

**EVALUATION OF PLANNED DISCHARGES
TO HARSHAW CREEK
ARIZONA MINERALS INCORPORATED
PATAGONIA ARIZONA**

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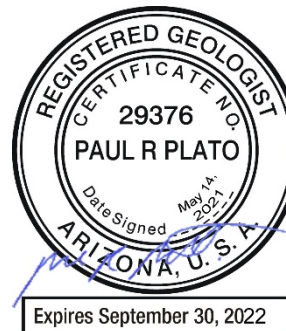
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May 2021

EXECUTIVE SUMMARY

The Town of Patagonia (Town) and Arizona Minerals Inc. (AMI) retained Clear Creek Associates as a third-party consultant to conduct an evaluation of the potential discharge of 10 cubic feet per second or cfs (4,500 gallons per minute or gpm) of treated water from the AMI Hermosa Project into Harshaw Creek. The Town of Patagonia was concerned that the additional flow to Harshaw Creek would negatively increase groundwater levels through recharge along Harshaw and Sonoita Creeks as well as exacerbate flood flows in the Town. Clear Creek Associates met six (6) times with the Town and AMI personnel to confirm the scope of work, review the progress of the work, exchange information pertinent to the modeling, and discuss the model results at various stages of development. The modeling performed as part of the project was designed to quantify impacts using industry-accepted techniques, assumptions, and software.

The result of the modeling indicates that a constant inflow of 10 cfs to Harshaw Creek from WTP2 would have minimal impacts to flood flows in the Town during the simulated 2-year, 10-year, and 50-year, 24-hour storm events. Projected surface water level (stream stage) rises attributable to the 10 cfs are less than one inch for all storm events. As indicated in **Table 4**, 10 cfs is a very small percentage of even the 2-year storm event, therefore, the impact to stormwater stage height is small.

The groundwater modeling shows that the addition of 10 cfs to Harshaw Creek would cause groundwater mounding along both Harshaw and Sonoita Creeks, with the maximum predicted groundwater mounding to be about 4.5 feet after 5 years of flow. The area of projected maximum water level rise is where Harshaw Creek enters the basin. Within the Town, projected water level rises are mostly in the range of 2 to 3 feet. After five years of recovery, groundwater levels were predicted to return to pre-discharge levels. Additional groundwater mounding from flood events on top of the long-term discharge impacts was also evaluated. For the largest flood event, the 50-year, 24-hour event, additional mounding of up to two feet may occur. No simulations indicated groundwater rising to ground surface except in the areas of predicted perennial flow along Sonoita Creek where groundwater levels are already at the ground surface.

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ACRONYMS AND ABBREVIATIONS

AAC	Arizona Administrative Code
ACOE	Army Corps of Engineers
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
ADOT	Arizona Department of Transportation
AF/yr	Acre-feet per year
ARS	Arizona Revised Statutes
bls	below land surface
CFR	Code of Federal Regulations
cfs	cubic feet per second
Clear Creek	Clear Creek Associates, PLC
DEM	Digital Elevation Model
FEMA	Federal Emergency Management Agency
FIS	Flood insurance study
Feet AMSL	Feet Above Mean Sea Level
ft	feet
ft/day	feet per day
g/cc	grams per cubic centimeter
g/L	grams per liter
gpm	gallons per minute
GWSI	Groundwater Site Inventory
HEC-RAS	Hydraulic Engineering Center – River Analysis System
LCS	low carbon steel
LiDAR	light detection and ranging
mg/L	milligrams per liter
PRISM	Parameter-elevation Regressions on Independent Slopes Model
psi/ft	pounds per square inch per foot
PVC	polyvinyl chloride
SSA	Storm and Sanitary Analysis
TBD	to be determined
TDS	total dissolved solids
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
Wells 55	ADWR Well Registry Database
WOTUS	Water of the United States
WTP	water treatment plant

1.0 INTRODUCTION

Clear Creek Associates, LLC (“Clear Creek”) was retained by Arizona Minerals, Inc. (“AMI”) and the Town of Patagonia (“Town”) to provide a third-party evaluation of possible impacts from planned water treatment plant discharges to Harshaw Creek. AMI, a Nevada corporation doing business in Arizona, is an independent company whose ultimate parent is South32, a mining company organized under Australian law. AMI is developing the Hermosa Project, a future underground mine in the Patagonia Mountains south of the Town. The purpose of this evaluation was to assess whether the discharges from mine dewatering operations would increase potential flooding impacts in and around the Town.

AMI is in the process of obtaining permits to discharge treated water from a second proposed water treatment plant (WTP2) to Harshaw Creek as part of the Hermosa Project. Harshaw Creek flows into Sonoita Creek just upstream of the Town (**Figure 1**). The discharge to Harshaw Creek from WTP2 of up to 4,500 gallons per minute or gpm (or 10 cubic feet per second or cfs) will occur 10 miles upstream of the Town. The exact duration of flow from WTP2 is uncertain at this time, and may continue for several years while underground facilities are constructed. The Town is concerned with the potential impact on both Harshaw Creek and Sonoita Creek in terms of groundwater mounding and surface water level (stage) rise in the creeks during storm events.

Clear Creek has developed a surface water model to evaluate impacts of the additional flow from WTP2 on stage in portions of Harshaw Creek and Sonoita Creek during storm events. A separate groundwater model was developed to evaluate groundwater mounding during the continuous flows, as well as the impact of the additional flow in the creek during storm events. Development and results of the surface water model is described in Sections 5 and 7, and the groundwater model development and results are described in Sections 6 and 8.

WTP2 will treat water from the following sources:

- Groundwater pumped from a wellfield to depressurize and dewater the fractured rock aquifer.
- Groundwater and operational water pumped from underground workings
- Treated water from water treatment plant number one (WTP1)
- Drilling water and core cutting water
- Water from stormwater Best Management Practices

WTP2 will be constructed to treat up to 10 cfs. The water discharged from the plant will meet all applicable surface water and groundwater quality standards. WTP2 will be constructed near Harshaw Creek at the site shown on **Figure 1**, 10 miles upstream of the location where Harshaw Creek flows into Sonoita Creek. The confluence of Harshaw Creek and Sonoita Creek is approximately a third of a mile upstream of the point where Sonoita Creek crosses Highway 82, on the northeast edge of the Town's main business center.

2.0 DATA SOURCES

The evaluation relied on existing data available from published reports and maps, publicly accessible databases, and information provided by AMI, the Town and interested citizens. In accordance with the approved Scope of Work, Clear Creek did not attempt to generate any new data for this project, with the exception of a field visit conducted on February 26, 2021, to verify locations of wells and inspect the conditions along major stream channels.

For the groundwater model, we obtained the following data. The use of these data is described in Section 6.

Data Type	Sources
Geology, aquifer composition and depth	<ul style="list-style-type: none"> • Geologic map by the United States Geological Survey (USGS; Drewes, 1996) • Surface geophysical survey for the Town of Patagonia (Clear Creek, 2016) • Well driller logs from Arizona Department of Water Resources (ADWR) Wells 55 Imaged Records database • Statewide depth to bedrock contours from the Arizona Geological Survey (AGS; Richard et al., 2007) • University of Arizona thesis on the hydrogeology of the Sonoita basin (Nassereddin, 1967)
Aquifer hydraulic conductivity	<ul style="list-style-type: none"> • University of Arizona thesis on the hydrogeology of the Sonoita basin (Nassereddin, 1967)
Aquifer storativity	<ul style="list-style-type: none"> • University of Arizona thesis on the hydrogeology of the Sonoita basin (Nassereddin, 1967)
Groundwater inflows and outflows along Sonoita Creek	<ul style="list-style-type: none"> • University of Arizona thesis by Robotham (1979)

Precipitation and groundwater recharge	<ul style="list-style-type: none"> • Climate data from the PRISM Climate Group at Oregon State University
Groundwater pumping	<ul style="list-style-type: none"> • Town of Patagonia • ADWR Wells-55 registry, 2021
Streamflow rates	<ul style="list-style-type: none"> • The Nature Conservancy and USGS stream gage data
Groundwater levels	<ul style="list-style-type: none"> • ADWR Groundwater Site Inventory (GWSI) database • ADWR Well 55 Database, 2021

A digital elevation model (DEM) was used for determining watershed topographic characteristics in the hydrologic model and for extracting cross section elevation data for the hydraulic model. DEMs are gridded surfaces of point elevations used to represent topography.

2.1 Hydrologic Model DEM

For the hydrologic model, a 4-foot resolution DEM from LiDAR was obtained from the Santa Cruz County website. This DEM covers the entire watersheds of Sonoita Creek (upstream of Harshaw Confluence), Red Rock Creek, and Harshaw Creek so that hydrologic parameters for these watersheds can be determined. For the purposes of watershed characterization, a 4-foot resolution was sufficient and expedited the processing time.

2.2 Hydraulic Model DEM

The DEM used for the hydraulic model focused on the area around the Town. Because this DEM is used to help define cross sections and understand channel geometry, it's important to use the highest resolution data available. Two datasets were used to generate the DEM for the hydraulic model:

- 1-foot contours for the Town and its immediate vicinity which was obtained from the Town;

- 2-foot and 4-foot contours obtained from Santa Cruz County were used to supplement the extent of the 1-foot contour data where it did not fully cover the floodplain.

2.3 Field Observations

After the process of constructing hydrologic and hydraulic models had begun, Clear Creek made a trip to the site on February 25, 2021, along with members of the Town to gather data and photograph key areas for the hydraulic model (e.g. bridges, boundaries, etc.). The observations made during this trip verified assumptions that were made when constructing the surface water models.

3.0 STUDY AREA DESCRIPTION

3.1 Conceptual Hydrogeologic Model

Using the data described in Section 2.1, a conceptual hydrogeologic model of the Study Area was developed. Key elements of the conceptual hydrogeologic model are summarized below, followed by a discussion of the Study Area's surface water hydrology.

3.1.1 Regional Geology

The Sonoita Area is characterized by an alluvial fill valley, surrounded by a wide variety of sedimentary and volcanic rocks. **Figure 2** illustrates the regional geology in the area of the site, and the alluvium is shown as the QTg unit. The groundwater flow model area and no-flow (non-calculation) cells are also shown for reference. The underlying bedrock units are significantly less permeable than the alluvium, but are likely to transmit some groundwater.

3.1.2 Aquifer Extent and Thickness

The Study Area is oriented north-northeast to south-southwest and extends approximately 10 miles from a bedrock constriction located downstream of the Town of Sonoita to a bedrock constriction located downstream of the Town (**Figure 2**). The focus of the study is the alluvial groundwater basin surrounding Sonoita Creek. The basin consists of Tertiary to Quaternary-aged basin-fill alluvium surrounded and underlain by older, less permeable bedrock. Within the Study Area, alluvium is exposed at the land surface over an area of approximately 35 square miles. Based on available data from water well drillers' logs and statewide depth-to-bedrock contours, the alluvium appears to be more than 450 feet thick near the middle of the Study Area. Near the Town, a geophysical survey indicated the thickness of the alluvium is at least 300 feet (Clear Creek, 2016). Along the edges of the basin, the alluvium is most likely a thin veneer overlying the bedrock and is unlikely to be saturated.

3.1.3 Water Balance

The focus of the Study Area is the shallow basin fill aquifer system in Sonoita Valley that would be most directly impacted by shallow surface water flows along Harshaw and Sonoita Creeks. For this reason, the water balance appropriate for this study must be derived for the inflow and outflow components of the shallow groundwater system. The underlying bedrock, although it contains groundwater, would not significantly contribute flow to the shallow aquifer system. Downstream of the Town, Sonoita Valley narrows and bedrock comes to the ground surface. This causes shallow groundwater moving down Sonoita Valley to be forced to the ground surface as surface water creating the observed perennial flow in Sonoita Creek. Therefore, to derive a water balance for the shallow aquifer, it is appropriate to rely on the observed surface water flow in Sonoita Creek to estimate the inflows and outflows of the shallow aquifer system.

The water balance for the Study Area (**Table 1**) includes all water that is added to the shallow aquifer and all water that leaves the shallow aquifer. There are four primary sources of water to the aquifer: runoff from precipitation and snowmelt in the surrounding mountains, mountain front and mountain block recharge, underflow from areas upstream of the Study Area along Sonoita Creek, and recharge of treated effluent from the Town's wastewater treatment plant.

Water leaves the aquifer as streamflow along Sonoita Creek, bedrock underflow along Sonoita Creek downstream from the Town, and groundwater pumpage. Additional water leaves the aquifer via evapotranspiration, primarily from stands of riparian vegetation in and south of the Town. Locations of inflows and outflows are shown on **Figure 3**.

Outflows

The largest outflow from the Study Area is Sonoita Creek base flow. This volume is roughly 3,300 AF/yr (4.6 cfs), based on stream gage data from the Nature Conservancy for the years 1992-2020. Underflow is a minor component of outflow only occurring in the immediate vicinity of the Sonoita Creek channel. Using assumptions regarding

permeability, hydraulic gradient, and width of the underflow zone¹, the estimated underflow in bedrock is about 146 AF/yr (0.2 cfs). Evapotranspiration (ET) was estimated using data from CropScape. The process of estimating ET involved using the crop survey data from the CropScape website (<https://nassgeodata.gmu.edu/CropScape/>) which is maintained by the National Agricultural Statistical Service (NASS). CropScape is a web-search program to interact with the NASS Cropland Data Layer, which is an annual raster image with pixels coded by crop type. CropScape includes categories of vegetation listed as “Woody Wetlands” and “Herbaceous Wetlands”. This acreage corresponds closely with phreatophyte vegetation along the Sonoita Creek, taking water directly from shallow groundwater. The CropScape data yielded an ET of 94.5 AF/yr (0.13 cfs).

Groundwater pumpage is relatively minor in the Study Area. The Study Area is outside any of Arizona’s designated Active Management Areas, where groundwater pumpage is regulated by ADWR, so private well owners are not required to report their pumpage. However, pumpage data were available from the Town. Also, it is possible to roughly estimate non-Town pumpage based on the number of registered wells in the Study Area and an assumption of 0.5 AF/yr per well, which is consistent with guidance that ADWR has provided on past groundwater modeling projects conducted in Arizona (Obenshain, 2018). The well database compiled for the Study Area includes 1,171 wells, with 417 wells in the active model area. After reviewing the well records, 317 wells were selected as wells with presumed water use, as illustrated in **Figure 4**. Of these wells, 315 are small domestic users, with total pumpage estimated at 157.5 AF/yr (0.22 cfs). The Town has two wells, and these wells were simulated using their average pumping rates. Pumpage from the Town wells averages 55.6 and 53.7 AF/yr (0.08 and 0.07 cfs). This equates to a total pumping rate of roughly 270 AF/yr (0.37 cfs) for the Study Area. This is a relatively small volume compared to the other components of the water budget.

¹ Underflow mainly occurs in a zone about 700 feet wide spanning Sonoita Creek through the upper 500 feet of bedrock yielding an area of 350,000 square feet. The hydraulic gradient is about 0.01 ft/ft and, at an assumed average hydraulic conductivity of 5 ft/day this yields an underflow of 146 AF/yr.

Inflows

As discussed above, a key feature of the Study Area is that groundwater is forced to the ground surface downstream of the Town due to shallow bedrock and a narrowing of the valley. Therefore, in this case, it is possible to use the measurements of surface flow and assumptions on ET, well pumping, and underflow to estimate the inflow to the Study Area. As shown on **Table 1**, the total inflow from recharge to the basin and underflow along Sonoita Creek above the Study Area must equal the outflow calculated for the basin minus the inflow from effluent discharge from the Patagonia wastewater treatment plant. Inflow from recharge and underflow then equals 3,691 AF/yr (5.1 cfs) with an additional contribution from the effluent discharge of 100 AF/yr (0.14 cfs).

3.1.4 Groundwater Levels, Trends, and Flow Direction

Groundwater flows into the Study Area from the highlands to the west (the Santa Rita Mountains), the east (the Patagonia Mountains), and from the north from the upper reaches of Sonoita Creek. The flow generally parallels Sonoita Creek. In the northern portion of the model the hydraulic gradient is approximately 0.013 feet/foot along Sonoita Creek and in the area of the Town, it decreases to approximately 0.006 feet/foot.

Clear Creek compiled water level data from a variety of sources, including ADWR Ground Water Site Inventory (GWSI) and registered well (Wells 55) databases for the Study Area. **Appendix A** includes a listing of available groundwater level data, which spans the period from 1908 to 2021, including 743 measurements for the area within one-mile of the model domain. The Study Area is generally considered to be in a long-term steady-state condition, as no non-natural stresses large enough to affect regional groundwater levels have been added. For this reason, average groundwater levels were calculated from the available data, and are presented in **Figure 5**. Groundwater flow in the area is illustrated by the water level contours, which indicate that flow is generally parallel to Sonoita Creek. Groundwater level data were available at 65 points in the Study Area.

Depths to water vary considerably because of the topography of the land surface.

Figure 6 shows the average depth to water for the model area. In the Town, the water

level elevation in the Town's wells is approximately 40 feet below land surface, and **Figure 7** shows the minimum depth to water measured at each well. The shallowest measured groundwater level is 7 feet, at a well located beyond the western limit of the Town, near Sonoita Creek. Groundwater levels are generally shallower near Sonoita Creek and deeper toward the east and west boundaries of the Study Area.

4.0 GENERAL PROJECT APPROACH

The evaluation of potential flooding impacts was conducted in close coordination with AMI and the Town. The evaluation consisted of groundwater modeling to estimate groundwater mounding in the Sonoita Creek Basin near the Town resulting from infiltration of the proposed 10 cfs flow from the WTP2 discharge, and surface water modeling to estimate the flooding impacts from additional water in the Harshaw and Sonoita Creek channels. An overview of the groundwater and surface water modeling approach is provided below. More detailed descriptions of the models are provided in Sections 6 and 7.

4.1 Groundwater Model

The numerical groundwater flow model used the United States Geological Survey (USGS) model code MODFLOW-NWT and the graphical user interface Groundwater Vistas™ by Environmental Simulations, Inc. All model input and output files used Groundwater Vistas (v. 8.07 build 1) and ESRI's ArcGIS software (v. 10.7.0.10450).

MODFLOW simulates the behavior of groundwater in three dimensions. It divides an aquifer into cells organized into rows, columns, and layers (**Figure 8**), with each model cell assigned the aquifer properties of hydraulic conductivity and storage. Other model inputs include recharge to the aquifer, underflow from outside the model domain, groundwater pumpage, and evapotranspiration. The MODFLOW Stream Flow Routing (SFR) Package simulates the interaction between groundwater and surface water along a stream. Model outputs include predicted groundwater elevations and the locations and rates of groundwater discharge to the surface (e.g., base flows in streams).

4.2 Surface Water Model

The primary purpose for constructing a surface water model in this study is to evaluate the incremental risk of flooding within the Town due to a maximum of 10 cfs continuous discharge into Harshaw Creek. Note that no losses of discharged flow are assumed to occur along Harshaw Creek until the flow reaches Sonoita Valley. While detailed flood

studies (FEMA 2011) have been conducted for the area by the United States Department of Homeland Security's Federal Emergency Management Agency (FEMA), these studies did not include the maximum 10 cfs discharge from the Harshaw Creek from WTP2.

The surface water model consists of two parts, a hydrologic model and a hydraulic model. The hydrologic model determines how water runs off of contributing watersheds during storm events, and the hydraulic model analyzes how water moves through the creeks and floodplain.

4.3 Model Simulations

The groundwater and surface water models were used together to evaluate the potential impacts on flooding along Sonoita Creek and Harshaw Creek near the Town. The groundwater model was first calibrated to historical (steady state) conditions that existed prior to 2007, then calibrated to transient conditions from 2007 through 2020. Model calibration consisted of matching the output (simulated groundwater levels and base flows along Sonoita Creek) to measured data. Various model inputs, including recharge rates and aquifer hydraulic conductivity, were adjusted as needed until the model adequately replicated the measured data. Model calibration is discussed in more detail in Section 6.2.

After the groundwater model was calibrated, recharge of 10 cfs from WTP2 was simulated to evaluate whether the recharge of this water would cause groundwater levels to rise high enough to saturate the land surface and/or increase the base streamflow rate along Sonoita Creek near the Town.

The surface water model predictions with the additional 10 cfs of flow were applied to the groundwater flow model to evaluate the potential impacts on flooding and groundwater level rise. As no increase in baseflow within the surface water model study area was observed in the groundwater model, flows due to rising groundwater were not included in the surface water model. Any changes in infiltration rate due to saturation of the stream bottom are sufficiently accounted for in the surface water model's conservative assumption that no infiltration will occur.

The predictive simulations are described in more detail in Section 8.

5.0 HYDROLOGY

5.1 Climate

The climate in the Study Area varies from high desert in the Sonoita Valley to the steppe-like climate of the higher elevation grasslands and scrub area (ADEQ, 2003). Average rainfall in the Harshaw Creek subwatershed is 19.95 inches per year (Oregon State University PRISM Climate Group, 2021), with the majority of precipitation occurring between June and October through convective thunderstorms. Measured annual and monthly precipitation for July 1921 through October 2017 is presented in **Appendix B** (NCDC, 2021). There is occasional snowfall at higher elevations during the winter months that usually melts within a few days. The highest annual precipitation was 27.9 inches in 1992, and the highest monthly total was 9.60 inches in July 1950.

5.2 Surface Water Hydrology

The Study Area is located within the Sonoita Creek and Harshaw Creek watersheds, and their tributaries (**Figure 9**). Harshaw Creek joins Sonoita Creek just upstream from the Town, along with a significant tributary, Redrock Canyon. Sonoita Creek flows to the west as a tributary of the Santa Cruz River. Sonoita Creek is mapped as perennial from just downstream of the Town as noted in **Figure 9**. As noted, all other streams in the Study Area are ephemeral or intermittent.

Figure 9 also illustrates the domain selected for the development of the numerical groundwater flow model, which encompasses the Harshaw Creek and Middle and Upper Sonoita Creek watersheds.

5.3 Springs

Figure 9 illustrates the identified springs and seeps in the model domain, based on review of USGS, USFS and site investigations conducted for this project. No springs are located within the model domain.

5.4 Wells and Water Levels

In order to assess the regional groundwater conditions, an evaluation of available well records was undertaken to properly locate wells in the area. This assessment began by selecting registered well records from the Wells 55 Registry Database (ADWR, 2021) in the area of interest. The selected well records were copied into a shapefile which forms the well database for the project, which is shown on **Figure 10**. The projection of the shapefile was adjusted to conform to Arizona State Plane, Central Zone, NAD 83. The numerical groundwater model used this same projection with coordinates in feet.

Fields were added to the database to accommodate:

- Perforation or screened interval – critical for loading water level or pumping data from the wells into the model;
- Well name – local name for well or core hole;
- Well Elevation – to determine water level elevations if depth to water is reported; and,
- Azimuth and Inclination for the angled core holes.

The well database serves as the cornerstone for hydrologic data collected, particularly water levels. Since all wells are not registered with ADWR, unregistered wells added to the database are assigned numbers starting with 1001. These are generally wells with water levels in the GWSI database which do not appear to be registered. The well registry number is the key field for the database, with water level data linked to the well registry number.

Appendix C is a database of information for 1,171 wells, covering the Study Area and the Hermosa Project site both inside and outside the model domain. **Figure 10** illustrates well locations in the well database. It should be noted that the elevations and well screen information were updated for wells with water level or pumping data.

5.5 Water Level Data

Water level data are available from the ADWR GWSI database (ADWR, 2021b) for areas across the state, although these data are generally very limited in both areal coverage

and historical entries. **Figure 5** illustrates the available wells color coded with the number of groundwater level measurements available for each well in the database. A significant effort was undertaken to assess individual wells to see if additional groundwater level data could be identified to form a basis for the model development. Many wells have reported depth to water associated with their well registration records, but lack the top of well elevation information. Because wells are only reported using the closest 10-acre legal description, they are not generally reported with precise enough locations to determine the well elevation adequately. Using parcel information and other data in ADWR well registry records, it was possible to more accurately locate additional wells using Google Earth imagery. This also provided surface elevations for wells found on Google Earth. This allowed for additional groundwater level elevations to be added to the database.

5.5.1 Well Pumping Records

Because the model domain is not within the boundaries of an ADWR Active Management Area (AMA), groundwater pumping is not generally required to be reported. However, reporting of pumping for water providers has been required by ADWR since 2006. **Table 2** lists the reported pumping (acre-feet per year) for the model domain:

Table 2 – Pumping Reported to ADWR

Owner	Well Number	Total	2006	2007	2008	2009	2010	2011	2012	2013
Red Rock Acres HOA	807106	26.23	3.00	3.00	2.56	3.00	2.53	2.79	3.18	3.51
Town of Patagonia	605596	581.60	82.00	64.00	60.40		70.70	56.70	70.40	73.00
Town of Patagonia	605595	570.21	58.00	64.00	56.91		54.90	71.30	59.60	70.00
			2014	2015	2016	2017	2018	2019	2020	
Red Rock Acres HOA	807106	26.23	2.66							
Town of Patagonia	605596	581.60	68.00	36.40	53.66	62.91	56.72	51.74	52.59	
Town of Patagonia	605595	570.21	59.00	76.50	55.55	53.52	49.72	43.08	55.07	
Note: Data in AF/yr										
	2018 data missing month of August									
	2019 data missing month of March									

The locations of these wells are shown on **Figure 4**.

5.5.2 Agricultural Water Use

Groundwater pumping can be used for agricultural irrigation. Since surface water diversions for agricultural irrigation are not known in the area, it is assumed that any agricultural activity is supported through groundwater pumping. The National Agricultural Statistics Service (NASS) maintains an aerial photographic archive for the U.S. which classifies each pixel by crop type, using infrared/visible light band responses (the Cropland Data Layer – CDL). The NASS CropScape data is also described above in Section 3.1.3. These coded raster images are available for Arizona from 2008 to 2020, with each pixel of the image representing 0.22 acres. The NASS does conduct a limited number of verification surveys to determine whether the crop type assessments are accurate, but the sensor band response is the principal source of data. The data also include non-agricultural plant communities, such as shrubland, evergreen forest and woody wetlands. **Figure 11** illustrates CropScape CDL image for 2020 for the model area. Much of the area is dominated by shrubland and evergreen forest. **Figure 12** shows the plant types for 2020 near the Town which would represent irrigated crop

lands. Only 42 pixels were noted for potential irrigated crops, which would be 9.24 acres. Based on these values, it appears that potential agricultural irrigation is minimal in the model area, likely never exceeding 40 AF/y. For this reason, agricultural irrigation was not included as pumping from the model.

5.5.3 Phreatophytes and Evapotranspiration

As mentioned in Section 3.1.3, the other significant value of the CropScape CDL dataset is the mapping of Woody Wetlands and Herbaceous Wetland categories. These categories map phreatophyte communities, which allows for estimating phreatophyte distribution. Using the CDL data, model cells were selected where phreatophytes were present. **Figure 13** illustrates the cells, which were assigned a rate of 0.0083 feet/day², with an extinction depth of 25 feet³. The model includes 153 cells, and this translates to maximum possible rate of 106.5 AF/yr (0.15 cfs).

5.5.4 Water Level Hydrographs

Because the overall volumes of pumpage are small, it has been assumed that the area of the model domain is in a steady-state condition, with groundwater levels in a long-term balance. **Figure 14** illustrates the locations for wells 55-645833 (near Harshaw Creek) and 55-809433 (along Sonoita Creek) near the Town. Hydrographs for these wells are presented in **Figure 15**. These wells appear to be fairly stable, with no significant changes over the period of record dating back to the late 1940s.

5.5.5 Regional Water Level Map

Because water levels appear to be in a steady state condition, the groundwater level map utilized available historic data, selecting the average value over the period of record. **Figure 5** illustrates the interpreted groundwater level contours and the available

² Based on ET rate developed by Nassereddin, 1967, p. 37

³ If the groundwater level is above the extinction depth, evapotranspiration is computed; below that depth, evapotranspiration is ignored.

groundwater level data used to construct the contours. **Table 3** lists the groundwater levels used for the map. Ultimately, the groundwater level data were used for developing the starting groundwater levels (head distribution) for the model simulation.

5.5.6 Aquifer Properties

Nassereddin (1967) described various units of the alluvium that comprise the aquifer. The oldest and lowermost unit is a basal conglomerate that is less permeable than the overlying units due to cementation of the sediments. The cemented conglomerate is overlain by an unconsolidated sandy gravel, which according to Nassereddin (1967) is the most productive unit of the aquifer. Another productive unit is the Holocene alluvium along the flood plains of Sonoita Creek and its tributaries. This unit consists of sands, gravels and finer grained sediments. According to Nassereddin (1967), most wells in the basin are drilled into this unit. Nassereddin (1967) described two additional alluvial units, but stated that these are located above the water table.

Drillers' logs for the area are generally consistent with Nassereddin's descriptions. Many of the logs note the presence of a conglomerate, and some list the presence of "sandstone", which might indicate a higher degree of cementation.

Nassereddin (1967) reported an average transmissivity for the basin of 100,000 gallons per day per foot (gpd/ft) (13,367 ft²/day). Transmissivity varies, with values calculated from aquifer tests ranging from 9,500 gpd/ft (1,270 ft²/day) to 195,000 gpd/ft (26,066 ft²/day) at two wells roughly one mile northeast of the Town. A specific yield value of 0.05 was reported for one of the tests. Transmissivity values calculated from specific capacity data ranged from 9,000 gpd/ft (1,200 ft²/day) to 260,000 gpd/ft (34,755 ft²/day).

Hydraulic conductivity is the transmissivity divided by aquifer thickness. An average transmissivity of 100,000 gpd/ft (13,367 ft²/d) and an average aquifer thickness of 300 feet would indicate an average hydraulic conductivity of 45 ft/d for the entire basin. Values along Sonoita Creek are likely to be significantly higher than the average, due to the younger, less consolidated nature of the sediments in this area.

5.6 Surface Water Hydrology

A hydrologic model was built to determine the runoff hydrographs from Red Rock, Harshaw, and Sonoita Creeks for specific recurrence interval storms. Hydrographs are curves that show the flow rate and timing of runoff from a given storm. Recurrence interval storms are storms that have a specific likelihood of recurring each year, based on historical data. These storms are commonly called a 1-year storm, a 2-year storm, a 10-year storm, etc.; although that nomenclature is not perfectly accurate it is an intuitive way to describe storms. For example, a “2-year” storm is a storm that has a 50% chance of occurring in a given year. A “100-year storm” has a 1% chance of occurring in a given year; however, it is unlikely to occur only once every 100 years. In this study, three storms are modeled: 2-year, 10-year, and 50-year, 24-hour storm events. A 24-hour event means the storm’s rainfall is assumed to occur over 24 hours.

A hydrologic model applies rainfall over an area and then calculates when and how much water will reach the discharge point of the watershed based on land use characteristics (is the watershed covered in forest or in pavement?), soil types (are the soils sandy and will infiltrate most of the rain, or are there primarily clays that will absorb very little rain?), land slopes, and other watershed characteristics. The output of the hydrologic model is a hydrograph that quantifies streamflow versus time at a particular location, and shows the rising and falling stream flowrate resulting from a storm event. The maximum flowrate in the stream resulting from the storm is known as the peak discharge. These runoff hydrographs become an input to the hydraulic model described later in this report.

Two readily available sources of peak discharge values exist that serve as the basis of the streamflow in this study- the values calculated by FEMA in 2011 and provided in the Flood Insurance Study (FIS), and StreamStats (a web-based USGS tool based on regression equations). These sources only provide peak discharges, they do not provide a full hydrograph. The flows calculated by the two programs are summarized in **Table 4**. The smallest storm modeled by FEMA was a 10-year storm. The smallest storm available from StreamStats is a 2-year storm.

Table 4 - Comparison of Peak Discharge

Location	FIS Peak Discharge (cfs)					StreamStats Peak Discharge (cfs)				
	2yr	10 yr	50 yr	100 yr	500 yr	2yr	10 yr	50 yr	100 yr	500 yr
Rock Creek	-	1,832	4,208	5,497	8,905	628	2,630	6,080	8,140	14,200
Harshaw Creek										
Below confluence with Red Rock	-	2,955	6,725	8,601	14,217	884	3,680	8,470	11,300	14,500
Above confluence with Red Rock	-	1,390	3,149	4,155	6,683	639	2,670	6,190	8,280	10,600
Sonoita Creek										
Below confluence with Harshaw	-	5,374	12,879	17,253	27,660	1,260	5,180	11,800	15,600	20,100
Above confluence with Harshaw	-	-	-	-	-	948	3,940	9,050	12,100	15,400

As illustrated in **Table 4**, StreamStats calculated peak discharges are higher than the calculated streamflow in the FIS along Harshaw, but lower along Sonoita Creek. For this study, peak discharge values from StreamStats were used for calibrating the hydrologic model, as StreamStats provides a flow estimate for a wider variety of storms. The Sonoita Creek streamflow numbers below the confluence with Harshaw are only provided for comparison between the FIS and StreamStats; these values are not used in the modeling. Flow in Harshaw is modeled as a separate creek until it joins Sonoita Creek; therefore, the Sonoita Creek streamflow was determined, in the model, upstream of the Harshaw confluence.

The watersheds analyzed in this report are shown in **Figure 16**. The Sonoita Creek watershed used in the model terminates upstream of the Town, just upstream of the confluence with Harshaw. The Red Rock Creek watershed encompasses the entire Red Rock Creek contributing area up to the location where Red Rock flows into Harshaw. The Harshaw Creek watershed includes contributing areas upstream of the Red Rock confluence.

As can be seen on **Figure 16**, the assumed watershed boundaries exclude some areas downstream of the Harshaw confluence with Sonoita and therefore do not capture all

areas which would contribute flow to Sonoita Creek within the Town. As noted above, the purpose of this model is to understand the change in streamflow and water surface elevation (stage) based on the addition of 10 cfs. All rainfall and snowmelt runoff that will enter Sonoita Creek within the Town will not be impacted by the increase in flow in Harshaw Creek. Therefore, even if this water were included in the model, it would be identical between the models, and it would not impact the comparison of “normal” storm event versus a “normal +10 cfs in Harshaw” storm event. The watersheds used were selected to represent the water that enters Sonoita up to the confluence of Harshaw to capture the flows impacted by the increase in streamflow in Harshaw Creek.

5.7 Hydrologic Modeling

As noted above, StreamStats provides a peak discharge but does not provide a complete hydrograph. Streamflow hydrographs are required for an unsteady-state hydraulic model (where flow in the creek changes over time). To generate hydrographs for these three watersheds, a simplified hydrologic model was constructed in Autodesk’s Storm and Sanitary Analysis (SSA) software. SSA was used to perform calculations from United States Department of Agriculture Natural Resource Conservation Service (NRCS) TR-55’s curve number method and Clark Unit Hydrograph. An SSA model was built for each watershed, and the model was used to generate hydrographs for each storm. The parameters required for these calculations are time of concentration (a fixed parameter based on watershed length and slope) and curve number (a parameter that represents watershed slope, land cover, soil type, etc.).

As discussed in the project kickoff meeting on January 12, 2020, a full hydrologic analysis was not included in the scope of this work, and the current modeling was based on flow estimates generated by others. This is in part because watershed characterization has already been completed by FEMA and the USGS to generate peak discharge values, therefore this work does not need to be duplicated.

The approach taken was to essentially reverse engineer the curve number method. The NRCS curve number method uses curve numbers to represent a variety of watershed parameters in an approach that is both quantitative and qualitative; quantitative in that a single curve number is selected, but qualitative in that the curve number represents a

variety of watershed parameters (soil type, land cover, land slope, antecedent moisture conditions, etc.). The curve number is not partitioned into the characteristics it is trying to represent, rather, a number is selected bearing all these parameters in mind. The curve number was iteratively changed in the SSA model until the calculated hydrograph had a peak discharge which approximated the peak discharge calculated by StreamStats (with a target of within 1%). This resulted in different curve numbers being used for different frequency storms for the same watershed.

In order to calculate the hydrograph, Clark Unit Hydrograph method was used in SSA. This method requires a watershed time of concentration. The time of concentration is physically based and was generated by measuring flow path length, slope, and other parameters in ArcGIS using the DEM discussed in Section 3.2.1. The time of concentration is based on the 2-hour, 24-hour storm intensity. This parameter helps determine the shape of the hydrograph.

Watershed characteristics used in the hydrologic model, including subbasin area, curve number, time of concentration, and peak discharge are summarized in **Table 5**. A hydrograph was generated for each 24-hour storm event and tributary:

- Sonoita Creek - 2-yr, 10-yr, and 50-yr storm
- Harshaw Creek - 2-yr, 10-yr, and 50-yr storm
- Red Rock Canyon - 2-yr, 10-yr, and 50-yr storm

The SSA calculated hydrographs were used as input to the hydraulic model as well as the groundwater model. After the runoff hydrographs were generated, a second set of hydrographs for Harshaw Creek were generated in Excel by adding a constant 10 cfs to the basin hydrographs.

Figures 17, 18, and 19 provides the hydrographs from each subbasin for the 2-year, 10, year, and 50-year frequency, 24-hour storms, respectively.

Table 5 - Watershed Information and Calculated Runoff

Watershed	Area (ft ²)	Curve Number			Time of Concentration	SSA Calculated Peak Discharge (cfs)		
		2-year	10-year	50-year		2-year	10-year	50-year
Harshaw Creek	20,950	66.29	69.37	83.25	4 hrs 20 min	639	2,671	6,191
Red Rock Creek	20,210	67.01	70.93	85.83	4 hrs 55 min	628	2,630	6,085
Sonoita Creek	47,760	63.78	65.26	77.24	5 hrs 2 min	949	3,941	9,053

ft² = Square feet
 cfs = Cubic feet per second
 NA = Not applicable

6.0 GROUNDWATER FLOW MODEL

Figure 20 illustrates the overall grid and boundary conditions used to simulate flow. The numerical groundwater flow model includes 573 rows and 355 columns of 100-foot square model cells, totaling 406,830 cells, with 205,754 active cells. The model has 2 layers, representing the alluvium and the underlying bedrock.

6.1 Model Structure

The top elevation of the groundwater model was established using DEM data from the USGS National Map (<https://www.usgs.gov/core-science-systems/national-geospatial-program/national-map>). These data are available as raster images at a 10-meter (3.28 feet) resolution. **Figure 21** shows the land surface elevation in the model area in feet above mean sea level (Meters-AMSL). These data were converted to feet above mean sea level for inclusion in the model.

6.1.1 Model Layers

The groundwater model was constructed using well data to establish the thickness of Layer 1, which represents the alluvial fill, as shown in **Figure 22**. Deep wells with drillers' logs were evaluated to estimate the thickness of alluvium, as noted on **Figure 22**. The Arizona Geological Survey (AZGS) has also compiled a map of the estimated depth to bedrock for alluvial basins (AZGS, 2007). The thickness of alluvium is contoured in purple on **Figure 22**. Generally, the alluvium varies from 0 to about 500 feet, which is consistent with the available data for the model area.

Layer 2 was added to accommodate recharge and underflow where the alluvium was not saturated. The layer is uniformly 394.4 feet thick in the model area.

6.1.2 Hydraulic Properties

Based on an evaluation of information from the Nassereddin (1967) thesis, the average hydraulic conductivity in the basin is approximately 45 ft/d with higher values near Sonoita Creek. Only one aquifer test was identified (Halpenny, 1964), conducted on a

well noted on **Figure 14**, which indicated transmissivity values of 101,000 to 212,000 gpd/ft (13,500 to 28,338 ft²/day. Based on the available well information, this would represent a hydraulic conductivity of 259 to 544 ft/d. The test also indicated an estimated specific yield of 0.20.

Figure 23 shows the calibrated hydraulic conductivity for model Layer 1, which varies from 0.5 to 100 ft/d. The highest values parallel Sonoita Creek, and lower values are located in the upland areas. **Figure 24** shows the calibrated hydraulic conductivity for model Layer 2, which varies from 0.04 to 1.0 ft/d.

Storage parameters were uniformly set for the model domain, with confined specific storage set to 1.0×10^{-5} per ft (both layers) and specific yield set to 0.15 (Layer 1) and 0.03 (Layer 2). Although zones were established based upon the hydraulic conductivity zones, values remained constant as described for each layer.

6.1.3 Recharge

Groundwater underflow and mountain front / mountain block recharge were simulated using the recharge package, which was broken down by sub-watershed. The basic groundwater budget for the model domain includes recharge from precipitation, which exits the basin primarily as surface flow in Sonoita Creek south and west.

The PRISM (Parameter-elevation Regressions on Independent Slopes Model) Climate Group at Oregon State University collects and presents precipitation data for the United States (<https://prism.oregonstate.edu/>). These data are converted to gridded data on an 800-meter grid spacing for the entire US⁴. Additional data products for average values are available for 2-kilometer grid spacing. These data are an excellent basis for estimating recharge rates.

Annual effective recharge rates have been calculated for the period 2000 to 2013, and are available (<https://www.sciencebase.gov/catalog/item/55d383a9e4b0518e35468e58>),

⁴ These data are available annually, but have a high cost. The PRISM Climate Group also provides 30-year average annual values for free, as raster data for the continental US.

which were derived from regression analysis of the PRISM data. This process is documented in Reitz, Meredith, Sanford, W.E., Senay, G.B., and Cazenias, Jeffrey, 2017, *Annual estimates of recharge, quick-flow runoff, and ET for the contiguous US using empirical regression equations, 2000-2013: U.S. Geological Survey data release*, <https://doi.org/10.5066/F7PN93P0>. These estimates can form the basis for estimating model recharge rates.

Figure 25 illustrates the effective recharge rates in meters per year for 2013, using the gridded dataset. Assuming each cell represents 173.34 acres (based on number of cells and area covered), the average recharge rate (2000-2013) for the model watershed area was 11,338 AF/yr (15.7 cfs), which is shown on **Table 6**⁵. This represents 5.2% of total precipitation, based on the average rate of precipitation and the area of the watershed. Because all of the watersheds do not enter the model domain, a second estimate was made of only the watersheds which would enter the model domain, which is 9,220 AF/yr (12.7 cfs). This rate was determined to be high based on other published materials, and this estimate may fail to reflect losses to evapotranspiration or runoff accurately. For this reason, the effective recharge rates were used as a basis for recharge distribution in the model, with total rates calibrated to 3,412.7 AF/yr (4.7 cfs). Recharge zones for the model were set to represent mountain front recharge and locations of underflow. Recharge rates were entered to the model in units of ft/d, and MODFLOW converts this to a volumetric rate based on the area of each cell. **Figure 26** illustrates the calibrated recharge rates for the model. Ultimately, the recharge rate was calibrated to 3,412 AF/yr (4.7 cfs), or 1.6% of the watershed of the active model domain, consistent with estimates made by the USGS and other researchers.

Constant head cells were added to the model to simulate outflow at the southwest end in Layer 2. The flow simulated was 129 AF/yr (0.18 cfs). Although recharge and underflow (combined total) are significantly less than the initial estimates, it is likely that the model does not simulate all of the flow that enters or leaves the area, as the model

⁵ The effective recharge raster datasets were analyzed for 2000-2013 for the model watershed area and the analysis is presented in Table 6.

does not cover the bedrock flows in full. Because the model outflows are largely surface baseflow in Sonoita Creek, the inflow rates essentially have to match the surface outflow. The recharge that enters the model from the tributary canyons and streams may have unaccounted losses prior to entering the model domain, such as ET and cross-basin underflow.

6.1.4 Evapotranspiration

MODFLOW can also incorporate evapotranspiration (ET) by applying a withdrawal of water from the model using a rate in feet per day to a depth limit defined as the extinction depth below which no evapotranspiration is assumed to occur. **Figure 13** illustrates the cells where evapotranspiration was simulated, with an extinction depth of 25 feet. If groundwater is less than 25 feet below the land surface for the model cell, then MODFLOW calculates an outflow rate based on the 0.0083 ft/d calibrated rate. This rate resulted in 94.5 AF/yr (0.13 cfs) of ET, which is much less than the estimated mass balance amount of 1,300 AF/yr (1.8 cfs) (**Table 1**). Based on the small area of phreatophytes mapped by CropScope, the ET rate estimated initially, appears to be too high.

6.1.5 Well Pumping

The steady-state simulation represents pre-development conditions with average groundwater pumping. Because water levels are observed to be generally stable, it is assumed that the existing pumping rates are too low to have any significant regional impacts, as evident from the stable water level hydrographs (see **Figure 15**). Pumping rates are presented in **Table 2**, and the simulated wells are shown on **Figure 4**. Overall simulated pumping is 266.7 AF/yr (0.37 cfs).

6.1.6 Stream Flow Routing Package

Surface flows in Sonoita Creek and Harshaw Creek were simulated using the streamflow routing package (SFR) for MODFLOW. This package specifies the geometry of the stream channel (width and length in each model cell, along with the slope of the channel). **Figure 20** shows the cells simulated with the SFR package, and **Figure 27**

shows a zoomed view near the Town. Each segment is broken into individual cells (reaches) which are numbered sequentially downstream starting with 1. Each new segment starts over with 1, with simulated flows routed to the next cell downstream. The SFR package computes flow and stage height for each cell, by subtracting or adding flow to and from groundwater in each cell based on the hydraulic conditions. If the groundwater level is below the bottom of the channel, then water will leak out of the channel into groundwater, with surface flow decreased. If groundwater levels are above the level of the stream bottom, then groundwater will discharge to the stream, increasing surface flow. The stream channel is specified in the SFR package using a width, length and conductance term for each model cell. Length is calculated for the stream length in each model cell, while width is either estimated from available data (such as Google Earth), or specified in a cross section. Flow to and from groundwater is calculated based on the individual cell conductance and the elevation of groundwater relative to the channel bottom. The conductance term is computed by multiplying the wetted area of the stream cell by a value of hydraulic conductivity. For this model, all stream cells were assigned a hydraulic conductivity of 0.1 ft/day which resulted in a good calibration to observed water levels (see discussion in Section 6.2).

The SFR package acts as a surface flow accounting system, tracking flow and adding or subtracting flows to/from groundwater. Stage height in each reach may be calculated using one of three methods:

- A simple rectangular channel, using Manning's equation;
- Flow tables, which specify stage at listed flow rates; or,
- An eight-point cross section to approximate the channel geometry.

The cross sections were developed for the surface water model, and were subsequently simplified into eight points for use in the numerical groundwater flow model. An example cross section is shown in **Figure 28**, for stream segment 15. The blue dots represent the points from the surface water model, and the numbered points indicate the points chosen for the 8-point representation in the groundwater model. Segments 3-19 were simulated using 8-point sections, while Segments 1, 2 and 20 used a rectangular channel. The model then estimates the stage height based upon the flow

rates and cross-sectional area. **Appendix D** includes figures outlining the cross sections for segments 3-19.

The base model simulation also includes 40,000 gallons per day of effluent releases from the Town's Wastewater Treatment Plant. These flows are added to segment 18 as runoff, meaning they are added to each reach (model cell) of stream segment 18 along its length.

6.2 Steady-State Model Calibration

The groundwater levels presented in **Figure 5** were used as model targets for calibration. The model calibration was conducted manually, with recharge rates and hydraulic conductivity zones and values adjusted to improve the statistical match between simulated and observed conditions. **Table 7** presents the statistical summary of the model, where the calibrated scaled root mean square error (RMSE) is 3.4%. Standard industry practice requires that model calibration should achieve a scaled RMSE that does not exceed 10%, but a scaled RMSE of less than 5% was chosen as the target for this project.

Table 7 – Steady-State Model Calibration Statistics

Statistic	Value
Residual Mean (ft)	-1.95
Absolute Residual Mean (ft)	16.12
Residual Std. Deviation (ft)	19.27
Sum of Squares (ft ²)	24,385.01
RMS Error (ft)	19.37
Min. Residual (ft)	-38.69
Max. Residual (ft)	52.04
Number of Observations	65
Range in Observations (ft)	570.11
Scaled Residual Std. Deviation (ft)	0.0338
Scaled Absolute Residual Mean (ft)	0.0283
Scaled RMS Error	3.40%
Scaled Residual Mean (ft)	-0.0034

Figure 29 illustrates the match between the measured target values and the model simulated values. The match is excellent, with simulated groundwater levels in the middle elevations of the model area slightly low, and the large cluster of groundwater levels in the Town split between positive and negative residual error.

Figure 30 illustrates the comparison between the measured groundwater levels and model simulated groundwater levels. The match is generally good, with contours of simulated and observed groundwater level data approximately parallel with similar hydraulic gradients between the simulated and observed data. This is an important factor in evaluating model calibration, because groundwater flows perpendicular to the contours, at a velocity that is proportional to the hydraulic gradient. The consistency between the contours of simulated and measured data indicate that the model accurately predicts groundwater flow directions and velocity.

Since groundwater flows perpendicular to, which indicates that groundwater flow directions and velocity Note that there are a mix of positive (model simulates too low) and negative (model simulates too high) residual errors across the model domain indicating there is no significant geographic bias in the calibration. The residual mean error of -1.95 indicates the simulated groundwater levels are slightly high but overall, the model falls within acceptable standards.

6.3 Sensitivity Analysis

As part of the model evaluation, a sensitivity analysis was completed, adjusting the horizontal hydraulic conductivity (K_x and K_y), the vertical hydraulic conductivity (K_z) and the recharge rates. A sensitivity analysis adjusts the model parameters individually by fixed multipliers, assessing the impact of each change on the model calibration. Hydraulic conductivity values (K_x , K_y , and K_z) were adjusted by factors of 0.1, 0.5, 1.0, 5.0 and 10.0. Recharge rates were adjusted by factors of 0.5, 0.8, 1.0, 1.2 and 1.5, since recharge rates are more generally constrained than conductivity values. Groundwater Vistas™ software automatically conducts the simulations and presents a sum of squares residual for each simulation.

6.3.1 Model Sensitivity for K_x

Figure 31 presents the ten most sensitive hydraulic conductivity zones based on the sum of squares residuals. The Y-axis shows the sum of squares residual, normalizing to 1.0. The X-axis shows the multiplier used. Based on these results, the model is most sensitive to variations in zones 1, 2 and then 8. These zones follow the main channels of both Sonoita and Harshaw Creeks and also coincide with the location of most of the water level observations, hence they are more sensitive than surrounding zones. Because the majority of the flow is in Layer 1, the model is most sensitive to the parameters in this layer. **Figure 23 and 24** lists the model hydraulic conductivity zones for each layer for reference.

6.3.2 Model Sensitivity for K_z

Figure 32 presents the sensitivity of the vertical hydraulic conductivity zones based on the standard deviation of the results. Clearly, the model is very insensitive to vertical hydraulic conductivity values, as the sum of squares did not change significantly. Based on these results, the model is most sensitive to variations in zones 7 and 5. The zones match those presented in **Figures 23 and 24** and coincide with the edges of the model where recharge is added to the model resulting in local downward vertical flow. Based on the sum of squares values, the vertical K sensitivity is much less than the horizontal K sensitivity.

6.3.3 Model Sensitivity for Recharge Rates

Figure 33 presents the sensitivity for the 9 zones (**Figure 26**) for recharge rates (Zone 1 is set to zero for the areas not receiving recharge). Generally, the model is not significantly sensitive to recharge across zones, although the range of multipliers used for this analysis range from 0.5 to 1.5, less than those used for hydraulic conductivity. The model is most sensitive to lower rates of recharge in Zone 3, which represents recharge from Big Casa Blanca Canyon. The model is most sensitive to higher rates of recharge in Zone 8, which represents recharge from Red Rock Canyon. This zone is also the second most sensitive to lower rates. Generally, the sensitivity of the model in the other zones is limited. The recharge sensitivity results indicate that a slight improvement in calibration may be possible by raising recharge from Zone 3. However, this improvement would not alter the results and conclusions of the model, therefore, it was not attempted.

7.0 HYDRAULIC ANALYSIS

A hydraulic model is a mathematical model used to determine how water moves in a stream and floodplain. Hydraulic models are typically either a steady state model or an unsteady model. The term steady state means that a constant rate of flow (usually the peak discharge) is applied throughout various stream segments. The rate of flow in the stream does not vary over time as there is no time component to a steady state model, it's just a snapshot of a given discharge. However, a steady state model provides limited information regarding the connectivity of various stream reaches and does not simulate backwater effects well (e.g. where a bridge constricts the flow in a stream). An unsteady model varies the stream flow over time by routing input hydrographs. A hydrograph is applied at the beginning of the stream reach (and along the stream reach as needed), and the model calculates how that flow moves from cross section to cross section down through the rest of the stream segments in the model. Previous modeling efforts by FEMA included only a steady state analysis of the Study Area. An unsteady model was used for this effort to better represent stream hydraulics around the bridge and because the groundwater model requires a hydrograph for input.

The purpose of constructing a hydraulic model in this study was to evaluate the change in flood risks within the Town due to the maximum potential continuous discharge of 10 cfs to Harshaw Creek. The hydraulic model was developed in the US Army Corp of Engineer's Hydrologic Engineering Center's River Analysis System (HEC-RAS). HEC-RAS is a standard hydraulic modeling platform used to evaluate flows through streams. A HEC-RAS model will calculate the maximum water surface elevation (stage) for a given storm at each cross section. That water surface is then applied to the stream and the adjacent floodplain to determine the depth of water in the stream and, as needed, in the floodplain. The HEC-RAS model was used to simulate the 24-hour 2-year, 10-year, and 50-year storm events without the 10 cfs. Then, the input hydrograph for Harshaw Creek was adjusted to include the continuous 10 cfs and the model was re-run.

The model used in this study was adapted from the geometry of the model developed by FEMA, but required updates to construct a stable model for unsteady flow. This

facilitated simulation of the water levels in the creek throughout the duration of a storm (not just at the time of peak discharge). All stream reaches were connected with stormwater moving freely between the separate reaches.

For the purposes of this study, in the HEC-RAS model, no water is allowed to infiltrate into the stream or floodplain, all water is conveyed through the model. In reality, infiltration will occur through the stream bed, stream banks, and (when present) into the floodplain. The zero-infiltration assumption is a conservative assumption that provides a maximum calculated water surface elevation (stage) throughout the model. Additionally, the HEC-RAS model assumes no lateral inflow from groundwater (see the groundwater modeling section of this report for more discussion of this assumption).

7.1 Study Area for the Hydraulic Model

At its simplest, a HEC-RAS model consists of a series of cross sections along a channel flow-path. These cross sections are located such that sufficiently realistic definition is given to the channel. An example cross section from the model is shown on **Figure 34**.

For the most recent mapping effort by FEMA, the model area (Town) was broken up into several distinct model areas which included Sonoita Creek and several tributaries – the lower portion of Harshaw Creek, the lower portion of Red Rock Canyon, and “Tributary A” located downstream of the Highway 82 Bridge over Sonoita Creek. There were also two separate models for the Sonoita Creek floodplains near the Highway 82 bridge that allowed water to leave the stream flood plain (e.g. on the north side water flows over SR82 to the west side of the road), then return to the stream later (the water that flows over SR82 flows along SR82 and returns to Sonoita Creek after the bridge). However, a greater number of connected tributaries on a stream greatly increase unsteady flow model stability. Therefore, the lower portion of Harshaw Creek and Sonoita Creek (**Figure 34**) were directly modeled. While the WTP2 flow into Harshaw Creek occurs roughly 10 miles upstream from the confluence with Sonoita, the 10 cfs constant discharge is introduced into the hydraulic model at the upstream boundary of the simulated length of Harshaw Creek, approximately one mile from the confluence. This conservatively assumes that none of the 10 cfs infiltrates or evaporates before it reaches the boundary of the surface water model. The flow from Red Rock Canyon was added to

Harshaw Creek as a lateral inflow, so that water is still accounted for in this model. This model also added several cross sections to Sonoita Creek downstream from the previous model boundary to ensure that any effects of flow from the Patagonia Wastewater Treatment Plant were fully accounted for.

7.2 Hydraulic Model Inputs

7.2.1 Flow Hydrographs from the Hydrologic Model

Inflow hydrographs were used as the boundary conditions for the upstream boundaries of the model and to simulate tributary flows from Red Rock Canyon. Additionally, for the 10-year and 50-year, 24-hour storm simulations, water flowed out of Sonoita Creek upstream of the Highway 82 bridge and into the left and right overbanks. This flow was accounted for as leaving the main model and used as the inflow boundary conditions on two separate floodplain flow models that convey the water until it returns to the stream (similar to the FEMA model described in the previous paragraph). The downstream discharge from each floodplain model was brought back into the main model as a lateral inflow at the appropriate cross section.

7.2.2 Model Geometry

The DEM described in Section 2.2 was used to generate model geometry including flow paths and cross sections. In some cases, the cross-sectional geometry from the FEMA model was used, although an unsteady flow model generally requires more channel definition than a steady state flow model. Therefore, a substantial increase in the number of cross sections was required for model stability. New cross sections were drawn and their geometry was generated using the raster DEM.

HEC-RAS's default is to take all of the water at a cross section and evenly distribute it across the cross section. However, particularly in natural systems, it's common that part of the floodplain area is lower than the bank elevation of the stream (see the example cross section on **Figure 34**). Therefore, HEC-RAS would automatically spread the water within the stream banks and within the low-lying areas of the floodplain. In reality, the water level in the creek will need to rise above the bank elevation before it can flow into

the floodplain. Therefore, HEC-RAS has a tool to define a certain elevation (specific to each cross section) in the model that the water surface must reach before it can move beyond that point laterally. This tool is called a levee point. Levee points were used in HEC-RAS to allow water to remain in the channel in many cross sections where overbank elevations were lower than that of the main channel.

To calculate water movement in a channel, the channel roughness (represented by the parameter "Manning's n") must be determined. Typical values for Manning's n are provided in literature and capture various effects that impact how freely water flows across a surface. These effects include quantity and type of vegetation within the flow area, channel straightness, presence and depth of shoals and depressions, and the presence and size of rocks and boulders. In the FIS, FEMA described the field work and literature review used to determine Manning's n values in the channel for their modeling. Based on review of the FIS documentation of Manning's n selection, the current study used that same Manning's n of 0.035 within all channels in all reaches, consistent with the FEMA modeling. Likewise, this model used a Manning's n value of 0.05 for floodplain areas outside the channel, consistent with the FEMA model.

7.3 Hydraulic Model Results

As described above, the standard storm events were modeled in HEC-RAS first, which did not include the 10 cfs continuous flow in Harshaw. A maximum water surface extent was generated for each event. After those analyses were completed, each storm event was modeled where the hydrograph for Harshaw Creek included the constant 10 cfs. Again, maximum water surface extent was generated for each event. The impact of 10 cfs can be determined by comparing the extent and the elevation of the water surfaces from each storm with and without the 10 cfs. **Figures 35a through 40** show water surface extents and comparison of the water depths. **Figures 35a, 37a, and 39a** show the extent of flooding without the 10 cfs and **Figures 35b, 37b, and 39b** show the extent of flooding with the 10 cfs added. **Figures 36, 38, and 40** show the calculated difference in water surface elevation between storms with and without the 10 cfs. Positive calculated differences indicate an increase in water level as a result of the added flow.

