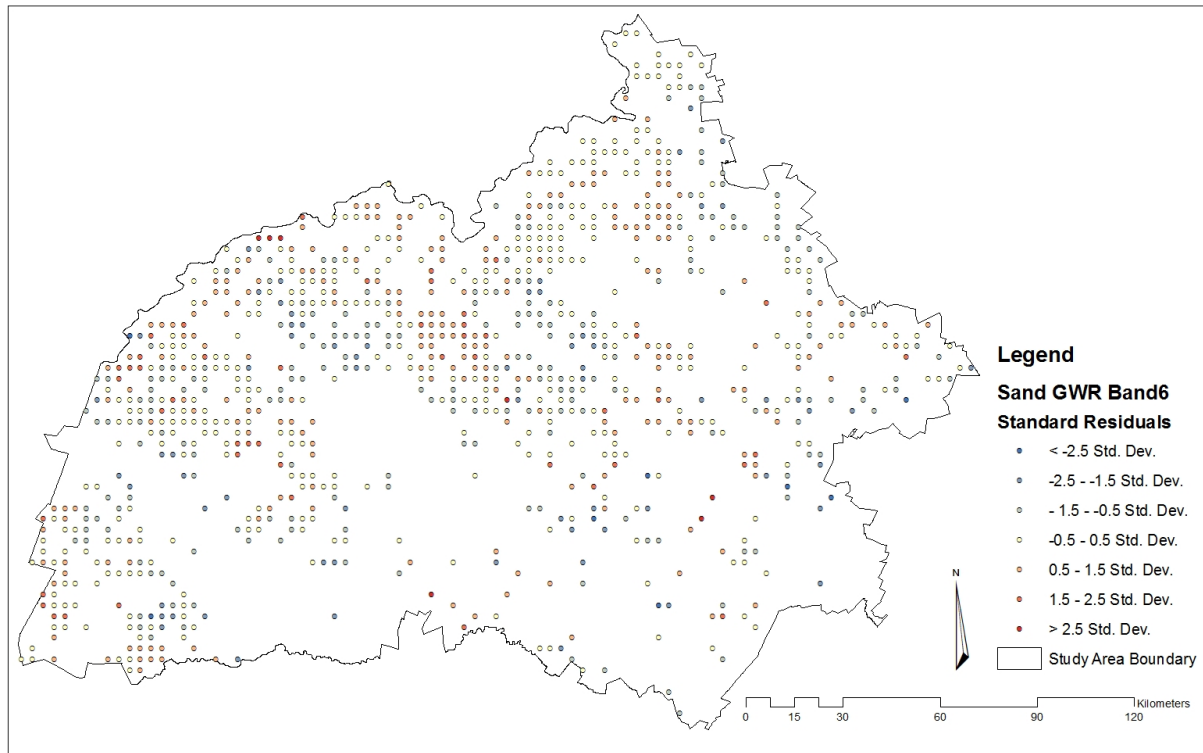


Figure 6.4: GWR model: Map of standard residuals for surface sand content and DN Band 6

Table 6.2: GWR report for surface sand content model

Varname	Variable	Definition
Bandwidth	16843.067	
Residual Squares	6201.732	
Effective Number	99.570	
Sigma	2.689	
AICc	4658.709	
r^2	0.918	
r^2 adjusted	0.909	
Dependent Field	0.000	sand_corre
Explanatory Field	1.000	Band_6_E

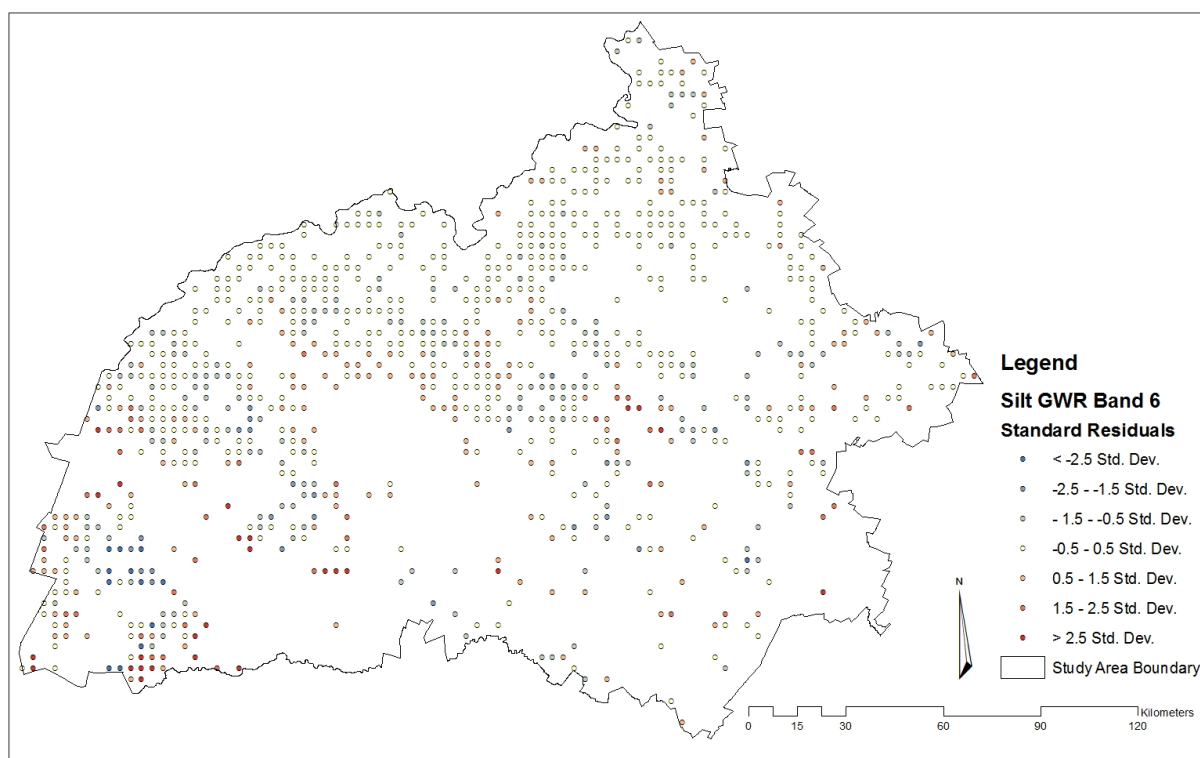


Figure 6.5: GWR model: Map of standard residuals for surface silt content and DN Band 6

Table 6.3: GWR report for the surface silt content model

Varname	Variable	Definition
Bandwidth	16843.067	
Residual Squares	2012.210	
Effective Number	99.570	
Sigma	1.532	
AICc	3581.514	
r^2	0.894	
r^2 adjusted	0.882	
Dependent Field	0.000	Silt_Corre
Explanatory Field	1.000	Band_6_E

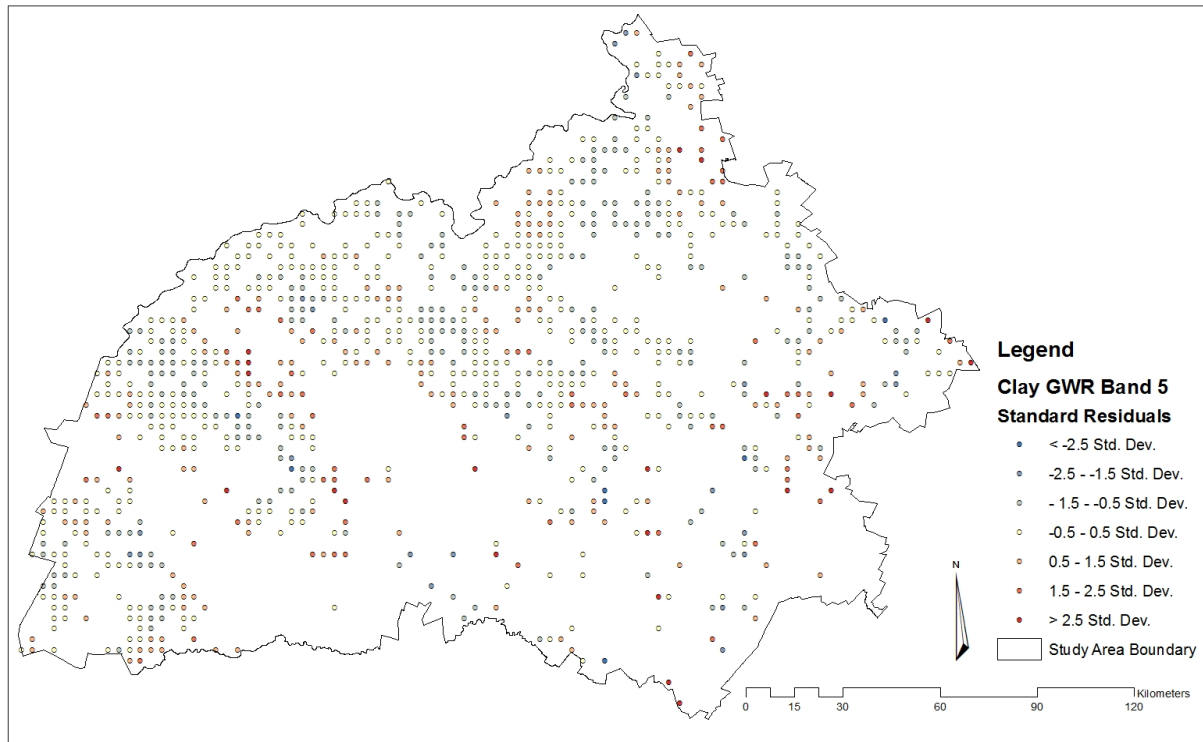


Figure 6.6: GWR model: Map of standard residuals for surface clay content and DN Band 5

Table 6.4: GWR report for the surface clay content model

Varname	Variable	Definition
Bandwidth	16843.067	
Residual Squares	4495.391	
Effective Number	99.485	
Sigma	2.290	
AICc	4350.493	
r^2	0.872	
r^2 adjusted	0.857	
Dependent Field	0.000	Clay_corre
Explanatory Field	1.000	Band_5_E

6.5.1 Exploring the GWR results

The first step was an OLSR analysis between the ARC-ISCW surface soil texture variables and the L8SR DN values to understand the degrees of association between them. The main reasons for using OLSR was because it provides valuable diagnostic information that indicates whether the explanatory variables are significant, whether the residuals are normally distributed, and ultimately whether a good model is being used. It is in most cases difficult to find an OLSR model that fits well because a single global model is not suitable for an entire study area. It is possible that one set of variables provides a good model for a part of the study area, but is inadequate for other parts.

In this case, the option was to proceed with the GWR model and the full set of variables from the whole study area because GWR would adjust the coefficients to reflect regional variation. The GWR model diagnostics results were exceptional. Tables 6.2, 6.3, and 6.4 present the results of the GWR analysis for ARC-ISCW surface soil texture variables and L8SR DNs. The adjusted r^2 values dramatically increased for all three soil texture classes, from adjusted r^2 0.27 for the OLSR model of sand to 0.91 for the GWR model, from adjusted r^2 0.22 for the OLSR model of silt to 0.88 for the GWR model, and lastly from adjusted r^2 0.20 for OLSR model of clay to 0.86 for the GWR model.

The AICc values considerably decreased for all three soil texture classes as compared with those from the OLSR model. This is good news because models with smaller AICc values are preferable to models with higher values. The AICc value for the sand and Band 6 OLSR model decreased from 6606.64 to 4658.71 for the GWR model, while the AICc value for the silt and Band 6 OLSR model decreased from 5345.15 to 3581.51 for the GWR model, and the AICc value for the clay and Band 5 OLSR model decreased from 5960.18 to 4350.49 for the GWR model. This difference implies that the local model's fitness is higher when explaining a spatial dataset such as surface soil texture (sand, silt, and clay) (Nkeki & Osirike, 2013) because the model with the lower AICc value provides a better fit to the observed data (ESRI, 2010).

The AICc bandwidth, also known as neighbours, is the bandwidth used for each local estimation, which is used to control the degree of smoothing in the model. The residual squares are the sum of the squared residuals in the model; the residual being the difference between an observed y-value and its estimated value returned by the GWR model. The smaller this measure, the closer the fit of the GWR model to the observed data. The stigma value is the square root of the normalised residual sum of squares. Stigma is used for the AICc computation.

Like the OLSR model, GWR also provides output maps of standard residuals for the standard deviation of surface soil texture and L8SR DN variables (Figure 6.4 for sand and Band 6, Figure 6.5 for silt and Band 6, and Figure 6.6 for clay and Band 5). The red sample points are under-predictions, where the actual percentage of surface soil texture (sand, silt, and clay) is higher than the model predictions. The blue sample points are over-predictions, where the actual percentage of surface soil texture (sand, silt, and clay) is lower than the predicted. According to ESRI (2010), the standard residuals can further be explored using the histogram found on the geostatistical analyst toolbox. When the regression model residuals are not normally distributed with a mean of zero, the p-values associated with the coefficients are unreliable. Geographically weighted regression modelled standard residuals in this study were normally distributed across the study area, with a standard deviation of 1 for all three soil

texture classes (sand, silt, and clay); the p-values associated with the coefficients are therefore reliable (Appendix P). These spatial distributions of the coefficients reveal that the relationships between the remotely sensed information and the soil texture classes vary not only in magnitude, but also in direction.

6.6 OLSR AND GWR DISCUSSION

In conducting the primary analysis using OLSR, it was discovered that the global regression model (OLSR) was a weak predictor of surface soil texture using L8SR data. The OLSR model did not account for the inherent spatial relationship that exists in surface soil texture; it failed to produce relevant results in the direction and strength of the correlation that exists between variables. This research showed that GWR models the relationship between surface soil texture and L8SR data in a meaningful and conclusive manner. The reason behind GWR's success in modelling this relationship lies in the use of a local model for each observation. The model mirrors more accurately what is seen as the natural relationship between surface soil texture and pixel values from L8SR data.

The good performance of the GWR models was to be expected considering the underlying assumption in a global OLSR model that relationships between the predictors and the outcome variable are homogeneous across space (Matthews & Yang, 2012). The OLSR model assumes that the same stimulus provokes the same response in all parts of the study region. Practically, this is not true; the relationships between variables might be non-stationary and vary geographically (Jones & Hanham, 1995). Spatial non-stationarity exists when the same stimulus provokes a different response in different parts of the study region. If non-stationarity exists, then there is a suggestion that different processes are at work within the study region (Matthews & Yang, 2012).

According to Fotheringham *et al.* (2002), GWR is like a “spatial microscope” due to its ability to measure and visualise variations in relationships that are unobservable in aspatial, global OLSR models. Geographically weighted regression places emphasis on differences across space, and the search for the exception or local hot spots.

This study made use of the AIC to consider model complexity and thus facilitating a comparison between the overall model results from the global OLSR model with those from the local GWR model. The AIC revealed in an explicit spatial perspective that GWR significantly improved the model fit from OLSR.

The GWR model estimated local standard errors, derived local t-statistics, calculated local goodness-of-fit measures (such as the R^2), and calculated local leverage measures.

The output from GWR included data that can be used to generate surfaces for each model parameter that can be mapped and measured, where each surface depicts the spatial variation of a relationship with the outcome variable. It is therefore essential to map them to make some sense of the patterns they display (Fotheringham *et al.*, 2002). Mapping GWR results facilitates interpretation based on spatial context and the known characteristics of the study area (Goodchild & Janelle, 2004).

The report produced by the GWR model (Appendices G, H, and I) contained observed as well as predicted variables for all three soil texture classes. Ordinary kriging was used to visualise GWR's spatial variability between the observed and predicted variables. The surfaces produced by OK for the observed A horizon ARC-ISCW surface soil texture and predicted GWR surface soil texture using L8SR data are illustrated in Figures 6.7 to 6.12. There was very little variability between the observed and predicted values for all three soil texture classes (i.e., sand observed and predicted, silt observed and predicted, and clay observed and predicted).

The lack of variability in the OK surfaces can be explained by the low residual values produced by GWR. Residuals are a measure of how far from the regression line data points are. The RMSE, which is the standard deviation of the residuals (prediction errors), was calculated (Table 6.5). The RMSE is a measure of how spread out these residuals are. In other words, the RMSE shows how concentrated the data are around the line of best fit. The RMSE results for surface sand texture only account for ~5% of the lowest predicted value and ~3% of the highest predicted value, which means that the GWR model was a good fit for predicting the observed values. The RMSE for surface silt texture accounts for ~49% of the lowest predicted value and ~6% of the highest predicted value, and the RMSE for the surface clay texture accounts for ~50% of the lowest predicted value and ~6% of the highest predicted value. The surface silt and clay texture results are inconclusive as no dominant trend could be discerned with the RMSE.

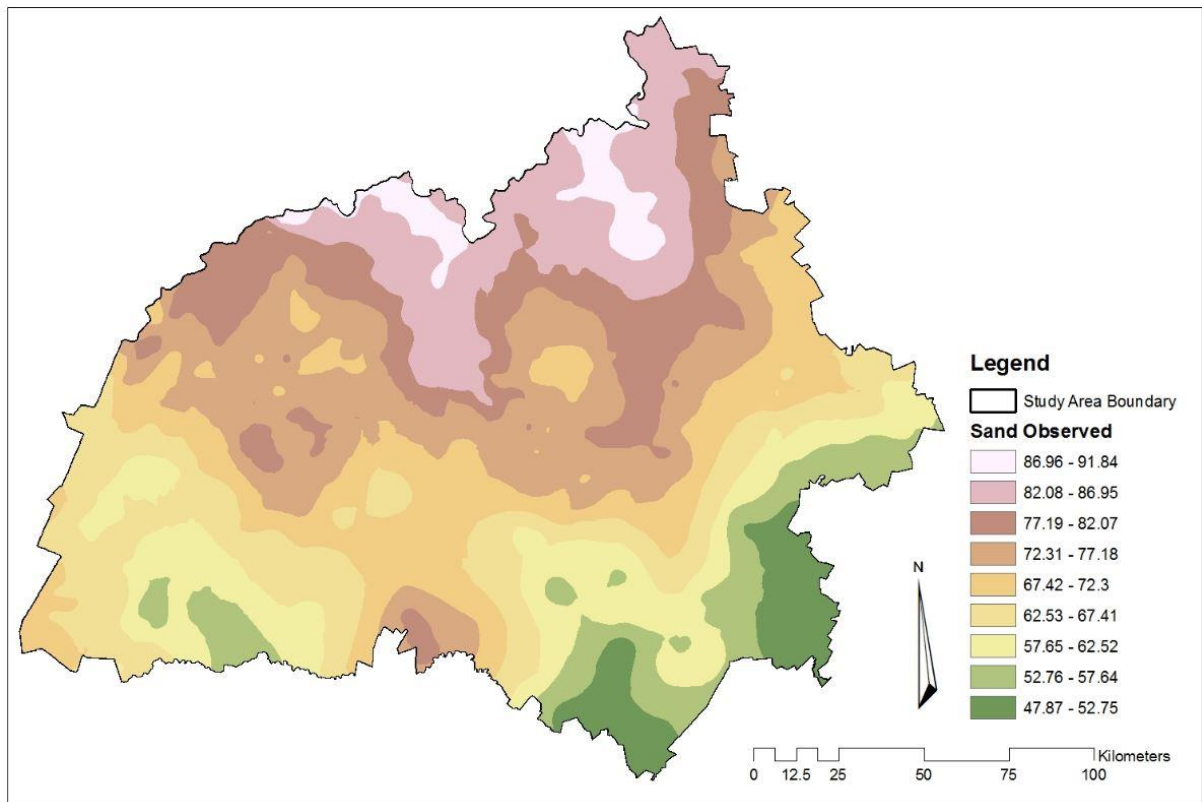


Figure 6.7: GWR observed (ARC-ISCW) sand content

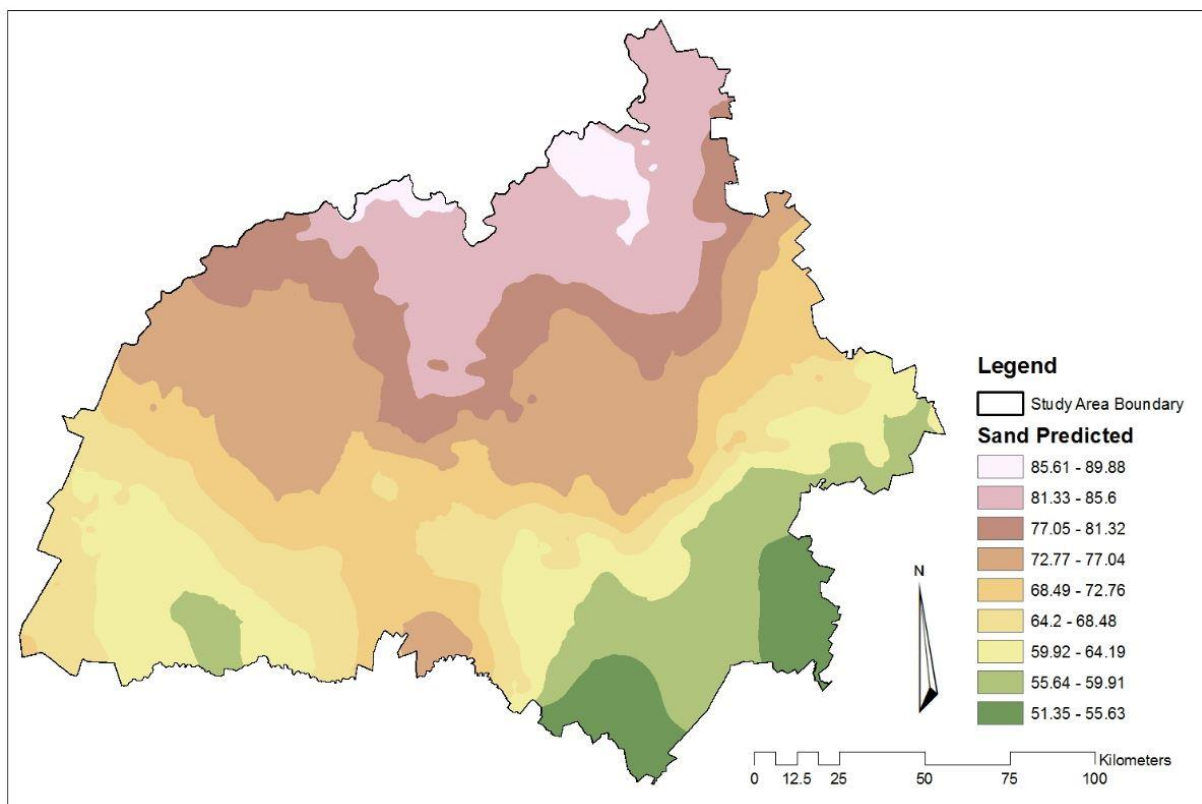


Figure 6.8: GWR predicted sand content

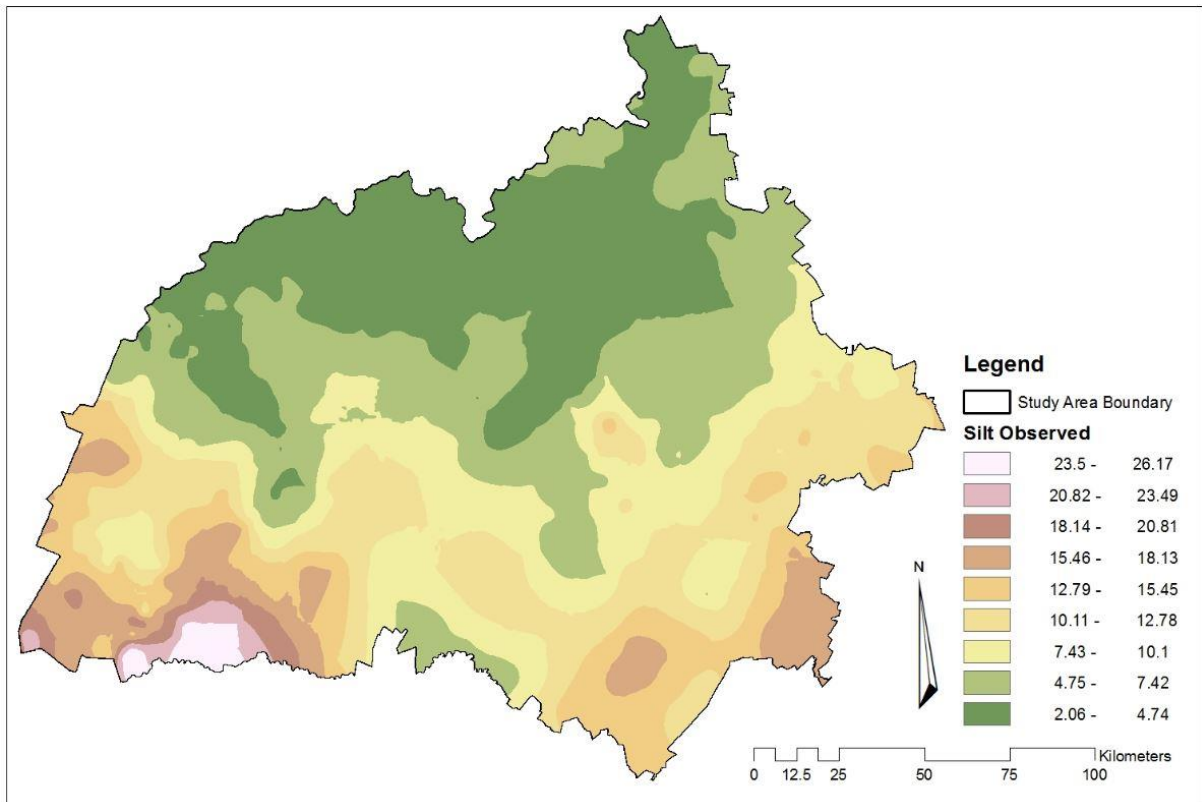


Figure 6.9: GWR observed (ARC-ISCW) silt content

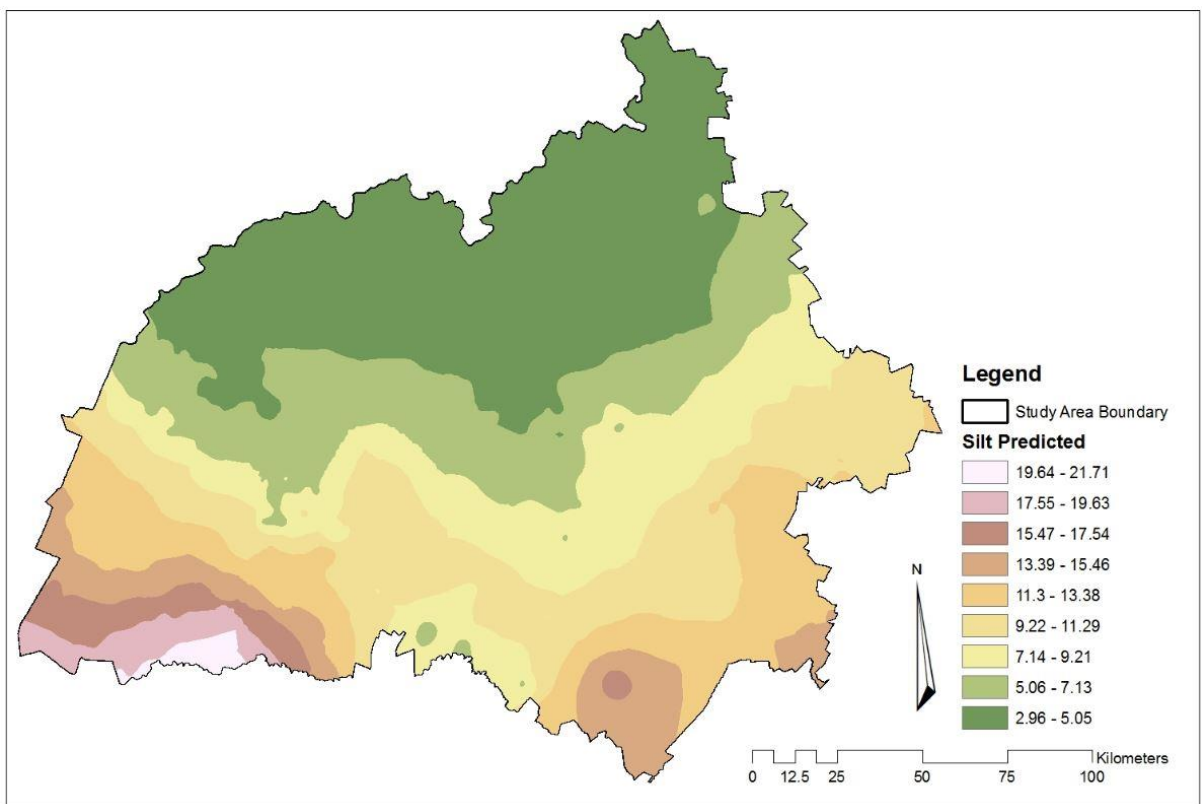


Figure 6.10: GWR predicted silt content

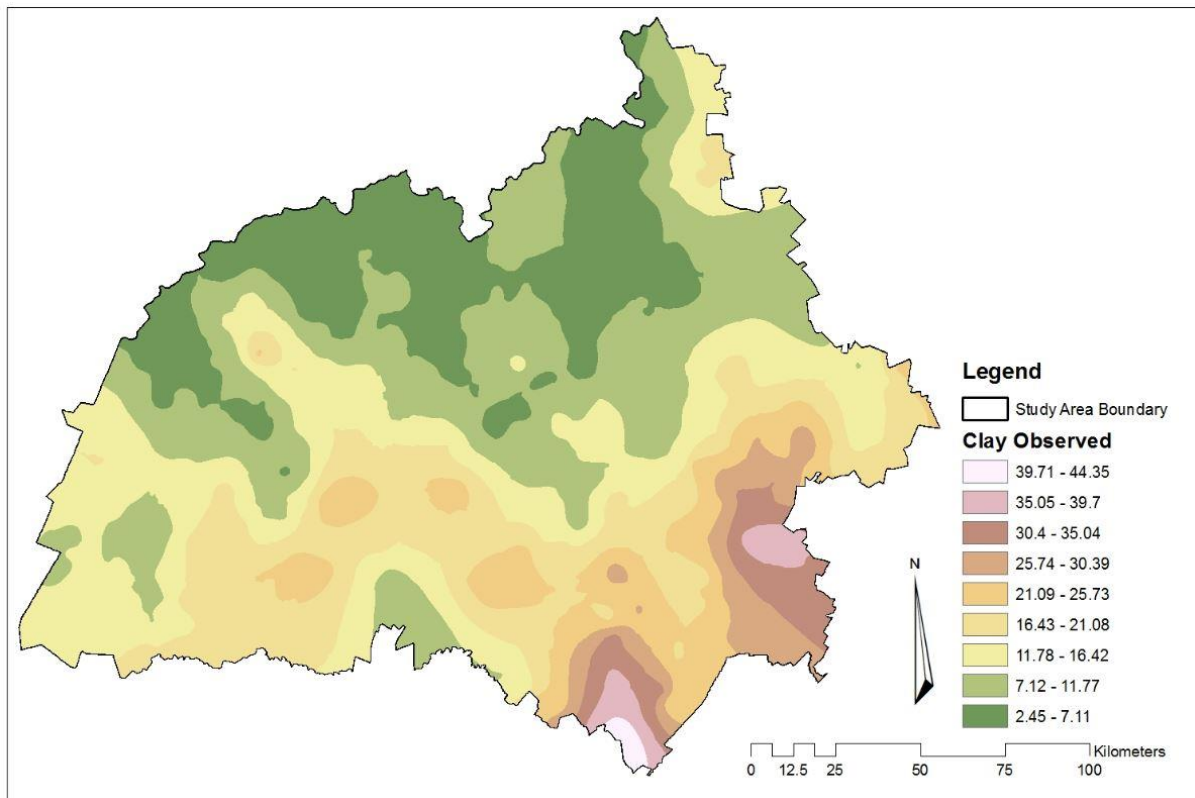


Figure 6.11: GWR observed (ARC-ISCW) clay content

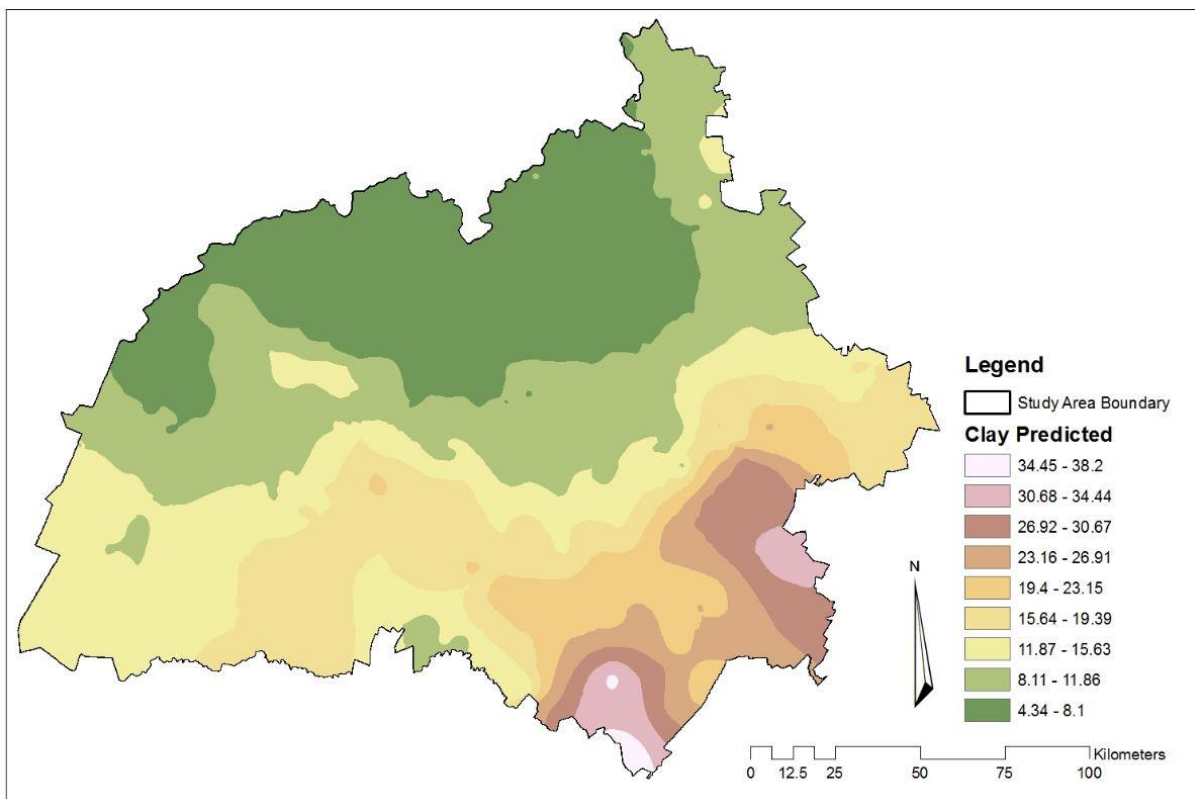


Figure 6.12: GWR predicted clay content

Table 6.5: Root mean square error (RMSE) of GWR predicted and observed residuals

Soil texture class	L8SR band	RMSE
Sand	6	2.5457
Silt	6	1.4500
Clay	5	2.1673

The geostatistical analysis tool on ArcGIS produced several graphs and summaries of the measured values versus the predicted values. Among these graphs, scatterplots of measured GWR kriging variables versus predicted GWR kriging variables of soil texture classes (sand, silt, and clay) were produced for the purpose of this study (Figures 6.13, 6.14, and 6.15). These scatterplots showed how well the kriging method predicted soil texture (sand, silt, and clay). The expectation was that the predicted values versus the measured values (observed in the case of this study) would scatter around the 1:1 line (the grey line in the plot shown in the figures that follow). However, the slope is usually less than 1 because the kriging method tends to under-predict large values and over-predict small values.

In the case of independent data, i.e., data that have no autocorrelation, all predictions would be the same; the blue line would therefore be horizontal. With autocorrelation and a good kriging model, the blue line should be closer to the 1:1 grey line (ESRI, 2010).

The regression equation below each of these plots was calculated using a robust regression equation. This procedure first fits a standard linear regression line to the scatterplot, then all the points that are more than two standard deviations above or below the regression line are removed, and a new regression equation is calculated. This process ensures that a few outliers will not corrupt the entire regression equation. For the GWR predicted dataset, using the kriging method, the scatterplot graphs for sand, silt, and clay were all closer to the 1:1 line when compared to the observed dataset. This proves that the kriging method predicted the results well for the predicted GWR variables and provided better autocorrelation compared to the observed GWR variables.

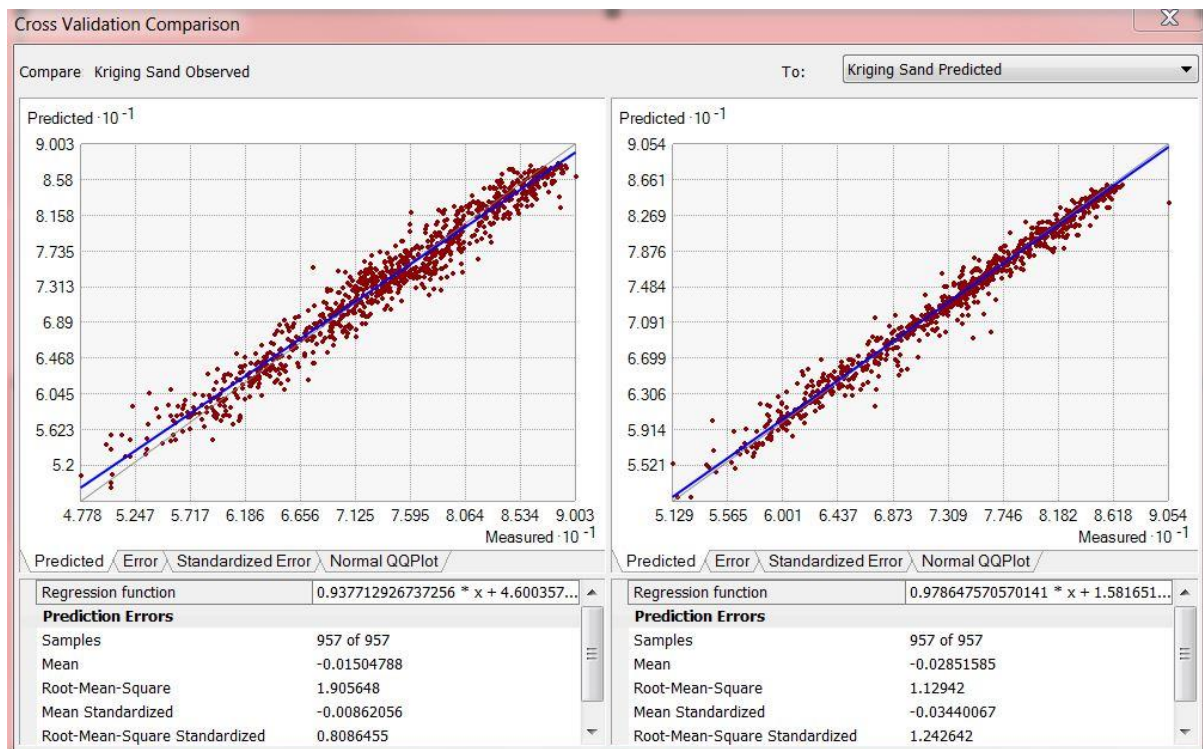


Figure 6.13: GWR linear function of observed sand variables versus predicted

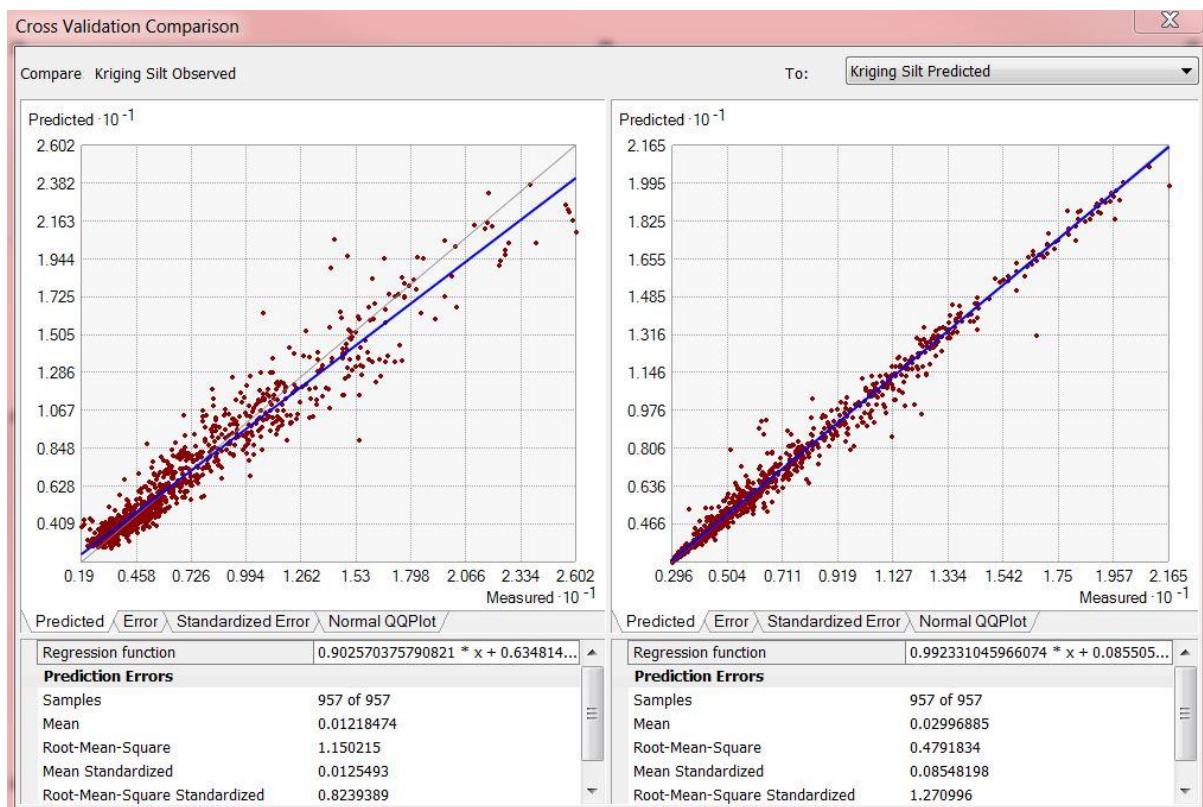


Figure 6.14: GWR linear function of observed silt variables versus predicted

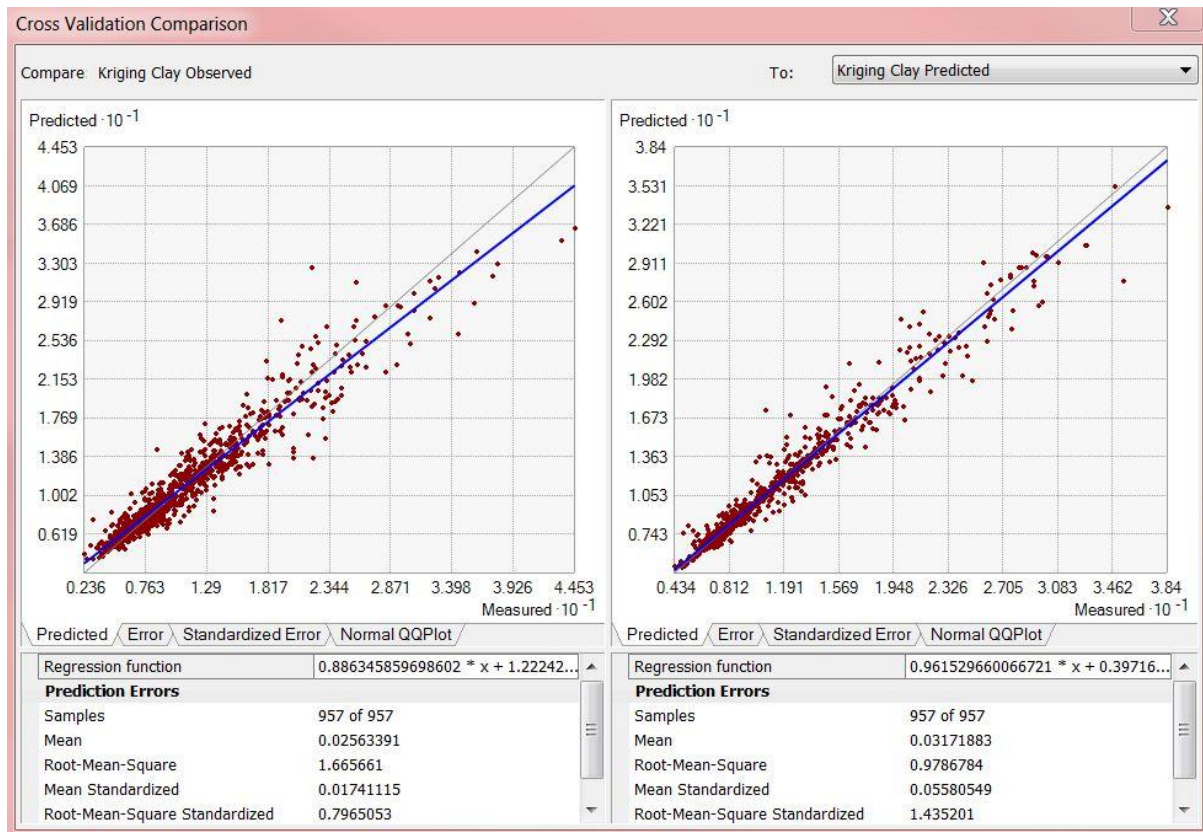


Figure 6.15: GWR linear function of observed clay variables versus predicted

The validity of the GWR model was further tested by computing the goodness-of-fit model. Figure 6.16 shows the observed A horizon ARC-ISCW soil texture class values and the predicted GWR values for the three soil texture classes all scattered close to the 45-degree line, which indicates an almost perfect fit of the developed GWR model. This means that the regression model can predict soil texture with higher accuracy. When a model has a high R^2 , most of the points are expected to be close to this diagonal line, as also shown by Figures 6.13, 6.14, and 6.15. The lower the R^2 , the weaker the goodness of fit of the model, and the more dispersed the points are away from this diagonal line (Trafton & Trickett, 2001).

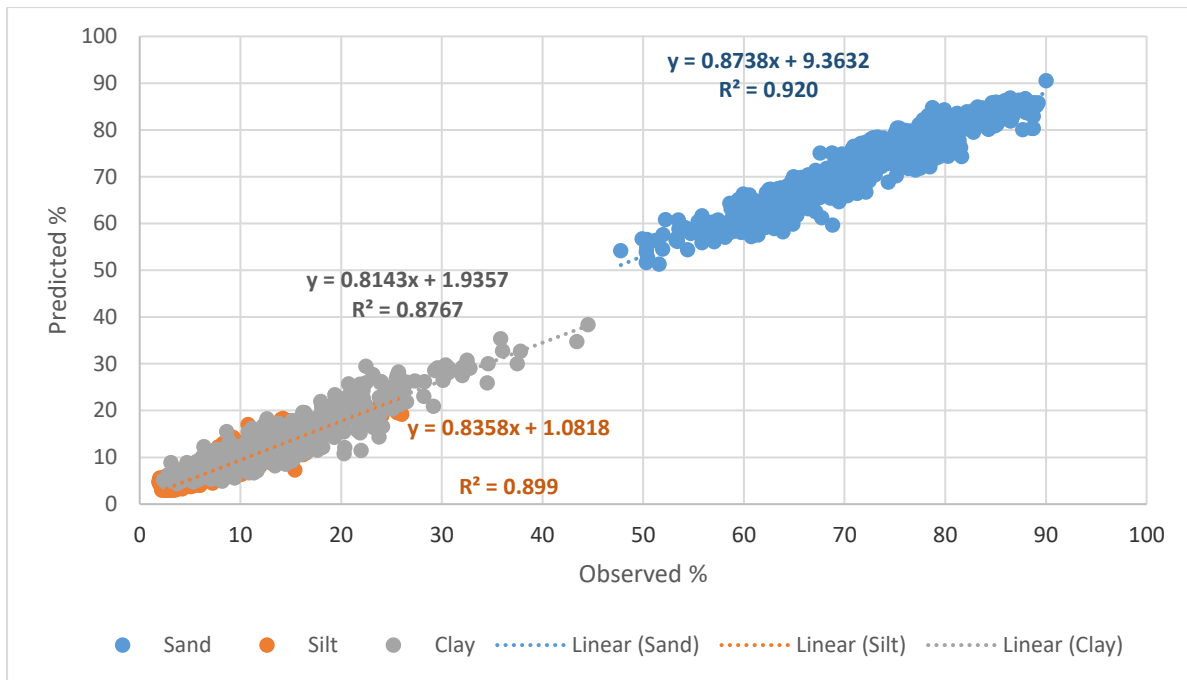


Figure 6.16: GWR linear function of predicted versus observed variables

6.7 ISSUES ASSOCIATED WITH GWR

Even though GWR demonstrates the potential for investigating relationships that vary over space between variables in a regression model, several critiques have been expressed about the methodology that have led most researchers to apply caution in using this method (Wheeler & Paez, 2010). The foundation of Wheeler and Paez's (2010) argument is that GWR does not suggest a base model for the source of the variation and is therefore seen as a heuristic approach. This implies that GWR lacks a unified statistical framework since it is in essence an ensemble of local geographical regressions where the dependence between regression coefficients at different data locations is not specified in the model.

To the contrary, Fabian (2014) argued that GWR is a complex statistical process with some elements of autocorrelation, regression, and spatial moving average calculations that can be found in its application. Fotheringham *et al.* (2002) based the development of GWR on the basic methodology adapted from global statistics into local ones via geographical weighting. This process was considered in a more theoretical depth. In essence, GWR expands the framework of global regression so that it allows the local estimation of parameters (Brunsdon *et al.*, 2002). The results, as illustrated in this study, provided a conceptual framework for deriving localised versions of a very general range of statistics.

Wheeler and Paez (2010) suggested that GWR, given its theoretical origins, is well suited for estimation and prediction of a response variable, but is less useful in formal statistical

inferences on spatially varying regression effects. Perhaps a shift in the focus of only utilising GWR for incorporating spatial interpolation would be worthwhile, and there is empirical evidence to support such a move. This was evident in this study – with GWR producing good comparative results in relation to other interpolation techniques, and the kriging interpolation technique serving as a visualisation supporting tool to the GWR results. One supporting argument for this is that when interpolation of a response variable over space is the sole interest, estimation issues in GWR are no longer a major concern.

The reason for the difference in OLSR estimation in this study may be because of the absence of an independence error structure that might have led to biased estimations. Ordinary least squares regression is a useful tool in that it produces several diagnostics, including ones to check for autocorrelation, influential observations, and collinearity. Geographically weighted regression has highlighted the existence of potentially complex, non-stationary, relational patterns in geographical modelling (Leung *et al.*, 2000). The models provided by GWR are based on well-established statistics of spatial autocorrelation, including Moran's I and Geary's *c*. The GWR approach compares each local prediction of the dependent variable with its observed value to provide a set of estimated residuals that can be used to detect map patterns. The application of these statistics is very similar to the application of autocorrelation statistics. The plots, graphs, and tables in this study obviated the need to use any interpolation routines to create a field from a set of irregularly spaced observations.

6.8 CONCLUSION

This chapter presented the regression analysis, results, and discussion of the findings. The findings of this study showed the ability of L8SR DNs to correlate with surface soil texture, and the consistent nature of GWR to model soil texture. Regrettably, the key explanatory variables were clearly too complex to be represented by the global model.

When compared to the standard OLSR approach, GWR analysis is better because it accounts for area-fixed effects as each area has its own constant term. With GWR, any outlier estimates that may occur are offset because GWR produces thousands of regressions and examines the median and the entire range of estimates. The GWR model can greatly reduce spatial error correlation when there is heterogeneity in the GWR coefficients. In OLSR, it may not be possible to distinguish the ensuing spatial correlation caused by the underlying heterogeneity in the regression coefficients from standard spatial error correlation that is generated by shocks originating in one region and impacting others. The GWR approach directly corrects the underlying spatial heterogeneity.

CHAPTER 7: SUMMARY AND CONCLUSION

7.1 INTRODUCTION

The previous chapter discussed how the research methodology was applied and how the empirical study was performed. The results were presented and interpreted to obtain a more meaningful understanding of the information gathered. The purpose of this chapter is to conclude on the overall results of the study and to provide an overview of the specific objectives as set out in Section 1.3, as well as how they were achieved. Recommendations, limitations, and further research ideas are also presented in this chapter.

7.2 RESEARCH AIM

The aim of this thesis was to evaluate the reliability of L8SR data to provide a unique measure that allows regular or synoptic coverage of surface soil texture at the regional level, as well as to provide a cost-effective, user-friendly, and adoptable methodology that would facilitate the rapid compilation of appropriate scaled surface soil texture maps from the conjunctive use of GIS and remote sensing.

7.3 SPECIFIC AIMS AND OBJECTIVES

The following specific objectives were set to achieve the primary objectives:

- 1) To analyse the relationship between L8SR data and soil texture attributes.
- 2) To develop a methodology for mapping bare soil areas in the study area.
- 3) To outline the spatial statistics (OK, OLSR, and GWR models) conceptual framework for predicting and estimating the spatial distribution of surface soil texture.
- 4) To identify the spatial regression model that best predicts and illustrates the spatial variability of surface soil texture using L8SR data as explanatory variables and conventionally analysed soil texture as response variables.
- 5) To assess the accuracy and effectiveness of surface soil texture maps produced by OLSR and GWR.
- 6) To provide an appropriate and applicable methodology (if any) for mapping surface soil texture using remote sensing.

7.4 ATTAINING THE OBJECTIVES

This study assessed the capability of remote sensing (L8SR) data and legacy observations (A horizon ARC-ISCW data) to characterise surface soil texture in a manner comparable to the conventional surface soil texture map of the Lejweleputswa District Municipality.

7.4.1 Objective 1: To analyse the relationship between L8SR data and soil texture attributes

Pearson's correlation coefficient was computed to evaluate the relationship between surface ARC-ISCW soil texture classes (sand, silt, and clay) and the L8SR DN of the seven bands. Pearson's correlation coefficient analysis was applied using SPSS. A positive correlation was found to exist between surface ARC-ISCW sand content with the DN of all seven bands, while ARC-ISCW surface silt and clay content showed a negative correlation with the DN of all seven bands. The DN of Band 6 had the strongest absolute correlation with the ARC-ISCW surface soil texture of sand and silt, while Band 5 had the strongest absolute correlation with that of clay.

Spearman's rank correlation test was conducted to test the validity of Pearson's correlation coefficient; the test results showed that for all the L8SR bands, ARC-ISCW surface sand had the strongest positive association (0.545) with Band 6, while ARC-ISCW surface silt had the strongest negative association (-0.507) with Band 6, and ARC-ISCW clay showed the strongest negative association (-0.458) with Band 5. This was in agreement with Pearson's correlation coefficient. Because soil covered by vegetation may restrict investigations, spectral signatures of land cover other than soils needed to be masked (Bernardi *et al.*, 2017). The simplest and most effective way of masking any land cover in remote sensing is through the use of indices (Li *et al.*, 2017).

7.4.2 Objective 2: To develop a methodology for mapping bare soil areas in the study area

Literature on masking land cover other than soil on L8SR data using spectral indices led to the conclusion that these indices have not been entirely successful in delineating bare soil areas from other surface features. This led to the development of a new bare soil index, namely the OBI, that can be modelled using L8SR-derived spectral index products (NDVI, SAVI, and TCB) over the study area to map bare soil. The idea was to show that L8SR data have a unique spectral signature for soils that is different from other elements; this illustrated the ability of L8SR data to detect and distinguish soil from other elements. The resulting map was classified to discern bare soil. The OBI accuracy assessment computation was conducted

using the confusion matrix. The confusion matrix confirmed that OBI managed to classify 88 bare soil classes in the study area out of a possible 101 randomly selected test samples, omitting 13 classes. The confusion matrix computed the kappa coefficient as 82%. The kappa coefficient is rated as substantial and the classified image was therefore found to be fit for further research (Fenstermaker, 1991).

7.4.3 Objective 3: To outline the spatial statistics (OK, OLSR, and GWR models) conceptual framework for predicting and estimating the spatial distribution of surface soil texture

The fishnet tool was used to generate a sampling scheme of a 3 x 3 km grid across the 32 863 km² study area on the L8SR bands (Band 6 for sand and silt and Band 5 for clay). These sampled points were clipped to the bare soil area, which resulted in 957 sample points, which ensured that the study only focused on barren land.

None of the 376 ARC-ISCW soil texture data points corresponded with the 3 x 3 km sampling scheme of the study area. This led to the ARC-ISCW data being interpolated using OK so that the values from the OK predictions could be sampled to correspond with the study area's sampling scheme. Although this process added an element of uncertainty to the ARC-ISCW dataset, the OK model's cross-validation assisted in making informed decisions about how well the model predicted the values at unknown sample locations. The difference between RMS and ASE for all three models (sand = 0.27, silt = 0.90, and clay = 0.17) was small enough to confirm that the models were classified as good fits.

A global regression model (OLSR) and a local regression model (GWR) were utilised to predict surface soil texture from the L8SR data and to statistically estimate the relationship between observed legacy data (A horizon ARC-ISCW surface soil texture) and L8SR data. Geographically weighted regression modelled the relationship between A horizon ARC-ISCW surface soil texture and L8SR data in a meaningful and conclusive manner, while the OLSR model failed to exhibit any significance.

7.4.4 Objective 4: To identify the spatial regression model that best predicts and illustrates the spatial variability of surface soil texture using L8SR data as explanatory variables and conventionally analysed soil texture as response variables

The global regression model (OLSR) failed as a predictor of surface soil texture using L8SR data. The OLSR model did not account for the inherent spatial relationship that exists in surface soil texture; it failed to produce relevant results on the direction and strength of the

correlation that exists between variables. This research showed that GWR can model the relationship between surface soil texture and L8SR data in a meaningful and conclusive manner. The reason behind GWR's success in modelling this relationship lies in the use of a local model for each observation. The good performance of the GWR models was to be expected considering that the underlying assumption in a global OLSR model is that relationships between the predictors and the outcome variable are homogeneous across space. The OLSR model assumes that the same stimulus provokes the same response in all parts of the study region. Practically, this is not true; the relationships between variables might be non-stationary and vary geographically. Spatial non-stationarity exists when the same stimulus provokes a different response in different parts of the study region. In this instance, GWR acted like a "spatial microscope" in that it provided the ability to measure and visualise variations in relationships that are unobservable in aspatial, global OLSR models.

7.4.5 Objective 5: To assess the accuracy and effectiveness of the surface soil texture maps predicted by OLSR and GWR

The reason behind GWR's success in modelling this relationship lies in the use of a local model for each observation. Geographically weighted regression not only provided improved explanatory abilities, but it was also able to detect the spatial variability among relationships across the study area. The local spatial variation was mapped using the kriging interpolation tool. Spatial variability is a natural and inevitable characteristic of soil, and ignoring this variability could result in biased estimation, misleading significant tests, and suboptimal predictions. To ensure that GWR provided an effective alternative option for predicting surface soil texture using L8SR data, accuracy tests such as RMSE and linear function of the observed versus predicted variables were conducted. These prediction accuracies can be deemed reasonable considering the high variability in land use practices, environmental variables, and the size of the study area.

7.4.6 Objective 6: To provide an appropriate and applicable methodology (if any) for mapping surface soil texture using remote sensing

Figure 7.1 outlines the methodology applied in this study. This methodology is promising for future local-to-regional-scale DSM efforts in data-poor regions; considering the increasing availability of free high-resolution remote sensing data.

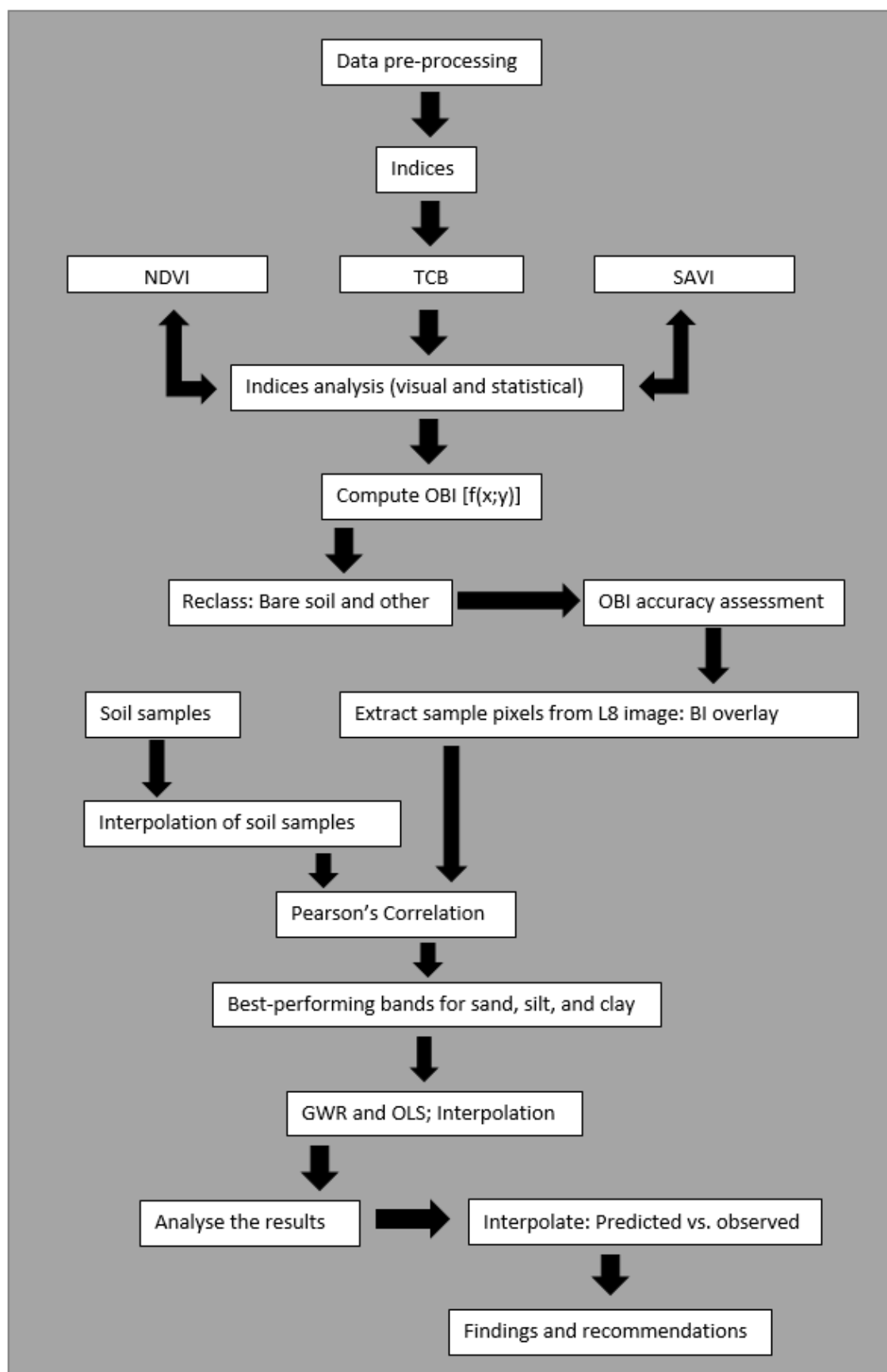


Figure 7.1: Workflow diagram presenting modelling methodology

The use of L8SR data reduced soil sampling efforts and therefore reduced soil mapping costs. Remote sensing is a key component of the emerging discipline of DSM. This integrated research offered many new perspectives for mapping soils where both remote sensing and DSM were beneficial to each other.

In conclusion, this research demonstrated the continuity of L8SR from its predecessors and served as a major data source for mapping surface soil texture on a regional scale. The research also showed how the capabilities of advanced classification algorithms (indices), data-fusion techniques, and two regression methods can improve the effective use of Landsat images for mapping surface soil texture.

7.5 RESEARCH CONTRIBUTIONS

The methodological research in this study contained a number of contributions to the remote sensing literature and extended methods that assess and improve the use of Landsat 8 images in mapping the earth's surface soil texture on a regional scale. While several studies have investigated the relationship between Landsat-derived vegetation indices for mapping bare soils and surface moisture variables for mapping soil texture, few attempts have been made to relate the Landsat DN_s to actual legacy measurements of surface soil texture variables to map surface soil texture. Prior to this research, a rapid, cost-effective, user-friendly, adoptable, and valid method to assess large areas in terms of soil texture variables did not exist. This research supplied the scientific basis underpinning such a method and developed the method for future use and study.

This study bridged the research gap by evaluating the performance of three commonly used indices for delineating canopies (that are by default also used for delineating bare soil areas), namely the NDVI, SAVI, and TCB. This evaluation was used to develop an OBI by using a mathematical function of the two best-performing indices. The results showed that the OBI has a better contrast between bare soil and other elements identified, which means that the OBI produced better bare soil detection.

A further contribution to the GIS community was the use of Pearson's correlation coefficient to reveal that a positive correlation exists between surface sand and the DN_s of all seven bands found on L8SR, while surface silt and surface clay have a negative correlation with the DN_s of all seven bands. This research concluded that for the study area, the NIR and SWIR1 bands of L8SR are important for classifying surface soil texture. A further contribution to the GIS community was demonstrated when the effective experimentation scheme for the evaluation and comparison of the GWR method outperformed the OLSR method on various

classifiers using the same explanatory and response variables. The research also identified the various trade-offs between GWR and OLSR.

The methodology provided in this study proved to be cost effective, user friendly, and adoptable to facilitating a rapid compilation of appropriate scaled surface soil texture maps from the conjunctive use of remote sensing, legacy data, and GIS. This is particularly important for the agricultural community because soil texture is one of the most important properties of soil and greatly affects crop production. Soil properties influenced by soil texture include drainage, aeration, water-holding capacity, susceptibility to erosion, organic matter content, cation exchange capacity, soil tilth, and pH buffering capacity. Methodology that provides high potential for soil characterisation retrieval that is accurate, timely, and cost effective is therefore of prime importance.

7.6 LIMITATIONS AND FUTURE RESEARCH

A limitation to remote sensing of soil is the fact that sensors only measure incoming radiation and not soil properties directly. It is up to the user of the data to infer soil characteristics in terms of how they affect the reflectance or emittance of radiation. As a result, more models must be developed that are able to discern soil condition. In this specific research, it should be mentioned that due to the limitation of observed data in relation to the study area size, it was not possible to test all the potential explanatory variables for the ideal regression model. This is a deficiency of this analysis.

The inclusion of the soil formation factors identified by Hans Jenny in 1941 (i.e., parent material, time, climate, relief, and organisms) (Jenny, 1941) as explanatory variables could be imperative as additional variables relating to soil texture that greatly increase the model's accuracy. The use of high-resolution remote sensing data could also yield better spatial information for mapping surface soil texture, which would be more efficient than when applying the techniques utilised in this study. The Lejweleputswa District Municipality is characterised by a typical interior landscape that is almost entirely a flat plain, with medium-gradient hillocks, and ridges, as well as a BSk (semi-arid) climatic zone. The methodology presented in this research can be applied in a similar region; however, further research is required to investigate the adaptability of the methodology to different landscapes and climatic zones.

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APPENDICES

Appendix A:

L8SR DNs for Band 1 to Band 7 and Interpolated (Kriging) Sample Values of ARC-ISCW Surface Soil

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
0	26,4880654973	-27,1555364416	370	474	832	1249	2244	3262	2679	83,9865	4,6930	3,1373
1	26,5180654973	-27,1555364416	462	558	796	1064	1968	3189	2382	83,8839	10,5497	3,0963
2	26,4580654973	-27,1855364416	375	464	907	1715	2751	4012	3575	84,3989	4,8043	3,1476
3	26,5780654973	-27,2155364416	618	748	1196	1633	2711	4100	3546	83,5212	10,7025	3,9974
4	26,6680654973	-27,2155364416	616	793	1352	2003	3143	4519	4092	82,4122	15,6354	4,8639
5	26,5180654973	-27,2455364416	443	552	851	1118	1956	3161	2446	83,1376	9,6105	3,3099
6	26,5780654973	-27,2455364416	452	559	876	1160	2007	3181	2520	82,0794	9,7496	4,5480
7	26,6080654973	-27,2455364416	397	478	706	886	1563	2678	1972	81,9258	10,8510	4,3410
8	26,6380654973	-27,2455364416	489	590	896	1145	1882	3183	2456	81,6561	13,6110	5,3773
9	26,6980654973	-27,2455364416	443	557	810	1056	1892	2926	2229	82,6571	12,9535	4,7340
10	26,6080654973	-27,3055364416	473	598	1050	1531	2353	3712	3235	82,2490	9,1678	2,9261
11	26,6380654973	-27,3055364416	467	592	915	1197	2356	3555	2611	81,9842	11,7513	2,9005
12	26,6680654973	-27,3055364416	392	574	915	1344	2426	3613	2621	78,8677	13,1772	3,4148
13	26,6980654973	-27,3055364416	564	704	1136	1620	2443	3918	3685	79,3238	11,8093	5,4649
14	26,5180654973	-27,2755364416	459	580	961	1326	2202	3327	2840	83,4070	5,6612	3,9694
15	26,5480654973	-27,2755364416	383	470	754	1007	1704	2961	2272	83,5421	9,0373	3,4600
16	26,5780654973	-27,2755364416	430	536	900	1277	2103	3222	2698	83,4705	9,1165	4,1638
17	26,6380654973	-27,2755364416	678	890	1476	2066	2942	4336	3811	81,6070	12,2551	3,5586
18	26,4880654973	-27,3355364416	549	685	1210	1755	2707	4021	3516	86,8630	5,5072	4,8874
19	26,6080654973	-27,3355364416	452	568	1038	1621	2510	3637	3159	80,7971	7,3673	2,9435

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
20	26,6980654973	-27,3355364416	336	419	746	1154	1860	2862	2610	77,7067	13,0442	4,8817
21	26,6680654973	-27,3655364416	617	776	1457	2203	3124	4519	4207	78,3005	12,9757	4,9459
22	26,4580654973	-27,3955364416	343	472	712	976	1791	2708	1949	87,5937	5,2223	4,4570
23	26,5480654973	-27,3955364416	391	498	735	948	1803	2912	2081	84,5044	7,0332	3,4018
24	26,5180654973	-27,4255364416	706	880	1667	2485	3470	4942	4640	86,3751	7,2882	3,9111
25	26,5480654973	-27,4255364416	567	690	1196	1753	2776	4017	3403	85,6419	8,2880	3,6998
26	26,6980654973	-27,4255364416	265	443	779	1106	1856	2750	1920	78,0513	17,2608	5,7211
27	26,3680654973	-27,4555364416	406	517	905	1279	2110	3428	2878	87,6512	6,0583	5,6230
28	26,3980654973	-27,4555364416	400	511	888	1321	2238	3239	2649	87,4608	5,5602	5,6677
29	26,4580654973	-27,4555364416	594	745	1365	1960	2931	4447	4032	85,0371	5,2462	4,6329
30	26,5180654973	-27,4555364416	498	622	1013	1419	2169	3528	3088	85,0622	7,2988	3,9740
31	26,5780654973	-27,4555364416	496	617	1214	1892	2830	3991	3587	84,3979	9,2770	4,0349
32	26,7580654973	-27,4555364416	378	477	835	1250	2030	3061	2566	75,4865	17,0237	5,6168
33	26,3980654973	-27,4855364416	490	613	1097	1697	2677	3841	3295	87,0929	4,3961	4,7395
34	26,4280654973	-27,4855364416	581	720	1300	1915	2867	4316	3839	86,7324	4,8645	4,3755
35	26,4580654973	-27,4855364416	570	716	1283	1839	2664	4058	3705	85,9747	5,6367	4,5156
36	26,4880654973	-27,4855364416	558	678	1119	1564	2370	3882	3471	86,3519	5,0110	4,2203
37	26,5480654973	-27,4855364416	639	829	1493	2108	2930	4666	4292	85,4633	7,3581	4,3257
38	26,5780654973	-27,4855364416	386	552	1006	1611	2543	3686	2977	85,4684	10,1622	4,8645
39	26,6080654973	-27,4855364416	369	479	748	1020	1766	2907	2252	81,6233	12,6531	4,9330
40	26,6380654973	-27,4855364416	670	822	1477	2166	3169	4572	3990	78,7151	14,4847	4,9750
41	26,6980654973	-27,4855364416	425	553	921	1314	2398	3417	2800	77,7271	16,1399	5,3382
42	26,2180654973	-27,5455364416	877	1098	2111	2998	4129	5577	5130	85,9351	10,8893	5,0247
43	26,2480654973	-27,5455364416	687	863	1609	2315	3409	4792	4200	85,6280	9,0980	4,6433
44	26,2780654973	-27,5455364416	549	710	1276	1778	2817	4227	3616	85,3783	7,3430	4,2683
45	26,3080654973	-27,5455364416	460	570	974	1376	2382	3794	3020	85,6422	6,8376	4,2667
46	26,3980654973	-27,5455364416	414	498	728	922	1510	2706	2058	87,9341	4,8490	3,9970

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
47	26,4280654973	-27,5455364416	632	784	1479	2204	3187	4578	4330	88,2533	4,3808	4,0283
48	26,4880654973	-27,5455364416	472	607	1055	1486	2172	3445	3127	86,0711	6,5677	4,4362
49	26,5180654973	-27,5455364416	692	908	1696	2369	3234	4858	4357	86,7353	7,1739	4,1903
50	26,5780654973	-27,5455364416	491	615	1033	1468	2362	3505	3027	86,5886	10,5251	5,3573
51	26,6080654973	-27,5455364416	492	624	1124	1668	2433	3873	3350	86,0028	12,1298	5,2315
52	26,7580654973	-27,5455364416	529	656	1251	1904	2972	4233	3775	77,4017	15,4042	5,5714
53	26,2780654973	-27,5155364416	437	543	861	1205	2032	3208	2544	85,9568	7,0772	4,8265
54	26,3380654973	-27,5155364416	553	693	1226	1796	2817	4131	3562	87,0267	5,3972	4,7104
55	26,3680654973	-27,5155364416	590	744	1324	1936	2681	4085	3774	87,1877	4,6722	4,7052
56	26,3980654973	-27,5155364416	424	556	947	1365	2194	3536	3157	87,2791	4,0700	4,8232
57	26,5180654973	-27,5155364416	527	678	1202	1720	2537	4029	3617	86,5223	6,8746	4,3138
58	26,5780654973	-27,5155364416	545	680	1275	1838	2772	4182	3673	86,0914	8,5468	4,9659
59	26,6080654973	-27,5155364416	591	750	1374	2027	2766	4215	3829	85,4482	11,3067	4,7465
60	26,6980654973	-27,5155364416	415	490	888	1389	2255	3222	2766	78,0686	17,6480	6,1599
61	25,8280654973	-27,5755364416	573	640	816	1035	1541	2846	2304	86,4660	3,7305	2,5860
62	26,3380654973	-27,5755364416	501	632	1086	1534	2408	3682	3076	87,4626	4,9545	4,1263
63	26,3680654973	-27,5755364416	591	729	1352	2047	2969	4502	4218	87,6872	4,7851	4,2064
64	26,3980654973	-27,5755364416	623	789	1443	2051	2940	4615	4345	88,8757	4,5581	3,4825
65	26,5780654973	-27,5755364416	565	729	1301	1870	2680	4198	3758	86,8598	8,8757	5,1491
66	26,6080654973	-27,5755364416	586	745	1440	2152	3058	4376	3915	86,2675	9,1431	5,1673
67	26,7280654973	-27,5755364416	334	416	713	997	1575	2565	2283	78,8978	15,5945	4,3358
68	26,7580654973	-27,5755364416	457	554	1096	1737	2561	3982	3623	78,1929	14,7295	5,3221
69	26,2180654973	-27,6055364416	577	731	1307	1856	2694	4315	3836	85,4392	10,0247	3,0952
70	26,2780654973	-27,6055364416	778	980	1837	2617	3482	5181	4755	87,3398	8,3670	4,1666
71	26,3080654973	-27,6055364416	694	874	1597	2264	3327	4889	4307	87,3995	7,1252	4,0988
72	26,5480654973	-27,6055364416	562	738	1336	1883	2865	4198	3641	87,1065	5,6950	4,2194
73	26,6380654973	-27,6055364416	476	580	1097	1662	2606	4075	3619	85,7141	10,1004	4,7878

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
74	26,6680654973	-27,6055364416	471	606	951	1370	2245	3456	2871	80,3041	10,8457	4,0741
75	26,6980654973	-27,6055364416	338	407	677	968	1642	2749	2136	78,1312	11,3347	4,6327
76	26,9080654973	-27,6055364416	405	493	855	1306	2003	3363	2984	71,3384	11,1069	6,6700
77	25,7380654973	-27,6355364416	578	699	1014	1342	2120	3234	2560	87,2302	4,2551	2,9492
78	25,7680654973	-27,6355364416	594	656	861	1123	1699	3104	2526	87,3792	3,7970	3,3576
79	25,7980654973	-27,6355364416	583	722	1219	1714	2546	3791	3180	87,7168	3,6358	2,1767
80	25,9180654973	-27,6355364416	677	800	1216	1645	2504	3785	3050	86,4478	3,8995	3,4098
81	26,1280654973	-27,6355364416	455	561	1085	1517	2414	3623	2955	82,1588	8,9706	4,2253
82	26,2180654973	-27,6355364416	571	732	1307	1901	2823	4227	3804	85,7772	8,9837	2,9866
83	26,2480654973	-27,6355364416	340	420	788	1115	2062	2961	2332	85,9778	8,4585	2,9789
84	26,2780654973	-27,6355364416	572	727	1374	2009	3073	4508	3899	82,9370	8,4239	4,0692
85	26,3080654973	-27,6355364416	492	617	1114	1523	2289	3748	3382	83,2152	7,0394	2,7213
86	26,3380654973	-27,6355364416	643	850	1515	2122	3215	5028	4420	83,6154	5,5582	2,7580
87	26,3680654973	-27,6355364416	719	898	1775	2615	3528	5022	4687	83,6999	5,1722	3,0086
88	26,4280654973	-27,6355364416	776	976	1880	2656	3594	5205	4819	84,4885	4,2064	3,4105
89	26,4580654973	-27,6355364416	802	1008	1892	2738	3736	5311	4930	88,8064	4,0975	3,4072
90	26,5180654973	-27,6355364416	724	914	1685	2344	3170	4801	4378	88,5511	4,4367	3,5000
91	26,5480654973	-27,6355364416	652	837	1501	2049	2838	4516	4171	86,1447	4,5409	3,2171
92	26,5780654973	-27,6355364416	640	785	1261	1719	2459	4190	3837	86,3740	5,9421	4,1762
93	26,6080654973	-27,6355364416	648	830	1445	2000	2882	4427	4010	86,1815	8,4677	4,1104
94	26,6980654973	-27,6355364416	688	841	1612	2448	3398	5080	4587	79,8965	9,9267	4,0548
95	26,7580654973	-27,6355364416	705	874	1667	2442	3544	4945	4443	77,8130	9,6542	4,1520
96	26,9080654973	-27,6355364416	482	548	702	848	1502	2898	2290	73,8533	9,9038	6,2750
97	25,5880654973	-27,6655364416	543	615	995	1475	2288	3681	3446	88,7481	5,2891	2,8464
98	25,6780654973	-27,6655364416	82	117	306	185	8	17	36	90,0304	5,3128	3,4957
99	25,7080654973	-27,6655364416	586	680	989	1274	1853	3004	2320	84,6697	5,2351	2,5295
100	25,7380654973	-27,6655364416	559	663	1038	1452	2303	3588	2852	84,7215	5,7945	3,6763

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
101	25,7680654973	-27,6655364416	635	762	1255	1757	2648	4087	3532	87,9089	4,3468	2,5847
102	25,7980654973	-27,6655364416	523	709	1215	1685	2533	3736	3050	87,6274	3,7901	2,4971
103	25,8580654973	-27,6655364416	452	539	812	1073	1676	2874	2241	88,1003	2,5930	2,6574
104	25,8880654973	-27,6655364416	709	837	1544	2218	3293	4661	4048	87,7848	3,0696	2,5406
105	25,9780654973	-27,6655364416	490	598	902	1171	2096	3333	2798	86,4122	4,5860	3,1706
106	26,1880654973	-27,6655364416	475	605	1310	1992	2767	4171	3744	81,1653	9,5807	3,0628
107	26,2180654973	-27,6655364416	323	437	709	1035	1805	2708	2104	85,8237	7,9603	3,0206
108	26,2780654973	-27,6655364416	769	991	1863	2650	3657	5274	4903	83,3711	8,1635	3,3131
109	26,3380654973	-27,6655364416	746	970	1752	2459	3444	5108	4720	83,3164	5,7389	2,7127
110	26,3980654973	-27,6655364416	781	974	1835	2611	3592	5274	4897	84,6710	4,1654	2,9321
111	26,4580654973	-27,6655364416	512	631	1061	1483	2474	3799	3137	89,2271	4,3473	3,4159
112	26,5480654973	-27,6655364416	506	764	1670	2139	2703	3871	3313	89,0639	4,6441	3,8894
113	26,5780654973	-27,6655364416	665	822	1459	2035	2860	4453	4098	87,4009	5,3757	3,6931
114	26,6080654973	-27,6655364416	581	740	1305	1863	2981	4337	3653	86,3858	7,6536	4,5420
115	26,6380654973	-27,6655364416	831	1011	1811	2534	3619	5402	5077	86,2540	8,2656	3,9727
116	26,6980654973	-27,6655364416	537	660	1159	1646	2600	3796	3289	79,7212	8,4803	4,0195
117	26,7280654973	-27,6655364416	536	670	1252	1922	2819	4281	3827	79,7842	9,7727	5,1930
118	26,7880654973	-27,6655364416	524	638	1230	1926	2778	4210	3729	77,4334	7,7840	4,5855
119	26,9080654973	-27,6655364416	490	597	1037	1512	2159	3543	3189	70,0876	7,5349	5,4377
120	25,5880654973	-27,6955364416	586	687	1105	1537	2435	3644	2983	84,3546	5,6836	3,9400
121	25,8580654973	-27,6955364416	668	810	1456	2044	3053	4443	3696	87,9676	2,3566	2,2981
122	26,1880654973	-27,6955364416	604	766	1440	2071	2956	4580	4127	81,2474	9,4544	3,2832
123	26,2180654973	-27,6955364416	680	854	1649	2379	3359	5033	4561	81,4998	8,9093	3,2347
124	26,2480654973	-27,6955364416	563	690	1339	2001	2869	4537	4071	83,1643	8,5608	2,6372
125	26,2780654973	-27,6955364416	700	902	1700	2394	3265	4962	4558	83,2800	8,9342	3,2951
126	26,3080654973	-27,6955364416	717	907	1807	2699	3747	5445	5010	83,3992	6,8945	2,8732
127	26,3680654973	-27,6955364416	439	558	997	1474	2464	3666	2917	84,3852	5,2388	2,8104

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
128	26,3980654973	-27,6955364416	531	666	1176	1681	2450	4035	3634	84,5273	4,1270	2,8240
129	26,4580654973	-27,6955364416	560	715	1380	2080	2948	4336	3822	88,8308	4,2369	3,3771
130	26,4880654973	-27,6955364416	488	595	1019	1458	2234	3565	3092	88,7856	4,5860	3,2032
131	26,5180654973	-27,6955364416	688	875	1600	2232	3124	4752	4351	88,4537	4,6854	3,7285
132	26,5480654973	-27,6955364416	505	625	1093	1584	2434	3706	3121	88,2744	5,1952	3,3540
133	26,6080654973	-27,6955364416	560	688	1002	1351	1949	3501	3076	86,8038	7,3754	4,2272
134	26,6380654973	-27,6955364416	962	1203	2156	2997	4140	5768	5468	84,6509	6,7305	3,8000
135	26,7580654973	-27,6955364416	500	606	1132	1709	2494	4042	3746	78,8039	8,4143	5,1664
136	26,7880654973	-27,6955364416	449	534	986	1512	2278	3584	3257	75,3074	8,6030	5,6643
137	26,8180654973	-27,6955364416	454	505	699	889	1603	2915	2222	72,1070	8,6879	5,3746
138	26,9080654973	-27,6955364416	798	989	1826	2619	3509	4840	4447	70,0158	8,4908	6,5490
139	26,9680654973	-27,6955364416	524	584	746	928	1610	3028	2424	68,2218	8,9188	6,8682
140	25,4680654973	-27,7255364416	666	776	1270	1835	2704	3962	3569	88,7406	6,1442	4,1423
141	25,4980654973	-27,7255364416	613	725	1207	1809	2640	4115	3773	88,5701	6,1776	4,2284
142	25,5280654973	-27,7255364416	664	820	1385	1913	2842	4347	3779	87,7046	5,5484	3,7689
143	25,7980654973	-27,7255364416	608	709	1244	1816	2948	4434	3804	83,4706	5,6455	2,8306
144	25,8280654973	-27,7255364416	512	696	1247	1853	2992	4207	3292	83,5624	5,3141	3,3836
145	25,8580654973	-27,7255364416	410	531	852	1137	1760	3057	2468	88,0043	4,1795	3,0186
146	25,9780654973	-27,7255364416	758	978	1879	2641	3655	5396	4943	87,6443	4,6659	3,2754
147	26,1280654973	-27,7255364416	518	667	1367	2238	3161	4676	4296	85,6467	7,2540	3,1978
148	26,1880654973	-27,7255364416	407	511	943	1320	2330	3530	2978	81,7870	8,5044	2,7935
149	26,2180654973	-27,7255364416	389	470	827	1156	1946	3262	2498	81,9549	8,9311	2,8410
150	26,2480654973	-27,7255364416	266	375	653	973	1820	2676	1967	83,4451	8,8079	2,3557
151	26,2780654973	-27,7255364416	673	840	1575	2288	3182	4827	4471	83,0719	7,4982	2,9556
152	26,3080654973	-27,7255364416	442	556	1239	1987	2847	4388	3872	83,0107	7,2339	2,9563
153	26,3980654973	-27,7255364416	470	589	1033	1485	2291	3574	3069	84,3146	4,1100	2,8259
154	26,5180654973	-27,7255364416	420	520	873	1184	2144	3221	2535	88,9084	5,1742	3,4080

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
155	26,5780654973	-27,7255364416	549	693	1229	1773	2497	3927	3847	86,8563	5,5440	3,7656
156	26,6080654973	-27,7255364416	597	779	1365	1866	3082	4234	3669	85,5301	5,0875	3,0402
157	26,6680654973	-27,7255364416	690	856	1509	2118	3115	4813	4268	84,9912	6,8266	4,4931
158	26,7280654973	-27,7255364416	526	645	1090	1569	2484	3817	3210	75,8646	7,5992	4,0474
159	26,8780654973	-27,7255364416	546	609	772	978	1880	3129	2513	72,1425	9,2617	5,9512
160	26,9080654973	-27,7255364416	593	731	1368	2016	3062	4322	3769	70,5704	10,1492	7,2812
161	26,9680654973	-27,7255364416	710	884	1671	2527	3463	4945	4619	68,5377	8,6480	7,5204
162	26,6680654973	-27,7555364416	600	743	1350	1979	3205	4540	3889	82,9681	6,7162	4,4616
163	26,9380654973	-27,7555364416	680	832	1572	2378	3334	4705	4351	69,6259	8,9835	6,8739
164	26,9980654973	-27,7555364416	580	728	1387	2159	3032	4571	4256	68,6724	8,9812	7,5767
165	25,7080654973	-27,7855364416	707	857	1546	2244	3217	4592	4195	80,1439	7,1013	3,3715
166	25,7380654973	-27,7855364416	696	818	1452	2095	2867	4149	3863	83,3913	7,2304	3,4581
167	25,8280654973	-27,7855364416	495	569	977	1616	2424	3706	3282	83,8803	6,3292	3,0486
168	25,9180654973	-27,7855364416	792	933	1727	2494	3399	4952	4511	83,7302	4,7010	3,0150
169	25,9780654973	-27,7855364416	480	636	1206	1785	2881	4168	3442	87,1299	5,1290	2,9848
170	26,0980654973	-27,7855364416	666	858	1717	2580	3674	5086	4330	86,4290	7,2084	3,2871
171	26,1280654973	-27,7855364416	689	906	1660	2345	3312	5041	4657	86,2771	7,2647	3,2799
172	26,1580654973	-27,7855364416	565	683	1295	1918	2758	4470	4044	79,6669	8,1256	3,0096
173	26,2180654973	-27,7855364416	664	842	1636	2370	3294	4858	4355	80,4748	6,5419	2,8979
174	26,2480654973	-27,7855364416	592	750	1424	2024	2858	4519	4079	83,8251	6,3205	2,6788
175	26,2780654973	-27,7855364416	574	713	1214	1704	2511	4161	3692	81,7897	6,1737	2,6406
176	26,3080654973	-27,7855364416	609	785	1528	2392	3444	5154	4754	81,1952	6,3252	2,9351
177	26,3380654973	-27,7855364416	496	647	1332	2448	3494	5233	4711	83,1741	5,4454	2,8915
178	26,3680654973	-27,7855364416	579	720	1354	1970	2958	4196	3637	81,5090	5,1822	2,9910
179	26,5180654973	-27,7855364416	603	764	1259	1749	2530	4208	3771	82,9602	5,9963	3,9218
180	26,6680654973	-27,7855364416	705	867	1647	2386	3623	4997	4665	82,0968	7,0685	3,4695
181	26,9380654973	-27,7855364416	358	449	783	1163	1857	2927	2504	70,6062	8,3812	6,3226

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
182	26,9680654973	-27,7855364416	447	529	954	1452	2416	3760	3149	69,9080	8,5140	6,3433
183	27,0280654973	-27,7855364416	491	618	1250	2083	3062	4425	4024	68,2378	9,5866	8,5933
184	25,3780654973	-27,7555364416	612	714	1137	1656	2549	3832	3424	78,6649	5,6605	3,9816
185	25,4380654973	-27,7555364416	511	590	991	1450	2170	3712	3365	75,9909	5,7863	3,4189
186	25,4680654973	-27,7555364416	376	534	918	1317	2249	3250	2389	78,2551	5,9117	3,4209
187	25,5280654973	-27,7555364416	318	438	793	1012	1892	2728	2066	82,3918	5,5546	3,7848
188	25,5580654973	-27,7555364416	441	545	904	1263	2074	3294	2602	83,7357	5,6453	3,7837
189	25,6180654973	-27,7555364416	500	658	1126	1624	2550	3693	2851	84,8157	5,9066	4,1198
190	25,7080654973	-27,7555364416	702	807	1391	1940	2729	4239	3937	85,0740	5,2714	3,1833
191	25,7680654973	-27,7555364416	567	702	998	1377	2125	3264	2331	83,3638	6,6943	3,4898
192	25,8580654973	-27,7555364416	546	660	1187	1721	2752	3951	3354	83,3279	5,4187	3,4409
193	25,9480654973	-27,7555364416	725	930	1875	2752	3848	5611	5195	87,6496	4,1416	2,9747
194	25,9780654973	-27,7555364416	747	943	1746	2492	3514	5022	4616	88,1226	4,6048	3,2644
195	26,0980654973	-27,7555364416	637	803	1605	2389	3494	4698	4100	86,2993	7,3816	3,7046
196	26,1580654973	-27,7555364416	296	519	951	1311	2274	3377	2355	81,7819	7,8937	3,1114
197	26,1880654973	-27,7555364416	623	793	1502	2157	3005	4609	4176	81,9926	7,5130	2,5081
198	26,2180654973	-27,7555364416	756	942	1805	2585	3683	5219	4772	82,5377	7,5210	3,0757
199	26,2480654973	-27,7555364416	715	908	1717	2513	3576	5118	4546	82,9132	6,9694	2,7259
200	26,2780654973	-27,7555364416	481	628	1120	1600	2346	3844	3441	82,9068	6,4903	2,4884
201	26,3080654973	-27,7555364416	609	782	1455	2103	2930	4486	4117	83,1338	5,9740	2,3726
202	25,3480654973	-27,8155364416	491	638	1064	1542	2343	3574	2805	79,1558	6,3587	4,0093
203	25,3780654973	-27,8155364416	473	583	923	1275	1963	3291	2658	77,1960	6,3874	3,8916
204	25,4080654973	-27,8155364416	546	708	1203	1726	2800	3970	3099	81,1291	5,5619	3,6085
205	25,5280654973	-27,8155364416	714	894	1733	2600	3820	5210	4649	77,3513	5,6359	3,9044
206	25,5580654973	-27,8155364416	609	709	1244	1860	2779	4365	3894	79,8667	5,5881	3,3555
207	25,5880654973	-27,8155364416	725	910	1689	2395	3297	4951	4496	79,3814	5,5112	3,3038
208	25,6180654973	-27,8155364416	564	718	1325	1873	2958	4332	3812	80,3852	5,8899	3,6354

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
209	25,6480654973	-27,8155364416	480	607	1115	1637	2844	4051	3160	80,5470	6,1692	3,4849
210	25,6780654973	-27,8155364416	464	602	1096	1560	2885	4119	3139	79,9716	7,0702	3,1110
211	25,7380654973	-27,8155364416	737	920	1734	2486	3446	4841	4409	80,1089	7,0818	2,8482
212	25,7980654973	-27,8155364416	375	559	885	1213	1831	3176	2320	84,3385	6,4665	2,3352
213	25,9480654973	-27,8155364416	869	1100	2162	3100	4046	5688	5235	88,2058	5,5280	3,5387
214	26,0380654973	-27,8155364416	870	1101	2175	3170	4262	5870	5494	82,6540	5,0026	2,8961
215	26,0980654973	-27,8155364416	692	921	1704	2361	3218	4895	4384	82,5794	6,8001	3,3518
216	26,1280654973	-27,8155364416	691	876	1648	2269	3119	4802	4393	80,8455	6,4998	3,5145
217	26,1880654973	-27,8155364416	819	1050	2001	2894	4039	5765	5403	81,7736	6,7380	2,8081
218	26,2180654973	-27,8155364416	459	560	1043	1460	2514	3563	2951	81,5921	6,5835	2,8367
219	26,2780654973	-27,8155364416	715	904	1712	2579	3594	5304	4938	81,5815	5,7473	2,4789
220	26,5480654973	-27,8155364416	459	573	1065	1632	2463	3880	3600	85,3685	7,0106	4,5175
221	26,5780654973	-27,8155364416	482	602	1060	1561	2315	3783	3322	84,8694	6,6930	3,9359
222	26,6680654973	-27,8155364416	657	803	1417	2044	2857	4482	4224	80,3602	5,9221	3,9267
223	26,6980654973	-27,8155364416	674	811	1352	1911	2608	4113	3721	79,7585	6,0828	4,3499
224	26,9380654973	-27,8155364416	518	607	1111	1674	2469	3873	3599	71,5055	8,9212	6,2893
225	26,9680654973	-27,8155364416	333	419	604	802	1486	2597	1863	70,9572	8,6885	6,4625
226	26,9980654973	-27,8155364416	523	629	1135	1757	2567	3915	3605	69,0387	8,5286	7,5424
227	25,4080654973	-27,7855364416	398	494	811	1077	1900	2725	2242	79,5997	5,7762	3,4247
228	25,4380654973	-27,7855364416	384	441	664	862	1535	2415	1883	82,2268	5,8064	3,4593
229	25,4980654973	-27,7855364416	620	716	1310	1979	2850	4501	3964	77,2511	6,0728	3,4271
230	25,5580654973	-27,7855364416	608	728	1260	1827	2961	4394	3686	78,7942	5,6805	4,0466
231	25,6480654973	-27,7855364416	255	416	778	1114	1849	2829	2023	79,8545	7,1322	3,3212
232	25,6780654973	-27,7855364416	504	656	1161	1683	2646	3851	3137	79,8803	5,7075	3,3665
233	25,2880654973	-27,8455364416	499	567	1004	1581	2329	3461	3156	78,3027	6,9560	4,4506
234	25,3480654973	-27,8455364416	566	694	1247	1880	2881	4188	3531	79,6426	6,5042	3,9655
235	25,3780654973	-27,8455364416	624	748	1532	2447	3455	5123	4783	79,2565	6,2680	3,8610

