



**Staff Recommendation for Operation Permit Application:  
Archangel Catholic School of Austin**

Lane Cockrell, General Manager/Hydrogeologist  
April 4, 2025

**District Background**

The Southwestern Travis County Groundwater Conservation District (District) was created in 2017 by the Texas Legislature through the passage of HB 4345 and was confirmed by voters in 2019, granting it authority to manage and protect groundwater resources within its jurisdiction. The District adopted its initial rules on September 23, 2020. Under these rules, all wells located in the District's jurisdiction must be registered with the District. Based on registration information, certain well owners are required to obtain authorization from the District to produce groundwater (e.g., Operating Permits). The decision whether to grant or deny an Operating Permit required under District rules must be made by the District's Board of Directors (Board) and shall be based on considerations specified in Texas Water Code §36.113(d) and District Rules 3.4(C) and 3.4(D), as described below.

**Consideration of Operating Permit Applications by the District**

In consideration of each application, the District is guided by its rules and Chapter 36 of the Texas Water Code, and must consider the information provided with the application and whether:

- (1) the application conforms to the requirements prescribed by Chapter 36 and [District] Rules, and is accompanied by the prescribed fees, and any information included on the application or supplied therewith;*
- (2) the proposed use of water unreasonably affects existing groundwater and surface water resources or existing permit holders and such Unreasonable Impacts are unable to be avoided, minimized, or mitigated;*
- (3) the proposed use of water is dedicated to any beneficial use, and the proposed groundwater production amount is reasonable for the intended place of use and purpose of use stated in the application;*
- (4) the proposed use of water is consistent with the district's approved management plan and will allow the District to achieve its applicable Desired Future Condition;*
- (5) the proposed use of water from the well is not wholly or partly to provide water to a pond, lake, or reservoir to enhance the appearance of the landscape;*
- (6) the applicant has agreed to avoid waste and achieve water conservation;*
- (7) the applicant has agreed that reasonable diligence will be used to protect groundwater quality and that the applicant will follow well plugging guidelines at the time of well closure; and*
- (8) the applicant has provided the District with a time-stamped photograph(s) of the face plate of the meter showing its identification number and current reading. [District Rule 3.4(C)]*

Evaluating factors 1, 3, and 5-8 is generally straightforward. However, assessing factors 2 and 4 requires a more detailed scientific analysis. Determining whether the proposed use of water will cause unreasonable impacts that cannot be avoided, minimized, or mitigated (factor 2) and whether it will allow the District to achieve its applicable Desired Future Condition (factor 4) requires the use of the best available data and analytical tools to project future aquifer conditions and pumping effects. Given the inherent uncertainty in such projections, the District applies a consistent, objective evaluation based on the best available science. This approach ensures that groundwater resources in southwestern Travis County are managed sustainably while minimizing the unreasonable impacts of pumping to the maximum extent practicable.

The term “unreasonable impacts” is not defined in statute, leaving the District to interpret what constitutes unreasonable. District rules define the term “unreasonable impacts” as “a significant drawdown of the water table or reduction in artesian pressure as a result of pumping from a well or well field that contributes to, causes, or will cause significant adverse groundwater conditions in those wells in use on adjacent property and/or an applicable Desired Future Condition to not be achieved.”

#### *Special Permit Conditions*

In accordance with Texas Water Code §36.4051 and District Rule 3.4(D)(4), the Board of Directors may, at its discretion, include special conditions on permits to address unique aquifer conditions, property configurations, land use, or any other factor that may impact aquifer levels or other permitted wells.

#### *Consideration of Existing Use in Permitting Decisions*

The concept of “historic use” refers to groundwater withdrawals that occurred before a specific regulatory cutoff date, often used by groundwater conservation districts (GCDs) as a basis for permitting. While District rules do not explicitly recognize historic use as a criterion for permit issuance, the Board of Directors acknowledges that its regulations impact existing users and considers those impacts in permitting decisions.

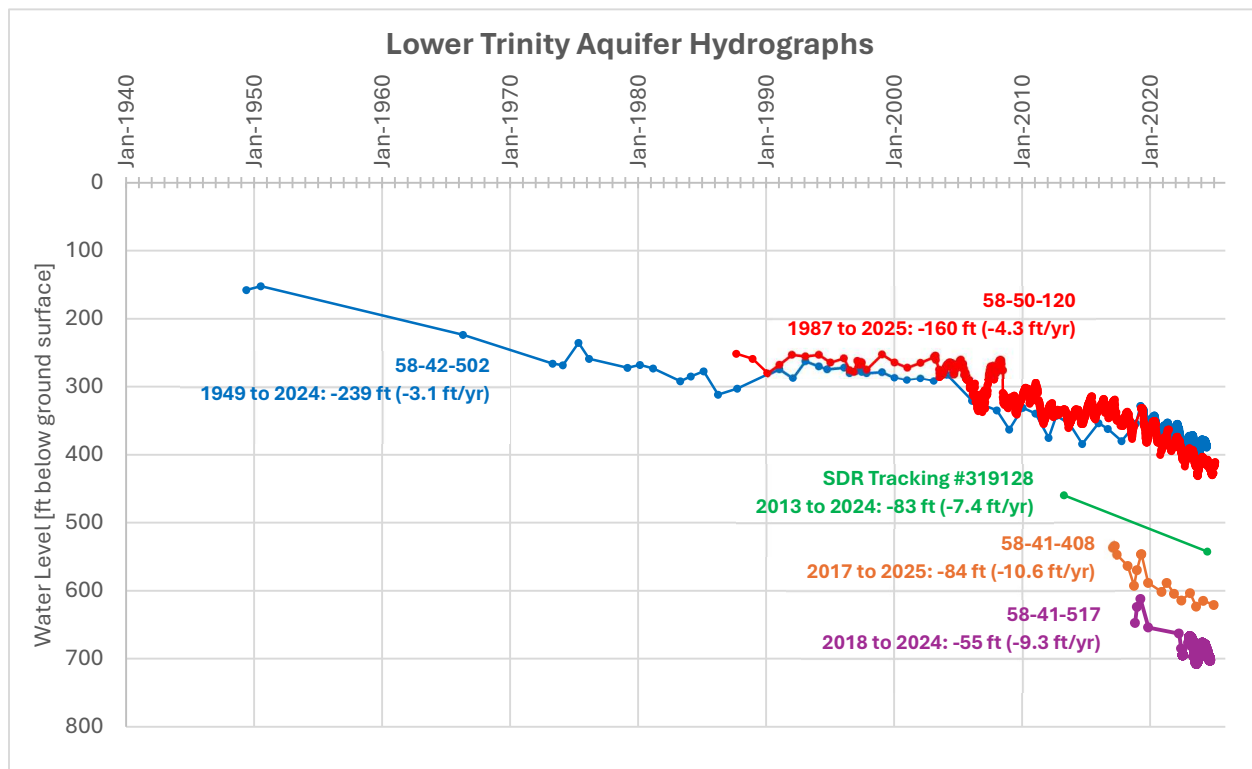
In evaluating this application, consideration was given to the Applicant’s prior groundwater use and the potential effects of regulatory requirements on continued access to groundwater. While historic use alone does not determine permit eligibility, the Board considers prior use within the broader context of the District’s management goals and statutory obligations. This approach ensures that permitting decisions account for long-standing groundwater use while maintaining the District’s responsibility to conserve and protect groundwater resources.