Hydraulic analysis for Sonoita Creek indicated a change of less than 0.5 inch in flood depth within the extent of the model with the addition of WTP2 discharge to Harshaw Creek. In addition, there is essentially no change in the flooded area due to the addition of the 10 cfs to the flood flows simulated. **Table 8** summarizes the results of the surface water model.

Table 8 - Summary of surface water modeling results

Simulated storm frequency and duration	Peak discharge at Sonoita Creek Bridge (cfs)		Increase in Peak Discharge at Sonoita Creek Bridge (cfs)	Maximum increase in maximum flood surface depth across watershed (inches)	% Channel Water Height at Location of Maximum Increase
	Without 10 cfs in Harshaw Creek	With 10 cfs in Harshaw Creek			
2-year, 24-hour	2,176	2,186	10	0.39	0.7%
10-year, 24-hour	8,891	8,902	11	0.27	0.2%
50-year, 24-hour	12,346	12,347	1	0.35	0.2%

7.4 Sensitivity Analysis for Hydraulic Model

A sensitivity analysis was conducted for this study to determine the impact to model results of small changes to an assumed parameter. The primary parameter which is assumed for the hydraulic model is Manning’s roughness coefficient, *n*. As described above, a Manning’s *n* of 0.035 was assigned to the channels in all reaches of the model to match the *n* selected by FEMA. The sensitivity analysis was only conducted for unsteady flow which included the additional 10 cfs into Harshaw Creek from WTP2.

The Manning’s *n* was modified across the model either by increasing or decreasing *n* in the channel to assess how sensitive the model was to changes in assumed roughness. For the 2-year, 24-hour storm simulation, changes in channel roughness minimally affected peak discharge at various locations throughout the model. At the locations where comparisons of peak discharge were made, the largest change in peak discharge

was -0.56% when n was changed from 0.035 to 0.05. It should be noted that a change in channel n from 0.035 to 0.05 is a large shift in assumed roughness.

The effect of changing Manning’s n on peak discharge throughout the model was more notable in the 10-year and 50-year, 24-hour storm simulations. This effect was most evident where water backs up near the bridge and is shown to cross over Highway 82. To illustrate the impact of the change in Manning n, **Table 3** shows the peak flow over Highway 82 in the left and right overbank near the bridge for various Manning’s n.

Table 4 summarizes the difference between the peak discharges in **Table 9** when n is adjusted away from n=0.035 (the value used in this study).

Tables 9 and 10 illustrate that the model is sensitive to the assumed Manning’s n in the channel. As would be expected, if Manning’s n is lowered, roughness is decreased and water moves through the channel more quickly and there is less flooding. If Manning’s n is raised, roughness is increased and water is slowed resulting in more water going over Highway 82.

Table 9 - Peak flow overtopping Highway 82 near Sonoita Cr. Bridge for varying channel roughness (n)

Location	Channel n	Peak discharge: 10-yr, 24-hour (cfs)				Peak discharge: 50-yr, 24-hour (cfs)			
		n=0.030	n=0.035	n=0.040	n=0.050	n=0.030	n=0.035	n=0.040	n=0.050
Right overbank		6	109	393	662	5,561	5,766	5,267	5,814
Left overbank		103	106	116	110	2,209	1,983	861	597

Table 10 - Change in peak flow overtopping Highway 82 near Sonoita Cr. Bridge for varying channel roughness (n)

Location	Channel n	Change in Peak discharge: 10-yr, 24-hour (cfs)			Change in Peak discharge: 50-yr, 24-hour (cfs)		
		n=0.030	n=0.040	n=0.050	n=0.030	n=0.040	n=0.050
Right overbank		-103.3	283.7	552.9	-204.9	-499.4	48.4
Left overbank		-3.5	9.1	3.5	225.4	-1122.8	-1386.4

8.0 GROUNDWATER MODEL SIMULATIONS

As outlined in Section 4.1, the groundwater flow model was used to evaluate the impacts from the discharges from the WTP2 at the Hermosa Mine into Harshaw Creek. The proposed discharge of 10 cfs will be added to Harshaw Creek at the location noted on **Figure 1**. The model-simulated discharge point was established at a location approximately 10 miles downstream from the actual proposed WTP2 discharge location thereby conservatively assuming that all of the 10 cfs discharge flows to Sonoita Valley with no losses from infiltration or evapotranspiration. Simulations including 10 cfs of flow in Harshaw Creek are added to the streamflow routing package (SFR) at the edge of the model domain where Harshaw Creek enters the domain.

Simulations were also conducted to evaluate the impact of flood events on groundwater levels, based upon the surface water model results. The purpose of these simulations was to determine whether the additional flooding or high groundwater levels may be expected in conjunction with the WTP2 discharges.

8.1 Impact of Harshaw Creek Discharge

A groundwater simulation was completed which included 10 cfs of surface flow added to Harshaw Creek for a 5-year period, followed by 5 years of recovery with no flow.

Figure 41 illustrates the change in groundwater levels after 5 years of continuous flow in Harshaw Creek. The largest increase occurs along Harshaw Creek near the start of the first segment. Water levels rise between 2 to 3 feet in the area of the Town, increasing to the east and south.

Figure 42 shows the change in groundwater levels after 5 years of flow, then 5 years of recovery with no flows. Residual groundwater level rises exceed 1 foot in few areas, but have recovered to within a foot in most areas.

Figure 41 also shows the minimum depth to water levels measured at wells historically. The shallowest measurement was 7 feet, at well 55-809433. The change simulated at this location is 2.30 feet after 5 years, and **Figure 43** illustrates the impact of 2.30 feet of

additional rise compared to measured depth to water historically. As evident, 2.30 feet of water level rise would not result in water reaching land surface.

Figure 44 illustrates the flow in Sonoita Creek after 5 years of undiminished inflow, after 10 years (5 years of recovery) and the simulated steady-state flow. This profile shows the simulated flow rate down the channel from the northeastern end of the model. Flow from Harshaw Creek joins Sonoita Creek at about 45,000 feet down the channel, and rises as baseflows are added beyond the Town. Based on these simulation results, baseflow conditions prior to the releases will return within 5 years after flows cease.

8.2 Harshaw Flows with 2-Year Storm Event

A simulation was conducted which included a 2-year recurrence interval storm event added onto the end of the 5-year flow in Harshaw Creek, to determine whether the impact of storm events would be greater with flows in Harshaw Creek. The event covers a 48-hour period, which is the time for which a precipitation event gathers and enters the streams. The model simulates 5 years of flow using annual stress periods, and then includes 48 hours of 10-minute stress periods. Flow data for the storm event were derived from the surface water model simulations. **Figure 45** illustrates flow at the State Route 82 bridge⁶. These flow rates are similar to the flows simulated in the surface water model. Maximum flow is 2,169 cfs after 16 hours at the bridge.

Figure 46 shows the additional change in groundwater levels due to the 2-Year recurrence flood event, after 5 years of 10 cfs flow in Harshaw Creek. The difference map represents the change after 48 hours of the flow event. The additional water level rises are less than 0.5 feet, and are generally 0.1 to 0.3 feet. These changes are confined to the areas immediately adjacent to Harshaw and Sonoita Creeks. Based on these data, groundwater levels will rise less than half a foot from a 2-year recurrence storm event during the Harshaw Creek 10 cfs discharge period.

⁶ This figure also includes the flows from a 50-Year recurrence flood event which will be discussed in the next section.

Figure 47 illustrates changes in simulated groundwater levels at well 55-809433 during the flood events. This well has the shallowest measured depth to water (7 feet), and the model is simulating an additional 0.2 feet of rise during the 2-Year recurrence storm event. This additional rise in water levels would not reach land surface.

8.3 Harshaw Flows with 50-Year Storm Event

As noted, a second simulation was conducted based on the 50-year recurrence flood event. As noted in **Figure 45**, the flows are much greater, with a peak discharge of 21,061 cfs after over 15 hours. A 50-year flood event will cause significant flooding in the Town, and will cause groundwater level rises. **Figure 47** also shows the increase in water levels at well 55-809433 during the 50-Year flood event. The change is approximately 0.6 feet, peaking after 24 hours of flow.

Figure 48 shows the change in groundwater levels after 24 hours of flood flows, as this approximately represents the greatest change. Some areas have over 2 feet of groundwater level rise, particularly along Harshaw Creek. Since the depth to water in this area exceeds 30 feet historically, this change will not result in groundwater reaching land surface.

9.0 CONCLUSIONS

Groundwater and surface water modeling were used to assess the potential impact of discharging 10 cfs of treated water from the AMI Hermosa Project into Harshaw Creek. The Town was concerned that the additional flow to Harshaw Creek would increase groundwater levels through recharge along Harshaw and Sonoita Creeks as well as exacerbate flood flows in the town. The modeling performed as part of the project was designed to quantify impacts using industry-accepted techniques, assumptions, and software.

The result of the modeling indicates that a constant inflow of 10 cfs to Harshaw Creek from WTP2 (assuming no infiltration or evapotranspiration losses for approximately 9 miles of flow) would have minimal impacts to flood flows in the Town during the simulated 2-year, 10-year, and 50-year, 24-hour storm events. Projected surface water level rises attributable to the 10 cfs are less than 0.5 inch. As can be seen in **Table 4**, 10 cfs is a very small percentage of even the 2-year storm event, therefore, the impact to stormwater water surface elevation is small.

The groundwater modeling shows that the addition of 10 cfs to Harshaw Creek would cause groundwater mounding along both Harshaw and Sonoita Creeks with the maximum predicted mounding to be about 4.5 feet after 5 years of flow. The area of projected maximum water level rise is where Harshaw Creek enters the basin. Within the Town, projected water level rises are mostly in the range of 2 to 3 feet. After five years of recovery, groundwater levels were predicted to return to pre-discharge levels. Additional mounding from flood events on top of the long-term discharge impacts was also evaluated. For the largest flood event, the 50-year, 24-hour event, additional mounding of up to two feet may occur. Under no scenarios simulated did groundwater mound to ground surface except in the areas of predicted perennial flow along Sonoita Creek where it already is at the ground surface.

10.0 REFERENCES

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TABLES

Table 1
Groundwater Budget from Published Sources
Patagonia Groundwater Model

SOURCE	INFLOWS (AF/yr)	DATA SOURCE OR EXPLANATION
Natural recharge and Underflow from Sonoita Creek	3,691	Based on evaluation of PRISM data; water shed areas; and Sonoita Ck discharge flows below Patagonia
Sonoita Creek surface water base flows	0	Sonoita Creek typically lacks base flows upstream of Patagonia
Effluent discharges	100	ADWR AZ Water Atlas
TOTAL	3,791	
SINK	OUTFLOWS (AF/yr)	DATA SOURCE OR EXPLANATION
Pumpage from wells	250	Town of Patagonia wells plus 0.5 AF/yr for each ADWR-registered private well
Sonoita Creek surface water base flows	3,300	Nature Conservancy gage average flow 1992-2020
Underflow along Sonoita Creek	146	Assume 700 ft wide by 500 ft sat thickness = 350,000 sf area * 0.01 ft/ft gradient * 5 ft/day = 17,500 ft ³ /day = 146 af/yr
ET	94.5	CropScape data for "Woody Wetlands" and "Herbacious Wetlands"
Spring and seep discharge	0	Flow either re-infiltrates downstream or is lost to ET
TOTAL	3,791	
DELTA (AF/YR)	0	
DELTA (% OF INFLOW)	0.00%	

Table 3
Model Target Water Levels
Patagonia Groundwater Model

Name	East	North	Layer	Observed	Computed	Weight	Group	Residual
1077	1057891.95	195779.66	1	4036.33	4015.74	1	1	20.59
1078	1061217.95	196873.02	1	4009.00	4038.54	1	1	-29.54
1079	1062312.26	198158.21	1	4024.00	4044.54	1	1	-20.54
1080	1061932.05	197804.05	1	4052.00	4042.57	1	1	9.43
1081	1061851.32	197692.07	1	4049.48	4042.13	1	1	7.35
1082	1062002.37	198413.42	1	4023.00	4044.06	1	1	-21.06
1083	1059900.80	198469.42	1	4057.56	4040.79	1	1	16.77
1084	1058908.62	197336.60	1	4046.33	4032.22	1	1	14.11
1085	1060763.14	199024.99	1	4012.39	4042.92	1	1	-30.53
1086	1063699.99	199561.52	1	4035.00	4048.95	1	1	-13.95
1087	1063787.68	199461.68	1	4031.83	4049.14	1	1	-17.31
1088	1062572.68	199098.75	1	4028.80	4046.11	1	1	-17.31
1089	1062663.82	199003.26	1	4030.92	4046.25	1	1	-15.33
1090	1065189.79	197859.50	1	4067.64	4051.16	1	1	16.48
206248	1070234.55	202269.85	1	4120.00	4095.85	1	1	24.15
517701	1065958.29	194567.46	2	4034.00	4057.12	1	1	-23.12
538247	1066961.70	195552.38	1	4023.00	4052.28	1	1	-29.28
538617	1070523.81	202879.80	1	4105.00	4106.09	1	1	-1.09
544272	1069631.36	199147.90	1	4098.10	4061.38	1	1	36.72
567459	1075281.99	202170.86	1	4169.00	4169.73	1	1	-0.73
574506	1072314.35	199090.15	1	4127.00	4111.60	1	1	15.40
575487	1068726.52	198634.63	1	4048.00	4056.38	1	1	-8.38
586146	1056537.11	185960.86	1	4053.00	4020.88	1	1	32.12
595940	1071310.44	197385.46	2	4069.00	4080.87	1	1	-11.87
596204	1057156.98	186099.04	1	4023.00	4022.19	1	1	0.81
605339	1060508.95	198517.34	1	4020.30	4041.67	1	1	-21.37
605595	1063393.55	199497.09	1	4039.00	4048.11	1	1	-9.11
605596	1063276.44	199322.74	1	4039.00	4047.76	1	1	-8.76
611488	1063147.11	200585.32	1	4055.54	4048.61	1	1	6.93
613792	1061670.90	198012.02	1	4040.65	4042.48	1	1	-1.83
624224	1069888.08	203569.65	1	4106.13	4110.46	1	1	-4.33
624225	1068356.62	202642.39	1	4114.96	4098.11	1	1	16.85
624881	1074503.56	231295.62	2	4372.22	4354.77	1	1	17.45
624890	1069238.27	207357.35	1	4150.66	4137.20	1	1	13.46
626069	1068184.94	201024.52	1	4077.00	4070.00	1	1	7.00
626070	1067681.14	201286.32	1	4055.63	4077.45	1	1	-21.82
626071	1066464.94	199995.31	1	4070.00	4061.36	1	1	8.64
626072	1063877.52	199159.21	1	4064.00	4049.23	1	1	14.77
626075	1067917.49	201729.25	1	4073.00	4084.99	1	1	-11.99
626076	1067681.14	201286.32	1	4056.55	4077.45	1	1	-20.90
630466	1069179.20	212639.74	1	4152.60	4166.05	1	1	-13.45
635157	1070226.77	222872.88	1	4288.90	4260.34	1	1	28.56
641113	1070427.86	197848.34	1	4066.10	4058.55	1	1	7.55
641361	1065740.05	198644.14	1	4037.00	4053.13	1	1	-16.13
641601	1066425.70	238390.06	2	4579.11	4580.85	1	1	-1.74
644363	1066390.55	198652.86	1	4015.50	4054.19	1	1	-38.69
644387	1075487.20	203382.65	2	4176.00	4175.39	1	1	0.61
644520	1070544.01	228748.05	1	4382.40	4330.36	1	1	52.04
644974	1069044.36	214427.77	1	4182.73	4175.86	1	1	6.87
645557	1061288.90	198424.45	1	4010.00	4042.58	1	1	-32.58
645833	1069028.92	198224.68	1	4061.98	4056.43	1	1	5.55
646413	1063147.11	200585.32	1	4053.67	4048.61	1	1	5.06
646565	1065607.94	199105.00	1	4033.00	4053.44	1	1	-20.44
646910	1061142.83	198279.37	1	4017.68	4042.01	1	1	-24.33

Table 3
Model Target Water Levels
Patagonia Groundwater Model

Name	East	North	Layer	Observed	Computed	Weight	Group	Residual
646914	1063128.33	197062.33	1	4060.88	4045.01	1	1	15.87
647913	1068815.48	203537.66	1	4119.50	4107.46	1	1	12.04
649405	1061103.35	196977.06	1	4019.23	4038.48	1	1	-19.25
649406	1062116.24	198340.35	1	4010.00	4044.24	1	1	-34.24
650012	1065713.44	200606.80	1	4065.50	4064.58	1	1	0.92
800496	1063731.53	198438.66	1	4028.55	4048.40	1	1	-19.85
804592	1058941.43	222906.52	2	4385.70	4375.11	1	1	10.59
809433	1060636.17	198233.85	1	4014.62	4041.10	1	1	-26.48
809723	1059712.82	197776.73	1	4040.85	4037.37	1	1	3.48
809829	1061909.43	197087.32	1	4044.56	4041.02	1	1	3.54
208337	1063281.18	208460.84	1	4163.00	4134.07	1	1	28.93

NOTES:

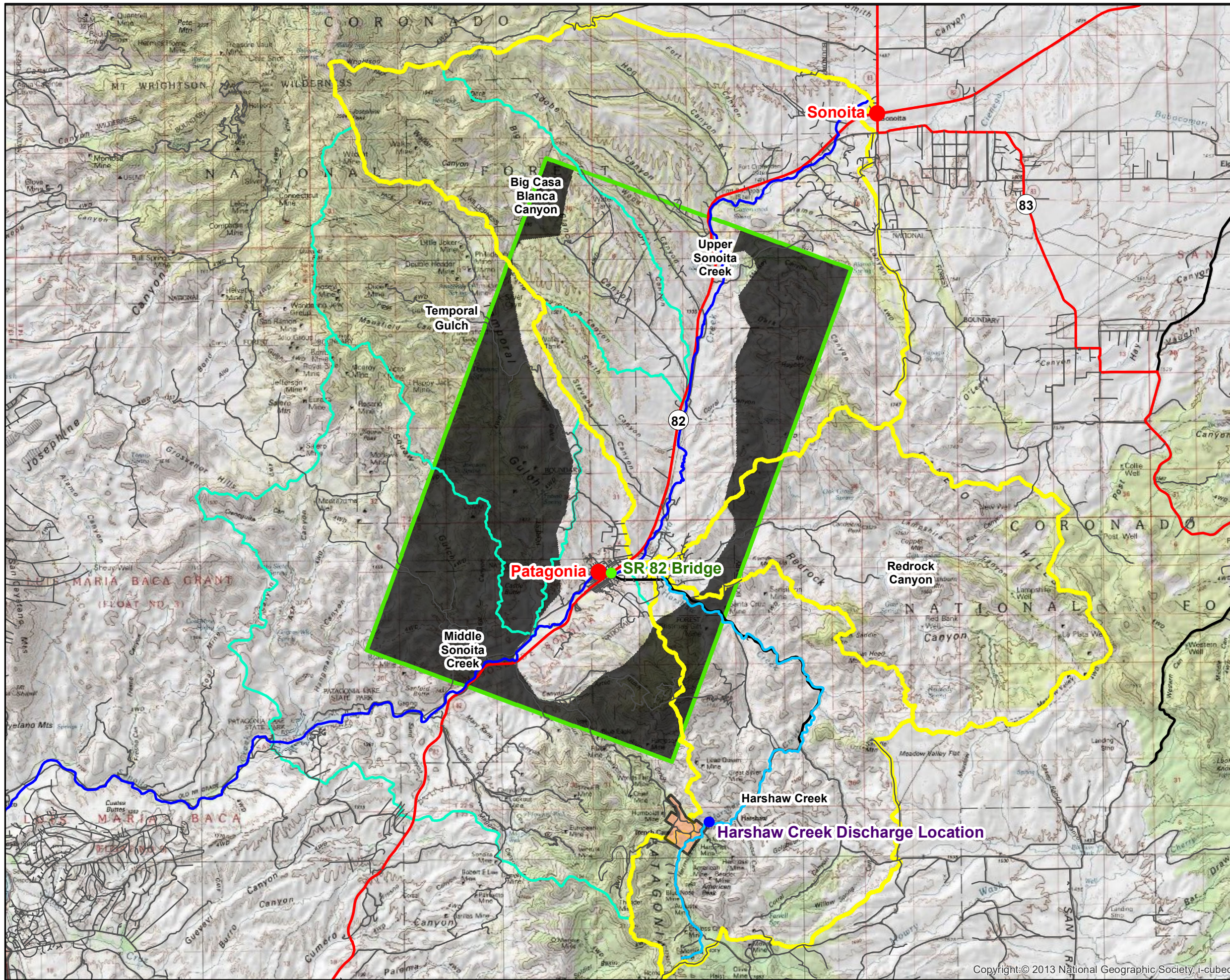
Easting and Northing are Arizona Central Zone State Plane, NAD 83 feet
Observed and Simulated are feet AMSL
Residual is feet.

Table 6
Effective Recharge Raster Dataset Evaluation
Patagonia Groundwater Model

Zone	Name	Acres	Count	R2000	R2001	R2002	R2003	R2004	R2005	R2006	R2007	R2008	R2009	R2010	R2011	R2012	R2013
1	Big Casa Blanca Canyon	12274.69	69	2545.98	2132.19	450.56	1451.43	1478.92	975.71	1018.22	2860.89	1408.75	413.85	3074.60	525.34	1116.82	689.13
2	Harshaw Creek	21195.31	123	1717.39	1041.24	226.35	596.16	899.32	399.24	763.52	1514.47	1005.77	229.12	1635.30	314.45	438.27	404.50
3	Middle Sonoita Creek - N Outside	18642.89	101	2646.24	1884.48	733.31	1305.77	1434.81	1060.36	1398.37	2204.39	1642.26	733.13	2392.34	904.71	1075.31	1049.65
4	Middle Sonoita Creek - North	2449.49	13	395.23	338.44	105.37	240.65	335.69	183.95	307.93	361.50	327.24	85.09	380.87	153.18	264.58	180.01
5	Middle Sonoita Creek - S Outside	15461.43	85	1238.06	825.12	303.90	573.46	681.89	465.11	685.27	948.32	767.39	307.43	1050.84	388.32	470.56	483.58
6	Middle Sonoita Creek - South	2922.61	16	270.77	183.12	53.82	107.44	167.79	90.63	147.18	212.32	167.83	41.37	241.73	75.60	105.16	89.02
7	Redrock Canyon	20212.84	107	3030.07	1899.20	674.44	1291.84	1701.46	960.30	1564.32	2704.47	1878.55	700.17	2912.87	833.92	1064.95	972.36
8	Temporal Gulch	17541.78	97	2230.74	1588.27	457.07	1083.61	1199.86	840.43	1074.20	2469.18	1277.24	417.15	2645.45	603.92	955.32	753.03
9	Upper Sonoita Creek - Northeast Side	15481.34	84	3013.65	2328.67	650.10	1655.60	1832.44	1157.22	1841.94	2508.87	2090.79	631.21	2847.34	1014.54	1420.33	1255.60
10	Upper Sonoita Creek - Northwest Side	4296.73	24	879.62	753.06	220.85	525.71	700.18	367.30	656.19	813.80	714.22	199.71	840.41	317.51	534.35	374.17
11	Upper Sonoita Creek - South Side	15706.27	89	2541.98	1855.86	567.30	1287.05	1629.48	891.84	1526.07	2306.33	1767.84	588.46	2352.12	806.61	1133.39	963.93
Total				20509.72	14829.66	4443.09	10118.74	12061.84	7392.09	10983.23	18904.55	13047.86	4346.70	20373.88	5938.10	8579.03	7214.98
In Model Only				16625.42	12120.06	3405.87	8239.50	9945.14	5866.61	8899.58	15751.84	10638.21	3306.13	16930.70	4645.07	7033.17	5681.74
				8981.22	7069.79	1888.82	4919.80	5641.02	3392.07	5042.43	8489.89	5981.59	1833.24	9114.48	2663.99	4204.89	3282.82
Average				11338.82													
				9220.65													

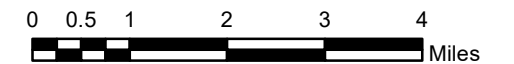
	Watershed discharges in model domain
	Watershed discharges outside model domain

FIGURES



Explanation

- Patagonia
- Sonoita Creek
- Harshaw Creek
- Roads**
- US, State, County Hwys
- Major Arterials
- Streets
- Hermosa Project Area
- Surface Water Model Watershed
- Subwatersheds for Recharge Analysis
- Groundwater Model Domain
- No-Flow cells





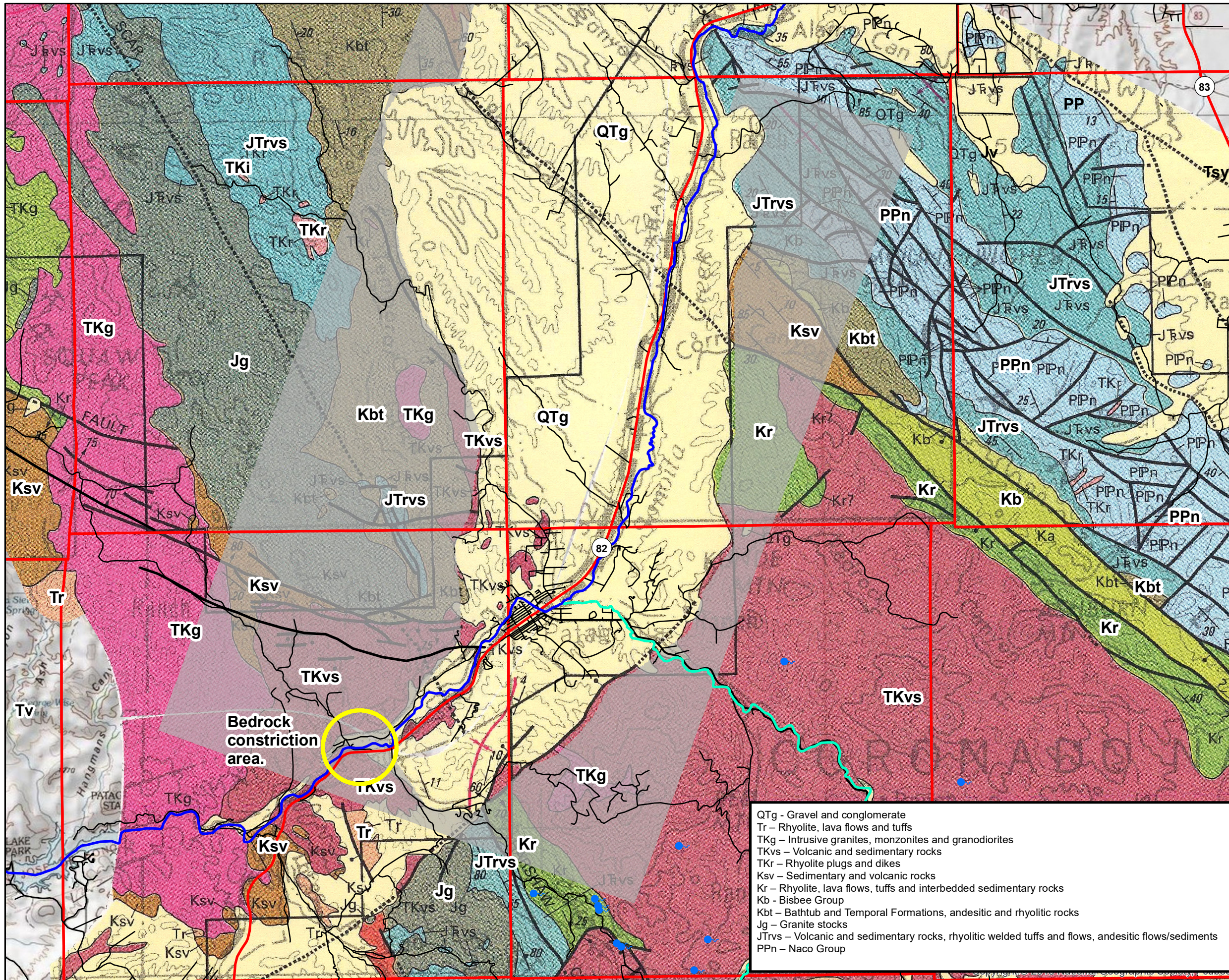
Date	5/6/2021	File ID	AZM-003
			

FIGURE 1
 Location of Proposed Discharge
 into Harshaw Creek
 Patagonia 3rd Party Analysis



Explanation

- Sonoita Creek
- Harshaw Creek
- Faults
- Springs
- Roads**
- Major Arterials
- Streets
- US, State, County Hwys
- Township
- Model Area and No-Flow cells

TITLE = Geology of Coronado National Forest
 AUTHOR(S) = Drewes, Harald
 PUBLISHER = U.S. Geological Survey
 SERIES NAME = Bulletin
 SERIES NUMBER = 2083-B
 PUBLICATION DATE = 1996
 SCALE = 1:126,720

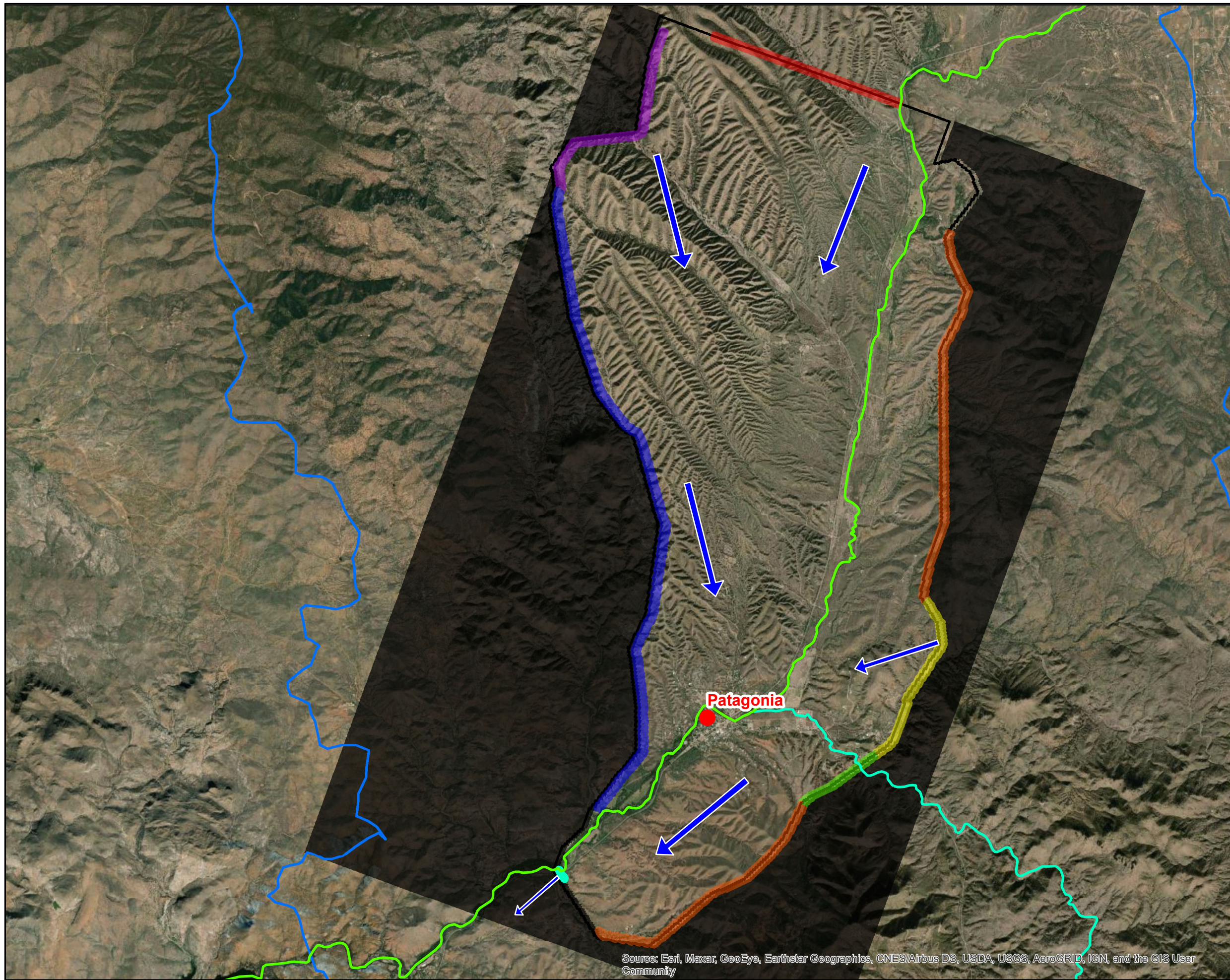


- QTg - Gravel and conglomerate
- Tr - Rhyolite, lava flows and tuffs
- TKg - Intrusive granites, monzonites and granodiorites
- TKvs - Volcanic and sedimentary rocks
- TKr - Rhyolite plugs and dikes
- Ksv - Sedimentary and volcanic rocks
- Kr - Rhyolite, lava flows, tuffs and interbedded sedimentary rocks
- Kb - Bisbee Group
- Kbt - Bathub and Temporal Formations, andesitic and rhyolitic rocks
- Jg - Granite stocks
- JTrvs - Volcanic and sedimentary rocks, rhyolitic welded tuffs and flows, andesitic flows/sediments
- PPn - Naco Group

Date	4/19/2021	File ID	AZM-003
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FIGURE 2
 Regional Geologic Map
 Patagonia Groundwater Model



Explanation

- Patagonia
 - Sonoita Creek
 - Harshaw Creek
 - Underflow from Model Area
- Groundwater Inflows**
- Big Casa Blanca Canyon
 - Harshaw Creek
 - Redrock Canyon
 - Sonoita Creek northside Tributaries
 - Sonoita Creek southside Tributaries
 - Upper Sonoita Creek
- Recharge and Underflow**
- Grid Outline
 - Subwatersheds
 - No-Flow cells





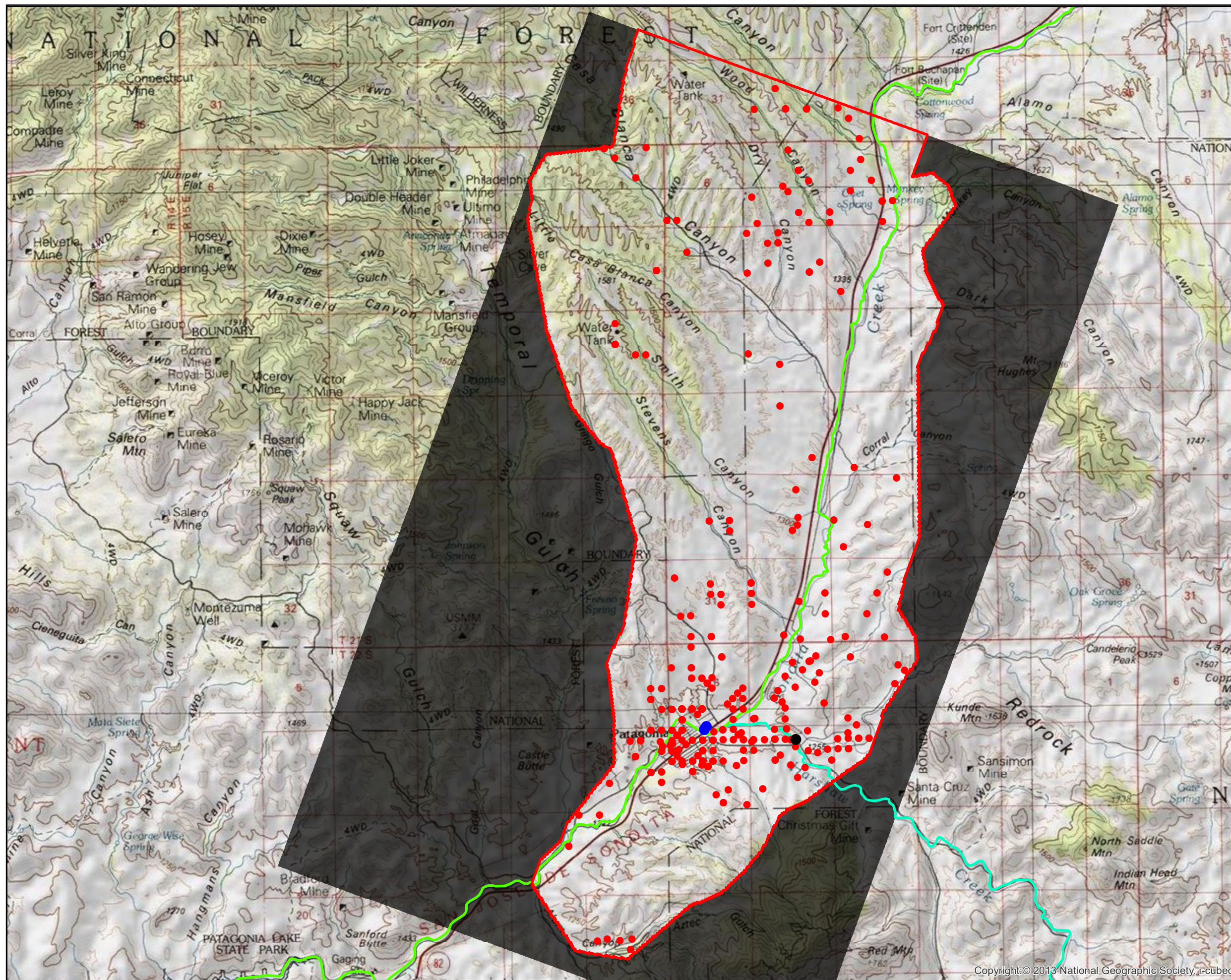
Date	03/09/21	File ID	AZM-003
			

FIGURE 3
 Recharge Areas and Underflow
 Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

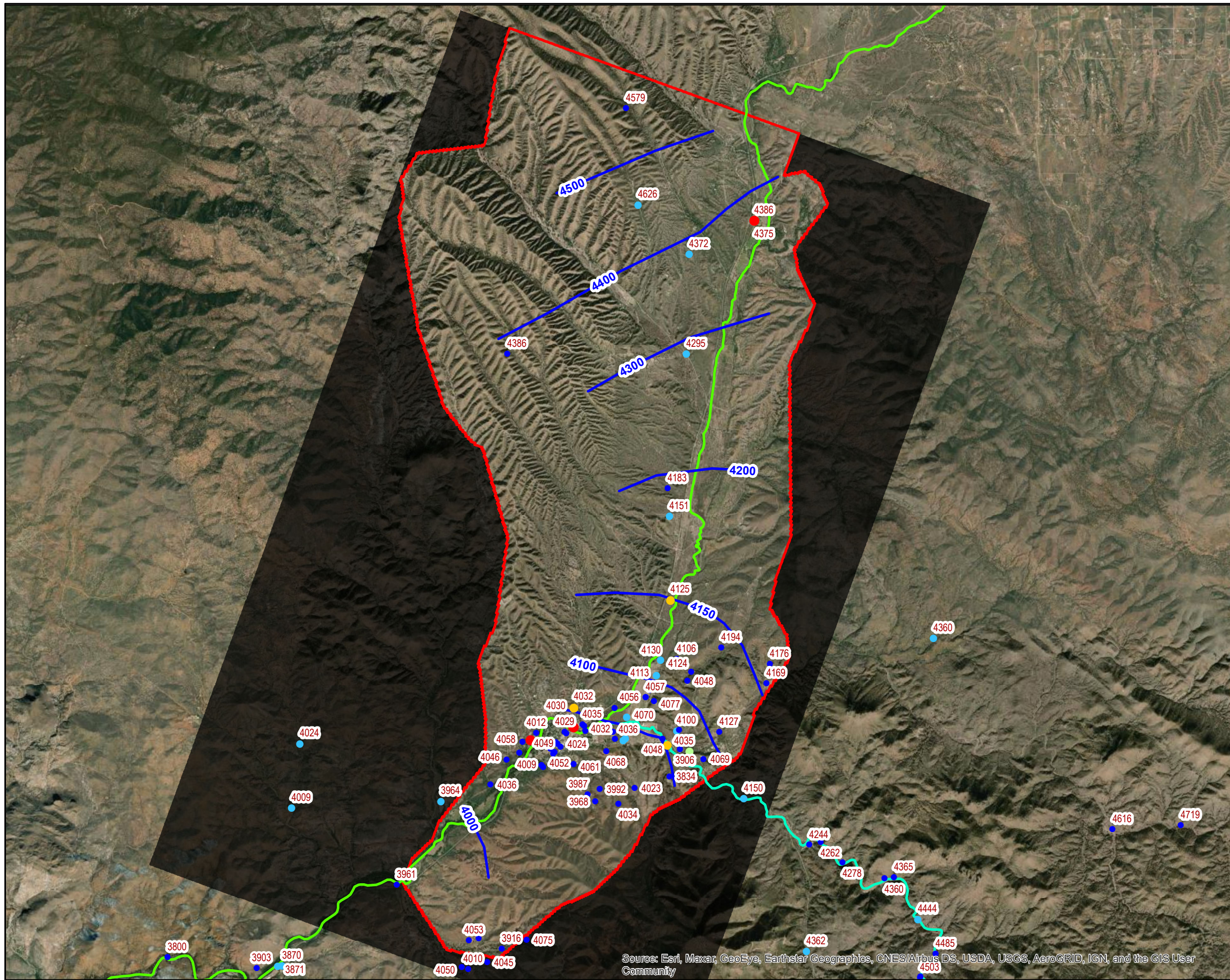
- Pumping Wells**
- Well Type**
- Red Rock Acres HA
 - Patagonia Municipal
 - Domestic Wells
- Active Model Area
- Sonoita Creek
- Harshaw Creek
- No-Flow cells



Date	5/6/2021	File ID	AZM-003
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FIGURE 4
Pumping Wells in Model Area
Patagonia Groundwater Model

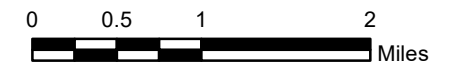


Explanation

Average Water Level

Count of Measurements

- 1
 - 2 - 10
 - 11 - 20
 - 21 - 50
 - 51 - 171
- Water Level Contours
 - Sonoita Creek
 - Harshaw Creek
 - Active Area
 - No-Flow cells

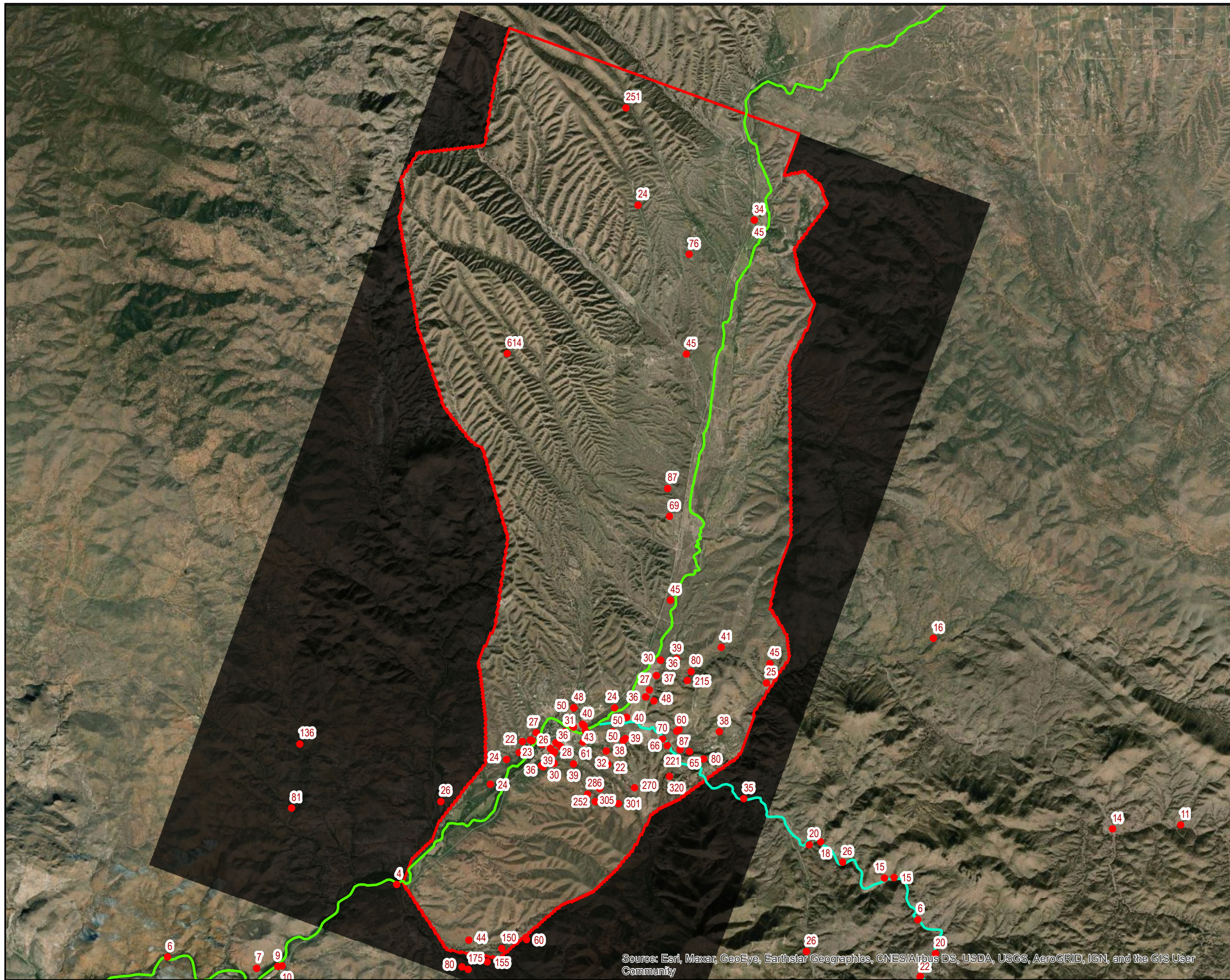


Date	4/19/2021	File ID	AZM-003
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FIGURE 5
 Water Levels for Study Area
 Average Values
 Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

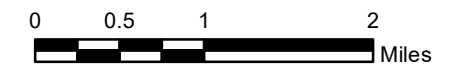


Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Explanation

Average Depth to Water

- Average Depth to Water
- Sonoita Creek
- Harshaw Creek
- Active Area
- No-Flow cells

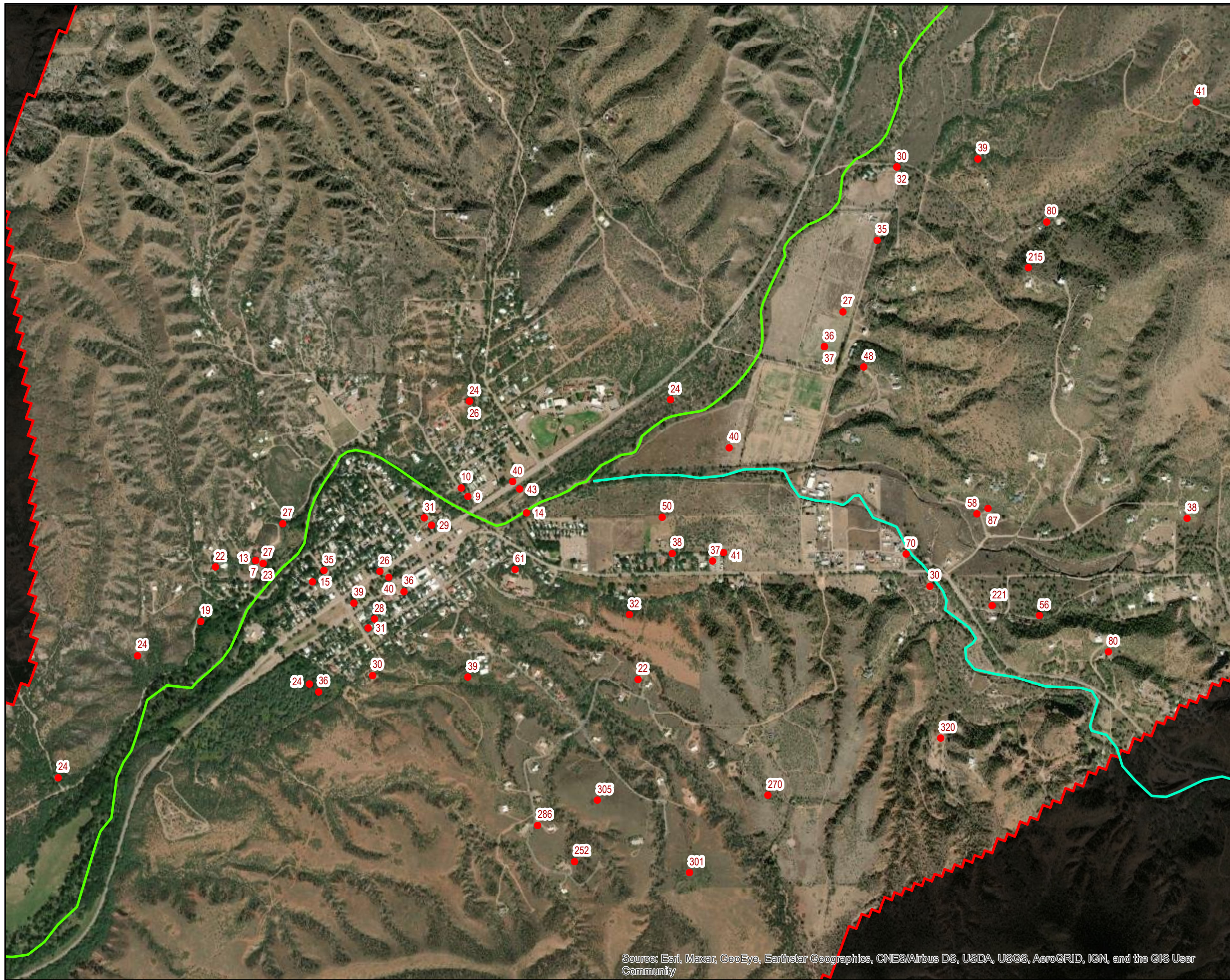


Date	4/19/2021	File ID	AZM-003
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CLEAR CREEK ASSOCIATES

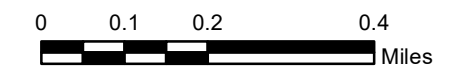
FIGURE 6
 Depth to Water for Study Area
 Average Values
 Patagonia Groundwater Model



Explanation

Minimum Depth to Water

- Minimum Depth to Water
- Sonoita Creek
- Harshaw Creek
- Active Area
- No-Flow cells



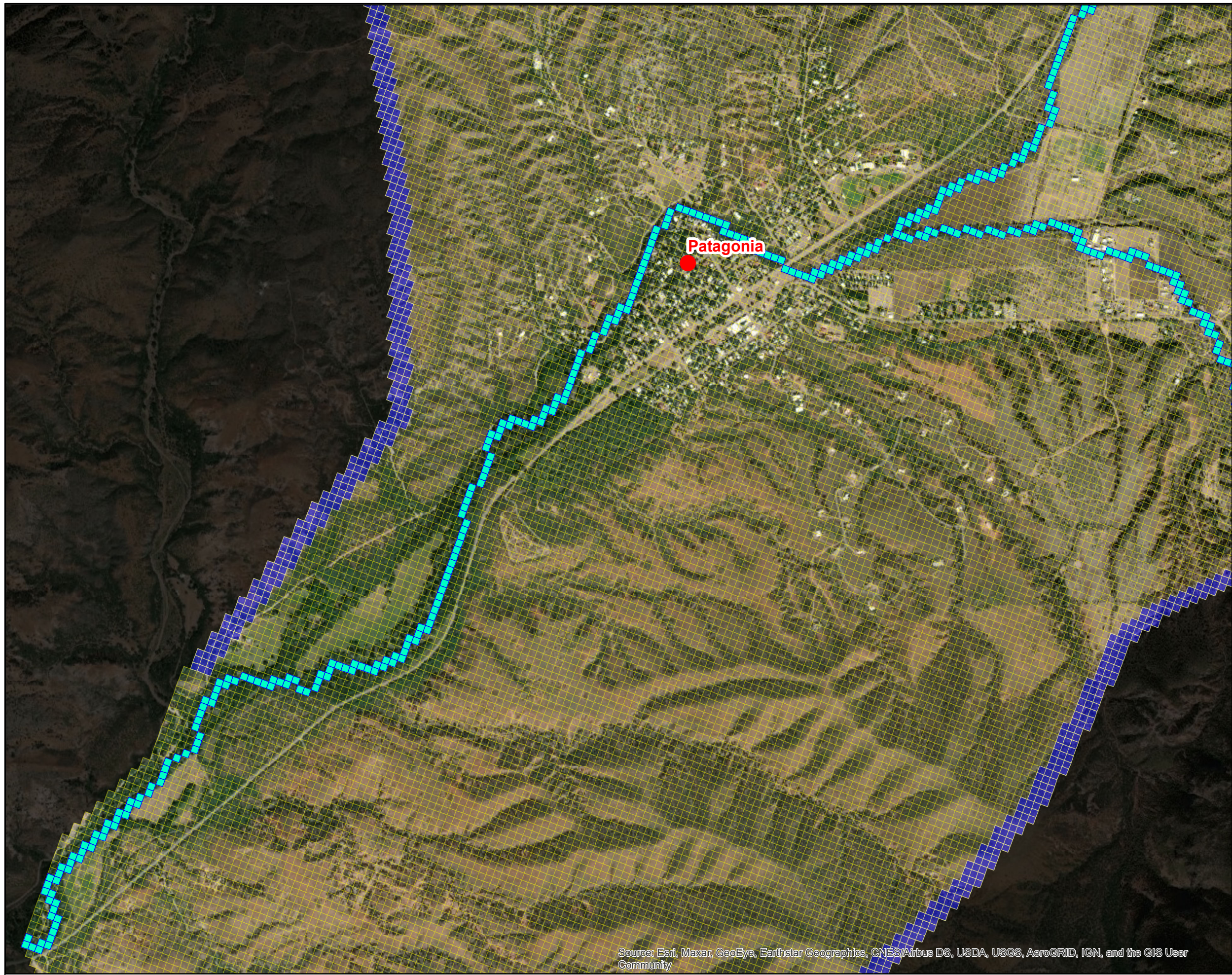
Date	4/19/2021	File ID	AZM-003
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FIGURE 7
Minimum Depth to Water for Patagonia

Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

- Patagonia
- Stream Cells
- Mountain Front Recharge/Underflow
- Model Grid
- No-Flow cells



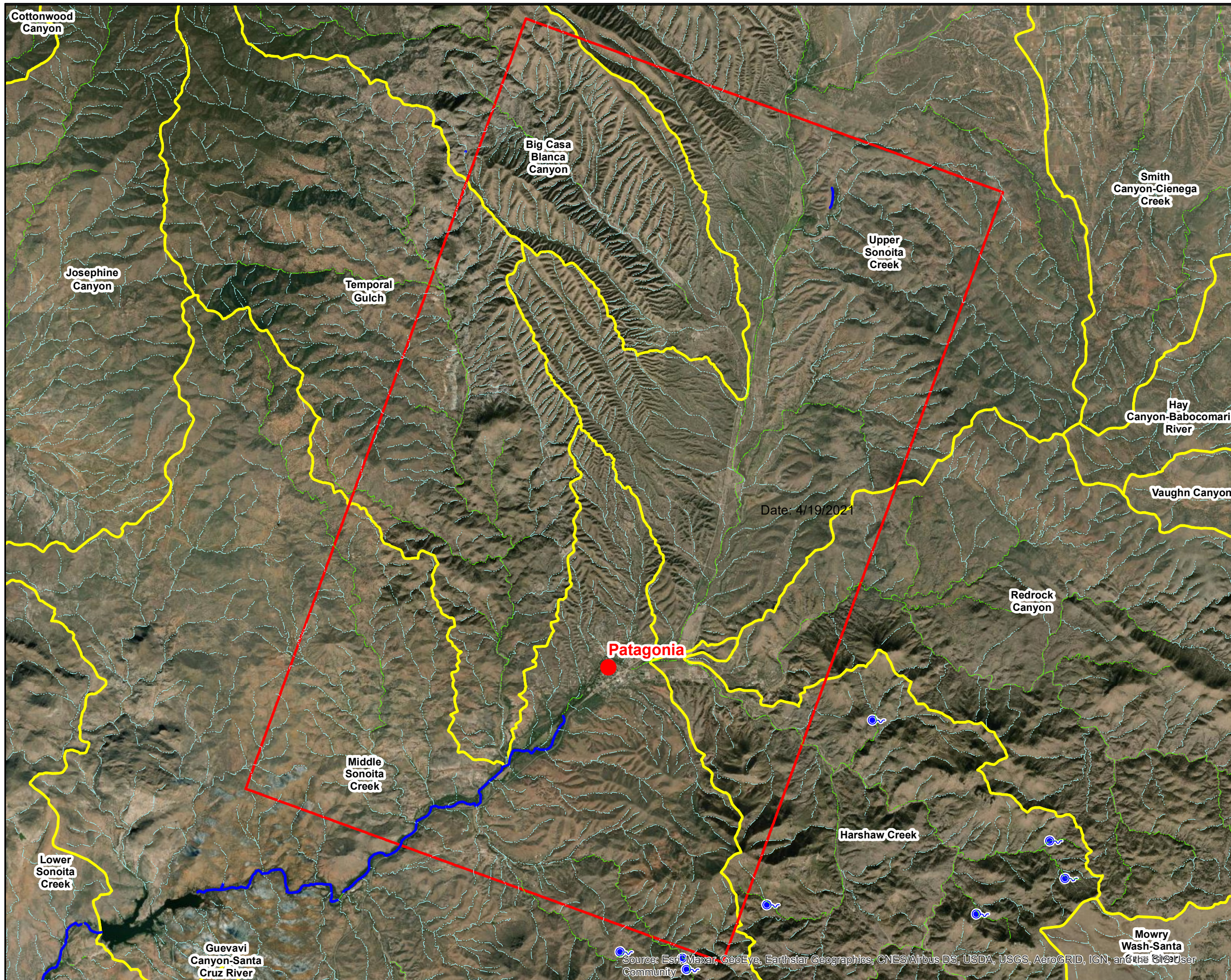
Date	4/19/2021	File ID	AZM-003
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FIGURE 8
Model Grid near Patagonia

Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

- Patagonia
- National Hydrography Dataset**
- Category**
- Ephemeral
- Intermittent
- Perennial
- Model Domain
- Springs
- Subwatersheds

