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Factors Affecting a Riparian Cottonwood Stand Die-off Along the Rio Grande Pueblo of Santa Ana New Mexico, USA

Hannah A. Varani

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A Professional Project Report Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Water Resources
Hydroscience
Water Resources Program
The University of New Mexico
Albuquerque, New Mexico
July 2020

Committee Approval

The Master of Water Resources Professional Project Proposal of Hannah A. Varani is approved by the committee:

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Factors Affecting a Riparian Cottonwood Stand Die-off along the Rio Grande: Pueblo of Santa Ana New Mexico, USA.

by

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This work is dedicated to Jeff F. Burnham (07/10/1978 – 08/02/2015)

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Factors Affecting Riparian Cottonwood Mortality on the Rio Grande: Pueblo of Santa Ana New Mexico, USA.

Hannah A. Varani

B.S. Rangeland Ecology and Soil & Crop Science

Master of Water Resources: Hydrologic Science

Abstract

Negative effects of river control include altered sediment and biotic processes, leading to channel incision and discordance between water delivery and the evolved physiology of seed dispersal. In forests where tree regeneration is inhibited due to such altered processes, tree mortality is of utmost importance guiding forest management. I compared cottonwood ring-widths between adjacent live and dead forest patches in a nested plot design along the regulated Rio Grande, New Mexico. Particle size in the associated sediments, competition, and age were analyzed as contributing factors. The entire stand had declining growth between 2002 and 2015. Tree growth correlated strongest with August and September streamflow and the trees that died grew similarly to their surviving neighbors until 2010. Surviving trees differ from adjacent dead trees in that they are larger and rooted in finer sediments. The die-off associated with coarser underlying sediments implies that water-holding capacity is important to tree health.

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Introduction

Although stand-scale mortality of lowland riparian Rio Grande cottonwood (*Populus deltoides* ssp. *wislizenii*) gallery forests is uncommon, a large stand collapse occurred between 2011 and 2013 along a reach of the Middle Rio Grande on the Pueblo of Santa Ana in north-central New Mexico (Figure 1). Approximately 14 hectares (~34.5 acres) of mature cottonwoods died on a riverside terrace, representing approximately one-third of the stand. The extent of this die-off is unusual, as similar forests are expected to experience less than 10% mortality per year when stressed (Anderson 2015). Similar stands survived both immediately up and downstream of the site. Overall, the spatial distribution of dead trees did not appear to be random and suggested that site conditions or processes differed between living and dead trees.

The die-off occurred against a backdrop of a highly modified river system with regulated stream flows from an upstream dam, concordant river sediment declines, and channel incision along with channel modifications. Yet, the causes of tree mortality were not immediately evident (insect pests and other pathogens had been ruled out by expert inspection). Causal mechanisms explaining the tree loss may be related to adverse hydrological conditions including on-going climate change and extended drought as well as reduced environmental stream flows, historic channel manipulations, change in nutrient cycling, tree age, continued channel incision or perhaps some other factor related to a rapid urbanization of the surrounding landscape.

Although several interacting broad-scale drivers may be involved, I used dendroecological methods (tree ring growth patterns) to address more proximal factors that may have affected tree growth, health and mortality in the stand. Dendroecological methods have a long history of being used to address both long and short-term tree growth patterns relative to environmental factors both in uplands and riparian ecosystems (Speer 2010). In this study, I used tree ring widths as a measure of annual growth to investigate the abiotic factors that may have contributed to this stand collapse. Our goal was to provide a better understanding of this occurrence to support long-term management of the riparian gallery forests of Santa Ana Pueblo and other cottonwood forests of the region. Accordingly, I sampled tree rings of live and dead trees to assess 1) if differences in sediment particle sizes were associated with growth and mortality of trees possibly indicating water availability differences; 2) if stream flow and climate patterns differentially affected growth patterns among living and dead trees, and 3) if stand density and inter-tree competition along with the age structure and the life history traits of cottonwoods made a difference between the living stands and adjacent collapsed dead stands.

Sediment particle size and water availability effects on tree mortality

Understanding soil moisture conditions in relation to groundwater levels between the dead and live stands is likely central to understanding the differences in vitality. As phreatophytes, cottonwoods are dependent on groundwater near or in contact with their roots (Philipsen et al. 2018). Given that plant available water is influenced by sediment particle size I chose to address tree vitality and groundwater relationships by looking at soil textures through the sediment profile between trees that lived and those that died. I suggest that the influence of the particle size distribution of sediments on the growth of cottonwood may be a critical factor determining survival when water becomes limiting at a site be it by drought, water diversions or some other larger-scale change.

Sediment particle sizes exert a strong effect on water holding capacity, nutrient cycling, and preferred pathways for water movement through the saturated and unsaturated riverine soil environments (Fuchs et al. 2009, Heeren et al. 2010, Miller et al. 2014). The sediment texture controls soil water potential, hydraulic conductivity, and capillarity (Hillel 1980). It is an important variable influencing effective moisture (plant available water) and it affects evapotranspiration rates, possibly moderating the impacts of groundwater decline on *Populus* spp. growth (Stromberg and Pattern 2004, Shafroth et al. 2000, Wu et al. 2015). The“capillary fringe” increases in size as pore size decreases, thus decreasing the depth of plant available water in finer sediments. Capillary rise is the mechanism for water delivery in the zone above the water table. In a very fine sand sediment, capillary rise may allow plants to access water as high as a meter above the groundwater table compared to coarser sediments where the availability of capillary water is more restricted (Fetter 1994). Hidden subsurface differences in particle size could be influencing water availability in this way within this stand, differentially affecting plant health and becoming especially important during periods of stress.

In alluvial settings, particle size varies with geomorphic position. Sediments deposit in somewhat uniform layers as a record of the depositional flood history, reflecting the local topographical characteristics at the time of flooding. The floodplain has more fine particles than benches or bars, and less sand (O’Donnel et al. 2015). The coarsest materials settle in old meander channels whereas fine and very fine sands may deposit where flow is inhibited, such as around and downstream of trees and tree clumps (Moody and Meade 2008). Surfaces begin to appear homogenized as swales and depressional areas fill with finer deposits during subsequent flows (Mergliano 2005). Ultimately a patterned and heterogeneous subsurface may be obscured in the present, yet the differences at depth in plant-available soil moisture may have significant consequences to tree growth (Stromberg and Pattern 2004).

I hypothesized that individual trees that died, and the collapsed stand as a whole, would have coarser, sandier sediments particularly at greater sediment depths approaching the shallow groundwater table. These sediments yielded less water to roots in the vadose zone due to a shallower capillary fringe. Conversely, fine textured sediment with greater fine sand, silt and clay content at depth would have greater water availability to help sustain cottonwoods during times of stress and declining water tables heights.

Streamflow and climate patterns impact on tree growth and mortality

Edmondson et al. (2014) in their reconstruction of past climates from tree rings of western North Dakota found cottonwoods to be sensitive to April-July precipitation and respond negatively with spring/summer temperatures associated with decreasing soil moisture. Past work at the site shows that these trees respond to streamflow (Muldavin et al. 2005), so I expected that trees were responding to both groundwater and precipitation, being especially sensitive to early season moisture and it was expected that both of these moisture sources were lacking during the time of die-off. Other researchers showed that water stress became apparent in ring chronologies in cottonwood trees ten years before stand collapse

(Scott et al. 2000). Thus, I expected to see a period of slower growth in dead trees in multiple years prior to death, whereas surviving trees may show comparatively less stress. I expect that dead trees show slower growth than their surviving counterparts in multiple periods of their lives, concordant with drought. This was expected to cause them to be smaller ultimately than surviving trees, perhaps less resilient to ongoing drought.

Focusing on stream flow, precipitation and temperature data in correlation with annual growth would serve as a proxy for water availability at the site at the time of stand collapse and would allow us to understand whether tree growth was primarily in response to streamflow or precipitation. It was essential to determine whether the terrace was in fact being subjected to drought conditions that may have enhanced the role of sediment particle size as an influencing factor on plant water availability. Decreased moisture delivery to the trees magnified the importance of particle size as a moisture availability factor, ultimately affecting moisture thresholds required for cottonwood survivorship.

Tree density and competition effects on tree growth and mortality

Competition among trees in stands for water, nutrients, and light can have significant impact on tree establishment and growth and commonly leads to tree death as the stands "self-thin" as they mature and compete for water and light (García-Arias and Francés 2015). Previous work done by Muldavin et al. (2005) on this site suggests that there were differences in tree density throughout this forest, but at that time, density did not affect tree growth response to the removal of non-native woody competitors. In this study, I asked if tree density represented by distances to neighbors and size of neighbors may have been important factors explaining the differential mortality. Dense stands are subject to increased intra-species competition for resources. Perhaps increased competition lowered root reserves and cottonwood drought tolerance. In this study I hypothesized that competition associated with tree density influenced survivorship. I expected that patches with higher density would be associated with higher mortality due to the increased competitive affects.

Cottonwoods are commonly known to have short lifespans, rarely living past 150 years in age (Andersen 2015 citing D.J. Cooper unpublished, Polzin and Rood 2000, Edmondson et al. 2014). I investigated tree age concurrently to other analyses to understand the effects of aging cottonwood in the mortality patterns, and the address an alternative hypothesis that the surviving trees were simply younger than their dying counterparts. If the oldest trees died, then it will be impossible to conclude that tree death is primarily related to water stress as they may have simply completed a short lifespan instead. I hypothesized that stand collapse was due to water stress and that live stands would not be younger than their dead neighbors.

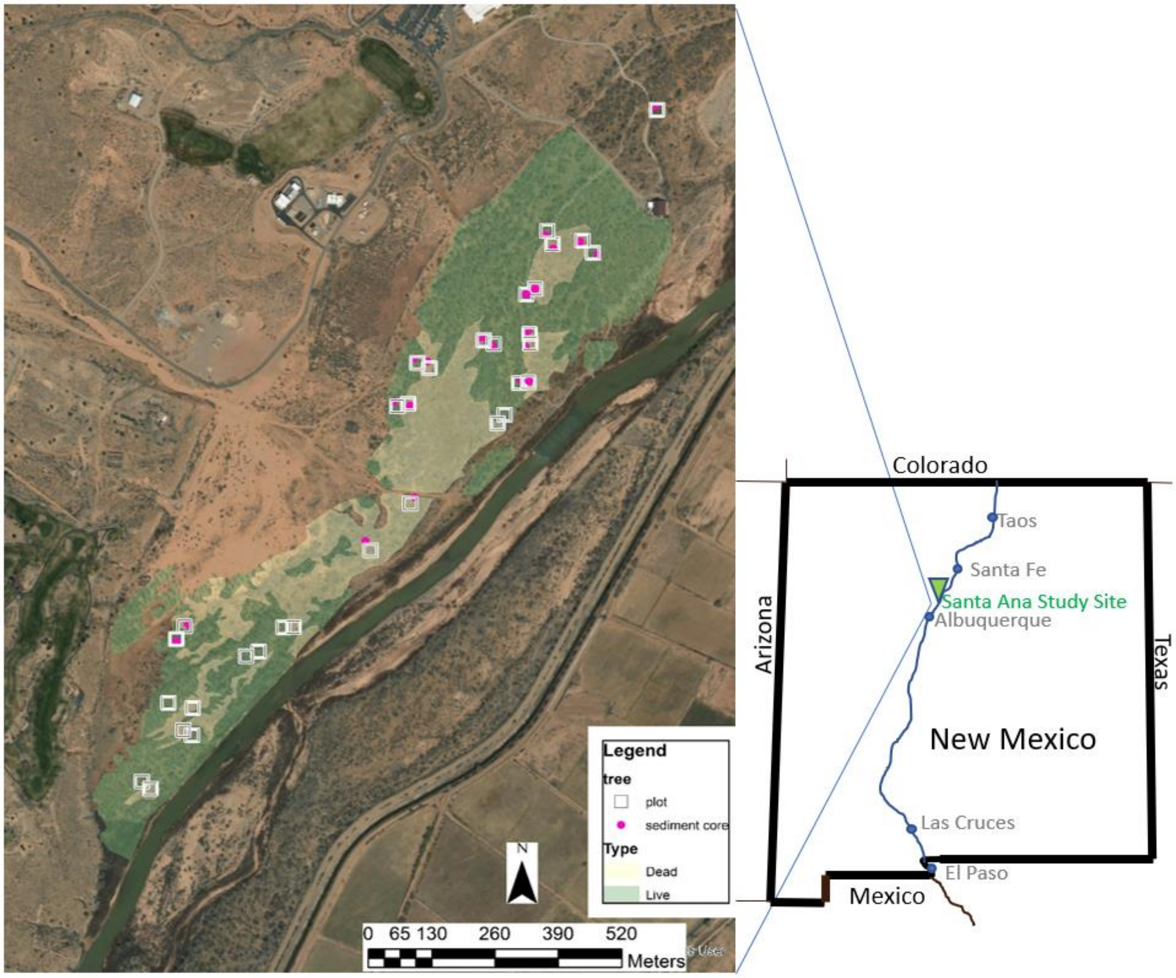

Figure 1. The study site is located along the Rio Grande in New Mexico, downstream of Cochiti dam, and upstream of Albuquerque. The detail is of 2016 imagery with the surviving forest patches shaded in green and the dead patches shaded in beige. White boxes are tree sampling plots and pink points represent sediment sampling locations.

Figure 2. The stand-scale die-off of Rio Grande cottonwoods on the Pueblo of Santa Ana in 2013.

Study area

The site is located ~2 km north of the Bernalillo NM-550 bridge in the upper reach of the Middle Rio Grande, in central New Mexico (Figure 1). This region has consistently featured the densest human populations in the state of New Mexico and the riverine environment is significantly altered as a result (Jarratt et al. 2004, Harris et al. 2018). The valley has been irrigated continuously, prior even to Spanish settlement (Brookshire et al. 2007). Streamflow in this reach has been controlled by Cochiti dam, ~40 km upstream of the study, site since 1973. Water is stored in the river only for flood-control purposes meaning that the total volume delivered into the channel hasn't changed due to the dam construction but the timing of delivery has (Figure 4). Reductions of water delivered to the site during the growing season occur downstream of Cochiti reservoir at the Cochiti and Angostura agricultural diversions. The USGS stream gage #08319000 Rio Grande at San Felipe flow data used in this study is located between these diversion dams and accordingly accounts for streamflow impacts due to Cochiti diversion only. The research site is located ~14.5 km downstream of this gage, and ~5 km downstream of the Jemez river confluence with the Rio Grande. This now un-dammed river represents an unaccounted-for streamflow addition to the site that may be contributing an estimated additional 2% mean annual cfs to the site, mostly delivered in April and early spring months.

The altered hydrograph is not the only impact of Cochiti dam. For example, while the Rio Grande is classified as a warm water river, cool water habitat occurs near the dam from deep-water discharge out of the reservoir (Crawford et al., 1993). Perhaps most importantly, Cochiti dam also traps sediment, which contributes to channel incision downstream. The study site is located along a river stretch that is known to be narrowing and incising (Massong et al. 2007, Harris et al. 2018). Recent work shows that floodplain elevations in areas near the study site exceed 2 m (6.5 ft) above the water surface elevation (Harris et al. 2018). Many man-made structures are located along the river and extensive habitat restoration activities have been implemented due to changes in floodplain processes provided by the river as the channel has undergone these geomorphological changes (Harris et al. 2018).

There are three man-made structures that are in close proximity to, and directly affecting the study site. One of these is a grade-control structure constructed by the U.S. Army Corps of Engineers (US ACE) to mediate channel incision next to the stand. A second similar structure is located immediately upstream of the site. In theory the US ACE structures should help control incision and maintain floodplain groundwater heights above where they are installed. Groundwater models would predict that by controlling incision, the height of the hyporheic groundwater table can be maintained, and the cottonwood roots would remain in contact with moisture. This is due to the river continuing to exchange hyporheic waters with the terrace at an elevation nearer to the surface and helping to alleviate drought stress in the trees. The Bureau of Reclamation (BOR) constructed a bedsill downstream of the site which is not meant to control channel incision like the US ACE structures but would instead be destroyed if incision continues. This will alert the pueblo and BOR of continuing channel degradation despite the presence of the US ACE grade-control structures intended to address incision (Schoeder 2017, personal communication).

The mean annual precipitation is 217 mm (8.5 inches) and peak precipitation occurs during the summer Monsoon (August, September and October; Muldavin et al. 2005, Figure 3). This season also transports the most sediment (Harris et al. 2018). Storms and dam releases continue to result in peak-flows that commonly exceed 5500 cfs, even though Cochiti dam controls the largest discharges (Ortiz 2004; Figure 4). November, December and January are the driest months, delivering an average of ~36 mm (1.4 in) of precipitation and the least amount of sediment (Harris et al. 2018). Since 1931 at the nearest weather station at the Albuquerque Sunport (NOAA station ID GHCND: USW00023050) high temperatures ranged from 6 ^{o} F to 107 ^{o} F (-14 ^{o} C to 42 ^{o} C), though are rarely subfreezing (~3 days per year). Temperatures average 81^{o} F (27 ^{o} C) during the monsoon months of August, September and October, cooling from the May, June and July long term average of 87 ^{o} F (31 ^{o} F).

Vegetation on the riverside terrace prior to stand death was documented in an earlier study spanning 1999 – 2001that investigated the effects of the mechanical removal of Russian Olive (*Elaeagnus angustifolia)* and Tamarisk (*Tamarisk ramosissima*) on the understory vegetation (Milford et al. 2002). At that time, graminoids averaged < 10% cover with fewer than eight species composed of species such as alkali muhly (*Muhlenbergia asperifolia*), alkali sacaton (*Sporobolus wrightii*) and inland saltgrass (*Distichlis spicata*). Forbs varied considerably in cover and were generally represented by ten or fewer species. Notable problematic exotics species included Russian thistle (*Salsola iberica*) and common kochia (*Kochia scoparia*).

In a simultaneous study of the cottonwood response to the exotic tree removal, ring width analyses did not indicate an increase in cottonwood growth in response to removal of the woody competitors, but ring growth did vary with discharge and precipitation (Muldavin et al. 2005). Though relationships between tree growth and moisture variables were complex, correlation (r) values were strongest between the growing season precipitation and streamflow. This study showed that the Rio Grande Cottonwood dominant at the site varied in age across the site and were younger on the downstream end of the terrace. Basal area varied widely across the terrace, exceeding 250 ft^2/ acre (57 m^2/ha) in some locations.

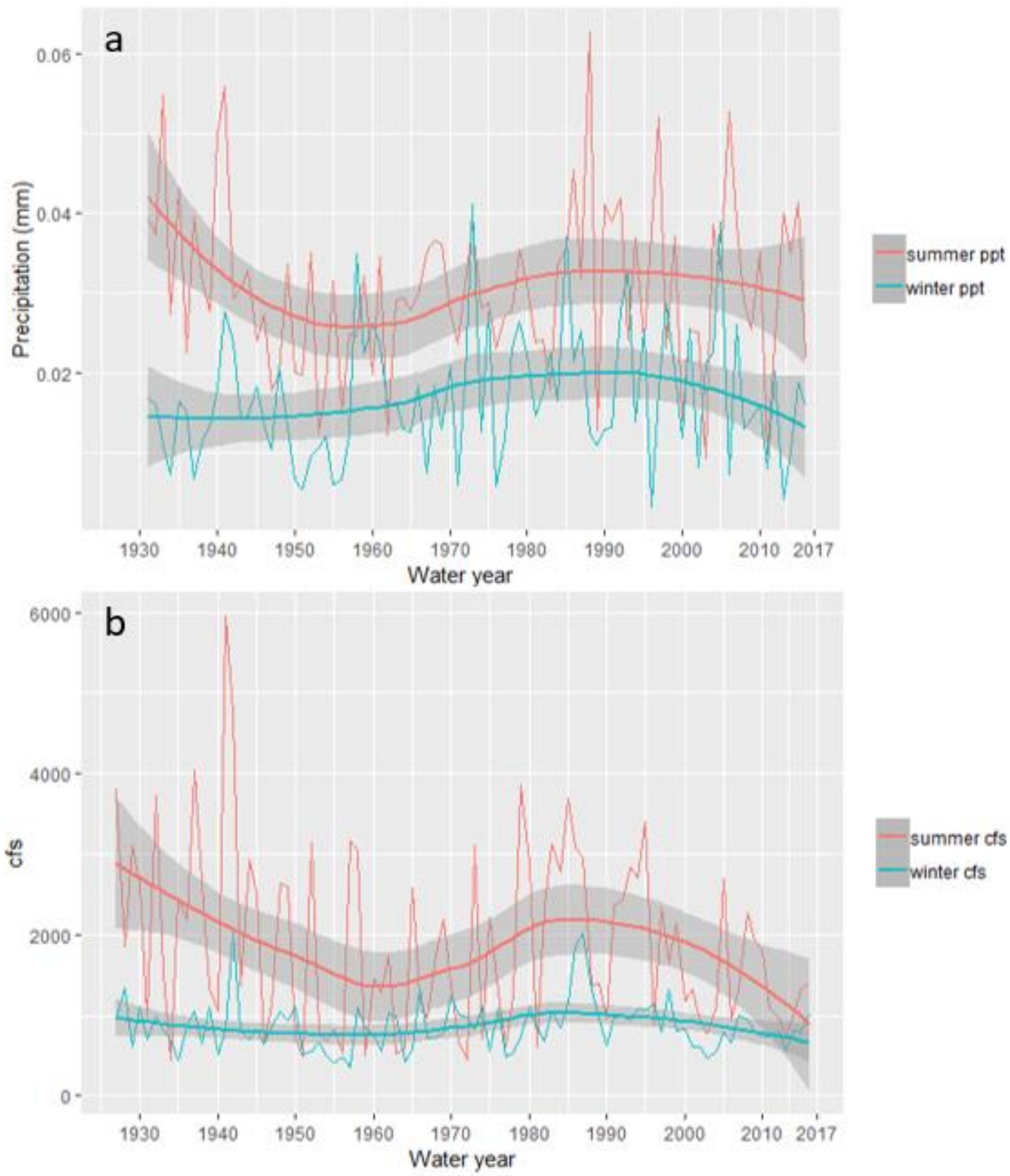

Figure 3. a) Total seasonal summer (April – Sept) and winter (Oct - March) precipitation by water year (October-September) from 1931 through 2018 and b) total seasonal discharge in cubic feet per second showing moisture trends. Precipitation data is from Albuquerque Sunport (NOAA station ID GHCND: USW00023050); streamflow is from the USGS stream gage on the Rio Grande at San Felipe (#08319000).

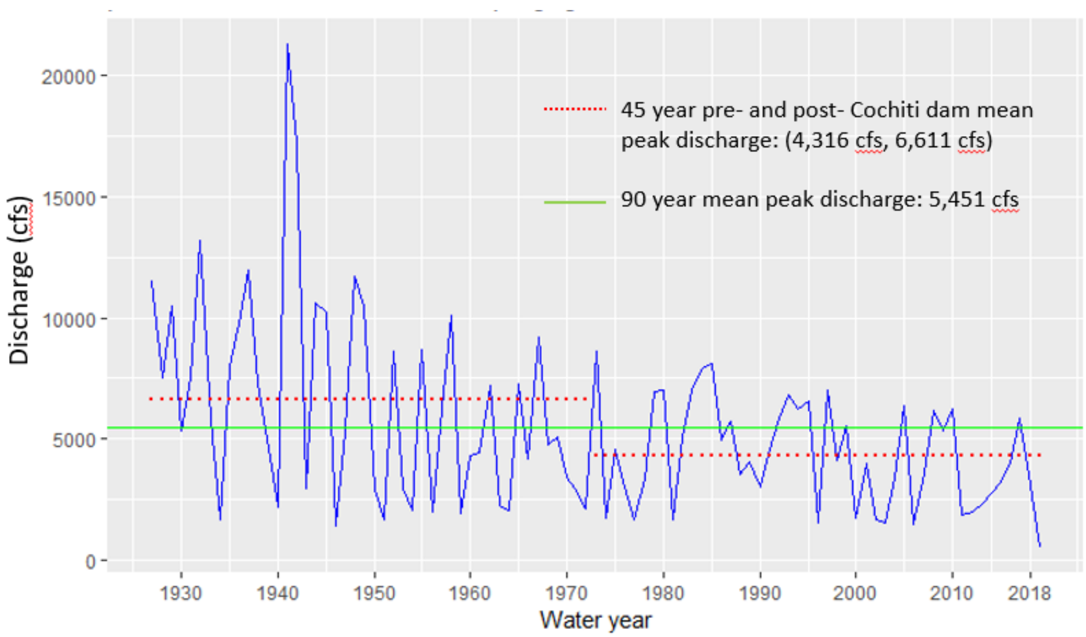

Figure 4. The average annual peak discharge in the Rio Grande below Cochiti dam has diminished after the closure of the dam. The annual volumes of water delivered did not change, as these decreases were concurrent with increases in baseflow (Ortiz 2004).

Methods

Sampling Methods

Sampling design

The study design is a nested comparison of live and dead trees at different scales. Using aerial imagery, 34 plot locations were identified in live or dead tree patches (a delineated area represented by mostly living, or mostly dead trees Figure 5). Surveyors traveled to a point representative of a patch vitality class and then selected a tree at the edge of the patch that was adjacent to a tree representative of a neighboring patch of opposite vitality class. These are referred to as “paired trees” and are nested within “paired plots” which are representative sample areas within a delineated patch. There are three plots that are not paired: two representing dead patches isolated from nearby live patches, and one representing a live patch isolated from nearby dead patches. These are otherwise similar to the paired plots.

Once the paired trees were selected, the original plot center point was adjusted so that two paired plots would each contain one of the paired trees. Each plot is 20 m x 20 m oriented along the cardinal direction (using true-North). Paired plots share some portion of a border. Live plots contained the live paired tree and had a living cottonwood canopy cover exceeding 50%. Most of the trees rooted in these plots were alive, and trees selected for tree-ring sampling were also living at the time of sample. Dead plots contained the dead paired tree and had < 50% living cottonwood canopy cover, with most of the trees rooted within the plot being dead. Trees selected for tree-ring sampling in these plots were all dead (Figure 6).

The finalized plot center points were located with a gps (+/- 3m accuracy; NAD83 UTM Zone 13 North). The aerial canopy cover for all species breaking 1% aerial cover in each plot was visually estimated. The aerial canopy cover for tree, shrub, sub-shrub and herbaceous functional classes was visually estimated. Percent surface cover was categorized as soil, gravel, rock, litter, herbaceous canopy cover (HCC), wood, cryptogram, water/other, and basal vegetation. Sampling occurred between August 8, 2017 and October 15, 2017.

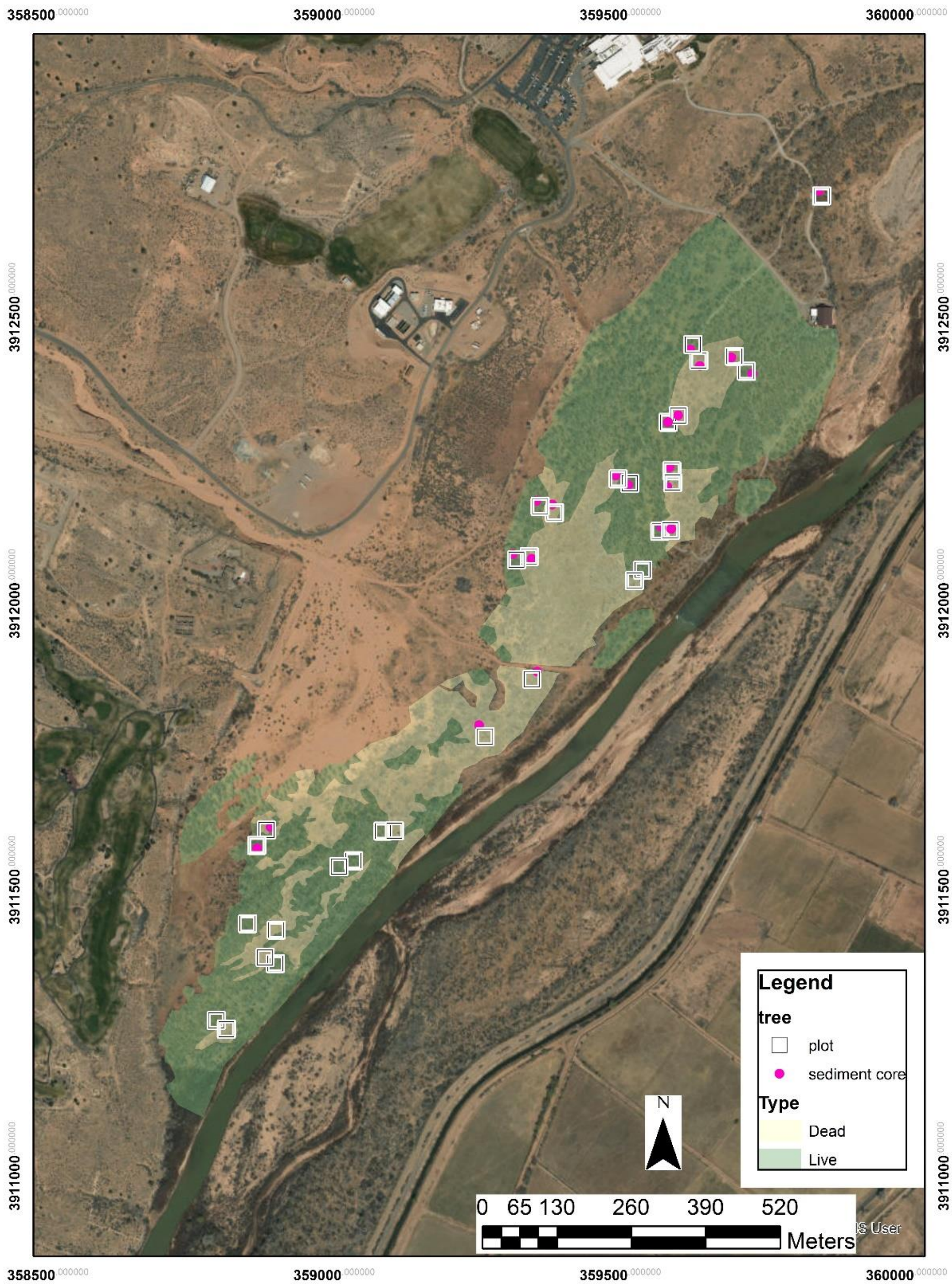

Figure 5. The study site showing the distribution of live and dead trees, tree sampling plot locations and associated sediment core sampling. The live and dead types shown in the legend are the vitality classes of the delineated patches in which the plots are located. Note the large ephemeral stream alluvial fan that borders the stand to the northwest that can provide additional runoff to the stand during summer rainstorms (imagery: NAIP 2016).

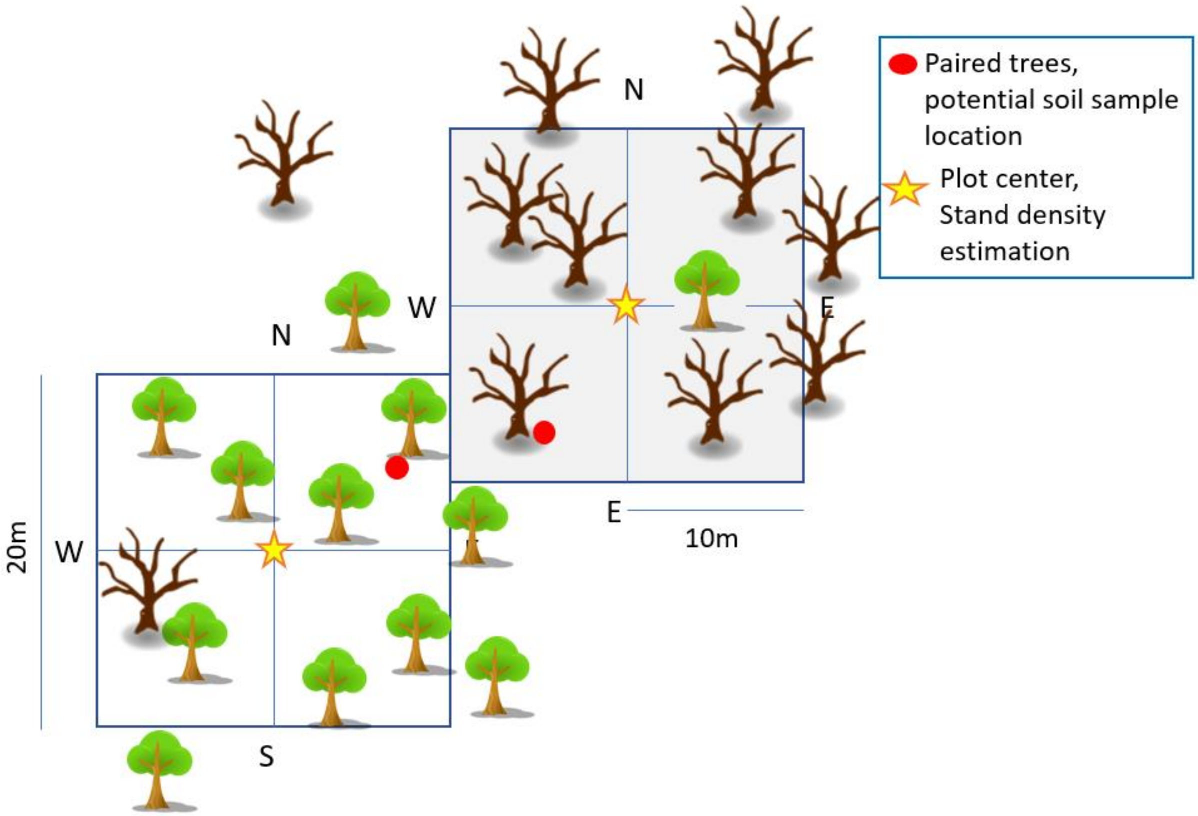

Figure 6. Tree sampling plots were 20 x 20 m and designed such that one of the sampled trees in the live plot is adjacent to and paired with a sampled tree in the dead plot. This allowed for multi-scale analysis from the paired tree to the stand level for factors affecting tree mortality.

Sediment sampling

To evaluate the effect of sediment characteristics on tree mortality, a subset of 21 plots was selected for sediment sampling (Figure 5). Selection of the sample plots and sampling placement was constrained by access for the large sampling equipment (Figure 7). Accessibility was a consideration when determining the precise location for each sediment profile extraction, but preference was placed on sampling further into the patch to avoid potential ecotone characteristics occurring on subsurface transitions between live and dead patches. Sediment samples were extracted from nine paired plots, and from three unpaired plots, totaling 21 sediment profiles. Each sediment sample was extracted from within three meters of a tree that was sampled for ring-widths.

At each location, litter and duff was removed from the surface of the soil. Using an AMS mechanized sediment probe mounted on a bobcat, a transparent PVC tube 5 cm (2 inches) in diameter, was hammered into the sediment until the top of the tube was flush with the ground surface to extract a sediment profile-segment representing a depth of 122 cm (4 ft). This was followed by two subsequent extractions of progressively deeper sediments from the same sample location pit. The three segments represent a complete sediment profile depth of 366 cm (12 ft) at each location. Each complete sediment sample, referred to as a “profile”, is made up of one upper, middle, and lower “segment”. One lower segment was lost during sampling resulting in 62 segments representing 20 complete profiles, and 1 incomplete profile. Sediment data is provided in Appendix B.

Tree-ring sampling

To evaluate differences in tree-ring growth patterns between live and dead trees, a subsample of trees in each plot was selected for tree-ring sampling and tree-based competitive factors. Plots were divided into four equally sized quadrants based on the cardinal directions (Figure 8). The straightest tree not obviously affected by heart rot in each plot quadrant was selected for wood increment sampling (Figure 9). In live stands, two cores were sampled from right angles on the trunk of the selected tree at a height of ~ 45 cm from the ground surface using an increment borer. Increment cores were stored in paper straws. In dead plots, partial cross-sections were removed from trees near the ground surface with a chainsaw. The width of the bark was measured for a random subset of trees, where cross-sections were removed. Either the diameter at breast height (DBH) or the diameter of the trunk above the root crown (DRC) were measured for each selected tree, and in many cases, both were measured. In cases where trees had multiple trunks, the largest trunk was sampled.

Laboratory processing of the tree-ring samples began the summer following sampling, allowing the wood ample time to air dry. Increment cores were mounted and sanded using a series of six progressively finer sandpapers, from 80-600 grit, and then polished using 30 µm and 15 µm paper. Cross-sections were similarly sanded and polished annual ring widths (RW) were measured using a Velmex stage and Acu-Rite encoder (0.001 mm precision) with a dissecting microscope (10-40x) and MeasureJ2X version 5.0 software (VoorTech Consulting, Holderness, NH, USA). Crossdating was accomplished using skeleton plots created using a subsample of cores featuring the clearest rings (Stokes and Smiley 1968). The program COFECHA was used to identify potential cross-dating or measurement errors. The final crossdated data set included 227 series from 119 trees (93% of the sampled trees), covering the years 1932 - 2016. Tree ring width data is provided in Appendix B. Appendix A includes visual comparisons between live and dead paired trees, bootstrapped comparisons of paired plots, and seascorr analyses between ring widths and moisture variables.

Tree density and size measurements

To evaluate the effect of stand-level tree density on mortality, at 32 of the 34 plots, overall patch density was measured from the plot center using the point-centered quarter (PCQ) method (Bonham, 1989). This method was neglected in the initial two plots. In this method, the plot area was divided into quadrants based on the cardinal directions from the plot center point (Figure 8). Within each quadrant, the distance to the nearest tree from the plot center, its diameter at breast height (DBH) or diameter at root crown (DRC) were measured, and vitality class status as live or dead was noted (lines 1-4 in Figure 8). Both the DBH and the DRC was measured for trees selected for increment coring. Most of the other trees are represented by DBH, but in some cases, measurement of the DBH was hindered and DRC was measured instead. I also noted whether the diameter represented a trunk that was more than 50% covered in bark. Saplings trees < 10 cm DBH were excluded as not likely to be significantly competitive with the large mature trees.

In all 34 of the plots, direct competitive distance from each of the core-sampled trees (represented by lines 5 – 8 plus 12 more lines not shown in Figure 8) was measured using a derivative of the PCQ method described above with the sampled tree serving as the center point. Using the base of the sampled tree as the center point, the area was divided into 4 quadrants around the sampled tree by cardinal direction. Distance, DBH or DRC, vitality class status and whether the diameter represented a trunk that was more than 50% covered in bark were noted for the nearest tree in each quadrant. Again, saplings, trees < 10cm DBH were excluded.

Figure 7. Bryan Wimberly and the Santa Ana environment department crew performing profile extraction. At bottom a profile segment with delineated layering is exposed in the laboratory. The layer thicknesses are measured, then sediments sampled by layer and analyzed for mean particle diameter for inclusion in the TI calculation.

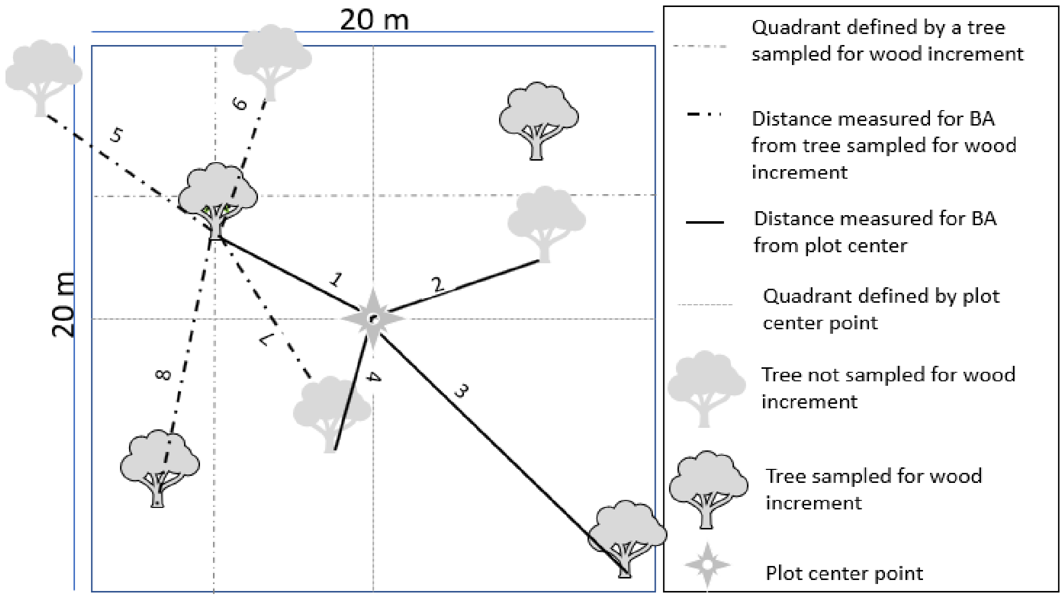

Figure 8. The plot-level basal area (BA) and density (ρ) sampling plan. Lines 1-4 are the point-center-quarter lines from the plot center measuring distance to the nearest trees in each plot quarter and are used in the calculation of BA_{patch} and ρ_{patch}., Lines 5-8 represent the distances to the nearest trees in each quarter from cored trees in a plot (four per plot) and are used in the calculation of BA_{tree} and ρ_{tree} (remaining distances not shown)

Figure 9. Increment boring of live samples (left); sanding "pie" samples cut with a chainsaw From dead logs (right).

Analysis Methods

Sediment texture and moisture availability

To evaluate the effects of soil texture and water availability on tree mortality I used a sediment texture Index (TI) developed by Merigliano (1996) who showed changing cottonwood understory communities in relationship with moisture along a sediment texture and depth gradient. Fine textures in otherwise sandy sediments can influence water table perching, and influence water availability for plants (Merigliano 1996). Fine sediments may be left behind in old channel bottoms as they fill in. These finer layers have higher Texture Index (TI) scores according to equations used by Mergliano (1996):

$$TI = \sum_{i=1}^{n} \left[\frac{t_i}{dg_i} (d_i) \right]$$

Here, TI is the sum of the texture indices for all (*n*) layers in a profile; dg_i is the mean particle diameter for each layer (*i*) in microns; t_i is the thickness of each layer *i* in cm, and d_i is the depth to the bottom of layer *i* from the surface in cm. Meanwhile, dg_i, the geometric mean particle diameter (*dg*) for each layer, is calculated by the following equation:

$$dg_i = exp \left[\sum_{i=1}^{n} \frac{w_i \, log_e \, x_i}{\sum_{i=1}^{n} w_i} \right]$$

where w_i is the weight of the aggregates in a size class of average diameter x_i divided by the total weight of the layer's samples in *n* size classes. This equation is attributed by

Mergliano (1996) to Hillel (1980). Please refer back to table 1, Sieve Sizes, which details the assignment of xi values. This equation assigns higher dg values to layers that have coarser sediments. However, these coarser layers are inversely related to TI scores: finer layers have higher TI scores. Deeper and thicker layers are also weighted. Where two cores have the same dg, the core with thicker layers of fine sediments and the core with fine layers located further beneath the surface will have higher TI scores.

					xi (sieved layers)	*xi* (un-sieved layers)
Texture Category	sieve number	> mm	< micron	> micron	assigned micron by sieve	assigned micron by category
A	1	15.85		15850	16000	9881.25
	2	8	15850	8000	11925	
	3	5.6	8000	5600	6800	
	4	4	5600	4000	4800	
A/B	-	-	-	-	-	6190.458
B	5	2.794	4000	2794	3397	2499.667
	6	2	2794	2000	2397	
	7	1.41	2000	1410	1705	
B/C	-	-	-	-	-	1764.833
C	8	1	1410	1000	1205	1030
	9	0.71	1000	710	855	
C/D	-	-	-	-	-	741.25
D	10	0.425	710	425	567.5	452.5
	11	0.25	425	250	337.5	
D/E	-	-	-	-	-	317.375
E	12	0.177	250	177	213.5	182.25
	13	0.125	177	125	151	
E/F	-	-	-	-	-	123.35
E/F(silt)	-	-	-	-	-	123.35
F(loam)	-	-	-	-	-	99.094
F (pan 2, finest)		0.0039	125	3.9	64.45	64.45
F(silt)	-	0.0039	125	3.9	64.45	64.45
F(silt)/F(clay)	-	-	-	-	-	51.974
F(clay)	-	0.00024	3.9	0.24	2.07	2.07

Table 1: Sieve sizes showing the size classes and average diameter assigned to the proportion of each layer (by weight) collected by each sieve. This table also details the default values assigned to layers which remained un-sieved based on texture by feel.

In this study, a slight modification was made to the TI calculation due to compaction of sediments within the sample tube as a result of the extraction method. Even though each segment tube represents 122 cm of sediment, the sediments compact within the tube to varying degrees. In order to account for this, a compaction coefficient (*cc*) was determined individually by

segment and is multiplied against every depth measurement in the segment according to the equation:

$$CC = \frac{D_t}{121.92}$$

The dimensionless compaction coefficient (*cc*) is based on the proportion of depth sampled in the field to the depth collected in the extraction tube, D_t. The inverse coefficient was multiplied against depth-related lab measurements including t_i (the layer thickness), and d_i (the bottom depth of each layer) used in the TI equation. The expanded equation used in this study then is:

$$TI = \sum_{i=1}^{n} \left[\frac{\frac{t_i}{cc}}{dg_i} \left(\frac{d_i}{cc} \right) \right]$$

This equation can be expanded further:

$$TI = \sum_{i=1}^{n} \left[\frac{t_i * \frac{121.92}{D_t}}{dg_i} \left(d_i * \frac{121.92}{D_t} \right) \right]$$

The final TI of the profile that is representative of a plot is referred to as "$TI_{profile}$" and is the sum of the three TI segments (TI_{seg}) for the plot. To normalize TI across segments, 121.92 cm was subtracted from layer depths in middle segments and 243.84 cm from layer depths in bottom segments. Comparisons between top, middle, and bottom segments use this relative TI, which compares all layers in their relative positions but adjusts each layer's depth so that the profiles can be viewed as if all segments are within the top 121.92 cm of the surface. One plot profile was missing a bottom segment due to sample loss (plot ID 17SA008). Accordingly, this sample was not used for the overall profile analysis (but was included in analyses of profile segments (for paired analyses the bottom segment the corresponding plot 17SA007 was removed).

Welch two sample t tests, and paired t tests were used to test differences among vitality classes with respect to TI variables. Normality was tested using Shapiro-Wilks tests. If normality could not be achieved for data using data transformation, Wilcoxon signed rank tests were used. All statistical analyses were done using R and R based packages (R Core Team. 2019).

Tree-ring growth

Cottonwood forests are known to establish in patches in response to flood events (Shafroth et al. 1998). This allowed Merigliano (1996) to assume that alluvium age is related to cottonwood age. Patches that establish at different times are likely to have differing depositional histories as reflected in differing sediment characteristics. Additionally, the prevailing idea is that cottonwoods are fast growing but short lived, and those older than 200 years are rare (Andersen 2015 citing D.J. Cooper unpublished, Polzin and Rood 2000, and Edmondson et al. 2014). Tree age was analyzed between neighboring plots to determine if age had effects on mortality patterns.

After accounting for age, tree growth patterns can then be investigated as a response to moisture variables including streamflow, and the climatic variables of precipitation, and temperature. The sequential average annual ring widths representing a subsample of trees such as the four trees in a plot, or the dead trees at the site is referred to as a “chronology” or “series”.

Initial tree-ring analysis indicated that most trees died prior to the growing season of 2012. The Age (*A*) of a tree up to 2012 was calculated by counting the tree rings from the tree’s pith (center, c) through 2011. Two years were added to the calculated age to account for the seedling growth period required to reach the sampling height of 45 cm above the ground surface following Muldavin et al. (2005). Given samples with a pith, the equation used for age was:

$$A = c + 2$$

For samples without a pith, but featuring a "half-moon", or the arc made by a semi-circular-partial-annual ring indicating a knowable distance to the pith, the equation becomes:

$$A = \frac{\frac{h}{2} + \frac{Ш^2}{8h}}{\Gamma} + c + 2$$

where h is the width of the earliest and incomplete ring in the sample, Ш is the arc width, and **Γ** is the average ring width for the sample (Math Open References 2019). The greater age was selected where there were two samples from a single tree with differing calculated ages.

Samples that did not include pith or an inner arc were excluded from the age analysis. This subset of samples features 44 dead samples and 47 live samples (representing 66% of the sampled trees). At least one tree was aged at every plot. The spread of ages was normal (Shapiro-Wilks test, $p < 0.05$). A Welch two-sample t-test was performed between the mean ages of dead trees and those of live trees. Differences in paired-plot age-in-2012 appeared normal according to a Shapiro-Wilk test, allowing for a one sample t test to be performed on the difference in the average age of plot pairs.

To test growth patterns against climate and streamflow, yearly ring widths were averaged by tree and normalized to the mean ring width of the tree to create average chronologies for paired trees, plots, and for both vitality classes across the site. Mean normalization does not detrend tree growth. Tree rings are affected by multiple ecological stimuli and trends can occur because of age-related growth patterns as mentioned, or due to intra-species competition, or a disturbance (such as release from inter-species competition as was considered by Muldavin 2005), or due to biological inertia (auto-correlation trends that could be based on carbon storage reserves from prior years, Grissino-Mayer 2013). Between trees at this site, rings are assumed to be affected by similar trends so detrending was considered unnecessary for these comparisons if the trees were similar in age. Differences found between these vitality classes to the independent moisture variables assumes that environmental trends affect all the trees on the site equally, especially for all trees of the same age. Thus the conservative approach of mean normalization was used for all tree-to-tree and tree-to-climate correlations.

The tree-ring climate-growth response was analyzed using the *treeclim* package in R, (Meko et al. 2011, Zang and Biondi 2015). The seascorr function provided by the package calculates Pearson correlations and partial correlations between 1-, 3-, and 6- month cumulations of the mean monthly climate data and tree-ring width for a rolling window. Streamflow data was from the USGS Rio Grande at San Felipe gage. Precipitation and temperature data were from Support Albuquerque International Airport. To test for anomalous reduced tree ring growth possibly associated with mortality, ring width chronologies were compared between the live and dead trees using a 95% bootstrapped confidence interval around the mean annual ring widths (n = 1000 replicates; Bunn 2008).

Competition among trees

Intra-species competition was considered as a factor that could affect ring widths and potentially distinguish the growth of surviving trees from their dead counterparts. Dense stands are subject to increased competition for nutrients, water, and light. Both basal area (BA) and density (p) were calculated for each tree and each patch so that competition could be compared between trees, plots and across the site by vitality class. Because it is unknown at this site if the trees are tending to cluster, two estimations of density and basal area were collected.

The DRC and DBH of the cottonwoods are closely related for the 127 trees where both diameters were measured. A linear model between the bare DRC and bare DBH was created ($r^2 = 0.78$) and DRC in cm was calculated for every tree lacking a DRC measurement using the model equation:

$$\mathrm{DRC} = 4.72 + 1.11\mathrm{DBH}$$

All DRC measurements were corrected for the occurrence of bark by subtracting the average bark-width (8 cm) from the diameters of trees whose diameter measurements included bark. This “bare” diameter is used in all diameter related analyses.

Basal area (sq. meters) occupied for each tree is calculated as follows:

$$BA = \frac{\pi}{4 * 10000} * DRC^2$$

(Larsen 2006). The four basal area (BA) measurements that are based on the center point are averaged for the plot and referred to as BA_{patch}. The 20 basal area (BA) measurements that are based on and include the sampled trees, averaged across the plot are referred BA_{tree}.

Density (ƿ), stems per mean area (m^2), is calculated as:

$$ƿ = \frac{1}{L^2}$$

where L is the averaged distance to the four trees from the center point or center tree (Bonham 1989). The four densities (ƿ) based on the distance from the plot center point are averaged for the plot and referred to as $ƿ_{patch}$. The 16 densities representative of a plot based on and including the sampled trees are averaged and referred to as $ƿ_{tree}$.

Welch two sampled t-tests were computed to compare basal areas and density for live and dead trees across the site. Paired t-tests were computed for the basal area and density of neighboring plots. These t-tests were computed similarly regardless of the point quarter method variation.

Results

Vegetation response

On dead-tree plots there were scattered remaining living trees at the time of sampling. Likewise on living-tree plots, there were scattered dead trees at the time of sampling (Figure 10). After canopy collapse, weedy forbs such as prickly Russian Thistle (*Salsola tragus*) and common Kochia (*Kochia scoparia*) increased in cover, presumably in response to increased disturbed ground from fallen trees and possibly added sunlight (Figure 11). In contrast, grass cover was higher in live plots, and in particular sand dropseed (*Sporobolus cryptandrus*) was absent from the dead-tree plots. Shrub and dwarf shrub cover did not appear to differ at this time between the two vitality classes. Although this vegetation response was not examined statistically, these data suggest that the terrace is moving towards a dry disturbed community.

Sediment effects

When looking at soil profiles as a whole, there was a trend towards increasingly coarse sediments on dead-tree plots (Figure 12), but the difference was not significant when analyzed across the whole site. When the profiles were compared using paired t-tests partitioned by relative upper, mid, and lower profile segments, tree mortality was significantly correlated with larger particle sizes (lower TI scores) in dead plots than in live plots with 8 out of the 9 plot pairs represented by dead-tree plots with coarser profiles (Figure 13).This difference in TI scores is driven by particle sizes in the lowermost profile segments.

Within profiles, sediments were significantly coarser in the bottom sediment profile segment than in the uppermost segments, with the middle profile segments having TI scores between the two (Figure 14).

Tree age

The mean age of the trees across the site was 70 years (Figure 15). While trees ranged from 27 - 103 years in age, the interquartile range was 60 to 81. I confirmed that there were differences in tree ages across the site similar to those found by Muldavin et al. (2005) where downstream plots tended to be younger than those upstream. With respect to mortality, across the site, there were no significant differences between the ages of live and dead trees in 2012. When looking at paired plots, the average age of live trees in a plot and the average 2012 age of dead trees in a neighboring plot was also not significant. The implication is that the establishment events for neighboring plots was the same suggesting that shallow underlying geomorphological features are similar between paired plots but may differ at the upstream and downstream ends of the site.

Correlation between tree growth and moisture variables

Ring width was strongly associated with streamflow, which confirms the connectivity of the alluvial aquifer with the channel and the importance of streamflow for the growth of these trees. Ring widths were significantly positively correlated with monthly stream flow from August to October (Pearson's $r > 0.5$, $p < 0.01$, Figure 16). The highest correlation was found for the cumulation of the July, August, and September streamflow, followed closely by the cumulation of August, September and October. Examination of precipitation as the secondary variable, with influences of streamflow on tree growth removed, suggests that late season surface moisture is also important (September through November). Negative correlations between temperature and tree growth are most apparent in September, but these findings are not significant when accounting for streamflow as the primary variable.

The seasonal correlation analysis revealed similar results for the live and dead trees, although some nuance exists in the strength of the correlations. Dead trees appear more sensitive to monthly streamflow variability; February, July, October and December streamflow were significantly correlated with ring widths for the dead trees only. However, similar relationships between tree growth and streamflow are apparent in the surviving trees during these months also, if to a lesser extent. Dead trees appear to have been somewhat less sensitive to high temperatures in July and slightly more sensitive to precipitation received in the prior growing season.

a)

b)

Figure 10. a) The collapsed Rio Grande cottonwood stand in 2014 on Santa Ana Pueblo, NM. Note the high cover of weedy Russian thistle throughout the stand; b) an example of a sampled stand on the margin of the die-off area that remains healthy with an understory of native grasses.

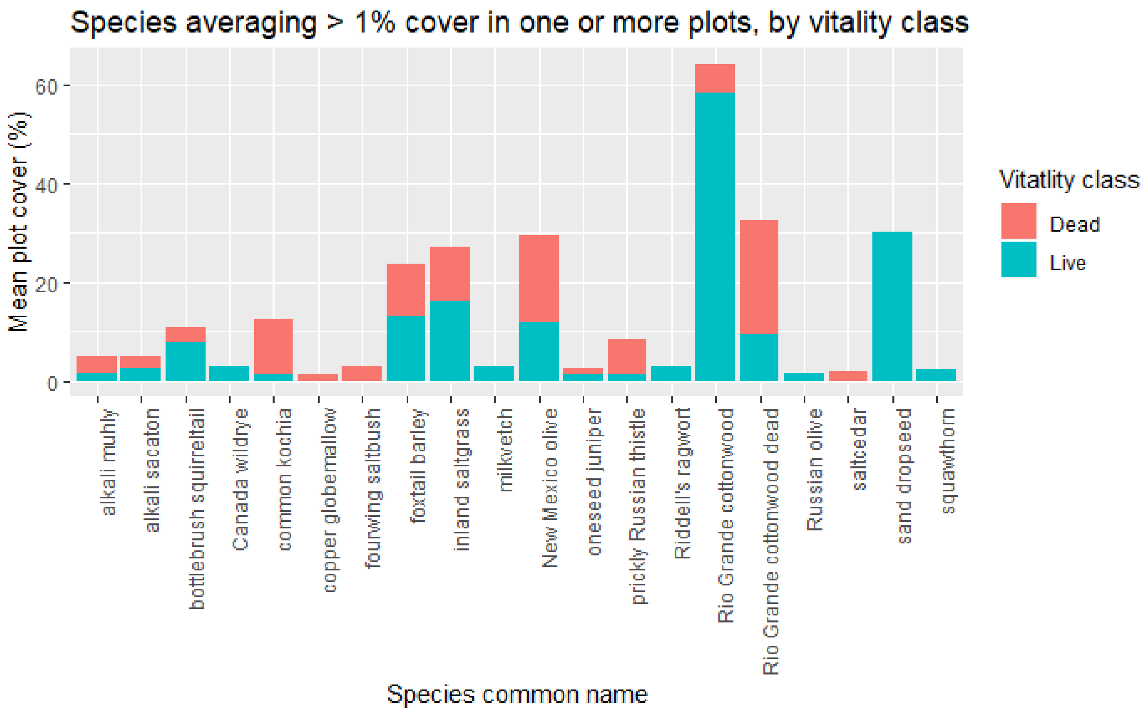

Figure 11. Average percent canopy cover of major plant species (> 1% cover) by vitality class.

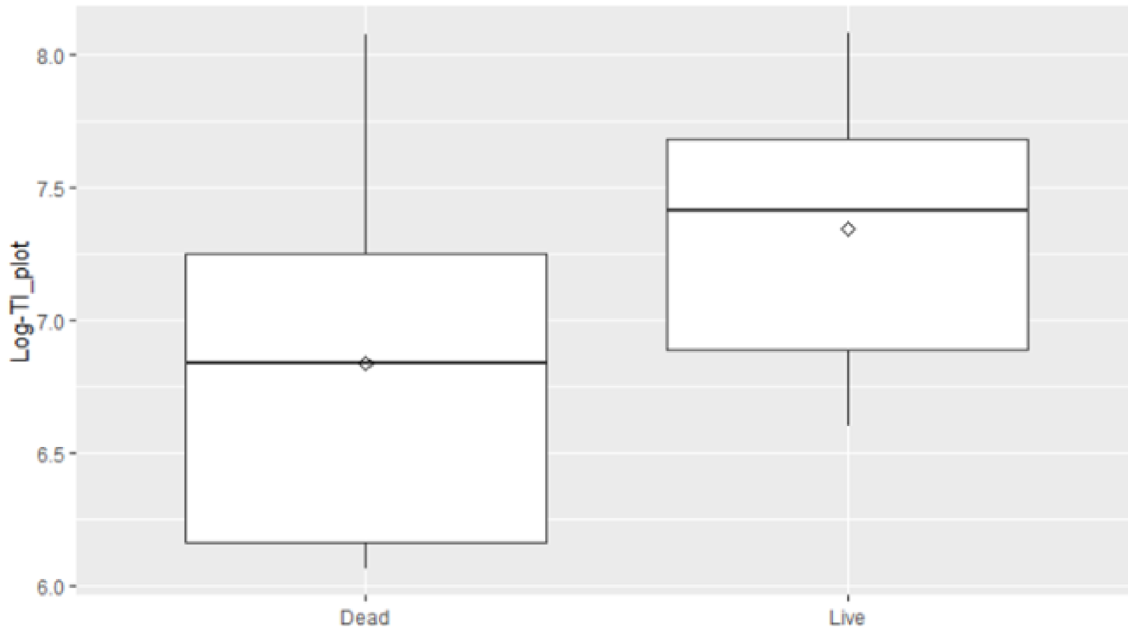

Figure 12: Based on the sediment texture index (TI), overall there was a trend towards finer sediments subtending live trees across the site, but this was nt significant when texture was averaged across entire profiles for the site as a whole.

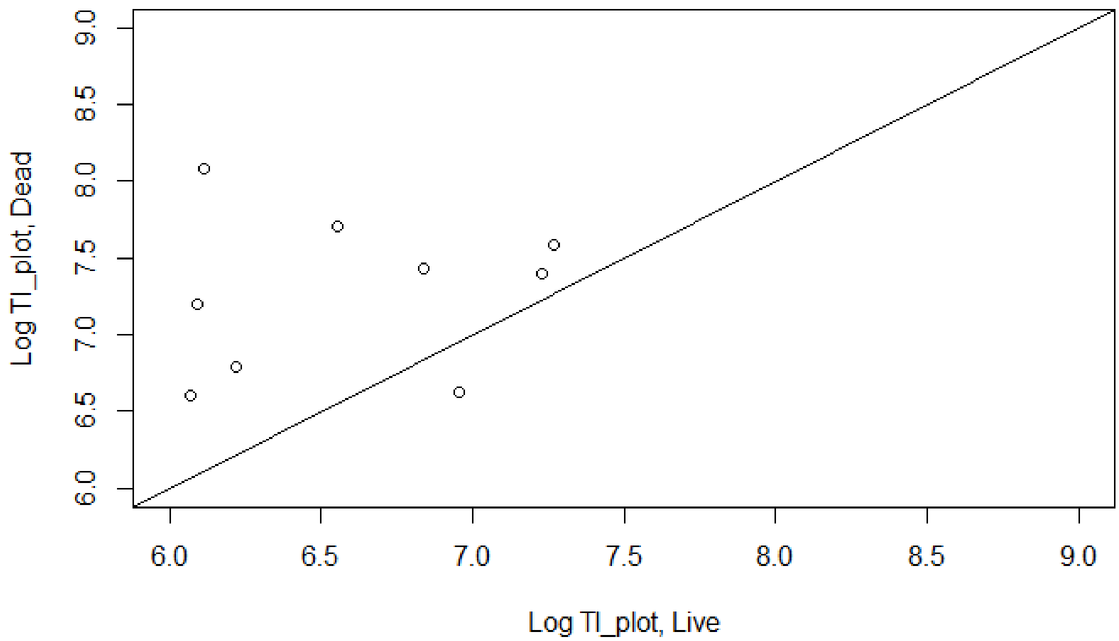

Figure 13. Each data point represents pairs of plots with the log-transformed TI of the plot's profile. The TI of the live plot profile is along the x axis and the corresponding TI of the dead plot profile of the pair is along the y axis with the line indicating a 1:1 relationship. The log-transformed profile sediment texture index (TI) shows that in 8 of the 9 paired plots the TI was smaller in the dead plots, meaning that the sediments are coarser under the dead trees than sediments found under adjacent live trees.

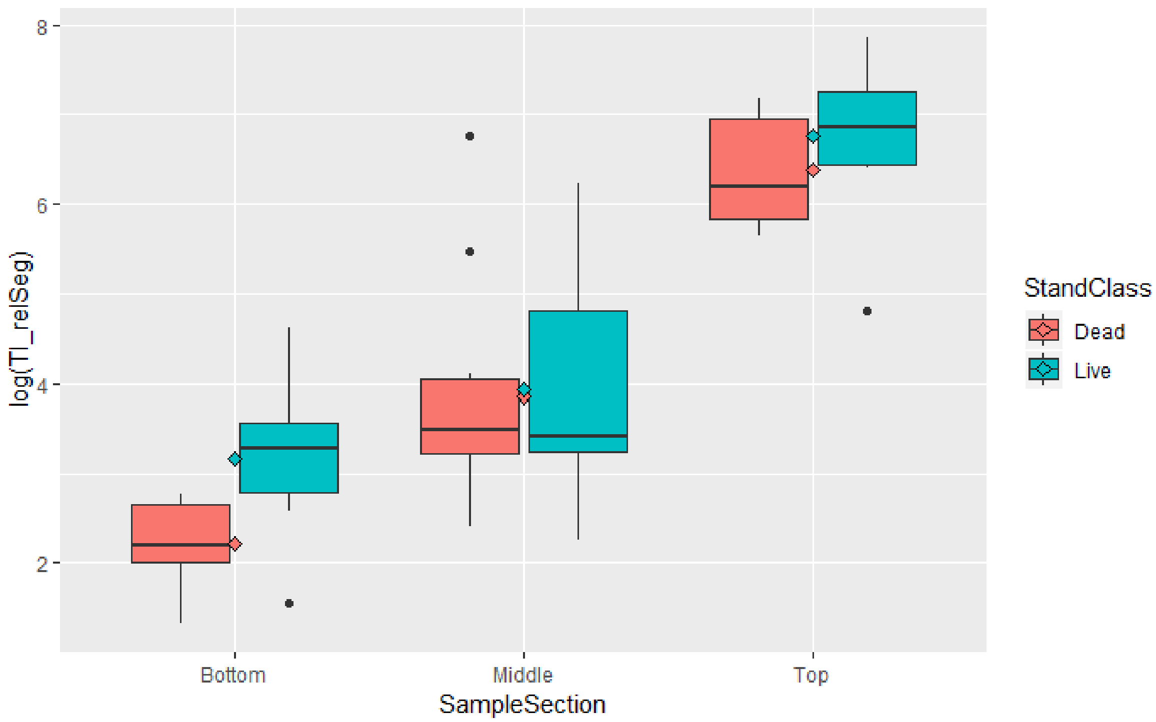

Figure 14. The log transformed sediment texture index (TI) by relative soil depth class showed increasing sandiness with depth for both vitality classes. But differences in TI were only significant between the live and dead patches for the bottom profile segments with coarser textures associated with dead trees. Diamonds are placed at the mean value versus the median value, where the boxed line is placed

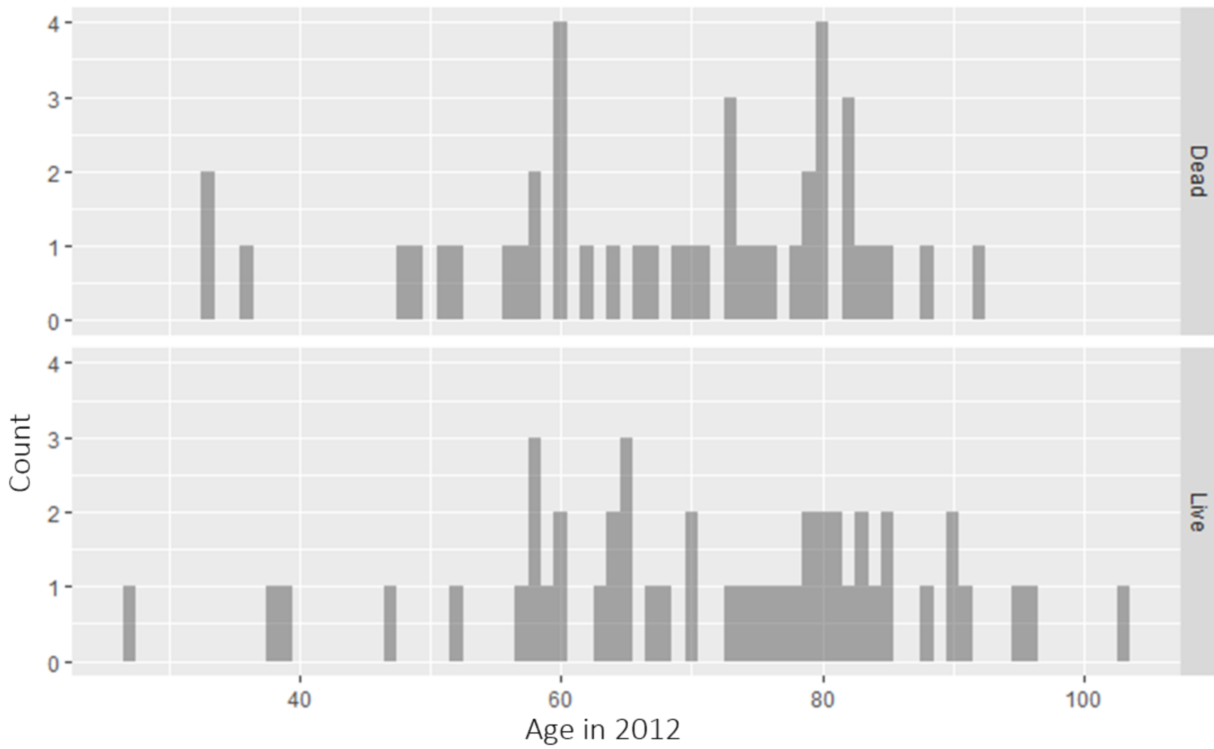

Figure 15. In 2012, there was a large range of tree ages in the sub-sample, with one tree exceeding 100 years in age, and a one being as young as 27 years in age. The spread of ages for the live and dead trees are similar. Between paired plots, differences in age by vitality class are not significant.

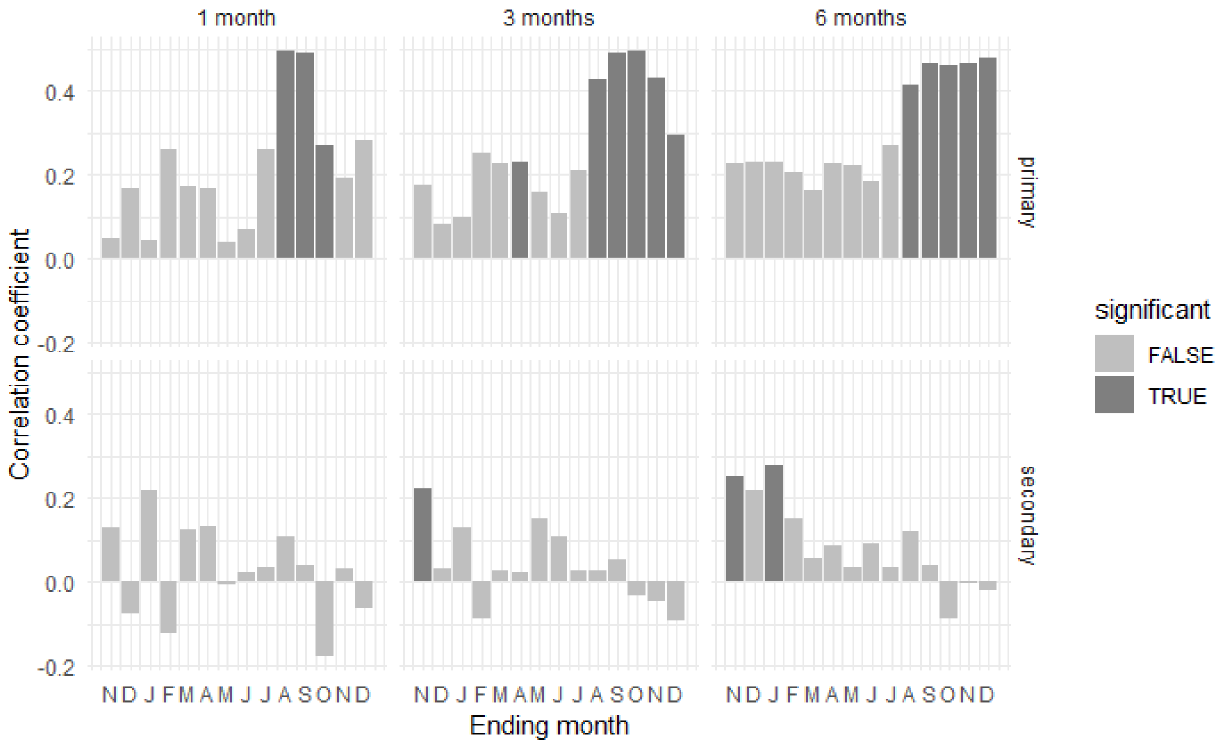

Figure 16. Seasonal correlations between the ring width index with a) streamflow and b) precipitation for all the sample trees. For streamflow, August and September average monthly volumes were important for tree growth. For precipitation, the average monthly precipitation was not as important as streamflow but after accounting for correlations with streamflow as the primary variable, monsoonal rains received during the previous year were significant.