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
236	25,4680654973	-27,8455364416	517	659	1212	1787	2919	3937	3216	80,1835	5,0491	3,1295
237	25,4980654973	-27,8455364416	533	658	1170	1720	2595	4020	3625	75,5109	5,5447	3,2879
238	25,5280654973	-27,8455364416	496	630	1132	1625	2324	3928	3507	73,2617	5,2183	3,3421
239	25,5880654973	-27,8455364416	522	597	996	1458	2109	3613	3219	79,4872	4,9701	3,2584
240	25,6180654973	-27,8455364416	442	569	1029	1516	2602	4028	3101	80,0222	5,5529	3,1553
241	25,6480654973	-27,8455364416	787	969	1873	2637	3506	5141	4784	80,2184	5,9242	3,4512
242	25,6780654973	-27,8455364416	560	710	1321	1827	2576	4238	3878	80,2558	6,5315	3,1690
243	25,7680654973	-27,8455364416	595	719	1220	1727	2547	4097	3777	85,1329	7,3440	3,0172
244	25,7980654973	-27,8455364416	279	457	880	1264	2114	3046	2137	85,8926	6,9279	2,3449
245	25,9480654973	-27,8455364416	460	593	1237	2033	2638	3873	3387	87,9834	3,8288	2,4715
246	26,0080654973	-27,8455364416	669	859	1603	2363	3193	4601	4136	82,6853	4,5631	2,6070
247	26,0680654973	-27,8455364416	724	924	1737	2427	3485	4868	4381	82,0056	5,5403	3,3179
248	26,0980654973	-27,8455364416	726	952	1779	2461	3362	4936	4520	82,8593	6,3343	3,5266
249	26,1580654973	-27,8455364416	342	544	1076	1409	2226	3010	2549	82,1822	6,3435	3,9630
250	26,1880654973	-27,8455364416	528	691	1356	1821	3225	4106	3634	78,0116	6,5874	3,1199
251	26,2180654973	-27,8455364416	671	857	1658	2414	3324	5027	4610	77,7623	7,8726	4,1537
252	26,2480654973	-27,8455364416	676	828	1549	2321	3266	4963	4575	75,2449	5,1678	3,0984
253	26,5780654973	-27,8455364416	573	708	1373	2201	3092	4560	4221	80,2442	7,1060	4,5007
254	26,8180654973	-27,8455364416	590	693	1020	1396	2342	3719	3285	77,9759	8,6810	4,7273
255	26,9980654973	-27,8455364416	503	637	1092	1643	2612	4036	3398	70,5616	10,2258	7,5088
256	25,3480654973	-27,8755364416	547	645	1309	2240	3216	4890	4391	81,3787	6,2019	4,3637
257	25,3780654973	-27,8755364416	518	594	1133	1918	2746	4358	3880	79,9378	7,3179	4,4755
258	25,4380654973	-27,8755364416	585	702	1280	1932	2772	4410	3940	80,1500	8,0269	3,9283
259	25,4680654973	-27,8755364416	302	575	1268	1764	2508	3277	2414	73,8654	6,3107	3,9708
260	25,4980654973	-27,8755364416	773	932	1851	2835	3858	5612	5259	75,2841	5,8465	5,1883
261	25,5580654973	-27,8755364416	638	810	1576	2364	3256	4898	4517	77,8778	4,3155	2,9738
262	25,5880654973	-27,8755364416	493	622	1205	1783	2648	4163	3741	77,7075	4,0031	2,8840

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
263	25,6480654973	-27,8755364416	535	652	1210	1834	2822	4226	3743	79,4428	5,4261	2,9990
264	25,6780654973	-27,8755364416	661	801	1534	2267	3275	4796	4329	79,2056	6,2009	2,8284
265	25,7680654973	-27,8755364416	230	404	806	1142	1927	2941	1994	79,9326	8,0868	2,8915
266	25,8280654973	-27,8755364416	402	513	924	1345	2206	3579	2872	85,7990	9,5508	3,0707
267	25,8580654973	-27,8755364416	532	696	1318	1952	2947	4275	3638	83,6958	7,6453	3,0010
268	25,9480654973	-27,8755364416	431	522	660	829	1506	2640	1979	86,7048	5,4353	3,3931
269	26,0380654973	-27,8755364416	490	617	1176	1830	2750	3936	3479	85,1749	5,1488	3,1953
270	26,0680654973	-27,8755364416	679	862	1702	2566	3522	5044	4573	80,9405	5,4781	3,5206
271	26,0980654973	-27,8755364416	348	421	766	1078	1851	2978	2269	82,3521	5,6449	3,3451
272	26,1280654973	-27,8755364416	893	1135	2218	3143	4264	5873	5546	78,1798	9,4601	4,9222
273	26,1580654973	-27,8755364416	371	472	722	933	1813	2815	2068	81,9420	6,1448	3,1515
274	26,2180654973	-27,8755364416	740	954	1892	2846	3949	5586	5204	75,4143	8,4159	4,6285
275	26,2480654973	-27,8755364416	619	802	1523	2206	3039	4689	4282	75,0731	7,5726	4,3619
276	26,4580654973	-27,8755364416	744	938	1716	2576	3472	4961	4550	80,2897	6,9651	4,1876
277	26,7580654973	-27,8755364416	734	888	1554	2217	3049	4623	4347	77,4152	9,6600	4,8882
278	26,9980654973	-27,8755364416	522	678	1326	2158	3199	4535	4223	67,7254	10,0890	8,1070
279	25,2880654973	-27,9055364416	423	527	797	1080	1694	2770	2400	78,0088	7,2316	3,9986
280	25,3180654973	-27,9055364416	388	506	764	1054	1803	2770	2223	79,6991	7,1974	4,3245
281	25,4080654973	-27,9055364416	659	751	1547	2442	3337	5005	4502	80,1514	11,3356	4,7520
282	25,4680654973	-27,9055364416	549	699	1301	1963	2929	4529	3945	75,6401	8,8376	3,8681
283	25,5280654973	-27,9055364416	379	566	1177	1827	2943	4004	3091	71,6078	5,6313	5,5307
284	25,5580654973	-27,9055364416	564	724	1355	1976	2845	4465	4103	75,5791	4,5263	4,6230
285	25,5880654973	-27,9055364416	483	606	1126	1650	2461	3896	3405	75,6104	3,6499	3,2418
286	25,6180654973	-27,9055364416	479	745	1434	2038	3088	4189	3351	77,4560	3,3659	2,3989
287	25,6480654973	-27,9055364416	534	664	1259	1875	2927	4584	3878	77,9340	5,0898	2,1574
288	25,6780654973	-27,9055364416	653	814	1606	2359	3294	4988	4618	78,5812	5,3863	2,6227
289	25,7080654973	-27,9055364416	602	700	1235	1904	2716	4314	4060	77,7041	6,2368	3,2861

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
290	25,7380654973	-27,9055364416	621	754	1393	2083	2955	4639	4283	79,0885	6,9078	3,1112
291	25,7680654973	-27,9055364416	713	889	1702	2472	3348	5022	4577	78,3540	7,5271	3,3490
292	25,7980654973	-27,9055364416	640	803	1600	2275	3117	4454	4095	80,1367	8,4225	3,2141
293	25,8280654973	-27,9055364416	539	618	1084	1625	2398	3867	3493	78,8470	9,6576	3,3532
294	25,8580654973	-27,9055364416	825	1009	1980	2907	3904	5470	5006	83,4034	7,7680	3,4380
295	26,0680654973	-27,9055364416	555	705	1338	2100	3018	4274	3795	80,6344	7,2306	4,5688
296	26,2180654973	-27,9055364416	499	673	1271	1912	3068	4350	3629	75,2955	9,0747	4,7750
297	26,2780654973	-27,9055364416	358	449	896	1559	2698	3601	2952	74,8953	8,3437	4,3357
298	26,3080654973	-27,9055364416	247	396	699	957	1876	2632	1873	74,3125	6,2470	3,0890
299	26,8780654973	-27,9055364416	526	600	910	1233	2121	3396	2871	77,0494	14,2112	6,7471
300	27,0280654973	-27,9055364416	421	502	896	1531	2587	3592	3118	72,2240	11,2847	7,7006
301	27,0880654973	-27,9055364416	541	661	1229	1931	2737	3952	3680	70,7170	10,6312	8,0911
302	26,9980654973	-27,9655364416	359	439	854	1461	2172	3250	3034	69,5486	15,0309	8,1368
303	27,0880654973	-27,9655364416	472	571	986	1405	2478	3622	2965	69,2875	14,3652	9,8834
304	27,1180654973	-27,9655364416	513	615	1003	1475	2213	3593	3114	70,5031	13,8939	9,2169
305	27,1780654973	-27,9655364416	466	555	793	1025	1931	3151	2349	64,0137	14,4280	10,6415
306	27,2080654973	-27,9655364416	394	467	651	760	1524	2540	1850	63,9522	11,1886	8,4106
307	27,3280654973	-27,9655364416	384	458	821	1236	2054	3049	2743	65,0873	21,6119	12,1134
308	25,2880654973	-27,9355364416	316	455	713	1030	1748	2579	1915	79,3520	8,4630	4,9499
309	25,3780654973	-27,9355364416	402	458	648	860	1438	2333	1918	79,9221	11,9251	4,7763
310	25,4380654973	-27,9355364416	526	652	1233	1972	3115	4469	3682	75,8924	11,6412	5,3763
311	25,4680654973	-27,9355364416	696	850	1616	2420	3237	4984	4635	76,1539	10,8476	4,6456
312	25,5580654973	-27,9355364416	436	578	1062	1576	2692	4073	3118	70,9037	5,0292	4,1637
313	25,5880654973	-27,9355364416	633	788	1518	2240	3511	4827	4312	75,1718	3,6647	3,0742
314	25,6180654973	-27,9355364416	633	761	1485	2220	3141	4775	4396	73,8552	2,8436	2,5477
315	25,7080654973	-27,9355364416	626	791	1560	2294	3260	4933	4499	75,3938	6,1860	3,3008
316	25,8280654973	-27,9355364416	750	898	1770	2714	3730	5382	4958	79,9534	7,2426	2,9220

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
317	25,8580654973	-27,9355364416	406	545	996	1464	2533	3808	2859	84,2407	6,9266	2,9600
318	25,9180654973	-27,9355364416	689	872	1726	2484	3481	5240	4863	83,9423	5,3892	3,2664
319	25,9480654973	-27,9355364416	407	560	993	1459	2443	3596	2904	85,2635	4,5672	3,5395
320	25,9780654973	-27,9355364416	574	784	1458	2060	2897	4473	3969	84,7205	4,4506	3,2005
321	26,0380654973	-27,9355364416	730	926	1707	2452	3270	4757	4316	86,6176	7,8668	4,5153
322	26,0680654973	-27,9355364416	527	683	1307	1972	2667	3918	3553	80,9706	8,2074	4,8860
323	26,1880654973	-27,9355364416	487	629	1272	1972	3016	4341	3772	75,8415	9,4340	4,9391
324	26,2180654973	-27,9355364416	409	542	874	1195	2206	3299	2587	75,5126	9,6930	4,7036
325	26,2480654973	-27,9355364416	680	888	1777	2674	3630	5174	4825	75,0762	9,3040	4,5698
326	26,3080654973	-27,9355364416	365	453	795	1156	1914	3145	2530	74,2255	8,3757	4,1500
327	26,3380654973	-27,9355364416	391	562	939	1294	1884	3185	2801	74,9035	6,2533	2,7223
328	26,3980654973	-27,9355364416	413	520	926	1339	2203	3332	2757	73,6933	6,2603	3,3514
329	26,9680654973	-27,9355364416	508	625	1197	1941	3130	4272	3762	69,9830	14,6944	8,0334
330	26,9980654973	-27,9355364416	512	584	790	1023	1800	3163	2489	72,4374	13,7987	8,1213
331	27,1180654973	-27,9355364416	616	755	1372	2027	2901	4227	3800	67,0481	12,2866	8,9143
332	27,1480654973	-27,9355364416	547	675	1276	2035	2858	4197	3637	66,3325	14,0791	9,5113
333	25,1680654973	-27,9655364416	591	666	1206	1822	2577	4099	3639	77,3228	5,9219	3,7106
334	25,1980654973	-27,9655364416	557	694	1080	1487	2294	3530	3090	78,4690	6,1449	3,7255
335	25,2280654973	-27,9655364416	343	502	818	1179	1813	2920	2162	80,1527	6,8722	3,8700
336	25,2580654973	-27,9655364416	374	466	697	920	1467	2462	1993	80,9378	9,4228	4,6431
337	25,5280654973	-27,9655364416	745	898	1739	2618	3521	5237	4792	71,8956	9,4413	5,0602
338	25,5580654973	-27,9655364416	540	653	1235	1944	2760	4034	3632	71,1755	5,4319	4,2566
339	25,5880654973	-27,9655364416	555	687	1377	2040	3200	4422	3946	70,7401	4,1235	3,2708
340	25,6780654973	-27,9655364416	517	638	1200	1816	2846	4267	3786	73,4550	5,0358	3,6515
341	25,7680654973	-27,9655364416	478	589	1099	1674	2564	3980	3344	75,1126	7,6765	3,9527
342	25,7980654973	-27,9655364416	407	516	884	1281	2301	3710	2756	76,4703	6,6011	3,4623
343	25,8580654973	-27,9655364416	560	642	1082	1584	2341	3836	3456	82,2356	6,6115	3,7527

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
344	25,8880654973	-27,9655364416	371	451	795	1046	2047	2975	2271	82,8218	5,9819	3,2135
345	25,9180654973	-27,9655364416	647	860	1667	2383	3276	4972	4447	86,5830	5,4861	3,3077
346	25,9480654973	-27,9655364416	468	579	1105	1582	2523	3882	3190	86,2781	4,3009	3,1836
347	25,9780654973	-27,9655364416	559	735	1363	1943	2760	4293	3892	84,9929	4,5252	3,5664
348	26,0080654973	-27,9655364416	394	526	963	1428	2431	3499	2885	86,1906	4,7602	3,5583
349	26,0380654973	-27,9655364416	482	628	1127	1614	2383	3815	3334	86,3338	7,6881	5,1020
350	26,0980654973	-27,9655364416	483	592	1065	1567	2555	3692	3049	78,5850	8,8828	5,0575
351	26,1880654973	-27,9655364416	757	957	1768	2582	3498	4964	4598	75,6818	10,2024	4,7825
352	26,2480654973	-27,9655364416	621	800	1543	2275	3109	4625	4225	74,9814	8,7674	4,6295
353	26,2780654973	-27,9655364416	603	769	1520	2292	3163	4648	4194	74,4291	8,4120	4,5888
354	26,3680654973	-27,9655364416	559	728	1397	2133	2997	4537	4146	73,9940	5,7067	2,9526
355	26,3980654973	-27,9655364416	349	445	758	1092	1892	2854	2301	73,4849	6,7902	3,8956
356	26,4580654973	-27,9655364416	457	566	1199	1927	2993	4200	3681	77,2821	7,3926	4,7736
357	26,5180654973	-27,9655364416	682	863	1598	2433	3325	4837	4361	80,1643	7,4172	5,0081
358	26,0380654973	-27,9955364416	487	647	1195	1694	2573	3993	3509	86,4721	5,6973	4,0229
359	26,0680654973	-27,9955364416	515	634	1127	1600	2582	4001	3395	84,1794	8,2957	5,2758
360	26,0980654973	-27,9955364416	509	639	1083	1560	2391	3788	3266	84,4145	8,9090	5,4050
361	26,1280654973	-27,9955364416	582	748	1496	2301	3278	4819	4477	80,0031	9,4154	4,9345
362	26,2780654973	-27,9955364416	439	540	1021	1671	2610	3869	3433	72,0899	8,3473	3,9001
363	26,3380654973	-27,9955364416	470	603	1141	1673	2579	3856	3404	71,2296	8,5720	4,3526
364	26,3680654973	-27,9955364416	529	677	1407	2235	3113	4615	4228	70,9230	6,2427	3,9233
365	26,3980654973	-27,9955364416	400	551	1084	1670	2566	3942	3331	72,0938	5,9312	3,8534
366	26,4280654973	-27,9955364416	474	608	1275	2050	2983	4280	3798	76,6876	6,8828	4,6056
367	26,4880654973	-27,9955364416	435	547	998	1509	2422	3906	3285	76,8473	7,8721	5,2801
368	26,5180654973	-27,9955364416	417	529	971	1446	2425	3427	2843	81,5302	7,5765	4,9609
369	26,9080654973	-27,9955364416	473	561	1054	1697	2543	3910	3376	69,8504	15,3089	6,9676
370	26,9980654973	-27,9955364416	557	711	1240	1820	2742	3818	3344	66,0455	12,3737	8,3470

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
371	27,0580654973	-27,9955364416	523	641	1167	1758	2655	3819	3378	69,1491	14,8583	10,2312
372	27,0880654973	-27,9955364416	535	646	1213	1909	2667	4078	3637	68,9803	16,0803	10,1523
373	27,2380654973	-27,9955364416	498	607	990	1442	2299	3341	2939	64,1530	12,7567	9,1529
374	27,2980654973	-27,9955364416	485	592	775	1024	1747	3070	2346	62,1332	15,3476	7,8023
375	25,3180654973	-28,0255364416	358	499	873	1375	2207	3227	2487	79,3608	11,1678	4,4156
376	25,5880654973	-28,0255364416	507	633	1144	1731	2903	4461	3502	73,1202	9,9420	7,2388
377	25,6480654973	-28,0255364416	499	656	1240	1852	2840	4269	3709	71,8886	7,1719	5,7229
378	25,6780654973	-28,0255364416	797	971	1874	2840	3781	5366	4998	72,1439	7,0912	5,9813
379	25,7680654973	-28,0255364416	668	844	1583	2352	3197	4883	4501	72,8950	7,6942	5,4429
380	25,8280654973	-28,0255364416	694	830	1604	2445	3405	5029	4694	78,2200	7,5876	5,5221
381	25,8580654973	-28,0255364416	632	790	1530	2332	3327	4936	4554	79,8449	7,4138	5,3334
382	25,9180654973	-28,0255364416	572	723	1430	2187	3104	4608	4143	84,4718	6,6379	5,5696
383	25,9480654973	-28,0255364416	708	900	1761	2598	3688	5332	4960	84,7385	5,2171	4,0635
384	26,0380654973	-28,0255364416	785	988	1958	2863	3942	5544	5162	86,2055	5,7414	4,0162
385	26,0680654973	-28,0255364416	761	975	1866	2733	3817	5398	4962	84,3966	8,3762	5,7712
386	26,0980654973	-28,0255364416	633	807	1616	2668	3760	5102	4750	84,1860	8,5281	5,2141
387	26,3380654973	-28,0255364416	585	731	1327	2030	2861	4374	3974	71,2291	7,6266	3,1268
388	26,3980654973	-28,0255364416	438	544	1070	1857	2718	4193	3755	68,7632	5,7427	3,7755
389	26,4280654973	-28,0255364416	389	580	1213	1819	2947	4134	3458	72,6893	6,7095	4,5177
390	26,4580654973	-28,0255364416	412	537	1110	1802	2821	4174	3498	76,7484	7,4191	5,2675
391	26,5480654973	-28,0255364416	380	498	1014	1687	2723	3849	3356	79,9998	8,1150	5,2589
392	26,5780654973	-28,0255364416	519	667	1387	2368	3293	4749	4298	78,4638	8,7098	5,8081
393	26,6080654973	-28,0255364416	671	821	1581	2395	3239	4835	4398	80,4281	8,9122	5,7147
394	26,6680654973	-28,0255364416	419	470	623	747	1429	2588	1926	75,8513	10,7305	6,5093
395	26,8480654973	-28,0255364416	529	609	1054	1594	2494	3660	3190	71,7062	20,2778	5,9621
396	26,9380654973	-28,0255364416	430	502	982	1524	2358	3537	3139	69,1448	14,2192	7,0484
397	26,9680654973	-28,0255364416	439	534	979	1415	2355	3149	2612	67,6476	15,4851	8,2422

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
398	27,0280654973	-28,0255364416	355	421	825	1437	2379	3367	2901	70,1255	17,4315	8,4174
399	27,2080654973	-28,0255364416	521	623	1169	1865	2675	3959	3597	67,6113	13,4778	10,0732
400	27,2380654973	-28,0255364416	487	581	973	1427	1998	3166	2915	66,3988	12,5502	9,3780
401	27,2680654973	-28,0255364416	493	571	785	974	1831	3103	2419	62,9756	14,5046	9,2713
402	27,2980654973	-28,0255364416	537	630	818	1011	1854	3216	2496	60,0121	16,9427	11,0188
403	27,3880654973	-28,0255364416	450	507	627	804	1354	2547	1967	59,4337	21,4511	13,0331
404	25,1080654973	-27,9955364416	478	587	878	1238	1962	3079	2468	67,5778	5,0354	5,1213
405	25,1380654973	-27,9955364416	517	586	1089	1730	2629	3827	3405	69,7214	4,8414	4,7335
406	25,1680654973	-27,9955364416	525	621	928	1272	2007	3177	2711	79,5514	6,6152	4,9835
407	25,2280654973	-27,9955364416	482	615	994	1453	2279	3349	2829	75,4248	6,1922	3,8433
408	25,2580654973	-27,9955364416	384	474	687	959	1495	2535	2124	79,1479	7,8468	4,8512
409	25,2880654973	-27,9955364416	445	509	726	984	1587	2627	2147	79,1355	11,3734	4,4406
410	25,4080654973	-27,9955364416	439	615	966	1324	2080	3114	2348	76,1839	13,1277	4,8802
411	25,5580654973	-27,9955364416	606	736	1359	2005	2810	4289	3883	71,3822	9,4930	6,0908
412	25,6180654973	-27,9955364416	830	1002	1887	2799	3717	5313	4949	73,3666	8,1718	5,1201
413	25,6780654973	-27,9955364416	496	660	1261	1900	3090	4665	3685	73,9027	6,6109	4,1016
414	25,7080654973	-27,9955364416	582	740	1402	2068	2841	4489	4113	73,8051	5,5942	4,3394
415	25,7380654973	-27,9955364416	644	769	1453	2229	3096	4784	4394	74,4952	8,5236	4,9233
416	25,7680654973	-27,9955364416	659	824	1561	2380	3274	5048	4662	74,9476	6,9910	3,9619
417	25,8280654973	-27,9955364416	596	710	1361	2086	2977	4525	4086	78,6829	7,8446	5,1180
418	25,8580654973	-27,9955364416	636	817	1548	2287	3211	4887	4485	79,0051	7,2526	5,0600
419	25,9180654973	-27,9955364416	440	544	992	1403	2381	3651	2921	84,5229	6,1115	4,5630
420	25,9480654973	-27,9955364416	592	799	1560	2316	3426	4833	4218	86,3517	5,0074	4,0090
421	25,9780654973	-27,9955364416	578	695	1340	1911	2746	4295	3980	84,5753	4,6023	3,7341
422	26,0080654973	-27,9955364416	719	936	1840	2704	3787	5460	5039	86,6580	5,0291	3,8591
423	25,1080654973	-28,0555364416	287	481	934	1348	2183	2993	2120	77,2201	4,5759	4,1001
424	25,1380654973	-28,0555364416	682	809	1526	2394	3444	4812	4318	77,9091	5,4558	5,9617

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
425	25,1980654973	-28,0555364416	417	572	999	1465	2349	3487	2833	76,2873	4,7237	4,6028
426	25,2280654973	-28,0555364416	385	483	844	1336	2238	3117	2499	74,6154	5,8577	4,7745
427	25,2880654973	-28,0555364416	457	567	948	1500	2683	3855	3018	75,6487	7,1019	3,8772
428	25,3180654973	-28,0555364416	349	523	974	1405	2433	3518	2633	80,2420	10,3067	4,2881
429	25,3480654973	-28,0555364416	343	496	869	1275	1902	3106	2441	75,0140	10,2703	3,2652
430	25,3780654973	-28,0555364416	489	569	873	1317	2253	3385	2682	75,5585	13,0186	4,6224
431	25,4380654973	-28,0555364416	489	688	1062	1376	2032	3112	2437	77,0580	20,2910	5,8113
432	25,7080654973	-28,0555364416	588	767	1394	2075	3005	4539	4061	74,2538	9,1450	5,8193
433	25,7380654973	-28,0555364416	647	801	1572	2373	3233	4767	4354	72,0315	7,9088	6,1441
434	25,7980654973	-28,0555364416	527	649	1201	1844	2851	4299	3882	78,1163	9,7318	6,9452
435	25,8880654973	-28,0555364416	744	965	1951	2955	4064	5698	5326	83,0838	7,0031	5,7970
436	25,9480654973	-28,0555364416	368	440	792	1140	2027	3027	2339	84,0880	6,0276	5,1063
437	25,9780654973	-28,0555364416	407	570	1127	1632	2437	3429	2863	84,9130	5,5353	4,5035
438	26,0380654973	-28,0555364416	590	737	1437	2175	3059	4526	3953	84,2499	6,3573	4,8044
439	26,0680654973	-28,0555364416	524	650	1181	1698	2643	3902	3469	84,2956	8,6346	6,0354
440	26,0980654973	-28,0555364416	499	660	1218	1801	2541	4024	3580	79,8887	8,2012	5,7555
441	26,1580654973	-28,0555364416	519	653	1306	2036	2903	4436	3983	80,4138	9,8787	5,5421
442	26,1880654973	-28,0555364416	523	667	1158	1694	2449	3777	3437	75,3194	11,7323	5,1878
443	26,2180654973	-28,0555364416	559	688	1285	1892	2636	4056	3946	72,9854	13,4231	5,1962
444	26,4280654973	-28,0555364416	420	502	934	1545	2403	3640	3167	74,0267	6,5497	4,0892
445	26,4580654973	-28,0555364416	361	464	919	1685	2670	3864	3324	72,1525	8,1634	7,8273
446	26,5180654973	-28,0555364416	490	629	1257	2032	2988	4373	3915	79,3267	9,2331	5,2902
447	26,5780654973	-28,0555364416	351	434	864	1414	2249	3549	3142	79,4915	8,9548	6,2135
448	26,6080654973	-28,0555364416	353	435	815	1233	2129	3132	2462	79,4161	9,4814	6,2812
449	26,6380654973	-28,0555364416	300	387	638	829	1439	2341	1744	76,2041	9,2822	5,2102
450	26,6680654973	-28,0555364416	195	283	515	688	1322	2069	1484	78,0617	8,8193	5,1223
451	26,9680654973	-28,0555364416	402	485	979	1681	2421	3723	3502	66,9153	18,2408	9,9935

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
452	26,9980654973	-28,0555364416	423	503	983	1624	2413	3736	3367	69,1995	18,8264	8,2606
453	27,2680654973	-28,0555364416	410	475	670	852	1637	2573	2099	64,8696	14,8600	10,9322
454	27,3580654973	-28,0555364416	398	485	675	856	1571	2656	1878	58,2112	17,7874	10,7641
455	25,1680654973	-28,0255364416	533	612	967	1425	2171	3619	3221	72,5773	6,1124	4,5920
456	25,1980654973	-28,0255364416	432	573	954	1336	2184	3313	2726	75,6976	5,5305	5,2845
457	25,2280654973	-28,0255364416	233	428	765	1087	1696	2654	1891	74,2685	5,4124	3,7387
458	25,2580654973	-28,0255364416	268	496	1006	1526	2474	3289	2304	75,6218	7,0993	3,9289
459	25,0480654973	-28,0855364416	465	548	823	1166	1816	2962	2398	76,8853	6,5544	5,5542
460	25,0780654973	-28,0855364416	367	472	779	1132	1805	2634	2139	77,4815	6,4823	5,3716
461	25,1080654973	-28,0855364416	369	549	996	1518	2413	3516	2542	78,0748	4,7044	4,1461
462	25,1380654973	-28,0855364416	222	376	724	1057	1658	2729	1915	78,9769	5,3475	5,5836
463	25,1680654973	-28,0855364416	347	485	865	1273	2068	3192	2532	72,9392	5,4176	4,8885
464	25,1980654973	-28,0855364416	536	676	1213	1834	2988	4243	3539	72,4507	4,6719	4,3180
465	25,2280654973	-28,0855364416	352	514	852	1161	2045	3044	2417	72,4578	5,3254	4,6700
466	25,2580654973	-28,0855364416	527	648	1102	1615	2738	4123	3299	76,1200	6,5557	4,9414
467	25,2880654973	-28,0855364416	430	519	827	1415	2204	3380	2783	75,6942	6,6693	3,7744
468	25,3180654973	-28,0855364416	357	480	878	1409	2090	3332	2629	72,0445	7,2434	3,7822
469	25,3480654973	-28,0855364416	302	481	970	1402	2292	3190	2475	74,7382	7,9708	3,2906
470	25,3780654973	-28,0855364416	446	516	860	1461	2448	3565	2814	75,3425	11,3913	3,0287
471	25,4080654973	-28,0855364416	434	648	1056	1440	2178	3288	2660	74,2912	15,3785	4,5962
472	25,4380654973	-28,0855364416	403	559	853	1148	1692	2990	2186	70,2993	21,9938	5,7581
473	25,5280654973	-28,0855364416	539	616	854	1094	1695	2796	2316	78,5051	15,6078	6,3578
474	25,5580654973	-28,0855364416	497	597	895	1178	1978	3077	2303	72,1793	15,0707	6,7063
475	25,6480654973	-28,0855364416	251	417	772	1081	1847	2679	1797	71,2321	12,2748	7,2450
476	25,7080654973	-28,0855364416	325	432	733	1007	1765	2646	2129	71,1327	11,3316	6,8395
477	25,7380654973	-28,0855364416	410	446	764	1460	2646	3855	3320	71,7728	11,9226	7,1080
478	25,7680654973	-28,0855364416	481	544	929	1558	2287	3673	3366	72,6670	11,8466	7,0963

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
479	25,8280654973	-28,0855364416	473	504	846	1310	1935	3264	3024	77,7403	10,5654	7,1628
480	25,8880654973	-28,0855364416	673	883	1695	2562	3524	5058	4590	81,8054	8,0136	6,1249
481	25,9180654973	-28,0855364416	617	800	1701	2666	3682	5093	4610	83,4092	10,0872	6,9923
482	25,9480654973	-28,0855364416	706	902	1768	2670	3795	5360	4995	83,4842	9,2120	6,9010
483	26,0080654973	-28,0855364416	609	779	1462	2180	3134	4629	4113	83,9777	6,2072	4,8639
484	26,0680654973	-28,0855364416	723	921	1734	2509	3430	5107	4660	83,8711	6,6006	4,8172
485	26,0980654973	-28,0855364416	697	897	1768	2636	3762	5370	4980	84,2905	8,5407	5,6988
486	26,1280654973	-28,0855364416	562	745	1433	2055	2944	4533	4057	75,8603	8,3248	5,6872
487	26,1580654973	-28,0855364416	602	781	1482	2314	3291	4711	4213	75,1224	8,5561	5,8049
488	26,2480654973	-28,0855364416	475	572	1092	1597	2524	3676	3028	72,0736	7,4969	3,7669
489	26,2780654973	-28,0855364416	508	662	1292	1953	2813	3929	3376	71,4717	5,8691	1,8968
490	26,3680654973	-28,0855364416	423	527	745	957	1625	2807	2073	69,7662	7,5486	4,1259
491	26,5780654973	-28,0855364416	359	432	739	1209	1989	3104	2582	78,4628	9,5443	6,2801
492	26,6380654973	-28,0855364416	370	521	982	1628	2480	3646	2942	77,3780	9,5697	6,1290
493	26,6680654973	-28,0855364416	347	456	830	1190	1931	3055	2641	75,5429	9,8689	5,5083
494	26,8180654973	-28,0855364416	380	463	696	990	1820	2918	2129	68,7139	15,1131	6,6870
495	26,9680654973	-28,0855364416	360	433	859	1488	2163	3430	3047	69,2719	19,8774	9,9231
496	27,4180654973	-28,0855364416	430	594	886	1226	1988	2948	2058	59,1213	19,8279	11,7149
497	27,4480654973	-28,0855364416	662	749	927	1184	2025	3361	2720	56,8503	23,0834	13,8408
498	25,0180654973	-28,1155364416	332	484	839	1187	1873	2912	2166	70,6582	7,6731	6,6299
499	25,0480654973	-28,1155364416	581	665	1275	2039	3171	4577	4140	71,6930	7,4225	6,2715
500	25,0780654973	-28,1155364416	384	467	764	1177	1873	2903	2370	77,6069	6,6853	5,6453
501	25,1680654973	-28,1155364416	325	436	757	1083	1653	2888	2233	70,5677	5,7852	4,8557
502	25,1980654973	-28,1155364416	427	555	937	1353	2143	3353	2908	71,2633	5,7240	4,8597
503	25,2280654973	-28,1155364416	331	466	797	1125	1802	3034	2312	74,0897	5,2433	4,7870
504	25,2880654973	-28,1155364416	346	484	844	1229	1960	3013	2352	70,7032	6,1434	4,1991
505	25,3180654973	-28,1155364416	308	483	901	1287	1961	3161	2397	74,6382	8,6439	4,0203

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
506	25,4080654973	-28,1155364416	569	684	1259	1998	2848	4314	3892	74,6777	12,1586	4,5112
507	25,4380654973	-28,1155364416	482	743	1351	1836	2793	4119	3451	73,8234	15,1278	5,6515
508	25,5580654973	-28,1155364416	385	500	751	1001	1686	2619	1957	72,0328	16,8404	7,3016
509	25,5880654973	-28,1155364416	501	567	783	1084	1765	2903	2298	72,1486	12,8461	6,9477
510	25,6780654973	-28,1155364416	316	416	659	927	1550	2453	1854	73,9674	12,4416	7,5098
511	25,9180654973	-28,1155364416	744	944	1769	2624	3464	5047	4549	82,8216	10,7271	7,2376
512	25,9480654973	-28,1155364416	604	752	1425	2189	3162	4794	4436	83,2511	7,6818	5,9424
513	26,0080654973	-28,1155364416	859	1088	2053	2989	4079	5581	5166	83,9123	7,3354	5,1769
514	26,0380654973	-28,1155364416	701	904	1779	2689	3737	5279	4836	83,8698	6,8553	4,8813
515	26,0680654973	-28,1155364416	632	808	1581	2455	3411	4923	4501	82,3455	7,1636	4,8987
516	26,0980654973	-28,1155364416	645	847	1639	2348	3225	4872	4468	82,9623	6,8738	4,8809
517	26,1280654973	-28,1155364416	662	848	1604	2414	3429	5111	4716	79,7731	8,3345	5,9485
518	26,1880654973	-28,1155364416	530	681	1275	1980	2818	4023	3555	77,9803	7,5161	4,7316
519	26,2180654973	-28,1155364416	527	647	1094	1596	2345	3786	3408	77,8603	7,1907	3,9345
520	26,2480654973	-28,1155364416	694	905	1814	2744	3788	5185	4821	76,0891	7,2088	2,8949
521	26,2780654973	-28,1155364416	557	711	1477	2362	3374	4783	4242	75,5055	7,3887	2,9790
522	26,3080654973	-28,1155364416	719	929	1737	2486	3448	4945	4507	73,4923	8,5519	3,6092
523	26,3380654973	-28,1155364416	611	761	1356	1914	2822	4279	3810	73,9705	7,0801	3,6489
524	26,3680654973	-28,1155364416	372	463	890	1383	2191	3562	3187	70,0949	7,7401	4,5049
525	26,3980654973	-28,1155364416	538	680	1278	2096	3026	4451	4110	73,5688	7,9868	4,9600
526	26,4580654973	-28,1155364416	384	464	883	1394	2303	3290	2672	74,0964	11,7024	8,5437
527	27,0580654973	-28,1155364416	517	586	777	988	1647	2738	2286	63,1182	24,4193	12,4090
528	27,2380654973	-28,1155364416	533	615	845	1089	1926	3223	2560	60,0935	12,3163	10,0513
529	27,3280654973	-28,1155364416	321	381	543	740	1277	2339	1918	59,3499	17,6350	11,2601
530	27,3580654973	-28,1155364416	446	553	824	1154	1849	2848	2313	59,3157	17,7379	11,3626
531	27,3880654973	-28,1155364416	326	465	884	1256	1567	2163	1725	57,0873	17,7582	11,3942
532	27,1480654973	-28,1755364416	444	496	625	801	1402	2707	2140	57,1643	22,4357	10,7846

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
533	27,2680654973	-28,1755364416	517	618	942	1254	2272	3549	3086	53,4852	16,6537	13,6298
534	25,0480654973	-28,1455364416	464	531	954	1526	2279	3629	3280	71,8141	7,6796	6,2654
535	25,1080654973	-28,1455364416	428	623	1109	1668	2426	3551	2726	74,9296	6,4233	5,8124
536	25,1680654973	-28,1455364416	396	433	712	1155	1808	3061	2738	69,1281	6,1766	5,6884
537	25,2580654973	-28,1455364416	374	506	822	1184	1867	3190	2503	71,5649	5,5356	3,9662
538	25,3180654973	-28,1455364416	292	429	854	1256	2088	3224	2403	72,0232	5,4707	3,6795
539	25,4080654973	-28,1455364416	357	478	903	1519	2534	3547	2818	74,9548	8,7132	2,9682
540	25,4380654973	-28,1455364416	510	659	1189	1903	2715	4240	3772	73,3831	10,9828	4,3193
541	25,4680654973	-28,1455364416	292	428	792	1103	1828	2820	2205	73,6087	12,5056	4,8075
542	25,5280654973	-28,1455364416	411	462	661	878	1471	2405	1898	72,9859	15,0790	6,4067
543	25,9180654973	-28,1455364416	632	810	1563	2359	3554	4931	4475	77,7073	10,9722	6,8357
544	26,0080654973	-28,1455364416	494	614	1302	2055	3032	4398	3731	77,1675	9,0316	6,1554
545	26,0980654973	-28,1455364416	698	887	1726	2595	3604	5167	4761	82,6465	6,9806	4,6090
546	26,1280654973	-28,1455364416	544	687	1337	2135	3068	4728	4384	82,7854	8,0146	5,6616
547	26,1880654973	-28,1455364416	661	847	1573	2320	3257	4809	4354	76,5962	7,0710	3,4765
548	26,2780654973	-28,1455364416	585	751	1485	2342	3282	4672	4308	74,9884	8,3838	2,9802
549	26,3080654973	-28,1455364416	460	607	1150	1704	2621	3846	3469	72,2770	8,2156	3,5074
550	26,3380654973	-28,1455364416	696	892	1711	2532	3506	5141	4696	73,8642	8,5501	4,2707
551	26,3680654973	-28,1455364416	545	675	1301	1916	2859	4063	3618	73,8400	9,7750	7,7678
552	26,4580654973	-28,1455364416	457	540	1168	1935	2729	4152	3900	73,7934	12,6828	9,7853
553	26,4880654973	-28,1455364416	344	383	509	622	1178	2245	1718	74,0958	12,2772	9,9810
554	26,5780654973	-28,1455364416	667	855	1599	2378	3277	4597	4204	80,0679	10,6017	6,3123
555	26,7880654973	-28,1455364416	392	575	967	1401	2139	3205	2564	71,1217	16,5062	7,8380
556	26,8180654973	-28,1455364416	388	476	789	1072	1937	2889	2245	69,4584	16,1837	7,7151
557	26,9680654973	-28,1455364416	415	508	746	990	1644	2606	2138	62,3022	22,1758	11,2023
558	27,1480654973	-28,1455364416	505	586	771	1021	1873	3126	2504	59,8948	20,8855	11,6444
559	27,2080654973	-28,1455364416	494	555	758	1009	1776	2928	2368	59,0936	15,6797	10,6091

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
560	27,2380654973	-28,1455364416	474	532	746	967	1834	2925	2295	57,4647	12,7358	10,5020
561	26,3680654973	-28,2055364416	690	886	1677	2472	3446	5020	4567	73,3955	12,2439	5,2016
562	26,3980654973	-28,2055364416	596	777	1459	2166	2992	4497	4134	75,8493	11,9291	8,7163
563	26,4280654973	-28,2055364416	334	398	640	835	1505	2483	2049	78,5058	12,7459	8,9543
564	26,6380654973	-28,2055364416	594	730	1333	1987	2759	4139	3728	75,7754	10,6032	6,7630
565	26,8480654973	-28,2055364416	561	666	1178	1765	2502	3949	3601	65,7021	19,9815	9,0951
566	26,8780654973	-28,2055364416	440	518	813	1136	1711	3030	2686	65,5451	24,4075	10,1486
567	26,9080654973	-28,2055364416	452	544	930	1344	2011	3409	2965	63,7721	25,0774	10,5630
568	26,9980654973	-28,2055364416	439	545	966	1447	2152	3474	3182	58,7284	22,1918	9,8446
569	27,1180654973	-28,2055364416	482	568	979	1459	2391	3489	3121	55,8398	25,1441	11,0622
570	27,1780654973	-28,2055364416	388	455	621	832	1595	2593	1924	55,6218	18,0838	10,9589
571	25,0180654973	-28,1755364416	225	446	856	1264	1915	2895	1953	67,1269	7,7525	5,0963
572	25,0480654973	-28,1755364416	539	624	958	1367	2109	3275	2844	73,6756	7,8077	6,7557
573	25,0780654973	-28,1755364416	492	546	852	1378	2132	3541	2931	72,5313	7,9024	7,3562
574	25,1080654973	-28,1755364416	472	571	952	1434	2209	3445	2847	72,1464	9,1249	10,1212
575	25,1380654973	-28,1755364416	296	461	889	1302	2169	3032	2255	68,8274	6,4845	5,5918
576	25,1680654973	-28,1755364416	509	637	1082	1699	2654	3897	3204	69,8470	5,8063	6,0269
577	25,1980654973	-28,1755364416	383	475	740	1088	1808	2930	2355	71,3816	6,1104	6,1632
578	25,2280654973	-28,1755364416	494	572	786	1102	1760	2968	2530	77,9292	6,6355	5,7969
579	25,2580654973	-28,1755364416	393	495	845	1339	2191	3359	2806	74,7785	6,1732	4,8474
580	25,2880654973	-28,1755364416	543	654	1265	2061	3436	4626	3910	74,4854	5,8988	3,5053
581	25,3780654973	-28,1755364416	464	574	1172	1921	2737	4261	3806	75,8158	8,9501	2,2772
582	25,4380654973	-28,1755364416	536	672	1300	2134	3117	4333	3886	74,9379	9,0540	2,0013
583	25,4980654973	-28,1755364416	346	441	797	1330	2318	3511	2670	71,5238	12,1361	5,2231
584	25,5280654973	-28,1755364416	344	455	892	1494	2473	3545	2791	72,2241	13,8912	6,0144
585	25,5580654973	-28,1755364416	301	408	810	1274	2089	2836	2263	76,5034	13,0961	6,2908
586	25,5880654973	-28,1755364416	556	637	1103	1916	3081	4188	3454	75,0493	14,1839	6,9737

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
587	25,9480654973	-28,1755364416	473	590	1188	1946	3202	4417	3881	77,5352	9,7971	7,1638
588	25,9780654973	-28,1755364416	562	722	1297	1939	2690	4315	3987	78,9066	9,6199	6,5764
589	26,0080654973	-28,1755364416	435	528	1064	1857	2693	4019	3668	76,6298	9,9380	6,7408
590	26,0380654973	-28,1755364416	400	532	965	1486	2467	3672	2922	76,0463	8,6144	5,6249
591	26,0680654973	-28,1755364416	387	475	848	1277	1974	3275	2647	74,6085	8,4002	5,8761
592	26,0980654973	-28,1755364416	557	722	1362	2059	2839	4530	4056	78,0995	7,5338	4,9264
593	26,1580654973	-28,1755364416	409	531	867	1284	2240	3280	2709	81,6119	6,3189	3,9002
594	26,1880654973	-28,1755364416	645	823	1529	2244	3114	4800	4356	72,6197	5,8397	3,4250
595	26,2480654973	-28,1755364416	561	707	1278	1939	2832	4219	3819	76,3423	6,0617	3,6069
596	26,3080654973	-28,1755364416	526	655	1161	1724	2576	3982	3511	73,6769	9,6465	4,5792
597	26,3380654973	-28,1755364416	446	555	1030	1490	2410	3583	3071	72,1892	13,4597	5,7707
598	26,4880654973	-28,1755364416	439	538	982	1554	2349	3632	3082	77,2914	14,2422	15,4115
599	26,5180654973	-28,1755364416	656	787	1511	2287	3154	4703	4176	78,5385	12,3506	11,1063
600	26,5780654973	-28,1755364416	537	634	1257	1836	2645	4106	3776	80,0159	10,6393	9,1550
601	26,6080654973	-28,1755364416	505	620	1176	1854	2760	4150	3688	79,0658	10,6781	9,3210
602	26,6980654973	-28,1755364416	697	851	1667	2538	3673	5043	4589	72,0243	11,1152	5,4062
603	26,8180654973	-28,1755364416	433	508	873	1394	2118	3252	2807	68,4192	16,3928	7,8118
604	26,8780654973	-28,1755364416	609	736	1357	2039	2876	4352	4013	65,7893	23,1914	10,0198
605	26,9380654973	-28,1755364416	368	471	857	1447	2220	3582	3212	64,3275	25,8472	10,1087
606	26,9680654973	-28,1755364416	500	669	1199	1738	2474	3922	3558	60,5496	23,8898	10,2885
607	26,9980654973	-28,1755364416	484	599	1090	1717	2489	3860	3531	62,9020	21,8317	11,1449
608	27,0580654973	-28,1755364416	501	594	941	1323	2245	3453	2844	59,8751	29,1807	13,3502
609	26,1580654973	-28,2355364416	372	482	789	1158	1969	2974	2311	75,3325	6,2233	3,2144
610	26,2780654973	-28,2355364416	463	596	962	1381	2489	3818	2962	73,4603	9,1316	4,9290
611	26,4280654973	-28,2355364416	522	648	1001	1291	2184	3495	2931	76,3382	13,2194	9,2793
612	26,5480654973	-28,2355364416	561	666	1195	1764	2597	3908	3484	77,1866	11,7125	10,5057
613	26,5780654973	-28,2355364416	503	596	1052	1589	2280	3795	3406	76,5981	11,4481	11,8987

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
614	26,6380654973	-28,2355364416	595	714	1392	2208	3039	4545	4000	78,0932	10,4407	6,7296
615	26,6680654973	-28,2355364416	667	824	1526	2297	3166	4624	4296	78,0275	10,5427	6,7097
616	26,6980654973	-28,2355364416	551	688	1294	2032	2942	4377	3854	74,2627	13,2568	7,8255
617	26,7280654973	-28,2355364416	496	589	1071	1643	2519	3754	3388	72,9550	13,9889	6,0764
618	26,9080654973	-28,2355364416	452	497	656	822	1455	2610	2035	62,8384	25,5643	10,6446
619	26,9680654973	-28,2355364416	486	573	773	972	1676	2849	2126	58,8111	30,1211	11,2845
620	24,9880654973	-28,2055364416	380	438	568	715	1161	2024	1570	65,3028	12,3741	11,3824
621	25,1080654973	-28,2055364416	489	567	915	1477	2418	3658	3051	71,3874	9,0674	10,0473
622	25,1380654973	-28,2055364416	404	499	810	1304	1927	3111	2619	72,2671	6,9104	8,0833
623	25,1680654973	-28,2055364416	363	569	1028	1577	2552	3669	2744	71,3421	4,7066	5,4171
624	25,1980654973	-28,2055364416	308	422	685	1040	1751	2723	2148	77,5071	7,0088	7,2309
625	25,2280654973	-28,2055364416	400	508	868	1397	2213	3485	2855	73,5588	7,8435	7,0688
626	25,2580654973	-28,2055364416	504	575	943	1536	2614	4012	3302	74,1374	7,5274	6,8105
627	25,2880654973	-28,2055364416	356	458	846	1388	2225	3341	2718	74,8376	6,4637	5,5659
628	25,3180654973	-28,2055364416	509	590	1068	1827	2670	4007	3481	73,5291	6,7230	4,2754
629	25,4380654973	-28,2055364416	101	338	719	1149	1956	2888	2016	77,5255	8,4499	2,8050
630	25,4680654973	-28,2055364416	682	842	1665	2735	3747	5476	5099	75,9435	6,6824	2,2859
631	26,0080654973	-28,2055364416	493	619	1116	1772	2865	4302	3588	76,8065	11,5753	6,9108
632	26,0680654973	-28,2055364416	478	596	1052	1595	2483	3926	3312	75,4196	8,3777	5,8422
633	26,0980654973	-28,2055364416	335	391	698	983	1822	2779	2157	71,9726	7,9608	5,7053
634	26,1280654973	-28,2055364416	494	614	1213	1948	2952	4235	3689	76,9175	6,8226	4,4128
635	26,1580654973	-28,2055364416	459	567	1039	1737	2630	4090	3518	73,6568	6,4083	3,7015
636	26,2180654973	-28,2055364416	601	735	1209	1748	2574	4225	3785	72,4725	7,4956	3,5479
637	26,2480654973	-28,2055364416	575	727	1318	1961	2866	4365	3949	78,4828	7,8693	4,4623
638	26,2780654973	-28,2055364416	465	569	1024	1485	2266	3514	3029	74,4391	8,9135	4,8239
639	26,3080654973	-28,2055364416	334	434	689	920	1584	2603	2076	71,6617	10,0599	5,1174
640	26,3380654973	-28,2055364416	688	858	1659	2465	3502	4972	4537	75,4184	12,7728	5,3304

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
641	25,0180654973	-28,2355364416	378	520	860	1229	1852	2764	2107	67,2726	13,6014	12,9836
642	25,0480654973	-28,2355364416	498	559	867	1385	2147	3245	2578	69,3697	11,6545	10,9704
643	25,0780654973	-28,2355364416	542	621	881	1274	1898	3179	2739	70,1412	10,1468	10,6020
644	25,1080654973	-28,2355364416	353	470	777	1173	1891	2838	2213	71,8883	8,2428	8,3772
645	25,1380654973	-28,2355364416	554	663	1166	1981	3026	4313	3665	71,9950	7,3378	7,5991
646	25,1680654973	-28,2355364416	306	427	731	1050	1757	2747	2181	72,5421	5,9804	6,2843
647	25,1980654973	-28,2355364416	283	434	806	1288	1999	3011	2357	72,9439	7,0438	6,3756
648	25,2280654973	-28,2355364416	335	447	804	1420	2227	3294	2614	73,3804	7,8969	7,0004
649	25,2580654973	-28,2355364416	302	413	677	975	1592	2582	2117	71,6880	7,4568	6,6873
650	25,2880654973	-28,2355364416	475	520	914	1584	2506	3654	3205	73,0131	7,0407	6,3505
651	25,3180654973	-28,2355364416	310	449	736	991	1530	2687	2112	72,6241	7,4806	5,5481
652	25,3480654973	-28,2355364416	434	525	901	1412	2485	3663	2993	73,0852	6,9907	4,4319
653	25,3780654973	-28,2355364416	317	438	797	1233	2274	3355	2553	73,2872	6,4655	4,2206
654	25,4080654973	-28,2355364416	288	371	700	1126	1923	3017	2358	76,9498	3,1122	1,9912
655	25,4380654973	-28,2355364416	168	344	741	1134	1813	2781	2083	75,3087	6,0373	2,4264
656	25,5280654973	-28,2355364416	381	464	854	1414	2098	3462	3049	76,9415	8,9308	5,3254
657	25,5580654973	-28,2355364416	473	576	959	1625	2717	3770	2975	78,8700	11,8240	6,2947
658	25,6180654973	-28,2355364416	472	562	998	1685	2709	3677	2920	77,2200	15,3880	7,5926
659	25,1680654973	-28,2655364416	347	462	744	1126	1695	2764	2213	69,2654	8,3333	6,9761
660	25,1980654973	-28,2655364416	299	424	709	1039	1630	2712	2132	69,1553	8,1863	6,8314
661	25,2280654973	-28,2655364416	333	466	848	1348	2089	3235	2476	71,2223	8,0193	7,3778
662	25,3180654973	-28,2655364416	411	489	761	1096	1884	2838	2354	72,5375	7,4279	4,9995
663	25,3480654973	-28,2655364416	480	601	1038	1756	2673	3691	3043	72,8466	8,3764	5,9470
664	25,4080654973	-28,2655364416	262	404	734	1121	1967	2870	2147	74,8733	7,0104	5,7672
665	25,4380654973	-28,2655364416	306	425	731	1115	1741	2856	2304	77,6488	6,7364	5,2068
666	25,5280654973	-28,2655364416	392	496	959	1672	2464	3781	3373	76,2121	7,5726	4,1927
667	25,5580654973	-28,2655364416	351	498	897	1293	2166	3394	2577	74,5704	11,3083	5,3949

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
668	25,5880654973	-28,2655364416	469	501	862	1608	2307	3503	3081	77,5465	12,8944	6,9426
669	26,0380654973	-28,2655364416	437	506	696	868	1669	2728	2122	71,5362	16,3202	7,8156
670	26,2180654973	-28,2655364416	452	554	1026	1637	2530	3788	3346	74,6074	8,2485	5,0485
671	26,2780654973	-28,2655364416	613	786	1409	2104	2961	4411	3993	71,9259	9,2983	5,6879
672	26,3980654973	-28,2655364416	645	827	1555	2341	3323	4985	4568	76,4107	11,3001	6,0797
673	26,4280654973	-28,2655364416	482	611	1060	1495	2548	3767	3212	74,3450	12,9593	6,9723
674	26,4580654973	-28,2655364416	520	640	1217	1826	2746	3952	3461	76,6921	12,5576	9,9611
675	26,6080654973	-28,2655364416	523	631	1155	1848	2660	4187	3769	75,6648	11,9194	9,8617
676	26,6680654973	-28,2655364416	442	530	1009	1616	2314	3653	3300	76,0184	12,7373	6,9297
677	26,7280654973	-28,2655364416	558	701	1391	2351	3318	4722	4248	73,4465	14,8274	7,5260
678	26,7580654973	-28,2655364416	458	561	986	1442	2274	3548	3047	70,5927	22,8602	9,1319
679	25,0780654973	-28,2955364416	401	509	769	1020	1856	2736	2136	68,9585	12,8907	12,5462
680	25,1380654973	-28,2955364416	362	529	829	1195	1869	2908	2297	65,8911	10,1500	7,9282
681	25,1980654973	-28,2955364416	439	537	891	1546	2548	3487	2723	70,7390	8,3700	7,1193
682	25,2580654973	-28,2955364416	442	546	888	1341	2050	3210	2696	70,2086	7,4902	6,1514
683	25,2880654973	-28,2955364416	414	487	745	1069	1723	2778	2293	70,4136	7,6569	6,1812
684	25,3780654973	-28,2955364416	419	500	908	1570	2374	3405	2867	73,6904	8,6081	6,4184
685	25,4080654973	-28,2955364416	336	469	811	1254	2280	3188	2432	78,6248	7,5616	6,3410
686	25,4380654973	-28,2955364416	435	504	688	942	1581	2737	2145	79,3599	7,0655	5,3739
687	25,4680654973	-28,2955364416	239	424	778	1167	2019	2866	2138	78,6533	6,6578	5,3171
688	25,5580654973	-28,2955364416	341	470	862	1335	2541	3543	2740	75,6105	10,6070	5,9793
689	25,5880654973	-28,2955364416	585	692	1304	2150	3013	4444	4108	74,1059	11,2420	4,6902
690	25,6180654973	-28,2955364416	478	570	956	1508	2560	3745	3169	76,9852	12,3408	6,1468
691	26,0380654973	-28,2955364416	380	466	896	1546	2519	3551	3119	71,7489	16,0465	7,9907
692	26,0680654973	-28,2955364416	445	573	838	1093	1849	2906	2386	70,3020	13,5689	6,2540
693	26,1880654973	-28,2955364416	544	684	1150	1709	2488	3926	3505	75,0623	10,3042	5,6823
694	26,3380654973	-28,2955364416	650	826	1643	2566	3838	5012	4428	75,3327	11,1359	5,7161

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
695	26,4580654973	-28,2955364416	437	561	1002	1389	2393	3533	3064	72,7152	11,2909	8,5558
696	26,9680654973	-28,2955364416	418	464	609	818	1491	2458	1815	58,1348	29,5716	14,6285
697	26,9980654973	-28,2955364416	375	458	692	936	1503	2358	1857	57,0620	30,6511	14,6784
698	25,1980654973	-28,3255364416	353	503	846	1310	2012	2993	2320	65,4496	9,4971	9,0229
699	25,2280654973	-28,3255364416	346	476	822	1294	2047	2940	2332	64,9273	9,5420	7,4373
700	25,2580654973	-28,3255364416	353	481	815	1206	1887	2834	2308	69,0996	10,5347	8,4195
701	25,2880654973	-28,3255364416	512	587	866	1302	1943	3222	2700	69,9745	8,4894	6,8518
702	25,3780654973	-28,3255364416	376	470	839	1320	2238	3158	2582	72,5459	10,0201	8,2024
703	25,4080654973	-28,3255364416	369	480	792	1228	2004	3100	2535	77,6750	9,4379	8,7179
704	25,5280654973	-28,3255364416	339	465	831	1265	2274	3267	2556	75,6879	7,7782	4,5553
705	25,6180654973	-28,3255364416	579	662	1228	2170	2943	4420	3923	77,9434	11,5873	5,7363
706	26,2180654973	-28,3255364416	397	522	1088	2060	2937	4301	3941	73,7004	11,1718	6,4629
707	26,2780654973	-28,3255364416	512	656	1265	2103	2959	4490	3977	73,9811	10,2746	6,6540
708	26,4280654973	-28,3255364416	361	490	878	1297	1954	3196	2721	71,8070	10,5644	5,3340
709	26,4580654973	-28,3255364416	424	540	1072	1821	2826	4062	3494	72,6928	9,7686	5,9112
710	26,4880654973	-28,3255364416	613	760	1557	2554	3550	4586	4266	73,6070	11,3375	6,6535
711	26,8180654973	-28,3255364416	431	480	651	825	1622	2769	2141	63,6421	23,9000	8,4420
712	26,8480654973	-28,3255364416	452	515	647	792	1255	2446	1967	63,0134	30,3669	12,0927
713	26,9980654973	-28,3255364416	510	582	770	994	1708	2924	2222	55,4723	30,6635	11,4410
714	27,0280654973	-28,3255364416	449	520	717	943	1702	2736	2154	53,3635	25,7045	10,0883
715	25,5280654973	-28,3555364416	462	526	700	913	1430	2612	2078	80,2908	8,3685	6,5361
716	25,5580654973	-28,3555364416	647	777	1434	2429	3378	4956	4608	72,4501	7,7246	5,1984
717	26,2780654973	-28,3555364416	391	519	859	1253	2040	3245	2716	75,1446	11,0019	7,4775
718	26,4580654973	-28,3555364416	440	497	680	876	1624	2823	2193	74,3442	11,2607	8,0455
719	26,8180654973	-28,3555364416	400	427	544	664	1234	2263	1716	63,8724	22,4466	9,5980
720	26,8480654973	-28,3555364416	431	503	704	946	1626	2628	2123	61,5799	25,4881	11,1211
721	26,9380654973	-28,3555364416	403	435	567	732	1362	2524	1824	56,4724	32,4990	12,6832

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
722	27,0280654973	-28,3555364416	468	527	695	896	1651	3013	2322	51,9509	32,0772	11,2118
723	26,9380654973	-28,4155364416	441	499	643	844	1515	2612	1924	49,8817	34,6011	12,2658
724	25,0780654973	-28,3855364416	439	589	913	1324	2091	3071	2271	62,2361	16,5074	16,2275
725	25,2580654973	-28,3855364416	351	477	737	1013	1689	2573	2025	63,2331	12,3028	10,7664
726	25,2880654973	-28,3855364416	471	571	844	1229	1934	3034	2462	67,8452	11,8734	11,6482
727	25,5580654973	-28,3855364416	456	524	788	1180	1974	3051	2499	72,3383	6,3719	3,7254
728	25,5880654973	-28,3855364416	588	690	1294	2369	3275	4828	4430	74,3658	9,1298	4,8179
729	25,6180654973	-28,3855364416	504	573	1028	2007	3046	4303	3685	73,7059	10,9836	5,5251
730	25,6780654973	-28,3855364416	365	523	973	1463	2532	3579	2740	73,1962	19,3207	10,3120
731	25,8280654973	-28,3855364416	373	455	647	885	1633	2566	1940	65,1506	19,9991	11,4181
732	26,0680654973	-28,3855364416	459	522	686	890	1553	2667	2087	69,1072	23,1040	8,7097
733	26,3680654973	-28,3855364416	477	593	1169	2047	2899	4254	3866	70,8286	11,8007	5,8776
734	26,4280654973	-28,3855364416	557	686	1333	2182	3049	4374	4020	74,2064	10,8108	6,7993
735	26,5480654973	-28,3855364416	624	779	1510	2442	3340	4807	4396	68,7763	20,3616	10,6834
736	26,5780654973	-28,3855364416	490	580	1033	1607	2488	3916	3304	72,0937	15,7212	10,0416
737	26,8480654973	-28,3855364416	500	556	707	889	1558	2652	2209	61,1541	25,7494	11,7180
738	26,8780654973	-28,3855364416	452	515	667	870	1515	2705	2059	54,1770	29,2923	11,1042
739	26,9380654973	-28,3855364416	428	491	673	849	1603	2775	2154	54,7125	32,7979	12,9854
740	26,4280654973	-28,4455364416	567	676	937	1205	1979	3192	2783	65,8056	8,6358	6,1447
741	26,7280654973	-28,4455364416	386	426	580	695	1253	2074	1574	68,8069	22,4764	10,4282
742	26,9380654973	-28,4455364416	422	480	606	784	1531	2589	1968	53,2776	37,4894	9,9657
743	27,0580654973	-28,4455364416	401	453	616	803	1494	2692	1935	47,7753	37,8292	15,4738
744	24,9880654973	-28,4155364416	399	605	988	1367	1853	2733	1978	64,9034	16,3974	15,8422
745	25,0180654973	-28,4155364416	343	539	897	1251	1913	2885	1967	65,2690	15,8037	17,1632
746	25,1080654973	-28,4155364416	421	557	860	1177	1822	2915	2282	59,4584	13,1500	12,8012
747	25,5880654973	-28,4155364416	540	621	1160	2223	3081	4532	4110	74,2784	10,2020	4,8135
748	25,6180654973	-28,4155364416	331	469	826	1420	2426	3371	2606	75,0074	13,5855	4,6837

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
749	25,6480654973	-28,4155364416	596	695	1215	2125	2955	4501	4119	73,0780	16,8772	8,3944
750	25,6780654973	-28,4155364416	366	487	794	1136	1775	3076	2407	71,0092	20,2952	10,3087
751	25,7680654973	-28,4155364416	429	545	822	1188	1926	3125	2476	69,1975	23,0570	11,9111
752	25,8280654973	-28,4155364416	405	497	748	1121	1874	3067	2504	65,4437	21,1638	12,3486
753	26,3380654973	-28,4155364416	422	509	799	1076	2061	3097	2440	69,9281	14,4220	7,6289
754	26,3980654973	-28,4155364416	336	415	797	1387	2032	3076	2689	72,1081	11,3519	7,2304
755	25,3180654973	-28,4755364416	406	585	955	1346	2116	3119	2341	63,6598	15,2156	12,2545
756	25,4680654973	-28,4755364416	410	564	913	1236	1962	3104	2367	70,5865	11,8273	6,9451
757	25,4980654973	-28,4755364416	421	574	879	1113	1721	2837	2403	72,8358	11,2115	6,5295
758	25,6180654973	-28,4755364416	709	793	992	1195	1650	2831	2522	73,0384	15,9130	7,2725
759	25,7080654973	-28,4755364416	457	588	1018	1505	2407	3534	2878	66,3912	24,0990	11,5690
760	26,2180654973	-28,4755364416	365	443	867	1618	2379	3575	3062	64,4733	16,8730	9,3470
761	26,2480654973	-28,4755364416	424	474	616	740	1529	2643	1999	61,0938	17,3213	8,5463
762	26,3980654973	-28,4755364416	530	658	1251	2078	2929	4139	3583	64,7757	14,7271	7,1946
763	26,4280654973	-28,4755364416	440	488	613	748	1294	2554	2096	63,2487	12,6505	5,6991
764	26,5180654973	-28,4755364416	400	477	693	869	1723	2844	2011	63,4455	18,1439	8,4930
765	26,5480654973	-28,4755364416	436	508	942	1495	2290	3570	3096	62,8698	18,7990	7,9408
766	27,0280654973	-28,4755364416	393	449	583	811	1485	2526	1802	50,2962	36,0296	15,2748
767	25,0480654973	-28,4455364416	361	524	842	1154	1752	2728	2070	61,3057	13,2389	13,5600
768	25,1080654973	-28,4455364416	428	560	810	1063	1693	2726	2246	62,2753	12,7972	11,8721
769	25,3780654973	-28,4455364416	459	599	904	1199	1884	2973	2275	65,8733	18,1602	13,1946
770	25,5280654973	-28,4455364416	605	718	1423	2868	3881	5332	4944	74,9481	8,2207	3,9570
771	25,5580654973	-28,4455364416	513	628	903	1133	1760	3051	2592	76,3201	11,4684	6,3763
772	25,6780654973	-28,4455364416	527	611	1068	1985	2932	4218	3680	70,2381	23,7585	8,7128
773	24,8980654973	-28,4755364416	491	668	1057	1413	2094	3209	2509	67,4341	14,2923	14,7952
774	24,9280654973	-28,4755364416	430	537	766	995	1553	2626	2031	65,6546	13,8795	14,6234
775	24,9580654973	-28,4755364416	410	505	709	923	1563	2498	1942	65,4882	14,0266	14,6132

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
776	24,9880654973	-28,4755364416	410	595	995	1392	2005	2964	2212	62,7063	12,6631	11,1847
777	25,0780654973	-28,4755364416	517	698	1098	1511	2318	3437	2720	62,6528	12,6117	11,8663
778	25,1080654973	-28,4755364416	329	479	769	1108	1726	2612	1968	62,1770	12,5706	11,8473
779	24,8680654973	-28,5055364416	412	564	877	1140	1783	2731	2204	69,4420	14,8558	15,7179
780	24,8980654973	-28,5055364416	645	846	1351	1799	2627	3911	3261	67,5153	14,2217	14,7685
781	24,9280654973	-28,5055364416	403	641	1085	1479	2203	3269	2349	67,5550	14,1895	14,7637
782	24,9880654973	-28,5055364416	416	574	876	1167	1711	3111	2413	62,7386	13,2018	11,1225
783	25,0180654973	-28,5055364416	431	536	821	1076	1690	2779	2289	61,9758	12,4769	11,5126
784	25,0780654973	-28,5055364416	398	552	849	1158	1827	2861	2241	62,6178	12,1114	11,6953
785	25,4380654973	-28,5055364416	442	588	880	1143	1755	2880	2179	67,8388	15,3691	10,4842
786	25,4680654973	-28,5055364416	411	500	818	1181	1873	2941	2272	71,7517	14,2350	9,2850
787	25,4980654973	-28,5055364416	630	751	1308	2249	3317	4777	4011	69,3302	11,4928	6,4929
788	25,5580654973	-28,5055364416	636	736	1410	2636	3558	4922	4549	69,9344	11,2913	6,5752
789	25,5880654973	-28,5055364416	476	541	947	1721	2394	3631	3310	71,5746	13,1230	6,9203
790	25,6180654973	-28,5055364416	611	731	1193	1823	2617	3920	3469	71,0788	17,8298	9,1506
791	26,3080654973	-28,5055364416	521	605	814	1069	1937	3186	2624	58,6215	17,5590	8,0393
792	26,3380654973	-28,5055364416	494	562	720	908	1628	2928	2382	62,9566	16,3164	5,3605
793	26,3980654973	-28,5055364416	430	543	1058	1781	2599	3713	3353	59,9286	16,8697	5,9706
794	26,4880654973	-28,5055364416	454	525	709	922	1731	2835	2078	60,7231	19,0032	7,4873
795	26,6980654973	-28,5055364416	359	418	565	721	1394	2455	1936	67,7195	20,9300	11,1952
796	26,8480654973	-28,5055364416	521	612	802	1007	1625	2747	2083	60,1037	26,5471	8,8372
797	24,8680654973	-28,5355364416	483	575	864	1168	1942	2991	2467	68,6098	13,4677	12,8113
798	24,9280654973	-28,5355364416	328	464	772	1071	1671	2642	2023	64,2178	14,0884	14,9698
799	24,9580654973	-28,5355364416	343	496	831	1212	1861	2885	2248	63,1455	14,7868	14,8933
800	24,9880654973	-28,5355364416	365	475	739	1033	1605	2668	2151	61,3266	14,2074	12,3906
801	25,0480654973	-28,5355364416	400	492	756	1072	1805	2730	2194	60,3431	13,4540	10,8337
802	25,1380654973	-28,5355364416	439	568	828	1095	1759	2804	2277	63,8680	9,7620	8,8890

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
803	25,4080654973	-28,5355364416	509	667	957	1229	1865	3059	2339	66,1244	19,4003	16,5018
804	25,4380654973	-28,5355364416	501	644	930	1205	1847	3087	2354	68,3675	17,8417	15,4153
805	25,4680654973	-28,5355364416	382	521	815	1159	1948	2961	2215	68,2067	15,0512	10,4026
806	25,5580654973	-28,5355364416	363	474	867	1456	2499	3504	2815	67,9239	13,9592	8,2671
807	25,5880654973	-28,5355364416	474	520	822	1597	2415	3813	3203	69,3364	15,7580	9,4212
808	25,7080654973	-28,5355364416	609	703	1211	2153	2985	4480	4016	68,1760	19,8000	10,8287
809	26,2780654973	-28,5355364416	440	500	690	906	1703	2714	2075	62,2554	22,8659	9,9189
810	26,3380654973	-28,5355364416	532	629	1012	1422	2366	3696	3189	59,7796	18,2326	7,1629
811	26,4280654973	-28,5355364416	400	485	911	1551	2282	3595	3091	61,0941	17,6112	6,1259
812	26,6680654973	-28,5355364416	363	431	681	957	1838	2768	2114	64,9760	19,4106	10,4298
813	24,8680654973	-28,5655364416	500	625	1006	1504	2335	3492	2858	67,0010	13,9373	17,3712
814	24,9580654973	-28,5655364416	308	468	797	1135	1789	2772	2114	61,7642	12,4698	10,6038
815	24,9880654973	-28,5655364416	470	566	829	1166	1872	3093	2566	61,5419	14,1904	10,7743
816	25,0480654973	-28,5655364416	492	556	773	1128	1870	2972	2425	63,5446	10,8170	7,8103
817	25,0780654973	-28,5655364416	493	593	926	1415	2246	3306	2671	64,7524	10,3363	7,8051
818	25,1080654973	-28,5655364416	430	474	651	820	1601	2356	1857	63,5800	9,7305	9,4302
819	25,1380654973	-28,5655364416	464	579	813	1083	1767	2884	2389	62,9857	7,5908	7,9601
820	25,2280654973	-28,5655364416	413	642	1041	1376	1956	3103	2393	62,1835	11,3240	13,9488
821	25,4380654973	-28,5655364416	544	713	1053	1481	2231	3366	2621	64,8677	17,4929	14,7425
822	25,5280654973	-28,5655364416	313	426	731	1072	1889	2735	2082	64,2968	15,6237	8,3278
823	25,6780654973	-28,5655364416	337	449	755	1053	1780	2666	2077	67,4724	19,5997	11,7766
824	25,7080654973	-28,5655364416	416	516	766	1129	1723	2914	2403	67,6409	16,3361	12,2037
825	25,8580654973	-28,5655364416	374	481	983	2014	2915	4204	3584	70,8782	17,1257	9,3106
826	26,5180654973	-28,5655364416	353	417	542	714	1320	2362	1719	58,4562	23,7867	7,3657
827	26,5480654973	-28,5655364416	422	469	627	781	1392	2590	1963	56,6126	28,2062	8,9240
828	26,5780654973	-28,5655364416	392	458	661	882	1666	2786	2111	57,4268	26,5101	11,4889
829	26,8180654973	-28,5655364416	414	492	827	1179	1939	2930	2496	60,0004	17,9638	9,4760

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
830	24,8680654973	-28,5955364416	431	551	885	1263	1895	3191	2541	66,5861	11,3309	15,0447
831	24,9280654973	-28,5955364416	349	490	834	1231	2065	3081	2384	64,7164	10,1940	13,4132
832	24,9880654973	-28,5955364416	273	380	704	915	1682	2336	1767	61,5965	12,5258	10,6002
833	25,2880654973	-28,5955364416	375	509	805	1137	1841	2856	2110	60,0053	17,6554	16,0725
834	26,1280654973	-28,5955364416	403	469	626	831	1509	2582	1921	67,0454	20,8258	12,0970
835	26,7580654973	-28,5955364416	442	513	902	1332	2097	3120	2703	62,1873	18,5685	9,9343
836	26,8180654973	-28,5955364416	354	419	770	1164	1860	2870	2382	56,4167	21,9593	6,8862
837	26,8480654973	-28,5955364416	391	475	843	1334	2138	3196	2850	55,6752	24,5879	8,8809
838	24,8380654973	-28,6255364416	384	512	839	1285	1872	3001	2410	66,8328	11,7142	15,2754
839	24,8680654973	-28,6255364416	335	443	683	915	1631	2512	1966	66,1023	11,3205	15,1125
840	24,8980654973	-28,6255364416	380	470	707	1008	1518	2708	2179	64,1810	11,5355	14,6184
841	24,9280654973	-28,6255364416	383	494	736	1074	1795	2863	2283	66,8879	11,5318	13,0067
842	25,0180654973	-28,6255364416	416	520	798	1187	2002	3129	2501	64,9391	12,2171	11,4246
843	25,0480654973	-28,6255364416	404	489	687	934	1485	2705	2071	64,5778	10,7129	8,3180
844	25,1080654973	-28,6255364416	473	534	736	1052	1735	2957	2297	65,3860	8,1430	8,4345
845	25,1380654973	-28,6255364416	490	542	692	964	1607	2736	2157	59,2841	7,5740	9,0516
846	25,1680654973	-28,6255364416	380	515	814	1191	1976	2989	2253	60,8837	8,9366	9,7235
847	25,6180654973	-28,6255364416	656	696	835	998	1657	2868	2341	66,2152	23,9697	15,3471
848	25,6480654973	-28,6255364416	452	559	855	1325	1994	3239	2608	63,3859	21,7807	15,9067
849	25,6780654973	-28,6255364416	402	497	834	1302	2001	3246	2635	62,6375	23,3660	15,6178
850	25,7080654973	-28,6255364416	514	598	955	1730	2599	3807	3176	64,7676	22,0970	15,5464
851	25,8880654973	-28,6255364416	277	462	860	1275	2326	3259	2503	71,0674	10,7565	8,2145
852	26,0080654973	-28,6255364416	372	452	707	1100	1699	2715	2086	69,5252	13,7846	9,4226
853	26,1280654973	-28,6255364416	406	488	896	1720	2717	3851	3196	67,5035	21,8929	11,6762
854	26,3680654973	-28,6255364416	376	443	612	805	1482	2606	2016	55,4808	21,2064	8,5619
855	26,7880654973	-28,6255364416	419	486	790	1135	1776	2810	2319	58,1105	19,9135	10,2427
856	26,8180654973	-28,6255364416	346	415	704	1054	1659	2675	2496	57,9294	19,3904	9,8822

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
857	26,6380654973	-28,6555364416	508	574	745	976	1669	2945	2246	61,2684	26,2285	13,2687
858	26,8780654973	-28,6555364416	369	460	673	947	1750	2695	1845	57,0184	24,5448	10,9165
859	26,2780654973	-28,6855364416	414	487	683	914	1720	2745	2024	64,4536	21,0560	11,4618
860	26,3680654973	-28,6855364416	563	647	813	1028	1782	3161	2516	59,6298	20,5407	10,6799
861	26,5480654973	-28,6855364416	410	496	817	1192	1962	2918	2294	59,0362	19,2793	11,6202
862	27,0280654973	-28,6855364416	423	477	642	890	1679	2686	1982	50,3316	28,2741	16,8170
863	24,9280654973	-28,6555364416	351	455	684	964	1537	2656	2053	66,0480	12,0127	13,3930
864	25,0480654973	-28,6555364416	311	463	776	1152	1913	2805	2078	64,1411	11,3133	8,2820
865	25,0780654973	-28,6555364416	398	508	821	1318	2137	3120	2524	63,3463	12,7712	14,0014
866	25,1080654973	-28,6555364416	426	498	765	1251	2118	3018	2500	61,0712	11,5021	11,4521
867	25,1380654973	-28,6555364416	409	524	794	1134	1718	2900	2299	60,8927	9,8222	9,3902
868	25,1680654973	-28,6555364416	366	505	844	1222	1963	2913	2224	59,1123	10,2023	9,6372
869	25,1980654973	-28,6555364416	553	632	942	1418	2339	3455	2811	58,7634	11,7186	9,2532
870	25,8580654973	-28,6555364416	373	470	1008	2066	3011	4160	3658	68,5074	11,1191	8,3040
871	26,1880654973	-28,6555364416	416	504	721	989	1829	2965	2251	67,0435	23,5644	12,0735
872	24,8980654973	-28,6855364416	421	534	849	1297	1992	3099	2511	70,4341	10,4746	14,8947
873	24,9280654973	-28,6855364416	338	454	731	1080	1720	2745	2122	66,2154	10,7180	14,9839
874	24,9580654973	-28,6855364416	380	514	853	1251	2067	3104	2355	66,0182	12,7149	15,5008
875	25,0180654973	-28,6855364416	386	468	709	1095	1721	2839	2211	63,6340	13,0176	14,0729
876	25,2280654973	-28,6855364416	393	497	777	1014	1597	2618	2029	57,3678	13,6283	17,4860
877	24,8680654973	-28,7155364416	344	432	707	1076	1867	2749	2154	70,3126	11,3777	15,9645
878	24,8980654973	-28,7155364416	534	630	1035	1639	2582	3833	3134	70,0941	9,9736	14,5396
879	25,2580654973	-28,7155364416	415	533	839	1250	1848	3088	2341	59,4184	15,3922	15,4374
880	25,9480654973	-28,7155364416	366	463	847	1325	2265	3167	2737	78,4688	8,9046	6,7866
881	26,1580654973	-28,7155364416	358	436	738	1276	2158	3233	2691	71,7739	18,1831	9,7831
882	24,8680654973	-28,7455364416	380	486	798	1184	1913	2878	2323	70,6044	11,9525	16,1801
883	24,8980654973	-28,7455364416	306	426	696	1018	1561	2640	2068	65,9193	12,5380	16,6870

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
884	24,9280654973	-28,7455364416	323	433	712	1023	1603	2653	2102	65,5077	14,5738	18,4472
885	24,9580654973	-28,7455364416	379	488	819	1254	1952	3056	2405	67,0810	15,7856	19,1394
886	25,0780654973	-28,7455364416	294	456	806	1156	1823	2699	1994	67,1240	12,2954	15,0084
887	25,1980654973	-28,7455364416	365	503	779	1060	1730	2713	2189	55,4618	10,5491	13,9571
888	25,2280654973	-28,7455364416	330	453	751	1138	1857	2780	2167	56,8645	11,7842	14,4803
889	25,2580654973	-28,7455364416	272	490	922	1390	2135	2915	2152	59,9536	15,9354	17,1813
890	25,2880654973	-28,7455364416	456	536	787	1182	1959	3065	2456	57,5127	17,2351	18,0657
891	26,0080654973	-28,7455364416	419	523	1110	2123	3033	4310	3841	77,4869	8,8519	5,7654
892	26,5780654973	-28,7455364416	424	496	642	867	1651	2778	1968	50,3695	34,4951	14,0965
893	26,6080654973	-28,7455364416	427	477	619	859	1608	2698	1903	51,2194	27,3119	16,6784
894	26,7580654973	-28,7455364416	425	503	910	1414	2159	3440	2921	56,5110	20,6039	15,0853
895	26,8480654973	-28,7455364416	467	552	712	910	1427	2678	1974	59,7365	25,3222	13,3984
896	24,8980654973	-28,7755364416	238	482	969	1389	2149	3124	2153	71,2469	13,1373	16,8785
897	24,9280654973	-28,7755364416	354	496	832	1239	1828	3035	2380	71,2473	13,9242	17,6115
898	25,1080654973	-28,7755364416	370	545	955	1370	2160	3136	2513	62,1991	13,6525	16,1085
899	25,1380654973	-28,7755364416	424	545	884	1317	2058	3156	2632	59,5614	13,3998	16,7200
900	25,1680654973	-28,7755364416	442	515	833	1213	2064	3076	2563	52,2031	11,3635	10,7498
901	25,1980654973	-28,7755364416	326	469	794	1201	1978	2903	2252	55,9049	11,7656	15,9019
902	25,2280654973	-28,7755364416	405	589	1030	1503	2380	3466	2667	56,3840	13,8546	18,2334
903	25,2580654973	-28,7755364416	362	449	679	952	1535	2545	2036	60,4584	15,5850	19,9449
904	25,3180654973	-28,7755364416	353	456	695	956	1517	2544	1922	55,2560	17,5954	22,5434
905	25,6780654973	-28,7755364416	503	613	910	1382	2194	3234	2684	61,3785	19,1221	15,4002
906	26,0680654973	-28,7755364416	438	523	949	1674	2630	3727	3208	75,4266	10,0530	7,0798
907	26,1280654973	-28,7755364416	461	584	1153	2071	2917	4077	3647	74,7822	13,2399	7,2909
908	26,7280654973	-28,7755364416	426	476	610	800	1464	2615	1954	60,7266	23,9989	15,3784
909	26,7580654973	-28,7755364416	381	452	600	769	1442	2602	1983	61,4000	20,7441	12,7373
910	26,8180654973	-28,7755364416	397	518	758	1005	1713	2801	1961	58,5191	22,0423	13,6246

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
911	24,8980654973	-28,8055364416	318	448	774	1128	1696	2503	2001	64,7599	13,4622	17,6405
912	24,9280654973	-28,8055364416	387	459	709	1050	1700	2538	2037	64,5093	13,9102	17,8335
913	24,9880654973	-28,8055364416	376	499	761	1136	1714	2896	2296	66,0808	14,5645	17,6106
914	25,1080654973	-28,8055364416	412	506	755	1019	1716	2729	2244	61,3688	13,5540	17,3593
915	25,1380654973	-28,8055364416	375	500	845	1289	1976	2889	2288	59,6050	12,9665	20,1786
916	25,1680654973	-28,8055364416	412	567	950	1350	2116	3157	2618	60,5575	12,5881	19,6069
917	25,1980654973	-28,8055364416	430	544	865	1152	1914	2974	2414	56,0067	11,4343	16,0481
918	25,2580654973	-28,8055364416	578	641	1029	1952	2775	3980	3376	58,9241	15,1869	20,1431
919	25,2880654973	-28,8055364416	429	547	910	1423	2180	3271	2618	60,0858	13,6732	24,0618
920	26,0380654973	-28,8055364416	356	453	931	1766	2681	3728	3254	77,8801	8,8958	6,0115
921	26,8480654973	-28,8055364416	526	650	1216	1836	2643	3717	3119	58,2856	21,0466	12,2579
922	26,7280654973	-28,8655364416	383	428	575	762	1558	2543	1821	55,8494	32,0334	14,6256
923	24,8980654973	-28,8355364416	426	585	964	1409	2049	3104	2453	70,4620	13,4719	17,5208
924	25,1380654973	-28,8355364416	329	513	918	1312	2042	2964	2341	61,5233	13,4720	14,0491
925	25,1680654973	-28,8355364416	392	506	861	1243	1897	2761	2292	59,0735	12,2799	16,6447
926	25,2580654973	-28,8355364416	495	597	925	1465	2214	3404	2803	60,0563	15,2515	21,0635
927	26,3380654973	-28,8355364416	364	447	734	1239	2166	3253	2651	63,1574	17,5165	8,5949
928	26,5780654973	-28,8355364416	240	314	448	611	963	1753	1236	51,5674	35,8393	16,4248
929	24,8380654973	-28,8655364416	522	623	956	1415	2097	3264	2781	69,6939	14,9635	22,2330
930	25,1080654973	-28,8655364416	322	411	670	989	1633	2521	2025	65,2550	14,8275	18,2845
931	25,1380654973	-28,8655364416	413	506	812	1123	1810	2794	2401	62,8635	14,1225	22,5193
932	25,1680654973	-28,8655364416	421	553	868	1268	1996	3009	2501	64,5038	16,2963	21,5509
933	25,1980654973	-28,8655364416	435	532	782	1181	1818	2909	2399	64,3498	16,3114	21,6659
934	25,2880654973	-28,8655364416	484	559	851	1309	2087	3149	2641	61,7617	18,7339	25,5249
935	26,2480654973	-28,8655364416	359	441	943	1810	2568	3758	3421	65,8484	11,5360	6,3739
936	26,2780654973	-28,8655364416	304	427	948	1635	2624	3410	2949	63,6050	13,3333	6,9412
937	26,3080654973	-28,8655364416	337	420	894	1952	2768	4011	3694	62,4729	14,0211	7,8966

#	Coordinates		OLI Surface Reflectance (DN)							Soil Texture (%)		
Number	X	Y	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7	Sand (ARC-ISCW)	Clay (ARC-ISCW)	Silt (ARC-ISCW)
938	26,3380654973	-28,8955364416	345	429	785	1586	2537	3381	2755	59,6369	15,9457	9,4714
939	26,7580654973	-28,8955364416	443	499	841	1234	1875	2848	2335	53,3972	21,8929	11,9923
940	26,3680654973	-28,9255364416	417	477	664	899	1633	2601	1994	54,3952	24,4208	11,3989
941	26,4280654973	-28,9255364416	449	521	704	885	1530	2662	2039	51,9456	23,1525	13,3407
942	24,8080654973	-28,8955364416	545	600	843	1303	2008	3208	2707	68,3478	13,4239	19,6198
943	24,8380654973	-28,8955364416	515	590	854	1374	2034	3394	2888	69,5834	15,2481	22,3066
944	24,8980654973	-28,8955364416	407	537	815	1180	1775	3013	2400	69,1785	14,0520	18,5511
945	25,0480654973	-28,8955364416	658	725	1135	1855	2784	4050	3435	66,8673	14,5033	14,8436
946	25,0780654973	-28,8955364416	525	619	999	1689	2681	3758	3132	64,4836	13,5785	14,2323
947	25,1080654973	-28,8955364416	454	529	861	1468	2247	3372	2768	63,1164	14,9400	22,7188
948	25,1380654973	-28,8955364416	420	555	960	1350	2095	3137	2690	64,0924	17,4401	26,0172
949	25,1680654973	-28,8955364416	399	528	812	1117	1634	2795	2339	63,8800	18,0265	25,5837
950	25,1980654973	-28,8955364416	454	534	807	1177	1866	2929	2372	63,5821	16,5494	21,7364
951	25,3480654973	-28,8955364416	334	576	984	1347	1898	3039	2287	61,3805	17,8811	23,7515
952	25,4080654973	-28,8955364416	498	591	880	1281	1890	2856	2509	53,5483	19,1205	25,6956
953	25,1080654973	-28,9255364416	371	488	758	1167	1944	2876	2448	61,7916	17,7518	21,8909
954	25,1380654973	-28,9255364416	471	530	859	1392	2172	3330	2856	64,0085	19,1895	25,8598
955	26,6080654973	-28,9855364416	490	531	696	895	1727	2864	2196	50,4372	43,4149	13,3961
956	26,6380654973	-29,0455364416	474	548	718	930	1764	2861	2211	50,3218	44,5271	14,8797

Appendix B:
A-Horizon ARC-ISCW Surface Soil Texture

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
1	P238	2813	Cv33	25,33694444440	-28,09055555560	A	93,40	4,50	0,90
2	P239	2804	Hu36	25,47361111110	-28,18277777780	A	88,70	9,30	1,60
3	P240	2807	Cv33	25,47777777780	-28,20777777780	A	92,40	5,00	0,50
4	P241	2810	Hu33	25,41722222220	-28,22500000000	A	89,10	7,40	1,40
5	P244	2788	Ms22	25,25083333330	-28,43416666670	A	85,30	7,60	2,20
6	P245	2786	Ss13	25,06972222220	-28,52916666670	A	85,70	12,50	2,00
7	P246	0	Hu43	25,20555555560	-28,54333333330	A	0,00	0,00	0,00
8	P247	2789	Ms22	25,39194444440	-28,70000000000	A	81,00	12,10	3,80
9	P248	2779	Va41	25,54111111110	-28,72611111110	A	29,30	37,50	32,00
10	P249	2782	Sw41	25,49972222220	-28,79861111110	A	36,80	27,00	35,30
11	P252	2793	Hu33	25,89444444440	-28,70166666670	A	92,80	7,90	0,50
12	P253	2795	Sd20	25,51666666670	-28,56722222220	A	75,20	17,80	5,40
13	P254	2819	Hu33	25,59000000000	-28,50722222220	A	91,80	7,50	0,90
14	P255	2790	Hu36	25,60805555560	-28,40138888890	A	87,50	9,40	1,80
15	P256	2776	Ss26	25,99666666670	-28,61888888890	A	69,00	16,70	11,80
16	P455	2304	Cv33	26,27000000000	-28,09333333330	A	91,90	6,20	1,20
17	P456	0	Hu36	26,24333333330	-28,13000000000	A	0,00	0,00	0,00
18	P456	3726	Hu36	26,24333333330	-28,13000000000	A	89,00	8,30	1,90
19	P457	3488	Hu36	26,08000000000	-28,28000000000	A	81,20	12,60	4,90
20	P458	2766	Cv36	26,42333333330	-28,27333333330	A	85,80	12,50	1,90
21	P459	2768	Va11	26,51333333330	-28,45166666670	A	82,20	13,80	3,10
22	P460	2771	Va41	26,56500000000	-28,47833333330	A	79,90	18,20	2,20
23	P461	2801	Va41	26,32500000000	-28,50833333330	A	78,70	15,10	2,70
24	P462	2798	Va21	26,33000000000	-28,56333333330	A	68,20	25,40	4,20

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
25	P463	2760	Ss13	26,11666666670	-28,68833333330	A	82,70	12,40	4,70
26	P467	2989	Oa46	26,28333333330	-28,93333333330	A	70,40	20,00	9,40
27	P468	2992	Du10	26,28666666670	-28,93666666670	A	82,10	12,90	3,60
28	P470	2712	Bo21	26,37388888890	-28,93000000000	A	50,90	33,60	14,30
29	P471	2710	Ar20	26,59666666670	-28,96472222220	A	32,30	53,70	10,30
30	P472	1958	Av36	26,76472222220	-28,90000000000	A	76,50	14,10	9,00
31	P473	1985	Sw41	26,78194444440	-28,89583333330	A	74,40	18,90	8,40
32	P474	1949	Sw42	26,81000000000	-28,83472222220	A	78,30	11,00	7,90
33	P477	1963	Mw11	26,85222222220	-28,69194444440	A	43,30	47,10	8,20
34	P478	1964	Va32	26,69000000000	-28,66000000000	A	68,60	13,90	12,10
35	P479	1961	We12	26,74333333330	-28,64611111110	A	83,50	9,00	5,90
36	P480	2774	We13	26,81333333330	-28,60666666670	A	79,00	18,10	3,50
37	P481	1968	Bo31	26,96500000000	-28,49666666670	A	41,30	51,70	6,80
38	P482	1970	Hu33	26,90666666670	-28,48666666670	A	78,00	12,90	7,70
39	P483	1971	Mw11	26,87000000000	-28,46500000000	A	40,80	48,70	8,70
40	P484	1966	Bo41	26,95833333330	-28,46000000000	A	40,10	55,80	5,10
41	P485	5092	Cv36	26,54333333330	-28,15333333330	A	88,00	9,30	2,70
42	P486	2763	Va41	26,67333333330	-28,16000000000	A	76,30	14,90	7,20
43	P487	2758	Hu36	26,72333333330	-28,11500000000	A	87,00	10,80	1,70
44	P488	2753	Cv36	26,82527777780	-28,16666666670	A	87,30	11,30	1,20
45	P489	2755	Av36	26,83500000000	-28,03500000000	A	54,00	33,60	10,90
46	P491	3684	Sw41	27,29666666670	-28,12333333330	A	69,50	19,20	8,50
47	P497	1977	Kd13	27,17472222220	-28,69083333330	A	65,50	14,00	15,30
48	P174	4182	Av34	26,47666666670	-27,55666666670	A	90,30	5,90	4,90
49	P175	3729	Cv33	26,20000000000	-27,84666666670	A	89,80	7,40	0,80
50	P176	3735	Hu33	26,32666666670	-27,93000000000	A	89,50	8,40	2,50
51	P177	3732	Ss23	26,42666666670	-27,90000000000	A	85,50	8,30	5,20
52	P178	4193	Av34	26,55333333330	-27,17000000000	A	96,60	4,10	1,60

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
53	P179	4189	Hu36	26,640000000000	-27,440000000000	A	74,50	24,70	3,10
54	P180	4188	Av33	26,773333333330	-27,633333333330	A	93,60	6,60	0,80
55	P181	4321	Bv36	26,913333333330	-27,940000000000	A	77,80	20,70	1,40
56	P182	3510	Hu36	27,113333333330	-27,980000000000	A	72,80	17,80	7,50
57	P183	4184	Bv36	26,963333333330	-27,610000000000	A	87,60	12,70	2,20
58	P168	4144	Av30	25,783333333330	-27,640000000000	A	99,40	2,70	0,40
59	P169	0	Oa46	25,608333333330	-27,933333333330	A	0,00	0,00	0,00
60	P170	2310	Cv34	25,656666666670	-27,923333333330	A	93,10	8,00	0,20
61	B1	322	Mp2200	26,237500000000	-27,663888888890	A	93,70	3,50	2,00
62	WB4	3084	My11	27,246666666670	-28,132222222220	A	0,00	0,00	0,00
63	WB5	3085	Ar20	26,435833333330	-28,443888888890	A	0,00	0,00	0,00
64	WB6	3086	Bo41	26,396944444440	-28,658055555560	A	0,00	0,00	0,00
65	WB7	3087	Ar40	26,170833333330	-28,351666666670	A	0,00	0,00	0,00
66	WB8	3088	Pn36	26,280000000000	-28,078333333330	A	0,00	0,00	0,00
67	KD1	3089	Av36	26,282222222220	-27,850555555560	A	0,00	0,00	0,00
68	KD2	3090	Pn36	26,813611111110	-27,859166666670	A	0,00	0,00	0,00
69	KD4	3092	Wo21	26,899166666670	-27,570000000000	A	0,00	0,00	0,00
70	C11	3690	Hu	25,125555555560	-28,610833333330	A	0,00	0,00	0,00
71	C13	3692	Sd	25,694166666670	-28,863611111110	A	0,00	0,00	0,00
72	C14	3693	Hu	25,406944444440	-28,233333333330	A	0,00	0,00	0,00
73	C15	3694	Cv	25,164166666670	-28,223333333330	A	0,00	0,00	0,00
74	C17	3696	Hu	25,312777777780	-27,950555555560	A	0,00	0,00	0,00
75	C18	3697	Cv	25,662222222220	-27,923888888890	A	0,00	0,00	0,00
76	30554	437	Ky	25,510638888870	-28,545999999960	A	81,33	12,92	4,06
77	30424	440	Hu	26,682249999960	-27,303305555540	A	79,90	14,54	3,72
78	30418	657	Nb	25,474194444460	-27,713888888890	A	88,68	6,46	3,46
79	30654	707	Bd	26,063555555530	-28,152666666680	A	82,03	10,19	6,53
80	30584	710	Cv	25,708805555580	-27,939166666670	A	90,78	6,06	2,61

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
81	30141	712	Cv	26,41630555580	-28,17724999960	A	84,97	8,17	5,46
82	30424	661	Tu	26,68222222220	-27,29769444470	A	79,44	12,09	6,35
83	931	2224	Ss2100	25,67947222180	-28,88005555580	A	63,68	6,33	28,55
84	710	2251	Av3200	26,15086111110	-28,14197222230	A	87,59	4,65	5,46
85	1265	2258	Pr1210	25,12388888890	-28,95511111100	A	60,95	19,27	17,16
86	890	2259	Hu3100	25,07591666650	-28,52833333330	A	64,79	17,29	16,56
87	764	2260	Br1000	24,96016666620	-28,29555555560	A	42,03	26,35	30,28
88	1150	2261	Sw1221	25,08469444450	-28,25022222220	A	81,87	8,21	7,25
89	851	2262	Cg2000	25,15366666660	-28,28127777740	A	75,00	11,33	11,13
90	1023	2263	Hu3100	25,08183333290	-28,12424999980	A	82,61	6,98	7,59
91	605	2264	Hu3200	26,12911111090	-28,23125000000	A	90,84	5,32	3,42
92	1173	2266	Bd3200	26,18788888880	-28,32033333330	A	83,48	9,32	4,58
93	1047	2268	Ad1111	26,23375000000	-28,32566666710	A	73,83	16,21	7,79
94	360	2269	Cg2000	26,01527777780	-28,30227777770	A	72,58	14,93	11,11
95	325	2270	Se1220	25,84686111130	-28,28436111110	A	49,74	36,70	11,88
96	1104	2271	Hu3200	25,56433333290	-28,38008333310	A	90,59	4,25	2,65
97	430	2273	Ad1211	25,58213888910	-28,21986111110	A	75,36	16,01	6,60
98	1069	2274	Bd3200	25,41933333340	-28,14619444420	A	90,88	4,56	2,40
99	1145	2276	Bd3200	25,25213888880	-28,22391666680	A	88,73	6,83	3,15
100	1216	2278	Bd3200	25,30022222220	-28,12444444440	A	91,99	4,98	0,46
101	1038	2280	Bd3200	25,20397222230	-28,05083333330	A	94,49	1,80	1,65
102	1160	2281	Bv3200	25,33391666660	-28,08980555530	A	90,43	4,84	3,05
103	720	2283	Bv3200	26,22350000010	-28,09972222220	A	90,60	6,25	2,01
104	704	2285	Va1122	26,21347222220	-28,03661111120	A	49,84	33,39	15,49
105	687	2286	Av3200	26,25380555550	-27,99777777780	A	85,16	7,47	5,34
106	668	2288	Bd3200	26,48611111110	-27,73691666660	A	90,43	3,67	3,87
107	721	2290	Cv3200	26,45813888870	-27,71327777760	A	91,19	3,20	2,70
108	681	2292	Pn3100	26,44608333380	-27,60324999990	A	93,59	0,90	2,55