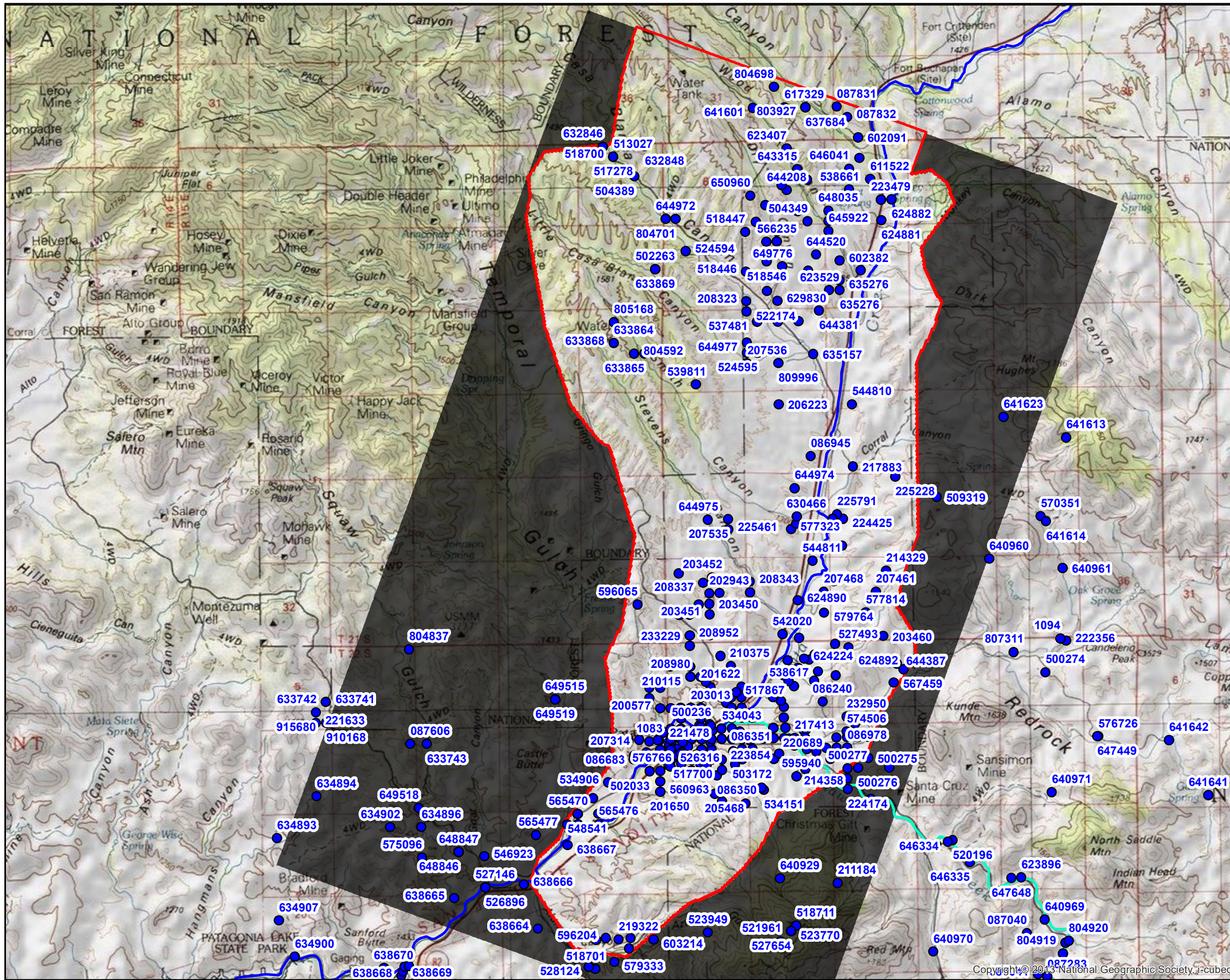


Date	4/19/2021	File ID	AZM-003
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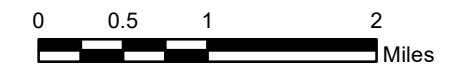
FIGURE 9
Surface Watersheds and Stearms
Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

- Well Database
- Sonoita Creek
- Harshaw Creek
- Grid Outline
- No-Flow cells



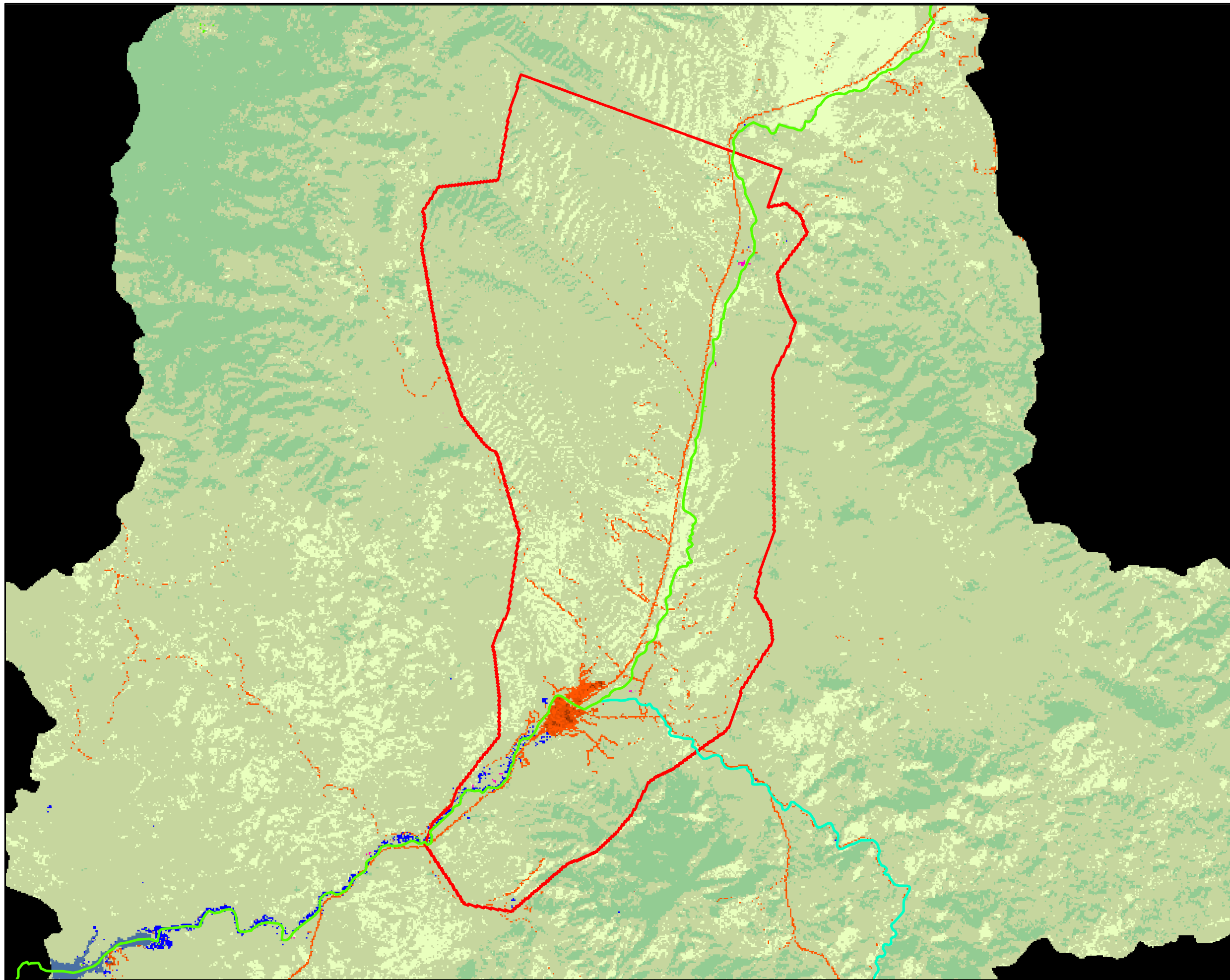
Date: 4/14/2021 File ID: AZM-003



CLEAR CREEK ASSOCIATES

FIGURE 10
Wells in Model Area

Patagonia Groundwater Model



Explanation

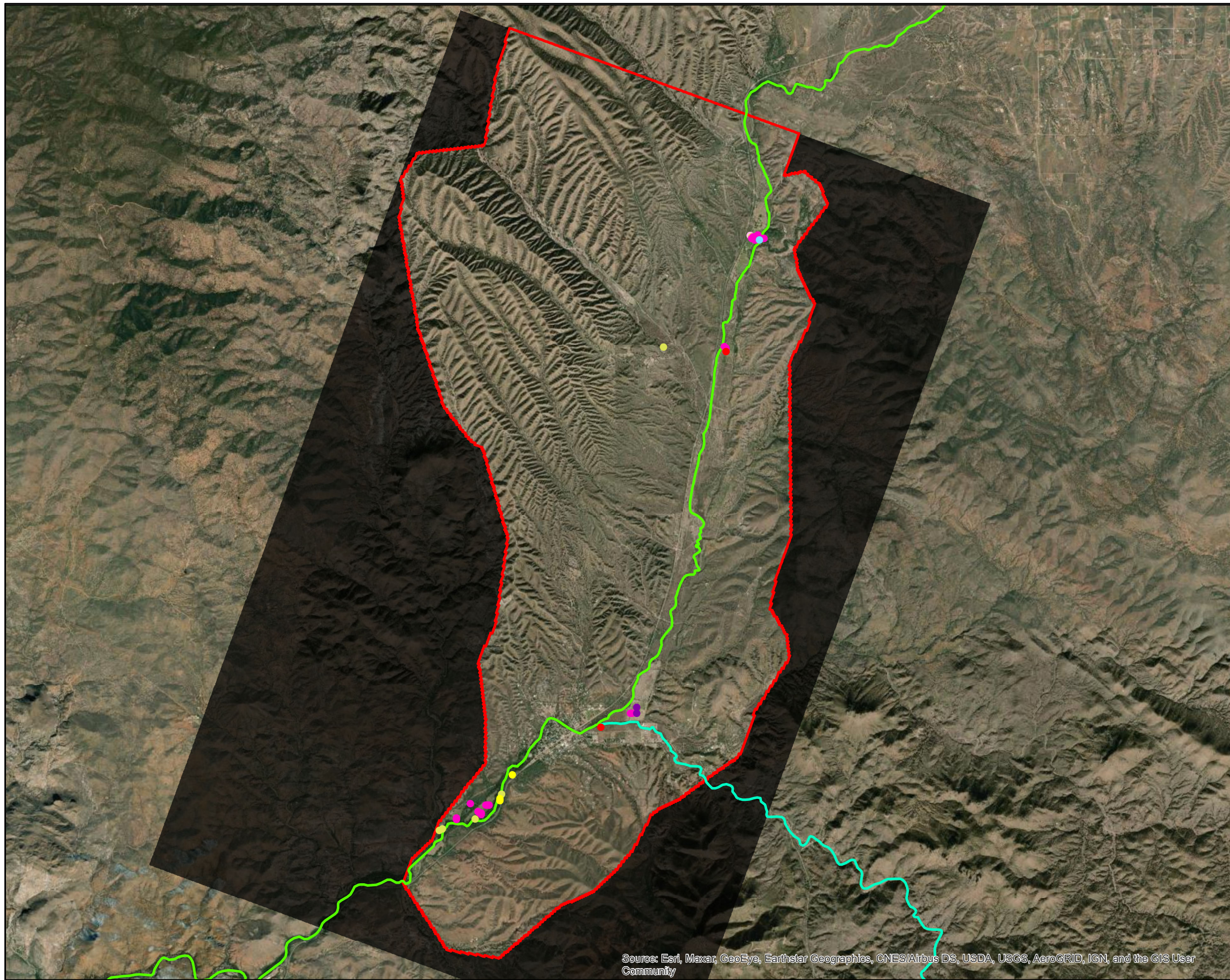
- Sonoita Creek
- Harshaw Creek
- Active Area
- Background
- Cotton
- Barley
- Winter Wheat
- Alfalfa
- Fallow/Idle Cropland
- Pecans
- Open Water
- Developed/Open Space
- Developed/Low Intensity
- Developed/Med Intensity
- Developed/High Intensity
- Barren
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrubland
- Grassland/Pasture
- Woody Wetlands
- Herbaceous Wetlands
- Pistachios
- Triticale
- Dbl Crop Oats/Corn
- Dbl Crop Triticale/Corn



Date 4/19/2021 File ID AZM-003



FIGURE 11
 CropScapeAgricultural Crop Map
 2020 Cropland Data Layer
 Patagonia Groundwater Model



Explanation

2020 Agricultural Crops

Class Name

- Alfalfa
- Barley
- Cotton
- Dbl Crop Oats/Corn
- Pecans
- Pistachios
- Triticale
- Sonoita Creek
- Harshaw Creek
- Active Area
- No-Flow cells

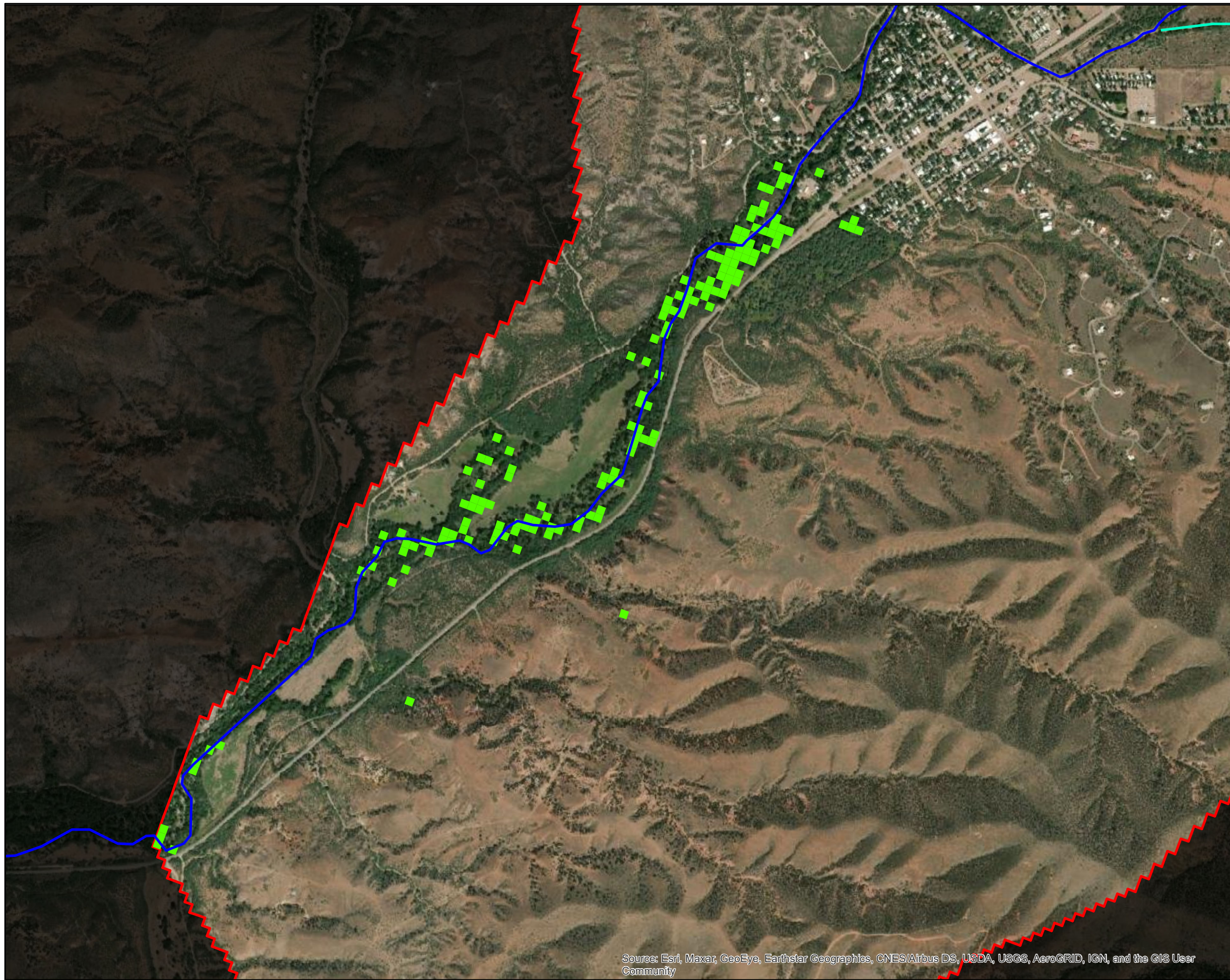


Date 4/19/2021	File ID AZM-003
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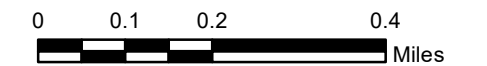
FIGURE 12
 CropScapeAgricultural Crop Map
 Irrigated Crops
 Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

-  Sonoita Creek
-  Harshaw Creek
-  Evapotraspiration Cells
-  Active Area
-  No-Flow cells



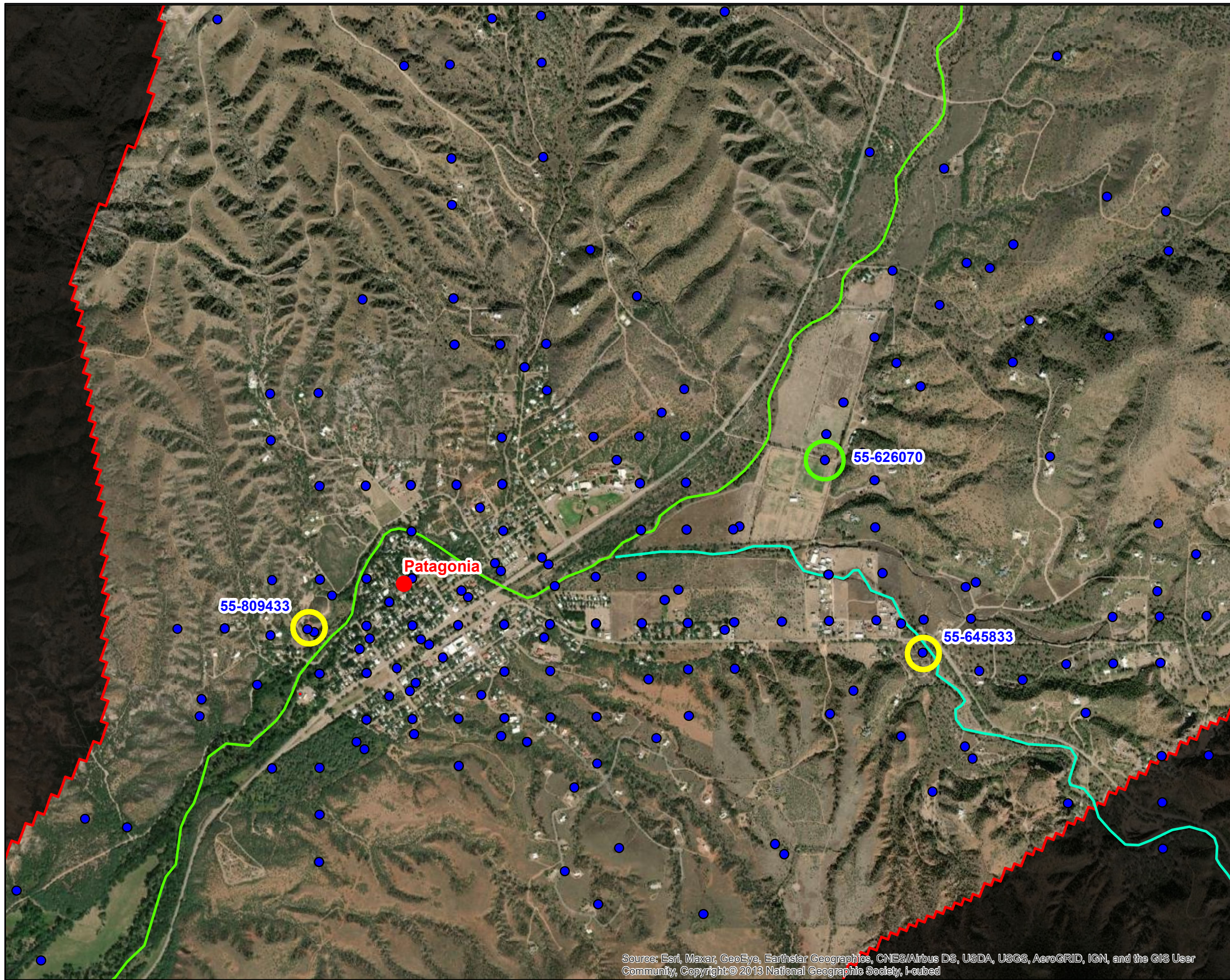
Date	4/19/2021	File ID	AZM-003
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**CLEAR
CREEK
ASSOCIATES**

FIGURE 13
Evapotraspiration Cells based on CropScape
Cropland Data Layer
Patagonia Groundwater Model

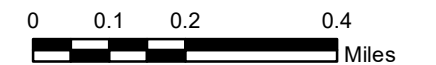
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

- Patagonia
- Well Database
- Sonoita Creek
- Harshaw Creek
- Grid Outline
- No-Flow cells

Notes: Yellow circles note wells with hydrographs. Green circle denotes well tested in 1959, with hydraulic property estimates (Halpenny, 1964).

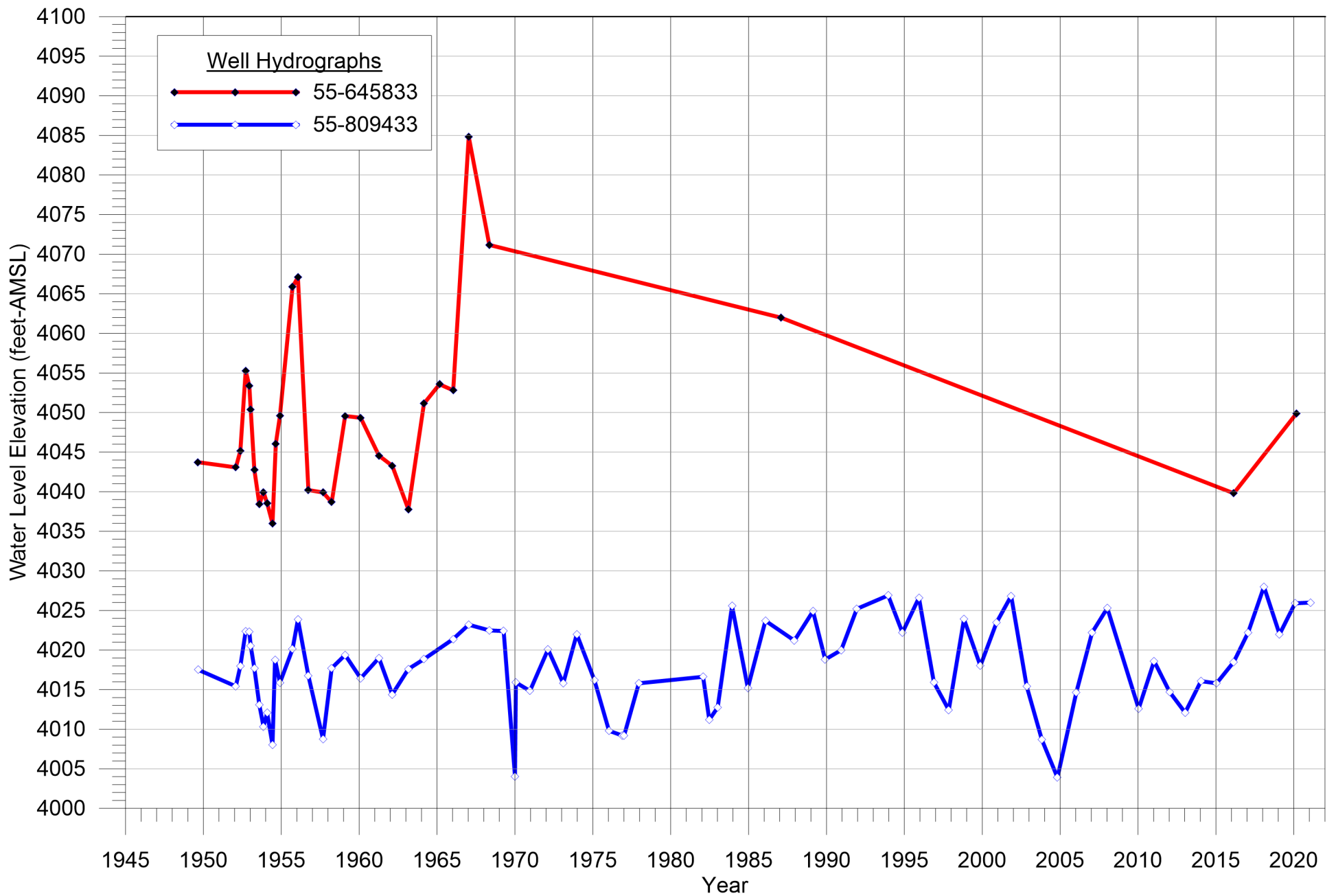


Date	4/19/2021	File ID	AZM-003
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FIGURE 14
Wells with Hydrographs

Patagonia Groundwater Model





Explanation

- Longest Flow Path
- ▭ Town of Patagonia
- ▭ Subbasins

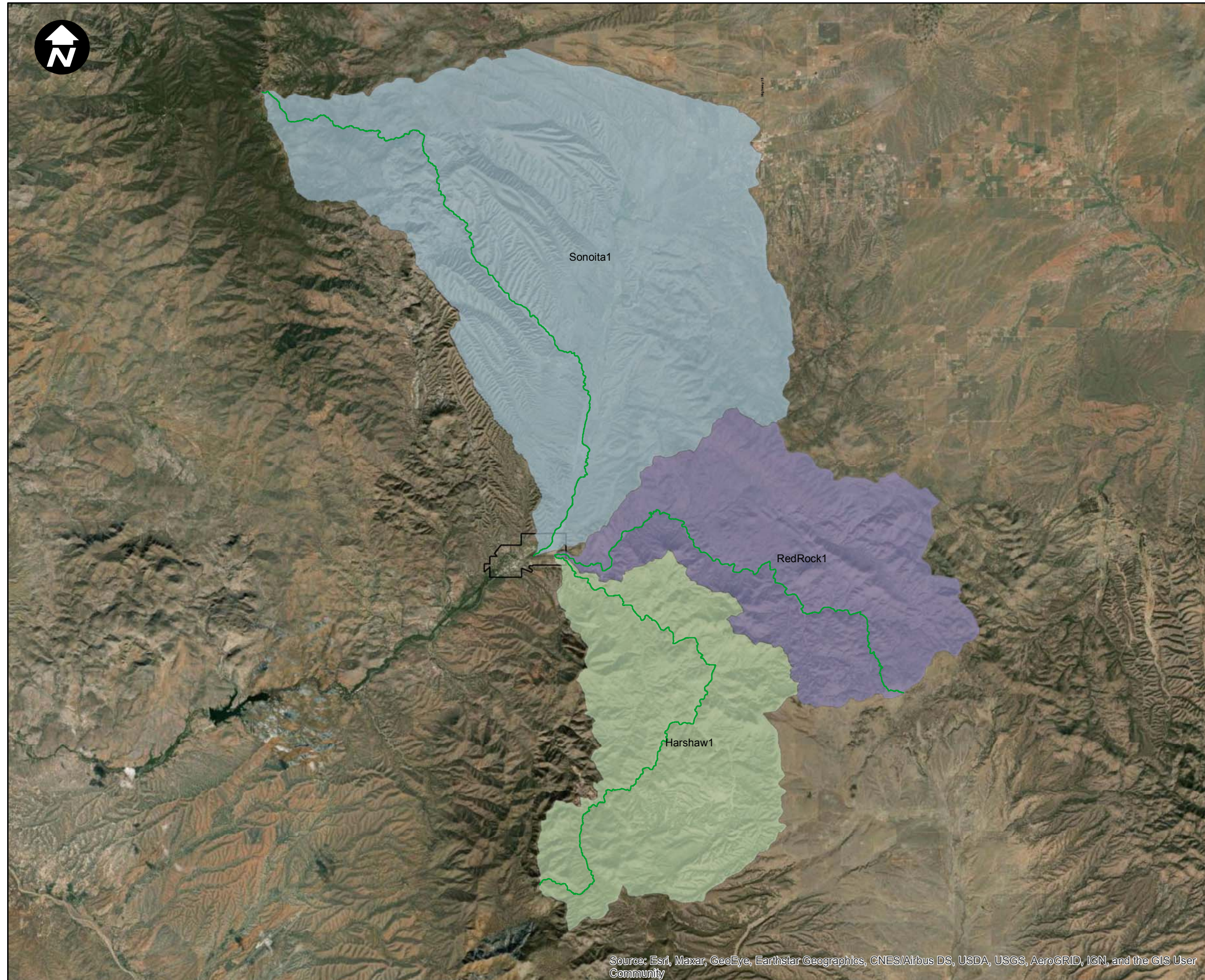
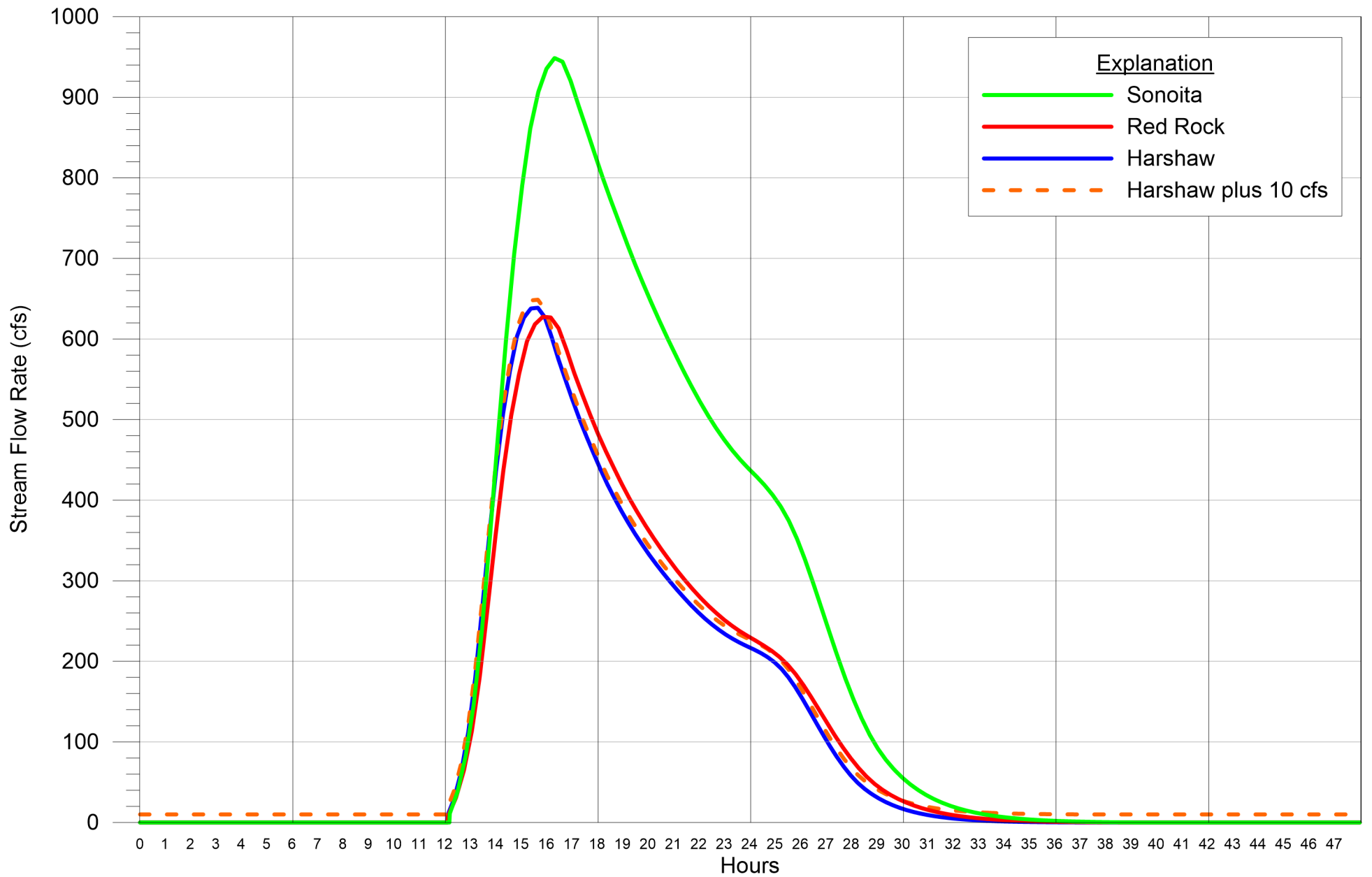
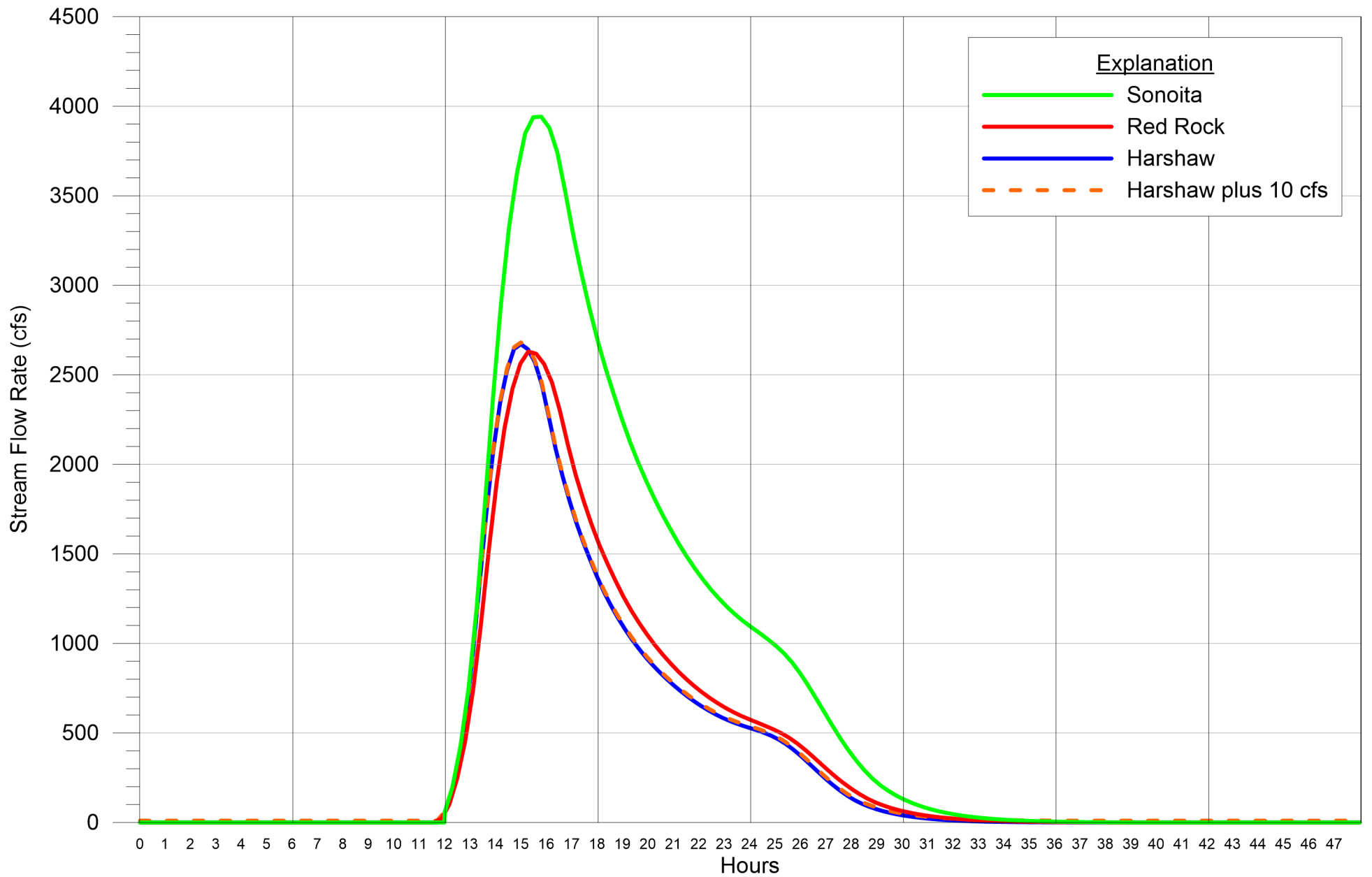
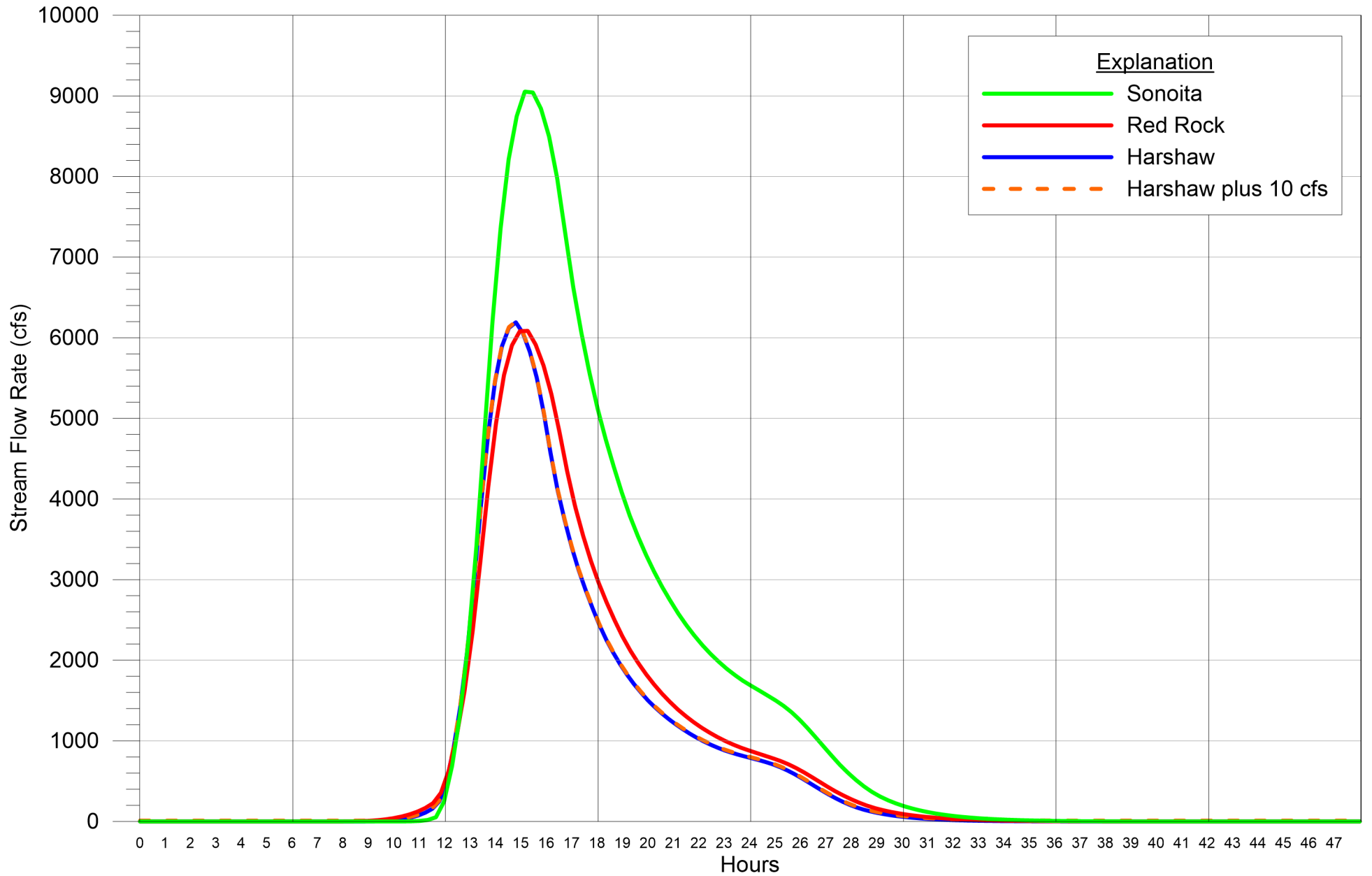


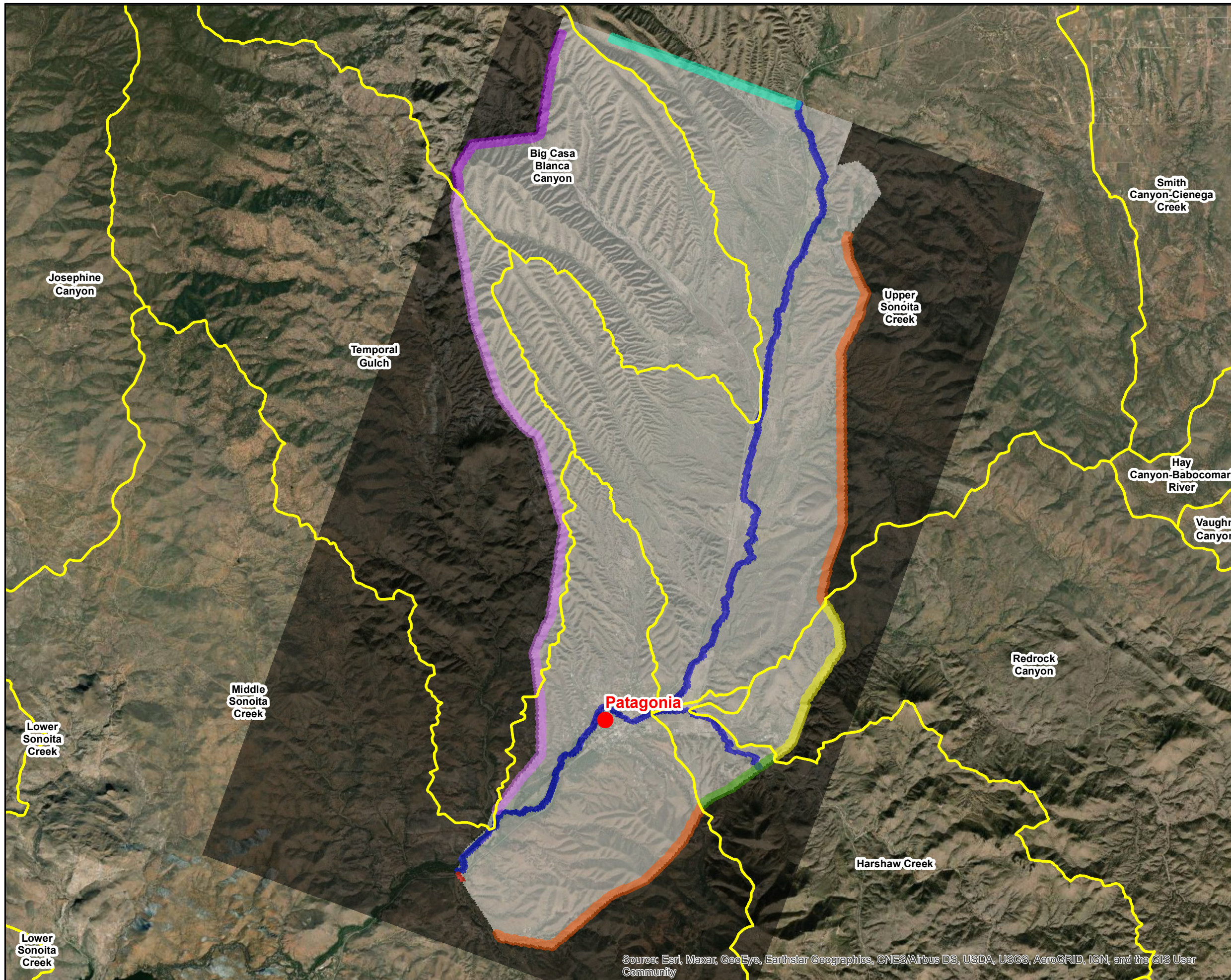
Figure 16
Hydrologic Model Extents
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community









Explanation

- Patagonia
- Subwatersheds
- Groundwater Inflows**
- Recharge and Underflow**
- Big Casa Blanca Canyon
- Harshaw Creek
- Redrock Canyon
- Sonoita Creek northside Tributaries
- Sonoita Creek southside Tributaries
- Upper Sonoita Creek
- Model Boundary Cells**
- Active Model Cells
- Constant Heads
- No Flow
- Stream Cells



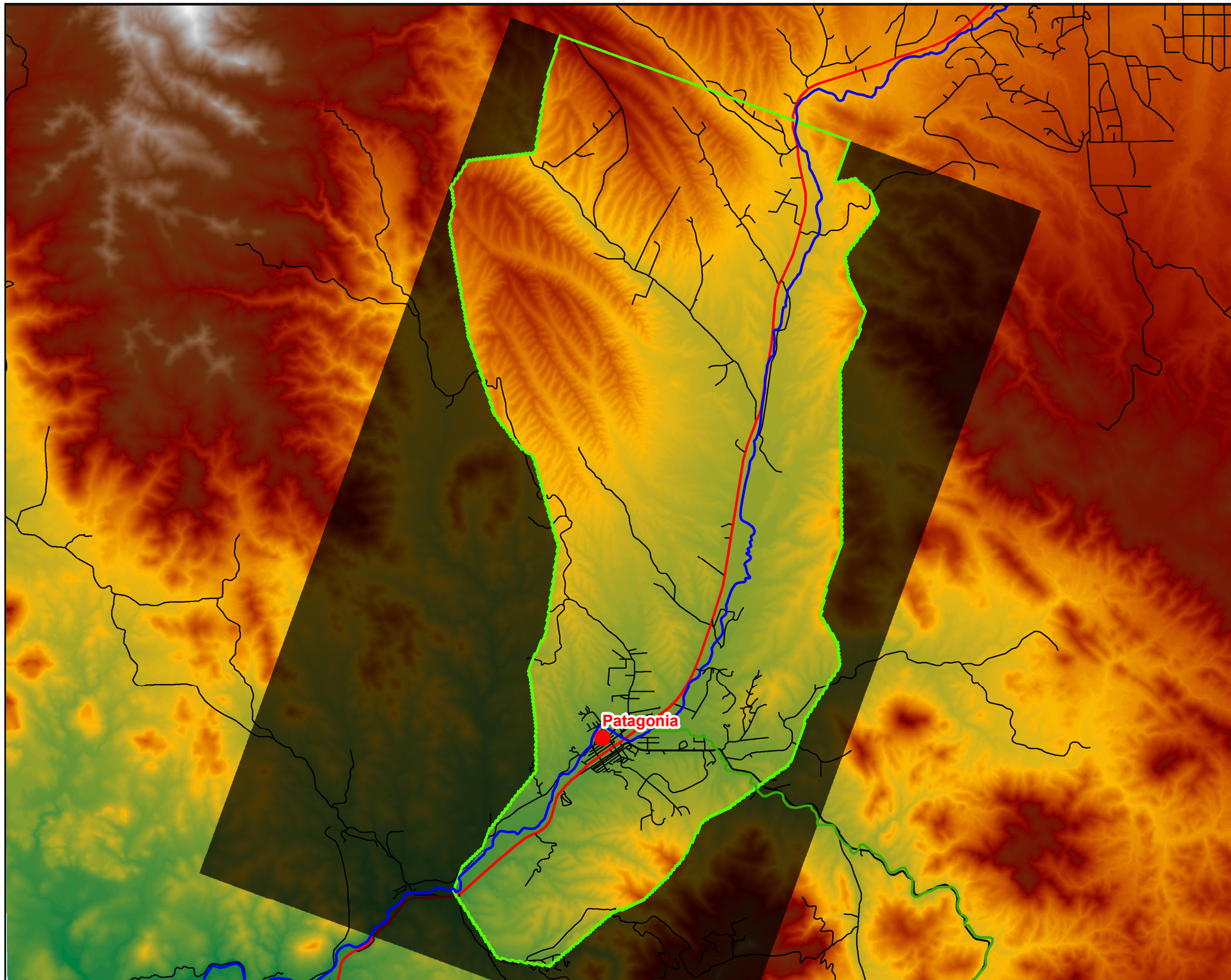
Date 4/19/2021 File ID AZM-003



FIGURE 20
Model Boundary Cells

Patagonia Groundwater Model

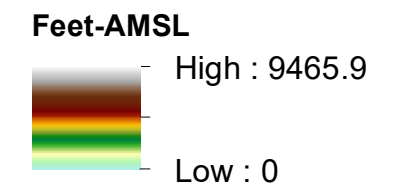
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

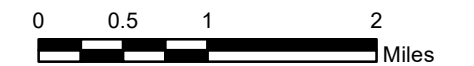
- Patagonia
 - Sonoita Creek
 - Harshaw Creek
 - Grid Outline
 - No-Flow cells
- Roads**
- Major Arterials
 - Streets
 - US, State, County Hwys

Land Surface



NOTES: Elevation data is 10-meter digital elevation model data from the USGS National Map. Elevations are presented in feet.

<https://www.usgs.gov/core-science-systems/national-geospatial-program/national-map>





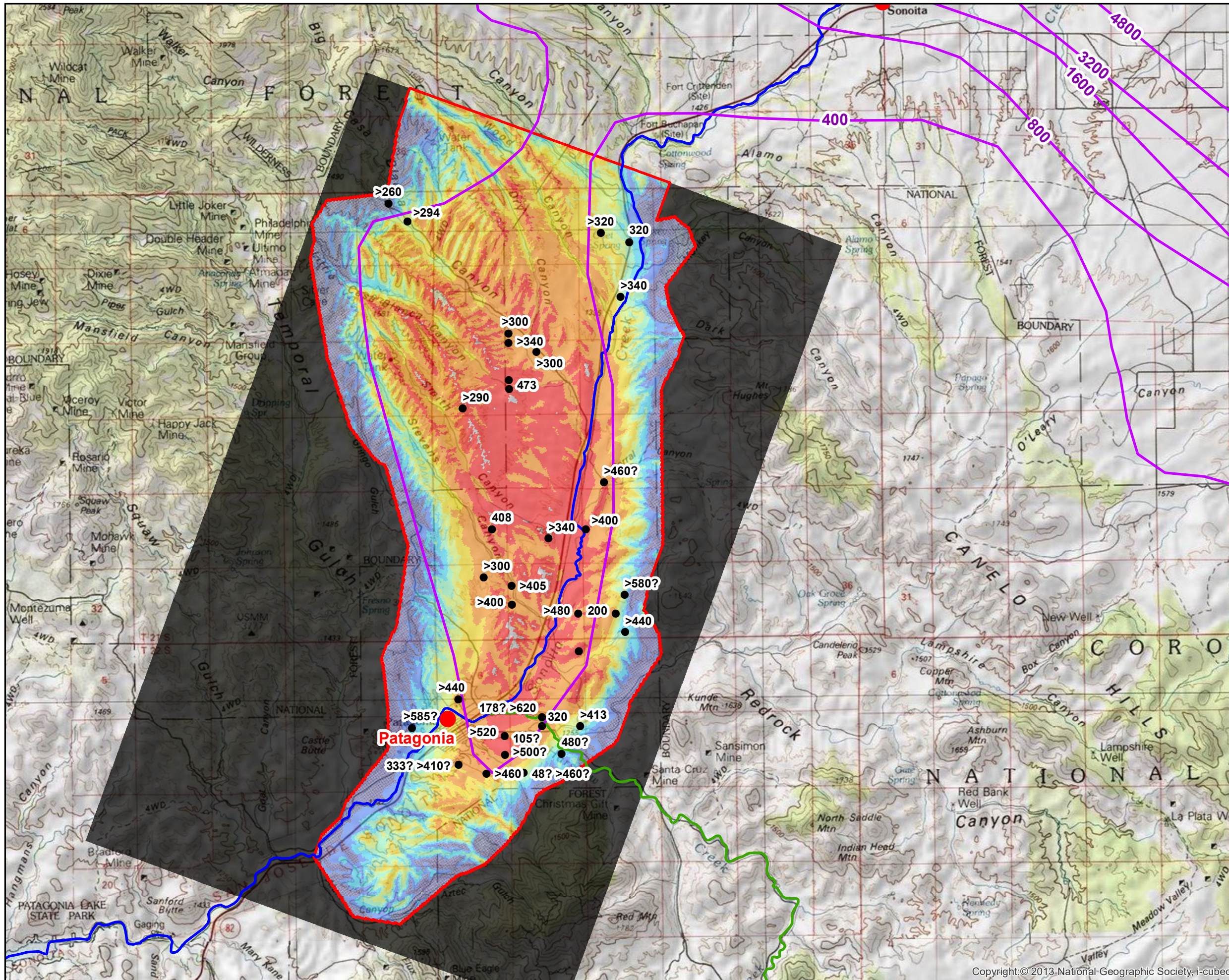
Date	5/6/2021	File ID	AZM-003
			

FIGURE 21
Digital Elevation Dataset

Patagonia Groundwater Model



Explanation

- Alluvium Thickness Estimates
- Patagonia
- Estimated Depth to Bedrock
- Sonoita Creek
- Harshaw Creek
- Active Model Area

Thickness of Alluvium

(feet)

- 113.21 - 150.00
- 150.01 - 200.00
- 200.01 - 250.00
- 250.01 - 300.00
- 300.01 - 350.00
- 350.01 - 400.00
- 400.01 - 500.00
- 500.01 - 573.72
- No-Flow cells

NOTES: Depth to bedrock from DGM-52, Estimated Depth to Bedrock in Arizona, Arizona Geological Survey, 2007.





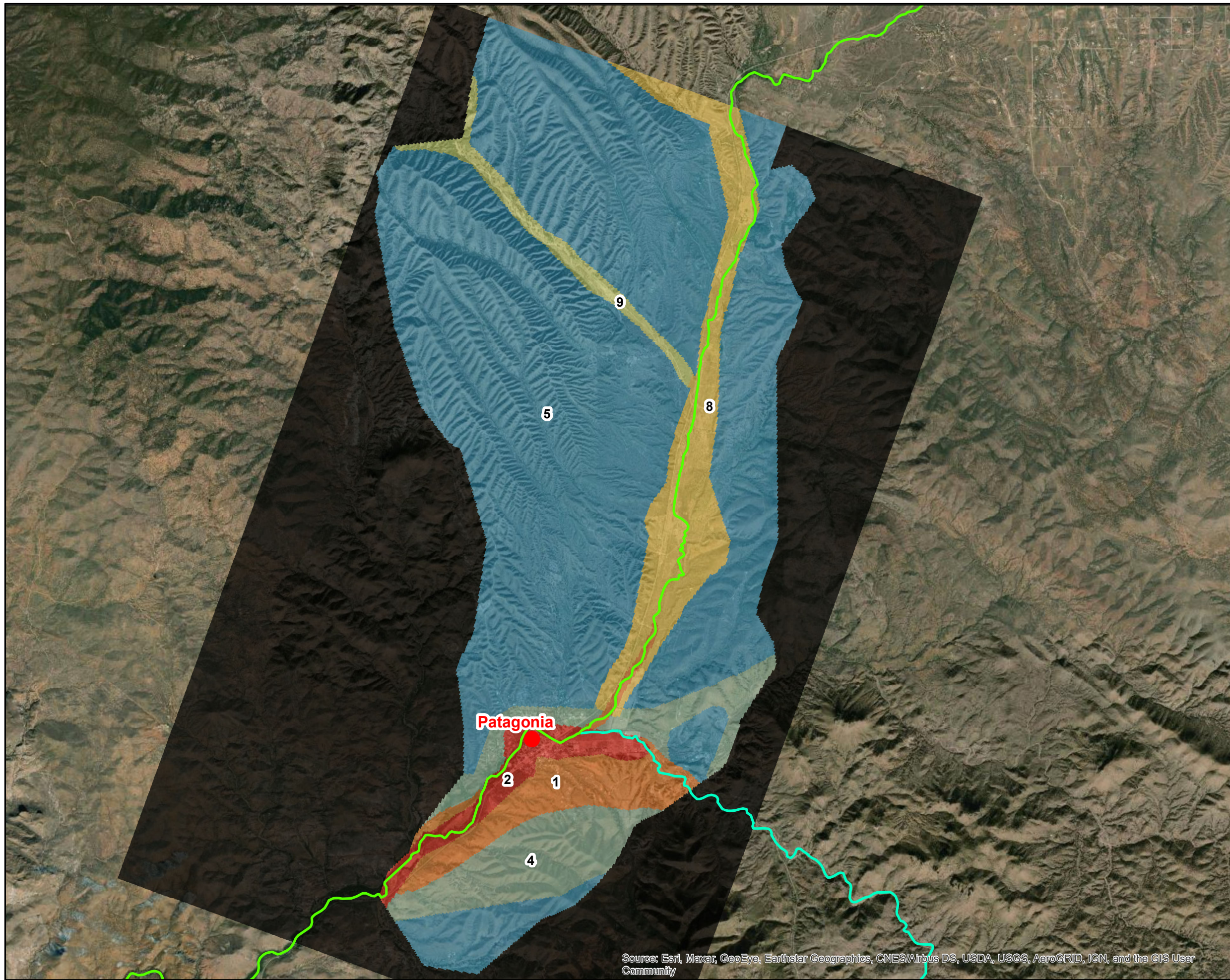
Date	5/7/2021	File ID	AZM-003
			

FIGURE 22
Model Alluvium Thickness

Patagonia Groundwater Model



Explanation

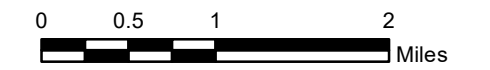
- Patagonia
- Sonoita Creek
- Harshaw Creek

Layer 1 Hydraulic Conductivity

(ft/d)

- 0.5
- 7
- 20
- 35
- 50
- 100
- No-Flow cells

Notes: Zone Numbers are listed as labels.