Live/Dead Growth

It is noteworthy that stress is apparent in all of the trees as reflected by reduced ring widths beginning in 2002. Of the smallest 15% of growth years in the index averaged by vitality class, 9 dead and 8 living occur between 2006 and 2015 (Figure 20). When averaged across all rings, the 5 smallest rings in the index in ascending order index are 2013, 2012, 2014, 2011 and 2006 indicating that unprecedented stress was apparent in all the trees prior to and during the period of collapse in 2011 to 2014. The importance of streamflow in the July, August and September months was identified in the Seascorr analyses. Low streamflow in these months (Figure 18) begin in 2001 and extend through 2013. These low flows coincide with the decline in tree growth for both vitality classes.

Tree-ring growth between the live and dead trees began to diverge in 2006, becoming significant in 2010, and carrying through to 2013 (Figure 18). After 2006, the majority of mean-normalized ring widths for the trees that died were smaller than live trees, occasionally equal, but never larger. Two trees died in 2014 despite increasing ring widths for the sample; the remaining 59 sampled trees survived into 2017.

While there was a divergence of growth patterns characterized by an overall greater decline in growth by the dead trees starting in 2006 (Figure 18), behavior of plot pairs across the site was not uniform. Divergence in growth by 2010 is apparent for almost half the pairs. Three pairs that appear to diverge earlier than 2010 are pairs 24&25, 27&28, and 29&30 which seem to diverge in 2006, 2001, and 2009 respectively (Figure 19). Seven of the 14 pairs did not clearly diverge.

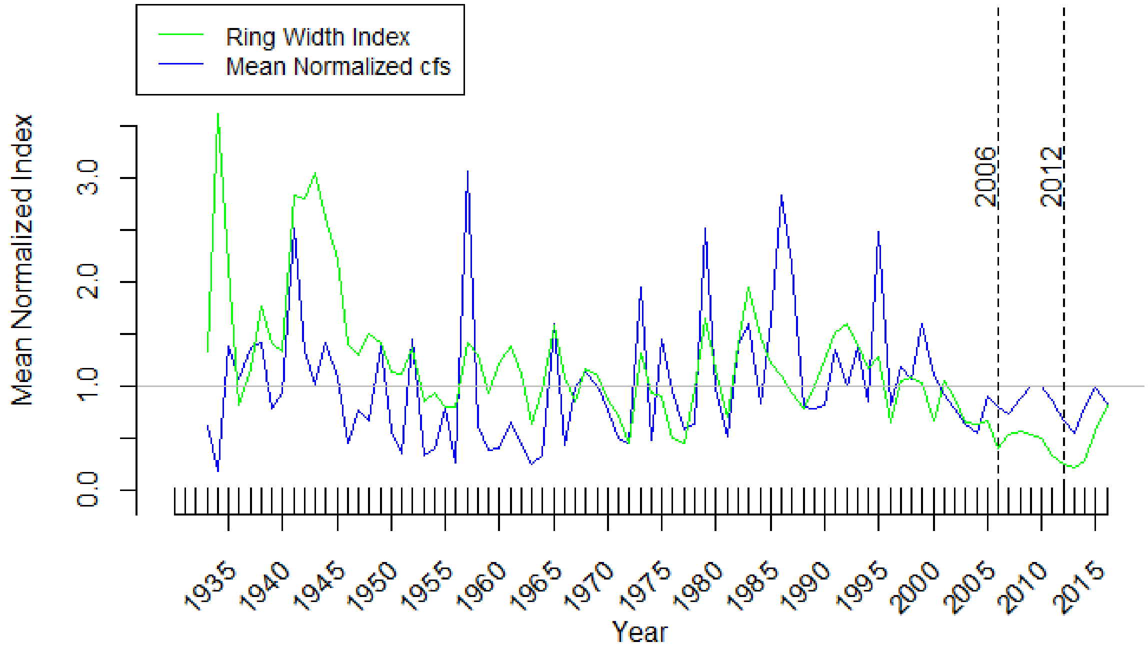

Figure 17. The annual summation of July, August and September mean monthly cfs is normalized by the mean of the data (blue line). Discharge in these months reached the long-term average volume only once after 2000. The mean-normalized ring-width chronology for all trees (green line) showed a downward trend in tree growth starting in 2002 at the beginning of one of the driest periods on record.

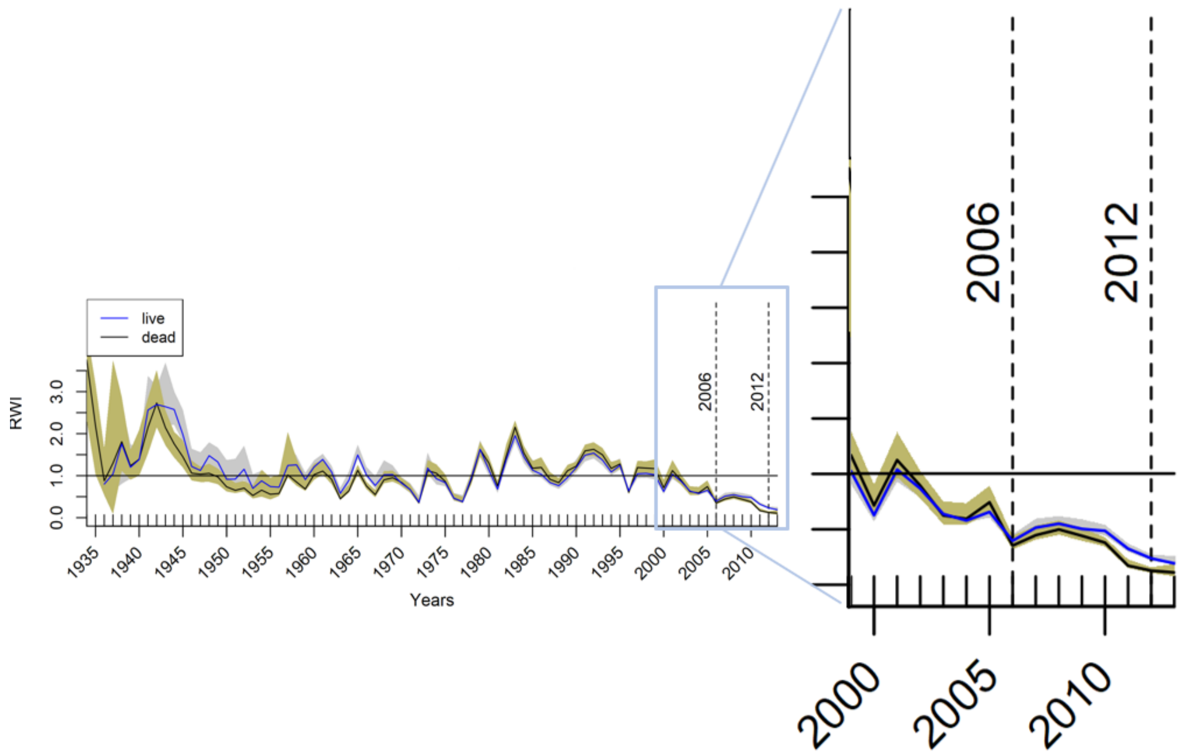

Figure 18. A bootstrapped comparison of the mean-normalized ring-widths by vitality class, showed decreasing tree growth for both vitality classes beginning in 2002, with the rate of decline for trees that died increasing as of 2006, and reaching a maximum divergence in 2010.

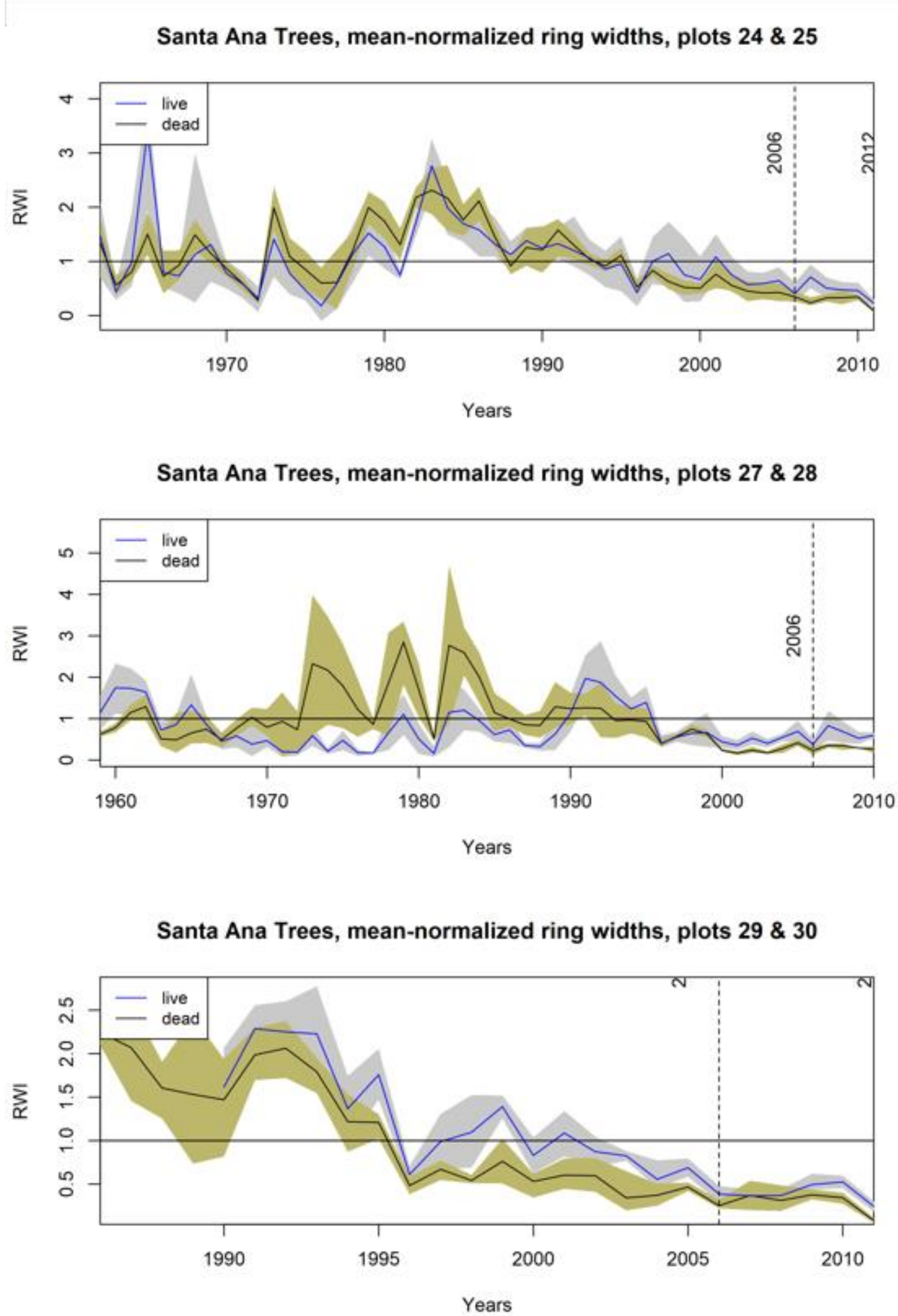

Figure 19. The comparisons of bootstrapped ring width indices for the three paired plots that clearly diverged in annual growth prior to 2010.

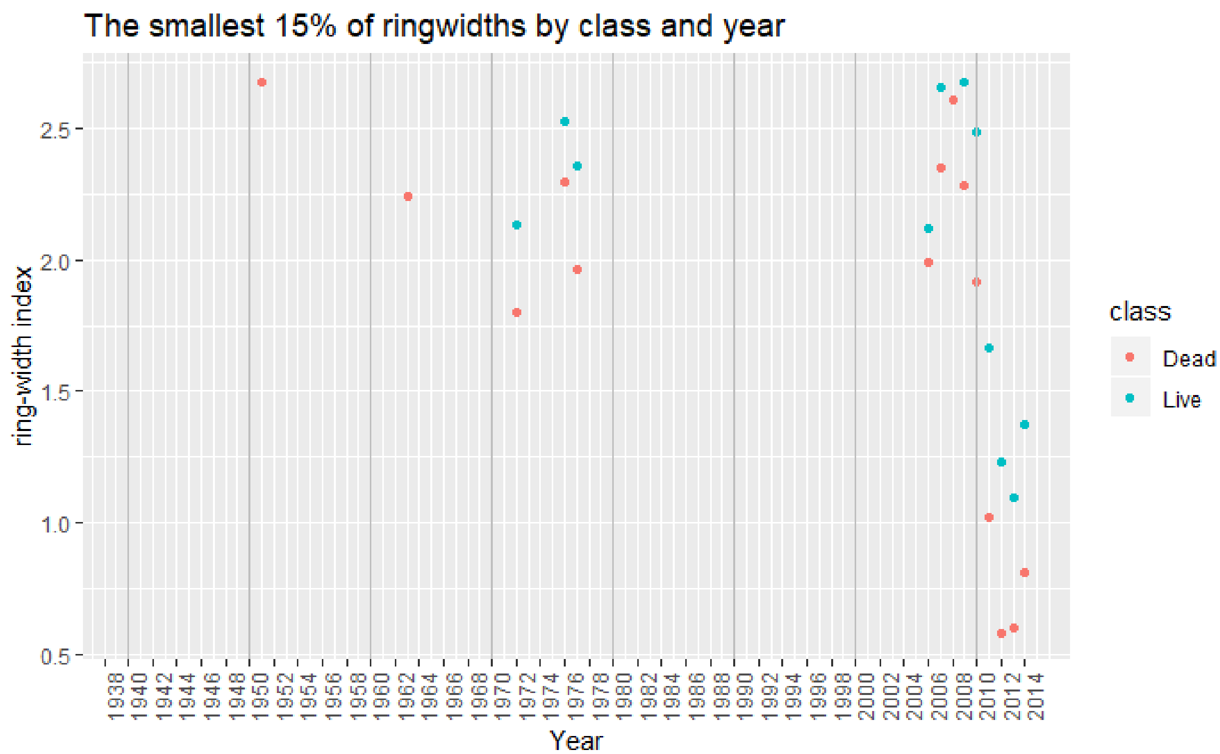

Figure 20. Of the 25 smallest ring width index values averaged by vitality class, 14 are for dead trees and 11 are for live trees. Of these, the majority (17 points) lie between 2006 and 2015.

Competition

The density of living and dead trees was similar across the site, and differences in density between vitality classes were not significant at the plot or relative to paired trees. Across the study area, the average plot density as measured from the sampled trees and from the plot centers is 405 to 421 stems per ha (164-170 stems per ac). Linear regression between plot and tree-level two density methods revealed an r^2 value of 0.37. If trees are clustering spatially within plots it could explain the poor correlation between the two density methods.

Across the site, tree density was independent from particle size. Correlations between the texture index (TI) and density (ρ) are negligible, with $r^2 < 0.10$ for both methods, even when the extreme outlier 17SA014 is removed. Between paired plots, after the extreme outlier of 17SA014 and its pair 17SA013 are removed, a trend between the difference in TI scores and the difference in patch densities becomes apparent and is negative (r2 = 0.47; Figure 22). In adjacent micro-habitats, where the difference in the texture index is pronounced between adjacent pairs, then the difference in density is also pronounced, with the dead plot pair tending to be in less dense plots, subtended by coarser sediments than the surviving pair.

Living and dead trees were similar in size across the site. There were no differences in stem basal area (BA) between live and dead trees for the site as a whole. This is true for both BA as measured from the center point of the plot (BA_{patch}, $p = 0.1$,), and BA as measured from the sampled trees and averaged over the plots (plot-averaged BA_{tree}, $p = 0.6$). These data were log-transformed for comparisons. The mean BA_{tree} and mean BA_{patch} are both 0.12 m^2.

The site averages basal areas per ha of between 43 and 56 m^2/ha (187 -244 ft^2/ac). At the local patch level between paired plots, BA was found to be higher for living trees than dead trees ($p = 0.02$). Mean BA_{patch} in live patches was greater than mean BA_{patch} of dead paired patches by an average difference of 0.04 m^2 meaning that the averaged diameters were ~22.6 cm (8.8 inches) larger for the surviving trees (Figure 21). The difference was not significant when using the BA measured from the core-sample trees (plot-averaged BA_{tree}). Linear regression between the two methods of measuring basal area, plot-averaged BA_{patch} and plot-averaged BA_{tree}, reveal an r^2 value of 0.39 indicating that they are not very good substitute estimations, and that trees are relatively heterogeneous in size throughout.

Large trees tended to be found in finer sediments. Particle size was shown earlier to be related to the vitality class of the plots, so it is not surprising that I also observed some correlation between particle size with tree size. However, the correlation between basal areas and the texture index of complete sediment profiles ($TI_{profile}$) was weak. Across the site, the strongest linear correlation of $r^2 = 0.30$ found was between $TI_{profile}$ and BA_{patch}. Between paired plots, correlations between the difference in BA (dead - live) and the difference in $TI_{profile}$ (dead - live) were stronger ($r^2 = 0.6$). The anomalous plot pair that had a greater BA_{patch} in the dead patch than in the live patch also had a greater TI in the dead plot than in the live plot (Plots 17S009 and 17SA010).

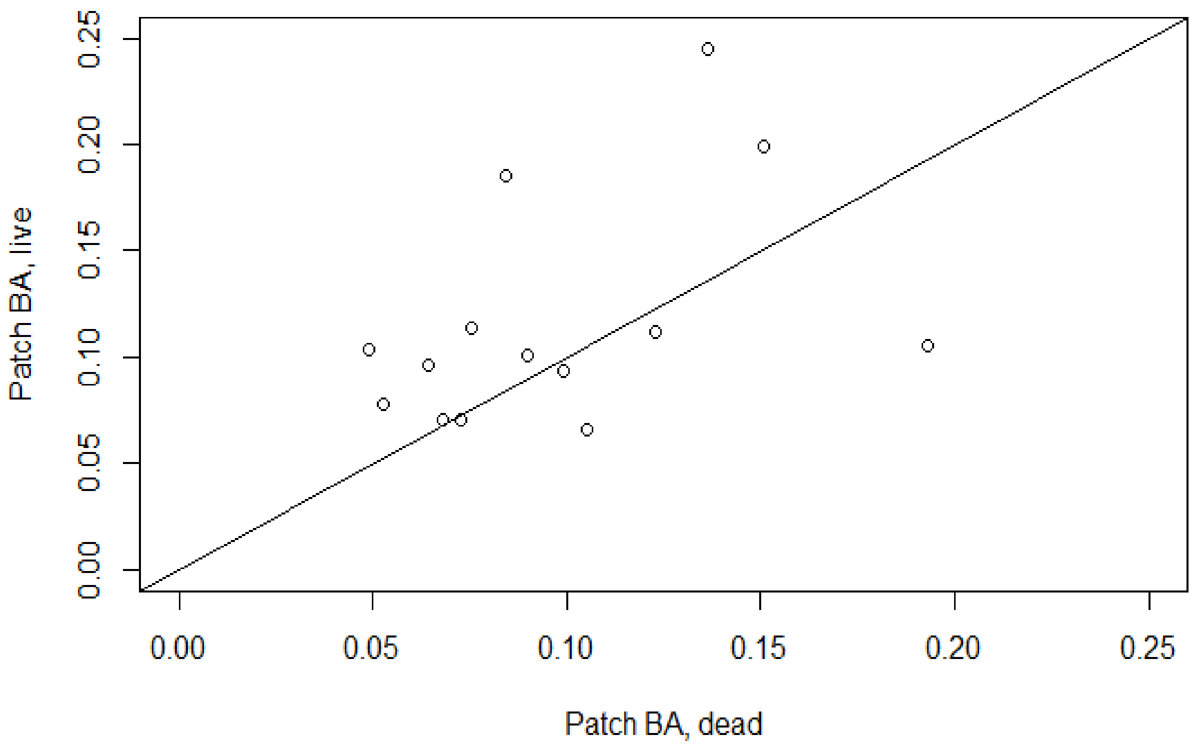

Figure 21. Each data point represents pairs of plots with the average plot tree Basal Area (BA) on the four point-center trees measured in the plots. BA of the dead plots is along the x axis and the corresponding BA of the live plot of the pair is along the y axis with the line indicating a 1:1 relationship.

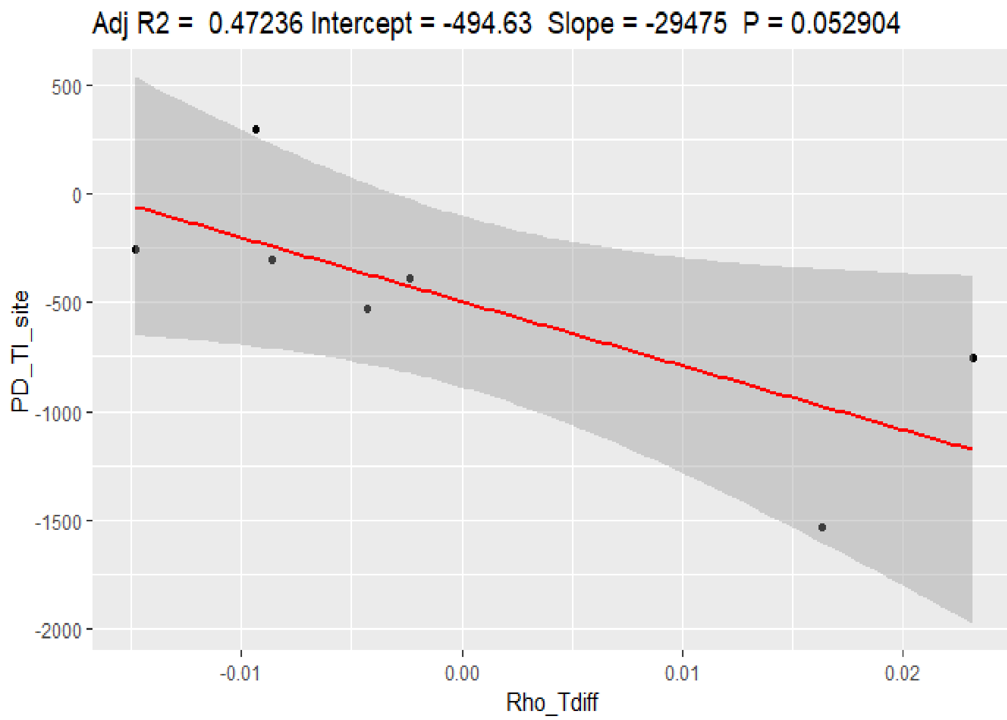

Figure 22. The relationship between the difference in sediment texture index (TI) and the difference in density (Rho) between paired plots shows that as the difference in density between paired plots increases, the difference in sediment texture also increases. This suggests that particle size plays a role in tree density, .All differences are the values for live plots subtracted from the values of dead plots, so negative TI values for pairs (PD_TI_site) indicate that the live pair had a higher TI representative of the sediment profile. Similarly, pairs with negative values in differences in density (Rho_Tdiff) show that the live paire was more dense than its dead neighbor.

Discussion

This study focused on the relationship between annual tree growth and moisture indices in relation to soil particle size as drivers of a cottonwood stand collapse on the Pueblo of Santa Ana. I hypothesized that coarser sediments likely would critically reduce water availability for the trees that died during 2011-2013, after a prolonged period of drought stress beginning in 2002. Our work identified more coarse particles at depths of ~10 ft below the surface with both tree size and survivorship suggesting that an effect of intensified drought occurred in the coarser sediments where trees reached a wilting-point threshold and death sooner than those that survived. Diminishing annual growth in all of the cottonwoods is apparent, and began by 2006, approximately 6 years prior to sudden stand die-off in 2011 - 2013. It was at this point that differences in growth between living and dying trees began to be detectable as diminished ring-width growth patterns in some plot pairs.

It is clear that the entire stand was stressed during the die-off event as the smallest rings are all found in the decade preceding the stand collapse (see Figure 20). This was similar for all of the trees despite heterogeneity in the subsurface distinguishing surviving trees from their dead neighbors. Drought conditions are apparent in both the below-average cumulative July, August, and September streamflow during 2002 to 2015 and in the tree ring record from the same period, which reflected multiple years of below average growth (see Figure 17). Tree growth continued to worsen after 2005 even as cumulative streamflow in these months increased following a nadir in 2002 which suggests a decoupling of moisture delivery with tree growth.

This is of interest because differences in particle sizes between living and dead trees at this site are most pronounced in the lowermost segments of the profiles. Here sediments are more likely to be in contact with the groundwater, and likely are inundated longer and more frequently than sediments nearer to the surface. The implications are that the depths to alluvial water table may be driving tree die-off. Decoupling of a streamside aquifer can result from channel incision. Investigation into the collapse of a Fremont's cottonwood (*Populus fremontii*) stand along the Mojave river in California associated widescale tree die-off to channel incision and the corresponding drop in riverside groundwater tables. There, water levels dropped ~1.5 m in zones of high mortality (Scott et al. 2000). Shafroth, Stromberg and Patten (2000) investigated groundwater decline and *Populus* sapling mortality along the Bill Williams River of central Arizona. They found nearly complete mortality in sand and gravel sediments after a 1.1 m drop in groundwater. Groundwater data was not available for our study, but incision in the Santa Ana reach is well documented (Harris et al. 2018, Massong et al. 2007, Ortiz 2004). This suggests that the alluvial aquifers at this site has correspondingly dropped since the closing of Cochiti dam in 1973. If so, low streamflow in the past may have been sufficient to supply all of the trees, whereas now, the same volume may be insufficient to reach the cottonwood roots, especially for those established in coarser sediments with less wicking capacity. Similar to the Mojave trees that Scott et al. (2000) documented, mortality at Santa Ana was associated with multiple years of relatively diminished growth in the stand and extended low moisture that the die-off event was years in the making.

However, tree death was sudden with only a few subtle differences in the ring series between the trees that died and survived. These subtle differences emphasize the differential moisture availability due to sediment heterogeneity in the vadose zone and hyporheic aquifer which played a role in survivorship on this study site, distinguishing the survivors from their dead neighbors. The difference in particle size between adjacent plots, in turn is highlighting differences in micro-site characteristics, and suggesting the existence of preferential flow pathways in the subsurface. Our findings that tree growth correlates strongly with streamflow more than precipitation or temperature indicate that water available for plant growth in terrace sediments is dependent on water in the channel. Bosque Eco-monitoring Program (BEMP) data shows that groundwater elevations closely mimics the river stage in nearby, downstream stretches of the river (Heller 2018) underlining the critical role of streamflow on the health of adjacent riparian vegetation throughout the Middle Rio Grande. At Santa Ana, volumes delivered from July to December are important, especially water delivered in August and September. The monsoonal flows driven by monsoonal precipitation are very important to the growth of these trees, perhaps influencing alluvial groundwater levels at the same time when trees are able to use groundwater for woody growth. Accordingly, a high-resolution grid of piezometer water wells would significantly lend and may be critical to our understanding the groundwater flow spatial characteristics and temporal dynamics and their impact on tree health.

Given that stand die-off is likely the result of a complex set of interacting factors, managers are faced with a difficult task when deciding how to proceed in order to maintain their cottonwood bosques. At the local site scale there are clearly environmental characteristics that reflect differences in survivorship among trees. The larger size of surviving trees suggests that particle size influenced the growth of the trees at this site throughout their lives. Simultaneous to influencing hydraulic conductivity and water holding capacity, particle size can influence both nutrient and contaminant cycling (Fuchs 2009).

Larger particles increase hydrologic conductivity and can transport contaminants without decreasing concentrations. Conversely, finer particles may represent nutrient rich environments due to increased sorption time (Fuchs 2009). To add to the complexity, *Populus deltoides* can have symbiotic relationships with ectomycorrhizal or vesicular-arbuscular mycorrhizal fungi that may also be influenced by such nutrient cycling and/or water availability (Pregitzer and Friend 1996). Meanwhile, tree growth variables including temperatures, precipitation, groundwater, and growing season also influence nutrient availability and element transport. These variables are not completely independent of one another (George 2014, Salehin et al. 2004) and deserve further investigation in the context of this stands die-off.

Our work shows that surviving trees were of similar ages but larger than their neighbors that died, suggesting a better localized growing environment. Scott et al. (2000) found similar results at one of their sites. I uncovered some-what weak correlations between basal area and the underlying particle sizes, which suggest that tree growth at Santa Ana is influenced by more than particle size/moisture relations. While patch density and tree age did not differ significantly between living and dead trees, there were some trends in tree density and sediment textures. Shafroth et al. (2000) found density to be inversely related to basal area in young cottonwoods. I saw trends that suggest that this pattern continues as trees age, and that sediment size may also influence tree densities. At the same time, some diminished growth in the ring index is expected due to age-related growth trends (Grissino-Mayer 2013) and cottonwoods are naturally short lived (Andersen 2015), yet in our data, age was not a characteristic associated with tree death. It seems possible that tree survival during a 10year drought might be due to the stronger growth of the surviving trees that led to higher carbon reserves and perhaps a greater resiliency to water stress.

Future work should further identify the impact of drought versus age in the slowed growth in rings between 2000 and 2015. The work in this study was done using ring series that were appropriate for comparisons between trees but are unable to reveal trends over a ring series without detrending the individual tree ring records for the influence of age-related growth. For example, without detrending it is not possible to identify if annual growth response to streamflow volumes changed at some point, or overtime. This would be expected if incision caused groundwater tables to drop as hypothesized. If ongoing incision is responsible for low growth, then it is necessary to identify how tree growth responded to streamflow prior to Cochiti Dam closure in 1973 when compared to tree growth post 1973 and such a long-term record will require the removal of age-related trends through detrending. Understanding if trees respond to seasonal water deliveries in the same way that they did prior to dam closure is an important question because it may help determine the water volumes needed and guide dam operations for maintenance of riverside vegetation (Philipsen et al. 2018).

Multiple seascorr windows analysis suggested that biological inertia was occurring where moisture received in prior years had an impact on the current year's tree growth response. That is, tree growth in a single year was significantly correlated with moisture received in previous monsoon seasons as well as responding to the monsoon streamflow during the current year. In future work, this type of trend will also need to be removed for year-to-year comparisons between trees or tree groups, e.g., to understand how live and dead trees responded differently to low summer and winter streamflow received in 1990 the effects of moisture received in 1989 on each ring series will need to be removed. This may be important to understanding carbon storage and resiliency as well as tree growth outcomes based on specific streamflow.

Future investigation of surficial fluvial geomorphic features and the influence of the alluvial fan adjacent to the die-off zone could lend insight to the formation of heterogeneity in the sediment profiles and its impact on tree growth and mortality. The subsurface heterogeneity identified by our work could explain why the two identified characteristics that differentiated trees that died from their neighbors who survived (the smaller basal area of the dead trees, and their coarser subtending sediments) are detectable only when comparing to the directly adjacent surviving trees. The lack of an absolute relationship between particle sizes and tree growth hints at variation in the hyporheic aquifer that may be related to a larger subsurface pattern. A nearest neighbor interpolation of the texture index suggests that the fan may be a source of fine material, while also being associated with the largest continuous area of die-off (Figure 23). But the interpolation was strongly influenced by two plots within this dead zone (plots 26 and 35) that had no paired living counterparts for comparison, The two plots had relatively high TI values, perhaps driven by finer layers that are concentrated in the middle and upper segments of the soil profile This suggests the fan may have added materials in a heterogeneous way, but further sampling is needed. It does underscore the need to consider the context of the larger landscape pattern in which these micro-sites are located

The drainage that feeds the alluvial fan is not only influencing sediment stratigraphy, but possibly water delivery as well. Changes to this drainage were not investigated in this study, but it is possible that water delivery from this source has been influenced by roadways and/or other modifications to hillslopes west of the site, causing a change in water delivery to the underlying sediments. It remains possible that particle size was playing a role in another process important to tree growth besides or in addition to water availability. It seems unlikely that the drainage somehow became a source of toxins detrimental to tree health, but element transport in this area remains unexamined. Investigation into such factors would require a nutrient availability study and could include analysis of nitrogen, potassium, and/or salts. Given that age was not a factor in die-off, local scale heterogeneity in the subsurface in not obviously a result of separate tree establishment events. Still geomorphological patterns of establishment exist on site with downstream trees being younger than those upstream (Figure 24). For future restoration efforts it may be pertinent to consider the growth of the younger trees on the downstream end, and how their growth patterns differ with the older upstream trees.

Distance to the channel was not considered for co-effects, and it would be informative to know if trees closer to the channel are larger than trees further out (particularly if coupled with groundwater sampling). This could shed light on the structure of the aquifer and could guide management decisions such as the placement of irrigation sources. While nutrient cycling and preferential flow paths are other important factors expected to have played a role in observed survivorship patterns, I have shown that collapse occurred during a time of low water availability. What precluded downstream terraces from experiencing similar die-off in cottonwood trees is unknown. Severe channel incision in this reach is thought to have exacerbated the observed water-stress and so it is possible that downstream cottonwood stands did not experience drought to the degree of the Santa Ana stand. Subsequent work could address the impact of incision on these trees through a comparison of annual growth pre and post dam-completion. This would necessitate detrending the rings to remove biological inertia and age-related growth patterns so that tree response to streamflow could be better isolated in the ring chronology.

If detrending was completed, a careful examination of the drought characteristics would need to be considered as changes in streamflow following dam-completion occurred at the same time as a shift in the prevailing climate conditions. The drought of 2012- 2013 was more severe than 2003-2004 and perhaps any prior drought which occurred during the life-span of these trees (USDA 2020). In conjunction with micro-site differences represented by differences in subsurface soil textures, the recent extreme may be key to explaining the stand collapse. This may still have been an idiosyncratic set of circumstances for this site, but alternatively it could foreshadow what might happen elsewhere in the Middle Rio Grande with increasing aridity. To address this, we suggest that, additional studies on tree growth, both up and downstream, in relation to soil moisture availability and channel changes is warranted to further understand this stand collapse and what it portends for the long-term trajectory of cottonwood riparian health in the Middle Rio Grande.

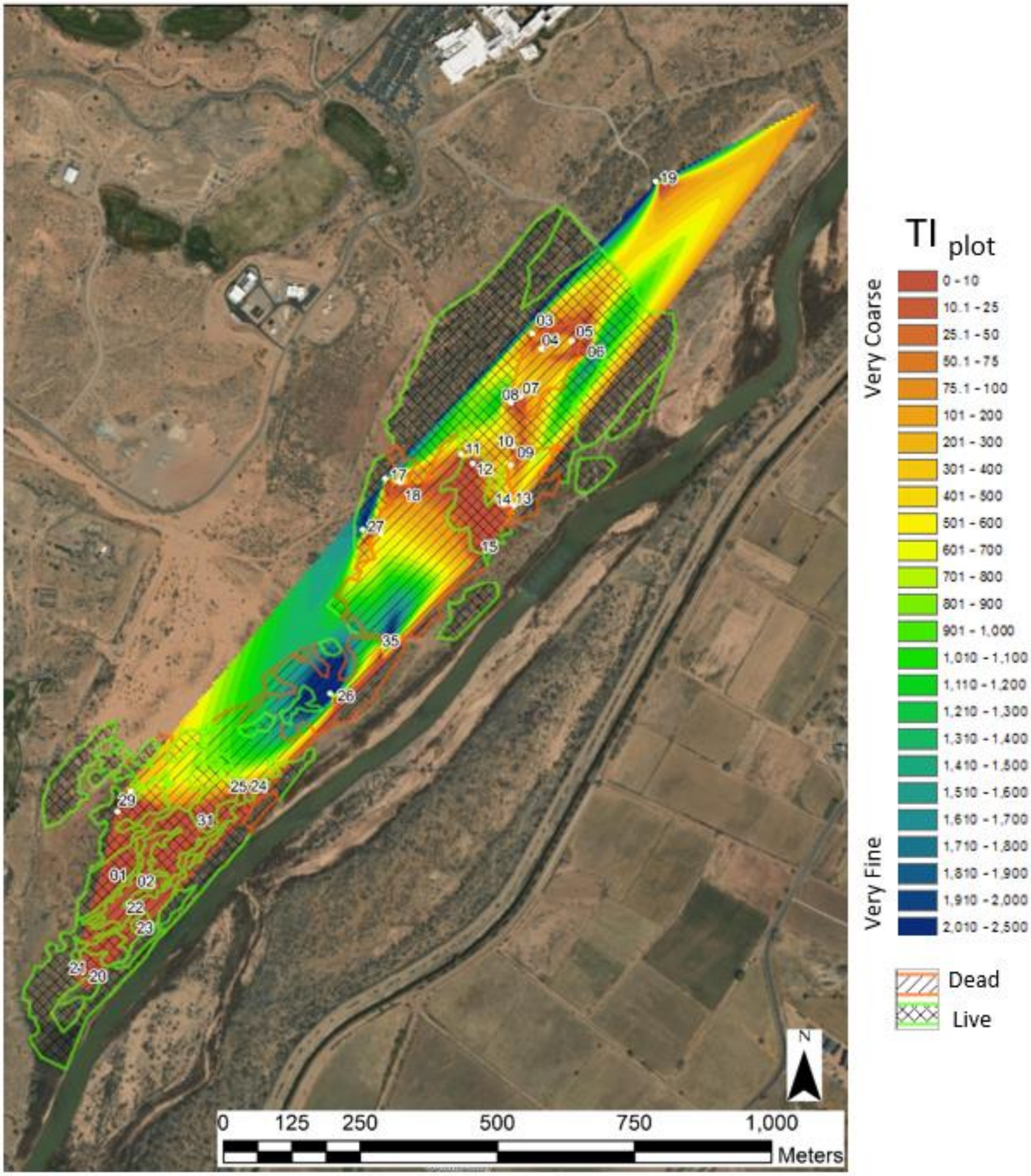

Figure 23. Natural neighbor interpolation of the texture index for the plot profiles. Plots 26 and 35 both represent dead plots that are located on the finest materials but be at the edge of any underlying alluvial fan. Additional sampling towards the center of the dead stand may uncover if there is an underlying influence due to the coarser alluvial fan materials.

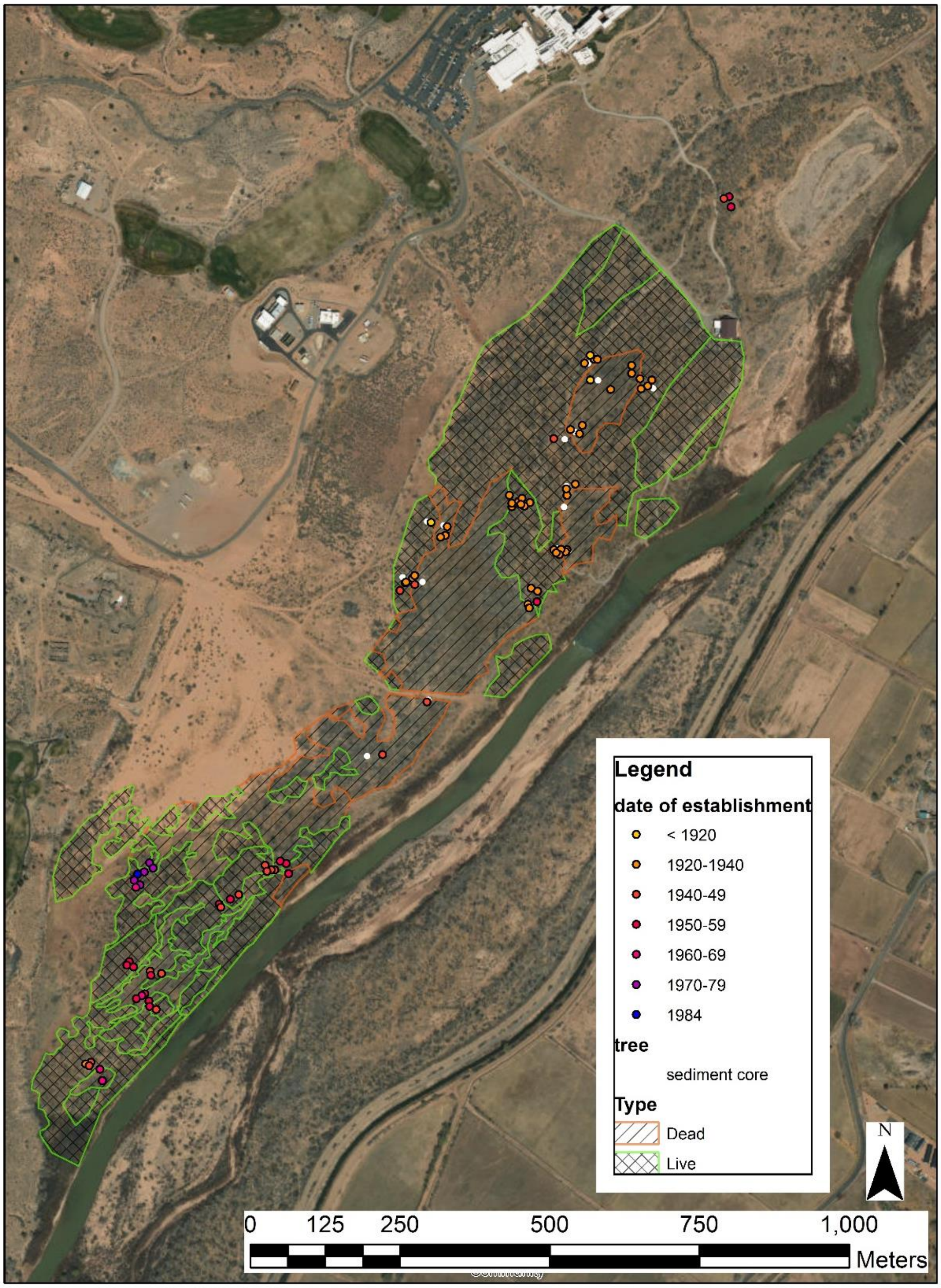

Figure 24. The establishment date of the subset of trees that were assigned ages shows that there is a larger pattern of establishment. Examination of historic aerial imager confirms that this patter is likely related to terrace formation.

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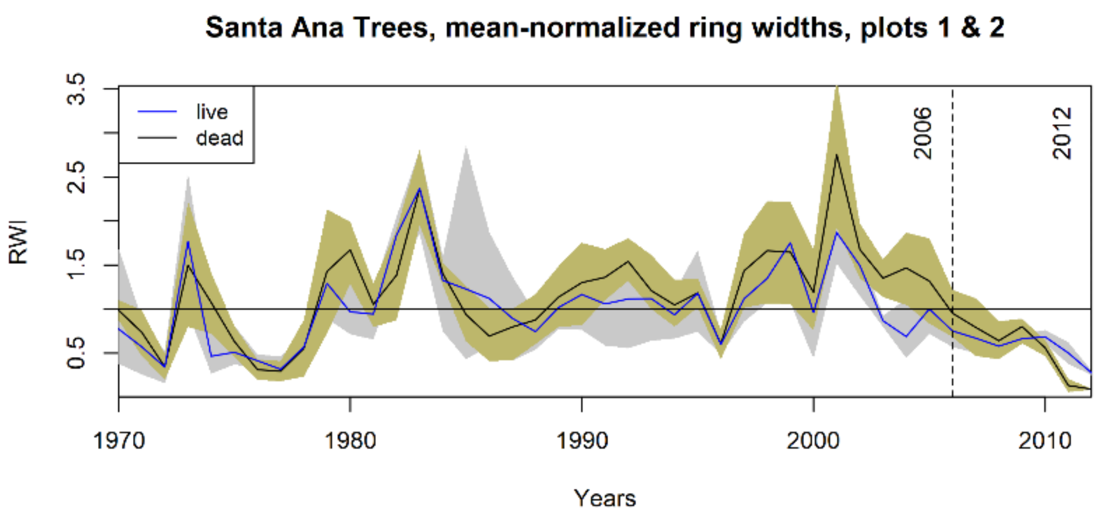
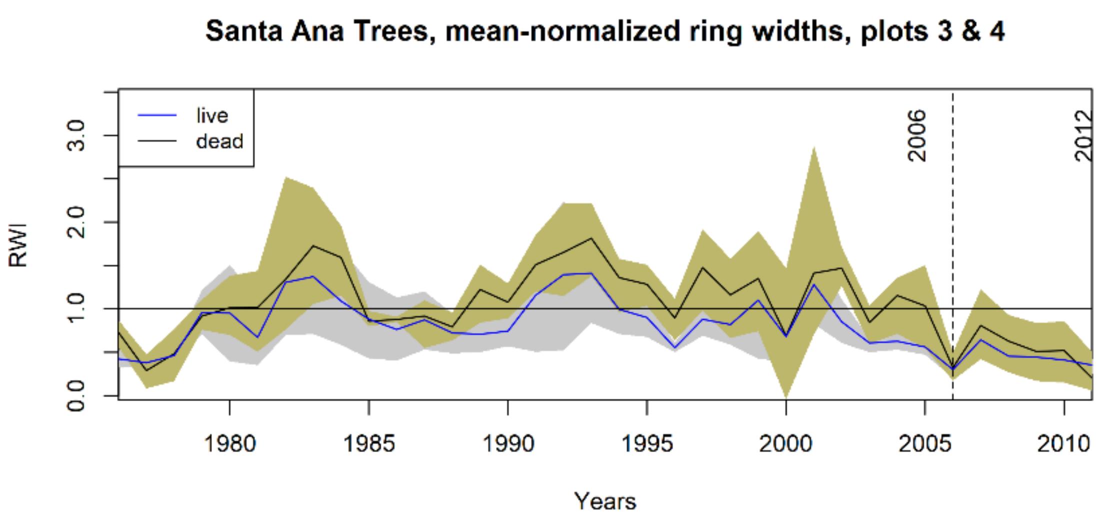
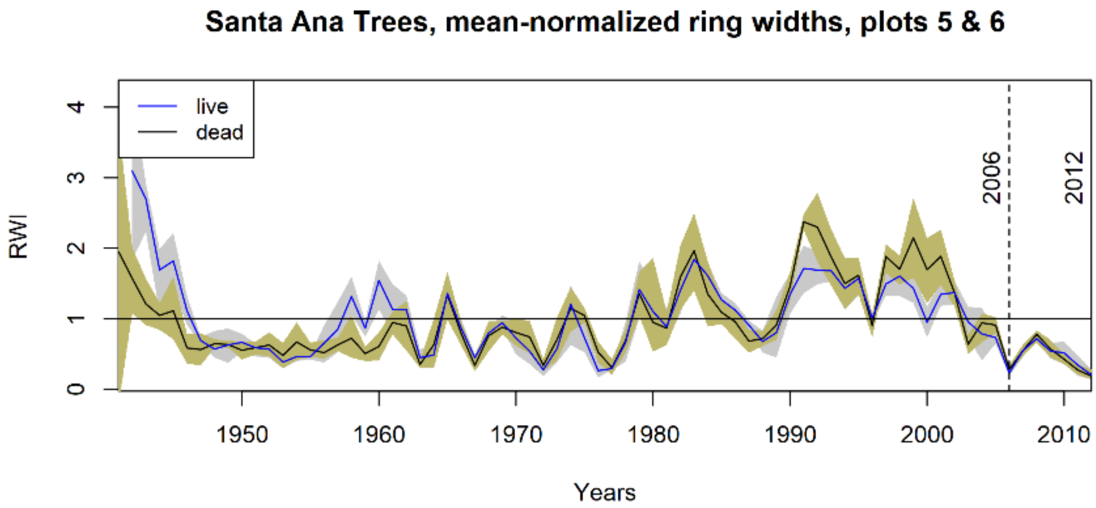
Appendices

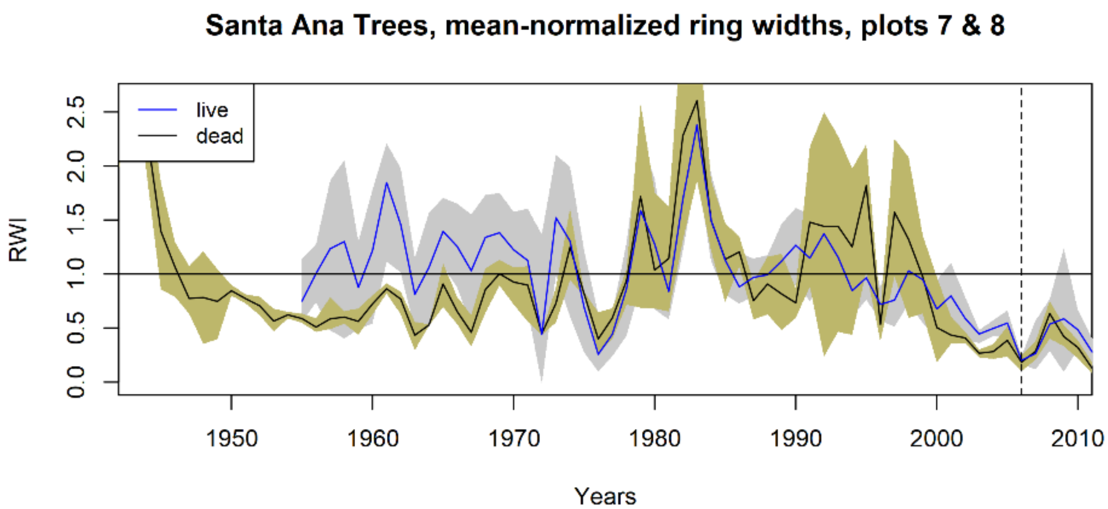
Appendix A: Visual Comparisons of Tree Growth

Comparisons of bootstrapped ring width indices for most of the paired plots.

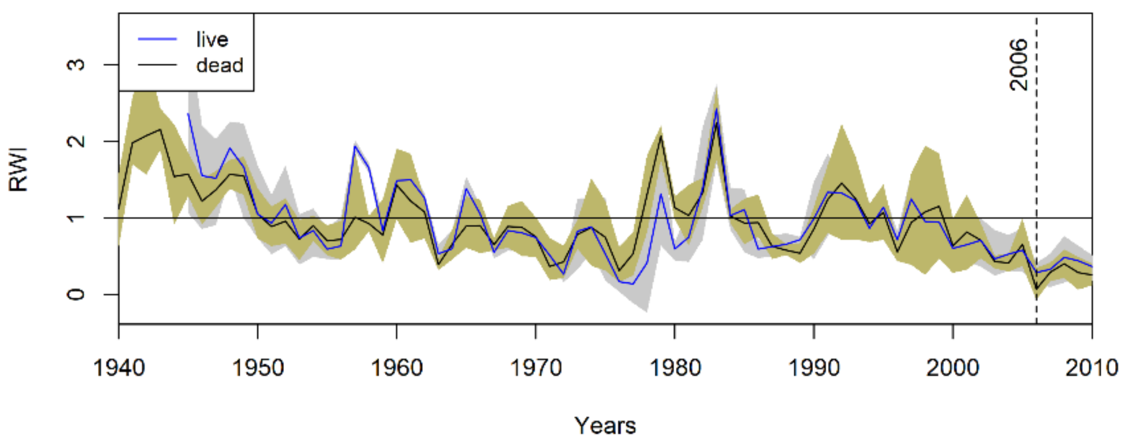




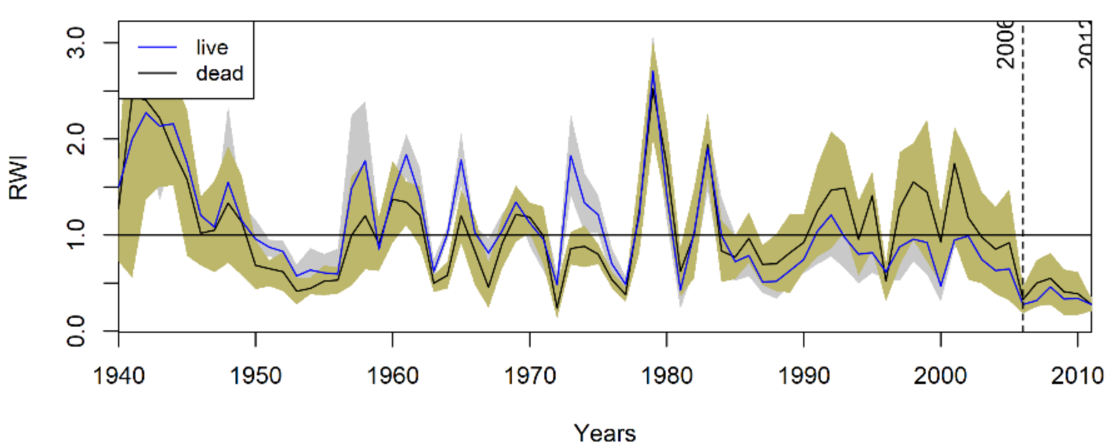

Santa Ana Trees, mean-normalized ring widths, plots 5 & 6
live
dead
2006
2012
RWI
Years

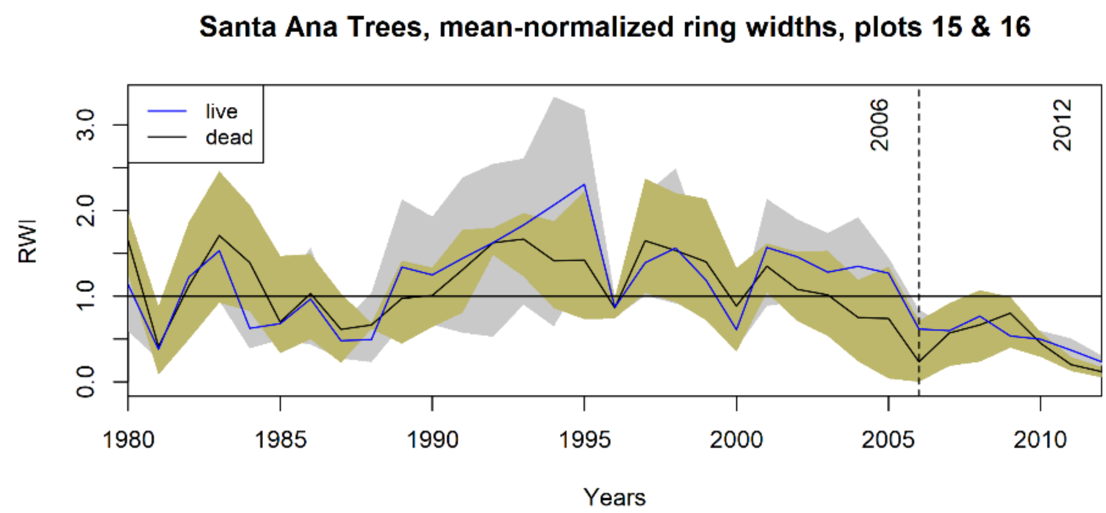

Santa Ana Trees, mean-normalized ring widths, plots 7 & 8
live
dead
RWI
Years

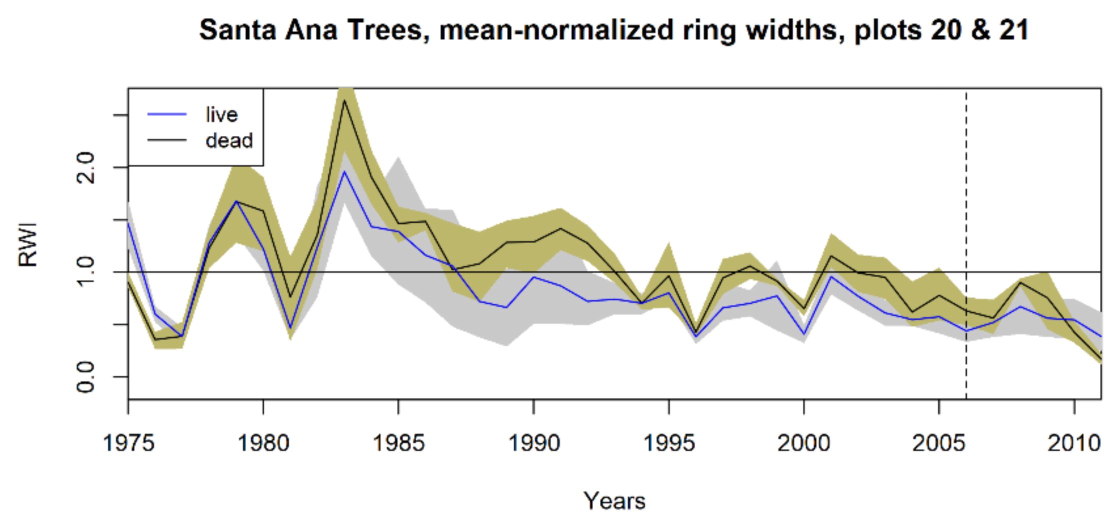
Santa Ana Trees, mean-normalized ring widths, plots 9 & 10

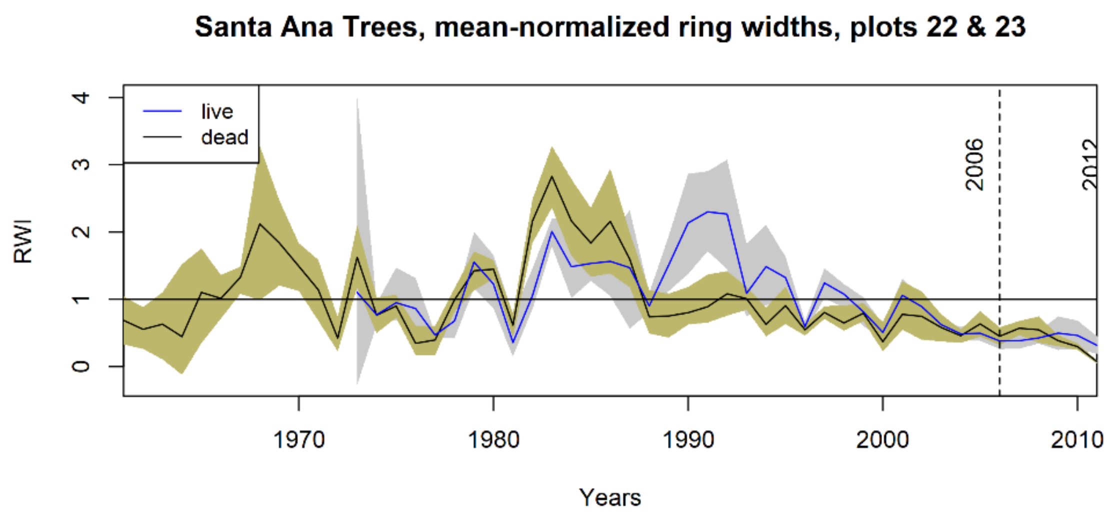


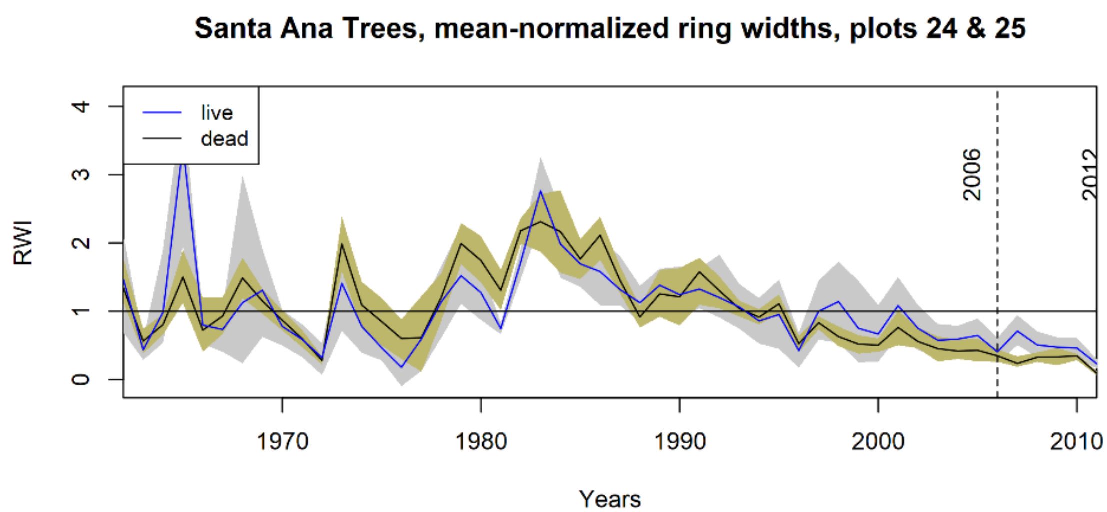
Santa Ana Trees, mean-normalized ring widths, plots 11 & 12

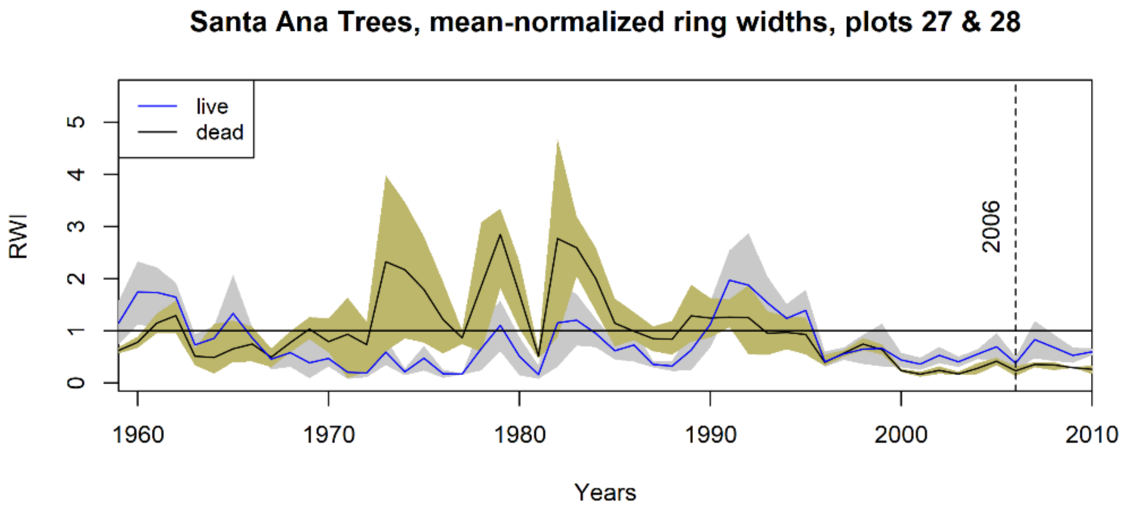


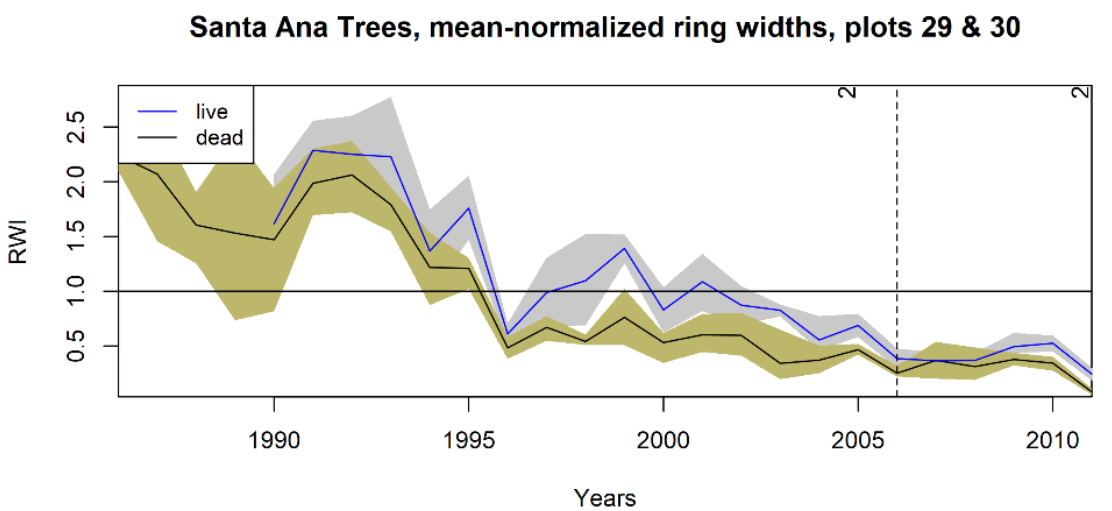

Santa Ana Trees, mean-normalized ring widths, plots 15 & 16
live
dead
2006
2012
RWI
0.0
1.0
2.0
3.0
1980
1985
1990
1995
2000
2005
2010
Years

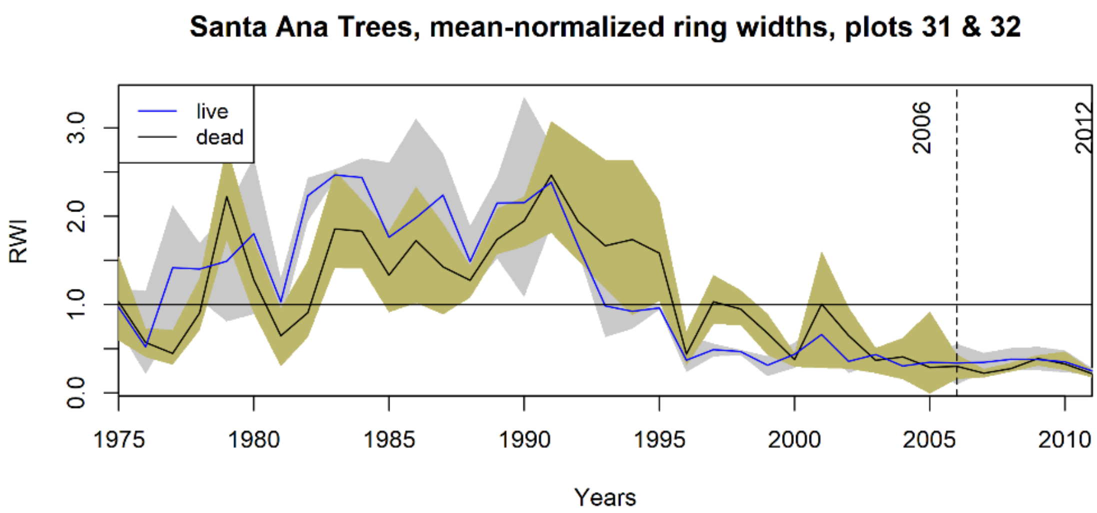

Santa Ana Trees, mean-normalized ring widths, plots 20 & 21
live
dead
RWI
0.0
1.0
2.0
1975
1980
1985
1990
1995
2000
2005
2010
Years


Santa Ana Trees, mean-normalized ring widths, plots 22 & 23
live
dead
2006
2012
RWI
0
1
2
3
4
1970
1980
1990
2000
2010
Years

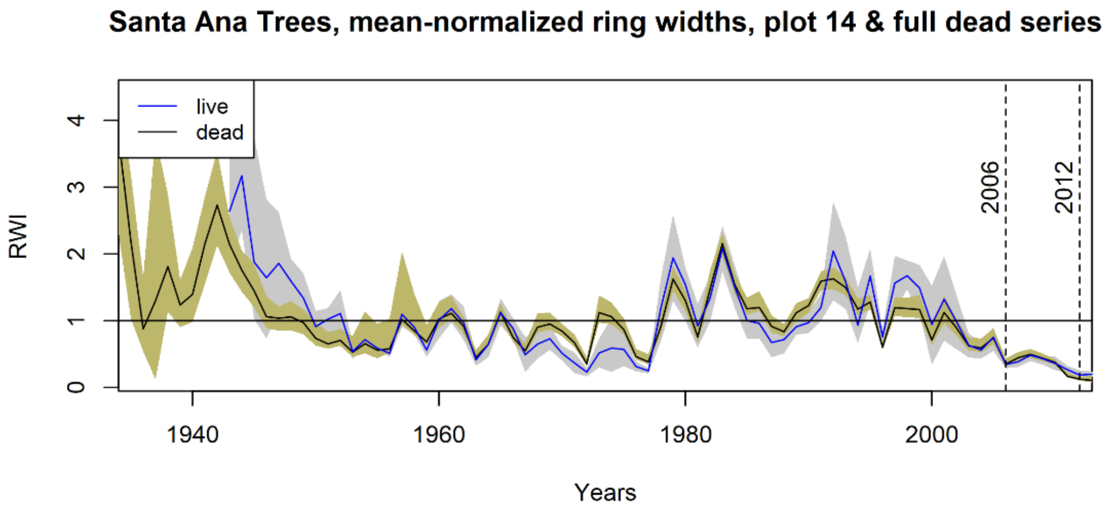

Santa Ana Trees, mean-normalized ring widths, plots 24 & 25
live
dead
2006
2012
RWI
0
1
2
3
4
1970
1980
1990
2000
2010
Years

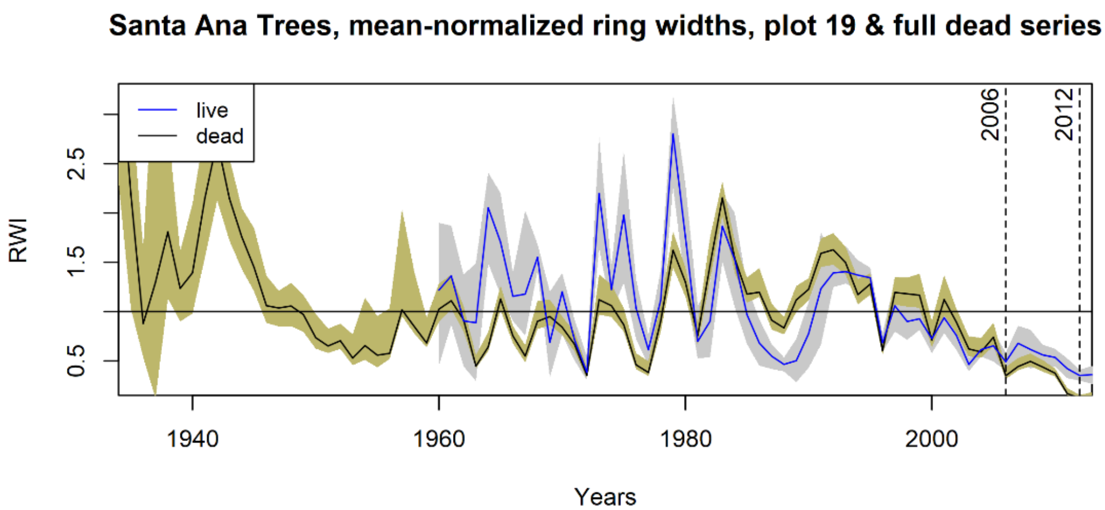

Santa Ana Trees, mean-normalized ring widths, plots 27 & 28
live
dead
2006
RWI
0
1
2
3
4
5
1960
1970
1980
1990
2000
2010
Years

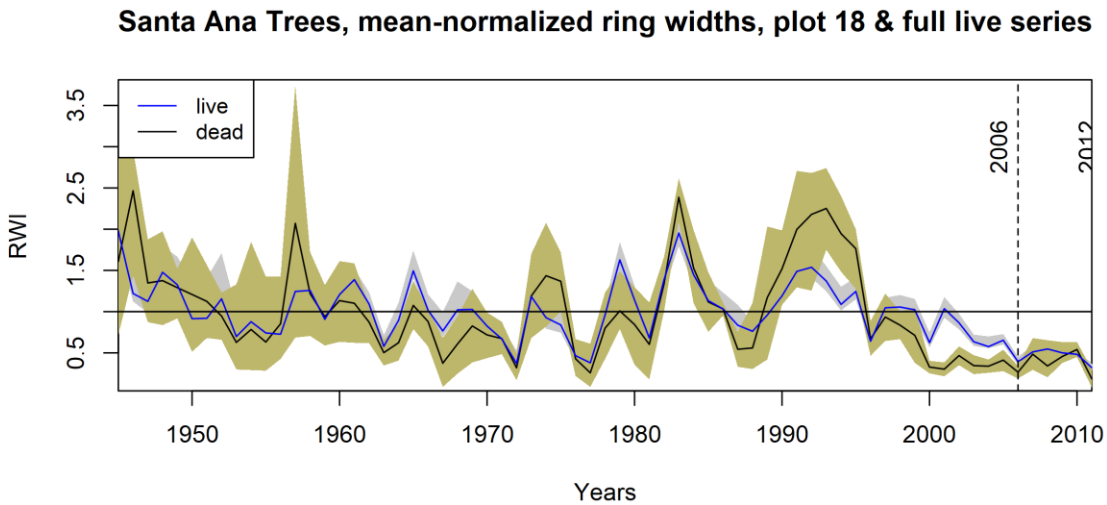

Santa Ana Trees, mean-normalized ring widths, plots 29 & 30
live
dead
2
2
RWI
0.5
1.0
1.5
2.0
2.5
1990
1995
2000
2005
2010
Years


Santa Ana Trees, mean-normalized ring widths, plots 31 & 32
live
dead
2006
2012
RWI
0.0
1.0
2.0
3.0
1975
1980
1985
1990
1995
2000
2005
2010
Years

Comparison of unpaired or selected plots with the dead ring chronology.