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
109	589	2441	Cv3200	25,98530555550	-28,00986111110	A	93,27	3,51	1,91
110	526	2443	Av3200	25,90652777780	-27,99436111130	A	89,69	4,35	3,25
111	705	2445	Av3200	25,86383333310	-27,99447222180	A	86,56	6,82	4,79
112	672	2447	Cv3200	25,89144444470	-27,88744444450	A	92,79	2,95	1,75
113	254	2449	Hu3200	25,70144444440	-28,11719444440	A	80,69	10,16	7,37
114	937	2450	Se1220	25,44797222240	-28,07669444400	A	50,16	41,93	6,00
115	1040	2451	Ad1211	25,27611111110	-27,95399999990	A	70,35	18,09	9,99
116	664	2452	Av3200	26,60797222240	-27,35436111110	A	94,07	3,53	1,04
117	530	2454	Av3200	26,53361111110	-27,34900000040	A	90,89	3,85	2,40
118	713	2456	Tu1220	26,48944444440	-27,24627777740	A	81,91	9,99	6,52
119	586	2458	Gc3100	26,47941666710	-27,22947222180	A	91,49	3,75	2,10
120	707	2460	Cv3100	26,60538888880	-27,20583333330	A	92,70	2,84	2,43
121	1811	2462	Av3200	26,70563888870	-27,22994444420	A	89,55	5,48	3,27
122	558	2468	Bv3200	26,34036111090	-27,42477777800	A	83,21	8,55	6,66
123	628	2470	Av3200	26,29177777770	-27,52780555510	A	90,67	5,03	2,31
124	382	2472	Va1221	26,20033333330	-27,56486111110	A	72,40	18,78	6,87
125	515	2473	Pn3100	25,98791666670	-27,74991666690	A	88,70	4,89	4,12
126	308	2475	Av3100	25,85441666660	-27,63558333340	A	93,86	1,86	1,86
127	637	2476	Av3100	25,84844444490	-27,68472222220	A	97,87	0,05	0,51
128	728	2477	Av3100	25,82511111100	-27,88994444420	A	76,95	16,80	4,35
129	261	2479	Pn3200	25,62844444490	-27,73652777780	A	89,91	4,27	3,66
130	604	2480	Av3200	25,60600000010	-27,88491666660	A	92,91	2,72	1,90
131	317	2482	Gm1120	25,55119444450	-27,90924999980	A	91,64	3,52	3,62
132	724	2483	Tu1220	26,06652777780	-27,89488888850	A	89,51	4,79	4,23
133	689	2485	Av3100	26,56138888890	-27,66769444450	A	92,22	3,53	2,41
134	648	2487	Pn3100	26,56633333310	-27,65505555580	A	88,39	7,36	4,15
135	563	2489	Av3200	26,68663888880	-27,65983333380	A	85,30	8,53	4,42
136	503	2491	Av3100	26,69797222240	-27,70386111100	A	92,66	2,52	2,97

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
137	738	2493	Av3200	26,69686111130	-27,58983333320	A	84,45	10,14	3,45
138	349	2495	Va1122	26,69519444470	-27,56472222220	A	51,82	34,74	11,83
139	730	2722	Av3200	26,93905555570	-27,68555555560	A	87,46	5,34	5,55
140	1916	2724	Av3200	27,03452777780	-27,77136111100	A	81,26	9,37	7,83
141	1857	2728	Bv3200	27,11836111110	-27,90583333330	A	80,39	12,03	5,60
142	715	2731	We1000	27,10725000010	-27,94236111110	A	80,42	9,89	7,38
143	665	2732	Av3200	26,71002777740	-27,85186111110	A	91,99	4,60	2,00
144	555	2734	Av3200	26,69727777800	-27,80447222230	A	92,79	3,55	0,80
145	658	2736	Lo2000	26,69513888890	-27,79347222220	A	86,06	8,12	4,06
146	585	2738	Bv3200	26,78058333290	-27,61794444440	A	82,18	10,26	4,65
147	743	2740	Av3200	26,80669444460	-27,68375000000	A	86,47	6,76	4,66
148	1770	2744	Av3200	26,98038888930	-27,85166666670	A	78,66	10,47	10,12
149	1949	2746	Av3200	27,01338888910	-27,87558333290	A	79,45	7,69	10,53
150	1835	2748	Av3200	27,22727777800	-28,03197222180	A	76,68	8,81	11,51
151	690	2750	Av3200	26,99733333380	-28,19830555600	A	86,99	6,16	5,46
152	514	2752	Hu3200	26,71161111090	-28,26205555600	A	83,76	10,07	4,17
153	572	2754	Hu3200	26,63975000010	-28,27963888910	A	81,68	9,81	6,11
154	619	2756	Av3200	26,61083333330	-28,16308333290	A	78,88	9,90	9,23
155	389	2757	Hu3100	26,46525000040	-28,37619444420	A	73,42	11,76	13,29
156	613	2758	Hu3200	26,44694444440	-28,33036111090	A	86,49	6,86	3,75
157	528	2760	Hu3200	26,49474999960	-28,30377777790	A	82,38	9,21	5,86
158	523	2762	Av3100	26,48794444460	-28,29477777800	A	96,27	1,26	1,06
159	461	2764	Va1121	26,50216666670	-28,28941666660	A	59,05	19,29	19,24
160	620	2765	We2000	26,45219444450	-28,23919444460	A	78,17	11,37	8,65
161	620	2766	We2000	26,45219444450	-28,23919444460	A	58,09	29,05	10,48
162	445	2767	Va1122	26,48191666710	-28,17961111070	A	48,54	18,27	30,79
163	635	2768	Av3100	26,33663888880	-28,18833333330	A	68,19	22,18	7,07
164	520	2770	Hu3200	26,25427777770	-28,18238888850	A	89,67	5,06	3,00

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
165	736	2772	Hu3200	26,25569444440	-28,226805555560	A	93,69	2,95	3,30
166	736	2773	Hu3200	26,25569444440	-28,226805555560	A	79,36	14,65	3,68
167	700	2774	Bv3200	26,17927777820	-28,24472222220	A	91,99	3,25	2,85
168	732	2776	Sw1121	26,35097222220	-28,43202777760	A	69,37	20,71	7,55
169	583	2778	Et1111	26,80452777760	-28,09366666690	A	74,17	13,87	9,64
170	512	2779	Hu3200	26,68494444450	-28,11411111090	A	81,28	9,91	6,31
171	729	2781	Bv3200	26,59236111110	-28,06419444400	A	83,35	8,73	6,52
172	1398	2783	Hu3200	26,47116666690	-28,05591666650	A	84,44	7,38	5,72
173	573	2785	Ss1200	26,48522222230	-28,10905555510	A	76,11	14,01	8,32
174	626	2786	Hu3200	26,38336111110	-28,11986111110	A	87,39	5,06	6,21
175	440	3316	Sw1122	27,36077777760	-28,19227777800	A	59,65	21,00	17,51
176	258	3317	Sw1122	27,36822222220	-28,18875000000	A	68,26	12,05	17,24
177	1605	3893	Ar	27,15283333330	-28,71241666690	A	36,71	36,81	24,20
178	1605	0	Ar	27,15283333330	-28,71241666690	A	0,00	0,00	0,00
179	740	3894	We	27,08286111090	-28,76241666690	A	59,94	24,29	12,78
180	912	3928	Sw	27,00891666620	-28,64974999960	A	42,93	28,74	25,73
181	556	3929	We	27,09022222200	-28,44577777760	A	73,48	10,12	14,29
182	556	3930	We	27,09022222200	-28,44577777760	A	32,19	54,97	10,51
183	923	3934	Bo	26,97522222200	-28,49405555510	A	41,63	30,07	25,99
184	657	3935	Bv	26,90519444470	-28,39172222240	A	72,06	10,50	14,62
185	531	3937	Hu	26,63130555580	-28,48025000040	A	87,49	6,61	4,90
186	744	3939	Av	26,77166666670	-28,76619444420	A	75,46	15,17	7,33
187	427	3941	Bo	26,75588888910	-28,80902777780	A	36,86	41,75	20,01
188	575	3942	Av	26,79016666680	-28,88150000040	A	63,31	14,95	19,53
189	362	3944	Sw	26,63661111120	-28,71772222220	A	58,38	23,12	15,83
190	293	3945	We	26,43333333330	-28,57822222180	A	70,54	18,49	8,67
191	1476	3947	Bv	26,32825000020	-28,50013888890	A	72,86	18,32	7,60
192	255	3948	Sw	26,13944444440	-28,67927777820	A	65,04	21,80	11,08

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
193	1099	3949	Oa	26,05030555560	-28,79108333320	A	85,09	7,51	5,06
194	1081	3950	Oa	26,10388888890	-28,79608333380	A	87,49	5,81	4,80
195	F13-03	9561	Sw1221	27,33997222210	-27,97083333330	A	56,07	26,31	15,69
196	F12-02	9565	Bv3100	27,24549999980	-27,94325000020	A	76,82	10,19	11,12
197	F11-03	9567	Bv3100	26,98358333330	-27,98944444440	A	79,94	8,90	9,05
198	E11-01	9586	Va1222	26,92247222210	-27,52872222260	A	52,85	31,40	14,15
199	F11-02	9590	Av3100	26,85875000000	-27,79988888850	A	80,35	9,52	8,66
200	D10-04	9604	Hu3200	26,72180555560	-27,32908333350	A	80,92	12,26	4,77
201	D10-03	9606	Av3100	26,60572222230	-27,28997222210	A	92,69	4,06	1,65
202	D10-01	9609	Hu3200	26,50461111120	-27,27502777790	A	85,47	6,96	5,44
203	D10-02	9611	Av3100	26,53644444440	-27,47952777760	A	83,76	7,50	6,83
204	D9-03	9613	Av3100	26,46047222240	-27,48266666620	A	87,50	6,30	4,20
205	D9-02	9615	Av3100	26,43216666650	-27,41250000000	A	91,24	3,11	3,21
206	D9-01	9617	Cv3100	26,30133333340	-27,49049999980	A	80,27	7,61	10,12
207	D9-04	9619	Av3200	26,39474999960	-27,50569444440	A	90,86	2,18	4,31
208	E10-01	9621	Cv2100	26,58458333330	-27,51433333290	A	88,10	4,92	4,92
209	F10-01	9623	Av3100	26,56994444450	-27,79130555580	A	82,55	8,68	6,83
210	E10-02	9625	Pn3100	26,62866666690	-27,69833333330	A	95,28	3,54	0,05
211	E09-03	9627	Pn3200	26,34430555560	-27,69608333380	A	89,39	6,57	2,47
212	E09-01	9629	Av3100	26,31333333330	-27,60430555560	A	86,99	6,56	4,41
213	E08-03	9631	Av3100	26,15450000020	-27,65583333330	A	82,82	13,75	2,15
214	E08-01	9633	Hu3100	26,10130555550	-27,60861111110	A	89,74	5,70	2,64
215	E08-04	9635	Av3100	26,20950000020	-27,71977777770	A	85,65	9,93	3,53
216	E09-02	9637	Av3100	26,25813888870	-27,70850000010	A	84,98	13,06	1,25
217	E08-02	9639	Hu3100	26,07722222220	-27,72941666710	A	88,03	6,14	3,94
218	E07-01	9641	Av3100	25,95805555560	-27,67000000000	A	60,36	4,80	4,55
219	F07-01	9643	Av3100	25,85216666670	-27,76161111090	A	85,71	6,73	5,45
220	F07-02	9645	Bd3100	25,95213888880	-27,84413888930	A	93,30	3,45	1,22

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
221	F11-01	9647	Se2220	26,78302777820	-27,76602777800	A	62,73	21,19	13,94
222	F10-02	9649	Se1210	26,56819444440	-27,90333333330	A	81,72	9,40	7,22
223	F10-03	9651	Tu1220	26,56502777740	-27,97661111090	A	86,70	6,35	4,26
224	F09-03	9653	Tu1210	26,45952777760	-27,79799999980	A	90,46	5,13	2,64
225	F09-01	9655	Bd3100	26,28950000020	-27,76200000020	A	88,30	5,09	4,02
226	F08-03	9657	Pn3200	26,23369444440	-27,78944444440	A	87,07	6,77	4,07
227	E06-02	9659	Cv3100	25,73977777800	-27,66530555510	A	88,39	5,91	3,80
228	F05-01	9661	Hu3100	25,34886111150	-27,81472222220	A	87,26	6,17	4,13
229	E05-01	9663	Hu3100	25,39799999980	-27,73527777780	A	90,75	4,21	3,24
230	E06-01	9665	Pn3100	25,58127777740	-27,72991666690	A	89,07	6,22	2,51
231	E06-01	9667	Hu3100	26,40033333330	-28,01127777740	A	0,00	0,00	0,00
232	F09-02	9669	Av3200	26,39400000040	-27,98197222180	A	87,70	6,61	3,02
233	G08-01	9671	Bd3100	26,11461111070	-28,06330555560	A	88,58	5,16	3,31
234	F08-02	9673	Bd3200	26,08116666690	-28,00055555560	A	83,42	8,55	6,27
235	F07-03	9675	Pn3200	25,97125000000	-27,97119444420	A	91,05	4,02	2,95
236	F06-03	9677	Bd3100	25,71316666710	-27,81230555530	A	86,28	9,04	2,54
237	F06-02	9679	Av3200	25,60283333330	-27,76352777800	A	83,38	6,73	7,29
238	F06-01	9681	Hu3200	25,54330555600	-27,83141666620	A	86,69	6,76	4,35
239	F05-04	9683	Bd3100	25,45930555560	-27,88986111110	A	92,31	5,04	1,20
240	F05-03	9685	Hu3100	25,45219444450	-27,88569444440	A	86,49	6,44	4,94
241	G04-01	9687	Hu3100	25,15127777780	-28,06558333290	A	85,48	5,36	7,42
242	G04-03	9689	Hu3100	25,22519444470	-28,15938888870	A	78,08	8,82	10,50
243	G10-02	9691	Cv3200	26,69338888910	-28,05875000000	A	84,58	7,55	5,50
244	G11-01	9693	Bv3200	26,77619444420	-28,20530555570	A	82,55	8,88	6,57
245	G10-01	9695	Av3200	26,57399999990	-28,22527777780	A	81,66	8,77	6,51
246	D10-05	9697	Bv3200	26,73075000020	-27,43641666680	A	79,48	13,37	4,51
247	G09-01	9868	Hu3100	26,40033333340	-28,01127777710	A	87,68	6,52	3,67
248	J03-04	10027	Cg2000	24,95000000000	-28,91788888890	A	57,28	19,96	22,09

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
249	J03-01	10028	Cg2000	24,81355555560	-28,81463888860	A	76,89	8,46	12,24
250	J04-03	10061	Hu3200	25,15711111120	-28,82680555550	A	73,98	12,47	11,35
251	J04-05	10063	Cg2000	25,21797222210	-28,79383333320	A	82,88	6,04	10,50
252	J04-01	10064	Ms1200	25,07399999980	-28,78741666640	A	71,31	12,03	13,87
253	J03-05	10065	Py1000	24,94302777830	-28,75683333350	A	35,49	21,93	41,25
254	I03-04	10067	Hu2200	24,91197222150	-28,70927777770	A	91,82	4,25	3,14
255	I03-03	10069	Hu2200	24,91341666650	-28,59583333350	A	90,35	5,40	3,15
256	I03-01	10071	Cg2000	24,90875000000	-28,54052777790	A	68,42	13,71	15,28
257	I03-02	10072	Hu3200	24,98450000000	-28,55197222220	A	66,92	19,22	12,10
258	J05-01	10102	Hu3200	25,29900000070	-28,79927777880	A	44,15	9,79	43,53
259	J05-06	10104	Va1222	25,39747222280	-28,77991666650	A	21,94	42,56	34,49
260	I05-03	10106	Sw1222	25,32283333340	-28,63911111100	A	24,62	28,31	44,86
261	I04-01	10108	Hu3100	25,03633333340	-28,66797222210	A	67,04	15,52	16,89
262	I04-04	10110	Hu3200	25,23886111090	-28,59616666690	A	72,38	11,96	14,13
263	I04-03	10112	Cg1000	25,24124999990	-28,66358333420	A	73,93	17,09	7,59
264	I04-02	10113	Hu3200	25,12833333340	-28,74147222180	A	73,73	11,92	12,18
265	J07-04	10133	Hu3200	25,99416666660	-28,80247222210	A	73,18	15,16	9,82
266	J08-01	10135	Py2000	26,21308333310	-28,78705555540	A	72,15	14,99	10,47
267	J08-02	10137	Sw1122	26,22050000020	-28,84944444460	A	85,89	7,81	4,00
268	I07-04	10140	Py1000	25,82722222180	-28,74108333320	A	90,49	4,65	2,85
269	J07-01	10142	Py2000	25,78605555570	-28,84061111120	A	73,71	13,90	10,50
270	I05-06	10144	Hu3100	25,26788888890	-28,69494444390	A	69,25	16,29	13,08
271	H04-03	10146	Ms1100	25,19597222260	-28,47583333300	A	69,67	9,90	18,54
272	H05-01	10147	Pr1210	25,26386111140	-28,48747222210	A	71,56	11,91	13,82
273	I05-02	10148	Se2220	25,33849999990	-28,58152777820	A	46,93	30,27	20,56
274	I05-04	10151	Ms1100	25,46808333330	-28,57500000040	A	77,59	15,08	5,53
275	H06-07	10152	Hu3100	25,54430555560	-28,48730555540	A	86,87	6,21	5,26
276	I05-05	10154	Ms1100	25,49477777810	-28,63747222210	A	65,49	17,33	15,03

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
277	I06-06	10155	Hu3100	25,59455555620	-28,58758333360	A	73,04	10,01	15,06
278	I06-03	10157	Se2220	25,60730555550	-28,66072222180	A	34,22	42,19	21,06
279	I06-01	10159	Se1220	25,53227777790	-28,82563888870	A	83,66	7,52	6,81
280	J06-02	10161	Pr1120	25,60038888890	-28,80088888890	A	56,68	17,84	23,14
281	J06-05	10163	Hu3200	25,70455555550	-28,79766666620	A	73,53	10,16	14,28
282	I06-05	10165	Hu3200	25,71374999990	-28,68658333320	A	77,13	9,56	12,06
283	I06-04	10167	Va1222	25,66216666680	-28,73466666680	A	25,21	46,73	26,35
284	I07-02	10169	Py2000	25,78958333340	-28,59922222170	A	74,07	11,81	11,71
285	I07-01	10171	Se1220	25,84730555520	-28,54180555520	A	59,28	25,92	12,76
286	H07-04	10173	Gs1211	25,92813888910	-28,47597222200	A	69,62	16,46	11,56
287	H07-02	10174	Se1220	25,81452777720	-28,46772222220	A	62,23	23,90	11,93
288	H07-01	10176	Ad2122	25,78038888900	-28,37163888890	A	61,06	19,33	18,03
289	H06-03	10178	Br2000	25,69591666640	-28,45266666690	A	53,82	34,72	8,78
290	I06-01	10180	Hu3100	25,66397222190	-28,51922222210	A	33,18	44,58	20,28
291	I06-02	10182	Mu1220	25,70425000020	-28,56419444380	A	84,49	7,21	6,30
292	I07-05	10184	Py1000	25,98230555450	-28,72047222210	A	81,14	7,47	9,77
293	I08-04	10186	Hu2200	26,06269444450	-28,68747222210	A	83,29	7,81	6,20
294	I08-05	10188	Se1120	26,22613888870	-28,69944444460	A	50,08	37,51	9,94
295	I08-06	10190	Br2000	26,15038888890	-28,62599999970	A	44,54	35,34	18,17
296	I08-03	10192	Cg1000	26,22855555530	-28,55649999970	A	60,35	25,67	12,32
297	I08-02	10193	Hu2200	26,06880555560	-28,59083333320	A	74,80	10,91	12,00
298	I08-01	10195	Bv2200	26,07130555550	-28,51822222220	A	79,83	10,62	7,92
299	I07-06	10197	Bv2200	25,97611111110	-28,51405555480	A	63,67	23,13	11,44
300	I07-03	10199	Hu3100	25,89688888890	-28,61858333340	A	84,69	6,21	6,15
301	H06-04	10366	Hu2200	25,73205555590	-28,33008333320	A	83,38	8,16	5,61
302	H06-02	10368	Gm1220	25,65597222240	-28,30122222220	A	76,18	12,66	10,46
303	G06-02	10370	Hu1200	25,53211111020	-28,21930555540	A	89,64	5,23	3,20
304	G06-01	10372	Hu2200	25,53827777750	-28,08541666680	A	65,27	19,12	12,96

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
305	G06-03	10374	Hu2200	25,58647222220	-28,01636111180	A	83,58	5,56	8,61
306	G05-02	10376	Sw1211	25,36816666670	-28,01469444480	A	75,85	15,58	8,27
307	G04-04	10378	Av1100	25,20413888880	-28,00586111100	A	89,28	5,51	3,71
308	G04-02	10380	Hu2200	25,01925000000	-28,20977777780	A	79,08	13,01	7,61
309	H04-04	10382	Hu1200	25,85419444450	-28,28849999990	A	90,39	5,61	3,40
310	G05-03	10384	Hu2200	25,299666666560	-28,22525000000	A	84,48	7,06	7,86
311	G06-04	10386	We2000	25,65324999980	-28,20300000000	A	53,61	34,09	11,50
312	H05-06	10388	Hu2200	25,49763888860	-28,27611111110	A	87,09	6,06	6,26
313	H05-03	10390	Hu2200	25,42450000040	-28,36099999990	A	85,51	6,59	5,33
314	H05-04	10392	Va1122	25,38455555560	-28,46513888870	A	45,32	29,16	23,65
315	H05-05	10394	Ag1220	25,44097222220	-28,47391666690	A	83,98	9,36	5,21
316	G06-05	10396	Ky2200	25,64869444400	-28,06750000000	A	83,38	9,01	6,21
317	G07-01	10398	Cv2200	25,78525000010	-28,02947222170	A	89,19	4,45	3,75
318	G07-02	10400	Cv2200	25,85291666670	-28,04741666660	A	86,29	5,21	6,31
319	G07-03	10402	Sw1221	25,81725000000	-28,17299999960	A	61,51	22,28	14,30
320	H05-02	10404	Hu2200	25,36980555550	-28,27269444480	A	71,47	13,81	12,61
321	H05-07	10406	Py1000	25,30722222220	-28,41313888840	A	73,21	11,73	12,24
322	H04-05	10408	Hu3200	25,08922222240	-28,37399999980	A	65,15	19,77	12,77
323	H04-01	10410	Cg2000	25,03191666680	-28,32013888890	A	67,77	15,42	16,62
324	H03-01	10411	Ag1120	24,94072222220	-28,33788888890	A	41,28	31,83	25,88
325	H03-02	10413	Cg2000	24,94550000010	-28,43333333330	A	71,62	8,94	17,09
326	H04-02	10414	Cg2000	25,03644444430	-28,46444444430	A	73,72	8,60	14,97
327	G07-05	10415	Hu3200	25,99149999950	-28,20897222200	A	81,10	10,15	6,41
328	G07-06	10417	Cv2100	25,97022222230	-28,10008333330	A	88,51	5,26	5,60
329	G08-01	10419	Se1220	26,04513888910	-28,37191666660	A	35,66	47,10	14,76
330	H09-02	10421	We2000	26,29175000000	-28,34849999970	A	83,28	8,16	7,94
331	H09-01	10423	Bv2200	26,26474999920	-28,26299999930	A	81,38	7,97	8,11
332	H09-03	10425	Bv2200	26,36991666650	-28,29569444450	A	84,56	6,26	6,22

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
333	H10-02	10427	Bv2100	26,54088888890	-28,37844444480	A	51,84	29,29	18,44
334	H10-01	10429	Sw1221	26,66072222180	-28,34438888850	A	72,60	13,00	11,43
335	H11-01	10431	Bo2120	26,78708333320	-28,30577777760	A	43,49	43,18	12,87
336	G11-03	10433	Bv2200	26,97916666690	-28,04783333380	A	80,61	11,01	8,03
337	G11-02	10435	Bo2120	26,93763888880	-28,22247222190	A	22,91	51,45	23,66
338	H11-04	10437	Bv2200	26,92536111050	-28,30855555570	A	72,49	17,06	10,25
339	H11-03	10439	Sw1121	25,79055555550	-28,43822222220	A	56,44	26,25	15,38
340	H12-01	10441	Ar2100	26,99555555540	-28,39569444450	A	27,20	54,55	15,79
341	I12-01	10448	Sw1221	27,11536111070	-28,58341666670	A	28,12	49,32	19,99
342	I12-02	10450	We2000	27,07994444410	-28,72755555610	A	61,69	16,72	20,78
343	I11-04	10452	We2000	26,95369444440	-28,72702777750	A	61,73	19,21	16,19
344	H08-02	10454	Sw1221	26,21094444470	-28,43324999950	A	68,99	16,63	12,14
345	I09-02	10456	We2000	26,28924999960	-28,67822222190	A	73,26	12,80	13,12
346	J09-01	10458	Sw1221	26,30000000000	-28,75000000000	A	55,28	29,75	12,86
347	I09-03	10460	Se1220	26,36480555530	-28,73527777780	A	46,01	35,63	15,97
348	I09-04	10462	Sw1121	26,42225000000	-28,73872222230	A	44,35	41,94	11,11
349	I10-03	10464	We2000	26,54588888880	-28,69077777740	A	75,58	11,49	10,53
350	I10-04	10466	Sw1222	26,66869444440	-28,59608333400	A	46,95	35,59	14,62
351	I10-01	10468	We2000	26,59661111080	-28,53550000010	A	57,18	26,32	13,97
352	I10-02	10470	Bo2220	26,54322222170	-28,58847222230	A	36,05	48,96	13,11
353	I10-05	10472	Sw1222	26,71597222310	-28,51455555580	A	57,32	24,87	15,38
354	I11-01	10474	Bv3200	26,76752777780	-28,56680555560	A	83,06	6,18	8,13
355	H09-04	10476	Sw1222	26,42061111110	-28,46299999930	A	73,16	12,49	11,62
356	J09-02	10478	Hu3200	26,32800000000	-28,80927777770	A	81,95	9,11	6,38
357	J09-03	10480	Sw1222	26,42188888850	-28,84077777740	A	80,51	10,45	6,58
358	J09-04	10482	Sw1222	26,47338888920	-28,78241666690	A	59,20	23,11	15,31
359	J10-02	10484	Sw1222	26,54619444450	-28,82036111110	A	53,10	25,08	19,64
360	J10-01	10486	Ar2200	26,62024999990	-28,77769444420	A	32,18	47,58	19,28

Number	Profile No.	Lab No.	Soil Class	X-Coordinates	Y-Coordinates	Master Horizon	Sand	Clay	Silt
361	J10-01	10487	Ar2200	26,62024999990	-28,77769444420	A	22,95	54,00	20,82
362	J10-04	10488	We2000	26,72380555590	-28,79522222200	A	61,41	17,17	19,54
363	I11-02	10494	Sw1221	26,76222222210	-28,74249999960	A	60,04	18,67	19,50
364	I11-03	10496	Ar1200	26,93747222210	-28,57933333260	A	24,57	46,04	26,68
365	I11-03	10497	Ar1200	26,93747222210	-28,57933333260	A	0,00	0,00	0,00
366	J09-05	10498	Im1000	26,47438888840	-28,94269444490	A	40,40	34,66	23,25
367	J10-03	10499	Sw1221	26,68827777750	-28,88027777750	A	25,80	65,07	6,38
368	J10-05	10501	Av3100	26,74677777840	-28,96122222280	A	62,34	14,66	20,04
369	K10-04	10503	Sw1122	26,68680555560	-29,01138888860	A	28,42	55,50	15,09
370	TBZ2	3833	Hu	26,31833055550	-28,91858611110	A	0,00	0,00	0,00
371	LB4	3908	Rg2000	26,62333333350	-27,18194444450	A	35,00	58,70	8,70
372	G12-04	11033	Sw1221	27,16666666670	-28,13686111110	A	61,20	18,14	18,64
373	G12-03	11035	Hu3100	27,17511111090	-28,21433333290	A	69,23	16,19	12,10
374	G12-02	11037	Va1222	27,03122222240	-28,22327777780	A	40,18	47,70	9,71
375	G12-01	11039	Va1222	27,09255555580	-28,04788888910	A	53,73	30,75	14,03
376	G13-01	11041	Sw1221	27,34233333390	-28,03230555450	A	60,73	25,54	11,24

Appendix C: SPSS Pearson's Correlation Report

GET DATA

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CORRELATIONS

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/VARIABLES=Band1 Band2 Band3 Band4 Band5 Band6 Band7 SandARCISCW ClayARCISCW SiltARCISCW
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/MISSING=PAIRWISE.

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Correlations

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	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax	CORRELATIONS /VARIABLES=Band1 Band2 Band3 Band4 Band5 Band6 Band7 SandARCISCW ClayARCISCW SiltARCISCW /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.	
Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.08

[DataSet1]

Correlations

		Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7
Sand (ARC-ISCW)	Pearson Correlation	.395**	.455**	.521**	.493**	.506**	.527**	.510**
	Sig. (2-tail)	.000	.000	.000	.000	.000	.000	.000
	N	957	957	957	957	957	957	957
Clay (ARC-ISCW)	Pearson Correlation	-.258**	-.342**	-.441**	-.434**	-.443**	-.438**	-.425**
	Sig. (2-tail)	.000	.000	.000	.000	.000	.000	.000
	N	957	957	957	957	957	957	957
Silt (ARC-ISCW)	Pearson Correlation	-.314**	-.351**	-.438**	-.421**	-.453**	-.470**	-.456**
	Sig. (2-tail)	.000	.000	.000	.000	.000	.000	.000
	N	957	957	957	957	957	957	957

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=Band1 Band2 Band3 Band4 Band5 Band6 Band7 SandARCISCW ClayARCISCW SiltARCISCW

/PRINT=SPEARMAN TWOTAIL NOSIG FULL

/MISSING=PAIRWISE.

Non-parametric Correlations

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.

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a. Based on availability of workspace memory

Correlations

		Band 1	Band 2	Band 3	Band 4	Band 5	Band 6	Band 7
Sand (ARC-ISCW)	Correlation Coefficient	.416**	.465**	.532**	.495**	.512**	.545**	.514**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	957	957	957	957	957	957	957
Clay (ARC-ISCW)	Correlation Coefficient	-.300**	-.367**	-.436**	-.422**	-.458	-.447**	-.426**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	957	957	957	957	957	957	957
Silt (ARC-ISCW)	Correlation Coefficient	-.360**	-.407**	-.500**	-.456**	-.486**	-.507**	-.479**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	957	957	957	957	957	957	957

** . Correlation is significant at the 0.01 level (2-tailed).

Appendix D:

OLSR Summary Results for Sand and Band 6

Summary of OLS Results - Model Variables

Variable	Coefficient [a]	StdError	t-Statistic	Probability [b]	Robust_SE	Robust_t	Robust_Pr [b]
Intercept	53.244584	1.123080	47.409439	0.000000*	1.366705	38.958349	0.000000*
BAND_6_E	0.005607	0.000298	18.838677	0.000000*	0.000340	16.483090	0.000000*

OLS Diagnostics

Input Features:	UTM_projected_sample_po	Dependent Variable:	SAND_CORRE
Number of Observations:	957	Akaike's Information Criterion (AICc) [d]:	6606.639779
Multiple R-Squared [d]:	0.270934	Adjusted R-Squared [d]:	0.270171
Joint F-Statistic [e]:	354.895737	Prob(>F), (1,955) degrees of freedom:	0.000000*
Joint Wald Statistic [e]:	271.692246	Prob(>chi-squared), (1) degrees of freedom:	0.000000*
Koenker (BP) Statistic [f]:	90.764414	Prob(>chi-squared), (1) degrees of freedom:	0.000000*
Jarque-Bera Statistic [g]:	3.195081	Prob(>chi-squared), (2) degrees of freedom:	0.202394

Notes on Interpretation

* An asterisk next to a number indicates a statistically significant p-value ($p < 0.01$).

[a] Coefficient: Represents the strength and type of relationship between each explanatory variable and the dependent variable.

[b] Probability and Robust Probability (Robust_Pr): Asterisk (*) indicates a coefficient is statistically significant ($p < 0.01$); if the Koenker (BP) Statistic [f] is statistically significant, use the Robust Probability column (Robust_Pr) to determine coefficient significance.

[c] Variance Inflation Factor (VIF): Large Variance Inflation Factor (VIF) values (> 7.5) indicate redundancy among explanatory variables.

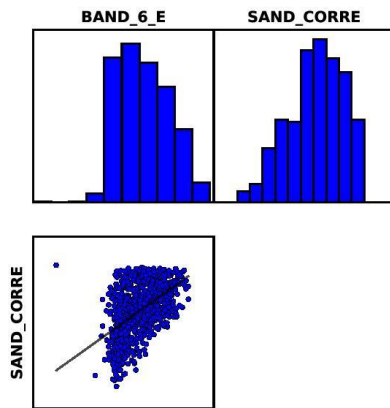
[d] R-Squared and Akaike's Information Criterion (AICc): Measures of model fit/performance.

[e] Joint F and Wald Statistics: Asterisk (*) indicates overall model significance ($p < 0.01$); if the Koenker (BP) Statistic [f] is statistically significant, use the Wald Statistic to determine overall model significance.

[f] Koenker (BP) Statistic: When this test is statistically significant ($p < 0.01$), the relationships modeled are not consistent (either due to non-stationarity or heteroskedasticity). You should rely on the Robust Probabilities (Robust_Pr) to determine coefficient significance and on the Wald Statistic to determine overall model significance.

[g] Jarque-Bera Statistic: When this test is statistically significant ($p < 0.01$) model predictions are biased (the residuals are not normally distributed).

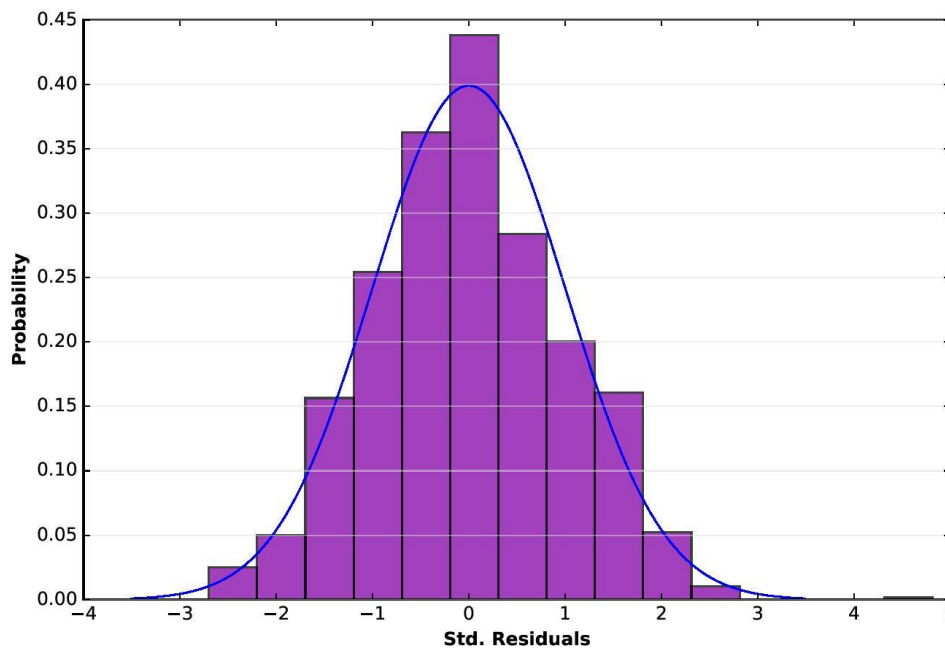
Variable Distributions and Relationships



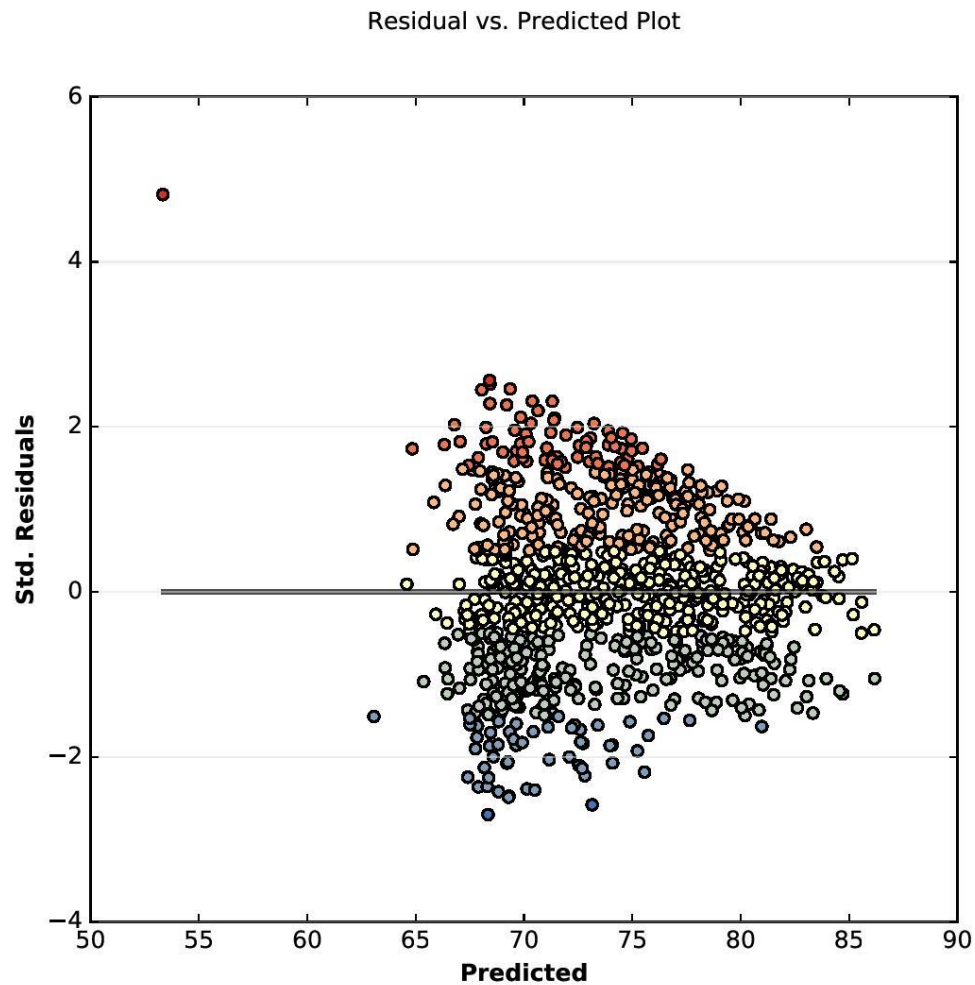
The above graphs are Histograms and Scatterplots for each explanatory variable and the dependent variable. The histograms show how each variable is distributed. OLS does not require variables to be normally distributed. However, if you are having trouble finding a properly-specified model, you can try transforming strongly skewed variables to see if you get a better result.

Each scatterplot depicts the relationship between an explanatory variable and the dependent variable. Strong relationships appear as diagonals and the direction of the slant indicates if the relationship is positive or negative. Try transforming your variables if you detect any non-linear relationships. For more information see the Regression Analysis Basics documentation.

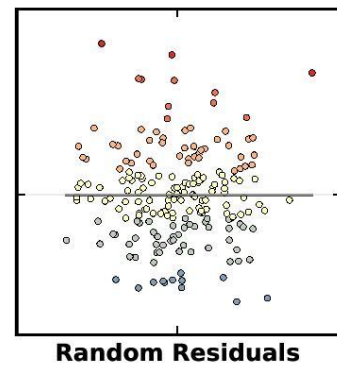
Histogram of Standardized Residuals



Ideally the histogram of your residuals would match the normal curve, indicated above in blue. If the histogram looks very different from the normal curve, you may have a biased model. If this bias is significant it will also be represented by a statistically significant Jarque-Bera p-value (*).



This is a graph of residuals (model over and under predictions) in relation to predicted dependent variable values. For a properly specified model, this scatterplot will have little structure, and look random (see graph on the right). If there is a structure to this plot, the type of structure may be a valuable clue to help you figure out what's going on.



Ordinary Least Squares Parameters

Parameter Name	Input Value
Input Features	UTM_projected_sample_points
Unique ID Field	Id
Output Feature Class	None
Dependent Variable	SAND_CORRE
Explanatory Variables	BAND_6_E
Selection Set	False

Appendix E:

OLSR Summary Results for Silt and Band 6

Summary of OLS Results - Model Variables

Variable	Coefficient [a]	StdError	t-Statistic	Probability [b]	Robust_SE	Robust_t	Robust_Pr [b]
Intercept	16.460208	0.580995	28.331074	0.000000*	0.643094	25.595353	0.000000*
BAND_6_E	-0.002533	0.000154	-16.452561	0.000000*	0.000151	-16.742232	0.000000*

OLS Diagnostics

Input Features:	UTM_projected_sample_po	Dependent Variable:	SILT_CORRE
Number of Observations:	957	Akaike's Information Criterion (AICc) [d]:	5345.145039
Multiple R-Squared [d]:	0.220845	Adjusted R-Squared [d]:	0.220029
Joint F-Statistic [e]:	270.686771	Prob(>F), (1,955) degrees of freedom:	0.000000*
Joint Wald Statistic [e]:	280.302330	Prob(>chi-squared), (1) degrees of freedom:	0.000000*
Koenker (BP) Statistic [f]:	73.800144	Prob(>chi-squared), (1) degrees of freedom:	0.000000*
Jarque-Bera Statistic [g]:	551.945062	Prob(>chi-squared), (2) degrees of freedom:	0.000000*

Notes on Interpretation

* An asterisk next to a number indicates a statistically significant p-value ($p < 0.01$).

[a] Coefficient: Represents the strength and type of relationship between each explanatory variable and the dependent variable.

[b] Probability and Robust Probability (Robust_Pr): Asterisk (*) indicates a coefficient is statistically significant ($p < 0.01$); if the Koenker (BP) Statistic [f] is statistically significant, use the Robust Probability column (Robust_Pr) to determine coefficient significance.

[c] Variance Inflation Factor (VIF): Large Variance Inflation Factor (VIF) values (> 7.5) indicate redundancy among explanatory variables.

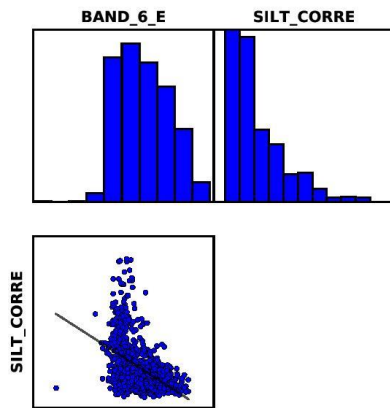
[d] R-Squared and Akaike's Information Criterion (AICc): Measures of model fit/performance.

[e] Joint F and Wald Statistics: Asterisk (*) indicates overall model significance ($p < 0.01$); if the Koenker (BP) Statistic [f] is statistically significant, use the Wald Statistic to determine overall model significance.

[f] Koenker (BP) Statistic: When this test is statistically significant ($p < 0.01$), the relationships modeled are not consistent (either due to non-stationarity or heteroskedasticity). You should rely on the Robust Probabilities (Robust_Pr) to determine coefficient significance and on the Wald Statistic to determine overall model significance.

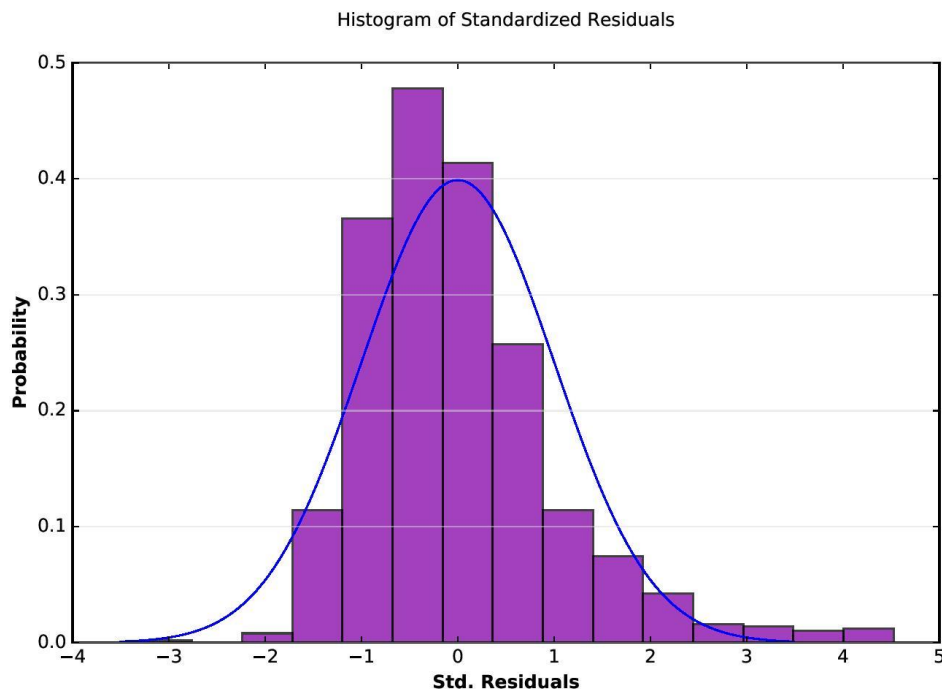
[g] Jarque-Bera Statistic: When this test is statistically significant ($p < 0.01$) model predictions are biased (the residuals are not normally distributed).

Variable Distributions and Relationships

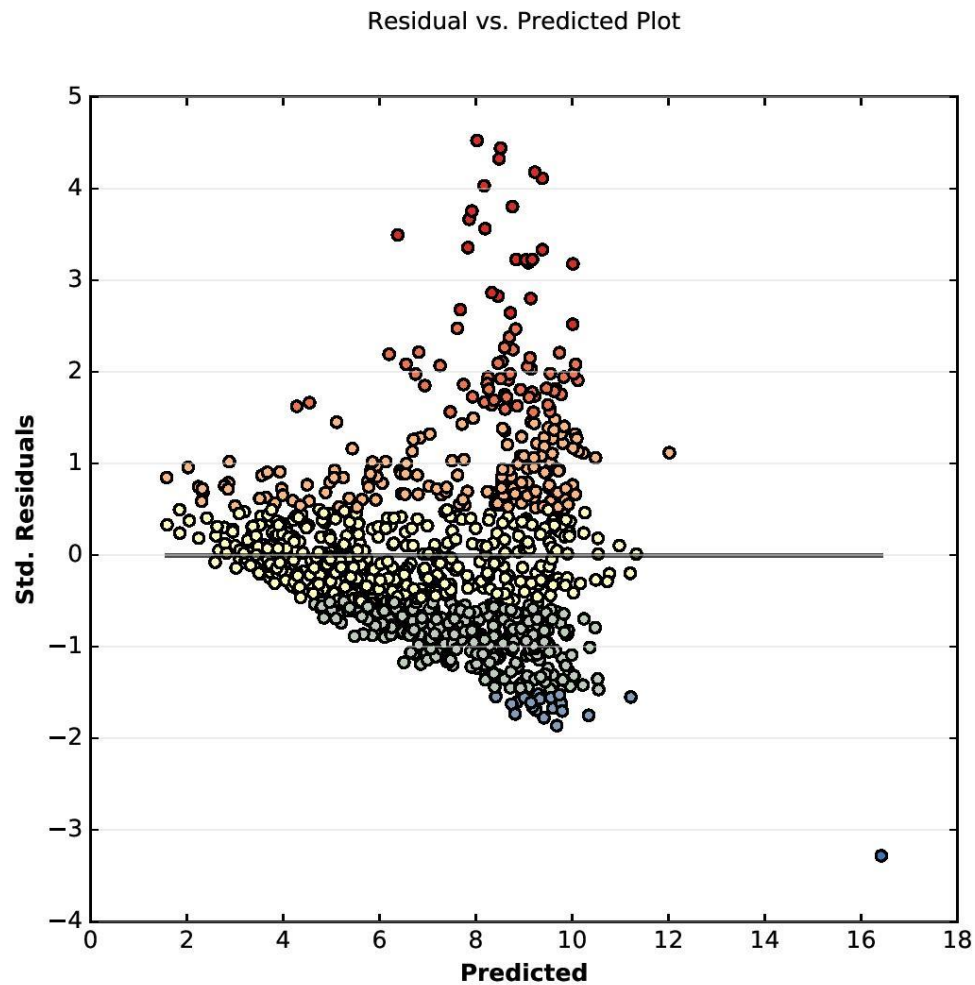


The above graphs are Histograms and Scatterplots for each explanatory variable and the dependent variable. The histograms show how each variable is distributed. OLS does not require variables to be normally distributed. However, if you are having trouble finding a properly-specified model, you can try transforming strongly skewed variables to see if you get a better result.

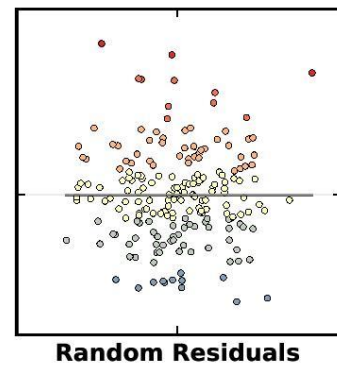
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Ideally the histogram of your residuals would match the normal curve, indicated above in blue. If the histogram looks very different from the normal curve, you may have a biased model. If this bias is significant it will also be represented by a statistically significant Jarque-Bera p-value (*).



This is a graph of residuals (model over and under predictions) in relation to predicted dependent variable values. For a properly specified model, this scatterplot will have little structure, and look random (see graph on the right). If there is a structure to this plot, the type of structure may be a valuable clue to help you figure out what's going on.



Ordinary Least Squares Parameters

Parameter Name	Input Value
Input Features	UTM_projected_sample_points
Unique ID Field	Id
Output Feature Class	None
Dependent Variable	SILT_CORRE
Explanatory Variables	BAND_6_E
Selection Set	False

Appendix F:

OLSR Summary Results for Clay and Band 5

Summary of OLS Results - Model Variables

Variable	Coefficient [a]	StdError	t-Statistic	Probability [b]	Robust_SE	Robust_t	Robust_Pr [b]
Intercept	21.131042	0.687799	30.722708	0.000000*	0.857118	24.653592	0.000000*
BAND_5_E	-0.004181	0.000274	-15.263209	0.000000*	0.000306	-13.675639	0.000000*

OLS Diagnostics

Input Features:	UTM_projected_sample_po	Dependent Variable:	CLAY_CORRE
Number of Observations:	957	Akaike's Information Criterion (AICc) [d]:	5960.181866
Multiple R-Squared [d]:	0.196105	Adjusted R-Squared [d]:	0.195263
Joint F-Statistic [e]:	232.965564	Prob(>F), (1,955) degrees of freedom:	0.000000*
Joint Wald Statistic [e]:	187.023099	Prob(>chi-squared), (1) degrees of freedom:	0.000000*
Koenker (BP) Statistic [f]:	80.024978	Prob(>chi-squared), (1) degrees of freedom:	0.000000*
Jarque-Bera Statistic [g]:	650.826534	Prob(>chi-squared), (2) degrees of freedom:	0.000000*

Notes on Interpretation

* An asterisk next to a number indicates a statistically significant p-value ($p < 0.01$).

[a] Coefficient: Represents the strength and type of relationship between each explanatory variable and the dependent variable.

[b] Probability and Robust Probability (Robust_Pr): Asterisk (*) indicates a coefficient is statistically significant ($p < 0.01$); if the Koenker (BP) Statistic [f] is statistically significant, use the Robust Probability column (Robust_Pr) to determine coefficient significance.

[c] Variance Inflation Factor (VIF): Large Variance Inflation Factor (VIF) values (> 7.5) indicate redundancy among explanatory variables.

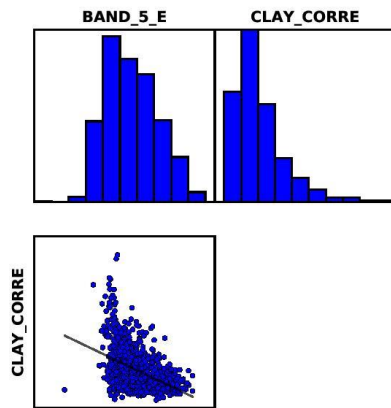
[d] R-Squared and Akaike's Information Criterion (AICc): Measures of model fit/performance.

[e] Joint F and Wald Statistics: Asterisk (*) indicates overall model significance ($p < 0.01$); if the Koenker (BP) Statistic [f] is statistically significant, use the Wald Statistic to determine overall model significance.

[f] Koenker (BP) Statistic: When this test is statistically significant ($p < 0.01$), the relationships modeled are not consistent (either due to non-stationarity or heteroskedasticity). You should rely on the Robust Probabilities (Robust_Pr) to determine coefficient significance and on the Wald Statistic to determine overall model significance.

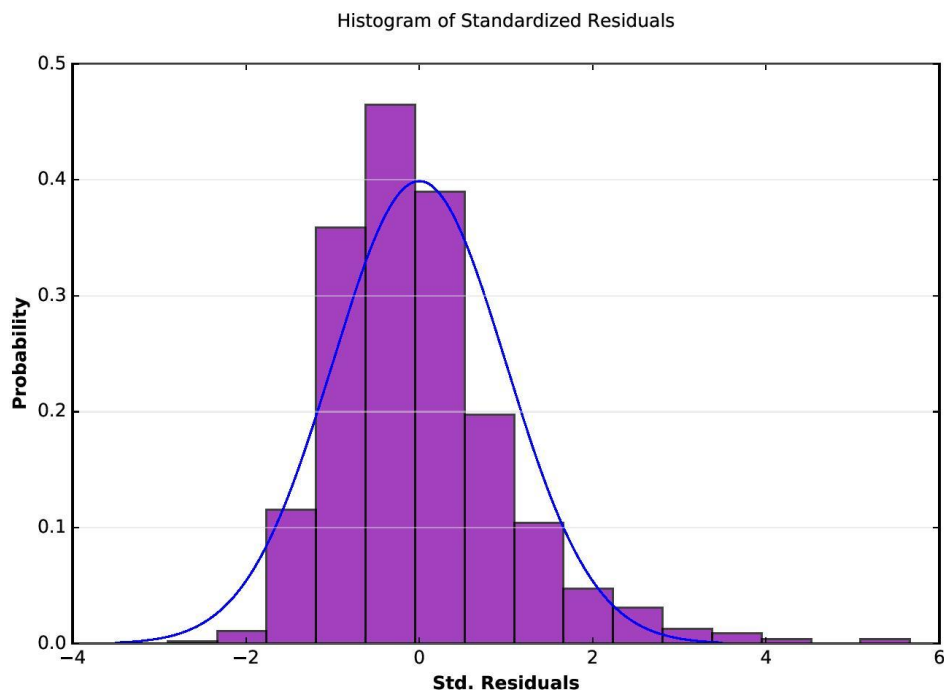
[g] Jarque-Bera Statistic: When this test is statistically significant ($p < 0.01$) model predictions are biased (the residuals are not normally distributed).

Variable Distributions and Relationships

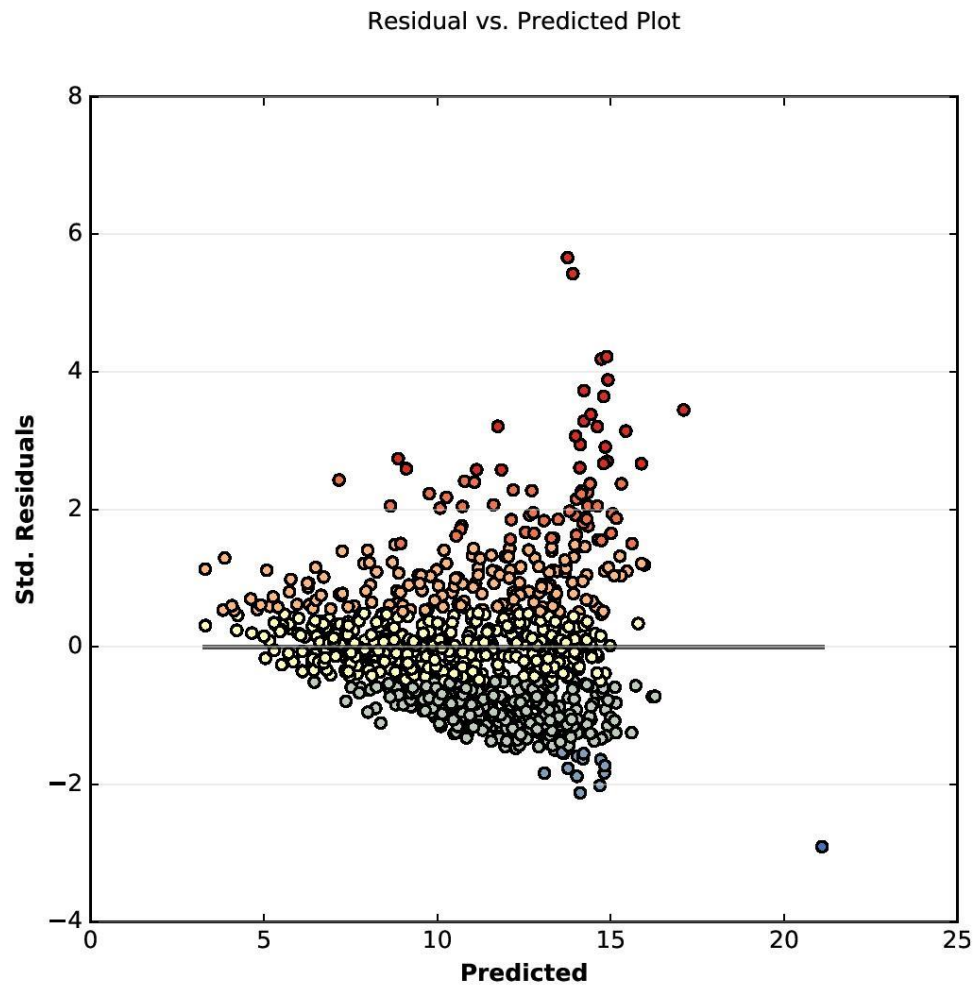


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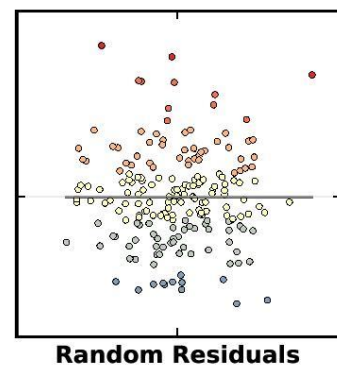
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Ideally the histogram of your residuals would match the normal curve, indicated above in blue. If the histogram looks very different from the normal curve, you may have a biased model. If this bias is significant it will also be represented by a statistically significant Jarque-Bera p-value (*).



This is a graph of residuals (model over and under predictions) in relation to predicted dependent variable values. For a properly specified model, this scatterplot will have little structure, and look random (see graph on the right). If there is a structure to this plot, the type of structure may be a valuable clue to help you figure out what's going on.



Ordinary Least Squares Parameters

Parameter Name	Input Value
Input Features	UTM_projected_sample_points
Unique ID Field	Id
Output Feature Class	None
Dependent Variable	CLAY_CORRE
Explanatory Variables	BAND_5_E
Selection Set	False

Appendix G:
GWR (Sand and Band 6) Output Feature Class Attribute Table

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
0	83,9865036	14,3393886	0,0106512	83,1996836	82,1765649	0,0003136	0,7868200	2,4240928	4,4214395	0,0012482	0,3245833
1	83,8839035	13,9693725	0,0042138	83,0403026	82,4094495	0,0001978	0,8436009	2,4260655	4,2229337	0,0011879	0,3477239
2	84,3989029	14,2734175	0,0194873	83,6820612	81,8370066	0,0004599	0,7168417	2,1378629	4,1867374	0,0011801	0,3353076
3	83,5212021	12,9914266	0,0008217	82,6837682	82,2658696	0,0001019	0,8374339	2,4171021	3,5433464	0,0009855	0,3464620
4	82,4122009	12,4103054	0,0000013	81,9704158	81,9882604	-0,0000039	0,4417852	2,1257219	3,7416914	0,0010505	0,2078283
5	83,1376038	13,0792382	0,0108033	82,9980897	81,7282365	0,0004017	0,1395141	2,5285713	3,2185834	0,0008786	0,0551751
6	82,0793991	12,8175191	0,0032122	82,5461950	81,8504214	0,0002187	-0,4667959	2,5586519	3,2541872	0,0008961	-0,1824382
7	81,9257965	12,6780736	0,0016374	82,2335968	81,8176092	0,0001553	-0,3078002	2,3590497	3,3114884	0,0009169	-0,1304764
8	81,6560974	12,5387372	0,0009407	82,0768472	81,7048927	0,0001169	-0,4207498	2,5497310	3,3887528	0,0009427	-0,1650173
9	82,6570969	12,2693459	0,0009232	81,5835825	81,2509536	0,0001137	1,0735144	2,3950227	3,5885127	0,0010027	0,4482272
10	82,2490005	12,3198007	0,0181860	82,5361485	80,2892157	0,0006053	-0,2871479	2,5983268	2,7547239	0,0007471	-0,1105126
11	81,9841995	12,2679917	0,0165476	82,1028578	80,0491179	0,0005777	-0,1186583	2,6007595	2,8329452	0,0007733	-0,0456245
12	78,8676987	12,2026187	0,0159903	81,8094606	79,7673883	0,0005652	-2,9417619	2,5912141	2,9409254	0,0008071	-1,1352832
13	79,3237991	12,1303586	0,0163225	81,6705388	79,4507709	0,0005666	-2,3467397	2,5329298	3,0715449	0,0008461	-0,9264922
14	83,4069977	12,7035374	0,0184036	83,1618206	81,3034353	0,0005586	0,2451771	2,5701588	2,9304419	0,0007894	0,0953938
15	83,5420990	12,6591353	0,0131918	82,7003952	81,2878337	0,0004771	0,8417038	2,4926205	2,9347081	0,0007942	0,3376783
16	83,4704971	12,5953812	0,0093717	82,5459039	81,2456512	0,0004036	0,9245932	2,5734870	2,9648679	0,0008073	0,3592764
17	81,6070023	12,4275000	0,0054268	82,3298741	81,0062085	0,0003053	-0,7228718	2,4033157	3,1036835	0,0008558	-0,3007811
18	86,8629990	12,1071632	0,0385576	84,5137542	81,1497181	0,0008366	2,3492448	2,5403727	2,6095917	0,0006879	0,9247638
19	80,7970963	12,1253737	0,0367409	82,6210854	79,2808191	0,0009184	-1,8239891	2,6052876	2,5392467	0,0006815	-0,7001105
20	77,7067032	11,9640686	0,0368802	80,7694380	78,1314484	0,0009217	-3,0627348	2,4046517	2,8467864	0,0007751	-1,2736709
21	78,3004990	11,8602378	0,0641472	83,0650558	77,1531606	0,0013082	-4,7645569	2,3781636	2,5413932	0,0006799	-2,0034606
22	87,5936966	12,0797969	0,0271892	84,6130485	82,9192014	0,0006255	2,9806481	2,3085810	2,4430981	0,0006243	1,2911170
23	84,5044022	12,0550628	0,0656382	83,0197390	79,4390390	0,0012296	1,4846632	2,4651241	2,2992566	0,0006004	0,6022671

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
24	86,3750992	12,2281683	0,0555278	85,9833595	80,8025580	0,0010483	0,3917397	2,4048891	2,2379028	0,0005730	0,1628930
25	85,6418991	12,1742567	0,0737641	84,6345005	79,3757585	0,0013091	1,0073987	2,6154063	2,2026952	0,0005675	0,3851786
26	78,0513000	11,4462977	0,1228263	79,7665288	74,2569212	0,0020035	-1,7152288	2,3685865	2,4205459	0,0006251	-0,7241571
27	87,6511993	11,9553581	0,0104282	86,3884057	87,2797401	-0,0002600	1,2627937	2,5454139	2,2824742	0,0005413	0,4961054
28	87,4608002	12,1146666	0,0009303	86,2190848	86,4938693	-0,0000848	1,2417153	2,5150982	2,2480333	0,0005393	0,4937045
29	85,0371017	12,3539189	0,0132235	85,9750544	84,1856330	0,0004024	-0,9379527	2,5793723	2,1867271	0,0005387	-0,3636360
30	85,0622025	12,4058918	0,0540472	84,7115763	81,1152066	0,0010194	0,3506261	2,6009671	2,1226752	0,0005342	0,1348061
31	84,3979034	12,2093024	0,0987280	84,3763676	77,8716583	0,0016298	0,0215358	2,6236348	2,0949297	0,0005328	0,0082084
32	75,4865036	10,9632435	0,1242922	79,1960214	72,8304656	0,0020796	-3,7095178	2,4436600	2,5136595	0,0006374	-1,5180172
33	87,0929031	12,1486193	0,0055791	86,2252915	87,0161182	-0,0002059	0,8676116	2,6187851	2,1547563	0,0005100	0,3313031
34	86,7323990	12,3225518	0,0000186	86,0891212	86,0327038	0,0000131	0,6432777	2,6130445	2,1178388	0,0005069	0,2461794
35	85,9747009	12,4662529	0,0071376	85,9233013	84,7553538	0,0002878	0,0513997	2,6294414	2,0798703	0,0005039	0,0195477
36	86,3518982	12,5569777	0,0249008	85,5862162	83,2295386	0,0006071	0,7656820	2,6295301	2,0437687	0,0005007	0,2911859
37	85,4633026	12,5039756	0,0756499	85,8423839	79,6949746	0,0013175	-0,3790813	2,5574423	2,0013078	0,0004981	-0,1482267
38	85,4683990	12,3476201	0,1004638	84,0182024	77,9354392	0,0016502	1,4501966	2,6204676	2,0080201	0,0005017	0,5534114
39	81,6232986	12,1198964	0,1214046	81,9491679	76,3299409	0,0019330	-0,3258692	2,4661136	2,0391303	0,0005102	-0,1321388
40	78,7151031	11,8458089	0,1358794	84,7669644	74,9880631	0,0021389	-6,0518612	2,5412681	2,0937002	0,0005237	-2,3814336
41	77,7270966	11,2779719	0,1443755	81,0389646	73,1689054	0,0023032	-3,3118680	2,5796074	2,2488084	0,0005617	-1,2838651
42	85,9350967	11,2752475	0,0189719	84,5740678	86,7188216	-0,0003846	1,3610289	2,3278338	2,2701417	0,0005266	0,5846762
43	85,6279984	11,3828144	0,0291275	85,0085663	87,2971199	-0,0004776	0,6194320	2,5756475	2,2053374	0,0005113	0,2404957
44	85,3783035	11,5055114	0,0383977	85,4654523	87,7896542	-0,0005498	-0,0871488	2,6215621	2,1448637	0,0004969	-0,0332431
45	85,6421967	11,6449804	0,0443094	85,9032510	88,1464042	-0,0005912	-0,2610543	2,6051507	2,0961179	0,0004856	-0,1002070
46	87,9340973	12,2034861	0,0206403	86,6744517	87,8142860	-0,0004212	1,2596456	2,3729179	2,0169271	0,0004724	0,5308425
47	88,2533035	12,4204982	0,0055390	85,9829611	87,0405599	-0,0002310	2,2703424	2,6138540	1,9882522	0,0004692	0,8685804
48	86,0710983	12,7707195	0,0092173	85,6204273	84,3680446	0,0003635	0,4506710	2,5772678	1,9086673	0,0004576	0,1748639
49	86,7352982	12,8276301	0,0302891	86,1710695	82,5642727	0,0007424	0,5642287	2,5602920	1,8770085	0,0004529	0,2203767
50	86,5886002	12,5807298	0,0832851	83,9618569	78,6671366	0,0015106	2,6267432	2,5958922	1,8970819	0,0004613	1,0118846
51	86,0028000	12,2972394	0,1058017	83,9594268	76,8658057	0,0018316	2,0433732	2,6319387	1,9539919	0,0004760	0,7763757

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
52	77,4017029	10,7310533	0,1186329	81,1815279	71,6554561	0,0022504	-3,7798251	2,5640087	2,2903424	0,0005685	-1,4741857
53	85,9568024	11,4811990	0,0435330	86,2770315	88,0331668	-0,0005474	-0,3202291	2,4548513	2,2619083	0,0005266	-0,1304474
54	87,0267029	11,7881806	0,0423212	86,0368614	88,2770533	-0,0005423	0,9898415	2,6234551	2,1503291	0,0004998	0,3773045
55	87,1876984	11,9732477	0,0296502	86,1367296	88,0272941	-0,0004628	1,0509688	2,6277205	2,1142304	0,0004932	0,3999546
56	87,2790985	12,1730613	0,0128478	86,3315190	87,4581614	-0,0003186	0,9475796	2,5897266	2,0812804	0,0004888	0,3658995
57	86,5223007	12,7122829	0,0411841	85,4765334	81,9756802	0,0008689	1,0457673	2,6358417	1,9305004	0,0004704	0,3967489
58	86,0914001	12,4714819	0,0953197	84,9318606	78,1964814	0,0016106	1,1595395	2,6295386	1,9373938	0,0004765	0,4409669
59	85,4481964	12,2100689	0,1169543	84,5546243	76,4973040	0,0019116	0,8935721	2,6226596	1,9810695	0,0004879	0,3407122
60	78,0686035	11,2476867	0,1414076	80,5361375	73,0334850	0,0023286	-2,4675340	2,5495637	2,2021221	0,0005438	-0,9678260
61	86,4660034	8,2511590	0,0737967	86,8455137	88,7200190	-0,0006586	-0,3795103	2,3849312	2,0653920	0,0005209	-0,1591284
62	87,4626007	11,8423814	0,0422150	85,9201635	88,2059170	-0,0006208	1,5424372	2,6007088	1,9817461	0,0004596	0,5930834
63	87,6872025	12,0331418	0,0382127	85,6014504	88,2859711	-0,0005963	2,0857521	2,6314615	1,9667490	0,0004582	0,7926212
64	88,8757019	12,2488044	0,0269346	85,7107839	88,0662119	-0,0005104	3,1649181	2,6228309	1,9567420	0,0004584	1,2066802
65	86,8598022	12,6869630	0,0669775	85,0319125	79,3100246	0,0013630	1,8278898	2,6377262	1,8952460	0,0004576	0,6929794
66	86,2675018	12,3929779	0,0894038	84,8564630	77,4144550	0,0017006	1,4110388	2,6260185	1,9625542	0,0004750	0,5373301
67	78,8977966	11,0069449	0,1235161	77,9707051	71,9860615	0,0023332	0,9270915	2,3428245	2,2361709	0,0005492	0,3957153
68	78,1929016	10,7651317	0,1161159	80,3642406	71,1841838	0,0023054	-2,1713390	2,6020535	2,2647116	0,0005602	-0,8344713
69	85,4392014	11,2988225	0,0128502	84,3693503	85,8633637	-0,0003462	1,0698511	2,6268199	2,0712916	0,0004692	0,4072800
70	87,3397980	11,5534642	0,0264280	84,3226083	86,9720362	-0,0005114	3,0171897	2,5717541	1,9835357	0,0004544	1,1732030
71	87,3994980	11,7079094	0,0328699	84,6659565	87,4970745	-0,0005791	2,7335415	2,6120682	1,9436639	0,0004478	1,0465047
72	87,1064987	12,9854422	0,0264747	85,4259698	82,1205493	0,0007874	1,6805289	2,6399624	1,8867738	0,0004515	0,6365730
73	85,7141037	12,1507605	0,0904113	83,7055017	76,1919057	0,0018438	2,0086020	2,6358896	2,0835133	0,0005040	0,7620205
74	80,3041000	11,7736860	0,1057686	81,6907727	74,4664313	0,0020904	-1,3866727	2,5880911	2,1535694	0,0005227	-0,5357898
75	78,1312027	11,4155804	0,1158410	79,1723485	72,9367738	0,0022683	-1,0411458	2,4230800	2,2038526	0,0005370	-0,4296787
76	71,3384018	10,3952766	0,0139806	73,7748075	71,2359929	0,0007549	-2,4364057	2,4826188	2,7211755	0,0006799	-0,9813853
77	87,2302017	7,5150956	0,1726059	85,6576261	90,0890321	-0,0013703	1,5725757	2,5820598	1,9368521	0,0004932	0,6090392
78	87,3792038	7,8163128	0,1408952	86,0399091	89,7332573	-0,0011899	1,3392947	2,5681617	1,8837920	0,0004765	0,5214994
79	87,7167969	8,1385812	0,1065761	85,5150438	89,2797311	-0,0009931	2,2017531	2,5914604	1,8414275	0,0004612	0,8496187

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
80	86,4477997	9,2046136	0,0180859	86,0109976	87,3718444	-0,0003595	0,4368021	2,5595913	1,9999814	0,0004757	0,1706530
81	82,1587982	11,0252015	0,0010201	83,9176210	84,2828145	-0,0001008	-1,7588228	2,5353900	1,9798616	0,0004369	-0,6937089
82	85,7771988	11,3036049	0,0104561	84,0166226	85,3929268	-0,0003256	1,7605762	2,6338183	2,0091014	0,0004508	0,6684501
83	85,9777985	11,4245391	0,0152391	84,7019588	85,8873413	-0,0004003	1,2758396	2,4717508	1,9777808	0,0004468	0,5161684
84	82,9369965	11,5681552	0,0204954	84,2829535	86,4225397	-0,0004746	-1,3459570	2,6403807	1,9381268	0,0004411	-0,5097587
85	83,2152023	11,7343173	0,0258115	84,9327877	86,9765003	-0,0005453	-1,7175854	2,6096953	1,9006994	0,0004358	-0,6581555
86	83,6154022	11,9212772	0,0304880	84,4642603	87,5102318	-0,0006058	-0,8488581	2,6054687	1,8744502	0,0004328	-0,3257986
87	83,6998978	12,1316592	0,0327753	84,7219654	87,9394290	-0,0006407	-1,0220676	2,6015490	1,8663042	0,0004336	-0,3928689
88	84,4885025	12,6082333	0,0221388	85,1577783	88,0132844	-0,0005486	-0,6692758	2,5539628	1,8923515	0,0004434	-0,2620538
89	88,8063965	12,8469529	0,0100703	85,3940097	87,4355462	-0,0003844	3,4123868	2,5160142	1,9083681	0,0004483	1,3562669
90	88,5511017	13,1386842	0,0018676	85,7928546	84,8660881	0,0001930	2,7582471	2,5989696	1,9299610	0,0004561	1,0612849
91	86,1446991	13,1073518	0,0133179	85,5847196	83,0153704	0,0005689	0,5599795	2,6284365	1,9576759	0,0004648	0,2130466
92	86,3740005	12,9390463	0,0315646	84,9947950	80,9634088	0,0009621	1,3792055	2,6396535	2,0085489	0,0004797	0,5224949
93	86,1815033	12,6590356	0,0525956	84,7917061	78,8349835	0,0013455	1,3897972	2,6315313	2,0753168	0,0004984	0,5281325
94	79,8964996	11,5746332	0,1083092	84,2893740	72,8062721	0,0022605	-4,3928744	2,5126312	2,2227366	0,0005408	-1,7483164
95	77,8130035	10,9899826	0,1177116	82,1910904	69,8534059	0,0024950	-4,3780869	2,4891213	2,2322861	0,0005480	-1,7588885
96	73,8533020	10,4702517	0,0113845	73,0359402	71,0815835	0,0006744	0,8173618	2,3540086	2,7200167	0,0006812	0,3472213
97	88,7481003	7,8968921	0,1708575	82,9000375	89,8472664	-0,0018873	5,8480628	2,5835382	1,8565883	0,0004669	2,2635867
98	90,0304031	7,5379727	0,2152853	90,5383228	90,5691980	-0,0018162	-0,5079197	1,2795874	1,9131261	0,0004819	-0,3969402
99	84,6697006	7,6481112	0,2022588	85,3944804	90,4783000	-0,0016924	-0,7247798	2,5786236	1,8873181	0,0004750	-0,2810723
100	84,7214966	7,8478330	0,1766205	84,7553385	90,2261292	-0,0015247	-0,0338419	2,6077397	1,8414789	0,0004620	-0,0129775
101	87,9088974	8,1052327	0,1425869	84,4265676	89,8191264	-0,0013194	3,4823298	2,5929621	1,7869868	0,0004456	1,3429930
102	87,6274033	8,3849822	0,1055713	85,2155504	89,2826480	-0,0010886	2,4118528	2,6092582	1,7435542	0,0004310	0,9243442
103	88,1003036	8,8965364	0,0445271	86,2404391	88,0853046	-0,0006419	1,8598645	2,4765408	1,7687255	0,0004290	0,7509929
104	87,7847977	9,1177838	0,0262526	85,3605301	87,5638201	-0,0004727	2,4242676	2,5359064	1,8355343	0,0004409	0,9559767
105	86,4122009	9,9243524	0,0046304	85,4652573	86,1585041	-0,0002080	0,9469436	2,4415613	1,9419885	0,0004506	0,3878435
106	81,1652985	11,2092882	0,0049530	83,5301359	84,4971964	-0,0002319	-2,3648374	2,6328779	1,9526661	0,0004325	-0,8981949
107	85,8237000	11,3053800	0,0079250	84,0631824	84,8677753	-0,0002971	1,7605175	2,4161856	1,9513181	0,0004348	0,7286350

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
108	83,3711014	11,5702316	0,0144675	83,5370527	85,7622933	-0,0004219	-0,1659513	2,5851269	1,9003354	0,0004298	-0,0641947
109	83,3163986	11,9368677	0,0220188	84,0484938	86,8778415	-0,0005539	-0,7320952	2,6014034	1,8448191	0,0004237	-0,2814232
110	84,6709976	12,3941599	0,0259661	84,5086191	87,8465830	-0,0006329	0,1623785	2,5563455	1,8597570	0,0004312	0,0635198
111	89,2270966	12,9040455	0,0139739	85,8275658	87,6825804	-0,0004883	3,3995308	2,6063766	1,9388357	0,0004506	1,3043130
112	89,0639038	13,2351419	0,0046304	85,2210875	83,8841991	0,0003454	3,8428163	2,6205861	2,0574259	0,0004838	1,4663957
113	87,4009018	13,0949899	0,0175868	85,1255670	81,8547859	0,0007345	2,2753348	2,6316739	2,1100851	0,0005003	0,8645960
114	86,3858032	12,8407974	0,0363302	84,5654065	79,6082501	0,0011430	1,8203967	2,6356767	2,1653547	0,0005176	0,6906753
115	86,2539978	12,5080681	0,0583475	85,6178524	77,2533360	0,0015484	0,6361454	2,4586795	2,2106148	0,0005320	0,2587346
116	79,7211990	11,7841436	0,1019517	81,2062868	72,6167832	0,0022628	-1,4850877	2,6133369	2,2450675	0,0005453	-0,5682726
117	79,7842026	11,4514351	0,1164110	81,3463135	70,6199037	0,0025056	-1,5621109	2,6178681	2,2356720	0,0005449	-0,5967111
118	77,4334030	10,9473076	0,1119228	78,8694731	68,1434381	0,0025478	-1,4360701	2,5996303	2,2310913	0,0005464	-0,5524132
119	70,0876007	10,5838692	0,0089860	73,0843168	70,9866302	0,0005921	-2,9967161	2,5603859	2,7127465	0,0006819	-1,1704158
120	84,3545990	8,4791855	0,1710684	82,4316680	89,7095382	-0,0019972	1,9229310	2,6061902	1,7580847	0,0004360	0,7378322
121	87,9675980	9,1309011	0,0398960	84,8765106	87,8271229	-0,0006641	3,0910873	2,5892826	1,6878991	0,0004060	1,1938007
122	81,2473984	11,2077404	0,0032268	83,0538267	83,9595309	-0,0001978	-1,8064283	2,6375526	1,8796163	0,0004154	-0,6848881
123	81,4998016	11,2955848	0,0050047	82,9761235	84,2344717	-0,0002500	-1,4763219	2,6133410	1,8872500	0,0004192	-0,5649174
124	83,1642990	11,4085821	0,0066301	83,2086261	84,5473056	-0,0002951	-0,0443271	2,6450300	1,8772731	0,0004196	-0,0167586
125	83,2799988	11,5496706	0,0082367	83,2367421	84,9233452	-0,0003399	0,0432567	2,6244234	1,8556447	0,0004178	0,0164824
126	83,3992004	11,7193407	0,0101208	83,2574816	85,3887244	-0,0003914	0,1417188	2,5630027	1,8311561	0,0004154	0,0552940
127	84,3852005	12,1367019	0,0153318	84,6773616	86,5831970	-0,0005199	-0,2921611	2,5896777	1,8171608	0,0004169	-0,1128176
128	84,5272980	12,3830663	0,0175656	84,8562473	87,1699445	-0,0005734	-0,3289493	2,6258307	1,8467206	0,0004245	-0,1252744
129	88,8308029	12,9246054	0,0138101	85,2646100	87,5724924	-0,0005323	3,5661929	2,6341020	1,9692804	0,0004521	1,3538553
130	88,7855988	13,1656477	0,0069582	85,6989801	87,0919394	-0,0003907	3,0866187	2,5647899	2,0384146	0,0004684	1,2034587
131	88,4536972	13,3252147	0,0010947	85,3166285	86,0920805	-0,0001632	3,1370687	2,5992065	2,1030426	0,0004855	1,2069332
132	88,2743988	13,3621209	0,0007439	85,1215301	84,5870470	0,0001442	3,1528687	2,5940100	2,1631887	0,0005036	1,2154420
133	86,8038025	13,0496156	0,0232681	83,6313546	80,3464386	0,0009383	3,1724479	2,5604256	2,2616767	0,0005378	1,2390314
134	84,6509018	12,7487693	0,0449570	85,8068708	77,7638195	0,0013944	-1,1559690	2,3060959	2,2858679	0,0005484	-0,5012666
135	78,8039017	11,3814903	0,1241459	79,3401548	68,2610529	0,0027410	-0,5362531	2,6130772	2,2232319	0,0005410	-0,2052190

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
136	75,3074036	11,1347194	0,1159507	76,8729778	67,3037641	0,0026700	-1,5655742	2,5785882	2,2282216	0,0005426	-0,6071439
137	72,1070023	10,9582387	0,0924891	74,1325966	67,2883364	0,0023479	-2,0255944	2,4142894	2,2801808	0,0005570	-0,8390023
138	70,0158005	10,7357872	0,0068016	73,4100125	70,9469478	0,0005089	-3,3942120	2,3945684	2,7094585	0,0006834	-1,4174630
139	68,2218018	10,7414300	0,0075017	71,7490875	72,9956581	-0,0004117	-3,5272858	2,4047092	3,0149222	0,0007729	-1,4668242
140	88,7406006	9,9915981	0,0491598	80,3415196	85,1890320	-0,0012235	8,3990810	2,6088308	1,9054829	0,0004661	3,2194809
141	88,5700989	9,8389447	0,0734997	80,3002848	86,4359394	-0,0014910	8,2698141	2,6092131	1,8028300	0,0004412	3,1694667
142	87,7045975	9,6260064	0,1026045	80,0702397	87,5929616	-0,0017306	7,6343578	2,5969807	1,7249363	0,0004227	2,9397053
143	83,4705963	9,1353926	0,0978564	83,4576631	89,0555404	-0,0012625	0,0129332	2,6004470	1,5676181	0,0003768	0,0049734
144	83,5624008	9,2848354	0,0619255	84,2283628	88,2494953	-0,0009558	-0,6659620	2,6180743	1,5782057	0,0003772	-0,2543709
145	88,0043030	9,4241306	0,0351187	85,4071243	87,4874488	-0,0006805	2,5971787	2,5269436	1,6259264	0,0003875	1,0277945
146	87,6443024	10,2630814	0,0022095	84,5874069	85,4456874	-0,0001591	3,0568954	2,5010153	1,7500059	0,0004107	1,2222618
147	85,6466980	11,0922679	0,0001200	82,9276631	83,1165804	-0,0000404	2,7190349	2,6296604	1,7416475	0,0003862	1,0339871
148	81,7870026	11,1881326	0,0014369	82,7970396	83,2936095	-0,0001407	-1,0100370	2,5897127	1,8067914	0,0003999	-0,3900190
149	81,9549026	11,2617547	0,0020853	82,8667977	83,4297848	-0,0001726	-0,9118950	2,5569391	1,8163418	0,0004036	-0,3566354
150	83,4450989	11,3645878	0,0024863	83,0757211	83,5946929	-0,0001939	0,3693777	2,4350125	1,8127086	0,0004050	0,1516944
151	83,0718994	11,4937862	0,0027775	82,7932971	83,8206306	-0,0002128	0,2786023	2,6357126	1,7981722	0,0004044	0,1057028
152	83,0106964	11,6533227	0,0031882	83,1004973	84,1463289	-0,0002383	-0,0898009	2,6454654	1,7812522	0,0004033	-0,0339452
153	84,3145981	12,3101174	0,0073075	84,4420137	85,9130978	-0,0004116	-0,1274156	2,5629533	1,8164613	0,0004151	-0,0497144
154	88,9084015	13,3927164	0,0022535	85,3496394	86,1650709	-0,0002532	3,5587621	2,4589922	2,1656011	0,0004951	1,4472442
155	86,8563004	13,4486978	0,0030389	84,5158940	83,2301941	0,0003274	2,3404063	2,6135373	2,3128136	0,0005406	0,8954938
156	85,5300980	13,2830048	0,0140570	84,1222453	80,9402233	0,0007515	1,4078527	2,6284633	2,3490984	0,0005559	0,5356182
157	84,9912033	12,6866439	0,0619536	83,7227516	75,1580615	0,0017795	1,2684517	2,5735008	2,3346437	0,0005631	0,4928896
158	75,8646011	11,9560838	0,1166587	79,6365627	69,4538512	0,0026677	-3,7719615	2,5953100	2,2556249	0,0005478	-1,4533761
159	72,1425018	10,9558855	0,0254399	72,7947383	69,3819292	0,0010907	-0,6522365	2,4885862	2,5499970	0,0006359	-0,2620912
160	70,5703964	10,9274324	0,0047764	72,7960774	70,9737334	0,0004216	-2,2256810	2,5549618	2,7163170	0,0006866	-0,8711210
161	68,5376968	10,9764150	0,0106426	70,6743544	73,0480300	-0,0004800	-2,1366576	2,3479342	3,0000347	0,0007709	-0,9100160
162	82,9681015	12,9726341	0,0553985	82,9671317	75,1567852	0,0017203	0,0009698	2,5993971	2,3615442	0,0005698	0,0003731
163	69,6259003	11,1982291	0,0012623	71,4271141	72,3121513	-0,0001881	-1,8012139	2,4610687	2,8824389	0,0007364	-0,7318828

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
164	68,6724014	11,3735805	0,0340184	70,0553892	73,4779710	-0,0007488	-1,3829878	2,4798854	3,0869176	0,0007968	-0,5576821
165	80,1438980	10,2185976	0,1750562	80,1841823	90,1158370	-0,0021628	-0,0402843	2,6157467	1,5255308	0,0003652	-0,0154007
166	83,3912964	10,1810931	0,1532725	81,6402936	89,8813090	-0,0019863	1,7510028	2,6377556	1,5115053	0,0003593	0,6638230
167	83,8803024	10,1247539	0,0525839	83,7293855	87,5820826	-0,0010396	0,1509169	2,6201682	1,5417127	0,0003590	0,0575982
168	83,7302017	10,2300374	0,0066842	84,0397162	85,5763990	-0,0003103	-0,3095144	2,5913657	1,6537443	0,0003863	-0,1194407
169	87,1298981	10,5548137	0,0015910	84,1935239	84,8086766	-0,0001476	2,9363742	2,6206224	1,6501396	0,0003839	1,1204873
170	86,4290009	11,0202086	0,0000304	82,6536078	82,5386496	0,0000226	3,7753931	2,6132577	1,6550911	0,0003726	1,4447075
171	86,2770996	11,0371643	0,0000503	82,2814819	82,1333326	0,0000294	3,9956177	2,6208143	1,6799112	0,0003759	1,5245711
172	79,6669006	11,0453935	0,0000639	81,9601915	81,8103312	0,0000335	-2,2932909	2,6461635	1,6963022	0,0003788	-0,8666474
173	80,4748001	11,0989139	0,0004052	81,6259084	81,1987107	0,0000879	-1,1511083	2,6373781	1,7008593	0,0003814	-0,4364594
174	83,8251038	11,1578603	0,0010536	81,5354011	80,8723010	0,0001467	2,2897026	2,6474300	1,6934626	0,0003816	0,8648775
175	81,7897034	11,2417207	0,0021431	81,4777422	80,5679406	0,0002186	0,3119612	2,6406007	1,6841853	0,0003817	0,1181402
176	81,1951981	11,3539428	0,0033848	81,8443215	80,3520497	0,0002895	-0,6491234	2,5988144	1,6768188	0,0003822	-0,2497768
177	83,1741028	11,4975859	0,0041623	82,0978935	80,3171910	0,0003403	1,0762093	2,5731491	1,6745937	0,0003836	0,4182460
178	81,5090027	11,6873187	0,0039658	82,0269281	80,5465208	0,0003528	-0,5179254	2,6273892	1,6846247	0,0003868	-0,1971255
179	82,9601974	13,3617867	0,0000059	83,8693928	83,8025984	0,0000159	-0,9091953	2,6097242	2,1098979	0,0004807	-0,3483875
180	82,0968018	13,1642735	0,0528209	83,4102182	74,9118541	0,0017007	-1,3134164	2,4731125	2,3352774	0,0005661	-0,5310783
181	70,6062012	11,5275369	0,0024839	71,6386581	72,4112468	-0,0002640	-1,0324569	2,4107093	2,8982944	0,0007408	-0,4282793
182	69,9079971	11,6293454	0,0166533	70,9131079	73,1672581	-0,0005995	-1,0051108	2,5905036	3,0052623	0,0007730	-0,3879982
183	68,2378006	11,9368123	0,0475694	69,6543343	73,3293872	-0,0008305	-1,4165337	2,4969203	3,1084669	0,0008068	-0,5673124
184	78,6649017	9,9376418	0,0107143	79,5553037	81,4380813	-0,0004913	-0,8904020	2,5975136	2,0629445	0,0005117	-0,3427901
185	75,9908981	10,1349680	0,0334963	79,9356461	83,4831690	-0,0009557	-3,9447480	2,6155630	1,9611619	0,0004789	-1,5081832
186	78,2550964	10,1845668	0,0509078	80,6945644	84,6354997	-0,0012126	-2,4394680	2,5761672	1,8815632	0,0004580	-0,9469370
187	82,3917999	10,1112674	0,0989272	82,3014496	86,9798287	-0,0017149	0,0903503	2,4809917	1,7129659	0,0004166	0,0364170
188	83,7357025	9,9876140	0,1276233	81,6947391	88,0352068	-0,0019249	2,0409634	2,5914794	1,6546127	0,0004024	0,7875669
189	84,8156967	9,6715456	0,1813791	81,5512198	89,6541509	-0,0021941	3,2644769	2,6289141	1,6130809	0,0003920	1,2417587
190	85,0739975	9,4448414	0,1912833	81,5247922	90,4423059	-0,0021037	3,5492053	2,6276926	1,5785611	0,0003820	1,3506927
191	83,3638000	9,5442028	0,1309270	84,2094322	89,6075197	-0,0016538	-0,8456322	2,5925800	1,5244288	0,0003640	-0,3261740

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
192	83,3279037	9,7594557	0,0312009	84,3495469	87,1036845	-0,0006971	-1,0216432	2,6243914	1,5893228	0,0003747	-0,3892876
193	87,6495972	10,1816486	0,0037008	84,3564543	85,5505558	-0,0002128	3,2931429	2,4713175	1,7011959	0,0004005	1,3325454
194	88,1225967	10,4183915	0,0016905	84,3662205	85,0980864	-0,0001457	3,7563762	2,5876824	1,6849815	0,0003951	1,4516373
195	86,2993011	11,0402743	0,0000143	82,9331711	82,8639525	0,0000147	3,3661301	2,6312307	1,6621077	0,0003735	1,2792987
196	81,7818985	11,1020748	0,0000850	82,4093473	82,5316324	-0,0000362	-0,6274488	2,5621231	1,7261133	0,0003835	-0,2448941
197	81,9925995	11,1391388	0,0002060	82,2116174	82,4746965	-0,0000571	-0,2190179	2,6447354	1,7438672	0,0003877	-0,0828128
198	82,5376968	11,1964992	0,0002177	82,1074176	82,4203440	-0,0000600	0,4302792	2,6068669	1,7496594	0,0003902	0,1650561
199	82,9132004	11,2811777	0,0001243	82,1339643	82,3734851	-0,0000468	0,7792361	2,6164444	1,7456914	0,0003912	0,2978225
200	82,9067993	11,3925496	0,0000352	82,2700000	82,3698667	-0,0000260	0,6367993	2,6225316	1,7350836	0,0003912	0,2428185
201	83,1337967	11,5311867	0,0000054	82,4212324	82,4691930	-0,0000107	0,7125643	2,6439999	1,7225066	0,0003908	0,2695024
202	79,1557999	9,3689773	0,0049881	78,8223918	79,8103364	-0,0002764	0,3334081	2,6065606	1,8419781	0,0004739	0,1279111
203	77,1959991	9,5803300	0,0118476	79,0266593	80,5224818	-0,0004545	-1,8306602	2,5888463	1,8208226	0,0004604	-0,7071336
204	81,1290970	9,8424345	0,0210780	78,7254757	81,3000571	-0,0006485	2,4036212	2,6295842	1,8040987	0,0004493	0,9140689
205	77,3513031	10,9843500	0,0779983	77,1638798	85,0853200	-0,0015204	0,1874233	2,5392315	1,6727509	0,0004044	0,0738110
206	79,8666992	11,1581163	0,0971884	78,5613830	86,1288911	-0,0017337	1,3053163	2,6408227	1,6238807	0,0003914	0,4942839
207	79,3814011	11,2479407	0,1175024	77,6049046	87,1427102	-0,0019264	1,7764964	2,5906103	1,5821829	0,0003803	0,6857444
208	80,3852005	11,2568242	0,1364929	79,0393928	88,0547268	-0,0020811	1,3458077	2,6436637	1,5516723	0,0003721	0,5090692
209	80,5469971	11,2041054	0,1509862	79,9614353	88,8005231	-0,0021820	0,5855617	2,6451528	1,5327070	0,0003667	0,2213716
210	79,9716034	11,1136885	0,1569849	80,1989905	89,3034183	-0,0022103	-0,2273871	2,6451755	1,5229454	0,0003631	-0,0859629
211	80,1089020	10,8909890	0,1344196	79,6960719	89,3492324	-0,0019940	0,4128301	2,5979355	1,5245066	0,0003587	0,1589070
212	84,3385010	10,6631028	0,0766772	83,5704217	88,0764560	-0,0014188	0,7680793	2,5613371	1,5533723	0,0003595	0,2998744
213	88,2058029	10,5604956	0,0035026	83,6465644	84,9514486	-0,0002294	4,5592385	2,4901689	1,6429586	0,0003784	1,8308953
214	82,6539993	10,9189129	0,0002722	83,1625563	83,5566395	-0,0000671	-0,5085570	2,4855689	1,6288602	0,0003703	-0,2046039
215	82,5793991	11,0011681	0,0000404	82,3665034	82,2323426	0,0000274	0,2128958	2,6312203	1,6640248	0,0003740	0,0809114
216	80,8454971	10,9949878	0,0002313	81,9403565	81,6194355	0,0000668	-1,0948594	2,6381735	1,6809010	0,0003767	-0,4150066
217	81,7735977	10,9776022	0,0014552	81,4455898	80,4443639	0,0001737	0,3280079	2,5380916	1,6869212	0,0003786	0,1292341
218	81,5921021	10,9866229	0,0030878	80,7472564	79,8228331	0,0002595	0,8448456	2,5996491	1,6796020	0,0003785	0,3249845
219	81,5814972	11,0639289	0,0097946	81,1642168	78,5199635	0,0004985	0,4172804	2,5862801	1,6668098	0,0003795	0,1613438