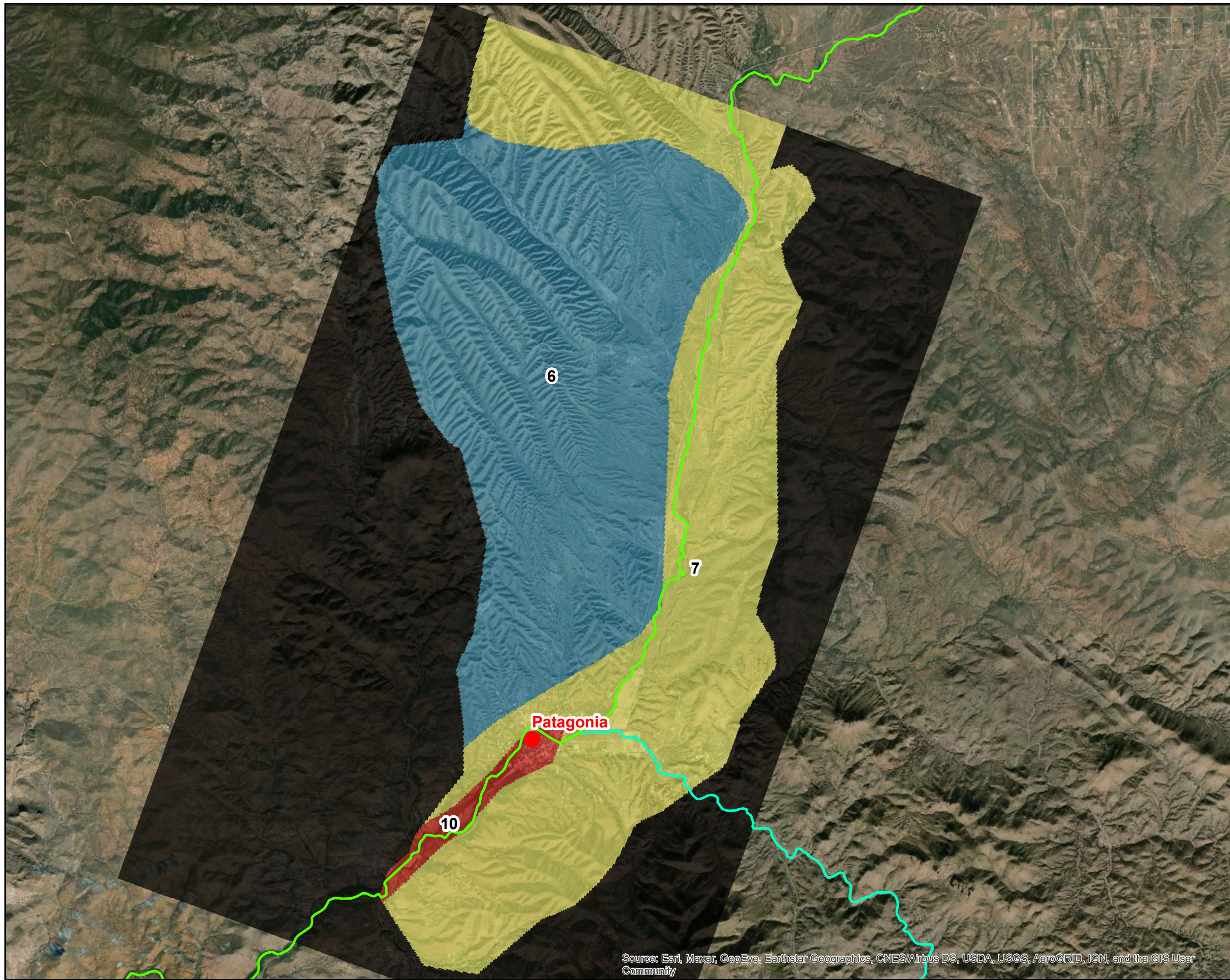
Date	4/20/2021	File ID	AZM-003
			

FIGURE 23
 Model Hydraulic Conductivity
 Layer 1
 Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

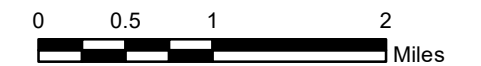
- Patagonia
- Sonoita Creek
- Harshaw Creek

Layer 2 Hydraulic Conductivity

(ft/d)

- 0.04
- 0.4
- 1
- No-Flow cells

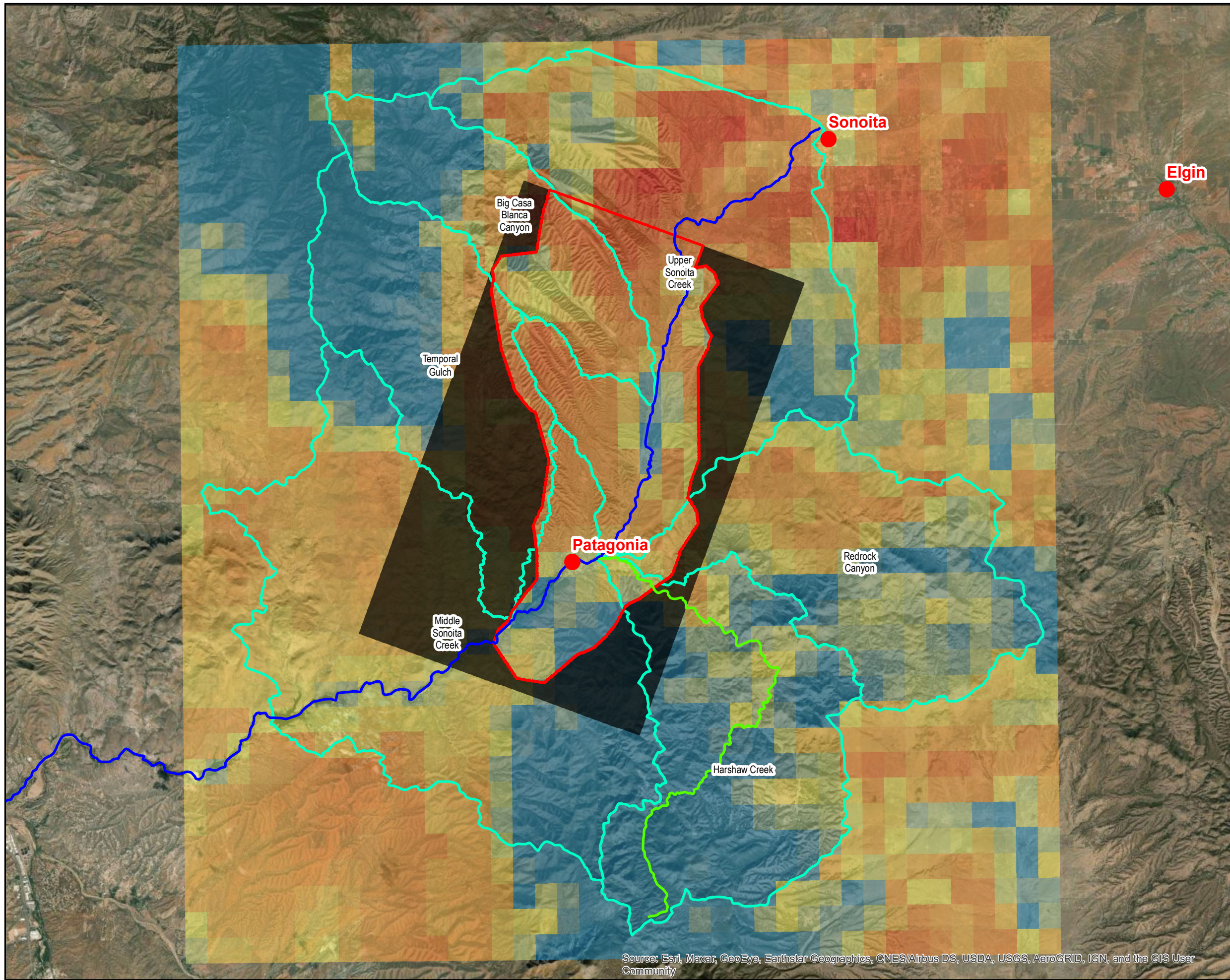
Notes: Zone numbers are included as labels.



Date	4/20/2021	File ID	AZM-003
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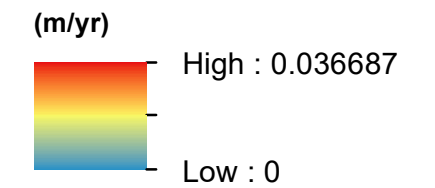
FIGURE 24
Model Hydraulic Conductivity
Layer 2
Patagonia Groundwater Model



Explanation

- Patagonia
- Sonoita Creek
- Harshaw Creek
- Active Grid Outline
- Subwatersheds
- No-Flow cells

Effective Recharge for 2013



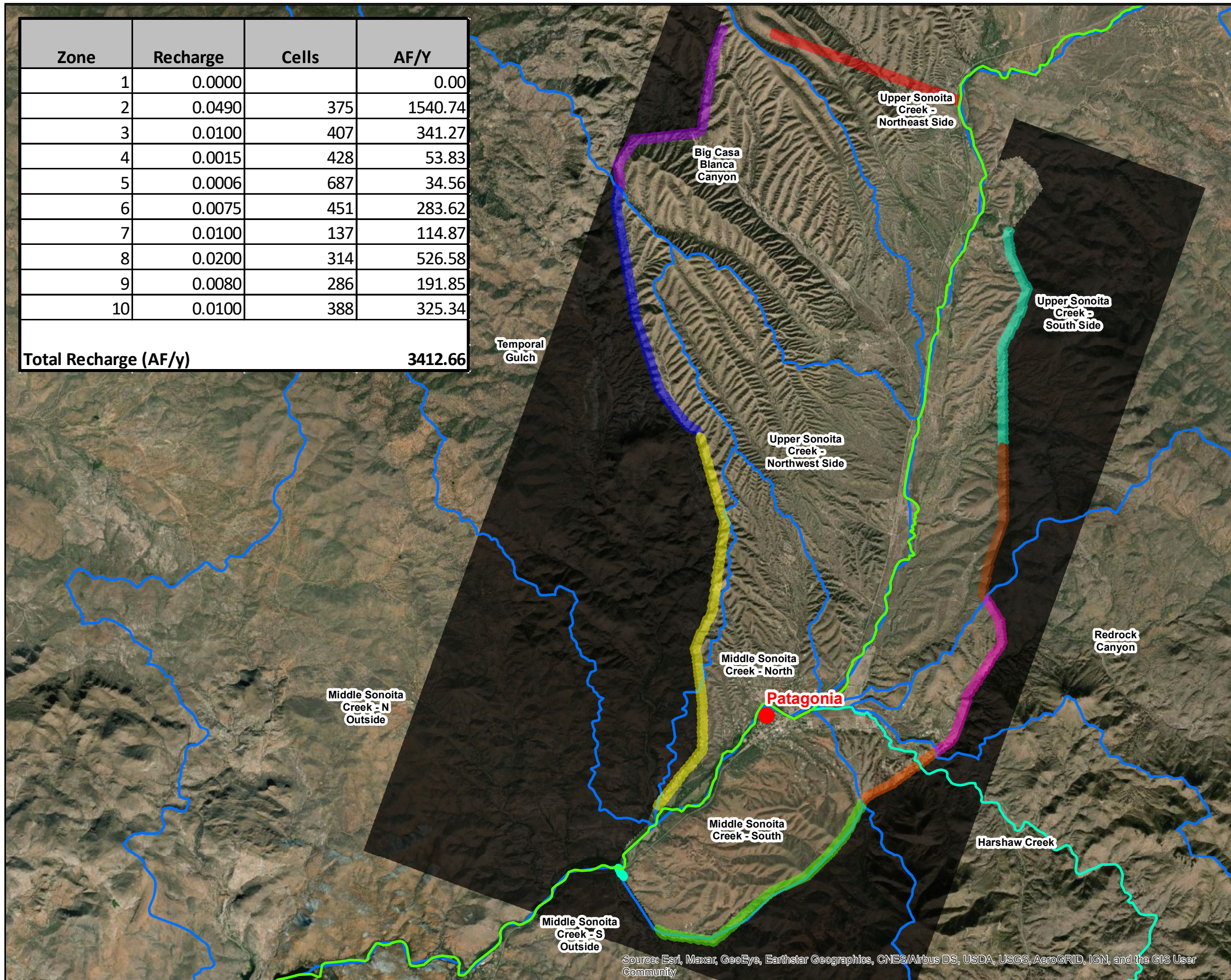
Date	4/20/2021	File ID	AZM-003
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FIGURE 25
Effective Recharge for 2013
PRISM Climate Group Data
Patagonia Groundwater Model

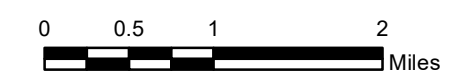
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Zone	Recharge	Cells	AF/Y
1	0.0000		0.00
2	0.0490	375	1540.74
3	0.0100	407	341.27
4	0.0015	428	53.83
5	0.0006	687	34.56
6	0.0075	451	283.62
7	0.0100	137	114.87
8	0.0200	314	526.58
9	0.0080	286	191.85
10	0.0100	388	325.34
Total Recharge (AF/y)			3412.66



Explanation

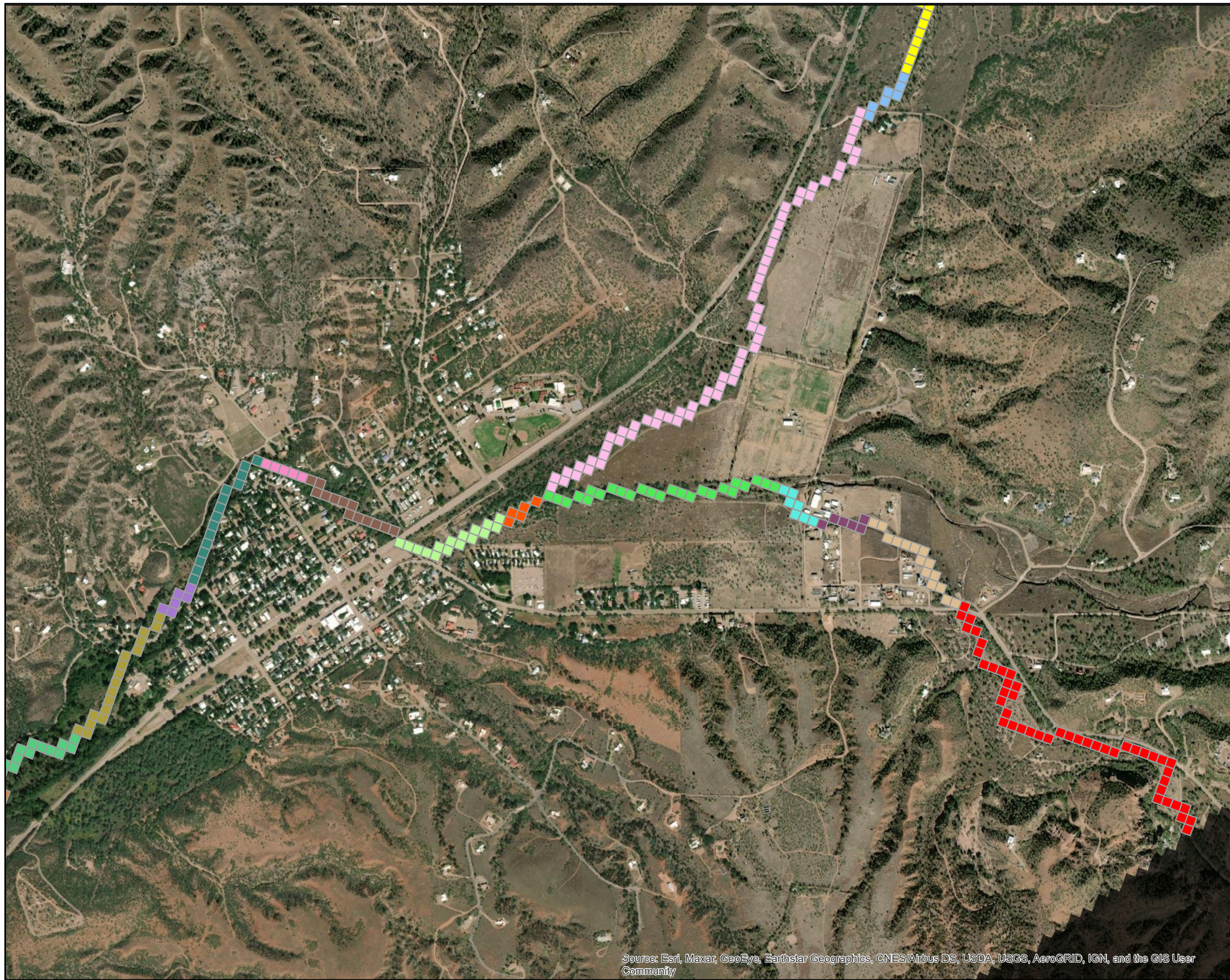
- Patagonia
 - Sonoita Creek
 - Harshaw Creek
 - Underflow from Model Area
- Groundwater Inflows**
- Recharge Zones**
- 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - Subwatersheds
 - No-Flow cells



Date	4/21/2021	File ID	AZM-003

FIGURE 26
Calibrated Recharge Rates
Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

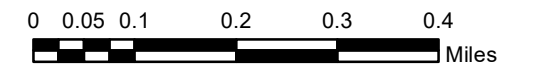


Explanation

Stream Segments

Segment Number

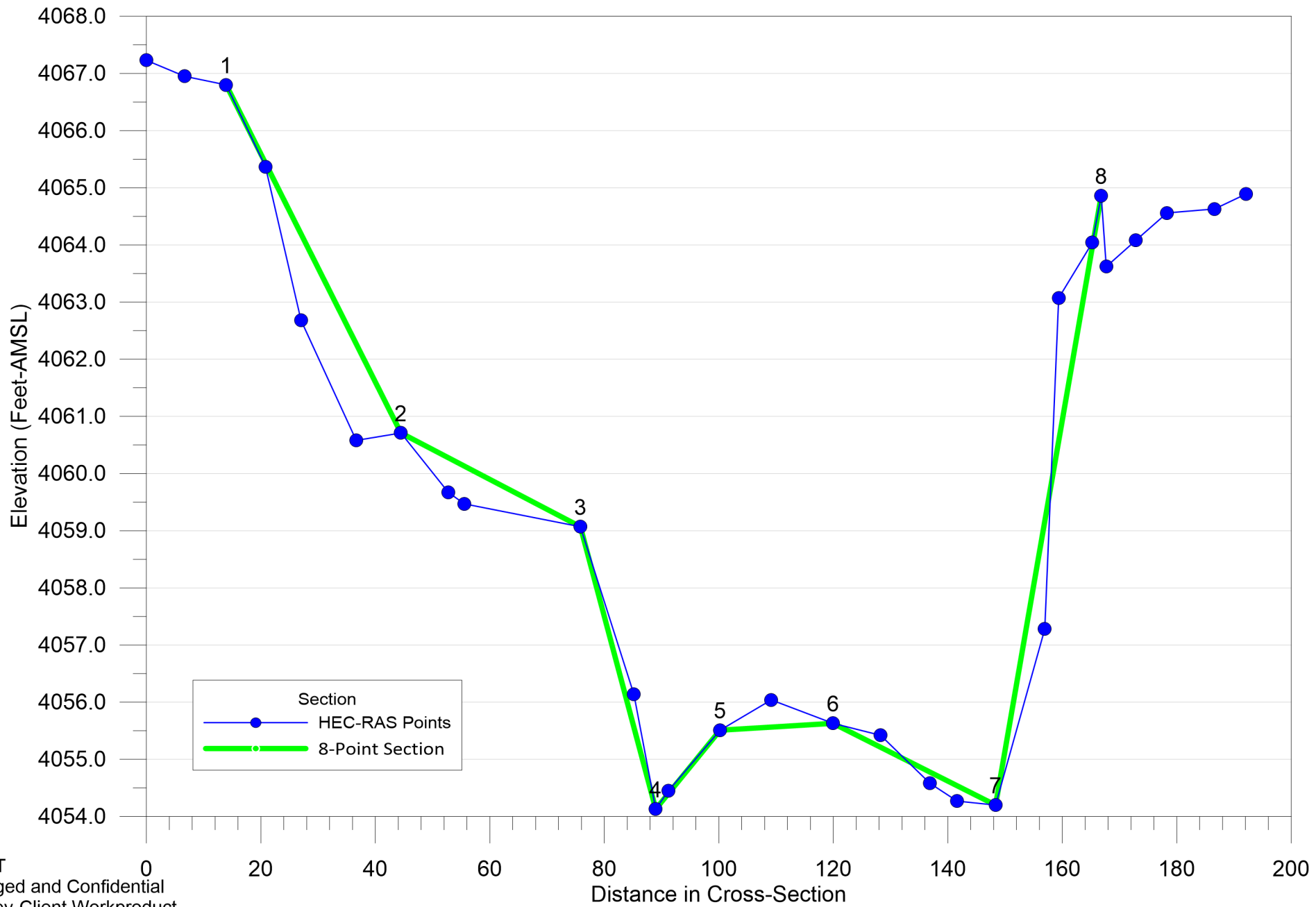
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- No-Flow cells



Date 03/09/21	File ID AZM-003

FIGURE 27
 Sonoita and Harshaw Creeks
 SFR Simulation Segments and Reaches
 Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



DRAFT
Privileged and Confidential
Attorney-Client Workproduct



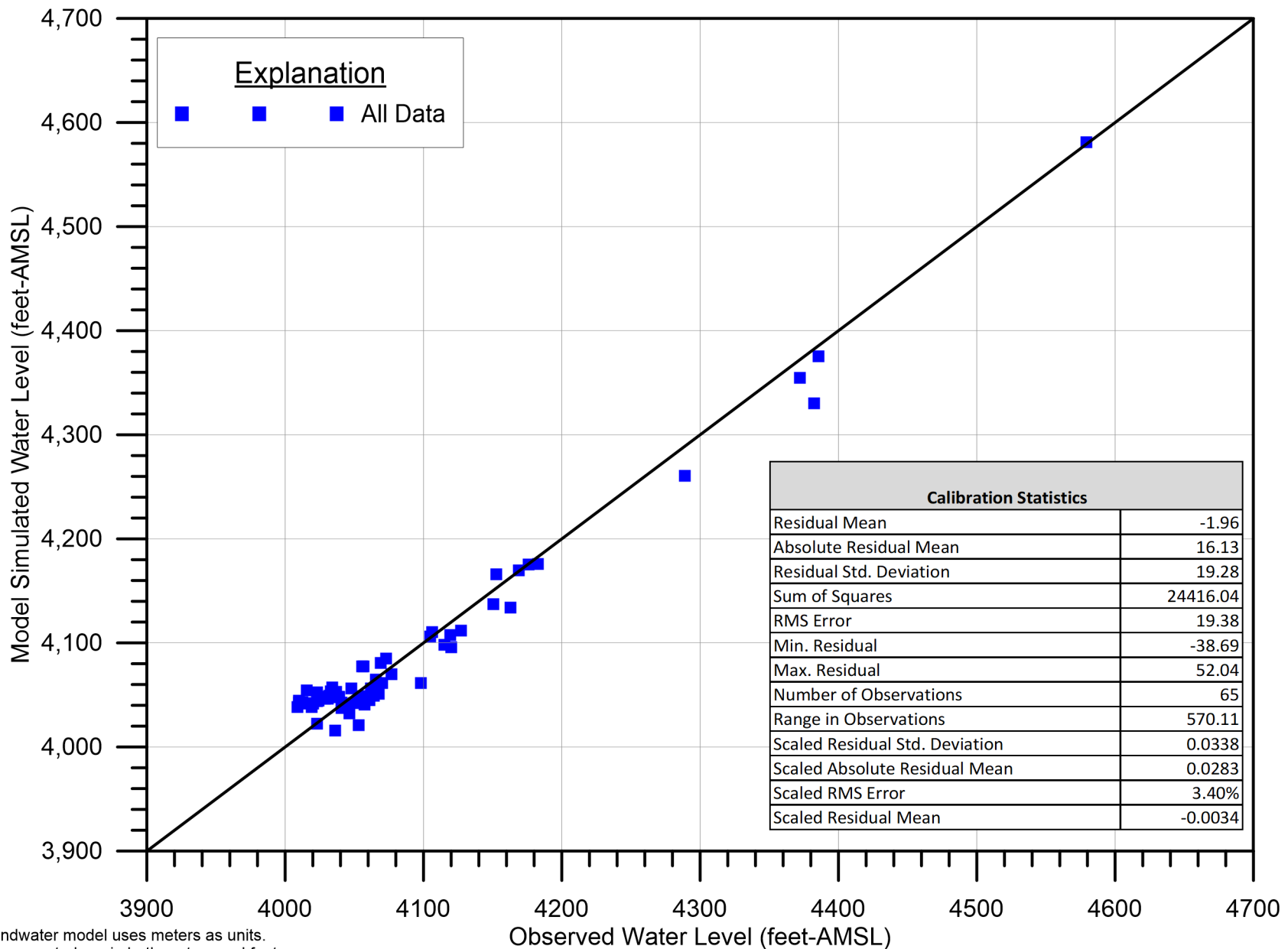
6155 East Indian School Road
Suite 200
Scottsdale, Arizona 85251
(480) 659-7131

May 7, 2021

**Eight-Point Cross-Section Example
Segment 13**

Patagonia Groundwater Flow Model

**FIGURE
28**



The groundwater model uses meters as units.
 Statistics presented are in both meters and feet.



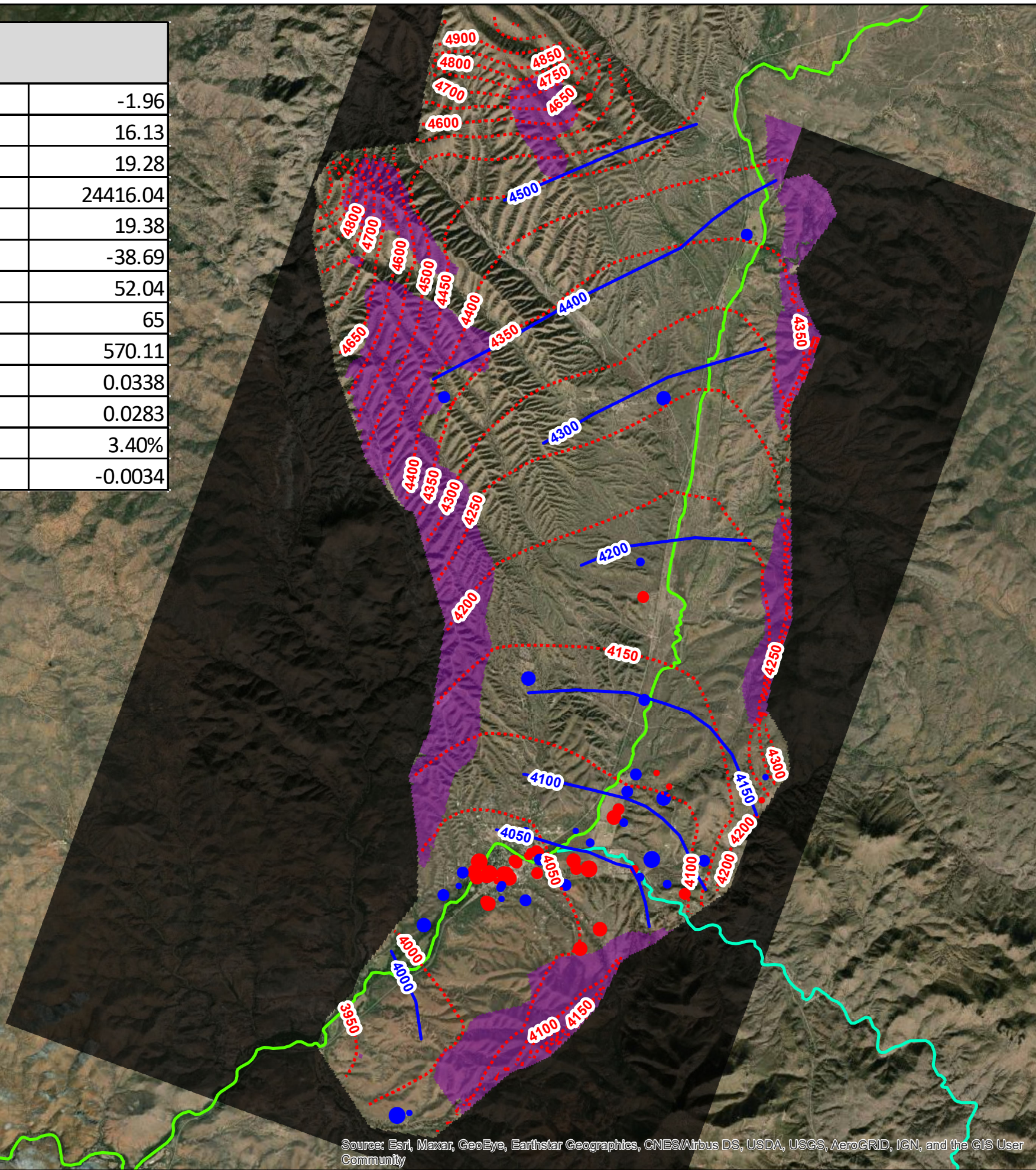
Clear Creek Associates
 6155 E Indian School Rd Ste 200
 Scottsdale, Arizona 85251
 (480) 659-7131

**Steady-State Model Calibration
 Measured vs. Computed Target Values**

Patagonia Groundwater Flow Model

**FIGURE
 29**

Calibration Statistics	
Residual Mean	-1.96
Absolute Residual Mean	16.13
Residual Std. Deviation	19.28
Sum of Squares	24416.04
RMS Error	19.38
Min. Residual	-38.69
Max. Residual	52.04
Number of Observations	65
Range in Observations	570.11
Scaled Residual Std. Deviation	0.0338
Scaled Absolute Residual Mean	0.0283
Scaled RMS Error	3.40%
Scaled Residual Mean	-0.0034



Explanation

- Measured Water Levels
- Simulated Water Levels

Positive Residuals

- (feet)
- 30.1 - 50.0
 - 20.1 - 30.0
 - 10.1 - 20.0
 - 5.1 - 10.0
 - 0.4 - 5.0

Negative Residuals

- (feet)
- -4.9 - 0.0
 - -9.9 - -5.0
 - -19.9 - -10.0
 - -29.9 - -20.0
 - -46.3 - -30.0

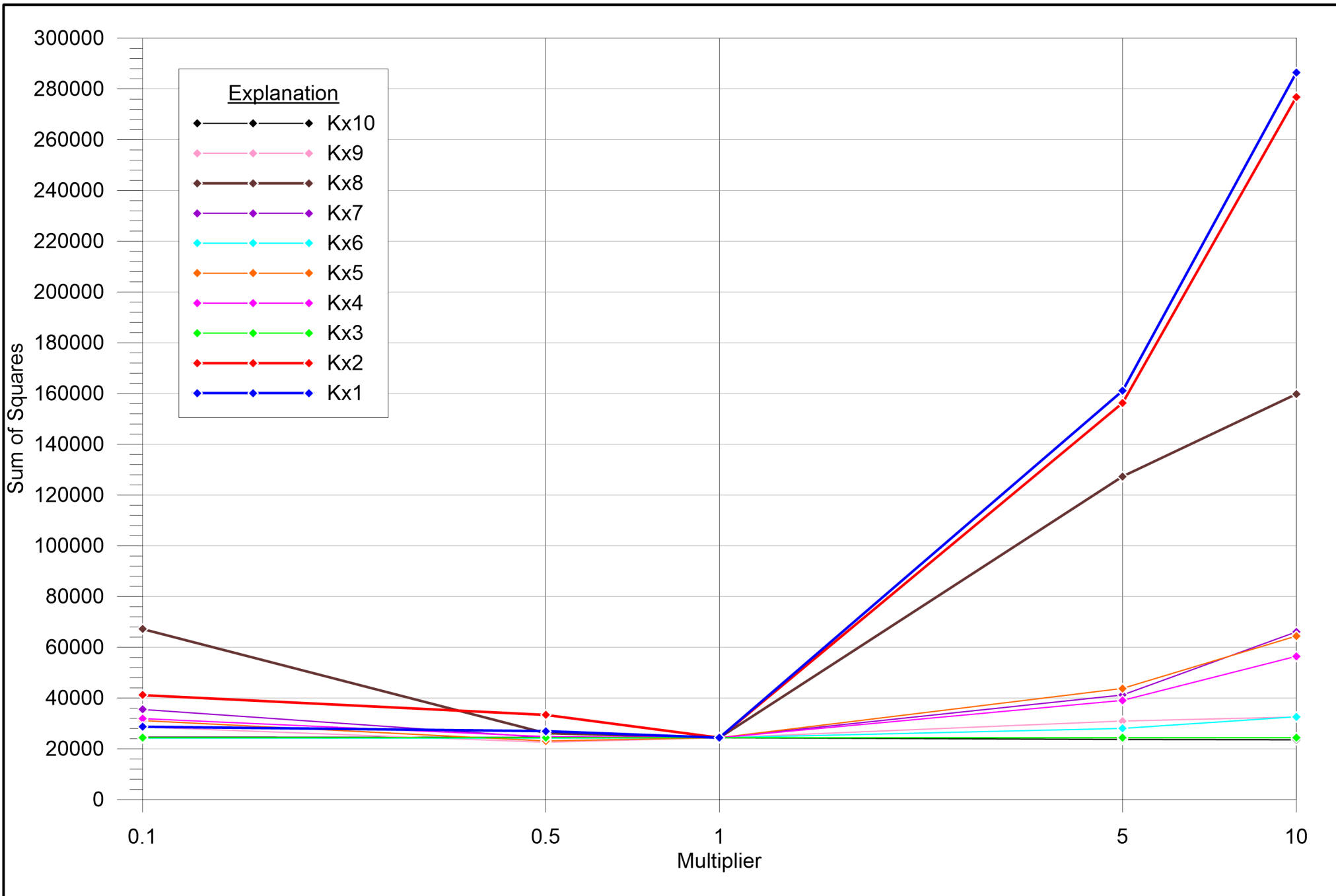
- Sonoyta Creek
- Harshaw Creek
- Alluvium Unsaturated
- No-Flow cells

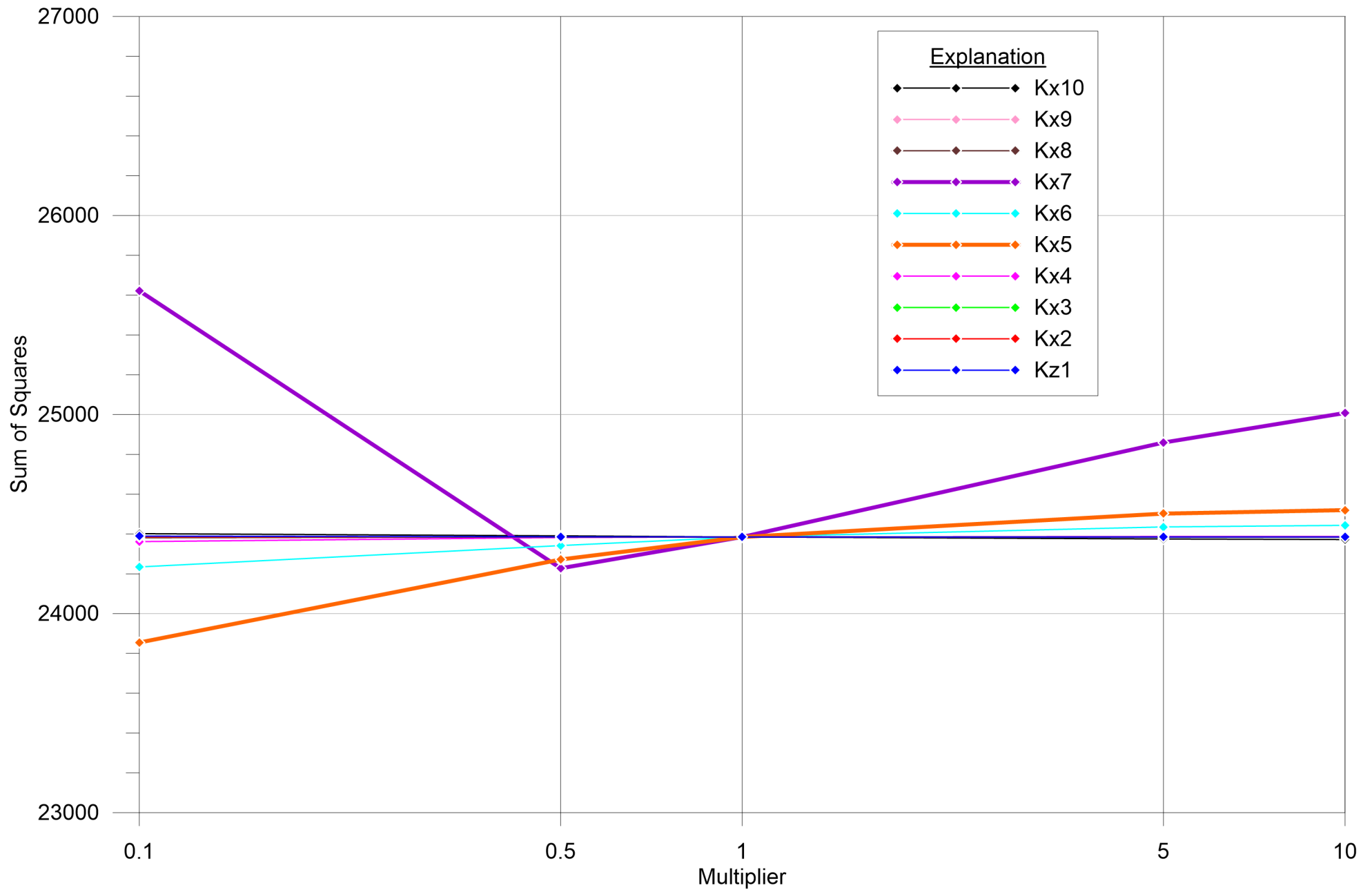


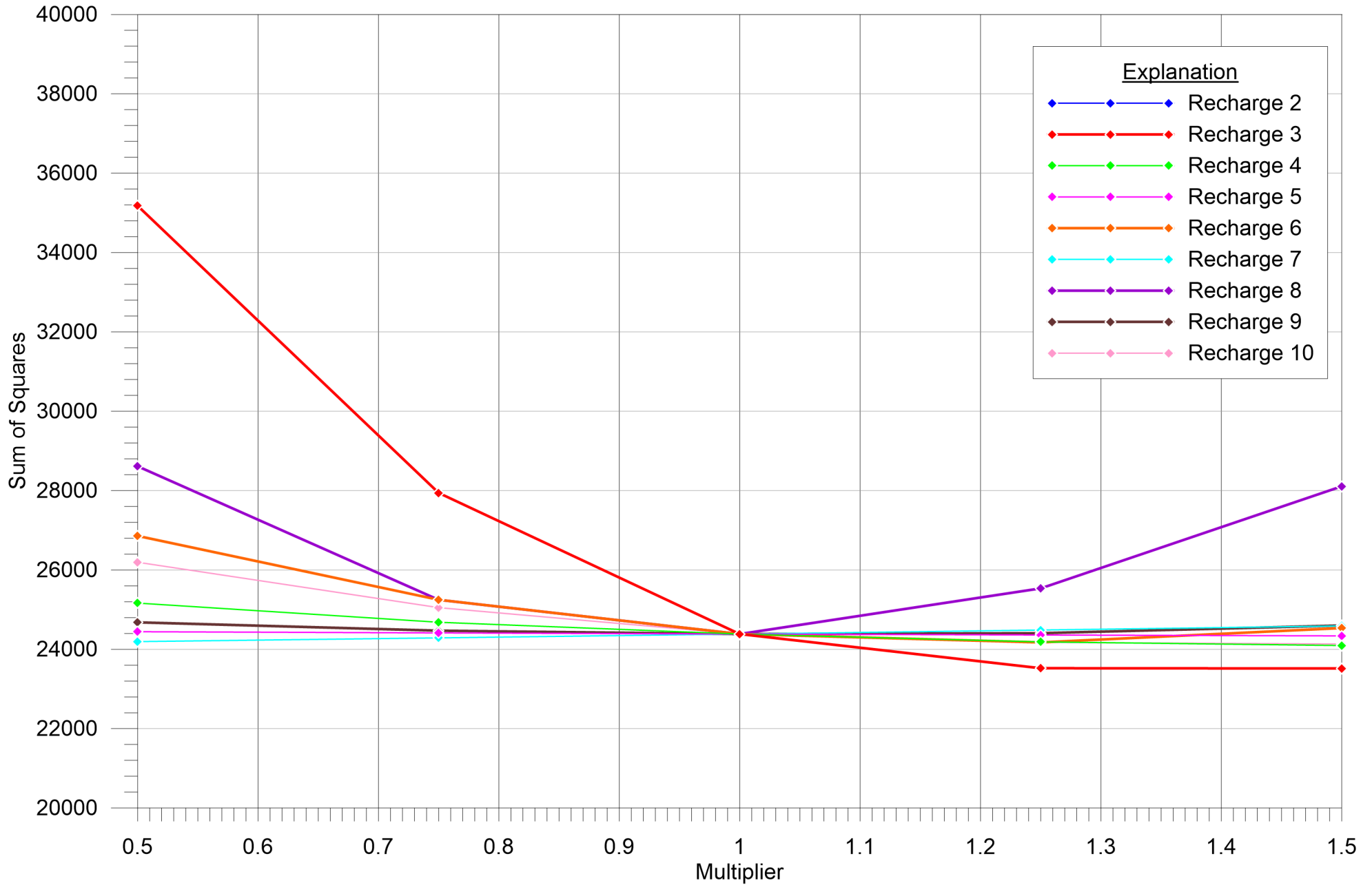
Date	5/7/2021	File ID	AZM-003

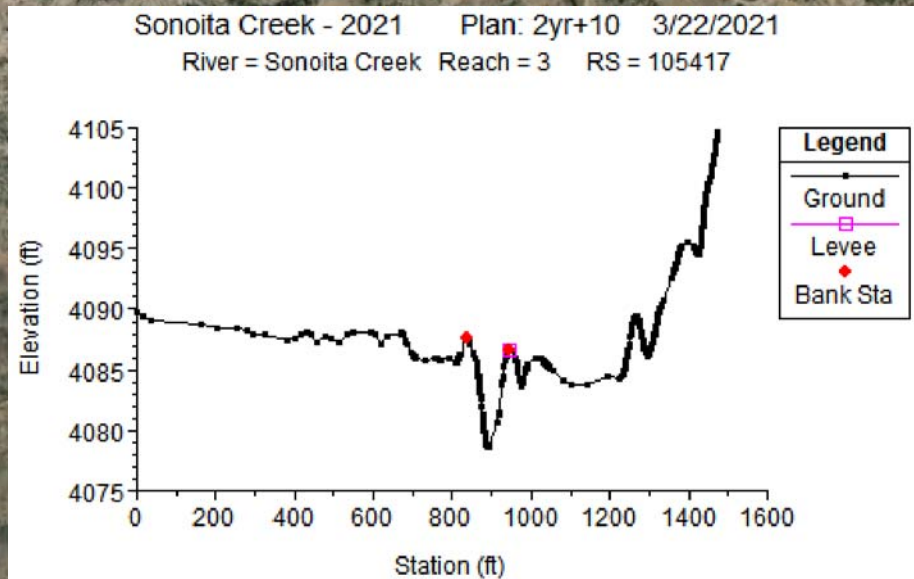
FIGURE 30
Model Simulated Water Levels
Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community









Explanation

- Stream Centerlines
- Harshaw Creek XSs
- Sonoita Creek XSs
- Overbank Models XSs
- Town of Patagonia

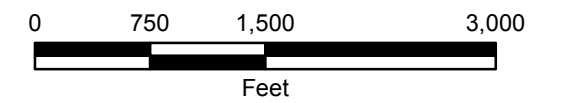
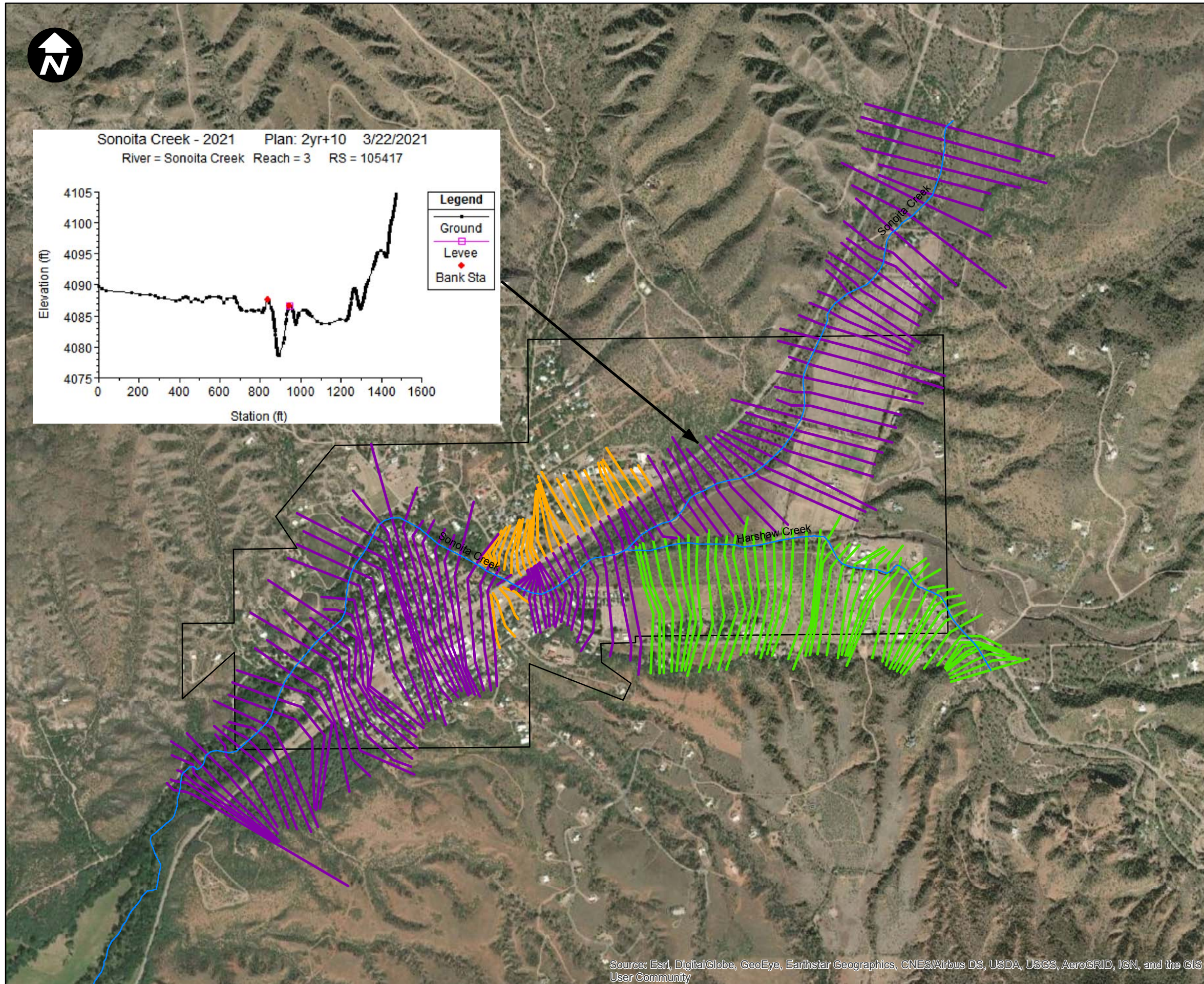



Figure 34
Hydraulic Model Extents
SURFACE WATER MODEL

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

 2-year Flood Boundary

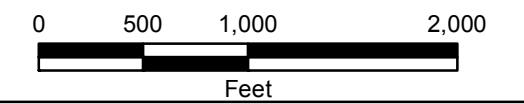
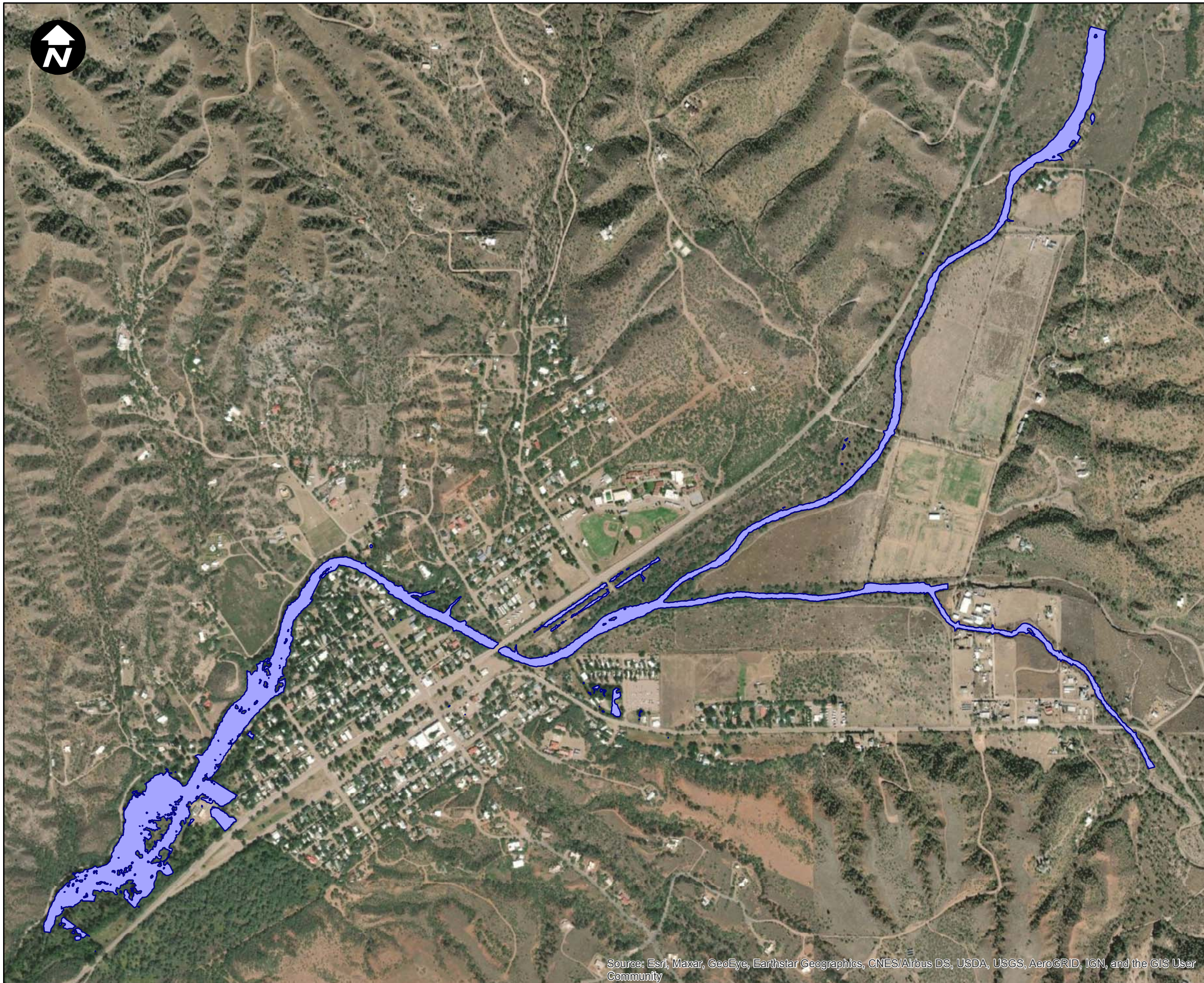



Figure 35a
Flood Boundaries without 10 cfs
2-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

 2-year + 10cfs Flood Boundary

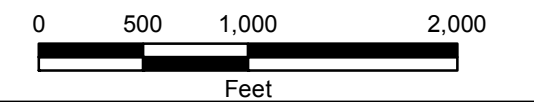
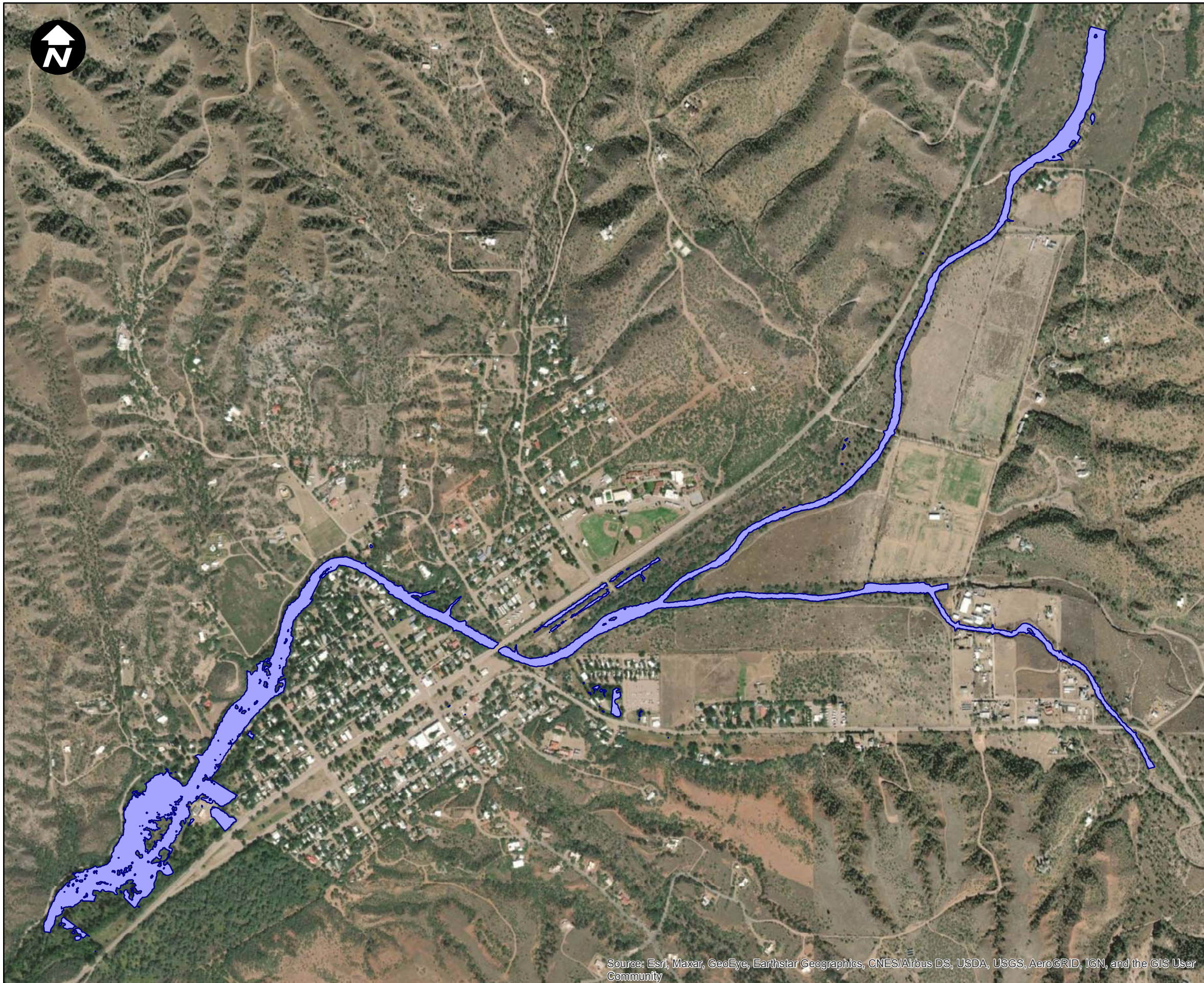


Figure 35b
Flood Boundaries with 10 cfs
2-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

Change in depth - 2-year, 24-hour

- 0 inches
- 0 - 0.25 inches
- 0.25 - 0.5 inches
- 0.5 - 0.75 inches
- 0.75 - 1 inch
- 1 - 1.25 inches

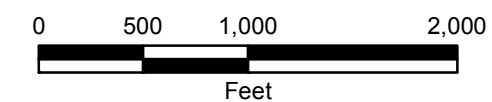
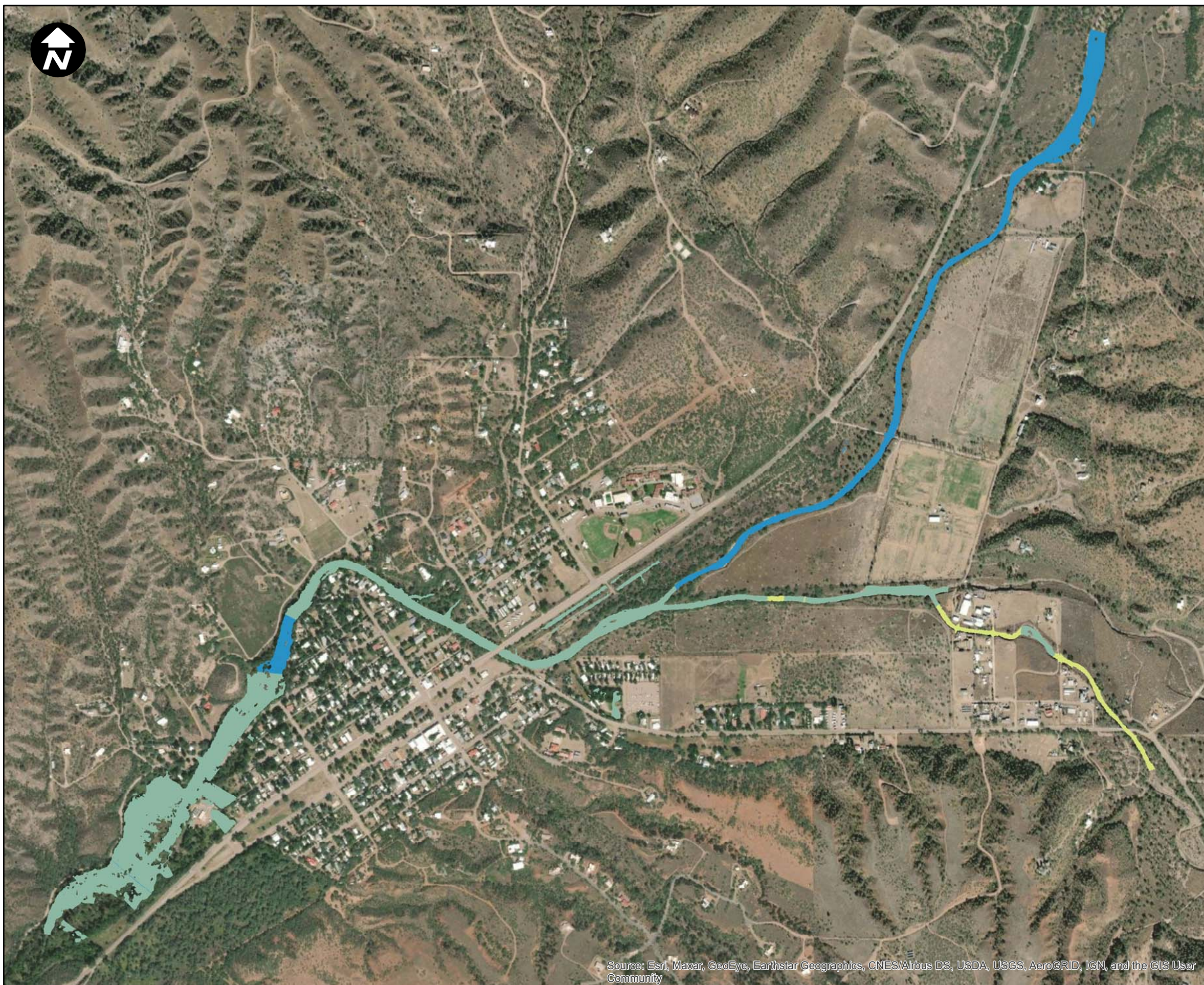



Figure 36
Flood Depth Comparison
2-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