Santa Ana Trees, mean-normalized ring widths, plot 14 & full dead series
live
dead
2006
2012
RWI
0
1
2
3
4
1940
1960
1980
2000
Years

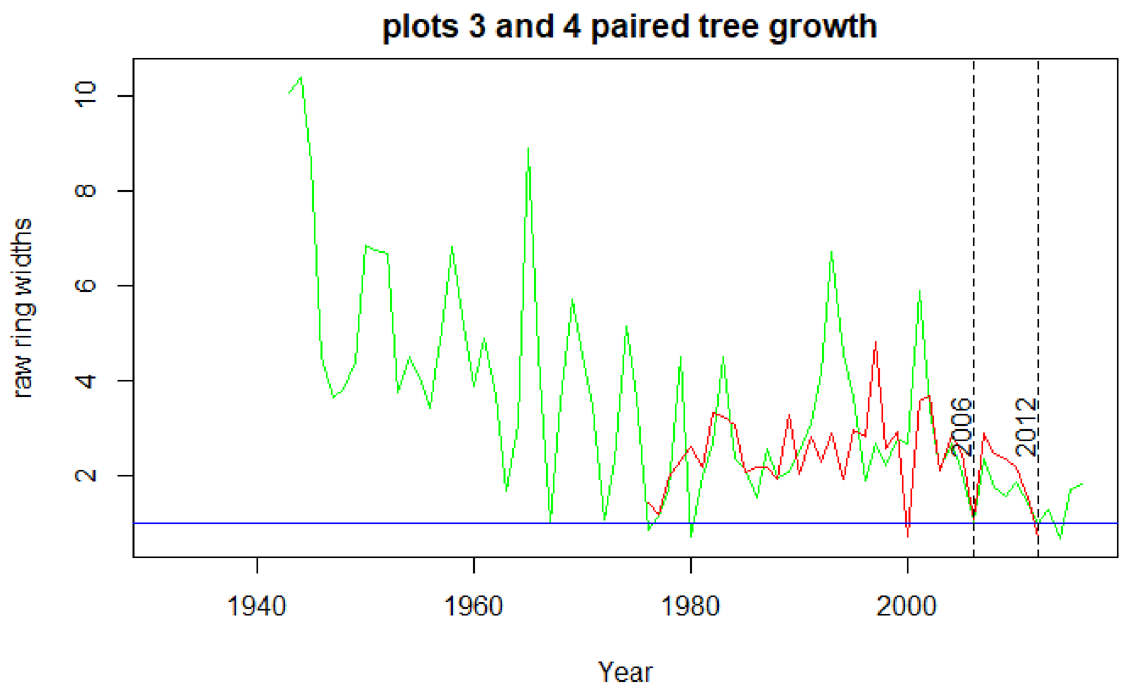

Santa Ana Trees, mean-normalized ring widths, plot 19 & full dead series
live
dead
2006
2012
RWI
0.5
1.5
2.5
1940
1960
1980
2000
Years

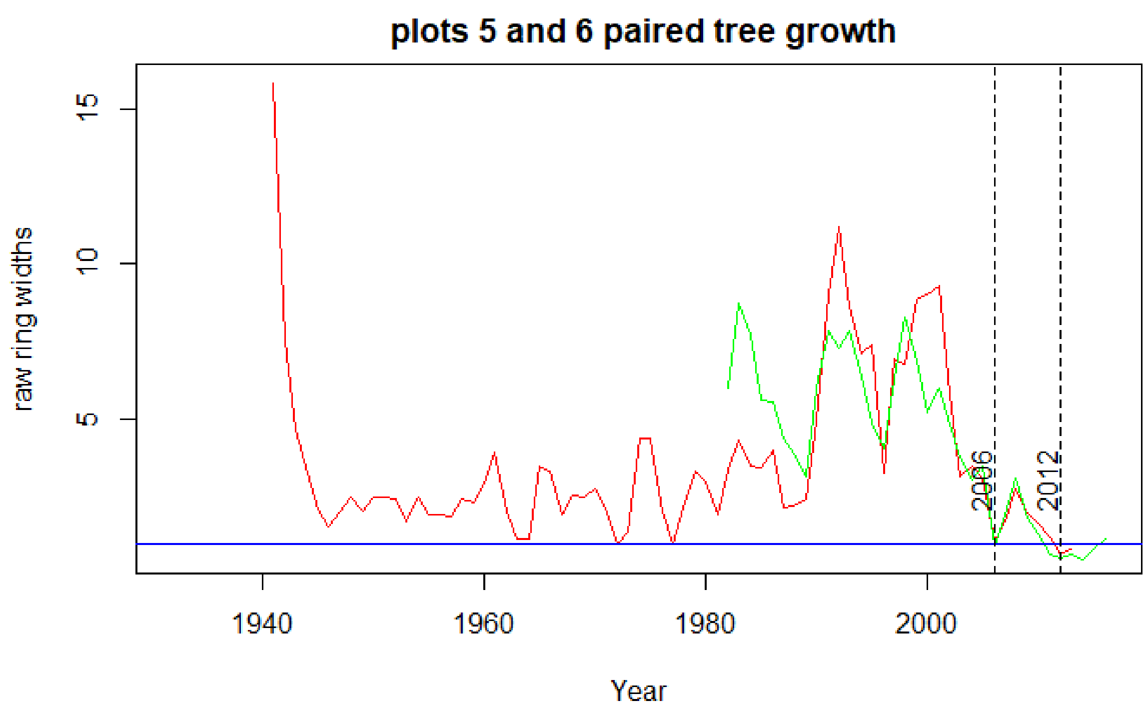

Santa Ana Trees, mean-normalized ring widths, plot 18 & full live series
live
dead
2006
2012
RWI
0.5
1.5
2.5
3.5
1950
1960
1970
1980
1990
2000
2010
Years

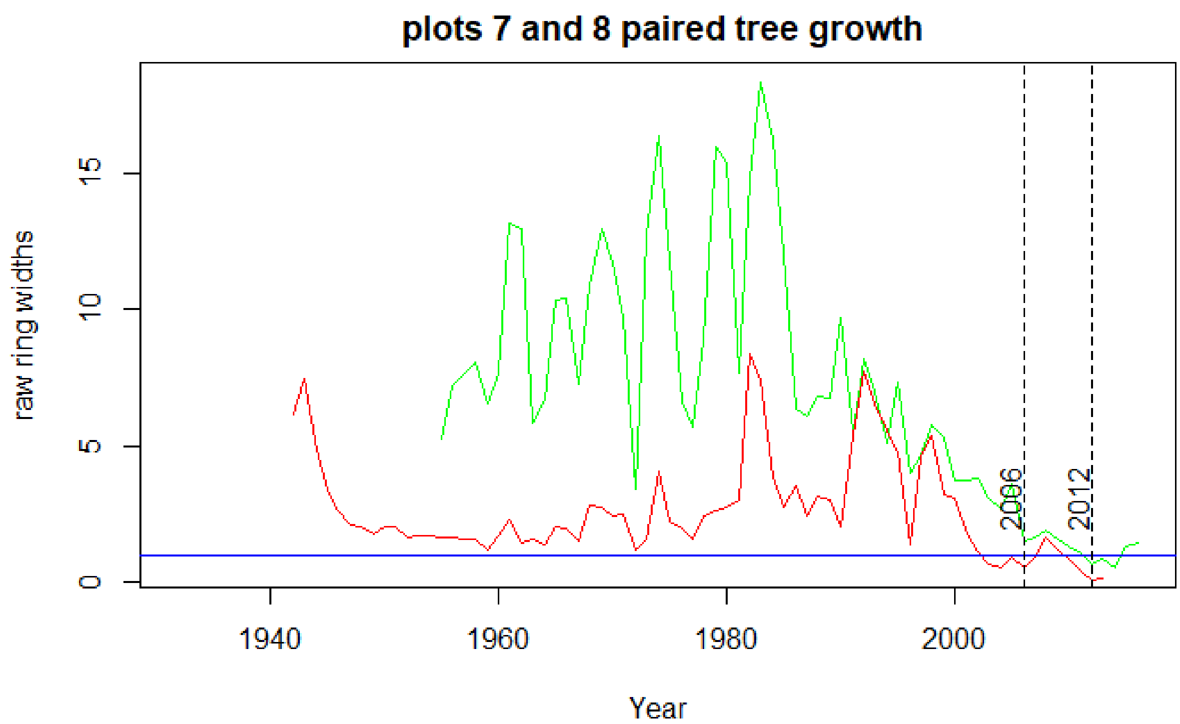
Comparisons of paired trees, trees located directly adjacent to one another.

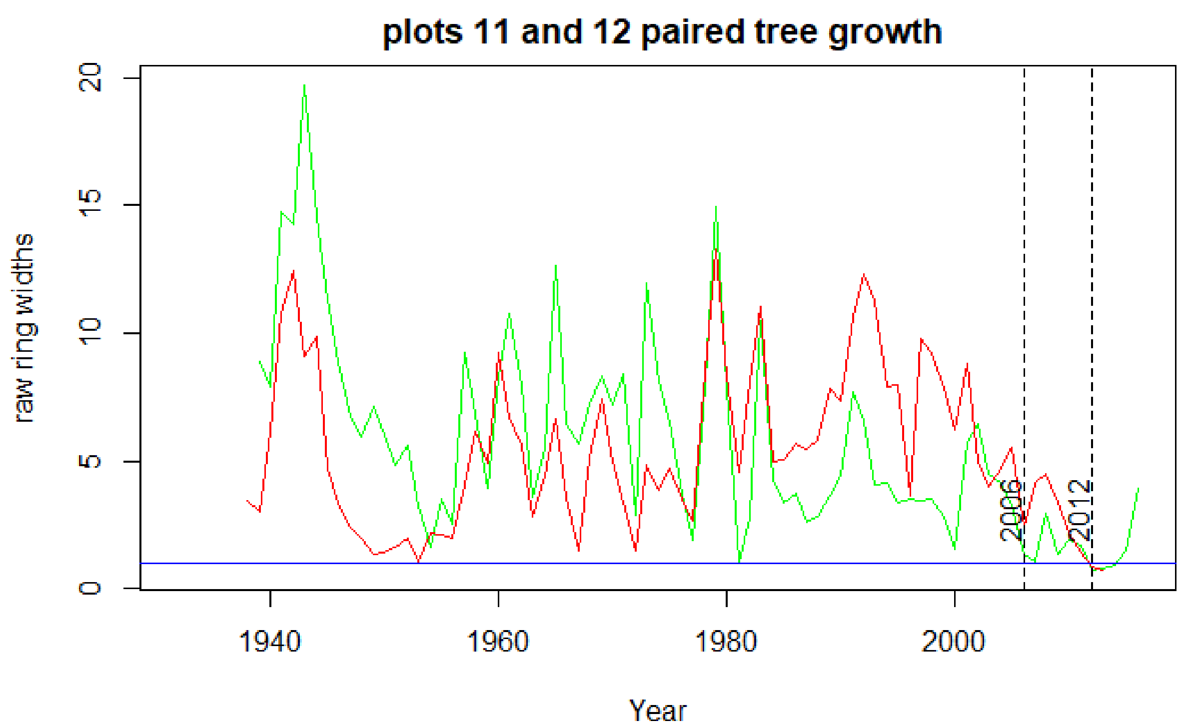
These are only available for some pairs and are not available for plots 1&2, 9&10, 13&14, 15&16, and 17&18.

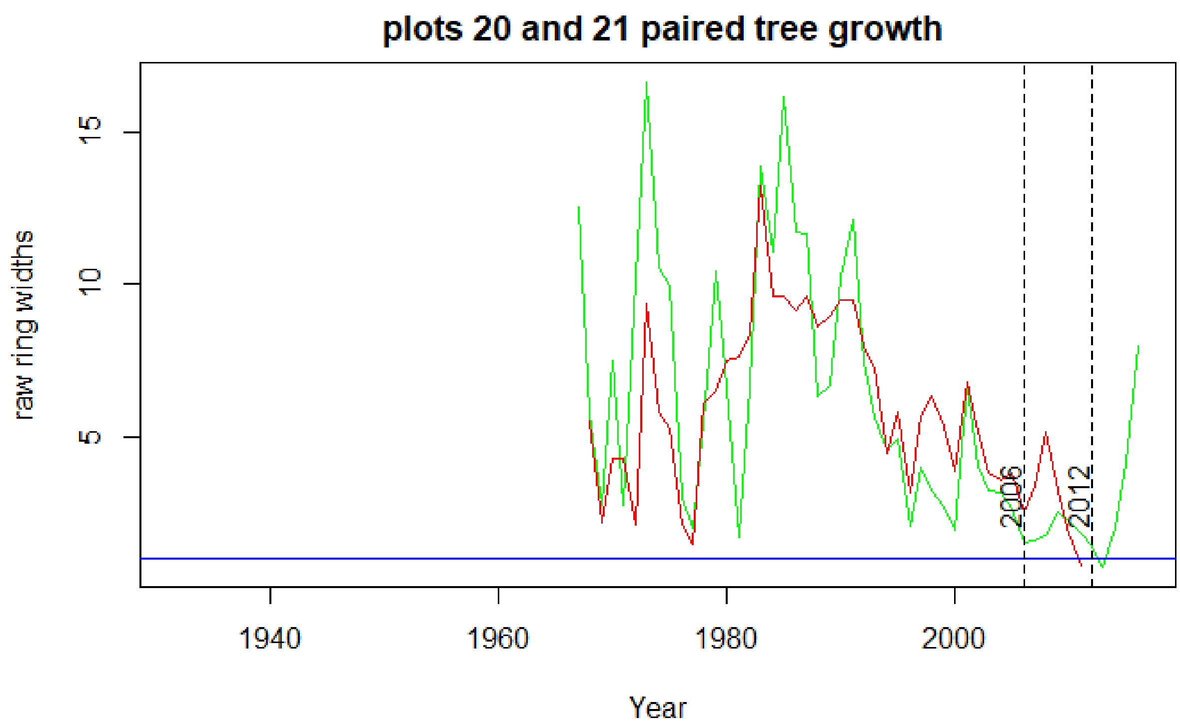
The live pair is shown in green, whereas the dead pair is in red.

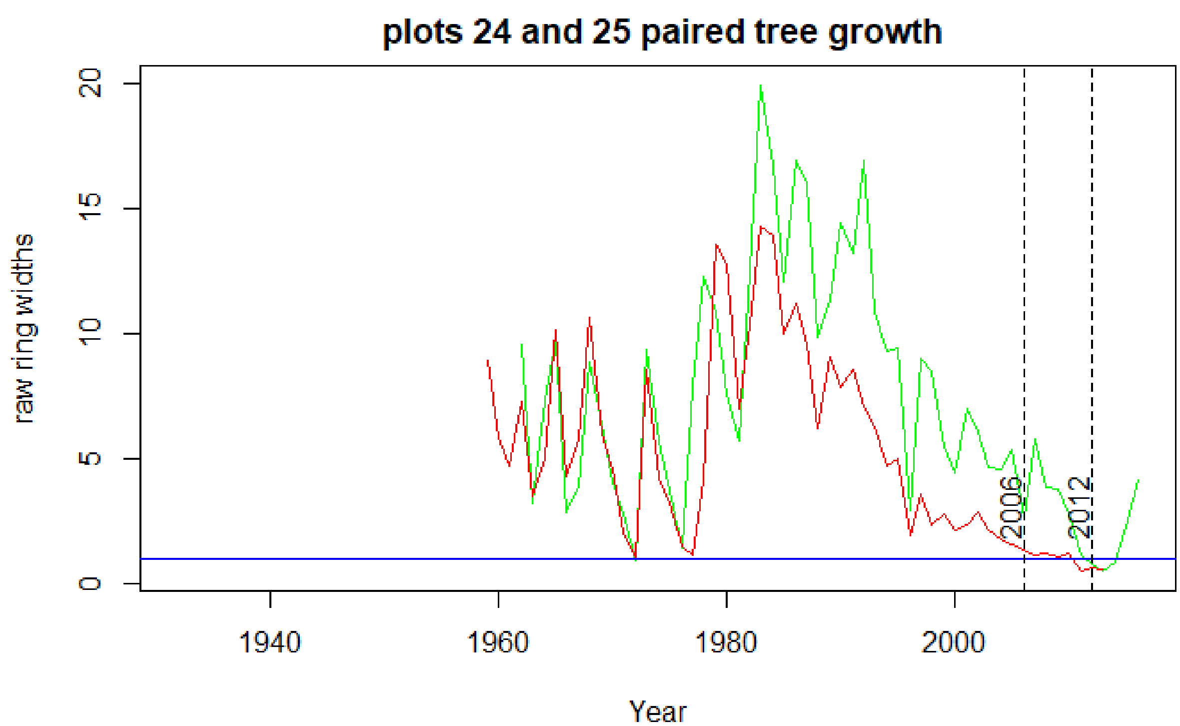


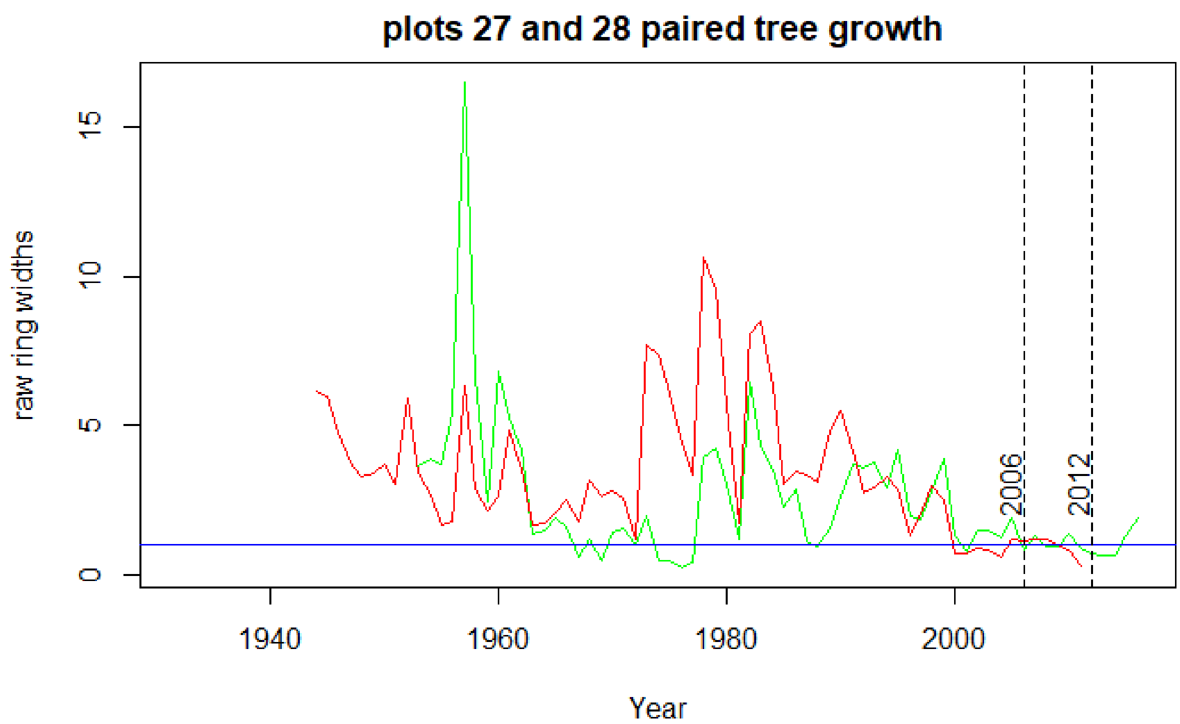


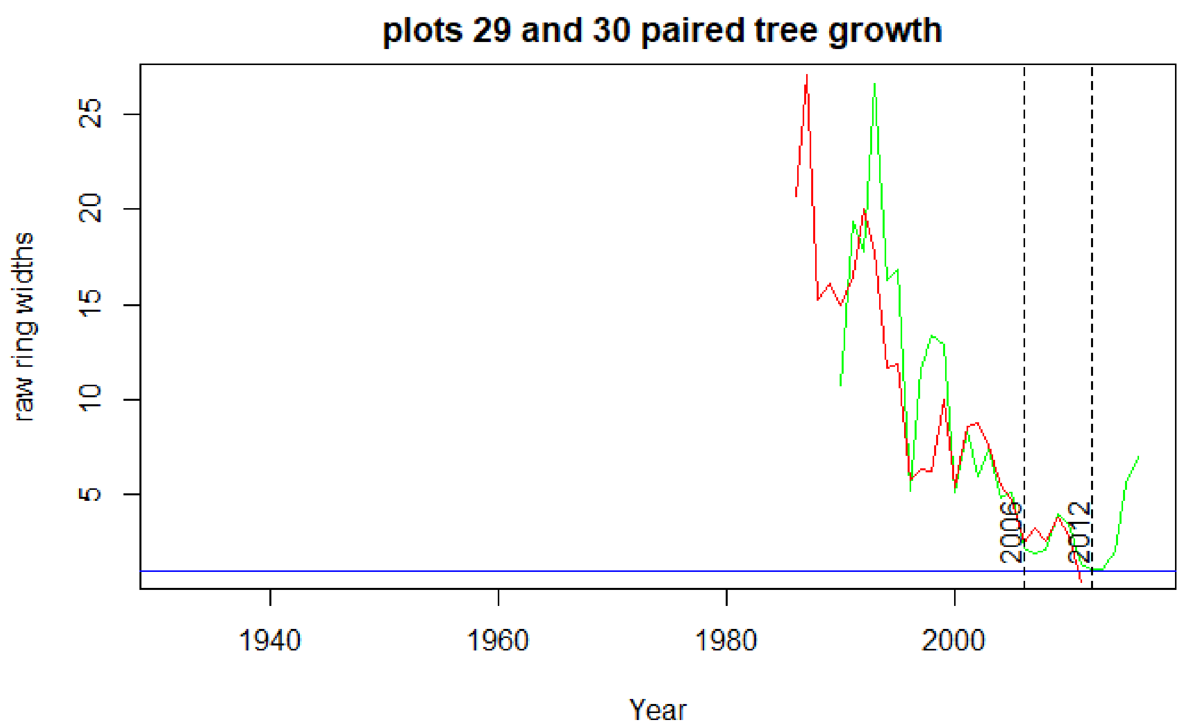

plots 7 and 8 paired tree growth
raw ring widths
0
5
10
15
1940
1960
1980
2000
Year
2006
2012

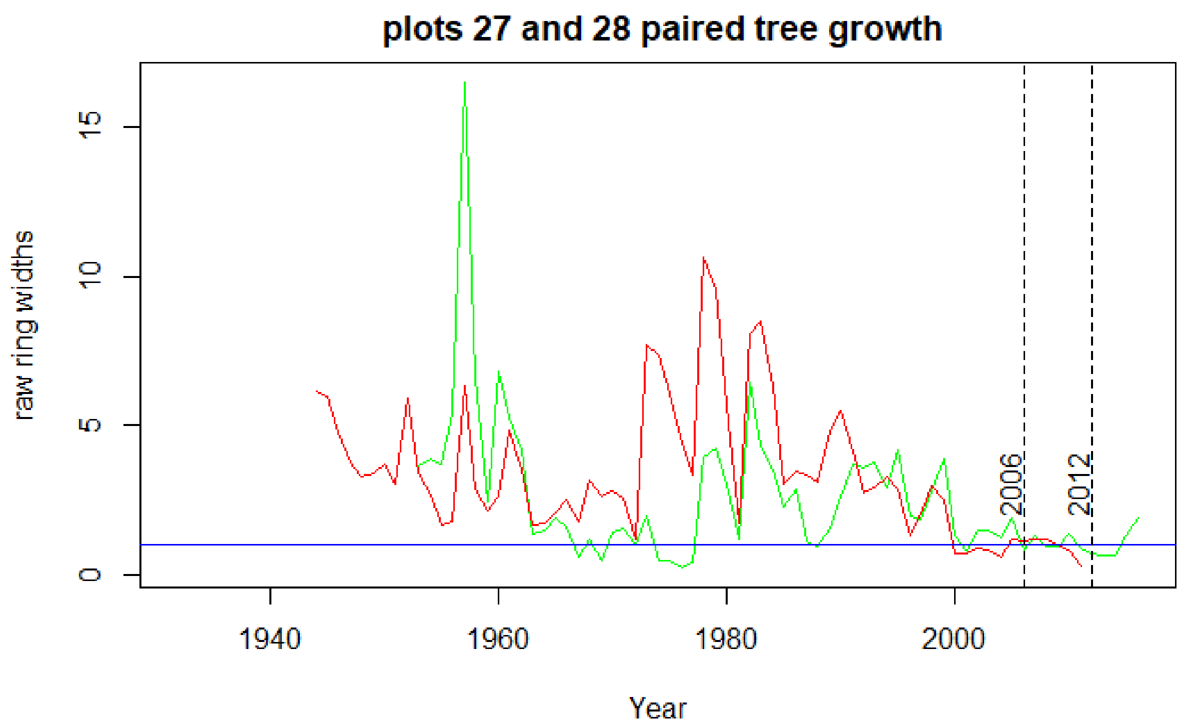

plots 11 and 12 paired tree growth
raw ring widths
0
5
10
15
20
1940
1960
1980
2000
Year
2006
2012

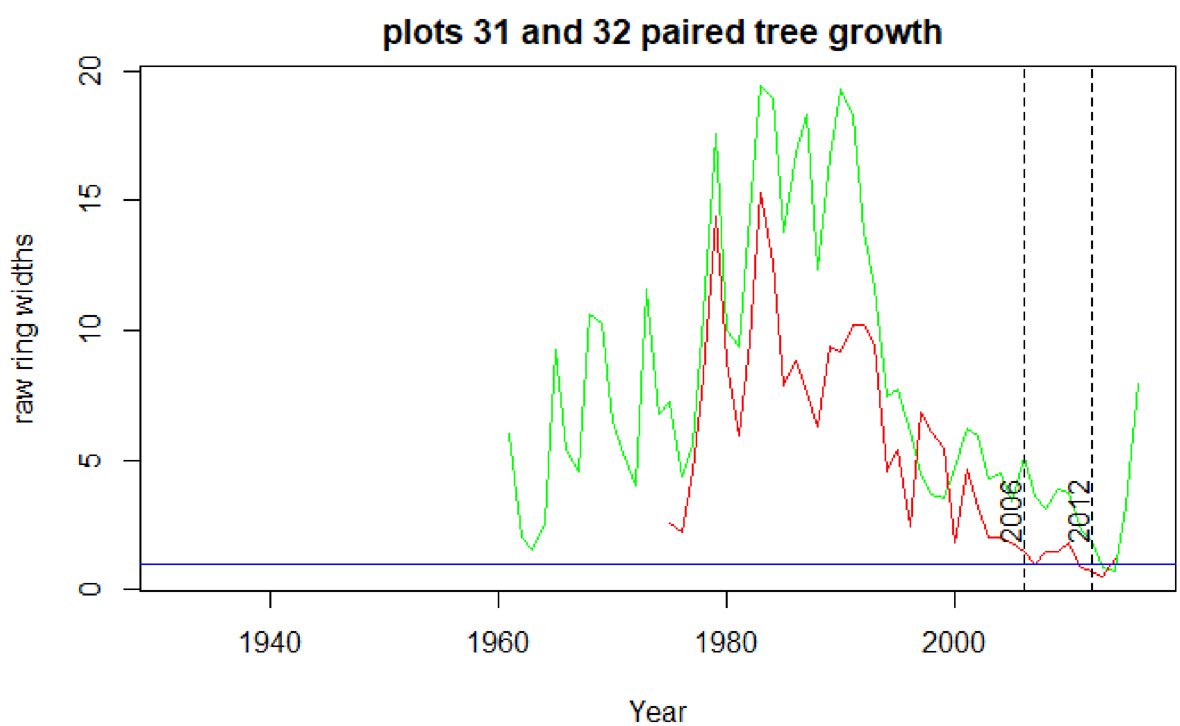

plots 20 and 21 paired tree growth
raw ring widths
5
10
15
1940
1960
1980
2000
Year
2006
2012


plots 24 and 25 paired tree growth
raw ring widths
0
5
10
15
20
1940
1960
1980
2000
Year
2006
2012


plots 27 and 28 paired tree growth
raw ring widths
0
5
10
15
1940
1960
1980
2000
Year
2006
2012

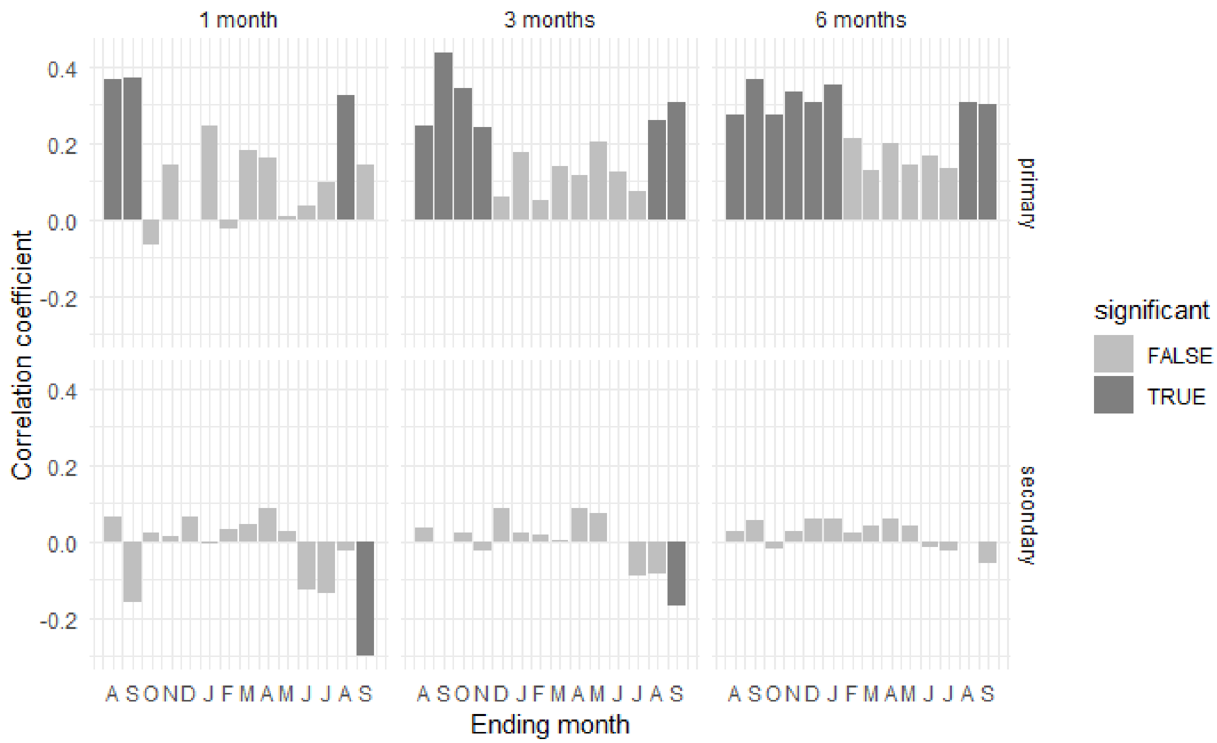

plots 29 and 30 paired tree growth
raw ring widths
5
10
15
20
25
1940
1960
1980
2000
Year
2006
2012


plots 27 and 28 paired tree growth
raw ring widths
0
5
10
15
1940
1960
1980
2000
Year
2006
2012

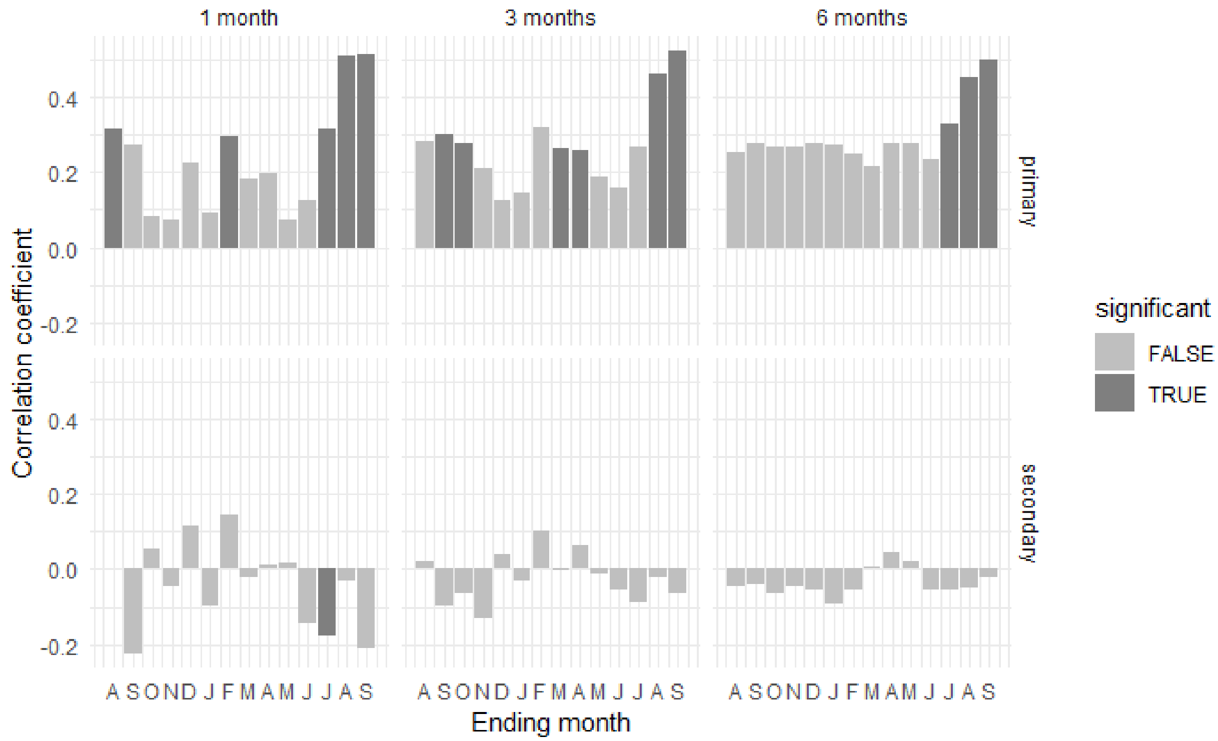

plots 31 and 32 paired tree growth
raw ring widths
0
5
10
15
20
1940
1960
1980
2000
Year
2006
2012

Seascorr analyses:

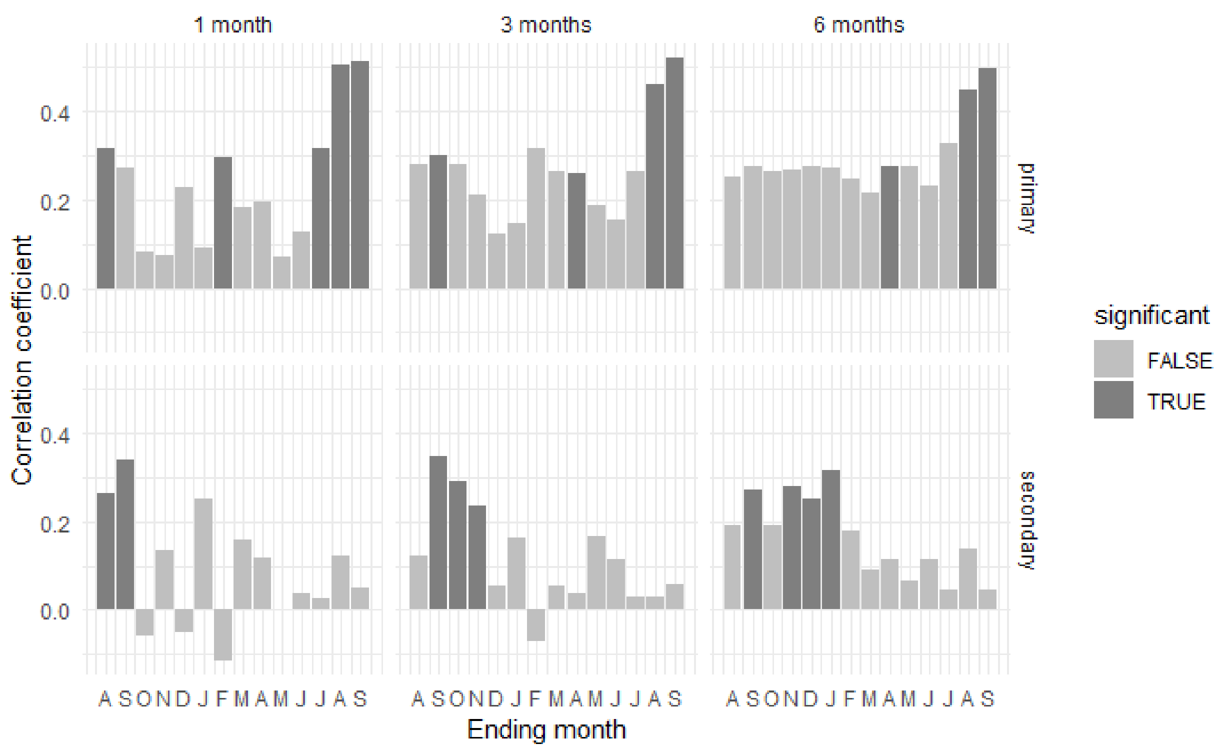
The entire mean-normalized ring chronology is correlated with 1) the primary variable. These are the 3 plots in the upper positions. When the correlation with the primary variable is removed, widths are correlated with a 2)secondary variable. These are the 3 plots in the lower positions.



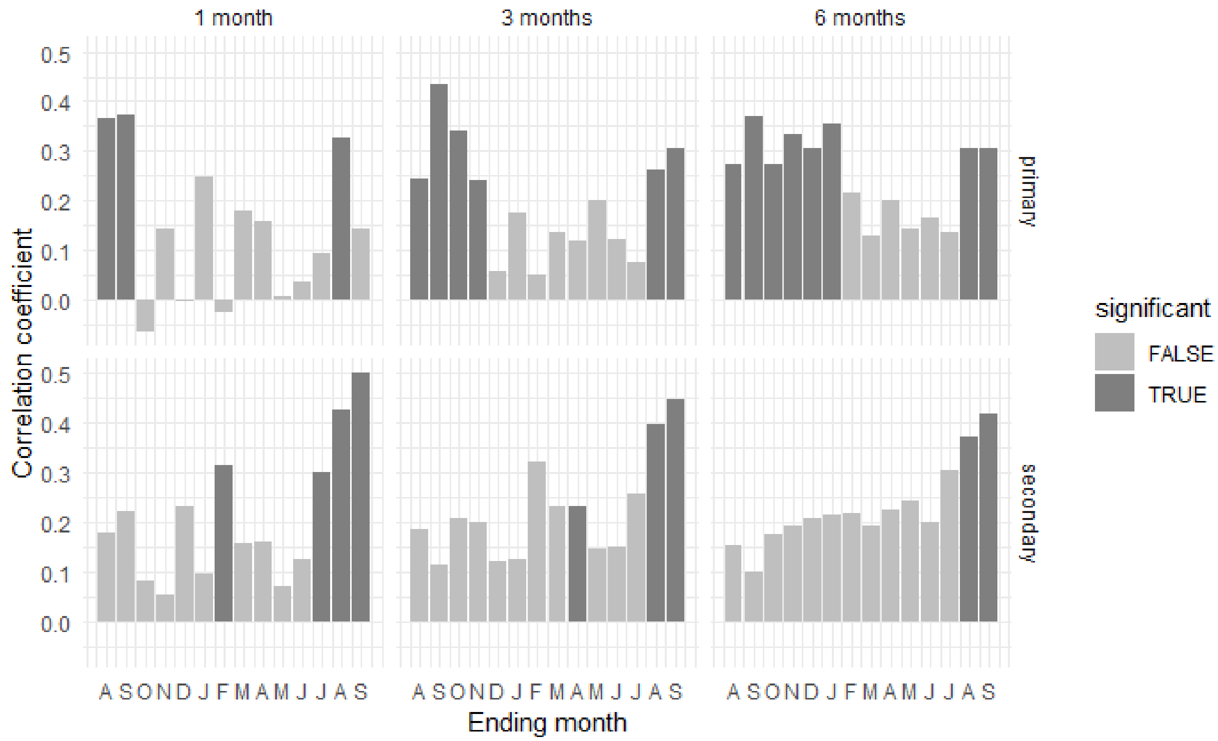
1) Average precipitation; 2) Max temperature.



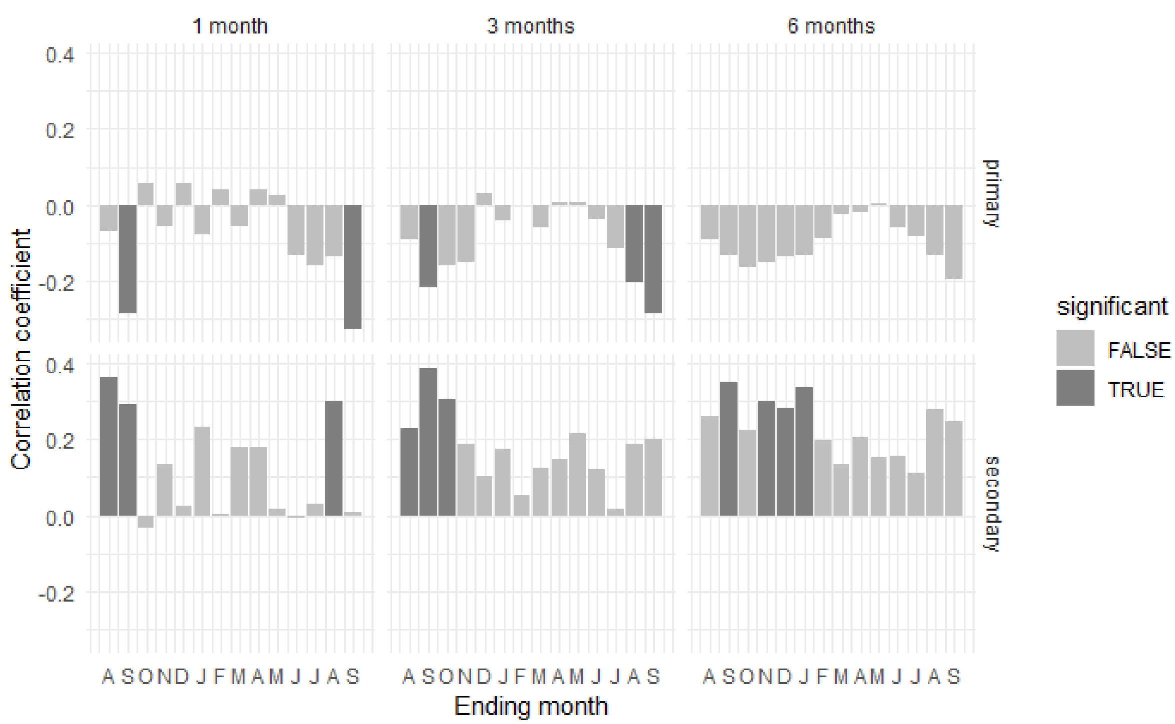
1) Average streamflow ; 2) Max temperature.



1) Average streamflow ; 2) Average precipitation



1) Average precipitation ; 2) Average streamflow



1) Max termperature; 2) Average precipitation

Appendix B: Raw Data

SiteID	Plot	TREE	CORE	EID	Brkdpth_mm	Pith	Wdth_arc
17SA001	1	NE	A	NE01A2		F	
17SA001	1	NE	B	NE01B2		N	21.74
17SA001	1	NW	A	NW01A2		N	15.408
17SA001	1	NW	B	NW01B2		N	39.482
17SA001	1	SE	A	SE01A2		N	
17SA001	1	SE	B	SE01B2		N	22.07
17SA001	1	SW	A	SW01A2		N	4.28
17SA001	1	SW	B	SW01B2		F	
17SA002	2	NE	L	NE02L1		F	34.938
17SA002	2	NE	T	NE02T1		F	
17SA002	2	NW	L	NW02L1		P	3.028
17SA002	2	NW	T	NW02T1		P	5.936
17SA002	2	SE	L	SE02L1		N	6.346
17SA002	2	SE	T	SE02T1		N	
17SA002	2	SW	L	SW02L1		N	26.848
17SA002	2	SW	T	SW02T1		N	
17SA003	3	NE	A	NE03A2	5.3	N	30.063
17SA003	3	NE	B	NE03B2	4.9	F	
17SA003	3	NW	A	NW03A2	5.12	N	
17SA003	3	NW	B	NW03B2	5.1	N	33.754
17SA003	3	SE	A	SE03A2	3.2	N	
17SA003	3	SE	B	SE03B2	4.1	F	
17SA003	3	SW	A	SW03A2	4.9	N	50.936
17SA003	3	SW	B	SW03B2	5.1	N	
17SA004	4	NW	L	NW04L1		F	
17SA004	4	SE	L	SE04L2		N	8.526
17SA004	4	SE	T	SE04T2		N	
17SA004	4	SW	L	SW04L1		N	
17SA004	4	SW	T	SW04T1		F	
17SA005	5	NE	L	NE05L1		F	
17SA005	5	NE	T	NE05T1		F	
17SA005	5	NW	L	NW05L1		N	55.536
17SA005	5	NW	T	NW05T1		N	
17SA005	5	SE	L	SE05L2		N	17.084
17SA005	5	SE	T	SE05T2		N	15.428
17SA005	5	SW	L	SW05L1		N	3.11
17SA005	5	SW	T	SW05T1		N	
17SA006	6	NE	A	NE06A2	4	P	
17SA006	6	NE	B	NE06B2	4.6	N	
17SA006	6	NW	A	NW06A2	5.3	F	
17SA006	6	NW	B	NW06B2	6.3	F	
17SA006	6	SE	A	SE06A2	3	N	24.556
17SA006	6	SE	B	SE06B1		N	46.698
17SA006	6	SW	A	SW06A2	4.5	N	
17SA006	6	SW	B	SW06B2	4	N	
17SA007	7	NE	L	NE07L1		P	

SiteID	Plot	TREE	CORE	EID	Brkdpth_mm	Pith	Wdth_arc
17SA007	7	NE	T	NE07T1		P	
17SA007	7	NW	L	NW07L1		P	7.97
17SA007	7	NW	T	NW07T1		P	9.278
17SA007	7	SE	L	SE07L1		N	9.284
17SA007	7	SE	T	SE07T1		N	
17SA008	8	NE	A	NE08A1	4.1	F	
17SA008	8	NE	B	NE08B1	4.3	F	
17SA008	8	NW	A	NW08A2	3	N	34.24
17SA008	8	NW	B	NW08B2	3.5	N	11.684
17SA008	8	SE	A	SE08A2	4	F	
17SA008	8	SW	A	SW08A2		F	
17SA008	8	SW	B	SW08B2		F	
17SA009	9	NE	L	NE09L1		MV	
17SA009	9	NE	T	NE09T1		MV	
17SA009	9	NW	L	NW09L1		N	31.342
17SA009	9	NW	T	NW09T2		N	
17SA009	9	SE	L	SE09L2		MV	
17SA009	9	SE	T	SE09T2		MV	
17SA009	9	SW	L	SW09L2		MV	
17SA009	9	SW	T	SW09T2		MV	
17SA010	10	NE	A	NE10A2	5.2	P	
17SA010	10	NE	B	NE10B2	4.4	N	25.722
17SA010	10	NW	A	NW10A2	4.8	N	
17SA010	10	NW	B	NW10B2	4.5	N	59.808
17SA010	10	SE	A	SE10A1	4.5	N	
17SA010	10	SE	B	SE10B1	4.5	N	
17SA010	10	SW	A	SW10A2	3.5	N	15.644
17SA010	10	SW	B	SW10B2	3.8	N	13.88
17SA011	11	NE	L	NE11L1		P	11.894
17SA011	11	NE	T	NE11T1		MV	
17SA011	11	NW	L	NW11L2		P	3.868
17SA011	11	NW	T	NW11T2		P	4.728
17SA011	11	SE	L	SE11L1		P	2.792
17SA011	11	SE	T	SE11T1		P	2.188
17SA011	11	SW	L	SW11L1		P	14.604
17SA011	11	SW	T	SW11T1		P	15.218
17SA012	12	NE	A	NE12A1	4.3	N	10.428
17SA012	12	NE	B	NE12B1	4	F	
17SA012	12	NW	A	NW12A2	4.5	N	
17SA012	12	NW	B	NW12B2	4.5	N	
17SA012	12	SE	A	SE12A2	5	N	12.524
17SA012	12	SE	B	SE12B2	4.7	N	
17SA012	12	SW	A	SW12A2	5.1	N	
17SA012	12	SW	B	SW12B2	4.25	N	
17SA013	13	NE	L	NE13L1		P	4.996
17SA013	13	NE	T	NE13T1		P	6.174

SiteID	Plot	TREE	CORE	EID	Brkdpth_mm	Pith	Wdth_arc
17SA013	13	SE	L	SE13L1		N	39.528
17SA013	13	SE	T	SE13T1		N	
17SA014	14	NE	A	NE14A2	3.6	N	
17SA014	14	NE	B	NE14B2	4.6	N	33.53
17SA014	14	NW	A	NW14A2	5.2	N	92.298
17SA014	14	NW	B	NW14B2	5.3	N	
17SA014	14	SE	A	SE14A1	4	N	26.096
17SA014	14	SE	B	SE14B2	4.5	N	
17SA014	14	SW	A	SW14A2	5.6	N	45.906
17SA014	14	SW	B	SW14B1	6.2	N	41.638
17SA015	15	NE	L	NE15L2		N	18.776
17SA015	15	NE	T	NE15T1		N	
17SA015	15	NW	L	NW15L1		P	10.238
17SA015	15	NW	T	NW15T1		P	
17SA015	15	SE	L	SE15L1		P	30.644
17SA015	15	SE	T	SE15T1		P	31.002
17SA015	15	SW	L	SW15L1		P	3.116
17SA015	15	SW	T	SW15T1		P	2.36
17SA016	16	NE	B	NE16B2	5.6	P	33.216
17SA016	16	NW	A	NW16A2	4	N	
17SA016	16	NW	B	NW16B2	2.5	N	
17SA016	16	SE	A	SE16A3	6.5	N	34.328
17SA016	16	SE	B	SE16B2	6.5	F	
17SA016	16	SW	A	SW16A2	5	F	
17SA016	16	SW	B	SW16B2	3.5	F	
17SA017	17	NE	A	NE17A2	4	N	53.928
17SA017	17	NE	B	NE17B2	3.5	F	
17SA017	17	NW	A	NW17A2	4	F	
17SA017	17	NW	B	NW17B2	4.7	F	
17SA017	17	SE	A	SE17A1	3.1	F	
17SA017	17	SE	B	SE17B2	2.2	F	
17SA017	17	SW	B	SW17B1	4.8	N	21.01
17SA018	18	NE	L	NE18L1		N	
17SA018	18	NE	T	NE18T1		N	
17SA018	18	NW	L	NW18L2		F	63.998
17SA018	18	NW	T	NW18T2		F	0
17SA018	18	SE	L	SE18L1		N	47.72
17SA018	18	SE	T	SE18T1		N	47.72
17SA018	18	SW	L	SW18L1		N	31.986
17SA018	18	SW	T	SW18T2		N	
17SA019	19	NE	A	NE19A2	4.5	N	
17SA019	19	NW	A	NW19A2	3.75	N	
17SA019	19	NW	B	NW19B2	3	N	28.178
17SA019	19	SE	A	SE19A2	6.1	N	
17SA019	19	SE	B	SE19B2	4.5	F	
17SA019	19	SW	A	SW19A2	4.1	F	

SiteID	Plot	TREE	CORE	EID	Brkdpth_mm	Pith	Wdth_arc
17SA019	19	SW	B	SW19B1	4.1	F	
17SA020	20	NW	L	NW20L2		P	9.862
17SA020	20	NW	T	NW20T2		P	
17SA020	20	SE	L	SE20L2		P	6.418
17SA020	20	SE	T	SE20T2		P	
17SA020	20	SW	L	SW20L1		MV	
17SA020	20	SW	T	SW20T1		MV	
17SA021	21	NE	A	NE21A2	6.2	N	
17SA021	21	NE	B	NE21B		F	
17SA021	21	NW	A	NW21A2	3.5	N	11.432
17SA021	21	NW	B	NW21B2	4	N	47.2
17SA021	21	SE	A	SE21A2	3.5	F	
17SA021	21	SE	B	SE21B12	3.2	F	
17SA022	22	NE	L	NE22L2		P	6.308
17SA022	22	NE	T	NE22T2		P	6.58
17SA021	21	SW	A	SW21A2	4.8	N	27.98
17SA021	21	SW	B	SW21B1	3.6	N	8.93
17SA022	22	NW	L	NW22L2		N	33.834
17SA022	22	NW	T	NW22T2		N	
17SA022	22	SE	L	SE22L2		P	9.35
17SA022	22	SE	T	SE22T2		N	7.114
17SA022	22	SW	L	SW22L2		N	20.242
17SA022	22	SW	T	SW22T2		N	
17SA023	23	NE	A	NE23A1	3	F	
17SA023	23	NE	B	NE23B1	3	F	
17SA023	23	NW	A	NW23A2	1	F	
17SA023	23	NW	B	NW23B2	1	F	27.022
17SA023	23	SE	A	SE23A2		P	18.104
17SA023	23	SE	B	SE23B2	4.5	N	27.024
17SA023	23	SW	A	SW23A2	4.1	F	
17SA023	23	SW	B	SW23B2	4.5	N	12.57
17SA024	24	NE	L	NE24L2		N	32.076
17SA024	24	NE	T	NE24T2		N	
17SA024	24	NW	L	NW24L2		P	9.736
17SA024	24	NW	T	NW24T2		P	7.956
17SA024	24	SE	L	SE24L2		N	40.26
17SA024	24	SE	T	SE24T2		N	
17SA024	24	SW	L	SW24L2		N	18.61
17SA024	24	SW	T	SW24T2		N	
17SA025	25	NE	A	NE25A2	3.9	F	
17SA025	25	NW	A	NW25A1	4.5	P	
17SA025	25	NW	B	NW25B2	4	N	
17SA025	25	SE	B	SE25B2	4.3	N	26.06
17SA025	25	SW	A	SW25A2	1.5	N	7.554
17SA025	25	SW	B	SW25B2	2.2	N	11.09
17SA026	26	NE	L	NE26L1		N	10.528

SiteID	Plot	TREE	CORE	EID	Brkdpth_mm	Pith	Wdth_arc
17SA026	26	NE	T	NE26T1		N	
17SA026	26	NW	L	NW26L1		F	111.232
17SA026	26	NW	T	NW26T1		F	
17SA026	26	SE	L	SE26L1		F	160.254
17SA026	26	SE	T	SE26T1		F	
17SA026	26	SW	L	SW26L1		F	79.94
17SA026	26	SW	T	SW26T1		F	
17SA027	27	NE	A	NE27A2	2.5	N	
17SA027	27	NE	B	NE27B2	3	P	30.898
17SA027	27	NW	A	NW27A2	5.1	N	21.838
17SA027	27	NW	B	NW27B2	4.5	MV	
17SA027	27	SE	A	SE27A2	4.5	F	0
17SA027	27	SE	B	SE27B2	4.5	N	
17SA027	27	SW	A	SW27A2		N	
17SA027	27	SW	B	SW27B2	3.5	F	
17SA028	28	NE	L	NE28L		MV	
17SA028	28	NE	T	NE28T		MV	
17SA028	28	NW	L	NW28L2		N	22.78
17SA028	28	NW	T	NW28T2		N	
17SA028	28	SW	L	SW28L2		P	
17SA028	28	SW	T	SW28T2		P	11.958
17SA029	29	NE	A	NE29A2	3	N	12.544
17SA029	29	NW	A	NW29A	3.4	N	
17SA029	29	NW	B	NW29B2	3.4	F	
17SA029	29	SE	B	SE29B2	2.5	N	13.166
17SA029	29	SW	A	SW29A1	2.5	N	45.234
17SA029	29	SW	B	SW29B1	3	N	
17SA030	30	NE	L	NE30L2		N	60.748
17SA030	30	NE	T	NE30T2		MV	
17SA030	30	NW	L	NW30L2		N	36.606
17SA030	30	NW	T	NW30T		MV	
17SA030	30	SE	L	SE30L2		N	64.646
17SA030	30	SE	T	SE30T2		N	
17SA030	30	SW	L	SW30L2		N	67.92
17SA030	30	SW	T	SW30T2		N	
17SA031	31	NE	L	NE31L2		F	
17SA031	31	NE	T	NE31T2		F	
17SA031	31	NW	L	NW31L2		P	1.278
17SA031	31	NW	T	NW31T2		P	2.628
17SA031	31	SE	L	SE31L2		F	
17SA031	31	SE	T	SE31T2		F	
17SA031	31	SW	L	SW31L1		N	13.636
17SA031	31	SW	T	SW31T1		N	
17SA032	32	NE	A	NE32A2	3	N	
17SA032	32	NE	B	NE32B2	2	MV	
17SA032	32	NW	A	NW32A2	3	N	

SiteID	Plot	TREE	CORE	EID	Brkdpth_mm	Pith	Wdth_arc
17SA032	32	NW	B	NW32B2	2.5	F	
17SA032	32	SE	A	SE32A2	4.1	F	
17SA032	32	SE	B	SE32B2		F	
17SA033	33	NE	A	NE33A1	2	P	
17SA033	33	NE	B	NE33B1	1	F	
17SA033	33	NW	B	NW33B1	1.5	F	
17SA033	33	SE	A	SE33A1	2	N	
17SA033	33	SE	B	SE33B1		N	
17SA033	33	SW	A	SW33A1	3	MV	
17SA035	35	NE	L	NE35L2		N	13.956
17SA035	35	NE	T	NE35T2		N	
17SA035	35	NW	L	NW35L1		F	
17SA035	35	NW	T	NW35T1		F	
17SA035	35	SE	L	SE35L1		F	
17SA035	35	SE	T	SE35T1		F	
17SA035	35	SW	L	SW35L1		F	
17SA035	35	SW	T	SW35T1		F	

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
2	17SA018	Top	1	E	0	9	0	0	0	0	0	0	29.7	6.9
3	17SA018	Top	2	F(clay)	9	17	0	0	0	0	0	0	0	0
4	17SA018	Top	3	F(silt)	17	29	0	0	0	0	0	0	0	5.5
5	17SA018	Top	4	F(clay)	29	42	0	0	0	0	0	0	0	0
6	17SA018	Top	5	E	42	64	0	0	0	0	0	0	0	0.5
7	17SA018	Top	6	F(clay)	64	69	0	0	0	0	0	0	0	0
8	17SA018	Top	7	F(silt)	69	78	0	0	0	0	0	0	0	0.2
9	17SA018	Top	8	F(clay)	78	82	0	0	0	0	0	0	0	0
10	17SA018	Top	9	E	82	88	0	0	0	0	0	0	0	0.1
11	17SA017	Bottom	1	E	0	23	0	0	0	0	0	0	0	0.4
12	17SA017	Bottom	2	A	23	30	38.6	22.8	5.9	7.3	5.7	3.7	2.7	2.6
13	17SA017	Bottom	3	C	30	40	7.9	53	8.2	9	6.8	5.3	4.4	4.6
14	17SA019	Bottom	8	F(silt)	86	101	0	0	0.9	0.2	0.01	0.01	0.1	0.01
15	17SA019	Bottom	1	C	0	27	9.7	3.1	2.2	1.5	2.9	3.4	5.3	9.5
16	17SA019	Bottom	2	D	27	44	0	15.9	0.8	0.7	1.3	1.2	2.1	5.1
17	17SA019	Bottom	3	B	44	49	12.4	6.9	1.8	3	2.5	2.1	2.3	2.5
18	17SA019	Bottom	4	C	49	53	0	0	1.8	0.2	1.1	0.5	1.1	2.4
19	17SA019	Bottom	5	F(clay)	53	55	0	0	0	0	0	0	0	0
20	17SA019	Bottom	6	D	55	73	0	6.8	0	0.7	0.7	1.5	3.5	14
21	17SA019	Bottom	7	E	73	86	0	0	0	0	0	0	0.3	0.2
24	17SA019	Middle	1	E	0	22	0	0	0	0	0	0	0.1	0.3
25	17SA019	Middle	2	D	22	34	0	0	0	0	0.1	0	0.1	0.6
26	17SA019	Middle	3	B	34	45	0	8	5	5.2	7.5	7.6	8.5	18.2
27	17SA019	Middle	4	B	45	69	0	6	3.4	3	5.3	5	11.4	17.1
29	17SA017	Top	1	F(clay)	0	12	0	0	0	0	0	0	0	0
30	17SA017	Top	2	F(clay)	12	20	0	0	0	0	0	0	0	0
31	17SA017	Top	3	F(silt)	20	38	0	0	0	0	0	2.5	2.5	3
32	17SA017	Top	4	F(clay)	38	45	0	0	0	0	0	0	0	0
33	17SA017	Top	5	F(silt)	45	50.5	0	0	0	0	0	0	0	0.5
34	17SA017	Top	6	F(clay)	50.5	55	0	0	0	0	0	0	0	0
35	17SA017	Top	7	E	55	69.5	0	0	0	0	0	0	0.1	0
36	17SA017	Top	8	D	69.5	85	0	0	0	0	0	0	0.5	1.2
37	17SA017	Top	9	F(silt)/F(clay)	85	87	0	0	0	0	0	0	0	0
38	17SA017	Top	10	F(clay)	87	92	0	0	0	0	0	0	0	2
39	17SA017	Top	11	F(silt)	92	100	0	0	0	0	0	0	0	0
40	17SA030	Middle	1	E	0	19	0	2.5	5.5	1.5	2.1	1.6	2.3	4.2
41	17SA030	Middle	2	E	19	34	0	4.5	0	1.3	1.5	1.8	2.4	4.3
42	17SA030	Middle	3	D	34	42	0	0	0	0.7	0.3	1	1.8	3.8

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
2	17SA018	Top	5.5	6.3	4.8	2.3	1.4	4	TRUE
3	17SA018	Top	0	0	0	0	0	0	FALSE
4	17SA018	Top	6.3	6.5	5.3	4	5.7	84.4	FALSE
5	17SA018	Top	0	0	0	0	0	0	FALSE
6	17SA018	Top	0.6	1	2.1	4.5	12.6	118.7	FALSE
7	17SA018	Top	0	0	0	0	0	0	FALSE
8	17SA018	Top	0.5	1.6	2.8	2.6	3.9	81.5	FALSE
9	17SA018	Top	0	0	0	0	0	0	FALSE
10	17SA018	Top	0.3	1.2	3.3	10.9	25	29.4	FALSE
11	17SA017	Bottom	0.4	1.4	12.5	77.8	71	56.9	FALSE
12	17SA017	Bottom	2.9	5	6	7.2	6.3	4.4	FALSE
13	17SA017	Bottom	4.7	9.3	9.9	4.5	2.3	3	FALSE
14	17SA019	Bottom	0.1	3.7	63.8	63	15.2	4	FALSE
15	17SA019	Bottom	17.4	58.8	92	34.6	13.1	5.2	FALSE
16	17SA019	Bottom	12	43.6	62.1	28.8	10.1	2.4	FALSE
17	17SA019	Bottom	3.1	6.9	8.5	3.2	1	1.2	FALSE
18	17SA019	Bottom	6.1	20.1	16.9	3.1	0.7	0.6	FALSE
19	17SA019	Bottom	0	0	0	0	0	0	FALSE
20	17SA019	Bottom	36.6	82.1	45	10	3.1	1.4	FALSE
21	17SA019	Bottom	0.9	3.6	29.4	57.4	28	6.1	FALSE
24	17SA019	Middle	0.4	3.1	32.2	61.1	32.9	19.4	FALSE
25	17SA019	Middle	2.5	16.6	43.3	23.2	11.6	3.8	FALSE
26	17SA019	Middle	26.1	44	21.9	7.9	5.5	4.1	FALSE
27	17SA019	Middle	31.3	70.9	55.7	21.2	9.7	5.3	FALSE
29	17SA017	Top	0	0	0	0	0	0	FALSE
30	17SA017	Top	0	0	0	0	0	0	FALSE
31	17SA017	Top	4.8	5.7	5.4	3.8	3.5	106.6	FALSE
32	17SA017	Top	0	0	0	0	0	0	FALSE
33	17SA017	Top	1.1	2.6	2.5	1.2	1	40.1	FALSE
34	17SA017	Top	0	0	0	0	0	0	FALSE
35	17SA017	Top	0.01	0.2	1.5	9.1	45.6	89.3	FALSE
36	17SA017	Top	2.3	6.4	10.8	22.5	35.5	40.2	FALSE
37	17SA017	Top	0	0	0	0	0	0	FALSE
38	17SA017	Top	2.7	2.8	2.2	1	0.9	27.9	FALSE
39	17SA017	Top	0.3	0.8	1.7	1.3	1.2	40.5	FALSE
40	17SA030	Middle	10.7	43.2	68.9	25.4	9.7	10.6	FALSE
41	17SA030	Middle	7.5	29.4	67.2	28.3	11.1	6.1	FALSE
42	17SA030	Middle	8.3	19.9	33.2	19.6	8.3	4.7	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
43	**17SA030**	**Middle**	4	E	42	60	0	7.5	3.4	1.3	1.1	0.8	1.3	2.8
44	**17SA030**	**Middle**	5	B	60	75	17.7	18.2	9.6	5.3	7	6.8	7.2	8.5
45	**17SA030**	**Middle**	6	D	75	85	0	0	0.9	0.6	0.6	0.5	1	1.1
51	**17SA014**	**Bottom**	1	E	0	11	0	0	0	0	0	0.4	0.4	1.2
52	**17SA014**	**Bottom**	2	D/E	11	39	0	5.3	0.4	1.7	1.9	1.2	1.3	2.2
53	**17SA014**	**Bottom**	3	F(silt)	39	44	0	0	0	0	0	0	0	0.1
54	**17SA014**	**Bottom**	4	D	44	60	0	1	0	0.7	0.5	0.5	1.6	4.7
55	**17SA014**	**Bottom**	5	C	60	69	57.6	13.1	1.6	4.4	4.8	3.5	4.4	6.5
58	**17SA026**	**Bottom**	1	F(silt)	0	7	0	0	0	0	0	0	0	2
59	**17SA026**	**Bottom**	2	D	7	20	0	11.5	4.6	5	4.2	5	4.8	7.1
60	**17SA026**	**Bottom**	3	C	20	33	0	5.9	2.8	2.7	2.1	2.4	3.4	5.5
61	**17SA026**	**Bottom**	4	C	33	49	10.3	37	9.4	5.3	6.6	6.6	7.6	8.5
62	**17SA026**	**Bottom**	5	B	49	56	61.7	28.9	8.5	6.8	8.1	6.6	6.5	6.4
63	**17SA026**	**Bottom**	6	D	56	71	0	0	1.6	1.4	1.8	1.9	2.7	4.6
64	**17SA028**	**Middle**	1	F(silt)	0	15	0	0	0	0	0	0	0	8.6
65	**17SA028**	**Middle**	2	E	15	35	0	0	0	0	0.2	0.2	0.4	0.1
66	**17SA028**	**Middle**	3	D	35	55	0	0	0	0	0.2	0.1	0.2	0.01
67	**17SA028**	**Middle**	4	D	55	75	0	0	0	0	0.01	0.01	0.01	0.1
68	**17SA028**	**Middle**	5	D	75	90	0	0	0	0	0	0.1	0.1	0.2
69	**17SA028**	**Middle**	6	D	90	103	0	0	0	0	0.2	0.01	0.1	0.3
70	**17SA030**	**Top**	1	F(loam)	0	10	0	0	0	0	0	0	0	9.1
71	**17SA030**	**Top**	2	F(silt)	10	14	0	0	0	0	0	0	0	4.5
72	**17SA030**	**Top**	3	F(silt)/F(clay)	14	19	0	0	0	0	0	0	0	0
73	**17SA030**	**Top**	4	E/F(silt)	19	26	0	0	0	0	0	0	0	0.9
74	**17SA030**	**Top**	6	E/F(silt)	31	52	0	0	0	0	0	0	0	1.8
75	**17SA030**	**Top**	5	F(silt)	26	31	0	0	0	0	0	0	0	0.6
76	**17SA030**	**Top**	7	F(clay)	52	60	0	0	0	0	0	0	0	0
77	**17SA030**	**Top**	8	E/F(silt)	60	68	0	0	0	0	0	0	0	0.2
78	**17SA030**	**Top**	9	F(silt)/F(clay)	68	72	0	0	0	0	0	0	0	0
80	**17SA030**	**Top**	10	D/E	76	89	0	0	0	1	1.7	1.1	1.5	3
81	**17SA030**	**Top**	11	C/D	89	90	0	0	0	0.5	1.1	0.9	1.6	2.4
82	**17SA030**	**Top**	12	D	90	97	0	0	0	0.1	0.01	0.01	0.3	0.6
83	**17SA030**	**Top**	9.5	F(silt)	72	76	0	1	0.5	0.4	1.1	0.8	1.2	1.3
84	**17SA029**	**Top**	1	F(silt)/F(clay)	0	4	0	0	0	0.2	0.4	1.1	2.7	6.2
85	**17SA029**	**Top**	2	F(clay)	4	15	0	0	0	0	0	0	0	0
86	**17SA029**	**Top**	10	E	15	25	0	0	0	0	0	0	0.2	1.1
87	**17SA029**	**Top**	3	E	25	40	0	0	0	0	0	0	0.6	0.9
88	**17SA029**	**Top**	4	F(silt)/F(clay)	40	45	0	0	0	0	0	0	0.8	1.5