#### **Lower Trinity Aquifer Groundwater Levels**

The Applicant has requested authorization to produce groundwater from the Lower Trinity Aquifer, which has exhibited prolonged water-level declines within the District, particularly in the area east of the mapped Bee Creek Fault, where the Applicant’s well is located (Hunt et. al., 2020). Available water-level data from Lower Trinity wells in this area indicate average annual declines ranging from

approximately 3 to over 10 feet per year, with an average decline of approximately 4.5 feet per year (**Figure 1**). Observed seasonal fluctuations exceed 40 feet in some wells, with aquifer levels typically reaching annual lows in October or November and annual highs in spring or early summer (**Figure 1**). These data, along with findings from Hunt et al. (2020), demonstrate that the aquifer is being depleted, or in other words, is experiencing groundwater mining. Groundwater mining causes the water table to lower over time, which can lead to declining well yields, reduced water availability, and the risk of wells going dry.

Notably, the static water level in the observation well used during aquifer testing for this application (Querencia well) has declined significantly. When the well was drilled in May 2013, the water level was recorded at 460 feet below ground surface (ftBGS) (State of Texas Well Report for Tracking # 319128). By July 24, 2024, prior to aquifer testing for this permit application, the water level had dropped to 542.9 ftBGS, a decline of approximately 83 feet. This corresponds to an average annual decline of approximately 7.4 feet per year.



**Figure 1.** Graph showing water levels in feet below ground surface [ftBGS] over time for selected Lower Trinity Aquifer wells. Data sources: TWDB Groundwater Database, Submitted Driller Reports Database, Hydrogeologic Report prepared and submitted by Bullock, Bennett & Associates, LLC in support of the Archangel application, District monitoring program.

### Desired Future Conditions (DFCs) & Modeled Available Groundwater (MAG)

The Desired Future Condition (DFC) adopted by Groundwater Management Area 9 (GMA 9) for the undifferentiated Trinity Aquifer states that average drawdown should not exceed 30 feet from 2008 baseline levels by 2060. Based on this DFC, the Texas Water Development Board (TWDB) estimated the Modeled Available Groundwater (MAG) for the Trinity Aquifer within the District at 8,485 acre-feet

per year (Dowlearn, 2022). The MAG represents the maximum volume of groundwater that can theoretically be pumped while still achieving the DFC. The District is responsible for managing groundwater in its jurisdiction to achieve the DFC, which in principle requires limiting total groundwater production in the District to not exceed TWDB's MAG estimate.

However, total estimated groundwater production from the Trinity Aquifer in the District is currently less than 4,500 acre-feet per year (Hunt et. al., 2020). Despite this, available water-level data indicate that groundwater withdrawals in some areas already exceed sustainable rates, contributing to ongoing aquifer declines. In certain areas, including the vicinity of the Archangel well, drawdown has already surpassed the rate needed to achieve the DFC, which would require limiting declines to less than 0.6 feet per year (based on 30 feet of drawdown from 2008 to 2060). Given these conditions, the District's management approach is necessarily one of managed depletion—seeking to slow or reverse the rate of decline and extend groundwater availability as much as practically possible while balancing current and future water needs.

### **Permit Application Summary**

#### *Nature & Purpose of Use*

Archangel Catholic School of Austin (Applicant) requests authorization to withdraw up to 9.85 million gallons (30.23 acre-feet) per year from the Lower Trinity Aquifer for the purpose of non-agricultural irrigation. The well is located at 3000 Barton Creek Blvd., Austin, TX 78735 (Longitude W 97.874045, Latitude N 30.290714), and water produced from the well will be used to irrigate school athletic fields and landscaped grounds at the same address.

The anticipated rate of withdrawal is stated as 30 gallons per minute. Groundwater will be pumped into 3 existing 9,000-gallon storage tanks which serve the existing irrigation system. Water produced from the well will not be transported or used to maintain ponds, pools, water features, or other surface impoundments. Archangel is currently purchasing irrigation water from the Travis County Municipal Utility District No. 3 to meet irrigation needs.

The proposed irrigation well was completed in June 2024 to replace a previous irrigation well that was decommissioned and plugged in May 2024 due to casing deterioration and an obstruction. The exact drilling date of the original well could not be confirmed by staff, but the application states the well was drilled "in the 1990s as a source of water for use on the campus' sports fields and landscaped grounds." The State of Texas Well Report for the replacement well ([Tracking #675038](#)) and Plugging Report for the original well ([Tracking #237441](#)) are provided as **Attachments A and B**, respectively.

#### *Demand Estimate*

An Irrigation Demand Worksheet (**Attachment C**) and a map of irrigated areas (**Attachment D**) were submitted to support the Well Drilling Authorization Application for the proposed replacement irrigation well. The worksheet and map indicate that a total of 12.57 acres on the 81.35-acre Archangel property will be irrigated using groundwater. A breakdown of irrigated areas is provided in **Table 1**.

**Table 1. Summary of Irrigated Areas**

<b>Description</b>	<b>Area [acres]</b>
Turfgrass – Sports Fields (Overseeded)	5.79
Turfgrass – Non-Playing Areas	2.30
Landscape Areas	4.48
<b>TOTAL Irrigated Area</b>	<b>12.57</b>

The Application states that the requested volume is “based on projections by Archangel staff who has knowledge of historic use and landscaping professionals”. A summary of the Applicant’s estimated monthly irrigated demand is provided in **Table 2**. Additional information regarding projected demand and pumping rates is provided in Section B (2.0 Description of Groundwater Demand) of the hydrogeologic report submitted with the Application.