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
220	85,3684998	13,4117604	0,0037255	82,8664806	81,1929552	0,0004313	2,5020192	2,5700026	2,1066196	0,0004900	0,9735473
221	84,8694000	13,5175399	0,0058672	82,7503861	80,7332654	0,0005332	2,1190139	2,5462494	2,1959737	0,0005167	0,8322099
222	80,3601990	13,0857044	0,0571858	82,1156496	74,2492970	0,0017551	-1,7554506	2,5698620	2,2221610	0,0005450	-0,6830914
223	79,7584991	12,7771694	0,0916241	80,5736708	71,0076568	0,0023258	-0,8151717	2,5782278	2,1860842	0,0005413	-0,3161752
224	71,5055008	11,9428407	0,0034939	71,1977489	72,4295273	-0,0003180	0,3077519	2,5926271	2,9052909	0,0007444	0,1187027
225	70,9571991	12,0811374	0,0172645	71,4809466	73,1122763	-0,0006282	-0,5237475	2,2072210	2,9996589	0,0007737	-0,2372882
226	69,0386963	12,2473696	0,0310495	70,2494637	73,2488946	-0,0007661	-1,2107674	2,5893920	3,0504751	0,0007911	-0,4675875
227	79,5997009	9,9593843	0,0216857	80,0177209	81,9120492	-0,0006952	-0,4180200	2,4711863	1,9174946	0,0004733	-0,1691576
228	82,2267990	10,1572401	0,0342436	80,6551165	82,8833123	-0,0009226	1,5716825	2,3895039	1,8824392	0,0004605	0,6577443
229	77,2510986	10,4865631	0,0688948	78,6984333	85,0433251	-0,0014097	-1,4473346	2,6148683	1,7682005	0,0004289	-0,5535019
230	78,7941971	10,5933498	0,1152847	79,0383344	87,2324740	-0,0018648	-0,2441373	2,6312147	1,6392707	0,0003965	-0,0927850
231	79,8544998	10,3698554	0,1783134	83,2843465	89,6494224	-0,0022499	-3,4298467	2,5170725	1,5534183	0,0003742	-1,3626333
232	79,8803024	10,2823621	0,1834519	81,3693008	90,0292710	-0,0022488	-1,4889984	2,6377408	1,5401917	0,0003702	-0,5644976
233	78,3026962	9,0016214	0,0000050	78,3002339	78,2724505	0,0000080	0,0024624	2,5935561	1,8444275	0,0004951	0,0009494
234	79,6426010	9,1606406	0,0042458	78,2925467	79,3191199	-0,0002451	1,3500543	2,6053711	1,7498516	0,0004559	0,5181812
235	79,2565002	9,3854529	0,0103235	77,8534937	79,9262081	-0,0004046	1,4030065	2,4859022	1,7177793	0,0004401	0,5643852
236	80,1835022	10,4820987	0,0375617	78,3142558	82,0200246	-0,0009413	1,8692464	2,6400764	1,6705380	0,0004108	0,7080274
237	75,5109024	10,9068328	0,0483783	78,2827251	82,8270482	-0,0011304	-2,7718227	2,6433694	1,6521487	0,0004028	-1,0485945
238	73,2617035	11,2994692	0,0605272	78,5081863	83,7125240	-0,0013249	-5,2464828	2,6415634	1,6256078	0,0003936	-1,9861279
239	79,4871979	11,8491569	0,0891249	79,4752022	85,6503887	-0,0017092	0,0119957	2,6162937	1,5649962	0,0003751	0,0045850
240	80,0222015	11,9593908	0,1041620	79,0555010	86,6160909	-0,0018770	0,9667005	2,6454459	1,5420840	0,0003682	0,3654206
241	80,2183990	11,9621417	0,1167838	77,1721119	87,4730865	-0,0020037	3,0462872	2,5714523	1,5307604	0,0003643	1,1846563
242	80,2557983	11,8763944	0,1235181	79,3683783	88,1178269	-0,0020645	0,8874200	2,6477965	1,5326018	0,0003632	0,3351542
243	85,1328964	11,3413858	0,0896439	81,1585949	88,0963815	-0,0016934	3,9743015	2,6431662	1,5922782	0,0003687	1,5036139
244	85,8926010	11,1419353	0,0656879	83,2024173	87,4674816	-0,0014002	2,6901837	2,5310849	1,6121856	0,0003706	1,0628579
245	87,9833984	10,7587511	0,0041651	83,7674964	84,7835725	-0,0002623	4,2159020	2,6182336	1,6357771	0,0003713	1,6102085
246	82,6853027	10,9193555	0,0013093	83,3744314	84,0528053	-0,0001474	-0,6891287	2,6371957	1,6258623	0,0003669	-0,2613112
247	82,0056000	11,0143837	0,0000537	82,5788235	82,7356710	-0,0000322	-0,5732235	2,6314404	1,6486549	0,0003699	-0,2178364

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
248	82,8592987	11,0132509	0,0000637	82,1070285	81,9279475	0,0000363	0,7522702	2,6296404	1,6699136	0,0003740	0,2860734
249	82,1821976	10,9498260	0,0017525	80,8213217	80,2222209	0,0001990	1,3608758	2,5175488	1,6895659	0,0003789	0,5405559
250	78,0115967	10,9174329	0,0040075	80,5820936	79,3225439	0,0003068	-2,5704969	2,6410727	1,6862131	0,0003794	-0,9732776
251	77,7622986	10,8957599	0,0078700	80,5899788	78,3804142	0,0004395	-2,8276802	2,6231482	1,6803191	0,0003798	-1,0779720
252	75,2449036	10,8915678	0,0137054	80,3698843	77,4084270	0,0005967	-5,1249808	2,6237602	1,6791997	0,0003813	-1,9532961
253	80,2442017	13,0268149	0,0186876	82,3338047	77,9130957	0,0009695	-2,0896031	2,5432489	2,0195287	0,0004851	-0,8216274
254	77,9758987	11,8760326	0,0855907	74,3669902	65,6449957	0,0023453	3,6089086	2,5405396	2,2707770	0,0005680	1,4205284
255	70,5615997	12,8129620	0,0212701	69,9839856	72,7323064	-0,0006810	0,5776141	2,5802442	3,0096793	0,0007862	0,2238603
256	81,3787003	9,0031666	0,0031854	77,7554879	78,7781921	-0,0002091	3,6232124	2,5107114	1,6804039	0,0004423	1,4431019
257	79,9377975	9,2054356	0,0080172	77,7648958	79,2718049	-0,0003458	2,1729018	2,6107070	1,6379234	0,0004248	0,8323040
258	80,1500015	9,9351799	0,0208832	77,4955428	80,2818760	-0,0006318	2,6544587	2,6282253	1,5893407	0,0004002	1,0099814
259	73,8654022	10,4211830	0,0273242	78,2736721	80,8062367	-0,0007728	-4,4082699	2,5883327	1,5780401	0,0003922	-1,7031311
260	75,2841034	10,9431187	0,0336441	76,2472288	81,3735620	-0,0009135	-0,9631255	2,4677857	1,5687060	0,0003855	-0,3902792
261	77,8778000	11,9096457	0,0482537	76,8310303	82,7791001	-0,0012144	1,0467697	2,6094961	1,5436804	0,0003726	0,4011386
262	77,7074966	12,2562693	0,0576217	77,9093811	83,6480136	-0,0013785	-0,2018844	2,6485474	1,5296089	0,0003668	-0,0762246
263	79,4428024	12,5319668	0,0782077	78,3989760	85,5202057	-0,0016851	1,0438264	2,6493776	1,5228872	0,0003617	0,3939893
264	79,2055969	12,4643132	0,0850357	77,7848561	86,3068099	-0,0017769	1,4207409	2,6236187	1,5397357	0,0003637	0,5415196
265	79,9326019	11,8016238	0,0673032	82,3908469	86,9380358	-0,0015461	-2,4582450	2,4950040	1,6389064	0,0003780	-0,9852669
266	85,7990036	11,3146565	0,0352447	82,3573016	86,0562407	-0,0010335	3,4417020	2,6076194	1,6671022	0,0003797	1,3198636
267	83,6958008	11,1358811	0,0222055	82,2583197	85,5554825	-0,0007713	1,4374811	2,6423787	1,6648025	0,0003776	0,5440102
268	86,7048035	10,9767640	0,0046256	83,8595545	84,6238159	-0,0002895	2,8452490	2,4143448	1,6339488	0,0003665	1,1784766
269	85,1748962	11,1082239	0,0004988	82,9136418	83,3005708	-0,0000983	2,2612545	2,6269830	1,6242079	0,0003619	0,8607800
270	80,9404984	11,1187518	0,0000203	82,3870783	82,4919231	-0,0000208	-1,4465799	2,6188067	1,6413381	0,0003657	-0,5523813
271	82,3520966	11,0961479	0,0002078	81,7539622	81,5477973	0,0000692	0,5981343	2,5025870	1,6617413	0,0003706	0,2390064
272	78,1798019	11,0492497	0,0012635	81,5288288	80,4946705	0,0001761	-3,3490269	2,5081757	1,6771798	0,0003748	-1,3352441
273	81,9420013	10,9899023	0,0035380	80,2139650	79,3661256	0,0003012	1,7280364	2,4807363	1,6838926	0,0003776	0,6965821
274	75,4142990	10,8784492	0,0138647	80,4019829	76,9633164	0,0006156	-4,9876839	2,5495315	1,6881594	0,0003821	-1,9563139
275	75,0730972	10,8447822	0,0225897	79,5016699	75,7489380	0,0008003	-4,4285727	2,6358648	1,7004756	0,0003866	-1,6801213

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
276	80,2897034	11,9207723	0,0429339	80,4364432	72,9335627	0,0015124	-0,1467398	2,4705126	1,8744572	0,0004428	-0,0593965
277	77,4151993	11,4358057	0,1289254	78,9542535	66,2214131	0,0027542	-1,5390542	2,3884895	2,0479715	0,0005289	-0,6443630
278	67,7254028	13,4483790	0,0090085	69,5494105	71,7472534	-0,0004846	-1,8240076	2,4159017	2,9686984	0,0007833	-0,7550008
279	78,0087967	9,1015002	0,0001445	77,5081570	77,6391759	-0,0000473	0,5006397	2,5638592	1,7411910	0,0004711	0,1952680
280	79,6990967	8,9539954	0,0006142	77,6312254	77,8905607	-0,0000936	2,0678713	2,5644217	1,6827270	0,0004509	0,8063694
281	80,1513977	9,3526235	0,0098994	76,9467697	78,9292800	-0,0003961	3,2046280	2,5460029	1,5366814	0,0003971	1,2586898
282	75,6400986	10,2516504	0,0170474	76,8489291	79,4987718	-0,0005851	-1,2088306	2,6272194	1,4919305	0,0003756	-0,4601179
283	71,6078033	11,3908915	0,0214369	77,1254808	80,0991090	-0,0007427	-5,5176775	2,6418313	1,4774734	0,0003630	-2,0885805
284	75,5791016	11,9239700	0,0242108	76,8315232	80,5551764	-0,0008340	-1,2524217	2,6440756	1,4753851	0,0003587	-0,4736709
285	75,6103973	12,3576012	0,0283814	77,4957926	81,1864413	-0,0009473	-1,8853952	2,6336774	1,4756079	0,0003558	-0,7158793
286	77,4560013	12,6507741	0,0340853	77,4625173	81,9888539	-0,0010805	-0,0065160	2,6479671	1,4811507	0,0003547	-0,0024608
287	77,9339981	12,7842052	0,0406548	77,3134028	82,8959409	-0,0012178	0,6205953	2,6426430	1,4966187	0,0003563	0,2348389
288	78,5811996	12,7633729	0,0464878	77,1478360	83,7920696	-0,0013320	1,4333636	2,6054195	1,5261497	0,0003609	0,5501470
289	77,7041016	12,6165987	0,0494168	78,5365258	84,5383870	-0,0013913	-0,8324243	2,6485313	1,5682233	0,0003677	-0,3142966
290	79,0885010	12,3842151	0,0480709	78,6643239	85,0406670	-0,0013745	0,4241771	2,6380013	1,6141245	0,0003751	0,1607949
291	78,3539963	12,1096647	0,0423256	78,8565110	85,2580271	-0,0012747	-0,5025147	2,6017532	1,6526198	0,0003807	-0,1931447
292	80,1367035	11,8338515	0,0337301	80,3022331	85,2346705	-0,0011074	-0,1655296	2,6443198	1,6766792	0,0003834	-0,0625982
293	78,8470001	11,5911946	0,0245334	81,5728447	85,0689172	-0,0009041	-2,7258446	2,6314258	1,6857408	0,0003830	-1,0358812
294	83,4033966	11,4010557	0,0164898	81,0360135	84,8555815	-0,0006983	2,3673831	2,5401333	1,6821153	0,0003802	0,9319917
295	80,6343994	11,3048925	0,0000558	82,2293699	82,0743904	0,0000363	-1,5949705	2,6452481	1,6230987	0,0003595	-0,6029569
296	75,2955017	10,9793733	0,0208800	79,0355006	75,5759699	0,0007953	-3,7399989	2,6441171	1,6857829	0,0003820	-1,4144604
297	74,8953018	10,8985998	0,0429832	77,2145848	73,0563811	0,0011547	-2,3192830	2,6061430	1,7537398	0,0004001	-0,8899293
298	74,3125000	10,9230148	0,0535637	75,5183239	72,0718551	0,0013094	-1,2058239	2,4173211	1,8019435	0,0004120	-0,4988265
299	77,0494003	12,8879643	0,0114205	71,4140488	68,7893086	0,0007729	5,6353516	2,5120424	2,4840149	0,0006481	2,2433346
300	72,2239990	14,1825606	0,0005657	69,2712323	68,7931853	0,0001331	2,9527668	2,5900117	2,9069829	0,0007821	1,1400592
301	70,7170029	13,9386049	0,0433053	68,8366958	64,0205140	0,0012187	1,8803070	2,5662235	2,8226219	0,0007753	0,7327137
302	69,5485992	15,1003278	0,0222859	68,4042429	64,9849232	0,0010521	1,1443563	2,5363478	2,8536756	0,0007824	0,4511827
303	69,2874985	14,2950764	0,1369781	67,7269906	57,9920714	0,0026877	1,5605079	2,6016699	2,7718581	0,0007850	0,5998101

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
304	70,5030975	13,7718358	0,2006334	67,2549994	55,4043586	0,0032983	3,2480982	2,5973091	2,8167817	0,0008058	1,2505628
305	64,0137024	12,7891125	0,3131515	64,6749360	51,5011025	0,0041808	-0,6612336	2,5536824	2,9523224	0,0008587	-0,2589334
306	63,9522018	12,4882077	0,3469837	61,5441410	50,3333739	0,0044137	2,4080608	2,3030517	2,9915581	0,0008786	1,0455956
307	65,0873032	13,0553353	0,3172610	62,5177226	49,1263367	0,0043921	2,5695806	2,5325057	3,2131126	0,0009964	1,0146396
308	79,3519974	9,4076816	0,0007405	77,0981387	77,3948375	-0,0001150	2,2538587	2,5515584	1,6877691	0,0004580	0,8833263
309	79,9220963	9,0540663	0,0038949	77,3613563	77,9208426	-0,0002398	2,5607400	2,4811622	1,5211870	0,0004010	1,0320728
310	75,8924026	9,5560671	0,0080784	76,5519366	78,1862772	-0,0003657	-0,6595339	2,6178500	1,4444046	0,0003723	-0,2519372
311	76,1539001	9,9975763	0,0087790	76,2065965	78,2017302	-0,0004003	-0,0526963	2,5727082	1,4217207	0,0003622	-0,0204828
312	70,9037018	11,6180478	0,0074692	76,4794262	78,2584164	-0,0004368	-5,5757244	2,6424998	1,4137215	0,0003472	-2,1100189
313	75,1717987	12,0813720	0,0080573	76,2469746	78,5574861	-0,0004787	-1,0751759	2,6199201	1,4272705	0,0003470	-0,4103850
314	73,8552017	12,4275129	0,0097536	76,4498915	79,0932592	-0,0005536	-2,5946898	2,6275948	1,4461932	0,0003486	-0,9874771
315	75,3937988	12,6180406	0,0188402	77,4183217	81,6498737	-0,0008578	-2,0245228	2,6153223	1,5488787	0,0003641	-0,7741007
316	79,9533997	11,7768381	0,0125134	80,0569921	83,6621649	-0,0006699	-0,1035924	2,5609663	1,6849096	0,0003825	-0,0404505
317	84,2406998	11,6093323	0,0090088	81,7673905	83,8143566	-0,0005375	2,4733093	2,6259596	1,6897871	0,0003812	0,9418687
318	83,9422989	11,4466731	0,0038329	82,3205017	83,9172786	-0,0003047	1,6217972	2,5918340	1,6706148	0,0003725	0,6257334
319	85,2634964	11,4478490	0,0021711	83,0542436	83,8332408	-0,0002166	2,2092528	2,6057520	1,6531274	0,0003666	0,8478369
320	84,7204971	11,4796406	0,0008976	82,9663404	83,5741699	-0,0001359	1,7541567	2,6474654	1,6334844	0,0003609	0,6625797
321	86,6175995	11,5593645	0,0000925	82,5707353	82,3500450	0,0000464	4,0468642	2,6387957	1,6087639	0,0003547	1,5336027
322	80,9705963	11,5681197	0,0010273	81,9967369	81,3542048	0,0001640	-1,0261405	2,6314909	1,6073171	0,0003551	-0,3899465
323	75,8414993	11,3051156	0,0201129	79,2109096	75,6287889	0,0008252	-3,3694103	2,6443584	1,6343449	0,0003688	-1,2741882
324	75,5126038	11,2143269	0,0297006	77,4580608	74,1650765	0,0009982	-1,9454570	2,5644886	1,6604685	0,0003768	-0,7586140
325	75,0762024	11,1454160	0,0405306	78,8291316	72,8660847	0,0011525	-3,7529292	2,5762337	1,7016000	0,0003878	-1,4567503
326	74,2255020	11,1377429	0,0591573	75,3292187	71,0304153	0,0013669	-1,1037167	2,5422769	1,8107881	0,0004153	-0,4341450
327	74,9035034	11,2229008	0,0631943	75,0794925	70,5519115	0,0014215	-0,1759891	2,5462987	1,8624704	0,0004289	-0,0691156
328	73,6932983	11,5470285	0,0576685	75,2600851	70,4784474	0,0014351	-1,5667868	2,5574359	1,9245116	0,0004506	-0,6126397
329	69,9830017	14,5561107	0,0008700	69,7330211	68,9204785	0,0001902	0,2499806	2,4634258	2,8879364	0,0007766	0,1014768
330	72,4374008	14,6907021	0,0035034	69,0755120	67,8949629	0,0003732	3,3618888	2,4902206	2,9093073	0,0007868	1,3500366
331	67,0481033	13,7259641	0,1514254	69,2411372	58,2283191	0,0026054	-2,1930339	2,4522904	2,8613452	0,0008060	-0,8942798

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
332	66,3324966	13,2198581	0,2223021	69,1118536	55,5892358	0,0032220	-2,7793570	2,4306623	2,9486275	0,0008378	-1,1434567
333	77,3227997	11,4968535	0,0096910	75,2756232	77,7071195	-0,0005932	2,0471765	2,4897007	2,0159733	0,0005921	0,8222581
334	78,4690018	11,1627036	0,0078402	75,8640332	77,6430633	-0,0005040	2,6049686	2,6193457	1,8948747	0,0005460	0,9945112
335	80,1527023	10,7566341	0,0053478	76,3423450	77,4770586	-0,0003886	3,8103574	2,6087699	1,7904425	0,0005053	1,4605954
336	80,9377975	10,3137504	0,0032089	76,6143229	77,3008615	-0,0002789	4,3234746	2,5338466	1,7034230	0,0004717	1,7062890
337	71,8955994	10,5809970	0,0012384	75,6726289	76,4845703	-0,0001550	-3,7770295	2,5403817	1,3714179	0,0003437	-1,4867961
338	71,1754990	11,0449213	0,0004820	75,8534305	76,2637972	-0,0001017	-4,6779316	2,6395643	1,3905014	0,0003441	-1,7722362
339	70,7400970	11,4723500	0,0002118	75,9115824	76,2264717	-0,0000712	-5,1714854	2,6418658	1,4184960	0,0003469	-1,9575125
340	73,4550018	12,2422853	0,0010446	76,8444683	77,6439846	-0,0001874	-3,3894665	2,6456275	1,5136135	0,0003599	-1,2811579
341	75,1126022	12,1378010	0,0033426	78,8978221	80,3624833	-0,0003680	-3,7852199	2,6336497	1,6180373	0,0003733	-1,4372526
342	76,4702988	11,9969057	0,0033198	79,8014591	81,1527358	-0,0003642	-3,3311604	2,6107905	1,6509015	0,0003775	-1,2759202
343	82,2356033	11,7454781	0,0022428	81,3026974	82,3634551	-0,0002765	0,9329059	2,6260466	1,6940554	0,0003819	0,3552511
344	82,8218002	11,6753957	0,0015449	82,1246004	82,7643467	-0,0002150	0,6971998	2,5026163	1,6994579	0,0003808	0,2785884
345	86,5830002	11,6539070	0,0008511	82,2486496	82,9898265	-0,0001491	4,3343505	2,6254017	1,6945430	0,0003776	1,6509285
346	86,2780991	11,6758608	0,0002624	82,6985734	83,0028962	-0,0000784	3,5795257	2,6314295	1,6811475	0,0003729	1,3602970
347	84,9928970	11,7287808	0,0000022	82,7706598	82,7407186	0,0000070	2,2222372	2,6492564	1,6628237	0,0003677	0,8388154
348	86,1905975	11,7901483	0,0004913	82,5771896	82,2036442	0,0001068	3,6134079	2,5915019	1,6422103	0,0003626	1,3943296
349	86,3338013	11,8450916	0,0020735	82,2391373	81,3601459	0,0002304	4,0946639	2,6244058	1,6232656	0,0003587	1,5602252
350	78,5849991	11,8743876	0,0092908	80,8761646	78,8403177	0,0005514	-2,2911655	2,6098649	1,5922680	0,0003541	-0,8778867
351	75,6818008	11,6663592	0,0321079	79,5353858	74,0465803	0,0011057	-3,8535849	2,6111917	1,5862144	0,0003589	-1,4757955
352	74,9813995	11,4922483	0,0517440	77,7436335	71,5130178	0,0013472	-2,7622339	2,6285829	1,6612634	0,0003798	-1,0508453
353	74,4291000	11,4542204	0,0592699	77,2079740	70,7238901	0,0013950	-2,7788740	2,6206548	1,7192992	0,0003947	-1,0603739
354	73,9940033	11,6575531	0,0557707	76,2026763	70,3156128	0,0012976	-2,2086730	2,6058537	1,8670291	0,0004369	-0,8475813
355	73,4849014	11,7819733	0,0481743	74,1725592	70,6609590	0,0012304	-0,6876577	2,4450678	1,8841585	0,0004460	-0,2812428
356	77,2820969	11,8422446	0,0347668	76,3971846	71,8014112	0,0010942	0,8849123	2,6153683	1,8802572	0,0004596	0,3383509
357	80,1642990	11,3378434	0,0324492	77,9572163	73,0158213	0,0010216	2,2070828	2,4738822	1,9430051	0,0004886	0,8921535
358	86,4720993	12,1260398	0,0092316	81,9248330	79,8896534	0,0005097	4,5472663	2,6366519	1,6530728	0,0003675	1,7246366
359	84,1793976	12,1878735	0,0150485	81,3779286	78,6010610	0,0006940	2,8014690	2,6362458	1,6244976	0,0003623	1,0626737

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
360	84,4144974	12,2159826	0,0222521	80,4755999	77,0764971	0,0008973	3,9388975	2,6173247	1,5936971	0,0003570	1,5049327
361	80,0030975	12,2061243	0,0308693	80,7412775	75,4026828	0,0011078	-0,7381800	2,6331050	1,5652226	0,0003524	-0,2803458
362	72,0898972	11,8507029	0,0696208	75,6395078	69,7229124	0,0015292	-3,5496107	2,6302840	1,6645632	0,0003844	-1,3495161
363	71,2295990	11,8749953	0,0597793	74,9630009	69,9578566	0,0012980	-3,7334019	2,6322211	1,7733699	0,0004154	-1,4183466
364	70,9229965	11,9322737	0,0489154	75,7818200	70,4402064	0,0011574	-4,8588235	2,5966330	1,8070919	0,0004274	-1,8712015
365	72,0938034	11,9767128	0,0380469	75,0995665	71,0422284	0,0010293	-3,0057631	2,6337140	1,8209337	0,0004357	-1,1412640
366	76,6875992	11,9584579	0,0294464	75,6590948	71,7102861	0,0009226	1,0285044	2,6195678	1,8205640	0,0004418	0,3926237
367	76,8472977	11,5572285	0,0216108	76,1276582	73,0332896	0,0007922	0,7196395	2,6233573	1,8558124	0,0004640	0,2743200
368	81,5301971	11,1496397	0,0225136	76,2197576	73,5455906	0,0007803	5,3104395	2,5813274	1,9281860	0,0004869	2,0572514
369	69,8504028	14,2756465	0,0152204	69,7086516	65,8448900	0,0009882	0,1417512	2,5314468	2,4713553	0,0006814	0,0559961
370	66,0455017	15,2564369	0,0544947	68,6632414	61,6793581	0,0018292	-2,6177397	2,5848695	2,7709411	0,0007707	-1,0127164
371	69,1491013	14,7617013	0,1312407	68,2439085	57,2300548	0,0028840	0,9051928	2,5843460	2,7072410	0,0007688	0,3502599
372	68,9803009	14,2830418	0,1853131	68,9214837	54,8229613	0,0034572	0,0588172	2,5011844	2,7003770	0,0007760	0,0235157
373	64,1529999	12,4985633	0,3475087	64,4046634	48,7075754	0,0046983	-0,2516635	2,5804057	2,9237721	0,0008806	-0,0975287
374	62,1332016	12,8413898	0,3125996	62,5767184	48,8495438	0,0044714	-0,4435168	2,5715296	3,0862667	0,0009552	-0,1724720
375	79,3608017	10,7130093	0,0024883	75,6382742	76,4083362	-0,0002386	3,7225275	2,6415238	1,4526991	0,0004001	1,4092349
376	73,1202011	9,9403630	0,0070618	75,0813231	73,6202286	0,0003275	-1,9611220	2,6245548	1,5051055	0,0003683	-0,7472208
377	71,8886032	10,4595840	0,0154660	75,4500852	73,0589416	0,0005601	-3,5614819	2,6377329	1,5984586	0,0003823	-1,3502057
378	72,1438980	10,7352819	0,0173016	76,5681170	73,0907532	0,0006480	-4,4242190	2,5348991	1,6298971	0,0003857	-1,7453235
379	72,8949966	11,4343701	0,0134147	78,3368776	74,8843528	0,0007070	-5,4418809	2,6179527	1,6604428	0,0003816	-2,0786781
380	78,2200012	11,7033821	0,0084417	80,1165645	77,2462922	0,0005707	-1,8965632	2,6131644	1,6982251	0,0003853	-0,7257726
381	79,8449020	11,7944104	0,0066198	80,8444673	78,4307400	0,0004890	-0,9995653	2,6261211	1,7261049	0,0003897	-0,3806242
382	84,4718018	11,9578494	0,0060149	81,8876110	79,9549558	0,0004194	2,5841908	2,6472595	1,7591215	0,0003938	0,9761759
383	84,7385025	12,0484319	0,0078771	82,5431323	80,0836508	0,0004613	2,1953702	2,5968600	1,7552409	0,0003919	0,8453941
384	86,2054977	12,3582198	0,0259201	82,8247510	77,8737947	0,0008930	3,3807467	2,5645722	1,6867208	0,0003779	1,3182498
385	84,3965988	12,4423208	0,0352294	82,4356643	76,4570105	0,0011076	1,9609345	2,5821033	1,6516994	0,0003717	0,7594330
386	84,1859970	12,5016790	0,0453112	81,6469512	74,8492981	0,0013324	2,5390458	2,6144193	1,6137519	0,0003650	0,9711701
387	71,2291031	12,1296453	0,0601168	75,3320974	69,8119071	0,0012620	-4,1029943	2,6299835	1,7281069	0,0004087	-1,5600837

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
388	68,7631989	12,0657880	0,0306950	75,0668298	71,3985776	0,0008749	-6,3036310	2,6323794	1,7741547	0,0004280	-2,3946514
389	72,6893005	11,9599947	0,0212346	75,2430282	72,1963727	0,0007370	-2,5537277	2,6312376	1,7762607	0,0004336	-0,9705424
390	76,7483978	11,7569959	0,0159588	75,6169905	72,9288340	0,0006440	1,1314073	2,6245742	1,7866294	0,0004417	0,4310822
391	79,9998016	10,5149347	0,0195946	76,7005548	74,2154352	0,0006457	3,2992469	2,6188027	2,0130781	0,0005107	1,2598303
392	78,4637985	10,0134054	0,0274060	77,6582331	74,2197394	0,0007240	0,8055654	2,4897641	2,1255668	0,0005406	0,3235509
393	80,4281006	9,5551350	0,0377216	77,9783687	73,9789480	0,0008272	2,4497319	2,4401824	2,2202427	0,0005654	1,0039135
394	75,8513031	8,9572085	0,0487619	75,5214104	72,8323922	0,0010390	0,3298927	2,4444633	2,3191868	0,0005932	0,1349551
395	71,7061996	12,1727681	0,0139666	70,2792891	66,6930550	0,0009798	1,4269105	2,5511264	2,1596860	0,0005916	0,5593257
396	69,1447983	14,7377458	0,0403510	68,2562760	62,2285083	0,0017042	0,8885223	2,5947259	2,5675735	0,0007192	0,3424340
397	67,6475983	15,0639861	0,0619595	67,0577805	60,3768730	0,0021216	0,5898177	2,5254015	2,6599920	0,0007468	0,2335540
398	70,1255035	14,9708428	0,1292374	66,6939868	56,1924503	0,0031190	3,4315167	2,5902499	2,6718372	0,0007597	1,3247821
399	67,6112976	12,6806660	0,3293018	67,3262269	47,9911972	0,0048838	0,2850708	2,3971918	2,8017760	0,0008437	0,1189186
400	66,3988037	12,6478526	0,3202950	63,1735326	48,1021680	0,0047604	3,2252712	2,5906845	2,8680774	0,0008740	1,2449494
401	62,9756012	12,7649413	0,2999143	62,6169384	48,4482594	0,0045661	0,3586628	2,5877266	2,9717179	0,0009176	0,1386015
402	60,0121002	12,9887902	0,2717408	62,8453297	48,9686896	0,0043149	-2,8332294	2,5670974	3,1262895	0,0009780	-1,1036704
403	59,4337006	13,9611011	0,1627434	59,6372744	51,3463303	0,0032552	-0,2035739	2,3969784	3,9718780	0,0012903	-0,0849294
404	67,5777969	12,0794448	0,0059641	75,0377725	76,5935913	-0,0005053	-7,4599756	2,5989573	2,2640856	0,0006804	-2,8703725
405	69,7213974	12,0363851	0,0078057	74,8326347	76,9964328	-0,0005654	-5,1112373	2,5741174	2,1388832	0,0006398	-1,9856271
406	79,5513992	11,9051829	0,0086984	75,4068370	77,2436328	-0,0005782	4,1445622	2,6294436	2,0130142	0,0005963	1,5762126
407	75,4247971	11,3452248	0,0066872	75,7037420	77,2421194	-0,0004594	-0,2789450	2,6401958	1,7708487	0,0005071	-0,1056531
408	79,1479034	10,9382170	0,0047852	76,1712282	77,0925216	-0,0003634	2,9766753	2,5574429	1,6658182	0,0004676	1,1639264
409	79,1354980	10,4989034	0,0032158	76,2111264	76,9384289	-0,0002769	2,9243716	2,5780103	1,5775833	0,0004349	1,1343522
410	76,1838989	9,3601926	0,0024664	76,0431227	76,6476884	-0,0001941	0,1407762	2,6101933	1,3709016	0,0003608	0,0539333
411	71,3822021	10,3554264	0,0007328	75,3445479	74,8608470	0,0001128	-3,9623457	2,6367708	1,4115015	0,0003499	-1,5027266
412	73,3666000	11,0139653	0,0032997	75,8671787	74,4431004	0,0002680	-2,5005787	2,5419832	1,4961707	0,0003622	-0,9837117
413	73,9027023	11,5355626	0,0031736	76,4141561	74,9990329	0,0003033	-2,5114537	2,6324511	1,5630830	0,0003709	-0,9540362
414	73,8050995	11,7076089	0,0023063	76,9065583	75,6652018	0,0002765	-3,1014588	2,6418635	1,5842630	0,0003723	-1,1739663
415	74,4952011	11,8136520	0,0014438	77,6466275	76,5421143	0,0002309	-3,1514264	2,6284324	1,6026493	0,0003729	-1,1989756

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
416	74,9476013	11,8567379	0,0008242	78,4577385	77,5475451	0,0001803	-3,5101372	2,6056123	1,6234429	0,0003742	-1,3471449
417	78,6828995	11,8308173	0,0002369	80,0646350	79,6318429	0,0000956	-1,3817355	2,6453815	1,6790969	0,0003811	-0,5223199
418	79,0050964	11,8067877	0,0001496	80,8968849	80,5408865	0,0000728	-1,8917885	2,6305043	1,7046632	0,0003844	-0,7191733
419	84,5229034	11,8271906	0,0002968	82,0150907	81,6835142	0,0000908	2,5078127	2,6069763	1,7257016	0,0003852	0,9619622
420	86,3516998	11,8828220	0,0008367	82,4739540	81,7718313	0,0001453	3,8777459	2,6393012	1,7186963	0,0003822	1,4692320
421	84,5753021	11,9581864	0,0022263	82,5012486	81,5007272	0,0002330	2,0740535	2,6496755	1,7016677	0,0003777	0,7827576
422	86,6579971	12,0438397	0,0049463	82,8051230	80,8695286	0,0003545	3,8528741	2,5762161	1,6789960	0,0003726	1,4955555
423	77,2201004	12,4062634	0,0002002	74,1974859	74,4760632	-0,0000931	3,0226145	2,6158064	2,1828762	0,0006564	1,1555192
424	77,9091034	12,5132802	0,0008861	74,0431585	74,9743511	-0,0001935	3,8659449	2,2486449	2,0722498	0,0006220	1,7192332
425	76,2873001	12,5078037	0,0023065	74,6062144	75,6456177	-0,0002981	1,6810857	2,6446574	1,8511914	0,0005492	0,6356535
426	74,6154022	12,3653372	0,0024990	74,8711987	75,8021629	-0,0002987	-0,2557965	2,6435009	1,7393043	0,0005107	-0,0967643
427	75,6486969	11,7551612	0,0018389	74,9511336	75,8325512	-0,0002286	0,6975633	2,6143954	1,5210508	0,0004345	0,2668163
428	80,2419968	11,3313535	0,0014265	75,1248532	75,7835030	-0,0001872	5,1171435	2,6448938	1,4315656	0,0004028	1,9347255
429	75,0139999	10,8770525	0,0011639	75,2428423	75,7287264	-0,0001564	-0,2288423	2,6335062	1,3647024	0,0003784	-0,0868965
430	75,5585022	10,4372553	0,0010437	75,1995102	75,6637898	-0,0001372	0,3589920	2,6420101	1,3242853	0,0003619	0,1358784
431	77,0579987	9,7276416	0,0007244	75,0821701	75,3943007	-0,0001003	1,9758285	2,6157618	1,3179305	0,0003487	0,7553549
432	74,2537994	10,2980668	0,0404576	76,3592011	71,7986501	0,0010047	-2,1054017	2,6249479	1,7063112	0,0003986	-0,8020737
433	72,0315018	10,6215946	0,0416594	77,3249659	71,9933380	0,0011184	-5,2934641	2,6135548	1,7137174	0,0003959	-2,0253886
434	78,1163025	11,2421472	0,0350813	78,4871666	73,5694596	0,0011439	-0,3708641	2,6369082	1,7176945	0,0003911	-0,1406435
435	83,0838013	11,8899243	0,0221465	82,0940933	77,2044301	0,0008581	0,9897079	2,5224008	1,7760186	0,0004004	0,3923674
436	84,0879974	12,1583034	0,0265656	80,5482721	77,9029242	0,0008739	3,5397253	2,4797551	1,7833728	0,0004001	1,4274496
437	84,9130020	12,2757362	0,0342582	80,8537623	77,4562473	0,0009908	4,0592397	2,5631288	1,7685530	0,0003968	1,5837049
438	84,2499008	12,4903835	0,0570037	81,5527636	75,3219318	0,0013767	2,6971373	2,6513255	1,7151246	0,0003872	1,0172788
439	84,2956009	12,5848170	0,0693556	80,1176787	73,8533538	0,0016054	4,1779222	2,6250098	1,6823163	0,0003817	1,5915835
440	79,8887024	12,6634110	0,0807227	79,6396264	72,2974682	0,0018246	0,2490760	2,6349960	1,6470709	0,0003757	0,0945262
441	80,4138031	12,7284644	0,0993091	78,9461937	69,4240002	0,0021466	1,4676094	2,6476765	1,5771970	0,0003629	0,5543009
442	75,3193970	12,7035525	0,1050408	76,7105794	68,4152888	0,0021963	-1,3911824	2,6144391	1,5565116	0,0003593	-0,5321151
443	72,9853973	12,6421421	0,1068930	76,5680570	67,8632302	0,0021462	-3,5826596	2,6389846	1,5573017	0,0003608	-1,3575902

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
444	74,0267029	11,8642091	0,0164845	74,7794318	72,5466522	0,0006134	-0,7527289	2,6225567	1,7734783	0,0004339	-0,2870210
445	72,1524963	11,6288830	0,0114706	75,2826509	73,2917919	0,0005152	-3,1301545	2,6328017	1,7835640	0,0004406	-1,1889063
446	79,3266983	10,9051993	0,0111665	76,3841946	74,2498278	0,0004881	2,9425037	2,5928050	1,8854589	0,0004741	1,1348727
447	79,4915009	9,9984707	0,0213914	76,5872283	74,3814369	0,0006215	2,9042726	2,6126944	2,0808425	0,0005283	1,1116006
448	79,4160995	9,5834253	0,0292051	76,3681118	74,1118724	0,0007204	3,0479877	2,5748557	2,1696977	0,0005523	1,1837509
449	76,2041016	9,2499927	0,0355590	75,5333650	73,5887038	0,0008307	0,6707365	2,3959273	2,2324887	0,0005702	0,2799486
450	78,0616989	9,0332684	0,0377312	74,7597785	72,8157595	0,0009396	3,3019204	2,2795557	2,2617845	0,0005802	1,4484929
451	66,9152985	14,6635974	0,0892661	67,7263902	57,6446058	0,0027080	-0,8110917	2,5791950	2,6082833	0,0007422	-0,3144748
452	69,1995010	14,7602791	0,1232653	67,5454683	55,4658313	0,0032333	1,6540328	2,5782280	2,6391786	0,0007538	0,6415386
453	64,8695984	12,9479121	0,2542238	59,8634197	48,6409536	0,0043616	5,0061786	2,4659485	3,0071992	0,0009372	2,0301229
454	58,2112007	13,6451558	0,1546536	59,9305229	51,3918642	0,0032149	-1,7193222	2,5130180	3,7718561	0,0012177	-0,6841663
455	72,5773010	12,2602333	0,0053947	74,7716408	76,4503168	-0,0004639	-2,1943398	2,6266227	1,9959951	0,0005946	-0,8354225
456	75,6976013	12,1311296	0,0059235	75,0912326	76,6484562	-0,0004700	0,6063687	2,6443475	1,8752597	0,0005526	0,2293075
457	74,2685013	11,8990914	0,0055417	75,5463793	76,7000413	-0,0004347	-1,2778780	2,5810902	1,7552819	0,0005097	-0,4950924
458	75,6218033	11,5648685	0,0045146	75,4207943	76,6392768	-0,0003705	0,2010090	2,6462656	1,6400244	0,0004679	0,0759595
459	76,8852997	12,1388684	0,0048068	73,2912466	71,9224803	0,0004621	3,5940531	2,5976556	2,3632663	0,0007125	1,3835757
460	77,4814987	12,3595420	0,0022055	73,4007014	72,5792176	0,0003119	4,0807973	2,5468727	2,2373573	0,0006742	1,6022777
461	78,0747986	12,5502490	0,0007798	73,8061045	73,1583152	0,0001842	4,2686941	2,6342643	2,1228382	0,0006391	1,6204502
462	78,9768982	12,6962482	0,0001590	73,8755238	73,6510075	0,0000823	5,1013744	2,5912039	2,0169117	0,0006060	1,9687275
463	72,9392014	12,7845924	0,0000010	74,0768992	74,0568166	0,0000063	-1,1376978	2,6469483	1,9177058	0,0005742	-0,4298149
464	72,4506989	12,7953899	0,0000449	74,1912827	74,3691055	-0,0000419	-1,7405838	2,5264093	1,8210414	0,0005425	-0,6889556
465	72,4578018	12,7100874	0,0001129	74,3966140	74,5918812	-0,0000641	-1,9388122	2,6403666	1,7239903	0,0005102	-0,7342966
466	76,1200027	12,5172004	0,0001410	74,4650615	74,7468954	-0,0000684	1,6549413	2,5651920	1,6270637	0,0004776	0,6451530
467	75,6941986	12,2175847	0,0001213	74,6433456	74,8451536	-0,0000597	1,0508530	2,6510742	1,5346508	0,0004464	0,3963876
468	72,0445023	11,8260228	0,0001025	74,7508700	74,9210896	-0,0000511	-2,7063677	2,6492481	1,4545238	0,0004190	-1,0215607
469	74,7381973	11,3760562	0,0001095	74,8313812	74,9869685	-0,0000488	-0,0931839	2,6411545	1,3952123	0,0003975	-0,0352815
470	75,3424988	10,9071311	0,0001612	74,8485067	75,0428602	-0,0000545	0,4939921	2,6436403	1,3611325	0,0003828	0,1868605
471	74,2911987	10,4527949	0,0002427	74,8583407	75,0616022	-0,0000618	-0,5671420	2,6380125	1,3507688	0,0003737	-0,2149884

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
472	70,2993011	10,0398285	0,0002740	74,8296190	75,0125947	-0,0000612	-4,5303179	2,6095105	1,3605438	0,0003688	-1,7360796
473	78,5050964	9,2004748	0,0004173	74,4659717	74,2811419	0,0000661	4,0391247	2,5684285	1,4696412	0,0003733	1,5726055
474	72,1792984	9,0766550	0,0027357	74,3503810	73,8342698	0,0001677	-2,1710826	2,5978237	1,5195527	0,0003796	-0,8357313
475	71,2321014	9,2030650	0,0354875	73,8715870	71,9852501	0,0007041	-2,6394855	2,5013499	1,6710355	0,0004017	-1,0552244
476	71,1326981	9,7013986	0,0654793	73,9563964	70,8018476	0,0011922	-2,8236983	2,4430818	1,7417408	0,0004073	-1,1557936
477	71,7727966	10,0542845	0,0735707	75,9698864	70,5568988	0,0014041	-4,1970897	2,6165904	1,7561668	0,0004054	-1,6040301
478	72,6669998	10,4497958	0,0751786	76,4098598	70,7458579	0,0015421	-3,7428600	2,5946147	1,7585700	0,0004021	-1,4425495
479	77,7403030	11,2444900	0,0639418	77,5103324	72,5317943	0,0015253	0,2299706	2,5047029	1,7643945	0,0004006	0,0918155
480	81,8053970	11,8437032	0,0529660	81,5268173	74,7888303	0,0013321	0,2785797	2,6105107	1,7941202	0,0004062	0,1067146
481	83,4092026	12,0402612	0,0546558	81,9942847	75,3160027	0,0013113	1,4149179	2,6136109	1,8017039	0,0004071	0,5413652
482	83,4841995	12,1858674	0,0624692	82,6344239	75,2495299	0,0013778	0,8497756	2,5870257	1,7986220	0,0004057	0,3284759
483	83,9776993	12,3947244	0,0908264	81,5792123	73,6332862	0,0017166	2,3984870	2,6482327	1,7661991	0,0003993	0,9056935
484	83,8711014	12,5706384	0,1190505	81,9560558	71,0022856	0,0021449	1,9150456	2,6190810	1,7197682	0,0003924	0,7311899
485	84,2904968	12,6537737	0,1284245	82,1429598	69,6672134	0,0023232	2,1475370	2,5799348	1,6933227	0,0003884	0,8323997
486	75,8602982	12,7267321	0,1343265	79,5758993	68,4704398	0,0024499	-3,7156011	2,6485802	1,6651079	0,0003837	-1,4028652
487	75,1223984	12,7738386	0,1365913	79,3260293	67,5391458	0,0025020	-4,2036309	2,6384429	1,6364150	0,0003785	-1,5932241
488	72,0736008	12,6628700	0,1194911	74,9076881	67,1935064	0,0020985	-2,8340873	2,6113010	1,6355418	0,0003837	-1,0853162
489	71,4717026	12,5410150	0,1046033	74,9937829	67,8774281	0,0018112	-3,5220803	2,6367608	1,6770864	0,0003966	-1,3357603
490	69,7661972	12,0723550	0,0403223	73,4880467	70,9250340	0,0009131	-3,7218495	2,4648711	1,7958336	0,0004346	-1,5099571
491	78,4627991	10,0807556	0,0181827	76,1509211	74,3895678	0,0005674	2,3118780	2,5678670	2,0248647	0,0005135	0,9003106
492	77,3779984	9,4157192	0,0303999	76,3113300	73,4198706	0,0007930	1,0666684	2,6085257	2,1554799	0,0005518	0,4089162
493	75,5429001	9,2109688	0,0341647	75,3162650	72,4634362	0,0009338	0,2266350	2,5607330	2,1817069	0,0005621	0,0885040
494	68,7138977	10,7711564	0,0350105	69,1388570	64,5527356	0,0015717	-0,4249592	2,4889692	2,0934447	0,0005698	-0,1707370
495	69,2718964	14,0745980	0,1135816	66,1873278	55,3192889	0,0031685	3,0845685	2,6001392	2,5833135	0,0007452	1,1863090
496	59,1212997	13,9485381	0,0562385	59,9942584	54,7744001	0,0017706	-0,8729586	2,5021858	4,6730114	0,0015583	-0,3488784
497	56,8502998	14,0536915	0,0347448	60,2691147	55,8298873	0,0013208	-3,4188148	2,0598539	5,0980649	0,0017277	-1,6597366
498	70,6582031	11,9711171	0,0210611	72,5133208	69,6741898	0,0009750	-1,8551177	2,5827372	2,4679952	0,0007476	-0,7182758
499	71,6930008	12,2328204	0,0139423	74,0599426	70,4341843	0,0007922	-2,3669418	2,2509640	2,3149995	0,0007007	-1,0515236

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
500	77,6069031	12,4744578	0,0089633	72,9509251	71,1144655	0,0006326	4,6559780	2,6104538	2,1804391	0,0006592	1,7835895
501	70,5677032	12,9625180	0,0024685	73,5234450	72,5989171	0,0003201	-2,9557417	2,6245601	1,8772846	0,0005631	-1,1261856
502	71,2632980	12,9958171	0,0018155	73,8217238	72,9242110	0,0002677	-2,5584258	2,6528199	1,7973617	0,0005370	-0,9644175
503	74,0896988	12,9378947	0,0014824	73,8972735	73,1887549	0,0002335	0,1924253	2,6410580	1,7208099	0,0005120	0,0728592
504	70,7032013	12,5067032	0,0011224	74,2007527	73,6501795	0,0001827	-3,4975514	2,6355098	1,5739337	0,0004641	-1,3270872
505	74,6381989	12,1438534	0,0008651	74,3643440	73,8920080	0,0001494	0,2738549	2,6441189	1,5134694	0,0004440	0,1035713
506	74,6776962	10,7802519	0,0000224	74,6557822	74,5744176	0,0000189	0,0219140	2,5634427	1,4453137	0,0004113	0,0085487
507	73,8234024	10,3377527	0,0000123	74,6412644	74,6948173	-0,0000130	-0,8178620	2,6002746	1,4516977	0,0004051	-0,3145291
508	72,0327988	9,1052409	0,0015532	74,3277464	74,0027519	0,0001241	-2,2949476	2,5419932	1,5408749	0,0003906	-0,9028142
509	72,1485977	8,9659002	0,0064988	74,2326505	73,4916957	0,0002552	-2,0840527	2,5770927	1,5795247	0,0003936	-0,8086837
510	73,9673996	9,0456457	0,0623558	73,5284499	71,1307551	0,0009775	0,4389497	2,4240455	1,7107820	0,0004083	0,1810814
511	82,8216019	11,9565489	0,1068702	81,8549591	72,4812199	0,0018573	0,9666428	2,6080719	1,8018559	0,0004095	0,3706350
512	83,2510986	12,0970593	0,1204060	81,5899977	72,2089537	0,0019568	1,6611009	2,6332688	1,8033782	0,0004089	0,6308133
513	83,9123001	12,2517019	0,1572204	83,3721944	70,4555523	0,0023144	0,5401057	2,5465495	1,7933351	0,0004067	0,2120932
514	83,8697968	12,3139878	0,1724578	82,5460454	69,3186528	0,0025057	1,3237514	2,5952638	1,7840449	0,0004059	0,5100643
515	82,3454971	12,3853320	0,1819531	81,3321474	68,2119905	0,0026651	1,0133497	2,6310967	1,7716475	0,0004050	0,3851435
516	82,9623032	12,4722911	0,1848439	80,7465082	67,2547164	0,0027693	2,2157950	2,6327397	1,7556369	0,0004033	0,8416309
517	79,7731018	12,5656261	0,1818082	80,8547020	66,5289192	0,0028029	-1,0816001	2,6039740	1,7337878	0,0004002	-0,4153652
518	77,9803009	12,6966569	0,1618889	76,5737312	66,0623166	0,0026128	1,4065697	2,6393334	1,6883767	0,0003931	0,5329261
519	77,8602982	12,6946002	0,1469620	75,4280221	66,3831057	0,0023890	2,4322760	2,6228371	1,6856108	0,0003946	0,9273455
520	76,0891037	12,6269260	0,1291054	77,9197527	67,0445126	0,0020974	-1,8306490	2,5511104	1,7057586	0,0004021	-0,7175891
521	75,5055008	12,4978208	0,1088409	76,4128750	67,9438833	0,0017706	-0,9073742	2,6086901	1,7446035	0,0004147	-0,3478275
522	73,4923019	12,3238435	0,0859669	76,0974205	68,9828135	0,0014387	-2,6051185	2,5781572	1,7892553	0,0004289	-1,0104576
523	73,9704971	12,1256560	0,0613037	74,8944418	70,0862326	0,0011237	-0,9239446	2,6398499	1,8272131	0,0004413	-0,3499989
524	70,0949020	11,9216191	0,0390298	74,1856846	71,1476193	0,0008529	-4,0907826	2,6163969	1,8517354	0,0004499	-1,5635176
525	73,5688019	11,7251808	0,0225852	74,9565983	72,1182257	0,0006377	-1,3877964	2,6181628	1,8638864	0,0004549	-0,5300650
526	74,0963974	11,3348304	0,0089187	74,9281402	73,5866936	0,0004077	-0,8317428	2,5879487	1,8645225	0,0004590	-0,3213907
527	63,1181984	13,6679409	0,2213953	61,0810983	48,0382984	0,0047636	2,0371001	2,4306812	2,6076962	0,0007690	0,8380779

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
528	60,0934982	13,3217997	0,1791778	61,7561160	49,0526436	0,0039415	-1,6626178	2,5657784	2,9853890	0,0009318	-0,6479974
529	59,3498993	13,5413483	0,0867402	58,7851668	53,0476398	0,0024530	0,5647325	2,3192824	3,7957482	0,0012300	0,2434945
530	59,3157005	13,6285817	0,0641164	59,8912025	54,1380246	0,0020201	-0,5755020	2,5494166	4,1189866	0,0013470	-0,2257387
531	57,0872993	13,7076437	0,0451789	58,6163803	55,1219492	0,0016155	-1,5290810	2,0422527	4,4594813	0,0014738	-0,7487227
532	57,1642990	13,5457428	0,1869933	58,7562218	47,0725506	0,0043161	-1,5919228	2,4497926	2,8832553	0,0008804	-0,6498194
533	53,4851990	13,8066931	0,0520222	60,7471341	53,5921852	0,0020160	-7,2619351	2,2540477	3,5941846	0,0011655	-3,2217308
534	71,8141022	12,3463142	0,0288422	73,0184867	68,8326599	0,0011534	-1,2043846	2,6022634	2,2869529	0,0006954	-0,4628219
535	74,9296036	12,8201239	0,0159592	73,1491736	70,1392233	0,0008476	1,7804300	2,6339754	2,0272956	0,0006140	0,6759478
536	69,1280975	13,1019916	0,0104247	73,0801816	71,0481717	0,0006638	-3,9520841	2,6438131	1,8601920	0,0005594	-1,4948425
537	71,5649033	12,9111259	0,0078257	73,6679532	72,0234943	0,0005155	-2,1030500	2,6507981	1,6834261	0,0005017	-0,7933648
538	72,0232010	12,3007224	0,0054133	74,0340464	72,8171766	0,0003774	-2,0108455	2,6482511	1,5878120	0,0004709	-0,7593107
539	74,9548035	10,9882064	0,0006463	74,5122749	74,1475960	0,0001028	0,4425285	2,6450168	1,5559651	0,0004510	0,1673065
540	73,3831024	10,5627534	0,0000839	74,6032442	74,4571668	0,0000345	-1,2201418	2,5812646	1,5616851	0,0004455	-0,4726915
541	73,6087036	10,1753112	0,0000016	74,6162411	74,6288214	-0,0000045	-1,0075375	2,5943568	1,5632108	0,0004369	-0,3883573
542	72,9859009	9,5485283	0,0000363	74,5694075	74,5221036	0,0000197	-1,5835066	2,5081860	1,5600630	0,0004150	-0,6313354
543	77,7072983	11,7511683	0,1818221	81,4890165	69,4147025	0,0024487	-3,7817182	2,6040966	1,7896607	0,0004092	-1,4522189
544	77,1675034	11,9546873	0,2399871	80,0855817	67,3495126	0,0028959	-2,9180784	2,6417567	1,8367730	0,0004166	-1,1045977
545	82,6464996	12,1554780	0,2435065	81,3977830	65,3035759	0,0031148	1,2487167	2,5930363	1,8282409	0,0004196	0,4815654
546	82,7854004	12,2750589	0,2278150	79,4872149	65,0941821	0,0030442	3,2981855	2,6339747	1,8072297	0,0004170	1,2521705
547	76,5961990	12,4917592	0,1832771	78,3878949	65,5973182	0,0026597	-1,7916958	2,6191014	1,7571315	0,0004098	-0,6840880
548	74,9884033	12,3663877	0,1083502	76,0822408	68,2441067	0,0016777	-1,0938375	2,6201495	1,8062013	0,0004309	-0,4174714
549	72,2770004	12,1838243	0,0829963	74,4980015	69,3333553	0,0013429	-2,2210011	2,6357572	1,8475426	0,0004446	-0,8426425
550	73,8641968	11,9686890	0,0585354	75,7628851	70,3953400	0,0010441	-1,8986883	2,5340091	1,8821215	0,0004562	-0,7492824
551	73,8399963	11,7518573	0,0372027	74,6098787	71,3915906	0,0007921	-0,7698823	2,6411690	1,9058835	0,0004645	-0,2914930
552	73,7934036	11,2367362	0,0093486	75,2359063	73,5758539	0,0003998	-1,4425026	2,6269221	1,9179908	0,0004721	-0,5491227
553	74,0958023	11,0926966	0,0086092	74,8352676	73,9639998	0,0003881	-0,7394653	2,2881027	1,9076194	0,0004722	-0,3231784
554	80,0679016	10,5216984	0,0191935	76,6161202	73,8553035	0,0006006	3,4517814	2,5445900	1,9195897	0,0004898	1,3565177
555	71,1216965	9,9288062	0,1179463	69,3597151	60,1991209	0,0028582	1,7619814	2,5684883	1,9829109	0,0005469	0,6859994

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
556	69,4583969	10,3157766	0,1254830	67,0637031	58,1611670	0,0030815	2,3946938	2,5131737	2,0045723	0,0005600	0,9528565
557	62,3022003	12,6854103	0,1633439	61,5566220	51,5553035	0,0038378	0,7455783	2,4085134	2,5149966	0,0007502	0,3095595
558	59,8947983	13,4703779	0,2199268	61,2614843	46,4191102	0,0047480	-1,3666860	2,5748057	2,7498385	0,0008269	-0,5307919
559	59,0936012	13,5593575	0,1629912	60,1195173	48,6876991	0,0039043	-1,0259161	2,5555625	2,9491837	0,0009120	-0,4014443
560	57,4646988	13,5893685	0,1268609	60,0540210	50,3228209	0,0033269	-2,5893222	2,5582614	3,1341671	0,0009879	-1,0121414
561	73,3955002	11,4637781	0,0385031	75,2712341	71,4290223	0,0007654	-1,8757340	2,5392067	1,9732901	0,0004846	-0,7387087
562	75,8492966	11,3137986	0,0258715	74,8926973	72,0892443	0,0006234	0,9565993	2,6097202	1,9908878	0,0004902	0,3665524
563	78,5057983	11,2215044	0,0185172	73,9415025	72,6092809	0,0005365	4,5642958	2,3818539	1,9975238	0,0004924	1,9162786
564	75,7753983	10,7841192	0,0885846	75,5238300	68,3023344	0,0017447	0,2515683	2,6025810	1,8191901	0,0004895	0,0966611
565	65,7021027	9,9285772	0,2787290	69,0777035	50,0380948	0,0048214	-3,3756008	2,5322078	1,9497287	0,0005691	-1,3330663
566	65,5450974	10,2970692	0,2628118	63,7510757	49,4105294	0,0047329	1,7940216	2,5839106	2,0412883	0,0006060	0,6943048
567	63,7720985	10,7077452	0,2456618	64,7215044	49,0178569	0,0046065	-0,9494059	2,5995311	2,1654200	0,0006531	-0,3652220
568	58,7284012	11,8669447	0,2191454	63,1577384	47,7029697	0,0044487	-4,4293372	2,5749538	2,5324306	0,0007857	-1,7201618
569	55,8398018	13,2496178	0,1890187	61,6616581	46,8079356	0,0042573	-5,8218563	2,4783478	2,8836863	0,0008978	-2,3490877
570	55,6217995	13,8338955	0,1245163	57,8982269	49,1301542	0,0033814	-2,2764274	2,3401998	3,1892359	0,0009995	-0,9727491
571	67,1268997	12,1936551	0,0636794	71,3620499	66,2792062	0,0017557	-4,2351502	2,5928364	2,4616600	0,0007522	-1,6334043
572	73,6755981	12,4803985	0,0498662	72,1802400	67,0966843	0,0015522	1,4953581	2,6308314	2,2855733	0,0006983	0,5683975
573	72,5313034	12,7413382	0,0394544	72,6972317	67,8293490	0,0013747	-0,1659282	2,6237827	2,1404212	0,0006531	-0,0632401
574	72,1464005	12,9591954	0,0321014	72,6940146	68,4590218	0,0012293	-0,5476141	2,6401180	2,0261643	0,0006165	-0,2074203
575	68,8274002	13,1233764	0,0271735	72,3707682	68,9885589	0,0011155	-3,5433680	2,6404684	1,9412458	0,0005883	-1,3419467
576	69,8470001	13,2174208	0,0242024	73,4452136	69,4241126	0,0010318	-3,5982134	2,5927917	1,8777367	0,0005666	-1,3877757
577	71,3815994	13,2357461	0,0223981	72,6396565	69,8091812	0,0009660	-1,2580571	2,6340984	1,8290963	0,0005498	-0,4776044
578	77,9291992	13,1541960	0,0211354	72,8748120	70,1891266	0,0009049	5,0543872	2,6375869	1,7830458	0,0005345	1,9162922
579	74,7785034	12,9778277	0,0195021	73,4145104	70,6266261	0,0008300	1,3639930	2,6537271	1,7380043	0,0005200	0,5139914
580	74,4853973	12,7048866	0,0169375	74,5368101	71,1559317	0,0007308	-0,0514127	2,4252164	1,6938827	0,0005060	-0,0211992
581	75,8158035	11,5146173	0,0045854	74,4965857	73,1951503	0,0003054	1,3192178	2,5665111	1,6390798	0,0004834	0,5140121
582	74,9378967	10,7013782	0,0002880	74,6113134	74,3252136	0,0000660	0,3265833	2,5632745	1,6534587	0,0004770	0,1274086
583	71,5238037	10,0605099	0,0000467	74,7076514	74,7915170	-0,0000239	-3,1838477	2,6383809	1,6345496	0,0004556	-1,2067430

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
584	72,2240982	9,8139810	0,0000080	74,7265862	74,7604800	-0,0000096	-2,5024879	2,6343903	1,6143124	0,0004405	-0,9499306
585	76,5034027	9,6030237	0,0002155	74,6836552	74,5456390	0,0000487	1,8197475	2,5783025	1,5951798	0,0004254	0,7057929
586	75,0493011	9,4212907	0,0022697	74,7944196	74,1364858	0,0001571	0,2548816	2,5738427	1,5852781	0,0004131	0,0990276
587	77,5352020	11,4947466	0,2988930	79,8437864	65,8154646	0,0031760	-2,3085844	2,6223719	1,8287071	0,0004170	-0,8803421
588	78,9066010	11,5225833	0,3183917	79,4576153	65,2076976	0,0033024	-0,5510144	2,6289922	1,8703938	0,0004242	-0,2095915
589	76,6297989	11,5349778	0,3302900	78,2877108	64,6109201	0,0034030	-1,6579119	2,6236651	1,8982097	0,0004300	-0,6319068
590	76,0463028	11,5693363	0,3312891	76,8257917	64,1394868	0,0034549	-0,7794889	2,5994793	1,9126190	0,0004342	-0,2998635
591	74,6084976	11,6426860	0,3204915	75,1429472	63,8715901	0,0034416	-0,5344496	2,5479639	1,9131916	0,0004363	-0,2097556
592	78,0995026	11,7626758	0,2987778	79,0460541	63,8572710	0,0033529	-0,9465516	2,6376314	1,9004469	0,0004358	-0,3588642
593	81,6119003	12,0834268	0,2343331	74,3063915	64,6585654	0,0029414	7,3055088	2,5563491	1,8413089	0,0004274	2,8577900
594	72,6196976	12,2265093	0,1985477	78,0896562	65,4481397	0,0026336	-5,4699587	2,6107983	1,8121903	0,0004234	-2,0951288
595	76,3423004	12,2965273	0,1334822	75,6036456	67,4993714	0,0019209	0,7386548	2,6436348	1,8162384	0,0004310	0,2794088
596	73,6769028	12,0159062	0,0794486	74,6400701	69,6550462	0,0012519	-0,9631673	2,6408273	1,8892601	0,0004562	-0,3647218
597	72,1892014	11,8042960	0,0560257	74,1436184	70,6400550	0,0009778	-1,9544171	2,6163804	1,9229210	0,0004677	-0,7469927
598	77,2913971	11,1321462	0,0104546	75,2584750	73,7286409	0,0004212	2,0329221	2,6186273	1,9442333	0,0004813	0,7763312
599	78,5384979	11,0726443	0,0124898	76,0351017	73,8242679	0,0004701	2,5033962	2,5379572	1,9162648	0,0004785	0,9863823
600	80,0158997	10,8549513	0,0245018	76,0932632	73,1824344	0,0007089	3,9226364	2,6114844	1,8762954	0,0004818	1,5020716
601	79,0658035	10,6662725	0,0369235	76,0781252	72,1791365	0,0009395	2,9876783	2,6049302	1,8814739	0,0004908	1,1469322
602	72,0242996	9,9298536	0,1138239	76,8144510	65,2571400	0,0022918	-4,7901514	2,3529217	1,9203446	0,0005231	-2,0358312
603	68,4191971	10,0131336	0,2020080	67,4331268	54,5300347	0,0039677	0,9860703	2,5859120	1,9466004	0,0005522	0,3813240
604	65,7892990	10,8079128	0,1959928	69,8319460	52,2279841	0,0040450	-4,0426470	2,3547809	2,1041819	0,0006171	-1,7167827
605	64,3274994	11,6745224	0,1899583	65,2390460	50,7074170	0,0040568	-0,9115466	2,5840988	2,3610776	0,0007114	-0,3527522
606	60,5495987	12,0429238	0,1930599	66,1009592	49,8539565	0,0041425	-5,5513605	2,4826439	2,4687836	0,0007497	-2,2360680
607	62,9020004	12,3610401	0,1999875	65,4357797	48,8974318	0,0042845	-2,5337793	2,4852305	2,5462427	0,0007771	-1,0195349
608	59,8750992	12,8971222	0,2145960	62,9333229	47,0962540	0,0045865	-3,0582237	2,5663368	2,6487177	0,0008105	-1,1916689
609	75,3324966	11,4536748	0,2717710	72,7917583	64,0931348	0,0029249	2,5407384	2,4853794	1,9183142	0,0004482	1,0222739
610	73,4602966	11,8098137	0,1068429	74,3118769	68,5820093	0,0015008	-0,8515802	2,6259793	1,8737483	0,0004548	-0,3242905
611	76,3382034	11,1796813	0,0278389	74,2222148	71,8041133	0,0006919	2,1159886	2,6029439	2,0091844	0,0004976	0,8129213

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
612	77,1865997	11,4670009	0,0384655	75,2414396	71,4641398	0,0009666	1,9451602	2,6136910	1,8584894	0,0004722	0,7442196
613	76,5980988	11,4551948	0,0572694	75,0895665	70,2957695	0,0012632	1,5085323	2,6059192	1,7944881	0,0004660	0,5788868
614	78,0932007	10,9778724	0,1389031	76,1526453	65,4317478	0,0023588	1,9405554	2,5394611	1,7550564	0,0004782	0,7641603
615	78,0274963	10,5298268	0,2003720	76,2950120	61,8969685	0,0031138	1,7324843	2,5134308	1,7794785	0,0004930	0,6892906
616	74,2627029	10,0392371	0,2641032	75,1581011	58,1454701	0,0038868	-0,8953982	2,5547810	1,8105002	0,0005076	-0,3504794
617	72,9550018	9,6063998	0,3185342	71,8150967	54,6859306	0,0045629	1,1399051	2,5977786	1,8352438	0,0005191	0,4387999
618	62,8384018	10,2830089	0,2911758	60,2295851	46,8981371	0,0051078	2,6088167	2,5213320	2,1199920	0,0006449	1,0346978
619	58,8111000	11,1340792	0,2467471	60,2294726	46,7244775	0,0047403	-1,4183726	2,5734881	2,4039006	0,0007489	-0,5511479
620	65,3028030	12,0554628	0,1115614	68,4089809	63,5277152	0,0024117	-3,1061779	2,1275412	2,6856823	0,0008241	-1,4599848
621	71,3873978	13,1147779	0,0536589	72,6776104	66,6263122	0,0016543	-1,2902127	2,6102685	2,0632966	0,0006313	-0,4942835
622	72,2670975	13,2655330	0,0472098	71,9599233	67,2018566	0,0015294	0,3071741	2,6452408	1,9868759	0,0006052	0,1161233
623	71,3421021	13,3429074	0,0430672	72,9491883	67,6991580	0,0014309	-1,6070863	2,6226979	1,9316374	0,0005854	-0,6127607
624	77,5071030	13,3293712	0,0404123	71,8284272	68,1584250	0,0013478	5,6786757	2,6055649	1,8859738	0,0005691	2,1794413
625	73,5587997	13,2274702	0,0379015	73,0390826	68,6479133	0,0012600	0,5197172	2,6470227	1,8445055	0,0005547	0,1963403
626	74,1373978	13,0264306	0,0343951	73,8421618	69,2356091	0,0011482	0,2952359	2,5793235	1,7999648	0,0005400	0,1144625
627	74,8376007	12,7336311	0,0291690	73,3052821	69,9575893	0,0010020	1,5323186	2,6521852	1,7545505	0,0005252	0,5777570
628	73,5290985	12,3682922	0,0221466	74,1024865	70,8183727	0,0008196	-0,5733880	2,5933777	1,7170810	0,0005124	-0,2210970
629	77,5254974	10,7671024	0,0003580	74,5062036	74,2825541	0,0000774	3,0192938	2,6115053	1,7069972	0,0004935	1,1561507
630	75,9434967	10,4648850	0,0000310	74,6622359	74,7794718	-0,0000214	1,2812608	2,1713316	1,7007209	0,0004857	0,5900807
631	76,8065033	11,0435971	0,4181167	78,7639188	62,3797563	0,0038085	-1,9574155	2,6248275	1,9715537	0,0004467	-0,7457311
632	75,4196014	11,1973720	0,3821783	76,8773349	62,4622098	0,0036717	-1,4577335	2,6270783	1,9857729	0,0004531	-0,5548877
633	71,9726028	11,3528282	0,3462185	72,5693405	62,8497242	0,0034975	-0,5967377	2,4442347	1,9662456	0,0004513	-0,2441409
634	76,9175034	11,5486552	0,3026599	77,2533175	63,4833911	0,0032515	-0,3358141	2,6375766	1,9312632	0,0004462	-0,1273192
635	73,6567993	11,7602049	0,2554267	76,3774980	64,3602788	0,0029382	-2,7206987	2,6382781	1,8878346	0,0004391	-1,0312403
636	72,4725037	12,0660656	0,1684027	75,8528370	66,5531137	0,0022011	-3,3803333	2,6392094	1,8307065	0,0004324	-1,2808128
637	78,4828033	12,0872528	0,1330943	75,6976868	67,7034441	0,0018314	2,7851166	2,6344639	1,8411520	0,0004389	1,0571853
638	74,4391022	12,0050673	0,1033213	74,0387962	68,7917716	0,0014932	0,4003060	2,6002524	1,8728973	0,0004507	0,1539489
639	71,6616974	11,8466126	0,0780109	72,9025487	69,7752575	0,0012014	-1,2408513	2,3948848	1,9116756	0,0004640	-0,5181257

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
640	75,4184036	11,6523444	0,0561451	75,4202073	70,6568637	0,0009580	-0,0018037	2,5563179	1,9464838	0,0004757	-0,0007056
641	67,2725983	12,5992561	0,1216731	69,6896867	62,2366603	0,0026965	-2,4170884	2,5625042	2,5074639	0,0007759	-0,9432525
642	69,3696976	12,8671896	0,1047543	71,1556459	63,0403747	0,0025009	-1,7859484	2,6222789	2,3452789	0,0007259	-0,6810673
643	70,1411972	13,1084091	0,0906474	71,1768130	63,8167734	0,0023152	-1,0356158	2,6338294	2,2187359	0,0006858	-0,3931977
644	71,8882980	13,3034908	0,0795424	70,6360820	64,5411126	0,0021476	1,2522160	2,6117178	2,1248143	0,0006545	0,4794607
645	71,9950027	13,4382624	0,0714252	73,8393082	65,1957534	0,0020041	-1,8443055	2,3956878	2,0573186	0,0006305	-0,7698438
646	72,5420990	13,4924205	0,0658576	70,9604613	65,7867359	0,0018834	1,5816377	2,6058860	2,0045914	0,0006108	0,6069482
647	72,9439011	13,4595046	0,0614259	71,6989365	66,3719409	0,0017692	1,2449646	2,6413559	1,9590641	0,0005938	0,4713354
648	73,3804016	13,3312438	0,0567550	72,4284331	67,0180944	0,0016425	0,9519686	2,6507310	1,9127590	0,0005773	0,3591344
649	71,6880035	13,1053124	0,0504734	71,6243053	67,7907543	0,0014847	0,0636982	2,5754072	1,8612934	0,0005597	0,0247333
650	73,0130997	12,7889702	0,0417275	73,4228231	68,7339505	0,0012832	-0,4097235	2,6304755	1,8065608	0,0005413	-0,1557602
651	72,6240997	12,3954186	0,0309586	72,6356874	69,8398768	0,0010405	-0,0115877	2,5926699	1,7568711	0,0005238	-0,0044694
652	73,0851974	11,9632410	0,0196199	73,8789705	71,0479711	0,0007729	-0,7937731	2,6336446	1,7253935	0,0005109	-0,3013972
653	73,2872009	11,5265720	0,0098702	73,9553509	72,2504698	0,0005082	-0,6681500	2,6463552	1,7142187	0,0005033	-0,2524793
654	76,9497986	11,1197066	0,0032761	74,1660999	73,3504618	0,0002703	2,7836987	2,6287085	1,7156803	0,0004987	1,0589606
655	75,3087006	10,7708976	0,0003111	74,4812021	74,2668813	0,0000771	0,8274984	2,5979761	1,7176370	0,0004943	0,3185166
656	76,9414978	10,1706537	0,0021618	74,9749869	75,5701390	-0,0001719	1,9665109	2,6343962	1,6727828	0,0004677	0,7464750
657	78,8700027	10,0949532	0,0016024	74,9641671	75,5102763	-0,0001449	3,9058356	2,6228786	1,6472759	0,0004562	1,4891408
658	77,2200012	10,0056642	0,0008440	74,9540869	74,5621610	0,0001066	2,2659143	2,6116942	1,5965854	0,0004316	0,8676032
659	69,2654037	13,7027424	0,0907766	70,2565959	63,5824270	0,0024147	-0,9911922	2,6043252	2,0804471	0,0006380	-0,3805946
660	69,1552963	13,6496784	0,0841186	70,4624697	64,3338317	0,0022598	-1,3071733	2,5970424	2,0316711	0,0006191	-0,5033315
661	71,2222977	13,4969497	0,0765595	71,9173283	65,1783865	0,0020831	-0,6950307	2,6472065	1,9772109	0,0005991	-0,2625525
662	72,5374985	12,4598806	0,0393212	72,4148643	68,7702077	0,0012842	0,1226342	2,6148605	1,7759967	0,0005284	0,0468989
663	72,8466034	11,9856188	0,0246061	73,7513265	70,2549374	0,0009473	-0,9047231	2,6212138	1,7264493	0,0005088	-0,3451543
664	74,8732986	11,0771325	0,0039515	73,9892963	73,0645575	0,0003222	0,8840024	2,6117731	1,6943222	0,0004883	0,3384683
665	77,6488037	10,7168480	0,0002762	74,4205453	74,1970794	0,0000782	3,2282584	2,6062258	1,6953390	0,0004836	1,2386718
666	76,2120972	10,1946459	0,0053549	74,9024371	75,9825755	-0,0002857	1,3096600	2,6254024	1,6851074	0,0004715	0,4988416
667	74,5703964	10,1811230	0,0054622	75,0549921	76,0120953	-0,0002820	-0,4845957	2,6255642	1,6784935	0,0004677	-0,1845682

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
668	77,5465012	10,2141055	0,0030553	75,0045817	75,7432701	-0,0002109	2,5419195	2,6214151	1,6719185	0,0004639	0,9696745
669	71,5362015	10,2006854	0,5205812	71,2272005	59,8666008	0,0041644	0,3090010	2,3727674	2,1492892	0,0004930	0,1302281
670	74,6073990	11,5789844	0,1818916	74,3219455	65,9153372	0,0022193	0,2854535	2,6150471	1,8297700	0,0004406	0,1091581
671	71,9259033	11,5953998	0,1193949	74,9831574	67,7120796	0,0016484	-3,0572541	2,6097608	1,8598926	0,0004577	-1,1714691
672	76,4106979	11,1267371	0,0545035	75,1682001	69,9379680	0,0010492	1,2424978	2,4998717	1,9961785	0,0004986	0,4970246
673	74,3450012	11,1153620	0,0470195	74,0167217	70,2496488	0,0010000	0,3282795	2,6198171	2,0079583	0,0005010	0,1253063
674	76,6921005	11,1750876	0,0434736	74,3596175	70,4201174	0,0009968	2,3324830	2,6208678	2,0026670	0,0004995	0,8899659
675	75,6648026	11,3043231	0,1392623	75,1504526	65,3497475	0,0023407	0,5143500	2,5896526	1,7069154	0,0004586	0,1986174
676	76,0184021	10,3380047	0,2805860	72,5691966	58,3746276	0,0038857	3,4492055	2,5835423	1,7475972	0,0004874	1,3350683
677	73,4465027	9,2655101	0,4037823	76,4605624	51,5637810	0,0052725	-3,0140597	2,4232795	1,8325751	0,0005204	-1,2437937
678	70,5926971	8,9430185	0,4336266	69,3311563	49,0555668	0,0057147	1,2615408	2,5909575	1,8546103	0,0005311	0,4869014
679	68,9585037	13,8147730	0,1457497	68,2603584	58,4437503	0,0035879	0,6981454	2,5686635	2,3045654	0,0007254	0,2717932
680	65,8910980	14,0056067	0,1255938	69,5072566	60,0796855	0,0032419	-3,6161586	2,6175154	2,1932649	0,0006828	-1,3815233
681	70,7389984	13,9261613	0,1076468	71,8581006	61,9235612	0,0028490	-1,1191022	2,6135060	2,0922051	0,0006415	-0,4281996
682	70,2086029	13,4536665	0,0829303	71,7443493	64,3088968	0,0023163	-1,5357464	2,6418521	1,9525280	0,0005898	-0,5813143
683	70,4135971	13,0460797	0,0660666	71,2844896	65,8290254	0,0019638	-0,8708925	2,6016030	1,8611231	0,0005575	-0,3347523
684	73,6903992	11,4636814	0,0150315	73,6098331	71,0552208	0,0007503	0,0805660	2,6364631	1,6593722	0,0004794	0,0305584
685	78,6248016	10,9778810	0,0050278	73,8921242	72,6312875	0,0003955	4,7326775	2,6347346	1,6487978	0,0004705	1,7962634
686	79,3599014	10,5898571	0,0003992	74,2416505	73,9635631	0,0001016	5,1182509	2,5831388	1,6569787	0,0004684	1,9814076
687	78,6532974	10,3173496	0,0007109	74,6509582	75,0078529	-0,0001245	4,0023392	2,5971161	1,6721668	0,0004698	1,5410706
688	75,6104965	10,1529039	0,0089924	74,8951799	76,2576652	-0,0003846	0,7153166	2,6281681	1,7258373	0,0004816	0,2721731
689	74,1059036	10,2470871	0,0062376	74,5706019	75,9961006	-0,0003208	-0,4646983	2,5342920	1,7444278	0,0004860	-0,1833641
690	76,9851990	10,3637961	0,0014635	74,7160233	75,3133759	-0,0001595	2,2691757	2,6142925	1,7580712	0,0004887	0,8679885
691	71,7489014	9,8462758	0,5507154	74,2001485	58,9695381	0,0042891	-2,4512472	2,5602349	2,2417063	0,0005197	-0,9574306
692	70,3020020	10,0699563	0,4930819	71,5309642	59,8532711	0,0040185	-1,2289623	2,4303457	2,2137349	0,0005155	-0,5056738
693	75,0623016	11,1496070	0,2398785	74,4825585	63,7939788	0,0027225	0,5797431	2,6073488	1,8678812	0,0004524	0,2223497
694	75,3327026	11,1251252	0,1107454	75,3833626	66,8700256	0,0016986	-0,0506599	2,4726349	1,9301920	0,0004879	-0,0204882
695	72,7152023	11,0603327	0,0759958	73,1757317	67,8221684	0,0015153	-0,4605294	2,5951569	2,0043365	0,0005050	-0,1774572

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
696	58,1348000	11,1023282	0,2473979	57,0710554	44,3957410	0,0051568	1,0637445	2,5018911	2,3884895	0,0007522	0,4251762
697	57,0620003	11,5946445	0,2239363	56,1319322	44,5820397	0,0048982	0,9300681	2,4302912	2,5558413	0,0008133	0,3826982
698	65,4496002	14,3284218	0,1308101	69,6987886	59,0898535	0,0035446	-4,2491883	2,6257389	2,1393179	0,0006607	-1,6182829
699	64,9272995	14,0951527	0,1167612	69,9704391	60,4728874	0,0032305	-5,0431396	2,6210104	2,0687087	0,0006327	-1,9241204
700	69,0996017	13,7346766	0,0991352	70,1722542	62,1052208	0,0028465	-1,0726525	2,6040666	1,9749479	0,0005979	-0,4119144
701	69,9745026	13,2432441	0,0783512	71,7021321	63,9893378	0,0023938	-1,7276295	2,6330518	1,8610197	0,0005569	-0,6561320
702	72,5458984	11,3576820	0,0185415	73,0679593	70,1945291	0,0009099	-0,5220608	2,6292366	1,6085488	0,0004607	-0,1985598
703	77,6750031	10,8073491	0,0068393	73,5271117	71,9785410	0,0004995	4,1478913	2,6236749	1,6044356	0,0004545	1,5809471
704	75,6878967	9,9631370	0,0071731	74,6936486	75,9179272	-0,0003747	0,9942481	2,6185678	1,7416737	0,0004867	0,3796916
705	77,9433975	10,3464713	0,0012405	74,2659102	74,9573759	-0,0001564	3,6774874	2,5434368	1,8564559	0,0005157	1,4458733
706	73,7004013	11,0138364	0,2229125	74,6914427	62,4611006	0,0028436	-0,9910414	2,5643103	1,8436442	0,0004636	-0,3864748
707	73,9811020	11,0380525	0,1807997	74,5860672	63,1598617	0,0025448	-0,6049652	2,5510506	1,8741180	0,0004788	-0,2371436
708	71,8069992	10,7811159	0,1235257	71,3599504	64,4074022	0,0021754	0,4470488	2,5451287	2,0151125	0,0005146	0,1756488
709	72,6928024	10,8346355	0,1217025	73,3317161	64,3387456	0,0022139	-0,6389137	2,6032124	2,0170952	0,0005155	-0,2454328
710	73,6070023	10,9063352	0,1259082	74,6562363	64,0510701	0,0023125	-1,0492340	2,5101267	1,9945524	0,0005120	-0,4180004
711	63,6421013	8,5393331	0,4477341	61,8294658	43,6707286	0,0065579	1,8126355	2,5648378	1,9383728	0,0005700	0,7067252
712	63,0134010	9,0002130	0,4006035	58,9094789	43,1152173	0,0064572	4,1039222	2,5191122	1,9677286	0,0005859	1,6291145
713	55,4723015	12,1358865	0,1940123	58,3557909	44,0121508	0,0049055	-2,8834894	2,5747667	2,5787926	0,0008270	-1,1199032
714	53,3634987	12,6226813	0,1767664	56,9527943	44,2342477	0,0046486	-3,5892956	2,5503327	2,7615500	0,0008944	-1,4073833
715	80,2908020	9,7797467	0,0032777	74,4025272	75,1044011	-0,0002687	5,8882748	2,5148753	1,7820621	0,0004987	2,3413784
716	72,4501038	9,8917949	0,0039142	73,7566630	75,1768183	-0,0002866	-1,3065593	2,4330449	1,8326601	0,0005111	-0,5370058
717	75,1445999	10,7220046	0,2224040	70,2000443	59,6734891	0,0032439	4,9445556	2,5229993	1,9487242	0,0005057	1,9597927
718	74,3442001	10,5312868	0,1730677	68,8649609	60,4354731	0,0029860	5,4792392	2,4444205	2,0445960	0,0005318	2,2415289
719	63,8723984	8,6495340	0,4074277	58,2089261	43,4556701	0,0065193	5,6634722	2,4528012	1,9624830	0,0005804	2,3089814
720	61,5798988	9,2698430	0,3556302	59,7472976	42,8777384	0,0064192	1,8326013	2,5626797	1,9939313	0,0005971	0,7151113
721	56,4724007	11,6909942	0,2067179	56,9828176	43,1797076	0,0054687	-0,5104169	2,5440249	2,2597914	0,0007096	-0,2006336
722	51,9509010	13,6400804	0,1368375	57,6344510	44,0937436	0,0044941	-5,6835500	2,5092020	2,8459896	0,0009356	-2,2650827
723	49,8816986	14,5181602	0,0909458	56,7268967	45,0191559	0,0044823	-6,8451980	2,5477246	2,4819127	0,0008097	-2,6867888

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
724	62,2360992	16,6371145	0,1674166	66,5528114	51,4998215	0,0049017	-4,3167122	2,5945785	2,5048979	0,0008107	-1,6637431
725	63,2331009	14,4691679	0,1264903	67,3252327	57,0112064	0,0040086	-4,0921318	2,4758614	1,9774715	0,0006019	-1,6528113
726	67,8451996	13,6145713	0,0999412	69,7950067	59,7672767	0,0033051	-1,9498071	2,6056155	1,8179140	0,0005425	-0,7483096
727	72,3383026	9,7431386	0,0001785	73,5845170	73,7800493	-0,0000641	-1,2462143	2,5803513	1,8754423	0,0005225	-0,4829631
728	74,3657990	9,9305108	0,0000099	73,4779005	73,4052955	0,0000150	0,8878984	2,4843247	1,9234571	0,0005329	0,3574003
729	73,7059021	10,1373694	0,0015284	73,4133889	72,5963370	0,0001899	0,2925132	2,5818289	1,9731751	0,0005436	0,1132969
730	73,1961975	10,4738932	0,0268186	72,6483821	69,6013074	0,0008514	0,5478154	2,5961378	2,1044108	0,0005714	0,2110117
731	65,1505966	10,0720980	0,3479167	67,2590265	57,8655703	0,0036607	-2,1084299	2,0400670	2,9590728	0,0007459	-1,0335101
732	69,1072006	9,6333638	0,4370141	68,6068879	57,0956933	0,0043162	0,5003127	2,1203851	2,5718433	0,0006383	0,2359537
733	70,8285980	10,3528248	0,2236604	72,4100978	56,7805062	0,0036741	-1,5814997	2,5456574	2,0622267	0,0005420	-0,6212540
734	74,2063980	10,2773804	0,2157292	72,8120036	56,9014505	0,0036375	1,3943944	2,5197806	2,0809806	0,0005492	0,5533793
735	68,7762985	9,8146826	0,2709903	75,0246115	55,2250308	0,0041189	-6,2483129	2,2991514	1,9637498	0,0005385	-2,7176605
736	72,0936966	9,5068347	0,3031811	71,4134205	54,4746615	0,0043255	0,6802761	2,5484176	1,8899377	0,0005260	0,2669406
737	61,1540985	9,8578217	0,2835454	59,6093705	43,3692864	0,0061237	1,5447281	2,5629779	2,0280361	0,0006139	0,6027083
738	54,1769981	10,8163941	0,2318469	59,0897894	43,1949329	0,0058761	-4,9127913	2,5748478	2,0840966	0,0006397	-1,9079929
739	54,7125015	12,8784872	0,1486433	57,9054851	43,6725184	0,0051290	-3,1929836	2,5753526	2,3287078	0,0007420	-1,2398239
740	65,8056030	10,0900754	0,2592162	65,9640422	51,7247177	0,0044609	-0,1584392	2,5783959	2,1923788	0,0006042	-0,0614488
741	68,8069000	8,5696133	0,2606361	59,6528703	49,6997352	0,0047990	9,1540298	2,2254511	2,1117108	0,0006271	4,1133368
742	53,2775993	16,5612579	0,0456175	56,3772223	47,1940457	0,0035470	-3,0996229	2,5171660	2,7943601	0,0009408	-1,2313940
743	47,7752991	20,4335563	0,0319991	54,1550950	45,8709423	0,0030773	-6,3797959	2,4413554	4,6403277	0,0016351	-2,6132188
744	64,9033966	17,8542073	0,1141981	64,1006679	55,0725620	0,0033034	0,8027287	2,5682603	3,2686531	0,0010927	0,3125574
745	65,2689972	18,0190497	0,1211609	64,5923712	54,1015204	0,0036363	0,6766260	2,6033441	3,0700518	0,0010208	0,2599065
746	59,4584007	17,8384860	0,1532032	65,1545983	50,9764055	0,0048639	-5,6961976	2,6045386	2,7128437	0,0008871	-2,1870275
747	74,2783966	9,8161087	0,0038202	73,0494215	71,6699626	0,0003044	1,2289751	2,5525688	1,9538775	0,0005398	0,4814660
748	75,0074005	10,0258082	0,0084599	72,4920249	70,9490040	0,0004577	2,5153756	2,6023032	1,9961592	0,0005481	0,9665959
749	73,0780029	10,2234455	0,0186694	72,9741390	69,8454133	0,0006951	0,1038640	2,5306020	2,0487934	0,0005591	0,0410432
750	71,0092010	10,3868733	0,0373305	71,4988165	68,3859957	0,0010120	-0,4896155	2,5295722	2,1230827	0,0005752	-0,1935566
751	69,1975021	10,5226246	0,1588925	69,8332042	62,7692881	0,0022605	-0,6357021	2,4789200	2,6044155	0,0006835	-0,2564431

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
752	65,4437027	10,3554789	0,2783198	68,7910493	59,3230573	0,0030871	-3,3473466	2,4002702	3,0305960	0,0007826	-1,3945707
753	69,9281006	10,3049063	0,2539189	66,8085221	53,6055960	0,0042631	3,1195785	2,5400562	2,1399809	0,0005706	1,2281533
754	72,1081009	10,2002749	0,2434580	66,6947387	53,9147010	0,0041548	5,4133622	2,5499872	2,1263851	0,0005703	2,1228978
755	63,6598015	12,5400545	0,0987429	67,6210117	57,4751039	0,0032529	-3,9612102	2,5670909	1,8273764	0,0005528	-1,5430736
756	70,5865021	9,3481421	0,0367666	70,4941918	67,0516490	0,0011091	0,0923103	2,5917492	2,0211859	0,0005720	0,0356170
757	72,8358002	9,3162685	0,0313664	70,5008555	67,7697440	0,0009627	2,3349447	2,5554661	2,0220011	0,0005679	0,9137060
758	73,0383987	9,9051346	0,0376647	70,4368153	67,6273184	0,0009924	2,6015834	2,5184972	2,0444959	0,0005604	1,0329904
759	66,3911972	10,4740922	0,0789530	70,4052752	65,0974811	0,0015019	-4,0140780	2,5861620	2,2561858	0,0006102	-1,5521371
760	64,4732971	10,7113260	0,2425384	67,5974991	51,5522805	0,0044882	-3,1242019	2,4813868	2,6109314	0,0007208	-1,2590548
761	61,0937996	10,7264865	0,2440889	63,0615686	51,0756448	0,0045350	-1,9677691	2,3277573	2,5471481	0,0007019	-0,8453498
762	64,7757034	10,3716767	0,2467935	69,1969184	50,6739278	0,0044752	-4,4212149	2,4436310	2,2829816	0,0006452	-1,8092809
763	63,2486992	10,1960609	0,2588563	62,0235081	50,4329822	0,0045382	1,2251911	2,4220985	2,2742731	0,0006439	0,5058387
764	63,4454994	9,5050720	0,3031423	63,2392346	49,7931992	0,0047279	0,2062648	2,5162511	2,2468046	0,0006433	0,0819731
765	62,8698006	9,2462513	0,3090824	66,7142913	49,9111641	0,0047068	-3,8444907	2,5362869	2,2195856	0,0006420	-1,5157949
766	50,2961998	22,5916087	0,0193150	53,8986542	47,0217886	0,0027224	-3,6024544	2,2910838	5,0605919	0,0017884	-1,5723800
767	61,3056984	19,1162185	0,1021081	63,6032112	54,5939438	0,0033025	-2,2975128	2,5878719	3,3104973	0,0011123	-0,8878001
768	62,2752991	19,1849277	0,1179033	63,6114108	52,4975992	0,0040770	-1,3361117	2,5742503	3,1237387	0,0010392	-0,5190295
769	65,8732986	10,4916927	0,0511764	69,7749585	64,4708254	0,0017841	-3,9016599	2,5707583	1,8013374	0,0005251	-1,5177078
770	74,9480972	9,3996750	0,0120272	73,0718663	70,0474570	0,0005672	1,8762310	2,2954655	1,9436643	0,0005432	0,8173640
771	76,3200989	9,5458269	0,0120894	71,8005763	70,1065525	0,0005552	4,5195226	2,5800752	1,9612634	0,0005443	1,7517019
772	70,2380981	10,3246858	0,0491682	72,1158410	67,2028420	0,0011648	-1,8777429	2,5574890	2,1299125	0,0005772	-0,7342135
773	67,4340973	17,4239024	0,1136745	65,6243627	57,2088406	0,0026225	1,8097346	2,5568028	4,1591118	0,0014185	0,7078116
774	65,6546021	17,8591873	0,1094428	63,8456753	56,8507624	0,0026637	1,8089268	2,5496470	4,0019399	0,0013643	0,7094813
775	65,4881973	18,3395153	0,1028131	63,2724331	56,5918181	0,0026744	2,2157642	2,4983308	3,8459948	0,0013097	0,8868978
776	62,7062988	18,8460805	0,0948753	64,3111833	56,3969360	0,0026701	-1,6048844	2,6215344	3,7123742	0,0012625	-0,6121928
777	62,6528015	20,0639138	0,0787328	65,2930862	55,4707987	0,0028578	-2,6402847	2,3460037	3,5479165	0,0011999	-1,1254393
778	62,1769981	20,2062159	0,0808482	62,8595931	54,7296644	0,0031125	-0,6825950	2,5312984	3,5127470	0,0011834	-0,2696620
779	69,4420013	17,2399316	0,1177887	64,6534354	57,5368080	0,0026059	4,7885659	2,5613646	4,1830001	0,0014276	1,8695370

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
780	67,5152969	17,6013496	0,1167227	67,5500206	57,0703065	0,0026795	-0,0347236	1,9679036	4,0512498	0,0013831	-0,0176450
781	67,5550003	18,0334362	0,1116256	65,5809882	56,7493366	0,0027016	1,9740121	2,5573427	3,9188607	0,0013375	0,7718997
782	62,7386017	19,0555324	0,0920060	64,6265948	56,5622837	0,0025922	-1,8879931	2,6041746	3,6994035	0,0012607	-0,7249871
783	61,9757996	19,6046344	0,0791063	63,5478055	56,6565548	0,0024798	-1,5720060	2,6204599	3,6523574	0,0012437	-0,5998970
784	62,6178017	20,5585406	0,0568461	63,3866753	56,8455452	0,0022863	-0,7688736	2,6239329	3,7089855	0,0012606	-0,2930234
785	67,8387985	9,5921566	0,0665696	68,8483921	64,1339502	0,0016370	-1,0095936	2,5536107	2,1269997	0,0006077	-0,3953592
786	71,7517014	9,4174212	0,0583207	69,3981633	65,2658258	0,0014051	2,3535380	2,5679505	2,1307305	0,0006026	0,9165044
787	69,3302002	9,3747864	0,0524648	72,0039658	66,0278222	0,0012510	-2,6737656	2,3900867	2,1179985	0,0005945	-1,1186898
788	69,9344025	9,5525553	0,0487085	72,1886782	66,5908246	0,0011373	-2,2542757	2,3938890	2,0812108	0,0005776	-0,9416793
789	71,5746002	9,7230298	0,0509444	70,6796535	66,4696142	0,0011595	0,8949467	2,6155238	2,0783616	0,0005735	0,3421673
790	71,0787964	9,9193470	0,0559907	70,9262444	66,1260070	0,0012246	0,1525520	2,6013560	2,0978496	0,0005755	0,0586432
791	58,6214981	11,0675735	0,2039315	64,3410381	51,1057444	0,0041542	-5,7195400	2,5597600	2,5640305	0,0007353	-2,2344048
792	62,9566002	10,9593981	0,2095181	63,1206340	50,8506072	0,0041906	-0,1640338	2,5234555	2,4928144	0,0007208	-0,0650037
793	59,9286003	10,6309315	0,2316980	66,3190250	50,2176793	0,0043365	-6,3904247	2,5330185	2,4074488	0,0007025	-2,5228495
794	60,7230988	9,9547706	0,2820985	62,3089869	49,1845848	0,0046294	-1,5858882	2,5275617	2,3772534	0,0006920	-0,6274380
795	67,7194977	10,1750748	0,1059207	61,2085709	53,4131037	0,0031753	6,5109267	2,4084254	2,4347095	0,0007584	2,7033957
796	60,1036987	15,9971311	0,0052129	58,8916353	55,8365049	0,0011122	1,2120634	2,5203454	3,2069195	0,0011383	0,4809116
797	68,6098022	17,4477730	0,1192363	65,4244531	57,4042936	0,0026814	3,1853491	2,6089753	4,0225059	0,0013725	1,2209196
798	64,2177963	18,2205588	0,1114029	63,9379074	56,6457963	0,0027601	0,2798889	2,5806120	3,7853021	0,0012915	0,1084584
799	63,1455002	18,7138488	0,1009892	64,3311146	56,5383263	0,0027011	-1,1856144	2,6318700	3,6861363	0,0012569	-0,4504836
800	61,3265991	19,2595197	0,0870931	63,4920965	56,6265128	0,0025733	-2,1654973	2,5995191	3,6192733	0,0012334	-0,8330377
801	60,3431015	20,4057850	0,0539571	63,1807858	57,3378738	0,0021403	-2,8376843	2,6125225	3,6524677	0,0012440	-1,0861856
802	63,8680000	21,4398180	0,0242797	62,7767104	58,1651229	0,0016446	1,0912896	2,6057821	3,8617151	0,0013101	0,4187954
803	66,1243973	10,1503449	0,0992942	67,6454919	60,5948767	0,0023049	-1,5210946	2,5659533	2,1878885	0,0006375	-0,5927990
804	68,3675003	9,7624059	0,0893318	68,3310290	62,3211619	0,0019468	0,0364713	2,5753326	2,2210054	0,0006370	0,0141618
805	68,2067032	9,5625179	0,0808576	68,5834014	63,5897826	0,0016865	-0,3766982	2,5618037	2,2243223	0,0006308	-0,1470441
806	67,9238968	9,6451347	0,0693503	69,9154445	65,0962672	0,0013753	-1,9915477	2,6078334	2,1586900	0,0006004	-0,7636790
807	69,3364029	9,8041321	0,0704976	70,3019783	65,0286989	0,0013830	-0,9655754	2,5992911	2,1561476	0,0005959	-0,3714765