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
43	17SA030	Middle	5.5	18	47.9	27.9	11.1	6.5	FALSE
44	17SA030	Middle	11.2	28.1	26.2	9.4	3.4	2.6	FALSE
45	17SA030	Middle	2.1	13.5	28.7	12.2	4.7	2.8	FALSE
51	17SA014	Bottom	3.3	14.7	40.8	28.8	14.8	14.8	FALSE
52	17SA014	Bottom	4.7	25.6	69.5	33.1	14.8	13.1	FALSE
53	17SA014	Bottom	0	0.5	1	1	3.1	37.1	FALSE
54	17SA014	Bottom	13.9	53.3	54.1	14.4	7.1	6.4	FALSE
55	17SA014	Bottom	9.1	19.4	16.9	6.2	3.1	3.5	FALSE
58	17SA026	Bottom	2.4	3.9	6	6.9	5.8	12.7	FALSE
59	17SA026	Bottom	10.4	33.6	56.8	24.3	11.3	9.3	FALSE
60	17SA026	Bottom	10.9	29	44.2	37.3	15.9	9.1	FALSE
61	17SA026	Bottom	10.3	32.7	35.3	8.6	4	4.7	FALSE
62	17SA026	Bottom	6.5	13.3	14.2	5	2.6	4.6	FALSE
63	17SA026	Bottom	8.6	32	40.1	22.2	8.9	3.5	FALSE
64	17SA028	Middle	11.1	11.9	9.8	7.2	7.3	85.9	FALSE
65	17SA028	Middle	0.6	2	12.3	30.1	43.5	84.5	FALSE
66	17SA028	Middle	0.5	5.9	39	53.2	43.2	34.8	FALSE
67	17SA028	Middle	0.3	2.8	28.1	54	57.2	44.5	FALSE
68	17SA028	Middle	0.5	4.2	18.1	40.1	56.2	39.8	FALSE
69	17SA028	Middle	0.7	4.2	28.3	42.6	30.5	23.2	FALSE
70	17SA030	Top	9.6	13.9	11.9	6.7	4.4	9.3	FALSE
71	17SA030	Top	3.8	4.7	6.8	6.6	5.3	10.1	FALSE
72	17SA030	Top	0	0	0	0	0	0	FALSE
73	17SA030	Top	1.3	3.7	17.2	18.9	9.8	8.5	FALSE
74	17SA030	Top	4.2	6	15.3	43.6	43	11.01	FALSE
75	17SA030	Top	1.3	2.1	3	4	3.1	30.3	FALSE
76	17SA030	Top	0	0	0	0	0	0	FALSE
77	17SA030	Top	0.3	0.4	0.6	0.9	2.5	71.7	FALSE
78	17SA030	Top	0	0	0	0	0	0	FALSE
80	17SA030	Top	6.4	22.5	35.8	15.8	8.5	7.4	FALSE
81	17SA030	Top	5.3	15.3	15.7	6.2	4	2.7	FALSE
82	17SA030	Top	1.8	11.3	30.4	16.7	7.5	3.9	FALSE
83	17SA030	Top	1.8	4.8	8.8	7.1	5.6	8.4	FALSE
84	17SA029	Top	5.8	8.8	6.3	3.3	2.7	8.7	FALSE
85	17SA029	Top	0	0	0	0	0	0	FALSE
86	17SA029	Top	2.2	3.4	4	4.3	7.8	55.1	FALSE
87	17SA029	Top	1.2	2.2	6.8	17.7	52.6	112.3	FALSE
88	17SA029	Top	1.7	2.3	2.7	2.7	3.6	37.7	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
89	17SA029	Top	5	E	45	57	0	0	0	0	0	0	0.8	0.6
90	17SA029	Top	6	F(clay)	57	62	0	0	0	0	0	0	0	0
91	17SA029	Top	7	E	62	74	0	0	0	0	0	0	0.4	0.5
92	17SA029	Top	8	F(clay)	74	79	0	0	0	0	0	0	0	0
93	17SA029	Top	9	F	79	96	0	0	1.4	0.6	0.7	0.7	1.1	1.2
94	17SA029	Middle	1	D	0	10	0	0	0.9	1.1	1.5	0.8	0.7	1.1
95	17SA029	Middle	2	C	10	24	0	0	0.9	0	0.4	0.9	2.2	5.1
96	17SA029	Middle	3	D	24	43	0	0	1.1	1.8	0.7	0.5	0.6	1.2
97	17SA029	Middle	4	D	43	63	5.2	7.5	3.6	3.2	2.7	3.6	4.7	6.9
98	17SA029	Middle	5	E	63	75	0	0	1	0.2	1.2	0.6	1.3	1.8
99	17SA029	Middle	6	C	75	85	0	2.4	3.7	2.4	3	4.2	5.4	6.4
100	17SA029	Middle	7	D	85	100	0	0	1.1	0.9	0.7	0.3	0.8	1.1
101	17SA027	Middle	1	F(silt)	0	9	0	0	0	0	0	0	0.1	1.1
102	17SA027	Middle	2	F(clay)	9	18	0	0	0	0	0	0	0	0
103	17SA027	Middle	10	E/F(silt)	18	25	0	0	0	0	0	0	0.01	0.7
104	17SA027	Middle	3	E	25	45	0	0	0	0	0	0	0.1	0.3
105	17SA027	Middle	4	F(clay)	45	53	0	0	0	0	0	0	0	0
106	17SA027	Middle	5	D	53	71	0	0	0	0	0	0.2	0.4	1.2
107	17SA027	Middle	6	E	71	78	0	0	0	0.2	0.1	0.5	0.7	0.9
108	17SA027	Middle	7	C	78	80	0	0	0	0.5	0.8	0.9	1	1.1
109	17SA027	Middle	8	E	80	95	0	0	0	0	0.3	0.4	1	1.6
110	17SA007	Top_2	1	F(silt)/F(clay)	0	6	0	0	0	0	0	0	0	0
112	17SA007	Top_2	2	F(silt)	6	33	0	0	0	0.01	0.2	0.4	0.8	0
113	17SA007	Top_2	3	F(silt)/F(clay)	33	45	0	0	0	0	0	0	0	0
114	17SA007	Top_2	4	E	45	58	0	0	0	0	0	0	0	0
115	17SA007	Top_2	5	F(clay)	58	61	0	0	0	0	0	0	0	0
116	17SA007	Top_2	6	D	61	65	0	0.3	0.3	0.01	0.1	0.5	0.7	2.8
117	17SA007	Top_2	7	E	65	79	0	0	0.2	0.8	0.3	0.5	0.9	1.4
118	17SA026	Top	1	E	0	15	0	0	0	0.4	2.6	4.4	5.5	5.8
119	17SA026	Top	2	D	15	27	0	0	0	0.01	0	0.2	0.4	0.2
120	17SA026	Top	3	F(silt)	27	32	0	0	0	0	0	0	0	0
121	17SA026	Top	4	D	32	47	0	0	0.2	0	0.4	0.2	0.3	0.1
122	17SA026	Top	5	E	47	60	0	0	0.4	0.7	0.3	0.1	0.3	0.01
123	17SA026	Top	6	F(silt)	60	67	0	0	0	0	0	0	0	0
124	17SA026	Top	7	E	67	80	0	0	0.4	0	0.5	0.4	0.2	0.1
125	17SA026	Top	8	F(clay)	80	84	0	0	0	0	0	0	0	0
126	17SA026	Top	9	F(silt)	84	91	0	0	0	0.1	0.1	0	0.01	0.2
127	17SA026	Top	10	E	91	96	0	0	0	0	0.01	0.01	0.01	0.01

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
89	17SA029	Top	0.8	1.1	1.2	1.7	6.8	89.4	FALSE
90	17SA029	Top	0	0	0	0	0	0	FALSE
91	17SA029	Top	0.7	1.1	1.9	2.9	5.7	92	FALSE
92	17SA029	Top	0	0	0	0	0	0	FALSE
93	17SA029	Top	2.3	11.5	50.7	59.6	35.4	19.7	FALSE
94	17SA029	Middle	1.8	6.6	21.7	31.3	16.6	13.7	FALSE
95	17SA029	Middle	11.9	38.6	52.7	22.4	10.4	4.7	FALSE
96	17SA029	Middle	2.9	27.8	92.3	34.9	10.6	4.4	FALSE
97	17SA029	Middle	11.2	33	50.2	24.4	11.5	6.1	FALSE
98	17SA029	Middle	3.2	7.5	11.2	27.1	45.7	31.1	FALSE
99	17SA029	Middle	8	14.8	21.5	10.8	7.6	11.1	FALSE
100	17SA029	Middle	2.7	20.4	67.6	36.7	20.3	11.6	FALSE
101	17SA027	Middle	2	2.9	2.5	1.6	1.6	33.9	FALSE
102	17SA027	Middle	0	0	0	0	0	0	FALSE
103	17SA027	Middle	0.8	1.2	1.9	3.5	5.6	23.3	FALSE
104	17SA027	Middle	0.6	2.6	13.1	35.7	35.4	65.9	FALSE
105	17SA027	Middle	0	0	0	0	0	0	FALSE
106	17SA027	Middle	1.8	7.2	31.1	49.6	38.4	27.6	FALSE
107	17SA027	Middle	1.4	5.5	13.4	9.7	17.2	30.4	FALSE
108	17SA027	Middle	1.2	2.3	3.2	2.5	2.2	4.6	FALSE
109	17SA027	Middle	3	10.1	21.9	28.9	28.4	41.8	FALSE
110	17SA007	Top_2	3.9	0	0	3.1	3.1	60.1	FALSE
112	17SA007	Top_2	0	0	2.3	2.2	6.9	173.6	FALSE
113	17SA007	Top_2	0	0	0	0	0	0	FALSE
114	17SA007	Top_2	0.8	0.1	6.9	23.3	33.1	41.5	FALSE
115	17SA007	Top_2	0	0	0	0	0	0	FALSE
116	17SA007	Top_2	4.4	8.1	11.7	11.4	8.1	5.3	FALSE
117	17SA007	Top_2	3.1	15.2	50.5	37.6	18.5	12.5	FALSE
118	17SA026	Top	5.8	8.1	9.7	10	11.1	34.4	TRUE
119	17SA026	Top	0.5	3.5	19	29	31.3	44.9	FALSE
120	17SA026	Top	0	0	0	0	0	0	FALSE
121	17SA026	Top	0.3	2.4	38.3	45	35.8	39	FALSE
122	17SA026	Top	0.2	0.6	6.8	28.5	43.4	50.7	FALSE
123	17SA026	Top	0	0	0	0	0	0	FALSE
124	17SA026	Top	0.2	1.5	11	23.3	31.9	41.3	FALSE
125	17SA026	Top	0	0	0	0	0	0	FALSE
126	17SA026	Top	0.01	0.01	2.1	4.8	13.1	50.6	FALSE
127	17SA026	Top	0.01	0.4	9.5	23.6	9.2	9.4	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
132	**17SA005**	**Middle**	1	D/E	0	10	0	6.1	0.7	0.7	1	1.4	2.2	4.7
134	**17SA005**	**Middle**	2	E	10	30	0	0	0	0	0	0	0	0.7
135	**17SA005**	**Middle**	3	E	30	45	0	0	0	0	0	0	0	4.1
136	**17SA005**	**Middle**	4	F(silt)	45	50	0	0	0	0	0	0	0	0.01
137	**17SA005**	**Middle**	5	C	50	54	0	4.6	1.1	0.9	1.3	0.9	1.2	1.3
138	**17SA005**	**Middle**	6	D/E	54	58	0	0	0	0	0	0	0	0.6
139	**17SA005**	**Middle**	7	C/D	58	64	20.5	17.8	4.6	4	1.9	1.2	1.1	1.2
140	**17SA005**	**Middle**	8	C	64	75	10.9	15.3	8.4	6	6.6	3.5	4.1	3.9
141	**17SA005**	**Middle**	9	D	75	87	23.9	6.1	4.5	2.3	1.3	1.1	1.5	2.2
142	**17SA018**	**Bottom**	1	B/C	0	12	41.8	38.3	13.1	9.9	9	7.2	8.4	9.5
143	**17SA018**	**Bottom**	2	B/C	12	28	13	54	7.5	10.6	8.5	7.4	7.5	8
144	**17SA018**	**Bottom**	3	B	28	35	43.8	5.5	7.9	6.6	4.2	2.9	2.7	3.3
145	**17SA017**	**Middle**	1	F(clay)	0	5	0	0	0	0	0	0	0	0
146	**17SA017**	**Middle**	2	E	5	10	0	1.2	0.2	0.6	1.2	0.8	1.2	1
147	**17SA017**	**Middle**	3	F(silt)	10	14	0	0	0	0	0.2	0.4	0.3	0.3
148	**17SA017**	**Middle**	4	F(clay)	14	19	0	0	0	0	0	0	0	0
149	**17SA017**	**Middle**	5	E	19	43	0	0	0	0.6	1.1	0.9	1	1.6
150	**17SA017**	**Middle**	6	F(silt)	43	60	0	0	0	0	0.01	0.01	0.01	0.01
151	**17SA017**	**Middle**	7	F(silt)	60	77	0	0	0	0	0	0	0	0
152	**17SA017**	**Middle**	8	F(silt)	77	87	0	0	0	0	0	0	0	0
153	**17SA027**	**Top**	1	F(silt)	0	15	0	0	0	0	0	0	0	2.8
154	**17SA027**	**Top**	2	OM	15	18	0	0	0	0	0	0	0	0
155	**17SA027**	**Top**	3	F(silt)	18	42	0	0	0	0	0	0	0.3	0.4
156	**17SA027**	**Top**	4	F(silt)	42	61	0	0	0	0	0	0	0	0
157	**17SA027**	**Top**	5	F(silt)	61	75	0	0	0	0	0	0	0	0
158	**17SA026**	**Middle**	1	E	0	20	0	0	0	0	0.01	0	0.01	0.2
159	**17SA026**	**Middle**	2	F(clay)	20	31	0	0	0	0	0	0	0	0
160	**17SA026**	**Middle**	3	F(silt)	31	36	0	0	0	0	0	0	0	0
161	**17SA026**	**Middle**	4	F(clay)	36	50	0	0	0	0	0	0	0	0
162	**17SA026**	**Middle**	5	F(silt)	50	60	0	0	0	0	0	0	0	0
163	**17SA026**	**Middle**	6	E/F(silt)	60	72	0	0	0.6	0.3	0.8	0.9	0.9	0.7
164	**17SA026**	**Middle**	7	D	72	80	0	0.6	0	0	0.1	0.7	1.5	4.1
165	**17SA026**	**Middle**	8	E	80	91	0	0	0.3	0.1	0.01	0.2	0.3	0.5
166	**17SA026**	**Middle**	9	D	91	96	0	0	0	0.2	0.6	0.3	0.9	1.5
167	**17SA011**	**Bottom**	1.5	D	0	10	0	5	1.9	3.4	3.8	3.4	5.3	6.4
168	**17SA011**	**Bottom**	1	D	10	22	16.2	18.9	6.2	5.4	5.1	5.2	5.9	8.3
169	**17SA011**	**Bottom**	2	B/C	22	30	10.8	28	9.2	6.8	5.5	4	4.2	4.3
170	**17SA027**	**Bottom**	1	D/E	0	9	0	0	0	0	0	0	0	0

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
132	17SA005	Middle	8.3	21.6	40.6	23.2	14.3	14.4	FALSE
134	17SA005	Middle	55	6.3	28.5	52	54.2	39	FALSE
135	17SA005	Middle	3	15.2	68	45.6	20.8	13.9	FALSE
136	17SA005	Middle	0.2	0.6	1.4	1.5	2.7	45.91	FALSE
137	17SA005	Middle	1.4	2.4	4.2	5.6	7.7	10.2	FALSE
138	17SA005	Middle	0.3	1	2.6	8.1	18	24.1	FALSE
139	17SA005	Middle	1.7	5.2	15.5	11.9	3.8	5	FALSE
140	17SA005	Middle	6.8	22.5	40.8	16	5.6	7.5	FALSE
141	17SA005	Middle	4.1	20.2	51	19.2	5.7	4.6	FALSE
142	17SA018	Bottom	12.3	19.4	12.6	5	3.2	5	FALSE
143	17SA018	Bottom	10.1	22.8	22.8	8.7	4.1	4.4	FALSE
144	17SA018	Bottom	4	7.9	8.5	3.6	1.7	2.2	FALSE
145	17SA017	Middle	0	0	0	0	0	0	FALSE
146	17SA017	Middle	1.2	3.3	7.6	5.7	4.4	6	FALSE
147	17SA017	Middle	0.4	1.6	2.4	3.8	14.2	28.6	FALSE
148	17SA017	Middle	0	0	0	0	0	0	FALSE
149	17SA017	Middle	3.8	17.6	52.3	47.8	33.2	20.6	FALSE
150	17SA017	Middle	0.01	0.5	6.8	31.2	50.4	77.8	FALSE
151	17SA017	Middle	1	2.6	3.9	7.6	24.3	129.43	FALSE
152	17SA017	Middle	0.01	0.1	2.3	12.4	29.5	43.11	FALSE
153	17SA027	Top	3.2	5.3	9.6	17.7	27.6	74.51	TRUE
154	17SA027	Top	0	0	0	0	0	0	FALSE
155	17SA027	Top	0.7	2.4	12.7	34.5	60.2	103.2	TRUE
156	17SA027	Top	0	0	0	0	0	0	FALSE
157	17SA027	Top	0	0	0	0	0	0	FALSE
158	17SA026	Middle	0.5	7.2	42.5	74.6	58	30.1	FALSE
159	17SA026	Middle	0	0	0	0	0	0	FALSE
160	17SA026	Middle	0	0	0	0	0	0	FALSE
161	17SA026	Middle	0	0	0	0	0	0	FALSE
162	17SA026	Middle	0	0	0	0	0	0	FALSE
163	17SA026	Middle	1.3	4.7	16.4	20.1	19.2	28.4	FALSE
164	17SA026	Middle	9	22.4	32.8	32.3	30.8	24	FALSE
165	17SA026	Middle	1.1	2.6	3.5	9.6	42.5	56	FALSE
166	17SA026	Middle	2.8	11.3	22	12.1	6.8	4.4	FALSE
167	17SA011	Bottom	8.8	20.7	35.9	15	9.8	11.4	FALSE
168	17SA011	Bottom	10.3	21.2	19.3	6.5	3.9	5.8	FALSE
169	17SA011	Bottom	4.3	6.3	5.6	2.6	1.2	1.8	FALSE
170	17SA027	Bottom	0	0	9.3	11.9	19	50.6	TRUE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
171	17SA027	Bottom	2	E	9	21	0	0	0	0	0.2	0.2	0.2	0.3
172	17SA027	Bottom	3	C	21	29	0	33.4	0	0.2	0	0.1	0.01	0.01
173	17SA027	Bottom	4	D	29	40	0	0	0	0.4	0.01	0.1	0.1	0.3
174	17SA027	Bottom	5	D	40	57	0	0	0.5	0.01	0.01	0.2	0	0.3
175	17SA027	Bottom	6	C	57	76	0	0	0	0	0	0	0	0.01
176	17SA027	Bottom	7	E	76	91	0	0	0	0	0	0.01	0.2	0.4
177	17SA035	Top	1	F(silt)	0	14	0	0	0	0	0	0	0	0
178	17SA035	Top	2	F(clay)	14	29	0	0	0	0	0	0	0	0
179	17SA035	Top	3	F(silt)/F(clay)	29	36	0	0	0	0	0	0	0	1.9
180	17SA035	Top	4	E/F(silt)	36	47	0	0	0	0	0	0	0	1.1
181	17SA035	Top	5	F(clay)	47	54	0	0	0	0	0	0	0	0
182	17SA035	Top	6	E	54	71	0	0	0	0	0.01	0.4	0.3	0.01
183	17SA035	Top	7	E	71	84	0	0	0	0	0.3	0.1	0.2	0.1
184	17SA035	Top	8	F(silt)	84	87	0	0	0	0	0	0	0	0
185	17SA035	Top	9	F(clay)	87	93	0	0	0	0	0	0	0	0
186	17SA035	Bottom	1	D	0	8	22.7	32	10.1	3.3	4.2	3.4	2.7	3
187	17SA035	Bottom	1.5	D/E	8	15	34.7	9.8	1.9	3.5	1.4	1.4	1.8	1.8
188	17SA035	Bottom	2	E	15	25	0	2.7	0.8	0.01	0.01	0.01	0.3	0.2
189	17SA035	Bottom	3	B	25	36	60.7	56.2	9.7	11.1	10.5	8.3	8.7	8.2
190	17SA035	Bottom	4	C	36	53	33.2	42.7	7.8	9.8	8.4	6.4	9.5	13.2
192	17SA013	Top	1	F(loam)	0	14	0	0	0	0	0	0	0	0
193	17SA013	Top	2	F(silt)	14	28	0	0	0	0	0	0	0	0.5
194	17SA013	Top	3	F(clay)	28	36	0	0	0	0	0	0	0	0
195	17SA013	Top	4	F(silt)	36	45	0	0	0	0	0.01	0.2	0.3	0.1
196	17SA013	Top	5	F(silt)/F(clay)	45	49	0	0	0	0	0	0	0	0
197	17SA013	Top	6	D	49	61	0	8.6	1.1	2.1	2	1.7	2.6	3.5
198	17SA013	Top	7	C	61	73	0	0.8	0.2	1	1	1.2	1.5	5.9
199	17SA013	Top	8	E	73	81	0	0	0	0.3	0.3	0.4	0.4	0.6
200	17SA004	Top_2	1	F(loam)	0	6	0	0	0	0	0	0	0	0
201	17SA004	Top_2	2	F(silt)	6	42	0	0	0	0	0	0	0	1.4
202	17SA004	Top_2	3	F(clay)	42	47	0	0	0	0	0	0	0	0
203	17SA004	Top_2	4	F(silt)	47	65	0	0	0	0	0	0	0	0
204	17SA004	Top_2	5	E/F(silt)	65	79	0	0	0.3	0.2	0.2	0.1	0.01	0.4
205	17SA004	Top_2	6	E	79	93	0	0	0	0	0	0	0.01	0.2
206	17SA009	Middle	1	E/F	0	12	0	0	0	0.3	0.1	0.1	0.7	1.1
207	17SA009	Middle	2	E	12	35	0	0.9	0	0.1	0.1	0.01	0.4	0.3
208	17SA009	Middle	3	E	35	52	0	0	0	0	0	0	0.01	0.01
209	17SA009	Middle	4	E/F	52	65	0	0	0	0	0.1	0.01	0.4	0.5

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
171	17SA027	Bottom	0.7	1.3	9.1	21.1	33.8	49.9	FALSE
172	17SA027	Bottom	0.2	1.2	8.5	14.3	15.8	18.2	FALSE
173	17SA027	Bottom	0.4	2.9	20.9	38.2	32	19.9	FALSE
174	17SA027	Bottom	0.9	5.5	26.1	42.1	41.6	31.9	FALSE
175	17SA027	Bottom	0.3	11.4	97.4	69	27	11.6	FALSE
176	17SA027	Bottom	1.3	5.5	12.7	28.6	50.8	61.1	FALSE
177	17SA035	Top	0	0	0	0	0	0	FALSE
178	17SA035	Top	0	0	0	0	0	0	FALSE
179	17SA035	Top	2.6	4.3	11.6	12.2	10.6	16.61	TRUE
180	17SA035	Top	1.3	2.5	13.9	25.9	29.2	50.4	TRUE
181	17SA035	Top	0	0	0	0	0	0	FALSE
182	17SA035	Top	0.5	1.3	9.8	34.5	63.7	63.7	FALSE
183	17SA035	Top	0.2	1.5	13.2	39.5	50.5	42.2	FALSE
184	17SA035	Top	0	0	0	0	0	0	FALSE
185	17SA035	Top	0	0	0	0	0	0	FALSE
186	17SA035	Bottom	4.3	14	25.2	9	2.4	2.8	FALSE
187	17SA035	Bottom	2.5	8.8	19.2	10	3.1	2.8	FALSE
188	17SA035	Bottom	0.4	4.3	20.4	34.1	22.2	14	FALSE
189	17SA035	Bottom	9	15	13.6	6.8	4	7.4	FALSE
190	17SA035	Bottom	17.8	30.8	25.6	8.3	3.7	5.6	FALSE
192	17SA013	Top	0	0	0	0	0	0	FALSE
193	17SA013	Top	0.8	2	11.4	44.1	42.8	62	FALSE
194	17SA013	Top	0	0	0	0	0	0	FALSE
195	17SA013	Top	0.3	0.6	1.5	2.6	8.7	80.31	FALSE
196	17SA013	Top	0	0	0	0	0	0	FALSE
197	17SA013	Top	5.9	21.4	51.7	29.4	11	7.1	FALSE
198	17SA013	Top	10.3	13.3	46.4	38.9	13.2	4.9	FALSE
199	17SA013	Top	1.3	4.9	20.8	26.6	13.2	5.1	FALSE
200	17SA004	Top_2	0	0	0	0	0	0	FALSE
201	17SA004	Top_2	2.3	3.7	4.6	7.7	43.1	283.4	FALSE
202	17SA004	Top_2	0	0	0	0	0	0	FALSE
203	17SA004	Top_2	0	0	0	0	0	0	FALSE
204	17SA004	Top_2	0.4	1	7.9	22.6	38	59.1	FALSE
205	17SA004	Top_2	0.6	11.2	60.8	44.5	22.1	15.8	FALSE
206	17SA009	Middle	3.4	18.2	54	37.9	13.4	19.3	FALSE
207	17SA009	Middle	1.2	11.2	68.4	59.9	22.7	11.2	FALSE
208	17SA009	Middle	0.2	5.6	67	70.5	26.5	12.8	FALSE
209	17SA009	Middle	1.6	3.6	20.7	58.2	36.1	22.9	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
210	17SA009	Middle	5	C	65	81	43.7	33.9	10.5	7	7.5	6.9	8.2	10.2
211	17SA009	Middle	6	D	81	91	0	1.5	0	1	0.9	0.9	1.6	3.1
212	17SA010	Top	1	F(loam)	0	7	0	0	0	0	0	0	0	0
213	17SA010	Top	2	F(silt)	7	47	0	0	0	0	0	0	0	0
214	17SA010	Top	3	F(silt)/F(clay)	47	53	0	0	0	0	0	0	0	0
215	17SA010	Top	4	F(clay)	53	61	0	0	0	0	0	0	0	0
216	17SA010	Top	5	E/F(silt)	61	76	0	0	0.6	0.2	0.01	0.5	0.3	0.2
217	17SA010	Top	6	D	76	83	0	0	0	0.3	0.8	2	2.6	3.4
218	17SA019	Top	1	F(loam)	0	7	0	2	3.7	3.8	3.9	4.7	3.7	2.8
219	17SA019	Top	2	F(clay)	7	55	0	0	0	0	0	0	0	0
220	17SA019	Top	3	F(silt)/F(clay)	55	60	0	0	0	0	0	0	0	0.2
221	17SA019	Top	4	E	60	79	0	0	0	0	0.4	0.1	0.4	0.5
222	17SA019	Top	5	F(silt)	79	86	0	0	0	0	0	0	0	0.01
223	17SA035	Middle	1	F(clay)	0	5	0	0	0	0	0	0	0	0
224	17SA035	Middle	2	F(silt)	5	23	0	0	0.01	0.5	0.4	0	0	0.2
225	17SA035	Middle	3	F(clay)	23	30	0	0	0	0	0	0	0	0
226	17SA035	Middle	4	F(silt)	30	44	0	0	0	0	0	0	0	0.5
227	17SA035	Middle	5	E	44	72	0	2.2	0	0.5	0.3	0.5	1.1	1.5
228	17SA035	Middle	6	B	72	81	28.1	24.3	13.3	8	6.1	4	3.5	4.1
229	17SA035	Middle	7	C	81	91	20	16.6	7.1	6.8	4.7	4	4.3	4.9
230	17SA018	Middle	1	E	0	14	0	0	0	0.6	0.5	0.9	2.1	3.9
231	17SA018	Middle	2	F(silt)	14	33	0	1.6	0.3	1.1	0.3	0.1	0.4	0.3
232	17SA018	Middle	2.5	F(silt)	33	50	0	0	0	0.2	0	0	0	0.2
233	17SA018	Middle	3	E	50	63	0	0	0	0	0	0	0	0.2
234	17SA018	Middle	4	E	63	73	0	0	0	0	0	0	0	0.6
235	17SA018	Middle	4.5	E	73	90	0	5.8	0.8	0.5	0.9	0.7	1.5	2.1
236	17SA014	Top	1	F(loam)	0	6	0	0	0	0	0	0	0	0
237	17SA014	Top	2	F(clay)	6	17	0	0	0	0	0	0	0	0
238	17SA014	Top	3	F(silt)	17	40	0	0	0	0	0	0	0	0.2
239	17SA014	Top	4	F(clay)	40	55	0	0	0	0	0	0	0	0
240	17SA014	Top	5	F(silt)	55	66	0	0	0	0	0	0.01	0.2	0.01
241	17SA014	Top	6	E	66	78	0	0	0	0	0	0	0	0.5
242	17SA006	Top	1	F(loam)	0	10	0	0	0	0	0	0	0	0
243	17SA006	Top	2	E	10	30	0	0	0.01	0.01	0	0.2	0.1	0.2
244	17SA006	Top	3	F(silt)	30	40	0	0	0	0	0	0	0	0
245	17SA006	Top	4	F(clay)	40	41	0	0	0	0	0	0	0	0
246	17SA006	Top	5	F(silt)	41	53	0	0	0	0	0	0	0	0
247	17SA006	Top	6	F(clay)	53	70	0	0	0	0	0	0	0	0

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
210	17SA009	Middle	16.4	35.2	24.3	8.9	6.4	7.7	FALSE
211	17SA009	Middle	6.6	18.7	30.3	22.1	7.8	4.8	FALSE
212	17SA010	Top	0	0	0	0	0	0	FALSE
213	17SA010	Top	0	0	0	0	0	0	FALSE
214	17SA010	Top	0	0	0	0	0	0	FALSE
215	17SA010	Top	0	0	0	0	0	0	FALSE
216	17SA010	Top	0.5	1.4	5.4	17.9	39.8	77.9	FALSE
217	17SA010	Top	4.6	14.2	28.1	19	10.3	9.8	FALSE
218	17SA019	Top	1.9	1.9	1.6	1.2	0.6	2.1	FALSE
219	17SA019	Top	0	0	0	0	0	0	FALSE
220	17SA019	Top	0.5	0.9	2.6	6.4	5.5	31	FALSE
221	17SA019	Top	0.9	5.2	34	74.5	40.9	19.9	FALSE
222	17SA019	Top	0.01	0.4	6.4	29.9	33.4	17.4	FALSE
223	17SA035	Middle	0	0	0	0	0	0	FALSE
224	17SA035	Middle	0.5	1	2.7	3.5	5.8	83.5	TRUE
225	17SA035	Middle	0	0	0	0	0	0	FALSE
226	17SA035	Middle	0.3	2.6	17.3	34	42.3	38.1	FALSE
227	17SA035	Middle	3.6	20.8	69.8	67.2	41.7	21.2	FALSE
228	17SA035	Middle	5.1	10.9	13.9	8	6	6.6	FALSE
229	17SA035	Middle	7.6	20.8	26.8	3.9	3.3	4.2	FALSE
230	17SA018	Middle	8.1	17.9	41.8	48.4	37.6	32.4	FALSE
231	17SA018	Middle	0.9	10.5	46.5	56.8	47.8	24.1	FALSE
232	17SA018	Middle	0.3	6.2	54.3	60.5	35.5	16.8	FALSE
233	17SA018	Middle	0.3	9.9	60.7	46.7	17.5	8.2	FALSE
234	17SA018	Middle	0.8	15.2	55.6	39.7	17.5	6.4	FALSE
235	17SA018	Middle	4.8	20.2	60	51.9	26.4	14.7	FALSE
236	17SA014	Top	0	0	0	0	0	0	FALSE
237	17SA014	Top	0	0	0	0	0	0	FALSE
238	17SA014	Top	0.5	1.1	3	11.7	34.9	139.31	FALSE
239	17SA014	Top	0	0	0	0	0	0	FALSE
240	17SA014	Top	0.1	0.2	0.7	1.4	3.8	91.5	FALSE
241	17SA014	Top	0.3	1.5	4.5	12	33.3	80.2	FALSE
242	17SA006	Top	0	0	0	0	0	0	FALSE
243	17SA006	Top	0.7	6.6	37.3	67	61.9	49.5	FALSE
244	17SA006	Top	0	0	0	0	0	0	FALSE
245	17SA006	Top	0	0	0	0	0	0	FALSE
246	17SA006	Top	0	0	0	0	0	0	FALSE
247	17SA006	Top	0	0	0	0	0	0	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
248	**17SA006**	**Top**	7	D	70	76	0	0	0	0.2	0.2	0.4	1	1.5
249	**17SA009**	**Top**	1	F(silt)	0	7	0	0	0	0	0	0	0	0
250	**17SA009**	**Top**	2	F(silt)	7	35	0	0	0	0	0	0	0	0
251	**17SA009**	**Top**	3	F(silt)	35	56	0	0	0	0	0	0	0	0
252	**17SA009**	**Top**	4	F(silt)/F(clay)	56	60	0	0	0	0	0	0	0	0
253	**17SA009**	**Top**	5	F(clay)	60	74	0	0	0	0	0	0	0	0
254	**17SA009**	**Top**	6	D	74	85	0	1.4	2.6	1.6	1.5	2	3.1	0.9
255	**17SA009**	**Top**	7	E	85	94	0	0.9	0	0	0.2	0.9	1.4	1.5
256	**17SA028**	**Top**	1	F(loam)	0	11	0	0	0	0	0	0	0	0
257	**17SA028**	**Top**	2	F(silt)	11	47	0	0	0	0.01	0	0	0	0.8
258	**17SA028**	**Top**	3	F(silt)/F(clay)	47	56	0	0	0	0	0	0	0	0
259	**17SA028**	**Top**	4	E/F(silt)	56	65	0	0	0	0	0.4	0	0.5	0.2
260	**17SA028**	**Top**	5	F(silt)/F(clay)	65	71	0	0	0	0	0	0	0	0
261	**17SA028**	**Top**	6	F(clay)	71	78	0	0	0	0	0	0	0	0
262	**17SA028**	**Top**	7	F(silt)	78	85	0	0	0	0.01	0.2	0.3	0.2	0.2
263	**17SA028**	**Top**	8	F(silt)/F(clay)	85	93	0	0	0	0	0	0	0	0
264	**17SA028**	**Top**	9	F(silt)	93	101	0	0	0	0	0	0	0	0.4
265	**17SA008**	**Top**	1	F(loam)	0	10	0	0	0	0	0	0	0	0
266	**17SA008**	**Top**	2	F(silt)	10	29	0	0	0	0	0	0	0	0.3
267	**17SA008**	**Top**	3	F(clay)	29	38	0	0	0	0	0	0	0	0
268	**17SA008**	**Top**	4	F(silt)	38	52	0	0	0.1	0.6	0.2	0.2	0.2	0.2
269	**17SA008**	**Top**	5	F(clay)	52	54	0	0	0	0	0	0	0	0
270	**17SA008**	**Top**	6	F(silt)	54	62	0	4.3	1.3	1.3	1.2	0.4	0.3	0.3
271	**17SA008**	**Top**	7	F(clay)	62	68	0	0	0	0	0	0	0	0
272	**17SA008**	**Top**	8	E	68	72	0	0	0.4	0.4	0.2	0.2	0.1	0.4
273	**17SA005**	**Top**	1	F(loam)	0	8	0	0	0	0	0	0	0	0
274	**17SA005**	**Top**	2	F(silt)	8	25	0	0	0	0	0	0	0	0
275	**17SA005**	**Top**	2.5	F(silt)	25	40	0	0	0	0	0	0	0	0.4
276	**17SA005**	**Top**	3	F(silt)/F(clay)	40	65	0	0	0	0	0	0	0	0
277	**17SA005**	**Top**	4	F(clay)	65	74	0	0	0	0	0	0	0	0
278	**17SA005**	**Top**	5	D	74	81	0	0	0	0	0.6	0.4	0.3	1.2
279	**17SA011**	**Middle**	1	E/F(silt)	0	9	0	0	0	0	0.01	0.3	0.3	0.2
280	**17SA011**	**Middle**	2	E	9	21	0	0	0.2	0.7	0.1	0.2	0.4	0.4
281	**17SA011**	**Middle**	3	E	21	34	0	2.6	0.5	0.01	0.4	0.3	0.3	0.2
282	**17SA011**	**Middle**	4	E	34	47	0	0	0	0.2	0.01	0.01	0.1	0.1
283	**17SA011**	**Middle**	5	E	47	61	0	0	0	0	0.2	0.01	0.3	1.3
284	**17SA011**	**Middle**	6	D	61	71	0	0	0	0.01	0.7	0.6	1.3	3
285	**17SA011**	**Middle**	7	C/D	71	82	0	6.1	0.4	1.2	1.4	1.4	2	3.1

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
248	17SA006	Top	3.1	16.3	30.3	8.8	2.9	2.9	FALSE
249	17SA009	Top	0	0	0	0	0	0	FALSE
250	17SA009	Top	0	0	0	0	0	0	FALSE
251	17SA009	Top	0	0	0	0	0	0	FALSE
252	17SA009	Top	0	0	0	0	0	0	FALSE
253	17SA009	Top	0	0	0	0	0	0	FALSE
254	17SA009	Top	7.4	22.9	40	21.8	10.3	8.8	FALSE
255	17SA009	Top	2.3	9.6	29.8	24.7	13.6	9.3	FALSE
256	17SA028	Top	0	0	0	0	0	0	FALSE
257	17SA028	Top	1.3	2.7	17.1	47.8	72.8	122.7	TRUE
258	17SA028	Top	0	0	0	0	0	0	FALSE
259	17SA028	Top	0.5	0.5	0.6	1	2.5	84.3	TRUE
260	17SA028	Top	0	0	0	0	0	0	FALSE
261	17SA028	Top	0	0	0	0	0	0	FALSE
262	17SA028	Top	0.4	0.7	1.1	1.6	4.1	56.4	FALSE
263	17SA028	Top	0	0	0	0	0	0	FALSE
264	17SA028	Top	0.9	1.1	1.2	1	1.6	48.1	FALSE
265	17SA008	Top	0	0	0	0	0	0	FALSE
266	17SA008	Top	0.4	0.6	0.9	2	8.3	156.11	FALSE
267	17SA008	Top	0	0	0	0	0	0	FALSE
268	17SA008	Top	1	3	11.8	35.7	51.2	64.8	FALSE
269	17SA008	Top	0	0	0	0	0	0	FALSE
270	17SA008	Top	0.4	0.7	1.6	1.8	4.1	50.4	FALSE
271	17SA008	Top	0	0	0	0	0	0	FALSE
272	17SA008	Top	0.5	1.8	10.6	15.4	10.5	8.1	FALSE
273	17SA005	Top	0	0	0	0	0	0	FALSE
274	17SA005	Top	0.1	0.4	1	9.6	34.8	129.2	FALSE
275	17SA005	Top	0.1	0.3	0.6	3.4	16.7	134.9	FALSE
276	17SA005	Top	0	0	0	0	0	0	FALSE
277	17SA005	Top	0	0	0	0	0	0	FALSE
278	17SA005	Top	2.5	9.4	27.3	19.1	10.7	9.6	FALSE
279	17SA011	Middle	0.4	1.8	8.5	17.9	22.2	38.5	FALSE
280	17SA011	Middle	1	5	23.3	30.1	27.3	53.2	FALSE
281	17SA011	Middle	1	8.2	48.2	58.4	25.6	11.5	FALSE
282	17SA011	Middle	0.5	8	59.5	40.9	10.3	4.5	FALSE
283	17SA011	Middle	5.2	26.4	35.5	45.5	29.2	15.4	FALSE
284	17SA011	Middle	6.7	20.7	25.3	27.2	24.5	15.9	FALSE
285	17SA011	Middle	5.6	15.6	21.6	13.7	11.3	9.1	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
291	17SA030	Bottom	1	E	0	6	0	0	0.2	0.01	0.2	0.3	0.6	1
292	17SA030	Bottom	2	D/E	6	9	8.3	2.9	2.5	1.3	1.5	1.5	1.8	2
293	17SA030	Bottom	3	D	9	25	92.7	37.4	18.4	15	13	10.3	10.3	11.2
294	17SA030	Bottom	4	C/D	25	37	0	0	0	0	0	0	0	0
295	17SA030	Bottom	5	MV	37	43	41.7	31.3	11	12	9.6	8.7	9.1	9.4
296	17SA010	Bottom	1	D	0	11	12.9	8.6	3.1	1.6	1.9	1.7	2.1	3.2
297	17SA010	Bottom	2	D/E	11	30	0	0	0	0	0.01	0.1	0.01	0.3
298	17SA010	Bottom	3	C	30	34	0	23.5	1.4	1.7	2.4	1.5	2.6	3.6
299	17SA010	Bottom	4	A/B	34	41	60.6	4.6	4.7	2.1	3.2	3	3.3	3.5
300	17SA010	Bottom	5	C	41	45	0	3.6	1.7	1.5	1.4	1.3	1.2	1.5
301	17SA028	Bottom	1	E	0	8	0	0	0	0	0	0	0	0
302	17SA028	Bottom	2	D	8	20	34.4	19.4	0.3	1.4	3.3	2.3	3.1	4.4
303	17SA028	Bottom	3	C/D	30	49	28.5	29.3	15.7	14.1	14.6	12.8	14.7	17.4
304	17SA028	Bottom	2.5	C/D	20	30	0	14.5	5.3	6.5	6.3	7.5	10.9	14.1
305	17SA005	Bottom	1	B/C	0	11	56.3	29.4	9.9	8.9	7.9	7.2	7.4	7.2
306	17SA005	Bottom	2	B/C	11	22	55.6	17.4	4	7.5	4.5	4.4	5.3	7.1
307	17SA005	Bottom	3	B/C	22	37	35.8	14.4	9.4	8.6	8.5	6.9	8.8	10.4
308	17SA007	Middle_1	1	C	0	6	0	0	0	0.6	0.5	0.4	0.4	0.6
309	17SA007	Middle_1	2	D	6	15	9	43.7	7.4	7.6	7.4	4	4.8	4.7
310	17SA007	Middle_1	3	C	15	23	9	10.2	2.4	5.4	5.3	4.4	5.2	6.2
311	17SA007	Middle_1	4	E	23	29	0	4.4	0.8	0.6	0.4	0.2	0.1	0.2
312	17SA007	Middle_1	5	B/C	29	35	16.4	8.2	3.1	3.2	2.3	2.3	2.7	3.3
313	17SA004	Middle_2	1	E	0	19	0	0	0	0	0	0	0	5.2
314	17SA004	Middle_2	2	F(silt)	19	25	0	0	0	0	0	0	0	0.01
315	17SA004	Middle_2	3	E	25	35	0	0	0	0	0	0	0	1.3
316	17SA004	Middle_2	4	C/D	35	53	11.9	25.9	13.6	7.7	9.7	9.3	12.7	16.1
317	17SA004	Middle_2	5	D	53	64	6.3	9.4	4.7	2.8	2.2	2.7	3.4	5
318	17SA004	Middle_2	6	C	64	72	39.3	18.1	4.6	6.1	5.1	3.3	3.7	3.7
319	17SA012	Bottom	1	D	0	10	0	1.7	0	0.1	0.01	0.1	0.3	0.6
320	17SA012	Bottom	2	A	55	63	44.6	5.4	6.6	3.8	3.2	3.5	2.8	3.4
321	17SA012	Bottom	1.25	D	10	25	0	0	0	0	0.1	0.2	0.4	0.6
322	17SA012	Bottom	1.5	D	25	40	0	0	0	0.01	0.4	0.8	2.1	4.5
323	17SA012	Bottom	1.75	D	40	55	0	12.3	3.6	2.2	2.4	2.7	3.5	4.8
324	17SA014	Middle	1	F(silt)	0	1	0	0	0	0	0	0	0	0
325	17SA014	Middle	2	F(clay)	1	14	0	0	0	0	0	0	0	0
326	17SA014	Middle	3	F(silt)	14	22	0	0	0.2	0	0.01	1.1	0.01	0.1
327	17SA014	Middle	4	F(clay)	22	25	0	0	0	0	0	0	0	0
328	17SA014	Middle	5	F(silt)	25	32	0	0	0	0	0	0	0	0.8

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
291	17SA030	Bottom	2.4	10.2	16.2	7.6	3.2	3.1	FALSE
292	17SA030	Bottom	3.5	12.2	15.3	6	2.3	2.4	FALSE
293	17SA030	Bottom	12.8	25.6	27.8	15.1	7.8	11.4	FALSE
294	17SA030	Bottom	0	0	0	0	0	0	FALSE
295	17SA030	Bottom	11.3	20.9	12.3	5.2	3.3	4.9	FALSE
296	17SA010	Bottom	6	25.5	71.7	53.8	20.6	16.6	FALSE
297	17SA010	Bottom	1.3	8.1	29.4	55.7	33.9	24.7	FALSE
298	17SA010	Bottom	5.4	10.4	7.6	7.1	4.5	3.9	FALSE
299	17SA010	Bottom	4.9	8.6	5.5	2.1	1	2.3	FALSE
300	17SA010	Bottom	2	4.7	8	4.3	1.7	1.4	FALSE
301	17SA028	Bottom	0	0	0	0	0	0	TRUE
302	17SA028	Bottom	10	38.5	42.6	14	7.1	5.4	FALSE
303	17SA028	Bottom	24.7	40.2	44.3	20.5	6.5	4.1	FALSE
304	17SA028	Bottom	18.7	29.9	21.1	5.5	2.2	1.6	FALSE
305	17SA005	Bottom	9.6	20.8	23.6	8.9	5.5	8.1	FALSE
306	17SA005	Bottom	11.2	25.1	20.6	6.6	3.3	6.5	FALSE
307	17SA005	Bottom	14	32.3	34.2	12.2	4.6	3.9	FALSE
308	17SA007	Middle_1	1	4.6	14.4	11.9	7	3.5	FALSE
309	17SA007	Middle_1	6.5	15	22.5	15.6	7.8	6.8	FALSE
310	17SA007	Middle_1	8.5	18.9	25.5	14.8	8.3	6.1	FALSE
311	17SA007	Middle_1	0.4	0.8	2.1	16.7	24.4	16.4	FALSE
312	17SA007	Middle_1	4.1	8.3	6.8	3.3	3.1	3.3	FALSE
313	17SA004	Middle_2	1.5	4.6	20.9	50	51.5	43.5	FALSE
314	17SA004	Middle_2	0.01	0.4	1.6	4	8.9	48.8	FALSE
315	17SA004	Middle_2	0.5	2.6	15.8	39.3	36.7	27.6	FALSE
316	17SA004	Middle_2	23.5	49.2	48.4	26.7	12.6	11.3	FALSE
317	17SA004	Middle_2	8.6	25.8	31.6	18.6	9.9	7.8	FALSE
318	17SA004	Middle_2	4.5	7.4	7.1	3.4	2	3.8	FALSE
319	17SA012	Bottom	2.5	31.9	89.1	21.7	8.8	8.5	FALSE
320	17SA012	Bottom	6	18.5	18.7	4	1.7	2.2	FALSE
321	17SA012	Bottom	2.9	34.8	91.2	21.6	8.2	6.7	FALSE
322	17SA012	Bottom	11	47.9	91.2	25.3	10	7	FALSE
323	17SA012	Bottom	9.8	39.3	65.1	18.3	6.9	4.7	FALSE
324	17SA014	Middle	0	0	0	0	0	0	FALSE
325	17SA014	Middle	0	0	0	0	0	0	FALSE
326	17SA014	Middle	0.4	0.5	2.3	7.9	14.6	51.3	FALSE
327	17SA014	Middle	0	0	0	0	0	0	FALSE
328	17SA014	Middle	0.3	1.6	11.1	22.1	18.8	13.7	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
329	**17SA014**	**Middle**	6	F(clay)	32	34	0	0	0	0	0	0	0	0
330	**17SA014**	**Middle**	7	F(silt)	34	60	0	0	0.1	0.2	0.2	0	0.6	0.3
331	**17SA014**	**Middle**	8	E	60	76	0	0	0	0	0.01	0.01	0.01	0.1
332	**17SA014**	**Middle**	9	D/E	76	91	0	0	0	0.3	0.7	0.3	0.4	0.7
333	**17SA008**	**Middle**	1	E	0	15	0	2.4	0.01	0.6	0.4	0.5	0.8	0.5
334	**17SA008**	**Middle**	2	E	15	33	0	2.3	0.6	0.6	0.3	0.2	0.3	0.5
335	**17SA008**	**Middle**	3	E	33	51	0	0	0.01	0.01	0.01	0.01	0.2	0.1
336	**17SA008**	**Middle**	4	E	51	65	0	0	0.4	0.7	0.8	0.4	1	2.4
337	**17SA008**	**Middle**	5	D	65	72	0	4.2	1.7	0.01	1.6	1.3	2.2	3.2
338	**17SA011**	**Top**	1	D	0	7	0	0	0	0	0	0	0	1.2
339	**17SA011**	**Top**	2	F(silt)/F(clay)	7	12	0	0	0	0	0	0	0	0
340	**17SA011**	**Top**	3	F(silt)	12	38	0	0	0	0	0	0	0	1.1
341	**17SA011**	**Top**	4	F(clay)	38	48	0	0	0	0	0	0	0	0
342	**17SA011**	**Top**	5	E	48	66	0	0	0	0.01	0.01	0.01	0.1	2
343	**17SA011**	**Top**	6	F(clay)	66	71	0	0	0	0	0	0	0	0
344	**17SA011**	**Top**	7	F(silt)	71	74	0	0	0	0	0	0	0	0.3
345	**17SA011**	**Top**	8	F(clay)	74	76	0	0	0	0	0	0	0	0
346	**17SA011**	**Top**	9	F(silt)	76	78	0	0	0	0	0	0	0	0.3
347	**17SA012**	**Middle**	1	E	0	22	0	4.1	1.2	0.9	0.6	0.7	0.9	0.7
348	**17SA012**	**Middle**	2	D/E	22	50	0	7.7	1.4	2.2	1.7	2.7	3	4.7
349	**17SA012**	**Middle**	3	E	50	60	0	0	0	0.1	0.5	0.6	0.8	1.3
350	**17SA012**	**Middle**	4	C	60	67	0	4.1	0	1.3	0.6	0.3	0.8	1.4
351	**17SA004**	**Bottom_2**	1	C	0	6	0	9.4	2	2.3	3.2	4.5	5.3	6.7
352	**17SA004**	**Bottom_2**	2	D	6	11	0	0	0	0.4	0.3	0.3	0.9	1.2
353	**17SA004**	**Bottom_2**	3	B	11	15	18.8	15.6	5.2	2.4	2.5	2.1	2.6	2.5
355	**17SA007**	**Bottom_2**	1	D	0	5	0	0	1.6	1	1.2	0.5	0.6	1.6
356	**17SA007**	**Bottom_2**	2	B	5	11	56.8	10.2	1.1	1.4	1.1	1.2	0.9	3
357	**17SA007**	**Bottom_2**	2.5	D	11	17	0	0	1.2	1.5	1.7	1.7	2.9	7.2
358	**17SA007**	**Bottom_2**	3	C	17	36	20	15.9	6.5	9.5	10.6	11	13.6	19.2
359	**17SA007**	**Bottom_2**	4	B	36	41	30.5	6.7	6.4	5.3	5.2	2.6	2.8	3.2
360	**17SA013**	**Middle**	1	E	0	9	0	0	0	0.1	0.1	0.4	0.9	1.6
361	**17SA013**	**Middle**	2	E	9	21	0	8.3	0.9	2	0.5	0.6	1.3	2.9
362	**17SA013**	**Middle**	3	D/E	21	34	0	0.9	2.3	2.6	3.3	3.3	4.6	8.7
363	**17SA013**	**Middle**	4	D	34	42	0	1.9	0.8	2.2	1.2	2	4.5	7.6
364	**17SA013**	**Middle**	5	C/D	42	60	30.4	31.3	11	9	10	9.2	10.4	11.9
365	**17SA013**	**Middle**	6	B/C	60	76	11.9	21.2	10.1	7.5	6.2	6.9	9.7	13.2
366	**17SA003**	**Middle**	1	F(silt)	0	10	0	0	0	0	0	0	0	0
367	**17SA003**	**Middle**	2	E	10	16	0	0	1.2	0.3	0.5	0.3	0.9	1.6

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
329	17SA014	Middle	0	0	0	0	0	0	FALSE
330	17SA014	Middle	0.4	2.5	16.4	37.1	58.2	70.8	FALSE
331	17SA014	Middle	0.3	7.4	33.3	32.9	36.7	34.8	FALSE
332	17SA014	Middle	3	25	74.7	37	14.3	9.9	FALSE
333	17SA008	Middle	1.4	6.6	28.4	39.9	42.3	51.2	FALSE
334	17SA008	Middle	1.7	15	78.3	77	33.8	19.3	FALSE
335	17SA008	Middle	0.7	15.8	75.8	55.5	25.6	12.1	FALSE
336	17SA008	Middle	5.2	21.3	56.2	55.9	28.6	13.7	FALSE
337	17SA008	Middle	5.4	13.9	12.8	5.8	3.6	2.2	FALSE
338	17SA011	Top	1.3	2.9	6.8	5.5	4.4	21	FALSE
339	17SA011	Top	0	0	0	0	0	0	FALSE
340	17SA011	Top	1	1.6	2.9	4.1	20.2	246.9	FALSE
341	17SA011	Top	0	0	0	0	0	0	FALSE
342	17SA011	Top	0.3	0.9	4.3	20.6	65.8	131.2	FALSE
343	17SA011	Top	0	0	0	0	0	0	FALSE
344	17SA011	Top	0.4	0.7	1.7	2.1	5.3	40.5	FALSE
345	17SA011	Top	0	0	0	0	0	0	FALSE
346	17SA011	Top	0.4	0.7	1.7	2.1	5.3	40.5	FALSE
347	17SA012	Middle	1.4	11.3	84.4	68.6	40.8	36.5	FALSE
348	17SA012	Middle	11.2	45.4	95.3	55.5	23.6	14.7	FALSE
349	17SA012	Middle	3.7	18.5	34.7	33.3	28.5	32.5	FALSE
350	17SA012	Middle	4.3	18.4	16.3	6.2	6.4	10.9	FALSE
351	17SA004	Bottom_2	9.3	15.9	9.6	2.8	1.7	2.4	FALSE
352	17SA004	Bottom_2	3.9	21	19.7	11.5	12.4	9.6	FALSE
353	17SA004	Bottom_2	3.2	6.2	5.1	2.5	2.1	3.4	FALSE
355	17SA007	Bottom_2	2.9	5.8	9.3	10.2	11.2	10.9	FALSE
356	17SA007	Bottom_2	5.6	9.5	10.1	4.2	2.2	2.2	FALSE
357	17SA007	Bottom_2	13.3	29.6	39.4	13.2	4.1	3.2	FALSE
358	17SA007	Bottom_2	25.2	50.8	62.3	27.4	13	7.6	FALSE
359	17SA007	Bottom_2	3.6	6.1	4.3	1.5	0.4	0.7	FALSE
360	17SA013	Middle	3.9	15.2	39.9	40.3	17.4	6.7	FALSE
361	17SA013	Middle	7.4	20.3	28.9	34.2	22.3	11.8	FALSE
362	17SA013	Middle	20.2	53	26.7	18.7	14.1	7.8	FALSE
363	17SA013	Middle	14.3	30.5	18.2	10.7	9.8	6.3	FALSE
364	17SA013	Middle	18.5	45.4	42.3	16.9	9.5	8.4	FALSE
365	17SA013	Middle	21.4	44.2	34.1	7	3.3	4	FALSE
366	17SA003	Middle	0	0	12.2	15.1	14.7	61.6	FALSE
367	17SA003	Middle	4	16.7	37.3	20	7	5.7	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
368	**17SA003**	**Middle**	3	D	16	19	0	0.6	0.8	0.9	1.8	1.7	1.3	1.4
369	**17SA003**	**Middle**	4	D/E	34	52	0	0	0	0	0.4	0.5	0.8	1.6
370	**17SA003**	**Middle**	5	D/E	52	76	0	10.5	2.3	2.3	2.6	3.7	4.6	8.9
371	**17SA003**	**Middle**	3.5	D	19	34	0	0	1	0	0.3	0.9	2.1	4.7
372	**17SA009**	**Bottom**	1	C	0	9	20.7	2.2	2.4	2.2	3.4	3.3	4.8	8.8
373	**17SA009**	**Bottom**	2	D	9	25	0	19	2.4	3.9	3.1	2.8	4.8	10.1
374	**17SA009**	**Bottom**	3	C	25	36	11	26.9	4.7	6.1	5.4	5.6	9.2	11.4
375	**17SA009**	**Bottom**	4	E	36	40	0	3.4	0	0.6	0.6	0.4	0.6	1.3
376	**17SA003**	**Top**	1	F(loam)	0	7	0.2	0.2	0.1	0.3	1	1.3	1.2	1.4
377	**17SA003**	**Top**	2	F(silt)	7	29	0	0	0	0	0	0	0	0
378	**17SA003**	**Top**	3	E/F(silt)	37	49	0	0	0	0	0	0	0	0.1
379	**17SA003**	**Top**	4	F(silt)	49	65	0	0	0	0	0	0	0	0.2
380	**17SA003**	**Top**	2.5	F(clay)	29	37	0	0	0	0	0	0	0	0
381	**17SA006**	**Middle**	1	E/F(silt)	0	19	0	0	0	0	0	0	0	0.4
382	**17SA006**	**Middle**	2	D	19	29	0	14.6	2.9	5.2	5	4.4	5.1	6.4
383	**17SA006**	**Middle**	3	E/F(silt)	29	37	0	9.9	3.4	1.3	1.7	0.9	0.9	1.3
384	**17SA006**	**Middle**	4	C	37	47	0	3.1	3.7	2.8	3.9	4	6.1	11.8
385	**17SA006**	**Middle**	5	D	47	65	0	0	0.2	0.3	0.2	0.2	1	1.4
386	**17SA006**	**Middle**	6	B	65	69	29.1	14.9	3	2.9	1.5	1.1	0.9	1
387	**17SA003**	**Bottom**	1	D	0	7	0	5.5	0.3	2.1	3.1	2.1	3.5	4.6
388	**17SA003**	**Bottom**	2	C	7	15	17.7	8.8	4.9	6.5	6.4	5.6	6.8	8.1
389	**17SA003**	**Bottom**	3	B/C	15	24	14.5	8.8	3.5	3.6	3.5	4.2	5.8	7.8
390	**17SA003**	**Bottom**	4	E	24	28	0	0.7	0.9	1.3	0.9	1.1	1.6	2.3
391	**17SA003**	**Bottom**	5	B	28	33	0	6.3	6.4	5.3	5.2	4.4	4.4	3.6
392	**17SA003**	**Bottom**	6	D	33	41	0	2.3	1.8	0.8	1.6	2	3.2	3.7
393	**17SA029**	**Bottom**	1	E	0	10	0	0	0	0.2	0.1	0.3	0.2	1.3
394	**17SA029**	**Bottom**	2	E	10	25	0	0	0	2.2	1.9	2.3	4.5	9.5
395	**17SA029**	**Bottom**	3	D	25	40	19	21.9	7.2	5.3	7.1	4.5	7.7	10
396	**17SA029**	**Bottom**	4	D	40	53	0	16.6	4	7.6	5.7	4.8	7.3	8.8
397	**17SA029**	**Bottom**	5	A	53	61	58	35.8	8.9	7.6	5.7	5	4.9	5.8
398	**17SA029**	**Bottom**	6	E	61	69	0	0	0.3	0.01	0.1	0.01	0.1	0.2
399	**17SA006**	**Bottom**	1	A	0	4	44.1	11.1	3	2.5	2.2	1.8	1.9	2.2
400	**17SA006**	**Bottom**	2	C	4	15	46.2	6.3	6.6	4.6	6.1	5.1	5.4	7.2
401	**17SA006**	**Bottom**	3	B	15	23	25.5	12.2	6.7	5.7	5.7	4.6	5.4	5.4
402	**17SA010**	**Middle**	1	D	0	9	0	0	0.5	1	1.9	3.2	5.2	7.7
403	**17SA010**	**Middle**	2	C/D	9	25	42.6	14.6	5	2.1	2.9	2.6	3.4	5.2
404	**17SA010**	**Middle**	3	C/D	25	31	38.6	10.2	3.1	2.2	1.3	1.9	1.6	1.8
405	**17SA010**	**Middle**	4	E	31	35	0	4	0	1.3	0.7	0.6	0.3	0.6

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
368	17SA003	Middle	2	6.7	14.7	9.1	4.5	4.7	FALSE
369	17SA003	Middle	5.9	41.9	101.6	39.4	16.3	9.7	FALSE
370	17SA003	Middle	19.1	57.3	93.5	39.5	14.1	9.9	FALSE
371	17SA003	Middle	9.2	27.6	54.5	24.3	9.8	7.4	FALSE
372	17SA009	Bottom	12.5	25.4	35.7	16.4	6.2	6	FALSE
373	17SA009	Bottom	18.3	44.5	64.5	30.9	12.5	6.6	FALSE
374	17SA009	Bottom	14.4	24.9	24.1	16.4	13.2	9.1	FALSE
375	17SA009	Bottom	3.1	6.6	7	3.9	3.7	2.3	FALSE
376	17SA003	Top	2.3	3.3	3.2	2.5	3.7	32.5	FALSE
377	17SA003	Top	0	0	0	0	0	0	FALSE
378	17SA003	Top	0.4	2.6	10.6	27.1	43	53.32	FALSE
379	17SA003	Top	0.6	1.7	3.9	5.8	15.9	139.62	FALSE
380	17SA003	Top	0	0	0	0	0	0	FALSE
381	17SA006	Middle	0.8	3.5	19.6	52	53.9	69.2	FALSE
382	17SA006	Middle	10.5	30.3	31.2	10.2	4.1	4.5	FALSE
383	17SA006	Middle	2.6	8.5	25.8	31.8	20.4	17.1	FALSE
384	17SA006	Middle	19.5	42.5	38.6	13.5	5	4.2	FALSE
385	17SA006	Middle	4.5	30.1	68.1	56	22.2	11.3	FALSE
386	17SA006	Middle	1.5	2.5	3.5	4.4	2.5	2.9	FALSE
387	17SA003	Bottom	9	30.9	31	10.4	3.7	4	FALSE
388	17SA003	Bottom	10.9	27.7	26.3	7.5	6.3	5.8	FALSE
389	17SA003	Bottom	9.7	22.3	25.1	9.8	4.3	3.1	FALSE
390	17SA003	Bottom	3.4	13	28.4	20.7	7.2	3.7	FALSE
391	17SA003	Bottom	3.6	5.5	9.9	6.8	2.4	1.4	FALSE
392	17SA003	Bottom	5.1	13.6	21	15	5.3	2.5	FALSE
393	17SA029	Bottom	5.7	23.2	46	34.7	23.8	10.1	FALSE
394	17SA029	Bottom	22.5	63.6	67.3	31.8	16.6	5.2	FALSE
395	17SA029	Bottom	18.6	47.9	46.9	21	12.2	6	FALSE
396	17SA029	Bottom	12.3	27.6	37.4	16.3	6.7	4.2	FALSE
397	17SA029	Bottom	6.9	10.7	8.2	4.2	2.4	6	FALSE
398	17SA029	Bottom	0.2	1.9	28.5	24.9	11.5	6.9	FALSE
399	17SA006	Bottom	3.4	7.1	6.1	2.6	1.7	4.5	FALSE
400	17SA006	Bottom	11.9	28.5	23.7	9.2	5.5	11.5	FALSE
401	17SA006	Bottom	6.8	9.8	5.6	1.9	0.9	2.2	FALSE
402	17SA010	Middle	13.2	29.6	33.3	12.8	7.1	10	FALSE
403	17SA010	Middle	9.5	27.6	47.3	24.8	11.3	10.4	FALSE
404	17SA010	Middle	2.8	10.2	19.9	8.9	4.5	6.3	FALSE
405	17SA010	Middle	0.8	1.5	3.8	11.9	13.4	11.3	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
406	17SA010	Middle	5	B	35	46	19.3	43.1	8	6.2	4.9	3.8	4.2	5.2
407	17SA013	Bottom	1	D	0	5	0	6.7	1.9	3.6	2.7	2.3	2.7	3.4
408	17SA013	Bottom	2	C	5	11	11.9	30.5	8.2	9	5.2	4.2	4.3	3.5
409	17SA013	Bottom	3	D	11	26	52.6	29.6	6.6	8.9	6.1	6.8	9.3	7.7
410	17SA013	Bottom	4	C	26	34	12.7	24.5	8.1	7.5	7	6.3	7.6	7.7
411	17SA013	Bottom	5	E	34	52	7.6	1.1	0	0.01	0.5	0.2	0.6	0.9
412	17SA013	Bottom	6	D	52	54	0	9.3	2.3	6.3	2.7	1.7	1.6	1.1
413	17SA012	Top	1	F(loam)	0	6	0	0	0	0	0	0	0	0
414	17SA012	Top	2	F(clay)	6	17	0	0	0	0	0	0	0	0
415	17SA012	Top	3	F(silt)	17	25	0	0	0	0	0	0	0	3.3
416	17SA012	Top	4	F(clay)	25	38	0	0	0	0	0	0	0	0
417	17SA012	Top	5	F(silt)	38	52	0	0	0	0	0	0	0	0.4
418	17SA012	Top	6	F(clay)	52	55	0	0	0	0	0	0	0	0
419	17SA012	Top	7	F(silt)	55	65	0	0	0	0	0	0	0	0.4
420	17SA012	Top	8	F(clay)	65	72	0	0	0	0	0	0	0	0
421	17SA012	Top	9	F(silt)	72	83	0	0	0	0	0	0	0	0
430	17SA004	Bottom_1	1	A	0	27	110.4	25.2	6.9	5	5.4	3.4	3.7	5
431	17SA004	Middle_1	1	E	0	12	0	4.4	0.4	0.2	0.5	0.2	0.1	0.1
432	17SA004	Top_1	1	OM	0	1	0	0	0	0	0	0	0	0
441	17SA004	Middle_1	2	E/F(silt)	12	28	0	0	0	0	0.1	0.1	0.1	0.1
442	17SA004	Middle_1	3	E/F(silt)	28	40	0	0	0.6	0.6	0.8	1.3	1.1	1.9
443	17SA004	Middle_1	4	C/D	40	52	23.3	43	10.6	12.3	8.2	6.9	7.9	11.8
444	17SA004	Middle_1	5	E	52	56	0	3.6	0.8	1.4	1	0.8	1.3	2.3
445	17SA004	Middle_1	6	C/D	56	63	45.4	13.8	0.8	1.4	1.7	1.7	1.3	1.9
446	17SA004	Top_1	2	F(silt)	1	33	0	0	0.2	0.1	0.8	1.2	1.2	1
447	17SA004	Top_1	3	F(silt)/F(clay)	33	57	0	0	0	0	0	0	0	0
448	17SA004	Top_1	4	E/F(silt)	57	68	0	0	0	0	0	0	0	0
449	17SA004	Top_1	5	E	68	77	0	0	0	0	0	0	0.01	0.01
452	17SA007	Top_1	1	F(loam)	0	11	0	0	0	0	0	0	0	0
453	17SA007	Top_1	2	F(silt)	11	37	0	0	0.01	0.2	0	0	0	0.1
454	17SA007	Top_1	3	F(silt)/F(clay)	37	54	0	0	0	0	0	0	0	0
455	17SA007	Top_1	4	F(silt)	54	61	0	0	0	0	0	0	0	0
456	17SA007	Top_1	5	F(clay)	61	65	0	0	0	0	0	0	0	0
457	17SA007	Top_1	6	D	65	82	0	2.3	0.3	1.8	2.2	2.6	3.3	3.8
458	17SA007	Middle_2	1	E	0	4	0	0	0.3	0	0.01	0.2	0.01	0.3
459	17SA007	Middle_2	2	D	4	11	35.8	22.1	8.3	6.1	5.2	2.9	2.6	3.4
460	17SA007	Middle_2	3	E	11	16	10.7	2	0	1.1	2	2.5	2.8	3.3
461	17SA007	Middle_2	4	OM	16	20	0	0	0	0	0	0	0	0

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
406	17SA010	Middle	8.3	16.7	13.7	5	3.1	6.6	FALSE
407	17SA013	Bottom	6.7	17.7	15.9	3.7	1.1	1.5	FALSE
408	17SA013	Bottom	5.5	12.6	13.8	4.7	1.9	2.1	FALSE
409	17SA013	Bottom	13	33.8	40	14	5.5	6.2	FALSE
410	17SA013	Bottom	11.5	25.3	19.5	5.4	2.6	2.4	FALSE
411	17SA013	Bottom	4.6	42.8	101	41.1	11.6	6.6	FALSE
412	17SA013	Bottom	1.2	2.8	4.4	3.2	1	0.9	FALSE
413	17SA012	Top	1.3	3.8	6.4	4.9	5.5	20.8	FALSE
414	17SA012	Top	0	0	0	0	0	0	FALSE
415	17SA012	Top	0.6	1	1.4	6.2	23.4	50.3	FALSE
416	17SA012	Top	0	0	0	0	0	0	FALSE
417	17SA012	Top	0.3	0.9	2.7	9.5	38.1	67.6	FALSE
418	17SA012	Top	0	0	0	0	0	0	FALSE
419	17SA012	Top	0.6	1.6	2.3	2.3	4.401	77.501	FALSE
420	17SA012	Top	0	0	0	0	0	0	FALSE
421	17SA012	Top	0.2	0.8	4.5	20.1	23.6	23.7	FALSE
430	17SA004	Bottom_1	7.5	15.9	15.1	7.6	5.3	10.6	FALSE
431	17SA004	Middle_1	0.4	3.8	22.4	36.8	47	0	FALSE
432	17SA004	Top_1	0	0	0	0	0	0	FALSE
441	17SA004	Middle_1	0.1	0.5	8.3	24.7	45.2	105.5	FALSE
442	17SA004	Middle_1	2.7	6.5	20.8	41.1	42.5	27.2	FALSE
443	17SA004	Middle_1	17.1	30.3	24.5	12.4	6.7	9.8	FALSE
444	17SA004	Middle_1	3.9	9.5	11.8	7.8	3.6	3.1	FALSE
445	17SA004	Middle_1	4.1	8.9	8	2.8	1.3	3.5	FALSE
446	17SA004	Top_1	1.1	1.5	1.6	2.7	19.5	172.5	FALSE
447	17SA004	Top_1	0	0	0	0	0	0	FALSE
448	17SA004	Top_1	0	0	0	0	0	0	FALSE
449	17SA004	Top_1	0.5	7.4	26.9	28.9	19.6	14.7	FALSE
452	17SA007	Top_1	0	0	0	0	0	0	FALSE
453	17SA007	Top_1	0.3	0.4	0.7	1.3	3.3	221.41	FALSE
454	17SA007	Top_1	0	0	0	0	0	0	FALSE
455	17SA007	Top_1	0	0	0	0	0	0	FALSE
456	17SA007	Top_1	0	0	0	0	0	0	FALSE
457	17SA007	Top_1	5.9	23.1	67.8	55	29.4	18.5	FALSE
458	17SA007	Middle_2	0.5	2.9	10.6	10	6.4	3.5	FALSE
459	17SA007	Middle_2	5.2	11.8	15.9	10.1	5.6	6.2	FALSE
460	17SA007	Middle_2	3.3	7.9	13.9	10.8	5	2.7	FALSE
461	17SA007	Middle_2	0	0	0	0	0	0	FALSE

Layer_ID	SiteCode	Sample Section	Layer	Manual texture Category	TopDpth cm	Depth cm	Coarsest Sieve1 g	Sieve2_g	Sieve3_g	Sieve4_g	Sieve5_g	Sieve6_g	Sieve7_g	Sieve8_g
462	**17SA007**	**Middle_2**	5	C/D	20	26	0	6.5	4.4	3.6	2.6	2	2.4	2.7
463	**17SA007**	**Middle_2**	6	E	26	29	0	0	0	0	0.2	0.01	0.01	0.01
464	**17SA008**	**Bottom**	0	Lost										

Layer_ID	SiteCode	Sample Section	Sieve9_g	Sieve10_g	Sieve11_g	Sieve12_g	Sieve13_g	Finest Pan_g	Aggregates
462	17SA007	Middle_2	3.6	8.4	10.5	7.2	6.6	5.6	FALSE
463	17SA007	Middle_2	0.2	0.7	2.3	5.7	5.2	8.6	FALSE
464	17SA008	Bottom							FALSE