**Table 2. Estimated Monthly Irrigation Demand**

<b>Month</b>	<b>Percent of Annual Volume</b>	<b>Monthly Volume [gal]</b>
January	7.00 %	689,500
February	7.10 %	699,350
March	7.10 %	699,350
April	9.12 %	898,320
May	9.13 %	899,305
June	9.44 %	929,840
July	9.44 %	929,840
August	9.44 %	929,840
September	9.13 %	899,305
October	9.00 %	886,500
November	7.10 %	699,350
December	7.00 %	689,500
<b>Total</b>	<b>100.00 %</b>	<b>9,850,000</b>

Note the total annual volume requested is equivalent to 26,986.3 gallons per day, or roughly the total volume of existing storage tanks (27,000 gallons). At the anticipated pumping rate of 30 gallons per minute, the well would need to be pumped for an average of 15 hours per day to refill the storage tanks if emptied completely each day, as the Applicant’s volume estimates suggest.

#### *Conservation Practices*

The Application states that Archangel has installed artificial turf at its football field and on the infield of its baseball field to reduce irrigation needs. The Application also references “plans to upgrade portions of the irrigation system to increase overall efficiency,” though no specific details are provided. Applicant will also make efforts “to utilize drought resistant and native plants when updating ... landscaped areas on campus,” though additional information was not provided.

#### *Aquifer Test & Hydrogeological Report*

An aquifer test was conducted and a hydrogeologic report was prepared and submitted by Bullock, Bennett & Associates, LLC in support of the Archangel application. The test was performed according to District guidelines, and the hydrogeologic report generally satisfies the requirements specified by

District rules and its *Guidelines for Aquifer Testing and Hydrogeologic Reports* by providing data necessary to evaluate aquifer properties, potential impacts to aquifer levels and wells, and changes in water quality.

Data collected was generally of good quality and facilitates relatively straightforward estimates of aquifer parameters, which can subsequently be used to estimate future impacts of proposed pumping. While staff do not agree with all aspects of the report, the analyses, interpretations, and assumptions presented were generally found to be accurate and consistent with accepted practices.

One area of technical disagreement concerns the report's statement that no response was observed in the observation well during aquifer testing. However, the report also notes – and testing data confirm – that static water levels were gradually rising before pumping began and then declined after pumping started. District staff interpret this as a potential response to pumping, which could have been used to estimate aquifer Storativity. Despite this difference in interpretation, the Storativity value used in the report is within the accepted published range for the Lower Trinity Aquifer and is considered reasonable for evaluating pumping effects.

Analytical modeling results presented in the report suggest that Archangel's proposed pumping would cause approximately 78 feet of drawdown at the Archangel well over a 7-year period, with modeled drawdown ranging from 10 to 25 feet at neighboring wells within a 2-mile radius. Pumping effects after 7 years are expected to lower static water levels below the top of the Lower Trinity Aquifer at the Archangel well and Querencia well, located approximately 1,400 feet away. When water levels reach the top of the aquifer, artesian pressure is lost, leading to a significant reduction in well yield (pumping rate).

Modeled drawdown is presented in the following report figures, which are included as **Attachment E** for reference:

- **Figure 8. Study Area Hydrogeologic Cross Section** – depicts site geology at the Archangel and Querencia wells, with static (pre-test) water levels and modeled drawdown due to Archangel's proposed pumping after 7 years. Note modeled drawdown after 7 years suggests water levels will fall below the top of the Lower Trinity Aquifer at the Archangel well and at the Querencia well, located approximately 1,400 feet away.
- **Figure 13. 1-Week Simulated Distance Drawdown Map** – contour map showing estimated drawdown within approximately 2 miles of the Archangel well after 1 week of pumping.
- **Figure 14. 1-Year Simulated Distance Drawdown Map** – contour map showing estimated drawdown within approximately 2 miles of the Archangel well after 1 year of pumping.
- **Figure 15. 7-Year Simulated Distance Drawdown Map** – contour map showing estimated drawdown within approximately 2 miles of the Archangel well after 7 years of pumping.

Modeled drawdown in the report was calculated in FWD:SOLV v1.0 (Hydrosolv, Inc) using aquifer parameters estimated in AQTESOLV from aquifer testing data. Calculations assume continuous

pumping at a constant rate equivalent to the requested annual volume of 9.85 million gallons (18.74 gallons per minute).

#### **Application Review & Evaluation for Unreasonable Impacts**

- 1. The application conforms to the requirements prescribed by Chapter 36 and [District] Rules, and is accompanied by the prescribed fees, and any information included on the application or supplied therewith [District Rule 3.4(C)(1)].**

Staff confirm that the Applicant filed a signed application using the District's Production Authorization Application form and provided the requisite application fee of \$750.

- 2. The proposed use of water unreasonably affects existing groundwater and surface water resources or existing permit holders and such Unreasonable Impacts are unable to be avoided, minimized, or mitigated [District Rule 3.4(C)(2)].**

Analytical modeling presented in the Applicant's hydrogeological report and evaluated by District staff suggests that the proposed pumping would result in over 70 feet of drawdown at the Archangel well over a 7-year period, with drawdown ranging from 10 to 25 feet at neighboring wells within a 2-mile radius (Hydro Report Fig. 15). Pumping effects from the Archangel well after 7 years are expected to lower static water levels below the top of the Lower Trinity Aquifer at the Archangel well and at 1 or more neighboring wells. This transition from confined to unconfined conditions may cause reduced well yields due to the loss of artesian pressure. Based on these findings, staff conclude that the Applicant's proposed groundwater production, under modeled conditions, will cause unreasonable impacts. Specifically, water-level declines that reach the top of the aquifer and reduce well yields due to the loss of artesian pressure are considered significant and unreasonable impacts to be avoided. Given this determination, staff have developed recommendations to minimize unreasonable impacts, as detailed below.

- 3. The proposed use of water is dedicated to any beneficial use, and the proposed groundwater production amount is reasonable for the intended place of use and purpose of use stated in the application [District Rule 3.4(C)(3)].**

Under Texas Water Code §36.001(9), irrigation is considered a beneficial use. Staff conclude that the requested volume is consistent with typical irrigation demand for the specified use and total land area to be irrigated, based on information provided in the application and methodology developed by the Barton Springs/Edwards Aquifer Conservation District for estimating irrigation demand (Pittenger, 2014). A summary of calculations is provided in **Attachment F**.

- 4. The proposed use of water is consistent with the district's approved management plan and will allow the District to achieve its applicable Desired Future Condition [District Rule 3.4(C)(4)].**

Evaluation of the Applicant's proposed production, along with available water-level data, indicates that while the proposed use may be consistent with the District's approved management plan, the rate of groundwater decline near the Archangel well, to which

Archangel's past and proposed production contribute, will likely hinder the District's ability to achieve its DFC.