 10-year Flood Boundary

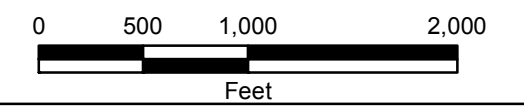
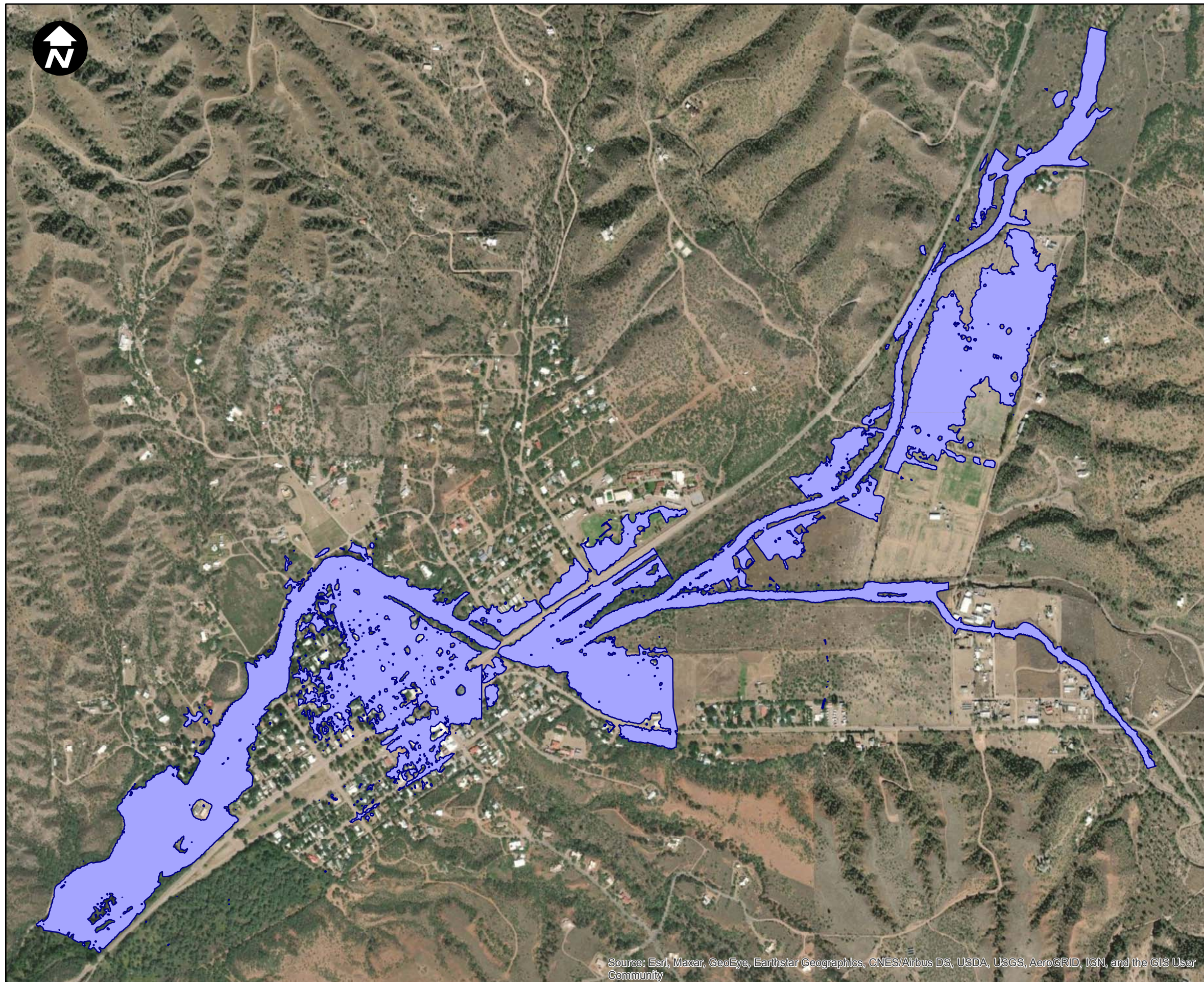



Figure 37a
Flood Boundaries without 10 cfs
10-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

 10-year +10cfs Flood Boundary

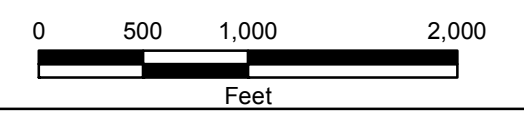
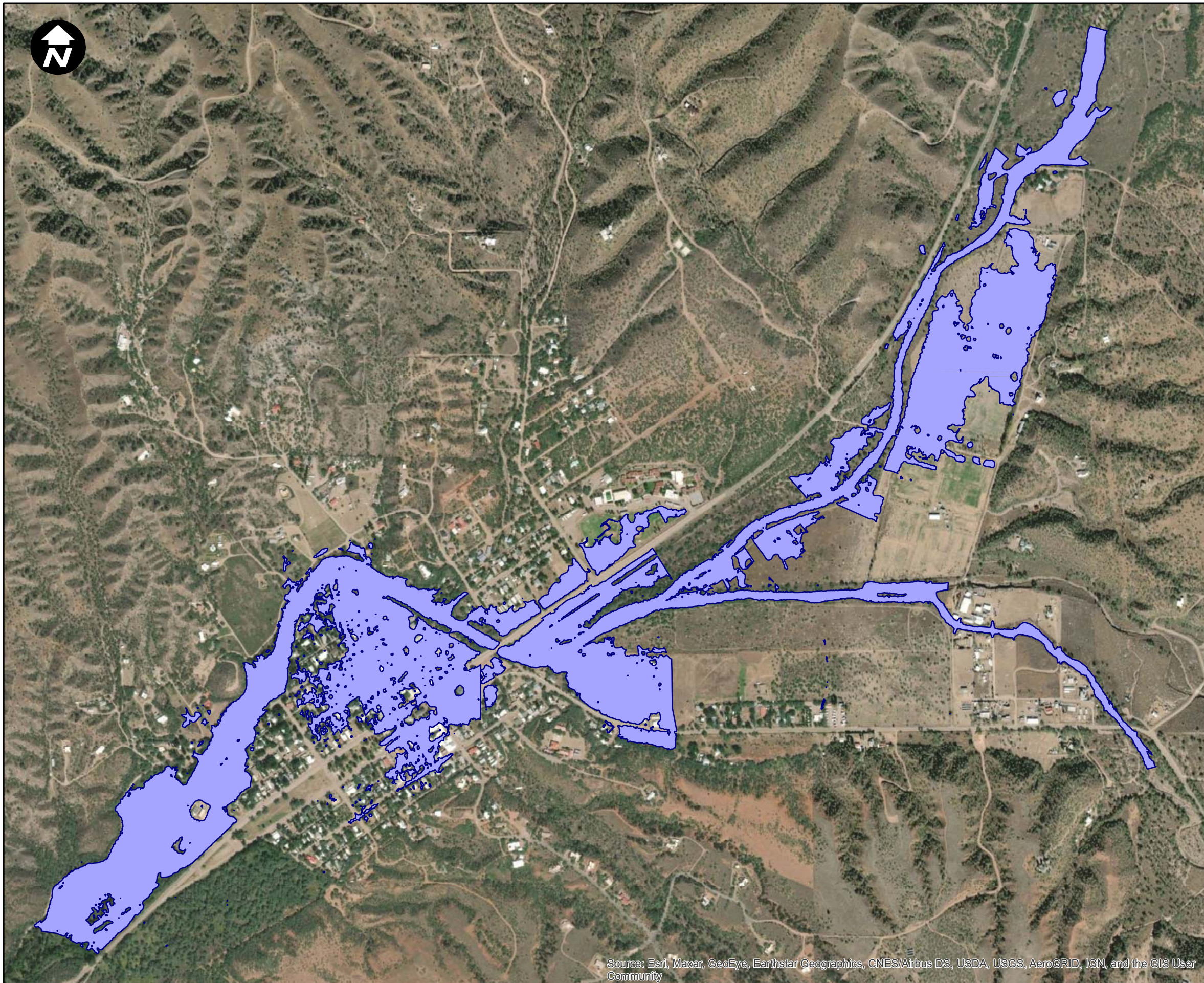


Figure 37b
Flood Boundaries with 10 cfs
10-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

Change in depth - 10-year, 24-hour

- 0 inches
- 0 - 0.25 inches
- 0.25 - 0.5 inches
- 0.5 - 0.75 inches
- 0.75 - 1 inch
- 1 - 1.25 inches

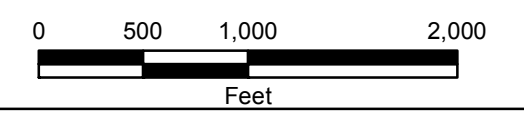
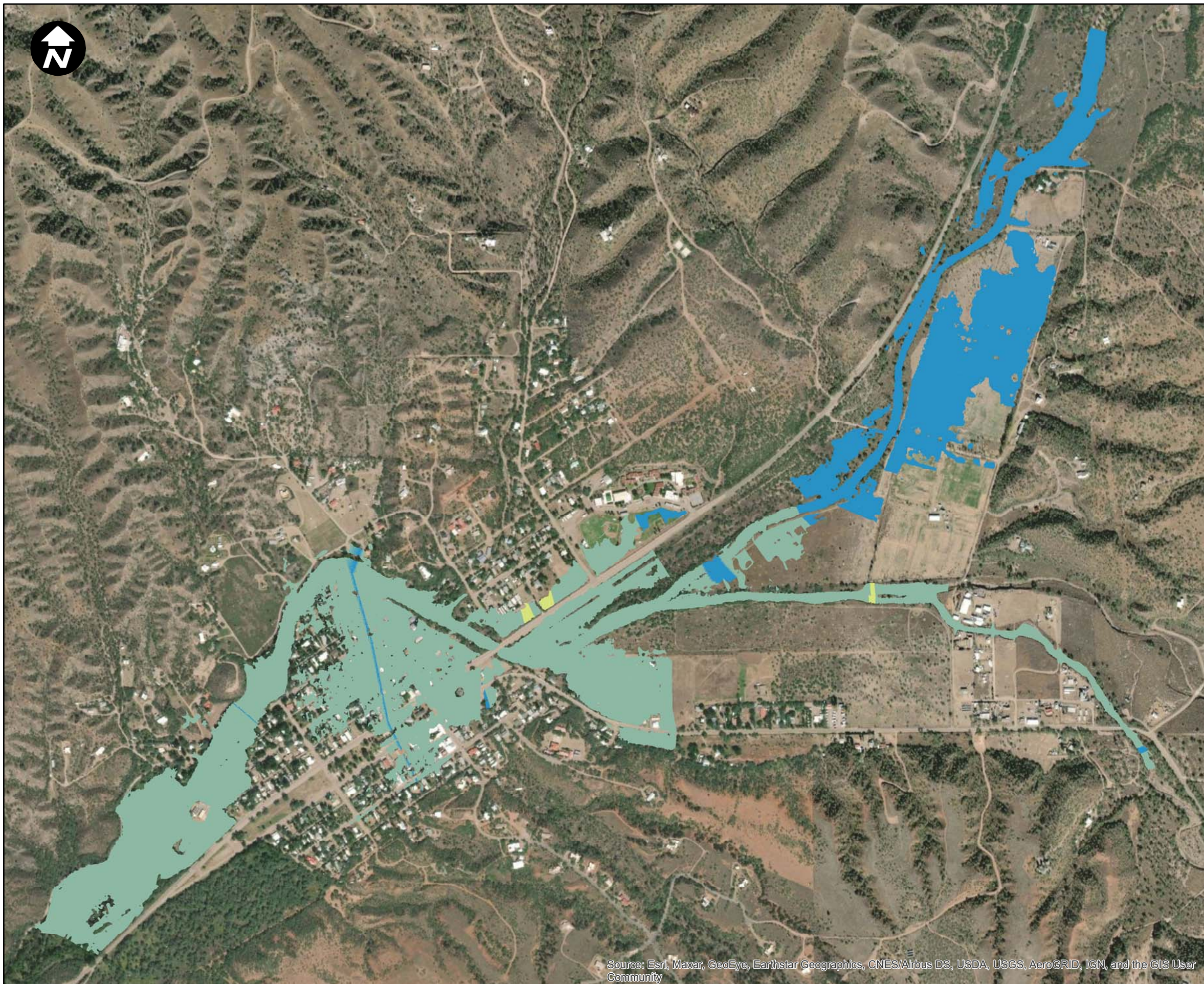


Figure 38
Flood Depth Comparison
10-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

 50-year Flood Boundary

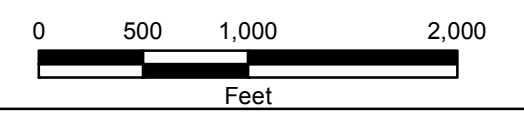
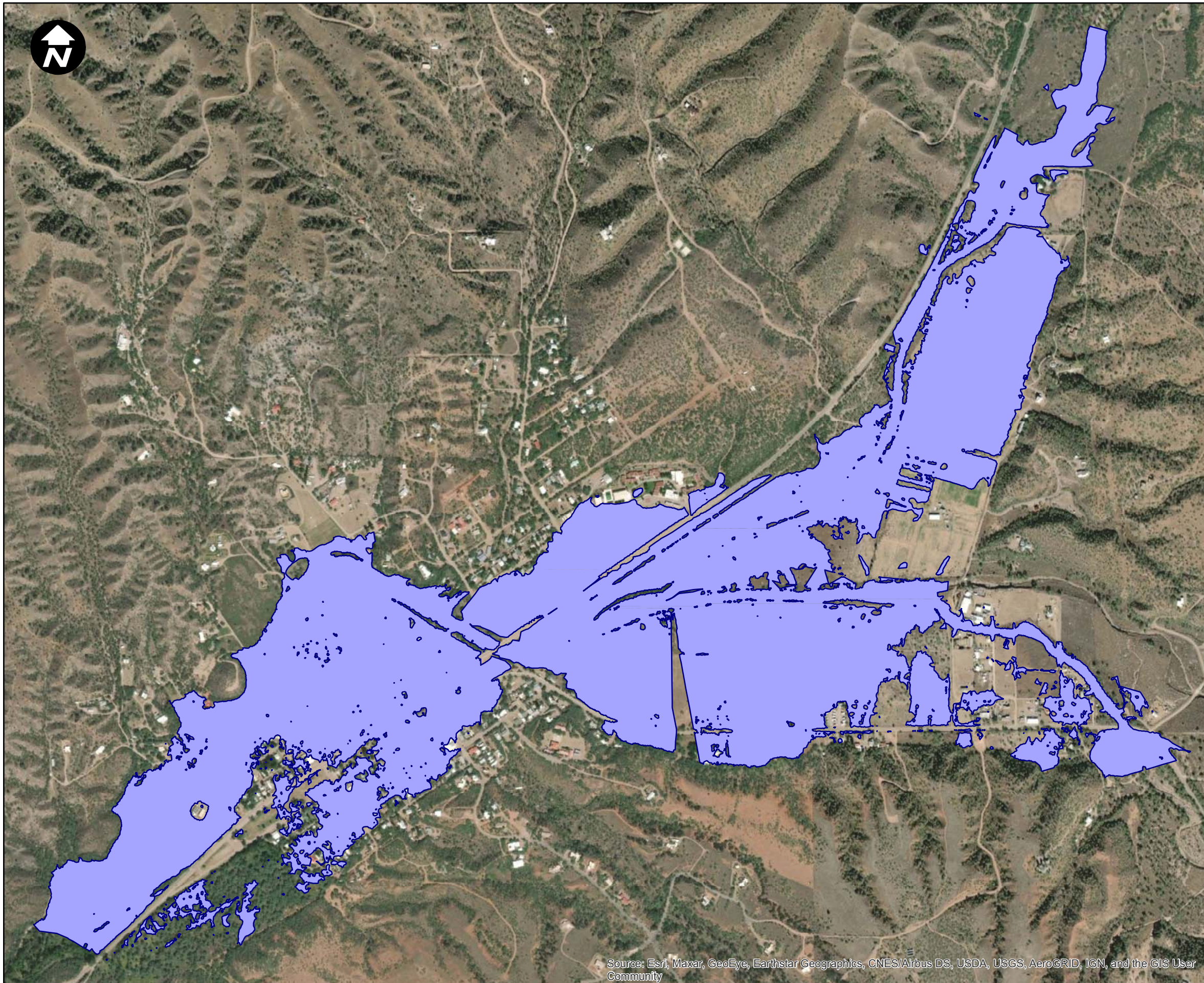



Figure 39a
Flood Boundaries without 10 cfs
50-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

 50-year +10cfs Flood Boundary

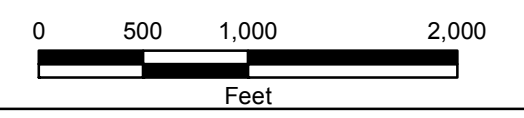
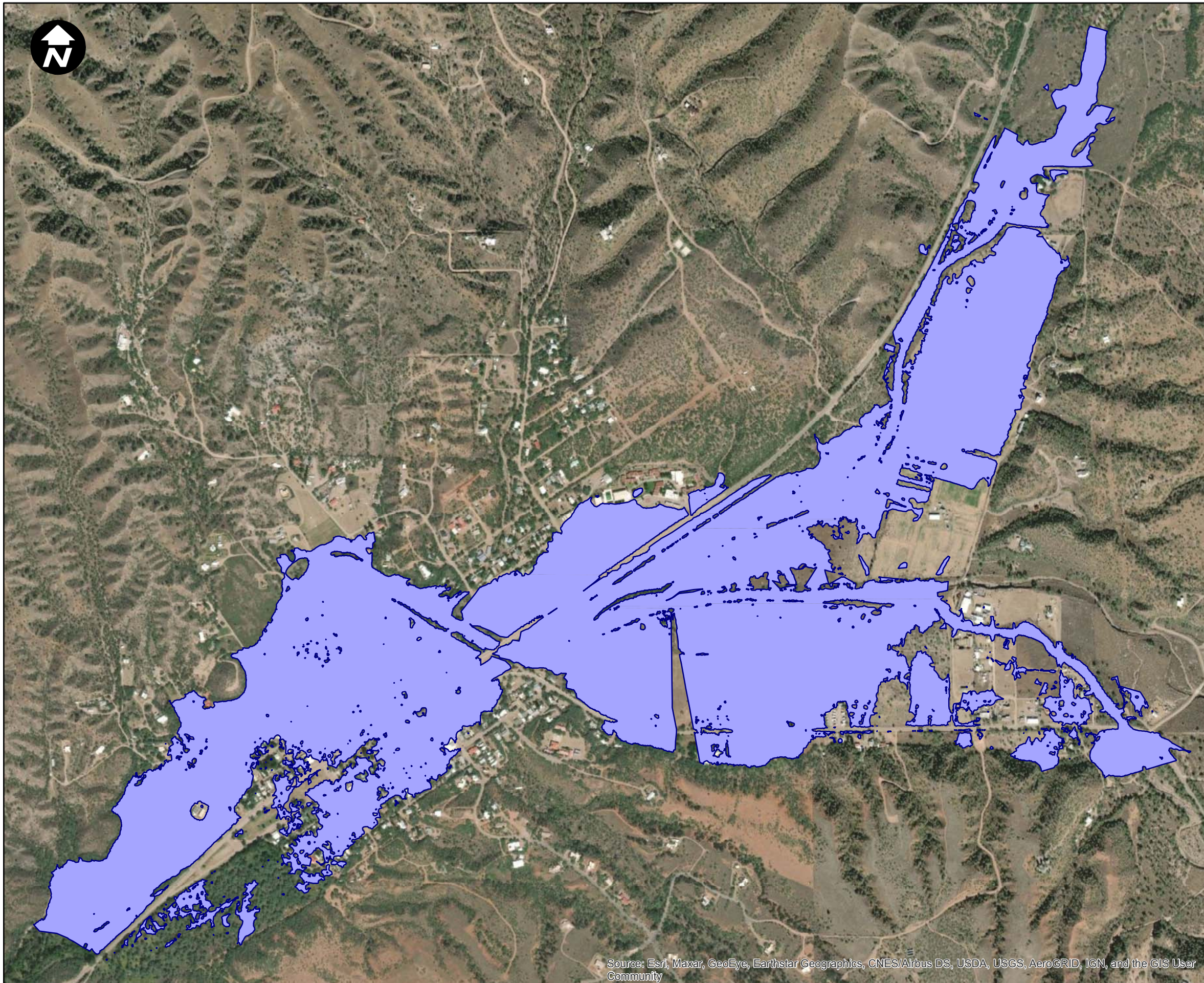


Figure 39b
Flood Boundaries with 10 cfs
50-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

Change in depth - 50-year, 24-hour

- 0 inches
- 0 - 0.25 inches
- 0.25 - 0.5 inches
- 0.5 - 0.75 inches
- 0.75 - 1 inch
- 1 - 1.25 inches

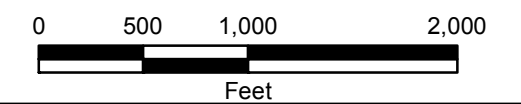
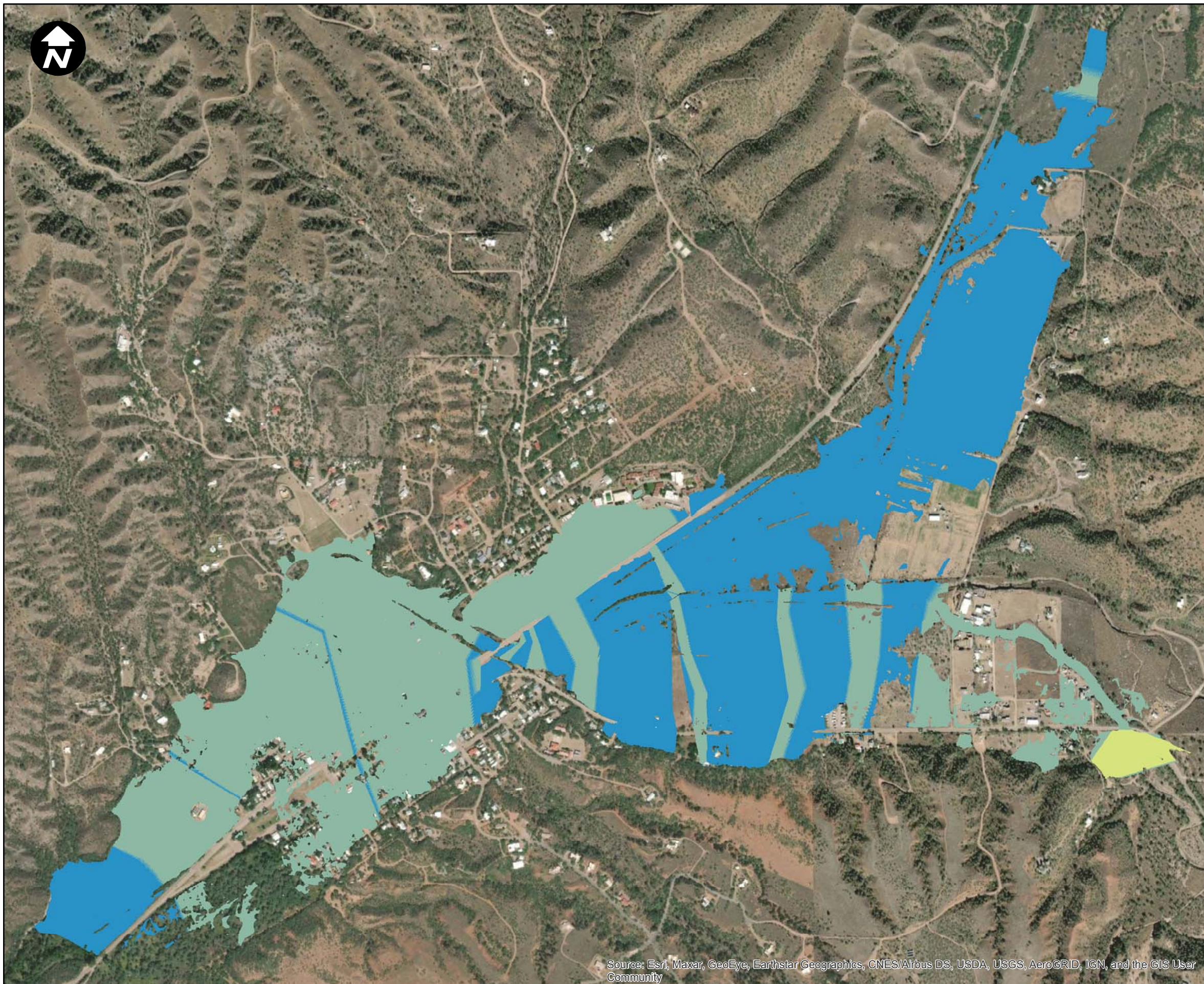
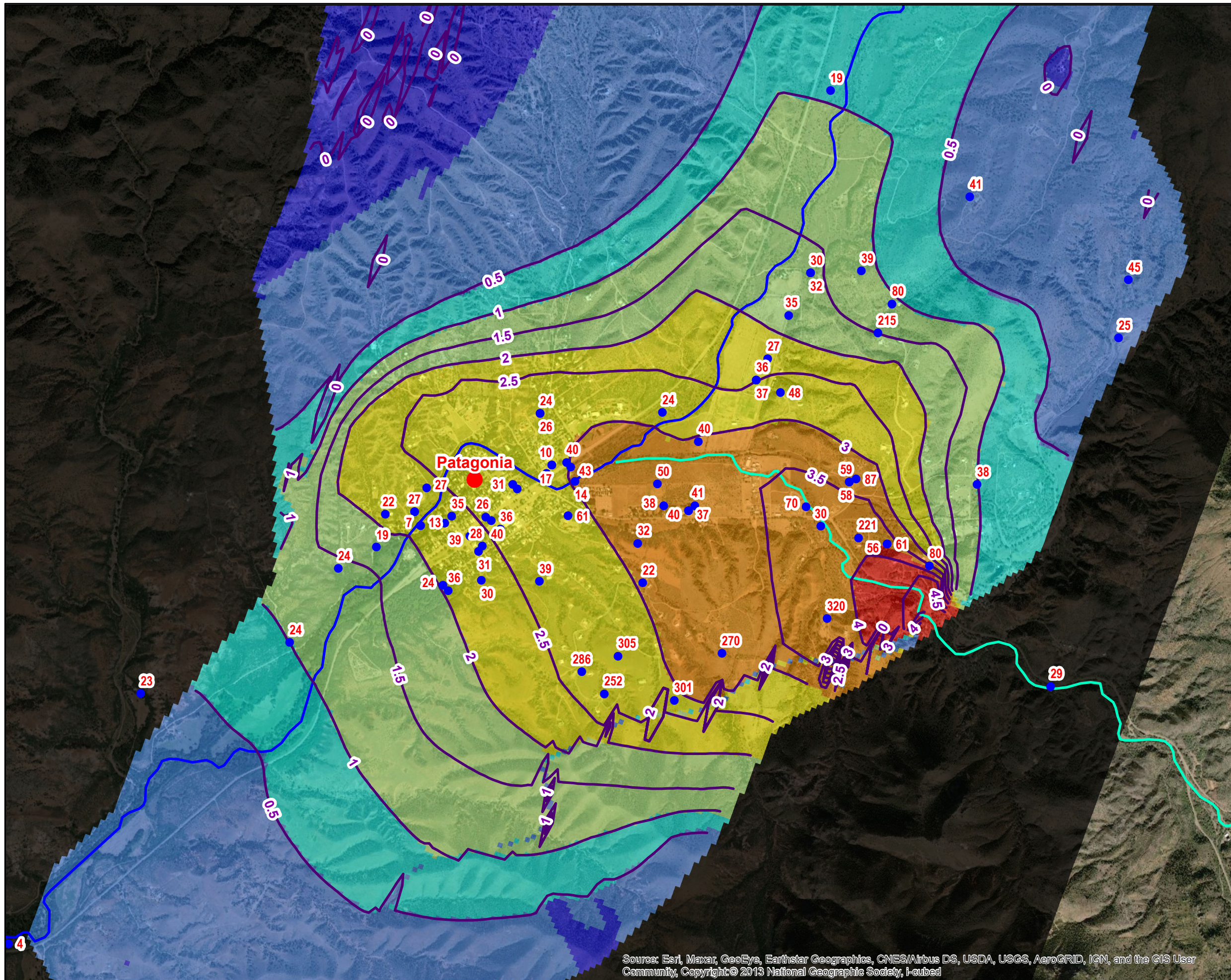


Figure 40
Flood Depth Comparison
50-yr, 24-hr
SURFACE WATER MODEL

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Explanation

- Minimum Depth to Water
- Patagonia
- Water Level Rise
- Sonoita Creek
- Harshaw Creek

Water Level Rise at 5 Years

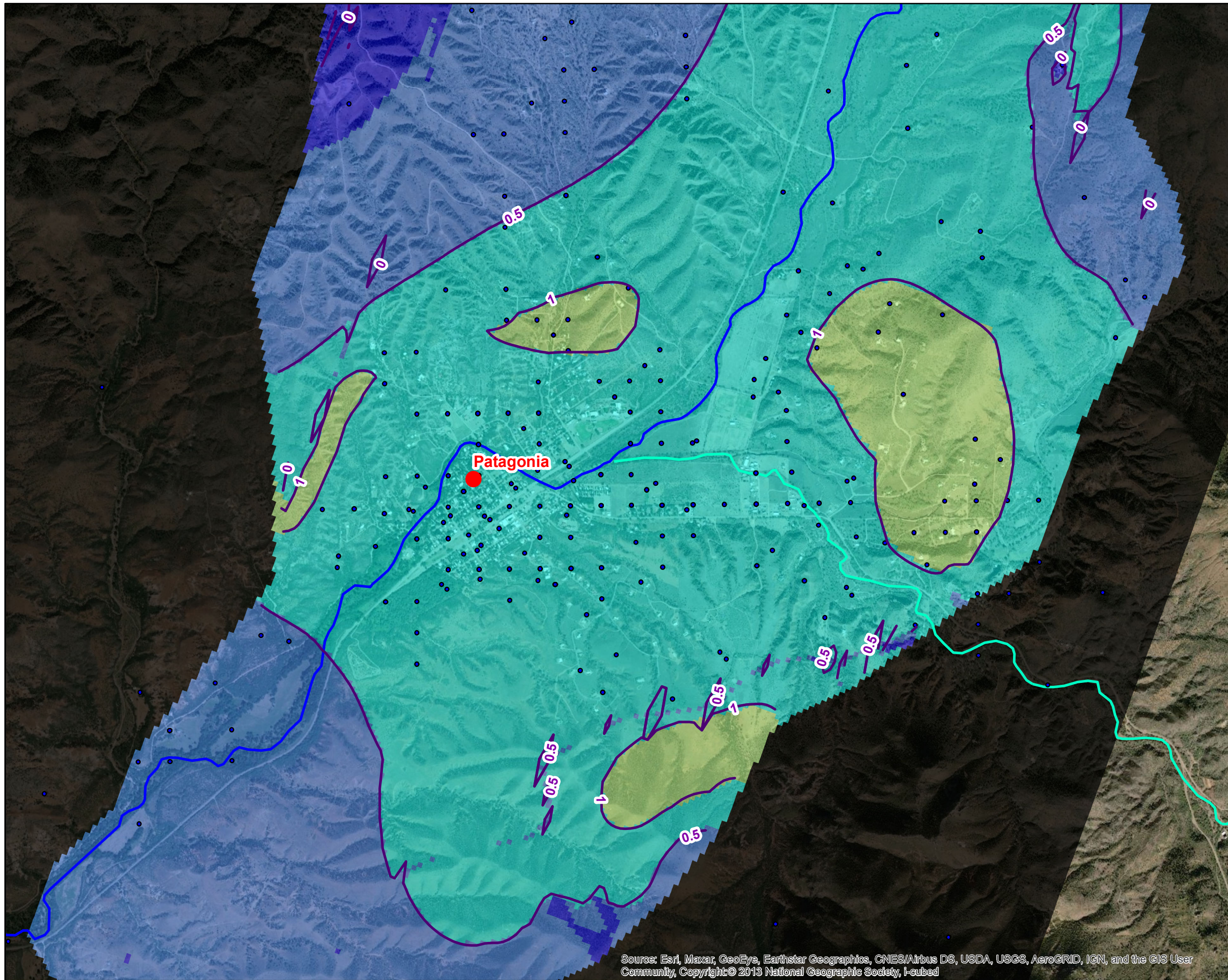
- (feet)
- -2.28 - 0.00
 - 0.01 - 0.50
 - 0.51 - 1.00
 - 1.01 - 2.00
 - 2.01 - 3.00
 - 3.01 - 4.00
 - 4.01 - 5.04
 - No-Flow cells

Date 4/20/2021 File ID AZM-003



FIGURE 41
Rise in Groundwater Levels
after 5 Years in Layer 1
Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Copyright © 2013 National Geographic Society, I-cubed



Explanation

- Patagonia
- Water Level Rise
- Wells in Database
- Sonoita Creek
- Harshaw Creek

Water Level Rise at 10 Years

(feet)

	-2.28 - 0.00
	0.01 - 0.50
	0.51 - 1.00
	1.01 - 2.00
	No-Flow cells

Date 4/20/2021	File ID AZM-003
-------------------	--------------------

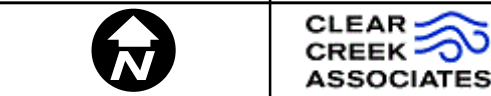
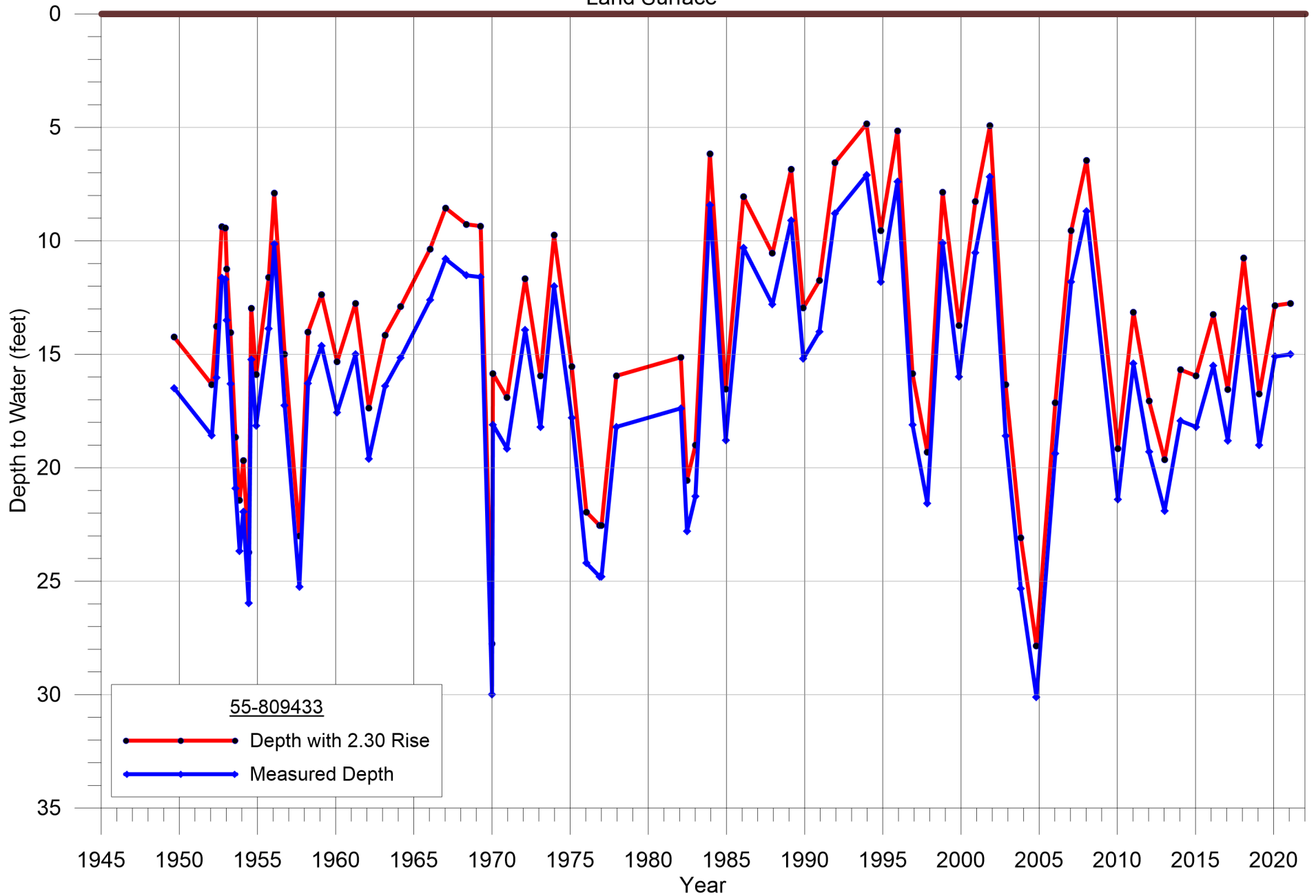
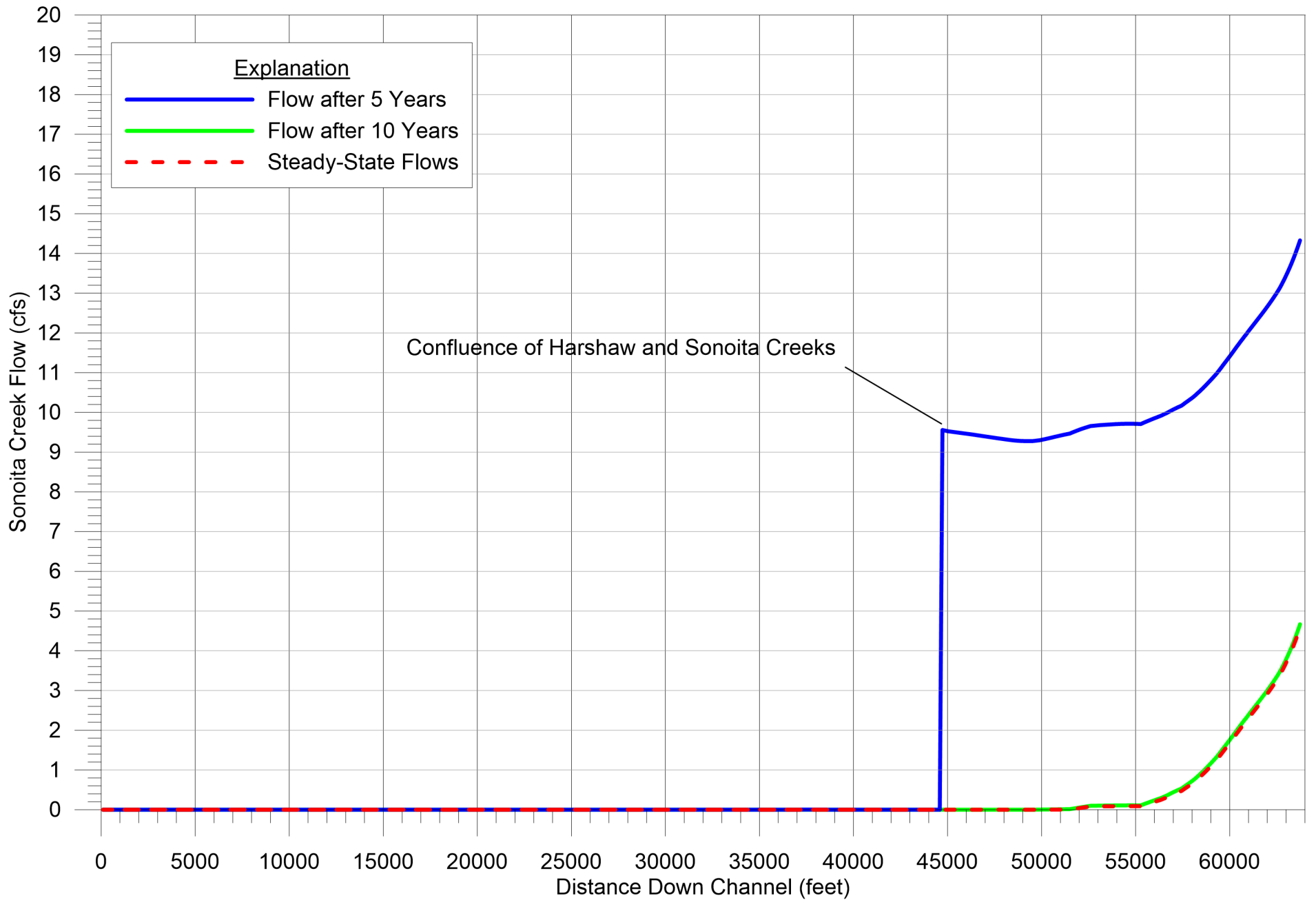


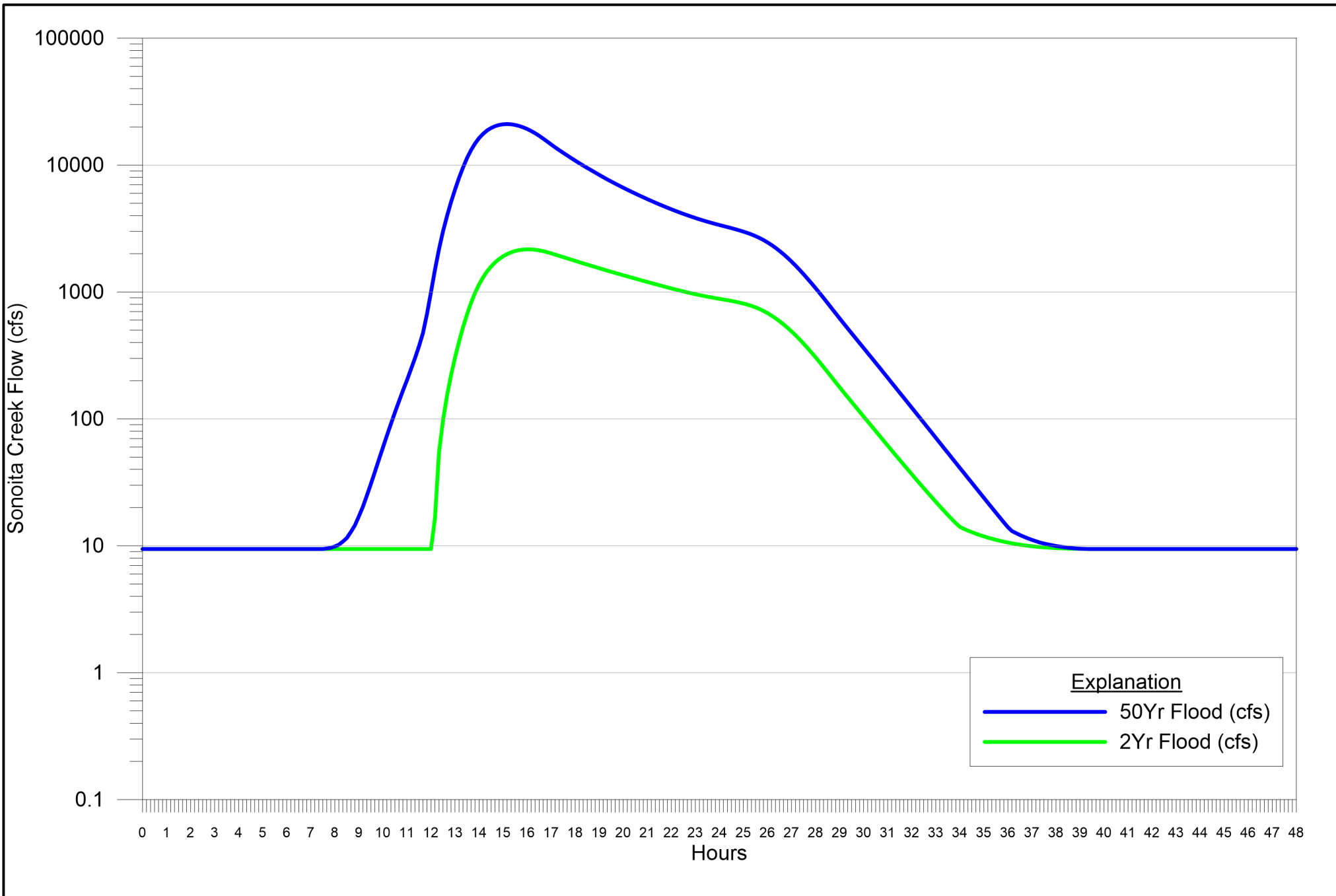
FIGURE 42
 Residual Rise in Groundwater Levels
 after 10 Years (5 years of recovery)
 Patagonia Groundwater Model

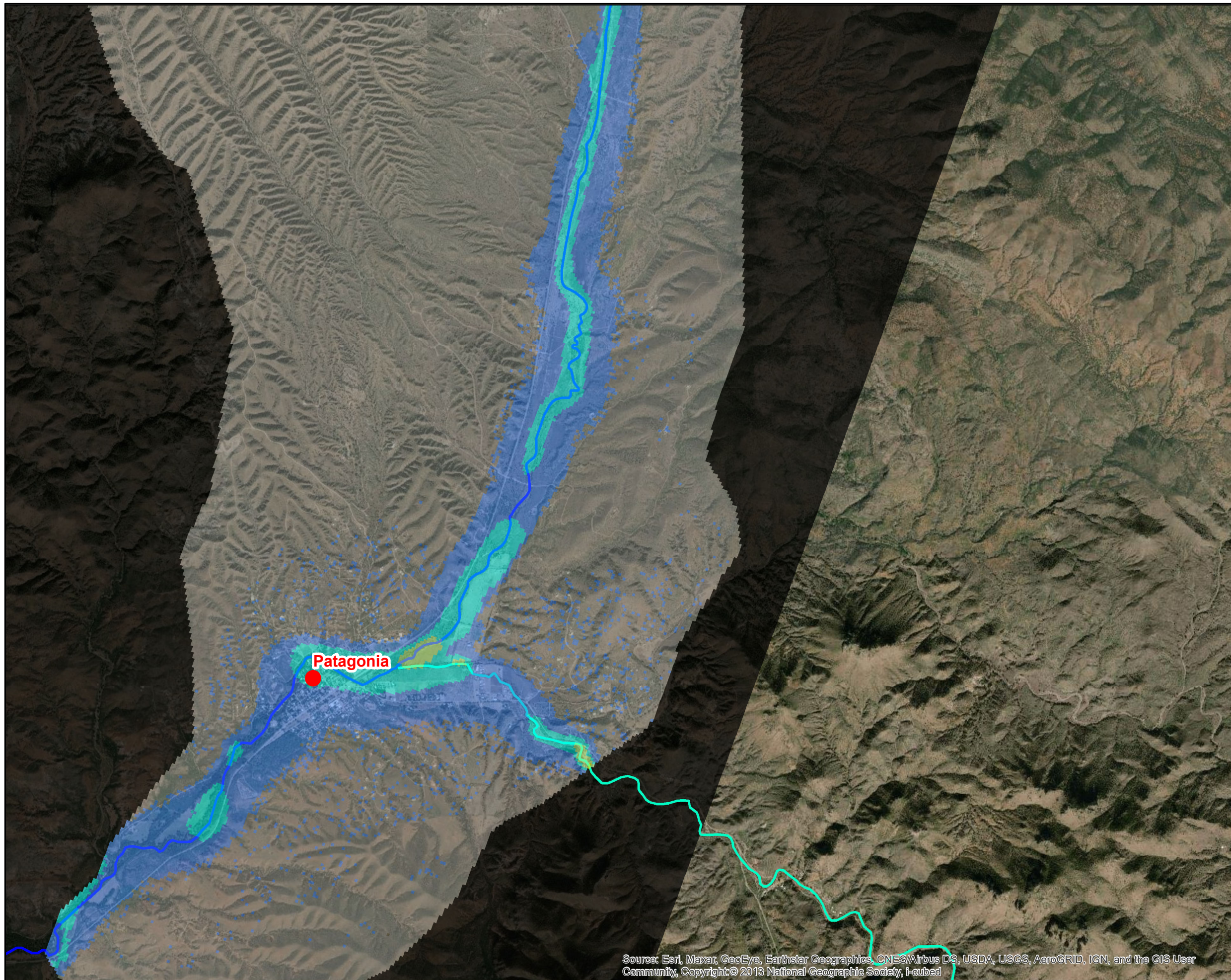
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Copyright © 2013 National Geographic Society, i-cubed

Land Surface





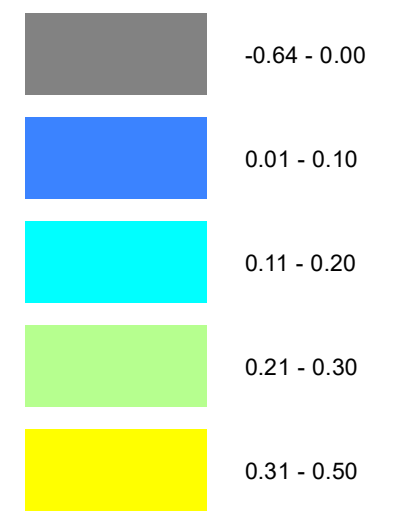




Explanation

● Patagonia

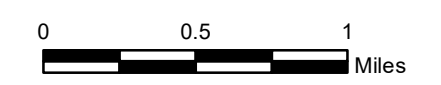
Water Level Change after 48-Hours
(feet)



— Sonoita Creek

— Harshaw Creek

■ No-Flow cells

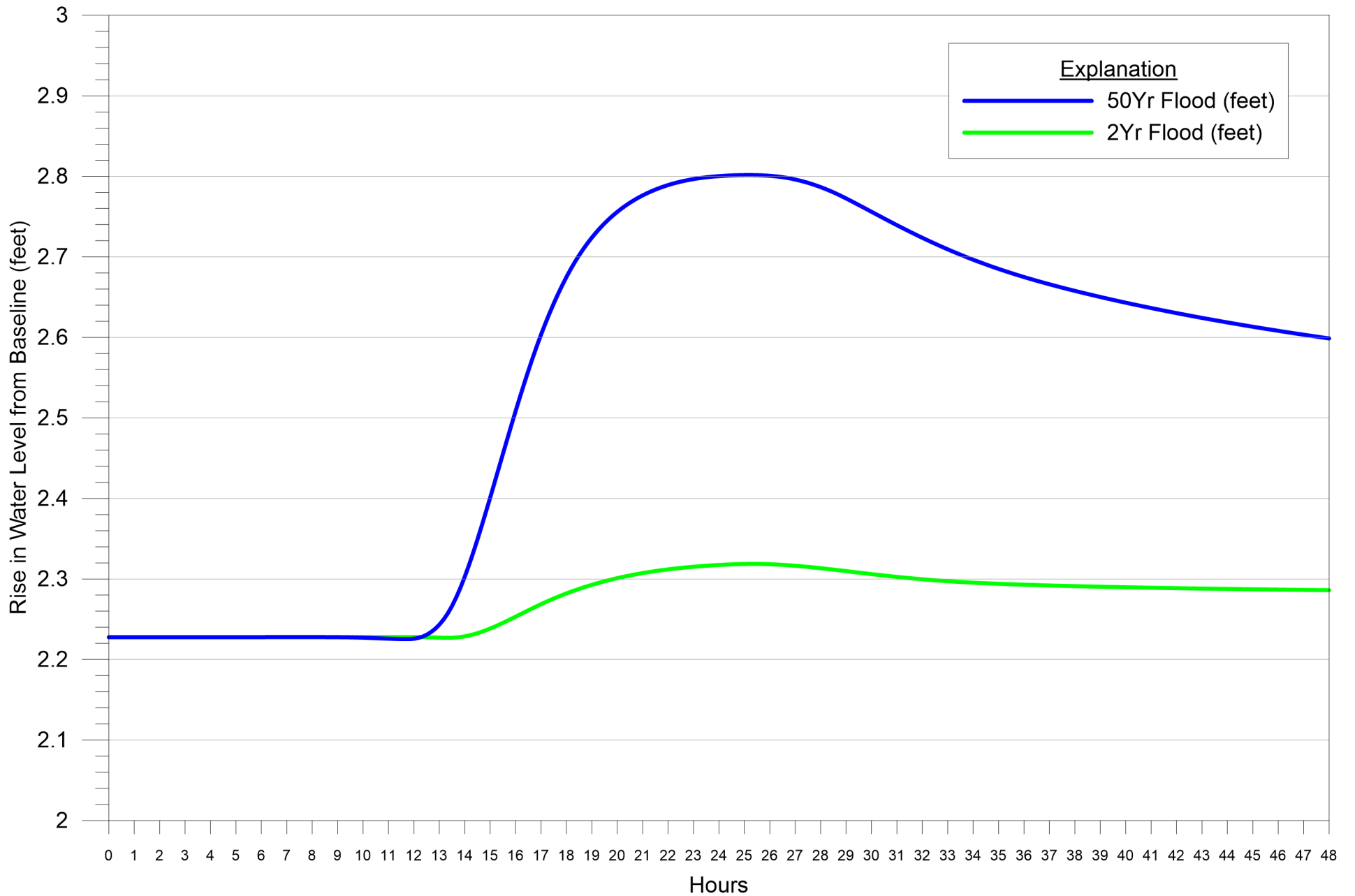


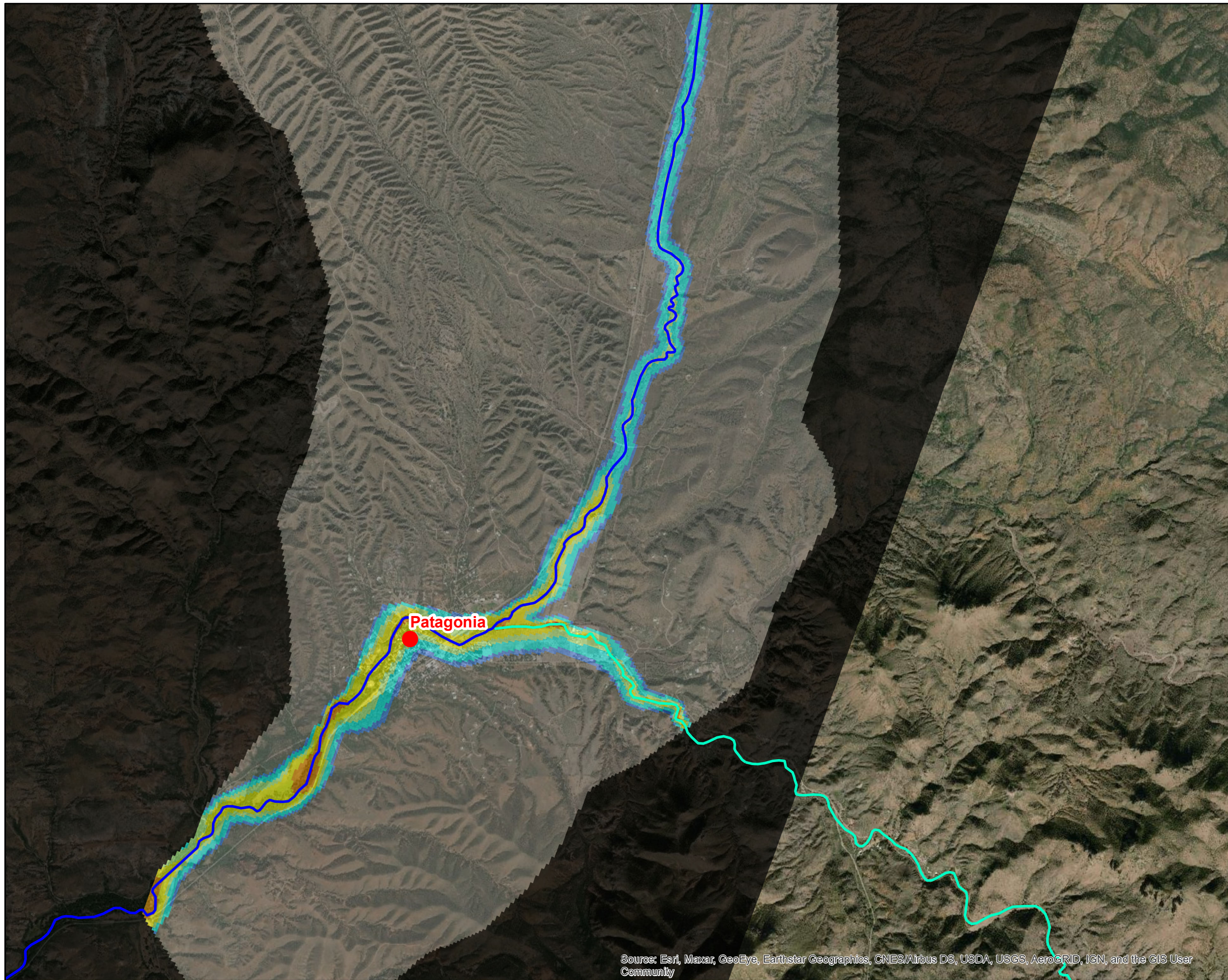
Date	04/21/21	File ID	AZM-003
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FIGURE 46
Additional Change in Water Level
After 48 Hours - 2-Year Flood Event
Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Copyright © 2013 National Geographic Society, I-cubed





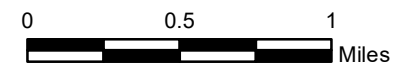
Explanation

- Patagonia
- Sonoita Creek
- Harshaw Creek
- No-Flow cells

Head Change at 24 Hours

(feet)

- 0.0 - 0.050
- 0.051 - 0.10
- 0.11 - 0.30
- 0.31 - 0.50
- 0.51 - 1.0
- 1.1 - 2.0
- 2.1 - 2.3



Date: 4/21/2021 File ID: AZM-003



FIGURE 48
 Additional Change in Water Level
 After 24 Hours - 50-Year Flood Event
 Patagonia Groundwater Model