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
1	17SA001	358852	3911421	Live	SW	Center Pt	32.6	cm	39.5	cm	0	m	live		0	1
2	17SA001			Live	SW	NE	27.7	cm		cm	5.77	m	live		0	5
3	17SA001			Live	SW	NW	17.5	cm		cm	0.09	m	dead		0	2
4	17SA001			Live	SW	SW	21.2	cm			8.79	m	live		0	3
5	17SA001			Live	SW	SE	31.5	cm			4.31	m	live		0	4
8	17SA001	358856	3911427	Live	NW	Center Pt	23.7	cm	28.7	cm	0	m	live		0	16
16	17SA001	358863	3911418	Live	SE	Center Pt	38	cm	44.5	cm	0	m	live		0	6
17	17SA001			Live	SE	NW	31.2	cm		cm	3.16	m	live		0	7
18	17SA001			Live	SE	SW	23.9	cm		cm	0.73	m	live		0	8
19	17SA001			Live	SE	SE	29.2	cm		cm	5.68	m	live		0	9
20	17SA001			Live	SE	NE	23.4	cm		cm	1	m	live		0	10
21	17SA001	358855	3911424	Live	NE	Center Pt	50	cm	43	cm	0	m	live		0	11
22	17SA001			Live	NE	NE	22.7	cm		cm	6.02	m	live		0	13
23	17SA001			Live	NE	NW	26	cm		cm	2.21	m	live		0	12
24	17SA001			Live	NE	SW	23.7	cm		cm	6.23	m	live		0	14
25	17SA001			Live	NE	SE	21.5	cm		cm	5.91	m	dead		0	15
28	17SA001			Live	NW	NE	43	cm		cm	6.23	m	live		0	17
29	17SA001			Live	NW	NW	35.2	cm		cm	1.62	m	live		0	18
30	17SA001			Live	NW	SW	39.4	cm		cm	2.92	m	live		0	19
31	17SA001			Live	NW	SE	25.6	cm		cm	3.7	m	live		0	20
33	17SA002	358891	3911411	Dead	NW	Center Pt	26.4	cm	35.4	cm	0	m	dead	Not Barked	0	1
34	17SA002			Dead	NW	SW	33.5	cm		cm	4.96	m	dead	Barked	0	2
35	17SA002			Dead	NW	SE	10.8	cm		cm	6.64	m	dead	Not Barked	0	3
36	17SA002			Dead	NW	NE	20.2	cm		cm	2.54	m	dead	Barked	0	4
37	17SA002			Dead	NW	NW	38.3	cm		cm	5.82	m	dead	Barked	0	5
38	17SA002	358907	3911415	Dead	NE	Center Pt	26.8	cm	32.3	cm	0	m	dead		0	6
40	17SA002			Dead	NE	NW	25.2	cm		cm	1.6	m	dead	Not Barked	0	7
41	17SA002			Dead	NE	NE	14.1	cm		cm	2.8	m	dead	Not Barked	0	8
42	17SA002			Dead	NE	SE	14.3	cm		cm	14.8	m	dead	Not Barked	0	9
43	17SA002			Dead	NE	SW	31.6	cm		cm	2.16	m	dead		0	10
44	17SA002	358892	3911404	Dead	SW	Center Pt	16.5	cm	18.1	cm	0	m	dead	Not Barked	0	11
45	17SA002			Dead	SW	NW	20.1	cm		cm	9.4	m	dead		0	12
46	17SA002			Dead	SW	NE	10.7	cm		cm	6.49	m	dead	Not Barked	0	13
47	17SA002			Dead	SW	SE	24	cm		cm	3.2	m	dead		0	14
48	17SA002			Dead	SW	SW	32.1	cm		cm	6.9	m	dead		0	15
50	17SA002	358910	3911407	Dead	SE	Center Pt	23.5	cm	27.7	cm	0	m	dead		0	16
51	17SA002			Dead	SE	SW	22.2	cm		cm	6.38	m	dead		0	17

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
52	17SA002			Dead	SE	SE	25	cm		cm	8.08	m	dead		0	18
53	17SA002			Dead	SE	NE	29.7	cm		cm	8.67	m	dead		0	19
54	17SA002			Dead	SE	NW	18.7	cm		cm	6.98	m	dead	Not Barked	0	20
55	17SA003			Live	Center Pt	NE	34.7	cm	41.9	cm	8.3	m	live	Barked	0	21
56	17SA003			Live	Center Pt	SE	44.6	cm	52.3	cm	7.9	m	live	Barked	0	22
57	17SA003			Live	Center Pt	SW	44.7	cm		cm	6.2	m	live	Barked	0	23
58	17SA003			Live	Center Pt	NW	23.7	cm		cm	3.6	m	live	Barked	0	24
59	17SA003	359638	3912433	Live	NW	Center Pt	34.7	cm	41.9	cm	0	m	live		0	16
60	17SA003			Live	NW	NE	39.9	cm		cm	2.2	m	dead	Barked	0	17
61	17SA003			Live	NW	SE	28.6	cm		cm	7	m	live	Barked	0	18
62	17SA003			Live	NW	SW	44.6	cm		cm	2.9	m	live	Barked	0	19
63	17SA003			Live	NW	NW	43.8	cm		cm	12.7	m	live	Barked	0	20
64	17SA003	359632	3912434	Live	NE	Center Pt	44.6	cm	52.3	cm	0	m	live		0	1
65	17SA003			Live	NE	NE	39.9	cm		cm	4.6	m	dead	Barked	0	2
66	17SA003			Live	NE	SE	30.5	cm		cm	6	m	dead	Barked	0	3
67	17SA003			Live	NE	SW	30	cm		cm	2.1	m	dead	Barked	0	4
68	17SA003			Live	NE	NW	34.7	cm		cm	2.85	m	live	Barked	0	5
69	17SA003	359616	3912427	Live	SE	Center Pt	39	cm	46.5	cm	0	m	live		1	6
70	17SA003			Live	SE	NE	32.5	cm		cm	2.09	m	live	Barked	0	7
71	17SA003			Live	SE	SE	45.6	cm		cm	11.3	m	dead	Barked	0	8
72	17SA003			Live	SE	SW	42.1	cm		cm	9.1	m	live	Barked	0	9
73	17SA003			Live	SE	NW	25.5	cm		cm	15.7	m	live	Barked	0	10
74	17SA005	359704	3912415	Dead	NE	Center Pt	23.2	cm	28	cm	0	m	dead	Not Barked	0	1
75	17SA005	359709	3912401	Dead	SE	Center Pt	24.8	cm	36.5	cm	0	m	dead	Not Barked	1	6
77	17SA003	359626	3912440	Live	SW	Center Pt	43.8	cm	49.4	cm	0	m	live		0	11
78	17SA003			Live	SW	NE	29.4	cm		cm	5.9	m	dead	Barked	0	12
79	17SA003			Live	SW	SE	23.4	cm		cm	5.5	m	dead	Barked	0	13
80	17SA003			Live	SW	SW	37.6	cm		cm	2.1	m	dead	Barked	0	14
81	17SA003			Live	SW	NW	27	cm		cm	6.9	m	live	Barked	0	15
84	17SA004			Dead	NE	Center Pt	20.2	cm	26	cm	0	m	dead	Other	0	1
89	17SA004	359660	3912383	Dead	SE	Center Pt	18.5	cm	30.9	cm	0	m	dead	Other	0	6
90	17SA004			Dead	SE	NE	20.5	cm		cm	5.31	m	dead	Barked	0	7
91	17SA004			Dead	SE	SE	20	cm		cm	6.67	m	dead	Not Barked	0	8
92	17SA004			Dead	SE	SW	34.8	cm		cm	7.52	m	dead	Barked	0	9
93	17SA004			Dead	SE	NW	20.3	cm		cm	9.25	m	dead	Not Barked	0	10
94	17SA004	359626	3912399	Dead	SW	Center Pt	31	cm	36.7	cm	0	m	dead	Barked	1	11
95	17SA004			Dead	SW	NE	20.3	cm		cm	3.95	m	dead	Not Barked	0	12

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
96	17SA004			Dead	SW	SE	34.8	cm		cm	7.23	m	dead	Barked	0	13
97	17SA004			Dead	SW	SW	23.1	cm		cm	7.72	m	dead	Barked	0	14
98	17SA004			Dead	SW	NW	23	cm		cm	6.38	m	dead	Barked	0	15
99	17SA004	359624	3912415	Dead	NW	Center Pt	28.1	cm	33	cm	0	m	dead	Barked	0	16
100	17SA004			Dead	NW	NE	45.5	cm		cm	3.01	m	dead	Barked	0	17
101	17SA004			Dead	NW	SE	24.4	cm		cm	11.4	m	dead	Not Barked	0	18
102	17SA004			Dead	NW	SW	47	cm		cm	9.1	m	dead	Barked	0	19
103	17SA004			Dead	NW	NW	39.6	cm		cm	11.6	m	live	Barked	0	20
104	17SA004			Dead	Center Pt	NE	45.9	cm		cm	6.09	m	dead	Barked	0	22
105	17SA004			Dead	Center Pt	SE	34.1	cm		cm	9.94	m	dead	Barked	0	23
106	17SA004			Dead	Center Pt	SW	24.4	cm		cm	4.76	m	dead	Not Barked	0	24
107	17SA004			Dead	Center Pt	NW	24.2	cm		cm	1.79	m	dead	Barked	0	25
108	17SA005			Dead	NE	NE	21.5	cm		cm	9.63	m	dead	Barked	0	2
109	17SA005			Dead	NE	SE	25.5	cm		cm	9.41	m	dead	Barked	0	3
110	17SA005			Dead	NE	SW	20.5	cm		cm	1.73	m	dead	Barked	0	4
111	17SA005			Dead	NE	NW	13	cm		cm	3.06	m	dead	Barked	0	5
112	17SA005			Dead	SE	NE	30.8	cm		cm	9.1	m	live	Barked	0	7
113	17SA005			Dead	SE	SE	51.5	cm		cm	7.33	m	live	Barked	0	8
114	17SA005			Dead	SE	SW	28.3	cm		cm	5.02	m	dead	Not Barked	0	9
115	17SA005			Dead	SE	NW	20.8	cm		cm	1.59	m	dead		0	10
117	17SA005	359695	3912410	Dead	SW	Center Pt	26	cm	32.3	cm	0	m	dead	Barked	0	11
118	17SA005			Dead	SW	NE	28.7	cm		cm	4.15	m	dead	Barked	0	12
119	17SA005			Dead	SW	SE	37.4	cm		cm	7.88	m	dead	Barked	0	13
120	17SA005			Dead	SW	SW	28	cm		cm	5.59	m	dead	Barked	0	14
121	17SA005			Dead	SW	NW	12.8	cm		cm	9.26	m	dead	Barked	0	15
122	17SA005	359695	3912423	Dead	NW	Center Pt	18.6	cm	24	cm	0	m	dead	Not Barked	0	16
123	17SA005			Dead	NW	NE	32	cm		cm	0.76	m	dead	Barked	0	17
124	17SA005			Dead	NW	SE	29.3	cm		cm	7.06	m	dead	Barked	0	18
125	17SA005			Dead	NW	SW	12.8	cm		cm	10.2	m	dead	Not Barked	0	19
126	17SA005			Dead	NW	NW	40.7	cm		cm	10.1	m	dead	Barked	0	20
128	17SA005			Dead	Center Pt	NE	23.3	cm		cm	1.72	m	dead	Barked	0	22
129	17SA005			Dead	Center Pt	SE	24.7	cm		cm	5.57	m	dead	Barked	0	23
130	17SA005			Dead	Center Pt	SW	27.9	cm		cm	5.18	m	dead	Barked	0	24
131	17SA005			Dead	Center Pt	NW	28.9	cm		cm	2.14	m	dead	Barked	0	25
132	17SA006			Live	NE	Center Pt	42.1	cm	47.3	cm	0	m	live		0	1
133	17SA006			Live	NE	NE	3.7	cm		cm	1.61	m	live	Barked	0	2
134	17SA006			Live	NE	SE	45.2	cm		cm	11.7	m	live	Barked	0	3

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
135	**17SA006**			Live	NE	SW	27.5	cm		cm	7.4	m	dead	Barked	0	4
136	**17SA006**			Live	NE	NW	20.9	cm		cm	6.81	m	dead	Barked	0	5
137	**17SA006**	359722	3912389	Live	SE	Center Pt	39.5	cm	44.9	cm	0	m	live		0	6
138	**17SA006**			Live	SE	NE	43.9	cm		cm	6.45	m	live	Barked	0	7
139	**17SA006**			Live	SE	SE	50.8	cm		cm	10.7	m	live	Barked	0	8
140	**17SA006**			Live	SE	SW	24.7	cm		cm	4.58	m	dead	Barked	0	9
141	**17SA006**			Live	SE	NW	23	cm		cm	9.81	m	dead	Barked	0	10
142	**17SA006**	359711	3912384	Live	SW	Center Pt	59.4	cm	90.5	cm	0	m	live		0	11
143	**17SA006**			Live	SW	NE	1.5	cm		cm	4.7	m	live	Barked	0	12
144	**17SA006**			Live	SW	SE	27.3	cm		cm	3.33	m	live	Barked	0	13
145	**17SA006**			Live	SW	SW	33.4	cm		cm	3.94	m	live	Barked	0	14
146	**17SA006**			Live	SW	NW	13.78	cm		cm	45.1	m	live	Barked	0	15
147	**17SA006**	359713	3912396	Live	NW	Center Pt	51.4	cm	52	cm	0	m	live		1	16
148	**17SA006**			Live	NW	NE	48.9	cm		cm	3.45	m	dead	Not Barked	0	17
149	**17SA006**			Live	NW	SE	2	cm		cm	12.4	m	live	Barked	0	18
150	**17SA006**			Live	NW	SW	44.6	cm		cm	2.12	m	live	Barked	0	19
151	**17SA006**			Live	NW	NW	6.35	cm		cm	27	m	dead	Not Barked	0	20
152	**17SA006**			Live	Center Pt	NE	28.3	cm		cm	9.39	m	dead	Barked	0	21
153	**17SA006**			Live	Center Pt	SE	39.5	cm		cm	10	m	live	Barked	0	22
154	**17SA006**			Live	Center Pt	SW	2	cm		cm	5.32	m	live	Barked	0	23
155	**17SA006**			Live	Center Pt	NW	48.5	cm		cm	9.7	m	dead	Barked	0	24
156	**17SA007**	359613	3912323	Dead	NE	Center Pt	28.2	cm	33.6	cm	0	m	dead	Not Barked	0	1
157	**17SA007**			Dead	NE	NE	43.3	cm		cm	8.69	m	dead	Barked	0	2
158	**17SA007**			Dead	NE	SE	21.1	cm		cm	5.5	m	dead	Not Barked	0	3
159	**17SA007**			Dead	NE	SW	60	cm		cm	8.46	m	dead	Barked	0	4
160	**17SA007**			Dead	NE	NW	24.4	cm		cm	9.08	m	dead	Barked	0	5
161	**17SA007**	359608	3912309	Dead	SE	Center Pt	23.3	cm	26.9	cm	0	m	dead	Barked	1	6
162	**17SA007**			Dead	SE	NE	16.9	cm		cm	10.6	m	dead	Not Barked	0	7
163	**17SA007**			Dead	SE	SE	38.9	cm		cm	5.89	m	dead	Barked	0	8
164	**17SA007**			Dead	SE	SW	26.9	cm		cm	1.32	m	dead	Not Barked	0	9
165	**17SA007**			Dead	SE	NW	60	cm		cm	9.46	m	dead	Barked	0	10
166	**17SA007**	359591	3912308	Dead	SW	Center Pt	33.2	cm	60.7	cm	0	m	dead	Other	0	11
167	**17SA007**			Dead	SW	NE	52.3	cm		cm	12	m	dead	Barked	0	12
168	**17SA007**			Dead	SW	SE	36.1	cm		cm	5.67	m	live	Barked	0	13
169	**17SA007**			Dead	SW	SW	68.5	cm		cm	2.5	m	live	Barked	0	14
170	**17SA007**			Dead	SW	NW	41.9	cm		cm	5.7	m	dead	Barked	0	15
171	**17SA007**			Dead	NW	Center Pt	25.1	cm	26.8	cm	0	m	dead	Not Barked	0	16

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
172	**17SA007**			Dead	NW	NE	14.4	cm		cm	8.3	m	dead	Not Barked	0	17
173	**17SA007**			Dead	NW	SE	26.7	cm		cm	5.46	m	dead	Barked	0	18
174	**17SA007**			Dead	NW	SW	41.9	cm		cm	11.3	m	dead	Barked	0	19
175	**17SA007**			Dead	NW	NW	23.5	cm		cm	3.57	m	dead	Barked	0	20
176	**17SA007**			Dead	Center Pt	SE	27.5	cm		cm	11.4	m	dead	Not Barked	0	21
177	**17SA007**			Dead	Center Pt	NE	61.1	cm		cm	7.82	m	dead	Barked	0	22
178	**17SA007**			Dead	Center Pt	NW	28.6	cm		cm	3.54	m	dead	Barked	0	23
179	**17SA007**			Dead	Center Pt	SW	27.1	cm		cm	3.56	m	dead	Barked	0	24
180	**17SA008**	359589	3912303	Live	NE	Center Pt	76.2	cm	66.9	cm	0	m	live		0	1
181	**17SA008**			Live	NE	NE	48.4	cm		cm	2.62	m	dead	Barked	0	2
182	**17SA008**			Live	NE	SE	37	cm		cm	4.58	m	live	Barked	0	3
183	**17SA008**			Live	NE	SW	50.9	cm		cm	8.53	m	live	Barked	0	4
184	**17SA008**			Live	NE	NW	45.5	cm		cm	4.95	m	live	Barked	0	5
185	**17SA008**			Live	SE	Center Pt	50.6	cm	57.1	cm	0	m	live		0	6
186	**17SA008**			Live	SE	NE	61.7	cm		cm	1.93	m	live	Barked	0	7
187	**17SA008**			Live	SE	SE	37.1	cm		cm	3.94	m	live	Barked	0	8
188	**17SA008**			Live	SE	SW	49.1	cm		cm	3.23	m	live	Barked	0	9
189	**17SA008**			Live	SE	NW	45.6	cm		cm	12.9	m	live	Barked	0	10
190	**17SA008**	359583	3912295	Live	SW	Center Pt	37.4	cm	43.3	cm	0	m	live		0	11
191	**17SA008**			Live	SW	NE	49.7	cm		cm	3.44	m	live	Barked	0	12
192	**17SA008**			Live	SW	SE	50.7	cm		cm	6.04	m	live	Barked	0	13
193	**17SA008**			Live	SW	SW	39.7	cm		cm	3.62	m	live	Barked	0	14
194	**17SA008**			Live	SW	NW	50.8	cm		cm	19.3	m	live	Barked	0	15
196	**17SA008**	359565	3912301	Live	NW	Center Pt	50.8	cm	87	cm	0	m	live	Barked	1	16
197	**17SA008**			Live	NW	NE	47.7	cm		cm	20.6	m	live	Barked	0	17
198	**17SA008**			Live	NW	SE	37.5	cm		cm	19.3	m	live	Barked	0	18
199	**17SA008**			Live	NW	SW	42.8	cm		cm	11.7	m	live	Barked	0	19
200	**17SA008**			Live	NW	NW	3.8	cm		cm	5.25	m	live	Barked	0	20
201	**17SA008**			Live	Center Pt	NE	76.2	cm		cm	8.35	m	live	Barked	0	21
202	**17SA008**			Live	Center Pt	SE	49.1	cm		cm	7.98	m	live	Barked	0	22
203	**17SA008**			Live	Center Pt	SW	37.4	cm		cm	7.97	m	live	Barked	0	23
204	**17SA008**			Live	Center Pt	NW	50.8	cm		cm	16.7	m	live	Barked	0	24
205	**17SA009**			Dead	NE	Center Pt	28.9	cm	32.5	cm	0	m	dead	Barked	0	1
206	**17SA009**			Dead	NE	NE	41.3	cm		cm	5.09	m	dead	Barked	0	2
207	**17SA009**			Dead	NE	SE	45.4	cm		cm	15.6	m	dead	Barked	0	3
208	**17SA009**			Dead	NE	SW	50.3	cm		cm	13	m	dead	Barked	0	4
209	**17SA009**			Dead	NE	NW	35.8	cm		cm	6.29	m	live	Barked	0	5

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
210	17SA009	359593	3912187	Dead	SE	Center Pt	24.8	cm	40.1	cm	0	m	dead	Other	0	6
211	17SA009			Dead	SE	NE	49.1	cm		cm	8.42	m	dead	Barked	0	7
212	17SA009			Dead	SE	SE	25.5	cm		cm	20.8	m	dead	Not Barked	0	8
213	17SA009			Dead	SE	SW	49.9	cm		cm	3.32	m	dead	Barked	0	9
214	17SA009			Dead	SE	NW	62.6	cm		cm	4.25	m	dead	Barked	0	10
215	17SA009	359585	3912186	Dead	SW	Center Pt	33.8	cm	51.2	cm	0	m	dead	Other	0	11
216	17SA009			Dead	SW	NE	49.9	cm		cm	8.68	m	dead	Barked	0	12
217	17SA009			Dead	SW	SE	47.1	cm		cm	11.1	m	dead	Barked	0	13
218	17SA009			Dead	SW	SW	45.5	cm		cm	10.3	m	live	Barked	0	14
219	17SA009			Dead	SW	NW	28.7	cm		cm	6.27	m	dead	Barked	0	15
220	17SA009	359587	3912206	Dead	NW	Center Pt	24.6	cm	38.3	cm	0	m	dead	Other	1	16
221	17SA009			Dead	NW	NE	22.6	cm		cm	8.04	m	dead	Barked	0	17
222	17SA009			Dead	NW	SE	24.4	cm		cm	6.2	m	dead	Not Barked	0	18
223	17SA009			Dead	NW	SW	26.8	cm		cm	3.18	m	dead	Barked	0	19
224	17SA009			Dead	NW	NW		cm	28.1	cm	6.23	m	dead	Barked	0	20
225	17SA009			Dead	Center Pt	NE	26.7	cm		cm	13.3	m	dead	Barked	0	21
226	17SA009			Dead	Center Pt	SE	63.3	cm		cm	4.32	m	dead	Barked	0	22
227	17SA009			Dead	Center Pt	SW	40.4	cm		cm	13.3	m	dead	Barked	0	23
228	17SA009			Dead	Center Pt	NW	51.6	cm		cm	2	m	dead	Barked	0	24
229	17SA010	359601	3912225	Live	NE	Center Pt	44.2	cm	51.3	cm	0	m	live		0	1
230	17SA010			Live	NE	NE	48.5	cm		cm	6.69	m	dead	Barked	0	2
231	17SA010			Live	NE	SE	49.5	cm		cm	7.68	m	live	Barked	0	3
232	17SA010			Live	NE	SW	31.7	cm		cm	9.87	m	dead	Barked	0	4
233	17SA010			Live	NE	NW	39.5	cm		cm	4.93	m	live	Barked	0	5
234	17SA010	359601	3912210	Live	SE	Center Pt	35.5	cm	43	cm	0	m	live		0	6
235	17SA010			Live	SE	NE	23.3	cm		cm	2.49	m	dead	Barked	0	7
236	17SA010			Live	SE	SE	26.4	cm		cm	5.68	m	dead	Barked	0	8
237	17SA010			Live	SE	SW	24.8	cm		cm	10.3	m	dead	Not Barked	0	9
238	17SA010			Live	SE	NW	31.7	cm		cm	4.58	m	dead	Barked	0	10
239	17SA010	359586	3912217	Live	SW	Center Pt	35.1	cm	42.2	cm	0	m	live	Barked	1	11
240	17SA010			Live	SW	NE	46.3	cm		cm	13.7	m	live	Barked	0	12
241	17SA010			Live	SW	SE	34.8	cm		cm	2.9	m	live	Barked	0	13
242	17SA010			Live	SW	SW	41.4	cm		cm	9.5	m	live	Barked	0	14
243	17SA010			Live	SW	NW	45.2	cm		cm	5.31	m	dead	Barked	0	15
244	17SA010	359586	3912217	Live	NW	Center Pt	46.3	cm	50.8	cm	0	m	live		0	16
245	17SA010			Live	NW	NE	41.5	cm		cm	3.44	m	live	Barked	0	17
246	17SA010			Live	NW	SE	32.8	cm		cm	4.13	m	live	Barked	0	18

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
247	**17SA010**			Live	NW	SW	31.5	cm		cm	13	m	dead	Barked	0	19
248	**17SA010**			Live	NW	NW	22.5	cm		cm	9.75	m	dead	Barked	0	20
249	**17SA010**			Live	Center Pt	NW	46.8	cm		cm	6.12	m	live	Barked	0	21
250	**17SA010**			Live	Center Pt	NE	51	cm		cm	9.59	m	live	Barked	0	22
251	**17SA010**			Live	Center Pt	SE	32.5	cm	32.5	cm	6.84	m	dead	Barked	0	23
252	**17SA010**			Live	Center Pt	SW	24.2	cm		cm	10.4	m	dead	Barked	0	24
253	**17SA011**	359506	3912196	Dead	NE	Center Pt	39.8	cm	50.3	cm	0	m	dead	Not Barked	1	1
254	**17SA011**			Dead	NE	NE	17.4	cm		cm	2.9	m	dead	Not Barked	0	2
255	**17SA011**			Dead	NE	SE	41.7	cm		cm	5.18	m	dead	Not Barked	0	3
256	**17SA011**			Dead	NE	SW	32.2	cm		cm	12.2	m	dead	Barked	0	4
257	**17SA011**			Dead	NE	NW	29.7	cm		cm	9.42	m	dead	Barked	0	5
259	**17SA011**	359495	3912187	Dead	SE	Center Pt	22.8	cm	32.3	cm	0	m	dead	Not Barked	0	6
260	**17SA011**			Dead	SE	NE	32.2	cm		cm	3.36	m	dead	Barked	0	7
261	**17SA011**			Dead	SE	SE	34.6	cm		cm	3.79	m	live	Barked	0	8
262	**17SA011**			Dead	SE	SW	53.7	cm		cm	8.8	m	dead	Barked	0	9
263	**17SA011**			Dead	SE	NW		cm	34.5	cm	5.98	m	dead	Not Barked	0	10
264	**17SA011**	359495	3912193	Dead	SW	Center Pt		cm	34.5	cm	0	m	dead	Not Barked	0	11
265	**17SA011**			Dead	SW	NE	39.8	cm		cm	13	m	dead	Not Barked	0	12
266	**17SA011**			Dead	SW	SE	32.2	cm		cm	7.13	m	dead	Barked	0	13
267	**17SA011**			Dead	SW	SW	34.5	cm		cm	1.02	m	live	Barked	0	14
268	**17SA011**			Dead	SW	NW	36.5	cm		cm	2.78	m	dead	Barked	0	15
269	**17SA011**	359491	3912206	Dead	NW	Center Pt	20.1	cm	37.2	cm	0	m	dead	Other	0	16
270	**17SA011**			Dead	NW	NE	41.3	cm		cm	7.4	m	live	Barked	0	17
271	**17SA011**			Dead	NW	SE	29.7	cm		cm	7.53	m	dead	Barked	0	18
272	**17SA011**			Dead	NW	SW	39.8	cm		cm	4.36	m	dead	Barked	0	19
273	**17SA011**			Dead	NW	NW	39.5	cm		cm	4.45	m	dead	Barked	0	20
274	**17SA011**			Dead	Center Pt	NE	30.3	cm		cm	6.32	m	dead	Barked	0	21
275	**17SA011**			Dead	Center Pt	SE	32.5	cm		cm	10.9	m	dead	Barked	0	22
276	**17SA011**			Dead	Center Pt	SW	36.4	cm		cm	5.46	m	dead	Barked	0	23
277	**17SA011**			Dead	Center Pt	NW	22.3	cm		cm	8.6	m	dead	Barked	0	24
278	**17SA012**	35927	3912195	Live	NE	Center Pt	47	cm	52.5	cm	0	m			0	1
279	**17SA012**			Live	NE	NE	21.2	cm		cm	3.84	m	dead	Barked	0	2
280	**17SA012**			Live	NE	SE	26.8	cm		cm	3.22	m	dead	Barked	0	3
281	**17SA012**			Live	NE	SW	25.9	cm		cm	2.62	m	dead	Barked	0	4
282	**17SA012**			Live	NE	NW	19.2	cm		cm	0.86	m	live	Barked	0	5
283	**17SA012**	359516	3912188	Live	SE	Center Pt	33.6	cm	38	cm	0	m	live		0	6
284	**17SA012**			Live	SE	NE	38.9	cm		cm	7.72	m	live	Barked	0	7

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
285	**17SA012**			Live	SE	SE	47.4	cm		cm	8.85	m	live	Barked	0	8
286	**17SA012**			Live	SE	SW	26.5	cm		cm	4.94	m	live	Barked	0	9
287	**17SA012**			Live	SE	NW	38.7	cm		cm	7.71	m	live	Barked	0	10
288	**17SA012**	359510	3912191	Live	SW	Center Pt	38.7	cm	43.1	cm	0	m	live		0	11
289	**17SA012**			Live	SW	NE	47.4	cm		cm	5.54	m	dead	Not Barked	0	12
290	**17SA012**			Live	SW	SE	26.3	cm		cm	4.48	m	live	Barked	0	13
291	**17SA012**			Live	SW	SW	24.7	cm		cm	6.53	m	live	Barked	0	14
292	**17SA012**			Live	SW	NW	50.1	cm		cm	8.38	m	dead	Barked	0	15
293	**17SA012**	359512	3912201	Live	NW	Center Pt	49.8	cm	55.3	cm	0	m	live		1	16
294	**17SA012**			Live	NW	NE	56.9	cm		cm	11.9	m	live	Barked	0	17
295	**17SA012**			Live	NW	SE	47.4	cm		cm	4.89	m	dead	Not Barked	0	18
296	**17SA012**			Live	NW	SW	20	cm		cm	1.52	m	dead	Barked	0	19
297	**17SA012**			Live	NW	NW	44.1	cm		cm	1.96	m	live	Barked	0	20
298	**17SA012**			Live	Center Pt	NW	47.4	cm		cm	7.59	m	dead	Not Barked	0	21
299	**17SA012**			Live	Center Pt	SE	33.6	cm		cm	3.05	m	live	Barked	0	22
300	**17SA012**			Live	Center Pt	SW	27.8	cm		cm	6.54	m	live	Barked	0	23
301	**17SA012**			Live	Center Pt	NE	39	cm		cm	5	m	live	Barked	0	24
302	**17SA013**	359587	3912115	Dead	NE	Center Pt	26	cm	36.7	cm	0	m	dead	Not Barked	0	1
303	**17SA013**			Dead	NE	NE	51.1	cm		cm	8.59	m	dead	Barked	0	2
304	**17SA013**			Dead	NE	SE	51.1	cm		cm	9.71	m	live	Barked	0	3
305	**17SA013**			Dead	NE	SW	31.2	cm		cm	5.84	m	dead	Barked	0	4
306	**17SA013**			Dead	NE	NW	35.1	cm		cm	6.7	m	dead	Barked	0	5
307	**17SA013**	359585	3912112	Dead	SE	Center Pt	31.2	cm	38.9	cm	0	m	dead	Barked	0	6
308	**17SA013**			Dead	SE	NE	26	cm		cm	5.84	m	dead	Not Barked	0	7
309	**17SA013**			Dead	SE	SE	25	cm		cm	6.1	m	dead	Not Barked	0	8
310	**17SA013**			Dead	SE	SW	40	cm		cm	8.15	m	dead	Barked	0	9
311	**17SA013**			Dead	SE	NW	35.1	cm		cm	8.84	m	dead	Barked	0	10
312	**17SA013**	359578	3912095	Dead	SW	Center Pt	36	cm	49.9	cm	0	m	dead	Other	0	11
313	**17SA013**			Dead	SW	NE	46	cm		cm	1.49	m	live	Barked	0	12
314	**17SA013**			Dead	SW	SE	64.5	cm		cm	34.5	m	live	Barked	0	13
315	**17SA013**			Dead	SW	SW	35.8	cm		cm	5.33	m	live	Barked	0	14
316	**17SA013**			Dead	SW	NW	42.6	cm		cm	8.66	m	live	Barked	0	15
317	**17SA013**	359579	3912117	Dead	NW	Center Pt	27.3	cm	36.1	cm	0	m	dead	Barked	1	16
318	**17SA013**			Dead	NW	NE	43.2	cm		cm	2.78	m	dead	Barked	0	17
319	**17SA013**			Dead	NW	SE	31.2	cm		cm	10.7	m	dead	Barked	0	18
320	**17SA013**			Dead	NW	SW	36.1	cm		cm	3.67	m	live	Barked	0	19
321	**17SA013**			Dead	NW	NW	46.4	cm		cm	8.07	m	live	Barked	0	20

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
322	**17SA013**			Dead	Center Pt	NE	26.5	cm		cm	3.6	m	dead	Not Barked	0	21
323	**17SA013**			Dead	Center Pt	SE	30.8	cm		cm	5.45	m	dead	Barked	0	22
324	**17SA013**			Dead	Center Pt	SW	31	cm		cm	2.12	m	dead	Barked	0	23
325	**17SA013**			Dead	Center Pt	NW	34.1	cm		cm	8.22	m	dead	Barked	0	24
326	**17SA014**			Live	Center Pt	NE	44.7	cm		cm	1.71	m	live	Barked	0	21
327	**17SA014**			Live	Center Pt	SE	54.8	cm		cm	1.05	m	live	Barked	0	22
328	**17SA014**			Live	Center Pt	NW	35.3	cm		cm	3.97	m	live	Barked	0	23
329	**17SA014**			Live	Center Pt	SW	57.8	cm		cm	0.21	m	live	Barked	0	24
331	**17SA014**	359577	3912116	Live	NE	Center Pt	35.6	cm	37.2	cm	0	m	live	Barked	1	1
332	**17SA014**			Live	NE	NE	27.9	cm		cm	3.16	m	dead	Barked	0	2
333	**17SA014**			Live	NE	SE	27	cm		cm	1.6	m	dead	Barked	0	3
334	**17SA014**			Live	NE	SW	45.5	cm		cm	6.07	m	live	Barked	0	4
335	**17SA014**			Live	NE	NW	46	cm		cm	6.36	m	live	Barked	0	5
336	**17SA014**	359574	3912107	Live	SE	Center Pt	54.8	cm		cm	0	m	live		0	6
337	**17SA014**			Live	SE	NE		cm	22	cm	1.05	m	dead	Not Barked	0	7
338	**17SA014**			Live	SE	SE	40.3	cm		cm	6.93	m	dead	Barked	0	8
339	**17SA014**			Live	SE	SW	43.2	cm		cm	2.47	m	live	Barked	0	9
340	**17SA014**			Live	SE	NW	43.1	cm		cm	7.27	m	live	Barked	0	10
341	**17SA014**	359569	3912110	Live	SW	Center Pt	57.8	cm	72.2	cm	0	m	live		0	11
342	**17SA014**			Live	SW	NE	44.7	cm		cm	1.91	m	live	Barked	0	12
343	**17SA014**			Live	SW	SE	54.8	cm		cm	1.25	m	live	Barked	0	13
344	**17SA014**			Live	SW	SW	4	cm		cm	19.2	m	live	Barked	0	14
345	**17SA014**			Live	SW	NW	35.3	cm		cm	3.67	m	live	Barked	0	15
346	**17SA014**	359565	3912115	Live	NW	Center Pt	85.59	cm	35.3	cm	0	m	live	Not Barked	0	16
347	**17SA014**			Live	NW	NE	39.7	cm		cm	4.6	m	live	Barked	0	17
348	**17SA014**			Live	NW	SE	32.2	cm		cm	1.12	m	live	Barked	0	18
349	**17SA014**			Live	NW	SW	34.3	cm		cm	2.36	m	live	Barked	0	19
350	**17SA014**			Live	NW	NW	9.6	cm		cm	16.9	m	live	Barked	0	20
351	**17SA015**	359537	3912028	Dead	NE	Center Pt	46.2	cm	56.5	cm	0	m	dead	Barked	1	1
352	**17SA015**			Dead	NE	NE	90.9	cm		cm	3.91	m	live	Barked	0	2
353	**17SA015**			Dead	NE	SE	9.3	cm		cm	13.6	m	dead	Barked	0	3
354	**17SA015**			Dead	NE	SW	57.8	cm		cm	3.21	m	dead	Barked	0	4
355	**17SA015**			Dead	NE	NW		cm	33.5	cm	1.65	m	dead	Barked	0	5
356	**17SA015**	359513	3912021	Dead	SE	Center Pt	52.8	cm	62	cm	0	m	dead	Not Barked	0	6
357	**17SA015**			Dead	SE	NE	39.8	cm		cm	11.6	m	dead	Not Barked	0	7
358	**17SA015**			Dead	SE	SE	20	cm		cm	7.4	m	dead	Not Barked	0	8
359	**17SA015**			Dead	SE	SW		cm	37.4	cm	5.33	m	dead	Not Barked	0	9

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
360	**17SA015**			Dead	SE	NW	43.2	cm		cm	6.35	m	dead	Barked	0	10
361	**17SA015**	359524	3912018	Dead	SW	Center Pt	37.8	cm	47	cm	0	m	dead	Not Barked	0	11
362	**17SA015**			Dead	SW	NE	54.7	cm		cm	6.64	m	dead	Barked	0	12
363	**17SA015**			Dead	SW	SE		cm	28.5	cm	5.03	m	dead		0	13
364	**17SA015**			Dead	SW	SW	33.8	cm		cm	1	m	dead		0	14
365	**17SA015**			Dead	SW	NW	30	cm		cm	1.5	m	dead	Not Barked	0	15
366	**17SA015**	359522	3912024	Dead	NW	Center Pt	39.8	cm	55.9	cm	0	m	dead	Other	0	16
367	**17SA015**			Dead	NW	NE	26.6	cm		cm	4.2	m	dead	Barked	0	17
368	**17SA015**			Dead	NW	SE	54.7	cm		cm	6.23	m	dead	Barked	0	18
369	**17SA015**			Dead	NW	SW	37.8	cm		cm	5.52	m	dead	Not Barked	0	19
370	**17SA015**			Dead	NW	NW	52.8	cm		cm	11.6	m	dead	Not Barked	0	20
371	**17SA015**			Dead	Center Pt	NE	54.7	cm		cm	2.6	m	dead	Barked	0	21
372	**17SA015**			Dead	Center Pt	SE	21.2	cm		cm	8.26	m	dead	Barked	0	22
373	**17SA015**			Dead	Center Pt	SW	38.1	cm		cm	4.85	m	dead	Not Barked	0	23
374	**17SA015**			Dead	Center Pt	NW	40.8	cm		cm	3.64	m	dead	Barked	0	24
375	**17SA016**	359538	3912046	Live	NE	Center Pt	59.6	cm	69.1	cm	0	m	live		0	1
376	**17SA016**			Live	NE	NE	44.8	cm		cm	7.61	m	dead	Barked	0	2
377	**17SA016**			Live	NE	SE	42	cm		cm	4.14	m	live	Not Barked	0	3
378	**17SA016**			Live	NE	SW	47.6	cm		cm	3.9	m	dead	Barked	0	4
379	**17SA016**			Live	NE	NW	27.5	cm		cm	1.23	m	dead	Barked	0	5
380	**17SA016**	359541	3912033	Live	SE	Center Pt	89.4	cm	100.8	cm	0	m	live		0	6
381	**17SA016**			Live	SE	NE	56.5	cm		cm	2.55	m	live	Barked	0	7
382	**17SA016**			Live	SE	SE	6.3	cm		cm	5.65	m	live	Barked	0	8
383	**17SA016**			Live	SE	SW	47.6	cm		cm	3.91	m	dead	Barked	0	9
384	**17SA016**			Live	SE	NW	44.6	cm		cm	4.95	m	live	Barked	0	10
385	**17SA016**	359534	3912033	Live	SW	Center Pt	44.6	cm	52	cm	0	m	live		1	11
386	**17SA016**			Live	SW	NE	44	cm		cm	2.3	m	live	Barked	0	12
387	**17SA016**			Live	SW	SE		cm	36.6	cm	1.15	m	dead	Barked	0	13
388	**17SA016**			Live	SW	SW	27.1	cm		cm	9.86	m	dead	Not Barked	0	14
389	**17SA016**			Live	SW	NW	40.5	cm		cm	9.4	m	dead	Barked	0	15
390	**17SA016**			Live	NW	Center Pt	33.9	cm	37.5	cm	0	m	live		0	16
391	**17SA016**			Live	NW	NE	34	cm		cm	7	m	dead	Not Barked	0	17
392	**17SA016**			Live	NW	SE	38.1	cm		cm	5.85	m	dead	Not Barked	0	18
393	**17SA016**			Live	NW	SW	30.3	cm		cm	5.7	m	dead	Barked	0	19
394	**17SA016**			Live	NW	NW	19.5	cm		cm	4.63	m	dead	Barked	0	20
395	**17SA016**	359539	3912042	Live	Center Pt	NE	59.6	cm		cm	3.35	m	live	Barked	0	21
396	**17SA016**			Live	Center Pt	SE	42	cm		cm	2.75	m	dead	Not Barked	0	22

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
397	**17SA016**			Live	Center Pt	SW	44.2	cm		cm	5.25	m	live	Barked	0	23
398	**17SA016**			Live	Center Pt	NW	47.6	cm		cm	2.56	m	dead	Barked	0	24
399	**17SA017**	359360	3912161	Live	NE	Center Pt	40.7	cm	47.8	cm	0	m	live	Barked	0	1
400	**17SA017**			Live	NE	NE	33.3	cm		cm	9.22	m	live	Barked	0	2
401	**17SA017**			Live	NE	SE	44.3	cm		cm	8.42	m	dead	Barked	0	3
402	**17SA017**			Live	NE	SW	32.3	cm		cm	6.15	m	live	Barked	0	4
403	**17SA017**			Live	NE	NW	39.2	cm		cm	2.78	m	live	Barked	0	5
404	**17SA017**	359367	3912150	Live	SE	Center Pt	29.9	cm	38.2	cm	0	m	live		1	6
405	**17SA017**			Live	SE	NE	28.5	cm		cm	6.47	m	dead	Barked	0	7
406	**17SA017**			Live	SE	SE	42.9	cm		cm	5	m	dead	Barked	0	8
407	**17SA017**			Live	SE	SW	40.2	cm		cm	5.95	m	live	Barked	0	9
408	**17SA017**			Live	SE	NW	40.7	cm		cm	12.1	m	live		0	10
409	**17SA017**	359351	3912149	Live	SW	Center Pt	42.5	cm	51.5	cm	0	m	live	Barked	0	11
410	**17SA017**			Live	SW	NE	32.3	cm		cm	9.42	m	live	Barked	0	12
411	**17SA017**			Live	SW	SE	29.2	cm		cm	3.93	m	live	Barked	0	13
412	**17SA017**			Live	SW	SW	26.2	cm		cm	6.87	m	dead	Not Barked	0	14
413	**17SA017**			Live	SW	NW	36	cm		cm	10.7	m	live	Barked	0	15
414	**17SA017**	359356	3912158	Live	NW	Center Pt	40.6	cm	47.8	cm	0	m	live	Barked	0	16
415	**17SA017**			Live	NW	NE	39.7	cm		cm	3.1	m	live	Barked	0	17
416	**17SA017**			Live	NW	SE	40.7	cm		cm	6.15	m	live	Barked	0	18
417	**17SA017**			Live	NW	SW	42.5	cm		cm	9.42	m	live	Barked	0	19
418	**17SA017**			Live	NW	NW	36	cm		cm	6.68	m	live	Barked	0	20
419	**17SA017**	359360	3912153	Live	Center Pt	NE	40.7	cm		cm	6.5	m	live	Barked	0	21
420	**17SA017**			Live	Center Pt	SE	40.3	cm		cm	4.98	m	live	Barked	0	22
421	**17SA017**			Live	Center Pt	SW	38.7	cm		cm	3	m	live	Barked	0	23
422	**17SA017**			Live	Center Pt	NW	39.7	cm		cm	6.55	m	live	Barked	0	24
423	**17SA019**	359858	3912705	Live	NE	Center Pt	47.6	cm	56.5	cm	0	m	live		0	1
424	**17SA019**			Live	NE	NE	29	cm		cm	5.4	m	live	Barked	0	2
425	**17SA019**			Live	NE	SE	34	cm		cm	1.55	m	live	Barked	0	3
426	**17SA019**			Live	NE	SW	14.8	cm		cm	5.94	m	live	Barked	0	4
427	**17SA019**			Live	NE	NW	30.3	cm		cm	6.5	m	live	Barked	0	5
429	**17SA019**	359861	3912688	Live	SE	Center Pt	55.6	cm	83.2	cm	0	m	live		0	6
430	**17SA019**			Live	SE	NE	61.8	cm		cm	16.9	m	live	Barked	0	7
431	**17SA019**			Live	SE	SE	31.6	cm		cm	3.45	m	live	Barked	0	8
432	**17SA019**			Live	SE	SW	24.6	cm		cm	2.97	m	dead	Barked	0	9
433	**17SA019**			Live	SE	NW	34	cm		cm	15.8	m	live	Barked	0	10
434	**17SA019**	359851	3912696	Live	SW	Center Pt	32.8	cm	36.8	cm	0	m	live		0	11

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
435	**17SA019**			Live	SW	NE	24.4	cm		cm	2.88	m	live	Barked	0	12
436	**17SA019**			Live	SW	SE	21.3	cm		cm	9.92	m	live	Barked	0	13
437	**17SA019**			Live	SW	SW	33.9	cm		cm	0.67	m	live	Barked	0	14
438	**17SA019**			Live	SW	NW	23	cm		cm	5.55	m	live	Barked	0	15
440	**17SA019**	359849	3912702	Live	NW	Center Pt	53.48	cm		cm	0	m	live	Not Barked	0	16
441	**17SA019**			Live	NW	NE	24.2	cm		cm	3.88	m	live	Barked	0	17
442	**17SA019**			Live	NW	SE	14.6	cm		cm	2.98	m	live	Barked	0	18
443	**17SA019**			Live	NW	SW	26.4	cm		cm	2.24	m	live	Barked	0	19
444	**17SA019**			Live	NW	NW	15.3	cm		cm	3.98	m	dead	Not Barked	0	20
446	**17SA019**			Live	Center Pt	NE	47.6	cm		cm	8.2	m	live	Barked	0	22
447	**17SA019**			Live	Center Pt	SE	21.3	cm		cm	10.1	m	dead	Barked	0	23
448	**17SA019**			Live	Center Pt	SW	32.8	cm		cm	2.1	m	live	Barked	0	24
449	**17SA019**			Live	Center Pt	NW	24	cm		cm	1.43	m	live	Barked	0	25
450	**17SA018**	359387	3912154	Dead	NE	Center Pt		cm	45.4	cm	0	m	dead	Barked	0	1
451	**17SA018**			Dead	NE	NE	35.7	cm		cm	3.26	m	dead	Barked	0	2
452	**17SA018**			Dead	NE	SE	31.2	cm		cm	7.39	m	dead	Not Barked	0	3
453	**17SA018**			Dead	NE	SW	29	cm		cm	13	m	dead	Not Barked	0	4
454	**17SA018**			Dead	NE	NW	33.5	cm		cm	12.5	m	live	Barked	0	5
455	**17SA018**	359384	3912139	Dead	SE	Center Pt	21.3	cm	31	cm	0	m	dead	Other	0	6
456	**17SA018**			Dead	SE	NE	29	cm		cm	3.93	m	dead	Not Barked	0	7
457	**17SA018**			Dead	SE	SE	27	cm		cm	4.34	m	dead	Not Barked	0	8
458	**17SA018**			Dead	SE	SW	30	cm		cm	4.5	m	dead	Not Barked	0	9
459	**17SA018**			Dead	SE	NW	30.3	cm		cm	13	m	dead	Barked	0	10
460	**17SA018**			Dead	SW	Center Pt	31.9	cm	36.3	cm	0	m	dead	Not Barked	0	11
461	**17SA018**			Dead	SW	NE	35.3	cm		cm	8.75	m	dead	Barked	0	12
462	**17SA018**			Dead	SW	SE	37.7	cm		cm	6.52	m	dead	Barked	0	13
463	**17SA018**			Dead	SW	SW	31.3	cm		cm	4.96	m	dead	Barked	0	14
464	**17SA018**			Dead	SW	NW	35.6	cm		cm	8.41	m	dead	Barked	0	15
465	**17SA018**	359377	3912150	Dead	NW	Center Pt	21.4	cm	34.6	cm	0	m	dead	Other	1	16
466	**17SA018**			Dead	NW	NE		cm	45.4	cm	9.77	m	dead	Barked	0	17
467	**17SA018**			Dead	NW	SE	29	cm		cm	10.9	m	dead	Not Barked	0	18
468	**17SA018**			Dead	NW	SW	44.4	cm		cm	3.39	m	dead	Barked	0	19
469	**17SA018**			Dead	NW	NW	30.2	cm		cm	6.13	m	live	Barked	1	20
470	**17SA018**			Dead	Center Pt	NE	37.6	cm		cm	12.2	m	dead	Barked	0	21
471	**17SA018**			Dead	Center Pt	SE	29.2	cm		cm	2.3	m	dead	Not Barked	0	22
472	**17SA018**			Dead	Center Pt	SW	30	cm		cm	7.1	m	dead	Not Barked	0	23
473	**17SA018**			Dead	Center Pt	NW	42.9	cm		cm	7	m	dead	Barked	0	24

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
474	**17SA020**	378816	3911249	Dead	NE	Center Pt		cm	50.1	cm	0	m	dead	Not Barked	0	1
475	**17SA020**			Dead	NE	NE	50.2	cm		cm	8.56	m	live	Barked	0	2
476	**17SA020**			Dead	NE	SE	41.8	cm		cm	2.84	m	dead	Barked	0	3
477	**17SA020**			Dead	NE	SW	34.7	cm		cm	4.91	m	dead	Barked	0	4
478	**17SA020**			Dead	NE	NW	47.5	cm		cm	3.76	m	dead	Barked	0	5
479	**17SA020**	358811	3911228	Dead	SE	Center Pt	23.9	cm	36.6	cm	0	m	dead	Other	0	6
480	**17SA020**			Dead	SE	NE	78.5	cm	115.7	cm	17.3	m	dead	Barked	0	7
481	**17SA020**			Dead	SE	SE	75.7	cm		cm	6.32	m	live	Barked	0	8
482	**17SA020**			Dead	SE	SW	26.5	cm		cm	4.02	m	dead	Barked	0	9
483	**17SA020**			Dead	SE	NW	17.7	cm		cm	7.11	m	dead	Not Barked	0	10
484	**17SA020**	358803	3911236	Dead	SW	Center Pt	31.4	cm	35.6	cm	0	m	dead	Not Barked	0	11
485	**17SA020**			Dead	SW	NE		cm	32.8	cm	2.1	m	dead	Barked	0	12
486	**17SA020**			Dead	SW	SE		cm	20.9	cm	4.98	m	dead	Barked	0	13
487	**17SA020**			Dead	SW	SW	34.7	cm		cm	7.07	m	dead	Not Barked	0	14
488	**17SA020**			Dead	SW	NW	23.8	cm		cm	3.75	m	dead	Barked	0	15
489	**17SA020**	358807	3911247	Dead	NW	Center Pt	52.2	cm		cm	0	m	dead	Not Barked	1	16
490	**17SA020**			Dead	NW	NE		cm	22.9	cm	2.59	m	dead	Barked	0	17
491	**17SA020**			Dead	NW	SE	34	cm		cm	4.24	m	dead	Barked	0	18
492	**17SA020**			Dead	NW	SW		cm	33.6	cm	10.2	m	dead	Barked	0	19
493	**17SA020**			Dead	NW	NW	38.9	cm		cm	6.52	m	live	Barked	0	20
494	**17SA020**			Dead	Center Pt	NE	19.7	cm		cm	2.32	m	dead	Not Barked	0	21
495	**17SA020**			Dead	Center Pt	SE	30.4	cm		cm	11.5	m	dead	Barked	0	22
496	**17SA020**			Dead	Center Pt	SW	25	cm		cm	3.55	m	dead	Barked	0	23
497	**17SA020**			Dead	Center Pt	NW	31.8	cm		cm	3.57	m	dead	Barked	0	24
498	**17SA021**			Live	NE	Center Pt	39.5	cm	46.8	cm	0	m	live		0	1
499	**17SA021**			Live	NE	NE	26	cm		cm	4.05	m	dead	Barked	0	2
500	**17SA021**			Live	NE	SE	10.5	cm		cm	3.73	m	dead	Not Barked	0	3
501	**17SA021**			Live	NE	SW	37.3	cm		cm	6.5	m	live	Barked	0	4
502	**17SA021**			Live	NE	NW	31.8	cm		cm	9.15	m	live	Barked	0	5
503	**17SA021**	358800	3911254	Live	SE	Center Pt	38.9	cm	46.5	cm	0	m	live	Barked	1	6
504	**17SA021**			Live	SE	NE	24.4	cm		cm	7.05	m	dead	Barked	0	7
505	**17SA021**			Live	SE	SE	31.8	cm		cm	6.5	m	dead	Barked	0	8
506	**17SA021**			Live	SE	SW	54	cm		cm	2.3	m	live	Barked	0	9
507	**17SA021**			Live	SE	NW	10.5	cm		cm	9.65	m	dead	Not Barked	0	10
508	**17SA021**	358789	3911253	Live	SW	Center Pt	36.7	cm	41.6	cm	0	m	live		0	11
509	**17SA021**			Live	SW	NE	37.3	cm		cm	2.57	m	live	Barked	0	12
510	**17SA021**			Live	SW	SE	31.2	cm		cm	3.1	m	live	Barked	0	13

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
511	**17SA021**			Live	SW	SW	41.5	cm		cm	7.66	m	live	Barked	0	14
512	**17SA021**			Live	SW	NW	21.7	cm		cm	3.78	m	dead	Barked	0	15
513	**17SA021**	358783	3911256	Live	NW	Center Pt	36.7	cm	52.1	cm	0	m	live		0	16
514	**17SA021**			Live	NW	NE	23.4	cm		cm	7.22	m	live	Barked	0	17
515	**17SA021**			Live	NW	SE	21.7	cm		cm	4.65	m	dead	Barked	0	18
516	**17SA021**			Live	NW	SW		cm	16.9	cm	2.85	m	dead	Barked	0	19
517	**17SA021**			Live	NW	NW	25.1	cm		cm	6	m	dead	Barked	0	20
518	**17SA021**			Live	Center Pt	NE	39.5	cm	46.8	cm	5.43	m	live	Barked	0	21
519	**17SA021**			Live	Center Pt	SE	31.7	cm		cm	8.45	m	live	Barked	0	22
520	**17SA021**			Live	Center Pt	SW	37.3	cm		cm	1.07	m	live	Barked	0	23
521	**17SA021**			Live	Center Pt	NW	36.7	cm	52.1	cm	9.2	m	live	Barked	0	24
522	**17SA022**	358882	3911373	Dead	NE	Center Pt	21.7	cm	28.7	cm	0	m	dead	Not Barked	0	1
523	**17SA022**			Dead	NE	NE	29.2	cm		cm	0.07	m	dead	Barked	0	2
524	**17SA022**			Dead	NE	SE	22.4	cm		cm	1.16	m	dead	Barked	0	3
525	**17SA022**			Dead	NE	SW	16.5	cm		cm	4.01	m	dead	Not Barked	0	4
526	**17SA022**			Dead	NE	NW	36.8	cm		cm	9.73	m	dead	Not Barked	0	5
527	**17SA022**	358889	3911361	Dead	SE	Center Pt	24	cm	33.3	cm	0	m	dead	Other	1	6
528	**17SA022**			Dead	SE	NE	36	cm		cm	5.73	m	live	Barked	0	7
529	**17SA022**			Dead	SE	SE	33.2	cm		cm	1.98	m	live	Barked	0	8
530	**17SA022**			Dead	SE	SW	26.7	cm		cm	3.17	m	dead	Barked	0	9
531	**17SA022**			Dead	SE	NW	27.8	cm		cm	7.19	m	dead	Not Barked	0	10
532	**17SA022**	358868	3911365	Dead	SW	Center Pt	27.7	cm	33.6	cm	0	m	dead	Not Barked	0	11
533	**17SA022**			Dead	SW	NE	13.7	cm		cm	4.26	m	dead	Not Barked	0	12
534	**17SA022**			Dead	SW	SE	20.5	cm		cm	5.57	m	dead	Not Barked	0	13
535	**17SA022**			Dead	SW	SW	30.7	cm		cm	2.32	m	dead	Barked	0	14
536	**17SA022**			Dead	SW	NW	18.5	cm		cm	3.86	m	dead	Not Barked	0	15
537	**17SA022**	358877	3911370	Dead	NW	Center Pt		cm	36.9	cm	0	m	dead	Barked	0	16
538	**17SA022**			Dead	NW	NE	21.7	cm		cm	5.45	m	dead	Not Barked	0	17
539	**17SA022**			Dead	NW	SE	16.5	cm		cm	2.49	m	dead	Not Barked	0	18
540	**17SA022**			Dead	NW	SW	13.7	cm		cm	9.4	m	dead	Not Barked	0	19
541	**17SA022**			Dead	NW	NW	14.5	cm		cm	8.09	m	dead	Not Barked	0	20
542	**17SA022**			Dead	Center Pt	NE	28.4	cm		cm	3.52	m	dead	Not Barked	0	21
543	**17SA022**			Dead	Center Pt	SE	26.2	cm		cm	6.5	m	dead	Barked	0	22
544	**17SA022**			Dead	Center Pt	SW		cm	48.2	cm	6.74	m	dead	Barked	0	23
545	**17SA022**			Dead	Center Pt	NW	33.5	cm		cm	5.96	m	dead	Not Barked	0	24
546	**17SA023**	358902	3911350	Live	NE	Center Pt	27.3	cm	34.7	cm	0	m	live		0	1
547	**17SA023**			Live	NE	NE	12.2	cm		cm	10.4	m	live	Barked	0	2

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
548	**17SA023**			Live	NE	SE	11.5	cm		cm	5.74	m	live	Barked	0	3
549	**17SA023**			Live	NE	SW	30	cm		cm	11.9	m	live	Barked	0	4
550	**17SA023**			Live	NE	NW	49.5	cm		cm	10.7	m	live	Barked	0	5
551	**17SA023**			Live	SE	Center Pt	46.7	cm	52.8	cm	0	m	live		0	6
552	**17SA023**			Live	SE	NE	17.2	cm		cm	1.65	m	dead	Barked	0	7
553	**17SA023**			Live	SE	SE	16	cm		cm	2.83	m	dead	Barked	0	8
554	**17SA023**			Live	SE	SW	24	cm		cm	3.32	m	live	Barked	0	9
555	**17SA023**			Live	SE	NW	11.5	cm		cm	2.29	m	live	Barked	0	10
556	**17SA023**	358890	3911352	Live	SW	Center Pt	31.1	cm	38.3	cm	0	m	live		0	11
557	**17SA023**			Live	SW	NE	49.5	cm		cm	11.9	m	live	Barked	0	12
558	**17SA023**			Live	SW	SE	5.22	cm		cm	31.9	m	live	Barked	0	13
559	**17SA023**			Live	SW	SW	30.7	cm		cm	7.91	m	dead	Barked	0	14
560	**17SA023**			Live	SW	NW		cm	21.6	cm	9.57	m	dead	Barked	0	15
561	**17SA023**	358891	3911361	Live	NW	Center Pt	33.1	cm		cm	0	m	live		1	16
562	**17SA023**			Live	NW	NE	49.5	cm		cm	4.16	m	live	Barked	0	17
563	**17SA023**			Live	NW	SE	31.1	cm		cm	10.2	m	live	Barked	0	18
564	**17SA023**			Live	NW	SW		cm	21.6	cm	2.52	m	dead	Barked	0	19
565	**17SA023**			Live	NW	NW	27.8	cm		cm	1.87	m	dead	Barked	0	20
566	**17SA023**			Live	Center Pt	NE	27.3	cm		cm	3.98	m	live	Barked	0	21
567	**17SA023**			Live	Center Pt	SE	11.5	cm		cm	7.79	m	live	Barked	0	22
568	**17SA023**			Live	Center Pt	SW	30	cm		cm	9.41	m	live	Barked	0	23
569	**17SA023**			Live	Center Pt	NW	49.5	cm		cm	8.54	m	live	Barked	0	24
570	**17SA024**	359118	3911591	Dead	NE	Center Pt		cm	35.8	cm	0	m	dead	Barked	0	1
571	**17SA024**			Dead	NE	NE	33	cm		cm	2.04	m	dead	Barked	0	2
572	**17SA024**			Dead	NE	SE	33	cm		cm	3.85	m	dead	Not Barked	0	3
573	**17SA024**			Dead	NE	SW	34.8	cm		cm	7.06	m	dead	Barked	0	4
574	**17SA024**			Dead	NE	NW	29	cm		cm	1.79	m	dead	Barked	0	5
575	**17SA024**	359122	3911574	Dead	SE	Center Pt	30.2	cm	36.9	cm	0	m	dead	Barked	0	6
576	**17SA024**			Dead	SE	NE	35.3	cm		cm	2.52	m	dead	Not Barked	0	7
577	**17SA024**			Dead	SE	SE	37.6	cm		cm	1.22	m	dead	Barked	0	8
578	**17SA024**			Dead	SE	SW	22.1	cm		cm	6.51	m	dead	Barked	0	9
579	**17SA024**			Dead	SE	NW	39.9	cm		cm	11.3	m	dead	Barked	0	10
580	**17SA024**	359099	3911580	Dead	SW	Center Pt	25.8	cm	38.8	cm	0	m	dead	Other	1	11
581	**17SA024**			Dead	SW	NE	23.5	cm		cm	3.22	m	dead	Barked	0	12
582	**17SA024**			Dead	SW	SE	27.3	cm		cm	2.37	m	dead	Barked	0	13
583	**17SA024**			Dead	SW	SW	46	cm		cm	4.48	m	live	Barked	0	14
584	**17SA024**			Dead	SW	NW	42	cm		cm	5.98	m	live	Barked	0	15

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
585	**17SA024**	359108	3911595	Dead	NW	Center Pt	31.3	cm	43.2	cm	0	m	dead	Other	0	16
586	**17SA024**			Dead	NW	NE	29	cm		cm	9.38	m	dead	Barked	0	17
587	**17SA024**			Dead	NW	SE	23.4	cm		cm	1.41	m	dead	Barked	0	18
588	**17SA024**			Dead	NW	SW	36.3	cm		cm	8.2	m	live	Barked	0	19
589	**17SA024**			Dead	NW	NW	40.5	cm		cm	6.77	m	dead	Barked	0	20
590	**17SA024**			Dead	Center Pt	NE		cm	28.6	cm	3.8	m	dead	Barked	0	21
591	**17SA024**			Dead	Center Pt	SE		cm	33.5	cm	1.98	m	dead	Barked	0	22
592	**17SA024**			Dead	Center Pt	SW		cm	42.6	cm	1.3	m	dead	Barked	0	23
593	**17SA024**			Dead	Center Pt	NW		cm	23.2	cm	6.15	m	dead	Barked	0	24
594	**17SA025**	359087	3911592	Live	NE	Center Pt	29.7	cm	33	cm	0	m	live		0	1
595	**17SA025**			Live	NE	NE	43.8	cm		cm	7.2	m	live	Barked	0	2
596	**17SA025**			Live	NE	SE	29.1	cm		cm	6.78	m	live	Barked	0	3
597	**17SA025**			Live	NE	SW	29.6	cm		cm	7.3	m	live	Barked	0	4
598	**17SA025**			Live	NE	NW	29.5	cm		cm	6.4	m	live	Barked	0	5
599	**17SA025**	359093	3911580	Live	SE	Center Pt	46.1	cm	51.8	cm	0	m	live		1	6
600	**17SA025**			Live	SE	NE	31.2	cm		cm	4.42	m	dead	Barked	0	7
601	**17SA025**			Live	SE	SE	16.8	cm		cm	9	m	dead	Not Barked	0	8
602	**17SA025**			Live	SE	SW	22.8	cm		cm	6.38	m	dead	Barked	0	9
603	**17SA025**			Live	SE	NW	33.4	cm		cm	9.53	m	live	Barked	0	10
604	**17SA025**	359086	3911578	Live	SW	Center Pt	33.4	cm	39	cm	0	m	live		0	11
605	**17SA025**			Live	SW	NE	41.6	cm		cm	9.34	m	live	Barked	0	12
606	**17SA025**			Live	SW	SE	22.8	cm		cm	5.3	m	dead	Barked	0	13
607	**17SA025**			Live	SW	SW	25.7	cm		cm	7.66	m	dead	Not Barked	0	14
608	**17SA025**			Live	SW	NW	41.9	cm		cm	1.53	m	live	Barked	0	15
609	**17SA025**	359083	3911588	Live	NW	Center Pt	39.6	cm	44.5	cm	0	m	live		0	16
610	**17SA025**			Live	NW	NE	29.5	cm		cm	6.4	m	live	Barked	0	17
611	**17SA025**			Live	NW	SE	41.9	cm		cm	7.75	m	live	Barked	0	18
612	**17SA025**			Live	NW	SW	16.3	cm		cm	2.04	m	dead	Not Barked	0	19
613	**17SA025**			Live	NW	NW	32.6	cm		cm	4.67	m	live	Barked	0	20
614	**17SA025**			Live	Center Pt	NE	29.7	cm		cm	6.46	m	live	Barked	0	21
615	**17SA025**			Live	Center Pt	SE	41.9	cm		cm	8.54	m	live	Barked	0	22
616	**17SA025**			Live	Center Pt	SW	41.9	cm		cm	2.72	m	live	Barked	0	23
617	**17SA025**			Live	Center Pt	NW	39.6	cm		cm	6.9	m	live	Barked	0	24
618	**17SA026**	359279	3911773	Dead	NE	Center Pt	35	cm	42.4	cm	0	m	dead	Not Barked	0	1
619	**17SA026**			Dead	NE	NE	56	cm		cm	2.94	m	dead	Not Barked	0	2
620	**17SA026**			Dead	NE	SE	63.8	cm		cm	23.5	m	dead	Not Barked	0	3
621	**17SA026**			Dead	NE	SW	37.7	cm		cm	23.9	m	dead	Not Barked	0	4

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
622	**17SA026**			Dead	NE	NW	44.2	cm		cm	17.5	m	dead	Barked	0	5
623	**17SA026**	359269	3911751	Dead	SE	Center Pt	58	cm	65	cm	0	m	dead	Not Barked	0	6
624	**17SA026**			Dead	SE	NE	63.8	cm		cm	21.1	m	dead	Not Barked	0	7
625	**17SA026**			Dead	SE	SE	50.3	cm		cm	18.6	m	dead	Not Barked	0	8
626	**17SA026**			Dead	SE	SW	37.7	cm		cm	8.41	m	dead	Not Barked	0	9
627	**17SA026**			Dead	SE	NW	36	cm		cm	22	m	dead	Not Barked	0	10
628	**17SA026**	359260	3911750	Dead	SW	Center Pt	37.7	cm	61.9	cm	0	m	dead	Other	0	11
629	**17SA026**			Dead	SW	NE	58	cm		cm	8.41	m	dead	Not Barked	0	12
630	**17SA026**			Dead	SW	SE	91.7	cm		cm	30	m	dead	Barked	0	13
631	**17SA026**			Dead	SW	SW	59.8	cm		cm	5.95	m	dead	Not Barked	0	14
632	**17SA026**			Dead	SW	NW	36	cm		cm	19.7	m	dead	Not Barked	0	15
633	**17SA026**	359255	3911769	Dead	NW	Center Pt	36	cm	44.4	cm	0	m	dead	Not Barked	0	16
634	**17SA026**			Dead	NW	NE	44.2	cm		cm	8.51	m	dead	Barked	0	17
635	**17SA026**			Dead	NW	SE	37.7	cm		cm	19.7	m	dead	Not Barked	0	18
636	**17SA026**			Dead	NW	SW	34	cm		cm	11.6	m	dead	Barked	0	19
637	**17SA026**			Dead	NW	NW	45.2	cm		cm	14.1	m	dead	Barked	0	20
638	**17SA026**			Dead	Center Pt	NE	36.5	cm		cm	24.7	m	dead	Not Barked	0	21
639	**17SA026**			Dead	Center Pt	SE	56	cm		cm	5.57	m	dead	Not Barked	0	22
640	**17SA026**			Dead	Center Pt	SW	32.9	cm		cm	3.56	m	dead	Barked	0	23
641	**17SA026**			Dead	Center Pt	NW	50.9	cm		cm	17.9	m	dead	Barked	0	24
642	**17SA027**	359329	3912068	Live	NE	Center Pt	26	cm	29.3	cm	0	m	live		1	1
643	**17SA027**			Live	NE	NE	31.5	cm		cm	6.28	m	dead	Barked	0	2
644	**17SA027**			Live	NE	SE	18	cm		cm	9.08	m	dead	Not Barked	0	3
645	**17SA027**			Live	NE	SW	26	cm		cm	14.4	m	dead	Barked	0	4
646	**17SA027**			Live	NE	NW	21	cm		cm	5.05	m	live	Barked	0	5
647	**17SA027**	359318	3912061	Live	SE	Center Pt	46.4	cm	47.9	cm	0	m	live		0	6
648	**17SA027**			Live	SE	NE	21.2	cm		cm	13.5	m	live	Barked	0	7
649	**17SA027**			Live	SE	SE	32.6	cm		cm	1.32	m	dead	Not Barked	0	8
650	**17SA027**			Live	SE	SW	35.5	cm		cm	12.4	m	live	Barked	0	9
651	**17SA027**			Live	SE	NW	27.8	cm		cm	5.08	m	live	Barked	0	10
652	**17SA027**	359308	3912047	Live	SW	Center Pt	35.5	cm	39.9	cm	0	m	live		0	11
653	**17SA027**			Live	SW	NE	32.6	cm		cm	11.3	m	dead	Not Barked	0	12
654	**17SA027**			Live	SW	SE	38.9	cm		cm	9.85	m	live	Barked	0	13
655	**17SA027**			Live	SW	SW	35.9	cm		cm	17.9	m	live	Barked	0	14
656	**17SA027**			Live	SW	NW	47	cm		cm	17	m	live	Barked	0	15
657	**17SA027**	359317	3912060	Live	NW	Center Pt	39.1	cm	41.8	cm	0	m	live		0	16
658	**17SA027**			Live	NW	NE	28.4	cm		cm	0.64	m	live	Barked	0	17

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
659	17SA027			Live	NW	SE	27.8	cm		cm	6.85	m	live	Barked	0	18
660	17SA027			Live	NW	SW	37.6	cm		cm	4.92	m	live	Barked	0	19
661	17SA027			Live	NW	NW	27.9	cm		cm	5.41	m	live	Barked	0	20
662	17SA027			Live	Center Pt	NE	29	cm		cm	8.27	m	live	Barked	0	21
663	17SA027			Live	Center Pt	SE	25.7	cm		cm	6.73	m	dead	Barked	0	22
664	17SA027			Live	Center Pt	SW	46.94	cm		cm	3.74	m	live	Barked	0	23
665	17SA027			Live	Center Pt	NW	27.8	cm		cm	1.99	m	live	Barked	0	24
666	17SA028	359341	3912069	Dead	NE	Center Pt	22.9	cm	27.4	cm	0	m	dead	Not Barked	0	1
667	17SA028			Dead	NE	NE	22.7	cm		cm	2.22	m	dead	Not Barked	0	2
668	17SA028			Dead	NE	SE	33.3	cm		cm	9.04	m	dead	Not Barked	0	3
669	17SA028			Dead	NE	SW	25.9	cm		cm	2.36	m	dead	Barked	0	4
670	17SA028			Dead	NE	NW	20.5	cm		cm	4.73	m	dead	Not Barked	0	5
671	17SA028	359342	3912061	Dead	SE	Center Pt	22	cm	33.9	cm	0	m	dead	Other	0	6
672	17SA028			Dead	SE	NE	33.3	cm		cm	1.03	m	dead	Not Barked	0	7
673	17SA028			Dead	SE	SE	23.2	cm		cm	6.22	m	dead	Not Barked	0	8
674	17SA028			Dead	SE	SW	19.4	cm		cm	10.8	m	dead	Not Barked	0	9
675	17SA028			Dead	SE	NW	27.3	cm		cm	7.89	m	dead	Barked	0	10
676	17SA028	359333	3912057	Dead	SW	Center Pt	19.4	cm	22.7	cm	0	m	dead	Not Barked	0	11
677	17SA028			Dead	SW	NE	22	cm		cm	10.8	m	dead	Not Barked	0	12
678	17SA028			Dead	SW	SE	27.3	cm		cm	10.7	m	dead	Not Barked	0	13
679	17SA028			Dead	SW	SW	26	cm		cm	8	m	dead	Barked	0	14
680	17SA028			Dead	SW	NW	26.9	cm		cm	15.3	m	live	Barked	0	15
681	17SA028	359333	3912072	Dead	NW	Center Pt	24.3	cm	36.8	cm	0	m	dead	Other	1	16
682	17SA028			Dead	NW	NE	33.6	cm		cm	1.54	m	dead	Barked	0	17
683	17SA028			Dead	NW	SE	17.4	cm		cm	5.65	m	dead	Not Barked	0	18
684	17SA028			Dead	NW	SW	26.9	cm		cm	6.59	m	live	Barked	0	19
685	17SA028			Dead	NW	NW	31.5	cm		cm	2.02	m	dead	Barked	0	20
686	17SA028			Dead	Center Pt	NE	27.5	cm		cm	1.46	m	dead	Barked	0	21
687	17SA028			Dead	Center Pt	SE	32.6	cm		cm	6.98	m	dead	Not Barked	0	22
688	17SA028			Dead	Center Pt	SW	18.9	cm		cm	9.19	m	dead	Not Barked	0	23
689	17SA028			Dead	Center Pt	NW	18.1	cm		cm	3.71	m	dead	Not Barked	0	24
690	17SA029	358870	3911573	Live	NE	Center Pt	41.5	cm	50.6	cm	0	m	live		1	1
691	17SA029			Live	NE	NE	30.8	cm		cm	9.75	m	dead	Barked	0	2
692	17SA029			Live	NE	SE	29.1	cm		cm	12.6	m	live	Barked	0	3
693	17SA029			Live	NE	SW	16	cm		cm	8.76	m	live	Barked	0	4
694	17SA029			Live	NE	NW	45.9	cm		cm	10.4	m	live	Barked	0	5
695	17SA029	358874	3911555	Live	SE	Center Pt	31.2	cm	37.3	cm	0	m	live		0	6