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
808	68,1760025	10,6442378	0,0879241	70,8038460	63,6415649	0,0015987	-2,6278435	2,3548421	2,4699520	0,0006719	-1,1159320
809	62,2554016	11,6435902	0,1533025	62,2903697	52,5549514	0,0035871	-0,0349681	2,3975765	2,8551277	0,0008379	-0,0145848
810	59,7795982	11,3708232	0,1773630	65,4518679	51,3763489	0,0038083	-5,6722696	2,4731091	2,6822626	0,0007997	-2,2935784
811	61,0941010	10,7355119	0,2330640	64,9166739	49,6251516	0,0042536	-3,8225730	2,5198252	2,5534445	0,0007671	-1,5169992
812	64,9759979	11,0035539	0,0852033	61,6572557	53,7139260	0,0028697	3,3187422	2,5055016	2,5233045	0,0007968	1,3245820
813	67,0009995	17,6867666	0,1187841	66,9526791	57,2982723	0,0027647	0,0483203	2,4160759	3,8720626	0,0013192	0,0199995
814	61,7641983	18,9325709	0,0955452	64,1117932	56,5162097	0,0027401	-2,3475949	2,6225607	3,5645881	0,0012137	-0,8951537
815	61,5419006	19,4832498	0,0793084	64,6428579	56,6878351	0,0025719	-3,1009573	2,6141510	3,5147995	0,0011963	-1,1862196
816	63,5446014	20,6534977	0,0413520	63,6365275	57,7888883	0,0019676	-0,0919260	2,6295534	3,5788865	0,0012182	-0,0349588
817	64,7524033	21,1676928	0,0254566	63,8232575	58,5616202	0,0015915	0,9291458	2,4906036	3,6837773	0,0012541	0,3730605
818	63,5800018	21,5627600	0,0146190	62,2016825	59,2636949	0,0012470	1,3783194	2,3459274	3,7995398	0,0012929	0,5875371
819	62,9856987	21,7572923	0,0090982	62,6063056	59,6589951	0,0010220	0,3793931	2,6190063	3,8679163	0,0013143	0,1448615
820	62,1834984	19,8649281	0,0305824	62,7680613	56,2128494	0,0021125	-0,5845630	2,5531084	3,1598950	0,0010561	-0,2289613
821	64,8676987	10,0219488	0,1107735	68,1159882	60,4067856	0,0022903	-3,2482895	2,5734841	2,2805922	0,0006595	-1,2622147
822	64,2967987	9,7056538	0,0906042	67,9964749	63,5019575	0,0016433	-3,6996762	2,4889003	2,2630552	0,0006355	-1,4864702
823	67,4723969	10,5905906	0,0903048	67,4865248	63,1240856	0,0016363	-0,0141279	2,3844005	2,5132096	0,0006834	-0,0059252
824	67,6408997	10,8244306	0,0895987	67,7485144	62,9746569	0,0016382	-0,1076147	2,4529386	2,6552715	0,0007234	-0,0438718
825	70,8781967	11,5974499	0,0475654	69,9313917	64,7349763	0,0012361	0,9468051	2,0894779	3,4350680	0,0009998	0,4531300
826	58,4561996	10,7213168	0,2470502	58,7474406	48,4031059	0,0043795	-0,2912410	2,3147968	2,6961173	0,0008215	-0,1258171
827	56,6125984	10,7763465	0,2273594	59,8148104	48,7136286	0,0042862	-3,2022120	2,4507916	2,6584919	0,0008124	-1,3066031
828	57,4267998	10,9733337	0,1898279	60,7574331	49,5258765	0,0040314	-3,3306334	2,5125942	2,6163650	0,0008066	-1,3255755
829	60,0004005	18,4918839	0,0132727	58,9238765	63,8130709	-0,0016687	1,0765241	2,5041006	4,2501317	0,0015368	0,4299045
830	66,5860977	17,9283469	0,1189291	66,3387923	57,1622329	0,0028758	0,2473054	2,5734121	3,7653831	0,0012799	0,0961002
831	64,7164001	18,6762183	0,1025698	65,4482808	56,5427258	0,0028905	-0,7318807	2,6162377	3,5468928	0,0012059	-0,2797455
832	61,5965004	19,7138140	0,0689496	62,7952237	56,8210535	0,0025574	-1,1987233	2,4231901	3,4132410	0,0011597	-0,4946881
833	60,0052986	16,8841620	0,0709690	61,8674647	52,7605251	0,0031887	-1,8621660	2,5401554	2,5112655	0,0008161	-0,7330914
834	67,0454025	11,8967737	0,1519790	65,1796253	55,9121357	0,0035893	1,8657772	2,0482252	4,1278880	0,0012395	0,9109239
835	62,1873016	17,7670692	0,0147836	59,1767658	64,1067358	-0,0015801	3,0105358	2,3765128	3,8928440	0,0013813	1,2667871

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
836	56,4166985	19,7711757	0,0247451	58,7911864	65,0326249	-0,0021747	-2,3744879	2,5291963	4,7151491	0,0016936	-0,9388310
837	55,6752014	20,6104362	0,0151671	57,7798571	63,4330631	-0,0017688	-2,1046557	2,1566229	5,0824347	0,0018308	-0,9759034
838	66,8328018	17,8852237	0,1250313	66,2786722	57,4491545	0,0029422	0,5541296	2,5962514	3,8580116	0,0013072	0,2134345
839	66,1023026	18,1373797	0,1200790	64,5641031	57,0011463	0,0030107	1,5381995	2,4846235	3,7349167	0,0012668	0,6190876
840	64,1809998	18,4664694	0,1107582	64,8667734	56,6737233	0,0030255	-0,6857736	2,5937010	3,6158936	0,0012272	-0,2643996
841	66,8879013	18,8746834	0,0968874	65,0134473	56,5211446	0,0029662	1,8744540	2,6283530	3,5033535	0,0011892	0,7131668
842	64,9391022	20,4777321	0,0368755	64,3906023	57,8147993	0,0021016	0,5484999	2,5977471	3,2983874	0,0011189	0,2111444
843	64,5777969	21,0326716	0,0192144	63,1363474	58,8724942	0,0015763	1,4414496	2,6020430	3,3170469	0,0011255	0,5539684
844	65,3860016	21,8206004	0,0015877	62,5346190	61,1278329	0,0004757	2,8513825	2,6271023	3,4901720	0,0011848	1,0853717
845	59,2840996	21,9205431	0,0000846	62,0588340	61,7560586	0,0001107	-2,7747344	2,5909413	3,5931682	0,0012190	-1,0709368
846	60,8837013	21,7984695	0,0000002	61,6966233	61,7123243	-0,0000053	-0,8129220	2,6154310	3,6692900	0,0012428	-0,3108176
847	66,2152023	10,7024332	0,1060600	66,8228868	61,5081814	0,0018531	-0,6076844	2,4332868	2,6268337	0,0007206	-0,2497381
848	63,3858986	10,9329861	0,1009114	67,4052876	61,5265093	0,0018150	-4,0193890	2,5329863	2,7606215	0,0007535	-1,5868183
849	62,6375008	11,1797766	0,0939560	67,3345465	61,5971336	0,0017675	-4,6970458	2,5248167	2,9197777	0,0007970	-1,8603512
850	64,7676010	11,4249908	0,0852140	68,2654557	61,7686442	0,0017065	-3,4978547	2,4681537	3,0849014	0,0008465	-1,4171948
851	71,0673981	12,1620348	0,0145486	69,8776582	67,0754550	0,0008598	1,1897399	2,3165384	4,2059798	0,0012022	0,5135852
852	69,5251999	11,5214312	0,1242573	69,0945012	61,8670472	0,0026620	0,4306987	1,9732661	4,4551458	0,0012571	0,2182669
853	67,5035019	11,9531356	0,1996758	70,7101170	54,4034168	0,0042344	-3,2066151	2,0591094	4,1908727	0,0012499	-1,5572826
854	55,4808006	12,5000993	0,1494419	59,8926321	50,6887438	0,0035318	-4,4118314	2,2847382	3,2417705	0,0010090	-1,9310009
855	58,1105003	19,5367374	0,0282463	59,0252882	64,9729287	-0,0021166	-0,9147879	2,5253004	4,6826638	0,0016624	-0,3622491
856	57,9294014	20,1193102	0,0256475	59,0094558	64,4349998	-0,0020282	-1,0800544	2,4455074	5,0147347	0,0017781	-0,4416484
857	61,2683983	15,9818952	0,0398043	59,0663512	51,7577817	0,0024817	2,2020471	2,4634316	3,1543528	0,0010934	0,8938941
858	57,0183983	20,0782193	0,0030447	58,0017228	59,7317985	-0,0006420	-0,9833245	2,4090520	5,6749923	0,0019784	-0,4081790
859	64,4535980	13,2674513	0,1883196	61,9414468	48,3703512	0,0049439	2,5121512	2,2483206	3,7560473	0,0011125	1,1173456
860	59,6297989	13,1367707	0,2003405	61,6047780	46,9815439	0,0046261	-1,9749791	2,4103397	3,3010837	0,0010149	-0,8193779
861	59,0362015	13,9641411	0,1738841	58,3825949	44,6034366	0,0047221	0,6536066	2,4363772	3,1442575	0,0010527	0,2682699
862	50,3316002	20,5378722	0,0868052	54,6510535	42,8820054	0,0043816	-4,3194533	1,8650759	7,1554453	0,0024007	-2,3159665
863	66,0479965	18,9897372	0,0915815	64,6039487	56,5339921	0,0030384	1,4440478	2,5833940	3,5297399	0,0011973	0,5589731

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
864	64,1410980	21,0204409	0,0117348	63,2896188	59,5534461	0,0013320	0,8514792	2,6220644	3,1446411	0,0010642	0,3247362
865	63,3462982	21,4317141	0,0031310	63,0174571	60,8129371	0,0007066	0,3288411	2,5950939	3,1749847	0,0010745	0,1267165
866	61,0712013	21,6699340	0,0001712	62,3437685	61,8403880	0,0001668	-1,2725671	2,6210065	3,2651885	0,0011050	-0,4855261
867	60,8927002	21,7334052	0,0002432	61,8234946	62,3967036	-0,0001977	-0,9307944	2,6252059	3,4045446	0,0011516	-0,3545605
868	59,1123009	21,5305807	0,0005289	61,3738742	62,2055733	-0,0002855	-2,2615733	2,6213871	3,5334639	0,0011932	-0,8627392
869	58,7634010	21,1458599	0,0000873	60,9401164	61,3306019	-0,0001130	-2,1767154	2,3492799	3,6370766	0,0012244	-0,9265458
870	68,5074005	12,5859890	0,0131059	70,3696085	66,6201831	0,0009013	-1,8622080	2,0423136	4,2116387	0,0012053	-0,9118129
871	67,0435028	12,5444180	0,2139246	65,5483388	50,9242541	0,0049322	1,4951641	2,3998619	3,9919325	0,0011940	0,6230209
872	70,4340973	18,6235464	0,1105822	66,6017948	56,4593343	0,0032728	3,8323024	2,5998739	3,7708524	0,0012778	1,4740339
873	66,2154007	18,9748103	0,0869309	65,0910335	56,6103445	0,0030895	1,1243672	2,6049631	3,6015089	0,0012206	0,4316250
874	66,0182037	19,3933415	0,0617773	65,6829830	57,0593090	0,0027782	0,3352208	2,6045765	3,4181957	0,0011577	0,1287045
875	63,6339989	20,3412388	0,0193207	63,8979391	58,9494214	0,0017430	-0,2639402	2,6243268	3,0785109	0,0010394	-0,1005745
876	57,3678017	20,1902343	0,0001379	60,3265836	59,9718171	0,0001355	-2,9587819	2,5004232	3,7573662	0,0012556	-1,1833125
877	70,3125992	18,3030579	0,1381157	65,9894322	56,3382179	0,0035108	4,3231669	2,5814826	4,0518526	0,0013688	1,6746837
878	70,0941010	18,5234350	0,1113322	69,3194366	56,4476939	0,0033581	0,7746644	1,9528136	3,8757648	0,0013101	0,3966914
879	59,4183998	19,2487570	0,0020090	59,9627250	58,4757151	0,0004815	-0,5443252	2,6043984	3,9872275	0,0013248	-0,2090023
880	78,4688034	13,1238788	0,0504200	72,1412356	66,0991529	0,0019078	6,3275678	2,1852414	5,2211144	0,0014517	2,8955921
881	71,7739029	12,9046462	0,2879809	68,3134530	49,3067118	0,0058790	3,4604499	2,4233652	4,2825292	0,0012589	1,4279523
882	70,6044006	18,1758260	0,1444326	66,6541813	56,2761368	0,0036060	3,9502193	2,6001720	4,1444191	0,0013937	1,5192146
883	65,9192963	18,3064016	0,1107966	65,5030404	56,5878905	0,0033770	0,4162559	2,5482514	3,9393716	0,0013248	0,1633496
884	65,5076981	18,4853150	0,0775192	65,1875816	57,1407477	0,0030331	0,3201164	2,5619328	3,7031463	0,0012445	0,1249511
885	67,0810013	18,7154259	0,0484257	65,7927974	57,9318743	0,0025723	1,2882039	2,6098284	3,4494405	0,0011577	0,4935972
886	67,1240005	19,8330470	0,0007392	62,5116913	61,5224187	0,0003665	4,6123092	2,5752049	2,8967657	0,0009670	1,7910455
887	55,4617996	19,6662446	0,0000232	60,4091695	60,5606398	-0,0000558	-4,9473699	2,5780738	3,6672864	0,0012214	-1,9190179
888	56,8644981	19,3417262	0,0001681	60,0301096	59,6346294	0,0001423	-3,1656114	2,5941200	3,9068619	0,0012996	-1,2203026
889	59,9536018	18,9460143	0,0016953	59,7714623	58,5191981	0,0004296	0,1821395	2,6125714	4,1059596	0,0013633	0,0697166
890	57,5126991	18,5070385	0,0062137	59,6830761	57,2536759	0,0007926	-2,1703770	2,6031885	4,2475610	0,0014064	-0,8337379
891	77,4869003	13,7406199	0,1473281	75,9183435	61,5629380	0,0033307	1,5685569	1,8418035	5,2139836	0,0014779	0,8516418

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
892	50,3694992	13,4681511	0,1623123	56,5961580	44,1989964	0,0044626	-6,2266588	2,4322695	4,3394942	0,0015145	-2,5600201
893	51,2193985	13,9685959	0,1169946	56,4043856	46,0670219	0,0038315	-5,1849871	2,4515921	4,4354410	0,0015598	-2,1149469
894	56,5110016	15,7009778	0,0006465	58,0548904	57,2593578	0,0002313	-1,5438888	2,0055036	5,0838368	0,0017861	-0,7698260
895	59,7364998	16,0373715	0,0042742	58,1193237	59,4942404	-0,0005134	1,6171761	2,3963033	5,8750406	0,0020383	0,6748629
896	71,2469025	18,0028781	0,1078527	67,2650592	56,9169181	0,0033125	3,9818432	2,5810787	3,9655212	0,0013240	1,5427051
897	71,2472992	18,0556653	0,0720206	66,4419373	57,6243077	0,0029053	4,8053619	2,6058172	3,7146779	0,0012388	1,8440902
898	62,1991005	19,2345888	0,0004430	61,9503229	61,1052827	0,0002695	0,2487776	2,6136294	3,1108108	0,0010331	0,0951847
899	59,5614014	19,3355692	0,0001084	61,3461580	60,9387477	0,0001291	-1,7847567	2,6140963	3,2518491	0,0010789	-0,6827433
900	52,2030983	19,3253126	0,0000512	60,8416608	60,5800529	0,0000850	-8,6385625	2,6290288	3,4501806	0,0011445	-3,2858379
901	55,9048996	19,1947497	0,0001389	60,4180702	60,0306490	0,0001335	-4,5131706	2,6256289	3,6821424	0,0012217	-1,7188913
902	56,3839989	18,9900432	0,0005338	60,2177686	59,3545433	0,0002491	-3,8337697	2,5024509	3,9318791	0,0013048	-1,5320059
903	60,4584007	18,7074785	0,0018731	59,6332773	58,5013624	0,0004448	0,8251235	2,4773060	4,1619317	0,0013805	0,3330729
904	55,2560005	18,0410504	0,0121406	58,9898656	56,2918844	0,0010605	-3,7338651	2,3933355	4,4986573	0,0014866	-1,5601093
905	61,3785019	14,9852570	0,0894437	64,6565909	55,8299015	0,0027293	-3,2780890	2,0053647	4,3980945	0,0012201	-1,6346597
906	75,4265976	14,6719565	0,2190756	73,4796036	55,4500666	0,0048375	1,9469940	2,4186345	5,0133075	0,0014464	0,8049972
907	74,7822037	14,4735566	0,2610971	74,1632576	49,3155166	0,0060946	0,6189461	2,1171173	4,6824852	0,0013659	0,2923532
908	60,7266006	14,5371271	0,0156798	57,1824034	54,1621881	0,0011550	3,5441972	2,4366877	4,8253853	0,0017010	1,4545143
909	61,4000015	14,7812279	0,0040070	57,5316198	56,1107073	0,0005461	3,8683817	2,4158517	5,0758984	0,0017835	1,6012497
910	58,5191002	15,0595342	0,0009202	57,9380091	58,5836446	-0,0002305	0,5810910	2,4724943	5,6792180	0,0019811	0,2350222
911	64,7599030	17,6603446	0,1021802	65,3544893	57,4232236	0,0031687	-0,5945863	2,4154478	3,9898616	0,0013226	-0,2461599
912	64,5093002	17,5754761	0,0661981	65,1271526	58,2049679	0,0027274	-0,6178523	2,4622043	3,7435439	0,0012396	-0,2509346
913	66,0808029	17,6174512	0,0223014	64,7858199	59,6668878	0,0017676	1,2949830	2,6057060	3,3793126	0,0011214	0,4969797
914	61,3688011	18,5366583	0,0020915	61,8190429	60,2997264	0,0005567	-0,4502418	2,5838202	3,2898800	0,0010883	-0,1742543
915	59,6049995	18,7313255	0,0012732	61,3682465	60,1453960	0,0004233	-1,7632470	2,6239567	3,3704899	0,0011129	-0,6719802
916	60,5574989	18,8308130	0,0009031	61,0059780	59,9168496	0,0003450	-0,4484791	2,6207434	3,5070641	0,0011576	-0,1711267
917	56,0066986	18,8282965	0,0008586	60,5577877	59,5938331	0,0003241	-4,5510891	2,6308839	3,6992455	0,0012223	-1,7298707
918	58,9240990	18,5564129	0,0023441	60,4556675	58,4852738	0,0004951	-1,5315686	1,9972235	4,1648314	0,0013794	-0,7668489
919	60,0858002	18,3390908	0,0049501	59,9264006	57,6549337	0,0006944	0,1593996	2,5711188	4,3888406	0,0014536	0,0619962

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
920	77,8800964	15,8498856	0,1605740	74,0683180	58,6207059	0,0041437	3,8117785	2,3643514	5,5805324	0,0015850	1,6121878
921	58,2855988	14,4488841	0,0004884	57,6798506	58,2578904	-0,0001555	0,6057481	1,2890118	6,0358468	0,0021051	0,4699322
922	55,8493996	13,3347111	0,0323994	55,9100599	51,8719990	0,0015879	-0,0606603	2,3210958	4,8220479	0,0016942	-0,0261343
923	70,4619980	17,3327420	0,0944375	67,2649638	58,0500659	0,0029687	3,1970342	2,5709917	4,0424405	0,0013335	1,2435023
924	61,5233002	18,2178526	0,0039937	61,5408221	59,4298651	0,0007122	-0,0175220	2,6280032	3,5268730	0,0011596	-0,0066674
925	59,0735016	18,4296788	0,0028961	60,9941758	59,3538144	0,0005941	-1,9206742	2,5915218	3,5938246	0,0011806	-0,7411376
926	60,0563011	18,4933347	0,0030148	60,4058281	58,4957914	0,0005611	-0,3495270	2,5289798	4,1338356	0,0013659	-0,1382087
927	63,1573982	12,9062791	0,4594383	61,2324096	36,9726362	0,0074577	1,9249886	2,4363237	4,4685966	0,0013999	0,7901202
928	51,5674019	11,2938211	0,1936303	51,2897992	44,2453023	0,0040185	0,2776027	0,9488031	5,0397727	0,0017534	0,2925820
929	69,6939011	17,9624066	0,1756387	68,6613413	57,2558492	0,0034943	1,0325598	2,4505681	4,7315888	0,0015730	0,4213553
930	65,2549973	17,4317412	0,0108611	61,6880343	58,8710577	0,0011174	3,5669630	2,4663436	3,7430802	0,0012310	1,4462555
931	62,8634987	17,7989012	0,0083431	61,5570260	58,8394988	0,0009726	1,3064727	2,5905914	3,7133102	0,0012167	0,5043145
932	64,5037994	18,1117692	0,0060442	61,3705776	58,8981773	0,0008217	3,1332219	2,6248296	3,7143819	0,0012150	1,1936858
933	64,3498001	18,3389368	0,0043946	60,9579867	58,9383525	0,0006943	3,3918134	2,6121308	3,7758023	0,0012360	1,2984853
934	61,7616997	18,5288732	0,0052848	60,2724047	57,9591558	0,0007346	1,4892949	2,5839098	4,3337231	0,0014306	0,5763727
935	65,8483963	14,8218693	0,3816961	66,6719292	35,5668048	0,0082770	-0,8235329	2,2971759	5,0908863	0,0015159	-0,3584980
936	63,6049995	14,1832467	0,4239408	63,0706618	35,5901650	0,0080588	0,5343377	2,4423802	5,1269795	0,0015451	0,2187774
937	62,4729004	13,5073760	0,4731089	67,2347596	35,4981701	0,0079124	-4,7618592	1,9479477	5,0609315	0,0015451	-2,4445519
938	59,6369019	12,6584955	0,5819533	61,4027534	33,9750618	0,0081123	-1,7658515	2,4298796	5,2624990	0,0016131	-0,7267239
939	53,3972015	13,7160577	0,0213718	56,2051051	52,5804174	0,0012727	-2,8079036	2,3404140	5,0978040	0,0017849	-1,1997465
940	54,3951988	11,9351143	0,6545800	54,3901950	33,0865460	0,0081906	0,0050039	1,9848962	5,2794152	0,0016267	0,0025210
941	51,9455986	10,9517062	0,6379538	54,5043432	34,0159752	0,0076966	-2,5587446	2,1668012	4,5523279	0,0014465	-1,1808857
942	68,3478012	18,8035089	0,2131301	68,7184541	57,2977552	0,0035601	-0,3706529	2,4223664	5,2852604	0,0017711	-0,1530127
943	69,5833969	18,1192147	0,1604965	69,0244940	57,9604235	0,0032599	0,5589029	2,2874790	4,8719581	0,0016205	0,2443314
944	69,1784973	16,8921769	0,0761339	66,9657171	59,4205096	0,0025042	2,2127802	2,5325153	4,2401182	0,0013940	0,8737480
945	66,8673019	16,2749248	0,0228078	65,0681219	58,9327132	0,0015149	1,7991800	1,9516510	4,0375797	0,0013356	0,9218759
946	64,4835968	16,6211347	0,0209722	63,9820833	58,5402973	0,0014481	0,5015135	2,3210966	4,0258008	0,0013267	0,2160675
947	63,1164017	17,0369114	0,0181004	62,8858919	58,3535181	0,0013441	0,2305097	2,5558148	3,9818292	0,0013063	0,0901903

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
948	64,0923996	17,4690163	0,0142942	62,1316160	58,3742086	0,0011978	1,9607836	2,6104063	3,9200598	0,0012808	0,7511412
949	63,8800011	17,8686481	0,0103844	61,3983754	58,5300312	0,0010262	2,4816257	2,5709124	3,8701496	0,0012613	0,9652704
950	63,5820999	18,2043582	0,0072627	61,2286891	58,7002385	0,0008632	2,3534109	2,6003333	3,8681270	0,0012605	0,9050420
951	61,3805008	18,9346557	0,0166043	59,8692888	55,7837070	0,0013444	1,5112120	2,5103248	4,8370794	0,0015897	0,6019986
952	53,5483017	19,3502756	0,0481777	58,8435136	51,9332719	0,0024196	-5,2952119	2,2692710	5,5338677	0,0017922	-2,3334418
953	61,7915993	16,7407296	0,0270070	62,3622494	57,9709553	0,0015269	-0,5706501	2,5615551	4,2159766	0,0013795	-0,2227749
954	64,0084991	17,2188792	0,0217348	62,6355262	58,0240097	0,0013848	1,3729730	2,5471999	4,1375904	0,0013484	0,5390126
955	50,4371986	14,6852078	0,0236613	52,7329163	48,8938611	0,0013405	-2,2957176	2,0339066	5,5170450	0,0020541	-1,1287232
956	50,3218002	20,6453800	0,0017514	51,6315378	52,7483622	-0,0003904	-1,3097376	1,8616261	6,0251007	0,0023541	-0,7035449

Appendix H:
GWR (Silt and Band 6) Output Feature Class Attribute Table

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
0	3,1372700	14,3393886	0,0008995	3,7375480	3,5945910	0,0000438	-0,6002781	1,3807955	2,5185108	0,0007110	-0,4347335
1	3,0963199	13,9693725	0,0009291	3,7891448	3,6466500	0,0000447	-0,6928249	1,3819192	2,4054392	0,0006766	-0,5013498
2	3,1475699	14,2734175	0,0011692	3,7891617	3,5907374	0,0000495	-0,6415919	1,2177552	2,3848214	0,0006722	-0,5268644
3	3,9973600	12,9914266	0,0000179	3,9915312	3,9663592	0,0000061	0,0058288	1,3768135	2,0183373	0,0005614	0,0042335
4	4,8639302	12,4103054	0,0011358	4,1008129	4,3235520	-0,0000493	0,7631173	1,2108395	2,1313172	0,0005984	0,6302382
5	3,3098700	13,0792382	0,0013674	3,9330620	3,7687965	0,0000520	-0,6231920	1,4403078	1,8333480	0,0005005	-0,4326797
6	4,5479598	12,8175191	0,0000083	4,0198344	4,0066066	0,0000042	0,5281254	1,4574422	1,8536283	0,0005105	0,3623645
7	4,3409600	12,6780736	0,0001951	4,0830216	4,1375605	-0,0000204	0,2579384	1,3437461	1,8862679	0,0005223	0,1919547
8	5,3772998	12,5387372	0,0009154	4,1306438	4,2724771	-0,0000446	1,2466560	1,4523607	1,9302787	0,0005370	0,8583652
9	4,7339702	12,2693459	0,0036596	4,2785531	4,5418769	-0,0000900	0,4554171	1,3642368	2,0440646	0,0005712	0,3338256
10	2,9261301	12,3198007	0,0002467	4,1470389	4,2302212	-0,0000224	-1,2209089	1,4800415	1,5691274	0,0004255	-0,8249153
11	2,9004600	12,2679917	0,0016065	4,1944364	4,4028717	-0,0000586	-1,2939764	1,4814272	1,6136833	0,0004405	-0,8734661
12	3,4148200	12,2026187	0,0040122	4,2399163	4,5815470	-0,0000946	-0,8250964	1,4759900	1,6751903	0,0004597	-0,5590122
13	5,4649301	12,1303586	0,0072561	4,2550668	4,7609568	-0,0001291	1,2098633	1,4427905	1,7495929	0,0004820	0,8385578
14	3,9693601	12,7035374	0,0022175	3,9976914	3,7840191	0,0000642	-0,0283313	1,4639967	1,6692187	0,0004496	-0,0193520
15	3,4599900	12,6591353	0,0007190	4,0104149	3,9000416	0,0000373	-0,5504249	1,4198298	1,6716488	0,0004524	-0,3876696
16	4,1637998	12,5953812	0,0000314	4,0597446	4,0341036	0,0000080	0,1040552	1,4658925	1,6888282	0,0004599	0,0709842
17	3,5585699	12,4275000	0,0012769	4,1049297	4,3333169	-0,0000527	-0,5463597	1,3689606	1,7678994	0,0004875	-0,3991055
18	4,8874102	12,1071632	0,0023593	4,1905014	3,9512855	0,0000595	0,6969088	1,4470301	1,4864582	0,0003918	0,4816132
19	2,9435201	12,1253737	0,0004604	4,2151787	4,3237923	-0,0000299	-1,2716586	1,4840065	1,4463887	0,0003882	-0,8569090
20	4,8817301	11,9640686	0,0098658	4,4781546	4,9042955	-0,0001489	0,4035755	1,3697216	1,6215674	0,0004415	0,2946405
21	4,9458599	11,8602378	0,0086311	4,2776990	4,8766049	-0,0001325	0,6681609	1,3546336	1,4476114	0,0003873	0,4932410
22	4,4569702	12,0797969	0,0074834	4,4311360	4,6855094	-0,0000939	0,0258343	1,3149985	1,3916212	0,0003556	0,0196458
23	3,4017701	12,0550628	0,0019777	4,3634184	4,5174123	-0,0000529	-0,9616483	1,4041675	1,3096872	0,0003420	-0,6848530

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
24	3,9110701	12,2281683	0,0144677	4,2121738	4,8688129	-0,0001329	-0,3011037	1,3698569	1,2747392	0,0003264	-0,2198067
25	3,6998301	12,1742567	0,0124444	4,3525012	4,8635578	-0,0001272	-0,6526712	1,4897702	1,2546845	0,0003232	-0,4381019
26	5,7211299	11,4462977	0,0345671	4,8682320	5,5296661	-0,0002405	0,8528979	1,3491784	1,3787751	0,0003561	0,6321610
27	5,6230202	11,9553581	0,0988896	4,5084867	5,6518702	-0,0003335	1,1145335	1,4499016	1,3001277	0,0003084	0,7686959
28	5,6677198	12,1146666	0,0941692	4,5663939	5,6134041	-0,0003233	1,1013259	1,4326334	1,2805097	0,0003072	0,7687423
29	4,6328702	12,3539189	0,0657336	4,2080312	5,4069435	-0,0002696	0,4248390	1,4692448	1,2455889	0,0003069	0,2891547
30	3,9740000	12,4058918	0,0410824	4,4617314	5,2350227	-0,0002192	-0,4877314	1,4815455	1,2091041	0,0003043	-0,3292045
31	4,0348802	12,2093024	0,0349067	4,4227921	5,2685699	-0,0002119	-0,3879120	1,4944573	1,1932998	0,0003035	-0,2595671
32	5,6167798	10,9632435	0,0605855	5,0508567	5,9668197	-0,0002992	0,5659231	1,3919412	1,4318139	0,0003631	0,4065711
33	4,7394900	12,1486193	0,1162000	4,3265217	5,7395189	-0,0003679	0,4129684	1,4916948	1,2273779	0,0002905	0,2768451
34	4,3754601	12,3225518	0,1120217	4,1719546	5,7196454	-0,0003586	0,2035056	1,4884249	1,2063492	0,0002888	0,1367255
35	4,5156398	12,4662529	0,1009484	4,2847836	5,6616344	-0,0003393	0,2308562	1,4977648	1,1847218	0,0002870	0,1541338
36	4,2202501	12,5569777	0,0875627	4,3654512	5,5951114	-0,0003168	-0,1452011	1,4978154	1,1641578	0,0002852	-0,0969419
37	4,3257098	12,5039756	0,0685121	4,2041687	5,5391001	-0,0002861	0,1215411	1,4567531	1,1399715	0,0002837	0,0834329
38	4,8644500	12,3476201	0,0656802	4,5272965	5,5735069	-0,0002838	0,3371535	1,4926532	1,1437950	0,0002858	0,2258753
39	4,9330101	12,1198964	0,0668766	4,8040455	5,6459104	-0,0002896	0,1289646	1,4047311	1,1615158	0,0002906	0,0918073
40	4,9750299	11,8458089	0,0700100	4,3713273	5,7369443	-0,0002987	0,6037027	1,4475401	1,1925995	0,0002983	0,4170542
41	5,3381600	11,2779719	0,0775525	4,8496751	5,9330916	-0,0003171	0,4884850	1,4693787	1,2809512	0,0003199	0,3324432
42	5,0247002	11,2752475	0,0003547	3,7235375	3,8370355	-0,0000204	1,3011627	1,3259651	1,2931029	0,0003000	0,9812948
43	4,6432900	11,3828144	0,0066920	3,7437496	4,1738446	-0,0000898	0,8995404	1,4671231	1,2561895	0,0002912	0,6131322
44	4,2683301	11,5055114	0,0212521	3,8376214	4,5220747	-0,0001619	0,4307087	1,4932767	1,2217429	0,0002830	0,2884320
45	4,2666798	11,6449804	0,0425931	3,9796331	4,8567793	-0,0002312	0,2870467	1,4839285	1,1939766	0,0002766	0,1934370
46	3,9969800	12,2034861	0,1123904	4,5779516	5,6009133	-0,0003780	-0,5809717	1,3516456	1,1488685	0,0002691	-0,4298254
47	4,0283198	12,4204982	0,1246811	3,9072911	5,7267541	-0,0003974	0,1210288	1,4888860	1,1325349	0,0002672	0,0812881
48	4,4361601	12,7707195	0,1265598	4,4569459	5,8306727	-0,0003988	-0,0207858	1,4680460	1,0872023	0,0002606	-0,0141588
49	4,1903000	12,8276301	0,1213523	3,9541381	5,8462849	-0,0003895	0,2361619	1,4583764	1,0691690	0,0002580	0,1619348
50	5,3573198	12,5807298	0,1141700	4,5865146	5,8961464	-0,0003736	0,7708052	1,4786547	1,0806031	0,0002627	0,5212882
51	5,2315302	12,2972394	0,1138074	4,5083920	5,9408952	-0,0003699	0,7231382	1,4991873	1,1130198	0,0002711	0,4823535

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
52	5,5714402	10,7310533	0,0958811	4,7480577	6,2372299	-0,0003518	0,8233826	1,4604935	1,3046095	0,0003239	0,5637701
53	4,8264699	11,4811990	0,0339763	4,1913208	4,8515913	-0,0002058	0,6351491	1,3983160	1,2884131	0,0003000	0,4542243
54	4,7104201	11,7881806	0,0848385	4,0766951	5,4228544	-0,0003259	0,6337251	1,4943549	1,2248561	0,0002847	0,4240794
55	4,7052202	11,9732477	0,1071612	4,1258337	5,6159395	-0,0003648	0,5793865	1,4967846	1,2042938	0,0002809	0,3870874
56	4,8231802	12,1730613	0,1218973	4,3702252	5,7377047	-0,0003867	0,4529550	1,4751427	1,1855250	0,0002784	0,3070584
57	4,3138199	12,7122829	0,1063379	4,3244435	5,7634518	-0,0003572	-0,0106236	1,5014105	1,0996387	0,0002679	-0,0070757
58	4,9658599	12,4714819	0,0958282	4,3694769	5,7935070	-0,0003405	0,5963830	1,4978202	1,1035653	0,0002714	0,3981673
59	4,7465000	12,2100689	0,0953710	4,4131784	5,8453408	-0,0003398	0,3333216	1,4939018	1,1284435	0,0002779	0,2231215
60	6,1599398	11,2476867	0,0992058	4,9420000	6,0572538	-0,0003461	1,2179397	1,4522654	1,2543580	0,0003097	0,8386482
61	2,5860000	8,2511590	0,0103122	2,9645747	3,1145396	-0,0000527	-0,3785748	1,3584885	1,1764747	0,0002967	-0,2786735
62	4,1263299	11,8423814	0,0477068	3,9149857	4,8094305	-0,0002429	0,2113442	1,4813984	1,1288290	0,0002618	0,1426654
63	4,2063498	12,0331418	0,0709624	3,7512941	5,0977568	-0,0002991	0,4550558	1,4989155	1,1202864	0,0002610	0,3035900
64	3,4824901	12,2488044	0,0921885	3,7537273	5,3381015	-0,0003433	-0,2712372	1,4939994	1,1145863	0,0002611	-0,1815511
65	5,1490998	12,6869630	0,1164479	4,2755379	5,8725619	-0,0003804	0,8735619	1,5024839	1,0795573	0,0002607	0,5814118
66	5,1672502	12,3929779	0,1173984	4,2753101	5,9252216	-0,0003770	0,8919401	1,4958151	1,1178970	0,0002706	0,5962903
67	4,3357902	11,0069449	0,1094192	5,2529167	6,2045553	-0,0003710	-0,9171265	1,3345040	1,2737527	0,0003128	-0,6872415
68	5,3220501	10,7651317	0,0965724	4,8313269	6,2756388	-0,0003627	0,4907232	1,4821643	1,2900099	0,0003191	0,3310855
69	3,0952401	11,2988225	0,0017387	3,4672319	3,2915657	0,0000407	-0,3719918	1,4962716	1,1798353	0,0002673	-0,2486125
70	4,1666398	11,5534642	0,0035040	3,4816781	3,7975350	-0,0000610	0,6849617	1,4649054	1,1298483	0,0002588	0,4675809
71	4,0987902	11,7079094	0,0132144	3,5065738	4,0987615	-0,0001211	0,5922164	1,4878688	1,1071368	0,0002551	0,3980300
72	4,2193599	12,9854422	0,1024896	4,1378510	5,6617461	-0,0003630	0,0815089	1,5037577	1,0747315	0,0002572	0,0542035
73	4,7877798	12,1507605	0,1123751	4,4065288	5,9016732	-0,0003669	0,3812510	1,5014378	1,1867969	0,0002871	0,2539240
74	4,0740499	11,7736860	0,1152679	4,7156186	6,0017445	-0,0003721	-0,6415687	1,4742111	1,2267018	0,0002977	-0,4351946
75	4,6326499	11,4155804	0,1144042	5,0719837	6,1089143	-0,0003772	-0,4393338	1,3802186	1,2553438	0,0003059	-0,3183074
76	6,6700101	10,3952766	0,0000507	5,8348552	5,8702153	-0,0000105	0,8351549	1,4141327	1,5500178	0,0003873	0,5905775
77	2,9491601	7,5150956	0,0075636	3,0860581	3,2307446	-0,0000447	-0,1368980	1,4707756	1,1032567	0,0002809	-0,0930788
78	3,3575499	7,8163128	0,0081433	3,0503225	3,1940257	-0,0000463	0,3072274	1,4628591	1,0730330	0,0002714	0,2100185
79	2,1767099	8,1385812	0,0056159	2,9906282	3,1363209	-0,0000384	-0,8139183	1,4761303	1,0489016	0,0002627	-0,5513865

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
80	3,4097700	9,2046136	0,0089248	3,0005062	2,8128388	0,0000496	0,4092639	1,4579773	1,1392160	0,0002710	0,2807066
81	4,2252898	11,0252015	0,0166453	3,2341373	2,8570658	0,0001041	0,9911525	1,4441919	1,1277555	0,0002489	0,6863025
82	2,9865799	11,3036049	0,0045795	3,3476371	3,0886904	0,0000613	-0,3610572	1,5002580	1,1444109	0,0002568	-0,2406634
83	2,9789200	11,4245391	0,0008655	3,3388600	3,2574760	0,0000275	-0,3599401	1,4079422	1,1265703	0,0002545	-0,2556497
84	4,0691700	11,5681552	0,0002497	3,4032048	3,4718114	-0,0000152	0,6659652	1,5039960	1,1039828	0,0002512	0,4427972
85	2,7212601	11,7343173	0,0043092	3,4812937	3,7252498	-0,0000651	-0,7600336	1,4865172	1,0826637	0,0002482	-0,5112848
86	2,7580400	11,9212772	0,0136325	3,4068552	4,0057025	-0,0001191	-0,6488152	1,4841096	1,0677118	0,0002466	-0,4371747
87	3,0086000	12,1316592	0,0273535	3,4258865	4,2965150	-0,0001734	-0,4172865	1,4818769	1,0630717	0,0002470	-0,2815932
88	3,4104800	12,6082333	0,0574415	3,4535157	4,8253342	-0,0002636	-0,0430357	1,4547712	1,0779086	0,0002526	-0,0295824
89	3,4071701	12,8469529	0,0680533	3,4775748	5,0283378	-0,0002920	-0,0704047	1,4331552	1,0870318	0,0002554	-0,0491257
90	3,5000000	13,1386842	0,0774384	3,7857563	5,3018538	-0,0003158	-0,2857563	1,4804077	1,0993315	0,0002598	-0,1930254
91	3,2170801	13,1073518	0,0801806	3,9602751	5,4036393	-0,0003196	-0,7431950	1,4971924	1,1151183	0,0002648	-0,4963924
92	4,1761799	12,9390463	0,0845491	4,1481586	5,5089343	-0,0003248	0,0280213	1,5035817	1,1440962	0,0002732	0,0186364
93	4,1104002	12,6590356	0,0910870	4,1509451	5,6276100	-0,0003336	-0,0405449	1,4989552	1,1821281	0,0002839	-0,0270488
94	4,0548201	11,5746332	0,1075763	4,1619149	6,0714303	-0,0003759	-0,1070948	1,4312282	1,2661004	0,0003080	-0,0748272
95	4,1520000	10,9899826	0,0899089	4,4592410	6,3539299	-0,0003832	-0,3072411	1,4178366	1,2715399	0,0003121	-0,2166971
96	6,2750401	10,4702517	0,0007608	5,8833345	5,7615894	0,0000420	0,3917057	1,3408746	1,5493577	0,0003880	0,2921270
97	2,8463900	7,8968921	0,0058493	3,4459097	3,2868422	0,0000432	-0,5995197	1,4716177	1,0575374	0,0002659	-0,4073882
98	3,4956901	7,5379727	0,0001136	3,2469415	3,2470390	-0,0000057	0,2487486	0,7288700	1,0897421	0,0002745	0,3412798
99	2,5294800	7,6481112	0,0011142	3,1718472	3,2252536	-0,0000178	-0,6423672	1,4688183	1,0750415	0,0002705	-0,4373361
100	3,6762700	7,8478330	0,0021784	3,1062788	3,1948876	-0,0000247	0,5699912	1,4854032	1,0489309	0,0002631	0,3837283
101	2,5846500	8,1052327	0,0022452	3,0495646	3,1513452	-0,0000249	-0,4649146	1,4769857	1,0178915	0,0002538	-0,3147726
102	2,4970801	8,3849822	0,0011290	3,0264636	3,0918767	-0,0000175	-0,5293835	1,4862682	0,9931517	0,0002455	-0,3561830
103	2,6573601	8,8965364	0,0012102	2,9835999	2,9320990	0,0000179	-0,3262398	1,4106706	1,0074896	0,0002444	-0,2312657
104	2,5405600	9,1177838	0,0058001	3,0386940	2,8557114	0,0000393	-0,4981339	1,4444860	1,0455448	0,0002511	-0,3448520
105	3,1706400	9,9243524	0,0186621	3,0519928	2,7935050	0,0000776	0,1186472	1,3907458	1,1061825	0,0002567	0,0853120
106	3,0628400	11,2092882	0,0124419	3,2467822	2,8684243	0,0000907	-0,1839423	1,4997223	1,1122646	0,0002464	-0,1226509
107	3,0205500	11,3053800	0,0081599	3,1452170	2,9398235	0,0000758	-0,1246670	1,3762915	1,1114968	0,0002477	-0,0905818

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
108	3,3130901	11,5702316	0,0005636	3,3222679	3,2104029	0,0000212	-0,0091778	1,4725227	1,0824563	0,0002448	-0,0062327
109	2,7127299	11,9368677	0,0043216	3,3278035	3,6485316	-0,0000628	-0,6150736	1,4817940	1,0508335	0,0002413	-0,4150871
110	2,9320700	12,3941599	0,0237655	3,3522137	4,1851637	-0,0001579	-0,4201437	1,4561284	1,0593424	0,0002456	-0,2885348
111	3,4159200	12,9040455	0,0439530	3,7918154	4,6581386	-0,0002280	-0,3758954	1,4846268	1,1043866	0,0002566	-0,2531918
112	3,8893800	13,2351419	0,0565064	4,0759852	5,1019615	-0,0002650	-0,1866052	1,4927207	1,1719371	0,0002756	-0,1250101
113	3,6931400	13,0949899	0,0624546	4,0103101	5,2434730	-0,0002769	-0,3171700	1,4990365	1,2019325	0,0002850	-0,2115826
114	4,5419998	12,8407974	0,0714206	4,1297852	5,4096894	-0,0002951	0,4122147	1,5013165	1,2334149	0,0002948	0,2745688
115	3,9727399	12,5080681	0,0825395	3,8773836	5,6014307	-0,0003191	0,0953563	1,4004966	1,2591956	0,0003030	0,0680875
116	4,0194998	11,7841436	0,0994145	4,6174395	6,0376366	-0,0003741	-0,5979397	1,4885915	1,2788203	0,0003106	-0,4016816
117	5,1929498	11,4514351	0,0976690	4,5625701	6,2486164	-0,0003938	0,6303797	1,4911725	1,2734685	0,0003104	0,4227410
118	4,5854998	10,9473076	0,0656349	4,9422825	6,5041542	-0,0003710	-0,3567827	1,4807840	1,2708593	0,0003113	-0,2409418
119	5,4376998	10,5838692	0,0032754	5,9931437	5,6740689	0,0000901	-0,5554439	1,4584299	1,5452165	0,0003884	-0,3808506
120	3,9400401	8,4791855	0,0061104	3,4624383	3,2891203	0,0000476	0,4776019	1,4845206	1,0014284	0,0002484	0,3217213
121	2,2980800	9,1309011	0,0053382	3,0556108	2,8821738	0,0000390	-0,7575308	1,4748898	0,9614498	0,0002312	-0,5136186
122	3,2832000	11,2077404	0,0143110	3,2431990	2,8172035	0,0000930	0,0400011	1,5023851	1,0706545	0,0002366	0,0266250
123	3,2347100	11,2955848	0,0112452	3,2760967	2,8508243	0,0000845	-0,0413867	1,4885938	1,0750027	0,0002388	-0,0278026
124	2,6372299	11,4085821	0,0071300	3,2338061	2,9209553	0,0000690	-0,5965762	1,5066443	1,0693197	0,0002390	-0,3959635
125	3,2950499	11,5496706	0,0030566	3,2604256	3,0302981	0,0000464	0,0346243	1,4949065	1,0569999	0,0002380	0,0231615
126	2,8731699	11,7193407	0,0003558	3,2725186	3,1835961	0,0000163	-0,3993487	1,4599205	1,0430509	0,0002366	-0,2735414
127	2,8104100	12,1367019	0,0042643	3,3848431	3,6084282	-0,0000610	-0,5744331	1,4751149	1,0350789	0,0002375	-0,3894158
128	2,8240299	12,3830663	0,0111630	3,4441206	3,8597386	-0,0001030	-0,6200906	1,4957081	1,0519166	0,0002418	-0,4145800
129	3,3771100	12,9246054	0,0258608	3,5931654	4,3281973	-0,0001695	-0,2160554	1,5004195	1,1217283	0,0002575	-0,1439967
130	3,2031500	13,1656477	0,0300308	3,8400953	4,5083712	-0,0001875	-0,6369453	1,4609385	1,1611081	0,0002668	-0,4359836
131	3,7284801	13,3252147	0,0327719	3,7164414	4,6592101	-0,0001984	0,0120387	1,4805426	1,1979211	0,0002765	0,0081312
132	3,3540299	13,3621209	0,0363357	4,0315658	4,8083832	-0,0002096	-0,6775359	1,4775826	1,2321811	0,0002869	-0,4585435
133	4,2271800	13,0496156	0,0531124	4,3006932	5,1919022	-0,0002546	-0,0735132	1,4584525	1,2882812	0,0003063	-0,0504049
134	3,8000000	12,7487693	0,0669738	3,7649017	5,4431350	-0,0002910	0,0350982	1,3135829	1,3020608	0,0003124	0,0267194
135	5,1664200	11,3814903	0,0837688	4,8330046	6,5124315	-0,0004155	0,3334154	1,4884435	1,2663825	0,0003082	0,2240027

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
136	5,6643400	11,1347194	0,0629061	5,2229173	6,6088337	-0,0003867	0,4414228	1,4687981	1,2692247	0,0003091	0,3005333
137	5,3745599	10,9582387	0,0362366	5,6458010	6,5489482	-0,0003098	-0,2712412	1,3752114	1,2988214	0,0003173	-0,1972360
138	6,5490298	10,7357872	0,0062632	6,2528776	5,6283016	0,0001290	0,2961522	1,3639780	1,5433436	0,0003892	0,2171239
139	6,8682098	10,7414300	0,0621858	6,2303958	5,0954156	0,0003748	0,6378140	1,3697544	1,7173398	0,0004403	0,4656412
140	4,1422601	9,9915981	0,0265262	3,7259488	3,2739695	0,0001141	0,4163113	1,4860248	1,0853884	0,0002655	0,2801510
141	4,2284002	9,8389447	0,0199189	3,6905280	3,2821548	0,0000992	0,5378722	1,4862425	1,0269159	0,0002513	0,3619007
142	3,7689099	9,6260064	0,0138495	3,6517546	3,2939496	0,0000823	0,1171554	1,4792748	0,9825467	0,0002408	0,0791978
143	2,8306401	9,1353926	0,0038709	3,1187157	2,9567149	0,0000365	-0,2880757	1,4812492	0,8929362	0,0002147	-0,1944816
144	3,3836300	9,2848354	0,0072622	3,0948130	2,8862173	0,0000496	0,2888170	1,4912900	0,8989670	0,0002149	0,1936693
145	3,0186300	9,4241306	0,0121553	3,0180497	2,8228008	0,0000639	0,0005803	1,4393807	0,9261493	0,0002207	0,0004032
146	3,2754400	10,2630814	0,0155280	3,2738601	2,8501923	0,0000785	0,0015799	1,4246116	0,9968266	0,0002340	0,0011090
147	3,1977999	11,0922679	0,0129615	3,2760966	2,8753274	0,0000857	-0,0782966	1,4978896	0,9920656	0,0002200	-0,0522713
148	2,7935300	11,1881326	0,0138471	3,1426363	2,8188314	0,0000917	-0,3491063	1,4751348	1,0291724	0,0002278	-0,2366606
149	2,8410201	11,2617547	0,0120187	3,1109735	2,8281435	0,0000867	-0,2699534	1,4564666	1,0346125	0,0002299	-0,1853482
150	2,3556900	11,3645878	0,0089400	3,0713384	2,8682083	0,0000759	-0,7156484	1,3870155	1,0325429	0,0002307	-0,5159628
151	2,9556301	11,4937862	0,0051788	3,2282655	2,9443267	0,0000588	-0,2726355	1,5013370	1,0242628	0,0002304	-0,1815951
152	2,9563301	11,6533227	0,0018164	3,2152600	3,0587288	0,0000357	-0,2589299	1,5068923	1,0146250	0,0002297	-0,1718304
153	2,8259101	12,3101174	0,0048333	3,4078100	3,6422137	-0,0000656	-0,5818999	1,4598923	1,0346805	0,0002364	-0,3985910
154	3,4079900	13,3927164	0,0187480	3,9259569	4,4046207	-0,0001486	-0,5179669	1,4006747	1,2335552	0,0002820	-0,3697982
155	3,7655599	13,4486978	0,0277484	4,0394949	4,7576129	-0,0001829	-0,2739350	1,4887056	1,3174094	0,0003079	-0,1840089
156	3,0402400	13,2830048	0,0386948	4,0832351	5,0101228	-0,0002189	-1,0429951	1,4972077	1,3380777	0,0003166	-0,6966269
157	4,4931002	12,6866439	0,0729876	4,1095335	5,6791968	-0,0003261	0,3835667	1,4659003	1,3298441	0,0003207	0,2616595
158	4,0474401	11,9560838	0,0921918	4,7632177	6,3961530	-0,0004278	-0,7157776	1,4783231	1,2848339	0,0003120	-0,4841821
159	5,9512200	10,9558855	0,0000374	5,9900652	6,0236005	-0,0000107	-0,0388451	1,4175318	1,4525122	0,0003622	-0,0274034
160	7,2811499	10,9274324	0,0083183	6,3127358	5,6428874	0,0001550	0,9684141	1,4553403	1,5472503	0,0003911	0,6654211
161	7,5204000	10,9764150	0,0627839	7,0880579	5,1432299	0,0003933	0,4323422	1,3374146	1,7088597	0,0004391	0,3232671
162	4,4615598	12,9726341	0,0688291	4,1961868	5,6955556	-0,0003303	0,2653730	1,4806512	1,3451670	0,0003246	0,1792272
163	6,8738499	11,1982291	0,0296737	6,8535602	5,4583236	0,0002965	0,0202896	1,4018575	1,6418755	0,0004194	0,0144734

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
164	7,5766902	11,3735805	0,0732107	7,2865953	5,2634700	0,0004426	0,2900949	1,4125757	1,7583493	0,0004539	0,2053659
165	3,3715100	10,2185976	0,0083500	3,3468948	3,0009670	0,0000753	0,0246152	1,4899641	0,8689627	0,0002080	0,0165207
166	3,4581399	10,1810931	0,0118221	3,2719867	2,9079512	0,0000877	0,1861532	1,5025007	0,8609736	0,0002047	0,1238956
167	3,0485799	10,1247539	0,0251499	3,1533673	2,7005566	0,0001222	-0,1047874	1,4924827	0,8781801	0,0002045	-0,0702101
168	3,0150101	10,2300374	0,0210629	3,3340518	2,7795132	0,0001120	-0,3190416	1,4760764	0,9419947	0,0002200	-0,2161417
169	2,9847801	10,5548137	0,0093061	3,3189071	2,9962561	0,0000774	-0,3341270	1,4927414	0,9399415	0,0002187	-0,2238345
170	3,2870901	11,0202086	0,0042961	3,4363367	3,1465422	0,0000570	-0,1492466	1,4885464	0,9427619	0,0002122	-0,1002633
171	3,2798600	11,0371643	0,0056028	3,4234878	3,0921023	0,0000657	-0,1436278	1,4928507	0,9568998	0,0002141	-0,0962104
172	3,0095799	11,0453935	0,0067276	3,3635592	3,0392431	0,0000726	-0,3539793	1,5072900	0,9662363	0,0002158	-0,2348449
173	2,8979199	11,0989139	0,0066473	3,3396123	2,9876275	0,0000725	-0,4416924	1,5022857	0,9688321	0,0002172	-0,2940136
174	2,6788001	11,1578603	0,0052420	3,2927904	3,0015659	0,0000644	-0,6139903	1,5080114	0,9646188	0,0002174	-0,4071523
175	2,6406200	11,2417207	0,0032480	3,2594675	3,0474475	0,0000510	-0,6188476	1,5041213	0,9593344	0,0002174	-0,4114346
176	2,9351399	11,3539428	0,0012212	3,2940749	3,1310627	0,0000316	-0,3589350	1,4803193	0,9551383	0,0002177	-0,2424714
177	2,8915401	11,4975859	0,0000492	3,2903909	3,2563982	0,0000065	-0,3988509	1,4657000	0,9538709	0,0002185	-0,2721231
178	2,9909699	11,6873187	0,0005084	3,3240810	3,4147734	-0,0000216	-0,3331111	1,4965959	0,9595847	0,0002204	-0,2225792
179	3,9218099	13,3617867	0,0081237	3,7982528	4,2434177	-0,0001058	0,1235571	1,4865336	1,2018259	0,0002738	0,0831176
180	3,4695301	13,1642735	0,0722277	4,0487039	5,8294263	-0,0003564	-0,5791738	1,4087178	1,3302051	0,0003224	-0,4111354
181	6,3225698	11,5275369	0,0228110	6,5008646	5,6870827	0,0002780	-0,1782948	1,3731721	1,6509071	0,0004220	-0,1298415
182	6,3433299	11,6293454	0,0408608	6,9290827	5,5650464	0,0003628	-0,5857528	1,4755853	1,7118374	0,0004403	-0,3969630
183	8,5932798	11,9368123	0,0513074	7,5420363	5,7447154	0,0004062	1,0512435	1,4222790	1,7706241	0,0004595	0,7391261
184	3,9815800	9,9376418	0,0241937	3,8774219	3,4597630	0,0001090	0,1041581	1,4795783	1,1750806	0,0002915	0,0703972
185	3,4188600	10,1349680	0,0247018	3,7698780	3,3338186	0,0001175	-0,3510180	1,4898595	1,1171039	0,0002728	-0,2356048
186	3,4209399	10,1845668	0,0209208	3,6698417	3,3092690	0,0001109	-0,2489018	1,4674191	1,0717634	0,0002609	-0,1696187
187	3,7847700	10,1112674	0,0117580	3,5325305	3,3000956	0,0000852	0,2522395	1,4132059	0,9757282	0,0002373	0,1784874
188	3,7836800	9,9876140	0,0082383	3,5291956	3,2954160	0,0000710	0,2544844	1,4761412	0,9424894	0,0002292	0,1723984
189	4,1198201	9,6715456	0,0043884	3,4330919	3,2487230	0,0000499	0,6867282	1,4974645	0,9188324	0,0002233	0,4585940
190	3,1832800	9,4448414	0,0043256	3,2745344	3,0798369	0,0000459	-0,0912545	1,4967687	0,8991694	0,0002176	-0,0609676
191	3,4898400	9,5442028	0,0082167	3,1311448	2,9320953	0,0000610	0,3586952	1,4767680	0,8683350	0,0002073	0,2428921

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
192	3,4408901	9,7594557	0,0200631	3,1219606	2,7560757	0,0000926	0,3189295	1,4948883	0,9052994	0,0002134	0,2133467
193	2,9746799	10,1816486	0,0171829	3,3295669	2,8282065	0,0000894	-0,3548870	1,4076953	0,9690238	0,0002281	-0,2521050
194	3,2643900	10,4183915	0,0122874	3,3028374	2,9109891	0,0000780	-0,0384475	1,4739783	0,9597879	0,0002251	-0,0260841
195	3,7045701	11,0402743	0,0075704	3,3339882	3,0108290	0,0000688	0,3705819	1,4987840	0,9467587	0,0002128	0,2472550
196	3,1113801	11,1020748	0,0105935	3,1939483	2,9112537	0,0000837	-0,0825682	1,4594194	0,9832171	0,0002185	-0,0565761
197	2,5080600	11,1391388	0,0108775	3,2754550	2,8814193	0,0000855	-0,7673951	1,5064765	0,9933300	0,0002208	-0,5093973
198	3,0757000	11,1964992	0,0099885	3,3045791	2,8746752	0,0000824	-0,2288791	1,4849061	0,9966293	0,0002223	-0,1541371
199	2,7258799	11,2811777	0,0079475	3,2749226	2,8965094	0,0000739	-0,5490427	1,4903615	0,9943691	0,0002229	-0,3683957
200	2,4884100	11,3925496	0,0051500	3,1811470	2,9502981	0,0000601	-0,6927370	1,4938289	0,9883267	0,0002228	-0,4637325
201	2,3726201	11,5311867	0,0021855	3,2228493	3,0444789	0,0000398	-0,8502291	1,5060575	0,9811627	0,0002226	-0,5645396
202	4,0092902	9,3689773	0,0017733	4,0243980	3,9136203	0,0000310	-0,0151078	1,4847316	1,0492152	0,0002699	-0,0101754
203	3,8916399	9,5803300	0,0045219	3,9568002	3,7848003	0,0000523	-0,0651602	1,4746413	1,0371648	0,0002622	-0,0441872
204	3,6085200	9,8424345	0,0067648	3,9431960	3,6732596	0,0000680	-0,3346759	1,4978462	1,0276386	0,0002560	-0,2234381
205	3,9043801	10,9843500	0,0052577	3,7987326	3,4134707	0,0000739	0,1056475	1,4463801	0,9528212	0,0002304	0,0730427
206	3,3554599	11,1581163	0,0042288	3,6692829	3,3724853	0,0000680	-0,3138230	1,5042477	0,9249841	0,0002229	-0,2086246
207	3,3038299	11,2479407	0,0037283	3,6407992	3,3214333	0,0000645	-0,3369693	1,4756461	0,9012324	0,0002166	-0,2283537
208	3,6354301	11,2568242	0,0038912	3,5378104	3,2531288	0,0000657	0,0976197	1,5058660	0,8838532	0,0002119	0,0648263
209	3,4849000	11,2041054	0,0049678	3,4597227	3,1627051	0,0000733	0,0251773	1,5067142	0,8730503	0,0002089	0,0167101
210	3,1110101	11,1136885	0,0072311	3,4116506	3,0541832	0,0000868	-0,3006405	1,5067272	0,8674900	0,0002068	-0,1995321
211	2,8481700	10,8909890	0,0162180	3,4208764	2,8186184	0,0001244	-0,5727064	1,4798186	0,8683792	0,0002043	-0,3870112
212	2,3351901	10,6631028	0,0278922	3,1424581	2,6441183	0,0001569	-0,8072681	1,4589717	0,8848216	0,0002048	-0,5533131
213	3,5386600	10,5604956	0,0136558	3,5466574	2,9415131	0,0001064	-0,0079974	1,4184334	0,9358511	0,0002155	-0,0056382
214	2,8961401	10,9189129	0,0023796	3,5722687	3,3021744	0,0000460	-0,6761286	1,4158131	0,9278205	0,0002109	-0,4775550
215	3,3517599	11,0011681	0,0023537	3,5356230	3,3076196	0,0000466	-0,1838631	1,4987781	0,9478507	0,0002130	-0,1226753
216	3,5145099	10,9949878	0,0031342	3,5189562	3,2593931	0,0000541	-0,0044463	1,5027387	0,9574636	0,0002145	-0,0029588
217	2,8081200	10,9776022	0,0043340	3,5311602	3,1636489	0,0000637	-0,7230402	1,4457307	0,9608928	0,0002157	-0,5001210
218	2,8367000	10,9866229	0,0039707	3,3641301	3,1467661	0,0000610	-0,5274301	1,4807947	0,9567237	0,0002156	-0,3561805
219	2,4788699	11,0639289	0,0014163	3,4059613	3,2116905	0,0000366	-0,9270913	1,4731796	0,9494370	0,0002162	-0,6293132

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
220	4,5174999	13,4117604	0,0131861	4,0372642	4,6177711	-0,0001496	0,4802357	1,4639077	1,1999586	0,0002791	0,3280506
221	3,9358499	13,5175399	0,0212696	4,1630580	4,8780792	-0,0001890	-0,2272081	1,4503775	1,2508559	0,0002943	-0,1566545
222	3,9267099	13,0857044	0,0858554	4,2772440	6,1359141	-0,0004147	-0,3505341	1,4638276	1,2657725	0,0003105	-0,2394640
223	4,3498502	12,7771694	0,1078300	4,5850686	6,6722657	-0,0005075	-0,2352184	1,4685929	1,2452226	0,0003083	-0,1601659
224	6,2892599	11,9428407	0,0133550	6,9480443	6,0528634	0,0002311	-0,6587844	1,4767949	1,6548924	0,0004240	-0,4460907
225	6,4625301	12,0811374	0,0247317	6,7676796	5,9662789	0,0003086	-0,3051494	1,2572625	1,7086457	0,0004407	-0,2427094
226	7,5423999	12,2473696	0,0294773	7,3656095	6,0512067	0,0003357	0,1767904	1,4749521	1,7375912	0,0004506	0,1198618
227	3,4247401	9,9593843	0,0156941	3,7683711	3,5042236	0,0000969	-0,3436310	1,4076206	1,0922304	0,0002696	-0,2441219
228	3,4593201	10,1572401	0,0160790	3,6778322	3,4295916	0,0001028	-0,2185122	1,3610932	1,0722624	0,0002623	-0,1605417
229	3,4270899	10,4865631	0,0118206	3,7758054	3,3482492	0,0000950	-0,3487155	1,4894638	1,0071905	0,0002443	-0,2341215
230	4,0465999	10,5933498	0,0067119	3,6332942	3,3090849	0,0000738	0,4133056	1,4987749	0,9337504	0,0002258	0,2757623
231	3,3212299	10,3698554	0,0049301	3,3413098	3,1694116	0,0000608	-0,0200798	1,4337580	0,8848478	0,0002132	-0,0140050
232	3,3664501	10,2823621	0,0061115	3,3443015	3,0900319	0,0000660	0,0221485	1,5024923	0,8773137	0,0002109	0,0147412
233	4,4505601	9,0016214	0,0037586	4,1904770	4,3445489	-0,0000445	0,2600831	1,4773241	1,0506104	0,0002820	0,1760501
234	3,9654901	9,1606406	0,0000089	4,0989176	4,1085714	-0,0000023	-0,1334275	1,4840541	0,9967388	0,0002597	-0,0899074
235	3,8610101	9,3854529	0,0003790	4,0763339	3,9945937	0,0000160	-0,2153238	1,4160030	0,9784700	0,0002507	-0,1520645
236	3,1295099	10,4820987	0,0019597	3,8980498	3,7193563	0,0000454	-0,7685399	1,5038226	0,9515607	0,0002340	-0,5110576
237	3,2879300	10,9068328	0,0016921	3,8403471	3,6588001	0,0000452	-0,5524171	1,5056984	0,9410859	0,0002294	-0,3668843
238	3,3420899	11,2994692	0,0013404	3,7724217	3,6053144	0,0000425	-0,4303318	1,5046697	0,9259679	0,0002242	-0,2859975
239	3,2583699	11,8491569	0,0011547	3,6300699	3,4772616	0,0000423	-0,3717000	1,4902757	0,8914427	0,0002137	-0,2494169
240	3,1552501	11,9593908	0,0016630	3,5857068	3,3790818	0,0000513	-0,4304567	1,5068812	0,8783916	0,0002098	-0,2856607
241	3,4511600	11,9621417	0,0029592	3,6041945	3,2533720	0,0000682	-0,1530345	1,4647334	0,8719415	0,0002075	-0,1044794
242	3,1690400	11,8763944	0,0055753	3,4967646	3,1048347	0,0000925	-0,3277246	1,5082201	0,8729904	0,0002069	-0,2172923
243	3,0171499	11,3413858	0,0232314	3,3949017	2,6697036	0,0001770	-0,3777517	1,5055826	0,9069829	0,0002100	-0,2509007
244	2,3448801	11,1419353	0,0295261	3,1820411	2,5883436	0,0001949	-0,8371610	1,4417396	0,9183224	0,0002111	-0,5806603
245	2,4715099	10,7587511	0,0141530	3,4790426	2,9947199	0,0001251	-1,0075326	1,4913807	0,9317604	0,0002115	-0,6755704
246	2,6070299	10,9193555	0,0041970	3,6311081	3,3180529	0,0000680	-1,0240782	1,5021818	0,9261128	0,0002090	-0,6817272
247	3,3178999	11,0143837	0,0016422	3,6777264	3,4698810	0,0000427	-0,3598265	1,4989035	0,9390958	0,0002107	-0,2400598

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
248	3,5265601	11,0132509	0,0017018	3,6802901	3,4654912	0,0000435	-0,1537300	1,4978782	0,9512050	0,0002130	-0,1026319
249	3,9630201	10,9498260	0,0026560	3,5434950	3,3800988	0,0000543	0,4195251	1,4340293	0,9623992	0,0002158	0,2925498
250	3,1198900	10,9174329	0,0029231	3,5723697	3,3390039	0,0000568	-0,4524797	1,5043902	0,9604894	0,0002161	-0,3007729
251	4,1536698	10,8957599	0,0025570	3,5916830	3,3247722	0,0000531	0,5619869	1,4941801	0,9571321	0,0002163	0,3761172
252	3,0983801	10,8915678	0,0016515	3,5553873	3,3429513	0,0000428	-0,4570072	1,4945287	0,9564945	0,0002172	-0,3057868
253	4,5006900	13,0268149	0,0343516	4,1262127	5,3562654	-0,0002697	0,3744772	1,4486684	1,1503504	0,0002763	0,2584975
254	4,7272801	11,8760326	0,0569919	6,0214682	8,0343219	-0,0005412	-1,2941880	1,4471252	1,2934648	0,0003235	-0,8943166
255	7,5087800	12,8129620	0,0121197	7,6124766	6,6527543	0,0002378	-0,1036966	1,4697414	1,7143534	0,0004478	-0,0705543
256	4,3637199	9,0031666	0,0017319	4,1347899	4,3007094	-0,0000339	0,2289301	1,4301346	0,9571804	0,0002519	0,1600759
257	4,4755101	9,2054356	0,0006196	4,1224129	4,2164789	-0,0000216	0,3530973	1,4870934	0,9329829	0,0002420	0,2374412
258	3,9282501	9,9351799	0,0000906	4,0388351	4,0818413	-0,0000098	-0,1105850	1,4970721	0,9053096	0,0002279	-0,0738675
259	3,9707799	10,4211830	0,0000966	3,9988682	4,0349513	-0,0000110	-0,0280883	1,4743487	0,8988726	0,0002234	-0,0190513
260	5,1882801	10,9431187	0,0001711	3,9090787	3,9984719	-0,0000159	1,2792014	1,4056836	0,8935558	0,0002196	0,9100209
261	2,9737599	11,9096457	0,0003239	3,7934742	3,9159138	-0,0000250	-0,8197143	1,4864037	0,8793009	0,0002123	-0,5514749
262	2,8840401	12,2562693	0,0002025	3,7525982	3,8383431	-0,0000206	-0,8685581	1,5086478	0,8712856	0,0002090	-0,5757196
263	2,9990399	12,5319668	0,0002212	3,6473217	3,5535464	0,0000222	-0,6482818	1,5091207	0,8674568	0,0002060	-0,4295758
264	2,8284299	12,4643132	0,0016581	3,6412409	3,3517670	0,0000604	-0,8128110	1,4944481	0,8770540	0,0002072	-0,5438871
265	2,8915000	11,8016238	0,0184152	3,3063998	2,7527686	0,0001882	-0,4148998	1,4211875	0,9335429	0,0002153	-0,2919388
266	3,0706601	11,3146565	0,0308580	3,4106161	2,5876488	0,0002299	-0,3399559	1,4853347	0,9496036	0,0002163	-0,2288750
267	3,0010300	11,1358811	0,0322060	3,5889761	2,6121567	0,0002285	-0,5879461	1,5051341	0,9482936	0,0002151	-0,3906271
268	3,3931100	10,9767640	0,0165883	3,4359169	3,0288086	0,0001542	-0,0428068	1,3752430	0,9307190	0,0002087	-0,0311268
269	3,1952901	11,1082239	0,0034695	3,7765094	3,5071258	0,0000684	-0,5812193	1,4963645	0,9251705	0,0002062	-0,3884209
270	3,5205801	11,1187518	0,0023570	3,8603002	3,5776106	0,0000560	-0,3397201	1,4917071	0,9349280	0,0002083	-0,2277392
271	3,3450799	11,0961479	0,0021349	3,7501785	3,5923807	0,0000530	-0,4050986	1,4255068	0,9465500	0,0002111	-0,2841787
272	4,9221702	11,0492497	0,0023689	3,8947132	3,5688687	0,0000555	1,0274570	1,4286903	0,9553439	0,0002135	0,7191601
273	3,1514900	10,9899023	0,0027370	3,6953536	3,5282895	0,0000593	-0,5438637	1,4130604	0,9591677	0,0002151	-0,3848835
274	4,6285400	10,8784492	0,0023932	3,7924241	3,4834471	0,0000553	0,8361160	1,4522470	0,9615980	0,0002177	0,5757395
275	4,3619199	10,8447822	0,0014910	3,7107101	3,5050101	0,0000439	0,6512098	1,5014237	0,9686135	0,0002202	0,4337282

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
276	4,1875901	11,9207723	0,0105095	3,8906994	4,7131261	-0,0001658	0,2968907	1,4072369	1,0677158	0,0002522	0,2109742
277	4,8881798	11,4358057	0,1300021	4,9138057	8,3521851	-0,0007438	-0,0256259	1,3605154	1,1665518	0,0003013	-0,0188355
278	8,1070204	13,4483790	0,0022314	7,8782869	7,3684165	0,0001124	0,2287334	1,3761297	1,6910101	0,0004462	0,1662150
279	3,9985700	9,1015002	0,0077312	4,3736460	4,5850444	-0,0000763	-0,3750760	1,4604083	0,9918056	0,0002683	-0,2568296
280	4,3244500	8,9539954	0,0063484	4,3381592	4,5271603	-0,0000682	-0,0137091	1,4607287	0,9585037	0,0002568	-0,0093851
281	4,7519898	9,3526235	0,0036299	4,1139325	4,4161520	-0,0000604	0,6380573	1,4502371	0,8753142	0,0002262	0,4399676
282	3,8680501	10,2516504	0,0050166	4,0570554	4,4455702	-0,0000858	-0,1890053	1,4964991	0,8498235	0,0002139	-0,1262983
283	5,5307202	11,3908915	0,0074846	4,0157334	4,5174567	-0,0001253	1,5149869	1,5048223	0,8415885	0,0002068	1,0067547
284	4,6229701	11,9239700	0,0080094	3,9049283	4,5258930	-0,0001391	0,7180418	1,5061006	0,8403990	0,0002043	0,4767556
285	3,2417700	12,3576012	0,0073063	3,9357356	4,4812584	-0,0001400	-0,6939655	1,5001777	0,8405259	0,0002026	-0,4625889
286	2,3989100	12,6507741	0,0052797	3,8480844	4,3637864	-0,0001231	-1,4491743	1,5083173	0,8436832	0,0002021	-0,9607888
287	2,1573801	12,7842052	0,0025023	3,7714690	4,1660224	-0,0000861	-1,6140888	1,5052846	0,8524939	0,0002030	-1,0722815
288	2,6227200	12,7633729	0,0003485	3,7435547	3,9036915	-0,0000321	-1,1208347	1,4840816	0,8693152	0,0002056	-0,7552379
289	3,2860999	12,6165987	0,0003793	3,7453381	3,6027972	0,0000330	-0,4592381	1,5086387	0,8932809	0,0002095	-0,3044057
290	3,1112101	12,3842151	0,0036535	3,7681513	3,3033264	0,0001002	-0,6569412	1,5026407	0,9194268	0,0002136	-0,4371911
291	3,3489799	12,1096647	0,0099820	3,8494350	3,0418910	0,0001608	-0,5004550	1,4819932	0,9413542	0,0002168	-0,3376905
292	3,2141099	11,8338515	0,0178343	3,7727484	2,8466445	0,0002079	-0,5586385	1,5062398	0,9550588	0,0002184	-0,3708828
293	3,3531899	11,5911946	0,0248921	3,6524376	2,7345258	0,0002374	-0,2992477	1,4988951	0,9602204	0,0002182	-0,1996455
294	3,4380300	11,4010557	0,0289702	4,0658567	2,7112900	0,0002476	-0,6278267	1,4468937	0,9581552	0,0002165	-0,4339135
295	4,5687900	11,3048925	0,0045053	3,9978353	3,6398377	0,0000838	0,5709546	1,5067685	0,9245386	0,0002048	0,3789266
296	4,7749901	10,9793733	0,0033916	3,9042068	3,5980529	0,0000704	0,8707832	1,5061243	0,9602444	0,0002176	0,5781616
297	4,3357100	10,8985998	0,0007630	3,8287655	3,7043100	0,0000346	0,5069446	1,4844937	0,9989535	0,0002279	0,3414933
298	3,0890000	10,9230148	0,0000098	3,8457427	3,8350010	0,0000041	-0,7567428	1,3769383	1,0264110	0,0002347	-0,5495836
299	6,7471099	12,8879643	0,0134779	7,2079549	8,2666682	-0,0003118	-0,4608450	1,4308928	1,4149279	0,0003691	-0,3220681
300	7,7006202	14,1825606	0,0013288	8,2330482	8,5722018	-0,0000944	-0,5324280	1,4753052	1,6558561	0,0004455	-0,3608935
301	8,0910797	13,9386049	0,0146179	8,5190884	9,7272276	-0,0003057	-0,4280087	1,4617551	1,6078030	0,0004416	-0,2928046
302	8,1368399	15,1003278	0,0184210	8,6692254	10,0270132	-0,0004178	-0,5323855	1,4447375	1,6254916	0,0004456	-0,3684998
303	9,8833904	14,2950764	0,0497574	9,0083044	11,2496104	-0,0006188	0,8750860	1,4819458	1,5788873	0,0004471	0,5904980

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
304	9,2169399	13,7718358	0,0647476	9,1725539	11,6012058	-0,0006759	0,0443860	1,4794618	1,6044763	0,0004590	0,0300015
305	10,6415005	12,7891125	0,0881666	9,7558047	12,1097107	-0,0007470	0,8856958	1,4546115	1,6816821	0,0004891	0,6088882
306	8,4106102	12,4882077	0,0937438	10,3520442	12,3226492	-0,0007758	-1,9414340	1,3118489	1,7040313	0,0005004	-1,4799220
307	12,1134005	13,0553353	0,0848622	10,4434920	13,3405393	-0,0009502	1,6699085	1,4425490	1,8302317	0,0005676	1,1576095
308	4,9499102	9,4076816	0,0075774	4,4595487	4,6845289	-0,0000872	0,4903615	1,4534016	0,9613757	0,0002609	0,3373888
309	4,7762599	9,0540663	0,0081990	4,4273481	4,6404483	-0,0000913	0,3489118	1,4133030	0,8664884	0,0002284	0,2468768
310	5,3762798	9,5560671	0,0129721	4,1816280	4,7815526	-0,0001342	1,1946518	1,4911622	0,8227521	0,0002121	0,8011548
311	4,6455998	9,9975763	0,0173807	4,0596832	4,9117397	-0,0001710	0,5859166	1,4654488	0,8098310	0,0002063	0,3998206
312	4,1636901	11,6180478	0,0302744	4,1464597	5,3384249	-0,0002927	0,0172304	1,5052030	0,8052746	0,0001978	0,0114472
313	3,0741799	12,0813720	0,0299793	3,8849530	5,3758538	-0,0003089	-0,8107732	1,4923414	0,8129923	0,0001976	-0,5432893
314	2,5477300	12,4275129	0,0257715	3,8762898	5,3002536	-0,0002982	-1,3285598	1,4967130	0,8237709	0,0001986	-0,8876517
315	3,3007901	12,6180406	0,0028706	3,8915068	4,3914544	-0,0001013	-0,5907167	1,4897224	0,8822619	0,0002074	-0,3965281
316	2,9219699	11,7768381	0,0166716	4,2009608	3,0363715	0,0002164	-1,2789909	1,4587605	0,9597469	0,0002178	-0,8767655
317	2,9600301	11,6093323	0,0235867	3,8627873	2,9180833	0,0002481	-0,9027573	1,4957815	0,9625252	0,0002171	-0,6035355
318	3,2663500	11,4466731	0,0272253	4,2716939	2,9672259	0,0002489	-1,0053439	1,4763432	0,9516044	0,0002122	-0,6809690
319	3,5394700	11,4478490	0,0239781	3,9119101	3,0965490	0,0002267	-0,3724402	1,4842710	0,9416434	0,0002088	-0,2509246
320	3,2005200	11,4796406	0,0191836	4,1419014	3,2594051	0,0001973	-0,9413814	1,5080315	0,9304545	0,0002056	-0,6242452
321	4,5152602	11,5593645	0,0104769	4,2352245	3,5742226	0,0001390	0,2800357	1,5030932	0,9163733	0,0002020	0,1863063
322	4,8860402	11,5681197	0,0080753	4,1434522	3,6752895	0,0001195	0,7425880	1,4989322	0,9155492	0,0002023	0,4954113
323	4,9390502	11,3051156	0,0061942	4,1204693	3,6828193	0,0001008	0,8185809	1,5062617	0,9309446	0,0002101	0,5434520
324	4,7036200	11,2143269	0,0051437	3,9854486	3,6798139	0,0000926	0,7181713	1,4607668	0,9458249	0,0002146	0,4916400
325	4,5697498	11,1454160	0,0032075	4,1109711	3,7240965	0,0000748	0,4587787	1,4674570	0,9692540	0,0002209	0,3126352
326	4,1499901	11,1377429	0,0000184	4,0216885	4,0019712	0,0000063	0,1283015	1,4481148	1,0314490	0,0002366	0,0885990
327	2,7223301	11,2229008	0,0006825	4,1032166	4,2348843	-0,0000413	-1,3808865	1,4504057	1,0608879	0,0002443	-0,9520691
328	3,3514299	11,5470285	0,0061021	4,3457669	4,8380328	-0,0001477	-0,9943369	1,4567495	1,0962274	0,0002567	-0,6825723
329	8,0333595	14,5561107	0,0042763	7,9687659	8,7744543	-0,0001886	0,0645936	1,4032001	1,6450070	0,0004424	0,0460331
330	8,1212502	14,6907021	0,0057059	8,3819611	9,0615598	-0,0002149	-0,2607109	1,4184628	1,6571801	0,0004482	-0,1837982
331	8,9142599	13,7259641	0,0461536	8,6575448	10,9845936	-0,0005505	0,2567152	1,3968573	1,6298603	0,0004591	0,1837805

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
332	9,5112495	13,2198581	0,0632608	8,7830436	11,4092405	-0,0006257	0,7282059	1,3845376	1,6795774	0,0004772	0,5259560
333	3,7105999	11,4968535	0,0007574	4,6682857	4,8643805	-0,0000478	-0,9576858	1,4181667	1,1483252	0,0003373	-0,6752985
334	3,7255099	11,1627036	0,0016603	4,6125933	4,8397393	-0,0000643	-0,8870834	1,4920142	1,0793459	0,0003110	-0,5945543
335	3,8700399	10,7566341	0,0032453	4,5900776	4,8275743	-0,0000813	-0,7200377	1,4859900	1,0198599	0,0002878	-0,4845508
336	4,6430802	10,3137504	0,0052813	4,5819427	4,8135252	-0,0000941	0,0611375	1,4433127	0,9702924	0,0002687	0,0423592
337	5,0601802	10,5809970	0,0581417	3,8916818	5,9557263	-0,0003941	1,1684984	1,4470352	0,7811779	0,0001958	0,8075120
338	4,2565999	11,0449213	0,0666383	4,3727954	6,2020857	-0,0004535	-0,1161955	1,5035310	0,7920481	0,0001960	-0,0772817
339	3,2707701	11,4723500	0,0691000	4,1834050	6,3477624	-0,0004895	-0,9126349	1,5048419	0,8079942	0,0001976	-0,6064656
340	3,6514699	12,2422853	0,0359431	4,2296081	5,8612327	-0,0003824	-0,5781382	1,5069846	0,8621744	0,0002050	-0,3836391
341	3,9527299	12,1378010	0,0002988	4,2124829	4,3453515	-0,0000334	-0,2597530	1,5001619	0,9216556	0,0002126	-0,1731500
342	3,4623101	11,9969057	0,0016869	4,1573734	3,8722685	0,0000768	-0,6950633	1,4871410	0,9403755	0,0002150	-0,4673822
343	3,7526500	11,7454781	0,0165741	4,1131427	3,2535455	0,0002241	-0,3604927	1,4958311	0,9649565	0,0002175	-0,2409983
344	3,2134500	11,6753957	0,0232623	3,8931134	3,1318325	0,0002559	-0,6796635	1,4255236	0,9680338	0,0002169	-0,4767816
345	3,3077300	11,6539070	0,0263996	4,4303074	3,1219806	0,0002631	-1,1225775	1,4954637	0,9652343	0,0002151	-0,7506551
346	3,1835899	11,6758608	0,0258782	4,1746302	3,1968041	0,0002519	-0,9910403	1,4988973	0,9576040	0,0002124	-0,6611796
347	3,5664201	11,7287808	0,0227020	4,3080543	3,3269785	0,0002285	-0,7416342	1,5090517	0,9471665	0,0002094	-0,4914571
348	3,5583200	11,7901483	0,0184939	4,1785996	3,4785155	0,0002001	-0,6202795	1,4761540	0,9354249	0,0002066	-0,4201997
349	5,1019902	11,8450916	0,0146016	4,2788592	3,6194634	0,0001728	0,8231311	1,4948965	0,9246337	0,0002043	0,5506275
350	5,0575199	11,8743876	0,0102253	4,2902268	3,7789875	0,0001385	0,7672932	1,4866138	0,9069770	0,0002017	0,5161348
351	4,7825198	11,6663592	0,0083021	4,3653183	3,7497417	0,0001240	0,4172015	1,4873695	0,9035289	0,0002044	0,2804962
352	4,6295099	11,4922483	0,0032849	4,2312255	3,8480118	0,0000829	0,3982845	1,4972758	0,9462778	0,0002163	0,2660061
353	4,5888400	11,4542204	0,0007246	4,1997825	4,0076783	0,0000413	0,3890575	1,4927598	0,9793357	0,0002249	0,2606297
354	2,9525700	11,6575531	0,0052607	4,2596176	4,9229445	-0,0001462	-1,3070476	1,4843289	1,0634846	0,0002489	-0,8805647
355	3,8956399	11,7819733	0,0095257	4,7048384	5,3190052	-0,0002152	-0,8091985	1,3927431	1,0732418	0,0002541	-0,5810106
356	4,7735500	11,8422446	0,0180728	4,6936371	6,0860172	-0,0003315	0,0799129	1,4897486	1,0710195	0,0002618	0,0536419
357	5,0080700	11,3378434	0,0255153	4,7423795	6,6165949	-0,0003875	0,2656905	1,4091562	1,1067616	0,0002783	0,1885458
358	4,0228901	12,1260398	0,0159850	4,4908012	3,7415510	0,0001876	-0,4679111	1,5018720	0,9416123	0,0002093	-0,3115519
359	5,2757602	12,1878735	0,0132312	4,5028039	3,8371261	0,0001664	0,7729562	1,5016407	0,9253354	0,0002064	0,5147411

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
360	5,4049902	12,2159826	0,0114862	4,4640731	3,8867134	0,0001524	0,9409171	1,4908630	0,9077911	0,0002033	0,6311224
361	4,9345398	12,2061243	0,0106028	4,5908722	3,8898222	0,0001455	0,3436676	1,4998516	0,8915716	0,0002007	0,2291344
362	3,9001300	11,8507029	0,0000064	4,3198132	4,3029142	0,0000044	-0,4196832	1,4982448	0,9481573	0,0002190	-0,2801166
363	4,3525701	11,8749953	0,0056136	4,4490807	5,0605167	-0,0001586	-0,0965106	1,4993481	1,0101351	0,0002366	-0,0643684
364	3,9233100	11,9322737	0,0110234	4,3823681	5,5160226	-0,0002456	-0,4590581	1,4790767	1,0293436	0,0002434	-0,3103680
365	3,8533499	11,9767128	0,0163604	4,6912306	5,9766411	-0,0003261	-0,8378806	1,5001986	1,0372281	0,0002482	-0,5585132
366	4,6055698	11,9584579	0,0206564	4,7250951	6,3935003	-0,0003898	-0,1195252	1,4921407	1,0370175	0,0002516	-0,0801032
367	5,2800698	11,5572285	0,0245240	5,2209331	6,9305166	-0,0004377	0,0591368	1,4942992	1,0570955	0,0002643	0,0395749
368	4,9609399	11,1496397	0,0238252	5,5787413	7,0081935	-0,0004171	-0,6178014	1,4703585	1,0983204	0,0002774	-0,4201706
369	6,9675698	14,2756465	0,0163455	8,0147352	9,6964548	-0,0004301	-1,0471654	1,4419458	1,4077169	0,0003881	-0,7262169
370	8,3469601	15,2564369	0,0377198	8,6036371	11,0505347	-0,0006409	-0,2566770	1,4723760	1,5783649	0,0004390	-0,1743285
371	10,2312002	14,7617013	0,0607560	8,8913502	11,7709184	-0,0007540	1,3398500	1,4720779	1,5420805	0,0004379	0,9101761
372	10,1522999	14,2830418	0,0736747	8,8182632	12,0389572	-0,0007898	1,3340367	1,4247079	1,5381707	0,0004420	0,9363581
373	9,1528502	12,4985633	0,0944361	9,9463151	12,7128660	-0,0008281	-0,7934649	1,4698334	1,6654195	0,0005016	-0,5398332
374	7,8023000	12,8413898	0,0838605	10,3838099	13,0949863	-0,0008831	-2,5815099	1,4647775	1,7579786	0,0005441	-1,7623905
375	4,4155598	10,7130093	0,0148272	4,5880551	5,2250869	-0,0001974	-0,1724953	1,5046471	0,8274767	0,0002279	-0,1146417
376	7,2388201	9,9403630	0,1534819	4,5142999	7,7362740	-0,0007223	2,7245202	1,4949813	0,8573281	0,0002098	1,8224443
377	5,7228999	10,4595840	0,1456868	4,7355594	7,9064362	-0,0007428	0,9873405	1,5024878	0,9105033	0,0002178	0,6571371
378	5,9813399	10,7352819	0,1217333	4,0067332	7,7110494	-0,0006903	1,9746068	1,4439123	0,9284111	0,0002197	1,3675393
379	5,4429102	11,4343701	0,0245756	4,5908919	6,1085873	-0,0003108	0,8520183	1,4912207	0,9458103	0,0002174	0,5713563
380	5,5220499	11,7033821	0,0000298	4,7371819	4,7896412	-0,0000104	0,7848680	1,4884932	0,9673316	0,0002195	0,5272903
381	5,3333602	11,7944104	0,0030828	4,7935053	4,2842307	0,0001032	0,5398549	1,4958735	0,9832123	0,0002220	0,3608961
382	5,5695601	11,9578494	0,0159903	4,7783599	3,7633188	0,0002203	0,7912001	1,5079142	1,0020190	0,0002243	0,5246984
383	4,0635200	12,0484319	0,0187914	4,9503988	3,7211585	0,0002305	-0,8868788	1,4792060	0,9998086	0,0002232	-0,5995641
384	4,0162401	12,3582198	0,0132168	4,9421147	3,9736558	0,0001747	-0,9258746	1,4608145	0,9607786	0,0002152	-0,6338071
385	5,7711701	12,4423208	0,0108968	4,8844367	4,0486388	0,0001548	0,8867335	1,4708004	0,9408300	0,0002117	0,6028918
386	5,2141299	12,5016790	0,0094086	4,8034854	4,0783139	0,0001421	0,4106445	1,4892080	0,9192145	0,0002079	0,2757469
387	3,1267600	12,1296453	0,0138429	4,4982078	5,7433416	-0,0002847	-1,3714478	1,4980736	0,9843527	0,0002328	-0,9154742

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
388	3,7754500	12,0657880	0,0263973	4,8057515	6,7746193	-0,0004696	-1,0303015	1,4994383	1,0105821	0,0002438	-0,6871250
389	4,5176902	11,9599947	0,0292926	5,0097555	7,1679948	-0,0005221	-0,4920653	1,4987879	1,0117817	0,0002470	-0,3283088
390	5,2675200	11,7569959	0,0293182	5,1786078	7,4108585	-0,0005348	0,0889122	1,4949924	1,0176879	0,0002516	0,0594733
391	5,2588701	10,5149347	0,0158247	5,8360675	7,1923072	-0,0003524	-0,5771974	1,4917049	1,1466761	0,0002909	-0,3869380
392	5,8081298	10,0134054	0,0101689	5,7127561	6,9535718	-0,0002613	0,0953737	1,4182027	1,2107511	0,0003079	0,0672497
393	5,7147298	9,5551350	0,0058525	5,8607163	6,7425739	-0,0001824	-0,1459865	1,3899604	1,2646798	0,0003220	-0,1050293
394	6,5092902	8,9572085	0,0018917	6,3384639	6,5747341	-0,0000913	0,1708263	1,3923988	1,3210397	0,0003379	0,1226849
395	5,9621301	12,1727681	0,0076697	7,8177466	8,8387512	-0,0002790	-1,8556165	1,4531556	1,2301859	0,0003370	-1,2769566
396	7,0484099	14,7377458	0,0338146	8,6426087	10,9708399	-0,0006583	-1,5941987	1,4779904	1,4625240	0,0004096	-1,0786259
397	8,2421999	15,0639861	0,0474605	9,1386252	11,5803916	-0,0007754	-0,8964253	1,4385023	1,5151669	0,0004254	-0,6231657
398	8,4174099	14,9708428	0,0757271	9,3211538	12,4387037	-0,0009259	-0,9037439	1,4754408	1,5219140	0,0004327	-0,6125247
399	10,0732002	12,6806660	0,0958740	9,4638040	12,7651986	-0,0008339	0,6093962	1,3654724	1,5959289	0,0004806	0,4462897
400	9,3779802	12,6478526	0,0889459	10,2076756	12,8194348	-0,0008249	-0,8296954	1,4756884	1,6336950	0,0004978	-0,5622430
401	9,2712698	12,7649413	0,0811189	10,3499623	12,9145537	-0,0008265	-1,0786925	1,4740035	1,6927301	0,0005227	-0,7318114
402	11,0187998	12,9887902	0,0722100	10,3578199	13,0190288	-0,0008275	0,6609799	1,4622529	1,7807761	0,0005571	0,4520285
403	13,0331001	13,9611011	0,0294467	11,2184229	12,8158180	-0,0006272	1,8146772	1,3653508	2,2624346	0,0007350	1,3290923
404	5,1213002	12,0794448	0,0008909	5,0622086	5,2789875	-0,0000704	0,0590916	1,4804007	1,2896533	0,0003875	0,0399160
405	4,7335000	12,0363851	0,0006530	4,9060361	5,1224851	-0,0000566	-0,1725361	1,4662515	1,2183363	0,0003644	-0,1176716
406	4,9835000	11,9051829	0,0008183	4,8391816	5,0257967	-0,0000587	0,1443184	1,4977661	1,1466397	0,0003397	0,0963557
407	3,8433199	11,3452248	0,0029958	4,6494557	4,9656279	-0,0000944	-0,8061358	1,5038907	1,0086990	0,0002889	-0,5360335
408	4,8511801	10,9382170	0,0052797	4,6719182	4,9611769	-0,0001141	0,1792619	1,4567535	0,9488722	0,0002663	0,1230557
409	4,4406300	10,4989034	0,0079921	4,6189723	4,9573902	-0,0001288	-0,1783424	1,4684690	0,8986125	0,0002477	-0,1214478
410	4,8801498	9,3601926	0,0240612	4,5802464	5,2188128	-0,0002051	0,2999035	1,4868008	0,7808838	0,0002055	0,2017106
411	6,0907998	10,3554264	0,1069402	4,4316463	6,9305584	-0,0005826	1,6591535	1,5019397	0,8040100	0,0001993	1,1046738
412	5,1201100	11,0139653	0,1125210	3,7979869	7,2713805	-0,0006538	1,3221231	1,4479475	0,8522387	0,0002063	0,9131016
413	4,1015801	11,5355626	0,0764143	4,2771883	6,9000927	-0,0005623	-0,1756082	1,4994792	0,8903529	0,0002113	-0,1171128
414	4,3393998	11,7076089	0,0497577	4,4008071	6,4445130	-0,0004553	-0,0614073	1,5048406	0,9024173	0,0002121	-0,0408065
415	4,9233098	11,8136520	0,0250125	4,3315316	5,8642954	-0,0003204	0,5917782	1,4971901	0,9128904	0,0002124	0,3952592