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

APPENDICES

APPENDIX A

WATER LEVEL DATABASE

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-15 12CAD	1077	11/1/1939		GWSI	0	0	50	1057891.94	195779.66	4060.00	23.67	4036.33	USGS	
D-22-16 07BCC2	1078	6/1/1949		GWSI	0	0	50	1061217.95	196873.02	4045.00	36.00	4009.00	USGS	
D-22-16 07BAC	1079	6/1/1949		GWSI	0	0	50	1062312.26	198158.21	4060.00	36.00	4024.00	USGS	
D-22-16 07BDB1	1080	8/1/1949		GWSI	0	0	50	1061932.05	197804.05	4080.00	28.00	4052.00	USGS	
D-22-16 07BDB2	1081	8/1/1949		GWSI	0	0	50	1061851.32	197692.07	4080.00	30.52	4049.48	USGS	
D-22-16 07BBD1	1082	8/24/1949		GWSI	0	0	50	1062002.36	198413.42	4049.00	26.00	4023.00	USGS	
D-22-15 12AAC	1083	8/31/1949		GWSI	0	0	50	1059900.80	198469.41	4080.00	22.44	4057.56	USGS	
D-22-15 12AC	1084	11/1/1939		GWSI	0	0	50	1058908.61	197336.60	4070.00	23.67	4046.33	USGS	
D-22-15 12AAA	1085	8/31/1949		GWSI	0	0	50	1060763.14	199025.00	4039.00	26.61	4012.39	USGS	
D-22-16 06DCC1	1086	6/17/1949		GWSI	0	0	50	1063699.99	199561.52	4075.00	40.00	4035.00	USGS	
D-22-16 06DCC2	1087	8/23/1949		GWSI	0	0	50	1063787.67	199461.67	4075.00	43.17	4031.83	USGS	
D-22-16 07BAB1	1088	8/1/1949		GWSI	0	0	50	1062572.68	199098.75	4060.00	31.20	4028.80	USGS	
D-22-16 07BAB2	1089	8/1/1949		GWSI	0	0	50	1062663.82	199003.27	4060.00	29.08	4030.92	USGS	
D-22-16 07ADB	1090	8/1/1949		GWSI	0	0	50	1065189.79	197859.50	4100.00	32.36	4067.64	USGS	
D-22-15 28AB	1092	11/1/1939		GWSI	0	0	50	1043615.62	182881.30	3850.00	41.27	3808.73	USGS	
D-21-16 05CDB	1096	3/17/1982			0	0	0	1067201.21	232258.35	4650.00	20.19	4629.81	GWSI	
D-21-16 05CDB	1096	12/14/1987			0	0	0	1067201.21	232258.35	4650.00	27.42	4622.58	GWSI	
D-22-16 05DAD	086240	1/19/1981		D A D ASSOCIATES,	525	445	485	1070814.95	200973.70	4391.00	420.00	3971.00	ADWR 55 DB	Pumping level
D-22-16 07CAC	205468	12/14/2004		2007 STROHM FAMILY TRUST	400	320	400	1064020.24	195170.43	4273.00	286.00	3987.00	ADWR 55 DB	
D-22-16 05AAD	206248	2/5/2005		CHARLES HOUSTON COBB	460	410	460	1070287.90	202291.87	4263.00	215.00	4048.00	ADWR 55 DB	
D-22-16 07DCA	219551	1/15/2010		ANTHONY J HAMILTON	460	400	460	1064780.35	195493.54	4297.00	305.00	3992.00	ADWR 55 DB	
D-22-16 08BBC2	223854	2/23/2016		MICHAEL SHOEMAKER	247	140	245	1066255.52	198547.98	4075.00	40.50	4034.50	ADWR	
D-22-16 08BBC2	223854	3/5/2020		MICHAEL SHOEMAKER	247	140	245	1066255.52	198547.98	4075.00	37.40	4037.60	GWSI	
D-22-16 15BCD	512821	11/18/1985		MARY JANE POTTEBAUM	120	80	105	1077973.33	191986.12	4264.00	20.00	4244.00	ADWR 55 DB	
D-22-16 07DDA	517701	5/26/1987		LAURINE HILL	360	320	360	1065958.29	194567.46	4335.00	301.00	4034.00	ADWR 55 DB	
D-22-16 07DCD	517702	5/19/1987		RICHEY, BRADFORD,W	320	260	320	1064489.24	194707.91	4220.00	252.00	3968.00	ADWR 55 DB	
D-22-15 24CCD	518701	8/6/1987		ROBERT P. OLLERTON	370	210	370	1056489.01	184140.84	4185.00	175.00	4010.00	ADWR 55 DB	
D-22-16 04BBA	527493	6/6/1990		LEWIS, JIM,	100	40	100	1072433.74	204406.94	4235.00	41.00	4194.00	ADWR 55 DB	
D-22-15 24CCC	528124	6/20/1990		JACOBS, DALE,R	210	135	175	1056083.08	184269.90	4130.00	80.00	4050.00	ADWR 55 DB	
D-22-16 07CBA	530346	12/20/1990		KENNETH LUDWIG	50	25	50	1065299.67	197031.18	4201.00	22.00	4179.00	ADWR 55 DB	
D-22-16 08CCA	538247	6/18/1993		COUSENS, GABRIEL,	440	300	440	1066961.70	195552.37	4293.00	270.00	4023.00	ADWR 55 DB	
D-22-16 05ADC	538617	6/16/1993		ALICE ELIZABETH ERVIN	360	210	360	1070523.81	202879.80	4185.00	80.00	4105.00	ADWR 55 DB	
D-22-16 08ABA2	544272	2/23/2005		DENICKE, LAWRENCE,W	200	120	200	1069631.36	199147.90	4160.00	61.90	4098.10	ADWR	
D-22-16 08ABA2	544272	2/23/2016		DENICKE, LAWRENCE,W	200	120	200	1069631.36	199147.90	4160.00	58.20	4101.80	ADWR	
D-22-16 08ABA2	544272	3/5/2020		DENICKE, LAWRENCE,W	200	120	200	1069631.36	199147.90	4160.00	59.30	4100.70	GWSI	
D-22-16 08ABA1	551775	10/14/1995		DENICKE, LAWRENCE,M	200	120	200	1069773.62	199214.43	4122.00	87.00	4035.00	ADWR 55 DB	
D-22-16 08ABA1	551775	2/23/2005		DENICKE, LAWRENCE,M	200	120	200	1069773.62	199214.43	4122.00			ADWR	
D-22-16 08ABA1	551775	2/23/2016		DENICKE, LAWRENCE,M	200	120	200	1069773.62	199214.43	4122.00			ADWR	UTM - NO ACCESS
D-22-16 08DBB	566007	3/18/1998		CLINTON CONSEMIUS	540	380	540	1069168.43	196282.26	4154.00	320.00	3834.00	ADWR 55 DB	
D-22-16 04ADD	567459	4/24/1998		MARK & LINDA BYRUM	105	65	105	1075281.98	202170.86	4194.00	25.00	4169.00	ADWR 55 DB	
D-22-16 08AAD	567993	5/22/1998		HOWARD & MARY WHETZEL	413	313	393	1069823.23	197972.82	4127.00	221.00	3906.00	ADWR 55 DB	
D-22-16 09BBB	574506	8/11/1999		KATHLEEN PASIERB	280	220	280	1072314.35	199090.15	4165.00	38.00	4127.00	ADWR 55 DB	
D-22-16 08DBA	575487	9/23/1999		TIMOTHY & DIANNA ANDREWS	628	200	620	1068726.52	198634.63	4118.00	70.00	4048.00	ADWR 55 DB	
D-22-15 24DCB	579333	7/22/2000		THOMAS AND LINDA ARNY	500	400	500	1057690.94	184573.61	4200.00	155.00	4045.00	ADWR 55 DB	
D-22-15 24CBB	586146	4/21/2001		LESLIE SCHUPP	400	180	400	1056537.12	185960.85	4097.00	44.00	4053.00	ADWR 55 DB	
D-22-15 24DBB	592830	8/27/2002		JAMES LESLIE HAYS	300	260	300	1058615.34	185432.41	4066.00	150.00	3916.00	ADWR 55 DB	
D-22-16 08ADD	595940	2/22/2003		C.D. BUTSCH & CAROLYN SHAFER	380	320	360	1071310.44	197385.46	4149.00	80.00	4069.00	ADWR 55 DB	
D-22-15 24CBA	596204	2/5/2003		WILLIAM W & LAURA JEAN MILLER	500	260	340	1057156.98	186099.04	4130.00	107.00	4023.00	ADWR 55 DB	
D-22-15 11DDC	600713	11/1/1939		RICHARD P. NASH III	60	30	60	1054762.72	194708.24	3990.00	22.69	3967.31	USGS	
D-22-15 11DDC	600713	4/1/1982		RICHARD P. NASH III	60	30	60	1054762.72	194708.24	3990.00	27.90	3962.10	ADWR	
D-22-15 11DDC	600713	12/9/1987		RICHARD P. NASH III	60	30	60	1054762.72	194708.24	3990.00	26.10	3963.90	ADWR	
D-22-15 24DDA	603214	6/14/1982		KIMBALL,J W	360	250	360	1060166.69	185994.35	4135.00	60.00	4075.00	ADWR 55 DB	
D-22-15 12DAD	605339	8/31/1949		JOHN F & MARGARETA BRYANT	30	10	30	1060508.96	198517.34	4039.00	26.61	4012.39	GWSI	
D-22-15 12AAD1	605339	6/22/1982		JOHN F & MARGARETA BRYANT	30	10	30	1060508.96	198517.34	4043.00	22.70	4020.30	ADWR	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 07BAA1	605595	4/18/1965	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	27.00	4033.00	ADWR 55 DB	
D-22-16 07BAA1	605595	6/22/1982	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.20	4021.80	ADWR	
D-22-16 07BAA1	605595	3/13/2001	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	9.50	4050.50	ADWR	
D-22-16 07BAA1	605595	1/10/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA1	605595	2/14/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	18.50	4041.50	TOP	
D-22-16 07BAA1	605595	3/14/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	17.00	4043.00	TOP	
D-22-16 07BAA1	605595	4/11/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	17.00	4043.00	TOP	
D-22-16 07BAA1	605595	5/20/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	17.00	4043.00	TOP	
D-22-16 07BAA1	605595	6/13/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	19.67	4040.33	TOP	
D-22-16 07BAA1	605595	7/11/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA1	605595	8/8/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA1	605595	9/12/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	20.33	4039.67	TOP	
D-22-16 07BAA1	605595	10/10/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	20.00	4040.00	TOP	
D-22-16 07BAA1	605595	11/14/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	19.50	4040.50	TOP	
D-22-16 07BAA1	605595	12/12/2007	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	18.50	4041.50	TOP	
D-22-16 07BAA1	605595	1/9/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	18.00	4042.00	TOP	
D-22-16 07BAA1	605595	2/13/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	18.00	4042.00	TOP	
D-22-16 07BAA1	605595	3/12/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	19.17	4040.83	TOP	
D-22-16 07BAA1	605595	4/9/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	20.00	4040.00	TOP	
D-22-16 07BAA1	605595	6/11/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	23.83	4036.17	TOP	
D-22-16 07BAA1	605595	7/9/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA1	605595	8/13/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	24.67	4035.33	TOP	
D-22-16 07BAA1	605595	9/10/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	20.33	4039.67	TOP	
D-22-16 07BAA1	605595	10/8/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	23.00	4037.00	TOP	
D-22-16 07BAA1	605595	11/12/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	22.50	4037.50	TOP	
D-22-16 07BAA1	605595	12/10/2008	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA1	605595	1/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA1	605595	2/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA1	605595	3/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA1	605595	4/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA1	605595	5/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	24.00	4036.00	TOP	
D-22-16 07BAA1	605595	6/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	26.00	4034.00	TOP	
D-22-16 07BAA1	605595	7/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	27.50	4032.50	TOP	
D-22-16 07BAA1	605595	8/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA1	605595	9/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	34.00	4026.00	TOP	
D-22-16 07BAA1	605595	10/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA1	605595	11/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	36.00	4024.00	TOP	
D-22-16 07BAA1	605595	12/15/2009	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	37.00	4023.00	TOP	
D-22-16 07BAA1	605595	1/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	2/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	3/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	4/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	5/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.00	4022.00	TOP	
D-22-16 07BAA1	605595	6/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA1	605595	7/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA1	605595	8/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.00	4031.00	TOP	
D-22-16 07BAA1	605595	9/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	26.00	4034.00	TOP	
D-22-16 07BAA1	605595	10/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	25.17	4034.83	TOP	
D-22-16 07BAA1	605595	11/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	23.00	4037.00	TOP	
D-22-16 07BAA1	605595	12/15/2010	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA1	605595	1/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	24.83	4035.17	TOP	
D-22-16 07BAA1	605595	2/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA1	605595	3/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA1	605595	4/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	25.00	4035.00	TOP	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 07BAA1	605595	5/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.00	4032.00	TOP	
D-22-16 07BAA1	605595	6/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA1	605595	7/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	32.00	4028.00	TOP	
D-22-16 07BAA1	605595	8/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	33.00	4027.00	TOP	
D-22-16 07BAA1	605595	9/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	33.75	4026.25	TOP	
D-22-16 07BAA1	605595	10/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	34.00	4026.00	TOP	
D-22-16 07BAA1	605595	11/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	34.33	4025.67	TOP	
D-22-16 07BAA1	605595	12/15/2011	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA1	605595	1/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.50	4024.50	TOP	
D-22-16 07BAA1	605595	2/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA1	605595	3/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.67	4024.33	TOP	
D-22-16 07BAA1	605595	4/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	37.00	4023.00	TOP	
D-22-16 07BAA1	605595	5/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	37.33	4022.67	TOP	
D-22-16 07BAA1	605595	6/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.33	4021.67	TOP	
D-22-16 07BAA1	605595	7/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.75	4021.25	TOP	
D-22-16 07BAA1	605595	8/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	9/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.50	4020.50	TOP	
D-22-16 07BAA1	605595	10/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.50	4020.50	TOP	
D-22-16 07BAA1	605595	11/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	12/15/2012	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	1/9/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.75	4021.25	TOP	
D-22-16 07BAA1	605595	2/13/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	37.50	4022.50	TOP	
D-22-16 07BAA1	605595	3/15/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.00	4022.00	TOP	
D-22-16 07BAA1	605595	4/10/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.00	4022.00	TOP	
D-22-16 07BAA1	605595	5/15/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA1	605595	6/12/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	40.00	4020.00	TOP	
D-22-16 07BAA1	605595	7/15/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	40.50	4019.50	TOP	
D-22-16 07BAA1	605595	8/14/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	40.50	4019.50	TOP	
D-22-16 07BAA1	605595	9/15/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	41.00	4019.00	TOP	
D-22-16 07BAA1	605595	10/15/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	41.83	4018.17	TOP	
D-22-16 07BAA1	605595	11/15/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	41.83	4018.17	TOP	
D-22-16 07BAA1	605595	12/15/2013	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	41.83	4018.17	TOP	
D-22-16 07BAA1	605595	1/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	42.17	4017.83	TOP	
D-22-16 07BAA1	605595	2/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	42.67	4017.33	TOP	
D-22-16 07BAA1	605595	3/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	42.92	4017.08	TOP	
D-22-16 07BAA1	605595	4/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	43.33	4016.67	TOP	
D-22-16 07BAA1	605595	5/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	43.92	4016.08	TOP	
D-22-16 07BAA1	605595	6/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	44.67	4015.33	TOP	
D-22-16 07BAA1	605595	7/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	45.00	4015.00	TOP	
D-22-16 07BAA1	605595	8/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	44.17	4015.83	TOP	
D-22-16 07BAA1	605595	9/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	43.67	4016.33	TOP	
D-22-16 07BAA1	605595	10/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	41.58	4018.42	TOP	
D-22-16 07BAA1	605595	11/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	40.00	4020.00	TOP	
D-22-16 07BAA1	605595	12/15/2014	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.50	4021.50	TOP	
D-22-16 07BAA1	605595	1/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	36.67	4023.33	TOP	
D-22-16 07BAA1	605595	2/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA1	605595	3/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	32.58	4027.42	TOP	
D-22-16 07BAA1	605595	4/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.67	4029.33	TOP	
D-22-16 07BAA1	605595	5/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA1	605595	6/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.08	4029.92	TOP	
D-22-16 07BAA1	605595	7/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.08	4029.92	TOP	
D-22-16 07BAA1	605595	8/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.92	4030.08	TOP	
D-22-16 07BAA1	605595	9/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.42	4029.58	TOP	
D-22-16 07BAA1	605595	10/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.92	4029.08	TOP	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 07BAA1	605595	11/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.50	4028.50	TOP	
D-22-16 07BAA1	605595	12/15/2015	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.33	4028.67	TOP	
D-22-16 07BAA1	605595	1/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.67	4029.33	TOP	
D-22-16 07BAA1	605595	2/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA1	605595	2/23/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00			ADWR	UTM - NO ACCESS
D-22-16 07BAA1	605595	3/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.33	4031.67	TOP	
D-22-16 07BAA1	605595	4/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.08	4031.92	TOP	
D-22-16 07BAA1	605595	5/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.25	4031.75	TOP	
D-22-16 07BAA1	605595	6/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA1	605595	7/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.25	4029.75	TOP	
D-22-16 07BAA1	605595	8/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.00	4029.00	TOP	
D-22-16 07BAA1	605595	9/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.50	4029.50	TOP	
D-22-16 07BAA1	605595	10/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.17	4028.83	TOP	
D-22-16 07BAA1	605595	11/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.33	4028.67	TOP	
D-22-16 07BAA1	605595	12/15/2016	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.92	4029.08	TOP	
D-22-16 07BAA1	605595	1/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA1	605595	2/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.00	4031.00	TOP	
D-22-16 07BAA1	605595	3/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.08	4031.92	TOP	
D-22-16 07BAA1	605595	4/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.17	4031.83	TOP	
D-22-16 07BAA1	605595	5/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA1	605595	6/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.00	4029.00	TOP	
D-22-16 07BAA1	605595	7/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	32.58	4027.42	TOP	
D-22-16 07BAA1	605595	8/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.00	4029.00	TOP	
D-22-16 07BAA1	605595	9/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.67	4029.33	TOP	
D-22-16 07BAA1	605595	10/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.50	4029.50	TOP	
D-22-16 07BAA1	605595	11/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.83	4030.17	TOP	
D-22-16 07BAA1	605595	12/15/2017	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.33	4031.67	TOP	
D-22-16 07BAA1	605595	1/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	27.17	4032.83	TOP	
D-22-16 07BAA1	605595	2/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	26.08	4033.92	TOP	
D-22-16 07BAA1	605595	3/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	26.50	4033.50	TOP	
D-22-16 07BAA1	605595	4/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	27.75	4032.25	TOP	
D-22-16 07BAA1	605595	5/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA1	605595	6/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	32.17	4027.83	TOP	
D-22-16 07BAA1	605595	7/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	34.00	4026.00	TOP	
D-22-16 07BAA1	605595	8/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	34.75	4025.25	TOP	
D-22-16 07BAA1	605595	9/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.67	4024.33	TOP	
D-22-16 07BAA1	605595	10/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.92	4024.08	TOP	
D-22-16 07BAA1	605595	11/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	37.83	4022.17	TOP	
D-22-16 07BAA1	605595	12/15/2018	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.67	4021.33	TOP	
D-22-16 07BAA1	605595	1/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.83	4020.17	TOP	
D-22-16 07BAA1	605595	2/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.67	4020.33	TOP	
D-22-16 07BAA1	605595	3/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.58	4020.42	TOP	
D-22-16 07BAA1	605595	4/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	39.42	4020.58	TOP	
D-22-16 07BAA1	605595	5/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	38.92	4021.08	TOP	
D-22-16 07BAA1	605595	6/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	37.17	4022.83	TOP	
D-22-16 07BAA1	605595	7/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	35.25	4024.75	TOP	
D-22-16 07BAA1	605595	8/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	33.00	4027.00	TOP	
D-22-16 07BAA1	605595	9/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	31.33	4028.67	TOP	
D-22-16 07BAA1	605595	10/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA1	605595	11/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.92	4030.08	TOP	
D-22-16 07BAA1	605595	12/15/2019	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	29.33	4030.67	TOP	
D-22-16 07BAA1	605595	1/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	28.92	4031.08	TOP	
D-22-16 07BAA1	605595	2/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	27.67	4032.33	TOP	
D-22-16 07BAA1	605595	3/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	26.25	4033.75	TOP	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 07BAA1	605595	4/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA1	605595	5/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	23.92	4036.08	TOP	
D-22-16 07BAA1	605595	6/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	22.17	4037.83	TOP	
D-22-16 07BAA1	605595	7/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA1	605595	8/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	21.58	4038.42	TOP	
D-22-16 07BAA1	605595	9/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	22.17	4037.83	TOP	
D-22-16 07BAA1	605595	10/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	23.67	4036.33	TOP	
D-22-16 07BAA1	605595	11/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	26.00	4034.00	TOP	
D-22-16 07BAA1	605595	12/15/2020	Well #1	TOWN OF PATAGONIA	96	35	94	1063042.67	199480.66	4060.00	27.83	4032.17	TOP	
D-22-16 07BAA2	605596	6/27/1974	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	40.00	4020.00	ADWR 55 DB	
D-22-16 07BAA2	605596	6/22/1982	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	33.10	4026.90	ADWR	
D-22-16 07BAA2	605596	3/13/2001	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	9.20	4050.80	ADWR	
D-22-16 07BAA2	605596	1/10/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA2	605596	2/14/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	18.50	4041.50	TOP	
D-22-16 07BAA2	605596	3/14/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	17.00	4043.00	TOP	
D-22-16 07BAA2	605596	4/11/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	17.00	4043.00	TOP	
D-22-16 07BAA2	605596	5/20/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	17.00	4043.00	TOP	
D-22-16 07BAA2	605596	6/13/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	19.67	4040.33	TOP	
D-22-16 07BAA2	605596	7/11/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA2	605596	8/8/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA2	605596	9/12/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	20.33	4039.67	TOP	
D-22-16 07BAA2	605596	10/10/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	20.00	4040.00	TOP	
D-22-16 07BAA2	605596	11/14/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	19.50	4040.50	TOP	
D-22-16 07BAA2	605596	12/12/2007	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	18.50	4041.50	TOP	
D-22-16 07BAA2	605596	1/9/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	18.00	4042.00	TOP	
D-22-16 07BAA2	605596	2/13/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	18.00	4042.00	TOP	
D-22-16 07BAA2	605596	3/12/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	19.17	4040.83	TOP	
D-22-16 07BAA2	605596	4/9/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	20.00	4040.00	TOP	
D-22-16 07BAA2	605596	6/11/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	23.83	4036.17	TOP	
D-22-16 07BAA2	605596	7/9/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA2	605596	8/13/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	24.67	4035.33	TOP	
D-22-16 07BAA2	605596	9/10/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	20.33	4039.67	TOP	
D-22-16 07BAA2	605596	10/8/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	23.00	4037.00	TOP	
D-22-16 07BAA2	605596	11/12/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	22.50	4037.50	TOP	
D-22-16 07BAA2	605596	12/10/2008	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA2	605596	1/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA2	605596	2/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA2	605596	3/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	21.00	4039.00	TOP	
D-22-16 07BAA2	605596	4/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA2	605596	5/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	24.00	4036.00	TOP	
D-22-16 07BAA2	605596	6/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	26.00	4034.00	TOP	
D-22-16 07BAA2	605596	7/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	27.50	4032.50	TOP	
D-22-16 07BAA2	605596	8/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA2	605596	9/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	34.00	4026.00	TOP	
D-22-16 07BAA2	605596	10/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA2	605596	11/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	36.00	4024.00	TOP	
D-22-16 07BAA2	605596	12/15/2009	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	37.00	4023.00	TOP	
D-22-16 07BAA2	605596	1/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	2/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	3/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	4/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	5/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.00	4022.00	TOP	
D-22-16 07BAA2	605596	6/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA2	605596	7/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.00	4030.00	TOP	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 07BAA2	605596	8/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.00	4031.00	TOP	
D-22-16 07BAA2	605596	9/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	26.00	4034.00	TOP	
D-22-16 07BAA2	605596	10/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	25.17	4034.83	TOP	
D-22-16 07BAA2	605596	11/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	23.00	4037.00	TOP	
D-22-16 07BAA2	605596	12/15/2010	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA2	605596	1/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	24.83	4035.17	TOP	
D-22-16 07BAA2	605596	2/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA2	605596	3/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA2	605596	4/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA2	605596	5/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.00	4032.00	TOP	
D-22-16 07BAA2	605596	6/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA2	605596	7/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	32.00	4028.00	TOP	
D-22-16 07BAA2	605596	8/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	33.00	4027.00	TOP	
D-22-16 07BAA2	605596	9/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	33.75	4026.25	TOP	
D-22-16 07BAA2	605596	10/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	34.00	4026.00	TOP	
D-22-16 07BAA2	605596	11/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	34.33	4025.67	TOP	
D-22-16 07BAA2	605596	12/15/2011	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA2	605596	1/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.50	4024.50	TOP	
D-22-16 07BAA2	605596	2/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA2	605596	3/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.67	4024.33	TOP	
D-22-16 07BAA2	605596	4/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	37.00	4023.00	TOP	
D-22-16 07BAA2	605596	5/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	37.33	4022.67	TOP	
D-22-16 07BAA2	605596	6/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.33	4021.67	TOP	
D-22-16 07BAA2	605596	7/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.75	4021.25	TOP	
D-22-16 07BAA2	605596	8/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	9/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.50	4020.50	TOP	
D-22-16 07BAA2	605596	10/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.50	4020.50	TOP	
D-22-16 07BAA2	605596	11/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	12/15/2012	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	1/9/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.75	4021.25	TOP	
D-22-16 07BAA2	605596	2/13/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	37.50	4022.50	TOP	
D-22-16 07BAA2	605596	3/15/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.00	4022.00	TOP	
D-22-16 07BAA2	605596	4/10/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.00	4022.00	TOP	
D-22-16 07BAA2	605596	5/15/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.00	4021.00	TOP	
D-22-16 07BAA2	605596	6/12/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	40.00	4020.00	TOP	
D-22-16 07BAA2	605596	7/15/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	40.50	4019.50	TOP	
D-22-16 07BAA2	605596	8/14/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	40.50	4019.50	TOP	
D-22-16 07BAA2	605596	9/15/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	41.00	4019.00	TOP	
D-22-16 07BAA2	605596	10/15/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	41.83	4018.17	TOP	
D-22-16 07BAA2	605596	11/15/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	41.83	4018.17	TOP	
D-22-16 07BAA2	605596	12/15/2013	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	41.83	4018.17	TOP	
D-22-16 07BAA2	605596	1/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	42.17	4017.83	TOP	
D-22-16 07BAA2	605596	2/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	42.67	4017.33	TOP	
D-22-16 07BAA2	605596	3/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	42.92	4017.08	TOP	
D-22-16 07BAA2	605596	4/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	43.33	4016.67	TOP	
D-22-16 07BAA2	605596	5/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	43.92	4016.08	TOP	
D-22-16 07BAA2	605596	6/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	44.67	4015.33	TOP	
D-22-16 07BAA2	605596	7/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	45.00	4015.00	TOP	
D-22-16 07BAA2	605596	8/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	44.17	4015.83	TOP	
D-22-16 07BAA2	605596	9/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	43.67	4016.33	TOP	
D-22-16 07BAA2	605596	10/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	41.58	4018.42	TOP	
D-22-16 07BAA2	605596	11/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	40.00	4020.00	TOP	
D-22-16 07BAA2	605596	12/15/2014	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.50	4021.50	TOP	
D-22-16 07BAA2	605596	1/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	36.67	4023.33	TOP	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 07BAA2	605596	2/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.00	4025.00	TOP	
D-22-16 07BAA2	605596	3/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	32.58	4027.42	TOP	
D-22-16 07BAA2	605596	4/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.67	4029.33	TOP	
D-22-16 07BAA2	605596	5/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA2	605596	6/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.08	4029.92	TOP	
D-22-16 07BAA2	605596	7/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.08	4029.92	TOP	
D-22-16 07BAA2	605596	8/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.92	4030.08	TOP	
D-22-16 07BAA2	605596	9/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.42	4029.58	TOP	
D-22-16 07BAA2	605596	10/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.92	4029.08	TOP	
D-22-16 07BAA2	605596	11/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.50	4028.50	TOP	
D-22-16 07BAA2	605596	12/15/2015	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.33	4028.67	TOP	
D-22-16 07BAA2	605596	1/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.67	4029.33	TOP	
D-22-16 07BAA2	605596	2/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA2	605596	2/23/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	27.60	4032.40	ADWR	
D-22-16 07BAA2	605596	3/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.33	4031.67	TOP	
D-22-16 07BAA2	605596	4/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.08	4031.92	TOP	
D-22-16 07BAA2	605596	5/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.25	4031.75	TOP	
D-22-16 07BAA2	605596	6/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA2	605596	7/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.25	4029.75	TOP	
D-22-16 07BAA2	605596	8/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.00	4029.00	TOP	
D-22-16 07BAA2	605596	9/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.50	4029.50	TOP	
D-22-16 07BAA2	605596	10/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.17	4028.83	TOP	
D-22-16 07BAA2	605596	11/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.33	4028.67	TOP	
D-22-16 07BAA2	605596	12/15/2016	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.92	4029.08	TOP	
D-22-16 07BAA2	605596	1/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA2	605596	2/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.00	4031.00	TOP	
D-22-16 07BAA2	605596	3/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.08	4031.92	TOP	
D-22-16 07BAA2	605596	4/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.17	4031.83	TOP	
D-22-16 07BAA2	605596	5/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA2	605596	6/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.00	4029.00	TOP	
D-22-16 07BAA2	605596	7/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	32.58	4027.42	TOP	
D-22-16 07BAA2	605596	8/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.00	4029.00	TOP	
D-22-16 07BAA2	605596	9/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.67	4029.33	TOP	
D-22-16 07BAA2	605596	10/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.50	4029.50	TOP	
D-22-16 07BAA2	605596	11/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.83	4030.17	TOP	
D-22-16 07BAA2	605596	12/15/2017	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.33	4031.67	TOP	
D-22-16 07BAA2	605596	1/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	27.17	4032.83	TOP	
D-22-16 07BAA2	605596	2/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	26.08	4033.92	TOP	
D-22-16 07BAA2	605596	3/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	26.50	4033.50	TOP	
D-22-16 07BAA2	605596	4/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	27.75	4032.25	TOP	
D-22-16 07BAA2	605596	5/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.50	4030.50	TOP	
D-22-16 07BAA2	605596	6/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	32.17	4027.83	TOP	
D-22-16 07BAA2	605596	7/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	34.00	4026.00	TOP	
D-22-16 07BAA2	605596	8/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	34.75	4025.25	TOP	
D-22-16 07BAA2	605596	9/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.67	4024.33	TOP	
D-22-16 07BAA2	605596	10/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.92	4024.08	TOP	
D-22-16 07BAA2	605596	11/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	37.83	4022.17	TOP	
D-22-16 07BAA2	605596	12/15/2018	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.67	4021.33	TOP	
D-22-16 07BAA2	605596	1/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.83	4020.17	TOP	
D-22-16 07BAA2	605596	2/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.67	4020.33	TOP	
D-22-16 07BAA2	605596	3/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.58	4020.42	TOP	
D-22-16 07BAA2	605596	4/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	39.42	4020.58	TOP	
D-22-16 07BAA2	605596	5/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	38.92	4021.08	TOP	
D-22-16 07BAA2	605596	6/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	37.17	4022.83	TOP	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 07BAA2	605596	7/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	35.25	4024.75	TOP	
D-22-16 07BAA2	605596	8/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	33.00	4027.00	TOP	
D-22-16 07BAA2	605596	9/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	31.33	4028.67	TOP	
D-22-16 07BAA2	605596	10/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	30.00	4030.00	TOP	
D-22-16 07BAA2	605596	11/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.92	4030.08	TOP	
D-22-16 07BAA2	605596	12/15/2019	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	29.33	4030.67	TOP	
D-22-16 07BAA2	605596	1/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	28.92	4031.08	TOP	
D-22-16 07BAA2	605596	2/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	27.67	4032.33	TOP	
D-22-16 07BAA2	605596	3/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	26.25	4033.75	TOP	
D-22-16 07BAA2	605596	4/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	25.00	4035.00	TOP	
D-22-16 07BAA2	605596	5/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	23.92	4036.08	TOP	
D-22-16 07BAA2	605596	6/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	22.17	4037.83	TOP	
D-22-16 07BAA2	605596	7/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	22.00	4038.00	TOP	
D-22-16 07BAA2	605596	8/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	21.58	4038.42	TOP	
D-22-16 07BAA2	605596	9/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	22.17	4037.83	TOP	
D-22-16 07BAA2	605596	10/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	23.67	4036.33	TOP	
D-22-16 07BAA2	605596	11/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	26.00	4034.00	TOP	
D-22-16 07BAA2	605596	12/15/2020	Well #2	TOWN OF PATAGONIA	100	36	95	1063124.50	199372.82	4060.00	27.83	4032.17	TOP	
D-22-16 30DCD	608252	5/12/1982		BRUSH HILL LAND	165	20	165	1062020.27	178911.27	4640.00	69.00	4571.00	ADWR 55 DB	
D-22-16 06CDA2	611488	7/29/1949		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	58.40	4021.60	USGS	
D-22-16 06CDA2	611488	10/19/1950		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	39.70	4040.30	USGS	
D-22-16 06CDA2	611488	1/30/1952		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	59.21	4020.79	USGS	
D-22-16 06CDA2	611488	5/15/1952		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	54.31	4025.69	USGS	
D-22-16 06CDA2	611488	9/17/1952		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	44.68	4035.32	USGS	
D-22-16 06CDA2	611488	12/11/1952		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	44.63	4035.37	USGS	
D-22-16 06CDA2	611488	1/13/1953		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	46.72	4033.28	USGS	
D-22-16 06CDA2	611488	4/8/1953		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	48.95	4031.05	USGS	
D-22-16 06CDA2	611488	8/3/1953		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	49.77	4030.23	USGS	
D-22-16 06CDA2	611488	11/9/1953		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	56.69	4023.31	USGS	
D-22-16 06CDA2	611488	2/2/1954		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	57.32	4022.68	USGS	
D-22-16 06CDA2	611488	8/24/1954		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	50.03	4029.97	USGS	
D-22-16 06CDA2	611488	11/29/1954		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	46.92	4033.08	USGS	
D-22-16 06CDA2	611488	9/21/1955		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	43.74	4036.26	USGS	
D-22-16 06CDA2	611488	1/25/1956		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	36.10	4043.90	USGS	
D-22-16 06CDA2	611488	9/26/1956		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	50.75	4029.25	USGS	
D-22-16 06CDA2	611488	9/4/1957		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	50.22	4029.78	USGS	
D-22-16 06CDA2	611488	3/27/1958		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	54.81	4025.19	USGS	
D-22-16 06CDA2	611488	4/7/1961		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	48.35	4031.65	USGS	
D-22-16 06CDA2	611488	2/26/1963		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	51.14	4028.86	USGS	
D-22-16 06CDA2	611488	2/27/1964		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	50.27	4029.73	USGS	
D-22-16 06CDA2	611488	2/26/1965		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	38.03	4041.97	USGS	
D-22-16 06CDA2	611488	1/13/1966		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	36.89	4043.11	USGS	
D-22-16 06CDA2	611488	1/11/1967		MCKELLY,E	75	40	78	1063147.11	200585.31	4080.00	24.46	4055.54	USGS	
D-22-16 07BCB	613792	6/1/1949		HILL & CERVANTES - WAGON WHEEL BAR	0	0	110	1061670.90	198012.02	4080.00	39.35	4040.65	USGS	
D-22-16 05ABC	624224	10/1/1959		REGINA C MEDLEY	160	51	160	1069641.55	203684.23	4145.00	38.87	4106.13	USGS	
D-22-16 05BDA3	624225	1/1/1959		REGINA C MEDLEY	110	105	110	1068356.62	202642.38	4150.00	38.00	4112.00	ADWR 55 DB	
D-22-16 05BDA3	624225	10/19/1959		REGINA C MEDLEY	110	105	110	1068356.62	202642.38	4150.00	35.04	4114.96	USGS	
D-22-16 04DCD	624881	11/8/1949		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.33	4374.67	GWSI	
D-22-16 04DCD	624881	10/19/1950		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.22	4374.78	GWSI	
D-22-16 04DCD	624881	1/30/1952		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.98	4374.02	GWSI	
D-22-16 04DCD	624881	5/15/1952		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.48	4375.52	GWSI	
D-22-16 04DCD	624881	9/17/1952		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.65	4374.35	GWSI	
D-22-16 04DCD	624881	12/11/1952		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.56	4374.44	GWSI	
D-22-16 04DCD	624881	1/13/1953		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.49	4374.51	GWSI	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 04DCD	624881	4/8/1953		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.94	4374.06	GWSI	
D-22-16 04DCD	624881	8/3/1953		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.76	4373.24	GWSI	
D-22-16 04DCD	624881	11/9/1953		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.00	4373.00	GWSI	
D-22-16 04DCD	624881	2/2/1954		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.59	4373.41	GWSI	
D-22-16 04DCD	624881	6/8/1954		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	48.25	4371.75	GWSI	
D-22-16 04DCD	624881	8/24/1954		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.57	4373.43	GWSI	
D-22-16 04DCD	624881	11/29/1954		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.31	4373.69	GWSI	
D-22-16 04DCD	624881	9/4/1957		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	43.37	4376.63	GWSI	
D-22-16 04DCD	624881	4/7/1961		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	49.00	4371.00	GWSI	
D-22-16 04DCD	624881	2/26/1963		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.20	4373.80	GWSI	
D-22-16 04DCD	624881	2/27/1964		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	48.33	4371.67	GWSI	
D-22-16 04DCD	624881	2/26/1965		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.66	4374.34	GWSI	
D-22-16 04DCD	624881	1/13/1966		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	42.21	4377.79	GWSI	
D-22-16 04DCD	624881	1/11/1967		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	43.00	4377.00	GWSI	
D-22-16 04DCD	624881	5/9/1968		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	41.68	4378.32	GWSI	
D-22-16 04DCD	624881	4/10/1969		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.90	4375.10	GWSI	
D-22-16 04DCD	624881	1/22/1970		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.97	4375.03	GWSI	
D-22-16 04DCD	624881	12/17/1970		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.04	4373.96	GWSI	
D-22-16 04DCD	624881	2/15/1972		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.71	4375.29	GWSI	
D-22-16 04DCD	624881	2/5/1973		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.80	4375.20	GWSI	
D-22-16 04DCD	624881	12/19/1973		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	42.80	4377.20	GWSI	
D-22-16 04DCD	624881	1/14/1975		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	29.80	4390.20	GWSI	
D-22-16 04DCD	624881	2/6/1975		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.90	4374.10	GWSI	
D-22-16 04DCD	624881	1/14/1976		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	29.80	4390.20	GWSI	
D-22-16 04DCD	624881	11/22/1976		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	48.00	4372.00	GWSI	
D-22-16 04DCD	624881	12/13/1977		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.80	4373.20	GWSI	
D-22-16 04DCD	624881	12/4/1979		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.80	4375.20	GWSI	
D-22-16 04DCD	624881	12/9/1980		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.20	4372.80	GWSI	
D-22-16 04DCD	624881	1/28/1982		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.65	4374.35	GWSI	
D-22-16 04DCD	624881	1/5/1983		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.44	4374.56	GWSI	
D-22-16 04DCD	624881	12/8/1983		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.32	34.32	4386.00	GWSI	
D-22-16 04DCD	624881	12/12/1984		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	42.80	4377.20	GWSI	
D-22-16 04DCD	624881	1/29/1987		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.46	4375.54	GWSI	
D-22-16 04DCD	624881	12/14/1987		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.70	4375.30	GWSI	
D-22-16 04DCD	624881	2/17/1989		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.40	4375.60	GWSI	
D-22-16 04DCD	624881	11/30/1989		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.30	4374.70	GWSI	
D-22-16 04DCD	624881	12/11/1990		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.80	4375.20	GWSI	
D-22-16 04DCD	624881	12/12/1991		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.40	4375.60	GWSI	
D-22-16 04DCD	624881	1/6/1993		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.70	4375.30	GWSI	
D-22-16 04DCD	624881	12/16/1993		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	43.10	4376.90	GWSI	
D-22-16 04DCD	624881	11/16/1994		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.80	4375.20	GWSI	
D-22-16 04DCD	624881	3/6/1996		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	44.90	4375.10	GWSI	
D-22-16 04DCD	624881	11/22/1996		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.10	4373.90	GWSI	
D-22-16 04DCD	624881	11/6/1997		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.80	4374.20	GWSI	
D-22-16 04DCD	624881	10/28/1998		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	48.66	4371.34	GWSI	
D-22-16 04DCD	624881	11/15/1999		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.62	4374.38	GWSI	
D-22-16 04DCD	624881	11/29/2000		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	34.40	4385.60	GWSI	
D-22-16 04DCD	624881	11/7/2001		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.71	4374.29	GWSI	
D-22-16 04DCD	624881	11/7/2002		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.38	4372.62	GWSI	
D-22-16 04DCD	624881	10/30/2003		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.54	4372.46	GWSI	
D-22-16 04DCD	624881	10/28/2004		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	48.00	4372.00	GWSI	
D-22-16 04DCD	624881	1/11/2006		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.78	4372.22	GWSI	
D-22-16 04DCD	624881	1/17/2007		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.28	4373.72	GWSI	
D-22-16 04DCD	624881	1/9/2008		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	45.70	4374.30	GWSI	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 04DCD	624881	1/14/2010		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.40	4373.60	GWSI	
D-22-16 04DCD	624881	1/12/2011		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.86	4373.14	GWSI	
D-22-16 04DCD	624881	1/12/2012		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.45	4373.55	GWSI	
D-22-16 04DCD	624881	1/8/2013		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.11	4372.89	GWSI	
D-22-16 04DCD	624881	1/15/2014		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	48.52	4371.48	GWSI	
D-22-16 04DCD	624881	1/15/2015		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.21	4372.79	GWSI	
D-22-16 04DCD	624881	3/18/2016		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.97	4372.03	GWSI	
D-22-16 04DCD	624881	1/24/2017		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	46.59	4373.41	GWSI	
D-22-16 04DCD	624881	1/30/2018		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	47.10	4372.90	GWSI	
D-22-16 04DCD	624881	1/31/2019		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	48.80	4371.20	GWSI	
D-22-16 04DCD	624881	1/29/2020		FIRST PATAGONIA,	210	0	0	1074503.56	231295.62	4420.00	42.10	4377.90	GWSI	
D-21-16 32DAB	624890	8/25/1949		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	44.74	4125.26	USGS	
D-21-16 32DAB	624890	10/19/1950		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	40.70	4129.30	USGS	
D-21-16 32DAB	624890	1/30/1952		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	42.81	4127.19	USGS	
D-21-16 32DAB	624890	5/15/1952		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	39.24	4130.76	USGS	
D-21-16 32DAB	624890	9/17/1952		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	42.02	4127.98	USGS	
D-21-16 32DAB	624890	12/11/1952		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	51.06	4118.94	USGS	
D-21-16 32DAB	624890	1/13/1953		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	49.21	4120.79	USGS	
D-21-16 32DAB	624890	4/8/1953		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	50.14	4119.86	USGS	
D-21-16 32DAB	624890	8/3/1953		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	53.36	4116.64	USGS	
D-21-16 32DAB	624890	11/9/1953		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	50.18	4119.82	USGS	
D-21-16 32DAB	624890	2/2/1954		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	49.18	4120.82	USGS	
D-21-16 32DAB	624890	6/8/1954		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	51.72	4118.28	USGS	
D-21-16 32DAB	624890	8/24/1954		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	46.92	4123.08	USGS	
D-21-16 32DAB	624890	11/29/1954		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	45.20	4124.80	USGS	
D-21-16 32DAB	624890	9/21/1955		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	41.63	4128.37	USGS	
D-21-16 32DAB	624890	1/25/1956		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	36.44	4133.56	USGS	
D-21-16 32DAB	624890	9/26/1956		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	50.40	4119.60	USGS	
D-21-16 32DAB	624890	9/4/1957		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	43.65	4126.35	USGS	
D-21-16 32DAB	624890	3/27/1958		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	50.89	4119.11	USGS	
D-21-16 32DAB	624890	2/4/1960		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	45.15	4124.85	USGS	
D-21-16 32DAB	624890	4/7/1961		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	49.53	4120.47	USGS	
D-21-16 32DAB	624890	2/14/1962		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	41.97	4128.03	USGS	
D-21-16 32DAB	624890	2/26/1963		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	50.07	4119.93	USGS	
D-21-16 32DAB	624890	2/27/1964		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	44.73	4125.27	USGS	
D-21-16 32DAB	624890	2/26/1965		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	42.70	4127.30	USGS	
D-21-16 32DAB	624890	1/13/1966		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	39.41	4130.59	USGS	
D-21-16 32DAB	624890	1/11/1967		ROSEMONT COPPER COMPANY	300	20	300	1069238.27	207357.35	4170.00	19.34	4150.66	USGS	
D-22-16 05CAC	626069	7/1/1969		NATIVE SEEDS / SEARCH	120	50	120	1068184.94	201024.51	4125.00	48.00	4077.00	ADWR 55 DB	
D-22-16 05CDB1	626070	8/25/1949		NATIVE SEEDS / SEARCH	97	45	97	1067681.14	201286.32	4092.00	36.37	4055.63	USGS	
D-22-16 05CCC	626071	11/1/1959		EMILY S STEVENS	145	45	145	1066464.94	199995.31	4110.00	40.00	4070.00	ADWR 55 DB	
D-22-16 05CCC	626071	11/21/1959		EMILY S STEVENS	145	45	145	1066464.94	199995.31	4110.00	40.00	4070.00	USGS	
D-22-16 07ABB	626072	5/16/1966		THE NATURE CONSERVANCY	102	20	102	1063877.52	199159.21	4078.00	14.00	4064.00	USGS	
D-22-16 05CAC	626075	1/1/1959		GARY NABHAN	143	65	143	1067917.49	201729.25	4100.00	27.00	4073.00	ADWR 55 DB	
D-22-16 05CDB2	626076	8/31/1949		NATIVE SEEDS / SEARCH	170	50	170	1067681.14	201286.32	4094.00	37.45	4056.55	USGS	
D-21-16 29DBB	630466	10/25/1980		BROOKS,J S	400	360	400	1069179.20	212639.74	4220.00	70.00	4150.00	ADWR 55 DB	
D-21-16 29DBB	630466	2/22/2005		BROOKS,J S	400	360	400	1069179.20	212639.74	4220.00	67.40	4152.60	ADWR	
D-21-16 29DBB	630466	2/23/2016		BROOKS,J S	400	360	400	1069179.20	212639.74	4220.00			ADWR	UTM - NO ACCESS
D-22-15 10BBD	633743	10/21/1981		I J BAR RANCH CORP	400	0	400	1045885.60	198316.75	4160.00	131.60	4028.40	ADWR	
D-22-15 10BBD	633743	6/22/1982		I J BAR RANCH CORP	400	0	400	1045885.60	198316.75	4160.00	140.40	4019.60	ADWR	
D-22-15 20CAD	634900	1/1/1954		BERGIER FAMILY LIMITED PARTNERSHIP	10	5	10	1037552.13	184908.28	3806.00	6.00	3800.00	ADWR 55 DB	
D-21-16 17DAB	635157	2/22/2005		HALL, LARKIN NEEL,	250	230	250	1070226.77	222872.87	4340.00	51.10	4288.90	ADWR	
D-21-16 17DAB	635157	2/23/2016		HALL, LARKIN NEEL,	250	230	250	1070226.77	222872.87	4340.00	42.60	4297.40	ADWR	
D-21-16 17DAB	635157	3/4/2020		HALL, LARKIN NEEL,	250	230	250	1070226.77	222872.87	4340.00	40.30	4299.70	GWSI	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-15 14CD	638666	11/1/1939		NASH,L	8	0	8	1051992.08	189465.62	3965.00	4.34	3960.66	USGS	
D-22-15 21DDC	638668	2/22/2016		NASH,L	30	0	30	1044283.17	183720.64	3870.00			ADWR	UTM - PUMPING
D-22-15 21DC	638670	11/1/1939		NASH,L	0	0	14	1043169.50	184190.52	3910.00	7.29	3902.71	USGS	
D-22-15 21DDB1	639154	6/22/1982		CIRCLE Z RANCH,	30	10	30	1044484.41	184297.06	3880.00	9.30	3870.70	ADWR	
D-22-15 21DDB1	639154	1/9/1995		CIRCLE Z RANCH,	30	10	30	1044484.41	184297.06	3880.00	9.90	3870.10	ADWR	
D-22-15 21DDB1	639154	2/29/2000		CIRCLE Z RANCH,	30	10	30	1044484.41	184297.06	3880.00	8.70	3871.30	ADWR	
D-22-15 21DDB1	639154	2/22/2016		CIRCLE Z RANCH,	30	10	30	1044484.41	184297.06	3880.00	9.80	3870.20	ADWR	
D-22-15 21DDB2	639155	6/22/1982		CIRCLE Z RANCH,	30	10	30	1044764.80	184336.12	3880.00	10.10	3869.90	ADWR	
D-22-15 21DDB2	639155	1/9/1995		CIRCLE Z RANCH,	30	10	30	1044764.80	184336.12	3880.00	10.00	3870.00	ADWR	
D-22-15 21DDB2	639155	2/29/2000		CIRCLE Z RANCH,	30	10	30	1044764.80	184336.12	3880.00	8.80	3871.20	ADWR	
D-22-15 21DDB2	639155	2/22/2016		CIRCLE Z RANCH,	30	10	30	1044764.80	184336.12	3880.00	10.70	3869.30	ADWR	
D-22-16 22CCA	640970	3/10/1982		CORONADO NATIONAL FOREST	0	60	120	1077788.04	185231.94	4388.00	25.64	4362.36	USGS	
D-22-16 22CCA	640970	12/9/1987		CORONADO NATIONAL FOREST	0	60	120	1077788.04	185231.94	4388.00	23.30	4364.70	ADWR	
D-22-16 22CCA	640970	2/17/2005		CORONADO NATIONAL FOREST	0	60	120	1077788.04	185231.94	4388.00	27.90	4360.10	ADWR	
D-22-16 22CCA	640970	2/24/2016		CORONADO NATIONAL FOREST	0	60	120	1077788.04	185231.94	4388.00	28.20	4359.80	ADWR	
D-22-16 08ADB	641113	1/1/1908		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	60.00	4065.00	ADWR 55 DB	
D-22-16 08ADB	641113	8/24/1949		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	66.54	4058.46	USGS	
D-22-16 08ADB	641113	1/30/1952		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	66.81	4058.19	USGS	
D-22-16 08ADB	641113	12/11/1952		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	66.21	4058.79	USGS	
D-22-16 08ADB	641113	1/13/1953		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	67.36	4057.64	USGS	
D-22-16 08ADB	641113	4/8/1953		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	69.13	4055.87	USGS	
D-22-16 08ADB	641113	8/3/1953		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	68.83	4056.17	USGS	
D-22-16 08ADB	641113	11/9/1953		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	67.70	4057.30	USGS	
D-22-16 08ADB	641113	2/2/1954		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	69.57	4055.43	USGS	
D-22-16 08ADB	641113	6/8/1954		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	73.30	4051.70	USGS	
D-22-16 08ADB	641113	11/29/1954		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	59.25	4065.75	USGS	
D-22-16 08ADB	641113	1/25/1956		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	56.42	4068.58	USGS	
D-22-16 08ADB	641113	9/4/1957		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	63.80	4061.20	USGS	
D-22-16 08ADB	641113	2/22/2005		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	58.90	4066.10	ADWR	
D-22-16 08ADB	641113	2/23/2016		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00			ADWR	UTM - NO ACCESS
D-22-16 08ADB	641113	3/5/2020		BRYANT,M R	395	80	395	1070427.86	197848.34	4125.00	61.00	4064.00	GWSI	
D-22-16 07AAD	641361	8/1/1949		YOUNG,R R	0	50	100	1065740.05	198644.14	4075.00	38.00	4037.00	USGS	
D-20-16 32CBB	641601	3/18/1982		CORONADO NATL FOREST,	0	0	0	1066425.70	238390.06	4830.00	250.89	4579.11	GWSI	
D-22-16 08BBC1	644363	8/1/1949		BOHN,H S	120	0	120	1066390.55	198652.87	4075.00	40.82	4034.18	USGS	
D-22-16 08BBC1	644363	2/22/2005		BOHN,H S	120	0	120	1066390.55	198652.87	4075.00	59.50	4015.50	ADWR	
D-22-16 08BBC1	644363	2/23/2016		BOHN,H S	120	0	120	1066390.55	198652.87	4075.00			ADWR	UTM - NO ACCESS
D-22-16 04AD0	644387	6/15/1974		PATAGONIA LAND LLC	120	50	120	1075487.20	203382.64	4221.00	45.00	4176.00	ADWR 55 DB	
D-21-16 08ADA	644520	3/18/1982		DARYL BURTON	250	0	250	1070409.56	229142.15	4448.00	83.60	4364.40	GWSI	
D-21-16 08ADA	644520	12/10/1987		DARYL BURTON	250	0	250	1070409.56	229142.15	4448.00	79.50	4368.50	GWSI	
D-21-16 08ADA	644520	2/17/2005		DARYL BURTON	250	0	250	1070409.56	229142.15	4448.00	65.60	4382.40	GWSI	
D-21-16 29ABD	644974	8/1/1949		PATAGONIA PRESERVE LLC	260	0	260	1069044.36	214427.77	4270.00	87.27	4182.73	USGS	
D-22-16 07BBC1	645557	6/1/1949		SEIBOLD,I	40	20	40	1061288.90	198424.45	4045.00	35.00	4010.00	USGS	
D-22-16 08BAD	645833	8/24/1949		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	71.27	4043.73	USGS	
D-22-16 08BAD	645833	1/30/1952		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	71.93	4043.07	USGS	
D-22-16 08BAD	645833	5/15/1952		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	69.84	4045.16	USGS	
D-22-16 08BAD	645833	9/17/1952		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	59.72	4055.28	USGS	
D-22-16 08BAD	645833	12/11/1952		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	61.62	4053.38	USGS	
D-22-16 08BAD	645833	1/13/1953		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	64.61	4050.39	USGS	
D-22-16 08BAD	645833	4/8/1953		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	72.23	4042.77	USGS	
D-22-16 08BAD	645833	8/3/1953		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	76.57	4038.43	USGS	
D-22-16 08BAD	645833	11/9/1953		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	75.08	4039.92	USGS	
D-22-16 08BAD	645833	2/2/1954		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	76.46	4038.54	USGS	
D-22-16 08BAD	645833	6/8/1954		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	79.00	4036.00	USGS	
D-22-16 08BAD	645833	8/24/1954		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	68.97	4046.03	USGS	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 08BAD	645833	11/29/1954		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	65.42	4049.58	USGS	
D-22-16 08BAD	645833	9/21/1955		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	49.14	4065.86	USGS	
D-22-16 08BAD	645833	1/25/1956		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	47.91	4067.09	USGS	
D-22-16 08BAD	645833	9/26/1956		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	74.79	4040.21	USGS	
D-22-16 08BAD	645833	9/4/1957		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	75.10	4039.90	USGS	
D-22-16 08BAD	645833	3/27/1958		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	76.32	4038.68	USGS	
D-22-16 08BAD	645833	2/5/1959		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	65.44	4049.56	USGS	
D-22-16 08BAD	645833	2/4/1960		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	65.66	4049.34	USGS	
D-22-16 08BAD	645833	4/7/1961		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	70.44	4044.56	USGS	
D-22-16 08BAD	645833	2/14/1962		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	71.73	4043.27	USGS	
D-22-16 08BAD	645833	2/26/1963		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	77.22	4037.78	USGS	
D-22-16 08BAD	645833	2/27/1964		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	63.87	4051.13	USGS	
D-22-16 08BAD	645833	2/26/1965		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	61.43	4053.57	USGS	
D-22-16 08BAD	645833	1/13/1966		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	62.20	4052.80	USGS	
D-22-16 08BAD	645833	1/12/1967		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	30.17	4084.83	USGS	
D-22-16 08BAD	645833	5/9/1968		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	43.83	4071.17	USGS	
D-22-16 08BAD	645833	1/29/1987		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	53.02	4061.98	ADWR	
D-22-16 08BAD	645833	2/17/2005		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00			ADWR	
D-22-16 08BAD	645833	2/23/2016		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	75.20	4039.80	ADWR	
D-22-16 08BAD	645833	3/5/2020		GREENLEAF, SALLY,S	348	0	348	1069028.92	198224.68	4115.00	65.10	4049.90	ADWR	
D-22-16 15BDD	646334	2/22/2005		CONLEY,R E	60	0	60	1078695.83	192162.18	4280.00	18.40	4261.60	ADWR	
D-22-16 15BDD	646334	2/24/2016		CONLEY,R E	60	0	60	1078695.83	192162.18	4280.00			ADWR	UTM - LOCKED GATE, PRIVATE PROPERTY
D-22-16 06CDA1	646413	11/8/1949		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	54.39	4025.61	USGS	
D-22-16 06CDA1	646413	1/30/1952		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	59.13	4020.87	USGS	
D-22-16 06CDA1	646413	5/15/1952		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	54.72	4025.28	USGS	
D-22-16 06CDA1	646413	9/17/1952		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	46.70	4033.30	USGS	
D-22-16 06CDA1	646413	12/11/1952		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	46.62	4033.38	USGS	
D-22-16 06CDA1	646413	1/13/1953		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	48.03	4031.97	USGS	
D-22-16 06CDA1	646413	4/8/1953		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	52.58	4027.42	USGS	
D-22-16 06CDA1	646413	8/3/1953		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	54.83	4025.17	USGS	
D-22-16 06CDA1	646413	11/9/1953		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	57.56	4022.44	USGS	
D-22-16 06CDA1	646413	2/2/1954		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	58.71	4021.29	USGS	
D-22-16 06CDA1	646413	6/8/1954		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	61.36	4018.64	USGS	
D-22-16 06CDA1	646413	8/24/1954		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	51.92	4028.08	USGS	
D-22-16 06CDA1	646413	11/29/1954		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	48.71	4031.29	USGS	
D-22-16 06CDA1	646413	9/21/1955		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	42.38	4037.62	USGS	
D-22-16 06CDA1	646413	1/25/1956		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	36.84	4043.16	USGS	
D-22-16 06CDA1	646413	9/26/1956		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	45.85	4034.15	USGS	
D-22-16 06CDA1	646413	9/4/1957		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	51.72	4028.28	USGS	
D-22-16 06CDA1	646413	3/27/1958		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	55.61	4024.39	USGS	
D-22-16 06CDA1	646413	2/4/1960		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	51.58	4028.42	USGS	
D-22-16 06CDA1	646413	4/7/1961		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	49.58	4030.42	USGS	
D-22-16 06CDA1	646413	2/26/1963		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	53.05	4026.95	USGS	
D-22-16 06CDA1	646413	2/27/1964		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	48.12	4031.88	USGS	
D-22-16 06CDA1	646413	2/26/1965		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	41.70	4038.30	USGS	
D-22-16 06CDA1	646413	1/13/1966		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	50.71	4029.29	USGS	
D-22-16 06CDA1	646413	1/11/1967		KUNDE,R A	80	50	80	1063147.11	200585.31	4080.00	26.33	4053.67	USGS	
D-22-16 07AAA	646565	7/11/1963		FARRELL,E B	0	0	100	1065607.94	199105.00	4083.00	50.00	4033.00	USGS	
D-22-16 07BBC2	646910	1/1/1946		BELVEAL,A M	100	0	100	1061142.84	198279.38	4043.00	15.00	4028.00	ADWR 55 DB	
D-22-16 07BBC2	646910	8/24/1949		BELVEAL,A M	100	0	100	1061142.84	198279.38	4043.00	25.32	4017.68	USGS	
D-22-16 07BDD	646914	11/1/1939		ALTAMIRANO, R	36	0	36	1063128.33	197062.33	4100.00	39.12	4060.88	USGS	
D-22-16 09CDD	647393	8/7/1945		GWYN STERN ENRIGHT TRUST	60	0	60	1073850.08	194860.53	4185.00	29.00	4156.00	ADWR 55 DB	
D-22-16 09CDD	647393	3/10/1982		GWYN STERN ENRIGHT TRUST	60	0	60	1073850.08	194860.53	4185.00	37.97	4147.03	ADWR	
D-22-16 09CDD	647393	12/9/1987		GWYN STERN ENRIGHT TRUST	60	0	60	1073850.08	194860.53	4185.00	31.40	4153.60	ADWR	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-16 09CDD	647393	2/17/2005		GWYN STERN ENRIGHT TRUST	60	0	60	1073850.08	194860.53	4185.00	49.10	4135.90	ADWR	
D-22-16 09CDD	647393	2/24/2016		GWYN STERN ENRIGHT TRUST	60	0	60	1073850.08	194860.53	4185.00	28.90	4156.10	ADWR	
D-22-16 05BDA4	647913	2/22/2005		LAURA CLEVELAND	110	0	110	1068607.14	203575.85	4160.00	40.50	4119.50	ADWR	
D-22-16 05BDA4	647913	2/23/2016		LAURA CLEVELAND	110	0	110	1068607.14	203575.85	4160.00	32.50	4127.50	ADWR	
D-22-16 05BD	647913	3/4/2020		LAURA CLEVELAND	110	0	110	1068607.14	203575.85	4160.00	29.90	4130.10	GWSI	
D-22-16 07BCC1	649405	8/23/1949		PORTILLO, ERNESTO,	33	0	33	1061103.36	196977.06	4043.00	23.77	4019.23	USGS	
D-22-16 07BBD2	649406	6/1/1949		JIMENEZ, J S	84	0	84	1062116.25	198340.34	4050.00	40.00	4010.00	USGS	
D-22-15 10CCC	649518	1/1/1972		SWYERS, H W	252	0	252	1045376.32	194280.10	4090.00	80.00	4010.00	ADWR 55 DB	
D-22-15 10CCC	649518	12/30/1981		SWYERS, H W	252	0	252	1045376.32	194280.10	4090.00	88.30	4001.70	ADWR	
D-22-15 10CCC	649518	12/9/1987		SWYERS, H W	252	0	252	1045376.32	194280.10	4090.00	73.40	4016.60	ADWR	
D-22-16 06DDA	650012	8/1/1949		MOCK, D	100	0	100	1065713.44	200606.80	4090.00	24.50	4065.50	USGS	
D-22-16 07ABC	800496	8/1/1949		M. GREY & MARTHA BANTA	0	20	100	1063731.53	198438.66	4090.00	61.45	4028.55	USGS	
D-21-15 13DBA	804592	11/10/1972		CORONADO NATL FOREST,	0	0	0	1058941.44	222906.51	5000.00	614.30	4385.70	GWSI	
D-22-15 12AAD2	809433	8/31/1949		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	16.49	4017.51	USGS	
D-22-15 12AAD2	809433	1/30/1952		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.58	4015.42	USGS	
D-22-15 12AAD2	809433	5/15/1952		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	16.02	4017.98	USGS	
D-22-15 12AAD2	809433	9/17/1952		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	11.63	4022.37	USGS	
D-22-15 12AAD2	809433	12/11/1952		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	11.69	4022.31	USGS	
D-22-15 12AAD2	809433	1/13/1953		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	13.49	4020.51	USGS	
D-22-15 12AAD2	809433	4/8/1953		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	16.30	4017.70	USGS	
D-22-15 12AAD2	809433	8/3/1953		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	20.91	4013.09	USGS	
D-22-15 12AAD2	809433	11/9/1953		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	23.68	4010.32	USGS	
D-22-15 12AAD2	809433	2/2/1954		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	21.94	4012.06	USGS	
D-22-15 12AAD2	809433	6/8/1954		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	25.97	4008.03	USGS	
D-22-15 12AAD2	809433	8/6/1954		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	15.22	4018.78	USGS	
D-22-15 12AAD2	809433	11/29/1954		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.14	4015.86	USGS	
D-22-15 12AAD2	809433	9/21/1955		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	13.87	4020.13	USGS	
D-22-15 12AAD2	809433	1/25/1956		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	10.14	4023.86	USGS	
D-22-15 12AAD2	809433	9/26/1956		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	17.25	4016.75	USGS	
D-22-15 12AAD2	809433	9/4/1957		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	25.25	4008.75	USGS	
D-22-15 12AAD2	809433	3/27/1958		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	16.28	4017.72	USGS	
D-22-15 12AAD2	809433	2/5/1959		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	14.62	4019.38	USGS	
D-22-15 12AAD2	809433	2/4/1960		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	17.57	4016.43	USGS	
D-22-15 12AAD2	809433	4/7/1961		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	15.00	4019.00	USGS	
D-22-15 12AAD2	809433	2/14/1962		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	19.61	4014.39	USGS	
D-22-15 12AAD2	809433	2/26/1963		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	16.40	4017.60	USGS	
D-22-15 12AAD2	809433	2/27/1964		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	15.15	4018.85	USGS	
D-22-15 12AAD2	809433	1/13/1966		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	12.61	4021.39	USGS	
D-22-15 12AAD2	809433	1/11/1967		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	10.80	4023.20	USGS	
D-22-15 12AAD2	809433	5/9/1968		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	11.52	4022.48	USGS	
D-22-15 12AAD2	809433	4/10/1969		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	11.60	4022.40	USGS	
D-22-15 12AAD2	809433	1/1/1970		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	30.00	4004.00	ADWR 55 DB	
D-22-15 12AAD2	809433	1/22/1970		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.10	4015.90	USGS	
D-22-15 12AAD2	809433	12/17/1970		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	19.16	4014.84	USGS	
D-22-15 12AAD2	809433	2/15/1972		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	13.92	4020.08	USGS	
D-22-15 12AAD2	809433	2/5/1973		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.20	4015.80	USGS	
D-22-15 12AAD2	809433	12/19/1973		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	12.00	4022.00	USGS	
D-22-15 12AAD2	809433	2/6/1975		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	17.80	4016.20	USGS	
D-22-15 12AAD2	809433	1/14/1976		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	24.20	4009.80	USGS	
D-22-15 12AAD2	809433	11/22/1976		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	24.80	4009.20	USGS	
D-22-15 12AAD2	809433	1/2/1977		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	24.80	4009.20	USGS	
D-22-15 12AAD2	809433	12/13/1977		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.20	4015.80	USGS	
D-22-15 12AAD2	809433	1/28/1982		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	17.38	4016.62	USGS	
D-22-15 12AAD2	809433	6/22/1982		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	22.80	4011.20	ADWR	