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
696	**17SA029**			Live	SE	NE	17	cm		cm	2.57	m	dead	Barked	0	7
697	**17SA029**			Live	SE	SE	30.1	cm		cm	5.65	m	live	Barked	0	8
698	**17SA029**			Live	SE	SW	18.5	cm		cm	4.1	m	dead	Barked	0	9
699	**17SA029**			Live	SE	NW	26.1	cm		cm	1.86	m	live	Barked	0	10
700	**17SA029**	358867	3911551	Live	SW	Center Pt	36.8	cm	42.8	cm	0	m	live		0	11
701	**17SA029**			Live	SW	NE	18.5	cm		cm	5.94	m	dead	Barked	0	12
702	**17SA029**			Live	SW	SE	34.2	cm		cm	6.88	m	live	Barked	0	13
703	**17SA029**			Live	SW	SW	36.3	cm		cm	4.05	m	live	Barked	0	14
704	**17SA029**			Live	SW	NW	15.8	cm		cm	12.7	m	live	Barked	0	15
705	**17SA029**	358864	3911563	Live	NW	Center Pt	47	cm	88	cm	0	m	live		0	16
706	**17SA029**			Live	NW	NE	16	cm		cm	5.39	m	live	Barked	0	17
707	**17SA029**			Live	NW	SE	15.8	cm		cm	1.5	m	live	Barked	0	18
708	**17SA029**			Live	NW	SW	18.5	cm		cm	2.82	m	live	Barked	0	19
709	**17SA029**			Live	NW	NW	17.1	cm		cm	8.64	m	live	Barked	0	20
710	**17SA029**			Live	Center Pt	NE	15.8	cm		cm	0.8	m	live	Barked	0	21
711	**17SA029**			Live	Center Pt	SE	25.4	cm		cm	8.12	m	live	Barked	0	22
712	**17SA029**			Live	Center Pt	SW	36.8	cm		cm	11.8	m	live	Barked	0	23
713	**17SA029**			Live	Center Pt	NW	47	cm		cm	2.8	m	live	Barked	0	24
714	**17SA030**	358890	3911592	Dead	NE	Center Pt	35.3	cm	44.9	cm	0	m	dead	Other	0	1
715	**17SA030**			Dead	NE	NE	30.5	cm		cm	1.01	m	dead	Barked	0	2
716	**17SA030**			Dead	NE	SE	37.7	cm		cm	1.95	m	dead	Not Barked	0	3
717	**17SA030**			Dead	NE	SW	29	cm		cm	5.99	m	dead	Barked	0	4
718	**17SA030**			Dead	NE	NW	28.6	cm		cm	6.79	m	dead	Barked	0	5
719	**17SA030**	358896	3911583	Dead	SE	Center Pt	39.9	cm	43.8	cm	0	m	dead	Barked	0	6
720	**17SA030**			Dead	SE	NE	32.8	cm		cm	11.9	m	dead	Barked	0	7
721	**17SA030**			Dead	SE	SE	16.6	cm		cm	4.86	m	dead	Barked	0	8
722	**17SA030**			Dead	SE	SW	14.4	cm		cm	9.19	m	live	Barked	0	9
723	**17SA030**			Dead	SE	NW	24.9	cm		cm	7.86	m	dead	Barked	0	10
724	**17SA030**	358881	3911577	Dead	SW	Center Pt	28.9	cm	37.2	cm	0	m	dead	Barked	1	11
725	**17SA030**			Dead	SW	NE	22	cm		cm	8.92	m	dead	Barked	0	12
726	**17SA030**			Dead	SW	SE	33.4	cm		cm	7.79	m	dead	Not Barked	0	13
727	**17SA030**			Dead	SW	SW	41.1	cm		cm	10.1	m	live	Barked	0	14
728	**17SA030**			Dead	SW	NW	29.6	cm		cm	3.97	m	dead	Not Barked	0	15
729	**17SA030**	358873	3911589	Dead	NW	Center Pt	31.8	cm	43.9	cm	0	m	dead	Barked	0	16
730	**17SA030**			Dead	NW	NE	23.2	cm		cm	4	m	dead	Barked	0	17
731	**17SA030**			Dead	NW	SE	31.3	cm		cm	6.93	m	dead	Barked	0	18
732	**17SA030**			Dead	NW	SW	31.8	cm		cm	2.15	m	live	Barked	0	19

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
733	**17SA030**			Dead	NW	NW	43.9	cm		cm	3.26	m	live	Barked	0	20
734	**17SA030**			Dead	Center Pt	NE	19.2	cm		cm	3.01	m	dead	Barked	0	21
735	**17SA030**			Dead	Center Pt	SE	25.2	cm		cm	4.3	m	dead	Barked	0	22
736	**17SA030**			Dead	Center Pt	SW	30.8	cm		cm	6.5	m	dead	Not Barked	0	23
737	**17SA030**			Dead	Center Pt	NW	31.8	cm		cm	3.28	m	dead	Barked	0	24
738	**17SA031**	359027	3911533	Dead	NE	Center Pt	27.2	cm	36.5	cm	0	m	dead	Other	1	1
739	**17SA031**			Dead	NE	NE	48	cm		cm	2.15	m	live	Barked	0	2
740	**17SA031**			Dead	NE	SE	22.5	cm		cm	3.31	m	dead	Barked	0	3
741	**17SA031**			Dead	NE	SW		cm	53.6	cm	4.39	m	dead	Barked	0	4
742	**17SA031**			Dead	NE	NW	31.5	cm		cm	3.58	m	dead	Barked	0	5
743	**17SA031**	359017	3911517	Dead	SE	Center Pt		cm	51	cm	0	m	dead	Not Barked	0	6
744	**17SA031**			Dead	SE	NE		cm	36	cm	7.29	m	dead	Barked	0	7
745	**17SA031**			Dead	SE	SE	13	cm		cm	6.86	m	dead	Not Barked	0	8
746	**17SA031**			Dead	SE	SW	33.2	cm		cm	6.14	m	dead	Barked	0	9
747	**17SA031**			Dead	SE	NW	30.8	cm		cm	3.06	m	dead	Barked	0	10
748	**17SA031**	359009	3911518	Dead	SW	Center Pt	22.4	cm	32.4	cm	0	m	dead	Other	0	11
749	**17SA031**			Dead	SW	NE	30.8	cm		cm	4.64	m	dead	Barked	0	12
750	**17SA031**			Dead	SW	SE	33.2	cm		cm	5.01	m	dead	Barked	0	13
751	**17SA031**			Dead	SW	SW		cm	36.7	cm	3.06	m	dead	Barked	0	14
752	**17SA031**			Dead	SW	NW	30.9	cm		cm	6.3	m	dead	Barked	0	15
753	**17SA031**	359006	3911523	Dead	NW	Center Pt	30.9	cm	42.4	cm	0	m	dead	Barked	0	16
754	**17SA031**			Dead	NW	NE	22.3	cm		cm	4.2	m	dead	Barked	0	17
755	**17SA031**			Dead	NW	SE	22.4	cm		cm	6.3	m	dead	Not Barked	0	18
756	**17SA031**			Dead	NW	SW	39.9	cm		cm	7.19	m	dead	Barked	0	19
757	**17SA031**			Dead	NW	NW	29.1	cm		cm	5	m	dead	Barked	0	20
758	**17SA031**			Dead	Center Pt	NE	28.2	cm		cm	8.88	m	dead	Not Barked	0	21
759	**17SA031**			Dead	Center Pt	SE	31.3	cm		cm	3.26	m	dead	Not Barked	0	22
760	**17SA031**			Dead	Center Pt	SW	27.8	cm		cm	5.06	m	dead	Barked	0	23
761	**17SA031**			Dead	Center Pt	NW	30.8	cm		cm	6.97	m	dead	Barked	0	24
762	**17SA033**	360147	3912850	Live	NE	Center Pt	42.9	cm	57.2	cm	0	m	live		0	1
763	**17SA033**			Live	NE	NE	40.7	cm		cm	2.8	m	live	Barked	0	2
764	**17SA033**			Live	NE	SE	24	cm		cm	2.44	m	live	Barked	0	3
765	**17SA033**			Live	NE	SW	9.7	cm		cm	16.8	m	live	Barked	0	4
766	**17SA033**			Live	NE	NW	2	cm		cm	54	m	live	Barked	0	5
767	**17SA033**			Live	SE	Center Pt	33.1	cm	36.4	cm	0	m	live		0	6
768	**17SA033**			Live	SE	NE	40	cm		cm	2.65	m	live	Barked	0	7
769	**17SA033**			Live	SE	SE	33	cm		cm	5.67	m	live	Barked	0	8

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
770	**17SA033**			Live	SE	SW	9.7	cm		cm	18.6	m	live	Barked	0	9
771	**17SA033**			Live	SE	NW	25.3	cm		cm	1.8	m	live	Barked	0	10
772	**17SA033**			Live	SW	Center Pt	27.6	cm	39.8	cm	0	m	live		0	11
777	**17SA033**			Live	NW	Center Pt	36.3	cm	41.3	cm	0	m	live		0	16
782	**17SA033**			Live	Center Pt	NE	42.9	cm		cm	34.6	m	live	Barked	0	21
783	**17SA033**			Live	Center Pt	SE	2	cm		cm	50	m	live	Barked	0	22
784	**17SA033**			Live	Center Pt	SW	9.7	cm		cm	13.2	m	live	Barked	0	23
785	**17SA033**			Live	Center Pt	NW	9.5	cm		cm	4.3	m	live	Barked	0	24
787	**17SA032**	359039	3911539	Live	NE	Center Pt	33.2	cm	39	cm	0	m	live	Barked	0	1
788	**17SA032**			Live	NE	NE	37.5	cm		cm	3.26	m	live	Barked	0	2
789	**17SA032**			Live	NE	SE	34.3	cm		cm	3.91	m	live	Barked	0	3
790	**17SA032**			Live	NE	SW	40.8	cm		cm	3.96	m	dead	Barked	0	4
791	**17SA032**			Live	NE	NW	43.4	cm		cm	1.67	m	dead	Barked	0	5
793	**17SA032**	359037	3911535	Live	SE	Center Pt	44.8	cm	55.6	cm	0	m	live	Barked	0	6
794	**17SA032**			Live	SE	NE	37.3	cm		cm	6.64	m	live	Barked	0	7
795	**17SA032**			Live	SE	SE	33.3	cm		cm	3.75	m	dead	Barked	0	8
796	**17SA032**			Live	SE	SW	21.2	cm		cm	7.72	m	live	Barked	0	9
797	**17SA032**			Live	SE	NW	40.8	cm		cm	7.23	m	live	Barked	0	10
798	**17SA032**	359028	3911523	Live	SW	Center Pt	23.7	cm	28.3	cm	0	m	live	Barked	0	11
799	**17SA032**			Live	SW	NE	27.2	cm		cm	4.65	m	dead	Barked	0	12
800	**17SA032**			Live	SW	SE	33.4	cm		cm	4.69	m	live	Barked	0	13
801	**17SA032**			Live	SW	SW	44	cm		cm	4.26	m	dead	Barked	0	14
802	**17SA032**			Live	SW	NW	31.5	cm		cm	5.47	m	dead	Barked	0	15
803	**17SA032**	359025	3911531	Live	NW	Center Pt	47.1	cm	52.9	cm	0	m	live	Barked	1	16
804	**17SA032**			Live	NW	NE	35.7	cm		cm	4.42	m	dead	Barked	0	17
805	**17SA032**			Live	NW	SE	23.7	cm		cm	8.28	m	live	Barked	0	18
806	**17SA032**			Live	NW	SW	31.5	cm		cm	1.85	m	dead	Barked	0	19
807	**17SA032**			Live	NW	NW	38.9	cm		cm	4.78	m	live	Barked	0	20
808	**17SA032**			Live	Center Pt	NE	40.8	cm		cm	7.2	m	dead	Barked	0	21
809	**17SA032**			Live	Center Pt	SE	44.8	cm		cm	4.32	m	live	Barked	0	22
810	**17SA032**			Live	Center Pt	SW	21.2	cm		cm	8.85	m	dead	Barked	0	23
811	**17SA032**			Live	Center Pt	NW	41.5	cm		cm	3.39	m	dead	Barked	0	24
812	**17SA035**	359353	3911861	Dead	NE	Center Pt	41.5	cm	53	cm	0	m	dead	Not Barked	0	1
813	**17SA035**			Dead	NE	NE		cm	36.4	cm	10.5	m	dead	Not Barked	0	2
814	**17SA035**			Dead	NE	SE	42.3	cm		cm	23.8	m	dead	Not Barked	0	3
815	**17SA035**			Dead	NE	SW	40.1	cm		cm	14	m	dead	Not Barked	0	4
816	**17SA035**			Dead	NE	NW	51.1	cm		cm	14.3	m	dead	Barked	0	5

Tree_ID	SiteCode	Easting	Northing	Stand Class	Core Tree	Nearest Tree	DBH	DBH units	DRC	DRC units	Distance	Distance units	LiveDead	Bark	Paired	tree Order
817	**17SA035**	359345	3911850	Dead	SE	Center Pt	53.9	cm	60	cm	0	m	dead	Not Barked	0	6
818	**17SA035**			Dead	SE	NE	42.3	cm		cm	16.4	m	dead	Not Barked	0	7
819	**17SA035**			Dead	SE	SE	40.7	cm		cm	3.97	m	dead	Not Barked	0	8
820	**17SA035**			Dead	SE	SW	38.8	cm		cm	8.5	m	dead	Not Barked	0	9
821	**17SA035**			Dead	SE	NW	52.6	cm		cm	15.4	m	dead	Not Barked	0	10
822	**17SA035**	359349	3911833	Dead	SW	Center Pt	33.8	cm	41.9	cm	0	m	dead	Not Barked	0	11
823	**17SA035**			Dead	SW	NE	41.5	cm		cm	14.4	m	dead	Not Barked	0	12
824	**17SA035**			Dead	SW	SE	53.9	cm		cm	18.5	m	dead	Not Barked	0	13
825	**17SA035**			Dead	SW	SW	52.6	cm		cm	9.1	m	dead	Not Barked	0	14
826	**17SA035**			Dead	SW	NW	40.1	cm		cm	3.3	m	dead	Not Barked	0	15
827	**17SA035**	359347	3911853	Dead	NW	Center Pt	40.1	cm	54.4	cm	0	m	dead	Not Barked	0	16
828	**17SA035**			Dead	NW	NE	41.5	cm		cm	12.5	m	dead	Not Barked	0	17
829	**17SA035**			Dead	NW	SE	33.8	cm		cm	3.42	m	dead	Not Barked	0	18
830	**17SA035**			Dead	NW	SW	52.6	cm		cm	11.5	m	dead	Not Barked	0	19
831	**17SA035**			Dead	NW	NW	51.1	cm		cm	11.1	m	dead	Barked	0	20
833	**17SA035**			Dead	Center Pt	NE	41.5	cm		cm	12.8	m	dead	Not Barked	0	22
834	**17SA035**			Dead	Center Pt	SE	53.9	cm		cm	19.5	m	dead	Not Barked	0	23
835	**17SA035**			Dead	Center Pt	SW	33.8	cm		cm	1.61	m	dead	Not Barked	0	24
836	**17SA035**			Dead	Center Pt	NW	40.1	cm		cm	2.48	m	dead	Not Barked	0	25

Tree_ID	SiteCode	Tree_Comments
1	17SA001	206 degrees, 49% @ 30m, is 7m from center
2	17SA001	live
3	17SA001	dead
4	17SA001	live
5	17SA001	live
8	17SA001	43@30m, 339 degrees, is 6.12m from center
16	17SA001	54% at 30m, 123 degrees, is 8.21m from cen
17	17SA001	
18	17SA001	
19	17SA001	
20	17SA001	
21	17SA001	18 degrees, 53@30m, is 9.4m from center po
22	17SA001	
23	17SA001	
24	17SA001	
25	17SA001	dead, but closer
28	17SA001	
29	17SA001	
30	17SA001	
31	17SA001	
33	17SA002	19m, fallen tree
34	17SA002	
35	17SA002	
36	17SA002	stump
37	17SA002	
38	17SA002	Stump, nearest neighbor is 41%@30m
40	17SA002	
41	17SA002	
42	17SA002	
43	17SA002	
44	17SA002	15m long, fallen tree
45	17SA002	
46	17SA002	
47	17SA002	
48	17SA002	
50	17SA002	37% at 30m
51	17SA002	

Tree_ID	SiteCode	Tree_Comments
52	17SA002	
53	17SA002	
54	17SA002	
55	17SA003	NW core tree: tree 16
56	17SA003	NE Core Tree: tree 1
57	17SA003	
58	17SA003	SE tree in SW quadrant: tree 13
59	17SA003	
60	17SA003	same as NE tree in NE Quad: tree # 2
61	17SA003	
62	17SA003	
63	17SA003	
64	17SA003	
65	17SA003	
66	17SA003	
67	17SA003	
68	17SA003	same as tree 16
69	17SA003	paired with SW tree in plot 17SA004
70	17SA003	
71	17SA003	core tree for 17SA004
72	17SA003	
73	17SA003	
74	17SA005	
75	17SA005	Paired with NW tree of 17SA006
77	17SA003	
78	17SA003	
79	17SA003	
80	17SA003	
81	17SA003	
84	17SA004	Bare at DRC, Barked at DBH
89	17SA004	Barked at DRC, Bared at DBH
90	17SA004	
91	17SA004	
92	17SA004	
93	17SA004	
94	17SA004	paired with SE tree of 17SA003; split x2
95	17SA004	is tree #10

Tree_ID	SiteCode	Tree_Comments
96	17SA004	is tree #9 - Standing
97	17SA004	
98	17SA004	Standing
99	17SA004	
100	17SA004	standing
101	17SA004	Standing
102	17SA004	Standing
103	17SA004	is pair tree in plot 17SA003 (SE of 17SA003)
104	17SA004	
105	17SA004	Standing
106	17SA004	is tree #18
107	17SA004	Standing
108	17SA005	
109	17SA005	
110	17SA005	
111	17SA005	
112	17SA005	is pair tree from the other plot
113	17SA005	
114	17SA005	
115	17SA005	
117	17SA005	
118	17SA005	
119	17SA005	Distance cell is torn, I think it says 7.88 m?
120	17SA005	is tree #19
121	17SA005	
122	17SA005	
123	17SA005	
124	17SA005	
125	17SA005	is tree #14
126	17SA005	
128	17SA005	
129	17SA005	
130	17SA005	Potential cut tree
131	17SA005	
132	17SA006	tree on plot edge or just out
133	17SA006	
134	17SA006	Forked above DBH

Tree_ID	SiteCode	Tree_Comments
135	17SA006	
136	17SA006	
137	17SA006	
138	17SA006	
139	17SA006	
140	17SA006	
141	17SA006	
142	17SA006	Tree split at 1m below DBH
143	17SA006	Juniper
144	17SA006	
145	17SA006	
146	17SA006	
147	17SA006	Is paired with SE tree in plot 17SA005
148	17SA006	
149	17SA006	Juniper
150	17SA006	
151	17SA006	is paired core tree of 17SA005 in SE corner
152	17SA006	
153	17SA006	SE core tree #6
154	17SA006	Juniper
155	17SA006	
156	17SA007	
157	17SA007	Standing
158	17SA007	
159	17SA007	is tree #10
160	17SA007	
161	17SA007	SE tree paired with NW tree of 17SA008 (live
162	17SA007	
163	17SA007	
164	17SA007	Standing
165	17SA007	Standing
166	17SA007	Barked at DRC, Bare at DBH
167	17SA007	is the larger trunk of tree 16
168	17SA007	
169	17SA007	is the pair tree from 17SA008, flairs at DBH,
170	17SA007	
171	17SA007	throwout?

Tree_ID	SiteCode	Tree_Comments
172	17SA007	
173	17SA007	standing stump
174	17SA007	is tree 15
175	17SA007	standing
176	17SA007	
177	17SA007	
178	17SA007	
179	17SA007	
180	17SA008	IGNORE DBH due to branch at BH
181	17SA008	is the pair tree, SE tree plot 17SA007
182	17SA008	
183	17SA008	
184	17SA008	
185	17SA008	
186	17SA008	
187	17SA008	
188	17SA008	
189	17SA008	same tree as #5
190	17SA008	
191	17SA008	
192	17SA008	
193	17SA008	
194	17SA008	Core tree #16
196	17SA008	Forked above DRC; is tree 15
197	17SA008	
198	17SA008	
199	17SA008	
200	17SA008	Juniper
201	17SA008	Core tree 1
202	17SA008	
203	17SA008	Core tree 11
204	17SA008	Core tree 16, is tree 15
205	17SA009	Barked at DRC and DBH. Tree has large gall (
206	17SA009	
207	17SA009	split below DBH
208	17SA009	
209	17SA009	is SE core tree of live plot

Tree_ID	SiteCode	Tree_Comments
210	17SA009	Barked at DRC, Bare at DBH. Very near a blu
211	17SA009	split below DBH (x3)
212	17SA009	
213	17SA009	
214	17SA009	
215	17SA009	Barked at DRC, Bare at DBH. Split at base, nc
216	17SA009	is tree 9
217	17SA009	split at DRC (x2)
218	17SA009	
219	17SA009	
220	17SA009	Barked at DRC, Bare at DBH. Very near an or
221	17SA009	
222	17SA009	
223	17SA009	
224	17SA009	Measured at DRC, no measure for DBH
225	17SA009	NE cut tree
226	17SA009	
227	17SA009	SW cut tree
228	17SA009	
229	17SA010	
230	17SA010	
231	17SA010	
232	17SA010	
233	17SA010	
234	17SA010	
235	17SA010	
236	17SA010	could be pair #2 with 009, NE
237	17SA010	Dead, Drowned
238	17SA010	is tree 4
239	17SA010	live barked. Is pair for NW in plot 009
240	17SA010	is tree 16
241	17SA010	4.5
242	17SA010	
243	17SA010	
244	17SA010	
245	17SA010	
246	17SA010	

Tree_ID	SiteCode	Tree_Comments
247	17SA010	
248	17SA010	
249	17SA010	
250	17SA010	
251	17SA010	stump, took DRC
252	17SA010	
253	17SA011	NE paired with NW of live plot, 4.17 m apart
254	17SA011	
255	17SA011	
256	17SA011	
257	17SA011	
259	17SA011	
260	17SA011	is tree 4
261	17SA011	
262	17SA011	
263	17SA011	Measured at DRC, is tree 11
264	17SA011	DBH missing trunk
265	17SA011	is tree 1
266	17SA011	is tree 4 and 7
267	17SA011	mostly dead
268	17SA011	
269	17SA011	Barked at DRC, Bare at DBH
270	17SA011	
271	17SA011	is tree 5
272	17SA011	
273	17SA011	
274	17SA011	
275	17SA011	
276	17SA011	
277	17SA011	
278	17SA012	possible misrecorded Easting coordinate (on
279	17SA012	
280	17SA012	
281	17SA012	
282	17SA012	
283	17SA012	
284	17SA012	

Tree_ID	SiteCode	Tree_Comments
285	17SA012	
286	17SA012	
287	17SA012	same as tree 10 (maybe mixed up number? -
288	17SA012	
289	17SA012	is tree 18
290	17SA012	
291	17SA012	
292	17SA012	
293	17SA012	is pair tree with NE 17SA011 dead, 3.82 m ap
294	17SA012	
295	17SA012	same as center NW
296	17SA012	
297	17SA012	
298	17SA012	Dowed
299	17SA012	SE core tree 6
300	17SA012	
301	17SA012	
302	17SA013	
303	17SA013	Standing
304	17SA013	
305	17SA013	is tree 6
306	17SA013	is tree 10
307	17SA013	Moved due to rot, slightly west of plot cente
308	17SA013	is tree 1
309	17SA013	in office this cut piece labeled "SW"
310	17SA013	in office this cut piece labeled "SW"
311	17SA013	in office this cut piece labeled "SW"
312	17SA013	Barked at DRC, Bare at DBH, moved due to r
313	17SA013	in office probably labeled "SE"
314	17SA013	path to S. way; have affected tree stand stru
315	17SA013	in office probably labeled "SE"
316	17SA013	
317	17SA013	
318	17SA013	
319	17SA013	is tree 6
320	17SA013	is same as the pair tree, NE from live stand
321	17SA013	

Tree_ID	SiteCode	Tree_Comments
322	17SA013	
323	17SA013	
324	17SA013	
325	17SA013	
326	17SA014	
327	17SA014	
328	17SA014	
329	17SA014	core tree 11
331	17SA014	assumed barked as theres a measure for thic
332	17SA014	
333	17SA014	
334	17SA014	
335	17SA014	
336	17SA014	
337	17SA014	measured DRC
338	17SA014	
339	17SA014	
340	17SA014	
341	17SA014	
342	17SA014	Same as center NE tree
343	17SA014	Same as center SE tree
344	17SA014	
345	17SA014	Same as center NW tree
346	17SA014	missing DRC/DBH data: estimated from samp
347	17SA014	
348	17SA014	
349	17SA014	
350	17SA014	
351	17SA015	
352	17SA015	NHNM #19, is pair tree of live plot
353	17SA015	
354	17SA015	
355	17SA015	DRC - Barked
356	17SA015	
357	17SA015	is tree 16
358	17SA015	
359	17SA015	at DRC

Tree_ID	SiteCode	Tree_Comments
360	17SA015	
361	17SA015	
362	17SA015	is tree 18
363	17SA015	at DRC
364	17SA015	
365	17SA015	
366	17SA015	Bare at DBH, Barked at DRC
367	17SA015	
368	17SA015	
369	17SA015	is core tree 11
370	17SA015	is core tree 6
371	17SA015	
372	17SA015	
373	17SA015	Downed; is SW tree for plot #11
374	17SA015	is NW tree for plot #16
375	17SA016	
376	17SA016	
377	17SA016	is tree 23; 1/2 debarked
378	17SA016	is tree 25
379	17SA016	
380	17SA016	is tree 19 from 2001 study
381	17SA016	
382	17SA016	Juniper
383	17SA016	is core tree 1 from 17SA015
384	17SA016	is core tree 11
385	17SA016	
386	17SA016	is core tree
387	17SA016	DRC measured, stump
388	17SA016	
389	17SA016	
390	17SA016	tree is 5m west of west edge
391	17SA016	
392	17SA016	
393	17SA016	1/2 debarked
394	17SA016	
395	17SA016	is core tree 1
396	17SA016	1/2 debarked

Tree_ID	SiteCode	Tree_Comments
397	17SA016	
398	17SA016	
399	17SA017	is tree 21
400	17SA017	
401	17SA017	
402	17SA017	is core tree 16
403	17SA017	
404	17SA017	
405	17SA017	
406	17SA017	
407	17SA017	
408	17SA017	is core tree 1
409	17SA017	is tree 19
410	17SA017	is core tree 16
411	17SA017	
412	17SA017	
413	17SA017	
414	17SA017	
415	17SA017	
416	17SA017	is NE core tree #12
417	17SA017	is core tree 11
418	17SA017	is tree 15
419	17SA017	is core tree 1
420	17SA017	
421	17SA017	
422	17SA017	
423	17SA019	
424	17SA019	
425	17SA019	
426	17SA019	
427	17SA019	
429	17SA019	Split above DRC, 3m SE of plot corner out.
430	17SA019	
431	17SA019	
432	17SA019	
433	17SA019	Tree #3
434	17SA019	

Tree_ID	SiteCode	Tree_Comments
435	17SA019	Clump(x3)
436	17SA019	Clump(x3), see center pt. tree 23
437	17SA019	
438	17SA019	
440	17SA019	missing DRC/DBH values: estimated from sar
441	17SA019	
442	17SA019	
443	17SA019	
444	17SA019	
446	17SA019	Is core tree #1
447	17SA019	Clump (x3)
448	17SA019	Is core tree #11
449	17SA019	Clump (x3) trunk
450	17SA018	
451	17SA018	
452	17SA018	
453	17SA018	
454	17SA018	
455	17SA018	Barked at DRC, Bare at DBH
456	17SA018	is tree 4
457	17SA018	
458	17SA018	
459	17SA018	
460	17SA018	
461	17SA018	
462	17SA018	
463	17SA018	
464	17SA018	
465	17SA018	Barked at DRC, Bare at DBH
466	17SA018	is tree 1, measured at DRC
467	17SA018	is tree 4
468	17SA018	
469	17SA018	is pair tree
470	17SA018	is core tree NEX
471	17SA018	
472	17SA018	is at DBH - 30.0 cm
473	17SA018	

Tree_ID	SiteCode	Tree_Comments
474	17SA020	was NHNM 94
475	17SA020	30% stressed
476	17SA020	
477	17SA020	
478	17SA020	
479	17SA020	Barked at DRC, Bare at DBH
480	17SA020	Branched below DRC
481	17SA020	tree very stressed
482	17SA020	
483	17SA020	
484	17SA020	
485	17SA020	measured at DRC
486	17SA020	measured at DRC
487	17SA020	
488	17SA020	
489	17SA020	DBH/DRC Data missing: estimated from sam
490	17SA020	measured at DRC
491	17SA020	
492	17SA020	measured at DRC
493	17SA020	is pair tree live plot NE
494	17SA020	on the ground
495	17SA020	
496	17SA020	
497	17SA020	tagged, tree 97 NHNM 2001
498	17SA021	
499	17SA021	
500	17SA021	Russian Olive
501	17SA021	is tree 24
502	17SA021	
503	17SA021	NHNM tagged 99
504	17SA021	
505	17SA021	paired tree 16 from 17SA020
506	17SA021	
507	17SA021	is tree 3 - Russian Olive?
508	17SA021	
509	17SA021	is tree 24
510	17SA021	appears dead

Tree_ID	SiteCode	Tree_Comments
511	17SA021	
512	17SA021	
513	17SA021	
514	17SA021	
515	17SA021	is tree 15
516	17SA021	DRC measure
517	17SA021	
518	17SA021	NE core tree
519	17SA021	
520	17SA021	
521	17SA021	NW core tree
522	17SA022	
523	17SA022	
524	17SA022	
525	17SA022	is tree 18
526	17SA022	
527	17SA022	Barked at DRC, Bare at DBH
528	17SA022	
529	17SA022	is core tree for live plot
530	17SA022	
531	17SA022	
532	17SA022	
533	17SA022	
534	17SA022	
535	17SA022	
536	17SA022	
537	17SA022	No DBH taken
538	17SA022	is core tree 1
539	17SA022	is tree 4
540	17SA022	is tree 12
541	17SA022	
542	17SA022	
543	17SA022	
544	17SA022	Stump
545	17SA022	
546	17SA023	
547	17SA023	

Tree_ID	SiteCode	Tree_Comments
548	17SA023	SE tree for CP
549	17SA023	SW tree for CP
550	17SA023	NW tree for CP
551	17SA023	
552	17SA023	
553	17SA023	
554	17SA023	
555	17SA023	SE tree for CP
556	17SA023	
557	17SA023	is tree 25
558	17SA023	
559	17SA023	
560	17SA023	measured at DRC
561	17SA023	
562	17SA023	is tree 12
563	17SA023	is core tree 11
564	17SA023	is tree 15
565	17SA023	
566	17SA023	NE core tree
567	17SA023	~75% stressed
568	17SA023	
569	17SA023	
570	17SA024	
571	17SA024	
572	17SA024	
573	17SA024	
574	17SA024	
575	17SA024	
576	17SA024	
577	17SA024	
578	17SA024	
579	17SA024	
580	17SA024	Barked at DRC, Bare at DBH
581	17SA024	
582	17SA024	
583	17SA024	is pair tree (live SE)
584	17SA024	

Tree_ID	SiteCode	Tree_Comments
585	17SA024	Barked at DRC, Bare at DBH
586	17SA024	is tree 5
587	17SA024	
588	17SA024	
589	17SA024	
590	17SA024	
591	17SA024	
592	17SA024	
593	17SA024	
594	17SA025	GPS 14
595	17SA025	
596	17SA025	
597	17SA025	NW core tree 11
598	17SA025	
599	17SA025	15
600	17SA025	core tree 11 from 17SA024
601	17SA025	
602	17SA025	
603	17SA025	is core tree SW 11
604	17SA025	
605	17SA025	
606	17SA025	is tree 9
607	17SA025	
608	17SA025	is tree 24
609	17SA025	
610	17SA025	core tree 11
611	17SA025	is tree 15 and 24
612	17SA025	
613	17SA025	
614	17SA025	NE core tree
615	17SA025	
616	17SA025	
617	17SA025	NW core tree
618	17SA026	Multiple stems (x4)
619	17SA026	
620	17SA026	
621	17SA026	is tree 6

Tree_ID	SiteCode	Tree_Comments
622	17SA026	standing, is tree 17
623	17SA026	
624	17SA026	is tree 3, multiple stem (2-3)
625	17SA026	
626	17SA026	is tree 11
627	17SA026	is tree 16
628	17SA026	Barked at DRC, Bare at DBH - split below DBI
629	17SA026	is tree 6
630	17SA026	standing
631	17SA026	
632	17SA026	is tree 16
633	17SA026	
634	17SA026	standing
635	17SA026	is tree 11
636	17SA026	
637	17SA026	standing
638	17SA026	tree has 5 trunks w/ similar DBH
639	17SA026	Fallen tree with 3 larger trunks
640	17SA026	
641	17SA026	
642	17SA027	Outside of plot to east ~1m
643	17SA027	
644	17SA027	
645	17SA027	
646	17SA027	
647	17SA027	tree is in SW quad, but on line and is the onl
648	17SA027	
649	17SA027	is tree 12
650	17SA027	is core tree 11
651	17SA027	is tree 25
652	17SA027	
653	17SA027	
654	17SA027	
655	17SA027	
656	17SA027	
657	17SA027	
658	17SA027	

Tree_ID	SiteCode	Tree_Comments
659	17SA027	
660	17SA027	
661	17SA027	
662	17SA027	
663	17SA027	
664	17SA027	is SE core tree 6
665	17SA027	
666	17SA028	
667	17SA028	
668	17SA028	Standing, is tree 7
669	17SA028	Standing
670	17SA028	
671	17SA028	Barked at DRC, Bare at DBH
672	17SA028	Standing
673	17SA028	
674	17SA028	is tree 11
675	17SA028	
676	17SA028	
677	17SA028	is tree 6
678	17SA028	
679	17SA028	Standing
680	17SA028	is paired tree of live plot
681	17SA028	Barked at DRC, Bare at DBH
682	17SA028	standing, split 3 times below DBH
683	17SA028	standing
684	17SA028	is pair tree of live plot and and is tree 15
685	17SA028	standing
686	17SA028	
687	17SA028	at DRC is SEX
688	17SA028	
689	17SA028	
690	17SA029	#25
691	17SA029	is core tree 11
692	17SA029	
693	17SA029	is tree 17
694	17SA029	
695	17SA029	#22

Tree_ID	SiteCode	Tree_Comments
696	17SA029	
697	17SA029	
698	17SA029	
699	17SA029	
700	17SA029	just outside and south of south boundary ab
701	17SA029	is tree 9
702	17SA029	
703	17SA029	
704	17SA029	is tree 22
705	17SA029	split about DRC, has 3 trunks mainstem = DB
706	17SA029	is tree 4
707	17SA029	is tree 15
708	17SA029	
709	17SA029	
710	17SA029	is tree 15
711	17SA029	is core tree 16-NW
712	17SA029	is core tree 11-SW
713	17SA029	
714	17SA030	Barked at DRC, Bare at DBH
715	17SA030	
716	17SA030	
717	17SA030	
718	17SA030	
719	17SA030	
720	17SA030	
721	17SA030	
722	17SA030	
723	17SA030	
724	17SA030	
725	17SA030	
726	17SA030	
727	17SA030	is paired tree of live plot, NE core
728	17SA030	
729	17SA030	
730	17SA030	
731	17SA030	
732	17SA030	

Tree_ID	SiteCode	Tree_Comments
733	17SA030	
734	17SA030	
735	17SA030	
736	17SA030	
737	17SA030	SEX is ~3.0m west of west boundary
738	17SA031	Barked at DRC, Bare at DBH
739	17SA031	is NW core tree of live stand, pair
740	17SA031	
741	17SA031	measured at DRC
742	17SA031	
743	17SA031	
744	17SA031	measured at DRC; very difficult due to many
745	17SA031	very difficult due to many dead trunks/fall
746	17SA031	very difficult due to many dead trunks/fall
747	17SA031	very difficult due to many dead trunks/fall
748	17SA031	Barked at DRC, Bare at DBH
749	17SA031	Very difficult
750	17SA031	is tree 9, very difficult
751	17SA031	measured at DRC. Very difficult
752	17SA031	is tree 16, very difficult
753	17SA031	
754	17SA031	Very difficult
755	17SA031	is tree 11, Very difficult
756	17SA031	Very difficult
757	17SA031	Very difficult
758	17SA031	
759	17SA031	
760	17SA031	is SWX
761	17SA031	is NWX
762	17SA033	
763	17SA033	
764	17SA033	
765	17SA033	
766	17SA033	DBH was measured to be less that 2.0 (Not a
767	17SA033	#28
768	17SA033	
769	17SA033	

Tree_ID	SiteCode	Tree_Comments
770	17SA033	is tree 4; DBH is recorded in DRC but as it is t
771	17SA033	
772	17SA033	#29
777	17SA033	#30
782	17SA033	is tree 1
783	17SA033	Distance is measured to be 50+ (Not a specif
784	17SA033	
785	17SA033	
787	17SA032	is #25
788	17SA032	
789	17SA032	
790	17SA032	Center NE tree #21
791	17SA032	
793	17SA032	
794	17SA032	
795	17SA032	
796	17SA032	
797	17SA032	is center NE tree #21
798	17SA032	
799	17SA032	
800	17SA032	
801	17SA032	
802	17SA032	
803	17SA032	
804	17SA032	
805	17SA032	is core tree #11 SW
806	17SA032	is pair tree, NE of plot 17SA032
807	17SA032	
808	17SA032	
809	17SA032	is SE core tree #6
810	17SA032	
811	17SA032	
812	17SA035	bare, multi stemmed x3
813	17SA035	@ DRC
814	17SA035	standing
815	17SA035	is tree #11
816	17SA035	standing

Tree_ID	SiteCode	Tree_Comments
817	17SA035	bare, multi stemmed x2. flared at DBH for st
818	17SA035	is tree #3
819	17SA035	standing
820	17SA035	
821	17SA035	standing
822	17SA035	bare multi stemmed x2
823	17SA035	tree #1
824	17SA035	tree #6
825	17SA035	tree #10
826	17SA035	tree #16
827	17SA035	bare multi stemmed x5
828	17SA035	tree #1
829	17SA035	tree #11
830	17SA035	tree #10
831	17SA035	tree #5
833	17SA035	tree #1
834	17SA035	tree #6
835	17SA035	is tree #11
836	17SA035	is tree #16

	NE01A2	NE01B3	NE02I1	NE02T1	NE03A2	NE03B2	NE05I1	NE05T1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	4.218	NA	NA	NA
1940	NA	NA	NA	NA	6.424	NA	NA	NA
1941	NA	NA	NA	NA	11.616	NA	NA	NA
1942	NA	NA	NA	NA	11.7	NA	NA	NA
1943	NA	NA	NA	NA	9.228	NA	NA	NA
1944	NA	NA	NA	NA	8.286	NA	NA	NA
1945	NA	NA	NA	NA	5.876	NA	NA	NA
1946	NA	NA	NA	NA	2.896	NA	NA	NA
1947	NA	NA	NA	NA	1.984	NA	NA	NA
1948	NA	NA	NA	NA	2.29	NA	NA	NA
1949	NA	NA	NA	NA	2.824	NA	NA	NA
1950	NA	NA	NA	NA	2.74	NA	NA	NA
1951	NA	NA	NA	NA	2.37	1.936	NA	NA
1952	NA	NA	NA	NA	2.374	1.49	NA	NA
1953	NA	NA	NA	NA	1.592	1.456	NA	NA
1954	NA	NA	NA	NA	1.976	1.148	NA	NA
1955	NA	NA	NA	NA	1.816	1.682	NA	NA
1956	NA	NA	NA	NA	1.818	2.532	NA	NA
1957	NA	NA	NA	NA	2.3	3.58	NA	NA
1958	NA	NA	NA	NA	1.732	3.706	NA	NA
1959	NA	NA	NA	NA	1.862	1.73	NA	NA
1960	NA	NA	NA	NA	1.562	1.536	NA	1.778
1961	NA	NA	NA	NA	2.822	3.038	2.98	2.194
1962	NA	6.438	NA	NA	2.324	0.91	3.748	3.994
1963	NA	6.242	NA	NA	1.246	1.332	1.246	1.044
1964	NA	4.848	NA	NA	1.918	2.21	5.03	2.328
1965	NA	9.546	NA	NA	4.482	4.648	7.434	3.468
1966	NA	10.548	NA	NA	1.862	2.69	3.532	2.276
1967	NA	5.678	NA	NA	0.83	1.106	0.994	0.564
1968	NA	14.258	NA	NA	1.996	3.082	3.852	1.596
1969	NA	6.696	NA	NA	2.472	3.43	3.294	2.128
1970	NA	4.86	5.714	4.838	2.592	3.418	3.36	3.236
1971	NA	1.652	5.948	5.96	4.454	3.714	3.882	2.756
1972	NA	1.492	3.33	2.492	2.354	1.706	1.284	1.446
1973	NA	5.404	2.426	1.778	3.238	3.3	4.422	2.402
1974	NA	3.328	8.318	8.794	5.93	4.556	2.676	1.82
1975	NA	3.96	4.116	4.73	2.86	3.572	2.802	2.408
1976	NA	2.66	1.872	2.568	2.046	1.856	1.046	0.768
1977	NA	1.444	1.886	2.734	1.736	1.328	1.198	0.634

	NE01A2	NE01B3	NE02l1	NE02T1	NE03A2	NE03B2	NE05l1	NE05T1
1978	NA	3.394	5.41	4.464	2.238	2.616	2.178	0.556
1979	NA	9.038	10.242	9.886	3.152	4.764	5.978	3.264
1980	NA	7.598	11.602	8.452	6.728	7.86	3.512	0.926
1981	NA	4.52	8.754	4.708	3.788	8.284	2.478	1.656
1982	NA	7.002	10.342	10.094	7.17	12.99	3.744	3.832
1983	NA	9.914	13.116	13.582	8.55	12.454	5.722	4
1984	NA	1.928	9.186	6.762	6.46	10.91	2.752	1.946
1985	NA	30.998	9.892	5.442	3.428	7.058	2.53	2.576
1986	NA	18.108	7.778	5.39	3.95	4.032	1.982	1.056
1987	NA	12.066	5.566	3.992	6.336	4.736	1.578	0.882
1988	NA	5.12	5.762	4.348	3.386	4.18	2.26	1.26
1989	NA	7.04	6.852	5.484	4.246	4.72	3.49	3.198
1990	NA	8.408	7.634	6.23	6.446	5.138	5.54	3.388
1991	NA	7.812	6.568	5.476	9.104	9.96	8.912	5.366
1992	NA	9.688	8.586	7.01	9.076	13.58	4.908	5.43
1993	NA	8.55	8.196	5.304	5.826	9.068	3.656	3.874
1994	NA	7.84	5.928	5.588	3.652	5.476	2.59	2.726
1995	NA	14.606	5.978	5.608	3.83	5.718	4.616	2.784
1996	NA	6.028	3.126	2.63	2.43	2.182	3.74	2.614
1997	NA	8.874	4.218	3.546	3.88	4.79	6.68	4.082
1998	NA	10.234	3.896	2.622	3.766	5.488	5.656	4.288
1999	13.034	10.62	4.596	4.814	3.734	5.718	7.694	9.388
2000	11.902	11.912	4.64	4.31	4.06	4.58	6.062	4.37
2001	12.822	15.846	7.58	8.022	8.604	5.042	5.678	3.93
2002	10.446	12.3	5.534	6.178	4.886	4.568	4.06	3.386
2003	6.506	6.656	4.38	5.374	2.324	2.408	1.978	1.744
2004	4.648	5.518	3.912	5.674	2.33	2.602	2.486	2.842
2005	5.228	6.314	2.8	2.672	2.562	3.066	2.346	1.928
2006	4.494	4.94	2.462	3.008	2.064	1.304	0.704	0.702
2007	3.672	4.758	1.1	1.572	3.332	3.818	2.538	1.316
2008	2.472	4.514	1.734	1.54	3.17	2.654	3.146	1.316
2009	3.512	5.394	2.628	1.904	2.864	2.676	2.748	1.396
2010	3.744	4.386	2.192	2.052	1.912	1.922	1.518	1.012
2011	2.498	3.526	0.318	0.326	1.818	1.254	1.268	0.396
2012	1.59	1.878	0.458	0.43	1.238	0.898	1.342	0.516
2013	1.018	0.832	NA	NA	0.296	0.266	2.648	0.262
2014	0.822	0.75	NA	NA	0.612	0.436	NA	0.438
2015	2.758	4.168	NA	NA	1.478	1.102	NA	NA
2016	3.708	7.742	NA	NA	2.564	2.524	NA	NA

	NE06A2	NE06B2	NE07I1	NE07TI	NE08A2	NE08B1	NE09I1	NE09T1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	5.472	NA	NA	NA	NA	NA	NA
1934	NA	17.926	7.254	NA	NA	NA	NA	NA
1935	NA	3.706	5.634	NA	NA	NA	NA	NA
1936	NA	3.018	4.776	NA	NA	NA	1.684	2.472
1937	NA	3.19	2.65	NA	NA	NA	6.766	5.166
1938	NA	2.066	3.296	NA	NA	NA	3.142	4.24
1939	NA	4.44	4.806	NA	NA	NA	6.284	2.34
1940	NA	7.782	4.482	NA	NA	NA	2.694	1.744
1941	19.178	9.546	6.778	NA	NA	NA	7.478	8.27
1942	21.26	2.866	14.012	NA	NA	NA	5.212	6.012
1943	18.272	3.632	14.6	NA	NA	NA	3.926	6.012
1944	10.284	3.306	10.856	NA	NA	NA	3.966	8.068
1945	6.786	7.936	4.496	NA	NA	NA	3.454	5.214
1946	4.582	5.568	3.942	NA	NA	NA	2.526	3.978
1947	2.412	3.6	3.426	NA	NA	NA	3.17	5.058
1948	2.658	4.972	1.612	NA	NA	NA	3.828	6.088
1949	2.834	5.04	2.114	NA	NA	NA	4.04	5.418
1950	2.586	3.07	4.004	NA	NA	NA	3.506	4.676
1951	2.82	2.106	3.754	NA	NA	NA	2.792	2.102
1952	2.37	2.26	3.186	NA	NA	NA	3.646	2.524
1953	1.556	1.574	1.992	NA	NA	NA	2.866	1.946
1954	1.894	2.35	2.714	NA	NA	NA	2.964	2.24
1955	1.68	2.34	2.7	NA	NA	NA	2.42	1.968
1956	1.942	3.174	2.254	NA	NA	NA	1.806	1.742
1957	2.762	4.942	3.93	NA	NA	NA	3.22	2.714
1958	6.634	6.214	3.008	NA	NA	NA	2.768	2.35
1959	4.422	3.718	3.114	NA	NA	NA	2.244	2.342
1960	6.684	6.896	6.174	1.37	NA	NA	2.31	1.69
1961	6.508	5.61	6.082	2.038	NA	NA	2.634	1.6
1962	5.784	4.846	4.664	2.278	NA	NA	3.488	2.312
1963	2.414	1.828	1.13	2.018	NA	4.234	1.182	0.93
1964	2.674	2.766	3.45	1.282	NA	6.668	0.672	1.62
1965	5.764	6.122	4.882	2.898	NA	5.042	2.828	2.506
1966	4.302	3.592	3.238	1.196	NA	3.936	3.758	2.716
1967	2.018	2.168	2.204	2.304	NA	6.06	2.596	1.178
1968	4.34	3.108	6.064	1.526	NA	5.978	3.898	2.706
1969	4.17	3.72	5.77	1.996	NA	4.87	5.104	3.194
1970	2.528	3.838	3.964	1.794	4.04	4.936	4.56	2.13
1971	0.912	1.952	2.85	1.04	9.7	3.496	4.02	1.856
1972	0.422	0.808	1.538	2.596	7.952	7.95	2.446	1.194
1973	1.228	1.392	6.932	1.414	4.74	10.932	3.586	2.094
1974	1.388	1.718	6.912	5.016	1.354	7.27	6.78	4.326
1975	1.75	2.404	4.652	2.722	1.06	1.548	5.604	3.172
1976	0.324	0.95	1.6	1.684	0.996	0.516	3.908	1.022
1977	0.654	1.544	2.658	2.604	1.512	1.752	2.632	1.728

	NE06A2	NE06B2	NE07I1	NE07TI	NE08A2	NE08B1	NE09I1	NE09T1
1978	1.276	1.71	4.174	4.434	3.656	5.78	7.772	3.342
1979	3.906	2.91	17.252	8.828	7.096	9.244	7.83	3.738
1980	2.942	2.428	10.556	8.526	4.24	7.242	3.996	2.858
1981	1.908	2.724	9.168	5.698	1.346	1.272	6.018	2.51
1982	3.52	4.362	14.414	8.374	4.12	3.454	5.232	1.402
1983	6.984	5.322	16.268	12.082	8.104	8.242	7.662	3.408
1984	4.894	5.418	9.918	8.374	5.6	5.096	4.046	1.014
1985	3.778	6.062	9.224	5.19	2.694	2.824	2.766	0.984
1986	3.34	4.884	5.7	3.94	2.91	3.478	4.516	1.136
1987	3.1	3.738	3.628	3.226	2.526	5.212	2.278	0.998
1988	2.366	3.374	4.536	3.414	3.348	3.856	2.216	1.042
1989	3.366	3.572	3.656	4.122	3.616	5.206	1.434	0.726
1990	4.152	5.592	3.376	3.958	3.788	5.226	1.338	0.626
1991	4.894	5.592	8.22	6.304	4.408	4.266	2.992	1.742
1992	5.92	6.56	5.298	5.182	4.652	9.38	2.876	2.218
1993	7.258	5.916	5.178	6.43	4.438	5.856	2.168	2.114
1994	6.496	4.168	4.266	6.174	2.732	3.782	3.238	2.474
1995	10.76	2.922	7.63	9.088	3.274	3.086	4.392	1.988
1996	5.638	2.85	2.134	4.19	2.47	3.202	1.74	0.842
1997	6.606	4.468	7.874	10.412	3.35	3	2.168	0.776
1998	6.178	6.71	4.99	7.352	5.028	2.658	2.062	0.822
1999	7.428	5.092	3.934	5.744	4.312	3.162	2.198	1.274
2000	4.858	3.398	1.666	2.7	4.466	1.594	1.678	0.476
2001	9.35	4.17	1.988	1.866	3.504	4.896	1.51	0.772
2002	8.08	4.03	2.06	2	3.434	1.704	2.35	1.274
2003	2.914	2.62	1.576	1.222	2.108	1.048	1.194	1.008
2004	1.724	1.53	1.584	1.582	1.77	1.986	1.104	0.576
2005	3.07	2.288	2.462	2.49	1.808	0.384	0.972	0.622
2006	0.962	0.996	0.718	1.024	0.492	0.612	0.2	0.214
2007	3.15	2.086	1.002	1.762	1.454	0.604	0.466	0.456
2008	2.592	2.884	1.922	3.856	2.09	0.886	0.718	0.498
2009	1.808	1.908	2.05	2.442	1.694	1.082	0.572	0.276
2010	1.364	1.92	1.27	1.856	1.602	1.42	0.484	0.81
2011	0.998	1.19	0.984	0.306	1.072	0.704	NA	NA
2012	0.572	0.638	NA	NA	0.55	0.568	NA	NA
2013	1.16	1.082	NA	NA	0.452	0.614	NA	NA
2014	0.978	0.524	NA	NA	0.392	0.596	NA	NA
2015	1.758	1.414	NA	NA	0.72	1.578	NA	NA
2016	3.664	3.628	NA	NA	0.894	0.986	NA	NA

	NE10A8	NE10B2	NE11l1	NE11T2	NE12A1	NE12B1	NE13l1	NE13T1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	0.994	1.5
1937	NA	NA	NA	NA	NA	NA	1.04	1.318
1938	NA	NA	3.59	3.33	NA	NA	3.674	4.244
1939	NA	NA	2.526	3.466	NA	NA	6.936	7.062
1940	NA	NA	5.77	6.524	8.508	NA	6.196	7.396
1941	NA	NA	9.5	12.048	6.454	NA	24.558	5.592
1942	NA	NA	12.256	12.692	10.41	NA	8.092	22.658
1943	NA	NA	10.276	7.932	8.58	NA	6.324	18.31
1944	NA	NA	9.764	9.896	10.936	NA	7.16	8.228
1945	14.046	14.124	5.204	4.106	9.302	NA	5.944	6.906
1946	8.164	9.294	3.308	3.43	6.236	NA	3.132	3.018
1947	8.2	7.056	2.372	2.416	5.224	NA	3.488	2.052
1948	8.886	7.176	1.76	2.152	15.744	NA	3.616	3.664
1949	9.618	7.652	1.306	1.314	12.98	1.738	3.304	3.26
1950	8.344	5.644	1.506	1.3	7.5	5.928	2.06	1.762
1951	6.118	4.08	1.528	1.756	5.59	4.34	1.736	2.242
1952	6.78	5.364	1.964	2.03	4.432	4.818	3.262	2.214
1953	4.678	3.582	0.954	1.148	3.266	2.87	1.4	0.942
1954	4.832	3.582	2.21	2.182	3.478	3.308	2.74	2.246
1955	3.97	2.924	1.932	2.306	2.9	2.596	2.116	2.298
1956	4.864	3.496	2.268	1.64	2.61	2.486	1.698	2.1
1957	8.76	5.286	2.714	5.404	6.208	4.88	8.676	7.922
1958	7.008	4.156	6.026	6.31	6.372	5.466	4.056	4.714
1959	4.966	2.962	5.402	4.358	4.124	3.58	2.634	2.23
1960	7.274	3.428	10.604	7.906	7.594	5.35	6.28	6.252
1961	5.902	4.302	8.808	4.676	9.606	7.106	4.784	5.362
1962	4.104	3.586	5.032	6.114	6.524	4.3	2.644	2.628
1963	2.538	1.02	3.204	2.4	3.592	3.012	1.058	0.79
1964	2.494	1.716	5.666	3.124	5.028	5.032	1.584	0.75
1965	5.084	3.598	6.478	6.782	9.186	6.304	4.296	2.93
1966	4.278	2.306	4.112	2.97	6.488	4.754	1.918	2.154
1967	3.054	1.064	1.698	1.31	4.988	4.306	2.58	1.63
1968	3.006	2.666	5.992	4.216	4.88	4.926	2.126	3.26
1969	1.062	3.13	8.054	6.794	7.234	7.488	3.284	2.748
1970	2.788	3.356	5.404	4.548	6.898	5.098	1.304	2.04
1971	1.8	1.804	3.444	3.208	6.168	4.7	0.972	0.86
1972	1.096	0.78	1.304	1.63	3.686	3.638	0.574	0.374
1973	2.624	2.572	5.936	3.736	14.348	11.404	0.46	0.892
1974	3.036	3.73	4.95	2.748	10.234	8.59	0.574	1.426
1975	1.654	2.388	4.978	4.332	6.346	7.564	1.232	0.326
1976	0.406	0.804	4.022	2.91	3.716	4.88	0.344	0.914
1977	0.54	0.634	3.258	2.038	2.718	3.3	0.524	0.664

	NE10A8	NE10B2	NE11l1	NE11T2	NE12A1	NE12B1	NE13l1	NE13T1
1978	0.376	0.964	10.302	5.12	6.556	6.032	0.52	1.122
1979	1.28	2.136	13.296	13.23	11.652	11.226	2.768	3.842
1980	1.272	1.44	7.418	9.292	5.138	4.418	1.732	2.946
1981	1.092	1.16	4.834	4.322	3.442	3.914	1.024	1.388
1982	2.382	1.278	11.074	5.168	7.046	6.212	6.53	4.644
1983	5.754	4.484	12.546	9.604	12.18	9.442	6.818	6.758
1984	3.748	3.2	5.902	4.038	9.89	7.71	2.534	3.8
1985	1.156	0.998	4.538	5.57	7.748	5.51	1.132	2.612
1986	1.88	2.288	6.262	5.066	6.294	4.576	4.184	4.122
1987	1.48	1.814	6.816	4.138	3.758	3.446	1.138	1.248
1988	1.584	1.882	7.204	4.39	2.556	3.618	1.508	2.054
1989	2.252	2.798	8.592	7.008	2.732	3.478	1.476	2.738
1990	6.12	4.644	8.416	6.302	3.644	3.366	4.126	3.01
1991	6.114	7.42	10.168	11.126	4.776	4.966	6.032	3.478
1992	6.29	5.32	9.642	14.948	7.818	7.088	10.204	6.89
1993	3.788	5.014	7.98	14.532	7.428	4.62	6.232	6.65
1994	2.416	3.616	7.3	8.518	5.602	3.514	4.468	4.3
1995	2.65	3.744	8.45	7.546	6.45	3.86	6.07	5.786
1996	2.122	3.49	3.534	3.704	4.03	2.704	3.624	2.806
1997	5.894	5.756	10.162	9.384	6.872	5.636	7.916	5.954
1998	5.802	5.688	9.446	8.98	5.512	5.802	8.002	5.52
1999	4.27	4.258	9.058	6.656	5.148	4.518	10.592	4.522
2000	3.15	2.198	7.668	4.816	3.5	2.818	4.566	3.756
2001	4.6	4.558	9.218	8.356	5.044	4.396	11.85	7.05
2002	3.812	3.886	4.684	5.266	3.89	3.19	6.996	5.964
2003	3.56	3.436	3.532	4.502	2.938	3.37	7.024	4.938
2004	2.712	2.502	3.722	5.666	2.318	2.63	5.114	2.744
2005	3.274	2.766	4.364	6.626	2.492	2.812	4.24	3.87
2006	1.344	1.822	1.516	3.22	1.276	1.43	2.234	0.78
2007	1.968	2.388	3.308	4.914	2.412	1.668	2.026	1.584
2008	2.39	3.478	4.26	4.744	2.538	1.874	4.74	1.844
2009	2.164	2.47	3.02	3.71	1.838	1.462	2.86	1.654
2010	1.938	2.048	2.164	2.162	1.566	1.248	2.702	1.114
2011	0.644	0.894	1.076	1.764	1.588	1.242	0.364	0.204
2012	0.566	0.526	1.022	0.676	1.44	1.608	0.162	NA
2013	0.432	0.892	0.738	NA	1.556	1.052	NA	NA
2014	0.39	0.394	NA	NA	1.314	1.468	NA	NA
2015	0.634	0.554	NA	NA	3.594	2.408	NA	NA
2016	1.632	2.052	NA	NA	4.368	3.086	NA	NA

	NE14A2	NE14B2	NE15I2	NE15T1	NE16B2	NE17A2	NE17B2	NE18I1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	8.368	NA	NA	NA	NA	18.862	NA	NA
1943	10.044	NA	NA	NA	6.854	10.4	NA	17.198
1944	8.6	NA	NA	NA	7.394	18.99	NA	9.086
1945	6.444	NA	NA	NA	4.478	8.874	NA	7.318
1946	3.964	NA	NA	NA	3.434	4.154	NA	4.862
1947	4.766	5.504	NA	NA	3.454	3.16	NA	4.238
1948	4.83	6.242	NA	NA	4.096	3.01	NA	4.242
1949	4.222	4.208	NA	NA	3.808	2.926	NA	4.182
1950	4.424	5.11	NA	NA	1.97	2.592	NA	2.598
1951	3.64	4.082	NA	NA	1.7	2.814	NA	2.226
1952	3.836	4.214	NA	NA	1.954	2.844	NA	2.514
1953	2.058	2.234	NA	NA	1.224	2.558	NA	2.714
1954	2.748	3.066	NA	NA	2.336	3.584	NA	2.88
1955	2.836	2.962	NA	NA	1.934	2.63	NA	2.306
1956	1.858	2.462	NA	NA	2.456	2.456	NA	3.148
1957	2.31	3.502	NA	NA	5.648	4.516	NA	5.862
1958	2.47	3.448	NA	NA	5.978	4.346	NA	3.104
1959	1.932	2.248	NA	NA	3.526	2.414	NA	3.432
1960	2.516	3.602	NA	NA	3.808	2.984	6.138	3.318
1961	3.968	4.678	NA	NA	6.422	4.07	4.208	3.834
1962	3.258	4.05	3.85	2.814	3.496	4.406	2.602	2.1
1963	1.514	1.734	3.9	4.252	1.45	1.924	1.678	1.794
1964	2.556	2.29	11.122	13.282	1.928	1.912	2.474	2.274
1965	3.316	3.836	4.882	6.32	6.862	2.4	2.934	2.404
1966	2.984	3.22	4.634	3.494	5.478	1.45	2.052	1.782
1967	1.704	2.214	4.962	2.314	2.686	0.888	1.336	0.776
1968	2.692	2.294	5.356	3.84	4.67	1.736	1.536	1.222
1969	2.436	2.88	2.896	3.274	5.048	2.684	0.998	1.348
1970	1.78	2.086	2.154	2.934	2.558	2.224	0.756	2.16
1971	1.212	1.668	1.374	2.214	1.352	2.328	0.728	3.732
1972	0.882	1.268	1.894	1.782	3.198	1.642	1.242	2.628
1973	0.702	1.038	7.386	3.582	1.542	5.1	1.104	7.596
1974	0.972	1.44	8.09	4.376	2.412	8.84	1.026	7.886
1975	1.57	1.67	6.38	5.298	1.538	2.286	1.728	8.452
1976	1.07	1.378	1.904	2.324	1.168	1.818	2.572	3.198
1977	0.798	0.754	2.144	1.734	3.792	0.836	1.338	3.412

	NE14A2	NE14B2	NE15I2	NE15T1	NE16B2	NE17A2	NE17B2	NE18I1
1978	0.898	1.166	8.59	5.244	9.836	8.716	5.04	9.298
1979	3.924	5.7	17.78	17.25	5.372	9.692	6.092	5.27
1980	1.444	3.134	13.464	17.926	2.114	4.52	3.222	7.634
1981	1.138	1.346	6.496	9.68	1.308	2.566	1.58	8.736
1982	2.538	4.138	9.712	15.366	10.848	4.188	2.964	9.012
1983	8.736	9.904	14.74	17.136	9.096	4.356	5.308	11.44
1984	4.95	9.132	14.17	14.542	3.902	4.336	4.042	9.618
1985	4.502	5.032	13.462	13.144	4.212	2.838	2.362	10.04
1986	2.694	3.548	12.154	13.008	8.984	3.534	3.556	5.518
1987	2.642	3.11	8.056	10.168	4.184	2.056	1.66	1.796
1988	2.556	2.64	4.494	5.512	7.76	3.854	1.99	10.154
1989	3.15	3.682	9.526	14.068	12.014	3.574	1.952	15.388
1990	4.19	5.366	11.354	10.7	10.87	6.878	8.65	11.172
1991	5.252	5.436	10.888	16.432	13.916	9.494	8.878	16.644
1992	12.924	13.56	10.212	11.378	16.99	6.862	11.106	15.038
1993	10.2	11.434	10.806	14.618	17.384	6.738	12.078	15.052
1994	8.198	7.018	6.262	13.266	23.326	7.676	8.938	14.958
1995	7.132	10.63	12.696	16.63	21.172	6.582	6.926	12.604
1996	4.166	3.298	7.048	7.908	5.326	3.684	2.77	6.408
1997	8.232	7.56	13.054	19.392	15.414	5.016	3.93	7.85
1998	9.474	6.474	7.662	24.234	17.418	3.782	4.38	5.796
1999	8.036	5.284	5.38	25.748	9.892	2.736	2.482	7.202
2000	12.512	2.912	4.09	17.888	3.632	1.676	1.8	2.328
2001	10.37	7.674	7.668	11.54	13.994	2.21	2.02	2.674
2002	5.392	5.03	7.78	9.716	12.318	3.306	3.408	3.556
2003	3.346	2.924	4.562	6.838	9.816	2.632	2.344	2.238
2004	2.188	2.984	1.662	3.392	8.998	3.14	2.476	2.084
2005	2.434	3.114	1.324	2.888	7.65	3.884	3.104	2.686
2006	1.374	1.632	1.402	2.258	3.912	4.154	2.268	1.592
2007	1.23	1.128	1.572	3.418	3.288	5.766	3.084	5.55
2008	1.902	2.12	1.748	2.25	3.678	4.424	4.996	5.126
2009	1.652	1.588	1.364	2.034	2.534	4.572	3.914	3.554
2010	1.488	1.574	1.398	1.972	2.404	4.796	4.888	3.234
2011	0.814	0.842	0.554	0.984	1.824	2.02	1.984	0.838
2012	0.472	0.478	0.586	0.994	1.3	1.314	1.712	0.516
2013	0.436	0.814	NA	0.838	0.808	2.07	2.138	NA
2014	0.766	0.84	NA	NA	1.112	2.762	4.24	NA
2015	1.138	2.004	NA	NA	2.94	2.518	2.108	NA
2016	1.184	3.572	NA	NA	15.026	6.118	4.402	NA

	NE18T1	NE19A3	NE21A2	NE21B3	NE22I2	NE22T2	NE23A2	NE23B3
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	8.316	NA	NA	NA	NA	NA	NA	NA
1944	8.018	NA	NA	NA	NA	NA	NA	NA
1945	6.588	NA	NA	NA	NA	NA	NA	NA
1946	4.82	NA	NA	NA	NA	NA	NA	NA
1947	3.858	NA	NA	NA	NA	NA	NA	NA
1948	3.432	NA	NA	NA	NA	NA	NA	NA
1949	3.504	NA	NA	NA	NA	NA	NA	NA
1950	2.918	NA	NA	NA	NA	NA	NA	NA
1951	3.334	NA	NA	NA	NA	NA	NA	NA
1952	3.024	NA	NA	NA	NA	NA	NA	NA
1953	2.02	NA	NA	NA	NA	NA	NA	NA
1954	2.642	NA	NA	NA	NA	NA	NA	NA
1955	2.71	NA	NA	NA	NA	NA	NA	NA
1956	2.25	NA	NA	NA	NA	NA	NA	NA
1957	3.67	NA	NA	NA	NA	NA	NA	NA
1958	2.682	NA	0.552	NA	NA	NA	NA	NA
1959	2.954	NA	8.948	NA	NA	NA	NA	NA
1960	2.512	3.778	8.238	NA	7.768	5.83	NA	NA
1961	2.432	3.492	7.64	13.044	2.758	3.756	NA	NA
1962	2.128	2.33	4.69	6.514	3.012	2.66	NA	NA
1963	1.6	2.182	6.806	6.368	3.05	2.418	NA	NA
1964	1.152	15.52	15.262	9.558	2.388	2.252	NA	NA
1965	3.762	10.48	9.666	11.388	4.324	4.444	NA	NA
1966	1.112	7.432	5.068	11.14	5.564	4.846	NA	NA
1967	0.42	18.154	4.692	4.646	4.488	4.848	NA	NA
1968	1.012	10.374	6.716	10.22	5.346	3.744	NA	NA
1969	1.274	2.848	1.844	20.816	11.086	8.66	NA	NA
1970	1.062	7.634	7.516	6.186	9.196	7.278	NA	NA
1971	1.19	6.622	5.806	18.986	9.772	7.316	NA	NA
1972	3.468	2.71	2.202	7.402	5.778	3.52	NA	NA
1973	7.906	16.198	8.818	8.446	5.05	5.698	NA	NA
1974	9.932	9.454	4.602	6.886	4.432	3.086	NA	NA
1975	8.008	13.852	4.936	8.176	3.734	2.672	NA	NA
1976	5.268	10.444	1.674	4.394	2.068	1.524	NA	NA
1977	5.748	5.894	1.094	1.724	1.584	1.148	NA	NA

	NE18T1	NE19A3	NE21A2	NE21B3	NE22I2	NE22T2	NE23A2	NE23B3
1978	5.906	7.768	4.446	11.358	4.772	3.698	NA	NA
1979	4.69	20.772	9.226	5.698	6.098	4.094	NA	NA
1980	8.732	17.194	9.588	6.746	7.972	7.006	NA	NA
1981	6.326	9.088	4.698	1.9	1.754	1.634	NA	NA
1982	8.434	6.786	7.498	18.49	9.51	7.402	NA	NA
1983	12.002	11.654	15.392	7.844	11.43	9.768	NA	NA
1984	7.896	9.736	11.794	3.354	12.204	8.708	NA	NA
1985	7.076	7.148	8.234	6.134	10.512	7.654	NA	NA
1986	4.456	5.26	4.686	9.192	10.05	6.108	NA	10.366
1987	2.118	3.826	7.256	6.006	7.278	6.034	NA	18.188
1988	4.896	3.77	3.898	7.83	4.524	2.786	NA	5.764
1989	10.796	4.222	6.896	3.734	2.932	2.152	NA	9.87
1990	9.566	2.76	6.17	4.628	3.75	3.92	NA	12.124
1991	10.678	5.66	6.59	3.17	4.674	3.824	NA	11.004
1992	8.618	9.036	3.84	3.684	3.646	3.154	NA	18.554
1993	7.348	9.316	3.584	5.398	4.556	5.662	NA	7.348
1994	6.71	8.37	4.364	4.43	2.466	3.736	25.058	5.512
1995	4.758	9.55	5.388	6.986	6.63	5.138	13.376	8.872
1996	2.988	3.84	3.682	3.26	2.746	3.766	4.136	2.69
1997	4.34	3.848	3.264	9.372	3.572	4.42	10.314	5.418
1998	4.29	3.762	4.328	2.528	5.114	5.46	5.382	7.692
1999	5.668	5.558	4.418	2.086	4.824	5.288	5.154	8.336
2000	1.786	7.096	2.358	1.222	2.328	6.118	2.146	3.874
2001	1.818	7.1	3.798	3.444	5.422	10.512	5.422	7.262
2002	1.954	6.004	3.61	3.728	4.904	8.586	7.426	4.042
2003	1.472	3.462	2.886	2.592	3.056	5.522	4.57	3.488
2004	1.694	4.348	2.836	2.844	1.92	3.214	2.364	2.434
2005	3.686	3.76	3.36	2.658	2.88	3.396	1.798	3.106
2006	2.176	2.9	2.502	2.03	1.986	2.834	1.996	2.866
2007	2.054	4.164	3.344	2.206	2.142	3.526	1.438	1.53
2008	4.002	3.874	2.828	2.94	2.8	4.514	2.522	1.686
2009	4.282	5.048	2.268	1.496	2.596	2.434	1.836	1.084
2010	2.984	4.208	1.938	1.984	1.784	1.334	1.936	1.73
2011	2.98	3.768	1.776	2.114	0.228	0.548	1.268	1.226
2012	1.008	3.14	1.12	1.498	NA	NA	0.98	0.828
2013	NA	2.63	0.79	0.992	NA	NA	0.952	0.66
2014	NA	2.294	1.674	1.642	NA	NA	1.478	1.264
2015	NA	3.132	3.118	5.924	NA	NA	4.392	3.626
2016	NA	2.848	6.494	5.896	NA	NA	3.122	4.032