**5. The proposed use of water from the well is not wholly or partly to provide water to a pond, lake, or reservoir to enhance the appearance of the landscape [District Rule 3.4(C)(5)].**

The application states that water produced from the well will not be used to maintain ponds, pools, water features, or other surface impoundments, and surface impoundments will not be utilized for the storage of produced water prior to its use for landscape irrigation.

**6. The applicant has agreed to avoid waste and achieve water conservation [District Rule 3.4(C)(6)].**

Staff confirm that the Applicant's application includes a User Conservation Plan, in which the Applicant agrees to implement the specified conservation measures for both general groundwater use and for the intended use (non-agricultural irrigation). Additionally, the application states that the Applicant plans to upgrade portions of its existing irrigation system over the next 5 to 10 years to improve efficiency and reduce groundwater use. The application also states that the Applicant will consider "re-landscaping certain areas with more drought tolerant plants," though no specific details are provided.

**7. The applicant has agreed that reasonable diligence will be used to protect groundwater quality and that the applicant will follow well plugging guidelines at the time of well closure [District Rule 3.4(C)(7)].**

Staff confirm that the Applicant's application includes a signed sworn statement agreeing to comply with District rules, which provide for the protection of groundwater quality and establish guidelines for plugging wells.

**8. The applicant has provided the District with a time-stamped photograph(s) of the face plate of the meter showing its identification number and current reading [District Rule 3.4(C)(8)].**

Staff confirm that the Applicant must provide the requisite time-stamped photograph prior to producing any groundwater.

## **Staff Recommendations**

### *Acknowledgement of Revisions*

*Revisions have been made to the April 1, 2025, staff recommendations for this permit application. Changes to the original version are shown below as tracked edits.*

The District has reviewed the application and evaluated projected impacts of the proposed production using the best available data, science, analytical tools, and aquifer testing data provided by the Applicant. The District recognizes the inherent uncertainty in evaluating future groundwater conditions and has given due consideration to the permittee's prior groundwater use.



Based on this evaluation, staff has determined that the proposed groundwater production, under modeled conditions, is expected to contribute to significant localized drawdown and an overall reduction in artesian pressure, causing unreasonable impacts to the Lower Trinity Aquifer and existing wells in the area. The staff recommendation below reflects a reasonable balance between resource protection and the Applicant's water-use needs while maximizing long-term sustainability of groundwater resources within the District.

Given these considerations and findings, staff recommends approval of the Applicant's request for authorization to withdraw up to 9,850,000 gallons annually with the following special conditions:

- 1. Monitoring and Data Collection** – To assess actual impacts of pumping, the permittee must agree to ongoing data collection and monitoring. The permitted well must be equipped with a 1-inch drop pipe to facilitate water-level measurements and accommodate a pressure transducer/data logger. The District will install and maintain monitoring equipment at its own expense. The permittee must provide District staff with access to install monitoring equipment and collect groundwater data monthly or as requested by the District's General Manager.

If the District determines that the permitted well or any nearby existing well is inadequate for reliably monitoring groundwater levels—due to interference from pumping, well design, or other factors—it may require the installation of a dedicated monitoring well. This well will serve as a benchmark for tracking aquifer conditions and implementing the compliance-indexed response measures specified below. The permittee is responsible for all costs associated with the well's installation and must cooperate with the District to identify a suitable location and ensure timely installation in accordance with District specifications.

- 2. Compliance-Indexed Response Measures** – Water-level data collected from the permittee's well, or from an alternative monitoring well designated by the District, will be used to track aquifer conditions and serve as a benchmark for implementing responsive measures. The following compliance levels, based on observed water-level trends and modeled impacts, will apply:

Compliance Level	Trigger Water Level (feet <del>below ground</del> <del>surface</del> above mean sea level)	Response Measure	Comments
Level 1 – Baseline Monitoring	555 ftBGS295 ftAMSL (40 feet above top of aquifer*)	No curtailment; continue monitoring and data collection	Represents approximate current conditions
Level 2 – Moderate Decline	570 ftBGS280 ftAMSL (25 feet above top of aquifer*)	10% reduction in permitted pumping volume	Accounts for seasonal and annual fluctuations while initiating reductions to prevent/minimize unconfined conditions

Level 3 – Significant Decline	585 ftBGS265 ftAMSL (10 feet above top of aquifer*)	25% reduction in permitted pumping volume	
Level 4 – Critical Threshold	595 ftBGS255 ftAMSL (at top of aquifer*)	50% reduction in permitted pumping volume	Aquifer transitions to unconfined conditions at this level, risking loss of artesian pressure, reduced well yields, and dewatering

\*Top of Lower Trinity Aquifer determined by District staff from geophysical log

The District will determine the applicable compliance level based on the average maximum daily water level measured over the previous 10-day period. If the 10-day average maximum daily water level is at or below the specified trigger level for a compliance level, that level shall apply. Pumping curtailments must be implemented within 30 days of reaching a compliance level.

If a compliance-level-based curtailment coincides with a District-declared drought stage that requires mandatory pumping reductions, the greater reduction shall apply. This ensures that groundwater withdrawals align with both aquifer conditions and broader drought management efforts.

The District may modify response measures based on emerging data trends and regional aquifer conditions. If a new monitoring well is installed in accordance with Condition 1 above, future compliance determinations may be based on data from that well, as deemed appropriate by the District.

- 3. Rainwater Harvesting System Installation** – Modeling results indicate that the permitted well may not sustain its current production rate beyond 7 years, as the aquifer is expected to transition from confined to unconfined conditions. Additionally, the well will be subject to mandatory drought curtailments under District rules. To help offset potential water shortages resulting from reduced production rates and drought curtailments, this condition phases in alternative water supplies to mitigate groundwater declines while meeting the Applicant's irrigation needs.

The permittee must install and have operational a rainwater harvesting system with a minimum storage capacity of 80,000 gallons (approximately 3 times the existing groundwater storage capacity to ensure meaningful supplementation) within 2 years of permit issuance. Captured rainwater is not subject to District drought curtailments and may be used to supplement groundwater for irrigation under both drought and non-drought conditions. Additionally, other alternative water sources, such as air conditioning condensate, could be evaluated.