Appendix A
Water Level Data for Model Area
Patagonia Groundwater Flow Model

Cadastral Location	ADWR No.	Date Measured	Well Name	Owner	Well Depth	Top of Screen	Bottom of Screen	Easting	Northing	Well Elevation	Depth to Water	Water Level Elevation	Source of Data	NOTES
D-22-15 12AAD2	809433	1/5/1983		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	21.25	4012.75	ADWR	
D-22-15 12AAD2	809433	12/8/1983		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	8.42	4025.58	ADWR	
D-22-15 12AAD2	809433	12/12/1984		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.79	4015.21	ADWR	
D-22-15 12AAD2	809433	1/29/1986		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	10.30	4023.70	ADWR	
D-22-15 12AAD2	809433	12/9/1987		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	12.80	4021.20	ADWR	
D-22-15 12AAD2	809433	2/17/1989		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	9.10	4024.90	ADWR	
D-22-15 12AAD2	809433	11/30/1989		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	15.20	4018.80	ADWR	
D-22-15 12AAD2	809433	12/11/1990		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	14.00	4020.00	ADWR	
D-22-15 12AAD2	809433	12/12/1991		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	8.80	4025.20	ADWR	
D-22-15 12AAD2	809433	12/15/1993		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	7.10	4026.90	ADWR	
D-22-15 12AAD2	809433	11/15/1994		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	11.80	4022.20	ADWR	
D-22-15 12AAD2	809433	12/7/1995		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	7.40	4026.60	ADWR	
D-22-15 12AAD2	809433	11/22/1996		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.10	4015.90	ADWR	
D-22-15 12AAD2	809433	11/6/1997		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	21.57	4012.43	ADWR	
D-22-15 12AAD2	809433	10/28/1998		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	10.10	4023.90	ADWR	
D-22-15 12AAD2	809433	11/17/1999		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	15.99	4018.01	ADWR	
D-22-15 12AAD2	809433	11/30/2000		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	10.52	4023.48	ADWR	
D-22-15 12AAD2	809433	11/8/2001		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	7.17	4026.83	ADWR	
D-22-15 12AAD2	809433	11/7/2002		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.59	4015.41	ADWR	
D-22-15 12AAD2	809433	10/29/2003		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	25.33	4008.67	ADWR	
D-22-15 12AAD2	809433	10/28/2004		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	30.10	4003.90	ADWR	
D-22-15 12AAD2	809433	1/12/2006		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	19.38	4014.62	ADWR	
D-22-15 12AAD2	809433	1/18/2007		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	11.80	4022.20	ADWR	
D-22-15 12AAD2	809433	1/10/2008		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	8.70	4025.30	ADWR	
D-22-15 12AAD2	809433	1/14/2010		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	21.40	4012.60	ADWR	
D-22-15 12AAD2	809433	1/12/2011		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	15.40	4018.60	ADWR	
D-22-15 12AAD2	809433	1/11/2012		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	19.30	4014.70	ADWR	
D-22-15 12AAD2	809433	1/8/2013		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	21.90	4012.10	ADWR	
D-22-15 12AAD2	809433	1/14/2014		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	17.93	4016.07	ADWR	
D-22-15 12AAD2	809433	1/15/2015		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	18.20	4015.80	ADWR	
D-22-15 12AAD2	809433	2/22/2016		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4034.00	15.50	4018.50	ADWR	
D-22-15 12AAD2	809433	1/23/2017		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4041.00	18.80	4022.20	GWSI	
D-22-15 12AAD2	809433	1/30/2018		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4041.00	13.00	4028.00	GWSI	
D-22-15 12AAD2	809433	1/31/2019		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4041.00	19.00	4022.00	GWSI	
D-22-15 12AAD2	809433	1/29/2020		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4041.00	15.10	4025.90	GWSI	
D-22-15 12AAD2	809433	1/28/2021		CBM, L.L.C.	125	30	125	1060415.17	198553.79	4041.00	15.00	4026.00	GWSI	
D-22-15 12ADB	809723	8/1/1949		WILLIAM T. & ROSE E. PIPER	0	0	100	1059712.82	197776.73	4060.00	19.15	4040.85	USGS	
D-22-16 07BCD	809829	6/1/1949		SHONEMAN REVOCABLE TRUST	43	0	43	1061909.43	197087.32	4075.00	30.44	4044.56	USGS	
D-22-16 32DCD	910210	12/15/2008	JA-1	ASARCO INC	125	105	125	1070253.01	173593.99	4917.06	45.00	4872.06	ADWR 55 DB	
D-22-16 32DCD	920120	1/18/2017	MW-3	ARIZONA MINERALS INC	0	0	15	1069881.35	173646.87	4873.36	17.10	4856.26	AMI	
D-22-16 32DCD	920120	1/28/2017	MW-3	ARIZONA MINERALS INC	0	0	15	1069881.35	173646.87	4873.36	17.10	4856.26	AMI	

NOTES:
Well depth, water depth and screen interval data are in feet from ground surface
Easting and Northing are State Plane Feet - NAD 83 Arizona Central Zone
Well Elevation and Water Level Elevation are in feet above mean sea level (ft - AMSL)

APPENDIX B

PRECIPITATION AT PATAGONIA, ARIZONA

Appendix B
Monthly Precipitation Data
Patagonia, Arizona
1922-2021

Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1922	6	0.44	30
USC00026280	PATAGONIA, AZ US	1922	7	4.37	31
USC00026280	PATAGONIA, AZ US	1922	8	2.22	31
USC00026280	PATAGONIA, AZ US	1922	9	1.92	30
USC00026280	PATAGONIA, AZ US	1922	10	0.46	31
USC00026280	PATAGONIA, AZ US	1922	11	0.75	30
USC00026280	PATAGONIA, AZ US	1922	12	0.19	31
USC00026280	PATAGONIA, AZ US	1923	1	0.26	31
USC00026280	PATAGONIA, AZ US	1923	2	0.42	28
USC00026280	PATAGONIA, AZ US	1923	3	1.00	31
USC00026280	PATAGONIA, AZ US	1923	4	0.11	30
USC00026280	PATAGONIA, AZ US	1923	5	0.00	31
USC00026280	PATAGONIA, AZ US	1923	6	0.00	30
USC00026280	PATAGONIA, AZ US	1923	7	7.15	31
USC00026280	PATAGONIA, AZ US	1923	8	6.13	31
USC00026280	PATAGONIA, AZ US	1923	9	0.81	30
USC00026280	PATAGONIA, AZ US	1923	10	0.00	31
USC00026280	PATAGONIA, AZ US	1923	11	3.47	30
USC00026280	PATAGONIA, AZ US	1923	12	2.97	31
USC00026280	PATAGONIA, AZ US	1924	1	0.21	31
USC00026280	PATAGONIA, AZ US	1924	2	0.00	29
USC00026280	PATAGONIA, AZ US	1924	3	3.07	31
USC00026280	PATAGONIA, AZ US	1924	4	0.56	30
USC00026280	PATAGONIA, AZ US	1924	5	0.02	31
USC00026280	PATAGONIA, AZ US	1924	6	0.56	30
USC00026280	PATAGONIA, AZ US	1924	7	4.80	31
USC00026280	PATAGONIA, AZ US	1924	8	2.88	31
USC00026280	PATAGONIA, AZ US	1924	9	0.12	30
USC00026280	PATAGONIA, AZ US	1924	10	0.00	31
USC00026280	PATAGONIA, AZ US	1924	11	0.14	30
USC00026280	PATAGONIA, AZ US	1924	12	1.01	31
USC00026280	PATAGONIA, AZ US	1925	1	0.11	31
USC00026280	PATAGONIA, AZ US	1925	2	0.00	28
USC00026280	PATAGONIA, AZ US	1925	3	0.07	31
USC00026280	PATAGONIA, AZ US	1925	4	0.41	30
USC00026280	PATAGONIA, AZ US	1925	5	0.54	31
USC00026280	PATAGONIA, AZ US	1925	6	1.75	30
USC00026280	PATAGONIA, AZ US	1925	7	4.62	31
USC00026280	PATAGONIA, AZ US	1925	8	3.40	31
USC00026280	PATAGONIA, AZ US	1925	9	0.85	30
USC00026280	PATAGONIA, AZ US	1925	10	1.53	31
USC00026280	PATAGONIA, AZ US	1925	11	1.10	30
USC00026280	PATAGONIA, AZ US	1925	12	0.65	31
USC00026280	PATAGONIA, AZ US	1926	1	0.94	31
USC00026280	PATAGONIA, AZ US	1926	2	1.36	28
USC00026280	PATAGONIA, AZ US	1926	3	2.51	31
USC00026280	PATAGONIA, AZ US	1926	4	1.90	30
USC00026280	PATAGONIA, AZ US	1926	5	0.73	31
USC00026280	PATAGONIA, AZ US	1926	6	0.03	30
USC00026280	PATAGONIA, AZ US	1926	7	3.22	31
USC00026280	PATAGONIA, AZ US	1926	8	1.71	31
USC00026280	PATAGONIA, AZ US	1926	9	4.08	30

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1926	10	0.64	31
USC00026280	PATAGONIA, AZ US	1926	11	0.00	30
USC00026280	PATAGONIA, AZ US	1926	12	2.99	31
USC00026280	PATAGONIA, AZ US	1927	1	0.03	31
USC00026280	PATAGONIA, AZ US	1927	2	1.31	28
USC00026280	PATAGONIA, AZ US	1927	3	1.57	31
USC00026280	PATAGONIA, AZ US	1927	4	0.73	30
USC00026280	PATAGONIA, AZ US	1927	5	0.11	31
USC00026280	PATAGONIA, AZ US	1927	6	1.60	30
USC00026280	PATAGONIA, AZ US	1927	7	3.50	31
USC00026280	PATAGONIA, AZ US	1927	8	5.39	31
USC00026280	PATAGONIA, AZ US	1927	9	3.13	30
USC00026280	PATAGONIA, AZ US	1927	10	0.38	31
USC00026280	PATAGONIA, AZ US	1927	11	0.39	30
USC00026280	PATAGONIA, AZ US	1927	12	2.45	31
USC00026280	PATAGONIA, AZ US	1928	1	0.00	31
USC00026280	PATAGONIA, AZ US	1928	2	1.73	29
USC00026280	PATAGONIA, AZ US	1928	3	0.00	31
USC00026280	PATAGONIA, AZ US	1928	4	0.09	30
USC00026280	PATAGONIA, AZ US	1928	5	0.02	31
USC00026280	PATAGONIA, AZ US	1928	6	0.00	30
USC00026280	PATAGONIA, AZ US	1928	7	3.23	31
USC00026280	PATAGONIA, AZ US	1928	8	3.46	31
USC00026280	PATAGONIA, AZ US	1928	9	0.49	30
USC00026280	PATAGONIA, AZ US	1928	10	4.06	31
USC00026280	PATAGONIA, AZ US	1928	11	0.24	30
USC00026280	PATAGONIA, AZ US	1928	12	0.22	31
USC00026280	PATAGONIA, AZ US	1929	1	0.82	31
USC00026280	PATAGONIA, AZ US	1929	2	1.01	28
USC00026280	PATAGONIA, AZ US	1929	3	0.41	31
USC00026280	PATAGONIA, AZ US	1929	4	0.29	30
USC00026280	PATAGONIA, AZ US	1929	5	0.01	31
USC00026280	PATAGONIA, AZ US	1929	6	1.27	30
USC00026280	PATAGONIA, AZ US	1929	7	5.26	31
USC00026280	PATAGONIA, AZ US	1929	8	3.65	31
USC00026280	PATAGONIA, AZ US	1929	9	2.44	30
USC00026280	PATAGONIA, AZ US	1929	10	0.77	31
USC00026280	PATAGONIA, AZ US	1929	11	0.33	30
USC00026280	PATAGONIA, AZ US	1929	12	0.91	31
USC00026280	PATAGONIA, AZ US	1930	1	1.96	31
USC00026280	PATAGONIA, AZ US	1930	2	0.47	28
USC00026280	PATAGONIA, AZ US	1930	3	3.48	31
USC00026280	PATAGONIA, AZ US	1930	4	0.32	30
USC00026280	PATAGONIA, AZ US	1930	5	1.00	31
USC00026280	PATAGONIA, AZ US	1930	6	1.26	30
USC00026280	PATAGONIA, AZ US	1930	7	7.14	31
USC00026280	PATAGONIA, AZ US	1930	8	1.79	31
USC00026280	PATAGONIA, AZ US	1930	9	2.24	30
USC00026280	PATAGONIA, AZ US	1930	10	0.16	31
USC00026280	PATAGONIA, AZ US	1930	11	1.86	30
USC00026280	PATAGONIA, AZ US	1930	12	0.75	31
USC00026280	PATAGONIA, AZ US	1931	1	0.74	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1931	2	5.20	28
USC00026280	PATAGONIA, AZ US	1931	3	0.12	31
USC00026280	PATAGONIA, AZ US	1931	4	0.50	30
USC00026280	PATAGONIA, AZ US	1931	5	0.06	31
USC00026280	PATAGONIA, AZ US	1931	6	2.35	30
USC00026280	PATAGONIA, AZ US	1931	7	4.19	31
USC00026280	PATAGONIA, AZ US	1931	8	7.83	31
USC00026280	PATAGONIA, AZ US	1931	9	2.41	30
USC00026280	PATAGONIA, AZ US	1931	10	0.02	31
USC00026280	PATAGONIA, AZ US	1931	11	2.38	30
USC00026280	PATAGONIA, AZ US	1931	12	0.67	31
USC00026280	PATAGONIA, AZ US	1932	1	1.01	31
USC00026280	PATAGONIA, AZ US	1932	2	1.11	29
USC00026280	PATAGONIA, AZ US	1932	3	0.00	31
USC00026280	PATAGONIA, AZ US	1932	4	0.23	30
USC00026280	PATAGONIA, AZ US	1932	5	0.00	31
USC00026280	PATAGONIA, AZ US	1932	6	0.00	30
USC00026280	PATAGONIA, AZ US	1932	7	6.67	31
USC00026280	PATAGONIA, AZ US	1932	8	2.82	31
USC00026280	PATAGONIA, AZ US	1932	9	0.64	30
USC00026280	PATAGONIA, AZ US	1932	10	0.61	31
USC00026280	PATAGONIA, AZ US	1932	11	0.00	30
USC00026280	PATAGONIA, AZ US	1932	12	1.96	31
USC00026280	PATAGONIA, AZ US	1933	1	2.25	31
USC00026280	PATAGONIA, AZ US	1933	2	0.50	28
USC00026280	PATAGONIA, AZ US	1933	3	0.00	31
USC00026280	PATAGONIA, AZ US	1933	4	0.14	30
USC00026280	PATAGONIA, AZ US	1933	5	0.00	31
USC00026280	PATAGONIA, AZ US	1933	6	0.42	30
USC00026280	PATAGONIA, AZ US	1933	7	2.87	31
USC00026280	PATAGONIA, AZ US	1933	8	3.57	31
USC00026280	PATAGONIA, AZ US	1933	9	2.72	30
USC00026280	PATAGONIA, AZ US	1933	10	1.00	31
USC00026280	PATAGONIA, AZ US	1933	11	1.32	30
USC00026280	PATAGONIA, AZ US	1933	12	0.14	31
USC00026280	PATAGONIA, AZ US	1934	1	0.75	31
USC00026280	PATAGONIA, AZ US	1934	2	0.73	28
USC00026280	PATAGONIA, AZ US	1934	3	0.18	31
USC00026280	PATAGONIA, AZ US	1934	4	0.13	30
USC00026280	PATAGONIA, AZ US	1934	5	0.11	31
USC00026280	PATAGONIA, AZ US	1934	6	0.41	30
USC00026280	PATAGONIA, AZ US	1934	7	3.46	31
USC00026280	PATAGONIA, AZ US	1934	8	4.18	31
USC00026280	PATAGONIA, AZ US	1934	9	0.64	30
USC00026280	PATAGONIA, AZ US	1934	10	0.03	31
USC00026280	PATAGONIA, AZ US	1934	11	0.99	30
USC00026280	PATAGONIA, AZ US	1934	12	2.67	31
USC00026280	PATAGONIA, AZ US	1935	1	1.29	31
USC00026280	PATAGONIA, AZ US	1935	2	1.65	28
USC00026280	PATAGONIA, AZ US	1935	3	1.10	27
USC00026280	PATAGONIA, AZ US	1935	4	0.00	30
USC00026280	PATAGONIA, AZ US	1935	5	0.51	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1935	6	0.00	23
USC00026280	PATAGONIA, AZ US	1935	7	2.56	31
USC00026280	PATAGONIA, AZ US	1935	8	8.57	31
USC00026280	PATAGONIA, AZ US	1935	9	1.86	30
USC00026280	PATAGONIA, AZ US	1935	10	0.00	31
USC00026280	PATAGONIA, AZ US	1935	11	1.42	29
USC00026280	PATAGONIA, AZ US	1935	12	1.54	27
USC00026280	PATAGONIA, AZ US	1936	1	0.96	20
USC00026280	PATAGONIA, AZ US	1936	2	1.21	29
USC00026280	PATAGONIA, AZ US	1936	3	0.27	31
USC00026280	PATAGONIA, AZ US	1936	4	0.00	30
USC00026280	PATAGONIA, AZ US	1936	5	0.00	31
USC00026280	PATAGONIA, AZ US	1936	6	0.00	30
USC00026280	PATAGONIA, AZ US	1936	7	5.52	31
USC00026280	PATAGONIA, AZ US	1936	8	4.75	31
USC00026280	PATAGONIA, AZ US	1936	9	2.21	30
USC00026280	PATAGONIA, AZ US	1936	10	0.12	31
USC00026280	PATAGONIA, AZ US	1936	11	1.17	30
USC00026280	PATAGONIA, AZ US	1936	12	1.08	31
USC00026280	PATAGONIA, AZ US	1937	1	2.60	31
USC00026280	PATAGONIA, AZ US	1937	2	0.08	28
USC00026280	PATAGONIA, AZ US	1937	3	0.75	31
USC00026280	PATAGONIA, AZ US	1937	4	0.00	30
USC00026280	PATAGONIA, AZ US	1937	5	0.14	27
USC00026280	PATAGONIA, AZ US	1937	6	0.46	30
USC00026280	PATAGONIA, AZ US	1937	7	3.06	31
USC00026280	PATAGONIA, AZ US	1937	8	3.94	31
USC00026280	PATAGONIA, AZ US	1937	9	1.89	30
USC00026280	PATAGONIA, AZ US	1937	10	1.15	31
USC00026280	PATAGONIA, AZ US	1937	11	0.00	30
USC00026280	PATAGONIA, AZ US	1937	12	1.51	31
USC00026280	PATAGONIA, AZ US	1938	1	0.78	31
USC00026280	PATAGONIA, AZ US	1938	2	1.26	28
USC00026280	PATAGONIA, AZ US	1938	3	1.11	31
USC00026280	PATAGONIA, AZ US	1938	4	0.13	30
USC00026280	PATAGONIA, AZ US	1938	5	0.12	31
USC00026280	PATAGONIA, AZ US	1938	6	1.21	21
USC00026280	PATAGONIA, AZ US	1938	7	2.22	31
USC00026280	PATAGONIA, AZ US	1938	8	4.91	31
USC00026280	PATAGONIA, AZ US	1938	9	0.86	30
USC00026280	PATAGONIA, AZ US	1938	10	0.00	31
USC00026280	PATAGONIA, AZ US	1938	11	0.00	21
USC00026280	PATAGONIA, AZ US	1938	12	1.32	26
USC00026280	PATAGONIA, AZ US	1939	1	1.04	31
USC00026280	PATAGONIA, AZ US	1939	2	1.98	28
USC00026280	PATAGONIA, AZ US	1939	3	0.00	23
USC00026280	PATAGONIA, AZ US	1939	4	0.13	20
USC00026280	PATAGONIA, AZ US	1939	5	0.00	26
USC00026280	PATAGONIA, AZ US	1939	6	0.00	24
USC00026280	PATAGONIA, AZ US	1939	7	2.35	23
USC00026280	PATAGONIA, AZ US	1939	8	4.44	23
USC00026280	PATAGONIA, AZ US	1939	9	0.64	22

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1939	10	1.11	23
USC00026280	PATAGONIA, AZ US	1939	11	0.59	30
USC00026280	PATAGONIA, AZ US	1939	12	0.76	31
USC00026280	PATAGONIA, AZ US	1940	1	0.00	24
USC00026280	PATAGONIA, AZ US	1940	2	3.05	29
USC00026280	PATAGONIA, AZ US	1940	3	0.26	23
USC00026280	PATAGONIA, AZ US	1940	4	0.20	30
USC00026280	PATAGONIA, AZ US	1940	5	0.33	31
USC00026280	PATAGONIA, AZ US	1940	6	2.33	30
USC00026280	PATAGONIA, AZ US	1940	7	3.29	31
USC00026280	PATAGONIA, AZ US	1940	8	3.50	31
USC00026280	PATAGONIA, AZ US	1940	9	2.48	30
USC00026280	PATAGONIA, AZ US	1940	10	0.10	31
USC00026280	PATAGONIA, AZ US	1940	11	1.16	30
USC00026280	PATAGONIA, AZ US	1940	12	3.27	23
USC00026280	PATAGONIA, AZ US	1941	1	1.52	31
USC00026280	PATAGONIA, AZ US	1941	2	1.77	28
USC00026280	PATAGONIA, AZ US	1941	3	0.71	31
USC00026280	PATAGONIA, AZ US	1941	4	1.56	30
USC00026280	PATAGONIA, AZ US	1941	5	0.39	31
USC00026280	PATAGONIA, AZ US	1941	6	0.35	30
USC00026280	PATAGONIA, AZ US	1941	7	2.82	31
USC00026280	PATAGONIA, AZ US	1941	8	2.56	26
USC00026280	PATAGONIA, AZ US	1941	9	3.47	30
USC00026280	PATAGONIA, AZ US	1941	10	0.76	31
USC00026280	PATAGONIA, AZ US	1941	11	0.22	30
USC00026280	PATAGONIA, AZ US	1941	12	2.39	31
USC00026280	PATAGONIA, AZ US	1942	1	0.00	21
USC00026280	PATAGONIA, AZ US	1942	2	1.23	24
USC00026280	PATAGONIA, AZ US	1942	3	0.26	26
USC00026280	PATAGONIA, AZ US	1942	4	2.07	30
USC00026280	PATAGONIA, AZ US	1942	5	0.00	31
USC00026280	PATAGONIA, AZ US	1942	6	0.00	29
USC00026280	PATAGONIA, AZ US	1942	7	1.79	23
USC00026280	PATAGONIA, AZ US	1942	8	1.49	31
USC00026280	PATAGONIA, AZ US	1942	9	0.37	20
USC00026280	PATAGONIA, AZ US	1942	10	0.83	22
USC00026280	PATAGONIA, AZ US	1942	11	0.00	30
USC00026280	PATAGONIA, AZ US	1942	12	0.14	28
USC00026280	PATAGONIA, AZ US	1943	1	1.47	28
USC00026280	PATAGONIA, AZ US	1943	2	0.00	28
USC00026280	PATAGONIA, AZ US	1943	3	0.34	31
USC00026280	PATAGONIA, AZ US	1943	4	0.00	30
USC00026280	PATAGONIA, AZ US	1943	5	0.00	31
USC00026280	PATAGONIA, AZ US	1943	6	1.10	25
USC00026280	PATAGONIA, AZ US	1943	7	2.42	31
USC00026280	PATAGONIA, AZ US	1943	8	5.86	31
USC00026280	PATAGONIA, AZ US	1943	9	1.88	30
USC00026280	PATAGONIA, AZ US	1943	10	0.51	31
USC00026280	PATAGONIA, AZ US	1943	11	0.00	30
USC00026280	PATAGONIA, AZ US	1943	12	0.86	31
USC00026280	PATAGONIA, AZ US	1944	1	0.68	28

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1944	2	2.06	29
USC00026280	PATAGONIA, AZ US	1944	3	1.90	31
USC00026280	PATAGONIA, AZ US	1944	4	0.46	28
USC00026280	PATAGONIA, AZ US	1944	5	0.00	21
USC00026280	PATAGONIA, AZ US	1944	6	0.26	27
USC00026280	PATAGONIA, AZ US	1944	7	0.37	15
USC00026280	PATAGONIA, AZ US	1944	8	3.85	31
USC00026280	PATAGONIA, AZ US	1944	9	1.63	27
USC00026280	PATAGONIA, AZ US	1944	10	0.58	31
USC00026280	PATAGONIA, AZ US	1944	11	1.92	30
USC00026280	PATAGONIA, AZ US	1944	12	2.11	31
USC00026280	PATAGONIA, AZ US	1945	1	0.94	31
USC00026280	PATAGONIA, AZ US	1945	2	0.18	28
USC00026280	PATAGONIA, AZ US	1945	3	1.18	18
USC00026280	PATAGONIA, AZ US	1945	4	0.10	24
USC00026280	PATAGONIA, AZ US	1945	5	0.00	31
USC00026280	PATAGONIA, AZ US	1945	6	0.00	30
USC00026280	PATAGONIA, AZ US	1945	7	3.65	31
USC00026280	PATAGONIA, AZ US	1945	8	5.26	31
USC00026280	PATAGONIA, AZ US	1945	9	0.88	30
USC00026280	PATAGONIA, AZ US	1945	10	2.26	31
USC00026280	PATAGONIA, AZ US	1945	11	0.00	30
USC00026280	PATAGONIA, AZ US	1945	12	0.17	31
USC00026280	PATAGONIA, AZ US	1946	1	2.13	31
USC00026280	PATAGONIA, AZ US	1946	2	0.00	28
USC00026280	PATAGONIA, AZ US	1946	3	0.57	31
USC00026280	PATAGONIA, AZ US	1946	4	0.32	30
USC00026280	PATAGONIA, AZ US	1946	5	0.00	31
USC00026280	PATAGONIA, AZ US	1946	6	0.00	30
USC00026280	PATAGONIA, AZ US	1946	7	4.69	31
USC00026280	PATAGONIA, AZ US	1946	8	2.91	31
USC00026280	PATAGONIA, AZ US	1946	9	6.74	30
USC00026280	PATAGONIA, AZ US	1946	10	0.90	31
USC00026280	PATAGONIA, AZ US	1946	11	0.73	30
USC00026280	PATAGONIA, AZ US	1946	12	0.07	31
USC00026280	PATAGONIA, AZ US	1947	1	0.41	31
USC00026280	PATAGONIA, AZ US	1947	2	0.35	28
USC00026280	PATAGONIA, AZ US	1947	3	0.32	31
USC00026280	PATAGONIA, AZ US	1947	4	0.10	30
USC00026280	PATAGONIA, AZ US	1947	5	0.53	31
USC00026280	PATAGONIA, AZ US	1947	6	0.00	30
USC00026280	PATAGONIA, AZ US	1947	7	2.43	31
USC00026280	PATAGONIA, AZ US	1947	8	3.38	31
USC00026280	PATAGONIA, AZ US	1947	9	1.25	30
USC00026280	PATAGONIA, AZ US	1947	10	0.40	31
USC00026280	PATAGONIA, AZ US	1947	11	1.05	30
USC00026280	PATAGONIA, AZ US	1947	12	0.65	31
USC00026280	PATAGONIA, AZ US	1948	1	0.00	31
USC00026280	PATAGONIA, AZ US	1948	2	2.05	29
USC00026280	PATAGONIA, AZ US	1948	3	0.41	31
USC00026280	PATAGONIA, AZ US	1948	4	0.00	30
USC00026280	PATAGONIA, AZ US	1948	5	0.00	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1948	6	0.08	30
USC00026280	PATAGONIA, AZ US	1948	7	5.58	31
USC00026280	PATAGONIA, AZ US	1948	8	4.48	31
USC00026280	PATAGONIA, AZ US	1948	9	2.00	30
USC00026280	PATAGONIA, AZ US	1948	10	0.44	31
USC00026280	PATAGONIA, AZ US	1948	11	0.01	30
USC00026280	PATAGONIA, AZ US	1948	12	1.63	31
USC00026280	PATAGONIA, AZ US	1949	1	3.03	31
USC00026280	PATAGONIA, AZ US	1949	2	0.92	28
USC00026280	PATAGONIA, AZ US	1949	3	0.46	31
USC00026280	PATAGONIA, AZ US	1949	4	0.14	30
USC00026280	PATAGONIA, AZ US	1949	5	0.00	31
USC00026280	PATAGONIA, AZ US	1949	6	0.49	30
USC00026280	PATAGONIA, AZ US	1949	7	6.19	31
USC00026280	PATAGONIA, AZ US	1949	8	2.25	31
USC00026280	PATAGONIA, AZ US	1949	9	3.19	30
USC00026280	PATAGONIA, AZ US	1949	10	0.72	31
USC00026280	PATAGONIA, AZ US	1949	11	0.28	30
USC00026280	PATAGONIA, AZ US	1949	12	2.18	31
USC00026280	PATAGONIA, AZ US	1950	1	0.81	31
USC00026280	PATAGONIA, AZ US	1950	2	0.95	28
USC00026280	PATAGONIA, AZ US	1950	3	0.11	31
USC00026280	PATAGONIA, AZ US	1950	4	0.00	30
USC00026280	PATAGONIA, AZ US	1950	5	0.04	31
USC00026280	PATAGONIA, AZ US	1950	6	0.44	30
USC00026280	PATAGONIA, AZ US	1950	7	9.60	31
USC00026280	PATAGONIA, AZ US	1950	8	1.48	31
USC00026280	PATAGONIA, AZ US	1950	9	1.35	30
USC00026280	PATAGONIA, AZ US	1950	10	0.00	31
USC00026280	PATAGONIA, AZ US	1950	11	0.00	30
USC00026280	PATAGONIA, AZ US	1950	12	0.00	31
USC00026280	PATAGONIA, AZ US	1951	1	1.93	31
USC00026280	PATAGONIA, AZ US	1951	2	0.21	28
USC00026280	PATAGONIA, AZ US	1951	3	0.36	31
USC00026280	PATAGONIA, AZ US	1951	4	1.15	27
USC00026280	PATAGONIA, AZ US	1951	5	0.04	30
USC00026280	PATAGONIA, AZ US	1951	6	0.00	30
USC00026280	PATAGONIA, AZ US	1951	7	3.31	31
USC00026280	PATAGONIA, AZ US	1951	8	5.75	31
USC00026280	PATAGONIA, AZ US	1951	9	1.67	30
USC00026280	PATAGONIA, AZ US	1951	10	2.54	31
USC00026280	PATAGONIA, AZ US	1951	11	1.56	30
USC00026280	PATAGONIA, AZ US	1951	12	1.96	31
USC00026280	PATAGONIA, AZ US	1952	1	1.06	31
USC00026280	PATAGONIA, AZ US	1952	2	0.22	29
USC00026280	PATAGONIA, AZ US	1952	3	3.14	31
USC00026280	PATAGONIA, AZ US	1952	4	1.82	30
USC00026280	PATAGONIA, AZ US	1952	5	0.64	31
USC00026280	PATAGONIA, AZ US	1952	6	0.87	30
USC00026280	PATAGONIA, AZ US	1952	7	3.48	31
USC00026280	PATAGONIA, AZ US	1952	8	6.87	31
USC00026280	PATAGONIA, AZ US	1952	9	1.15	30

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1952	10	0.00	31
USC00026280	PATAGONIA, AZ US	1952	11	1.82	30
USC00026280	PATAGONIA, AZ US	1952	12	1.15	31
USC00026280	PATAGONIA, AZ US	1953	1	0.19	31
USC00026280	PATAGONIA, AZ US	1953	2	1.40	28
USC00026280	PATAGONIA, AZ US	1953	3	0.91	31
USC00026280	PATAGONIA, AZ US	1953	4	0.06	30
USC00026280	PATAGONIA, AZ US	1953	5	0.17	31
USC00026280	PATAGONIA, AZ US	1953	6	0.23	30
USC00026280	PATAGONIA, AZ US	1953	7	6.84	31
USC00026280	PATAGONIA, AZ US	1953	8	2.19	31
USC00026280	PATAGONIA, AZ US	1953	9	0.00	30
USC00026280	PATAGONIA, AZ US	1953	10	0.28	31
USC00026280	PATAGONIA, AZ US	1953	11	0.13	30
USC00026280	PATAGONIA, AZ US	1953	12	0.12	31
USC00026280	PATAGONIA, AZ US	1954	1	1.36	31
USC00026280	PATAGONIA, AZ US	1954	2	0.11	28
USC00026280	PATAGONIA, AZ US	1954	3	2.75	31
USC00026280	PATAGONIA, AZ US	1954	4	0.00	30
USC00026280	PATAGONIA, AZ US	1954	5	1.20	31
USC00026280	PATAGONIA, AZ US	1954	6	1.06	30
USC00026280	PATAGONIA, AZ US	1954	7	9.26	31
USC00026280	PATAGONIA, AZ US	1954	8	5.28	31
USC00026280	PATAGONIA, AZ US	1954	9	0.66	30
USC00026280	PATAGONIA, AZ US	1954	10	0.37	31
USC00026280	PATAGONIA, AZ US	1954	11	0.00	30
USC00026280	PATAGONIA, AZ US	1954	12	0.03	31
USC00026280	PATAGONIA, AZ US	1955	1	3.10	31
USC00026280	PATAGONIA, AZ US	1955	2	0.35	28
USC00026280	PATAGONIA, AZ US	1955	3	0.12	31
USC00026280	PATAGONIA, AZ US	1955	4	0.00	30
USC00026280	PATAGONIA, AZ US	1955	5	0.00	31
USC00026280	PATAGONIA, AZ US	1955	6	0.00	30
USC00026280	PATAGONIA, AZ US	1955	7	6.87	31
USC00026280	PATAGONIA, AZ US	1955	8	7.16	31
USC00026280	PATAGONIA, AZ US	1955	9	0.18	30
USC00026280	PATAGONIA, AZ US	1955	10	0.31	31
USC00026280	PATAGONIA, AZ US	1955	11	0.09	30
USC00026280	PATAGONIA, AZ US	1955	12	0.31	31
USC00026280	PATAGONIA, AZ US	1956	1	0.89	31
USC00026280	PATAGONIA, AZ US	1956	2	0.49	29
USC00026280	PATAGONIA, AZ US	1956	3	0.00	31
USC00026280	PATAGONIA, AZ US	1956	4	0.21	30
USC00026280	PATAGONIA, AZ US	1956	5	0.05	31
USC00026280	PATAGONIA, AZ US	1956	6	0.13	30
USC00026280	PATAGONIA, AZ US	1956	7	5.70	31
USC00026280	PATAGONIA, AZ US	1956	8	1.48	31
USC00026280	PATAGONIA, AZ US	1956	9	0.01	30
USC00026280	PATAGONIA, AZ US	1956	10	0.27	31
USC00026280	PATAGONIA, AZ US	1956	11	0.09	30
USC00026280	PATAGONIA, AZ US	1956	12	0.25	31
USC00026280	PATAGONIA, AZ US	1957	1	3.06	31

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USC00026280	PATAGONIA, AZ US	1957	2	0.29	28
USC00026280	PATAGONIA, AZ US	1957	3	1.39	31
USC00026280	PATAGONIA, AZ US	1957	4	0.42	30
USC00026280	PATAGONIA, AZ US	1957	5	0.42	31
USC00026280	PATAGONIA, AZ US	1957	6	0.11	30
USC00026280	PATAGONIA, AZ US	1957	7	3.27	31
USC00026280	PATAGONIA, AZ US	1957	8	4.17	31
USC00026280	PATAGONIA, AZ US	1957	9	0.13	30
USC00026280	PATAGONIA, AZ US	1957	10	1.97	31
USC00026280	PATAGONIA, AZ US	1957	11	0.18	30
USC00026280	PATAGONIA, AZ US	1957	12	0.70	31
USC00026280	PATAGONIA, AZ US	1958	1	0.02	31
USC00026280	PATAGONIA, AZ US	1958	2	1.68	28
USC00026280	PATAGONIA, AZ US	1958	3	3.84	31
USC00026280	PATAGONIA, AZ US	1958	4	0.38	30
USC00026280	PATAGONIA, AZ US	1958	5	0.00	31
USC00026280	PATAGONIA, AZ US	1958	6	1.12	30
USC00026280	PATAGONIA, AZ US	1958	7	5.42	31
USC00026280	PATAGONIA, AZ US	1958	8	3.08	31
USC00026280	PATAGONIA, AZ US	1958	9	2.22	30
USC00026280	PATAGONIA, AZ US	1958	10	1.10	31
USC00026280	PATAGONIA, AZ US	1958	11	0.00	28
USC00026280	PATAGONIA, AZ US	1958	12	0.00	31
USC00026280	PATAGONIA, AZ US	1959	1	0.00	31
USC00026280	PATAGONIA, AZ US	1959	2	1.13	28
USC00026280	PATAGONIA, AZ US	1959	3	0.00	31
USC00026280	PATAGONIA, AZ US	1959	4	0.23	30
USC00026280	PATAGONIA, AZ US	1959	5	0.00	31
USC00026280	PATAGONIA, AZ US	1959	6	0.53	30
USC00026280	PATAGONIA, AZ US	1959	7	6.11	31
USC00026280	PATAGONIA, AZ US	1959	8	3.07	31
USC00026280	PATAGONIA, AZ US	1959	9	0.56	30
USC00026280	PATAGONIA, AZ US	1959	10	1.88	31
USC00026280	PATAGONIA, AZ US	1959	11	2.24	30
USC00026280	PATAGONIA, AZ US	1959	12	1.84	31
USC00026280	PATAGONIA, AZ US	1960	1	3.28	31
USC00026280	PATAGONIA, AZ US	1960	2	0.44	29
USC00026280	PATAGONIA, AZ US	1960	3	0.63	31
USC00026280	PATAGONIA, AZ US	1960	4	0.00	30
USC00026280	PATAGONIA, AZ US	1960	5	0.00	31
USC00026280	PATAGONIA, AZ US	1960	6	0.03	30
USC00026280	PATAGONIA, AZ US	1960	7	3.15	31
USC00026280	PATAGONIA, AZ US	1960	8	6.47	31
USC00026280	PATAGONIA, AZ US	1960	9	1.56	30
USC00026280	PATAGONIA, AZ US	1960	10	2.68	31
USC00026280	PATAGONIA, AZ US	1960	11	0.15	30
USC00026280	PATAGONIA, AZ US	1960	12	0.73	31
USC00026280	PATAGONIA, AZ US	1961	1	1.18	31
USC00026280	PATAGONIA, AZ US	1961	2	0.11	28
USC00026280	PATAGONIA, AZ US	1961	3	0.25	31
USC00026280	PATAGONIA, AZ US	1961	4	0.00	30
USC00026280	PATAGONIA, AZ US	1961	5	0.00	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1961	6	1.10	30
USC00026280	PATAGONIA, AZ US	1961	7	3.30	31
USC00026280	PATAGONIA, AZ US	1961	8	6.12	31
USC00026280	PATAGONIA, AZ US	1961	9	2.43	30
USC00026280	PATAGONIA, AZ US	1961	10	3.37	31
USC00026280	PATAGONIA, AZ US	1961	11	0.23	30
USC00026280	PATAGONIA, AZ US	1961	12	3.02	31
USC00026280	PATAGONIA, AZ US	1962	1	2.14	31
USC00026280	PATAGONIA, AZ US	1962	2	0.51	28
USC00026280	PATAGONIA, AZ US	1962	3	1.14	31
USC00026280	PATAGONIA, AZ US	1962	4	0.09	30
USC00026280	PATAGONIA, AZ US	1962	5	0.00	31
USC00026280	PATAGONIA, AZ US	1962	6	0.12	30
USC00026280	PATAGONIA, AZ US	1962	7	2.84	31
USC00026280	PATAGONIA, AZ US	1962	8	0.99	31
USC00026280	PATAGONIA, AZ US	1962	9	1.76	30
USC00026280	PATAGONIA, AZ US	1962	10	0.43	31
USC00026280	PATAGONIA, AZ US	1962	11	0.48	30
USC00026280	PATAGONIA, AZ US	1962	12	1.71	31
USC00026280	PATAGONIA, AZ US	1963	1	0.97	31
USC00026280	PATAGONIA, AZ US	1963	2	1.18	28
USC00026280	PATAGONIA, AZ US	1963	3	0.27	31
USC00026280	PATAGONIA, AZ US	1963	4	0.47	30
USC00026280	PATAGONIA, AZ US	1963	5	0.00	31
USC00026280	PATAGONIA, AZ US	1963	6	0.00	30
USC00026280	PATAGONIA, AZ US	1963	7	4.94	31
USC00026280	PATAGONIA, AZ US	1963	8	5.89	31
USC00026280	PATAGONIA, AZ US	1963	9	2.53	30
USC00026280	PATAGONIA, AZ US	1963	10	0.69	31
USC00026280	PATAGONIA, AZ US	1963	11	2.20	30
USC00026280	PATAGONIA, AZ US	1963	12	0.53	31
USC00026280	PATAGONIA, AZ US	1964	1	0.44	31
USC00026280	PATAGONIA, AZ US	1964	2	0.08	29
USC00026280	PATAGONIA, AZ US	1964	3	0.71	31
USC00026280	PATAGONIA, AZ US	1964	4	0.42	30
USC00026280	PATAGONIA, AZ US	1964	5	0.00	31
USC00026280	PATAGONIA, AZ US	1964	6	0.43	30
USC00026280	PATAGONIA, AZ US	1964	7	4.84	31
USC00026280	PATAGONIA, AZ US	1964	8	4.74	31
USC00026280	PATAGONIA, AZ US	1964	9	8.13	30
USC00026280	PATAGONIA, AZ US	1964	10	1.43	31
USC00026280	PATAGONIA, AZ US	1964	11	1.27	30
USC00026280	PATAGONIA, AZ US	1964	12	0.52	31
USC00026280	PATAGONIA, AZ US	1965	1	0.20	31
USC00026280	PATAGONIA, AZ US	1965	2	0.66	28
USC00026280	PATAGONIA, AZ US	1965	3	0.41	31
USC00026280	PATAGONIA, AZ US	1965	4	0.50	30
USC00026280	PATAGONIA, AZ US	1965	5	0.00	31
USC00026280	PATAGONIA, AZ US	1965	6	0.09	30
USC00026280	PATAGONIA, AZ US	1965	7	4.30	31
USC00026280	PATAGONIA, AZ US	1965	8	2.30	31
USC00026280	PATAGONIA, AZ US	1965	9	3.18	30

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026280	PATAGONIA, AZ US	1965	10	0.19	31
USC00026280	PATAGONIA, AZ US	1965	11	0.70	30
USC00026280	PATAGONIA, AZ US	1965	12	8.62	31
USC00026280	PATAGONIA, AZ US	1966	1	2.02	31
USC00026280	PATAGONIA, AZ US	1966	2	2.26	28
USC00026280	PATAGONIA, AZ US	1966	3	0.07	31
USC00026280	PATAGONIA, AZ US	1966	4	0.02	30
USC00026280	PATAGONIA, AZ US	1966	5	ND	-
USC00026280	PATAGONIA, AZ US	1966	6	0.08	30
USC00026280	PATAGONIA, AZ US	1966	7	5.79	31
USC00026280	PATAGONIA, AZ US	1966	8	5.82	31
USC00026280	PATAGONIA, AZ US	1966	9	3.97	30
USC00026280	PATAGONIA, AZ US	1966	10	0.55	31
USC00026280	PATAGONIA, AZ US	1966	11	0.95	30
USC00026280	PATAGONIA, AZ US	1966	12	0.82	31
USC00026280	PATAGONIA, AZ US	1967	1	0.02	31
USC00026280	PATAGONIA, AZ US	1967	2	0.35	28
USC00026280	PATAGONIA, AZ US	1967	3	0.23	31
USC00026280	PATAGONIA, AZ US	1967	4	0.35	30
USC00026280	PATAGONIA, AZ US	1967	5	0.65	31
USC00026280	PATAGONIA, AZ US	1967	6	0.87	30
USC00026280	PATAGONIA, AZ US	1967	7	4.33	31
USC00026280	PATAGONIA, AZ US	1967	8	3.93	31
USC00026280	PATAGONIA, AZ US	1967	9	1.80	30
USC00026280	PATAGONIA, AZ US	1967	10	0.55	31
USC00026280	PATAGONIA, AZ US	1967	11	0.67	30
USC00026280	PATAGONIA, AZ US	1967	12	6.80	31
USC00026280	PATAGONIA, AZ US	1968	1	0.66	31
USC00026280	PATAGONIA, AZ US	1968	2	2.00	29
USC00026280	PATAGONIA, AZ US	1968	3	1.43	31
USC00026280	PATAGONIA, AZ US	1968	4	0.39	30
USC00026280	PATAGONIA, AZ US	1968	5	0.00	31
USC00026280	PATAGONIA, AZ US	1968	6	0.00	30
USC00026280	PATAGONIA, AZ US	1968	7	3.29	31
USC00026280	PATAGONIA, AZ US	1968	8	3.31	31
USC00026280	PATAGONIA, AZ US	1968	9	0.14	30
USC00026280	PATAGONIA, AZ US	1968	10	0.23	31
USC00026280	PATAGONIA, AZ US	1968	11	0.50	30
USC00026280	PATAGONIA, AZ US	1968	12	1.09	31
USC00026280	PATAGONIA, AZ US	1969	1	0.86	31
USC00026280	PATAGONIA, AZ US	1969	2	0.98	28
USC00026280	PATAGONIA, AZ US	1969	3	0.47	31
USC00026280	PATAGONIA, AZ US	1969	4	0.09	30
USC00026280	PATAGONIA, AZ US	1969	5	0.42	31
USC00026280	PATAGONIA, AZ US	1969	6	0.00	30
USC00026280	PATAGONIA, AZ US	1969	7	5.66	31
USC00026280	PATAGONIA, AZ US	1969	8	5.86	31
USC00026280	PATAGONIA, AZ US	1969	9	0.83	30
USC00026280	PATAGONIA, AZ US	1969	10	0.01	31
USC00026280	PATAGONIA, AZ US	1969	11	0.75	30
USC00026280	PATAGONIA, AZ US	1969	12	0.87	31
USC00026280	PATAGONIA, AZ US	1970	1	0.00	31

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USC00026280	PATAGONIA, AZ US	1970	2	0.82	28
USC00026280	PATAGONIA, AZ US	1970	3	2.11	31
USC00026280	PATAGONIA, AZ US	1970	4	0.05	30
USC00026280	PATAGONIA, AZ US	1970	5	0.05	31
USC00026280	PATAGONIA, AZ US	1970	6	0.40	30
USC00026280	PATAGONIA, AZ US	1970	7	4.39	31
USC00026280	PATAGONIA, AZ US	1970	8	2.89	31
USC00026280	PATAGONIA, AZ US	1970	9	2.34	30
USC00026280	PATAGONIA, AZ US	1970	10	0.44	31
USC00026280	PATAGONIA, AZ US	1970	11	0.00	30
USC00026280	PATAGONIA, AZ US	1970	12	0.56	31
USC00026280	PATAGONIA, AZ US	1971	1	0.22	31
USC00026280	PATAGONIA, AZ US	1971	2	1.20	28
USC00026280	PATAGONIA, AZ US	1971	3	0.00	31
USC00026280	PATAGONIA, AZ US	1971	4	0.43	30
USC00026280	PATAGONIA, AZ US	1971	5	0.00	31
USC00026280	PATAGONIA, AZ US	1971	6	0.94	30
USC00026280	PATAGONIA, AZ US	1971	7	4.94	31
USC00026280	PATAGONIA, AZ US	1971	8	6.20	31
USC00026280	PATAGONIA, AZ US	1971	9	1.97	30
USC00026280	PATAGONIA, AZ US	1971	10	2.45	31
USC00026280	PATAGONIA, AZ US	1971	11	1.12	30
USC00026280	PATAGONIA, AZ US	1971	12	2.26	31
USC00026280	PATAGONIA, AZ US	1972	1	0.07	31
USC00026280	PATAGONIA, AZ US	1972	2	0.00	29
USC00026280	PATAGONIA, AZ US	1972	3	0.05	31
USC00026280	PATAGONIA, AZ US	1972	4	0.00	30
USC00026280	PATAGONIA, AZ US	1972	5	0.23	31
USC00026280	PATAGONIA, AZ US	1972	6	2.59	30
USC00026280	PATAGONIA, AZ US	1972	7	2.38	31
USC00026280	PATAGONIA, AZ US	1972	8	2.15	31
USC00026280	PATAGONIA, AZ US	1972	9	3.51	30
USC00026280	PATAGONIA, AZ US	1972	10	3.92	31
USC00026280	PATAGONIA, AZ US	1972	11	1.64	30
USC00026280	PATAGONIA, AZ US	1972	12	1.08	31
USC00026280	PATAGONIA, AZ US	1973	1	0.62	31
USC00026280	PATAGONIA, AZ US	1973	2	2.69	28
USC00026280	PATAGONIA, AZ US	1973	3	3.66	31
USC00026280	PATAGONIA, AZ US	1973	4	0.00	30
USC00026280	PATAGONIA, AZ US	1973	5	0.08	31
USC00026280	PATAGONIA, AZ US	1973	6	0.83	30
USC00026280	PATAGONIA, AZ US	1973	7	3.71	31
USC00026280	PATAGONIA, AZ US	1973	8	2.59	31
USC00026280	PATAGONIA, AZ US	1973	9	0.00	30
USC00026280	PATAGONIA, AZ US	1973	10	0.00	31
USC00026280	PATAGONIA, AZ US	1973	11	0.47	30
USC00026280	PATAGONIA, AZ US	1973	12	0.00	31
USC00026280	PATAGONIA, AZ US	1974	1	1.98	31
USC00026280	PATAGONIA, AZ US	1974	2	0.00	28
USC00026280	PATAGONIA, AZ US	1974	3	0.57	31
USC00026280	PATAGONIA, AZ US	1974	4	0.00	30
USC00026280	PATAGONIA, AZ US	1974	5	0.08	31

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USC00026280	PATAGONIA, AZ US	1974	6	0.97	30
USC00026280	PATAGONIA, AZ US	1974	7	6.79	31
USC00026280	PATAGONIA, AZ US	1974	8	2.32	31
USC00026280	PATAGONIA, AZ US	1974	9	2.77	30
USC00026280	PATAGONIA, AZ US	1974	10	2.96	31
USC00026280	PATAGONIA, AZ US	1974	11	0.19	30
USC00026280	PATAGONIA, AZ US	1974	12	0.27	31
USC00026280	PATAGONIA, AZ US	1975	1	1.06	31
USC00026280	PATAGONIA, AZ US	1975	2	0.07	28
USC00026280	PATAGONIA, AZ US	1975	3	1.45	31
USC00026280	PATAGONIA, AZ US	1975	4	1.12	30
USC00026280	PATAGONIA, AZ US	1975	5	0.00	31
USC00026280	PATAGONIA, AZ US	1975	6	0.00	30
USC00026280	PATAGONIA, AZ US	1975	7	3.88	31
USC00026280	PATAGONIA, AZ US	1975	8	2.95	31
USC00026280	PATAGONIA, AZ US	1975	9	3.39	30
USC00026280	PATAGONIA, AZ US	1975	10	0.04	31
USC00026280	PATAGONIA, AZ US	1975	11	1.10	30
USC00026280	PATAGONIA, AZ US	1975	12	0.44	31
USC00026280	PATAGONIA, AZ US	1976	1	0.34	31
USC00026280	PATAGONIA, AZ US	1976	2	1.98	29
USC00026280	PATAGONIA, AZ US	1976	3	0.40	31
USC00026280	PATAGONIA, AZ US	1976	4	1.24	30
USC00026280	PATAGONIA, AZ US	1976	5	0.19	31
USC00026280	PATAGONIA, AZ US	1976	6	0.10	30
USC00026280	PATAGONIA, AZ US	1976	7	7.60	31
USC00026280	PATAGONIA, AZ US	1976	8	1.41	31
USC00026280	PATAGONIA, AZ US	1976	9	2.19	30
USC00026280	PATAGONIA, AZ US	1976	10	0.97	31
USC00026280	PATAGONIA, AZ US	1976	11	0.63	30
USC00026280	PATAGONIA, AZ US	1976	12	0.18	31
USC00026280	PATAGONIA, AZ US	1977	1	1.86	29
USC00026280	PATAGONIA, AZ US	1977	2	0.03	28
USC00026280	PATAGONIA, AZ US	1977	3	0.55	31
USC00026280	PATAGONIA, AZ US	1977	4	0.09	30
USC00026280	PATAGONIA, AZ US	1977	5	0.00	31
USC00026280	PATAGONIA, AZ US	1977	6	0.23	30
USC00026280	PATAGONIA, AZ US	1977	7	3.48	31
USC00026280	PATAGONIA, AZ US	1977	8	3.04	31
USC00026280	PATAGONIA, AZ US	1977	9	1.93	30
USC00026280	PATAGONIA, AZ US	1977	10	7.89	31
USC00026280	PATAGONIA, AZ US	1977	11	0.41	30
USC00026280	PATAGONIA, AZ US	1977	12	1.09	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	1	2.87	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	2	3.35	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	3	1.34	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	4	0.14	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	5	0.56	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	6	0.83	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	7	4.01	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	8	3.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	9	1.33	30