	NE24I2	NE24T2	NE25A2	NE26I1	NE26T1	NE27A2	NE27B2	NE28I2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	NA
1948	NA	NA	NA	NA	NA	NA	NA	NA
1949	NA	NA	NA	NA	NA	NA	NA	NA
1950	NA	NA	NA	NA	NA	NA	NA	NA
1951	NA	NA	NA	NA	NA	NA	NA	NA
1952	NA	NA	NA	NA	NA	NA	NA	NA
1953	NA	NA	NA	12.09	12.136	NA	3.622	NA
1954	NA	NA	NA	32.728	27.99	NA	3.892	NA
1955	NA	NA	NA	26.452	27.342	NA	3.694	NA
1956	NA	NA	NA	25.336	21.858	NA	5.45	NA
1957	NA	NA	NA	31.864	28.678	NA	16.532	NA
1958	NA	NA	NA	14.542	18.778	NA	6.602	NA
1959	NA	NA	NA	8.456	7.328	NA	2.422	NA
1960	NA	NA	NA	14.298	10.448	NA	6.794	NA
1961	NA	NA	NA	11.562	10.68	NA	5.244	NA
1962	11.876	8.652	NA	6.194	5.134	NA	4.208	4.352
1963	2.45	2.064	NA	3.256	2.126	NA	1.372	1.298
1964	4.44	3.838	NA	3.882	2.892	NA	1.498	1.908
1965	9.564	7.846	NA	7.028	6.982	NA	1.882	1.816
1966	2.84	2.572	NA	3.764	3.746	NA	1.634	1.736
1967	3.8	2.82	NA	1.252	1.26	NA	0.564	0.88
1968	9.004	7.438	NA	1.816	3.344	NA	1.168	2.052
1969	6.654	5.562	NA	1.562	3.528	NA	0.47	4.58
1970	4.62	4.294	NA	1.516	1.998	NA	1.44	6.118
1971	3.256	2.644	NA	1.37	1.59	NA	1.546	10.666
1972	1.486	1.042	NA	0.934	0.788	NA	0.988	6.352
1973	13.04	12.426	NA	2.746	2.656	NA	1.976	17.584
1974	7.644	6.87	NA	2.854	1.732	NA	0.49	15.144
1975	7.032	4.99	NA	2.058	1.714	NA	0.49	8.82
1976	3.552	3.344	4.41	0.73	1.136	NA	0.246	5.774
1977	4.124	2.998	3.56	0.814	1.398	NA	0.424	1.638

	NE24I2	NE24T2	NE25A2	NE26I1	NE26T1	NE27A2	NE27B2	NE28I2
1978	7.996	6.074	5.596	2.118	2.686	NA	3.938	6.186
1979	10.42	10.982	4.336	4.258	3.332	NA	4.218	12.112
1980	7.7	7.766	6.572	2.334	2.692	4.504	1.592	7.994
1981	4.622	4.664	2.324	1.17	1.208	1.57	0.856	3.164
1982	11.432	14.33	6.458	2.52	3.054	5.64	7.226	6.382
1983	14.162	14.742	9.99	4.748	3.724	3.788	4.98	9.55
1984	17.566	13.328	6.366	4.274	4.152	2.71	4.278	6.188
1985	14.268	9.25	5.898	5.832	4.826	1.308	3.268	3.374
1986	11.812	10.58	5.63	4.98	4.408	2.65	3.048	3.54
1987	7.142	6.554	4.724	2.418	2.756	1.444	0.866	1.728
1988	4.858	3.75	3.918	2.872	3.216	1.01	0.878	2.316
1989	8.454	4.064	4.166	5.872	4.744	1.502	1.564	3.082
1990	6.39	3.472	3.276	6.378	6.422	2.858	2.336	4.278
1991	4.83	2.75	3.802	10.566	9.852	4.496	2.908	6.464
1992	4.608	4.328	4.42	10.388	12.826	4.158	3.024	5.778
1993	6.854	4.992	4.256	9.332	8.438	4.514	3.02	2.796
1994	6.17	4.074	2.026	8.738	5.402	3.396	2.42	2.364
1995	7.282	4.49	1.854	5.156	9.506	4.638	3.722	3.19
1996	4.188	1.45	1.346	1.106	1.396	2.236	1.742	1.758
1997	5.538	2.92	3.078	5.968	4.08	2.208	1.49	1.992
1998	4.236	3.144	3.64	9.808	5.796	2.764	2.792	3.05
1999	2.628	1.29	2.528	9.612	6.346	3.264	4.546	2.46
2000	3.102	1.182	2.198	4.06	2.174	1.108	1.55	1.048
2001	4.668	1.964	4.772	4.054	2.464	0.674	0.83	0.702
2002	3.222	2.624	2.458	3.776	2.308	1.374	1.648	1.136
2003	1.31	1.242	1.566	1.394	0.688	1.338	1.642	0.694
2004	1.756	1.86	1.902	1.932	1.42	1.136	1.34	1.328
2005	1.104	1.424	1.9	3.632	3.22	1.656	2.094	1.944
2006	1.648	1.082	1.422	1.31	0.68	0.732	0.906	0.624
2007	0.856	1.47	1.704	1.72	1.352	1.15	1.408	1.704
2008	1.492	1.942	1.436	1.08	0.658	0.924	0.968	1.542
2009	1.216	1.014	1.314	1.316	1.132	0.986	0.89	1.024
2010	1.66	2.1	1.836	0.504	1.302	1.312	1.46	1.366
2011	0.306	NA	1.032	NA	NA	0.836	0.95	0.518
2012	NA	NA	1.008	NA	NA	0.608	0.814	NA
2013	NA	NA	1.12	NA	NA	0.776	0.496	NA
2014	NA	NA	2.116	NA	NA	0.616	0.626	NA
2015	NA	NA	4.562	NA	NA	1.75	0.894	NA
2016	NA	NA	4.154	NA	NA	2.176	1.59	NA

	NE28T2	NE29A3	NE30I2	NE30T2	NE31I2	NE31T2	NE32A4	NE32B4
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	NA
1948	NA	NA	NA	NA	NA	NA	NA	NA
1949	NA	NA	NA	NA	NA	NA	NA	NA
1950	NA	NA	NA	NA	NA	NA	NA	NA
1951	NA	NA	NA	NA	NA	NA	NA	NA
1952	NA	NA	NA	NA	NA	NA	NA	NA
1953	NA	NA	NA	NA	NA	NA	NA	NA
1954	NA	NA	NA	NA	NA	NA	NA	NA
1955	NA	NA	NA	NA	NA	NA	NA	NA
1956	NA	NA	NA	NA	NA	NA	NA	NA
1957	NA	NA	NA	NA	NA	NA	5.562	5.48
1958	NA	NA	NA	NA	NA	NA	3.178	2.596
1959	2.156	NA	NA	NA	NA	NA	1.756	1.442
1960	3.46	NA	NA	NA	NA	NA	2.696	3.748
1961	4.018	NA	NA	NA	NA	NA	4.78	11.09
1962	5.12	NA	NA	NA	NA	NA	2.736	3.028
1963	1.512	NA	NA	NA	NA	NA	1.158	3.358
1964	1.678	NA	NA	NA	NA	NA	3.67	3.194
1965	3.56	NA	NA	NA	NA	NA	10.7	7.308
1966	1.492	NA	NA	NA	NA	NA	3.942	3.178
1967	0.812	NA	NA	NA	NA	NA	0.8	7.916
1968	2.018	NA	NA	NA	NA	NA	2.936	4.918
1969	4.712	NA	NA	NA	NA	NA	9.65	2.368
1970	4.814	NA	NA	NA	NA	NA	5.724	3.588
1971	3.744	NA	NA	NA	NA	NA	5.674	5.472
1972	3.812	NA	NA	NA	NA	NA	3.514	3.03
1973	13.926	NA	NA	NA	NA	NA	4.126	3.526
1974	11.972	NA	NA	NA	NA	NA	6.866	3.464
1975	12.998	NA	NA	NA	NA	2.552	5.496	1.57
1976	8.634	NA	NA	NA	NA	2.226	2.01	2.352
1977	3.934	NA	NA	NA	NA	4.564	6.054	6.666

	NE28T2	NE29A3	NE30l2	NE30T2	NE31l2	NE31T2	NE32A4	NE32B4
1978	7.916	NA	NA	NA	8.512	7.898	3.458	6.59
1979	10.356	NA	NA	NA	15.844	13.02	5.25	3.326
1980	10.462	NA	NA	NA	8.558	9.122	7.69	6.5
1981	2.128	NA	NA	NA	6.534	5.376	4.308	5.386
1982	6.84	NA	24.886	21.256	8.904	10.234	9.646	10.932
1983	8.376	NA	33.354	24.292	15.28	15.372	12.936	9.812
1984	6.482	NA	26.298	30.672	12.574	12.702	11.126	8.76
1985	4.816	NA	30.372	34.522	8.106	7.628	9.268	4.664
1986	3.982	NA	22.634	32	10.102	7.624	11.768	14.362
1987	2.184	NA	23.172	23.942	9.952	5.182	12.772	10.49
1988	1.24	NA	16.076	15.966	6.192	6.314	8.228	7.828
1989	1.756	NA	7.278	7.918	9.296	9.448	8.032	11.442
1990	2.388	10.706	6.138	7.108	9.166	9.238	11.778	14.15
1991	3.386	19.326	22.248	26.708	10.78	9.658	15.134	10.588
1992	2.648	17.804	19.644	23.086	10.682	9.672	8.584	6.19
1993	2.762	26.58	19.058	16.096	10.288	8.63	4.292	2.61
1994	2.788	16.22	10.56	11.524	5.89	3.18	6.602	1.478
1995	1.952	16.828	9.4	13.17	6.244	4.582	6.19	2.366
1996	1.366	5.24	4.87	4.444	2.914	1.956	2.076	1.094
1997	1.672	11.608	6.348	7.806	9.616	4.072	2.774	1.49
1998	1.858	13.412	7.128	6.04	8.888	3.21	2.458	1.722
1999	1.688	12.88	8.226	3.944	8.086	2.78	0.944	0.998
2000	0.798	5.094	4.886	1.77	2.672	0.914	2.536	1.12
2001	0.602	8.376	7.896	6.188	7.398	1.886	3.182	1.412
2002	1.174	5.992	7.46	4.68	4.084	2.334	1.9	1.272
2003	0.618	7.416	5.242	3.588	2.792	1.202	2.288	0.89
2004	1.72	4.896	3.698	3.812	2.516	1.458	1.562	1.072
2005	1.902	5.14	4.02	8.14	2.256	1.356	1.388	1.148
2006	0.534	2.266	3.35	5.044	1.648	1.288	0.994	0.64
2007	1.516	1.952	7.776	7.09	0.82	1.082	1.362	0.766
2008	1.252	2.158	8.126	5.464	1.708	1.21	1.41	0.812
2009	1.25	3.992	5.906	4.242	1.832	1.162	1.238	0.742
2010	1.478	3.458	5.792	4.458	2.06	1.568	0.976	0.988
2011	1.854	1.348	1.788	0.758	0.98	0.726	1.004	0.934
2012	NA	1.142	NA	NA	0.742	0.606	0.706	0.69
2013	NA	1.142	NA	NA	0.478	0.462	1.252	0.566
2014	NA	2.028	NA	NA	NA	1.178	0.578	0.49
2015	NA	5.642	NA	NA	NA	NA	1.224	1.48
2016	NA	6.976	NA	NA	NA	NA	1.138	3.176

	NE35I7	NE35T7	NW01A2	NW01B2	NW02I1	NW02T2	NW03A2	NW03B2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	3.846	NA
1937	NA	NA	NA	NA	NA	NA	4.334	3.58
1938	NA	NA	NA	NA	NA	NA	6.326	6.028
1939	NA	NA	NA	NA	NA	NA	3.602	3.808
1940	NA	NA	NA	NA	NA	NA	4.004	3.59
1941	NA	NA	NA	NA	NA	NA	10.92	11.45
1942	NA	NA	NA	NA	NA	NA	4.164	13.214
1943	NA	NA	NA	NA	NA	NA	5.856	14.422
1944	NA	NA	NA	NA	NA	NA	5.438	8.73
1945	NA	NA	NA	NA	NA	NA	4.93	7.718
1946	NA	NA	NA	NA	NA	NA	3.526	4.306
1947	NA	NA	NA	NA	NA	NA	4.672	2.918
1948	NA	NA	NA	NA	NA	NA	5.688	4.834
1949	NA	NA	NA	NA	NA	NA	4.592	4.222
1950	4.278	3.496	NA	NA	NA	NA	2.666	4.112
1951	4.278	3.83	NA	NA	NA	NA	2.276	3.606
1952	5.336	4.172	NA	NA	1.322	1.632	3.05	4.742
1953	9.588	6.326	NA	NA	1.708	1.532	3.234	2.822
1954	9.246	11.124	NA	NA	1.278	0.756	3.408	2.494
1955	6.268	4.414	NA	NA	0.912	0.968	3.354	3.434
1956	13.998	15.046	NA	NA	0.784	0.738	2.72	2.782
1957	26.122	20.69	NA	NA	1.512	2.036	4.326	3.668
1958	19.998	21.368	NA	NA	1.818	1.784	3.974	3.954
1959	7.136	5.562	NA	NA	1.566	1.76	2.36	3.328
1960	18.35	13.792	NA	NA	3.13	3.01	3.624	5
1961	14.372	17.942	NA	NA	3.162	3.254	3.292	5.384
1962	9.822	7.478	NA	NA	1.726	1.47	2.01	4.122
1963	4.576	3.534	NA	NA	1.098	0.882	1.5	1.814
1964	3.662	2.774	NA	NA	3.272	3.37	3.26	3.222
1965	5.538	4.334	NA	NA	5.78	5.302	6.14	7.998
1966	4.582	2.916	NA	6.18	2.244	2.18	3.162	3.7
1967	3.152	1.716	6.726	3.736	1.962	1.662	2.434	1.546
1968	3.338	4.322	17.446	12.928	5.84	4.428	3.602	2.692
1969	3.786	4.122	15.11	9.802	6.088	5.352	4.404	3.458
1970	6.258	4.882	8.71	6.4	4.238	4.856	3.812	3.91
1971	7.054	3.748	3.49	2.97	1.988	1.834	3.522	3.006
1972	4.134	2.928	1.812	1.384	1.09	1.192	1.14	1.356
1973	14.86	8.828	10.75	8.546	8.412	6.586	1.416	1.3
1974	12.356	5.196	4.032	3.796	4.714	4.594	3.82	4.584
1975	7.61	5.938	3.454	3.278	3.082	3.098	2.636	2.844
1976	5.838	4.59	1.87	1.508	2.122	1.88	1.264	1.462
1977	2.56	3.358	0.856	1.756	1.786	1.738	1.246	1.358

	NE35l7	NE35T7	NW01A2	NW01B2	NW02l1	NW02T2	NW03A2	NW03B2
1978	6.768	10.812	1.41	1.332	3.692	3.838	1.334	1.506
1979	13.212	8.65	4.096	3.882	11.11	10.728	3.602	3.006
1980	17.956	5.874	3.19	2.708	9.604	8.384	2.66	5.494
1981	8.032	2.5	3.698	2.22	5.964	5.748	1.766	3.274
1982	13.846	13.048	5.518	5.6	8.684	8.506	4.85	4.778
1983	21.148	12.512	8.816	7.196	13.692	13.852	4.808	4.42
1984	14.882	9.578	5.068	3.16	7.468	6.722	4.922	3.514
1985	14.306	6.824	5.042	3.122	5.486	4.378	4.352	4.654
1986	14.234	6.86	2.984	1.654	3.034	2.928	4.346	4.388
1987	13.966	7.47	1.506	1	3.13	3.992	3.526	3.222
1988	13	5.894	1.644	1.188	5.282	6.256	3.294	3.278
1989	15.654	8.43	2.532	1.786	6.748	8.022	3.002	2.144
1990	12.128	8.826	2.02	2.24	8.508	11.002	2.166	2.876
1991	14.54	6.364	2.032	2.236	9.87	8.28	4.172	4.238
1992	9.596	7.848	0.92	0.952	10.544	8.38	4.18	5.426
1993	8.47	12.502	1.498	1.594	10.088	8.032	3.868	4.5
1994	3.444	6.288	1.556	1.64	5.776	8.82	3.172	3.388
1995	5.566	8.41	2.138	2.852	5.53	7.594	2.424	3.042
1996	4.844	7.864	1.786	1.99	3.012	2.8	1.528	2.706
1997	14.74	8.702	1.732	2.404	6.566	5.486	3.866	3.338
1998	15.15	9.798	2.456	2.888	6.966	7.162	2.742	3.864
1999	12.284	7.75	1.616	1.71	5.8	6.618	2.996	12.688
2000	9.048	6.714	1.024	0.67	3.462	4.132	1.026	3.206
2001	6.426	3.708	3.886	3.672	12.562	13.176	2.404	4.996
2002	8.312	5.688	2.182	3.462	8.246	6.542	2.022	3.334
2003	7.704	6.554	2.48	2.302	7.954	5.636	2.28	1.946
2004	7.09	1.978	1.572	1.734	8.1	4.556	2.014	2.328
2005	4.262	2.334	1.496	2.452	7.564	5.408	1.658	1.84
2006	3.426	2.48	1.434	1.816	6.508	4.034	0.928	1.194
2007	1.506	1.354	0.902	1.658	6.076	3.28	2.576	1.788
2008	0.946	0.934	1.328	1.64	3.614	2.958	1.356	1.31
2009	0.734	0.36	2.126	1.6	4.574	3.038	1.28	1.438
2010	NA	NA	2.624	2.14	3.064	1.876	1.2	1.384
2011	NA	NA	2.254	1.536	0.742	0.566	1.142	1.182
2012	NA	NA	0.978	0.898	0.434	NA	0.866	1.01
2013	NA	NA	0.432	0.46	0.432	NA	0.768	0.742
2014	NA	NA	0.878	0.538	NA	NA	0.524	0.578
2015	NA	NA	1.956	0.99	NA	NA	0.724	1.212
2016	NA	NA	3.992	1.732	NA	NA	1.222	1.436

	NW04L2	NW05l1	NW05T1	NW06A2	NW06B2	NW07l1	NW07T1	NW08A2
1932	NA	NA	NA	NA	NA	4.116	2.398	NA
1933	NA	NA	NA	NA	NA	5.784	4.322	NA
1934	NA	NA	NA	NA	NA	12.272	9.058	NA
1935	NA	NA	NA	NA	NA	9.594	9.708	NA
1936	NA	2.25	NA	NA	NA	3.966	5.43	NA
1937	NA	2.032	NA	NA	NA	5.038	4.706	NA
1938	NA	5.752	NA	NA	NA	9.498	9.266	NA
1939	NA	2.432	NA	NA	NA	7.206	7.28	NA
1940	NA	17.448	7.498	NA	NA	8.586	6.268	NA
1941	NA	6.75	1.676	NA	NA	6.43	8.872	NA
1942	NA	5.488	3.098	NA	NA	17.228	11.394	NA
1943	NA	3.018	1.586	NA	NA	10.41	8.56	NA
1944	NA	4.046	3.272	NA	NA	7.186	8.116	NA
1945	NA	6.19	2.238	NA	NA	4.914	6.334	NA
1946	NA	2.514	2.352	NA	NA	4.278	3.536	NA
1947	NA	1.998	2.476	NA	NA	3.858	2.932	NA
1948	NA	1.912	1.856	NA	NA	3.764	3.12	NA
1949	NA	1.694	1.992	NA	NA	3.87	2.472	NA
1950	NA	1.158	1.262	NA	NA	2.792	2.082	NA
1951	NA	1.454	1.47	NA	NA	2.458	1.77	NA
1952	NA	1.306	0.982	NA	NA	2.48	2.036	NA
1953	NA	0.858	0.89	NA	NA	1.88	1.468	NA
1954	NA	1.26	0.936	NA	NA	1.988	1.504	NA
1955	NA	1.294	1.564	NA	NA	1.698	1.374	5.27
1956	NA	1.378	1.506	NA	NA	1.646	1.26	5.086
1957	NA	1.982	1.72	NA	NA	2.042	1.216	1.922
1958	NA	1.572	1.778	NA	NA	1.948	1.158	5.888
1959	NA	1.336	1.184	NA	NA	1.896	1.268	3.906
1960	NA	2.078	1.576	NA	NA	2.354	1.634	8.052
1961	NA	2.082	1.698	NA	NA	2.3	2.242	19.278
1962	NA	1.768	1.29	NA	NA	2.51	1.872	14.842
1963	NA	1.152	1.122	NA	NA	1.22	1.06	5.79
1964	NA	1.152	2.362	NA	NA	1.678	1.324	6.92
1965	NA	3.452	3.738	NA	NA	3.614	3.084	11.808
1966	NA	1.496	1.896	NA	NA	2.05	1.846	11.28
1967	NA	0.988	0.932	NA	NA	0.77	0.822	8.044
1968	NA	1.026	1.024	NA	NA	2.022	1.738	12.088
1969	NA	1.986	2.908	NA	NA	3.276	2.926	13.25
1970	NA	2.098	2.464	NA	NA	2.83	2.72	12.906
1971	NA	1.39	3.13	NA	NA	2.416	2.6	10.282
1972	NA	0.65	1.528	NA	NA	1.242	1.194	4.318
1973	NA	1.976	2.908	NA	NA	1.826	2.098	14.74
1974	NA	4.452	5.144	NA	NA	2.652	2.284	17.954
1975	NA	3.198	3.04	NA	NA	2.484	2.082	11.836
1976	1.442	0.87	1.876	NA	NA	1.336	0.972	7.476
1977	1.208	0.674	0.62	NA	NA	1.114	0.736	7.002

	NW04L2	NW05l1	NW05T1	NW06A2	NW06B2	NW07l1	NW07T1	NW08A2
1978	1.96	2.024	2.162	NA	NA	2.266	1.286	10.612
1979	2.32	2.18	4.398	NA	NA	5.252	3.19	18.122
1980	2.618	1.902	4.736	NA	NA	3.736	2.124	20.862
1981	2.206	2.524	4.036	NA	NA	2.078	1.696	11.396
1982	3.326	3.458	8.046	NA	6.004	2.584	3.324	15.192
1983	3.272	5.462	10.654	NA	8.74	4.734	4.136	20.254
1984	3.08	4.426	6.938	NA	7.746	4.07	3.72	16.086
1985	2.094	3.04	4.152	NA	5.618	2.554	2.324	8.82
1986	2.182	2.984	3.094	NA	5.548	3.402	3.516	8.874
1987	2.178	1.954	2.53	NA	4.42	1.404	1.872	6.58
1988	1.944	2.322	2.6	NA	3.916	1.458	2.298	6.03
1989	3.282	3.198	2.978	NA	3.196	1.108	1.364	5.328
1990	2.06	4.384	2.17	NA	6.004	1.388	1.648	5.646
1991	2.822	7.586	5.062	NA	7.852	1.994	2.246	5.5
1992	2.286	7.478	5.36	NA	7.3	2.156	1.618	5.642
1993	2.896	5.282	4.082	10.184	5.574	1.21	2.486	7.804
1994	1.944	4.908	2.796	8.122	4.68	0.834	2.288	5.308
1995	2.978	5.012	3.532	5.642	4.148	1.236	2.558	7.818
1996	2.83	2.47	1.324	4.604	3.52	0.956	1.286	3.604
1997	4.824	5.514	2.816	7.392	5.248	2.612	1.612	4.436
1998	2.58	5.032	2.528	10.576	6.004	1.608	1.53	5.756
1999	2.936	4.752	2.602	8.514	5.332	1.104	1.698	4.652
2000	0.714	4.452	2.122	4.658	5.848	1.134	1.002	2.932
2001	3.592	6.062	2.194	6.318	5.712	1.398	1.13	3.322
2002	3.692	4.256	1.802	6.352	3.352	1.036	0.898	3.94
2003	2.12	1.748	1.102	5.186	2.44	0.754	0.588	3.434
2004	2.88	1.462	0.94	4.19	1.912	1.028	0.586	2.584
2005	2.458	4.286	1.814	4.212	2.844	1.052	0.466	3.9
2006	1.068	1.336	0.78	0.984	0.898	0.212	0.16	1.45
2007	2.896	2.154	1.276	1.88	2.05	0.546	0.49	1.418
2008	2.466	1.856	1.354	3.016	3.194	0.962	0.684	1.66
2009	2.374	1.11	0.958	1.83	1.826	0.986	0.726	1.54
2010	2.178	NA	NA	1.294	1.394	0.668	0.338	1.34
2011	1.554	NA	NA	0.778	0.626	0.294	0.044	1.136
2012	0.712	NA	NA	0.554	0.542	0.248	0.094	0.736
2013	NA	NA	NA	0.676	0.66	0.306	0.094	0.72
2014	NA	NA	NA	0.708	0.286	NA	NA	0.394
2015	NA	NA	NA	1.044	0.608	NA	NA	1.08
2016	NA	NA	NA	1.254	1.088	NA	NA	1.426

	NW08B2	NW09l1	NW09T1	NW10A2	NW10B2	NW11l3	NW11T3	NW12A2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	8.3	NA	NA	NA
1938	NA	NA	NA	NA	9.914	NA	NA	NA
1939	NA	NA	NA	NA	5.078	NA	NA	NA
1940	NA	NA	NA	NA	2.358	2.746	2.514	9.982
1941	NA	NA	NA	NA	11.346	3.328	3.24	24.096
1942	NA	NA	NA	NA	14.228	7.672	6.804	18.604
1943	NA	NA	NA	NA	17.136	6.11	5.944	14.852
1944	NA	NA	NA	NA	13.472	5.936	5.252	12.474
1945	NA	6.572	5.544	6.728	6.21	4.078	4.69	8.294
1946	NA	4.454	4.874	6.508	5.132	2.998	3.244	8.338
1947	NA	5.236	4.936	5.622	6.076	3.568	3.272	6.622
1948	NA	6.698	6.686	7.2	8.538	2.904	3.25	5.252
1949	NA	5.332	5.284	6.736	5.846	2.526	2.846	7.076
1950	NA	3.764	4.948	4.792	4.088	1.954	1.6	5.822
1951	NA	4.044	4.754	3.342	3.662	1.71	2.012	4.978
1952	NA	5.188	5.634	4.306	5.19	1.166	1.504	5.286
1953	NA	3.116	4.166	2.802	2.688	1.292	1.178	3.182
1954	NA	3.368	4.25	2.846	3.616	1.13	1.37	2.05
1955	NA	3.47	3.922	2.25	2.852	1.622	1.704	3.952
1956	9.314	3.302	3.762	2.432	2.988	1.516	1.806	3.04
1957	13.384	8.634	11.54	6.772	9.566	1.812	1.508	8.672
1958	10.264	3.026	5.242	5.538	8.306	2.234	1.324	6.248
1959	9.2	2.55	2.576	2.662	4.28	2.106	1.51	4.13
1960	7.238	6.622	9.07	3.298	5.96	2.206	1.396	7.876
1961	7.078	8.694	9.674	4.866	6.602	3.146	2.4	10.19
1962	11.106	4.222	4.898	4.882	5.668	2.178	2.064	8.092
1963	5.842	1.554	2.17	3.172	2.71	1.29	1.41	3.578
1964	6.436	1.93	4.62	4.474	3.62	1.422	1.38	5.318
1965	8.832	5.006	7.35	6.986	6.184	2.82	2.548	13.256
1966	9.56	4.294	5.832	4.842	4.754	2.55	2.582	6.936
1967	6.458	1.944	2.524	2.416	1.262	1.506	1.452	5.744
1968	9.616	2.104	2.026	5.602	3.59	1.702	2.264	8.49
1969	12.664	1.662	1.82	5.492	3.348	3.218	2.108	8.758
1970	10.51	3.456	2.388	3.59	1.998	3.366	4.282	6.292
1971	9.148	1.23	1.728	2.634	1.508	3.354	3.498	7.92
1972	2.55	0.466	0.902	0.858	0.516	1.586	2.332	3.196
1973	10.67	1.718	2.928	2.794	0.784	2.146	1.404	11.398
1974	14.694	0.934	2.606	2.594	1.336	2.806	3.772	7.228
1975	11.746	2.378	2.852	2.016	2.064	2.01	1.978	6.552
1976	5.736	0.934	1.12	0.706	0.684	1.278	2.17	3.506
1977	4.46	0.456	0.886	0.52	0.422	1.034	1.446	1.918

	NW08B2	NW09I1	NW09T1	NW10A2	NW10B2	NW11I3	NW11T3	NW12A2
1978	7.204	1.296	2.756	2.298	1.068	4.46	6.7	6.924
1979	13.85	7.316	9.03	8.188	8.024	6.798	7.894	16.086
1980	9.908	3.074	4.118	3.37	1.838	4.506	6.49	6.106
1981	3.878	1.2	2.43	5.902	2.696	2.436	2.676	0.846
1982	14.434	3.002	7.76	7.56	5.374	3.158	4.128	2.938
1983	16.4	12.53	10.426	9.97	10.752	5.398	5.822	10.712
1984	16.376	2.57	6.19	4.814	3.958	2.364	1.89	4.162
1985	15.292	3.68	4.232	2.21	6.882	1.66	1.986	3.036
1986	3.894	2.658	4.36	3.136	2.822	2.416	3.044	3.15
1987	5.66	2.918	1.928	3.532	1.95	2.362	1.18	2.732
1988	7.546	2.45	3.142	2.422	3.35	1.864	1.822	2.79
1989	8.168	1.024	2.346	2.614	2.656	2.71	1.828	3.73
1990	13.786	4.268	4.608	3.196	1.144	2.526	2.16	4.572
1991	5.484	6.076	5.914	4.338	6.202	3.256	2.354	8.25
1992	10.698	7.08	6.508	4.85	5.684	4.796	3.406	7.548
1993	6.188	5.08	7.184	4.96	5.362	5.674	3.476	4.51
1994	4.918	3.598	3.286	3.064	3.824	4.208	2.352	4.462
1995	6.906	4.726	3.212	4.992	4.744	4.804	2.826	3.738
1996	4.37	2.916	1.8	2.172	2.876	2.308	0.92	3.824
1997	4.918	3.906	4.472	2.938	4.962	3.814	3.184	3.922
1998	5.776	5.202	4.684	3.072	4.712	4.668	3.81	3.27
1999	6.032	7.548	4.914	2.292	3.748	5.346	3.8	2.516
2000	4.6	4.204	2.624	2.066	3.182	2.884	2.778	2.142
2001	4.178	5.928	3.88	2.374	3.238	5.522	5.332	6.178
2002	3.642	3.848	2.862	2.348	2.938	6.196	6.244	6.468
2003	2.732	1.908	1.522	1.67	2.274	5.268	4.682	4.61
2004	2.86	2.214	1.58	1.934	2.784	4.16	4.93	4.642
2005	3.398	3.644	3.348	2.002	2.896	5.296	5.544	3.806
2006	1.618	0.242	0.292	0.91	1.238	1.696	1.132	1.568
2007	1.842	1.464	0.876	1.102	1.206	2.822	1.338	1.12
2008	2.242	1.914	1.174	1.432	2.126	2.806	1.79	2.648
2009	1.638	1.06	0.762	1.878	1.69	1.588	2.248	1.512
2010	1.312	0.842	0.592	0.908	1.832	1.28	2.672	1.812
2011	1.054	NA	NA	0.508	0.95	1.01	1.05	1.676
2012	0.612	NA	NA	0.382	0.69	0.598	0.452	0.79
2013	0.974	NA	NA	0.374	0.58	0.338	0.31	0.876
2014	0.746	NA	NA	0.312	0.708	NA	NA	1.112
2015	1.558	NA	NA	0.804	1.376	NA	NA	1.438
2016	1.458	NA	NA	1.234	2.414	NA	NA	4.478

	NW12B8	NW14B3	NW15I2	NW15T2	NW16A8	NW16B8	NW17A4	NW17B2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	8.876	NA	NA	NA	NA	NA	NA	NA
1940	5.756	NA	NA	NA	NA	NA	NA	NA
1941	5.418	NA	NA	NA	8.314	NA	NA	NA
1942	9.876	NA	NA	NA	9.24	NA	NA	NA
1943	24.622	NA	NA	NA	10.774	NA	26.092	NA
1944	16.588	26.278	NA	NA	5.824	9.814	11.806	NA
1945	14.296	34.462	NA	NA	6.306	4.446	6.476	NA
1946	9.484	24.228	NA	NA	3.71	3.798	3.37	NA
1947	6.87	19.712	NA	NA	2.92	6.882	2.374	NA
1948	6.654	13.602	NA	NA	6.194	6.056	3.202	3.448
1949	7.242	11.45	NA	NA	2.66	2.822	2.596	3.212
1950	6.246	5.73	NA	NA	2.146	3.424	1.756	2.284
1951	4.738	7.314	NA	NA	2.94	3.998	1.912	3.628
1952	5.898	10.202	NA	NA	3.93	4.736	2.156	2.902
1953	3.226	4.226	NA	NA	3.348	4.484	1.984	1.126
1954	1.16	4.574	NA	NA	4.514	4.686	2.074	2.312
1955	3.082	3.746	NA	NA	3.698	3.78	1.14	1.904
1956	1.984	3.602	NA	NA	3.504	3.542	2.122	2.402
1957	9.726	7.642	NA	NA	9.95	9.012	4.742	3.794
1958	7.476	5.684	NA	NA	7.026	6.956	3.388	3.75
1959	3.708	3.762	NA	NA	3.496	2.822	2.834	3.448
1960	8.796	4.37	NA	NA	5.102	4.23	1.822	3.904
1961	11.412	5.52	NA	NA	6.374	7.186	2.154	4.152
1962	7.824	4.18	NA	NA	5.032	4.728	1.98	3.394
1963	3.6	1.796	NA	NA	2.78	3.05	1.966	2
1964	5.566	1.856	NA	NA	3.068	3.674	2.11	2.266
1965	12.082	6.032	NA	NA	2.174	8.814	3.128	4.204
1966	5.906	4.164	NA	NA	6.418	6.316	2.69	2.378
1967	5.622	0.81	NA	NA	6.288	4.642	3.642	1.826
1968	5.968	1.888	NA	NA	4.304	4.238	2.084	1.666
1969	7.82	2.786	NA	NA	4.558	4.198	1.252	2.96
1970	8.054	2.05	NA	NA	4.468	2.766	1.832	0.874
1971	8.914	0.898	NA	NA	1.912	1.174	1.952	3.422
1972	2.548	0.876	NA	NA	1.406	0.548	2.148	1.16
1973	12.54	2.456	NA	NA	0.774	0.948	1.832	3.498
1974	9.06	2.824	NA	NA	1.376	0.836	3.83	4.698
1975	6.402	4.054	NA	NA	1.378	2.646	0.714	0.554
1976	3.864	1.854	NA	NA	2.416	0.766	0.692	0.41
1977	1.906	2.012	NA	NA	0.96	0.826	1.14	0.876

	NW12B8	NW14B3	NW15I2	NW15T2	NW16A8	NW16B8	NW17A4	NW17B2
1978	6.994	10.14	NA	NA	1.242	1.744	6.154	4.276
1979	13.886	16.102	NA	NA	2.748	4.58	6.228	4.958
1980	9.752	9.408	NA	9.734	5.872	2.196	2.338	2.32
1981	1.126	8.04	3.376	0.596	2.096	1.284	2.142	1.93
1982	2.676	12.112	1.676	2.574	1.182	3.546	3.14	3.762
1983	10.316	14.044	3.518	4.858	5.022	1.806	2.892	6.538
1984	4.332	10.606	2.72	6.848	2.208	2.022	9.086	4.21
1985	3.618	7.862	2.716	8.046	2.632	2.01	2.162	2.616
1986	4.202	10.388	2.322	7.402	2.002	0.454	2.752	2.692
1987	2.508	6.646	1.34	4.42	2.278	0.984	1.518	1.066
1988	2.766	6.746	2.266	6.294	2.09	1.512	1.116	1.022
1989	3.558	9.108	1.436	7.148	2.068	1.512	1.096	0.954
1990	4.248	6.078	4.47	6.584	2.21	1.522	1.688	1.784
1991	7.188	7.616	4.014	8.124	2.082	1.3	2.972	1.706
1992	5.602	13.4	10.908	12.832	3.152	2.358	2.428	0.802
1993	3.598	11.182	8.446	17.156	5.09	3.046	2.906	1.594
1994	3.798	6.296	8.644	20.178	4.65	3.52	1.7	1.966
1995	3.006	7.632	9.366	13.672	6.312	4.788	2.676	2.49
1996	3.148	4.514	5.302	6.84	2.528	2.698	1.504	1.792
1997	2.938	6.162	8.678	17.256	3.754	5.734	1.704	1.874
1998	3.732	9.696	10.468	12.518	4.674	4.41	1.636	1.866
1999	3.016	5.126	12.108	8.798	4.152	3.992	1.046	1.302
2000	0.952	2.064	3.078	8.006	1.894	2.428	1.524	0.804
2001	5.312	3.384	10.576	14.032	4.104	3.306	0.862	0.674
2002	6.414	2.774	7.042	13.268	4.058	3.414	1.186	1.01
2003	4.348	2.46	13.048	11.998	2.648	2.814	1.062	0.802
2004	3.548	2.58	6.122	12.278	2.486	2.108	1.132	0.86
2005	2.81	2.42	7.894	14.782	3.08	2.004	1.454	0.898
2006	1.156	1.652	2.684	10.72	1.624	1.082	1.52	0.694
2007	0.97	2.002	3.344	11.894	2.656	1.994	2	2.07
2008	3.282	2.186	3.06	12.656	2.982	2.036	0.338	2.73
2009	1.15	1.69	2.822	8.922	2.24	1.648	1.656	2.022
2010	1.908	1.244	2.042	4.658	2.314	1.208	0.81	1.53
2011	1.662	2.31	0.91	2.896	1.368	1.042	1.788	1.284
2012	0.66	1.85	0.488	0.518	0.802	0.392	0.818	1.016
2013	0.678	1.446	0.396	0.506	0.486	0.338	0.606	0.668
2014	0.734	1.876	NA	NA	0.514	2.304	0.494	0.728
2015	1.474	1.832	NA	NA	1.022	2.874	0.986	1.168
2016	3.292	1.432	NA	NA	0.818	5.412	0.6	1.246

	NW18L2	NW18T2	NW19A3	NW19B3	NW20L2	NW20T2	NW21A2	NW21B2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	14.294	10.376	NA	NA	NA	NA	NA	NA
1946	8.35	7.028	NA	NA	NA	NA	NA	NA
1947	5.542	5.64	NA	NA	NA	NA	NA	NA
1948	6.308	5.446	NA	NA	NA	NA	NA	NA
1949	3.85	4.138	NA	NA	NA	NA	NA	NA
1950	3.484	4.244	NA	NA	NA	NA	NA	NA
1951	5.12	3.888	NA	NA	NA	NA	NA	NA
1952	4.924	3.678	NA	NA	NA	NA	NA	NA
1953	2.208	1.996	NA	NA	NA	NA	NA	NA
1954	3.208	2.766	NA	NA	NA	NA	NA	NA
1955	2.222	2.922	NA	NA	NA	NA	NA	NA
1956	3.29	2.652	NA	NA	NA	NA	NA	NA
1957	8.076	6.45	NA	NA	NA	NA	NA	7.996
1958	4.354	4.31	NA	NA	NA	NA	NA	4.36
1959	2.148	2.622	NA	NA	NA	NA	NA	1.008
1960	3.768	3.172	7.748	8.026	NA	NA	NA	2.304
1961	3.058	3.17	5.61	4.052	NA	NA	NA	4.878
1962	2.858	2.51	1.884	2.468	NA	NA	NA	3.41
1963	1.17	1.02	8.762	6.726	NA	NA	3.304	11.648
1964	1.33	1.586	6.362	8.836	NA	NA	3.118	12.936
1965	4.026	2.948	4.506	3.916	NA	NA	15.632	6.712
1966	2.708	2.758	5.162	4	NA	NA	12.542	7.8
1967	0.824	0.872	4.334	3.33	NA	NA	4.64	11.468
1968	1.39	1.478	6.238	4.51	4.538	6.52	8.034	4.446
1969	1.904	1.224	2.872	2.52	2.18	2.178	10.458	6.218
1970	2.088	1.314	2.008	1.278	4.38	4.166	9.892	7.072
1971	1.714	1.236	1.812	1.18	4.45	4.124	6.014	4.43
1972	0.828	0.274	1.838	1.246	2.14	2.112	1.64	0.996
1973	2.56	0.682	6.052	4.51	9.248	9.452	15.976	7.532
1974	6.214	1.25	3.392	4.798	5.378	6.25	6.484	6.95
1975	6.298	4.754	6.496	9.656	5.118	5.496	8.046	9.156
1976	1.686	1.334	3.208	4.002	1.736	2.566	2.91	3.906
1977	0.832	0.864	1.786	2.64	1.304	1.622	2.308	2.724

	NW18L2	NW18T2	NW19A3	NW19B3	NW20L2	NW20T2	NW21A2	NW21B2
1978	0.998	1.696	4.898	7.094	6.266	5.886	9.032	4.64
1979	2.578	4.026	10.238	14.092	7.558	5.504	13.924	8.82
1980	1.68	2.456	8.058	8.23	7.672	7.3	8.122	5.834
1981	0.888	0.87	2.378	2.504	8.428	6.852	2.878	2.68
1982	3.288	3.602	3.268	3.55	9.262	7.504	6.806	6.112
1983	7.87	7.998	7.37	9.404	12.394	14.052	9.882	9.522
1984	4.366	4.37	8.804	8.542	9.77	9.486	7.796	7.022
1985	2.43	3.082	2.706	2.202	9.562	9.692	7.292	7.41
1986	3.23	2.478	1.22	1.33	9.25	9.07	3.93	3.162
1987	1.034	0.64	1.232	1.884	10.27	8.93	1.682	1.68
1988	1.702	0.964	1.694	1.61	7.76	9.432	1.77	1.44
1989	1.812	0.934	2.448	4.04	9.166	8.818	0.978	1.128
1990	5.004	3.636	2.67	3.806	10.91	8.116	2.046	2.96
1991	6.584	5.952	2.276	1.65	11.586	7.36	3.032	3.482
1992	6.102	6.164	5.558	6.002	8.166	7.842	2.366	3.08
1993	7.442	7.414	5.79	4.848	7.312	7.208	2.484	2.69
1994	6.738	4.944	5.504	4.068	3.998	4.93	2.61	2.646
1995	7.046	3.744	5.718	4.242	5.742	5.828	4.258	3.812
1996	2.476	1.664	3.8	2.634	3.106	3.252	2.178	1.932
1997	5.57	1.97	4.644	4.636	4.146	7.26	3.44	3.036
1998	4.382	1.77	4.158	3.538	5.46	7.252	4.206	3.892
1999	2.95	2.05	4.972	4.014	5.61	5.052	4.022	4.404
2000	1.35	1.106	2.666	3.164	3.786	3.98	2.27	2.472
2001	1.168	0.806	4.262	4.818	6.864	6.734	4.13	5.24
2002	1.952	1.66	2.882	4.204	5.712	4.642	4.27	3.882
2003	1.456	2.086	1.896	2.324	4.392	3.306	3.092	3.336
2004	1.526	1.324	2.332	2.482	4.218	2.934	3.416	2.322
2005	1.316	1.408	3.434	2.806	3.894	3.75	3.456	2.462
2006	0.87	0.85	2.69	1.702	2.292	2.84	2.808	2.538
2007	1.35	1.158	3.176	2.44	3.06	3.804	2.824	3.074
2008	1.174	1.27	3.27	2.092	4.788	5.548	4.422	4.654
2009	0.892	1.84	1.95	2.106	3.418	3.038	3.484	4.7
2010	2.038	1.918	1.68	2.384	1.466	2.248	3.376	5.274
2011	0.738	0.62	1.63	2.088	0.578	1.038	4.004	4.166
2012	NA	NA	1.38	1.46	NA	NA	3.602	4.386
2013	NA	NA	1.828	2.152	NA	NA	3.74	6.304
2014	NA	NA	1.922	1.998	NA	NA	6.758	7.732
2015	NA	NA	3.218	2.914	NA	NA	9.074	7.498
2016	NA	NA	2.84	3.74	NA	NA	7.54	5.87

	NW22I2	NW22T2	NW23A2	NW23B5	NW24I2	NW24T2	NW25A1	NW25B2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	NA
1948	NA	NA	NA	NA	NA	NA	NA	NA
1949	NA	NA	NA	NA	NA	NA	NA	NA
1950	NA	NA	NA	NA	NA	NA	NA	NA
1951	NA	NA	NA	NA	NA	NA	NA	NA
1952	NA	NA	NA	NA	NA	NA	8.276	NA
1953	NA	NA	NA	NA	NA	NA	2.288	NA
1954	NA	NA	NA	NA	NA	NA	6.57	4.476
1955	NA	NA	NA	NA	NA	2.236	1.77	0.924
1956	NA	NA	NA	NA	2.73	2.456	0.872	2.284
1957	NA	NA	NA	NA	3.124	5.57	0.524	4.34
1958	NA	NA	NA	NA	8.094	3.032	1.954	6.19
1959	NA	NA	NA	NA	3.03	2.838	5.13	7.812
1960	NA	NA	NA	NA	2.53	10.242	5.144	1.9
1961	NA	NA	NA	NA	5.436	7.834	6.808	2.292
1962	NA	NA	NA	NA	11.422	2.79	1.894	5.884
1963	NA	NA	NA	NA	3.714	5.304	0.466	2.082
1964	NA	NA	NA	NA	3.004	2.82	6.72	1.954
1965	NA	NA	12.26	NA	8.286	7.666	15.096	15.06
1966	NA	NA	14.226	NA	10.692	6.458	3.558	3.73
1967	NA	NA	14.298	NA	7.622	6.576	2.814	3.09
1968	NA	NA	8.74	NA	7.538	5.184	4.06	5.224
1969	7.402	6.346	2.456	NA	4.574	10.728	4.74	5.564
1970	6.328	4.782	3.436	NA	2.928	8.956	3.978	5.69
1971	3.928	3.662	6.83	NA	1.426	6.698	2.476	2.394
1972	3.942	2.46	4.158	NA	0.906	3.038	0.946	1.482
1973	16.12	14.896	32.062	NA	8.72	8.11	1.958	5.8
1974	8.562	8.06	4.904	NA	3.032	4.688	0.734	1.402
1975	6.006	6.608	5.782	NA	2.014	2.162	0.792	1.188
1976	5.546	5.326	2.318	NA	2.524	2.316	0.814	0.824
1977	4.176	5.992	2.898	NA	1.938	2.756	0.544	0.584

	NW22I2	NW22T2	NW23A2	NW23B5	NW24I2	NW24T2	NW25A1	NW25B2
1978	8.622	8.432	5.82	NA	4.258	6.242	2.958	3.236
1979	12.824	10.2	11.838	NA	7.366	11.104	6.818	7.74
1980	7.73	11.316	8.178	NA	7.968	9.862	4.084	2.824
1981	3.822	6.394	6.042	NA	8.422	9.712	1.804	4.056
1982	14.472	17.856	12.054	8.318	12.716	10.832	4.878	6.638
1983	20.286	19.026	15.98	11.6	9.084	13.65	8.714	8.976
1984	9.098	13.806	11.98	6.148	8.492	9.712	5.31	4.846
1985	8.328	9.75	13.122	6.002	9.54	7.796	4.952	4.556
1986	15.794	17.734	11.712	6.726	10.192	15.074	3.794	5.076
1987	13.118	11.63	6.966	7.406	5.958	10.572	5.114	5.89
1988	4.804	4.86	6.036	4.544	4.626	5.958	3.564	6.786
1989	4.834	7.124	6.566	7.642	7.376	7.436	5.912	9.294
1990	3.934	5.568	8.698	7.45	5.8	13.558	4.972	6.262
1991	5.832	4.228	11.27	8.822	9.846	7.924	5.65	7.272
1992	8.194	7.496	11.306	8.316	8.868	5.25	5.904	5.152
1993	5.98	6.916	7.462	5.834	4.782	5.548	3.628	5.008
1994	3.454	3.092	5.666	4.842	2.818	5.05	3.65	6.366
1995	3.034	5.422	6.014	4.814	5.698	5.96	6.166	8.458
1996	3.442	4.036	3.706	4.026	4.086	3.436	4.116	3.692
1997	4.92	5.154	5.756	5.93	3.33	6.762	5.588	8.098
1998	4.62	3.718	4.662	4.19	3.026	6.2	6.312	11.678
1999	4.818	5.67	3.228	3.848	3.644	4.526	5.44	12.148
2000	1.856	3.944	3.57	3.268	3.038	3.51	5.282	7.212
2001	5.572	5.542	5.104	4.552	3.528	5.498	5.696	7.74
2002	4.712	3.88	4.884	3.942	2.97	3.214	3.346	7.176
2003	4.456	3.342	3.932	2.83	2.476	2.52	2.598	6.196
2004	3.898	3.322	2.666	2.198	2.676	2.236	3.126	4.672
2005	4.432	6.454	3.606	2.408	2.41	3.036	3.062	5.998
2006	3.15	4.478	2.684	1.836	1.802	2.512	2.91	4.098
2007	3.666	3.73	2.41	2.042	2.04	2.514	5.074	4.742
2008	3.562	3.814	2.206	1.976	1.404	2.19	3.818	4.086
2009	2.084	2.798	2.294	1.986	2.95	2.624	3.238	3.26
2010	1.756	1.844	1.696	1.514	1.624	1.988	2.808	3.312
2011	NA	0.444	1.084	1.074	0.462	NA	0.944	1.72
2012	NA	NA	0.814	0.88	NA	NA	0.608	0.872
2013	NA	NA	0.52	0.742	NA	NA	0.952	1.786
2014	NA	NA	0.654	0.674	NA	NA	1.858	3.884
2015	NA	NA	1.376	1.062	NA	NA	4.222	5.798
2016	NA	NA	2.138	5.298	NA	NA	5.002	10.54

	NW26l1	NW26T1	NW27A2	NW27B2	NW28l2	NW28T2	NW29A3	NW29B3
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	14.604	NA	6.182	NA	NA
1945	NA	NA	18.982	12.718	6.944	4.978	NA	NA
1946	NA	NA	10.84	10.02	5.354	4.18	NA	NA
1947	NA	NA	16.796	14.88	3.912	3.596	NA	NA
1948	NA	NA	14.572	14.354	3.872	2.728	NA	NA
1949	NA	NA	19.27	15.94	2.614	4.148	NA	NA
1950	NA	NA	11.212	10.74	3.628	3.804	NA	NA
1951	NA	NA	11.706	6.506	4.95	1.174	NA	NA
1952	NA	NA	13.88	5.876	5.04	6.744	NA	NA
1953	NA	NA	4.936	5.516	2.794	4.05	NA	NA
1954	NA	NA	10.9	9.336	2.222	3.112	NA	NA
1955	NA	NA	10.196	7.646	1.29	2.078	NA	NA
1956	NA	NA	5.934	5.192	1.46	2.122	NA	NA
1957	NA	NA	6.332	6.03	5.698	6.99	NA	NA
1958	NA	NA	4.316	5.95	2.6	3.132	NA	NA
1959	NA	NA	3.216	3.382	2.114	2.18	NA	NA
1960	14.306	12.84	4.602	3.938	2.158	3.146	NA	NA
1961	15.158	15.926	7.288	6.482	3.83	5.798	NA	NA
1962	8.696	11.756	4.978	3.394	3.776	3.316	NA	NA
1963	7.132	7.744	2.27	2.15	2.072	1.262	NA	NA
1964	7.068	6.918	2.774	2.818	2.004	1.492	NA	NA
1965	13.13	12.982	3.87	3.788	2.384	1.78	NA	NA
1966	6.916	8.328	2.828	3.136	2.654	2.396	NA	NA
1967	3.486	3.076	1.226	1.304	1.544	2.016	NA	NA
1968	6.342	4.928	1.892	1.442	2.854	3.432	NA	NA
1969	6.08	3.258	1.986	1.784	2.87	2.4	NA	NA
1970	4.282	3.202	1.562	1.248	2.614	3.002	NA	NA
1971	3.592	1.868	1.222	0.832	2.264	2.88	NA	NA
1972	1.698	1.28	1.044	0.668	1.198	1.176	NA	NA
1973	5.226	3.032	1.626	1.336	6.59	8.818	NA	NA
1974	3.868	3.454	1.494	1.142	5.066	9.594	NA	NA
1975	3.904	3.432	1.446	0.94	4.478	7.728	NA	NA
1976	1.268	1.058	0.812	0.348	3.572	5.252	NA	NA
1977	1.188	0.978	0.648	0.692	3.35	3.334	NA	NA

	NW26I1	NW26T1	NW27A2	NW27B2	NW28I2	NW28T2	NW29A3	NW29B3
1978	5.18	3.5	1.748	0.922	9.388	11.926	NA	NA
1979	3.346	3.146	3.512	3.734	7.022	12.132	NA	NA
1980	2.206	2.204	1.574	1.352	3.61	7.74	NA	NA
1981	4.39	3.432	0.894	0.456	1.484	2.008	NA	NA
1982	7.976	4.78	4.406	2.524	7.898	8.268	NA	NA
1983	8.326	7.048	5.01	4.34	6.744	10.264	NA	NA
1984	6.692	5.808	5.136	4.084	5.808	6.89	NA	NA
1985	7.628	6.954	1.824	2.056	2.252	3.886	NA	NA
1986	6.358	3.462	1.638	1.5	3.192	3.728	NA	NA
1987	6.682	3.054	1.462	1.174	2.092	4.586	NA	NA
1988	4.742	3.222	0.64	0.77	2.794	3.388	NA	NA
1989	19.55	10.492	0.608	0.832	4.554	5.13	NA	NA
1990	18.216	11.826	4.136	1.648	4.964	6.05	23.954	NA
1991	19.45	19.696	6.866	4.522	2.992	5.228	20.128	32.58
1992	21.388	14.332	8.12	5.652	2.656	2.826	21.494	31.436
1993	25.676	13.516	4.906	5.232	2.454	3.434	24.042	25.384
1994	16.5	12.858	4.294	2.62	2.418	4.086	15.31	14.22
1995	15.968	13.038	3.924	3.158	2.494	3.24	22.162	17.376
1996	8.044	5.946	2.26	1.108	1.134	1.506	10.336	6.37
1997	17.438	16.956	2.16	1.616	1.848	2.236	10.116	9.338
1998	16.326	15.432	1.498	1.438	2.812	3.098	14.062	12.716
1999	21.982	12.022	2.142	1.386	2.166	2.794	17.138	13.04
2000	8.228	2.59	1.006	0.922	0.676	0.724	12.846	9.594
2001	10.234	3.8	1.43	0.888	0.794	0.674	11.724	12.092
2002	6.586	4.304	1.21	1.202	0.804	0.942	6.826	7.366
2003	3.234	1.93	1.388	1.272	0.658	0.938	9.24	8.994
2004	6.206	3.294	2.786	2.746	0.662	0.566	11.434	9.042
2005	22.432	7.008	3.034	5.774	1.068	1.324	9.092	9.316
2006	3.998	1.7	2.134	2.158	0.464	1.838	6.342	4.738
2007	4.776	2.324	5.744	4.918	1.198	1.146	4.262	4.684
2008	5.776	3.6	4.866	4.436	0.982	1.348	6.094	4.006
2009	6.562	4.452	2.644	4.022	0.822	1.184	9.726	6.098
2010	5.402	4.754	2.52	2.85	1.012	0.632	7.198	4.688
2011	5.516	NA	2.24	1.548	0.312	NA	3.28	3.07
2012	NA	NA	1.582	1.882	NA	NA	3.418	3.068
2013	NA	NA	1.52	3.186	NA	NA	3.742	2.266
2014	NA	NA	2.666	4.768	NA	NA	4.306	2.678
2015	NA	NA	4.622	7.382	NA	NA	5.544	4.396
2016	NA	NA	3.872	5.35	NA	NA	5.624	3.35

	NW31T2	NW32A2	NW32B2	NW35I1	NW35T1	SE01A2	SE01B2	SE02I1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	NA
1948	NA	NA	NA	NA	NA	NA	NA	NA
1949	NA	NA	NA	NA	NA	NA	NA	NA
1950	NA	NA	NA	NA	NA	NA	NA	NA
1951	NA	NA	NA	NA	NA	NA	NA	NA
1952	NA	NA	NA	NA	NA	NA	NA	NA
1953	NA	NA	NA	NA	NA	NA	NA	NA
1954	NA	NA	NA	NA	NA	NA	NA	NA
1955	NA	NA	NA	NA	NA	NA	NA	1.886
1956	NA	NA	NA	NA	NA	NA	NA	1.34
1957	NA	NA	NA	NA	NA	NA	NA	2.852
1958	NA	NA	NA	NA	NA	NA	NA	1.99
1959	NA	NA	NA	NA	NA	NA	NA	1.394
1960	2.312	NA	NA	NA	7.104	NA	NA	1.588
1961	3.922	6.028	NA	6.444	7.228	NA	NA	2.156
1962	0.654	2.028	NA	2.536	2.992	NA	NA	1.586
1963	1.226	1.524	NA	3.63	3.026	NA	1.86	1.1
1964	3.018	2.554	NA	6.716	5.462	NA	5.17	3.782
1965	5.04	9.278	NA	4.924	4.712	1.612	12.144	4.156
1966	2.204	4.348	6.474	3.976	2.238	2.456	4.312	5.462
1967	3.004	4.136	4.99	3.53	2.142	2.254	2.634	4.182
1968	5.536	8.976	12.292	3.896	3.944	4.754	5.004	8.936
1969	4.174	8.45	12.05	3.06	3.086	10.472	5.532	7.854
1970	2.954	4.888	8.124	2.938	1.944	3.068	3.466	5.682
1971	2.746	3.814	6.654	4.462	1.122	2.15	0.84	2.996
1972	4.492	3.644	4.412	3.32	2.084	0.738	0.408	0.72
1973	7.472	9.33	13.9	4.918	2.536	6.784	6.99	10.28
1974	8.206	6.686	6.882	5.504	4.538	1.902	2.278	5.474
1975	6.05	6.266	8.18	4.022	4.116	2.28	2.57	3.05
1976	3.896	2.844	5.818	4.028	1.948	1.668	1.698	0.58
1977	2.322	3.022	8.124	0.99	2.532	0.702	0.788	0.916

	NW31T2	NW32A2	NW32B2	NW35I1	NW35T1	SE01A2	SE01B2	SE02I1
1978	4.796	6.512	14.672	2.422	3.002	2.244	4.21	0.902
1979	12.52	13.968	21.176	9.48	9.94	6.498	3.378	3.854
1980	7.324	5.664	14.316	5.784	4.446	4.908	4.586	8.606
1981	2.994	8.292	10.518	3.204	1.446	3.38	5.906	5.078
1982	4.634	13.182	15.726	7.398	4.726	6.922	12.65	4.372
1983	8.95	16.856	22.056	14.806	14.206	11.628	17.038	11.052
1984	8.094	19.802	18.05	13.36	11.332	5.29	7.936	6.314
1985	4.212	17.548	10.058	9.046	6.954	6.378	6.942	3.032
1986	6.074	16.162	17.558	12.502	9.13	6.122	6.632	2.054
1987	4.996	20.168	16.548	7.852	5.612	3.776	5.388	0.542
1988	6.526	13.374	11.318	7.226	6.652	3.178	5.036	1.814
1989	11.798	15.57	17.826	12.122	12.726	5	6.016	2.708
1990	11.902	19.6	19.006	12.03	10.38	7.822	10.58	3.236
1991	16.602	16.68	19.87	15.458	14.094	9.836	12.478	4.556
1992	10.608	14.834	12.726	13.248	12.624	10.254	10.236	5.532
1993	8.296	15.054	8.22	13.534	12.954	10.124	8.924	4.868
1994	9.484	7.396	7.472	8.774	10.202	6.298	7.142	3.608
1995	8.658	8	7.506	13.738	10.274	6.312	7.12	5.336
1996	2.3	8.898	3.316	2.702	4.926	2.604	2.72	3.262
1997	5.846	4.022	4.972	13.524	9.838	8.39	6.79	8.746
1998	5.3	3.788	3.588	9.764	11.848	6.346	8.002	11.02
1999	3.276	4.366	2.67	13.95	14.87	8.086	10.09	11.504
2000	1.896	6.858	2.614	13.896	4.172	4.494	5.328	4.032
2001	9.602	8.35	4.044	11.082	8.272	11.266	11.66	19.626
2002	5.536	8.99	2.93	5.222	7.97	6.536	8.718	10.222
2003	2.728	5.8	2.83	4.822	3.27	4.446	5.278	7.684
2004	3.586	6.594	2.436	5.292	3.948	3.422	4.116	10.86
2005	6.25	4.5	2.238	9.686	10.516	6.346	5.81	8.598
2006	2.614	6.862	3.362	2.216	3.4	4.16	4.35	5.874
2007	1.438	5.136	2.054	2.904	4.23	3.442	4.688	5.454
2008	1.956	3.494	2.706	1.754	2.218	2.594	3.81	3.768
2009	2.088	4.264	3.462	1.61	2.028	2.68	4.78	3.974
2010	2.828	4.698	2.738	2.03	2.172	3.4	3.31	3.276
2011	1.198	3.202	1.376	NA	NA	1.71	1.79	1.826
2012	NA	2.016	1.678	NA	NA	1.332	1.37	0.364
2013	NA	1.212	0.51	NA	NA	0.706	0.75	NA
2014	NA	0.904	0.554	NA	NA	1.112	1.562	NA
2015	NA	4.116	2.434	NA	NA	2.824	3.006	NA
2016	NA	5.672	10.186	NA	NA	6.662	15.416	NA

	SE02T1	SE03A8	SE03B2	SE04I2	SE04T2	SE05I2	SE05T2	SE06A2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	22.522	9.132	NA
1942	NA	NA	NA	NA	NA	7.28	7.852	NA
1943	NA	10.262	9.918	NA	NA	3.828	5.528	NA
1944	NA	10.508	10.3	NA	NA	2.656	3.906	NA
1945	NA	8.638	8.518	NA	NA	2.224	2.07	13.458
1946	NA	4.494	4.516	NA	NA	1.204	1.96	7.186
1947	NA	3.674	3.598	NA	NA	2.054	2.108	3.506
1948	NA	3.912	3.764	NA	NA	3.174	1.814	2.93
1949	NA	4.44	4.382	NA	NA	2.104	2.068	1.97
1950	NA	6.864	6.894	NA	NA	2.006	2.964	2.384
1951	NA	6.71	6.786	1.158	0.962	2.946	2.098	2.5
1952	NA	6.77	6.604	1.796	1.766	2.966	1.898	2.336
1953	0.052	3.826	3.672	1.106	1.17	2.504	0.924	2.054
1954	0.91	4.446	4.596	1.18	1.226	2.166	2.91	2.162
1955	1.54	4.008	4.13	1.128	1.262	1.884	2.01	2.438
1956	0.002	3.554	3.314	1.106	1.242	2.054	1.804	2.642
1957	2.484	5.116	5.05	1.628	1.438	1.996	1.78	2.72
1958	1.92	6.826	6.796	2.57	2.182	2.67	2.256	5.56
1959	0.998	5.182	5.118	1.252	1.282	2.594	2.092	3.99
1960	1.188	3.952	3.826	1.156	1.052	4.006	1.912	5.108
1961	1.896	4.828	4.964	2.528	2.132	4.35	3.614	3.768
1962	1.558	3.742	3.63	1.65	1.924	2.424	1.676	4.172
1963	1.038	1.706	1.64	0.894	0.912	1.16	1.22	1.558
1964	2.83	3.112	3.054	1.91	2.362	1.086	1.294	2.206
1965	2.616	9.138	8.642	2.258	2.61	3.414	3.58	5.968
1966	2.244	4.602	4.56	1.666	1.896	2.776	3.952	3.188
1967	2.544	0.914	1.114	1.452	1.564	1.872	2.088	1.992
1968	5.43	3.486	3.596	2.272	2.26	1.826	3.306	3.852
1969	4.66	5.376	6.066	1.988	2.138	2.046	3.008	5.09
1970	2.99	4.238	4.832	3.068	2.922	2.584	2.96	3.936
1971	1.822	4.064	2.862	3.612	3.164	2.496	1.882	3.47
1972	0.498	1.282	0.854	1.778	1.106	1.216	0.798	1.772
1973	7.442	2.618	2.04	5.086	4.014	1.124	1.626	2.77
1974	2.712	5.036	5.258	4.398	5.712	3.708	5.054	5.584
1975	1.696	3.798	3.528	5.362	4.992	3.404	5.428	2.504
1976	0.998	0.752	0.978	2.868	3.21	0.922	3.204	1.884
1977	0.6	1.066	1.226	0.826	0.98	0.64	1.378	1.516

	SE02T1	SE03A8	SE03B2	SE04I2	SE04T2	SE05I2	SE05T2	SE06A2
1978	0.608	1.654	1.832	1.572	1.442	1.54	2.844	4.364
1979	3.108	4.42	4.568	3.17	1.656	3.218	3.492	8.398
1980	3.47	0.628	0.85	2.29	1.934	2.686	3.33	5.878
1981	2.332	2.038	2	6.126	4.476	1.77	2.132	4.354
1982	2.544	2.73	2.68	11.726	9.002	3.694	3.07	7.814
1983	6.044	4.518	4.522	9.808	8.304	4.224	4.446	7.45
1984	3.84	2.338	2.414	5.49	4.616	3.724	3.32	4.952
1985	2.278	2.232	2.076	2.754	2.998	3.478	3.46	2.984
1986	1.322	1.536	1.528	2.934	2.694	4.422	3.556	4.086
1987	0.512	2.608	2.546	3.5	2.946	2.144	2.248	3.176
1988	1.41	1.916	2.036	3.874	2.512	2.16	2.296	3.122
1989	2.066	2.086	2.066	4.482	3.986	1.768	3.152	2.616
1990	2.532	2.608	2.42	4.668	3.746	4.964	5.004	6.182
1991	4.208	2.886	3.34	4.954	5.482	7.706	10.392	7.848
1992	4.77	4.242	4.106	6.042	7.51	11.59	10.842	8.146
1993	3.534	6.854	6.596	6.046	7.678	10.158	7.132	6.244
1994	2.722	4.602	4.528	6.67	2.894	8.364	5.91	9.016
1995	4.436	3.684	3.634	7.458	3.352	8.13	6.676	9.018
1996	3.412	1.9	1.926	2.366	2.242	4.132	2.46	4.544
1997	6.202	2.698	2.646	5.328	4.222	7.842	6.084	6.214
1998	5.942	2.154	2.326	5.27	6.18	8.036	5.61	4.664
1999	8.234	2.79	2.78	5.206	9.154	9.634	8.128	5.034
2000	5.938	2.726	2.656	8.062	4.088	8.96	9.034	5.404
2001	9.414	5.942	5.824	10.754	13.03	11.092	7.532	4.178
2002	4.826	3.478	3.404	6.398	4.764	7.448	4.1	6.654
2003	4.112	2.2	2.12	3.76	2.556	3.644	2.726	4.754
2004	5.016	2.662	2.708	4.458	3.124	5.25	1.776	4.016
2005	5.286	2.006	2.15	6.52	3.788	3.848	2.342	3.03
2006	4.044	1.108	1.012	1.384	1.07	1.624	0.58	1.142
2007	3.686	2.388	2.32	3.05	2.602	1.696	1.78	2.07
2008	3.234	1.75	1.776	1.584	2.17	3.268	2.284	3.81
2009	2.242	1.636	1.564	1.08	1.832	1.766	2.204	2.768
2010	1.78	1.862	1.87	1.632	1.624	1.822	1.526	3.296
2011	0.262	1.42	1.434	0.762	0.668	2.094	0.314	1.766
2012	0.268	1.068	0.982	0.824	0.582	1.098	0.284	1.058
2013	NA	1.24	1.328	NA	NA	1.152	0.554	1.192
2014	NA	0.732	0.672	NA	NA	NA	NA	0.92
2015	NA	1.716	1.708	NA	NA	NA	NA	0.824
2016	NA	1.83	1.84	NA	NA	NA	NA	2.286

	SE06B2	SE07I5	SE07T1	SE08A2	SE09I2	SE09T2	SE11I1	SE11T1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	2.648	1.936
1937	NA	NA	NA	NA	9.108	8.706	2.694	4.056
1938	NA	NA	NA	NA	10.724	12.2	4.164	3.998
1939	2.76	NA	NA	NA	3.682	3.536	3.406	3.094
1940	2.33	NA	NA	NA	4.484	7.486	6.514	5.728
1941	23.618	NA	NA	NA	6.662	6.712	13.608	15.714
1942	17.036	6.436	5.954	NA	12.382	12.276	17.784	17.338
1943	10.58	7.526	7.478	NA	4.93	10.27	9.762	9.376
1944	6.712	4.97	4.786	NA	3.082	2.746	9.122	9.766
1945	3.98	3.384	3.438	NA	5.084	8.434	5.652	9.59
1946	1.83	2.678	2.646	NA	5.15	6.472	3.79	4.782
1947	1.45	2.012	2.198	NA	4.62	6.702	4.816	4.078
1948	1.62	2.04	2.108	10.24	4.116	5.644	5.386	5.836
1949	1.704	1.818	1.82	7.504	5.806	7.236	4.7	5.702
1950	1.36	1.968	2.192	5.436	3.018	3.97	2.81	3.616
1951	0.748	2.296	1.748	5.996	3.206	3.476	1.67	2.444
1952	0.67	1.31	1.994	6.866	2.882	2.37	2.392	3.318
1953	0.69	1.758	1.676	5.238	2.644	2.04	1.554	2.114
1954	0.798	1.654	1.852	5.648	3.386	2.594	2.216	1.906
1955	0.692	1.746	1.568	4.512	2.786	1.684	2.472	2.612
1956	0.546	1.63	1.678	4.37	3.62	2.984	2.528	2.318
1957	0.458	1.718	1.448	7.094	4.262	2.96	4.944	8.726
1958	2.43	1.608	1.558	7.74	2.906	3.426	6.702	6.638
1959	2.02	1.234	1.118	4.312	7.018	4.356	4.404	4.424
1960	2.386	1.89	1.594	6.744	6.484	4.546	5.774	5.496
1961	2.228	2.52	2.128	6.35	3.316	3.43	4.814	4.936
1962	2.97	1.688	1.298	5.42	1.754	1.58	3.874	5.448
1963	0.622	1.36	1.868	3.02	1.66	1.262	1.804	2.25
1964	1.318	1.506	1.332	3.74	2.9	3.03	2.43	1.562
1965	3.44	1.788	2.32	5.816	2.894	2.318	6.006	4.876
1966	2.5	2.238	1.694	6.158	1.31	1.072	4.25	5.366
1967	1.062	1.632	1.4	3.716	3.832	1.654	2.73	3.102
1968	2.278	2.716	2.99	4.43	4.43	3.344	5.262	3.814
1969	2.884	2.436	3.04	5.044	2.716	2.07	5.688	4.798
1970	2.748	2.496	2.454	4.26	2.654	2.022	4.618	4.11
1971	2.146	2.49	2.504	2.754	1.038	1.128	2.802	2.06
1972	0.74	1.232	1.164	1.566	2.364	1.928	0.6	0.62
1973	2.124	1.46	1.708	4.862	3.552	2.844	2.942	3.966
1974	4.014	4.5	3.614	4.696	3.256	2.678	3.41	3.394
1975	3.302	2.312	2.164	2.69	1.092	1.28	3.22	2.804
1976	0.906	2.164	1.778	1.142	1.274	0.94	1.76	1.38
1977	0.808	1.706	1.522	1.25	4.254	1.554	0.756	0.994