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
416	3,9619000	11,8567379	0,0076479	4,3522470	5,2313681	-0,0001742	-0,3903470	1,4841914	0,9247347	0,0002132	-0,2630031
417	5,1180201	11,8308173	0,0020563	4,4894415	4,1027490	0,0000855	0,6285786	1,5068445	0,9564359	0,0002171	0,4171489
418	5,0600100	11,8067877	0,0091717	4,5696476	3,7167675	0,0001745	0,4903624	1,4983703	0,9709989	0,0002190	0,3272638
419	4,5630202	11,8271906	0,0226536	4,3129339	3,3800872	0,0002555	0,2500864	1,4849684	0,9829826	0,0002194	0,1684119
420	4,0089598	11,8828220	0,0243301	4,6307203	3,3953066	0,0002556	-0,6217605	1,5033811	0,9789923	0,0002177	-0,4135748
421	3,7340701	11,9581864	0,0228094	4,5129096	3,4862858	0,0002390	-0,7788395	1,5092904	0,9692926	0,0002151	-0,5160302
422	3,8590901	12,0438397	0,0195177	4,7817811	3,6143888	0,0002138	-0,9226910	1,4674470	0,9563785	0,0002122	-0,6287730
423	4,1000500	12,4062634	0,0057101	5,5197694	6,2120963	-0,0002313	-1,4197194	1,4899981	1,2433953	0,0003739	-0,9528330
424	5,9616699	12,5132802	0,0044964	5,0093214	5,9529277	-0,0001961	0,9523485	1,2808581	1,1803811	0,0003543	0,7435239
425	4,6028199	12,5078037	0,0053436	4,9998943	5,6638361	-0,0001904	-0,3970744	1,5064321	1,0544633	0,0003128	-0,2635860
426	4,7744598	12,3653372	0,0076086	4,9533042	5,6135434	-0,0002118	-0,1788444	1,5057733	0,9907309	0,0002909	-0,1187725
427	3,8771701	11,7551612	0,0165797	4,5743169	5,6073016	-0,0002680	-0,6971468	1,4891944	0,8664108	0,0002475	-0,4681369
428	4,2880702	11,3313535	0,0224004	4,6006809	5,6197707	-0,0002897	-0,3126107	1,5065667	0,8154388	0,0002295	-0,2074987
429	3,2651501	10,8770525	0,0284659	4,6964723	5,6520431	-0,0003077	-1,4313223	1,5000802	0,7773527	0,0002156	-0,9541638
430	4,6223698	10,4372553	0,0350116	4,6199892	5,7308872	-0,0003282	0,0023805	1,5049241	0,7543305	0,0002061	0,0015818
431	5,8112898	9,7276416	0,0558310	4,8706047	6,1309620	-0,0004050	0,9406850	1,4899727	0,7507108	0,0001986	0,6313438
432	5,8193002	10,2980668	0,1273840	4,8584600	7,9432916	-0,0006796	0,9608402	1,4952053	0,9719376	0,0002271	0,6426143
433	6,1441002	10,6215946	0,0870871	4,7814594	7,4781845	-0,0005657	1,3626408	1,4887156	0,9761562	0,0002255	0,9153130
434	6,9451599	11,2421472	0,0189727	5,0425765	6,1737475	-0,0002631	1,9025835	1,5020180	0,9784217	0,0002228	1,2666848
435	5,7969599	11,8899243	0,0035121	5,1144695	4,5040861	0,0001071	0,6824904	1,4367931	1,0116438	0,0002281	0,4750095
436	5,1062598	12,1583034	0,0107743	4,7062355	4,1729310	0,0001762	0,4000243	1,4125015	1,0158329	0,0002279	0,2832027
437	4,5034900	12,2757362	0,0108817	4,7710350	4,1847299	0,0001710	-0,2675451	1,4599923	1,0073913	0,0002260	-0,1832510
438	4,8043599	12,4903835	0,0074200	4,9197208	4,3193622	0,0001326	-0,1153609	1,5102303	0,9769578	0,0002205	-0,0763863
439	6,0354400	12,5848170	0,0058473	4,8140228	4,3629912	0,0001156	1,2214171	1,4952405	0,9582698	0,0002174	0,8168700
440	5,7554498	12,6634110	0,0049839	4,7864719	4,3591667	0,0001062	0,9689779	1,5009288	0,9381935	0,0002140	0,6455855
441	5,5421200	12,7284644	0,0030672	4,7045265	4,3184461	0,0000870	0,8375935	1,5081517	0,8983924	0,0002067	0,5553775
442	5,1878400	12,7035525	0,0012411	4,5967873	4,3765098	0,0000583	0,5910527	1,4892193	0,8866097	0,0002046	0,3968876
443	5,1961498	12,6421421	0,0000067	4,5711370	4,5524460	0,0000046	0,6250128	1,5032007	0,8870598	0,0002055	0,4157880

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
444	4,0891600	11,8642091	0,0384484	5,5796419	7,9670704	-0,0006559	-1,4904819	1,4938432	1,0101969	0,0002472	-0,9977499
445	7,8272500	11,6288830	0,0348681	5,6448954	8,1036040	-0,0006363	2,1823546	1,4996789	1,0159418	0,0002510	1,4552146
446	5,2902398	10,9051993	0,0197031	5,7827036	7,7719855	-0,0004549	-0,4924638	1,4768962	1,0739825	0,0002701	-0,3334451
447	6,2135401	9,9984707	0,0049736	6,3314502	7,0380845	-0,0001991	-0,1179102	1,4882255	1,1852756	0,0003009	-0,0792287
448	6,2812300	9,5834253	0,0012895	6,4264988	6,7189187	-0,0000934	-0,1452688	1,4666721	1,2358887	0,0003146	-0,0990465
449	5,2101698	9,2499927	0,0000594	6,4690666	6,5125314	-0,0000186	-1,2588968	1,3647521	1,2716553	0,0003248	-0,9224363
450	5,1223202	9,0332684	0,0000736	6,4983392	6,4579046	0,0000195	-1,3760191	1,2984653	1,2883426	0,0003305	-1,0597273
451	9,9935102	14,6635974	0,0683742	8,8907938	12,4653490	-0,0009601	1,1027164	1,4691438	1,4857129	0,0004228	0,7505844
452	8,2605495	14,7602791	0,0873243	9,0197213	12,9976372	-0,0010648	-0,7591718	1,4685930	1,5033113	0,0004294	-0,5169382
453	10,9322004	12,9479121	0,0661474	10,8657546	12,8150030	-0,0007576	0,0664458	1,4046371	1,7129407	0,0005339	0,0473046
454	10,7641001	13,6451558	0,0287012	11,0737571	12,6118100	-0,0005791	-0,3096570	1,4314485	2,1484995	0,0006936	-0,2163242
455	4,5920100	12,2602333	0,0017928	4,9523955	5,3209478	-0,0001018	-0,3603855	1,4961592	1,1369454	0,0003387	-0,2408738
456	5,2845201	12,1311296	0,0025350	4,8707344	5,2440142	-0,0001127	0,4137857	1,5062555	1,0681729	0,0003148	0,2747115
457	3,7386899	11,8990914	0,0042326	4,8577110	5,2143512	-0,0001344	-1,1190211	1,4702233	0,9998319	0,0002903	-0,7611233
458	3,9288499	11,5648685	0,0070382	4,6862953	5,2095776	-0,0001591	-0,7574454	1,5073481	0,9341797	0,0002665	-0,5025020
459	5,5541902	12,1388684	0,0201638	6,1767232	7,7079100	-0,0005169	-0,6225331	1,4796592	1,3461479	0,0004058	-0,4207273
460	5,3716002	12,3595420	0,0148016	6,1357541	7,2702246	-0,0004307	-0,7641540	1,4507326	1,2744285	0,0003840	-0,5267366
461	4,1461101	12,5502490	0,0113723	5,6133783	6,8971172	-0,0003651	-1,4672683	1,5005120	1,2091969	0,0003641	-0,9778451
462	5,5836301	12,6962482	0,0096528	5,7191901	6,6012553	-0,0003232	-0,1355600	1,4759842	1,1488597	0,0003452	-0,0918438
463	4,8885198	12,7845924	0,0094697	5,4119783	6,3870442	-0,0003055	-0,5234586	1,5077370	1,0923508	0,0003271	-0,3471816
464	4,3179798	12,7953899	0,0109021	4,9359183	6,2532816	-0,0003105	-0,6179385	1,4390763	1,0372894	0,0003090	-0,4293994
465	4,6700101	12,7100874	0,0141721	5,1730030	6,1860487	-0,0003328	-0,5029929	1,5039880	0,9820078	0,0002906	-0,3344395
466	4,9413500	12,5172004	0,0193078	4,6626593	6,1578824	-0,0003627	0,2786906	1,4611675	0,9267971	0,0002720	0,1907315
467	3,7744200	12,2175847	0,0261804	4,8233816	6,1510603	-0,0003928	-1,0489615	1,5100871	0,8741575	0,0002543	-0,6946364
468	3,7821701	11,8260228	0,0339604	4,7626161	6,1513964	-0,0004168	-0,9804460	1,5090470	0,8285161	0,0002386	-0,6497121
469	3,2906101	11,3760562	0,0418122	4,7796265	6,1653240	-0,0004344	-1,4890164	1,5044368	0,7947315	0,0002264	-0,9897501
470	3,0286901	10,9071311	0,0494706	4,6095002	6,2120606	-0,0004495	-1,5808101	1,5058527	0,7753192	0,0002181	-1,0497774
471	4,5961699	10,4527949	0,0575729	4,7776344	6,3203030	-0,0004692	-0,1814645	1,5026470	0,7694159	0,0002129	-0,1207632

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
472	5,7580500	10,0398285	0,0679138	5,0162391	6,5078119	-0,0004989	0,7418109	1,4864119	0,7749839	0,0002101	0,4990614
473	6,3577499	9,2004748	0,1229571	5,6520873	7,4528912	-0,0006441	0,7056626	1,4630111	0,8371272	0,0002126	0,4823358
474	6,7062702	9,0766550	0,1483412	5,6571078	7,8040698	-0,0006977	1,0491624	1,4797550	0,8655574	0,0002162	0,7090109
475	7,2450299	9,2030650	0,1945260	6,3812348	8,4802917	-0,0007835	0,8637951	1,4248022	0,9518441	0,0002288	0,6062562
476	6,8394499	9,7013986	0,1567585	6,4256387	8,3074876	-0,0007112	0,4138112	1,3916119	0,9921187	0,0002320	0,2973611
477	7,1080298	10,0542845	0,1174857	5,5682504	7,9631289	-0,0006212	1,5397794	1,4904447	1,0003360	0,0002309	1,0331007
478	7,0963101	10,4497958	0,0743085	5,6237915	7,4529450	-0,0004980	1,4725186	1,4779270	1,0017049	0,0002290	0,9963406
479	7,1628399	11,2444900	0,0127572	5,4981614	6,1735999	-0,0002069	1,6646785	1,4267121	1,0050226	0,0002282	1,1667936
480	6,1248899	11,8437032	0,0000951	5,2226539	5,1346098	0,0000174	0,9022359	1,4869816	1,0219547	0,0002314	0,6067566
481	6,9922700	12,0402612	0,0018193	5,2332166	4,8550069	0,0000743	1,7590534	1,4887475	1,0262745	0,0002319	1,1815660
482	6,9009800	12,1858674	0,0032607	5,2462716	4,7290900	0,0000965	1,6547084	1,4736043	1,0245190	0,0002311	1,1228987
483	4,8638601	12,3947244	0,0026339	5,1088022	4,7314602	0,0000815	-0,2449420	1,5084686	1,0060505	0,0002274	-0,1623779
484	4,8171501	12,5706384	0,0012473	5,0318126	4,7551276	0,0000542	-0,2146625	1,4918634	0,9796029	0,0002235	-0,1438888
485	5,6987600	12,6537737	0,0009788	4,9737996	4,7151452	0,0000482	0,7249604	1,4695652	0,9645392	0,0002212	0,4933163
486	5,6871700	12,7267321	0,0007084	4,8563637	4,6665706	0,0000419	0,8308063	1,5086665	0,9484676	0,0002185	0,5506892
487	5,8048801	12,7738386	0,0002209	4,7784788	4,6635519	0,0000244	1,0264014	1,5028922	0,9321238	0,0002156	0,6829508
488	3,7668900	12,6628700	0,0078782	4,7354026	5,4226228	-0,0001869	-0,9685126	1,4874318	0,9316264	0,0002186	-0,6511308
489	1,8968000	12,5410150	0,0178493	4,7503805	5,9880871	-0,0003150	-2,8535805	1,5019340	0,9552907	0,0002259	-1,8999373
490	4,1258702	12,0723550	0,0469851	5,9961704	7,9450824	-0,0006943	-1,8703002	1,4040234	1,0229307	0,0002475	-1,3321005
491	6,2800798	10,0807556	0,0025228	6,7268004	7,2004838	-0,0001526	-0,4467205	1,4626912	1,1533899	0,0002925	-0,3054100
492	6,1290102	9,4157192	0,0003613	6,7471855	6,5668647	0,0000495	-0,6181753	1,4858509	1,2277900	0,0003143	-0,4160413
493	5,5083098	9,2109688	0,0011121	6,7702008	6,5203529	0,0000818	-1,2618910	1,4586276	1,2427293	0,0003202	-0,8651221
494	6,6870399	10,7711564	0,0094838	8,2030626	9,0705777	-0,0002973	-1,5160227	1,4177500	1,1924539	0,0003245	-1,0693160
495	9,9230499	14,0745980	0,0917164	9,4182084	13,2591432	-0,0011198	0,5048416	1,4810739	1,4714897	0,0004245	0,3408618
496	11,7149000	13,9485381	0,0000144	11,2951174	11,2558675	0,0000133	0,4197826	1,4252783	2,6618095	0,0008876	0,2945267
497	13,8408003	14,0536915	0,0061254	11,5818498	10,6514328	0,0002768	2,2589505	1,1733202	2,9039256	0,0009841	1,9252635
498	6,6298499	11,9711171	0,0400700	6,7572165	9,1409174	-0,0008186	-0,1273665	1,4711615	1,4058029	0,0004258	-0,0865755
499	6,2715201	12,2328204	0,0308949	5,3884941	8,6109866	-0,0007041	0,8830261	1,2821791	1,3186545	0,0003991	0,6886917

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
500	5,6453199	12,4744578	0,0241405	6,3670805	8,1282774	-0,0006067	-0,7217606	1,4869492	1,2420071	0,0003755	-0,4853969
501	4,8556499	12,9625180	0,0175019	5,8063013	7,1413814	-0,0004623	-0,9506513	1,4949843	1,0693263	0,0003208	-0,6358938
502	4,8596702	12,9958171	0,0196817	5,4233264	6,9873184	-0,0004664	-0,5636562	1,5110815	1,0238011	0,0003059	-0,3730151
503	4,7870102	12,9378947	0,0241998	5,4181882	6,9014428	-0,0004889	-0,6311780	1,5043818	0,9801962	0,0002916	-0,4195597
504	4,1991000	12,5067032	0,0395504	5,1709836	6,8237211	-0,0005485	-0,9718836	1,5012215	0,8965336	0,0002643	-0,6473952
505	4,0203300	12,1438534	0,0488630	4,9917979	6,7902451	-0,0005689	-0,9714679	1,5061253	0,8620923	0,0002529	-0,6450113
506	4,5111499	10,7802519	0,0728309	4,2502462	6,7973033	-0,0005904	0,2609037	1,4601711	0,8232699	0,0002343	0,1786802
507	5,6514802	10,3377527	0,0800555	4,4327423	6,9005507	-0,0005991	1,2187378	1,4811510	0,8269063	0,0002308	0,8228316
508	7,3016100	9,1052409	0,1337533	6,0207671	7,8237806	-0,0006884	1,2808429	1,4479532	0,8777029	0,0002225	0,8845886
509	6,9477000	8,9659002	0,1541364	6,0085146	8,0839725	-0,0007149	0,9391854	1,4679463	0,8997183	0,0002242	0,6397955
510	7,5097699	9,0456457	0,1862821	6,7246781	8,5343722	-0,0007377	0,7850918	1,3807686	0,9744842	0,0002326	0,5685904
511	7,2376399	11,9565489	0,0002887	5,3739089	5,5207909	-0,0000291	1,8637310	1,4855925	1,0263611	0,0002333	1,2545372
512	5,9424100	12,0970593	0,0000062	5,3455468	5,3654760	-0,0000042	0,5968632	1,4999449	1,0272282	0,0002329	0,3979234
513	5,1768999	12,2517019	0,0000221	5,2315993	5,2731722	-0,0000074	-0,0546994	1,4505485	1,0215075	0,0002316	-0,0377094
514	4,8813000	12,3139878	0,0001054	5,1597116	5,2442279	-0,0000160	-0,2784116	1,4782968	1,0162157	0,0002312	-0,1883327
515	4,8986802	12,3853320	0,0002060	5,0847137	5,1945972	-0,0000223	-0,1860335	1,4987077	1,0091540	0,0002307	-0,1241293
516	4,8808498	12,4722911	0,0002630	4,9969807	5,1213458	-0,0000255	-0,1161309	1,4996436	1,0000342	0,0002297	-0,0774390
517	5,9484801	12,5656261	0,0003915	4,8930945	5,0570176	-0,0000321	1,0553856	1,4832582	0,9875886	0,0002280	0,7115319
518	4,7315502	12,6966569	0,0029574	4,7820488	5,1817438	-0,0000994	-0,0504986	1,5033994	0,9617218	0,0002239	-0,0335896
519	3,9344900	12,6946002	0,0080631	4,7980896	5,4788030	-0,0001798	-0,8635996	1,4940029	0,9601463	0,0002248	-0,5780441
520	2,8949201	12,6269260	0,0173416	4,4343676	5,9580463	-0,0002939	-1,5394475	1,4531464	0,9716228	0,0002291	-1,0593891
521	2,9790101	12,4978208	0,0297828	4,5208812	6,5887642	-0,0004323	-1,5418711	1,4859446	0,9937494	0,0002362	-1,0376370
522	3,6092401	12,3238435	0,0425498	4,4437977	7,3032378	-0,0005782	-0,8345577	1,4685526	1,0191836	0,0002443	-0,5682859
523	3,6489301	12,1256560	0,0526195	4,9726303	8,0151311	-0,0007110	-1,3237003	1,5036936	1,0408049	0,0002514	-0,8802992
524	4,5049200	11,9216191	0,0583107	5,7499242	8,6463473	-0,0008131	-1,2450042	1,4903345	1,0547731	0,0002563	-0,8353858
525	4,9600201	11,7251808	0,0585849	5,2560544	9,1161033	-0,0008672	-0,2960343	1,4913404	1,0616945	0,0002591	-0,1985022
526	8,5437098	11,3348304	0,0437336	6,7473110	9,3493837	-0,0007909	1,7963987	1,4741300	1,0620568	0,0002614	1,2186162
527	12,4090004	13,6679409	0,1517998	10,9609123	14,6072394	-0,0013317	1,4480881	1,3845484	1,4853785	0,0004380	1,0458920

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
528	10,0513000	13,3217997	0,0358148	10,5935893	12,3845650	-0,0005557	-0,5422893	1,4615015	1,7005173	0,0005308	-0,3710494
529	11,2601004	13,5413483	0,0076098	11,1375896	11,7835225	-0,0002762	0,1225107	1,3210941	2,1621087	0,0007006	0,0927343
530	11,3626003	13,6285817	0,0019981	11,1014200	11,5151630	-0,0001453	0,2611803	1,4521816	2,3462296	0,0007673	0,1798538
531	11,3942003	13,7076437	0,0000609	11,2036776	11,1476966	0,0000259	0,1905228	1,1632943	2,5401799	0,0008395	0,1637787
532	10,7846003	13,5457428	0,0739040	11,2413489	13,5249596	-0,0008436	-0,4567486	1,3954345	1,6423406	0,0005015	-0,3273164
533	13,6297998	13,8066931	0,0000788	11,0009657	11,0952696	-0,0000266	2,6288342	1,2839356	2,0472954	0,0006639	2,0474814
534	6,2654300	12,3463142	0,0437519	6,2870117	9,6151528	-0,0009171	-0,0215817	1,4822839	1,3026788	0,0003961	-0,0145598
535	5,8123498	12,8201239	0,0305996	6,0583296	8,6351915	-0,0007257	-0,2459798	1,5003474	1,1547745	0,0003497	-0,1639485
536	5,6883898	13,1019916	0,0283865	6,0250979	8,0033100	-0,0006463	-0,3367081	1,5059511	1,0595901	0,0003186	-0,2235850
537	3,9662299	12,9111259	0,0455360	5,4202632	7,6416092	-0,0006963	-1,4540332	1,5099299	0,9589019	0,0002858	-0,9629807
538	3,6795199	12,3007224	0,0653265	5,1291844	7,4897695	-0,0007322	-1,4496645	1,5084791	0,9044388	0,0002682	-0,9610107
539	2,9681599	10,9882064	0,0856707	4,7653515	7,2667369	-0,0007052	-1,7971916	1,5066368	0,8862984	0,0002569	-1,1928499
540	4,3192701	10,5627534	0,0894151	4,3419048	7,2706581	-0,0006907	-0,0226347	1,4703227	0,8895566	0,0002537	-0,0153943
541	4,8074498	10,1753112	0,0930665	5,4180807	7,3369067	-0,0006804	-0,6106309	1,4777802	0,8904257	0,0002489	-0,4132082
542	6,4067101	9,5485283	0,1049615	5,9982869	7,6151291	-0,0006723	0,4084233	1,4286961	0,8886327	0,0002364	0,2858713
543	6,8357100	11,7511683	0,0079104	5,5092216	6,2499329	-0,0001502	1,3264884	1,4833281	1,0194145	0,0002331	0,8942650
544	6,1554198	11,9546873	0,0045916	5,3720434	5,8446496	-0,0001075	0,7833764	1,5047798	1,0462503	0,0002373	0,5205920
545	4,6089802	12,1554780	0,0045626	4,9920299	5,5539333	-0,0001087	-0,3830497	1,4770280	1,0413903	0,0002390	-0,2593382
546	5,6616101	12,2750589	0,0048013	4,9303925	5,4763448	-0,0001155	0,7312176	1,5003471	1,0294221	0,0002375	0,4873656
547	3,4764800	12,4917592	0,0099484	4,7122720	5,6196301	-0,0001887	-1,2357920	1,4918750	1,0008855	0,0002334	-0,8283482
548	2,9801900	12,3663877	0,0407579	4,6357373	7,0971794	-0,0005268	-1,6555472	1,4924720	1,0288363	0,0002455	-1,1092651
549	3,5073500	12,1838243	0,0528547	5,2520839	7,8260872	-0,0006693	-1,7447340	1,5013624	1,0523848	0,0002532	-1,1621005
550	4,2707100	11,9686890	0,0619012	4,4519604	8,5483955	-0,0007968	-0,1812504	1,4434053	1,0720815	0,0002598	-0,1255714
551	7,7677498	11,7518573	0,0662436	5,5603474	9,1792119	-0,0008907	2,2074024	1,5044450	1,0856166	0,0002646	1,4672536
552	9,7853203	11,2367362	0,0471677	6,3698297	9,8492493	-0,0008380	3,4154906	1,4963298	1,0925131	0,0002689	2,2825787
553	9,9809999	11,0926966	0,0333688	7,9960804	9,5678263	-0,0007001	1,9849196	1,3033337	1,0866054	0,0002690	1,5229557
554	6,3123298	10,5216984	0,0025565	7,1662537	7,9458900	-0,0001696	-0,8539239	1,4494323	1,0934239	0,0002790	-0,5891437
555	7,8380299	9,9288062	0,0420205	8,3874908	10,2736670	-0,0005885	-0,5494610	1,4630451	1,1294924	0,0003115	-0,3755598

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
556	7,7150602	10,3157766	0,0631671	8,9980430	11,2196443	-0,0007690	-1,2829828	1,4315372	1,1418310	0,0003190	-0,8962273
557	11,2023001	12,6854103	0,1519454	11,0016751	14,6026967	-0,0013818	0,2006250	1,3719213	1,4325755	0,0004273	0,1462365
558	11,6443996	13,4703779	0,0853386	10,7226453	13,5281099	-0,0008975	0,9217543	1,4666436	1,5663446	0,0004710	0,6284787
559	10,6091003	13,5593575	0,0312491	10,8600056	12,3945072	-0,0005241	-0,2509053	1,4556824	1,6798943	0,0005195	-0,1723626
560	10,5019999	13,5893685	0,0159692	10,8749864	11,9712463	-0,0003748	-0,3729865	1,4572197	1,7852633	0,0005627	-0,2559577
561	5,2016101	11,4637781	0,0724545	5,0759060	9,7439248	-0,0009299	0,1257041	1,4463659	1,1240123	0,0002760	0,0869103
562	8,7163296	11,3137986	0,0696230	5,8753602	10,1788983	-0,0009570	2,8409693	1,4865314	1,1340362	0,0002792	1,9111399
563	8,9543104	11,2215044	0,0622145	8,1047030	10,4239571	-0,0009341	0,8496075	1,3567357	1,1378161	0,0002805	0,6262144
564	6,7629900	10,7841192	0,0100539	7,7872200	9,0619157	-0,0003080	-1,0242300	1,4824648	1,0362349	0,0002789	-0,6908967
565	9,0950699	9,9285772	0,2155054	8,5601300	14,2716527	-0,0014463	0,5349399	1,4423793	1,1105914	0,0003242	0,3708733
566	10,1485996	10,2970692	0,2236476	10,1705063	14,7935310	-0,0015258	-0,0219067	1,4718299	1,1627450	0,0003452	-0,0148840
567	10,5629997	10,7077452	0,2273524	9,8237776	15,1956202	-0,0015758	0,7392221	1,4807275	1,2334521	0,0003720	0,4992290
568	9,8446302	11,8669447	0,2280996	10,2499015	15,8256909	-0,0016050	-0,4052712	1,4667280	1,4425062	0,0004475	-0,2763097
569	11,0621996	13,2496178	0,1173898	10,6412203	14,4740397	-0,0010985	0,4209793	1,4116999	1,6425861	0,0005114	0,2982074
570	10,9589005	13,8338955	0,0299460	11,3267308	12,7156166	-0,0005356	-0,3678304	1,3330090	1,8166312	0,0005693	-0,2759399
571	5,0963101	12,1936551	0,0700007	7,5973517	11,3472118	-0,0012953	-2,5010415	1,4769141	1,4021943	0,0004284	-1,6934238
572	6,7556701	12,4803985	0,0584230	6,9340008	10,7304688	-0,0011592	-0,1783308	1,4985566	1,3018930	0,0003978	-0,1190017
573	7,3562398	12,7413382	0,0494278	6,4740818	10,1535168	-0,0010391	0,8821580	1,4945415	1,2192124	0,0003720	0,5902533
574	10,1211996	12,9591954	0,0434525	6,3969185	9,6479381	-0,0009437	3,7242811	1,5038463	1,1541301	0,0003512	2,4765038
575	5,5918198	13,1233764	0,0406414	6,5716149	9,2355335	-0,0008786	-0,9797951	1,5040460	1,1057594	0,0003351	-0,6514396
576	6,0268998	13,2174208	0,0412520	5,6301736	8,9322066	-0,0008473	0,3967262	1,4768887	1,0695838	0,0003227	0,2686230
577	6,1631699	13,2357461	0,0450696	6,2492255	8,7211243	-0,0008437	-0,0860557	1,5004175	1,0418776	0,0003132	-0,0573545
578	5,7969198	13,1541960	0,0520257	6,0296247	8,5799249	-0,0008593	-0,2327049	1,5024046	1,0156466	0,0003044	-0,1548883
579	4,8473902	12,9778277	0,0612666	5,5103923	8,4675645	-0,0008804	-0,6630021	1,5115983	0,9899904	0,0002962	-0,4386100
580	3,5052500	12,7048866	0,0715483	4,2102645	8,3498363	-0,0008948	-0,7050145	1,3814356	0,9648581	0,0002882	-0,5103492
581	2,2772200	11,5146173	0,0923929	4,2650932	7,8471642	-0,0008407	-1,9878731	1,4619189	0,9336417	0,0002754	-1,3597698
582	2,0013399	10,7013782	0,0935447	4,2884824	7,5941717	-0,0007629	-2,2871425	1,4600753	0,9418321	0,0002717	-1,5664552
583	5,2230601	10,0605099	0,0918527	5,1254124	7,5745908	-0,0006976	0,0976477	1,5028569	0,9310612	0,0002595	0,0649747

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
584	6,0144200	9,8139810	0,0924989	5,2583871	7,6450915	-0,0006733	0,7560329	1,5005838	0,9195339	0,0002509	0,5038259
585	6,2907500	9,6030237	0,0957514	5,8984767	7,7620661	-0,0006571	0,3922734	1,4686354	0,9086356	0,0002423	0,2671006
586	6,9737301	9,4212907	0,1019838	5,1961358	7,9127870	-0,0006487	1,7775943	1,4660950	0,9029955	0,0002353	1,2124687
587	7,1637802	11,4947466	0,0231896	5,6785696	6,7922234	-0,0002521	1,4852106	1,4937380	1,0416559	0,0002375	0,9942913
588	6,5764098	11,5225833	0,0198673	5,6073714	6,5944861	-0,0002288	0,9690384	1,4975090	1,0654012	0,0002417	0,6471002
589	6,7408400	11,5349778	0,0181850	5,5657345	6,4344414	-0,0002162	1,1751055	1,4944746	1,0812455	0,0002450	0,7863001
590	5,6248498	11,5693363	0,0170229	5,5227193	6,2893416	-0,0002088	0,1021305	1,4806980	1,0894532	0,0002473	0,0689746
591	5,8760700	11,6426860	0,0159996	5,4820137	6,1520152	-0,0002046	0,3940563	1,4513542	1,0897794	0,0002485	0,2715094
592	4,9263802	11,7626758	0,0150069	5,1041009	6,0223396	-0,0002027	-0,1777208	1,5024299	1,0825198	0,0002483	-0,1182889
593	3,9002299	12,0834268	0,0164070	5,1719039	5,9325989	-0,0002319	-1,2716740	1,4561305	1,0488341	0,0002435	-0,8733242
594	3,4249899	12,2265093	0,0204873	4,7255494	6,0659322	-0,0002792	-1,3005595	1,4871455	1,0322477	0,0002412	-0,8745342
595	3,6069300	12,2965273	0,0380497	4,8987372	6,8682246	-0,0004668	-1,2918072	1,5058496	1,0345535	0,0002455	-0,8578594
596	4,5791502	12,0159062	0,0600600	5,3202660	8,2171787	-0,0007275	-0,7411158	1,5042504	1,0761477	0,0002598	-0,4926811
597	5,7706699	11,8042960	0,0676729	5,8984060	8,9241349	-0,0008445	-0,1277361	1,4903251	1,0953214	0,0002664	-0,0857102
598	15,4115000	11,1321462	0,0360092	7,3332227	9,9868652	-0,0007306	8,0782773	1,4916049	1,1074612	0,0002742	5,4158290
599	11,1063004	11,0726443	0,0225466	6,8987475	9,5589805	-0,0005656	4,2075528	1,4456542	1,0915300	0,0002725	2,9104836
600	9,1550102	10,8549513	0,0051960	7,5317047	8,5498007	-0,0002480	1,6233055	1,4875362	1,0687628	0,0002744	1,0912712
601	9,3210297	10,6662725	0,0021781	7,5770084	8,2023380	-0,0001507	1,7440213	1,4838029	1,0717126	0,0002796	1,1753726
602	5,4061599	9,9298536	0,0116907	7,3578373	8,8398884	-0,0002939	-1,9516775	1,3402555	1,0938539	0,0002980	-1,4561981
603	7,8117700	10,0131336	0,1224528	9,0212973	12,4659082	-0,0010592	-1,2095273	1,4729699	1,1088095	0,0003145	-0,8211487
604	10,0198002	10,8079128	0,1576606	8,1914023	13,8964696	-0,0013109	1,8283979	1,3413145	1,1985700	0,0003515	1,3631388
605	10,1086998	11,6745224	0,1807761	9,6369494	14,8611603	-0,0014585	0,4717504	1,4719370	1,3449012	0,0004052	0,3204963
606	10,2884998	12,0429238	0,1903742	9,2998080	15,1884974	-0,0015015	0,9886918	1,4141470	1,4062520	0,0004271	0,6991436
607	11,1449003	12,3610401	0,1960085	9,5351267	15,3882655	-0,0015164	1,6097736	1,4156203	1,4503737	0,0004426	1,1371507
608	13,3501997	12,8971222	0,1793559	10,3735813	15,2454298	-0,0014109	2,9766184	1,4618196	1,5087449	0,0004617	2,0362420
609	3,2143900	11,4536748	0,0520639	5,6503448	6,9722523	-0,0004445	-2,4359547	1,4157052	1,0926973	0,0002553	-1,7206653
610	4,9289799	11,8098137	0,0631099	5,5414614	8,1419304	-0,0006811	-0,6124815	1,4957928	1,0673120	0,0002591	-0,4094695
611	9,2792501	11,1796813	0,0600583	7,3107180	10,4133838	-0,0008877	1,9685321	1,4826715	1,1444582	0,0002835	1,3276927

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
612	10,5057001	11,4670009	0,0211021	7,9294478	9,9573666	-0,0005189	2,5762523	1,4887932	1,0586203	0,0002690	1,7304300
613	11,8986998	11,4551948	0,0177864	8,0695408	9,8094331	-0,0004585	3,8291589	1,4843662	1,0221643	0,0002655	2,5796591
614	6,7295599	10,9778724	0,0279242	7,7315072	10,0583904	-0,0005120	-1,0019473	1,4465108	0,9997035	0,0002724	-0,6926649
615	6,7096500	10,5298268	0,0492933	7,6043493	10,5594357	-0,0006391	-0,8946993	1,4316837	1,0136146	0,0002808	-0,6249280
616	7,8255100	10,0392371	0,0887994	7,7023351	11,2854119	-0,0008186	0,1231749	1,4552372	1,0312850	0,0002891	0,0846425
617	6,0763602	9,6063998	0,1440093	8,2966743	12,1367932	-0,0010229	-2,2203141	1,4797293	1,0453793	0,0002957	-1,5004867
618	10,6445999	10,2830089	0,2787233	11,3040734	15,7980248	-0,0017218	-0,6594734	1,4361842	1,2075757	0,0003673	-0,4591844
619	11,2845001	11,1340792	0,2648628	11,2637881	16,1726765	-0,0017230	0,0207120	1,4658931	1,3692938	0,0004266	0,0141293
620	11,3823996	12,0554628	0,0989852	9,7993765	13,2944712	-0,0017268	1,5830230	1,2118758	1,5298004	0,0004694	1,3062585
621	10,0473003	13,1147779	0,0576645	6,4121659	10,7595078	-0,0011884	3,6351344	1,4868437	1,1752812	0,0003596	2,4448666
622	8,0832996	13,2655330	0,0544719	6,8336396	10,2824369	-0,0011086	1,2496600	1,5067644	1,1317509	0,0003447	0,8293666
623	5,4170599	13,3429074	0,0550065	6,0161547	9,9176907	-0,0010634	-0,5990948	1,4939236	1,1002864	0,0003335	-0,4010210
624	7,2309098	13,3293712	0,0593695	6,8004609	9,6578470	-0,0010494	0,4304490	1,4841644	1,0742758	0,0003241	0,2900278
625	7,0688300	13,2274702	0,0668697	5,7926767	9,4686826	-0,0010548	1,2761533	1,5077794	1,0506549	0,0003160	0,8463793
626	6,8105202	13,0264306	0,0763056	5,0338611	9,3041435	-0,0010644	1,7766591	1,4692170	1,0252839	0,0003076	1,2092557
627	5,5658898	12,7336311	0,0859029	5,5678356	9,1223131	-0,0010639	-0,0019458	1,5107200	0,9994153	0,0002992	-0,0012880
628	4,2753801	12,3682922	0,0938346	4,7142147	8,9019319	-0,0010451	-0,4388346	1,4772225	0,9780722	0,0002919	-0,2970674
629	2,8050001	10,7671024	0,0925925	5,5235911	7,8743876	-0,0008140	-2,7185910	1,4875482	0,9723283	0,0002811	-1,8275650
630	2,2858901	10,4648850	0,0870749	3,6041896	7,7229343	-0,0007521	-1,3182995	1,2368194	0,9687533	0,0002767	-1,0658787
631	6,9108200	11,0435971	0,0418034	5,6104046	7,0615038	-0,0003373	1,3004154	1,4951367	1,1230232	0,0002544	0,8697636
632	5,8422098	11,1973720	0,0348891	5,4588770	6,6858703	-0,0003125	0,3833328	1,4964188	1,1311227	0,0002581	0,2561668
633	5,7053099	11,3528282	0,0324953	5,6797305	6,5382678	-0,0003089	0,0255793	1,3922686	1,1199996	0,0002571	0,0183724
634	4,4127798	11,5486552	0,0312130	5,1099571	6,4392914	-0,0003139	-0,6971773	1,5023988	1,1000732	0,0002541	-0,4640428
635	3,7014501	11,7602049	0,0315147	5,0623865	6,4216338	-0,0003323	-1,3609364	1,5027983	1,0753357	0,0002501	-0,9056015
636	3,5478699	12,0660656	0,0397355	4,9519734	6,8064890	-0,0004389	-1,4041035	1,5033288	1,0427948	0,0002463	-0,9339963
637	4,4623199	12,0872528	0,0475452	4,9289890	7,2521584	-0,0005322	-0,4666691	1,5006257	1,0487447	0,0002500	-0,3109830
638	4,8238902	12,0050673	0,0564393	5,5762031	7,8375411	-0,0006435	-0,7523129	1,4811384	1,0668272	0,0002567	-0,5079288
639	5,1174302	11,8466126	0,0647287	6,5266140	8,5009789	-0,0007585	-1,4091838	1,3641582	1,0889159	0,0002643	-1,0330061

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
640	5,3303900	11,6523444	0,0705272	4,8895577	9,1619686	-0,0008593	0,4408323	1,4561127	1,1087431	0,0002710	0,3027460
641	12,9835997	12,5992561	0,1008520	8,8459332	14,1161199	-0,0019067	4,1376664	1,4596365	1,4282848	0,0004420	2,8347238
642	10,9703999	12,8671896	0,0896800	7,7084196	13,3948494	-0,0017524	3,2619803	1,4936850	1,3359021	0,0004135	2,1838476
643	10,6020002	13,1084091	0,0798924	7,5834691	12,6766374	-0,0016021	3,0185311	1,5002643	1,2638215	0,0003906	2,0119996
644	8,3772297	13,3034908	0,0726816	7,8385658	12,0116395	-0,0014704	0,5386639	1,4876692	1,2103225	0,0003728	0,3620858
645	7,5990601	13,4382624	0,0689614	5,5376137	11,4432512	-0,0013693	2,0614463	1,3646156	1,1718760	0,0003591	1,5106425
646	6,2843199	13,4924205	0,0691501	7,4113113	10,9918292	-0,0013034	-1,1269914	1,4843473	1,1418420	0,0003479	-0,7592505
647	6,3756299	13,4595046	0,0731317	6,8277742	10,6497853	-0,0012693	-0,4521443	1,5045515	1,1159090	0,0003382	-0,3005177
648	7,0003700	13,3312438	0,0803586	6,2471405	10,3884734	-0,0012572	0,7532295	1,5098916	1,0895330	0,0003288	0,4988633
649	6,6873202	13,1053124	0,0891728	6,9281945	10,1552362	-0,0012498	-0,2408743	1,4669862	1,0602175	0,0003188	-0,1641967
650	6,3504701	12,7889702	0,0974220	5,4033712	9,9043713	-0,0012318	0,9470989	1,4983538	1,0290410	0,0003083	0,6320929
651	5,5481300	12,3954186	0,1029114	6,3997274	9,5994138	-0,0011908	-0,8515974	1,4768193	1,0007372	0,0002984	-0,5766429
652	4,4319401	11,9632410	0,1045469	5,1185571	9,2440626	-0,0011263	-0,6866170	1,5001590	0,9828071	0,0002910	-0,4576962
653	4,2206001	11,5265720	0,1019844	5,3631566	8,8598936	-0,0010422	-1,1425564	1,5073991	0,9764418	0,0002867	-0,7579655
654	1,9911799	11,1197066	0,0959283	5,6228579	8,4787387	-0,0009466	-3,6316779	1,4973474	0,9772743	0,0002841	-2,4254078
655	2,4263501	10,7708976	0,0876628	5,7780572	8,1425315	-0,0008502	-3,3517071	1,4798417	0,9783889	0,0002815	-2,2649091
656	5,3254099	10,1706537	0,0642152	5,4503882	7,6332270	-0,0006305	-0,1249783	1,5005872	0,9528393	0,0002664	-0,0832862
657	6,2947302	10,0949532	0,0607386	5,4155231	7,6626204	-0,0005960	0,8792071	1,4940266	0,9383103	0,0002599	0,5884816
658	7,5925498	10,0056642	0,0641020	5,8270729	8,0167971	-0,0005955	1,7654769	1,4876558	0,9094363	0,0002459	1,1867510
659	6,9760799	13,7027424	0,0830138	7,8374455	12,2034781	-0,0015796	-0,8613656	1,4834583	1,1850504	0,0003634	-0,5806470
660	6,8314400	13,6496784	0,0861285	7,6345039	11,7519170	-0,0015182	-0,8030640	1,4793099	1,1572669	0,0003527	-0,5428639
661	7,3777699	13,4969497	0,0921437	6,6021561	11,3892259	-0,0014798	0,7756139	1,5078840	1,1262457	0,0003412	0,5143723
662	4,9994798	12,4598806	0,1082001	6,5296882	10,3300564	-0,0013391	-1,5302085	1,4894593	1,0116314	0,0003010	-1,0273583
663	5,9469500	11,9856188	0,1066468	5,2745742	9,8743582	-0,0012462	0,6723757	1,4930783	0,9834085	0,0002898	0,4503285
664	5,7671499	11,0771325	0,0920074	6,0001740	8,8904137	-0,0010071	-0,2330241	1,4877007	0,9651084	0,0002781	-0,1566337
665	5,2067699	10,7168480	0,0812492	5,9244430	8,4457889	-0,0008828	-0,7176730	1,4845409	0,9656877	0,0002755	-0,4834310
666	4,1926999	10,1946459	0,0534689	5,3940893	7,7087055	-0,0006122	-1,2013894	1,4954642	0,9598596	0,0002686	-0,8033555
667	5,3948798	10,1811230	0,0494503	5,7637596	7,7172349	-0,0005756	-0,3688798	1,4955563	0,9560922	0,0002664	-0,2466506

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
668	6,9425502	10,2141055	0,0492922	5,8651540	7,8698608	-0,0005723	1,0773961	1,4931929	0,9523470	0,0002642	0,7215385
669	7,8156099	10,2006854	0,1060517	6,5742330	8,2265347	-0,0006057	1,2413770	1,3515599	1,2242637	0,0002808	0,9184772
670	5,0484800	11,5789844	0,0708363	5,4608431	7,7894063	-0,0006147	-0,4123630	1,4895656	1,0422613	0,0002510	-0,2768344
671	5,6879401	11,5953998	0,0716361	5,2932916	8,4612328	-0,0007182	0,3946486	1,4865545	1,0594196	0,0002607	0,2654787
672	6,0796900	11,1267371	0,0636155	5,8348506	10,0367866	-0,0008429	0,2448394	1,4239602	1,1370498	0,0002840	0,1719426
673	6,9723301	11,1153620	0,0544666	7,1723688	10,1976454	-0,0008031	-0,2000387	1,4922827	1,1437598	0,0002854	-0,1340488
674	9,9610996	11,1750876	0,0439337	7,3320993	10,2358171	-0,0007347	2,6290003	1,4928812	1,1407458	0,0002845	1,7610244
675	9,8616896	11,3043231	0,0328559	8,0347009	10,4415252	-0,0005748	1,8269886	1,4751006	0,9722817	0,0002612	1,2385519
676	6,9296899	10,3380047	0,0910445	8,4413818	11,5361237	-0,0008472	-1,5116919	1,4716201	0,9954546	0,0002776	-1,0272298
677	7,5259500	9,2655101	0,2167521	7,2728718	13,0837812	-0,0012306	0,2530782	1,3803322	1,0438592	0,0002964	0,1833459
678	9,1318703	8,9430185	0,2783357	8,8429635	13,8550799	-0,0014127	0,2889068	1,4758439	1,0564107	0,0003025	0,1957570
679	12,5461998	13,8147730	0,1085998	9,5448836	15,9797127	-0,0023519	3,0013162	1,4631449	1,3127111	0,0004132	2,0512775
680	7,9281902	14,0056067	0,0976265	8,4076573	14,3158368	-0,0020317	-0,4794671	1,4909716	1,2493129	0,0003889	-0,3215803
681	7,1192698	13,9261613	0,0981291	6,7126139	13,0251027	-0,0018103	0,4066560	1,4886878	1,1917479	0,0003654	0,2731640
682	6,1514301	13,4536665	0,1069724	6,7223977	12,0891387	-0,0016719	-0,5709675	1,5048341	1,1121859	0,0003360	-0,3794223
683	6,1812401	13,0460797	0,1102013	7,2012981	11,6335020	-0,0015955	-1,0200580	1,4819077	1,0601205	0,0003176	-0,6883411
684	6,4184399	11,4636814	0,0978371	5,7935661	9,9667037	-0,0012256	0,6248738	1,5017645	0,9452005	0,0002731	0,4160931
685	6,3409500	10,9778810	0,0875316	5,9575043	9,3803412	-0,0010737	0,3834457	1,5007799	0,9391772	0,0002680	0,2554976
686	5,3739200	10,5898571	0,0761254	6,3117754	8,8503209	-0,0009275	-0,9378555	1,4713903	0,9438371	0,0002668	-0,6373941
687	5,3171101	10,3173496	0,0650215	6,1286701	8,4168038	-0,0007984	-0,8115600	1,4793519	0,9524885	0,0002676	-0,5485916
688	5,9792500	10,1529039	0,0453185	5,8654409	7,9630830	-0,0005921	0,1138091	1,4970395	0,9830599	0,0002743	0,0760228
689	4,6901698	10,2470871	0,0461651	5,4845675	8,1538376	-0,0006006	-0,7943977	1,4435665	0,9936493	0,0002769	-0,5503022
690	6,1468201	10,3637961	0,0522785	6,0906741	8,5492045	-0,0006565	0,0561460	1,4891358	1,0014208	0,0002784	0,0377038
691	7,9906998	9,8462758	0,1491971	6,2760216	9,0648975	-0,0007854	1,7146781	1,4583439	1,2769057	0,0002960	1,1757708
692	6,2540102	10,0699563	0,1394193	6,5860433	8,7845318	-0,0007565	-0,3320331	1,3843573	1,2609728	0,0002937	-0,2398464
693	5,6823401	11,1496070	0,1021894	5,5167396	8,3395778	-0,0007190	0,1656005	1,4851806	1,0639700	0,0002577	0,1115019
694	5,7161398	11,1251252	0,0751919	5,4150730	9,3902684	-0,0007931	0,3010668	1,4084458	1,0994631	0,0002779	0,2137582
695	8,5558100	11,0603327	0,0345398	7,6360214	9,7865997	-0,0006087	0,9197885	1,4782359	1,1416968	0,0002877	0,6222204

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
696	14,6285000	11,1023282	0,2870936	12,1830296	16,8553917	-0,0019009	2,4454704	1,4251105	1,3605154	0,0004285	1,7159866
697	14,6784000	11,5946445	0,2726065	12,5041253	16,9596939	-0,0018896	2,1742747	1,3843262	1,4558412	0,0004633	1,5706375
698	9,0229301	14,3284218	0,1083713	8,0629533	14,4876229	-0,0021466	0,9599769	1,4956558	1,2185839	0,0003763	0,6418434
699	7,4373298	14,0951527	0,1104209	7,8694040	13,8505592	-0,0020344	-0,4320743	1,4929624	1,1783640	0,0003604	-0,2894073
700	8,4195404	13,7346766	0,1123877	7,8010581	13,2620152	-0,0019269	0,6184823	1,4833110	1,1249566	0,0003406	0,4169606
701	6,8518000	13,2432441	0,1125739	6,8425098	12,6712191	-0,0018090	0,0092901	1,4998214	1,0600616	0,0003172	0,0061942
702	8,2024097	11,3576820	0,0948624	6,4597004	10,6647777	-0,0013316	1,7427093	1,4976482	0,9162508	0,0002624	1,1636307
703	8,7178602	10,8073491	0,0849589	6,4142803	10,0072567	-0,0011590	2,3035799	1,4944802	0,9139079	0,0002589	1,5413921
704	4,5552902	9,9631370	0,0512804	6,1983329	8,4558950	-0,0006910	-1,6430427	1,4915711	0,9920805	0,0002772	-1,1015517
705	5,7362599	10,3464713	0,0591372	5,8196541	9,1793870	-0,0007601	-0,0833942	1,4487755	1,0574620	0,0002937	-0,0575618
706	6,4628901	11,0138364	0,1259670	5,4678946	9,1460987	-0,0008552	0,9949955	1,4606653	1,0501643	0,0002641	0,6811934
707	6,6539698	11,0380525	0,1035210	5,5760233	9,2502760	-0,0008183	1,0779465	1,4531124	1,0675226	0,0002727	0,7418191
708	5,3340001	10,7811159	0,0348711	7,5490336	9,3076187	-0,0005502	-2,2150335	1,4497392	1,1478349	0,0002931	-1,5278841
709	5,9111700	10,8346355	0,0236769	7,3419163	9,2254757	-0,0004637	-1,4307463	1,4828245	1,1489643	0,0002937	-0,9648791
710	6,6534600	10,9063352	0,0163816	7,3955175	9,1895778	-0,0003912	-0,7420575	1,4298016	1,1361236	0,0002916	-0,5189933
711	8,4419699	8,5393331	0,3862763	10,6808344	15,6412497	-0,0017914	-2,2388645	1,4609657	1,1041229	0,0003247	-1,5324552
712	12,0927000	9,0002130	0,3670562	11,4896028	16,0559245	-0,0018669	0,6030972	1,4349198	1,1208444	0,0003337	0,4203003
713	11,4410000	12,1358865	0,2554326	11,4737465	17,2899656	-0,0019891	-0,0327465	1,4666214	1,4689146	0,0004711	-0,0223279
714	10,0882998	12,6226813	0,2431154	11,9659770	17,4068597	-0,0019886	-1,8776773	1,4527034	1,5730156	0,0005095	-1,2925400
715	6,5361099	9,7797467	0,0615169	7,1117401	9,2468475	-0,0008174	-0,5756301	1,4325064	1,0150863	0,0002841	-0,4018342
716	5,1983500	9,8917949	0,0602574	5,3296203	9,2690061	-0,0007949	-0,1312704	1,3858948	1,0439076	0,0002911	-0,0947189
717	7,4774799	10,7220046	0,1267951	6,8386647	9,6772116	-0,0008747	0,6388153	1,4371340	1,1100192	0,0002880	0,4445064
718	8,0454903	10,5312868	0,0144599	7,7635445	8,6989848	-0,0003314	0,2819457	1,3923744	1,1646291	0,0003029	0,2024928
719	9,5980396	8,6495340	0,3645381	11,5977892	15,6061123	-0,0017712	-1,9997496	1,3971482	1,1178564	0,0003306	-1,4313081
720	11,1211004	9,2698430	0,3375989	11,1599930	16,0339411	-0,0018546	-0,0388926	1,4597364	1,1357698	0,0003401	-0,0266436
721	12,6831999	11,6909942	0,2507083	11,9753728	17,0374152	-0,0020056	0,7078271	1,4491104	1,2872073	0,0004042	0,4884563
722	11,2117996	13,6400804	0,2174896	11,4315949	17,8701512	-0,0021369	-0,2197953	1,4292748	1,6211135	0,0005330	-0,1537810
723	12,2658005	14,5181602	0,1604076	11,7687444	17,3112068	-0,0021219	0,4970561	1,4512179	1,4137305	0,0004612	0,3425096

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
724	16,2275009	16,6371145	0,0852628	10,5599280	18,9246840	-0,0027238	5,6675729	1,4779065	1,4268232	0,0004618	3,8348658
725	10,7664003	14,4691679	0,1129817	9,5645055	15,8290504	-0,0024347	1,2018949	1,4102836	1,1263941	0,0003428	0,8522363
726	11,6482000	13,6145713	0,1100929	8,2133480	14,9846444	-0,0022318	3,4348520	1,4841933	1,0355080	0,0003090	2,3142889
727	3,7254000	9,7431386	0,0782439	7,3293237	10,3035932	-0,0009749	-3,6039237	1,4698024	1,0682769	0,0002976	-2,4519783
728	4,8178501	9,9305108	0,0815868	5,7065230	10,5364986	-0,0010004	-0,8886729	1,4151044	1,0956268	0,0003035	-0,6279910
729	5,5251002	10,1373694	0,0906115	6,3738996	11,0265168	-0,0010812	-0,8487994	1,4706441	1,1239468	0,0003096	-0,5771616
730	10,3120003	10,4738932	0,1306885	7,7207912	12,7442610	-0,0014036	2,5912091	1,4787946	1,1987004	0,0003255	1,7522441
731	11,4181004	10,0720980	0,2901562	11,2172000	16,5456017	-0,0020765	0,2009004	1,1620493	1,6855273	0,0004249	0,1728845
732	8,7096901	9,6333638	0,2454318	8,0708741	11,7161227	-0,0013668	0,6388160	1,2077996	1,4649562	0,0003636	0,5289089
733	5,8775601	10,3528248	0,0570669	6,6346672	9,0424849	-0,0005660	-0,7571071	1,4500404	1,1746717	0,0003088	-0,5221283
734	6,7992902	10,2773804	0,0182422	7,0328025	8,4981852	-0,0003350	-0,2335124	1,4353006	1,1853543	0,0003128	-0,1626923
735	10,6834002	9,8146826	0,0089976	7,8272869	9,0168274	-0,0002475	2,8561132	1,3096272	1,1185780	0,0003067	2,1808597
736	10,0416002	9,5068347	0,0224991	8,2384259	9,7366046	-0,0003826	1,8031743	1,4516126	1,0765337	0,0002996	1,2421870
737	11,7180004	9,8578217	0,2857155	11,0879302	15,8970491	-0,0018134	0,6300702	1,4599063	1,1551964	0,0003497	0,4315827
738	11,1042004	10,8163941	0,2534546	11,1959324	16,3255406	-0,0018963	-0,0917321	1,4666676	1,1871292	0,0003644	-0,0625445
739	12,9854002	12,8784872	0,2041235	11,4606839	17,1443598	-0,0020482	1,5247163	1,4669551	1,3264629	0,0004226	1,0393749
740	6,1446500	10,0900754	0,0187876	7,4553184	8,4853655	-0,0003227	-1,3106684	1,4686886	1,2488082	0,0003441	-0,8924073
741	10,4281998	8,5696133	0,2044389	10,9141219	13,3239972	-0,0011619	-0,4859221	1,2676466	1,2028586	0,0003572	-0,3833262
742	9,9656496	16,5612579	0,1318985	11,7755363	17,7289687	-0,0022995	-1,8098867	1,4338112	1,5917047	0,0005359	-1,2622908
743	15,4737997	20,4335563	0,1482888	12,4693530	20,9928925	-0,0031662	3,0044467	1,3906285	2,6431924	0,0009314	2,1604955
744	15,8422003	17,8542073	0,0107167	12,6535631	15,1189932	-0,0009021	3,1886372	1,4629153	1,8618683	0,0006224	2,1796458
745	17,1632004	18,0190497	0,0212631	12,1862230	16,0222723	-0,0013297	4,9769774	1,4828995	1,7487424	0,0005815	3,3562473
746	12,8011999	17,8384860	0,0634107	11,0175868	18,0617094	-0,0024165	1,7836131	1,4835798	1,5452719	0,0005053	1,2022360
747	4,8134499	9,8161087	0,1030614	6,2338942	11,6724694	-0,0012000	-1,4204444	1,4539772	1,1129546	0,0003075	-0,9769372
748	4,6837201	10,0258082	0,1101523	7,8269754	12,0893358	-0,0012644	-3,1432553	1,4823065	1,1370389	0,0003122	-2,1205164
749	8,3944197	10,2234455	0,1231179	6,5379353	12,7347593	-0,0013768	1,8564843	1,4414646	1,1670200	0,0003185	1,2879154
750	10,3086996	10,3868733	0,1424450	8,8654772	13,5681110	-0,0015288	1,4432224	1,4408780	1,2093362	0,0003276	1,0016271
751	11,9111004	10,5226246	0,2224544	9,9197135	16,0833302	-0,0019724	1,9913869	1,4120258	1,4835097	0,0003893	1,4103048

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
752	12,3486004	10,3554789	0,2533455	10,4298153	16,4981285	-0,0019786	1,9187850	1,3672259	1,7262678	0,0004458	1,4034148
753	7,6288900	10,3049063	0,0869473	7,3382245	9,4239758	-0,0006735	0,2906655	1,4468498	1,2189616	0,0003250	0,2008954
754	7,2303700	10,2002749	0,0312755	7,3814014	8,6358251	-0,0004078	-0,1510314	1,4525067	1,2112172	0,0003248	-0,1039798
755	12,2545004	12,5400545	0,1022574	9,9766924	17,2223559	-0,0023231	2,2778080	1,4622492	1,0408979	0,0003149	1,5577427
756	6,9451199	9,3481421	0,1543117	9,1548302	14,9236870	-0,0018585	-2,2097103	1,4762948	1,1512944	0,0003258	-1,4967947
757	6,5294800	9,3162685	0,1525602	9,4844284	14,4503059	-0,0017504	-2,9549484	1,4556275	1,1517587	0,0003235	-2,0300169
758	7,2725301	9,9051346	0,1441316	9,6402673	14,2209014	-0,0016180	-2,3677372	1,4345695	1,1645721	0,0003192	-1,6504862
759	11,5690002	10,4740922	0,1648351	9,2353558	15,6306986	-0,0018097	2,3336444	1,4731123	1,2851534	0,0003476	1,5841592
760	9,3470297	10,7113260	0,1868480	7,4963922	12,2978234	-0,0013431	1,8506375	1,4134309	1,4872213	0,0004106	1,3093229
761	8,5462704	10,7264865	0,1677520	8,5148070	11,6961588	-0,0012037	0,0314634	1,3259215	1,4508895	0,0003998	0,0237295
762	7,1945500	10,3716767	0,0403109	6,9986722	9,0226803	-0,0004890	0,1958779	1,3919247	1,3004167	0,0003675	0,1407245
763	5,6991200	10,1960609	0,0274250	7,7893059	8,8350629	-0,0004095	-2,0901859	1,3796595	1,2954562	0,0003668	-1,5150012
764	8,4930000	9,5050720	0,0205309	8,2103971	9,3095986	-0,0003865	0,2826029	1,4332901	1,2798098	0,0003665	0,1971708
765	7,9408202	9,2462513	0,0273763	8,1813980	9,8016701	-0,0004539	-0,2405777	1,4447028	1,2643055	0,0003657	-0,1665240
766	15,2748003	22,5916087	0,1360085	12,8672176	21,9015947	-0,0035766	2,4075827	1,3050318	2,8825805	0,0010187	1,8448460
767	13,5600004	19,1162185	0,0088289	12,1555213	14,5490060	-0,0008774	1,4044792	1,4740863	1,8857033	0,0006336	0,9527795
768	11,8720999	19,1849277	0,0285263	11,6397902	16,1293120	-0,0016469	0,2323097	1,4663272	1,7793231	0,0005920	0,1584296
769	13,1946001	10,4916927	0,1201943	9,2463739	15,1705690	-0,0019927	3,9482262	1,4643381	1,0260658	0,0002991	2,6962531
770	3,9570401	9,3996750	0,1265314	5,1357529	12,8455105	-0,0014459	-1,1787128	1,3075277	1,1071370	0,0003094	-0,9014821
771	6,3763099	9,5458269	0,1243655	8,4557899	12,7391393	-0,0014039	-2,0794800	1,4696452	1,1171617	0,0003101	-1,4149538
772	8,7128096	10,3246858	0,1506133	7,4373955	14,3481638	-0,0016384	1,2754140	1,4567798	1,2132265	0,0003288	0,8755023
773	14,7952003	17,4239024	0,0154499	13,6513193	10,8740175	0,0008655	1,1438810	1,4563889	2,3690855	0,0008080	0,7854228
774	14,6233997	17,8591873	0,0104231	12,9451710	10,9467195	0,0007610	1,6782287	1,4523129	2,2795582	0,0007771	1,1555559
775	14,6132002	18,3395153	0,0057973	12,6602033	11,1477637	0,0006055	1,9529969	1,4230825	2,1907298	0,0007460	1,3723708
776	11,1847000	18,8460805	0,0021946	12,6608243	11,4887489	0,0003954	-1,4761243	1,4932609	2,1146177	0,0007191	-0,9885240
777	11,8662996	20,0639138	0,0027113	11,5177773	13,2330059	-0,0004990	0,3485224	1,3363149	2,0209404	0,0006835	0,2608086
778	11,8472996	20,2062159	0,0073503	11,7576864	13,9530372	-0,0008405	0,0896132	1,4418613	2,0009075	0,0006741	0,0621511
779	15,7179003	17,2399316	0,0270079	13,4079814	10,4247744	0,0010923	2,3099189	1,4589874	2,3826925	0,0008132	1,5832343

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
780	14,7685003	17,6013496	0,0222266	14,4461292	10,2987076	0,0010605	0,3223711	1,1209441	2,3076458	0,0007878	0,2875889
781	14,7636995	18,0334362	0,0170736	13,5012871	10,2568190	0,0009925	1,2624124	1,4566964	2,2322352	0,0007619	0,8666270
782	11,1225004	19,0555324	0,0072759	12,7626415	10,4941811	0,0007292	-1,6401410	1,4833725	2,1072295	0,0007181	-1,1056839
783	11,5125999	19,6046344	0,0035475	12,2702849	10,7825305	0,0005354	-0,7576849	1,4926488	2,0804314	0,0007084	-0,5076110
784	11,6953001	20,5585406	0,0000294	11,8120558	11,6617407	0,0000525	-0,1167557	1,4946271	2,1126875	0,0007180	-0,0781169
785	10,4841995	9,5921566	0,1709542	10,4566099	16,7904521	-0,0021993	0,0275896	1,4545706	1,2115674	0,0003462	0,0189675
786	9,2850304	9,4174212	0,1728360	10,0899746	16,1846958	-0,0020723	-0,8049442	1,4627388	1,2136924	0,0003432	-0,5502993
787	6,4928799	9,3747864	0,1707620	6,3174832	15,6584810	-0,0019554	0,1753967	1,3614252	1,2064402	0,0003386	0,1288332
788	6,5752401	9,5525553	0,1615318	6,2128480	15,0855425	-0,0018027	0,3623922	1,3635910	1,1854854	0,0003290	0,2657631
789	6,9202700	9,7230298	0,1576064	8,6320316	15,0810300	-0,0017761	-1,7117616	1,4898372	1,1838624	0,0003267	-1,1489589
790	9,1506004	9,9193470	0,1555954	8,2708271	15,2514753	-0,0017808	0,8797734	1,4817670	1,1949631	0,0003278	0,5937326
791	8,0393295	11,0675735	0,1097313	7,7624436	10,8712046	-0,0009758	0,2768860	1,4580734	1,4605059	0,0004188	0,1898985
792	5,3604898	10,9593981	0,0887968	7,8638998	10,3126879	-0,0008363	-2,5034100	1,4373939	1,4199402	0,0004106	-1,7416312
793	5,9706402	10,6309315	0,0528838	7,2538128	9,5489578	-0,0006181	-1,2831726	1,4428411	1,3713149	0,0004002	-0,8893375
794	7,4873400	9,9547706	0,0341910	8,1440609	9,6677678	-0,0005375	-0,6567209	1,4397328	1,3541152	0,0003942	-0,4561408
795	11,1952000	10,1750748	0,0833104	10,3074534	12,5963828	-0,0009324	0,8877465	1,3718711	1,3868430	0,0004320	0,6471063
796	8,8372097	15,9971311	0,1024903	10,5511122	15,5463992	-0,0018185	-1,7139025	1,4356223	1,8267040	0,0006484	-1,1938394
797	12,8113003	17,4477730	0,0291308	13,7339242	10,2165439	0,0011760	-0,9226239	1,4861071	2,2912729	0,0007818	-0,6208327
798	14,9698000	18,2205588	0,0208031	12,8545791	9,8576501	0,0011343	2,1152209	1,4699509	2,1561585	0,0007357	1,4389739
799	14,8933001	18,7138488	0,0161762	12,8634789	9,7951092	0,0010636	2,0298211	1,4991482	2,0996723	0,0007160	1,3539830
800	12,3906002	19,2595197	0,0114749	12,3833643	9,8550407	0,0009476	0,0072359	1,4807207	2,0615862	0,0007025	0,0048867
801	10,8337002	20,4057850	0,0040428	11,9620152	10,2775103	0,0006170	-1,1283150	1,4881276	2,0804942	0,0007086	-0,7582112
802	8,8889799	21,4398180	0,0000246	11,5289654	11,3799669	0,0000531	-2,6399855	1,4842882	2,1996843	0,0007462	-1,7786206
803	16,5018005	10,1503449	0,1735153	10,9364589	18,6929242	-0,0025356	5,5653416	1,4616011	1,2462504	0,0003631	3,8077020
804	15,4153004	9,7624059	0,1823417	10,5947066	18,0274180	-0,0024077	4,8205938	1,4669437	1,2651142	0,0003628	3,2861477
805	10,4026003	9,5625179	0,1843319	10,6336430	17,3466959	-0,0022672	-0,2310427	1,4592375	1,2670036	0,0003593	-0,1583311
806	8,2670898	9,6451347	0,1716086	9,2287606	16,1424451	-0,0019731	-0,9616707	1,4854566	1,2296186	0,0003420	-0,6473907
807	9,4212198	9,8041321	0,1665242	8,7228120	16,1165969	-0,0019391	0,6984079	1,4805908	1,2281704	0,0003394	0,4717089

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
808	10,8287001	10,6442378	0,1554360	8,2455661	16,8383395	-0,0019180	2,5831340	1,3413494	1,4069176	0,0003827	1,9257727
809	9,9188499	11,6435902	0,1176944	8,7161309	11,9940328	-0,0012078	1,2027190	1,3656915	1,6263187	0,0004773	0,8806667
810	7,1628699	11,3708232	0,0946697	7,3246812	10,9505539	-0,0009810	-0,1618112	1,4087159	1,5278525	0,0004555	-0,1148644
811	6,1258602	10,7355119	0,0607742	7,4774473	10,2288442	-0,0007653	-1,3515871	1,4353260	1,4544760	0,0004370	-0,9416586
812	10,4298000	11,0035539	0,0516307	10,0269764	12,4721212	-0,0008834	0,4028237	1,4271671	1,4373078	0,0004538	0,2822540
813	17,3712006	17,6867666	0,0274610	14,4261707	10,2569759	0,0011939	2,9450298	1,3762290	2,2055784	0,0007514	2,1399272
814	10,6037998	18,9325709	0,0174406	12,7960586	9,5798638	0,0011602	-2,1922588	1,4938455	2,0304368	0,0006914	-1,4675272
815	10,7742996	19,4832498	0,0134209	12,8679393	9,5333359	0,0010781	-2,0936396	1,4890552	2,0020766	0,0006814	-1,4060188
816	7,8102498	20,6534977	0,0066853	12,1927420	9,6958141	0,0008402	-4,3824922	1,4978286	2,0385814	0,0006939	-2,9258970
817	7,8051300	21,1676928	0,0043067	12,2112376	9,8847969	0,0007037	-4,4061075	1,4186809	2,0983286	0,0007143	-3,1057776
818	9,4302101	21,5627600	0,0026664	11,4693989	10,1107748	0,0005767	-2,0391888	1,3362715	2,1642684	0,0007365	-1,5260288
819	7,9600601	21,7572923	0,0015232	11,7096176	10,4040712	0,0004527	-3,7495575	1,4918208	2,2032166	0,0007487	-2,5134101
820	13,9488001	19,8649281	0,0017567	11,8936269	13,4373813	-0,0004975	2,0551732	1,4542845	1,7999183	0,0006015	1,4131851
821	14,7425003	10,0219488	0,1859325	10,4519388	19,2706677	-0,0026199	4,2905615	1,4658908	1,2990557	0,0003757	2,9269312
822	8,3277597	9,7056538	0,1816679	11,3559973	17,3814177	-0,0022031	-3,0282375	1,4177108	1,2890663	0,0003620	-2,1360052
823	11,7765999	10,5905906	0,1550150	12,0509712	17,4280733	-0,0020169	-0,2743714	1,3581862	1,4315576	0,0003893	-0,2020131
824	12,2037001	10,8244306	0,1494614	11,7124112	17,4544246	-0,0019705	0,4912888	1,3972265	1,5124780	0,0004121	0,3516172
825	9,3105698	11,5974499	0,0857813	9,4547919	14,8247221	-0,0012773	-0,1442222	1,1901944	1,9566605	0,0005695	-0,1211753
826	7,3657298	10,7213168	0,0699300	9,4899891	12,0946602	-0,0011027	-2,1242593	1,3185391	1,5357443	0,0004679	-1,6110704
827	8,9239597	10,7763465	0,0651308	9,5399203	12,4237061	-0,0011134	-0,6159605	1,3960035	1,5143124	0,0004628	-0,4412314
828	11,4889002	10,9733337	0,0586363	9,6224544	12,6765054	-0,0010962	1,8664458	1,4312071	1,4903163	0,0004595	1,3041061
829	9,4759998	18,4918839	0,0340008	10,2243502	13,8520005	-0,0012381	-0,7483504	1,4263690	2,4209316	0,0008754	-0,5246541
830	15,0446997	17,9283469	0,0223995	14,2165058	10,5978274	0,0011340	0,8281939	1,4658498	2,1448123	0,0007290	0,5649923
831	13,4132004	18,6762183	0,0188781	13,5987721	9,9077264	0,0011980	-0,1855718	1,4902438	2,0203574	0,0006869	-0,1245244
832	10,6001997	19,7138140	0,0134451	12,1667393	9,4814710	0,0011495	-1,5665396	1,3802813	1,9442275	0,0006606	-1,1349423
833	16,0725002	16,8841620	0,0195605	13,1087608	17,6800170	-0,0016006	2,9637394	1,4469063	1,4304502	0,0004649	2,0483285
834	12,0970001	11,8967737	0,1358637	10,5623186	14,2518314	-0,0014289	1,5346816	1,1666963	2,3512999	0,0007061	1,3154079
835	9,9342499	17,7670692	0,0081553	10,4050968	12,3470862	-0,0006224	-0,4708469	1,3536933	2,2174158	0,0007868	-0,3478239

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
836	6,8862000	19,7711757	0,0142779	10,4998692	13,1269367	-0,0009154	-3,6136692	1,4406638	2,6858117	0,0009647	-2,5083362
837	8,8808699	20,6104362	0,0232519	10,1091015	14,1024606	-0,0012495	-1,2282317	1,2284411	2,8950225	0,0010428	-0,9998295
838	15,2754002	17,8852237	0,0166863	14,4443305	11,5658295	0,0009592	0,8310696	1,4788593	2,1975747	0,0007446	0,5619667
839	15,1125002	18,1373797	0,0164351	13,7437765	11,1762120	0,0010221	1,3687237	1,4152746	2,1274582	0,0007216	0,9671082
840	14,6183996	18,4664694	0,0159341	13,6966042	10,7651740	0,0010825	0,9217954	1,4774066	2,0596611	0,0006990	0,6239281
841	13,0066996	18,8746834	0,0149815	13,6023053	10,3698488	0,0011290	-0,5956057	1,4971448	1,9955568	0,0006774	-0,3978277
842	11,4245996	20,4777321	0,0107976	13,1082681	9,4287405	0,0011759	-1,6836685	1,4797113	1,8788054	0,0006373	-1,1378358
843	8,3179798	21,0326716	0,0096269	12,4017345	9,2096652	0,0011801	-4,0837547	1,4821583	1,8894341	0,0006411	-2,7552756
844	8,4344501	21,8206004	0,0081064	12,5175179	8,9496756	0,0012066	-4,0830678	1,4964324	1,9880484	0,0006749	-2,7285347
845	9,0516300	21,9205431	0,0071959	12,3046897	9,0580682	0,0011866	-3,2530597	1,4758346	2,0467164	0,0006944	-2,2042169
846	9,7235298	21,7984695	0,0057581	12,7433769	9,4684988	0,0010956	-3,0198471	1,4897843	2,0900764	0,0007079	-2,0270365
847	15,3471003	10,7024332	0,1576350	12,3788275	18,8976848	-0,0022730	2,9682728	1,3860326	1,4962794	0,0004105	2,1415607
848	15,9067001	10,9329861	0,1511684	11,7058885	18,8704316	-0,0022120	4,2008116	1,4428227	1,5724868	0,0004292	2,9115230
849	15,6177998	11,1797766	0,1442543	11,8385803	18,8022740	-0,0021453	3,7792194	1,4381692	1,6631443	0,0004540	2,6277989
850	15,5464001	11,4249908	0,1371163	10,7662554	18,6538077	-0,0020719	4,7801447	1,4058932	1,7572009	0,0004822	3,4000767
851	8,2144499	12,1620348	0,0591999	10,0314971	13,7290820	-0,0011346	-1,8170472	1,3195311	2,3957820	0,0006848	-1,3770401
852	9,4226398	11,5214312	0,1690823	10,1388553	14,2290639	-0,0015065	-0,7162155	1,1239986	2,5377103	0,0007161	-0,6372032
853	11,6761999	11,9531356	0,1925458	8,6099123	15,2276738	-0,0017185	3,0662876	1,1728961	2,3871768	0,0007119	2,6142875
854	8,5618896	12,5000993	0,1216903	9,4114483	13,5213518	-0,0015771	-0,8495587	1,3014173	1,8465556	0,0005747	-0,6527950
855	10,2426996	19,5367374	0,0031424	10,8814080	12,1527396	-0,0004524	-0,6387084	1,4384447	2,6673076	0,0009469	-0,4440271
856	9,8822002	20,1193102	0,0050220	10,9222192	12,4972376	-0,0005888	-1,0400190	1,3929936	2,8564596	0,0010128	-0,7466072
857	13,2686996	15,9818952	0,0288285	11,3676991	15,3246838	-0,0013436	1,9010005	1,4032034	1,7967613	0,0006228	1,3547576
858	10,9165001	20,0782193	0,0087720	11,3527045	13,6124767	-0,0008385	-0,4362044	1,3722281	3,2325511	0,0011269	-0,3178804
859	11,4617996	13,2674513	0,2122862	10,2711889	15,8979229	-0,0020498	1,1906107	1,2806734	2,1394945	0,0006337	0,9296756
860	10,6799002	13,1367707	0,1883356	9,1804340	16,2488421	-0,0022361	1,4994662	1,3729615	1,8803412	0,0005781	1,0921400
861	11,6202002	13,9641411	0,1190216	11,2140531	18,9770863	-0,0026604	0,4061471	1,3877929	1,7910109	0,0005996	0,2926568
862	16,8169994	20,5378722	0,0892373	13,3525543	22,5408303	-0,0034208	3,4644452	1,0623720	4,0758369	0,0013675	3,2610470
863	13,3929996	18,9897372	0,0110727	13,7651989	11,0561372	0,0010200	-0,3721992	1,4715356	2,0105868	0,0006820	-0,2529325

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
864	8,2820101	21,0204409	0,0103876	12,9893716	9,2899730	0,0013189	-4,7073615	1,4935628	1,7912294	0,0006062	-3,1517667
865	14,0014000	21,4317141	0,0105998	13,3392038	8,9245003	0,0014150	0,6621962	1,4782000	1,8085136	0,0006120	0,4479747
866	11,4520998	21,6699340	0,0107033	13,2118772	8,6987192	0,0014954	-1,7597774	1,4929602	1,8598948	0,0006294	-1,1787169
867	9,3901997	21,7334052	0,0104583	13,1421061	8,6823845	0,0015378	-3,7519064	1,4953522	1,9392739	0,0006560	-2,5090453
868	9,6372404	21,5305807	0,0089980	13,3596587	9,1102637	0,0014588	-3,7224183	1,4931769	2,0127081	0,0006796	-2,4929519
869	9,2531900	21,1458599	0,0065776	14,3117243	9,9724472	0,0012559	-5,0585343	1,3381811	2,0717272	0,0006975	-3,7801568
870	8,3039503	12,5859890	0,0676081	9,1605737	14,9837940	-0,0013998	-0,8566234	1,1633290	2,3990055	0,0006865	-0,7363552
871	12,0734997	12,5444180	0,2130224	10,0953364	15,7571115	-0,0019095	1,9781633	1,3669932	2,2738579	0,0006801	1,4470907
872	14,8947001	18,6235464	0,0080033	14,8672841	12,2958654	0,0008298	0,0274159	1,4809228	2,1479277	0,0007278	0,0185127
873	14,9839001	18,9748103	0,0080894	14,3422865	11,8672023	0,0009017	0,6416136	1,4838217	2,0514674	0,0006953	0,4324061
874	15,5008001	19,3933415	0,0083510	14,4575435	11,3773583	0,0009923	1,0432566	1,4836014	1,9470498	0,0006594	0,7031920
875	14,0728998	20,3412388	0,0096246	13,7863601	10,2534643	0,0012444	0,2865397	1,4948514	1,7535608	0,0005921	0,1916844
876	17,4860001	20,1902343	0,0063754	14,4404314	11,1880822	0,0012423	3,0455686	1,4242743	2,1402458	0,0007152	2,1383301
877	15,9645004	18,3030579	0,0070545	15,2746332	13,2501801	0,0007364	0,6898672	1,4704468	2,3079892	0,0007797	0,4691548
878	14,5396004	18,5234350	0,0064352	15,9146219	13,0245548	0,0007540	-1,3750216	1,1123486	2,2076872	0,0007463	-1,2361427
879	15,4373999	19,2487570	0,0058492	16,2153633	12,6872551	0,0011425	-0,7779634	1,4835000	2,2711778	0,0007546	-0,5244108
880	6,7866402	13,1238788	0,1420402	8,9209223	14,0242074	-0,0016114	-2,1342822	1,2447426	2,9740162	0,0008269	-1,7146374
881	9,7830896	12,9046462	0,3981488	9,5234304	18,1189554	-0,0026587	0,2596592	1,3803811	2,4393856	0,0007171	0,1881069
882	16,1800995	18,1758260	0,0081045	15,8843853	13,6106726	0,0007900	0,2957142	1,4810926	2,3607163	0,0007939	0,1996595
883	16,6870003	18,3064016	0,0063169	15,5628279	13,6032427	0,0007423	1,1241724	1,4515179	2,2439185	0,0007546	0,7744806
884	18,4472008	18,4853150	0,0054218	15,4248093	13,4647617	0,0007388	3,0223915	1,4593110	2,1093614	0,0007089	2,0711085
885	19,1394005	18,7154259	0,0052588	15,5923605	13,1880427	0,0007868	3,5470400	1,4865930	1,9648472	0,0006594	2,3860196
886	15,0084000	19,8330470	0,0098072	15,0810618	11,2466606	0,0014207	-0,0726618	1,4668710	1,6500363	0,0005508	-0,0495353
887	13,9570999	19,6662446	0,0121128	15,8982480	11,3686101	0,0016696	-1,9411481	1,4685052	2,0889351	0,0006957	-1,3218531
888	14,4802999	19,3417262	0,0107379	16,3230506	12,0352177	0,0015424	-1,8427507	1,4776453	2,2254005	0,0007403	-1,2470860
889	17,1812992	18,9460143	0,0083088	16,8404470	12,9866660	0,0013221	0,3408522	1,4881555	2,3388093	0,0007765	0,2290434
890	18,0657005	18,5070385	0,0051407	17,3024472	14,2056689	0,0010104	0,7632533	1,4828108	2,4194673	0,0008011	0,5147341
891	5,7653999	13,7406199	0,2872979	6,4019005	15,5899753	-0,0021318	-0,6365005	1,0491158	2,9699544	0,0008419	-0,6067019

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
892	14,0965004	13,4681511	0,1733588	12,9084563	20,8780803	-0,0028688	1,1880441	1,3854531	2,4718336	0,0008627	0,8575131
893	16,6784000	13,9685959	0,1285716	13,2929236	19,8316386	-0,0024235	3,3854765	1,3964595	2,5264862	0,0008885	2,4243285
894	15,0853004	15,7009778	0,0184545	12,2777975	15,3078592	-0,0008808	2,8075030	1,1423616	2,8958211	0,0010174	2,4576308
895	13,3984003	16,0373715	0,0056298	12,5611240	13,8653042	-0,0004870	0,8372763	1,3649662	3,3465013	0,0011610	0,6134044
896	16,8785000	18,0028781	0,0072663	16,4780712	14,0468795	0,0007782	0,4004288	1,4702168	2,2588137	0,0007541	0,2723604
897	17,6114998	18,0556653	0,0050379	16,2882237	14,1901875	0,0006913	1,3232761	1,4843082	2,1159300	0,0007057	0,8915103
898	16,1084995	19,2345888	0,0078104	16,6716864	12,7265328	0,0012580	-0,5631869	1,4887581	1,7719592	0,0005885	-0,3782931
899	16,7199993	19,3355692	0,0090577	16,9225553	12,5562418	0,0013835	-0,2025560	1,4890240	1,8522965	0,0006146	-0,1360327
900	10,7497997	19,3253126	0,0100784	17,0483802	12,5324865	0,0014681	-6,2985805	1,4975298	1,9652688	0,0006519	-4,2059801
901	15,9019003	19,1947497	0,0105245	17,0390186	12,7143884	0,0014897	-1,1371183	1,4955931	2,0973973	0,0006959	-0,7603126
902	18,2334003	18,9900432	0,0104048	18,1230483	13,0680362	0,0014585	0,1103521	1,4254293	2,2396507	0,0007432	0,0774167
903	19,9449005	18,7074785	0,0092105	17,1022521	13,6862050	0,0013423	2,8426484	1,4111064	2,3706917	0,0007864	2,0144819
904	22,5433998	18,0410504	0,0039197	17,8800653	15,7561153	0,0008349	4,6633346	1,3632758	2,5624950	0,0008468	3,4206832
905	15,4001999	14,9852570	0,1450524	14,0867097	23,6900793	-0,0029695	1,3134901	1,1422824	2,5052132	0,0006950	1,1498821
906	7,0798402	14,6719565	0,4056442	7,6100496	17,4565260	-0,0026419	-0,5302094	1,3776864	2,8556467	0,0008239	-0,3848549
907	7,2908902	14,4735566	0,4746018	6,7289348	18,8186903	-0,0029654	0,5619554	1,2059382	2,6672059	0,0007780	0,4659903
908	15,3783998	14,5371271	0,0509469	13,5542558	16,8788858	-0,0012714	1,8241440	1,3879697	2,7486037	0,0009689	1,3142535
909	12,7372999	14,7812279	0,0346598	13,3987843	16,1261168	-0,0010482	-0,6614844	1,3761013	2,8912993	0,0010159	-0,4806945
910	13,6246004	15,0595342	0,0162249	12,9434423	14,9435988	-0,0007141	0,6811581	1,4083657	3,2349581	0,0011285	0,4836514
911	17,6404991	17,6603446	0,0085702	16,5032421	14,4550889	0,0008183	1,1372571	1,3758712	2,2726783	0,0007534	0,8265723
912	17,8334999	17,5754761	0,0044846	16,5315067	14,9421936	0,0006262	1,3019932	1,4025043	2,1323724	0,0007061	0,9283345
913	17,6105995	17,6174512	0,0017761	16,7237655	15,4130052	0,0004526	0,8868340	1,4842448	1,9249014	0,0006387	0,5974984
914	17,3593006	18,5366583	0,0037570	17,0507424	14,8006845	0,0008245	0,3085583	1,4717784	1,8739594	0,0006199	0,2096499
915	20,1786003	18,7313255	0,0050124	17,3670107	14,5503933	0,0009749	2,8115896	1,4946406	1,9198759	0,0006339	1,8811141
916	19,6068993	18,8308130	0,0063668	17,8623551	14,3597918	0,0011095	1,7445441	1,4928103	1,9976704	0,0006594	1,1686308
917	16,0480995	18,8282965	0,0076067	17,8800708	14,2805131	0,0012103	-1,8319713	1,4985865	2,1071395	0,0006963	-1,2224662
918	20,1431007	18,5564129	0,0082005	19,5926339	14,7288870	0,0012220	0,5504668	1,1376451	2,3723434	0,0007857	0,4838651
919	24,0618000	18,3390908	0,0069672	18,9578223	15,3452726	0,0011044	5,1039777	1,4645435	2,4999420	0,0008280	3,4850298

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
920	6,0115199	15,8498856	0,3601726	7,3856976	16,3675453	-0,0024093	-1,3741777	1,3467660	3,1787455	0,0009028	-1,0203537
921	12,2579002	14,4488841	0,0265890	12,3984668	15,3395416	-0,0007912	-0,1405665	0,7342383	3,4380987	0,0011991	-0,1914454
922	14,6255999	13,3347111	0,1629015	14,1560502	18,2945145	-0,0016274	0,4695496	1,3221270	2,7467026	0,0009650	0,3551471
923	17,5207996	17,3327420	0,0090789	17,4792428	14,9530740	0,0008138	0,0415569	1,4644711	2,3026279	0,0007596	0,0283767
924	14,0490999	18,2178526	0,0014898	18,1438737	16,6500092	0,0005040	-4,0947738	1,4969456	2,0089538	0,0006606	-2,7354193
925	16,6446991	18,4296788	0,0026793	18,1949849	16,3011195	0,0006859	-1,5502858	1,4761653	2,0470903	0,0006725	-1,0502115
926	21,0634995	18,4933347	0,0057838	19,4089920	16,0228487	0,0009948	1,6545074	1,4405405	2,3546878	0,0007780	1,1485323
927	8,5949097	12,9062791	0,6553289	9,4331212	21,9586996	-0,0038505	-0,8382115	1,3877624	2,5453721	0,0007974	-0,6040022
928	16,4248009	11,2938211	0,3797910	16,6525394	22,1085823	-0,0031124	-0,2277385	0,5404509	2,8707216	0,0009988	-0,4213861
929	22,2329998	17,9624066	0,0466282	18,4622691	12,8299172	0,0017256	3,7707307	1,3958762	2,6951759	0,0008960	2,7013360
930	18,2845001	17,4317412	0,0002422	18,6760643	19,1500600	-0,0001880	-0,3915641	1,4048621	2,1321083	0,0007012	-0,2787207
931	22,5193005	17,7989012	0,0000003	18,7701663	18,7510337	0,0000068	3,7491341	1,4756353	2,1151509	0,0006931	2,5406915
932	21,5508995	18,1117692	0,0003218	18,9567549	18,2709781	0,0002279	2,5941447	1,4951379	2,1157613	0,0006921	1,7350538
933	21,6658993	18,3389368	0,0011661	19,1024757	17,8284983	0,0004379	2,5634236	1,4879045	2,1507472	0,0007041	1,7228415
934	25,5249004	18,5288732	0,0031701	19,9113029	17,6703339	0,0007116	5,6135976	1,4718294	2,4685463	0,0008149	3,8140273
935	6,3739100	14,8218693	0,6225879	7,4278233	20,5075482	-0,0034805	-1,0539134	1,3085019	2,8998366	0,0008635	-0,8054351
936	6,9411602	14,1832467	0,6477903	8,6954162	21,0221123	-0,0036149	-1,7542560	1,3912123	2,9203957	0,0008801	-1,2609550
937	7,8965998	13,5073760	0,6717660	6,4890309	21,6257867	-0,0037738	1,4075689	1,1095769	2,8827739	0,0008801	1,2685636
938	9,4713898	12,6584955	0,7158981	8,9491335	22,5097083	-0,0040108	0,5222563	1,3840918	2,9975894	0,0009189	0,3773278
939	11,9923000	13,7160577	0,1735320	13,6034707	18,0981338	-0,0015782	-1,6111707	1,3331309	2,9037770	0,0010167	-1,2085615
940	11,3989000	11,9351143	0,7412592	12,3359856	23,2647714	-0,0042018	-0,9370856	1,1306233	3,0072251	0,0009266	-0,8288221
941	13,3407001	10,9517062	0,7443854	12,5169713	24,3712437	-0,0044531	0,8237289	1,2342388	2,5930665	0,0008239	0,6673983
942	19,6198006	18,8035089	0,0902863	18,9441627	11,2858278	0,0023873	0,6756379	1,3798121	3,0105547	0,0010089	0,4896593
943	22,3066006	18,1192147	0,0496735	19,0463212	13,0728008	0,0017600	3,2602793	1,3029785	2,7751322	0,0009230	2,5021743
944	18,5510998	16,8921769	0,0046794	18,2212169	16,5472088	0,0005556	0,3298828	1,4425544	2,4152278	0,0007940	0,2286796
945	14,8436003	16,2749248	0,0069815	17,8195192	21,3983303	-0,0008837	-2,9759189	1,1116864	2,2998591	0,0007608	-2,6769410
946	14,2322998	16,6211347	0,0057270	18,3073834	21,4685887	-0,0008412	-4,0750836	1,3221275	2,2931497	0,0007557	-3,0822167
947	22,7187996	17,0369114	0,0037005	18,8720420	21,2493711	-0,0007050	3,8467576	1,4558261	2,2681029	0,0007441	2,6423195

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_6	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
948	26,0172005	17,4690163	0,0017174	19,2450598	20,8022348	-0,0004964	6,7721407	1,4869222	2,2329182	0,0007295	4,5544688
949	25,5837002	17,8686481	0,0004074	19,5373070	20,2292080	-0,0002475	6,0463932	1,4644259	2,2044887	0,0007184	4,1288488
950	21,7364006	18,2043582	0,0000000	19,6617946	19,6557434	0,0000021	2,0746060	1,4811845	2,2033366	0,0007180	1,4006398
951	23,7514992	18,9346557	0,0001914	20,8988193	20,3845419	0,0001692	2,8526799	1,4299144	2,7552648	0,0009055	1,9950004
952	25,6956005	19,3502756	0,0019172	21,6502212	23,1670664	-0,0005311	4,0453794	1,2926070	3,1521647	0,0010208	3,1296283
953	21,8908997	16,7407296	0,0115681	19,7733828	23,2447063	-0,0012070	2,1175169	1,4590959	2,4014764	0,0007858	1,4512527
954	25,8598003	17,2188792	0,0072651	19,4708243	22,7651944	-0,0009893	6,3889761	1,4509190	2,3568266	0,0007680	4,4033996
955	13,3961000	14,6852078	0,4050344	13,4839972	21,5509479	-0,0028167	-0,0878972	1,1585403	3,1425823	0,0011701	-0,0758689
956	14,8796997	20,6453800	0,2435538	13,8273497	20,4767633	-0,0023242	1,0523500	1,0604070	3,4319775	0,0013409	0,9924020

Appendix I:
GWR (Clay and Band 5) Output Feature Class Attribute Table

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
0	4,6929998	11,0604872	0,0145824	8,8600536	10,8609825	-0,0008917	-4,1670537	2,0987452	2,9608574	0,0012806	-1,9854977
1	10,5496998	10,7946238	0,0022145	9,3150113	9,9858748	-0,0003409	1,2346885	2,0372753	2,8307767	0,0012166	0,6060489
2	4,8042598	11,0742314	0,0301527	7,9411693	11,3692386	-0,0012461	-3,1369095	1,7832087	2,8503763	0,0012307	-1,7591376
3	10,7025003	10,2077325	0,0044016	10,2187050	9,0397451	0,0004349	0,4837953	2,0879710	2,4391672	0,0010303	0,2317060
4	15,6353998	9,8937462	0,0278838	11,9128141	8,8044561	0,0009890	3,7225857	1,7734872	2,5760889	0,0011015	2,0990204
5	9,6105003	10,3565843	0,0020934	9,3267992	9,9222724	-0,0003044	0,2837011	2,1422095	2,2657062	0,0009378	0,1324339
6	9,7496099	10,1674978	0,0016616	9,9220536	9,3896156	0,0002653	-0,1724436	2,1793682	2,2759149	0,0009500	-0,0791255
7	10,8509998	10,0895018	0,0055627	10,0236391	9,2807127	0,0004753	0,8273608	1,9940340	2,3093700	0,0009698	0,4149181
8	13,6110001	10,0252832	0,0101302	10,4686448	9,2926626	0,0006249	3,1423552	2,1346311	2,3582324	0,0009957	1,4720835
9	12,9534998	9,9378560	0,0167071	11,0678403	9,6432910	0,0007529	1,8856595	2,0810294	2,4940617	0,0010587	0,9061186
10	9,1678400	10,0763515	0,0004498	10,2387709	10,5675592	-0,0001397	-1,0709309	2,2169943	1,9795144	0,0008122	-0,4830553
11	11,7512999	10,0741755	0,0001293	10,6514848	10,8266158	-0,0000743	1,0998151	2,2139821	2,0251156	0,0008362	0,4967588
12	13,1772003	10,0769698	0,0000544	11,0412393	11,1566142	-0,0000476	2,1359610	2,2033803	2,0912133	0,0008678	0,9694019
13	11,8093004	10,0852359	0,0000727	11,4079899	11,5399189	-0,0000540	0,4013106	2,1874965	2,1745178	0,0009052	0,1834566
14	5,6611900	10,2086690	0,0038435	9,1558028	10,0462527	-0,0004044	-3,4946128	2,1959290	2,0937056	0,0008541	-1,5914052
15	9,0373096	10,1628625	0,0006969	9,6240667	9,9186678	-0,0001729	-0,5867571	2,0677070	2,0934107	0,0008576	-0,2837719
16	9,1165104	10,1197965	0,0000224	9,9167992	9,8518836	0,0000309	-0,8002888	2,2010476	2,1081736	0,0008690	-0,3635945
17	12,2551003	10,0557683	0,0023593	10,8899813	9,9844032	0,0003078	1,3651189	2,0530803	2,1893503	0,0009144	0,6649126
18	5,5072098	10,1040427	0,0125994	8,0467429	9,9222526	-0,0006928	-2,5395331	2,1577507	1,8757940	0,0007498	-1,1769354
19	7,3672900	10,0918651	0,0056853	10,0733220	11,3577879	-0,0005117	-2,7060320	2,2115908	1,8463417	0,0007501	-1,2235681
20	13,0441999	10,1092262	0,0070805	11,7289962	12,7721008	-0,0005608	1,3152038	2,0785539	2,0333547	0,0008358	0,6327494
21	12,9757004	10,1345931	0,0209578	10,2800123	13,4747800	-0,0010227	2,6956881	2,0033936	1,8413839	0,0007453	1,3455609
22	5,2222800	10,3160700	0,0091881	7,7096517	8,6673258	-0,0005347	-2,4873717	2,0383202	1,7503363	0,0006771	-1,2203047
23	7,0332398	10,3217561	0,0209059	9,4686110	11,2465493	-0,0009861	-2,4353712	2,0913801	1,6936854	0,0006706	-1,1644804

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
24	7,2882299	10,5291146	0,0211306	7,1874261	10,4708364	-0,0009462	0,1008039	1,9999972	1,6464654	0,0006378	0,0504020
25	8,2879696	10,5176378	0,0288204	8,3209153	11,5809515	-0,0011744	-0,0329457	2,2165864	1,6311914	0,0006363	-0,0148633
26	17,2607994	10,0797051	0,0777343	12,6870226	16,5351645	-0,0020734	4,5737769	2,0694190	1,7588113	0,0006870	2,2101744
27	6,0582600	10,0805378	0,0084123	6,1226345	5,3953383	0,0003447	-0,0643745	2,1454400	1,6500427	0,0005875	-0,0300053
28	5,5601702	10,2662079	0,0002180	6,4000039	6,2617155	0,0000618	-0,8398337	2,1889795	1,6242098	0,0005855	-0,3836645
29	5,2461801	10,5638434	0,0086042	6,8159401	8,2668193	-0,0004950	-1,5697600	2,2050657	1,5936351	0,0005916	-0,7118881
30	7,2987599	10,7054022	0,0269041	8,3273123	10,6378489	-0,0010653	-1,0285524	2,1949845	1,5682525	0,0005957	-0,4685921
31	9,2769499	10,6451651	0,0511848	8,5590395	13,2312630	-0,0016510	0,7179104	2,2183665	1,5569907	0,0005988	0,3236212
32	17,0237007	9,6111618	0,1113533	13,1995441	17,9715761	-0,0023508	3,8241566	2,0967043	1,7950349	0,0006869	1,8238893
33	4,3960600	10,2732354	0,0002795	6,3642348	6,1832040	0,0000676	-1,9681748	2,2335003	1,5728929	0,0005594	-0,8812064
34	4,8644500	10,4605945	0,0024492	6,5017951	7,1502019	-0,0002262	-1,6373451	2,2255118	1,5495206	0,0005577	-0,7357162
35	5,6367202	10,6280216	0,0105457	6,8343129	8,2527019	-0,0005324	-1,1975927	2,2387337	1,5273514	0,0005567	-0,5349420
36	5,0110302	10,7579889	0,0214561	7,4626189	9,4830679	-0,0008525	-2,4515887	2,2258447	1,5068399	0,0005557	-1,1014194
37	7,3580999	10,8358934	0,0489539	7,7549885	12,2280043	-0,0015266	-0,3968886	2,2186939	1,4823778	0,0005561	-0,1788839
38	10,1622000	10,7647557	0,0652048	8,9115588	13,6261273	-0,0018539	1,2506411	2,2387533	1,4865537	0,0005603	0,5586329
39	12,6531000	10,6221543	0,0822549	11,1462036	14,9336917	-0,0021447	1,5068964	2,0742067	1,5052126	0,0005687	0,7264929
40	14,4847002	10,4222156	0,0987043	8,5450613	16,0683112	-0,0023740	5,9396389	2,1405970	1,5382184	0,0005812	2,7747581
41	16,1399002	9,9275525	0,1227985	11,3933177	17,5889152	-0,0025837	4,7465825	2,2132294	1,6310082	0,0006154	2,1446410
42	10,8893003	9,6195947	0,0558913	8,2264590	5,1973290	0,0007336	2,6628413	1,8539370	1,7044568	0,0005936	1,4363170
43	9,0980301	9,6982524	0,0517287	7,4679453	5,0059763	0,0007222	1,6300848	2,1666013	1,6472399	0,0005733	0,7523695
44	7,3429899	9,7873281	0,0433827	6,8113576	4,9131800	0,0006738	0,5316324	2,2318889	1,5937902	0,0005542	0,2381984
45	6,8376098	9,8880892	0,0313126	6,3438425	4,9602036	0,0005809	0,4937673	2,2076878	1,5504355	0,0005390	0,2236581
46	4,8489699	10,3193088	0,0000000	6,2818886	6,2807613	0,0000007	-1,4329187	1,9828042	1,4851983	0,0005230	-0,7226728
47	4,3808298	10,5029432	0,0046054	6,2507294	7,1650036	-0,0002869	-1,8698996	2,2098508	1,4652322	0,0005203	-0,8461655
48	6,5676599	10,8423086	0,0315430	7,4329106	9,5208174	-0,0009613	-0,8652507	2,1919145	1,4058342	0,0005072	-0,3947466
49	7,1738801	10,9344609	0,0486564	6,6155742	10,8999673	-0,0013248	0,5583059	2,1906851	1,3786811	0,0005003	0,2548545
50	10,5250998	10,8266540	0,0857651	8,9329951	13,6699284	-0,0020055	1,5921047	2,2263145	1,3830701	0,0005058	0,7151302
51	12,1297998	10,6222239	0,1040358	9,3466169	14,8701026	-0,0022702	2,7831830	2,2338452	1,4202748	0,0005206	1,2459158