## References

- Dowlearn, G., 2022, GAM Run 21-014 MAG: Modeled Available Groundwater for the Aquifers in Groundwater Management Area 9: Texas Water Development Board, December 8, 2022, 24 p. [https://www.twdb.texas.gov/groundwater/docs/GAMruns/GR21-014\\_MAG.pdf](https://www.twdb.texas.gov/groundwater/docs/GAMruns/GR21-014_MAG.pdf)
- Hunt, B.B., Cockrell, L.P., Gary, R.H., Vay, J.M., Kennedy, V., Smith, B.A., and Camp, J.P., 2020, Hydrogeologic Atlas of Southwest Travis County, Central Texas: Barton Springs/Edwards Aquifer Conservation District Report of Investigations 2020-0429, April 2020, 80 p. + digital datasets. <http://dx.doi.org/10.26153/tsw/8570>
- Pittenger, D., 2014, Methodology for Estimating Landscape Irrigation Demand – Review and Recommendations: Prepared for the Barton Springs/Edwards Aquifer Conservation District, April 2014, 29 p.

**Attachment A:**  
**State of Texas Well Report for Tracking #675038**  
**Archangel Replacement Irrigation Well**

## STATE OF TEXAS WELL REPORT for Tracking #675038

Owner:	Archangel Catholic School of Austin	Owner Well #:	58427AC2
Address:	3000 Barton Creek Blvd. Austin, TX 78735	Grid #:	58-42-7
Well Location:	3000 Barton Creek Blvd. Austin, TX 78735	Latitude:	30° 17' 26" N
Well County:	Travis	Longitude:	097° 52' 26" W
		Elevation:	849 ft. above sea level
Type of Work:	New Well	Proposed Use:	Irrigation

Drilling Start Date: **6/24/2024** Drilling End Date: **6/28/2024**

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	14.75	0	80
	8.75	80	840

Drilling Method: **Air Rotary**

Borehole Completion: **Straight Wall**

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	560	Portland 185 Bags/Sacks

Seal Method: **Positive Displacement**

Distance to Property Line (ft.): **50+**

Sealed By: **Driller**

Distance to Septic Field or other  
concentrated contamination (ft.): **N/A**

Distance to Septic Tank (ft.): **N/A**

Method of Verification: **Owner**

Surface Completion: **Surface Slab Installed**

**Surface Completion by Driller**

Water Level: **508 ft. below land surface on 2024-06-28** Measurement Method: **Electric Line**

Packers: **Rubber/Burlap/PVC at 560 ft.**  
**Rubber/Burlap/PVC at 565 ft.**  
**Rubber/Burlap/PVC at 570 ft.**  
**Rubber/Burlap/PVC at 600 ft.**  
**Rubber/Burlap/PVC at 620 ft.**  
**Rubber/Burlap/PVC at 660 ft.**

Type of Pump: **Submersible**

Well Tests: **Test Pump** Yield: **30 GPM with 99 ft. drawdown after 46 hours**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
<b>740 - 840</b>	<b>Lower Trinity</b>

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which  
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Centex Pump & Supply, Inc.**

**2520 Hwy. 290 West  
Dripping Springs, TX 78620**

Driller Name: **Martin Lingle**

License Number: **54813**

Comments: **No Data**

Lithology:  
DESCRIPTION & COLOR OF FORMATION MATERIAL

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
<b>0</b>	<b>2</b>	<b>Top Soil</b>
<b>2</b>	<b>80</b>	<b>Tan Gray</b>
<b>80</b>	<b>200</b>	<b>Brown Gray</b>
<b>200</b>	<b>220</b>	<b>Gray</b>
<b>220</b>	<b>260</b>	<b>Gray w/ Strip Clay</b>
<b>260</b>	<b>320</b>	<b>Gray</b>
<b>320</b>	<b>550</b>	<b>Gray Tan</b>
<b>550</b>	<b>600</b>	<b>Gray Clay</b>
<b>600</b>	<b>660</b>	<b>Gray Tan</b>
<b>660</b>	<b>680</b>	<b>Tan Red Sand Stone</b>
<b>680</b>	<b>740</b>	<b>Conglomerate</b>
<b>740</b>	<b>800</b>	<b>Red Sand Stone</b>
<b>800</b>	<b>840</b>	<b>Gravel w/ Brown Clay</b>

Casing:  
BLANK PIPE & WELL SCREEN DATA

<i>Dia (in.)</i>	<i>Type</i>	<i>Material</i>	<i>Sch./Gage</i>	<i>Top (ft.)</i>	<i>Bottom (ft.)</i>
<b>10</b>	<b>Blank</b>	<b>New Plastic (PVC)</b>	<b>SDR21</b>	<b>0</b>	<b>80</b>
<b>5</b>	<b>Blank</b>	<b>New Plastic (PVC)</b>	<b>SDR17</b>	<b>2</b>	<b>740</b>
<b>5</b>	<b>Perforated or Slotted</b>	<b>New Plastic (PVC)</b>	<b>SDR17</b>	<b>740</b>	<b>840</b>

---

**IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY**

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

**Texas Department of Licensing and Regulation**  
**P.O. Box 12157**  
**Austin, TX 78711**  
**(512) 334-5540**

**Attachment B:**  
**State of Texas Plugging Report for Tracking #237441**  
**Archangel Original Irrigation Well**



## STATE OF TEXAS PLUGGING REPORT for Tracking #237441

Owner:	Archangel Catholic School of Austin	Owner Well #:	58427AC1
Address:	3000 Barton Creek Blvd. Austin, TX 78735	Grid #:	58-42-7
Well Location:	3000 Barton Creek Blvd. Austin, TX 78735	Latitude:	30° 17' 26.7" N
Well County:	Travis	Longitude:	097° 52' 26.72" W
		Elevation:	No Data

---

Well Type: **Withdrawal of Water**

### Drilling Information

Company:	No Data	Date Drilled:	No Data
Driller:	No Data	License Number:	No Data

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	6.63	0	800

### Plugging Information

Date Plugged: **5/8/2024**      Plugger: **Martin Lingle**

Plug Method: **Tremmie pipe cement from bottom to top**

Variance Number: **038-24**

#### Casing Left in Well:

Dia (in.)	Top (ft.)	Bottom (ft.)
6.625	-2	800

#### Plug(s) Placed in Well:

Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
0	524	Cement 180 Bags/Sacks
524	526	Hole Plug 3 Bags/Sacks
526	800	3/8 Chlorine Pea Gravel 4.5 Yards

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Centex Pump & Supply, Inc.**  
**2520 Hwy. 290 West**  
**Dripping Springs, TX 78620**

Driller Name: **Martin Lingle**      License Number: **54813**

Comments: **Chlorinating Tablets**



**Attachment C:**  
**Applicant Irrigation Demand Worksheet**



## Irrigation Demand Worksheet: Sport Fields Use Irrigation

This worksheet should be completed to provide the necessary information required in a permit application for non-exempt irrigation use. A key component of the permit application is the written descriptive statement and irrigation demand estimates. It is the District's policy to limit permitted groundwater production to an annual volume commensurate with reasonable non-speculative demand for the proposed use(s). As such, the permitted volume must be quantitatively consistent with the specific purpose of the proposed use(s), allowing for temporal variations and buffers but excluding speculative demand relative to the term of the permit. The District utilizes an irrigation demand calculator and methodology developed by the Barton Springs/Edwards Aquifer Conservation District to determine reasonable irrigation demand estimates. To develop an estimate of the irrigation demand volume for your permit application, you must submit the information below.