	SE06B2	SE07I5	SE07T1	SE08A2	SE09I2	SE09T2	SE11I1	SE11T1
1978	0.96	2.734	2.176	1.98	7.425	2.953	2.136	1.734
1979	4.362	1.682	3.542	3.932	7.425	2.953	6.17	5.812
1980	4.76	2.084	3.448	3.262	4.788	2.318	4.276	2.822
1981	3.878	2.262	3.762	2.854	4.468	2.69	0.708	0.774
1982	3.184	6.244	10.546	4.688	3.474	4.076	0.472	0.658
1983	7.802	6.434	8.428	5.598	11.768	4.912	3.394	5.002
1984	8.2	3.302	4.46	3.99	3.56	3.004	1.064	1.364
1985	6.11	2.386	3.162	3.062	2.772	2.03	1.506	1.442
1986	4.124	4.04	3.032	2.924	3.26	2.556	1.44	1.992
1987	3.61	2.872	2.058	2.512	1.766	1.458	0.888	1.802
1988	1.86	3.196	3.144	1.442	2.198	1.682	0.674	0.706
1989	1.626	3.512	2.55	2.2	1.666	2.612	1.19	1.1
1990	2.364	1.896	2.144	2.112	2.848	2.052	1.318	1.844
1991	4.06	5.384	5.438	3.164	2.284	2.896	1.566	2.196
1992	4.866	7.794	7.734	2.542	1.946	1.9	2.552	1.414
1993	5.022	6.172	6.908	2.394	2.878	1.754	2.524	2.794
1994	7.728	4.966	6.124	2.994	1.604	1.862	1.104	1.096
1995	3.544	3.96	5.57	3.326	1.548	2.168	1.756	0.702
1996	2.898	1.24	1.512	1.996	0.946	1.876	0.522	0.36
1997	7.928	3.138	6.066	2.31	2	1.222	0.726	0.41
1998	3.83	6.334	4.49	3.19	1.308	0.574	2.018	0.828
1999	3.096	3.792	2.672	1.608	1.566	0.592	1.178	0.712
2000	1.852	3.212	2.988	0.984	0.69	0.55	0.412	0.58
2001	5.07	2.024	1.562	1.604	0.928	0.74	0.798	0.648
2002	3.274	1.22	1.022	0.86	0.994	1.026	0.948	0.604
2003	2.94	0.582	0.796	1.008	0.968	1.318	1.072	0.816
2004	2.012	0.484	0.64	1.65	0.712	1.348	0.864	1.086
2005	1.956	0.966	0.938	2.232	NA	NA	0.886	0.382
2006	0.694	0.682	0.45	0.612	NA	NA	0.248	0.41
2007	1.566	1.414	0.458	0.938	NA	NA	0.336	0.94
2008	1.816	1.616	1.738	1.966	NA	NA	0.642	0.484
2009	1.786	1.06	1.304	6.172	NA	NA	0.118	0.378
2010	1.56	0.704	1.01	2.424	NA	NA	0.226	0.256
2011	1.196	0.142	0.72	0.956	NA	NA	NA	NA
2012	0.756	0.001	0.192	0.478	NA	NA	NA	NA
2013	1.32	NA	0.152	0.3	NA	NA	NA	NA
2014	0.85	NA	NA	0.438	NA	NA	NA	NA
2015	1.034	NA	NA	0.816	NA	NA	NA	NA
2016	2.072	NA	NA	0.616	NA	NA	NA	NA

	SE12A2	SE12B2	SE13I1	SE13T1	SE14A2	SE14B2	SE18I2	SE18T1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	8.332	NA	NA	NA	NA	NA	NA	NA
1943	9.466	7.35	NA	NA	20.948	NA	NA	NA
1944	8.668	8.03	NA	NA	11.71	8.136	NA	NA
1945	6.324	6.488	NA	NA	7.006	7.406	NA	NA
1946	3.932	4.474	NA	NA	4.37	3.184	NA	NA
1947	3.72	3.9	NA	NA	4.482	3.004	NA	NA
1948	3.31	3.184	NA	NA	4.146	4.59	NA	NA
1949	3.28	3.328	4.622	2.246	2.916	3.658	NA	NA
1950	2.29	3.03	3.338	1.81	2.202	2.488	9.308	7.588
1951	2.87	3.748	3.844	2.47	2.34	1.87	5.734	5.568
1952	2.708	2.922	3.772	2.842	3.1	1.652	3.394	3.802
1953	2.726	2.892	2.896	2.618	1.478	1.322	7.454	5.098
1954	3.026	3.246	3.512	2.574	1.992	2.242	10.584	7.48
1955	3.35	3.306	2.59	2.13	3.086	1.5	7.52	6.112
1956	3.722	3.86	2.16	1.502	2.114	1.412	6.4	6.382
1957	10.354	10.012	5.824	4.69	5.792	2.686	18.88	15.756
1958	8.37	8.386	3.7	3.338	4.238	4.166	4.186	9.646
1959	5.106	4.666	2.862	2.612	3.576	4.082	3.852	7.35
1960	6.476	5.08	3.134	3.01	4.07	7.23	4.47	8.468
1961	6.734	8.886	5.472	5.39	4.12	7.558	5.522	7.542
1962	6.236	6.794	4.156	3.804	5.354	5.176	3.258	3.678
1963	3.212	2.916	2.062	2.334	2.652	1.484	1.742	2.678
1964	3.306	3.986	2.144	2.184	3.082	1.946	2.044	2.914
1965	5.426	5.628	5.396	6.02	6.954	4.678	4.526	5.004
1966	3.662	3.09	4.192	4.144	4.36	3.766	2.854	3.006
1967	3.242	2.28	3.594	5.796	1.398	2.478	1.726	0.922
1968	4.39	3.976	2.64	6.112	3.148	3.998	2.054	2.312
1969	4.784	4.33	2.5	5.2	3.966	3.528	5.562	4.374
1970	4.088	3.826	3.664	4.362	2.102	2.866	2.99	3.45
1971	3.006	2.72	3.026	3.838	1.242	1.784	3.526	3.066
1972	2.074	0.964	1.34	1.702	0.55	0.994	1.26	1.19
1973	5.05	4.744	4.978	4.404	2.282	4.576	7.65	4.868
1974	4.104	4.722	6.648	7.272	5.052	6.276	7.118	8.232
1975	4.924	5.562	5.746	6.994	3.254	4.704	3.38	4.584
1976	1.094	1.956	2.266	2.84	1.902	1.738	0.756	1.032
1977	1.932	1.618	1.728	2.5	1.142	0.99	0.74	1.158

	SE12A2	SE12B2	SE13I1	SE13T1	SE14A2	SE14B2	SE18I2	SE18T1
1978	3.612	4.36	4.816	5.89	3.75	6.606	1.21	1.842
1979	7.632	11.888	7.904	12.098	8.378	12.938	2.672	3.822
1980	3.95	7.048	7.296	10.134	3.558	9.746	0.906	1.164
1981	0.944	1.092	4.952	7.816	3.844	4.834	0.682	1.014
1982	1.596	9.222	6.712	14.208	6.316	5.156	2.696	3.314
1983	5.034	2.876	11.214	18.088	8.086	8.458	5.096	7.518
1984	2.07	1.574	8.388	14.318	6.852	4.906	2.3	3.084
1985	2.07	2.608	7.648	11.368	3.606	3.604	2.41	2.09
1986	2.198	1.298	8.268	12.08	3.71	3.48	3.458	4.32
1987	1.352	1.036	4.9	8.438	1.566	1.652	2.066	2.77
1988	2.116	1.318	3.704	6.372	2.968	2.708	2.254	1.942
1989	1.34	2.146	4.012	7.54	4.79	2.184	1.632	1.752
1990	2.038	2.308	5.75	7.92	4.028	2.462	2.672	2.496
1991	1.534	1.812	7.28	9.226	3.598	2.838	3.078	2.414
1992	1.382	1.466	9.086	13.256	5.774	4.996	2.34	1.192
1993	1.678	2.494	10.864	12.406	4.21	6.598	6.252	2.744
1994	1.334	1.432	7.758	10.94	3.494	3.326	2.87	4.402
1995	1.942	2.432	7.52	12.278	6.244	6.78	2.14	3.588
1996	1.724	1.79	2.36	2.84	2.594	3.612	1.036	1.464
1997	1.892	1.282	5.964	13.09	5.378	7.738	2.002	1.91
1998	2.608	3.36	7.714	12.016	5.76	8.078	2.282	1.866
1999	3.664	6.024	5.336	10.262	4.912	9.386	1.49	1.846
2000	1.478	3.258	4.51	12.446	2.29	6.078	0.834	0.842
2001	2.694	4.604	3.856	11.468	5.134	7.598	0.766	0.638
2002	3.826	3.742	3.664	8.15	6.806	4.518	0.868	0.944
2003	3.158	2.768	3.924	4.38	2.466	3.898	1.01	0.858
2004	1.908	2.074	3.416	4.086	2.01	3.552	1.002	0.984
2005	2.222	3.464	4.09	4.902	1.752	5.044	0.638	1.13
2006	1.872	1.8	1.408	2.486	1.786	1.374	0.432	1.24
2007	0.982	1.186	1.564	2.288	1.54	2.124	1.484	2.412
2008	1.34	1.62	3.17	4.342	1.418	3.314	1.334	0.74
2009	1.088	1.476	2.42	2.032	1.508	1.902	1.666	1.354
2010	1.15	1.55	2.304	1.882	1.314	1.442	1.464	1.44
2011	1.956	1.032	1.436	1.41	0.804	0.926	0.31	0.384
2012	1.616	1.22	0.34	0.518	0.478	0.412	NA	NA
2013	1.808	0.86	0.652	0.7	0.794	0.488	NA	NA
2014	1.858	1.13	NA	NA	0.622	0.596	NA	NA
2015	3.606	2.394	NA	NA	1.62	2.14	NA	NA
2016	5.092	3.256	NA	NA	1.332	1.552	NA	NA

	SE19A2	SE19B2	SE20I2	SE20T2	SE21A2	SE21B2	SE22I2	SE22T2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	NA
1948	NA	NA	NA	NA	NA	NA	NA	NA
1949	NA	NA	NA	NA	NA	NA	NA	NA
1950	NA	NA	NA	NA	NA	NA	NA	NA
1951	NA	NA	NA	NA	NA	NA	NA	NA
1952	NA	NA	NA	NA	NA	NA	NA	NA
1953	NA	NA	NA	NA	NA	NA	NA	NA
1954	NA	NA	NA	NA	NA	NA	NA	NA
1955	NA	NA	NA	NA	NA	NA	NA	NA
1956	NA	NA	NA	NA	NA	NA	NA	NA
1957	NA	NA	NA	NA	NA	NA	NA	NA
1958	NA	NA	NA	NA	NA	NA	NA	NA
1959	14.852	NA	NA	NA	NA	NA	NA	NA
1960	14.362	5.406	NA	NA	NA	NA	NA	2.364
1961	21.944	7.228	NA	NA	NA	NA	2.13	1.296
1962	12.694	8.282	NA	NA	NA	NA	1.174	1.048
1963	3.354	9.59	NA	NA	NA	NA	0.526	1.202
1964	10.444	29.344	NA	NA	NA	NA	1.872	1.242
1965	6.16	24.87	NA	NA	NA	NA	2.57	3.724
1966	7.476	7.932	5.246	NA	NA	NA	3.272	2.93
1967	9.174	8.194	3.998	2.518	12.514	NA	3.914	10.448
1968	16.474	11.126	10.044	4.926	5.758	NA	6.322	15.936
1969	4.152	8.15	4.624	9.402	2.756	NA	6.108	8.762
1970	8.442	13.174	5.21	4.352	7.494	NA	12.982	5.89
1971	5.432	5.644	2.916	4.85	2.774	NA	7.908	3.436
1972	2.826	3.586	1.45	4.256	10.196	NA	2.224	0.868
1973	16.54	20.082	10.954	11.116	16.642	NA	7.238	5.45
1974	11.336	5.346	2.43	1.882	10.554	NA	3.514	1.822
1975	7.906	6.534	4.364	6.36	9.95	NA	9.806	2.34
1976	7.614	4.18	1.392	1.324	2.98	NA	1.08	1.266
1977	4.426	3.35	1.416	3.406	2.004	NA	0.564	1.016

	SE19A2	SE19B2	SE20I2	SE20T2	SE21A2	SE21B2	SE22I2	SE22T2
1978	9.168	10.136	6.176	8.474	5.47	NA	3.828	4.474
1979	17.02	15.358	10.662	12.648	10.416	NA	6.63	5.712
1980	14.71	6.514	12.124	11.602	6.656	NA	5.708	9.602
1981	7.248	6.536	3.584	4.324	1.736	NA	5.746	2.474
1982	10.77	13.354	5.478	5.24	6.714	NA	14.192	11.748
1983	20.844	18.806	13.39	17.104	13.904	NA	20.932	16.024
1984	14.3	14.078	13.456	12.374	11.096	NA	17.862	16.508
1985	13.41	12.27	8.738	6.886	16.166	NA	13.978	15.1
1986	6.502	11.02	6.636	11.054	11.708	NA	20.022	14.522
1987	5.824	7.324	5.162	6.686	11.652	NA	15.078	6.686
1988	3.382	5.706	4.564	7.482	6.354	NA	8.718	6.17
1989	2.7	3.894	7.712	7.114	6.664	NA	7.286	5.738
1990	4.73	6.22	6.782	6.106	8.26	12.236	8.138	7.266
1991	11.652	16.952	6.238	8.3	9.704	14.566	9.05	8.99
1992	11.712	16.426	7.082	8.572	6.926	7.978	8.426	8.574
1993	12.576	13.14	4.168	7.376	4.686	6.574	5.524	7.104
1994	8.804	18.544	3.696	4.734	4.374	4.822	5.632	5.652
1995	9.178	16.938	8.71	6.354	4.658	5.18	5.726	6.014
1996	5.632	7.302	2.328	2.71	2.002	2.11	2.728	2.436
1997	8.444	9.618	2.912	6.108	4.472	3.514	4.756	5.004
1998	7.256	10.846	4.902	5.63	2.962	3.49	2.64	3.642
1999	5.702	11.268	4.616	6.304	2.8	2.636	1.794	6.194
2000	3.552	8.212	5.494	3.108	1.524	2.4	1.28	1.882
2001	4.586	9.53	7.548	6.136	5.554	7.78	3.844	3.358
2002	2.89	6.472	5.714	5.658	4.15	3.942	2.52	1.94
2003	1.864	5.98	5.32	7.23	2.922	3.518	1.76	1.768
2004	3.394	8.464	6.208	6.276	3.236	3.102	1.566	1.36
2005	3.976	10.522	7.49	6.346	2.056	3.288	1.69	1.61
2006	3.606	7.032	4.01	3.828	1.23	1.88	1.146	1
2007	5.954	10.982	5.488	2.974	1.204	1.954	2.522	1.65
2008	3.274	12.268	8.866	2.572	1.314	2.286	1.642	0.928
2009	2.042	8.082	10.406	2.778	2.206	2.868	1.51	1.628
2010	2.352	8.08	3.586	2.66	1.572	2.888	0.982	1.284
2011	2.228	4.594	2.02	0.866	1.13	2.49	0.398	0.468
2012	2.266	3.426	NA	0.912	1.46	1.424	0.512	0.698
2013	2.224	3.41	NA	NA	0.874	0.618	0.766	NA
2014	2.89	3	NA	NA	1.956	2.096	NA	NA
2015	3.914	4.738	NA	NA	4.072	4.228	NA	NA
2016	3.1	2.508	NA	NA	6.644	9.292	NA	NA

	SE23A3	SE23B3	SE24l2	SE24T4	SE25B2	SE26l1	SE26T1	SE27B4
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	5.792
1947	NA	NA	NA	NA	NA	NA	NA	4.58
1948	NA	NA	NA	NA	NA	NA	NA	2.658
1949	NA	NA	NA	NA	NA	NA	NA	11.02
1950	NA	NA	NA	NA	NA	NA	NA	20.218
1951	NA	NA	NA	NA	NA	NA	NA	27.75
1952	NA	NA	NA	NA	NA	NA	NA	32.8
1953	3.032	NA	NA	NA	NA	NA	NA	10.33
1954	1.02	NA	NA	NA	NA	NA	NA	9.568
1955	2.422	NA	NA	NA	NA	NA	NA	5.686
1956	3.64	NA	NA	NA	NA	NA	NA	4.596
1957	1.702	NA	NA	NA	NA	NA	NA	5.984
1958	1.792	NA	NA	NA	NA	NA	NA	9.444
1959	0.458	NA	NA	NA	NA	NA	NA	5.824
1960	4.91	NA	NA	NA	NA	NA	NA	8.952
1961	4.172	NA	NA	NA	NA	NA	21.66	10.04
1962	4.216	NA	NA	NA	9.596	16.768	14.12	9.114
1963	1.96	NA	1.894	2.15	3.196	8.106	7.554	4.866
1964	4.692	NA	5.06	5.32	7.356	5.804	5.62	5.134
1965	9.76	10.698	4.896	4.698	9.722	7.052	7.062	7.25
1966	8.914	11.504	3.212	3.436	2.898	4.894	5.766	4.726
1967	4.262	6.428	3.626	4.684	3.858	2.998	3.996	3.072
1968	7.74	9.57	7.896	7.482	8.874	8.52	5.876	3.134
1969	8.012	8.366	5.524	5.228	6.346	11.302	8.33	1.71
1970	4.588	4.886	4.316	3.978	4.054	7.83	7.202	1.472
1971	5.25	4.404	4.362	3.6	2.808	3.486	5.794	0.934
1972	2.426	2.292	1.87	1.876	0.918	1.396	2.76	0.642
1973	10.114	6.44	13.318	14.392	9.332	7.18	8.6	1.656
1974	4.1	3.558	10.58	6.942	5.718	6.13	3.964	1.108
1975	5.58	6.84	8.748	5.942	3.762	6.432	4.254	3.538
1976	5.176	7.134	6.952	6.124	1.444	3.694	2.668	0.918
1977	2.266	3.096	10.626	10.132	7.868	2.526	2.9	0.912

	SE23A3	SE23B3	SE24l2	SE24T4	SE25B2	SE26l1	SE26T1	SE27B4
1978	2.052	3.894	11.066	9.814	12.272	5.082	5.978	2.59
1979	6.32	7.698	15.38	6.378	10.86	4.518	8.612	1.824
1980	5.074	4.412	12.426	8.294	7.578	2.302	7.398	0.866
1981	2.684	1.774	8.552	7.042	5.756	2.178	4.814	0.718
1982	6.12	7.564	15.95	9.578	12.506	7.29	8.904	1.216
1983	14.334	11.182	11.846	7.532	19.92	11	12.164	1.698
1984	11.388	5.666	10.932	6.126	16.688	9.094	11.748	3.032
1985	7.692	7.478	8.738	7.466	12.07	5.964	8.688	2.95
1986	11.946	11.798	9.748	7.744	16.936	5.512	10.208	2.21
1987	12.112	7.59	8.956	5.78	15.99	3.704	7.134	1.43
1988	9.202	6.88	5.232	3.266	9.824	1.534	5.028	1.432
1989	12.736	16.596	6.11	2.518	11.334	6.098	8.832	2.93
1990	13.968	13.484	5.628	2.002	14.414	8.566	13.34	5.432
1991	17.248	23.396	8.468	8.88	13.192	8.822	18.044	12.35
1992	20.374	19.944	11.036	6.342	16.916	6.026	12.73	18.104
1993	17.27	14.38	7.104	3.482	10.816	5.114	15.856	11.776
1994	11.126	11.01	7.232	5.086	9.29	10.056	18.202	7.746
1995	10.672	7.99	6.136	9.526	9.454	9.366	14.422	5.684
1996	6.094	3.216	3.568	2.39	2.942	5.042	7.91	2.02
1997	13.072	7.25	5.704	4.918	8.964	7.532	18.816	2.188
1998	7.4	6.788	3.408	2.762	8.498	13.142	20.476	2.892
1999	5.15	7.198	3.25	2.232	5.518	8.908	13.618	2.736
2000	4.726	3.662	5.046	1.994	4.418	2.988	8.722	1.826
2001	9.972	8.796	8.572	5.302	7.018	5.09	13.562	1.858
2002	6.74	7.596	5.446	5.708	6.082	5.606	13.874	2.348
2003	3.844	5.216	4.926	3.836	4.66	1.254	3.354	1.714
2004	3.92	4.5	3.778	4.66	4.578	2.238	7.228	2.036
2005	5.298	4.262	4.626	3.59	5.368	11.434	15.6	1.524
2006	3.912	3.148	3.474	2.212	2.662	3.452	3.7	0.846
2007	3.522	3.698	2.226	0.84	5.792	2.662	4.388	2.136
2008	3.882	3.64	2.866	2.044	3.874	2.788	3.75	3.342
2009	5.164	7.014	1.81	2.99	3.768	1.906	3.652	2.024
2010	5.762	5.096	2.406	1.856	2.782	2.27	1.742	2.514
2011	3.48	3.286	0.738	0.91	1.166	NA	1.962	0.6
2012	2.118	2.72	NA	NA	0.816	NA	NA	0.724
2013	1.962	2.512	NA	NA	0.542	NA	NA	0.586
2014	2.356	1.668	NA	NA	0.848	NA	NA	0.79
2015	9.878	5.478	NA	NA	2.334	NA	NA	1.552
2016	7.55	8.956	NA	NA	4.126	NA	NA	2.028

	SE29B3	SE30I3	SE30T2	SE32A2	SE32B2	SE35I1	SE35T1	SW01A2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	NA
1948	NA	NA	NA	NA	NA	NA	NA	NA
1949	NA	NA	NA	NA	NA	NA	NA	NA
1950	NA	NA	NA	NA	NA	NA	NA	NA
1951	NA	NA	NA	NA	NA	NA	NA	NA
1952	NA	NA	NA	NA	NA	NA	NA	NA
1953	NA	NA	NA	NA	NA	NA	NA	NA
1954	NA	NA	NA	NA	NA	NA	NA	NA
1955	NA	NA	NA	NA	NA	NA	NA	NA
1956	NA	NA	NA	NA	NA	NA	NA	NA
1957	NA	NA	NA	NA	NA	NA	NA	NA
1958	NA	NA	NA	NA	NA	NA	NA	NA
1959	NA	NA	NA	NA	NA	NA	NA	NA
1960	NA	NA	NA	NA	NA	NA	NA	NA
1961	NA	NA	NA	NA	NA	NA	NA	NA
1962	NA	NA	NA	NA	NA	NA	NA	NA
1963	NA	NA	NA	NA	NA	NA	NA	2.526
1964	NA	NA	NA	NA	NA	NA	NA	3.144
1965	NA	NA	NA	NA	NA	NA	NA	4.904
1966	NA	NA	NA	NA	NA	NA	NA	3.65
1967	NA	NA	NA	NA	NA	NA	NA	2.204
1968	NA	NA	NA	NA	NA	NA	NA	1.248
1969	NA	NA	NA	NA	NA	NA	NA	6.466
1970	NA	NA	NA	NA	NA	NA	NA	4.696
1971	NA	NA	NA	NA	NA	NA	NA	3.66
1972	NA	NA	NA	NA	NA	NA	NA	1.486
1973	NA	NA	NA	12.016	NA	4.124	NA	5.14
1974	NA	NA	NA	4.434	NA	14.302	NA	1.974
1975	NA	NA	NA	8.278	NA	11.01	5.684	1.614
1976	NA	NA	NA	9.432	NA	7.806	4.522	1.886
1977	NA	NA	NA	13.914	NA	2.054	1.354	2.364

	SE29B3	SE30I3	SE30T2	SE32A2	SE32B2	SE35I1	SE35T1	SW01A2
1978	NA	NA	NA	11.652	NA	4.394	2.768	3.096
1979	NA	NA	NA	8.944	NA	9.858	10.472	8.978
1980	6.594	NA	NA	20.044	NA	5.482	7.88	7.344
1981	9.454	NA	NA	4.326	NA	1.322	1.718	5.404
1982	14.106	NA	NA	14.814	NA	2.998	4.28	6.784
1983	21.394	NA	NA	16.062	NA	12.546	12.192	7.552
1984	19.06	NA	NA	17.854	NA	8.634	7.406	5.59
1985	15.308	23.354	24.154	19.434	NA	8.992	6.57	4.906
1986	9.768	33.494	27.202	5.45	NA	10.348	12.908	4.134
1987	9.044	24.576	16.636	11.502	NA	6.618	6.872	3.53
1988	7.31	27.202	22.936	6.984	NA	5.988	10.348	3.086
1989	6.196	30.786	27.924	8.664	8.044	7.306	17.196	4.3
1990	6.922	22.912	19.568	3.974	4.556	7.95	17.31	4.294
1991	9.428	26.692	31.116	8.194	17.834	12.22	25.162	3.394
1992	11.154	31.714	29.612	6.382	14.488	10.936	21.814	3.632
1993	12.658	23.218	23.858	4.554	7.368	12.148	25.494	4.424
1994	6.428	18.732	21.19	3.778	4.794	7.196	20.288	4.31
1995	8.714	14.816	15.996	3.448	8.94	7.256	19.512	3.616
1996	3.306	6.188	6.128	1.986	3.056	2.314	7.622	2.376
1997	3.584	8.784	11.75	3.226	2.348	23.224	23.99	4.406
1998	3.172	7.536	6.258	4.03	1.36	22.506	22.91	4.232
1999	8.416	9.928	9.616	2.41	1.394	23.59	29.236	9.042
2000	4.254	7.522	5.674	1.812	2.29	7.544	20.07	2.538
2001	5.278	7.272	6.158	2.736	6.208	8.62	18.064	7.092
2002	7.176	7.944	6.372	2.414	2.278	10.324	11.558	4.428
2003	5.172	3.962	4.192	2.452	2.984	7.502	9.156	2.96
2004	3.536	4.314	4.58	2.798	1.302	6.496	10.504	4.426
2005	5.074	6.124	4.124	2.542	1.852	6.016	10.386	5.12
2006	3.048	3.69	2.606	2.138	1.544	3.702	6.248	4.406
2007	3.176	4.112	2.882	2.102	2.428	4.624	6.194	3.254
2008	2.706	3.724	3.99	2.926	3.584	5.424	4.622	4.044
2009	3.318	3.664	4.06	2.526	2.818	2.004	2.534	2.92
2010	4.372	4.318	4.044	2.65	2.1	2.224	1.98	2.43
2011	1.408	1.218	1.046	1.714	1.47	1.31	1	2.586
2012	1.418	0.606	0.684	1.716	1.302	NA	NA	1.204
2013	1.32	NA	NA	0.812	1.316	NA	NA	0.65
2014	2.112	NA	NA	0.912	0.62	NA	NA	0.75
2015	4.116	NA	NA	2.056	3.04	NA	NA	2.468
2016	4.56	NA	NA	6.052	7.096	NA	NA	3.934

	SW01B2	SW02I1	SW02T1	SW03A4	SW03B2	SW04I1	SW04T1	SW05I1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	3.164	NA	NA
1934	NA	NA	NA	NA	10.406	11.61	NA	NA
1935	NA	NA	NA	NA	12.352	6.182	NA	NA
1936	NA	NA	NA	NA	2.188	8.688	NA	NA
1937	NA	NA	NA	NA	2.65	29.342	NA	NA
1938	NA	NA	NA	18.182	7.516	14.814	NA	NA
1939	NA	NA	NA	13.944	8.788	4.934	NA	3.036
1940	NA	NA	NA	7.102	5.022	4.116	NA	2.666
1941	NA	NA	NA	14.13	3.63	3.21	NA	1.162
1942	NA	NA	NA	13.538	8.842	2.22	NA	4.164
1943	NA	NA	NA	16.302	10.038	1.144	NA	4.918
1944	NA	NA	NA	12.782	9.36	0.802	NA	3.742
1945	NA	NA	NA	12.89	10.398	0.93	NA	3.404
1946	NA	NA	NA	7.25	8.096	1.222	NA	1.674
1947	NA	NA	NA	6.564	4.166	0.862	NA	0.932
1948	NA	NA	NA	11.57	4.108	0.8	NA	1.872
1949	NA	NA	NA	7.234	6.402	0.648	NA	1.946
1950	NA	NA	NA	5.766	3.374	0.878	NA	1.72
1951	NA	NA	NA	5.464	3.612	0.884	NA	1.882
1952	NA	NA	NA	6.306	5.16	0.898	NA	2.138
1953	NA	NA	NA	4.61	3.58	1.536	NA	2.112
1954	NA	NA	NA	4.322	3.732	1.732	NA	2.544
1955	NA	NA	NA	3.904	3.386	1.558	NA	2.28
1956	NA	NA	NA	5.016	2.614	2.158	3.024	2.346
1957	NA	NA	NA	5.034	3.038	2.878	3.162	2.142
1958	NA	NA	NA	3.508	2.806	0.826	2.904	4.228
1959	NA	NA	NA	2.86	3.308	0.698	0.906	1.41
1960	NA	NA	NA	5.902	4.79	1.088	2.266	0.78
1961	NA	NA	NA	6.016	3.864	2.628	5.398	2.838
1962	NA	NA	NA	4.038	2.078	1.896	3.15	3.096
1963	NA	NA	NA	2.682	1.646	0.656	1.492	0.932
1964	NA	NA	NA	3.94	2.94	1.036	1.92	1.838
1965	NA	NA	NA	6.818	5.842	0.38	1.728	4.144
1966	NA	NA	NA	3.954	5.208	0.942	0.178	1.984
1967	NA	NA	NA	3.378	5.086	0.598	0.364	0.688
1968	NA	NA	NA	6.32	3.16	1.926	3.772	2.912
1969	NA	NA	NA	5.244	2.76	2.848	3.554	2.764
1970	NA	3.888	3.25	4.208	1.95	2.484	3.904	1.908
1971	NA	3.95	2.978	2.94	1.806	0.826	1.49	1.55
1972	3.566	2.002	1.638	1.088	1.094	1.164	2.292	0.694
1973	14.13	7.564	5.748	1.437	1.8	0.934	1.584	1.162
1974	2.996	3.444	2.698	1.437	2.37	5.006	7.95	3.204
1975	3.206	1.954	1.43	2.08	1.972	2.864	3.43	2.776
1976	2.228	0.86	0.754	2.874	1.018	1.528	2.786	2.382
1977	2.488	0.588	0.824	1.89	0.832	0.308	0.342	1.952

	SW01B2	SW02I1	SW02T1	SW03A4	SW03B2	SW04I1	SW04T1	SW05I1
1978	4.278	1.184	1.156	1.246	1.236	0.892	0.388	3.298
1979	11.144	2.436	2.228	1.714	2.53	2.066	4.506	5.34
1980	11.798	4.822	3.814	3.804	0.76	3.594	4.49	9.958
1981	7.894	2.7	2.744	2.562	0.65	1.354	2.598	4.26
1982	11.182	3.754	3.558	5.054	2.152	3.454	4.622	6.878
1983	14.454	7.48	7.092	3.616	1.908	3.866	5.908	6.06
1984	7.89	5.422	5.15	3.026	2.262	4.228	8.584	4.902
1985	5.642	2.854	2.512	0.903	0.876	2.378	3.972	4.168
1986	5.066	3.058	3.01	0.903	1.806	2.874	2.596	2.894
1987	4.154	3.304	3.526	1.893	1.118	1.462	1.052	3.534
1988	6.558	4.086	3.24	1.893	1.1	1.744	2.144	2.528
1989	8.544	5.1	4.756	2.488	1.334	1.89	2.306	2.504
1990	6.102	5.326	4.684	3.982	1.724	2.536	4.358	5.214
1991	5.324	6.362	6.184	1.453	2.522	4.392	6.804	5.612
1992	4.49	7.174	6.298	1.453	2.076	4.15	6.88	5.208
1993	4.988	4.094	5.652	1.784	1.584	5.164	6.536	6.106
1994	3.52	3.564	3.988	1.636	1.774	4.504	3.812	5.268
1995	4.792	3.728	4.348	2.122	1.952	2.622	4.35	5.644
1996	3.202	1.256	2.254	1.944	1.368	1.818	3.466	3.166
1997	5.666	8.858	5.944	2.192	2.312	2.48	3.968	7.51
1998	8.14	10.358	7.794	2.298	1.606	1.588	3.27	6.186
1999	8.764	10.032	6.054	1.616	1.286	1.892	4.114	7.928
2000	6.746	8.81	9.1	1.298	0.546	2.076	1.29	6.078
2001	10.324	11.244	13.998	2.316	1.928	3.982	4.324	7.038
2002	9.602	8.608	8.208	1.99	1.232	3.718	3.732	4.646
2003	5.012	5.518	6.128	1.684	1.258	2.028	1.038	1.84
2004	8.978	7.088	6.396	2.198	1.434	1.566	1.766	3.126
2005	8.352	6.84	5.028	2.224	1.06	1.614	1.89	2.72
2006	5.39	3.612	3.728	0.546	0.62	0.518	0.208	0.678
2007	5.256	2.982	2.936	1.502	1.142	1.232	1.166	1.28
2008	3.944	2.198	3.16	0.964	0.59	0.864	1.31	2.72
2009	3.964	2.436	4.384	1.16	0.778	0.896	1.002	2.006
2010	4.844	2.6	2.858	1.186	0.538	0.68	0.49	1.166
2011	3.524	0.206	0.688	0.398	0.808	0.568	0.64	0.662
2012	1.7	0.29	0.58	0.56	0.4	NA	NA	0.474
2013	0.772	NA	NA	0.526	0.27	NA	NA	NA
2014	0.932	NA	NA	0.422	0.336	NA	NA	NA
2015	3.762	NA	NA	0.554	0.658	NA	NA	NA
2016	3.504	NA	NA	0.614	1.906	NA	NA	NA

	SW05T1	SW06A2	SW06B2	SW08A2	SW08B2	SW09I2	SW09T2	SW10A2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	1.572	NA	NA	NA	NA	NA	NA	3.446
1940	1.782	NA	NA	NA	NA	6.19	4.034	4.496
1941	1.058	NA	NA	NA	NA	10.84	9.766	7.518
1942	2.972	NA	12.384	NA	9.68	13.21	8.682	4.262
1943	4.184	11.12	14.242	14.658	4.668	13.442	10.356	5.124
1944	2.474	2.068	8.01	11.338	4.24	8.108	8.286	16.694
1945	4.116	11.734	5.956	10.99	9.742	6.024	6.32	9.552
1946	1.634	6.5	3.822	7.11	5.292	4.566	4.538	5.998
1947	1.096	5.132	3.542	5.776	6.046	5.102	4.894	5.506
1948	1.658	4.172	2.712	6.98	5.856	8.072	5.67	7.162
1949	2.188	5.254	1.818	5.16	5.74	6.54	5.966	5.66
1950	1.704	5.83	3.288	3.058	3.732	2.704	3.022	4.888
1951	1.672	4.268	2.958	3.266	4.178	1.514	2.822	3.096
1952	2.474	4.812	2.308	3.814	3.792	2.182	3.646	2.822
1953	2.02	3.744	3.512	2.736	2.634	0.974	1.272	2.252
1954	3.162	3.356	2.602	3.142	4.032	2.456	2.952	2.548
1955	2.11	3.41	2.492	2.35	3.33	1.782	2.226	2.352
1956	2.394	3.028	8.59	2.294	3.186	1.386	1.504	2.488
1957	2.268	9.532	4.38	2.61	2.466	3.784	5.484	7.104
1958	3.148	13.876	2.796	2.296	2.212	4.508	3.75	7.316
1959	1.582	6.38	4.104	1.834	1.484	2.012	3.052	3.446
1960	0.936	9.828	9.624	2.65	2.774	6.23	7.352	5.872
1961	3.802	7.808	6.388	2.744	2.884	6.902	6.314	6.438
1962	4.118	7.406	6.952	2.988	3.346	5.146	5.708	4.208
1963	0.798	3.41	2.492	0.946	1.188	1.198	1.552	1.964
1964	1.744	2.254	2.182	1.594	1.62	2.704	2.528	3.04
1965	4.118	9.36	7.906	2.792	3.456	2.998	4.072	5.712
1966	2.038	7.098	3.988	2.248	2.582	3.822	3.706	4.948
1967	1.416	4.048	1.45	0.992	1.252	2.866	3.212	1.912
1968	2.696	7.69	2.252	2.118	1.824	3.582	3.538	2.54
1969	3.124	7.378	2.92	3.294	2.8	4.202	5.576	2.386
1970	1.976	3.842	1.066	2.908	2.376	2.462	2.47	2.78
1971	1.55	4.838	1.936	1.782	2.102	2.104	2.012	2.074
1972	0.712	2.018	1.622	1.52	1.312	0.98	1.616	1.536
1973	1.598	5.05	4.21	2.174	2.23	1.144	4.952	5.914
1974	2.982	8.614	6.054	1.268	1.566	3.512	5.174	5.156
1975	3.308	6.68	4.938	1.598	1.724	3.676	3.804	8.194
1976	2.234	2.904	0.46	0.64	1.028	1.812	1.722	2.408
1977	1.39	2.896	0.988	0.582	1.222	2.112	1.242	5.656

	SW05T1	SW06A2	SW06B2	SW08A2	SW08B2	SW09I2	SW09T2	SW10A2
1978	2.732	7.32	4.288	0.868	1.202	7.01	4.794	11.95
1979	5.434	9.044	9.594	1.76	2.926	10.496	10.082	2.294
1980	5.94	7.808	7.03	1.016	1.932	6.382	7.312	2.698
1981	2.258	6.376	5.432	2.078	4.716	3.972	6.846	3.612
1982	5.932	12.774	10.246	8.69	8.106	6.356	10.57	11.382
1983	7.464	12.78	9.602	9.096	9.886	6.694	9.648	7.802
1984	5.27	11.268	8.466	3.4	7.18	3.976	7.202	2.928
1985	3.648	9.848	7.894	4.794	4.444	7.284	7.82	4.266
1986	2.788	8.19	6.232	4.96	6.072	10.844	5.628	1.898
1987	2.07	6.726	4.758	3.92	5.038	5.726	3.822	2.628
1988	2.398	3.042	2.828	4.896	3.344	2.76	2.672	2.57
1989	2.004	10.552	10.928	8.072	4.52	3.602	3.766	1.366
1990	5.648	13.184	10.366	7.082	4.746	4.438	7.208	3.4
1991	8.684	15.688	12.39	8.01	6.078	9.278	9.418	2.494
1992	8.78	18.782	7.912	6.62	5.544	16.174	11.52	3.618
1993	7.336	11.484	11.018	6.202	4.74	11.22	9.398	3.62
1994	5.444	6.316	8.568	8.132	4.536	6.814	5.646	4.108
1995	4.78	9.286	9.776	7.988	5.184	7.344	8.494	5.724
1996	2.506	7.26	6.458	3.906	3.274	4.184	3.592	3.214
1997	5.008	11.898	6.646	5.072	7.648	11.538	9.848	4.45
1998	4.462	12.496	8.948	5.634	7.696	18.742	7.94	3.636
1999	3.72	10.6	6.844	4.696	7.174	13.468	7.752	3.306
2000	2.876	4.244	3.33	3.27	4.444	6.388	4.844	1.814
2001	5.18	8.296	6.874	2.118	5.534	6.422	7.226	1.916
2002	4.734	14.012	5.908	2.33	3.768	4.326	5.11	1.584
2003	1.822	10.964	5.166	1.352	2.092	3.274	2.67	1.544
2004	2.684	11.536	6.024	1.652	2.738	2.752	3.018	0.928
2005	3.34	6.352	3.8	1.422	3.358	4.384	3.068	0.86
2006	0.66	2.066	2.864	1.022	0.926	2.03	2.97	0.678
2007	1.55	3.304	4.544	3.88	2.348	2.588	1.588	0.894
2008	2.248	4.854	4.414	3.654	3.512	4.214	1.83	0.926
2009	1.932	5.654	3.376	2.878	2.144	3.194	2.766	1.166
2010	0.836	5.144	3.92	1.958	2.45	2.622	2.222	1.302
2011	0.506	4.826	2.45	2.116	1.648	1.102	0.746	0.832
2012	0.658	2.754	1.186	0.952	1.302	0.416	0.38	1.006
2013	NA	2.098	1.244	0.622	0.646	NA	NA	0.994
2014	NA	1.386	0.916	0.562	1.058	NA	NA	0.838
2015	NA	4.566	1.91	1.774	0.6	NA	NA	1.134
2016	NA	3.6	2.874	1.42	1.064	NA	NA	2.598

	SW10B2	SW11I1	SW11T1	SW12A2	SW12B2	SW14A2	SW14B2	SW15I1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	2.33	NA	NA	NA	NA	NA	NA	NA
1939	7.624	NA	NA	5.248	NA	NA	NA	NA
1940	5.644	NA	NA	5.752	NA	NA	NA	NA
1941	8.844	NA	NA	8.184	NA	17.982	NA	5.462
1942	13.434	NA	NA	9.968	7.18	21.528	NA	21.296
1943	14.77	NA	NA	5.64	3.98	18.592	NA	14.82
1944	9.514	NA	NA	7.228	5.002	25.244	28.54	11.83
1945	5.676	NA	NA	4.132	6.05	19.196	10.648	9.822
1946	2.42	NA	NA	3.872	3.578	14.372	11.808	6.434
1947	2.27	NA	NA	4.61	3.736	14.644	15.764	6.442
1948	4.488	5.31	4.578	3.732	9.522	13.104	10.886	5.56
1949	3.374	4.134	3.37	3.042	4.748	14.092	8.69	4.7
1950	2.81	2.324	1.568	2.932	3.132	6.84	6.112	3.372
1951	1.938	1.524	1.636	2.81	2.624	7.668	6.446	3.142
1952	2.198	1.494	2.074	2.762	2.328	7.964	8.572	3.702
1953	1.606	0.98	1.072	1.924	2.554	3.432	4.162	1.784
1954	1.66	0.952	1.25	3.098	2.112	4.034	7.362	3.144
1955	1.916	0.894	0.892	2.79	1.9	2.97	5.43	3.18
1956	2.134	0.926	1.216	2.642	2.264	3.482	3.128	3.19
1957	6.646	1.512	3.556	6	2.99	11.258	7.086	7.388
1958	5.42	2.698	2.706	7.86	10.562	8.14	4.6	4.204
1959	2.76	2.802	1.144	4.9	2.042	4.828	2.858	4.226
1960	5.068	2.76	3.01	5.406	5.298	10.41	5.778	8.554
1961	6.688	2.21	5.194	5.396	7.742	10.846	6.672	5.482
1962	5.174	1.39	5.94	3.83	6.566	7.934	5.504	4.264
1963	1.452	0.524	1.248	2.068	2.592	2.84	2.946	2.654
1964	1.428	0.818	1.222	4.89	3.854	4.486	4.83	4.792
1965	4.316	1.386	3.67	6.862	7.808	8.276	8.44	9.396
1966	3	0.784	1.622	5.056	2.44	5.096	9.708	6.814
1967	2.27	0.754	0.726	3.23	1.262	4.852	6.624	5.102
1968	1.964	1.492	2.2	3.252	2.902	3.252	6.492	4.952
1969	3.372	2.137	2.336	4.554	4.976	3.714	7.698	5.344
1970	2.56	2.137	3.13	2.744	2.696	2.308	5.354	3.432
1971	2.604	5.268	1.444	2.228	2.086	2.352	5.406	2.71
1972	1.234	0.808	0.4	1.16	1.466	1.408	2.83	1.648
1973	4.11	3.134	0.808	7.824	3.176	1	7.454	12.44
1974	3.55	2.616	0.279	3.914	2.91	2.398	6.568	12.02
1975	3.458	3.074	0.279	3.852	3.068	0.894	3.3	6.842
1976	1.728	0.946	0.978	3.9	2.914	1.196	2.204	1.406
1977	0.952	0.934	0.638	1.616	2.15	1.632	1.376	1.972

	SW10B2	SW11I1	SW11T1	SW12A2	SW12B2	SW14A2	SW14B2	SW15I1
1978	2.054	1.984	3.01	5.264	5.998	1.316	14.846	8.184
1979	8.462	7.064	8.406	14.128	11.066	5.238	13.386	14.276
1980	1.712	6.524	4.8	7.652	4.868	9.792	11.238	8.47
1981	2.586	1.272	1.018	2.774	1.448	3.948	8.18	2.072
1982	3.384	2.852	1.52	3.766	2.408	7.312	9.12	10.134
1983	9.802	6.524	4.164	7.694	6.9	9.434	10.92	11.836
1984	8.466	4.36	1.812	4.762	3.868	4.828	7.926	11.854
1985	4.118	3.008	1.934	2.532	3.292	4.138	3.52	3.936
1986	1.642	3.886	2.18	3.216	4.236	6.848	7.152	4.57
1987	2.868	1.778	1.752	2.3	2.052	4.128	3.384	3.968
1988	3.04	1.87	2.082	5.75	3.974	3.208	3.622	4.428
1989	4.056	2.306	1.39	5.234	2.148	5.762	7.664	5.292
1990	3.546	2.508	2.348	5.484	2.362	5.042	8.302	6.298
1991	3.828	4.638	2.338	6.742	3.336	6.516	11.182	7.754
1992	4.872	4.988	2.31	8.512	3.248	10.056	14.708	12.254
1993	5.12	3.76	3.03	8.038	3.44	8.046	10.476	7.604
1994	3.886	1.408	2.602	5.606	3.88	6.132	7.17	6.082
1995	4.234	3.568	3.212	4.882	3.526	9.08	13.582	2.954
1996	2.248	0.988	1.468	3.286	2.2	3.134	5.41	6.272
1997	4.284	3.74	3.746	6.216	3.574	8.458	13.03	3.848
1998	3.608	4.832	3.804	6.512	3.492	7.774	12.676	8.094
1999	3.482	5.698	5.184	4.202	2.902	8.666	10.91	6.08
2000	1.276	2.076	2.202	1.284	1.318	3.09	5.526	1.484
2001	2.768	3.5	4.704	3.838	2.792	7.46	4.816	7.268
2002	1.838	2.39	4.368	3.558	3.846	4.154	5.748	4.016
2003	1.428	2.168	3.368	3.066	2.56	2.66	4.456	5.632
2004	1.074	1.382	2.138	3.698	2.176	2.756	3.724	2.75
2005	1.294	1.282	1.952	3.264	2.156	4.116	7.288	3.694
2006	0.686	0.7	0.544	1.144	1.198	1.822	2.604	1.976
2007	0.462	0.574	0.916	1.424	1.304	2.262	4.166	4.08
2008	0.778	0.61	1.164	1.902	1.87	3.004	3.41	4.528
2009	0.66	0.538	0.68	1.886	1.356	2.946	3.248	5.962
2010	0.454	1	0.84	1.472	1.4	2.892	3.84	3.122
2011	0.308	0.246	0.806	1.124	0.958	2.028	2.008	1.292
2012	0.358	NA	NA	0.378	0.488	1.518	1.616	1.308
2013	0.242	NA	NA	0.32	0.452	1.616	1.89	NA
2014	1.136	NA	NA	0.416	0.258	2.784	2.694	NA
2015	5.128	NA	NA	0.826	0.468	3.086	2.86	NA
2016	7.792	NA	NA	2.692	0.798	3.482	2.898	NA

	SW15T1	SW16A2	SW16B2	SW18l1	SW18T1	SW19A3	SW19B2	SW20L1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	6.958	NA	NA	NA	NA	NA	NA	NA
1942	30.594	NA	NA	NA	NA	NA	NA	NA
1943	15.56	NA	NA	5.976	5.016	NA	NA	NA
1944	13.332	NA	NA	8.42	6.07	NA	NA	NA
1945	7.122	NA	NA	8	6.522	NA	NA	NA
1946	6.166	NA	NA	12.362	8.714	NA	NA	NA
1947	6.576	NA	NA	4.446	7.692	NA	NA	NA
1948	4.362	NA	NA	6.814	5.612	NA	NA	NA
1949	3.986	9.712	NA	6.05	5.756	NA	NA	NA
1950	3.752	3.144	NA	5.01	3.172	NA	NA	NA
1951	3.374	1.822	NA	3.022	3.936	NA	NA	NA
1952	3.258	5.29	NA	3.004	3.816	NA	NA	NA
1953	1.072	1.874	NA	2.416	3.746	NA	NA	NA
1954	3.23	2.37	NA	2.768	4.164	NA	NA	NA
1955	2.758	3.38	NA	1.964	2.3	NA	NA	NA
1956	2.022	2.636	NA	2.594	2.538	NA	NA	NA
1957	7.12	7.51	NA	5.364	5.536	NA	NA	NA
1958	4.098	9.774	NA	3.986	3.85	NA	NA	NA
1959	5.124	3.088	4.998	3.894	4.604	NA	NA	NA
1960	6.206	6.23	4.772	4.582	4.38	NA	NA	NA
1961	5.772	9.934	6.078	5.34	3.998	NA	9.416	NA
1962	6.366	5.612	4.232	4	3.682	NA	7.52	NA
1963	2.146	2.142	2.082	3.244	2.458	4.086	4.508	NA
1964	3.234	2.844	3.56	4.79	3.47	4.652	5.55	NA
1965	9.696	10.022	5.156	5.25	4.068	14.51	9.902	NA
1966	8.052	5.916	1.932	3.788	3.856	5.354	9.688	NA
1967	5.752	3.564	2.232	3.712	4.474	4.816	8.596	NA
1968	5.536	5.658	0.89	4.636	5.814	5.818	11.082	NA
1969	6.924	5.17	1.89	3.834	5.506	5.6	9.718	NA
1970	3.982	2.158	2.426	4.174	4.67	4.788	7.366	NA
1971	3.896	1.946	1.376	2.264	4.45	3.118	5.18	NA
1972	1.012	0.84	0.572	0.854	0.89	2.314	4.39	NA
1973	8.212	5.406	4.778	4.176	3.032	7.564	21.002	NA
1974	5.334	1.598	1.328	1.772	1.926	4.77	9.958	NA
1975	4.292	4.898	2.212	3.312	3.858	9.086	16.222	5.608
1976	2.576	1.298	0.526	0.932	1.142	2.526	7.922	2.12
1977	2.088	0.736	1.346	0.678	1.166	1.198	4.856	2.728

	SW15T1	SW16A2	SW16B2	SW18l1	SW18T1	SW19A3	SW19B2	SW20L1
1978	8.786	4.558	2.526	2.99	5.19	2.476	4.462	7.662
1979	15.414	10.572	14.61	7.632	8.796	11.586	14.582	9.58
1980	8.678	5.754	4.642	3.062	4.604	4.232	8.294	8.154
1981	2.156	1.79	2.062	2.79	3.412	2.746	3.386	3.258
1982	3.95	6.472	4.736	6	7.664	1.498	1.736	7.952
1983	8.59	11.286	8.402	8.598	13.12	6.188	6.558	16.964
1984	4.886	8.898	3.406	7.2	10.83	3.652	4.792	10.606
1985	3.032	6.894	4.608	4.488	6.28	2.33	5.432	5.516
1986	5.35	5.402	4.294	3.912	5.25	2.116	3.88	7.836
1987	1.924	1.142	1.52	2.356	4.484	1.916	3.022	4.852
1988	2.858	2.03	2.358	2.428	2.866	1.668	1.906	2.904
1989	4.082	8.362	5.282	2.752	9.762	1.156	0.722	5.794
1990	3.818	7.848	4.838	4.61	10.636	3.522	9.678	5.72
1991	6.224	8.522	5.644	5.72	12.602	8.204	10.95	6.428
1992	6.984	5.84	7.22	5.142	16.06	4.838	6.502	6.446
1993	3.91	6.726	8.348	6.416	16.948	9.444	8.634	5.142
1994	4.892	9.626	6.434	5.732	14.734	4.546	9.86	2.91
1995	2.102	11.338	7.846	4.886	10.786	5.166	6.702	3.032
1996	2.03	4.864	4.302	2.054	3.898	2.462	3.584	1.826
1997	5.172	6.804	6.418	1.994	4.124	3.678	8.834	5.568
1998	1.212	6.538	7.498	1.868	4.322	3.606	4.896	6.526
1999	1.116	5.594	4.546	0.986	1.99	2.036	6.028	6.258
2000	3.814	1.818	0.984	0.88	1.32	1.004	4.856	2.708
2001	5.356	7.406	5.836	0.96	1.266	2.598	4.766	9.042
2002	2.698	8.586	3.934	1.658	2.064	2.454	4.246	8.15
2003	4.492	7.972	4.816	1.166	1.102	1.496	1.824	5.352
2004	4.564	7.282	8.744	0.868	1.064	2.236	2.482	3.48
2005	2.59	4.94	6.89	1.412	1.534	1.858	2.36	3.408
2006	0.498	2.882	4.608	0.568	0.86	1.562	2.098	3.114
2007	1.192	2.296	3.168	0.834	0.788	1.428	2.922	1.578
2008	2.47	3.738	5.67	1.074	1.69	1.37	1.784	4.348
2009	2.634	2.766	3.02	2.15	1.988	1.308	2.914	3.632
2010	2.486	3.028	2.464	2.286	1.778	1.072	2.514	2.352
2011	1.134	3.158	2.1	0.57	0.11	0.97	1.568	1.022
2012	0.802	1.87	1.228	NA	NA	1.29	1.702	0.362
2013	NA	1.076	0.762	NA	NA	0.77	1.578	NA
2014	NA	1.164	0.444	NA	NA	1.032	1.824	NA
2015	NA	2.742	0.642	NA	NA	1.412	2.796	NA
2016	NA	9.242	9.478	NA	NA	1.388	2.62	NA

	SW20T1	SW21A3	SW21B3	SW22L2	SW22T2	SW23A2	SW23B2	SW24l2
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	NA
1948	NA	NA	NA	NA	NA	NA	NA	NA
1949	NA	NA	9.918	NA	NA	NA	NA	NA
1950	NA	NA	3.902	NA	NA	NA	NA	NA
1951	NA	NA	5.774	NA	NA	NA	NA	NA
1952	NA	NA	10.092	NA	NA	NA	NA	NA
1953	NA	NA	5.892	NA	NA	NA	NA	NA
1954	NA	NA	7.116	NA	NA	NA	NA	NA
1955	NA	7.12	5.99	NA	NA	NA	NA	NA
1956	NA	4.482	2.124	NA	NA	NA	NA	NA
1957	NA	7.96	2.068	NA	NA	NA	NA	NA
1958	NA	4.89	2.436	NA	NA	NA	NA	NA
1959	NA	19.052	1.374	NA	NA	NA	NA	9.442
1960	NA	5.774	1.296	NA	NA	NA	NA	5.872
1961	NA	3.732	9.83	4.716	4.46	NA	NA	5.816
1962	NA	4.13	12.142	4.076	3.26	NA	NA	7.486
1963	NA	3.254	3.762	1.718	8.49	NA	NA	4.322
1964	NA	5.396	6.166	5.272	11.818	NA	NA	4.38
1965	NA	5.674	8.248	8.164	9.522	NA	NA	9.078
1966	NA	9.926	10.76	6.016	4.934	NA	NA	4.21
1967	NA	6.14	6.264	7.452	4.268	NA	NA	6.082
1968	NA	11.084	13.37	10.326	18.208	NA	NA	9.146
1969	NA	3.732	6.058	9.92	15.254	NA	NA	5.624
1970	NA	2.332	2.668	5.052	7.266	NA	NA	4.516
1971	NA	3.584	4.098	4.542	5.462	NA	NA	1.94
1972	NA	1.63	2.464	0.94	1.83	NA	NA	0.772
1973	NA	10.298	10.408	6.038	10.226	NA	4.396	7.756
1974	NA	10.254	9.352	1.462	4.214	NA	4.384	3.952
1975	NA	6.088	6.5	2.622	4.45	NA	8.198	4.106
1976	NA	3.104	3.51	0.796	1.906	NA	5.792	1.846
1977	NA	2.228	2.174	1.11	2.674	NA	2.29	1.278

	SW20T1	SW21A3	SW21B3	SW22L2	SW22T2	SW23A2	SW23B2	SW24l2
1978	NA	5.726	6.554	3.354	5.72	NA	3.076	4.436
1979	NA	6.528	8.11	5.724	8.95	NA	7.778	14.604
1980	NA	4.778	4.202	4.912	5.582	NA	7.3	14.164
1981	2.09	2.374	1.758	1.746	2.744	NA	1.766	6.866
1982	8.894	4.974	3.388	7.102	9.53	NA	5.012	8.014
1983	16.976	7.144	6.876	9.226	13.25	NA	8.744	12.118
1984	9.94	5.208	5.41	6.642	11.164	NA	12.054	11.932
1985	10.018	5.006	4.9	7.296	6.502	NA	7.248	8.526
1986	7.29	4.26	4.598	4.742	4.612	NA	2.892	9.286
1987	6.496	3.572	4.428	3.43	5	NA	2.444	8.484
1988	5.754	1.758	2.522	2.144	2.82	NA	4.204	5.388
1989	5.944	1.552	2.086	1.226	1.624	NA	5.832	6.986
1990	7.404	4.878	2.998	3.55	4.064	NA	15.972	7.266
1991	8.752	5.822	3.394	4.788	3.704	NA	12.756	6.174
1992	4.656	4.174	2.968	4.04	3.404	NA	6.26	4.248
1993	5.654	3.88	2.952	3.026	3.388	NA	4.67	5.592
1994	3.984	3.628	3.002	2.722	2.418	NA	4.878	5.14
1995	3.806	4.294	3.382	2.518	2.874	NA	5.57	6.162
1996	2.844	2.106	1.558	1.58	2.35	NA	2.258	2.078
1997	6.18	2.89	3.636	2.606	3.22	NA	5.63	3.406
1998	5.74	2.776	5.534	3.238	2.92	NA	5.72	1.644
1999	2.88	3.372	10.164	3.042	3.092	NA	3.024	1.708
2000	3.394	1.858	3.246	1.242	1.404	NA	1.506	1.63
2001	6.806	5.302	4.988	3.75	3.102	5.682	4.22	1.916
2002	5.234	4.97	5.49	3.616	2.976	3.676	4.118	1.972
2003	5.284	4.214	3.952	2.46	2.134	2.696	2.876	1.898
2004	3.272	3.97	3.246	2.226	1.498	2.946	2.142	1.69
2005	4.512	4.854	4.316	2.322	3.36	1.922	2.78	1.874
2006	4.438	3.282	1.78	1.264	2.582	1.4	0.616	1.518
2007	2.51	2.824	2.534	2.206	3.894	2.17	1.538	1.058
2008	5.304	5.038	4.186	1.684	3.28	2.884	1.546	0.98
2009	3.744	3.452	3.148	1.21	2.128	2.962	2.306	0.858
2010	2.3	2.866	3.334	1.426	1.724	2.868	2.192	0.906
2011	0.676	2.64	1.5	NA	0.104	2.108	1.516	0.338
2012	0.41	1.486	1.474	NA	NA	1.5	1.012	0.366
2013	NA	0.198	0.422	NA	NA	0.592	0.556	0.774
2014	NA	1.718	1.45	NA	NA	0.968	0.796	NA
2015	NA	5.392	4.568	NA	NA	8.094	5.414	NA
2016	NA	6.492	6.216	NA	NA	10.82	10.78	NA

	SW24T2	SW25A2	SW25B3	SW26I1	SW26T1	SW27A2	SW27B2	SW28I3
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	NA	NA	NA	NA	NA	NA	NA	4.682
1948	NA	NA	NA	NA	NA	NA	NA	2.036
1949	NA	NA	NA	NA	NA	NA	NA	2.76
1950	NA	NA	NA	NA	NA	NA	NA	2.186
1951	NA	NA	NA	NA	NA	NA	NA	1.45
1952	NA	NA	NA	NA	NA	11.962	NA	3.26
1953	NA	NA	NA	NA	NA	13.728	NA	2.158
1954	NA	2.602	NA	NA	NA	9.972	NA	3.24
1955	NA	2.892	NA	NA	NA	5.908	NA	3.118
1956	NA	1.932	NA	9.642	9.444	7.234	NA	2.556
1957	NA	0.934	1.5	31.414	32.116	6.572	NA	1.976
1958	NA	5.948	9.218	15.596	28.638	4.648	NA	2.752
1959	8.422	3.446	5.422	6.044	13.324	8.202	NA	2.252
1960	5.916	8.44	7.89	5.784	21.124	6.49	NA	2.49
1961	3.654	7.64	9.09	6.654	16.722	2.296	NA	3.852
1962	7.026	10.53	9.074	3.652	9.398	6.894	NA	5.706
1963	2.674	2.52	2.468	2.99	4.504	3.68	NA	2.288
1964	5.704	13.298	6.65	2.712	3.716	4.748	NA	3.906
1965	11.228	17.446	12.534	6.33	10.776	11.268	NA	4.494
1966	4.422	3.708	3.004	2.838	4.376	4.938	NA	4.01
1967	5.57	5.096	4.824	0.716	1.65	2.724	2.952	1.712
1968	12.194	15.288	17.116	3.116	4.934	6.43	4.436	2.246
1969	6.33	8.266	10.232	2.95	3.166	5.344	5.084	3.438
1970	4.678	4.032	2.214	2.238	2.104	2.436	3.332	2.4
1971	2.196	3.484	3.936	1.914	1.232	0.484	0.602	1.158
1972	1.36	2.416	2.656	0.95	0.754	0.744	0.712	2.18
1973	9.452	9.14	9.228	1.892	1.29	3.292	4.324	2.662
1974	4.468	3.526	3.872	2.286	0.632	0.392	0.644	3.036
1975	2.42	3.112	2.304	1.274	0.972	2.136	3.738	2.772
1976	1.158	0.914	0.44	0.484	0.234	1.336	1.35	0.874
1977	1.046	0.674	0.42	0.392	0.344	0.536	0.894	4.604

	SW24T2	SW25A2	SW25B3	SW26I1	SW26T1	SW27A2	SW27B2	SW28I3
1978	3.92	3.786	0.834	1.31	0.844	2.87	2.924	2.446
1979	12.504	8.128	16.076	2.724	1.472	6.322	6.232	4.632
1980	11.412	3.7	8.408	0.762	0.494	2.81	1.846	4.052
1981	7.152	3.252	4.242	0.608	0.312	0.908	0.562	1.742
1982	12.638	6.804	8.096	2.02	1.482	6.616	3.932	19.212
1983	16.468	10.702	17.656	3.714	4.196	7.59	5.05	10.692
1984	15.848	9.484	12.272	3.458	4.358	4.578	1.772	8.35
1985	11.472	6.596	8.022	5.754	2.918	3.416	1.622	5.9
1986	13.176	5.49	6.782	4.882	2.11	6.58	1.578	5.716
1987	10.59	7.672	3.882	2.78	1.188	1.714	1.468	3.278
1988	7.002	2.662	2.802	2.052	1.918	2.696	1.084	4.236
1989	11.166	3.958	5.154	4.274	7.654	7.142	2.862	6.466
1990	8.45	4.456	5.642	4.176	6.836	7.372	8.402	4.024
1991	11.02	3.5	5.104	4.154	6.142	13.032	8.56	4.568
1992	9.854	3.842	5.39	5.41	4.868	7.866	9.388	6.284
1993	7.032	2.306	2.25	5.668	4.964	4.11	8.726	4.732
1994	4.324	1.728	2.212	5.588	2.874	4.54	7.096	4.82
1995	3.874	1.368	1.722	4.636	4.006	8.506	7.594	4.456
1996	1.872	0.794	0.774	1.81	1.076	1.346	2.11	1.95
1997	3.698	1.082	1.236	5.458	2.028	2.536	2.726	2.056
1998	3.146	1.954	1.298	4.766	2.446	2.968	2.432	2.726
1999	3.942	1.736	1.326	4.804	2.608	2.91	3.154	2.336
2000	2.68	1.176	1.158	3.082	1.422	3.03	2.28	0.852
2001	2.85	1.452	1.17	4.272	2.864	2.154	2.838	0.372
2002	3.822	1.112	1.064	1.95	1.528	3.356	2.89	0.61
2003	2.38	1.044	1.156	1.292	0.628	1.562	1.97	0.492
2004	1.894	1.212	1.526	1.596	1.22	2.28	3.162	0.978
2005	1.272	0.978	1.456	5.078	3.498	2.192	3.458	1.458
2006	1.26	0.562	1.732	1.15	0.804	1.376	2.768	0.424
2007	1.214	0.756	3.746	1.608	1.37	5.038	4.566	1.72
2008	1.442	1.764	1.274	1.446	1.194	3.404	1.926	0.698
2009	1.334	1.298	1.3	1.51	1.13	3.298	1.6	0.968
2010	1.588	1.146	1.028	1.832	1.048	2.96	2.968	0.632
2011	0.638	0.792	0.62	NA	NA	1.044	1.002	NA
2012	1.01	0.694	0.598	NA	NA	0.722	0.836	NA
2013	0.366	0.52	0.624	NA	NA	0.964	1.03	NA
2014	NA	0.692	1.384	NA	NA	0.986	1.314	NA
2015	NA	2.668	7.584	NA	NA	2.602	2.858	NA
2016	NA	2.758	6.192	NA	NA	2.202	1.774	NA

	SW28T3	SW29A2	SW29B2	SW30I2	SW30T2	SW31I3	SW31T3	SW35I1
1932	NA	NA	NA	NA	NA	NA	NA	NA
1933	NA	NA	NA	NA	NA	NA	NA	NA
1934	NA	NA	NA	NA	NA	NA	NA	NA
1935	NA	NA	NA	NA	NA	NA	NA	NA
1936	NA	NA	NA	NA	NA	NA	NA	NA
1937	NA	NA	NA	NA	NA	NA	NA	NA
1938	NA	NA	NA	NA	NA	NA	NA	NA
1939	NA	NA	NA	NA	NA	NA	NA	NA
1940	NA	NA	NA	NA	NA	NA	NA	NA
1941	NA	NA	NA	NA	NA	NA	NA	NA
1942	NA	NA	NA	NA	NA	NA	NA	NA
1943	NA	NA	NA	NA	NA	NA	NA	NA
1944	NA	NA	NA	NA	NA	NA	NA	NA
1945	NA	NA	NA	NA	NA	NA	NA	NA
1946	NA	NA	NA	NA	NA	NA	NA	NA
1947	4.622	NA	NA	NA	NA	NA	NA	NA
1948	2.118	NA	NA	NA	NA	NA	NA	NA
1949	3.572	NA	NA	NA	NA	NA	NA	NA
1950	2.26	NA	NA	NA	NA	NA	NA	NA
1951	2.122	NA	NA	NA	NA	NA	NA	NA
1952	2.856	NA	NA	NA	NA	NA	NA	NA
1953	2.016	NA	NA	NA	NA	NA	NA	NA
1954	4.024	NA	NA	NA	NA	NA	NA	NA
1955	3.776	NA	NA	NA	NA	NA	NA	NA
1956	3.164	NA	NA	NA	NA	NA	NA	NA
1957	2.464	NA	NA	NA	NA	1.608	1.854	NA
1958	2.414	NA	NA	NA	NA	1.396	1.732	NA
1959	2.128	NA	NA	NA	NA	2.858	3.722	NA
1960	1.846	NA	NA	NA	NA	1.566	1.906	16.184
1961	3.278	NA	NA	NA	NA	2.83	3.132	13.202
1962	5.014	NA	NA	NA	NA	2.07	2.53	6.384
1963	2.178	NA	NA	NA	NA	1.472	1.488	6.374
1964	5.236	NA	NA	NA	NA	3.33	1.6	7.264
1965	4.6	NA	NA	NA	NA	7.882	8.95	10.028
1966	2.98	NA	NA	NA	NA	2.358	2.914	7.852
1967	2.02	NA	NA	NA	NA	2.522	1.284	4.726
1968	3.074	NA	NA	NA	NA	4.574	6.196	3.762
1969	3.574	NA	NA	NA	NA	4.792	4.618	4.032
1970	2.498	NA	NA	NA	NA	5.544	4.884	2.556
1971	0.856	NA	NA	NA	NA	3.55	3.294	2.27
1972	1.842	NA	NA	NA	NA	1.714	2.116	1.096
1973	1.698	NA	NA	NA	NA	9.908	10.25	2.662
1974	2.634	NA	NA	NA	NA	6.87	8.334	2.662
1975	2.222	NA	NA	NA	NA	6.168	6.866	4.682
1976	2.206	NA	NA	NA	NA	3.254	1.968	1.33
1977	1.134	NA	NA	NA	NA	2.694	1.468	1.008

	SW28T3	SW29A2	SW29B2	SW30I2	SW30T2	SW31I3	SW31T3	SW35I1
1978	1.642	NA	NA	NA	NA	5.142	3.168	2.016
1979	4.184	NA	1.222	NA	NA	8.084	6.082	9.084
1980	2.966	NA	1.874	NA	NA	4.558	2.532	3.846
1981	1.638	NA	0.818	NA	NA	2.514	1.39	1.594
1982	16.43	19.21	3.548	NA	NA	5.268	3.344	3.258
1983	11.638	17.2	8.622	NA	NA	9.658	7.068	10.834
1984	10.054	16.636	14.796	NA	NA	10.496	5.372	6.664
1985	5.852	6.306	17.022	NA	NA	10.156	5.514	5.596
1986	4.026	10.374	16.16	25.784	15.466	14.09	8.392	8.78
1987	2.52	6.868	13.708	33.984	20.124	12.52	5.516	5.872
1988	2.924	14.906	15.024	14.348	16.186	10.35	3.35	6.61
1989	4.634	7.182	21.304	14.91	17.274	9.848	6.244	16.206
1990	4.098	15.148	17.592	13.042	16.844	13.838	3.79	13.148
1991	6.676	21.254	15.724	12.668	20.172	15.74	6.376	13.014
1992	7.45	27.512	16.71	20.686	19.312	20.3	9.116	10.784
1993	5.296	21.686	13.11	19.514	15.942	20.544	7.052	7.252
1994	3.526	11.858	9.944	10.922	12.452	18.444	5.174	8.06
1995	4.412	14.644	15.27	8.984	14.844	14.55	4.786	7.196
1996	1.94	4.264	5.146	4.9	6.602	4.154	3.346	4.08
1997	1.686	8.322	10.314	6.402	6.276	3.988	2.27	7.78
1998	2.04	7.154	9.992	6.044	6.522	3.746	2.724	8.016
1999	1.846	10.92	12.394	7.494	12.528	2.4	2.364	16.068
2000	0.858	6.59	11.016	3.902	6.884	3.096	1.34	9.364
2001	0.388	6.688	18.57	8.722	8.534	2.776	1.634	11.518
2002	0.378	6.952	10.816	8.962	8.558	1.84	1.32	6.608
2003	0.622	3.978	9.652	7.412	7.788	1.346	0.736	7.634
2004	0.754	3.18	6.06	6.164	4.908	1.268	0.634	7.504
2005	1.15	2.978	6.104	5.038	4.416	1.518	0.744	7.002
2006	0.962	1.472	3.83	2.224	2.85	0.794	1.148	4.266
2007	0.304	2.204	3.506	2.506	4.08	0.942	1.104	3.134
2008	0.61	1.622	4.268	2.288	2.912	1.16	1.374	2.954
2009	0.894	3.264	5.374	3.958	3.772	1.944	1.57	0.678
2010	NA	3.652	4.76	3.294	2.498	1.538	1.416	1.712
2011	NA	1.742	3.54	0.332	0.624	1.194	1	NA
2012	NA	1.65	2.248	NA	NA	0.668	0.636	NA
2013	NA	0.91	2.184	NA	NA	0.516	0.358	NA
2014	NA	1.278	2.156	NA	NA	NA	NA	NA
2015	NA	3.236	5.302	NA	NA	NA	NA	NA
2016	NA	4.264	4.098	NA	NA	NA	NA	NA

	SW35T1
1932	NA
1933	NA
1934	NA
1935	NA
1936	NA
1937	NA
1938	NA
1939	NA
1940	NA
1941	NA
1942	NA
1943	NA
1944	NA
1945	NA
1946	NA
1947	NA
1948	NA
1949	NA
1950	NA
1951	NA
1952	NA
1953	NA
1954	NA
1955	NA
1956	NA
1957	NA
1958	NA
1959	NA
1960	8.93
1961	11.842
1962	8.886
1963	6.322
1964	4.608
1965	7.64
1966	4.172
1967	2.962
1968	2.892
1969	3.42
1970	1.998
1971	1.932
1972	0.994
1973	2.631
1974	2.631
1975	1.836
1976	4.294
1977	1.63

	SW35T1
1978	4.602
1979	8.762
1980	5.334
1981	1.834
1982	3.656
1983	10
1984	13.216
1985	7.02
1986	6.24
1987	6.192
1988	4.996
1989	5.834
1990	6.106
1991	5.566
1992	4.116
1993	9.044
1994	10.618
1995	15.184
1996	4.12
1997	7.166
1998	7.002
1999	9.254
2000	7.014
2001	5.07
2002	5.172
2003	4.794
2004	5.444
2005	5.29
2006	2.748
2007	0.78
2008	1.436
2009	0.662
2010	0.92
2011	NA
2012	NA
2013	NA
2014	NA
2015	NA
2016	NA