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	10	2.25	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	11	2.59	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1978	12	4.03	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	1	3.06	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	2	0.53	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	3	2.15	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	5	0.24	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	6	0.30	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	7	2.05	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	8	1.74	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	9	0.35	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	10	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	11	0.42	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1979	12	0.31	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	1	0.69	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	2	2.25	29
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	3	0.86	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	6	0.79	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	7	1.59	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	8	1.73	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	9	1.12	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	10	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	11	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1980	12	0.46	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	1	1.43	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	2	0.90	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	3	2.81	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	4	0.46	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	5	1.05	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	6	0.32	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	7	5.09	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	8	1.21	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	9	1.12	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	10	1.26	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	11	0.52	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1981	12	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	1	1.42	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	2	0.35	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	3	0.70	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	5	0.18	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	6	0.04	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	7	2.41	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	8	4.52	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	9	1.77	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	10	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	11	1.88	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1982	12	3.34	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	1	2.50	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	2	1.92	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	3	3.26	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	4	0.37	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	5	0.08	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	7	3.66	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	8	4.80	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	9	5.03	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	10	3.74	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	11	1.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1983	12	0.63	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	1	1.80	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	2	0.00	29
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	3	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	4	0.80	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	5	0.05	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	6	0.86	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	7	5.52	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	8	9.05	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	9	0.66	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	10	0.78	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	11	0.79	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1984	12	5.60	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	1	2.42	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	2	1.64	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	3	0.18	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	4	1.16	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	6	0.20	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	7	6.02	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	8	3.55	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	9	2.25	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	10	2.40	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	11	1.55	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1985	12	0.44	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	1	0.58	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	2	1.49	26
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	3	1.67	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	4	0.75	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	5	0.28	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	6	0.54	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	7	3.82	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	8	5.56	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	9	0.80	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	10	0.41	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	11	0.71	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1986	12	2.23	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	1	0.46	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	2	2.77	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	3	0.48	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	4	2.28	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	5	0.87	31

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USC00026282	PATAGONIA NUMBER 2, AZ US	1987	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	7	2.21	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	8	5.99	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	9	1.47	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	10	0.50	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	11	0.42	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1987	12	1.99	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	1	1.97	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	2	0.30	29
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	3	0.41	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	4	1.60	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	6	0.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	7	6.55	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	8	6.29	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	9	0.45	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	10	3.72	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	11	0.68	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1988	12	0.28	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	1	0.84	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	2	0.11	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	3	1.05	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	5	0.08	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	6	0.02	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	7	2.38	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	8	1.95	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	9	0.70	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	10	3.86	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	11	0.12	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1989	12	0.70	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	1	1.17	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	2	0.92	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	3	0.41	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	4	0.15	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	5	0.28	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	6	0.83	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	7	7.49	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	8	4.71	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	9	2.46	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	10	0.71	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	11	1.03	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1990	12	2.28	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	1	2.05	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	2	2.72	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	3	2.24	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	6	0.09	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	7	1.96	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	8	3.27	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	9	1.62	30

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	10	0.33	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	11	1.34	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1991	12	3.46	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	1	1.82	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	2	1.48	29
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	3	4.07	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	4	0.92	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	5	0.77	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	7	5.84	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	8	5.41	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	9	2.19	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	10	0.28	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	11	0.03	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1992	12	4.58	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	1	7.82	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	2	2.39	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	3	0.68	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	5	0.95	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	6	0.24	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	7	2.31	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	8	7.31	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	9	1.44	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	10	0.69	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	11	1.60	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1993	12	0.24	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	1	0.33	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	2	1.38	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	3	1.89	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	4	0.33	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	5	0.17	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	6	0.58	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	7	1.33	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	8	4.59	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	9	1.55	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	10	0.14	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	11	3.03	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1994	12	3.99	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	1	1.11	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	2	1.55	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	3	0.62	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	4	0.55	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	5	0.07	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	7	1.24	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	8	4.81	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	9	0.84	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	10	0.98	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	11	0.61	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1995	12	0.75	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	1	0.06	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	2	0.43	29
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	3	0.27	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	4	0.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	6	0.09	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	7	3.80	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	8	2.46	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	9	0.84	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	10	1.06	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	11	0.46	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1996	12	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	1	1.27	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	2	1.38	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	3	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	4	0.48	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	5	0.48	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	6	0.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	7	0.94	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	8	6.14	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	9	3.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	10	0.42	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	11	0.80	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1997	12	4.03	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	1	0.10	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	2	3.62	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	3	1.78	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	4	0.30	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	7	5.59	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	8	4.55	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	9	1.77	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	10	0.28	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	11	0.76	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1998	12	0.52	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	1	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	2	0.00	28
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	3	0.04	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	4	1.55	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	6	0.93	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	7	6.17	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	8	4.14	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	9	1.32	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	10	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	11	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	1999	12	0.03	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	1	0.05	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	2	0.54	29
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	3	1.50	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	5	0.00	31

Appendix B
Monthly Precipitation Data
Patagonia, Arizona
1922-2021

Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	6	3.58	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	7	1.80	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	8	5.70	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	9	0.23	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	10	7.95	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	11	1.94	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2000	12	0.02	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	1	2.01	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	2	0.80	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	3	0.93	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	4	1.97	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	5	0.14	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	6	0.88	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	7	5.74	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	8	2.97	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	9	1.31	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	10	0.46	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	11	0.52	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2001	12	1.85	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	1	0.35	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	2	0.33	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	3	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	7	4.44	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	8	1.85	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	9	1.68	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	10	0.24	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	11	0.42	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2002	12	1.11	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	1	0.21	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	2	1.93	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	3	0.50	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	4	0.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	5	0.03	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	6	0.06	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	7	5.70	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	8	2.55	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	9	1.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	10	0.79	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	11	0.89	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2003	12	0.86	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	1	0.63	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	2	0.65	29
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	3	0.94	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	4	1.97	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	6	0.29	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	7	6.53	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	8	4.95	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	9	0.73	30

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	10	0.19	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	11	0.48	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2004	12	1.39	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	1	1.88	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	2	1.24	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	3	0.27	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	4	0.33	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	5	0.44	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	7	5.75	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	8	2.67	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	9	0.10	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	10	0.46	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	11	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2005	12	0.06	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	1	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	2	0.20	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	3	1.04	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	6	1.29	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	7	6.33	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	8	4.57	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	9	3.56	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	10	0.17	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	11	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2006	12	0.66	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	1	1.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	2	0.00	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	3	0.53	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	4	0.19	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	5	0.17	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	6	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	7	6.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	8	5.73	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	9	3.56	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	10	0.15	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	11	1.60	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2007	12	0.90	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	1	0.53	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	2	0.94	29
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	3	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	5	0.74	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	6	1.59	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	7	8.33	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	8	3.97	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	9	1.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	10	0.36	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	11	0.87	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2008	12	0.43	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	1	0.43	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	2	0.63	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	3	0.27	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	4	0.31	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	5	0.88	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	6	0.38	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	7	2.22	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	8	1.54	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	9	0.43	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	10	0.40	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	11	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2009	12	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	1	4.03	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	2	2.10	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	3	0.57	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	4	0.69	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	7	7.16	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	8	3.49	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	9	1.01	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	10	1.16	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	11	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2010	12	0.73	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	1	0.09	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	2	0.24	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	3	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	4	0.41	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	6	0.32	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	7	2.95	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	8	2.41	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	9	2.15	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	10	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	11	0.78	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2011	12	3.16	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	1	0.23	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	2	0.14	29
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	3	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	4	0.07	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	5	0.70	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	6	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	7	8.24	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	8	2.19	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	9	2.12	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	10	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	11	0.26	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2012	12	1.95	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	2	0.12	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	3	0.03	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	4	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	6	0.25	30

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	7	5.25	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	8	2.96	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	9	1.45	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	10	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	11	1.17	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2013	12	0.70	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	1	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	2	0.14	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	3	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	4	0.02	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	5	0.00	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	7	4.98	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	8	3.25	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	9	5.39	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	10	0.95	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	11	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2014	12	1.25	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	1	2.40	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	2	0.00	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	3	0.68	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	4	0.52	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	5	0.14	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	6	1.95	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	7	4.18	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	8	1.25	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	9	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	10	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	11	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2015	12	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	1	2.12	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	2	0.00	29
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	3	0.14	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	4	0.78	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	5	0.02	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	6	2.22	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	7	2.54	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	8	5.99	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	9	3.31	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	10	0.67	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	11	0.06	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2016	12	1.57	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	1	1.27	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	2	0.22	28
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	3	0.12	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	4	ND	-
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	5	0.29	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	6	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	7	6.47	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	8	1.72	31
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	9	0.00	30
USC00026282	PATAGONIA NUMBER 2, AZ US	2017	10	0.30	31

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Station Number	Station Name	Year	Month	Total Precipitation	Count of Days
USC00026282	PATAGONIA PATON CENTER, AZ US	2017	11	0.15	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2017	12	ND	-
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	1	0.10	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	2	3.95	28
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	3	0.00	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	4	0.00	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	5	0.00	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	6	1.15	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	7	2.74	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	8	4.45	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	9	0.27	26
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	10	5.54	29
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	11	0.11	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2018	12	1.21	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	1	1.17	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	2	2.46	26
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	3	0.93	27
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	4	0.01	29
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	5	0.89	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	6	0.12	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	7	2.59	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	8	6.11	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	9	4.53	29
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	10	0.00	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	11	0.01	8
USC00026282	PATAGONIA PATON CENTER, AZ US	2019	12	2.24	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	1	0.74	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	2	1.27	29
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	3	2.36	25
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	4	0.07	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	5	0.00	18
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	6	ND	-
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	7	ND	-
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	8	ND	-
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	9	0.10	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	10	0.00	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	11	0.10	30
USC00026282	PATAGONIA PATON CENTER, AZ US	2020	12	0.44	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2021	1	1.90	31
USC00026282	PATAGONIA PATON CENTER, AZ US	2021	2	0.00	28
USC00026282	PATAGONIA PATON CENTER, AZ US	2021	3	0.00	3
USC00026282	PATAGONIA PATON CENTER, AZ US	2021	4	0.00	2

NOTES:

Months with no reported data as listed are ND.
Precipitation is in inches.

APPENDIX C

WELL DATABASE

ADWR Number	Well Name	CADASTRAL	Owner Name	Well Type	Date Installed	Well Depth	Depth to Water	Depth Cased	Casing Diameter	Type of Casing	Pump Rate	Rate Tested	Drawdown	Has Completion Report	Has Drill Log	Well Cancelled	Well Elevation	Easting	Northing	Top of Screen	Bottom of Screen	Water Level Elevation
640929		D22016017CDD	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1068128.55	189831.15	0	0	0
640960		D21016034AAA	CORONADO NATIONAL FOREST	EXEMPT	01-Jan-72	0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1081304.30	209977.40	0	0	0
640961		D21016035AAC	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1085913.71	209405.48	0	0	0
640970		D22016022CCA	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				4388.0	1077788.04	185231.94	60	120	0
642740		D22016030DDO	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1065600.03	179240.63	0	0	0
642746		D22016032CAO	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1068283.50	175340.57	0	0	0
641613		D21016023DAO	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1086148.77	217626.72	0	0	0
641614		D21016026DBO	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1084885.01	212341.23	0	0	0
641623		D21016023BCO	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1082197.37	218916.42	0	0	0
641637		D22016020CAO	CORONADO NATIONAL FOREST	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1068156.70	185876.07	0	0	0
641601		D20016032CBB	CORONADO NATIONAL FOREST	EXEMPT	01-Jan-70	0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1066425.70	238390.06	0	0	0
804592		D21015013DBA	CORONADO NATIONAL FOREST	EXEMPT	01-Jan-70	0	0	0	0		35	0	0				0.0	1058941.44	222906.51	0	0	0
804701		D21016006CCD	CORONADO NATIONAL FOREST	EXEMPT	01-Jan-70	0	0	0	0		35	0	0				0.0	1061549.50	231374.01	0	0	0
538247		D22016008CCA	COUSENS, GABRIEL,	NON-EXEMPT	18-Jun-93	440	270	440	6	PLASTIC OR PVC	36	36	293	X	X		4293.0	1066961.70	195552.37	300	440	4023
646416		D22016006DAC	CREHAN, M L	EXEMPT		0	0	0	0	NO CASING CODE LISTED	20	20	0				0.0	1065061.06	201254.54	0	0	0
086240		D22016005DAD	D A D ASSOCIATES,	EXEMPT	19-Jan-81	525	420	525	4	PLASTIC OR PVC	0	0	0				4391.0	1070814.95	200973.70	445	485	3971
501408		D22016009BBC	D A D ASSOCIATES,	NON-EXEMPT	30-Nov-82	100	65	100	12	STEEL - PERFORATED OR SLOTTED CASING	30	30	35	X	X		0.0	1071687.75	198726.75	0	100	0
224425		D21016028CBA	DANIEL CANTU	EXEMPT		0	0	0	0		0	0	0				0.0	1072106.78	212500.03	0	0	0
632636		D21016029DBO	DANIEL CANTU	EXEMPT	01-Jan-41	207	52	0	6	STEEL - PERFORATED OR SLOTTED CASING	4	4	4				0.0	1069141.88	212173.20	0	207	0
644520		D21016008ADA	DARYL BURTON	EXEMPT	01-Jan-58	250	109	250	6	STEEL - PERFORATED OR SLOTTED CASING	4	4	0				4448.0	1070409.56	229142.15	0	250	4382.4
637269		D21016008DAB	DARYL BURTON	EXEMPT	07-Apr-79	525	70	523	4		8	8	8				0.0	1069896.11	228115.68	0	0	0
518112		D22016006DDB	DAVID & KAYTI KING	EXEMPT - DOMESTIC STOCK	25-Jun-87	70	25	55	8	STEEL - PERFORATED OR SLOTTED CASING	0	0	0	C	X		0.0	1065071.12	200601.42	0	70	0
210360		D21016031ACD	DAVID LOPEZ	EXEMPT	16-Mar-06	285	202	285	6	PLASTIC OR PVC	0	0	0		X		0.0	1064314.15	207819.66	0	285	0
551775		D22016008ABA	DENICKE, LAWRENCE, M	EXEMPT	14-Oct-95	200	87	200	6	PLASTIC OR PVC	3	5	0	X	X		4122.0	1069773.62	199214.43	120	200	4035
544272		D22016008ABA	DENICKE, LAWRENCE, W	EXEMPT		200	0	0	0	NO CASING CODE LISTED	0	0	0		Y		4160.0	1069631.36	199147.90	120	200	0
203483		D22016006CCA	DENNIS M ARNESON	EXEMPT		220	28	220	7	PLASTIC OR PVC	0	0	0		X		0.0	1061864.43	200574.57	0	220	0
611522		D21016004ACC	DONNA RILEY	EXEMPT	01-May-79	250	90	250	6		12	0	0				0.0	1073807.08	233909.15	0	0	0
579208		D22016005CDD	DOYLE W PRATT TRUST	EXEMPT	21-Feb-00	190	0	190	5	PLASTIC OR PVC	0	2	180	X	X		0.0	1068362.66	199982.34	0	190	0
642391		D21016004CCC	DUBOW, ARTHUR,	EXEMPT	12-Apr-79	250	200	250	6		35	35	0				0.0	1071182.71	231257.90	0	0	0
590028		D22016008DAD	DUNCAN K & SUSAN H BLAIR	EXEMPT		0	0	0	0		0	0	0			Y	0.0	1071062.95	196118.56	0	0	0
645435		D21016031CAC	EASLEY ET AL, S	EXEMPT	01-Jan-12	200	20	100	8	STEEL - PERFORATED OR SLOTTED CASING	7	7	0				0.0	1062413.88	206457.96	0	200	0
645434		D22016007000	EASLEY, H T	EXEMPT	01-Jan-24	110	30	110	8	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1063492.09	196977.55	0	110	0
573196		D22016007BDC	EDWARD R VOLZ	EXEMPT		0	0	0	0		0	0	0			Y	0.0	1062533.22	197301.05	0	0	0
217413		D22016008ABC	EL PASO NATURAL GAS COMPANY	SPCL - CATHODIC PROTECTION	20-Oct-08	500	0	160	8	PLASTIC OR PVC	0	0	0		X		0.0	1069042.45	198688.19	0	500	0
534042		D22016007ACB	ELLIS DAVE,	EXEMPT	04-Sep-92	332	225	332	6	PLASTIC OR PVC	16	21	272	X	X		0.0	1063817.92	197971.57	0	332	0
626071		D22016005CCA	EMILY S STEVENS	NON-EXEMPT	01-Nov-59	145	40	98	12	STEEL - PERFORATED OR SLOTTED CASING	1300	1300	0				4110.0	1066464.94	199995.31	45	145	4070
646784		D22016007BCB	ERASMO LAGUNAS MORALES & MARTA A. LAGUNAS	EXEMPT	01-Jan-55	100	20	100	8	STEEL - PERFORATED OR SLOTTED CASING	15	15	0				0.0	1061241.79	197943.44	0	100	0
526316		D22016007BCC	ERNESTO PORTILLO	EXEMPT	06-Aug-90	120	19	120	6	STEEL - PERFORATED OR SLOTTED CASING	6	6	40	X	X		0.0	1061241.38	197286.96	0	120	0
646565		D22016007AAA	FARRELL, E B	EXEMPT		0	0	0	8	NO CASING CODE LISTED	30	30	0				4083.0	1065607.94	199105.00	0	100	0
644392		D22016007000	FELTS JR, B E	EXEMPT		125	75	0	0	NO CASING CODE LISTED	15	0	0				0.0	1063492.09	196977.55	0	125	0
624881		D21016004DCD	FIRST PATAGONIA CAPITAL CO	NON-EXEMPT	01-Jan-70	210	40	200	8		110	110	0				0.0	1074503.56	231295.62	0	0	0
624882		D21016004DAC	FIRST PATAGONIA CAPITAL CO	NON-EXEMPT	01-Jan-70	300	65	280	6		80	80	0				0.0	1075148.65	232614.00	0	0	0
624884		D21016004DBD	FIRST PATAGONIA CAPITAL CO	NON-EXEMPT	01-Jan-70	200	70	200	6		110	110	0				0.0	1074486.00	232605.16	0	0	0
223479		D21016004DBD	FIRST PATAGONIA CAPITAL CO	NON-EXEMPT	01-Jan-70	1035	145	1035	5		0	0	0		X		0.0	1074486.00	232605.16	0	0	0
544810		D21016021BAC	FIRST PATAGONIA CAPITAL CO	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0			Y	0.0	1072661.48	219709.60	0	0	0
544811		D21016032AAB	FIRST PATAGONIA CAPITAL CO	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0			Y	0.0	1070173.53	209864.46	0	0	0
624892		D22016004BAC	FIRST PATAGONIA CAPITAL CO	EXEMPT		265	170	0	6	STEEL - PERFORATED OR SLOTTED CASING	15	15	0				4225.0	1072472.21	203850.23	0	265	4055
903530		D21016009ACC	FIRST PATAGONIA CAPITAL CO	EXEMPT		340	180	340	6	PLASTIC OR PVC	16	10	15	X	X		0.0	1073868.76	228789.08	0	340	0
807311		D22016002BBD	FIRST PATAGONIA CAPITAL CO	EXEMPT	31-Dec-26	150	73	150	8	STEEL - PERFORATED OR SLOTTED CASING	10	0	0				0.0	1082840.40	204108.12	0	150	0
219322		D22015024CBB	FRANK L. POLE	EXEMPT		505	0	505	6	PLASTIC OR PVC	0	0	0				4150.0	1057964.20	185992.10	465	505	0
517704		D22016007DCD	FRED & KATHY ALLARD	EXEMPT	23-May-87	440	341	440	6	PLASTIC OR PVC	25	25	318	X	X		0.0	1064489.24	194707.91	400	440	0
555440		D22015012AAA	FREDERICK B & IRMA SANG	EXEMPT	12-Mar-96	200	32	200	6	PLASTIC OR PVC	30	4	145	X	X		0.0	1060589.11	199254.22	0	200	0
573745		D22016006CDB	GARLAND HATFIELD	EXEMPT	09-Aug-99	340	33	340	6	PLASTIC OR PVC	0	0	0		X		0.0	1062505.77	200579.94	0	340	0
626075		D22016005CAC	GARY NABHAN	EXEMPT	01-Jan-59	143	27	65	12	STEEL - PERFORATED OR SLOTTED CASING	34	34	0				4100.0	1067917.49	201729.25	65	143	4073
577814		D21016033CAD	GARY S GALLOWAY	EXEMPT	29-Nov-99	500	0	500	6	PLASTIC OR PVC	0	0	0		X		0.0	1073526.32	206596.99	400	500	0
524595		D21016017CBA	GERALD & CYNTHIA JENKINS	EXEMPT	02-Jun-89	200	52	200	8	PLASTIC OR PVC	20	20	0	X	X		0.0	1066699.95	222958.45	0	200	0
524594		D21016007BDB	GERALD & CYNTHIA JENKINS	EXEMPT	01-Jun-89	180	40	160	8		20	16	0	X	X		0.0	1062181.81	229363.92	0	0	0
200577		D22015001DDA	GERALD RODMAN	EXEMPT		160	50	160	7	PLASTIC OR PVC	0	0	0		X		0.0	1060585.07	200560.58	0	160	0
617329		D20016032CAA	GOODRICH, JOAN D	EXEMPT	01-Jan-79	150	40	135	4		10	10	0				0.0	1068401.52	238413.21	0	0	0
620403		D20016032CAA	GOODRICH, JOAN D	EXEMPT	27-Sep-79	150	40	135	4		0	0	0				0.0	1068401.52	238413.21	0	0	0
536076		D22016008BDC	GREENLEAF, SALLY,S	NON-EXEMPT	17-Aug-92	0	0	0	0	NO CASING CODE LISTED	0	0	0	N	X		0.0	1067732.30	197370.82	0	0	0
651256		D22016008BDO	GREENLEAF, SALLY,S	EXEMPT		165	0	0	8	NO CASING CODE LISTED	0	0	0				0.0	1068060.10	197698.53	0	165	0
645833		D22016008ACO	GREENLEAF, SALLY,S	EXEMPT	01-Jan-69	348	300	0	6	PLASTIC OR PVC	8	8	0				4115.0	1069028.92	198224.68	0	348	0
634463		D22015012ADA	GROVER V. KANE	EXEMPT	10-Feb-71	100	40	100	8	STEEL - PERFORATED OR SLOTTED CASING	10	10	0									

Appendix C
Well Information for Model Area
Patagonia Groundwater Flow Model

ADWR Number	Well Name	CADASTRAL	Owner Name	Well Type	Date Installed	Well Depth	Depth to Water	Depth Cased	Casing Diameter	Type of Casing	Pump Rate	Rate Tested	Drawdown	Has Completion Report	Has Drill Log	Well Cancelled	Well Elevation	Easting	Northing	Top of Screen	Bottom of Screen	Water Level Elevation
638664		D22015023BDD	NASH,L	EXEMPT		66	24	0	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1052873.69	186680.47	0	66	0
638665		D22015022BAA	NASH,L	EXEMPT		52	38	0	72	OTHER - BLACK STEEL - IRON - SEAMLESS	0	0	0				0.0	1047589.72	188602.43	0	52	0
638666		D22015023BAA	NASH,L	EXEMPT		8	0	8	8	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				3965.0	1051992.08	189465.62	0	8	0
638667		D22015014ADC	NASH,L	EXEMPT		32	16	32	12	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1054744.00	191938.09	0	32	0
638668		D22015021DDC	NASH,L	EXEMPT		30	20	30	37	POROUS CONCRETE	0	0	0				3870.0	1044283.17	183720.64	0	30	0
638669		D22015021DDC	NASH,L	EXEMPT		20	10	20	55	POROUS CONCRETE	0	0	0				0.0	1044383.86	183967.17	0	20	0
638662		D22015021CDC	NASH,L	EXEMPT		0	15	0	12	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1041753.59	183941.90	0	0	0
638663		D22015014BDA	NASH,L	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1052750.50	192577.88	0	0	0
638670		D22015021DCC	NASH,L	EXEMPT		0	12	0	18	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				3910.0	1043169.50	184190.52	0	14	3898
626069		D22016005CAC	NATIVE SEEDS / SEARCH	NON-EXEMPT	01-Jul-69	120	48	120	20	STEEL - PERFORATED OR SLOTTED CASING	800	800	0				4125.0	1068184.94	201024.51	50	120	4077
626070		D22016005CAC	NATIVE SEEDS / SEARCH	NON-EXEMPT		97	44	0	12	STEEL - PERFORATED OR SLOTTED CASING	1000	0	0				4092.0	1067681.14	201286.32	45	97	0
626073		D22016005CCC	NATIVE SEEDS / SEARCH	NON-EXEMPT	01-Jan-63	105	50	101	16	STEEL - PERFORATED OR SLOTTED CASING	389	389	0				0.0	1066375.70	199955.86	20	105	0
626076		D22016005CAC	NATIVE SEEDS / SEARCH	EXEMPT	01-Jan-48	170	45	170	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				4094.0	1067681.14	201286.32	50	170	0
087831		D20016033CBB	NELSON, I	EXEMPT	20-Jan-82	155	75	155	6		0	0	0				0.0	1071700.67	238454.04	0	0	0
631529		D21016005DCA	OATES, W N	EXEMPT	01-Jan-77	200	120	180	6		30	30	0				0.0	1069212.21	231891.29	0	0	0
537048		D22016007BDA	ODELL BORG	EXEMPT	29-Jan-93	263	75	263	6	PLASTIC OR PVC	16	13	215	X		X	0.0	1063174.28	197966.18	0	263	0
500275		D22016009BAD	OSCAR & WANDA DE LA OSSA TRUSTEES	EXEMPT	31-Jul-81	326	40	315	6	STEEL - PERFORATED OR SLOTTED CASING	2	2	0	X		X	0.0	1073679.41	197446.86	0	326	0
647392		D22016009BAC	OSCAR & WANDA DE LA OSSA TRUSTEES	EXEMPT	03-Jan-41	300	100	300	6	STEEL - PERFORATED OR SLOTTED CASING	7	0	0				0.0	1073002.57	198741.03	0	300	0
647394		D22016009BAC	OSCAR & WANDA DE LA OSSA TRUSTEES	EXEMPT	26-Nov-46	400	0	400	6	STEEL - PERFORATED OR SLOTTED CASING	5	0	0				0.0	1073002.57	198741.03	0	400	0
647395		D22016009BAD	OSCAR & WANDA DE LA OSSA TRUSTEES	EXEMPT	27-Aug-65	400	60	400	6	STEEL - PERFORATED OR SLOTTED CASING	5	0	0				0.0	1073658.66	198749.81	0	400	0
603213		D22015024DBB	OSTROM, PHILIP S	EXEMPT	12-Apr-80	360	275	360	6	STEEL - PERFORATED OR SLOTTED CASING	10	10	0				0.0	1058716.11	186079.41	0	360	0
644387		D22016004AAD	PATAGONIA LAND LLC	EXEMPT	15-Jun-74	120	45	120	6	PLASTIC OR PVC	30	30	0				4221.0	1075487.20	203382.64	50	120	4176
220832		D22016006CBB	PATAGONIA MONTESSORI ELEMENTARY SCHOOL	EXEMPT	27-Jun-12	325	38	325	7	PLASTIC OR PVC	27	34	11	X		X	0.0	1061232.31	200566.00	0	325	0
206223	TW-1	D21016020BAD	PATAGONIA PRESERVE LLC	NON-EXEMPT		0	0	0	0		0	0	0				0.0	1068046.47	219700.45	0	0	0
207535		D21016030DAB	PATAGONIA PRESERVE LLC	EXEMPT	22-Jun-05	500	7	400	7	OTHER - BLACK STEEL - IRON - SEAMLESS	0	0	0			X	0.0	1064869.53	212482.06	0	500	0
207536		D21016017CBB	PATAGONIA PRESERVE LLC	EXEMPT	22-Jun-05	520	64	500	7	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1066050.28	222303.08	0	520	0
644973		D21016017BDB	PATAGONIA PRESERVE LLC	EXEMPT	01-Jan-66	300	0	300	8	STEEL - PERFORATED OR SLOTTED CASING	30	30	0				0.0	1066677.31	224914.58	0	300	0
644974		D21016029ABA	PATAGONIA PRESERVE LLC	EXEMPT		260	250	260	6	NO CASING CODE LISTED	2	2	0				4270.0	1069044.36	214427.77	0	260	0
644975		D21016030DBB	PATAGONIA PRESERVE LLC	EXEMPT		80	75	80	6	NO CASING CODE LISTED	2	2	0				0.0	1063589.73	212441.79	0	80	0
644976		D21016031DCC	PATAGONIA PRESERVE LLC	EXEMPT		30	27	30	48	STEEL - PERFORATED OR SLOTTED CASING	3	3	0				0.0	1063718.95	205165.78	0	30	0
644977		D21016017BCC	PATAGONIA PRESERVE LLC	EXEMPT		220	180	220	6	STEEL - PERFORATED OR SLOTTED CASING	4	4	0				0.0	1066037.71	223606.09	0	220	0
641234		D22015012ADA	PATON FAMILY TRUST	EXEMPT		127	20	0	6	OTHER - BLACK STEEL - IRON - SEAMLESS	15	15	0				0.0	1060586.37	197934.67	0	127	0
542020		D21016032CDD	PATTY, RALPH,	NON-EXEMPT	08-Jan-94	180	20	180	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0	C		X	0.0	1068286.55	205230.29	0	180	0
217883		D21016021CDC	PAUL BANTA	EXEMPT	12-Jun-08	480	50	460	7	PLASTIC OR PVC	0	0	0			X	0.0	1072713.64	215797.39	0	480	0
211184		D22016016CCC	PAUL BENNET MARKOWITZ	EXEMPT		0	0	0	0		0	0	0				0.0	1071766.81	189553.03	0	0	0
598569		D22016005CDA	PAULA SCHAPER ZITTE	EXEMPT		280	60	280	7	PLASTIC OR PVC	0	0	0			X	0.0	1068353.22	200638.74	0	280	0
599328		D22016007BBB	PAULETTE GATLIN	EXEMPT	23-Jul-03	100	45	100	7	STEEL - PERFORATED OR SLOTTED CASING	35	35	45	X		X	0.0	1061242.89	199262.98	0	100	0
915109		D21016032BCC	PENNEY SHELLENBARGER	EXEMPT		260	15	260	7	PLASTIC OR PVC	5	6	3	X		X	0.0	1066243.17	207865.36	0	260	0
566235		D21016008BAD	PETER & BARBARA MANSFIELD	EXEMPT	21-Mar-98	210	35	210	8		4	20	0	X		X	0.0	1067918.10	229595.93	0	0	0
602268		D21016008BAA	PETER & BARBARA MANSFIELD	EXEMPT	08-Jul-76	300	55	240	6		0	0	0				0.0	1067911.23	230580.53	0	0	0
602194		D22015012ABC	PETER J & SHERI FAGERGREN	EXEMPT	30-Dec-79	260	100	54	6	PLASTIC OR PVC	5	5	0				0.0	1058599.57	198558.11	0	260	0
207468		D21016032ADD	PHILIP & NICOLE EIKER	EXEMPT	16-May-05	240	150	240	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	4210.0	1070879.34	207894.35	200	240	4060
540559		D22016007BAC	PINE, BRUCE,	ENV - MONITOR OR PIEZOMETER		0	0	0	0	NO CASING CODE LISTED	0	0	0	N			0.0	1062528.14	198613.97	0	0	0
543028		D22016007AAD	PIPER JURGEN,	EXEMPT	31-Mar-94	520	350	520	6	PLASTIC OR PVC	16	13	81	X		X	0.0	1065740.05	198644.14	0	520	0
649401		D22016007BBD	POMEROY, T E	EXEMPT	01-Jan-45	68	40	68	6	NO CASING CODE LISTED	25	25	0				0.0	1061885.81	198608.59	0	68	0
649405		D22016007BCC	PORTILLO, ERNESTO,	EXEMPT	01-Jan-42	33	25	24	33	NO CASING CODE LISTED	0	0	0			Y	4043.0	1061103.36	196977.06	0	33	0
579764		D21016032DAD	POWELL LIVING TRUST	EXEMPT	17-Mar-00	480	340	480	6	PLASTIC OR PVC	0	0	0			X	0.0	1070909.07	206578.35	380	480	0
503132		D22016006BDB	PROCTOR,G	EXEMPT	22-Dec-82	420	35	420	6	PLASTIC OR PVC	35	35	110	X		X	0.0	1062461.28	203189.08	0	420	0
644676		D22016006BDB	PROCTOR,G R	EXEMPT	30-May-78	300	23	280	6	PLASTIC OR PVC	16	16	0				0.0	1062461.28	203189.08	0	300	0
650866		D22016008000	QUIROGA, R S	EXEMPT	23-Sep-75	100	50	80	6	STEEL - PERFORATED OR SLOTTED CASING	15	15	0				0.0	1068729.17	197057.49	0	100	0
588494		D21016033BCB	RAIL X RANCH ESTATES LLC	EXEMPT		0	0	0	0		0	0	0			Y	0.0	1071522.43	208552.94	0	0	0
541773		D22016007BDC	RALPH H SCHMITT	EXEMPT	22-Dec-93	220	110	220	6	PLASTIC OR PVC	12	12	61	X		X	0.0	1062533.22	197301.05	0	220	0
633000		D22016007ADC	RED MTN MESA HM ASSO,	EXEMPT		230	123	215	6	STEEL - PERFORATED OR SLOTTED CASING	30	30	0				0.0	1064466.99	197327.08	0	230	0
633001		D22016007BDD	RED MTN MESA HM ASSO,	EXEMPT		230	106	200	6	STEEL - PERFORATED OR SLOTTED CASING	25	0	0				0.0	1063177.81	197309.73	0	230	0
599538		D22016008ABC	RED ROCK ACRES HOME OWNERS ASSOC	EXEMPT		0	0	0	0		0	0	0				0.0	1069042.45	198688.19	0	0	0
807106		D22016008ABC	RED ROCK ACRES HOME OWNERS ASSOC	EXEMPT	01-Jan-80	100	45	100	14	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1069042.45	198688.19	0	100	0
624224		D22016005BDA	REGINA C MEDLEY	NON-EXEMPT	01-Jan-59	160	87	51	12	STEEL - PERFORATED OR SLOTTED CASING	138	138	0				4145.0	1069641.55	203684.23	51	160	0
624225		D22016005BDA	REGINA C MEDLEY	EXEMPT	01-Jan-59	110	38	0	7	STEEL - PERFORATED OR SLOTTED CASING	20	20	0				4150.0	1068356.62	202642.38	105	110	4082
647929		D22016006DDC	RENEER, L A	EXEMPT	01-Jan-30	35	15	30	48	NO CASING CODE LISTED	30	30	0				0.0	1065081.21	199945.02	0	35	0
647930		D22016006DDC	RENEER, L A	EXEMPT	01-Jan-30	0	20	0	8	NO CASING CODE LISTED	0	0	0				0.0	1065081.21	199945.02	0	0	0
647931		D22016006DDC	RENEER, L A	EXEMPT	01-Jan-30	0	15	0	5	NO CASING CODE LISTED	0	0	0				0.0	1065081.21	199945.02	0	0	0
648923		D22016006D00	RHODES, W W	EXEMPT	06-Jan-74	72	25	68	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1064746.42	200923.66	0	72	0
568221		D22016007ACC	RICHARD BAUERBACH	EXEMPT	18-Jun-98	310	139	310	8	PLASTIC OR PVC	10	13	21	X		X	0.0	1063822.40	197318.41	0	310	0
208343		D21016032BCC																				

Appendix C
Well Information for Model Area
Patagonia Groundwater Flow Model

ADWR Number	Well Name	CADASTRAL	Owner Name	Well Type	Date Installed	Well Depth	Depth to Water	Depth Cased	Casing Diameter	Type of Casing	Pump Rate	Rate Tested	Drawdown	Has Completion Report	Has Drill Log	Well Cancelled	Well Elevation	Easting	Northing	Top of Screen	Bottom of Screen	Water Level Elevation
212610		D22016006ACC	RONALD BRISKMAN	EXEMPT	29-Jun-06	360	94	340	7	PLASTIC OR PVC	16	16	80	X			0.0	1063756.61	202550.01	0	360	0
212205		D21016031DCC	RONALD CITKOWSKI	EXEMPT	30-Apr-07	340	55	340	7	PLASTIC OR PVC	0	0	0		X		0.0	1063718.95	205165.78	0	340	0
221453		D22016006CCB	RONALD R MORRIS	EXEMPT		325	55	325	7	PLASTIC OR PVC	10	14	38	X	X		0.0	1061232.31	200566.00	0	325	0
624883		D21016009CAA	ROSEMONT COPPER COMPANY	NON-EXEMPT		180	70	0	8	STEEL - PERFORATED OR SLOTTED CASING	90	90	0				0.0	1073210.33	228159.89	0	180	0
624890		D21016032DAB	ROSEMONT COPPER COMPANY	EXEMPT		300	60	0	6	STEEL - PERFORATED OR SLOTTED CASING	12	12	0				4170.0	1069238.27	207357.35	20	300	4110
640480		D22016007BBA	ROTHROCK, O J	EXEMPT	24-Jun-57	100	35	100	6	STEEL - PERFORATED OR SLOTTED CASING	10	10	0				0.0	1061884.56	199268.35	0	100	0
518446		D21016008CBB	RUSSELL & NANCY KOLSRUD	EXEMPT	22-Jul-87	200	72	200	8		0	0	0	C	X		0.0	1065983.23	228066.44	0	0	0
518447		D21016008BBB	RUSSELL & NANCY KOLSRUD	EXEMPT	23-Jul-87	200	60	200	8		0	0	0	C	X		0.0	1065948.87	230557.50	0	0	0
546923		D22015015DAB	SALGE, ROY,	EXEMPT	08-Feb-95	220	0	220	6	PLASTIC OR PVC	0	0	0	C	X		0.0	1049504.01	191231.21	0	220	0
525944		D22016008BDC	SALLY GREENLEAF	EXEMPT	26-Sep-89	410	85	410	6	PLASTIC OR PVC	0	7	208	X	X		0.0	1067732.30	197370.82	0	410	0
566551		D22016008BBD	SALLY GREENLEAF	EXEMPT	16-Apr-98	305	83	305	8	PLASTIC OR PVC	0	0	0		X		0.0	1067054.51	198661.71	0	305	0
921165		D21016028CBB	SAM HUBBELL	EXEMPT	01-Jan-70	400	286	400	8		0	0	0		X		0.0	1071446.71	212497.78	0	0	0
630467		D22016007BBA	SANDRA S. POWELL TRUST	EXEMPT	01-Jan-20	96	36	96	8	OTHER - BLACK STEEL - IRON - SEAMLESS	10	10	0				0.0	1061884.56	199268.35	0	96	0
637268		D21016008DAB	SANTA RITA ABBEY, INC	EXEMPT	11-Apr-77	455	130	455	4		8	8	0				0.0	1069896.11	228115.68	0	0	0
202295		D22016006CCD	SASHA DON LEWTON	EXEMPT	03-Mar-04	320	31	320	7	PLASTIC OR PVC	15	15	273	X		X	0.0	1061875.78	199924.75	0	320	0
807723		D22016006CCD	SASHA DON LEWTON	EXEMPT		189	0	0	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1061875.78	199924.75	0	189	0
537481		D21016017BBD	SCOTT STAPLETON	EXEMPT	14-Dec-92	168	40	168	6	STEEL - PERFORATED OR SLOTTED CASING	14	14	130	X		X	0.0	1066677.31	224914.58	0	168	0
644388		D22016004ADO	SEIBOLD RANCH,	EXEMPT	01-Jan-07	120	45	0	0	NO CASING CODE LISTED	30	30	0				0.0	1075895.64	203022.57	0	120	0
645557		D22016007BBC	SEIBOLD,J	EXEMPT		40	18	40	36	NO CASING CODE LISTED	0	0	0				4045.0	1061288.90	198424.45	20	40	4027
644362		D22016007AAC	SHOEMAKER, MICHAEL,G	EXEMPT	01-Jan-56	80	60	80	6	STEEL - PERFORATED OR SLOTTED CASING	30	30	0				0.0	1065098.38	198638.77	0	80	0
809829		D22016007BCD	SHONEMAN REVOCABLE TRUST	EXEMPT		43	17	0	39		0	0	0				4075.0	1061909.43	197087.32	0	43	0
631632		D22016007BBO	SIMMONS,D	EXEMPT	01-Mar-60	80	30	75	6	STEEL - PERFORATED OR SLOTTED CASING	15	15	0				0.0	1061563.68	198937.42	0	80	0
524798		D22016009BCB	SKINNER, JOE,	EXEMPT	23-Jun-89	160	59	160	6	STEEL - PERFORATED OR SLOTTED CASING	15	15	0	X		X	0.0	1071696.15	198076.90	0	160	0
518546		D21016008BDC	SLOAN & REGNER	EXEMPT	23-Jul-87	180	50	180	6		10	10	132	X		X	0.0	1067280.01	228704.26	0	0	0
803927		D20016032DBA	SMITH, JEFFREY	EXEMPT	26-Sep-79	175	105	175	4		15	0	0				0.0	1069718.28	238430.83	0	0	0
602382		D21016009BCD	SMITH,S S	EXEMPT	15-May-78	255	150	255	6	PLASTIC OR PVC	15	15	0				0.0	1071871.63	228762.48	0	255	0
645922		D21016009BBB	SOEST,H G	EXEMPT	23-Aug-78	275	81	275	4	PLASTIC OR PVC	18	18	0				0.0	1071186.77	230617.86	0	275	0
645923		D21016009BCD	SOEST,H G	EXEMPT	24-Aug-78	255	60	250	4	PLASTIC OR PVC	10	10	0				0.0	1071871.63	228762.48	0	255	0
649831		D22016006CDO	STACK SR,W	EXEMPT	09-Oct-61	70	40	70	5	STEEL - PERFORATED OR SLOTTED CASING	20	20	0				0.0	1062832.77	200257.72	0	70	0
649081		D22016006CDA	STACK,W	EXEMPT	01-Jan-78	75	35	75	8	STEEL - PERFORATED OR SLOTTED CASING	35	35	0				0.0	1063147.11	200585.31	0	75	0
649082		D22016006CDA	STACK,W	EXEMPT	01-Aug-77	75	35	75	6	STEEL - PERFORATED OR SLOTTED CASING	35	35	0				0.0	1063147.11	200585.31	0	75	0
534151		D22016008CCA	STEEL, ANN,L	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0			Y	0.0	1067091.90	195409.15	0	0	0
645849		D22016007BAC	STEEL,A L	EXEMPT	01-Jan-19	60	25	0	6	STEEL - PERFORATED OR SLOTTED CASING	10	10	0				0.0	1062528.14	198613.97	0	60	0
644208		D21016005DBB	STEPHEN W & VICKI J RUTTER TRUST	EXEMPT	11-Apr-79	250	125	0	0		30	10	0				0.0	1068549.38	233195.41	0	0	0
509063		D22016008BAB	STEWART TITLE & TRUST	NON-EXEMPT	28-Oct-84	100	10	70	12	STEEL - PERFORATED OR SLOTTED CASING	0	0	0	C		X	0.0	1067709.74	199320.39	0	100	0
605338		D22016007BBB	STRADLING LAND COMPANY LLC	NON-EXEMPT	01-Jan-64	60	15	60	12	STEEL - PERFORATED OR SLOTTED CASING	400	400	0				0.0	1061242.89	199262.98	0	60	0
611162		D22016007AAO	STRADLING,F	NON-EXEMPT	01-Jan-47	120	35	120	16	STEEL - PERFORATED OR SLOTTED CASING	500	500	0				0.0	1065415.35	198966.38	0	120	0
611163		D22016007BBO	STRADLING,F	NON-EXEMPT	01-Jan-63	100	20	100	16	STEEL - PERFORATED OR SLOTTED CASING	300	300	0				0.0	1061563.68	198937.42	0	100	0
212454		D22016006BCB	STUART G & ANGELA B LUNA ASHBAUGH	EXEMPT	06-Jul-06	360	68	300	7	PLASTIC OR PVC	0	0	0		X		0.0	1061190.45	203175.16	0	360	0
208952		D21016031CDC	SUNHUI CHANG	EXEMPT		0	0	0	0		0	0	0				0.0	1062433.74	205145.17	0	0	0
629678		D22016007BCB	SUTTON & MIRANDA,	EXEMPT		225	100	225	4	PLASTIC OR PVC	15	0	0				0.0	1061241.79	197943.44	0	225	0
610195		D22016008BCB	SUZANNE M. & JOHN R. KILPATRICK	NON-EXEMPT	01-Mar-51	80	50	70	8	STEEL - PERFORATED OR SLOTTED CASING	0	0	0				0.0	1066396.97	198003.00	0	80	0
503027		D22016009BCA	SWYERS,H	EXEMPT	11-Jun-82	95	58	95	6	PLASTIC OR PVC	15	15	0	X		X	0.0	1072355.54	198082.42	0	95	0
649517		D22016007000	SWYERS,H	EXEMPT		80	30	80	6	STEEL - PERFORATED OR SLOTTED CASING	20	20	0				0.0	1063492.09	196977.55	0	80	0
649519		D22015002DBD	SWYERS,H	EXEMPT		0	0	0	0	NO CASING CODE LISTED	0	0	0				0.0	1053960.74	201125.50	0	0	0
649515		D22015002DBD	SWYERS,H A	EXEMPT		120	30	60	6	STEEL - PERFORATED OR SLOTTED CASING	3	3	0				0.0	1053960.74	201125.50	0	120	0
649516		D22016007000	SWYERS,H A	EXEMPT		60	30	60	6	STEEL - PERFORATED OR SLOTTED CASING	20	20	0				0.0	1063492.09	196977.55	0	60	0
649518		D22015010CCC	SWYERS,H W	EXEMPT	01-Jan-72	252	80	60	6	STEEL - PERFORATED OR SLOTTED CASING	35	35	0				4090.0	1045376.32	194280.10	0	252	0
649514		D22016007000	SWYERS,J	EXEMPT		80	30	80	6	STEEL - PERFORATED OR SLOTTED CASING	20	20	0				0.0	1063492.09	196977.55	0	80	0
646414		D22016007AAO	TATUM,S B	EXEMPT	01-Jan-48	103	45	100	6	NO CASING CODE LISTED	15	15	0				0.0	1065415.35	198966.38	0	103	0
221478		D22015012AAA	TERRI WOODHOUSE	EXEMPT	27-Apr-12	440	64	440	7	PLASTIC OR PVC	7	12	108	X		X	0.0	1060589.11	199254.22	0	440	0
548541		D22015014AAA	THE NATURE CONSERVANCY	EXEMPT	10-May-95	160	8	160	6	PLASTIC OR PVC	18	32	23	X		X	0.0	1055380.78	193899.72	0	160	0
565470		D22015014AAA	THE NATURE CONSERVANCY	ENV - MONITOR	25-May-98	114	8	110	4	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1055380.78	193899.72	0	114	0
565471		D22015014AAA	THE NATURE CONSERVANCY	ENV - MONITOR	27-May-98	152	8	150	4	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1055380.78	193899.72	0	152	0
565472		D22015014AAA	THE NATURE CONSERVANCY	ENV - MONITOR	28-May-98	155	7	150	4	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1055380.78	193899.72	0	155	0
565473		D22015014AAA	THE NATURE CONSERVANCY	ENV - MONITOR	30-May-98	175	40	171	4	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1055380.78	193899.72	0	175	0
565474		D22015014AAD	THE NATURE CONSERVANCY	ENV - MONITOR	01-Jun-98	160	23	160	4	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1055389.50	193249.88	0	160	0
565475		D22015014AAA	THE NATURE CONSERVANCY	ENV - PIEZOMETER	27-Jul-98	18	0	18	2	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1055380.78	193899.72	0	18	0
565476		D22015013BBD	THE NATURE CONSERVANCY	ENV - PIEZOMETER	14-Jul-98	18	0	18	2	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1056694.76	193267.36	0	18	0
565477		D22015014AAC	THE NATURE CONSERVANCY	ENV - PIEZOMETER	27-Jul-98	18	0	18	2	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1054725.19	193244.32	0	18	0
566065		D22015013BBA	THE NATURE CONSERVANCY	EXEMPT	23-Sep-98	61	9	61	5	STEEL - PERFORATED OR SLOTTED CASING	0	0	0			X	0.0	1056687.98	193920.50	0	61	0
626072		D22016007AAB	THE NATURE CONSERVANCY	NON-EXEMPT		102	14	102	16	STEEL - PERFORATED OR SLOTTED CASING	1100	1100	0			X	4078.0	1063877.52	199159.21	20	102	0
636244		D22015012																				

ADWR Number	Well Name	CADASTRAL	Owner Name	Well Type	Date Installed	Well Depth	Depth to Water	Depth Cased	Casing Diameter	Type of Casing	Pump Rate	Rate Tested	Drawdown	Has Completion Report	Has Drill Log	Well Cancelled	Well Elevation	Easting	Northing	Top of Screen	Bottom of Screen	Water Level Elevation
224174		D22016009CCA	TRES PIEDRAS, LLC	EXEMPT		100	60	100	0	STEEL - PERFORATED OR SLOTTED CASING	0	0	0		X		0.0	1072392.72	195483.05	0	100	0
525536		D22016006BDD	TURNER, ALICE,	EXEMPT	17-Aug-89	160	57	160	6	PLASTIC OR PVC	30	20	44	X	X		0.0	1063114.65	202541.36	0	160	0
502680		D22016006CCA	TURNER,A	EXEMPT	03-Jun-82	105	55	105	6	PLASTIC OR PVC	0	0	0	C	X		0.0	1061864.43	200574.57	0	105	0
630076		D22016006CCA	TURNER,A	EXEMPT	01-Jun-82	400	40	400	6	PLASTIC OR PVC	0	0	0				0.0	1061864.43	200574.57	0	400	0
647650		D22016006CCA	TURNER,A	EXEMPT	01-Jan-58	140	60	140	6	STEEL - PERFORATED OR SLOTTED CASING	12	12	0				0.0	1061864.43	200574.57	0	140	0
646906		D22016006CCA	TURNER,A	EXEMPT	01-Jan-45	100	40	100	6	STEEL - PERFORATED OR SLOTTED CASING	5	5	0				0.0	1061864.43	200574.57	0	100	0
503172		D22016007ADD	TURNER,N A	EXEMPT	24-Jun-82	105	28	105	6	PLASTIC OR PVC	0	0	0	C	X		0.0	1065754.24	197341.14	0	105	0
646564		D22016007AAO	TYLER BUILDING AND DESIGN, LLC	EXEMPT		0	0	0	6	NO CASING CODE LISTED	20	20	0				0.0	1065415.35	198966.38	0	0	0
633756		D22015012DAA	UBEL T. MURRIETTA	EXEMPT		40	25	40	36	POROUS CONCRETE	7	7	0				0.0	1060583.60	196618.41	0	40	0
570351		D21016026DBB	US FOREST SERVICE	EXEMPT	06-Nov-98	450	73	450	7	STEEL - PERFORATED OR SLOTTED CASING	0	0	0		X		0.0	1084551.77	212663.40	0	450	0
637457		D22016007000	VALENZULA,L R	EXEMPT	10-Sep-56	100	32	100	8	STEEL - PERFORATED OR SLOTTED CASING	12	12	0				0.0	1063492.09	196977.55	0	100	0
647097		D22016006BDD	VANTAGE FBO RAYMOND S. KLEIN, IRA	EXEMPT		100	28	100	6	STEEL - PERFORATED OR SLOTTED CASING	30	30	0				0.0	1063114.65	202541.36	0	100	0
214358		D22016008DBA	VIRGINIA & JAMES REED	EXEMPT		400	98	400	4	PLASTIC OR PVC	0	0	0		X		4136.0	1069621.32	196914.13	200	400	4038
649402		D22016007000	WATSON,J W	EXEMPT	01-Jan-46	40	15	40	6	OTHER - BLACK STEEL - IRON - SEAMLESS	12	12	0				0.0	1063492.09	196977.55	0	40	0
641498		D22016007BDD	WENIG, DON & DORIS,	EXEMPT	28-Feb-60	250	120	246	8	STEEL - PERFORATED OR SLOTTED CASING	20	0	0				0.0	1063177.81	197309.73	0	250	0
646783		D22016006CDD	WENIG,D R	EXEMPT		0	0	0	6	NO CASING CODE LISTED	0	0	0				0.0	1063159.47	199932.22	0	0	0
632845		D21016008BAC	WESSALE, F G	EXEMPT	12-Jul-76	280	40	280	7		10	10	0				0.0	1067264.62	229951.45	0	0	0
632844		D21016008CDB	WESSALE,F G	EXEMPT	11-Jul-76	300	44	300	6	PLASTIC OR PVC	13	13	0				0.0	1067302.24	226836.75	0	300	0
618224		D22016005ACB	WETTEN,W	NON-EXEMPT	23-Nov-59	500	46	493	8	STEEL - PERFORATED OR SLOTTED CASING	35	35	0				0.0	1069263.67	203094.65	0	500	0
225461		D21016030DAC	WILDLIFE CORRIDORS	EXEMPT		600	45	600	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0		X		0.0	1064879.68	211819.09	0	600	0
202943		D21016031ACC	WILLIAM & GINI HENGEN	EXEMPT	19-Aug-04	300	190	300	5	PLASTIC OR PVC	0	0	0		X		0.0	1063674.21	207804.46	0	300	0
534043		D22016007ABA	WILLIAM & JUDY PHILLIPS	EXEMPT	07-Apr-92	500	240	500	6	STEEL - PERFORATED OR SLOTTED CASING	10	14	252	X	X		0.0	1064450.26	199286.54	0	500	0
207461		D21016033ACC	WILLIAM & SUZETTE SHEWELOFF	EXEMPT		580	340	580	6	STEEL - PERFORATED OR SLOTTED CASING	0	0	0		X		0.0	1074161.32	207908.71	0	580	0
087832		D20016033CBD	WILLIAM F. AUTHER	EXEMPT	11-Apr-81	300	210	300	6		0	10	0				0.0	1072364.51	237812.98	0	0	0
502033		D22015012DAB	WILLIAM T. & ROSE E. PIPER	EXEMPT	19-Feb-82	80	20	80	6	STEEL - PERFORATED OR SLOTTED CASING	15	15	0	X	X		0.0	1059923.28	196606.32	0	80	0
644645		D22015012DAB	WILLIAM T. & ROSE E. PIPER	EXEMPT		90	18	90	6	STEEL - PERFORATED OR SLOTTED CASING	15	15	0				0.0	1059923.28	196606.32	0	90	0
809723		D22015012ADB	WILLIAM T. & ROSE E. PIPER	EXEMPT		0	0	0	8		0	0	0				4060.0	1059712.82	197776.73	0	100	0
596204		D22015024CBA	WILLIAM W & LAURA JEAN MILLER	EXEMPT	05-Feb-03	500	107	340	7	OTHER - BLACK STEEL - IRON - SEAMLESS	0	0	0		X		4130.0	1057156.98	186099.04	260	340	4023
544122		D22016007ADA	WILLIAM/BARBARA ROHREN/WALKER	EXEMPT	20-Jun-94	520	320	520	6	PLASTIC OR PVC	0	0	0	C	X		0.0	1065747.13	197994.28	0	520	0
633864		D21015013BDD	WILLIAMS JR, D R	EXEMPT	01-Jan-70	300	0	0	0		0	0	0				0.0	1057657.14	223558.79	0	0	0
633865		D21015013DAB	WILLIAMS JR, D R	EXEMPT	01-Jan-70	600	0	0	0		0	0	0				0.0	1059584.08	222911.90	0	0	0
633868		D21015013BDD	WILLIAMS JR, D R	EXEMPT	01-Jan-70	57	35	57	6		0	0	0				0.0	1057657.14	223558.79	0	0	0
633869		D21015012DAA	WILLIAMS JR, D R	EXEMPT	01-Jan-70	0	0	0	8		0	0	0				0.0	1060266.18	228231.83	0	0	0
502263		D21015012DAA	WILLIAMS JR, D R	EXEMPT	22-Mar-82	120	27	120	6		0	0	0	C	X		0.0	1060266.18	228231.83	0	0	0
611487		D22016006CDA	WILLIS,D W	EXEMPT	07-Jun-54	325	0	0	6	OTHER - BLACK STEEL - IRON - SEAMLESS	0	0	0				0.0	1063147.11	200585.31	0	325	0
637123		D22016007BAD	WITHERELL,E	EXEMPT	01-Jan-61	160	0	0	6	OTHER - BLACK STEEL - IRON - SEAMLESS	0	0	0				0.0	1063170.76	198622.63	0	160	0
809996		D21016017CAD	WOODLAND ESCROW INC.	EXEMPT	01-Jan-70	520	64	500	11		0	0	0				0.0	1068017.04	222309.73	0	0	0
646879		D22016007BCC	WRITHT,M F	EXEMPT	01-May-64	100	20	100	8	NO CASING CODE LISTED	15	15	0				0.0	1061241.38	197286.96	0	100	0
646639		D22016007BBC	WYKES,M R	EXEMPT	01-Jan-60	70	28	70	8	STEEL - PERFORATED OR SLOTTED CASING	20	20	0				0.0	1061242.18	198603.21	0	70	0
641361		D22016007AAD	YOUNG,R R	EXEMPT		0	0	0	0	OTHER - BLACK STEEL - IRON - SEAMLESS	0	0	0				4075.0	1065740.05	198644.14	50	100	0
640890		D22016007BCC	YOURGULES,J	EXEMPT		75	30	75	8	OTHER - BLACK STEEL - IRON - SEAMLESS	8	8	0				0.0	1061241.38	197286.96	0	75	0

NOTES:
 Depths listed are in feet below land surface.
 Elevations are feet above mean sea level (AMSL).
 Casing diameter is inches, pump rates are gpm.
 Easting and Northing are Arizona State Plane, Central Zone, NAD 83 feet.

APPENDIX D

CHANNEL GEOMETRY CROSS SECTIONS