**You must submit a plat map, land survey, landscape design plan, or property diagram\* that depicts and labels ALL of the following:**

- Total acreage/square footage of entire property plot
- Dimensions of Impervious areas (paved areas, parking lots, building structures)
- Dimensions of Irrigated areas (turf areas & landscape areas)
- Water features/Ponds/Pool

*\* Property diagrams can be hand drawn or computer drawn by either the applicant or a landscape consultant.*

**You must complete of the following informational components:**

**Total Property Plot Area:**

\_\_\_\_\_ sq ft or 81.35 acres of entire property plot

**Impervious Areas:**

\_\_\_\_\_ sq ft or 21.7 acres of estimated total impervious area (paved areas, parking lots, building structures)

**Irrigated Turf grass (Sports Fields)**

5.79 sq ft Total area of Sports Fields (include practice fields). Is this area over seeded? **Yes**

If so, how much of the area is over seeded? 5.79 sq ft (as needed)

List the months in which over seeding takes place: November

**Irrigated Turf grass (Non Playing Areas)**

2.3 acres Total area of turf grass areas (non-playing areas)

**Irrigated Landscape Areas**

4.48 acres Total cumulative area of all landscape planting beds (to include annuals, groundcovers, perennials, shrubs, native plantings, xeriscaping)

**Water Features/Ponds/Pool:**

n/a sq ft & \_\_\_\_\_ gallons for fountains, ponds, water features

**Significant Isolated Trees:**

- If you have trees that stand inside an irrigated turf grass area, or inside a landscape bed area then the District will not consider additional allocations for those trees.
- If you have significant isolated trees that stand outside of any turf grass area, or outside of a landscape bed then the District may consider allocations for those significant trees. District staff can provide the type of information that must be submitted to evaluate the irrigation demand for those significant trees.




**Attachment D:**  
**Applicant Map of Irrigated Areas**



Plot Date: 12/5/2023 - 12:17 PM - Plotted by C.J. Bennett  
Drawing Path: C:\Users\BryanBoyd\BBA Engineering\Dropbox\CAD\GIS\GW Availability Projects\SMichaelsIrrigationWell\St Michaels Irrigation Well\St Michaels Irrigated Areas Map.aprx



**Explanation**

-  Approximate Irrigated Areas (12.57 ac.)
-  Approximate Impervious Cover Areas (21.69 ac.)
-  Property Boundary (Source: Travis CAD)



0 400 800 Feet

**ARCHANGEL CATHOLIC SCHOOL**

Figure 1

**IRRIGATED AREAS**

PROJECT: 23647	BY: BWB	REVISIONS
DATE: NOV. 2023	CHECKED: CEB	

**Bullock, Bennett & Associates, LLC**  
Engineering and Geoscience  
Texas Registrations: Engineering F-8542, Geoscience 50127



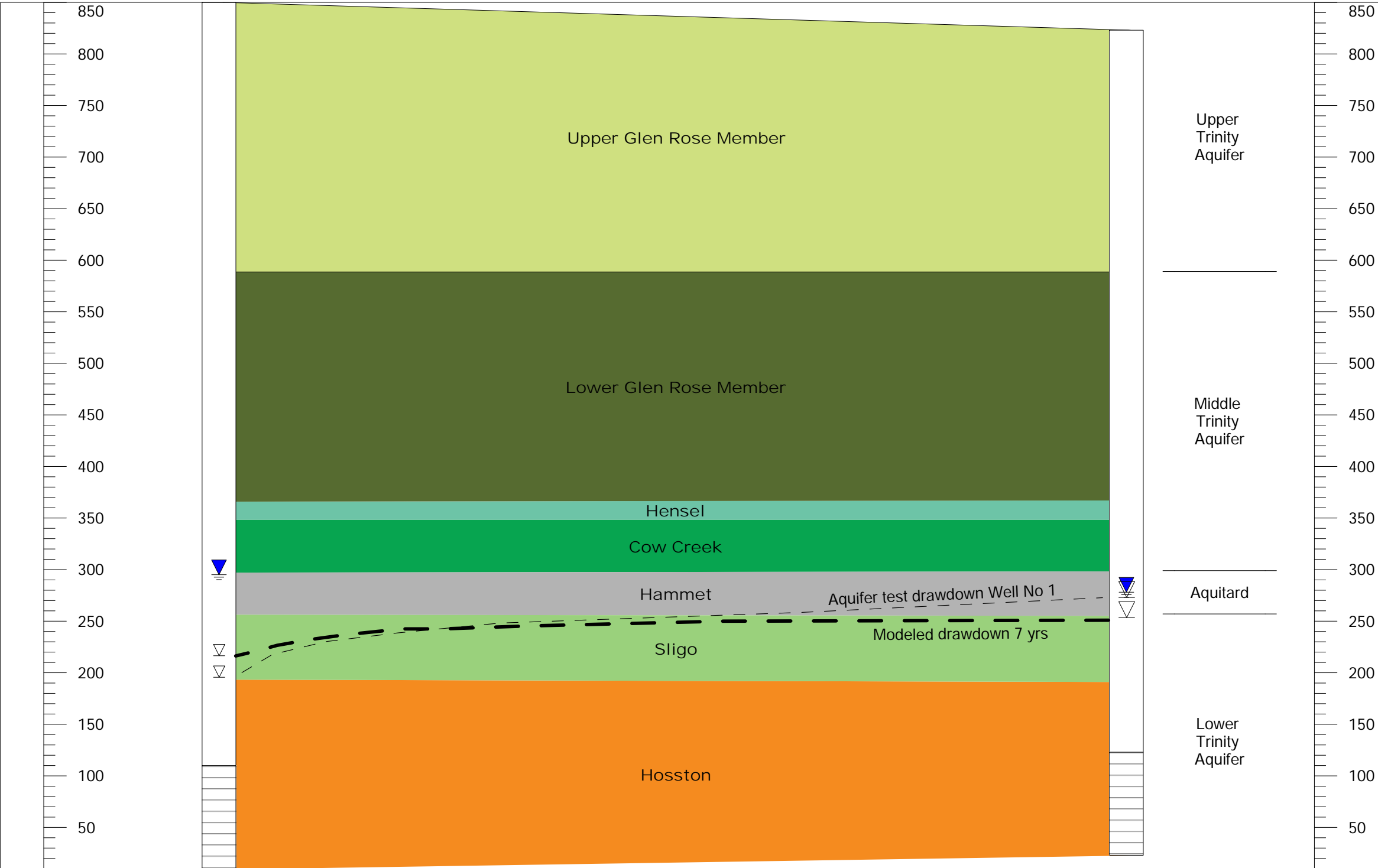
**Attachment E:**  
**Modeled Drawdown Figures from Hydrogeologic Report Prepared and Submitted by Bullock,**  
**Bennett & Associates, LLC in Support of the Archangel Application**