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
52	15,4041996	9,0041452	0,1215932	10,0564883	16,6182368	-0,0022079	5,3477113	2,1584889	1,6053104	0,0006021	2,4775256
53	7,0771899	9,6677699	0,0694689	6,0725998	4,3283694	0,0008584	1,0045901	2,1007880	1,6808731	0,0005878	0,4781968
54	5,3972402	9,9365718	0,0251633	6,3992482	4,8830650	0,0005382	-1,0020081	2,2321190	1,5821512	0,0005520	-0,4489044
55	4,6722298	10,1015392	0,0074251	6,2750026	5,4480014	0,0003085	-1,6027729	2,2369977	1,5522775	0,0005437	-0,7164839
56	4,0699701	10,2854136	0,0001085	6,2981908	6,2086910	0,0000408	-2,2282207	2,1935757	1,5285276	0,0005395	-1,0157939
57	6,8745999	10,9020767	0,0422674	7,6857643	10,9424134	-0,0012837	-0,8111644	2,2409576	1,4245232	0,0005222	-0,3619722
58	8,5467701	10,8208714	0,0776457	8,3085205	13,7977737	-0,0019803	0,2382496	2,2388006	1,4236943	0,0005272	0,1064184
59	11,3066998	10,6452743	0,0960698	8,8097190	15,0793341	-0,0022667	2,4969807	2,2357063	1,4515070	0,0005387	1,1168644
60	17,6480007	9,8053983	0,1339864	11,5267633	17,4291439	-0,0026175	6,1212374	2,2030374	1,5894745	0,0005923	2,7785445
61	3,7305300	6,8306601	0,0054222	4,3366071	4,1328208	0,0001322	-0,6060771	1,9482765	1,5899546	0,0006034	-0,3110837
62	4,9544501	10,1076339	0,0093239	6,3231909	5,5512325	0,0003206	-1,3687408	2,2189564	1,4613227	0,0005087	-0,6168399
63	4,7851000	10,2316663	0,0024272	6,3383301	5,8350953	0,0001695	-1,5532301	2,2422462	1,4494553	0,0005074	-0,6927117
64	4,5581198	10,3804989	0,0001059	6,2462056	6,3572658	-0,0000378	-1,6880858	2,2429816	1,4416596	0,0005081	-0,7526080
65	8,8756504	10,8057570	0,0872134	8,0663735	13,2159847	-0,0019215	0,8092769	2,2463578	1,3725183	0,0004983	0,3602618
66	9,1430998	10,5789077	0,1043744	7,7128855	14,3112615	-0,0021577	1,4302143	2,2200869	1,4163396	0,0005157	0,6442154
67	15,5944996	9,2144274	0,1280887	12,5016521	16,0037340	-0,0022235	3,0928475	2,0176280	1,5673998	0,0005809	1,5329126
68	14,7294998	8,8667835	0,1143674	10,5069959	15,6483188	-0,0020075	4,2225039	2,2162967	1,5697818	0,0005865	1,9052070
69	10,0247002	9,8856765	0,0058515	7,3328532	6,7276002	0,0002247	2,6918470	2,2306910	1,5322601	0,0005184	1,2067323
70	8,3669996	10,0409280	0,0073774	7,1177304	6,1821241	0,0002687	1,2492692	2,1979583	1,4625384	0,0005018	0,5683771
71	7,1252098	10,1254970	0,0062592	6,8364342	5,9934752	0,0002534	0,2887756	2,2214300	1,4323565	0,0004948	0,1299953
72	5,6949501	10,9250594	0,0647563	7,1094800	11,3374226	-0,0014757	-1,4145299	2,2453329	1,3636733	0,0004910	-0,6299867
73	10,1004000	10,2262213	0,1105665	8,8101990	14,2528492	-0,0020885	1,2902010	2,2425577	1,4845235	0,0005408	0,5753257
74	10,8457003	9,8735182	0,1202827	9,9708951	14,7923666	-0,0021476	0,8748052	2,2098701	1,5217774	0,0005567	0,3958627
75	11,3346996	9,5047034	0,1236019	11,5643788	15,0389201	-0,0021160	-0,2296792	2,0613130	1,5417346	0,0005666	-0,1114237
76	11,1069002	7,4083940	0,0212414	10,1501082	11,2236592	-0,0005360	0,9567921	2,1058733	1,7950935	0,0006757	0,4543445
77	4,2550602	6,6877583	0,0139782	4,9952680	4,5422656	0,0002137	-0,7402078	2,2005607	1,4524990	0,0005534	-0,3363724
78	3,7970400	6,8263054	0,0107789	4,7991200	4,4663975	0,0001958	-1,0020800	2,1404784	1,4135443	0,0005348	-0,4681570
79	3,6357801	6,9719103	0,0092639	4,8562752	4,3796045	0,0001872	-1,2204951	2,2036784	1,3892568	0,0005206	-0,5538445

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
80	3,8994999	7,5630643	0,0213635	4,8026244	3,9617762	0,0003358	-0,9031245	2,1807976	1,4664166	0,0005175	-0,4141258
81	8,9705896	9,6941447	0,0014896	7,5237443	7,7860510	-0,0001087	1,4468453	2,1686538	1,4611881	0,0004761	0,6671629
82	8,9837103	9,9844879	0,0000289	7,3741398	7,3311685	0,0000152	1,6095705	2,2425581	1,4841823	0,0004956	0,7177386
83	8,4585304	10,0646043	0,0004083	7,1547905	7,0324753	0,0000593	1,3037400	2,1566638	1,4593756	0,0004919	0,6045170
84	8,4238997	10,1483677	0,0009388	7,0114584	6,7251152	0,0000932	1,4124413	2,2458252	1,4290622	0,0004863	0,6289186
85	7,0394301	10,2373821	0,0012065	6,7000619	6,4510890	0,0001088	0,3393682	2,2023526	1,4016162	0,0004815	0,1540935
86	5,5581899	10,3320200	0,0009001	6,5706268	6,2612048	0,0000962	-1,0124369	2,2377107	1,3831338	0,0004794	-0,4524432
87	5,1721702	10,4386251	0,0001496	6,3682473	6,2261377	0,0000403	-1,1960771	2,1956092	1,3774053	0,0004812	-0,5447587
88	4,2064199	10,6921585	0,0044619	5,9777060	6,8614430	-0,0002459	-1,7712860	2,1652319	1,3881672	0,0004905	-0,8180584
89	4,0974498	10,8270469	0,0135523	5,7974544	7,5607795	-0,0004720	-1,7000046	2,1144955	1,3911554	0,0004931	-0,8039765
90	4,4367199	10,9775120	0,0402095	6,2993136	9,4677384	-0,0009995	-1,8625937	2,2224469	1,3904539	0,0004950	-0,8380824
91	4,5409398	10,9260425	0,0544171	6,9460186	10,5099487	-0,0012558	-2,4050788	2,2467016	1,4059782	0,0005025	-1,0704932
92	5,9420600	10,7703043	0,0687603	7,8638775	11,5146385	-0,0014847	-1,9218175	2,2314931	1,4381918	0,0005170	-0,8612249
93	8,4676504	10,5223597	0,0830278	7,5988466	12,4194690	-0,0016727	0,8688038	2,2438100	1,4781746	0,0005347	0,3872003
94	9,9266701	9,4836566	0,1105910	7,6605406	13,9534310	-0,0018519	2,2661295	2,1609909	1,5363403	0,0005642	1,0486530
95	9,6541700	8,7539921	0,0956862	8,0748874	13,6145982	-0,0015631	1,5792826	2,0771661	1,5137453	0,0005607	0,7603064
96	9,9038095	7,4451972	0,0195142	10,0385573	10,7165110	-0,0004514	-0,1347478	1,9608313	1,7697033	0,0006691	-0,0687197
97	5,2891102	7,3986960	0,0258404	5,6115391	5,0862124	0,0002296	-0,3224289	2,1962803	1,4439674	0,0005445	-0,1468068
98	5,3128300	6,9110866	0,0259993	4,7818894	4,7797285	0,0002701	0,5309406	1,2911428	1,4521465	0,0005480	0,4112176
99	5,2351298	6,9222296	0,0222709	5,1880864	4,6931311	0,0002671	0,0470434	2,1852686	1,4205772	0,0005351	0,0215275
100	5,7944899	6,9932271	0,0178076	5,2058903	4,6220972	0,0002535	0,5885996	2,2195814	1,3786685	0,0005171	0,2651849
101	4,3467898	7,0976410	0,0137280	5,1795876	4,5624477	0,0002331	-0,8327978	2,2131879	1,3377974	0,0004985	-0,3762888
102	3,7901001	7,2129566	0,0108867	5,0460124	4,5033090	0,0002143	-1,2559123	2,2203870	1,3110426	0,0004843	-0,5656277
103	2,5929699	7,4396033	0,0103491	4,7116301	4,3486563	0,0002166	-2,1186602	2,0871937	1,3269451	0,0004797	-1,0150760
104	3,0696101	7,5712708	0,0127807	5,0782410	4,2636595	0,0002474	-2,0086309	2,1394823	1,3590065	0,0004850	-0,9388397
105	4,5860400	8,3271229	0,0100886	5,3446910	4,7693087	0,0002745	-0,7586510	2,0712205	1,4023664	0,0004797	-0,3662821
106	9,5807104	9,9697865	0,0051285	7,4649356	7,9898209	-0,0001897	2,1157748	2,2412960	1,4516717	0,0004759	0,9439962
107	7,9603100	10,0555090	0,0025927	7,5035519	7,7532978	-0,0001384	0,4567581	2,0957891	1,4500190	0,0004796	0,2179409

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
108	8,1635303	10,2300283	0,0001826	6,9857898	7,1307991	-0,0000397	1,1777406	2,1883230	1,4096464	0,0004757	0,5381932
109	5,7388501	10,4222034	0,0000338	6,5810145	6,5185060	0,0000181	-0,8421644	2,2167706	1,3674663	0,0004708	-0,3799060
110	4,1653600	10,6385820	0,0003496	6,1560575	6,3783294	-0,0000619	-1,9906975	2,1773362	1,3721149	0,0004788	-0,9142812
111	4,3472700	10,8792533	0,0089441	6,2723240	7,1599760	-0,0003588	-1,9250539	2,2225474	1,4077322	0,0004933	-0,8661475
112	4,6440601	10,9360538	0,0408276	6,8906329	9,5929186	-0,0009997	-2,2465728	2,2446597	1,4674532	0,0005195	-1,0008523
113	5,3756599	10,7771371	0,0528952	7,0534126	10,4739214	-0,0011960	-1,6777526	2,2450775	1,5008741	0,0005360	-0,7473028
114	7,6535602	10,5338310	0,0656900	7,2278235	11,3026914	-0,0013669	0,4257367	2,2388782	1,5317302	0,0005520	0,1901563
115	8,2656097	10,2248374	0,0785122	6,5940386	12,0215018	-0,0014997	1,6715711	2,1304989	1,5494441	0,0005628	0,7845914
116	8,4802999	9,5111422	0,0957811	8,7611458	12,8817526	-0,0015848	-0,2808459	2,2346226	1,5365055	0,0005638	-0,1256793
117	9,7727404	9,1383487	0,0950349	8,6669486	12,9234331	-0,0015099	1,1057917	2,2300053	1,5143977	0,0005572	0,4958696
118	7,7840199	8,4377957	0,0712363	9,0825920	12,2715894	-0,0011479	-1,2985721	2,2145918	1,4959792	0,0005520	-0,5863708
119	7,5348802	7,5409775	0,0162513	9,5121785	10,3076238	-0,0003684	-1,9772984	2,1745549	1,7453979	0,0006634	-0,9092888
120	5,6836100	7,9001764	0,0167817	5,7087599	5,2084774	0,0002055	-0,0251500	2,2195415	1,3644879	0,0005074	-0,0113312
121	2,3566000	7,6787607	0,0074147	5,2083544	4,6243384	0,0001913	-2,8517543	2,2004850	1,2605592	0,0004512	-1,2959662
122	9,4543600	10,0090907	0,0117132	7,3615480	8,1759450	-0,0002755	2,0928120	2,2482528	1,4117360	0,0004610	0,9308615
123	8,9092598	10,0957647	0,0075803	7,2099251	7,9710679	-0,0002266	1,6993347	2,2299946	1,4173150	0,0004662	0,7620354
124	8,5607996	10,1846695	0,0041911	7,1981510	7,6997559	-0,0001748	1,3626486	2,2527870	1,4090379	0,0004677	0,6048724
125	8,9341497	10,2778584	0,0018588	6,9804933	7,3768158	-0,0001214	1,9536565	2,2410017	1,3913115	0,0004664	0,8717782
126	6,8945298	10,3761672	0,0005820	6,7630009	7,0274751	-0,0000706	0,1315289	2,1741983	1,3710384	0,0004642	0,0604953
127	5,2387500	10,5811676	0,0000124	6,3937854	6,4206607	-0,0000109	-1,1550354	2,2195934	1,3534923	0,0004657	-0,5203815
128	4,1269698	10,6896164	0,0001237	6,2264478	6,3129971	-0,0000353	-2,0994780	2,2152757	1,3674238	0,0004724	-0,9477276
129	4,2368798	10,9125558	0,0045727	6,0630437	6,7686229	-0,0002393	-1,8261639	2,2407966	1,4278347	0,0004934	-0,8149619
130	4,5859499	10,9938432	0,0106603	6,4132989	7,3017501	-0,0003977	-1,8273490	2,1785642	1,4617397	0,0005055	-0,8387859
131	4,6854300	11,0165393	0,0183237	6,1852514	7,9604329	-0,0005682	-1,4998213	2,2235046	1,4971634	0,0005200	-0,6745304
132	5,1951599	10,9548073	0,0268703	6,8921457	8,6911078	-0,0007391	-1,6969858	2,2191325	1,5344209	0,0005378	-0,7647069
133	7,3753500	10,5731792	0,0477729	8,1456012	10,2173625	-0,0010630	-0,7702512	2,1183362	1,5901292	0,0005706	-0,3636114
134	6,7305002	10,2816350	0,0602626	5,9551007	10,9271027	-0,0012010	0,7753995	1,9252300	1,5921367	0,0005771	0,4027568
135	8,4142904	8,8450419	0,0775900	8,9783560	11,9178054	-0,0011786	-0,5640655	2,2193049	1,4879603	0,0005457	-0,2541632

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
136	8,6030102	8,5077215	0,0650072	9,3181908	11,6018868	-0,0010025	-0,7151806	2,1983961	1,4867120	0,0005450	-0,3253193
137	8,6879301	8,2173661	0,0488335	9,8954773	11,1748804	-0,0007981	-1,2075472	2,0348385	1,5154388	0,0005576	-0,5934364
138	8,4907703	7,6895930	0,0118701	8,9799634	10,0115777	-0,0002940	-0,4891931	2,0038195	1,7267024	0,0006593	-0,2441303
139	8,9188299	7,6182189	0,0034708	9,4220712	9,6424241	-0,0001369	-0,5032413	1,9997721	1,8692099	0,0007251	-0,2516493
140	6,1441498	9,2619808	0,0013209	6,0208008	5,8002517	0,0000816	0,1233490	2,2172005	1,5008816	0,0005498	0,0556328
141	6,1776199	9,1201061	0,0022258	5,9439614	5,6803186	0,0000999	0,2336585	2,2260658	1,4202918	0,0005206	0,1049648
142	5,5484300	8,9227679	0,0034861	5,9078580	5,5737439	0,0001176	-0,3594280	2,2175593	1,3563779	0,0004978	-0,1620827
143	5,6454601	7,8897547	0,0076435	5,5709324	4,9860167	0,0001984	0,0745278	2,2189818	1,1796047	0,0004236	0,0335865
144	5,3141098	7,9153089	0,0050577	5,4866050	4,9963482	0,0001639	-0,1724952	2,2171333	1,1855482	0,0004225	-0,0778010
145	4,1795101	7,9586924	0,0037869	5,2397699	4,9892479	0,0001423	-1,0602598	2,1175241	1,2100138	0,0004288	-0,5007073
146	4,6658502	8,7196052	0,0015804	5,8247914	5,4538413	0,0001015	-1,1589412	2,1572260	1,2658883	0,0004388	-0,5372368
147	7,2539902	9,8501545	0,0178086	7,0982721	8,1659649	-0,0003378	0,1557181	2,2394973	1,3170628	0,0004302	0,0695326
148	8,5044403	10,0219399	0,0141635	7,4767757	8,1568970	-0,0002919	1,0276646	2,2091239	1,3707967	0,0004478	0,4651910
149	8,9310904	10,1041977	0,0100275	7,5075555	7,9939205	-0,0002499	1,4235349	2,1468620	1,3793864	0,0004532	0,6630770
150	8,8079300	10,1933168	0,0061662	7,3907923	7,7597413	-0,0002027	1,4171377	2,1181941	1,3768824	0,0004558	0,6690311
151	7,4982200	10,2859488	0,0031439	6,9845329	7,4644297	-0,0001508	0,5136871	2,2477032	1,3646397	0,0004558	0,2285387
152	7,2338500	10,3844941	0,0011616	6,8498685	7,1214453	-0,0000954	0,3839815	2,2511872	1,3489617	0,0004547	0,1705684
153	4,1100202	10,6967756	0,0000012	6,2481371	6,2557123	-0,0000033	-2,1381170	2,1827606	1,3531330	0,0004635	-0,9795472
154	5,1741600	11,0349901	0,0093531	6,5223310	7,3150891	-0,0003698	-1,3481710	2,1482502	1,5428070	0,0005298	-0,6275670
155	5,5439801	10,8519810	0,0223873	6,9538736	8,5577632	-0,0006423	-1,4098935	2,2206575	1,6314412	0,0005747	-0,6348991
156	5,0874801	10,6423244	0,0318502	6,8280452	9,2572431	-0,0007882	-1,7405652	2,2235463	1,6465791	0,0005882	-0,7827879
157	6,8266301	10,0505906	0,0566506	7,3117727	10,5909473	-0,0010527	-0,4851426	2,2158334	1,6027270	0,0005849	-0,2189436
158	7,5991902	9,3236320	0,0729305	8,5281778	11,3119158	-0,0011207	-0,9289876	2,2130318	1,5152118	0,0005558	-0,4197805
159	9,2617197	7,9762528	0,0157664	9,4267597	10,1145789	-0,0003659	-0,1650400	2,1288420	1,6405146	0,0006187	-0,0775257
160	10,1492004	7,8891645	0,0076402	9,1331658	9,8626433	-0,0002382	1,0160347	2,1530688	1,7177424	0,0006573	0,4719007
161	8,6479597	7,8856575	0,0012248	9,2915382	9,5986361	-0,0000887	-0,6435785	2,0212427	1,8531786	0,0007199	-0,3184073
162	6,7161899	10,1767286	0,0444697	7,1241951	9,8812251	-0,0008602	-0,4080052	2,1927296	1,6283463	0,0005945	-0,1860718
163	8,9835300	8,1473628	0,0018820	9,3659228	9,7980041	-0,0001296	-0,3823928	2,0821260	1,7928056	0,0006916	-0,1836550

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
164	8,9811602	8,3070356	0,0004316	9,6338305	9,8277225	-0,0000639	-0,6526703	2,1464960	1,9022315	0,0007391	-0,3040631
165	7,1013098	9,1218079	0,0023705	6,0600208	5,6899196	0,0001150	1,0412890	2,2130328	1,1573592	0,0004161	0,4705258
166	7,2303901	8,9964043	0,0025127	6,0360618	5,6915547	0,0001202	1,1943283	2,2423796	1,1438699	0,0004078	0,5326164
167	6,3291502	8,6573033	0,0002240	5,9157252	5,8258627	0,0000371	0,4134250	2,2305930	1,1541667	0,0004005	0,1853431
168	4,7010198	8,6641988	0,0000091	5,8118638	5,8366171	-0,0000073	-1,1108441	2,2093449	1,2039938	0,0004164	-0,5027934
169	5,1290202	9,0324301	0,0000001	5,9908423	5,9887308	0,0000007	-0,8618221	2,2344071	1,2049675	0,0004143	-0,3857050
170	7,2083602	9,7593492	0,0046086	6,7481358	7,3694544	-0,0001691	0,4602244	2,2065419	1,2482570	0,0004139	0,2085727
171	7,2646899	9,8425850	0,0059690	6,9708810	7,5918002	-0,0001875	0,2938090	2,2428900	1,2719649	0,0004192	0,1309957
172	8,1255999	9,9069879	0,0061718	7,1851271	7,6988160	-0,0001863	0,9404728	2,2459723	1,2891515	0,0004240	0,4187375
173	6,5419102	10,0289813	0,0040107	7,1470276	7,6386982	-0,0001493	-0,6051175	2,2456179	1,3019986	0,0004308	-0,2694659
174	6,3204699	10,0965399	0,0025164	7,1568043	7,5016132	-0,0001206	-0,8363345	2,2528241	1,2994245	0,0004327	-0,3712383
175	6,1736698	10,1696884	0,0012181	7,0874284	7,3046577	-0,0000865	-0,9137586	2,2293839	1,2928601	0,0004336	-0,4098705
176	6,3251901	10,2492267	0,0003564	6,8933243	7,0600627	-0,0000484	-0,5681342	2,2192073	1,2845346	0,0004342	-0,2560077
177	5,4454398	10,3331155	0,0000124	6,7526844	6,7852198	-0,0000093	-1,3072445	2,2004846	1,2768693	0,0004346	-0,5940712
178	5,1821599	10,4305873	0,0000823	6,5860607	6,5132071	0,0000246	-1,4039008	2,2393925	1,2769655	0,0004368	-0,6269115
179	5,9962502	11,0327898	0,0012869	6,3279506	6,6191584	-0,0001151	-0,3317004	2,2039200	1,5538189	0,0005294	-0,1505048
180	7,0685000	10,2797334	0,0379876	6,7626196	9,4792351	-0,0007498	0,3058804	2,0369648	1,6351314	0,0005987	0,1501648
181	8,3811598	8,4922208	0,0020333	9,8711238	10,1757881	-0,0001641	-1,4899640	2,1059068	1,8092372	0,0006957	-0,7075166
182	8,5139904	8,5810867	0,0012029	9,9089327	10,2190152	-0,0001283	-1,3949423	2,2035213	1,8670469	0,0007214	-0,6330514
183	9,5865602	8,8823271	0,0018601	10,0858700	10,6076555	-0,0001704	-0,4993098	2,1209201	1,9346206	0,0007523	-0,2354213
184	5,6604500	9,2014086	0,0014641	6,4042448	6,6848023	-0,0001101	-0,7437948	2,2112499	1,6236051	0,0006046	-0,3363685
185	5,7862701	9,3666854	0,0000527	6,2114598	6,2547868	-0,0000200	-0,4251896	2,1972795	1,5414483	0,0005643	-0,1935073
186	5,9117198	9,3995398	0,0000170	6,1017413	6,0772530	0,0000109	-0,1900215	2,2129735	1,4800757	0,0005401	-0,0858671
187	5,5545998	9,3100518	0,0006339	5,9022277	5,7891745	0,0000598	-0,3476279	2,1535792	1,3492935	0,0004917	-0,1614187
188	5,6452799	9,1870706	0,0013594	5,8477439	5,6763199	0,0000827	-0,2024640	2,1948311	1,2989368	0,0004735	-0,0922458
189	5,9065599	8,8607908	0,0041214	5,8390010	5,4993041	0,0001332	0,0675590	2,2422948	1,2455764	0,0004545	0,0301294
190	5,2714000	8,4769924	0,0088136	5,8725158	5,3206026	0,0002022	-0,6011158	2,2413743	1,1923675	0,0004333	-0,2681907
191	6,6942902	8,3547984	0,0062935	5,7049263	5,3149871	0,0001835	0,9893638	2,2104398	1,1492244	0,0004108	0,4475869

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
192	5,4186902	8,2673346	0,0009928	5,6245786	5,4171102	0,0000754	-0,2058884	2,2359127	1,1798482	0,0004135	-0,0920825
193	4,1416302	8,6278421	0,0006797	5,7569886	5,5141252	0,0000631	-1,6153585	2,1311426	1,2301917	0,0004283	-0,7579777
194	4,6047602	8,8890856	0,0002456	5,8899275	5,7525794	0,0000391	-1,2851674	2,1994949	1,2233276	0,0004240	-0,5843011
195	7,3816099	9,7589187	0,0102194	6,7763809	7,6730940	-0,0002566	0,6052290	2,2189914	1,2555880	0,0004158	0,2727496
196	7,8937101	9,9342407	0,0130041	7,3832212	8,0056104	-0,0002737	0,5104889	2,1946265	1,3134526	0,0004299	0,2326086
197	7,5129600	10,0066264	0,0110762	7,2239551	7,9769663	-0,0002506	0,2890049	2,2533484	1,3307753	0,0004362	0,1282557
198	7,5210099	10,0813936	0,0082014	7,0576549	7,8611689	-0,0002182	0,4633551	2,2026074	1,3384484	0,0004408	0,2103666
199	6,9693999	10,1634921	0,0052515	7,0323180	7,6743918	-0,0001796	-0,0629180	2,2154123	1,3373031	0,0004433	-0,0284001
200	6,4902701	10,2507174	0,0027291	7,1069494	7,4221269	-0,0001343	-0,6166792	2,2122693	1,3288464	0,0004440	-0,2787541
201	5,9739900	10,3420336	0,0010065	6,8709067	7,1193417	-0,0000848	-0,8969168	2,2511093	1,3162606	0,0004435	-0,3984332
202	6,3587399	8,6492695	0,0178494	7,0055565	8,1295698	-0,0004797	-0,6468167	2,2184410	1,4391143	0,0005566	-0,2915636
203	6,3873901	8,8490087	0,0142021	7,0761079	7,9296807	-0,0004348	-0,6887178	2,1710712	1,4222283	0,0005402	-0,3172249
204	5,5618901	9,0832528	0,0112215	6,6106554	7,7025606	-0,0003900	-1,0487653	2,2329359	1,4082817	0,0005266	-0,4696800
205	5,6358500	10,0042446	0,0032343	5,9403648	6,6774676	-0,0001930	-0,3045149	2,0891139	1,3201913	0,0004780	-0,1457627
206	5,5881100	10,1249625	0,0021337	6,0642506	6,4788459	-0,0001492	-0,4761406	2,2520440	1,2845860	0,0004633	-0,2114260
207	5,5111499	10,1728143	0,0013323	5,9640306	6,3324782	-0,0001118	-0,4528807	2,2147603	1,2480556	0,0004489	-0,2044829
208	5,8899002	10,1479726	0,0007583	6,0012047	6,2381252	-0,0000801	-0,1113045	2,2481006	1,2139170	0,0004360	-0,0495104
209	6,1691999	10,0619292	0,0003524	6,0369289	6,1856535	-0,0000523	0,1322710	2,2518413	1,1859786	0,0004254	0,0587391
210	7,0702400	9,9297438	0,0000975	6,0829726	6,1598081	-0,0000266	0,9872674	2,2499098	1,1665245	0,0004172	0,4388031
211	7,0818200	9,5826972	0,0000102	6,1858518	6,1572178	0,0000083	0,8959682	2,1860559	1,1540525	0,0004066	0,4098560
212	6,4664798	9,2040275	0,0000103	6,1988519	6,2140036	-0,0000083	0,2676278	2,1441264	1,1660819	0,0004026	0,1248191
213	5,5279698	9,0014855	0,0001252	6,0021338	6,1131568	-0,0000274	-0,4741640	2,1126722	1,2015042	0,0004089	-0,2244380
214	5,0025902	9,5152714	0,0000783	6,4242661	6,5197378	-0,0000224	-1,4216759	2,0883749	1,2137182	0,0004066	-0,6807571
215	6,8000798	9,7498335	0,0008511	6,8390611	7,0732511	-0,0000728	-0,0389813	2,2476466	1,2509715	0,0004140	-0,0173431
216	6,4997702	9,8166339	0,0012409	7,0064372	7,2746331	-0,0000860	-0,5066671	2,2516029	1,2675337	0,0004182	-0,2250250
217	6,7379899	9,9121447	0,0011262	7,1131620	7,4325404	-0,0000791	-0,3751720	2,1528434	1,2804655	0,0004237	-0,1742682
218	6,5834599	9,9563121	0,0007477	7,2399403	7,4016953	-0,0000643	-0,6564804	2,2315566	1,2791492	0,0004254	-0,2941805
219	5,7472501	10,0551578	0,0000982	7,0872732	7,1737852	-0,0000241	-1,3400231	2,2058149	1,2735054	0,0004290	-0,6074957

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
220	7,0105600	10,9675131	0,0032969	6,6064757	7,0542804	-0,0001818	0,4040844	2,1795374	1,5863383	0,0005510	0,1853992
221	6,6930299	10,8857289	0,0073925	6,8420783	7,5011186	-0,0002847	-0,1490484	2,1391500	1,6377370	0,0005765	-0,0696765
222	5,9220600	10,2709600	0,0402413	7,3450454	9,5145392	-0,0007594	-1,4229854	2,2010204	1,5988811	0,0005898	-0,6465117
223	6,0828300	9,9809389	0,0545478	7,8514209	10,2579033	-0,0009227	-1,7685909	2,1877387	1,5463225	0,0005762	-0,8084105
224	8,9212399	8,9063268	0,0035927	10,2296585	10,8983849	-0,0002708	-1,3084187	2,2065605	1,8349440	0,0007045	-0,5929675
225	8,6885300	9,0244310	0,0030300	10,6384816	11,0134567	-0,0002523	-1,9499517	1,9092420	1,8884605	0,0007291	-1,0213224
226	8,5285501	9,1795676	0,0036981	10,5256423	11,2570361	-0,0002849	-1,9970921	2,2050564	1,9209479	0,0007449	-0,9056875
227	5,7762098	9,2007598	0,0036527	6,6068691	6,9783786	-0,0001955	-0,8306593	2,1483524	1,5031996	0,0005568	-0,3866495
228	5,8064098	9,3663405	0,0021351	6,5102584	6,7363072	-0,0001473	-0,7038486	2,0406830	1,4756124	0,0005415	-0,3449083
229	6,0727901	9,6219111	0,0004986	6,1107502	6,3005591	-0,0000666	-0,0379601	2,2399849	1,3917635	0,0005060	-0,0169466
230	5,6805401	9,6745692	0,0000025	5,9693152	5,9818696	-0,0000042	-0,2887751	2,2389200	1,2921977	0,0004681	-0,1289796
231	7,1321802	9,3873464	0,0009573	5,8822952	5,7464241	0,0000735	1,2498850	2,1552260	1,1946641	0,0004322	0,5799322
232	5,7075200	9,2536944	0,0017343	5,9672375	5,7082032	0,0000979	-0,2597175	2,2480930	1,1747402	0,0004243	-0,1155279
233	6,9560399	8,2371434	0,0325594	7,3001481	8,8856796	-0,0006808	-0,3441082	2,2104410	1,4296715	0,0005779	-0,1556740
234	6,5042400	8,4401341	0,0277006	6,9422499	8,8468168	-0,0006611	-0,4380099	2,2085183	1,3601928	0,0005325	-0,1983275
235	6,2679601	8,6576861	0,0260602	6,5034625	8,7755828	-0,0006576	-0,2355024	2,1188607	1,3347790	0,0005137	-0,1111458
236	5,0491199	9,6090792	0,0192239	6,4965275	8,2000355	-0,0005836	-1,4474075	2,2435646	1,3000083	0,0004797	-0,6451374
237	5,5446601	9,9511272	0,0162973	6,5332595	7,9086676	-0,0005300	-0,9885994	2,2480518	1,2929170	0,0004725	-0,4397583
238	5,2182598	10,2543317	0,0133262	6,5204332	7,6027667	-0,0004657	-1,3021734	2,2258580	1,2813189	0,0004644	-0,5850209
239	4,9700899	10,6486451	0,0085633	6,3810798	7,0987355	-0,0003403	-1,4109899	2,1881180	1,2404577	0,0004444	-0,6448418
240	5,5529299	10,7040662	0,0068675	6,1888307	6,9387258	-0,0002882	-0,6359008	2,2490492	1,2134876	0,0004333	-0,2827421
241	5,9241800	10,6642537	0,0054734	5,9843744	6,8378059	-0,0002434	-0,0601944	2,1884012	1,1898780	0,0004237	-0,0275061
242	6,5314698	10,5403810	0,0042213	6,2547702	6,7778758	-0,0002031	0,2766997	2,2470045	1,1760001	0,0004170	0,1231416
243	7,3439698	9,8654229	0,0014864	6,4025959	6,6755090	-0,0001072	0,9413739	2,2440444	1,1944841	0,0004128	0,4194988
244	6,9278998	9,6181588	0,0012480	6,4481285	6,6503620	-0,0000957	0,4797713	2,1956374	1,2034741	0,0004122	0,2185112
245	3,8287499	9,1904527	0,0000739	6,1952328	6,2520630	-0,0000215	-2,3664829	2,2345911	1,2009644	0,0004023	-1,0590228
246	4,5631099	9,4369994	0,0001741	6,3661635	6,2589475	0,0000336	-1,8030536	2,2440099	1,2060139	0,0004008	-0,8034963
247	5,5403199	9,6737172	0,0001192	6,7185575	6,6206172	0,0000281	-1,1782376	2,2315787	1,2336017	0,0004072	-0,5279839

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
248	6,3343401	9,7523475	0,0000338	6,8931864	6,8433027	0,0000148	-0,5588463	2,2422225	1,2521875	0,0004126	-0,2492377
249	6,3435001	9,8374887	0,0000011	7,1653914	7,1595351	0,0000026	-0,8218913	2,1936150	1,2718770	0,0004202	-0,3746744
250	6,5874400	9,8631762	0,0000106	7,2434417	7,2180867	0,0000079	-0,6560017	2,2496459	1,2723705	0,0004222	-0,2916022
251	7,8726201	9,8849959	0,0000504	7,2744444	7,2177497	0,0000171	0,5981757	2,2427540	1,2710408	0,0004242	0,2667148
252	5,1677599	9,9093143	0,0001432	7,2595795	7,1654270	0,0000288	-2,0918196	2,2429852	1,2730212	0,0004273	-0,9326052
253	7,1059799	10,6689196	0,0156522	6,7632838	8,0051120	-0,0004016	0,3426961	2,1615365	1,5429290	0,0005518	0,1585428
254	8,6809797	9,1820144	0,0393527	9,9323008	12,4215711	-0,0010629	-1,2513211	2,1546805	1,5154821	0,0005650	-0,5807456
255	10,2257996	9,6965017	0,0094883	11,1333171	12,5712617	-0,0005505	-0,9075176	2,2056932	1,9338031	0,0007546	-0,4114432
256	6,2019401	8,2703500	0,0366428	6,8755485	9,5748055	-0,0008393	-0,6736084	2,1561781	1,2995096	0,0005137	-0,3124085
257	7,3178601	8,4743449	0,0397371	7,2378715	9,7139852	-0,0009017	0,0799886	2,2351888	1,2658720	0,0004930	0,0357861
258	8,0268602	9,1329347	0,0434776	7,0108063	9,7668627	-0,0009942	1,0160539	2,2459605	1,2256597	0,0004636	0,4523917
259	6,3106699	9,5453254	0,0426556	7,1275100	9,6291669	-0,0009975	-0,8168401	2,2429147	1,2197120	0,0004552	-0,3641869
260	5,8464499	9,9720128	0,0399883	5,6615171	9,3826240	-0,0009645	0,1849328	2,0962359	1,2205154	0,0004499	0,0882214
261	4,3155398	10,7195305	0,0315826	6,0494631	8,7024429	-0,0008148	-1,7339233	2,2300216	1,2232377	0,0004415	-0,7775365
262	4,0030599	10,9694125	0,0272494	6,4541471	8,3657753	-0,0007219	-2,4510873	2,2502635	1,2155065	0,0004355	-1,0892446
263	5,4261298	11,1148335	0,0198590	6,3160971	7,8562222	-0,0005458	-0,8899673	2,2556572	1,1868241	0,0004211	-0,3945490
264	6,2008500	11,0091680	0,0163824	6,1560662	7,6744562	-0,0004636	0,0447838	2,2292300	1,1813172	0,0004168	0,0200894
265	8,0867796	10,2575609	0,0063982	6,7633001	7,2270699	-0,0002407	1,3234795	2,1511326	1,2233174	0,0004204	0,6152477
266	9,5507498	9,7229740	0,0026923	6,6241822	6,9412040	-0,0001437	2,9265676	2,2067825	1,2329468	0,0004173	1,3261695
267	7,6452799	9,5320724	0,0016251	6,4664085	6,7865657	-0,0001086	1,1788714	2,2485198	1,2255880	0,0004122	0,5242878
268	5,4352899	9,3963932	0,0000347	6,3151155	6,2921714	0,0000152	-0,8798256	2,0320846	1,1997012	0,0003963	-0,4329670
269	5,1488199	9,6597730	0,0012837	6,5901777	6,3285230	0,0000951	-1,4413578	2,2439288	1,2108102	0,0003963	-0,6423367
270	5,4780698	9,7409140	0,0011837	6,8328341	6,5094827	0,0000918	-1,3547643	2,2278966	1,2271163	0,0004017	-0,6080912
271	5,6449099	9,7978572	0,0009726	6,8659001	6,7126463	0,0000828	-1,2209902	2,1185251	1,2443102	0,0004078	-0,5763397
272	9,4601402	9,8322264	0,0008046	7,2148049	6,8982131	0,0000742	2,2453353	2,1046322	1,2571240	0,0004133	1,0668540
273	6,1447601	9,8480497	0,0007679	7,1637636	7,0346307	0,0000712	-1,0190035	2,1145769	1,2632451	0,0004172	-0,4818947
274	8,4158897	9,8516687	0,0010591	7,4495891	7,1284190	0,0000813	0,9663007	2,1563344	1,2704316	0,0004245	0,4481219
275	7,5725799	9,8525302	0,0013269	7,3720054	7,0964211	0,0000907	0,2005745	2,2497945	1,2827214	0,0004308	0,0891524

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
276	6,9651299	10,4988428	0,0019044	6,8073187	7,2263871	-0,0001207	0,1578112	2,0721335	1,4179959	0,0005009	0,0761588
277	9,6599903	9,2273415	0,0732338	8,5948726	13,3019167	-0,0015438	1,0651177	2,0704986	1,4195969	0,0005468	0,5144257
278	10,0889997	10,2460077	0,0200810	11,2889520	14,2943826	-0,0009395	-1,1999523	2,0508809	1,9522673	0,0007705	-0,5850911
279	7,2315798	8,2180537	0,0310996	8,1525713	9,5250787	-0,0008102	-0,9209915	2,1676498	1,3344294	0,0005424	-0,4248802
280	7,1973500	8,1429639	0,0347362	8,2675517	9,8494088	-0,0008773	-1,0702016	2,1885893	1,2928484	0,0005202	-0,4889915
281	11,3355999	8,5926563	0,0628303	6,7164236	11,0412660	-0,0012960	4,6191763	2,1766773	1,1795680	0,0004578	2,1221227
282	8,8375702	9,3823976	0,0778300	6,9791557	11,4302689	-0,0015197	1,8584144	2,2441299	1,1458114	0,0004334	0,8281225
283	5,6312699	10,3126352	0,0770417	6,6533143	11,1070779	-0,0015133	-1,0220444	2,2508039	1,1551483	0,0004254	-0,4540797
284	4,5263100	10,7262579	0,0718715	6,6730556	10,7265284	-0,0014248	-2,1467456	2,2541661	1,1661849	0,0004244	-0,9523458
285	3,6498599	11,0493799	0,0650351	7,0800373	10,2756887	-0,0012985	-3,4301774	2,2313852	1,1720383	0,0004224	-1,5372413
286	3,3659000	11,2531660	0,0575490	6,2549697	9,8161883	-0,0011532	-2,8890696	2,2489493	1,1709048	0,0004189	-1,2846308
287	5,0898199	11,3214645	0,0496304	6,4526128	9,3777943	-0,0009994	-1,3627929	2,2552727	1,1673798	0,0004150	-0,6042697
288	5,3863101	11,2574906	0,0413446	6,1920704	8,9730917	-0,0008443	-0,8057603	2,2297094	1,1708130	0,0004131	-0,3613746
289	6,2368002	11,0807693	0,0324507	6,7177949	8,5895785	-0,0006892	-0,4809947	2,2514675	1,1860775	0,0004146	-0,2136361
290	6,9077802	10,8255837	0,0235497	6,6284451	8,2273609	-0,0005411	0,2793350	2,2530135	1,2093632	0,0004185	0,1239829
291	7,5271001	10,5312741	0,0154501	6,5242900	7,8846485	-0,0004063	1,0028101	2,2227922	1,2308837	0,0004219	0,4511488
292	8,4224701	10,2392999	0,0090020	6,6570263	7,5637283	-0,0002909	1,7654438	2,2447921	1,2430541	0,0004225	0,7864620
293	9,6576204	9,9845288	0,0044742	6,7926372	7,2607490	-0,0001952	2,8649833	2,2288615	1,2437241	0,0004196	1,2854021
294	7,7679501	9,7884702	0,0017145	6,5202572	6,9753926	-0,0001166	1,2476928	2,1363536	1,2349136	0,0004135	0,5840292
295	7,2306099	9,8667503	0,0024230	6,8964327	6,4816622	0,0001374	0,3341772	2,2529867	1,2131487	0,0003942	0,1483263
296	9,0746498	9,8903341	0,0021045	7,5172968	7,1471709	0,0001206	1,5573530	2,2497188	1,2644969	0,0004227	0,6922434
297	8,3437300	9,8657208	0,0028580	7,4430656	7,0667484	0,0001395	0,9006644	2,2431534	1,3235260	0,0004457	0,4015171
298	6,2470298	9,8890553	0,0026376	7,2758627	7,0231936	0,0001347	-1,0288329	2,1188480	1,3640527	0,0004604	-0,4855624
299	14,2111998	10,0833769	0,0286852	12,5822617	15,3923885	-0,0013249	1,6289381	2,1210228	1,7223793	0,0006721	0,7679965
300	11,2847004	10,8529502	0,0444512	12,7170979	16,7823055	-0,0015714	-1,4323975	2,2094936	1,9410029	0,0007839	-0,6482922
301	10,6311998	10,6774016	0,0636253	12,6410638	17,4781110	-0,0017673	-2,0098639	2,1750118	1,8597556	0,0007689	-0,9240704
302	15,0309000	11,5843926	0,0933231	15,3103445	21,6373136	-0,0029130	-0,2794445	2,1825504	1,9235237	0,0007981	-0,1280358
303	14,3652000	10,8632602	0,0968824	14,2561783	20,6710574	-0,0025887	0,1090217	2,2130654	1,7959627	0,0007708	0,0492628

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
304	13,8938999	10,4374070	0,0932534	14,8255093	20,1077951	-0,0023869	-0,9316094	2,2009698	1,8059396	0,0007838	-0,4232722
305	14,4280005	9,6462969	0,0918765	15,3042848	19,4468248	-0,0021453	-0,8762844	2,1604908	1,8820574	0,0008343	-0,4055950
306	11,1885996	9,4002476	0,0961710	16,2123588	19,5104595	-0,0021641	-5,0237592	2,0029332	1,9169626	0,0008612	-2,5082011
307	21,6119003	9,8326334	0,1014019	15,8162853	21,4089484	-0,0027228	5,7956150	2,1363319	2,1842741	0,0010579	2,7128814
308	8,4629498	8,4015437	0,0265480	8,2393685	9,6912914	-0,0008306	0,2235813	2,1958783	1,2848374	0,0005238	0,1018186
309	11,9251003	8,2631719	0,0596222	9,5802176	11,5141626	-0,0013449	2,3448827	2,1061079	1,1635736	0,0004602	1,1133725
310	11,6412001	8,7488035	0,1024340	7,0820142	12,9263658	-0,0018762	4,5591858	2,2171270	1,1033727	0,0004272	2,0563485
311	10,8476000	9,1369058	0,1206029	6,6529537	13,4123741	-0,0020882	4,1946463	2,2120514	1,0883762	0,0004166	1,8962698
312	5,0291901	10,4692448	0,1339608	7,3837650	13,2615296	-0,0021834	-2,3545750	2,2490254	1,1130623	0,0004098	-1,0469313
313	3,6646600	10,8292857	0,1262604	5,5848897	12,7451926	-0,0020394	-1,9202297	2,1935978	1,1292329	0,0004110	-0,8753791
314	2,8436401	11,0861882	0,1147811	6,3315358	12,1066228	-0,0018386	-3,4878958	2,2445378	1,1394249	0,0004109	-1,5539484
315	6,1859598	11,1101206	0,0662040	6,4376523	10,0028713	-0,0010936	-0,2516925	2,2346902	1,1719766	0,0004104	-0,1126297
316	7,2425699	10,1679533	0,0073682	6,6489628	7,6386077	-0,0002653	0,5936072	2,1735497	1,2421345	0,0004182	0,2731049
317	6,9266300	9,9916570	0,0020230	6,8502495	7,1875789	-0,0001332	0,0763805	2,2396941	1,2378567	0,0004133	0,0341031
318	5,3892202	9,8266138	0,0004103	6,6905670	6,4907398	0,0000574	-1,3013468	2,2235197	1,2144192	0,0003985	-0,5852643
319	4,5672002	9,8314268	0,0018422	6,5709951	6,2753843	0,0001210	-2,0037949	2,2298708	1,2035685	0,0003919	-0,8986148
320	4,4506202	9,8718917	0,0032713	6,6455269	6,1764201	0,0001619	-2,1949067	2,2540946	1,1956230	0,0003871	-0,9737420
321	7,8668199	9,9966327	0,0036160	6,9125869	6,3423967	0,0001744	0,9542329	2,2465562	1,1955321	0,0003860	0,4247536
322	8,2073498	10,0491619	0,0028808	6,9719520	6,5534675	0,0001569	1,2353978	2,2439274	1,2012998	0,0003889	0,5505516
323	9,4339800	10,0510302	0,0015415	7,6058591	7,2722206	0,0001106	1,8281209	2,2509231	1,2225679	0,0004063	0,8121650
324	9,6929703	10,0139661	0,0020834	7,5607692	7,2807155	0,0001270	2,1322011	2,1902468	1,2424752	0,0004155	0,9734981
325	9,3040400	9,9822959	0,0027685	7,7669560	7,2392581	0,0001454	1,5370840	2,1848722	1,2763433	0,0004288	0,7035121
326	8,3756599	9,9888515	0,0028367	7,4424251	7,1591110	0,0001480	0,9332349	2,1332543	1,3675099	0,0004622	0,4374701
327	6,2532701	10,0504619	0,0016547	7,4113738	7,1959828	0,0001143	-1,1581037	2,1207540	1,4090651	0,0004783	-0,5460811
328	6,2603002	10,2676551	0,0002084	7,4505272	7,5431277	-0,0000420	-1,1902270	2,1825083	1,4521236	0,0005032	-0,5453482
329	14,6943998	11,1903842	0,0537887	12,2331322	18,5755219	-0,0020263	2,4612677	2,0196172	1,9766745	0,0008003	1,2186803
330	13,7987003	11,2592720	0,0617565	15,0526597	18,8826068	-0,0021277	-1,2539593	2,0162543	1,9709366	0,0008026	-0,6219252
331	12,2866001	10,4576822	0,0852748	12,8205242	18,9244282	-0,0021041	-0,5339241	2,1007532	1,8542880	0,0007894	-0,2541584

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
332	14,0790997	10,0481294	0,0900522	12,9647675	18,8412118	-0,0020561	1,1143322	2,0875636	1,8952387	0,0008153	0,5337956
333	5,9218602	9,6609235	0,0454392	6,4405703	8,9178719	-0,0009613	-0,5187101	2,1841136	1,4565179	0,0006458	-0,2374923
334	6,1449299	9,4661910	0,0350620	6,9486551	9,0338448	-0,0009090	-0,8037252	2,2334699	1,3900418	0,0006044	-0,3598550
335	6,8722200	9,2269047	0,0265771	7,6346424	9,1629002	-0,0008429	-0,7624223	2,2126754	1,3314400	0,0005669	-0,3445703
336	9,4227695	8,9606982	0,0216710	8,2018094	9,3749879	-0,0007997	1,2209602	2,1410900	1,2793403	0,0005341	0,5702517
337	9,4413204	9,5974307	0,2040122	5,6082003	16,0452324	-0,0029642	3,8331201	2,1743120	1,0681842	0,0004018	1,7629117
338	5,4318500	9,9835178	0,2091277	7,7336798	15,8717777	-0,0029486	-2,3018298	2,2492551	1,0911798	0,0004051	-1,0233743
339	4,1234798	10,3334807	0,2041433	6,3728095	15,3678295	-0,0028109	-2,2493296	2,2340562	1,1155165	0,0004092	-1,0068366
340	5,0357699	10,8990920	0,1454025	7,2139199	12,7074097	-0,0019302	-2,1781499	2,2525208	1,1571291	0,0004110	-0,9669833
341	7,6764698	10,6159813	0,0548744	7,4473068	9,7305246	-0,0008905	0,2291630	2,2388459	1,2090179	0,0004141	0,1023577
342	6,6010599	10,4302208	0,0300638	7,4845593	8,8800897	-0,0006065	-0,8834994	2,2095030	1,2270985	0,0004162	-0,3998634
343	6,6115398	10,1252104	0,0032314	7,0772489	7,4925828	-0,0001774	-0,4657091	2,2181681	1,2408193	0,0004139	-0,2099521
344	5,9819198	10,0432317	0,0000803	6,9120427	6,9674841	-0,0000271	-0,9301229	2,1736123	1,2363703	0,0004090	-0,4279157
345	5,4861398	10,0143236	0,0007652	6,8486643	6,5795681	0,0000821	-1,3625245	2,2450644	1,2281684	0,0004030	-0,6068977
346	4,3008499	10,0307280	0,0027717	6,7251463	6,3334320	0,0001553	-2,4242964	2,2371467	1,2191204	0,0003973	-1,0836555
347	4,5252299	10,0791505	0,0042123	6,7741247	6,2444081	0,0001919	-2,2488947	2,2517203	1,2115680	0,0003928	-0,9987451
348	4,7601900	10,1421352	0,0043530	6,7814290	6,3027231	0,0001969	-2,0212390	2,2265272	1,2062173	0,0003901	-0,9077989
349	7,6880598	10,2077674	0,0034252	6,9044781	6,4836007	0,0001766	0,7835817	2,2194689	1,2031476	0,0003893	0,3530492
350	8,8828297	10,2997073	0,0011730	7,2887485	7,0220414	0,0001044	1,5940812	2,2345663	1,1950420	0,0003896	0,7133739
351	10,2024002	10,2642349	0,0005537	7,7797456	7,5356079	0,0000698	2,4226546	2,2153841	1,1871073	0,0003952	1,0935596
352	8,7674103	10,1730993	0,0015746	7,8403311	7,4784834	0,0001164	0,9270792	2,2417927	1,2425511	0,0004183	0,4135437
353	8,4119902	10,1492141	0,0019730	7,8339885	7,4199795	0,0001309	0,5780016	2,2329063	1,2891028	0,0004357	0,2588562
354	5,7066498	10,2830834	0,0000001	7,6660860	7,6626603	0,0000011	-1,9594362	2,2292258	1,4026664	0,0004838	-0,8789761
355	6,7902002	10,3591334	0,0012985	7,7506920	7,9666328	-0,0001141	-0,9604917	2,1107118	1,4112773	0,0004937	-0,4550558
356	7,3926301	10,3360245	0,0155572	7,6172916	8,8458171	-0,0004105	-0,2246615	2,2104531	1,3937205	0,0005076	-0,1016359
357	7,4172201	9,8409451	0,0447740	7,5039655	9,8484286	-0,0007051	-0,0867454	2,1105956	1,4224135	0,0005360	-0,0411000
358	5,6973000	10,4098036	0,0019028	7,1147280	6,7645355	0,0001361	-1,4174281	2,2380736	1,2209650	0,0003980	-0,6333250
359	8,2956495	10,4752822	0,0006989	7,2813580	7,0670397	0,0000830	1,0142916	2,2377083	1,2105827	0,0003958	0,4532725

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
360	8,9089499	10,5222997	0,0000906	7,4556787	7,3840733	0,0000299	1,4532711	2,2151490	1,1955855	0,0003927	0,6560602
361	9,4153605	10,5460090	0,0000086	7,6261135	7,6562057	-0,0000092	1,7892470	2,2447189	1,1777879	0,0003890	0,7970918
362	8,3472605	10,3605523	0,0003240	7,9321542	7,7843125	0,0000566	0,4151062	2,2410781	1,2441230	0,0004230	0,1852261
363	8,5719900	10,3567191	0,0000028	7,8943104	7,9085487	-0,0000055	0,6776796	2,2413632	1,3258811	0,0004572	0,3023515
364	6,2426600	10,3848369	0,0007799	7,8458226	8,1388057	-0,0000941	-1,6031626	2,2173966	1,3482033	0,0004699	-0,7229931
365	5,9312301	10,4001516	0,0039989	7,9281753	8,4891836	-0,0002186	-1,9969452	2,2397151	1,3537648	0,0004784	-0,8916068
366	6,8828101	10,3624601	0,0105982	7,8394300	8,9229212	-0,0003632	-0,9566198	2,2218749	1,3472621	0,0004845	-0,4305462
367	7,8721399	9,9906304	0,0326502	8,3011252	9,8601987	-0,0006437	-0,4289852	2,2221671	1,3584402	0,0005070	-0,1930481
368	7,5764999	9,6346316	0,0448116	8,4619965	10,2779775	-0,0007489	-0,8854966	2,2199581	1,4051679	0,0005306	-0,3988799
369	15,3088999	11,3131401	0,0761093	15,0050398	22,5277773	-0,0029582	0,3038601	2,1840891	1,7061548	0,0007158	0,1391244
370	12,3737001	11,7117834	0,1280269	14,2074060	24,5198176	-0,0037609	-1,8337059	2,1633754	1,8357162	0,0007774	-0,8476133
371	14,8583002	11,2116691	0,1223732	14,3683525	23,3880485	-0,0033972	0,4899477	2,1867561	1,7503533	0,0007573	0,2240523
372	16,0802994	10,8051141	0,1107376	14,2483689	22,3814358	-0,0030495	1,8319305	2,1763181	1,7286194	0,0007570	0,8417568
373	12,7566996	9,4020214	0,0927699	14,8201720	20,1073806	-0,0022998	-2,0634725	2,1709767	1,8977384	0,0008817	-0,9504812
374	15,3476000	9,7301625	0,0997298	16,4591500	20,9992269	-0,0025988	-1,1115500	2,1664366	2,0621624	0,0009938	-0,5130775
375	11,1677999	9,2104189	0,0148759	8,4069312	10,2549294	-0,0008373	2,7608687	2,2511003	1,0887191	0,0004531	1,2264530
376	9,9419498	9,0399559	0,3361313	8,0333106	19,0918757	-0,0038094	1,9086393	2,2401646	1,1770876	0,0004313	0,8520085
377	7,1718798	9,5037043	0,3160348	8,1043018	17,5051575	-0,0033102	-0,9324220	2,2457459	1,2310861	0,0004409	-0,4151948
378	7,0912199	9,7183194	0,2843846	5,2968189	16,3157293	-0,0029143	1,7944010	2,1261883	1,2425645	0,0004395	0,8439521
379	7,6942201	10,0970487	0,1295378	7,2853881	12,1001467	-0,0015060	0,4088320	2,2374593	1,2469764	0,0004251	0,1827215
380	7,5875702	10,1531992	0,0366588	7,1853790	9,5352794	-0,0006901	0,4021912	2,2270548	1,2658286	0,0004253	0,1805933
381	7,4138098	10,1743879	0,0122952	7,2471065	8,5113809	-0,0003800	0,1667032	2,2389335	1,2747356	0,0004260	0,0744565
382	6,6378698	10,2593682	0,0000131	7,2085483	7,1721425	0,0000117	-0,5706784	2,2542263	1,2762401	0,0004221	-0,2531593
383	5,2171302	10,3250473	0,0009232	7,2409899	6,8815395	0,0000975	-2,0238597	2,2132548	1,2696195	0,0004182	-0,9144269
384	5,7413502	10,5691725	0,0001908	7,3848221	7,2103269	0,0000443	-1,6434719	2,1742342	1,2407444	0,0004084	-0,7558854
385	8,3762102	10,6420714	0,0000522	7,4499937	7,5385902	-0,0000232	0,9262165	2,1919089	1,2255675	0,0004049	0,4225616
386	8,5280895	10,7022676	0,0007125	7,5422560	7,8652297	-0,0000859	0,9858335	2,1951515	1,2057660	0,0004001	0,4490959
387	7,6266298	10,4403003	0,0014060	8,0835234	8,4630541	-0,0001327	-0,4568936	2,2451273	1,2871144	0,0004489	-0,2035045

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
388	5,7427001	10,3536881	0,0081822	8,1572588	9,0768230	-0,0003383	-2,4145587	2,2446942	1,3119514	0,0004678	-1,0756738
389	6,7095299	10,2550555	0,0151481	8,1138847	9,4961116	-0,0004690	-1,4043548	2,2284775	1,3078257	0,0004731	-0,6301857
390	7,4190502	10,0805753	0,0237817	8,2508744	9,9166966	-0,0005905	-0,8318242	2,2348084	1,3092784	0,0004812	-0,3722127
391	8,1149597	9,0427341	0,0436432	8,7484041	10,8730396	-0,0007803	-0,6334444	2,2251345	1,4610924	0,0005532	-0,2846769
392	8,7097998	8,6168685	0,0431974	8,5099436	11,1277687	-0,0007950	0,1998562	2,1146472	1,5438951	0,0005856	0,0945104
393	8,9121599	8,2230253	0,0389200	8,8167745	11,4298706	-0,0008068	0,0953854	2,1087092	1,6161326	0,0006133	0,0452340
394	10,7305002	7,6898130	0,0266615	11,1875318	12,4174321	-0,0008607	-0,4570315	2,0176992	1,6935859	0,0006457	-0,2265112
395	20,2777996	10,0067681	0,0371324	15,4504002	20,5760752	-0,0020552	4,8273994	2,1611389	1,4947569	0,0006206	2,2337294
396	14,2192001	11,5692187	0,1268747	16,6000443	26,3194658	-0,0041219	-2,3808442	2,2091320	1,7045781	0,0007302	-1,0777283
397	15,4850998	11,6879119	0,1500296	16,6176755	27,1732855	-0,0044822	-1,1325757	2,2144163	1,7449781	0,0007498	-0,5114556
398	17,4314995	11,4160669	0,1552487	16,2514904	26,6620881	-0,0043760	1,1800090	2,2171813	1,7209808	0,0007496	0,5322113
399	13,4778004	9,5226362	0,0758283	14,2808430	20,3266210	-0,0022601	-0,8030427	2,0391701	1,8018170	0,0008367	-0,3938086
400	12,5502005	9,5394799	0,0806847	15,7582848	20,3734415	-0,0023099	-3,2080844	2,2056483	1,8644611	0,0008796	-1,4544859
401	14,5045996	9,6910202	0,0865693	16,2124458	20,6691516	-0,0024340	-1,7078462	2,1949448	1,9545018	0,0009385	-0,7780816
402	16,9426994	9,9475215	0,0896106	16,3098661	21,0715806	-0,0025683	0,6328333	2,1968650	2,0795635	0,0010160	0,2880620
403	21,4510994	11,0929300	0,0545381	18,3489808	21,5014509	-0,0023283	3,1021186	1,8676360	2,7319811	0,0014053	1,6609867
404	5,0353699	9,9437012	0,0529992	6,7197017	8,4947643	-0,0009047	-1,6843319	2,2090226	1,5822568	0,0007214	-0,7624783
405	4,8413701	9,9179452	0,0456848	6,2293898	8,6140573	-0,0009071	-1,3880197	2,1809159	1,5058667	0,0006825	-0,6364389
406	6,6151700	9,8463410	0,0369703	6,9567347	8,7426627	-0,0008898	-0,3415647	2,2343869	1,4332705	0,0006426	-0,1528673
407	6,1922002	9,5463224	0,0209863	7,2236281	9,0313953	-0,0007932	-1,0314279	2,2455635	1,2989018	0,0005627	-0,4593181
408	7,8467698	9,3216239	0,0167197	8,1473092	9,2781839	-0,0007564	-0,3005393	2,1581264	1,2378399	0,0005254	-0,1392594
409	11,3733997	9,0729715	0,0161121	8,4594803	9,6984223	-0,0007807	2,9139194	2,1817097	1,1827880	0,0004924	1,3356128
410	13,1276999	8,4376202	0,0905891	9,7962017	13,9838091	-0,0020133	3,3314982	2,2278395	1,0430066	0,0004112	1,4953941
411	9,4930000	9,3889157	0,2784771	8,0520807	18,0165633	-0,0035461	1,4409194	2,2462081	1,1064799	0,0004113	0,6414897
412	8,1717997	9,9572353	0,2701343	4,9309028	16,8531495	-0,0032075	3,2408968	2,1429075	1,1642097	0,0004227	1,5123830
413	6,6109300	10,3566783	0,2167772	7,0054338	14,6776628	-0,0024829	-0,3945038	2,2437754	1,1911754	0,0004227	-0,1758215
414	5,5941601	10,4484944	0,1770853	7,5871702	13,4081236	-0,0020489	-1,9930101	2,2505379	1,1966484	0,0004193	-0,8855706
415	8,5235701	10,4647749	0,1327883	7,1381052	12,1250284	-0,0016108	1,3854649	2,2458297	1,2040916	0,0004166	0,6169056

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
416	6,9910402	10,4180593	0,0885516	6,9767116	10,8929281	-0,0011962	0,0143287	2,2343844	1,2159472	0,0004159	0,0064128
417	7,8445601	10,2508941	0,0220386	7,2421019	8,7663158	-0,0005120	0,6024583	2,2529652	1,2441345	0,0004182	0,2674068
418	7,2525802	10,1850703	0,0062070	7,0980087	7,9277132	-0,0002584	0,1545715	2,2469086	1,2520208	0,0004178	0,0687930
419	6,1114702	10,1601880	0,0005499	6,9594903	6,7860903	0,0000728	-0,8480200	2,2201425	1,2499734	0,0004114	-0,3819665
420	5,0074201	10,2000201	0,0024823	7,0407846	6,5153126	0,0001534	-2,0333645	2,2384675	1,2435908	0,0004070	-0,9083735
421	4,6022801	10,2612915	0,0036084	6,9462982	6,4387324	0,0001848	-2,3440181	2,2507208	1,2359483	0,0004030	-1,0414522
422	5,0291200	10,3344488	0,0031771	7,1984396	6,5376330	0,0001745	-2,1693196	2,1979716	1,2286155	0,0004001	-0,9869644
423	4,5759201	10,0469186	0,0410675	6,6612930	8,4938705	-0,0008395	-2,0853729	2,2440232	1,5058634	0,0006882	-0,9293010
424	5,4558401	10,0967282	0,0321608	5,7288957	8,4304722	-0,0007844	-0,2730556	1,8895692	1,4352375	0,0006540	-0,1445068
425	4,7236500	10,0996837	0,0164618	6,9006318	8,4701878	-0,0006682	-2,1769819	2,2498475	1,3048685	0,0005866	-0,9676131
426	5,8577099	10,0417299	0,0112128	7,2269566	8,5905097	-0,0006093	-1,3692467	2,2553552	1,2426999	0,0005527	-0,6071091
427	7,1019201	9,7666183	0,0076863	7,6674323	9,2695319	-0,0005971	-0,5655122	2,2145513	1,1195868	0,0004842	-0,2553620
428	10,3066998	9,5576216	0,0100863	8,2307136	9,9910284	-0,0007235	2,0759861	2,2464800	1,0653172	0,0004533	0,9241062
429	10,2702999	9,3173044	0,0175182	9,1804054	11,0564058	-0,0009863	1,0898945	2,2305370	1,0232494	0,0004279	0,4886243
430	13,0186005	9,0682874	0,0338077	9,3251494	12,4544361	-0,0013889	3,6934510	2,2496481	0,9992678	0,0004104	1,6417905
431	20,2910004	8,6349092	0,1089521	10,7929641	15,7802636	-0,0024544	9,4980363	2,2281742	1,0112450	0,0003996	4,2626991
432	9,1450300	9,3275210	0,2929034	7,9179908	16,1830238	-0,0027504	1,2270393	2,2369264	1,2947920	0,0004504	0,5485381
433	7,9088101	9,5313653	0,2372138	7,3894436	14,7482840	-0,0022762	0,5193666	2,2226287	1,2937610	0,0004440	0,2336722
434	9,7317896	9,8596869	0,1090736	8,0173715	11,7643045	-0,0013143	1,7144181	2,2447043	1,2946176	0,0004365	0,7637612
435	7,0030999	10,2074326	0,0065405	7,2196078	8,3534278	-0,0002790	-0,2165079	2,1299391	1,3054739	0,0004357	-0,1016498
436	6,0276198	10,3968745	0,0000469	7,4212903	7,4676423	-0,0000229	-1,3936704	2,1445452	1,2919571	0,0004285	-0,6498676
437	5,5352502	10,4853532	0,0000029	7,4054401	7,4190729	-0,0000056	-1,8701900	2,2170692	1,2817550	0,0004245	-0,8435415
438	6,3573198	10,6488479	0,0010018	7,5183731	7,8364636	-0,0001040	-1,1610533	2,2572617	1,2572333	0,0004178	-0,5143636
439	8,6345701	10,7246116	0,0028849	7,6873900	8,1530857	-0,0001762	0,9471801	2,2407625	1,2414859	0,0004142	0,4227044
440	8,2012100	10,7931370	0,0052160	7,8434209	8,4450050	-0,0002368	0,3577891	2,2311083	1,2216165	0,0004094	0,1603638
441	9,8786602	10,8699170	0,0078082	7,9754800	8,8212411	-0,0002913	1,9031802	2,2536851	1,1735499	0,0003968	0,8444748
442	11,7322998	10,8599549	0,0071173	8,1889323	8,8762705	-0,0002807	3,5433675	2,2211545	1,1575606	0,0003932	1,5952819
443	13,4231005	10,8131719	0,0056384	8,1956034	8,8636432	-0,0002534	5,2274971	2,2418612	1,1581969	0,0003957	2,3317666

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
444	6,5497298	10,0780351	0,0189430	8,7153532	10,0502289	-0,0005555	-2,1656233	2,2330345	1,2994863	0,0004713	-0,9698119
445	8,1633701	9,8862476	0,0249236	8,6825821	10,3866679	-0,0006382	-0,5192120	2,2417442	1,3023391	0,0004779	-0,2316107
446	9,2331104	9,3044390	0,0324102	8,7532872	10,8734186	-0,0007095	0,4798232	2,2071283	1,3675479	0,0005125	0,2173971
447	8,9548197	8,5601691	0,0291610	9,6871505	11,2368775	-0,0006891	-0,7323308	2,2175458	1,5061420	0,0005699	-0,3302438
448	9,4814100	8,2100713	0,0250719	10,0563807	11,5136267	-0,0006845	-0,5749707	2,2058409	1,5722310	0,0005963	-0,2606583
449	9,2821798	7,9201079	0,0214991	10,9455089	11,9686052	-0,0007110	-1,6633291	2,0505239	1,6195600	0,0006163	-0,8111727
450	8,8192501	7,7211282	0,0193391	11,6396930	12,6699040	-0,0007793	-2,8204429	1,9980015	1,6413151	0,0006279	-1,4116320
451	18,2408009	11,4195133	0,1752247	17,1541445	29,5253309	-0,0051099	1,0866564	2,2072057	1,6815225	0,0007341	0,4923222
452	18,8264008	11,3723883	0,1822876	17,0775585	29,5850620	-0,0051834	1,7488423	2,2097457	1,6916479	0,0007421	0,7914224
453	14,8599997	9,9099741	0,0712749	16,8678783	20,7309425	-0,0023598	-2,0078787	2,1553493	1,9708050	0,0009582	-0,9315792
454	17,7873993	10,9176259	0,0609111	17,5890909	21,3439195	-0,0023901	0,1983083	2,1242577	2,5364057	0,0012940	0,0933542
455	6,1123600	9,9974170	0,0294036	6,8124671	8,5616488	-0,0008057	-0,7001071	2,2484550	1,4037550	0,0006340	-0,3113725
456	5,5305099	9,9359997	0,0216732	7,0067745	8,6690685	-0,0007611	-1,4762645	2,2512495	1,3354402	0,0005963	-0,6557534
457	5,4124398	9,8254328	0,0157029	7,6227110	8,8287600	-0,0007111	-2,2102711	2,2072833	1,2691173	0,0005584	-1,0013536
458	7,0993099	9,6601377	0,0121444	7,4103646	9,0889616	-0,0006785	-0,3110547	2,2375762	1,2039811	0,0005205	-0,1390141
459	6,5544300	9,9157244	0,0631063	7,2649218	9,2391773	-0,0010871	-0,7104917	2,1972434	1,6253463	0,0007447	-0,3233560
460	6,4823399	10,0228701	0,0513598	7,1731324	8,9226519	-0,0009693	-0,6907926	2,2091258	1,5368294	0,0007038	-0,3126995
461	4,7043500	10,1091772	0,0403306	6,5860876	8,6753902	-0,0008659	-1,8817376	2,2363811	1,4600544	0,0006676	-0,8414208
462	5,3475199	10,1722516	0,0298945	7,2163879	8,4963068	-0,0007720	-1,8688681	2,1992397	1,3926008	0,0006348	-0,8497792
463	5,4175701	10,2106636	0,0204764	6,9718484	8,3797945	-0,0006808	-1,5542783	2,2532814	1,3324965	0,0006046	-0,6897844
464	4,6718702	10,2184830	0,0130505	6,5638211	8,3346843	-0,0005927	-1,8919509	2,1394049	1,2767516	0,0005757	-0,8843351
465	5,3254199	10,1882850	0,0080378	7,3303476	8,3793070	-0,0005129	-2,0049277	2,2542729	1,2227913	0,0005473	-0,8893900
466	6,5556698	10,1134856	0,0053382	7,2968464	8,5572958	-0,0004604	-0,7411766	2,2064939	1,1694952	0,0005190	-0,3359069
467	6,6692600	9,9888575	0,0046683	7,9084496	8,9410553	-0,0004685	-1,2391895	2,2570137	1,1174099	0,0004912	-0,5490394
468	7,2434201	9,8115157	0,0061853	8,4055943	9,6087328	-0,0005757	-1,1621742	2,2522225	1,0699921	0,0004652	-0,5160121
469	7,9708300	9,5889867	0,0112852	8,7542306	10,6134289	-0,0008112	-0,7834006	2,2537823	1,0338643	0,0004438	-0,3475937
470	11,3913002	9,3358127	0,0229238	9,0585754	11,9430703	-0,0011783	2,3327248	2,2473517	1,0153388	0,0004291	1,0379883
471	15,3785000	9,0698107	0,0449582	9,9168966	13,5045246	-0,0016472	5,4616034	2,2469247	1,0164306	0,0004212	2,4307016

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
472	21,9937992	8,8115793	0,0804803	11,4809155	15,1431558	-0,0021644	10,5128837	2,1826064	1,0349913	0,0004191	4,8166648
473	15,6077995	8,2726552	0,2450490	13,0920082	18,8941439	-0,0034231	2,5157914	2,1691726	1,1469208	0,0004341	1,1597931
474	15,0706997	8,2138598	0,2969353	12,2680214	19,4480181	-0,0036299	2,8026783	2,2089174	1,1887802	0,0004428	1,2688018
475	12,2748003	8,4310053	0,3677215	12,4200903	18,9173619	-0,0035177	-0,1452900	2,1595279	1,2941331	0,0004639	-0,0672786
476	11,3316002	8,8297307	0,3253736	11,8848866	17,0103660	-0,0029040	-0,5532864	2,1067451	1,3286555	0,0004618	-0,2626262
477	11,9225998	9,0656059	0,2756082	9,1429530	15,7033397	-0,0024794	2,7796468	2,2329652	1,3328356	0,0004563	1,2448232
478	11,8465996	9,3082199	0,2112450	9,6466013	14,2490331	-0,0020124	2,1999983	2,1926455	1,3330526	0,0004513	1,0033534
479	10,5654001	9,7749080	0,0825388	9,1997932	11,3458022	-0,0011090	1,3656069	2,0960680	1,3340717	0,0004482	0,6515089
480	8,0135899	10,1532319	0,0168524	7,5393446	9,1825688	-0,0004663	0,4742452	2,2189605	1,3276551	0,0004453	0,2137241
481	10,0872002	10,2908298	0,0069602	7,4984758	8,5818555	-0,0002942	2,5887243	2,2059062	1,3186973	0,0004413	1,1735423
482	9,2119904	10,3976421	0,0038075	7,4812778	8,2964624	-0,0002148	1,7307125	2,1948108	1,3083750	0,0004368	0,7885475
483	6,2072201	10,5538682	0,0052713	7,6332989	8,4100711	-0,0002479	-1,4260788	2,2550487	1,2871907	0,0004295	-0,6323938
484	6,6005602	10,6924240	0,0122580	7,6212938	8,8998626	-0,0003728	-1,0207336	2,2402603	1,2624600	0,0004240	-0,4556317
485	8,5407305	10,7636159	0,0155999	7,5373871	9,1141971	-0,0004191	1,0033434	2,1941022	1,2448962	0,0004200	0,4572911
486	8,3247499	10,8296687	0,0173285	7,9607781	9,2628677	-0,0004423	0,3639718	2,2555386	1,2240663	0,0004148	0,1613680
487	8,5560999	10,8735336	0,0170939	7,8874305	9,3441756	-0,0004426	0,6686694	2,2410560	1,2022650	0,0004092	0,2983725
488	7,4969201	10,7575573	0,0104725	8,4168972	9,3451428	-0,0003678	-0,9199771	2,2360477	1,2086917	0,0004197	-0,4114300
489	5,8690801	10,6324512	0,0092808	8,3797309	9,3831685	-0,0003567	-2,5106509	2,2511226	1,2403983	0,0004347	-1,1152884
490	7,5486002	10,1779935	0,0134340	9,1800980	9,9434027	-0,0004697	-1,6314978	2,0674300	1,3141657	0,0004710	-0,7891429
491	9,5442600	8,5786239	0,0192001	10,2181812	11,3903796	-0,0005893	-0,6739212	2,1859208	1,4603691	0,0005518	-0,3083008
492	9,5696697	8,0204560	0,0166971	10,6472232	12,3082259	-0,0006698	-1,0775535	2,2202112	1,5540619	0,0005937	-0,4853383
493	9,8688498	7,8328901	0,0186210	11,6605090	13,2383259	-0,0008171	-1,7916592	2,1755940	1,5719563	0,0006054	-0,8235265
494	15,1131001	8,8724868	0,0581626	17,8230916	22,5575904	-0,0026014	-2,7099916	2,1154673	1,4424932	0,0005943	-1,2810368
495	19,8773994	11,0069816	0,1940994	19,4106444	31,3814175	-0,0055343	0,4667550	2,2100298	1,6516939	0,0007311	0,2111985
496	19,8278999	11,8653315	0,0150164	17,5252340	20,0449030	-0,0012674	2,3026659	2,0507330	3,1861006	0,0017000	1,1228502
497	23,0834007	12,1997345	0,0028505	18,0182697	19,1515541	-0,0005596	5,0651310	1,9339756	3,5088652	0,0019101	2,6190253
498	7,6731300	9,8461247	0,0853916	7,6130522	10,2441232	-0,0014047	0,0600778	2,2017821	1,7007910	0,0007820	0,0272860
499	7,4224801	9,9804002	0,0701705	5,8487501	9,7799073	-0,0012397	1,5737300	1,9253070	1,5886600	0,0007301	0,8173917

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
500	6,6852899	10,0936890	0,0561004	7,3278608	9,3580003	-0,0010839	-0,6425709	2,2268547	1,4947335	0,0006859	-0,2885554
501	5,7851801	10,2903823	0,0198847	7,3467426	8,4640668	-0,0006759	-1,5615626	2,2084817	1,3027975	0,0005913	-0,7070752
502	5,7239699	10,3010388	0,0116042	7,1221171	8,3078606	-0,0005533	-1,3981472	2,2583863	1,2571833	0,0005676	-0,6190912
503	5,2433200	10,2796407	0,0062603	7,4499457	8,2494832	-0,0004437	-2,2066257	2,2339166	1,2152707	0,0005458	-0,9877834
504	6,1434002	10,1107484	0,0026048	7,9408475	8,6125117	-0,0003427	-1,7974473	2,2471145	1,1334059	0,0005039	-0,7998913
505	8,6438999	9,9553609	0,0032833	8,3564452	9,1664256	-0,0004130	0,2874547	2,2441795	1,0968591	0,0004848	0,1280890
506	12,1585999	9,2505737	0,0279498	8,8956635	12,6129029	-0,0013052	3,2629364	2,2030247	1,0655077	0,0004545	1,4811166
507	15,1278000	8,9808844	0,0519014	9,2077787	14,0975902	-0,0017507	5,9200213	2,2142111	1,0837572	0,0004521	2,6736481
508	16,8404007	8,1915685	0,2317575	13,1340858	18,4614618	-0,0031598	3,7063149	2,1682112	1,2006144	0,0004540	1,7093884
509	12,8460999	8,1250042	0,2780139	13,0194535	18,8614710	-0,0033099	-0,1733536	2,1739320	1,2330512	0,0004583	-0,0797420
510	12,4415998	8,2855194	0,3438362	13,3446478	18,2608577	-0,0031717	-0,9030480	2,0627450	1,3193489	0,0004681	-0,4377895
511	10,7271004	10,2014871	0,0225567	7,7308614	9,6598929	-0,0005569	2,9962390	2,2241562	1,3285630	0,0004473	1,3471351
512	7,6817498	10,3036490	0,0178879	7,8517727	9,3990984	-0,0004894	-0,1700228	2,2470165	1,3210129	0,0004433	-0,0756660
513	7,3353701	10,4220647	0,0214369	7,3344420	9,4696066	-0,0005235	0,0009280	2,1348201	1,3115801	0,0004390	0,0004347
514	6,8552899	10,4743835	0,0261356	7,4914130	9,6293129	-0,0005721	-0,6361230	2,2009035	1,3054319	0,0004378	-0,2890281
515	7,1636400	10,5366279	0,0304980	7,6876929	9,7764381	-0,0006124	-0,5240528	2,2380951	1,2951165	0,0004360	-0,2341513
516	6,8737898	10,6142738	0,0328382	7,8336873	9,8719857	-0,0006320	-0,9598975	2,2492512	1,2803629	0,0004330	-0,4267631
517	8,3344498	10,6960879	0,0323208	7,7537920	9,9030424	-0,0006268	0,5806578	2,2295526	1,2606314	0,0004284	0,2604369
518	7,5160699	10,7963998	0,0248737	8,2548994	9,8379666	-0,0005618	-0,7388295	2,2529437	1,2271042	0,0004216	-0,3279396
519	7,1906600	10,7750276	0,0204109	8,5783191	9,7976308	-0,0005200	-1,3876591	2,2149467	1,2298339	0,0004257	-0,6264978
520	7,2087998	10,6894178	0,0169509	7,9525800	9,7967845	-0,0004869	-0,7437801	2,1291482	1,2491049	0,0004364	-0,3493323
521	7,3887200	10,5475703	0,0150641	8,2685118	9,8626026	-0,0004725	-0,8797918	2,2099055	1,2781270	0,0004509	-0,3981129
522	8,5519104	10,3692192	0,0147412	8,3467091	10,0053592	-0,0004810	0,2052013	2,1920225	1,3065745	0,0004649	0,0936128
523	7,0800500	10,1768769	0,0155820	8,7765458	10,2093089	-0,0005077	-1,6964958	2,2495716	1,3273798	0,0004757	-0,7541417
524	7,7400899	9,9877897	0,0175315	9,2609130	10,4675849	-0,0005507	-1,5208231	2,2109171	1,3383309	0,0004821	-0,6878698
525	7,9868302	9,8133547	0,0197957	8,9359392	10,7335476	-0,0005941	-0,9491089	2,2303080	1,3423168	0,0004855	-0,4255506
526	11,7024002	9,4916195	0,0225985	9,6968675	11,1663929	-0,0006381	2,0055327	2,2272720	1,3419241	0,0004898	0,9004436
527	24,4193001	10,3967808	0,1415363	22,0339678	30,0011982	-0,0048374	2,3853323	2,0777017	1,6857670	0,0007666	1,1480629

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
528	12,3163004	10,1915220	0,0292449	16,9047352	20,4172220	-0,0018237	-4,5884348	2,1961874	1,9581214	0,0009542	-2,0892729
529	17,6350002	11,0153156	0,0402720	18,0494616	20,6086206	-0,0020040	-0,4144614	1,8566642	2,5076371	0,0012883	-0,2232290
530	17,7378998	11,3442999	0,0338345	17,1018041	20,5215253	-0,0018495	0,6360957	2,1658890	2,7502654	0,0014320	0,2936880
531	17,7581997	11,6735851	0,0216457	17,8109405	20,1560351	-0,0014966	-0,0527408	2,0824868	3,0092207	0,0015898	-0,0253259
532	22,4356995	10,1664940	0,0257727	21,2806477	24,4715741	-0,0022760	1,1550517	1,9484282	1,9830171	0,0009511	0,5928120
533	16,6536999	10,8789098	0,0087850	17,0416041	19,6127984	-0,0011317	-0,3879042	1,9404967	2,3859047	0,0012264	-0,1998994
534	7,6795902	10,0744415	0,0790046	7,1697356	10,4293189	-0,0014303	0,5098546	2,2335014	1,5670940	0,0007226	0,2282759
535	6,4232602	10,2768492	0,0483331	6,8764038	9,4493198	-0,0010606	-0,4531436	2,2361169	1,3905606	0,0006380	-0,2026475
536	6,1766100	10,3675278	0,0220531	7,3887405	8,6960193	-0,0007231	-1,2121305	2,2355915	1,2889700	0,0005858	-0,5421968
537	5,5355601	10,2680350	0,0026817	7,6368988	8,2101349	-0,0003070	-2,1013386	2,2416669	1,1925168	0,0005354	-0,9374000
538	5,4706998	10,0130565	0,0014620	8,1964450	8,7492983	-0,0002648	-2,7257453	2,2540240	1,1347128	0,0005066	-1,2092796
539	8,7132397	9,3549309	0,0143850	9,2223405	11,5467194	-0,0009173	-0,5091008	2,2436919	1,1225865	0,0004882	-0,2269032
540	10,9827995	9,1033790	0,0281499	9,3601365	12,8130032	-0,0012718	1,6226631	2,2254583	1,1408562	0,0004872	0,7291366
541	12,5056000	8,8596609	0,0490244	11,0794704	14,0708314	-0,0016364	1,4261296	2,2117132	1,1601548	0,0004844	0,6448076
542	15,0790005	8,4544771	0,1122938	12,8552729	16,2137145	-0,0022831	2,2237276	2,1270306	1,1939191	0,0004739	1,0454610
543	10,9722004	10,0158549	0,0531973	7,8003944	11,0510552	-0,0009146	3,1718060	2,1984877	1,3310882	0,0004507	1,4427217
544	9,0315800	10,1732227	0,0516950	8,1110689	10,7413188	-0,0008675	0,9205111	2,2491538	1,3483245	0,0004510	0,4092700
545	6,9806399	10,3691717	0,0564553	7,5622856	10,7336042	-0,0008799	-0,5816457	2,2027223	1,3254001	0,0004480	-0,2640577
546	8,0145798	10,4742154	0,0515376	8,0536146	10,6249379	-0,0008381	-0,0390348	2,2508862	1,3038586	0,0004432	-0,0173420
547	7,0709701	10,6322008	0,0354767	8,0406836	10,3347975	-0,0007044	-0,9697136	2,2334371	1,2659224	0,0004359	-0,4341799
548	8,3837795	10,4071422	0,0194630	8,4409933	10,2661122	-0,0005561	-0,0572137	2,2215601	1,3107513	0,0004642	-0,0257539
549	8,2155895	10,2131869	0,0182830	8,9720487	10,4162652	-0,0005510	-0,7564591	2,2479036	1,3345554	0,0004769	-0,3365176
550	8,5500803	10,0004301	0,0185505	8,6519801	10,6338125	-0,0005653	-0,1018998	2,1756626	1,3507586	0,0004860	-0,0468362
551	9,7750301	9,7952480	0,0195883	9,2011495	10,8844906	-0,0005888	0,5738806	2,2459289	1,3597220	0,0004916	0,2555204
552	12,6828003	9,3397948	0,0204291	9,8371513	11,4921532	-0,0006064	2,8456490	2,2395104	1,3644715	0,0004976	1,2706568
553	12,2771997	9,2274016	0,0182360	10,9065567	11,5799775	-0,0005717	1,3706431	1,9049962	1,3614505	0,0004995	0,7194991
554	10,6016998	8,8085545	0,0131878	10,3635470	12,1373856	-0,0005413	0,2381529	2,1367801	1,3729848	0,0005218	0,1114541
555	16,5062008	8,0654592	0,1552143	17,5274737	26,3943048	-0,0041453	-1,0212729	2,1978267	1,3638575	0,0005747	-0,4646740

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
556	16,1837006	8,3089814	0,1787879	19,6106412	28,6874107	-0,0046860	-3,4269406	2,1774705	1,3634044	0,0005818	-1,5738173
557	22,1758003	9,9845602	0,2340731	24,2532602	34,1754602	-0,0060354	-2,0774599	2,1062156	1,6071934	0,0007400	-0,9863472
558	20,8855000	10,0729646	0,0325200	19,3490637	23,7998382	-0,0023763	1,5364363	2,1849278	1,8686506	0,0008740	0,7031977
559	15,6796999	10,2550644	0,0154366	18,0508347	20,7688029	-0,0015304	-2,3711348	2,1733620	1,9802155	0,0009563	-1,0909986
560	12,7357998	10,4406655	0,0154703	17,4817626	20,1547681	-0,0014575	-4,7459628	2,1833606	2,0764816	0,0010263	-2,1736962
561	12,2439003	9,4481997	0,0193522	9,4900387	11,5020087	-0,0005839	2,7538616	2,1732274	1,3788944	0,0005028	1,2671760
562	11,9291000	9,2912441	0,0189453	10,0083754	11,7237186	-0,0005733	1,9207246	2,2300849	1,3830817	0,0005052	0,8612787
563	12,7459002	9,1871744	0,0180006	11,0769473	11,9139083	-0,0005561	1,6689529	2,0516508	1,3845182	0,0005059	0,8134683
564	10,6032000	8,8227112	0,0848802	12,1456763	17,7636936	-0,0020363	-1,5424764	2,2168964	1,2824383	0,0005176	-0,6957819
565	19,9815006	7,7641361	0,3701863	18,3988971	35,6632197	-0,0069002	1,5826035	2,1783597	1,3109752	0,0005904	0,7265115
566	24,4074993	8,0449119	0,3645801	24,5352460	36,4298413	-0,0069518	-0,1277467	2,1750436	1,3568910	0,0006228	-0,0587329
567	25,0774002	8,3804028	0,3515287	22,9575860	36,8639724	-0,0069152	2,1198142	2,2161885	1,4212432	0,0006655	0,9565135
568	22,1917992	9,3142961	0,2634377	22,6274410	36,3733552	-0,0063875	-0,4356418	2,2005060	1,6180275	0,0007916	-0,1979735
569	25,1441002	10,0559363	0,0544504	20,3637838	28,6046062	-0,0034466	4,7803164	2,0235362	1,9595098	0,0009687	2,3623577
570	18,0837994	10,4059022	0,0121321	20,6183764	23,2791436	-0,0016682	-2,5345771	2,0653642	2,2099754	0,0010998	-1,2271817
571	7,7524700	10,0546906	0,1057497	8,2050934	11,7874495	-0,0018707	-0,4526234	2,2178367	1,6949905	0,0007849	-0,2040833
572	7,8077002	10,1978296	0,0883000	7,6915694	11,1825742	-0,0016553	0,1161308	2,2400840	1,5653321	0,0007249	0,0518422
573	7,9024301	10,3117030	0,0716750	7,5227252	10,5902809	-0,0014388	0,3797049	2,2476000	1,4635407	0,0006768	0,1689379
574	9,1249199	10,3913834	0,0557809	7,3233044	10,0311155	-0,0012258	1,8016155	2,2512911	1,3877945	0,0006395	0,8002588
575	6,4844599	10,4384273	0,0407512	7,3098633	9,5236210	-0,0010206	-0,8254034	2,2557615	1,3345768	0,0006119	-0,3659090
576	5,8062901	10,4518017	0,0268924	6,8932237	9,0755746	-0,0008223	-1,0869336	2,2087906	1,2971413	0,0005914	-0,4920944
577	6,1104202	10,4361872	0,0153633	7,5553424	8,6993509	-0,0006327	-1,4449222	2,2377482	1,2701951	0,0005763	-0,6457036
578	6,6354799	10,3831953	0,0073231	7,6085948	8,4124753	-0,0004568	-0,9731148	2,2311223	1,2458656	0,0005630	-0,4361549
579	6,1732202	10,2988396	0,0028731	7,5739739	8,2425047	-0,0003051	-1,4007537	2,2593476	1,2219411	0,0005507	-0,6199815
580	5,8988099	10,1789976	0,0010546	7,5542018	8,2370217	-0,0001987	-1,6553919	1,9943927	1,1966889	0,0005383	-0,8300231
581	8,9501104	9,6227628	0,0020860	8,6733326	9,5735384	-0,0003289	0,2767779	2,2203543	1,1589562	0,0005141	0,1246548
582	9,0539904	9,1708758	0,0114692	9,0197648	11,4687397	-0,0007857	0,0342256	2,1497651	1,1880690	0,0005134	0,0159206
583	12,1360998	8,7724667	0,0362105	10,4345813	13,5273803	-0,0013343	1,7015185	2,2462332	1,2119998	0,0005042	0,7574986

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
584	13,8912001	8,6183947	0,0556866	10,5174974	14,4602542	-0,0015943	3,3737027	2,2401210	1,2168227	0,0004956	1,5060360
585	13,0960999	8,4927003	0,0803436	11,4578710	15,2952663	-0,0018370	1,6382289	2,2273714	1,2196006	0,0004861	0,7354987
586	14,1838999	8,3941312	0,1100847	9,6737827	16,0247647	-0,0020613	4,5101172	2,1457017	1,2241804	0,0004775	2,1019311
587	9,7971201	9,7828991	0,0949939	8,2802193	12,4978018	-0,0013172	1,5169008	2,2262415	1,3583384	0,0004576	0,6813730
588	9,6199398	9,8096334	0,0938382	8,8572630	12,3308600	-0,0012913	0,7626768	2,2270944	1,3815104	0,0004623	0,3424537
589	9,9380398	9,8315703	0,0950485	8,7701258	12,2249814	-0,0012829	1,1679139	2,2349241	1,3953385	0,0004659	0,5225743
590	8,6144400	9,8770454	0,0952592	8,9832463	12,1172623	-0,0012704	-0,3688063	2,2215515	1,3988823	0,0004678	-0,1660130
591	8,4001598	9,9551066	0,0926369	9,5211194	11,9679376	-0,0012395	-1,1209596	2,1458163	1,3909044	0,0004671	-0,5223931
592	7,5337801	10,0690683	0,0857662	8,4033277	11,7581226	-0,0011817	-0,8695476	2,2498999	1,3726941	0,0004636	-0,3864828
593	6,3189001	10,3332260	0,0611748	8,9861441	11,1949834	-0,0009861	-2,6672440	2,2034486	1,3178867	0,0004510	-1,2104861
594	5,8396902	10,4249849	0,0471396	8,2126641	10,9132027	-0,0008672	-2,3729739	2,2395317	1,2980603	0,0004476	-1,0595849
595	6,0616598	10,3814014	0,0270742	8,7006109	10,5978971	-0,0006699	-2,6389511	2,2506550	1,3100060	0,0004606	-1,1725259
596	9,6464596	10,0381796	0,0200894	9,2369304	10,7586910	-0,0005907	0,4095292	2,2452468	1,3523542	0,0004849	0,1823983
597	13,4596996	9,8210784	0,0196268	9,5546051	10,9722289	-0,0005882	3,9050945	2,2348200	1,3657038	0,0004932	1,7473866
598	14,2421999	9,1751829	0,0156106	10,6346116	11,8721139	-0,0005268	3,6075882	2,2273951	1,3712285	0,0005027	1,6196445
599	12,3506002	9,1331214	0,0135714	10,4153871	12,0008616	-0,0005027	1,9352132	2,1794092	1,3580129	0,0005024	0,8879531
600	10,6393003	8,9866534	0,0169955	11,1365103	12,8555770	-0,0006499	-0,4972100	2,2280631	1,3354415	0,0005099	-0,2231579
601	10,6780996	8,8444652	0,0273315	11,3610984	13,9308888	-0,0009311	-0,6829987	2,2200295	1,3369506	0,0005208	-0,3076530
602	11,1152000	8,1754401	0,1215876	10,1885194	20,9339740	-0,0029255	0,9266806	1,9282605	1,3436743	0,0005562	0,4805785
603	16,3927994	7,9615334	0,2696753	19,5576525	31,7749580	-0,0057683	-3,1648532	2,2064342	1,3215708	0,0005754	-1,4343746
604	23,1914005	8,5278086	0,2887531	16,3994268	34,3720583	-0,0062492	6,7919737	2,0299577	1,3968432	0,0006295	3,3458696
605	25,8472004	9,2072942	0,2820000	21,3312005	35,4875901	-0,0063768	4,5159999	2,2098575	1,5290080	0,0007137	2,0435706
606	23,8897991	9,4831250	0,2649821	19,8976717	35,5046565	-0,0063084	3,9921275	2,1484292	1,5828144	0,0007478	1,8581611
607	21,8316994	9,6926657	0,2345251	19,8732324	35,0276397	-0,0060886	1,9584670	2,1291346	1,6233585	0,0007735	0,9198418
608	29,1807003	9,9414159	0,1379376	20,9474761	32,1134178	-0,0049737	8,2332242	2,1773230	1,7182816	0,0008238	3,7813518
609	6,2232900	9,8310386	0,1060463	10,1095145	13,2394556	-0,0015896	-3,8862246	2,1453509	1,3656675	0,0004703	-1,8114634
610	9,1316004	9,8373070	0,0295975	9,6181319	11,5271944	-0,0007670	-0,4865315	2,2337284	1,3391995	0,0004825	-0,2178114
611	13,2194004	9,0615885	0,0170191	11,0346373	12,2111329	-0,0005387	2,1847631	2,2061698	1,3816357	0,0005081	0,9902969