WEST  
A  
ARCHANGEL WELL

EAST  
A'  
QUERENCIA WELL

Elevation  
(FT MSL)

Elevation  
(FT MSL)



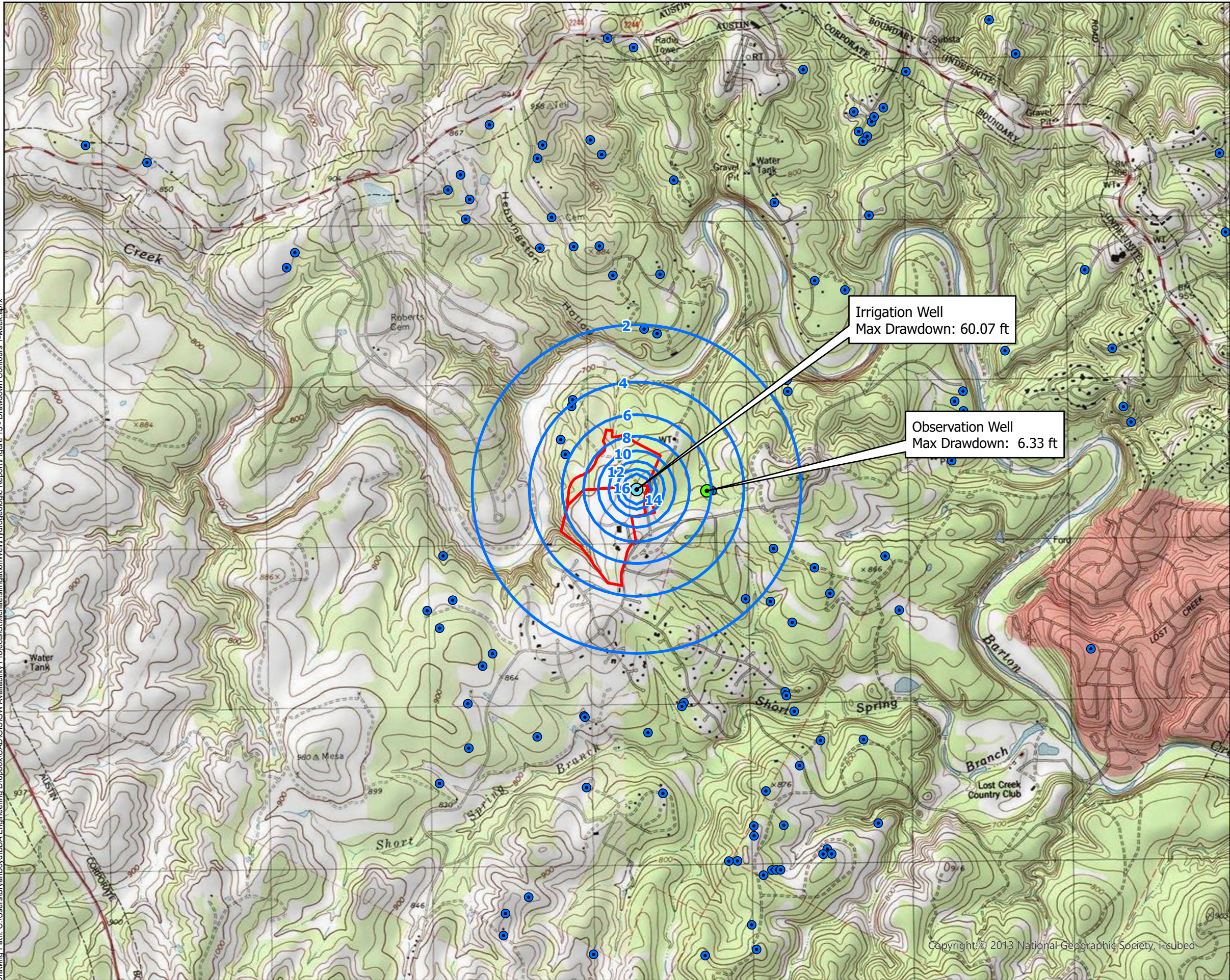
CRAIG E. BENNETT  
GEOLOGY  
LIC #1205  
PROFESSIONAL GEOSCIENTIST  
10/22/2024

Notes:  
Static water levels measured on July 24, 2024 (represented by blue WL marker).  
Potentiometric surfaces are inferred based upon measured water levels in the wells. Values are shown as elevations.  
Modeled water level (dashed line) is based upon static levels and results from analytical models with parameters derived from the aquifer testing in this report.