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
612	11,7124996	9,2229922	0,0236142	11,7101309	13,7135938	-0,0007715	0,0023688	2,2251996	1,3047014	0,0004911	0,0010645
613	11,4481001	9,2235850	0,0425733	12,3938841	15,0730608	-0,0011751	-0,9457841	2,1952577	1,2666443	0,0004873	-0,4308305
614	10,4406996	8,8584587	0,1373277	11,7480426	20,1844407	-0,0027760	-1,3073431	2,1769430	1,2310910	0,0005021	-0,6005408
615	10,5426998	8,4856121	0,2112081	11,4236350	23,6714400	-0,0038685	-0,8809351	2,1421995	1,2366898	0,0005177	-0,4112293
616	13,2567997	8,0568141	0,2889981	12,6332475	27,2487281	-0,0049679	0,6235522	2,1806870	1,2471502	0,0005329	0,2859430
617	13,9889002	7,6563099	0,3577299	15,5528883	30,4762828	-0,0059243	-1,5639881	2,2111464	1,2557470	0,0005450	-0,7073200
618	25,5643005	7,9813151	0,4064222	27,5946339	38,3863948	-0,0074170	-2,0303334	2,1295145	1,3912277	0,0006613	-0,9534255
619	30,1210995	8,7125057	0,3422566	26,4599161	38,3068054	-0,0070685	3,6611833	2,1847539	1,5445602	0,0007612	1,6757875
620	12,3740997	10,0480887	0,1314447	10,5967774	13,3450731	-0,0023672	1,7773223	1,7969841	1,8692457	0,0008694	0,9890584
621	9,0673904	10,5334133	0,0646407	7,2711383	10,7479937	-0,0014379	1,7962521	2,2285348	1,4118518	0,0006546	0,8060238
622	6,9104300	10,5656234	0,0491313	7,8315622	10,1501346	-0,0012032	-0,9211323	2,2464234	1,3627538	0,0006284	-0,4100439
623	4,7065902	10,5615034	0,0343617	7,1181457	9,6113236	-0,0009770	-2,4115555	2,2205283	1,3290060	0,0006092	-1,0860278
624	7,0087900	10,5195813	0,0211192	7,8097701	9,1381296	-0,0007586	-0,8009801	2,2296725	1,3031260	0,0005939	-0,3592366
625	7,8435001	10,4470126	0,0108462	7,5224402	8,7456277	-0,0005527	0,3210600	2,2580786	1,2811115	0,0005813	0,1421828
626	7,5274100	10,3398287	0,0043916	7,4954711	8,4524572	-0,0003661	0,0319390	2,2237274	1,2577558	0,0005688	0,0143628
627	6,4637399	10,1986263	0,0013094	7,8179104	8,2878487	-0,0002112	-1,3541706	2,2577202	1,2322199	0,0005557	-0,5997956
628	6,7230201	10,0271047	0,0003103	8,0066299	8,2977718	-0,0001090	-1,2836098	2,2215207	1,2085209	0,0005431	-0,5778068
629	8,4499302	9,1886881	0,0024369	9,5608237	10,2368447	-0,0003456	-1,1108935	2,2340625	1,2158532	0,0005263	-0,4972526
630	6,6824002	9,0073423	0,0056744	9,0807113	11,0444097	-0,0005241	-2,3983111	1,9119035	1,2266557	0,0005234	-1,2544101
631	11,5753002	9,4340569	0,1470001	8,8455979	13,9400225	-0,0017782	2,7297023	2,2348039	1,4468097	0,0004829	1,2214505
632	8,3776999	9,6069322	0,1327841	9,2537818	13,3616731	-0,0016544	-0,8760819	2,2281923	1,4405526	0,0004841	-0,3931806
633	7,9607902	9,7533288	0,1194385	10,1624727	12,9895987	-0,0015517	-2,2016826	2,1142660	1,4170681	0,0004791	-1,0413461
634	6,8225999	9,9208849	0,1018948	8,3803107	12,5584233	-0,0014153	-1,5577108	2,2420050	1,3832138	0,0004707	-0,6947847
635	6,4082899	10,0825188	0,0813558	8,8039819	12,0883749	-0,0012488	-2,3956920	2,2434000	1,3467936	0,0004617	-1,0678845
636	7,4955902	10,2401303	0,0439337	8,9552853	11,2765935	-0,0009018	-1,4596951	2,2416435	1,3110793	0,0004577	-0,6511718
637	7,8692999	10,1866937	0,0318992	8,8632087	11,0572931	-0,0007656	-0,9939088	2,2462087	1,3220115	0,0004668	-0,4424828
638	8,9135103	10,0479450	0,0247488	9,4789009	11,0024168	-0,0006723	-0,5653905	2,2129532	1,3417752	0,0004790	-0,2554914
639	10,0599003	9,8551956	0,0212102	10,1104648	11,0923829	-0,0006199	-0,0505646	2,0556226	1,3598673	0,0004902	-0,0245982

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
640	12,7728004	9,6441775	0,0197847	9,1922984	11,2763529	-0,0005951	3,5805021	2,1674604	1,3717947	0,0004980	1,6519342
641	13,6014004	10,4400577	0,1204516	9,2096780	13,7758472	-0,0024655	4,3917224	2,2040113	1,7312002	0,0008127	1,9926043
642	11,6545000	10,5638575	0,1050842	8,2948642	13,0695085	-0,0022239	3,3596359	2,2314097	1,6096688	0,0007560	1,5056114
643	10,1468000	10,6562549	0,0894022	8,6087068	12,3358499	-0,0019637	1,5380932	2,2315772	1,5191475	0,0007126	0,6892404
644	8,2427797	10,7109845	0,0740286	8,4011425	11,6157992	-0,0017000	-0,1583628	2,2367496	1,4548235	0,0006800	-0,0708004
645	7,3378401	10,7278373	0,0589861	6,5757627	10,9384048	-0,0014417	0,7620773	2,0295921	1,4100490	0,0006552	0,3754830
646	5,9803500	10,7027567	0,0440075	8,2229120	10,3120040	-0,0011890	-2,2425620	2,2262071	1,3761663	0,0006351	-1,0073465
647	7,0438099	10,6418946	0,0295823	7,8605119	9,7477821	-0,0009441	-0,8167020	2,2531944	1,3487914	0,0006183	-0,3624641
648	7,8968701	10,5458868	0,0171235	7,6749078	9,2573663	-0,0007106	0,2219624	2,2551396	1,3232197	0,0006031	0,0984251
649	7,4568200	10,4142484	0,0079336	8,0674221	8,8475591	-0,0004900	-0,6106021	2,1971166	1,2957770	0,0005879	-0,2779106
650	7,0407200	10,2480053	0,0026551	7,8091469	8,5434932	-0,0002930	-0,7684269	2,2349964	1,2654469	0,0005715	-0,3438157
651	7,4805899	10,0471276	0,0004753	8,1676706	8,3656471	-0,0001294	-0,6870807	2,1764101	1,2355253	0,0005549	-0,3156945
652	6,9907098	9,8239026	0,0000054	8,3096233	8,3454460	-0,0000144	-1,3189135	2,2410151	1,2143224	0,0005412	-0,5885340
653	6,4654999	9,5896732	0,0000480	8,5989864	8,4978928	0,0000445	-2,1334865	2,2526504	1,2065902	0,0005323	-0,9471006
654	3,1121800	9,3613527	0,0000552	8,9058946	8,8120725	0,0000488	-5,7937146	2,2340324	1,2111950	0,0005278	-2,5933888
655	6,0373201	9,1575233	0,0000002	9,2767582	9,2707571	0,0000033	-3,2394381	2,2164915	1,2211029	0,0005254	-1,4615161
656	8,9307699	8,8086865	0,0028375	10,4788092	11,2134013	-0,0003501	-1,5480393	2,2324180	1,2289503	0,0005117	-0,6934361
657	11,8240004	8,7817590	0,0066510	10,5546188	11,9983964	-0,0005314	1,2693816	2,2181327	1,2231282	0,0005048	0,5722748
658	15,3879995	8,7844553	0,0249378	11,0491411	13,8165827	-0,0010216	4,3388584	2,2065435	1,2031523	0,0004866	1,9663598
659	8,3332701	10,8954730	0,0550194	8,7159294	11,1954547	-0,0014628	-0,3826593	2,2088883	1,4291030	0,0006649	-0,1732361
660	8,1863203	10,8145714	0,0403096	8,5988215	10,5439363	-0,0011933	-0,4125011	2,1977141	1,3978793	0,0006451	-0,1876955
661	8,0192804	10,6938641	0,0262391	8,0115593	9,9595334	-0,0009325	0,0077212	2,2536448	1,3659010	0,0006257	0,0034261
662	7,4279099	10,0931424	0,0014744	8,2492405	8,6746480	-0,0002258	-0,8213306	2,2367908	1,2521284	0,0005614	-0,3671915
663	8,3763905	9,8264286	0,0000497	8,3447858	8,4585720	-0,0000426	0,0316046	2,2042585	1,2202254	0,0005413	0,0143380
664	7,0103598	9,2931285	0,0008826	8,8310807	8,4626333	0,0001873	-1,8207209	2,2371120	1,2008899	0,0005183	-0,8138712
665	6,7364001	9,0721058	0,0012509	9,0875207	8,6944980	0,0002257	-2,3511205	2,2030670	1,2077141	0,0005144	-1,0672034
666	7,5726399	8,7720068	0,0000644	10,3241619	10,1953253	0,0000523	-2,7515220	2,2402674	1,2278085	0,0005106	-1,2282114
667	11,3083000	8,7898100	0,0002620	10,7276994	10,9589799	-0,0001068	0,5806006	2,2289186	1,2297260	0,0005095	0,2604853

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
668	12,8943996	8,8449810	0,0023675	11,1218635	11,8763946	-0,0003271	1,7725361	2,2300582	1,2291639	0,0005077	0,7948385
669	16,3202000	8,7654822	0,2437949	12,7038802	17,5813474	-0,0029224	3,6163198	2,0150187	1,5616915	0,0005285	1,7946830
670	8,2484903	9,7643886	0,0754202	9,6253687	13,1655592	-0,0013993	-1,3768784	2,2291566	1,3063630	0,0004657	-0,6176678
671	9,2983103	9,5886075	0,0402849	9,5369906	12,3331480	-0,0009443	-0,2386803	2,2253473	1,3280250	0,0004859	-0,1072553
672	11,3001003	8,9556669	0,0210906	10,4662758	12,4997476	-0,0006119	0,8338245	2,1707674	1,3719328	0,0005104	0,3841151
673	12,9593000	8,9012108	0,0185255	11,1833542	12,6448655	-0,0005736	1,7759458	2,2325469	1,3758734	0,0005111	0,7954797
674	12,5576000	8,9093698	0,0165355	11,3028240	12,8199846	-0,0005525	1,2547761	2,2289434	1,3742193	0,0005103	0,5629466
675	11,9194002	9,0006354	0,1199891	12,7537397	19,2026155	-0,0024244	-0,8343395	2,2133958	1,1999611	0,0004786	-0,3769500
676	12,7372999	8,2478288	0,2900117	15,4545073	26,4048379	-0,0047322	-2,7172074	2,1933860	1,2019186	0,0005067	-1,2388186
677	14,8274002	7,3230083	0,4449352	10,6268087	32,9031561	-0,0067138	4,2005915	2,0417229	1,2449673	0,0005429	2,0573759
678	22,8602009	7,0084683	0,4898865	18,5005350	35,2077848	-0,0073471	4,3596659	2,2056596	1,2568272	0,0005556	1,9765815
679	12,8907003	11,2639655	0,1052560	9,7778825	14,7671338	-0,0026882	3,1128178	2,2146840	1,5841229	0,0007603	1,4055359
680	10,1499996	11,2264621	0,0802333	9,1512316	13,0799233	-0,0021020	0,9987680	2,2287819	1,5107622	0,0007161	0,4481228
681	8,3700304	11,0508823	0,0520994	7,6993159	11,5392885	-0,0015071	0,6707145	2,1776628	1,4419416	0,0006707	0,3079974
682	7,4902000	10,7044473	0,0232453	8,3350687	10,2589592	-0,0009385	-0,8448687	2,2484862	1,3586972	0,0006202	-0,3757500
683	7,6568899	10,4513599	0,0117683	8,5719195	9,7107658	-0,0006610	-0,9150296	2,2084861	1,3071067	0,0005909	-0,4143244
684	8,6080799	9,4801542	0,0000477	8,7328872	8,6312720	0,0000428	-0,1248073	2,2385819	1,1815632	0,0005128	-0,0557528
685	7,5616002	9,1694160	0,0009753	8,9857514	8,5415682	0,0001948	-1,4241512	2,2444071	1,1750487	0,0005020	-0,6345334
686	7,0654702	8,9177368	0,0021929	9,0737789	8,6091089	0,0002939	-2,0083086	2,1642670	1,1842567	0,0004994	-0,9279394
687	6,6578302	8,7427483	0,0028149	9,5199015	8,8421574	0,0003357	-2,8620713	2,2317208	1,2005194	0,0005018	-1,2824504
688	10,6070004	8,6923012	0,0001365	10,8112987	10,6110248	0,0000788	-0,2042984	2,2351570	1,2498419	0,0005179	-0,0914022
689	11,2419996	8,7883643	0,0005008	11,1448347	11,6176380	-0,0001569	0,0971650	2,1727117	1,2620802	0,0005226	0,0447206
690	12,3408003	8,8985458	0,0045003	11,6383981	12,8984067	-0,0004922	0,7024022	2,2248330	1,2692837	0,0005250	0,3157101
691	16,0464993	8,4468690	0,2958394	10,7023400	19,9438080	-0,0036687	5,3441593	2,1923475	1,6303241	0,0005592	2,4376424
692	13,5689001	8,6566226	0,2729036	12,7893175	19,2333251	-0,0034851	0,7795826	2,0788096	1,6048321	0,0005530	0,3750139
693	10,3042002	9,4292187	0,1387080	10,1073802	15,5793070	-0,0021993	0,1968200	2,2156407	1,3280744	0,0004765	0,0888321
694	11,1358995	8,9529936	0,0406421	9,6389600	13,1967474	-0,0009270	1,4969396	1,9938061	1,3446296	0,0005077	0,7507950
695	11,2909002	8,6927519	0,0219658	11,8904139	13,5126789	-0,0006779	-0,5995137	2,2187068	1,3748829	0,0005178	-0,2702086

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
696	29,5716000	8,5720192	0,3807501	29,1030908	40,8619457	-0,0078866	0,4685092	2,1636031	1,5350466	0,0007707	0,2165412
697	30,6511002	8,9924186	0,3429034	29,1519964	40,8204681	-0,0077635	1,4991038	2,1527397	1,6300840	0,0008317	0,6963702
698	9,4971399	11,3720592	0,0634137	8,9488093	12,7236097	-0,0018761	0,5483307	2,2394973	1,4765316	0,0006931	0,2448454
699	9,5419798	11,1783645	0,0483814	8,7686736	11,9701699	-0,0015640	0,7733062	2,2414580	1,4304721	0,0006633	0,3450014
700	10,5347004	10,9203109	0,0331147	8,9135615	11,2740370	-0,0012509	1,6211389	2,2298178	1,3744768	0,0006294	0,7270275
701	8,4893599	10,5919667	0,0196299	8,8116936	10,6408333	-0,0009414	-0,3223337	2,2348529	1,3088229	0,0005916	-0,1442304
702	10,0200996	9,3503666	0,0003415	8,9996457	9,2668296	-0,0001194	1,0204539	2,2389006	1,1515340	0,0004959	0,4557835
703	9,4378700	8,9781741	0,0001136	9,2205365	9,0839418	0,0000682	0,2173335	2,2316302	1,1479544	0,0004870	0,0973878
704	7,7782102	8,4346660	0,0007247	10,5967216	10,1887131	0,0001794	-2,8185114	2,2363429	1,2516764	0,0005194	-1,2603217
705	11,5873003	8,7778366	0,0061739	11,7582668	13,5440551	-0,0006068	-0,1709665	2,1881136	1,3231010	0,0005465	-0,0781342
706	11,1717997	9,1095195	0,1482314	9,6669891	16,6443258	-0,0023757	1,5048106	2,1775537	1,3094376	0,0004910	0,6910555
707	10,2746000	8,9194484	0,0953758	10,2123229	15,1801456	-0,0016789	0,0622771	2,1932696	1,3186450	0,0005038	0,0283947
708	10,5643997	8,3849081	0,0369975	12,5314755	14,3445055	-0,0009279	-1,9670758	2,1564430	1,3723365	0,0005249	-0,9121854
709	9,7685804	8,3897912	0,0340548	11,9548406	14,5634370	-0,0009231	-2,1862602	2,2111213	1,3785212	0,0005283	-0,9887563
710	11,3374996	8,4254559	0,0364693	11,4482717	15,0344032	-0,0010102	-0,1107721	2,0262451	1,3715168	0,0005285	-0,0546686
711	23,8999996	6,4901657	0,5463027	25,9783320	39,6672846	-0,0084396	-2,0783324	2,1820911	1,3051742	0,0005997	-0,9524498
712	30,3668995	6,7963034	0,5147059	29,7663638	40,4299785	-0,0084969	0,6005357	2,1103379	1,3222676	0,0006179	0,2845685
713	30,6634998	9,3502803	0,3384101	28,1051360	42,1672756	-0,0082331	2,5583638	2,1940242	1,6425358	0,0008439	1,1660600
714	25,7045002	9,7483200	0,3070682	28,2669368	42,2607162	-0,0082220	-2,5624366	2,1809637	1,7496713	0,0009126	-1,1749103
715	8,3685102	8,1961063	0,0001237	11,0955578	11,2040617	-0,0000759	-2,7270475	2,0900658	1,2735040	0,0005298	-1,3047663
716	7,7245798	8,2961321	0,0011621	11,2413424	12,0628450	-0,0002432	-3,5167626	2,1045306	1,3058384	0,0005413	-1,6710437
717	11,0018997	8,5297140	0,1389058	12,6227577	17,1067435	-0,0021980	-1,6208580	2,1460999	1,3434248	0,0005227	-0,7552575
718	11,2607002	8,0348765	0,0533103	13,8750459	15,9483449	-0,0012767	-2,6143457	2,0664403	1,3818344	0,0005401	-1,2651445
719	22,4466000	6,5352714	0,5152272	29,4454830	39,8851616	-0,0084600	-6,9988831	2,0922156	1,3228336	0,0006120	-3,3452016
720	25,4881001	6,9501000	0,4764229	26,8254731	40,7398261	-0,0085574	-1,3373730	2,1945807	1,3441618	0,0006328	-0,6093980
721	32,4990005	8,8216459	0,3584864	30,8029714	42,4587117	-0,0085578	1,6960292	2,1368115	1,4870867	0,0007410	0,7937196
722	32,0772018	10,4842252	0,2974206	29,2802403	43,8876038	-0,0088476	2,7969616	2,1718159	1,7877160	0,0009420	1,2878447
723	34,6011009	10,7318557	0,2572997	30,0477921	44,1318222	-0,0092964	4,5533088	2,1705665	1,6381969	0,0008490	2,0977513

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
724	16,5074005	13,3483513	0,0770394	10,9769813	16,9594515	-0,0028611	5,5304192	2,1907617	1,7327075	0,0008632	2,5244276
725	12,3028002	11,4537844	0,0458009	10,4410823	13,6129428	-0,0018780	1,8617179	2,1516656	1,3571486	0,0006259	0,8652450
726	11,8733997	10,8349988	0,0330904	9,9703619	12,9514662	-0,0015414	1,9030378	2,2139979	1,2651429	0,0005705	0,8595482
727	6,3718600	8,0817959	0,0073516	12,3018798	13,5318078	-0,0006231	-5,9300198	2,2005676	1,3301935	0,0005515	-2,6947683
728	9,1297598	8,2343394	0,0129433	11,8035210	14,6614989	-0,0008727	-2,6737612	2,1426656	1,3591870	0,0005605	-1,2478668
729	10,9835997	8,3983263	0,0224768	12,3825699	16,0912724	-0,0012176	-1,3989702	2,1830009	1,3901774	0,0005701	-0,6408473
730	19,3206997	8,6458817	0,0574728	14,2527402	19,6830737	-0,0021447	5,0679595	2,2139167	1,4843781	0,0005996	2,2891374
731	19,9990997	8,2163489	0,2216537	20,2174281	27,0619398	-0,0041914	-0,2183283	1,8288257	2,1009731	0,0007794	-0,1193817
732	23,1040001	8,0069730	0,3958417	17,5198996	26,4026423	-0,0057197	5,5841005	1,7426245	1,8984536	0,0007097	3,2044197
733	11,8007002	7,8754481	0,1050368	11,9459908	17,3469555	-0,0018630	-0,1452906	2,1743296	1,3666411	0,0005395	-0,0668209
734	10,8107996	7,7392218	0,0801254	12,1483308	17,2407221	-0,0016702	-1,3375312	2,1466897	1,3801763	0,0005475	-0,6230668
735	20,3616009	7,4938099	0,1357704	12,1065691	20,8606672	-0,0026210	8,2550318	1,9886339	1,3156982	0,0005451	4,1511068
736	15,7212000	7,3408624	0,1897733	14,7878401	22,9468127	-0,0032793	0,9333599	2,1785521	1,2617578	0,0005317	0,4284313
737	25,7493992	7,3429250	0,4148604	27,5235926	40,8420279	-0,0085484	-1,7741934	2,1836891	1,3699846	0,0006525	-0,8124753
738	29,2922993	8,0258777	0,3717702	28,5930411	41,6942092	-0,0086476	0,6992582	2,1837011	1,4084583	0,0006834	0,3202170
739	32,7979012	9,6371364	0,3042945	29,0351665	43,1713447	-0,0088186	3,7627347	2,1929404	1,5391179	0,0007780	1,7158399
740	8,6358204	7,3585410	0,1265756	15,4993369	20,5072929	-0,0025305	-6,8635165	2,1928768	1,4171798	0,0005905	-3,1299144
741	22,4764004	6,6521122	0,3958226	25,9316643	34,2613213	-0,0066478	-3,4552639	1,9766139	1,3754680	0,0006289	-1,7480723
742	37,4893990	11,9532887	0,2359775	30,0139484	45,7858262	-0,0103017	7,4754506	2,1552727	1,8389328	0,0009938	3,4684477
743	37,8292007	15,5756559	0,2644527	32,7222796	51,8908094	-0,0128303	5,1069212	2,0323817	2,6984158	0,0015109	2,5127766
744	16,3973999	14,4207776	0,0111618	12,8329619	14,5613016	-0,0009327	3,5644380	2,2117371	2,2690235	0,0011731	1,6116011
745	15,8037004	14,4896233	0,0200107	12,5160455	15,0730610	-0,0013367	3,2876549	2,2161324	2,1244222	0,0010914	1,4835102
746	13,1499996	14,1394564	0,0504720	11,8159912	16,0862740	-0,0023437	1,3340084	2,2095562	1,8546230	0,0009328	0,6037450
747	10,2019997	8,0584855	0,0265927	12,3316077	16,2054979	-0,0012573	-2,1296081	2,1845307	1,3766011	0,0005669	-0,9748584
748	13,5854998	8,2242858	0,0360552	13,7351102	17,4829953	-0,0015449	-0,1496104	2,2298945	1,4028868	0,0005741	-0,0670931
749	16,8771992	8,3764636	0,0491342	13,3680988	18,9645631	-0,0018939	3,5091004	2,1869830	1,4384653	0,0005849	1,6045394
750	20,2952003	8,4969789	0,0657841	16,5176106	20,5609385	-0,0022779	3,7775897	2,1040382	1,4922789	0,0006021	1,7953998
751	23,0569992	8,5561155	0,1273992	18,4768965	24,7094032	-0,0032360	4,5801027	2,0893610	1,8433843	0,0007176	2,1921069

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
752	21,1637993	8,3835054	0,1690851	19,4338961	26,1181916	-0,0035669	1,7299032	2,0109856	2,1358124	0,0008143	0,8602266
753	14,4219999	7,7487383	0,1500714	14,2326218	19,3176639	-0,0024673	0,1893781	2,1862665	1,4026086	0,0005626	0,0866217
754	11,3519001	7,5773167	0,1123109	14,4274560	18,7562148	-0,0021303	-3,0755559	2,1921672	1,3895899	0,0005611	-1,4029750
755	15,2156000	9,9666343	0,0281683	12,1182663	15,3633908	-0,0015336	3,0973337	2,1792116	1,2709636	0,0005777	1,4213093
756	11,8273001	7,5377659	0,0617150	13,6488177	16,9327750	-0,0016738	-1,8215176	2,2043765	1,4189642	0,0006011	-0,8263188
757	11,2115002	7,5242325	0,0612985	14,3295876	17,2209406	-0,0016800	-3,1180874	2,1692237	1,4164506	0,0005957	-1,4374208
758	15,9130001	8,0134213	0,0673534	16,4646576	19,8857224	-0,0020734	-0,5516575	2,1210629	1,4255186	0,0005842	-0,2600854
759	24,0990009	8,4604492	0,0842149	16,5983110	22,6806018	-0,0025269	7,5006899	2,2038097	1,5663960	0,0006319	3,4035106
760	16,8729992	8,0332954	0,2588768	14,8295398	24,7675015	-0,0041774	2,0434594	2,1029472	1,7114945	0,0007140	0,9717122
761	17,3213005	7,9689892	0,2370792	18,0365147	23,9107611	-0,0038419	-0,7152142	1,9811038	1,6566390	0,0006894	-0,3610181
762	14,7271004	7,4529903	0,1463128	13,3025695	21,7241146	-0,0028752	1,4245308	2,0549813	1,4651328	0,0006301	0,6932087
763	12,6505003	7,3286233	0,1465856	18,2687715	22,0914404	-0,0029541	-5,6182712	2,0094338	1,4566803	0,0006275	-2,7959473
764	18,1438999	6,9613783	0,1885838	18,3764490	24,6558913	-0,0036445	-0,2325490	2,1482627	1,4401339	0,0006264	-0,1082498
765	18,7989998	6,8537884	0,2156349	16,7329869	25,8177642	-0,0039672	2,0660129	2,1655542	1,4269167	0,0006274	0,9540343
766	36,0295982	16,3077439	0,2826855	32,7757900	54,7269996	-0,0147820	3,2538083	2,0221264	2,9271032	0,0016566	1,6091023
767	13,2389002	15,2449617	0,0056768	12,5536790	13,8092476	-0,0007166	0,6852212	2,2101729	2,2565919	0,0011715	0,3100306
768	12,7972002	15,1413673	0,0171238	12,2105965	14,5099732	-0,0013582	0,5866037	2,1761087	2,0904772	0,0010709	0,2695655
769	18,1602001	8,4451995	0,0326429	12,1841925	14,8216914	-0,0013999	5,9760076	2,1858498	1,2754654	0,0005562	2,7339516
770	8,2207403	7,6511026	0,0362850	10,9100712	16,0932756	-0,0013355	-2,6893309	1,9263324	1,3697837	0,0005720	-1,3960887
771	11,4684000	7,7730940	0,0391010	14,2360578	16,7794232	-0,0014451	-2,7676578	2,1687810	1,3794272	0,0005719	-1,2761352
772	23,7584991	8,3883615	0,0725975	14,3474206	21,2491180	-0,0023539	9,4110786	2,1676453	1,4905520	0,0006023	4,3416137
773	14,2923002	14,1240815	0,0082853	13,2944054	12,1160568	0,0005627	0,9978948	2,1777314	2,8693094	0,0015241	0,4582268
774	13,8795004	14,4466012	0,0058883	12,9272738	12,1323295	0,0005119	0,9522266	2,1263794	2,7589017	0,0014626	0,4478160
775	14,0265999	14,7962148	0,0037454	12,8468483	12,1545710	0,0004429	1,1797516	2,1437857	2,6456253	0,0013989	0,5503123
776	12,6631002	15,1511473	0,0019934	12,8929511	12,1887026	0,0003512	-0,2298508	2,2150587	2,5423372	0,0013407	-0,1037674
777	12,6117001	15,8905820	0,0001448	12,2306026	12,5018448	-0,0001170	0,3810975	1,9764127	2,3610403	0,0012344	0,1928228
778	12,5705996	15,9168022	0,0010054	12,1248339	12,6840433	-0,0003240	0,4457657	2,1997935	2,3076265	0,0011997	0,2026398
779	14,8557997	13,9604662	0,0139401	12,9979713	11,7699688	0,0006887	1,8578284	2,2009072	2,8701944	0,0015296	0,8441194

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
780	14,2216997	14,2287615	0,0111989	13,5069928	11,7871902	0,0006547	0,7147069	1,7099465	2,7772861	0,0014787	0,4179703
781	14,1894999	14,5472201	0,0089895	13,1504146	11,7676120	0,0006277	1,0390852	2,1473310	2,6800940	0,0014245	0,4838962
782	13,2018003	15,2791767	0,0058127	12,6289679	11,6233601	0,0005877	0,5728325	2,2204574	2,5058953	0,0013258	0,2579795
783	12,4769001	15,6483662	0,0046437	12,4725843	11,5142240	0,0005671	0,0043158	2,2141367	2,4541937	0,0012961	0,0019492
784	12,1113997	16,2275964	0,0027990	12,2114293	11,2916723	0,0005034	-0,1000296	2,2336961	2,4384203	0,0012833	-0,0447821
785	15,3690996	7,6778994	0,0866588	14,5690382	18,0555492	-0,0019866	0,8000614	2,1653357	1,4860885	0,0006361	0,3694861
786	14,2349997	7,5543009	0,0899652	14,5629886	18,3073142	-0,0019991	-0,3279889	2,1903382	1,4832466	0,0006290	-0,1497435
787	11,4927998	7,5333714	0,0891532	11,9210458	18,6006825	-0,0020138	-0,4282460	2,0532579	1,4702728	0,0006194	-0,2085690
788	11,2912998	7,6911829	0,0845061	12,0270841	19,5227274	-0,0021067	-0,7357843	2,0091653	1,4417632	0,0006007	-0,3662139
789	13,1230001	7,8302608	0,0835163	14,9270203	20,1744417	-0,0021919	-1,8040202	2,2266748	1,4397280	0,0005958	-0,8101857
790	17,8297997	7,9874885	0,0833373	14,9146669	20,8965890	-0,0022858	2,9151327	2,2166075	1,4523900	0,0005967	1,3151325
791	17,5590000	7,9399263	0,1820874	16,8197389	23,2895717	-0,0033401	0,7392611	2,1730405	1,6299940	0,0007125	0,3401967
792	16,3164005	7,8132376	0,1696332	17,7354423	22,9757052	-0,0032188	-1,4190418	2,1085991	1,5851020	0,0007008	-0,6729785
793	16,8696995	7,5352735	0,1605254	14,7238356	23,1257509	-0,0032327	2,1458639	2,1236182	1,5276951	0,0006840	1,0104754
794	19,0032005	7,1393540	0,1921310	18,6311799	25,3287325	-0,0038692	0,3720207	2,1617937	1,5068513	0,0006710	0,1720889
795	20,9300003	7,7970593	0,2882128	23,9294382	31,7471517	-0,0056081	-2,9994379	2,0168200	1,5691834	0,0007646	-1,4872115
796	26,5471001	11,1447649	0,2368192	26,0435118	41,5600487	-0,0095486	0,5035883	2,1385735	2,0851882	0,0012134	0,2354786
797	13,4677000	14,0796623	0,0131031	12,9296388	11,6133417	0,0006778	0,5380612	2,2195257	2,7457211	0,0014631	0,2424217
798	14,0883999	14,6410001	0,0094076	12,6466666	11,5712045	0,0006436	1,4417333	2,2064385	2,5647788	0,0013636	0,6534210
799	14,7868004	14,9900343	0,0084338	12,6791999	11,4641924	0,0006529	2,1076005	2,2411706	2,4820537	0,0013168	0,9404017
800	14,2074003	15,3647608	0,0078223	12,3909890	11,3054399	0,0006764	1,8164113	2,1906513	2,4195854	0,0012811	0,8291650
801	13,4540005	16,0922161	0,0079386	12,2303043	10,8128384	0,0007853	1,2236962	2,2388097	2,4023160	0,0012691	0,5465834
802	9,7619801	16,5741023	0,0094448	11,7799607	9,9852732	0,0010203	-2,0179806	2,2128814	2,4720827	0,0012959	-0,9119244
803	19,4002991	8,0758663	0,0927430	14,6883240	18,6272962	-0,0021120	4,7119751	2,1711272	1,5257785	0,0006668	2,1702897
804	17,8416996	7,7855048	0,1089227	14,9966330	19,0722012	-0,0022066	2,8450666	2,1740663	1,5407325	0,0006632	1,3086384
805	15,0511999	7,6426575	0,1153168	15,0203998	19,4123280	-0,0022546	0,0308002	2,1932602	1,5353105	0,0006542	0,0140431
806	13,9591999	7,7365291	0,1068663	14,7248632	20,6686652	-0,0023785	-0,7656633	2,2166471	1,4820807	0,0006201	-0,3454151
807	15,7580004	7,8651651	0,1029521	15,3610286	21,2466623	-0,0024371	0,3969718	2,2195208	1,4818134	0,0006151	0,1788547

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
808	19,7999992	8,5337370	0,0855075	15,8238942	23,1633014	-0,0024588	3,9761051	2,0591541	1,6833859	0,0006825	1,9309410
809	22,8659000	8,2942591	0,1785342	18,4030218	24,2678079	-0,0034438	4,4628782	2,0981930	1,7716699	0,0007946	2,1270104
810	18,2325993	8,0066584	0,1718740	15,9299140	23,9662546	-0,0033966	2,3026853	2,1363367	1,6720425	0,0007676	1,0778663
811	17,6112003	7,5389175	0,1852413	16,4515953	25,1856374	-0,0038274	1,1596050	2,1640762	1,5935370	0,0007409	0,5358430
812	19,4106007	8,2776909	0,2643091	21,2739273	31,2212099	-0,0054120	-1,8633266	2,1365970	1,6334705	0,0008099	-0,8721002
813	13,9372997	14,2135734	0,0097309	12,9837544	11,6039200	0,0005909	0,9535453	2,0367103	2,6336325	0,0014000	0,4681791
814	12,4698000	15,0691603	0,0073590	12,4799834	11,3908358	0,0006088	-0,0101834	2,2389050	2,3765663	0,0012589	-0,0045484
815	14,1904001	15,4249214	0,0077411	12,4225149	11,1703417	0,0006689	1,7678853	2,2436302	2,3246450	0,0012294	0,7879575
816	10,8170004	16,1150209	0,0107871	12,1559201	10,4648114	0,0009043	-1,3389197	2,2419971	2,3404595	0,0012359	-0,5971996
817	10,3362999	16,3755316	0,0132885	12,4222435	10,0252639	0,0010672	-2,0859436	2,0777232	2,3983818	0,0012657	-1,0039565
818	9,7304802	16,5433184	0,0159881	11,5756286	9,5893874	0,0012406	-1,8451484	2,1620001	2,4616178	0,0012970	-0,8534451
819	7,5908098	16,5775951	0,0182932	11,6988293	9,2184712	0,0014037	-4,1080195	2,2187840	2,4946152	0,0013103	-1,8514734
820	11,3240004	15,1677029	0,0094553	12,2774548	10,0565901	0,0011354	-0,9534544	2,1953543	2,0801618	0,0010666	-0,4343055
821	17,4929008	7,9735915	0,1220428	14,5486418	19,7858644	-0,0023475	2,9442591	2,1898770	1,5718723	0,0006839	1,3444860
822	15,6237001	7,7574360	0,1319069	16,3330906	21,1910239	-0,0025717	-0,7093905	2,1702642	1,5408674	0,0006525	-0,3268683
823	19,5997009	8,4538722	0,0987618	18,7975781	23,4306640	-0,0026029	0,8021228	2,1044325	1,7145102	0,0006944	0,3811587
824	16,3360996	8,6397236	0,0903287	19,2306913	23,5689424	-0,0025178	-2,8945917	2,0513573	1,8048894	0,0007318	-1,4110617
825	17,1257000	9,3070808	0,0679427	15,6728758	22,7493520	-0,0024276	1,4528242	1,8078235	2,2907935	0,0010082	0,8036316
826	23,7866993	7,5982614	0,2526467	22,8725000	29,9400716	-0,0053542	0,9141993	1,9993892	1,6925432	0,0008001	0,4572393
827	28,2061996	7,7016775	0,2634020	23,0233010	30,8131643	-0,0055962	5,1828987	2,0385415	1,6923656	0,0008017	2,5424543
828	26,5100994	7,9141632	0,2687103	21,8816539	31,4457397	-0,0057407	4,6284455	2,1383442	1,6882745	0,0008078	2,1644998
829	17,9638004	12,6069636	0,1864016	21,9253946	36,6763220	-0,0076075	-3,9615942	2,0996520	2,5937803	0,0015345	-1,8867861
830	11,3309002	14,3394565	0,0046482	12,5705286	11,7921102	0,0004108	-1,2396284	2,2260981	2,5596806	0,0013552	-0,5568615
831	10,1940002	14,8259885	0,0043473	12,5622009	11,6570998	0,0004383	-2,3682006	2,2075092	2,3769627	0,0012575	-1,0727931
832	12,5257998	15,4568733	0,0064769	12,1895254	11,1686020	0,0006070	0,3362743	2,2197069	2,2498946	0,0011872	0,1514949
833	17,6553993	13,0101449	0,0003662	13,0965525	12,7144538	0,0002075	4,5588468	2,1704352	1,7141002	0,0008486	2,1004298
834	20,8257999	8,4605240	0,1604362	20,1580502	25,5892152	-0,0035992	0,6677497	1,7388785	2,5561752	0,0011585	0,3840117
835	18,5685005	12,3193871	0,1685695	20,5287281	32,6986756	-0,0058035	-1,9602276	1,9602749	2,4173713	0,0013990	-0,9999759

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
836	21,9592991	13,2262317	0,1605734	22,3372622	34,6740319	-0,0066327	-0,3779631	2,1472799	2,7662900	0,0016207	-0,1760195
837	24,5879002	13,5194373	0,1740805	20,5483636	36,7531448	-0,0075794	4,0395366	1,8413425	2,8973234	0,0017028	2,1937997
838	11,7142000	14,2962056	0,0008791	12,4639174	12,1400101	0,0001730	-0,7497174	2,2126578	2,6395050	0,0013915	-0,3388311
839	11,3205004	14,4420338	0,0007539	12,4152244	12,1448114	0,0001658	-1,0947240	2,1724312	2,5462390	0,0013437	-0,5039165
840	11,5354996	14,6383999	0,0009064	12,3634725	12,0757119	0,0001896	-0,8279729	2,1313024	2,4503028	0,0012934	-0,3884822
841	11,5318003	14,8790741	0,0014270	12,3684435	11,9193825	0,0002502	-0,8366433	2,2359345	2,3547320	0,0012423	-0,3741806
842	12,2171001	15,7233667	0,0085504	12,2427809	10,7671777	0,0007371	-0,0256808	2,2242448	2,1815983	0,0011473	-0,0115458
843	10,7129002	15,9651321	0,0139868	11,6599707	10,1688081	0,0010041	-0,9470705	2,1092643	2,2009799	0,0011569	-0,4490051
844	8,1429901	16,2196635	0,0273144	11,6921577	8,9547004	0,0015778	-3,5491676	2,2189833	2,3250693	0,0012195	-1,5994566
845	7,5740299	16,1846707	0,0315375	11,4308095	8,5556149	0,0017892	-3,8567796	2,1544466	2,3843338	0,0012475	-1,7901486
846	8,9365501	16,0477557	0,0316976	12,1685700	8,4390401	0,0018874	-3,2320198	2,2211584	2,4214234	0,0012625	-1,4551055
847	23,9696999	8,4660165	0,1421278	19,4045006	24,5375279	-0,0030978	4,5651993	2,0172794	1,8159461	0,0007428	2,2630475
848	21,7807007	8,6342088	0,1316688	18,7159148	24,7572682	-0,0030298	3,0647859	2,1417460	1,9100886	0,0007753	1,4309754
849	23,3659992	8,8161560	0,1211813	18,9507277	24,8516402	-0,0029490	4,4152715	2,1335613	2,0153572	0,0008170	2,0694374
850	22,0970001	8,9999766	0,1122703	17,3480875	24,8700130	-0,0028942	4,7489127	2,0846689	2,1231755	0,0008656	2,2780177
851	10,7565002	9,8596172	0,0710057	15,3110726	21,5372639	-0,0026768	-4,5545724	2,0285886	2,7710620	0,0011821	-2,2451927
852	13,7846003	8,8719186	0,1532497	17,2636013	23,6922560	-0,0037838	-3,4790010	1,6668066	2,9288282	0,0012015	-2,0872254
853	21,8929005	8,5269457	0,2101585	15,2484012	26,9258292	-0,0042979	6,6444993	1,7306507	2,5924463	0,0011563	3,8393070
854	21,2063999	8,6121031	0,2399104	21,2191895	28,1524613	-0,0046783	-0,0127896	1,9531088	1,9252116	0,0009246	-0,0065483
855	19,9134998	13,0244608	0,1467061	22,5418412	32,2507451	-0,0054667	-2,6283413	2,1536949	2,7118236	0,0015626	-1,2203870
856	19,3903999	13,2468651	0,1408001	23,3841097	32,7000115	-0,0056154	-3,9937098	2,1050064	2,8413287	0,0016331	-1,8972435
857	26,2285004	11,1233142	0,2747327	23,9325145	37,7168616	-0,0082590	2,2959858	2,1133442	2,0560421	0,0011358	1,0864230
858	24,5447998	12,8529117	0,1354300	23,2963312	32,6525582	-0,0053464	1,2484687	2,1107709	3,0980041	0,0017288	0,5914752
859	21,0559998	8,9892513	0,4082896	20,6532412	30,4177595	-0,0056770	0,4027586	1,9864339	2,2126348	0,0009783	0,2027546
860	20,5407009	8,9084400	0,3866359	20,8056722	32,4939508	-0,0065591	-0,2649713	2,0485343	1,9825537	0,0009095	-0,1293468
861	19,2793007	9,9042322	0,3529261	21,5296561	40,9599194	-0,0099033	-2,2503555	1,9613573	2,0066810	0,0010879	-1,1473460
862	28,2740994	12,9211633	0,2216585	26,1994467	39,8075300	-0,0081049	2,0746527	1,6518567	3,6773587	0,0019391	1,2559520
863	12,0127001	14,8839221	0,0000649	12,3458107	12,2639941	0,0000532	-0,3331106	2,1496138	2,3834145	0,0012556	-0,1549630

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
864	11,3133001	15,7827597	0,0152140	12,1534636	10,1699097	0,0010369	-0,8401634	2,2386840	2,1144629	0,0011069	-0,3752934
865	12,7712002	15,9133780	0,0235045	12,4181076	9,4943220	0,0013682	0,3530926	2,1754569	2,1460927	0,0011222	0,1623073
866	11,5021000	15,9547662	0,0308390	12,4404934	8,9324503	0,0016563	-0,9383934	2,1859016	2,2043429	0,0011509	-0,4292935
867	9,8222399	15,9184353	0,0348147	11,7762207	8,5933186	0,0018527	-1,9539808	2,2048310	2,2776409	0,0011863	-0,8862270
868	10,2023001	15,7547486	0,0334190	12,3283039	8,6085247	0,0018949	-2,1260038	2,2288510	2,3374517	0,0012132	-0,9538564
869	11,7186003	15,5099624	0,0273984	13,1575293	8,9985927	0,0017781	-1,4389290	2,0252112	2,3836425	0,0012318	-0,7105081
870	11,1190996	10,1753827	0,0901366	13,3443142	22,9294399	-0,0031834	-2,2252145	1,6582733	2,7911484	0,0011953	-1,3418865
871	23,5643997	8,7551699	0,2915356	19,6637728	28,6420329	-0,0049088	3,9006270	2,0282856	2,4014676	0,0010804	1,9231153
872	10,4745998	14,6859646	0,0015671	12,4029363	12,9024539	-0,0002508	-1,9283365	2,2174628	2,5698401	0,0013542	-0,8696139
873	10,7180004	14,8347427	0,0002647	12,4327390	12,6178577	-0,0001076	-1,7147386	2,2176002	2,4357696	0,0012813	-0,7732406
874	12,7149000	15,0100854	0,0002072	12,4074191	12,2001751	0,0001003	0,3074809	2,2034036	2,2956408	0,0012043	0,1395482
875	13,0176001	15,3786571	0,0080101	12,1974135	10,9894532	0,0007019	0,8201865	2,2172587	2,0676984	0,0010783	0,3699102
876	13,6282997	14,9296976	0,0158399	12,4822638	10,3690425	0,0013232	1,1460359	2,1138316	2,4275592	0,0012423	0,5421605
877	11,3776999	14,6120209	0,0061933	12,5454063	13,4559495	-0,0004877	-1,1677064	2,2200665	2,7793955	0,0014639	-0,5259781
878	9,9735899	14,6562651	0,0034024	12,2831448	13,2447412	-0,0003724	-2,3095549	1,7105312	2,6379176	0,0013868	-1,3501975
879	15,3922005	14,4065525	0,0050760	13,4172688	12,0979202	0,0007139	1,9749317	2,2142055	2,5661872	0,0013027	0,8919369
880	8,9046097	10,8920614	0,1415909	13,3719934	21,6690552	-0,0036632	-4,4673837	1,9474080	3,4634820	0,0013911	-2,2940153
881	18,1830997	9,3280778	0,4260641	17,3518913	31,7975046	-0,0066940	0,8312085	2,0686236	2,6391756	0,0011421	0,4018172
882	11,9525003	14,6491067	0,0070961	12,6901544	13,6998860	-0,0005278	-0,7376541	2,2151432	2,8373880	0,0014879	-0,3330051
883	12,5380001	14,5977921	0,0037515	12,8481665	13,4610956	-0,0003927	-0,3101663	2,1224116	2,6722353	0,0013966	-0,1461386
884	14,5738001	14,5747765	0,0008686	12,7916151	13,1041239	-0,0001950	1,7821850	2,1571590	2,4894940	0,0012951	0,8261723
885	15,7855997	14,5851945	0,0000766	12,7554463	12,6377517	0,0000603	3,0301534	2,2269955	2,3027327	0,0011917	1,3606464
886	12,2953997	14,9324387	0,0197382	12,7594167	10,5813798	0,0011948	-0,4640171	2,2267794	1,9066174	0,0009793	-0,2083804
887	10,5490999	14,8022893	0,0122294	13,1303072	11,2993892	0,0010583	-2,5812073	2,1982686	2,3438843	0,0011937	-1,1742002
888	11,7841997	14,5816341	0,0067718	13,4809126	12,0123620	0,0007908	-1,6967129	2,2263372	2,5004763	0,0012702	-0,7621096
889	15,9354000	14,3044554	0,0023883	13,8624485	12,8636040	0,0004678	2,0729515	2,2071915	2,6391306	0,0013369	0,9391806
890	17,2350998	13,9937994	0,0001620	14,0270524	13,7906765	0,0001207	3,2080474	2,2182440	2,7484902	0,0013876	1,4462103
891	8,8519402	11,2143849	0,2391928	9,9338679	25,0704646	-0,0049906	-1,0819278	1,6966118	3,3818004	0,0013877	-0,6376991

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
892	34,4950981	9,8746490	0,3910671	25,9399308	44,9633257	-0,0115223	8,5551673	2,0739330	2,5949306	0,0014599	4,1250934
893	27,3118992	10,2128344	0,3511100	26,3144166	43,7834780	-0,0108638	0,9974826	2,0855969	2,6485052	0,0014998	0,4782720
894	20,6039009	10,3889819	0,1964261	21,2337761	33,5696560	-0,0057137	-0,6298752	1,9009765	2,9318240	0,0016405	-0,3313430
895	25,3222008	10,1813530	0,1537979	24,4537393	30,0141877	-0,0038966	0,8684615	1,9168278	3,3025895	0,0018162	0,4530722
896	13,1372995	14,5118024	0,0025042	12,8589289	13,5437509	-0,0003187	0,2783706	2,1470018	2,6744133	0,0013850	0,1296555
897	13,9242001	14,3707847	0,0003442	12,9795662	13,2008539	-0,0001211	0,9446339	2,2197376	2,4864496	0,0012804	0,4255611
898	13,6525002	14,6715690	0,0148879	13,5475968	11,2812747	0,0010492	0,1049033	2,2069120	2,0067286	0,0010224	0,0475340
899	13,3998003	14,7415378	0,0131897	13,5372415	11,4352332	0,0010214	-0,1374412	2,2343688	2,0872926	0,0010606	-0,0615123
900	11,3634996	14,7341108	0,0099934	13,6528951	11,7751959	0,0009097	-2,2893954	2,2354951	2,2106737	0,0011210	-1,0241111
901	11,7656002	14,6373409	0,0062200	13,7161118	12,2788379	0,0007266	-1,9505116	2,2406073	2,3613806	0,0011957	-0,8705281
902	13,8546000	14,4767265	0,0028155	14,0793271	12,9105264	0,0004911	-0,2247272	2,1249104	2,5265688	0,0012783	-0,1057584
903	15,5850000	14,2549332	0,0005570	13,9758169	13,6414963	0,0002178	1,6091832	2,0829802	2,6838455	0,0013563	0,7725389
904	17,5953999	13,7306396	0,0019299	14,7101904	15,3144392	-0,0003983	2,8852094	1,9952076	2,9315026	0,0014749	1,4460698
905	19,1221008	11,2545741	0,2144156	19,1489249	29,4580339	-0,0046988	-0,0268241	1,7358171	2,9468548	0,0012502	-0,0154533
906	10,0530005	11,6563991	0,3549381	12,3899741	29,5838703	-0,0065376	-2,3369737	2,0562226	3,2121006	0,0013493	-1,1365373
907	13,2398996	11,0228742	0,4669781	10,9563776	32,8992442	-0,0075224	2,2835221	1,8157047	2,9605697	0,0012600	1,2576506
908	23,9988995	9,9100218	0,2190788	26,1945276	36,2039671	-0,0068370	-2,1956281	2,0353960	2,8480211	0,0016051	-1,0787228
909	20,7441006	9,8368415	0,1973892	25,7401647	34,1819712	-0,0058542	-4,9960642	2,0124547	2,9649490	0,0016635	-2,4825723
910	22,0422993	9,6647586	0,1697025	23,6685380	31,1999114	-0,0043966	-1,6262387	2,1101003	3,2330738	0,0017960	-0,7706926
911	13,4622002	14,3983308	0,0008393	13,2185512	13,5249061	-0,0001806	0,2436490	2,1603076	2,6696733	0,0013684	0,1127844
912	13,9102001	14,1279941	0,0000008	13,2281257	13,2379151	-0,0000058	0,6820744	2,1718525	2,4986894	0,0012738	0,3140519
913	14,5644999	13,8481888	0,0031667	13,2700338	12,6123749	0,0003837	1,2944661	2,1821275	2,2509868	0,0011444	0,5932129
914	13,5539999	14,3421947	0,0080529	13,5023853	12,2269591	0,0007433	0,0516146	2,1893687	2,1303063	0,0010778	0,0235751
915	12,9665003	14,4769445	0,0063540	13,7928238	12,4419040	0,0006837	-0,8263235	2,2406668	2,1775923	0,0010977	-0,3687847
916	12,5881004	14,5372790	0,0041732	13,9833996	12,7816630	0,0005679	-1,3952992	2,2298682	2,2657519	0,0011399	-0,6257317
917	11,4343004	14,5150596	0,0020558	14,0075293	13,2329257	0,0004047	-2,5732289	2,2370396	2,3920716	0,0012033	-1,1502831
918	15,1869001	14,2526854	0,0000126	14,3277177	14,4161977	-0,0000319	0,8591824	1,7389157	2,7011902	0,0013610	0,4940909
919	13,6731997	14,0558160	0,0010512	14,4891085	15,1220835	-0,0002904	-0,8159089	2,1929231	2,8532463	0,0014375	-0,3720645

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
920	8,8958197	13,1138654	0,3020262	11,5199422	27,4259576	-0,0059329	-2,6241225	2,0030901	3,6075586	0,0014886	-1,3100372
921	21,0466003	9,1832023	0,1684690	20,0078948	30,8451237	-0,0041004	1,0387055	0,9891280	3,3979002	0,0018913	1,0501224
922	32,0334015	9,3093407	0,1578633	27,5080216	38,9665439	-0,0073546	4,5253799	2,0147879	2,8996550	0,0016472	2,2460826
923	13,4719000	14,2626908	0,0000135	13,4212659	13,4666109	-0,0000221	0,0506341	2,1766942	2,6895073	0,0013663	0,0232619
924	13,4720001	14,2284870	0,0018992	14,1446593	13,4072017	0,0003611	-0,6726592	2,2373440	2,3069650	0,0011543	-0,3006508
925	12,2798996	14,3615709	0,0008488	14,2034031	13,7320670	0,0002485	-1,9235035	2,2334221	2,3510528	0,0011735	-0,8612360
926	15,2515001	14,2903678	0,0009395	14,5639563	15,1637650	-0,0002709	0,6875438	2,1913473	2,7015799	0,0013555	0,3137539
927	17,5165005	9,2279142	0,7588677	18,3982102	40,1019164	-0,0100202	-0,8817098	2,0686486	2,6491046	0,0012427	-0,4262250
928	35,8392982	8,4056358	0,3228198	35,3647505	46,1011342	-0,0111489	0,4745477	1,1029319	2,9859933	0,0016385	0,4302602
929	14,9635000	15,4714519	0,0000001	13,5701491	13,5664781	0,0000018	1,3933509	2,0876403	3,1033548	0,0015929	0,6674286
930	14,8275003	13,7468375	0,0003969	14,2898232	14,0391754	0,0001535	0,5376771	2,1335367	2,4800349	0,0012409	0,2520121
931	14,1225004	13,9996558	0,0000660	14,4217705	14,3036880	0,0000652	-0,2992701	2,2080263	2,4606081	0,0012238	-0,1355374
932	16,2963009	14,2011900	0,0000233	14,5261487	14,6061412	-0,0000401	1,7701522	2,2349932	2,4626219	0,0012207	0,7920168
933	16,3113995	14,3294353	0,0003845	14,6583687	14,9618153	-0,0001669	1,6530307	2,2073508	2,5020540	0,0012402	0,7488754
934	18,7339001	14,3181865	0,0062618	14,9898237	16,4452019	-0,0006974	3,7440764	2,1990200	2,8500635	0,0014267	1,7026114
935	11,5360003	11,2038645	0,7631586	14,1196737	38,2167715	-0,0093836	-2,5836735	2,0275092	3,0208930	0,0013244	-1,2743091
936	13,3332996	10,5439494	0,7821680	13,6940958	38,8432906	-0,0095843	-0,3607962	2,0045180	3,0490860	0,0013552	-0,1799915
937	14,0211000	9,8897058	0,7816894	12,3412454	39,6659027	-0,0098716	1,6798546	1,8709599	3,0246289	0,0013645	0,8978571
938	15,9456997	9,1712802	0,7551302	14,7454433	41,1515024	-0,0104084	1,2002564	1,9978110	3,2219784	0,0014505	0,6007857
939	21,8929005	9,3963541	0,1315848	25,6293480	38,7633620	-0,0070048	-3,7364475	1,9528733	3,0342138	0,0017218	-1,9133077
940	24,4207993	8,4865946	0,6809777	24,8600630	42,7687295	-0,0109667	-0,4392638	1,7397821	3,2855668	0,0014843	-0,2524821
941	23,1525002	7,6341421	0,5573663	27,6772537	46,2332430	-0,0121281	-4,5247536	1,7276865	2,8699968	0,0013540	-2,6189667
942	13,4238997	16,6602073	0,0011385	13,7574749	13,3673176	0,0001943	-0,3335752	2,0811566	3,4489257	0,0017844	-0,1602836
943	15,2481003	15,6586804	0,0010242	13,7793701	13,4145092	0,0001794	1,4687302	2,1033955	3,1870048	0,0016262	0,6982663
944	14,0520000	13,9717992	0,0014986	13,8290144	13,4494498	0,0002138	0,2229857	2,0973481	2,8662488	0,0014387	0,1063179
945	14,5032997	12,9524971	0,0000849	14,4888445	14,3163312	0,0000620	0,0144552	1,7352907	2,7132193	0,0013713	0,0083301
946	13,5784998	13,2031908	0,0000117	14,5280837	14,5932412	-0,0000243	-0,9495839	1,8926163	2,6947364	0,0013530	-0,5017308
947	14,9399996	13,4997734	0,0002286	14,6091255	14,8627291	-0,0001129	0,3308740	2,1873185	2,6636514	0,0013274	0,1512693

Source_ID	Observed	Cond	LocalR2	Predicted	Intercept	C1_Band_5_	Residual	StdError	StdErr_Int	StdErrC1_B	StdResid
948	17,4400997	13,7971175	0,0006774	14,7029729	15,1286202	-0,0002032	2,7371268	2,2211845	2,6257666	0,0012998	1,2322825
949	18,0265007	14,0587467	0,0013746	14,9180094	15,4090968	-0,0003005	3,1084913	2,1089213	2,5964593	0,0012796	1,4739722
950	16,5494003	14,2631252	0,0024178	14,9565857	15,7232517	-0,0004109	1,5928146	2,2055321	2,5953483	0,0012777	0,7221907
951	17,8810997	14,5666314	0,0229847	15,8420924	18,4226143	-0,0013596	2,0390073	2,1183041	3,1779967	0,0015820	0,9625659
952	19,1205006	14,8495930	0,0423230	16,4278896	19,9798220	-0,0018793	2,6926110	1,9968726	3,5655752	0,0017488	1,3484140
953	17,7518005	13,2962748	0,0024714	14,9296111	15,6310273	-0,0003608	2,8221894	2,1992082	2,8378752	0,0014092	1,2832752
954	19,1895008	13,6248206	0,0034721	14,9161515	15,8895385	-0,0004482	4,2733493	2,1915174	2,7920885	0,0013770	1,9499499
955	43,4149017	10,9992466	0,0217685	34,7624200	42,8682282	-0,0046936	8,6524817	1,7818094	3,1953872	0,0018900	4,8560086
956	44,5270996	15,6217347	0,0008028	38,4047976	40,4146669	-0,0011394	6,1223020	1,5784460	3,4716290	0,0021862	3,8786895

Appendix J:

Fitted Default OK Variogram for ARC-ISCW Sand Samples

Method Report

Input datasets

☒ **Dataset** C:\Users\babalwam\Desktop\New PC\Desktop\Surface Reflectance Map Work\Statistical Analysis\A-Horison\A_Horison_Soil
 Type Feature Class
 Data field 1 Sand
 Records 376

☒ **Method** **Kriging**
 Type Ordinary
 Output type Prediction

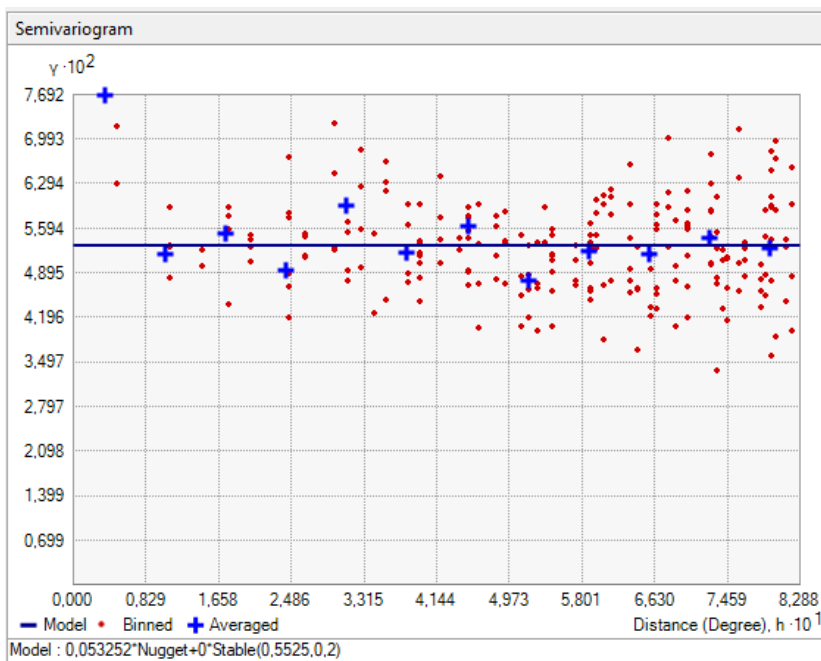
☒ **Dataset #** 1
 Trend type None

☒ **Searching neighborhood** Standard
 Neighbors to include 5
 Include at least 2
 Sector type Four and 45 degree
 Major semiaxis 0.552502711094
 Minor semiaxis 0.552502711094
 Angle 0

☒ **Variogram** Semivariogram
 Number of lags 12
 Lag size 0.069062838887
 Nugget 0.053252044905
 Measurement error % 100

☒ **Model type** Stable
 Parameter 0.2
 Range 0.552502711094
 Anisotropy No
 Partial sill 0

Save... OK Cancel



Appendix K:

Fitted Default OK Variogram for ARC-ISCW Silt Samples

Method Report

Input datasets

Dataset C:\Users\babalwam\Desktop\New PC\Desktop\Surface Reflectance Map Work\Statistical Analysis\A-Horison\A_Horison_Soil
 Type Feature Class
 Data field 1 Silt
 Records 376

Method **Kriging**
 Type Ordinary
 Output type Prediction

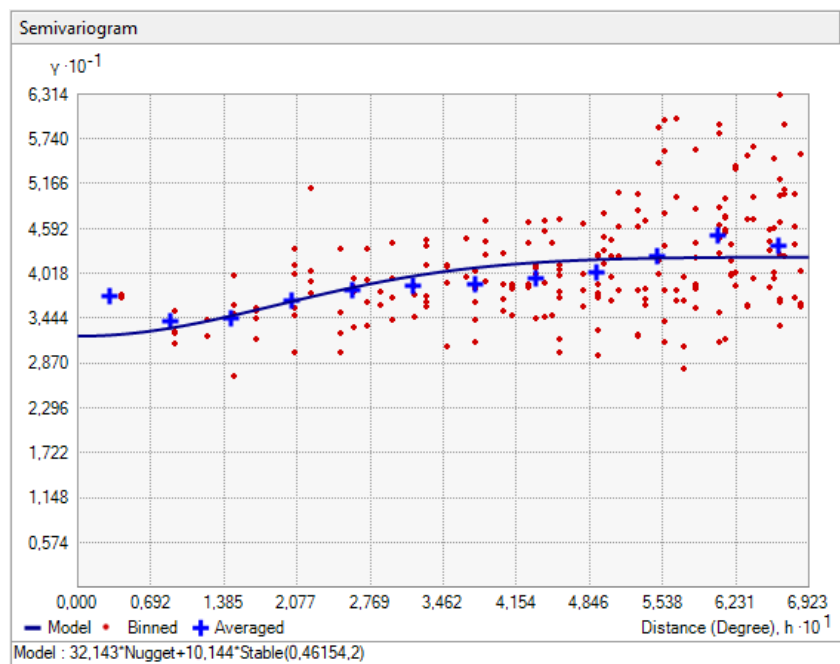
Dataset # 1
 Trend type None

Searching neighborhood Standard
 Neighbors to include 5
 Include at least 2
 Sector type Four and 45 degree
 Major semiaxis 0.461540714987
 Minor semiaxis 0.461540714987
 Angle 0

Variogram Semivariogram
 Number of lags 12
 Lag size 0.057692589373
 Nugget 32.142798726523
 Measurement error % 100

Model type Stable
 Parameter 2
 Range 0.461540714987
 Anisotropy No
 Partial sill 10.14448007743

Save... OK Cancel



Appendix L:

Fitted Default OK Variogram for ARC-ISCW Clay Samples

Method Report ×

Input datasets

☒ **Dataset** C:\Users\babalwam\Desktop\New PC\Desktop\Surface Reflectance Map Work\Statistical Analysis\A-Horison\A_Horison_Soil
 Type Feature Class
 Data field 1 Clay
 Records 376

☒ **Method** **Kriging**
 Type Ordinary
 Output type Prediction

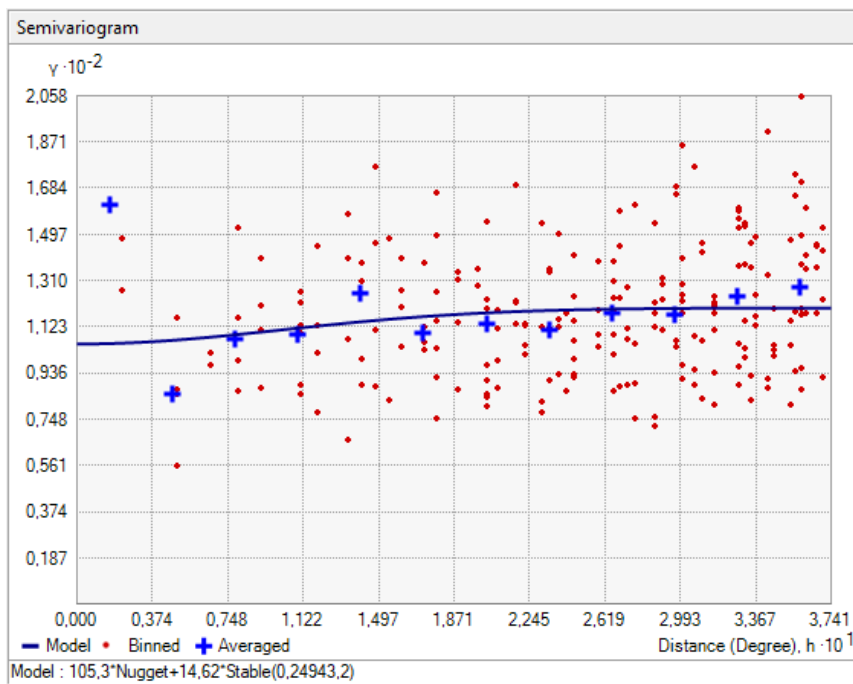
☒ **Dataset #** 1
 Trend type None

☒ **Searching neighborhood** Standard
 Neighbors to include 5
 Include at least 2
 Sector type Four and 45 degree
 Major semiaxis 0.249426361608
 Minor semiaxis 0.249426361608
 Angle 0

☒ **Variogram** Semivariogram
 Number of lags 12
 Lag size 0.031178295201
 Nugget 105.303895068239
 Measurement error % 100

☒ **Model type** Stable
 Parameter 2
 Range 0.249426361608
 Anisotropy No
 Partial sill 14.620294537575

Save... OK Cancel



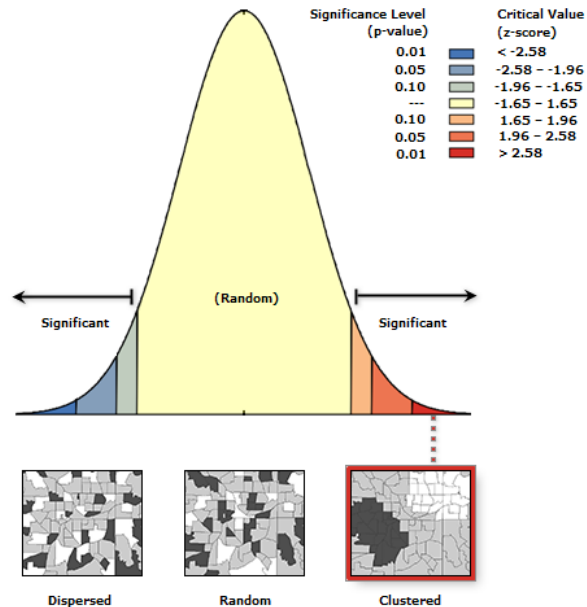
Appendix M:

Spatial Autocorrelation Report on OLS ARC-ISCW Sand and LaSRC Band 6

Moran's Index: 0,531107

z-score: 58,014666 ■

p-value: 0,000000



Given the z-score of 58.0146658279, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Moran's Index:	0,531107
Expected Index:	-0,001046
Variance:	0,000084
z-score:	58,014666
p-value:	0,000000

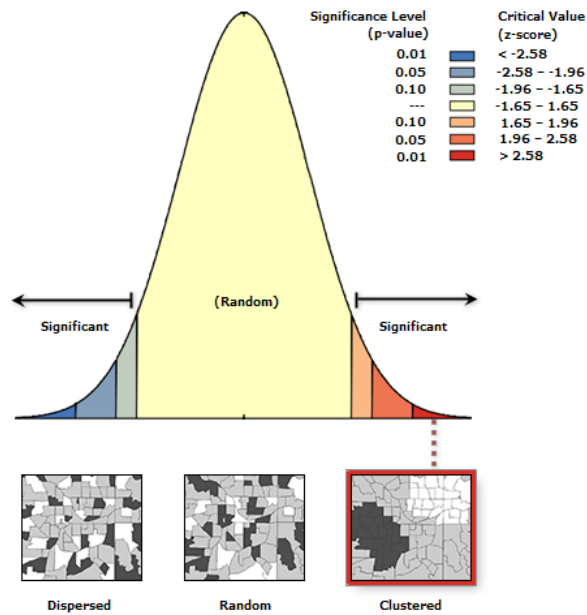
Global Moran's I Summary

Input Feature Class:	Sand_OLS_Band6
Input Field:	RESIDUAL
Conceptualisation:	INVERSE_DISTANCE
Distance Method:	EUCLIDEAN
Row Standardisation:	False
Distance Threshold:	16844,7511 metres
Weights Matrix File:	None
Selection Set:	False

Appendix N:

Spatial Autocorrelation Report on OLS ARC-ISCW Silt and LaSRC Band 6

Moran's Index: 0,621957
z-score: 68,013110 ■
p-value: 0,000000



Given the z-score of 68.0131095963, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Moran's Index:	0,621957
Expected Index:	-0,001046
Variance:	0,000084
z-score:	68,013110
p-value:	0,000000

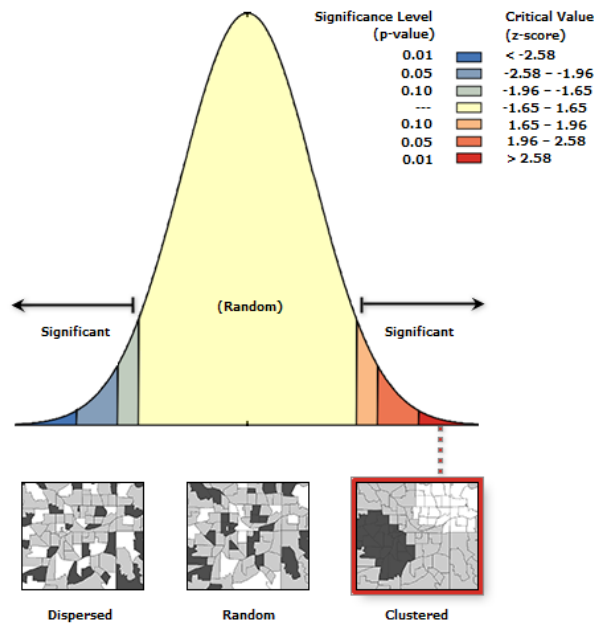
Global Moran's I Summary

Input Feature Class:	Silt_OLS_Band6
Input Field:	RESIDUAL
Conceptualisation:	INVERSE_DISTANCE
Distance Method:	EUCLIDEAN
Row Standardisation:	False
Distance Threshold:	16844,7511 metres
Weights Matrix File:	None
Selection Set:	False

Appendix O:

Spatial Autocorrelation Report on OLS ARC-ISCW Clay and LaSRC Band 5

Moran's Index: 0,455667
z-score: 49,870102 ■
p-value: 0,000000



Given the z-score of 49.8701022228, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

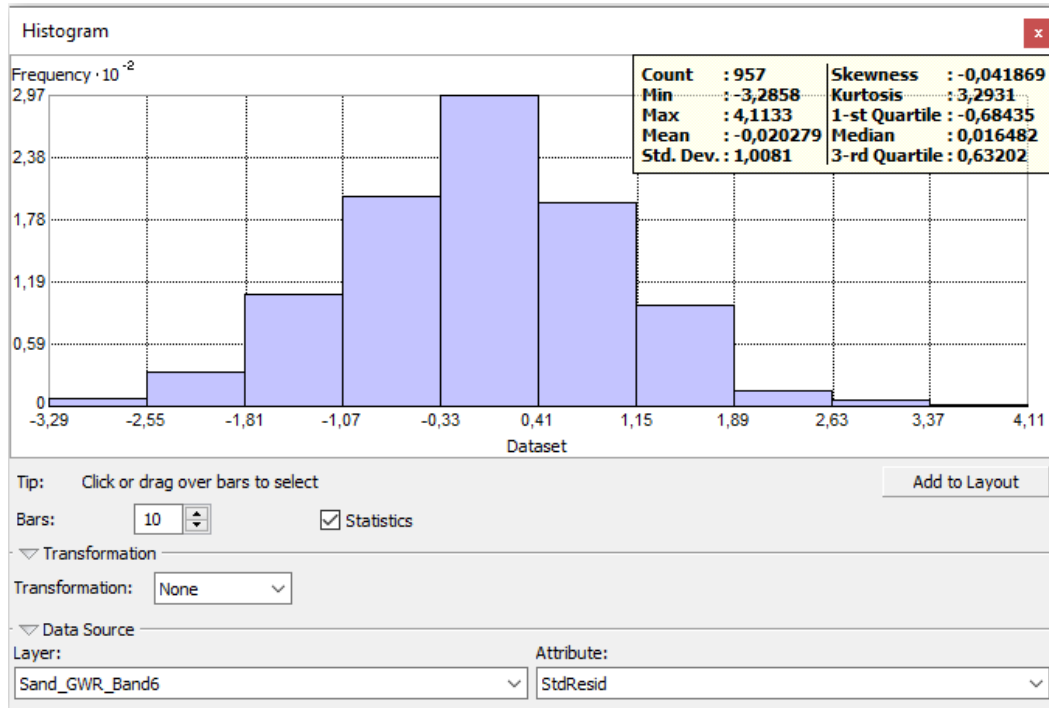
Moran's Index:	0,455667
Expected Index:	-0,001046
Variance:	0,000084
z-score:	49,870102
p-value:	0,000000

Global Moran's I Summary

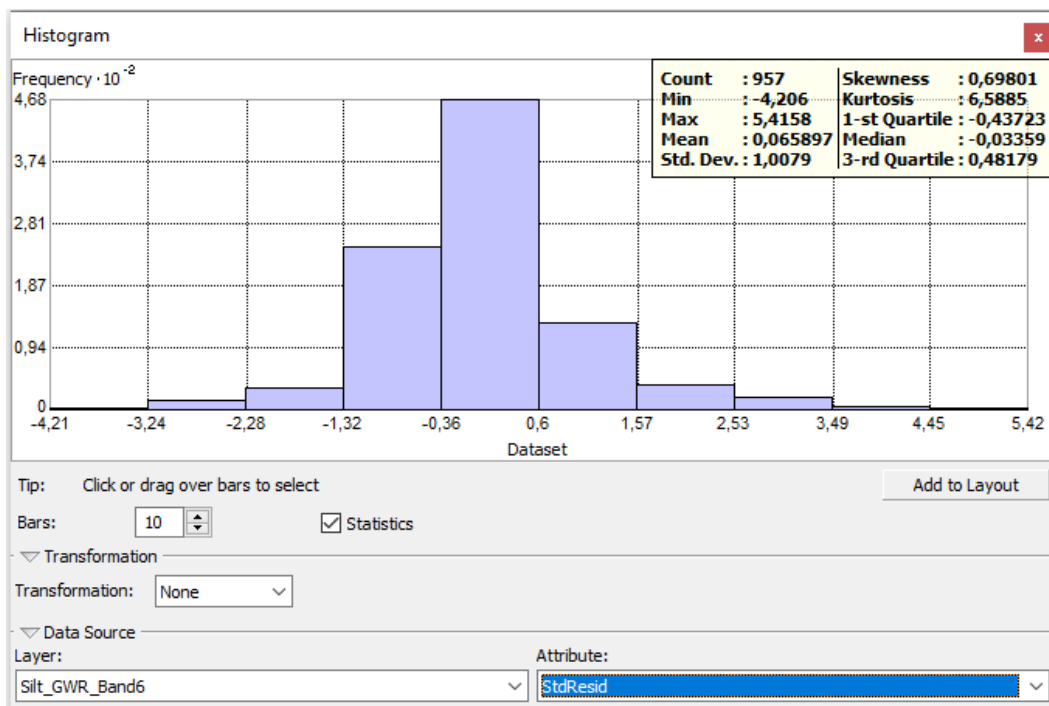
Input Feature Class:	Clay_OLS_Band5
Input Field:	RESIDUAL
Conceptualisation:	INVERSE_DISTANCE
Distance Method:	EUCLIDEAN
Row Standardisation:	False
Distance Threshold:	16844,7511 metres
Weights Matrix File:	None
Selection Set:	False

Appendix P: Standard Residual Histogram for the GWR Model

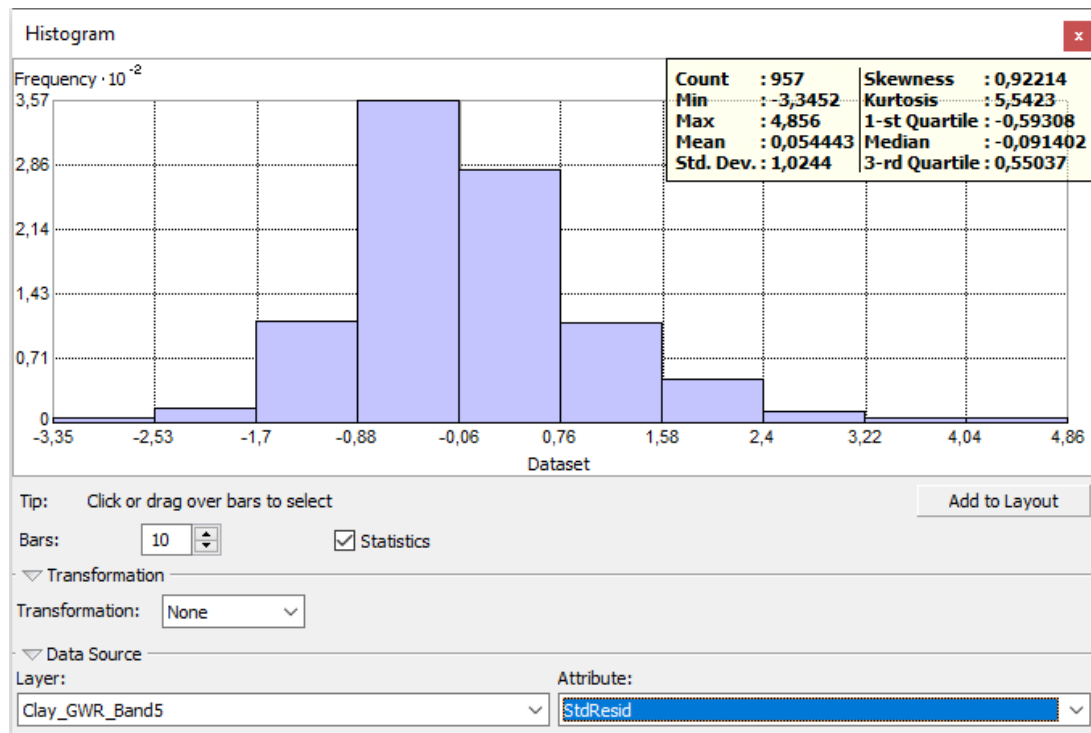
Standard residual histogram for GWR ARC-ISCW sand and LaSRC Band 6



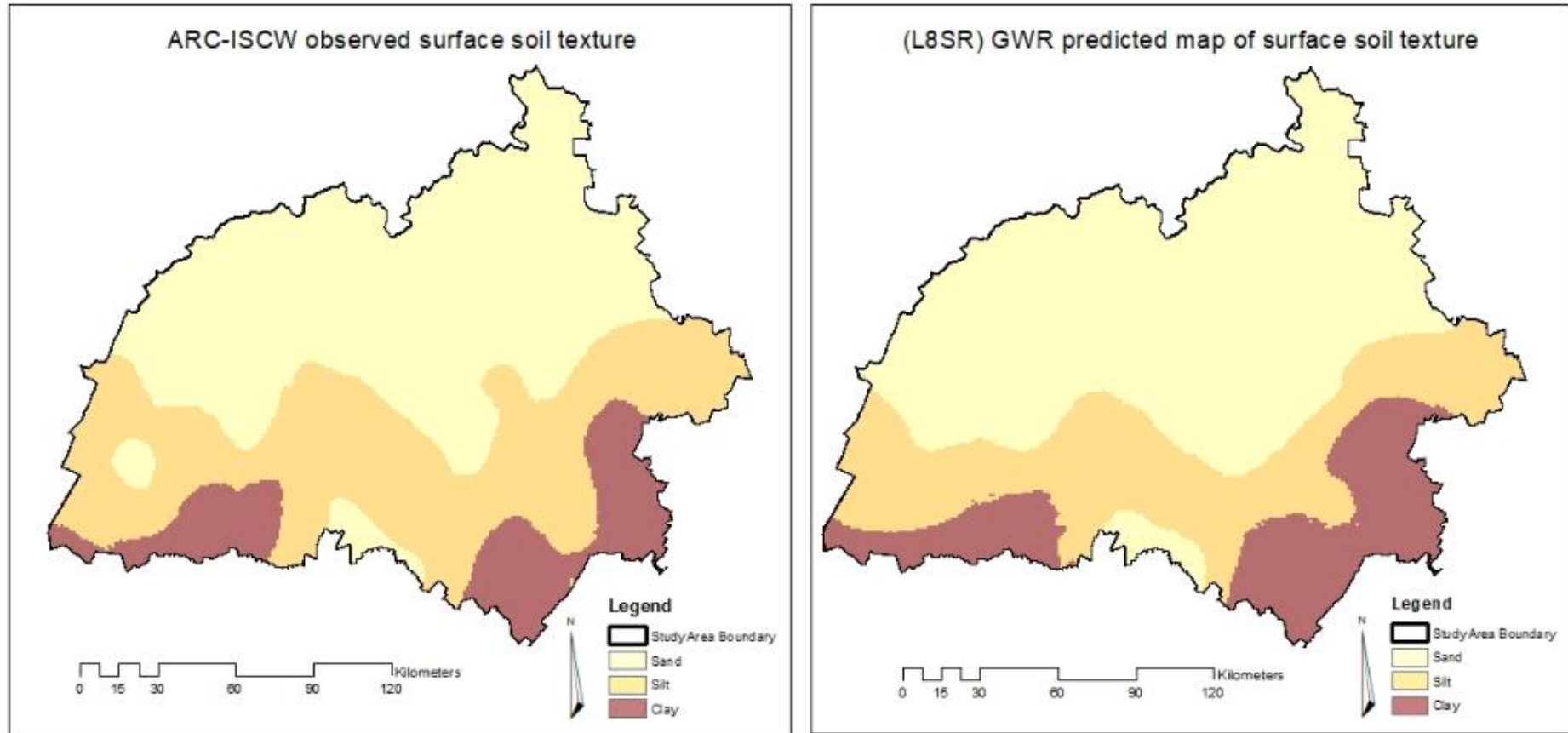
Standard residual histogram for GWR ARC-ISCW Silt and LaSRC Band 6



Standard residual histogram for GWR ARC-ISCW Clay and LaSRC Band 5



Appendix Q:
ARC-ISCW Observed and L8SR GWR Predicted Surface Soil Texture Maps



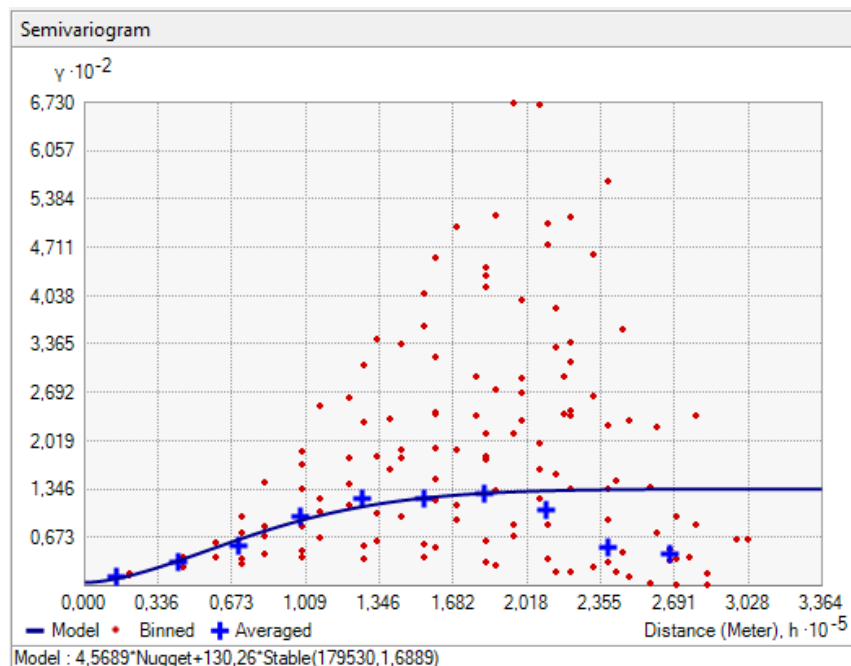
Appendix R:

Fitted OK Variogram for ARC-ISCW Observed Data

Surface sand semivariogram report and semivariogram (ARC-ISCW observed data)

Input datasets	
Dataset	C:\Users\babalwam\Desktop\New PC\Desktop\PhD Articles\My Articles for Chapter 6\Results for Chapter 6\Sand\Sand_GWR_Band6
Type	Feature Class
Data field 1	Observed
Records	957
Method	
Type	Kriging
Output type	Ordinary
Dataset #	Prediction
Trend type	1
Searching neighborhood	None
Neighbors to include	Standard
Include at least	5
Sector type	2
Major semiaxis	Four and 45 degree
Minor semiaxis	179,529.3830957181
Angle	179,529.3830957181
Variogram	0
Number of lags	Semivariogram
Lag size	12
Nugget	28,034.123692116434
Measurement error %	4.568943578386
Model type	100
Parameter	Stable
Range	1.6888671875
Anisotropy	179,529.3830957181
Partial sill	No
	130.259495187012

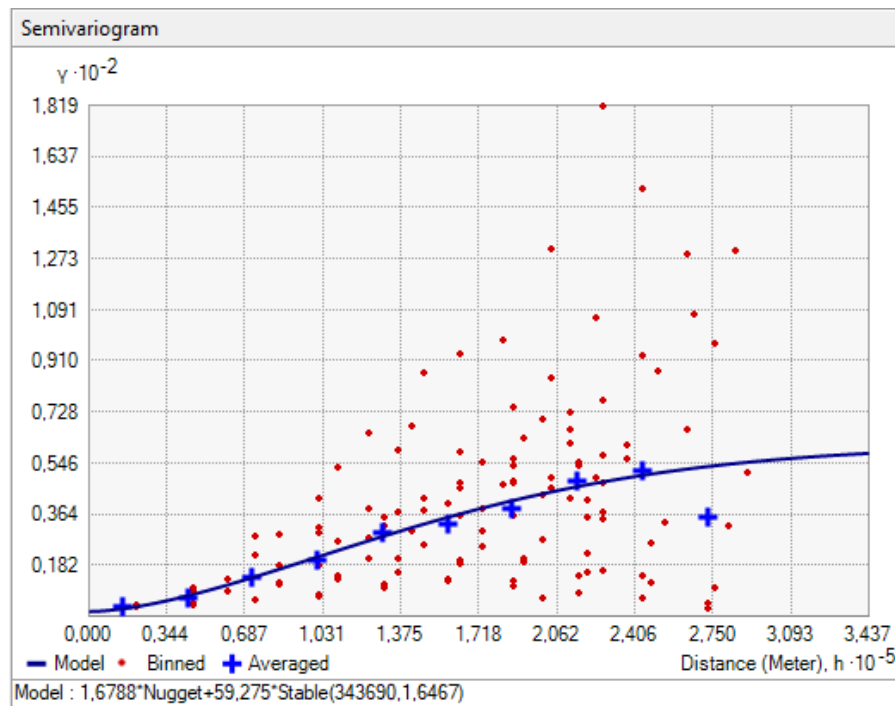
Save... OK Cancel



Surface silt semivariogram report and semivariogram (ARC-ISCW observed data)

Input datasets	
☒ Dataset	C:\Users\babalwam\Desktop\New PC\Desktop\PhD Articles\My Articles for Chapter 6\Results for Chapter 6\Silt\Silt_GWR_Band6
Type	Feature Class
Data field 1	Observed
Records	957
Method	
Type	Kriging
Output type	Ordinary
Output type	Prediction
☒ Dataset #	1
Trend type	None
☒ Searching neighborhood	Standard
Neighbors to include	5
Include at least	2
Sector type	Four and 45 degree
Major semiaxis	343,692.79587710806
Minor semiaxis	343,692.79587710806
Angle	0
☒ Variogram	Semivariogram
Number of lags	12
Lag size	28,641.06632309234
Nugget	1.678808723108
Measurement error %	100
☒ Model type	Stable
Parameter	1.6466796875
Range	343,692.79587710806
Anisotropy	No
Partial sill	59.274874656833

Save... OK Cancel



Surface clay semivariogram report and semivariogram (ARC-ISCW observed data)

Input datasets

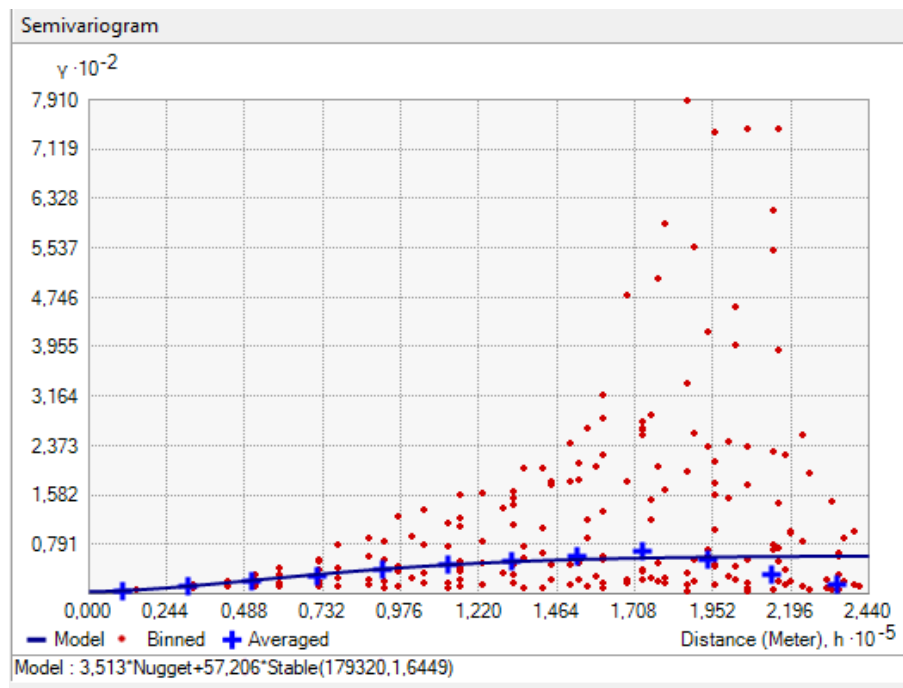
☐ **Dataset** C:\Users\babalwam\Desktop\New PC\Desktop\PhD Articles\My Articles for Chapter 6
 \Results for Chapter 6\Clay\Clay_GWR_Band5
 Type Feature Class
 Data field 1 Observed
 Records 957

☐ **Method** **Kriging**
 Type Ordinary
 Output type Prediction
☐ **Dataset #** 1
 Trend type None
☐ **Searching neighborhood** Standard
 Neighbors to include 5
 Include at least 2
 Sector type Four and 45 degree
 Major semiaxis 179,317.6381533605
 Minor semiaxis 179,317.6381533605
 Angle 0

☐ **Variogram** Semivariogram
 Number of lags 12
 Lag size 20,330.778964578447
 Nugget 3.513019963779
 Measurement error % 100

☐ **Model type** Stable
 Parameter 1.644921875
 Range 179,317.6381533605
 Anisotropy No
 Partial sill 57.206416927769

Save... OK Cancel



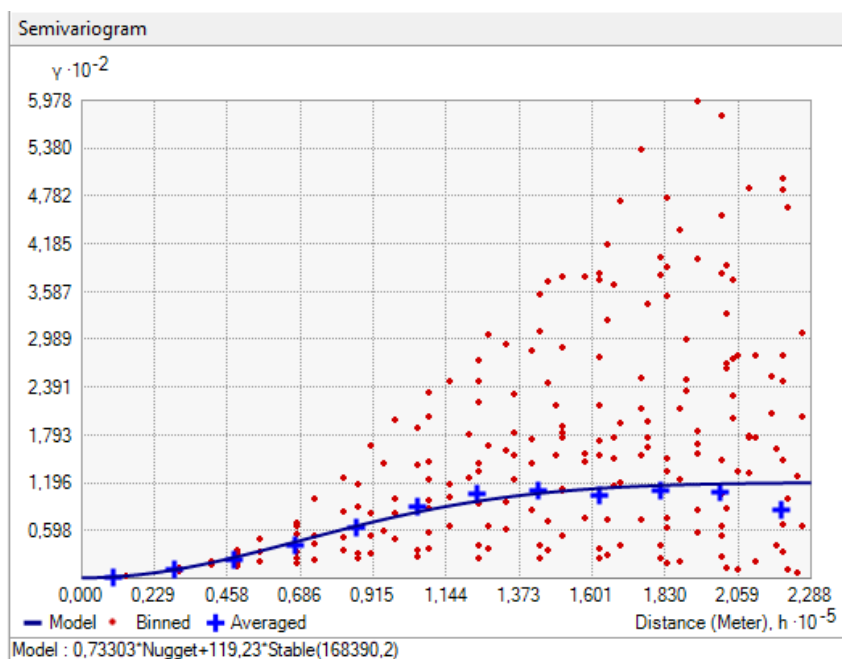
Appendix S:

Fitted OK Variogram for L8SR GWR Predicted Data

Surface sand semivariogram report and semivariogram (L8SR GWR predicted data)

Input datasets	
☒ Dataset	C:\Users\babalwam\Desktop\New PC\Desktop\PhD Articles\My Articles for Chapter 6\Results for Chapter 6\Sand\Sand_GWR_Band6
Type	Feature Class
Data field 1	Predicted
Records	957
☒ Method	Kriging
Type	Ordinary
Output type	Prediction
☒ Dataset #	1
Trend type	None
☒ Searching neighborhood	Standard
Neighbors to include	5
Include at least	2
Sector type	Four and 45 degree
Major semiaxis	168,386.7375191313
Minor semiaxis	168,386.7375191313
Angle	0
☒ Variogram	Semivariogram
Number of lags	12
Lag size	19,065.46602875871
Nugget	0.733033822111
Measurement error %	100
☒ Model type	Stable
Parameter	2
Range	168,386.7375191313
Anisotropy	No
Partial sill	119.233934824741

Save... OK Cancel



Surface silt semivariogram report and semivariogram (L8SR GWR predicted data)

Input datasets

☒ **Dataset** C:\Users\babalwam\Desktop\New PC\Desktop\PhD Articles\My Articles for Chapter 6\Results for Chapter 6\Silt\Silt_GWR_Band6
 Type Feature Class
 Data field 1 Predicted
 Records 957

☒ **Method** **Kriging**
 Type Ordinary
 Output type Prediction

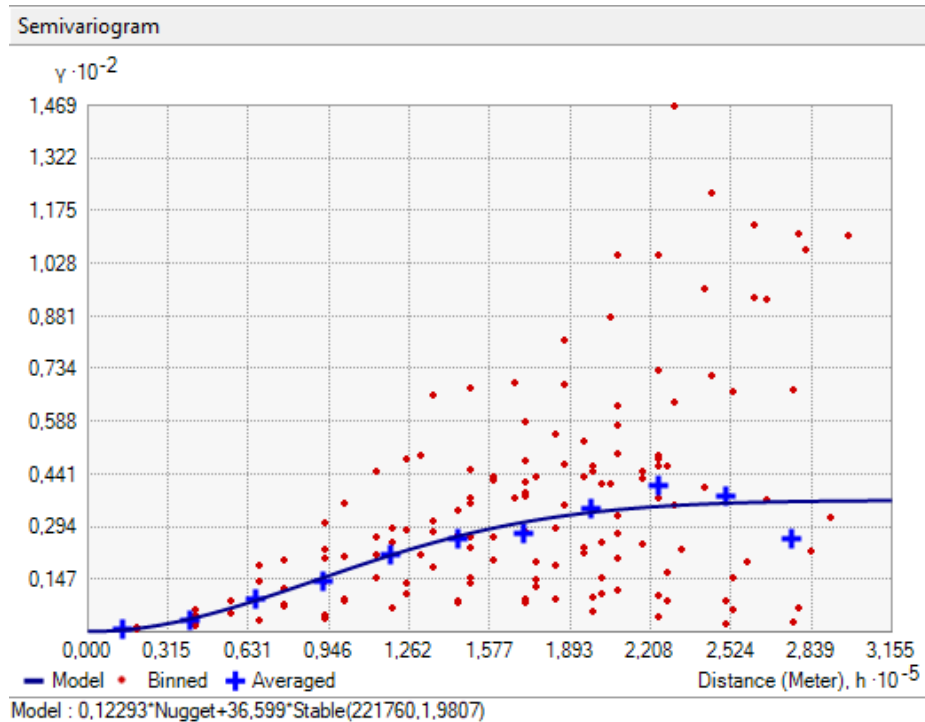
☒ **Dataset #** 1
 Trend type None

☒ **Searching neighborhood** Standard
 Neighbors to include 5
 Include at least 2
 Sector type Four and 45 degree
 Major semiaxis 221,762.23816139824
 Minor semiaxis 221,762.23816139824
 Angle 0

☒ **Variogram** Semivariogram
 Number of lags 12
 Lag size 26,289.382902114885
 Nugget 0.122932601926
 Measurement error % 100

☒ **Model type** Stable
 Parameter 1.9806640625
 Range 221,762.23816139824
 Anisotropy No
 Partial sill 36.598655249175

Save... OK Cancel



Surface clay semivariogram report and semivariogram (L8SR GWR predicted data)

Input datasets

☒ **Dataset** C:\Users\babalwam\Desktop\New PC\Desktop\PhD Articles\My Articles for Chapter 6\Results for Chapter 6\Clay\Clay_GWR_Band5

Type Feature Class

Data field 1 Predicted

Records 957

☒ **Method** **Kriging**

Type Ordinary

Output type Prediction

☒ **Dataset #** 1

Trend type None

☒ **Searching neighborhood** Standard

Neighbors to include 5

Include at least 2

Sector type Four and 45 degree

Major semiaxis 161,552.85338314425

Minor semiaxis 161,552.85338314425

Angle 0

☒ **Variogram** Semivariogram

Number of lags 12

Lag size 18,661.443218234166

Nugget 0.36489504797

Measurement error % 100

☒ **Model type** Stable

Parameter 1.9349609375

Range 161,552.85338314425

Anisotropy No

Partial sill 47.815901444059

Save... OK Cancel