ARCHANGEL CATHOLIC SCHOOL		
Figure 8		
STUDY AREA HYDROGEOLOGIC CROSS SECTION		
PROJECT: 23647	BY: BWB	REVISIONS
DATE: SEPT. 2024	CHECKED: CEB	
Bullock, Bennett & Associates, LLC Engineering and Geoscience Texas Registrations: Engineering F-8542, Geoscience 50127		

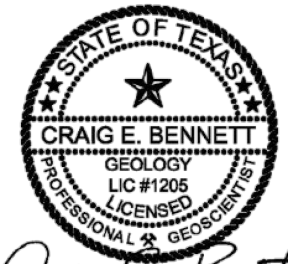


Plot Date: 10/11/2024 - 3:07 PM - Plotted by C.J. Bennett  
Drawing Path: C:\Users\BryanBoyd\BBA Engineering Dropbox\CAD\GIS\GW Availability Projects\SMichael's Irrigation Well\Hydrogeologic Report\Figure 13 - Drawdown Contours 1-week.aprx

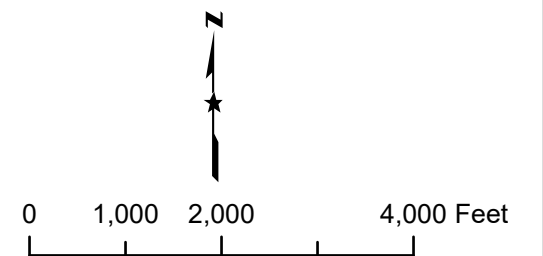


### Explanation

- Archangel's Irrigation Well  
(Constructed in 2024)
- Querencia Existing Irrigation Well  
(Observation Well)
- Likely Lower Trinity Well - Total Depth  
>700 ft  
(Source: Submitted Driller's Report  
Database)
- Property Boundary (Source: Travis CAD)
- 10 - 1-week Simulated Drawdown  
Contour in Feet (FWD:SOLV)



Craig E. Bennett  
10/22/2024



ARCHANGEL CATHOLIC SCHOOL

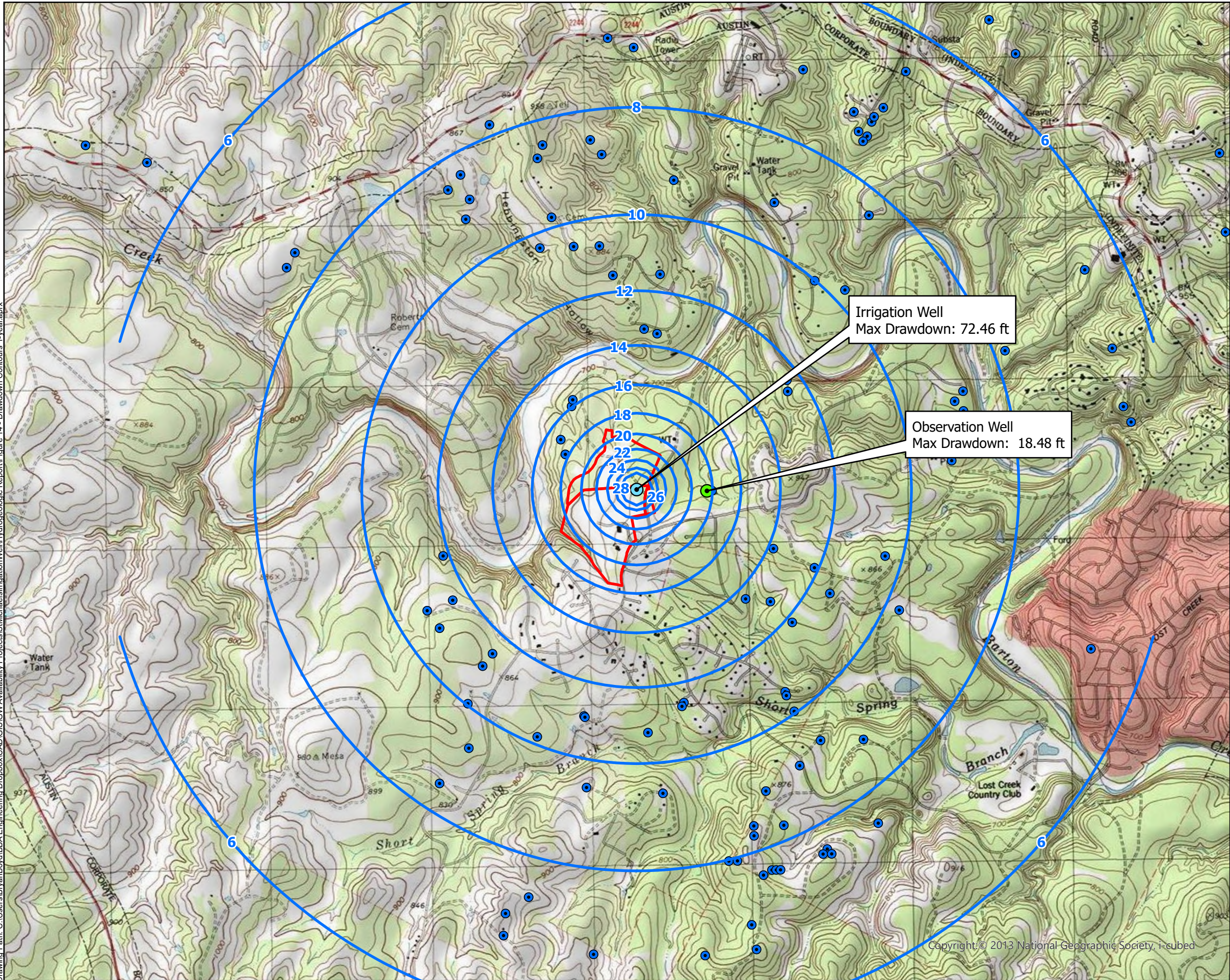
Figure 13

### 1-WEEK SIMULATED DISTANCE DRAWDOWN MAP

PROJECT: 23647	BY: BWB	REVISIONS
DATE: AUG. 2024	CHECKED: CEB	
<b>Bullock, Bennett &amp; Associates, LLC</b>		
Engineering and Geoscience		
Texas Registrations: Engineering F-8542, Geoscience 50127		



Plot Date: 10/11/2024 - 3:11 PM - Plotted by C.J. Bennett  
Drawing Path: C:\Users\BryanBoyd\BBA Engineering Dropbox\CAD\GIS\GW Availability Projects\SMichael's Irrigation Well\Hydrogeologic Report\Figure 14 - Drawdown Contours 1-year.aprx

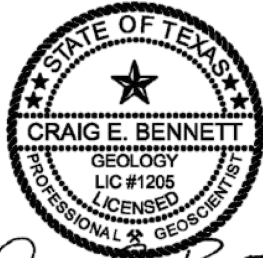


**Explanation**

- Archangel's Irrigation Well (Constructed in 2024)
- Querencia Existing Irrigation Well (Observation Well)
- Likely Lower Trinity Well - Total Depth >700 ft (Source: Submitted Driller's Report Database)

Property Boundary (Source: Travis CAD)

10 - 1-year Simulated Drawdown Contour in Feet (FWD:SOLV)



Craig E. Bennett  
10/22/2024



0 1,000 2,000 4,000 Feet

**ARCHANGEL CATHOLIC SCHOOL**

Figure 14

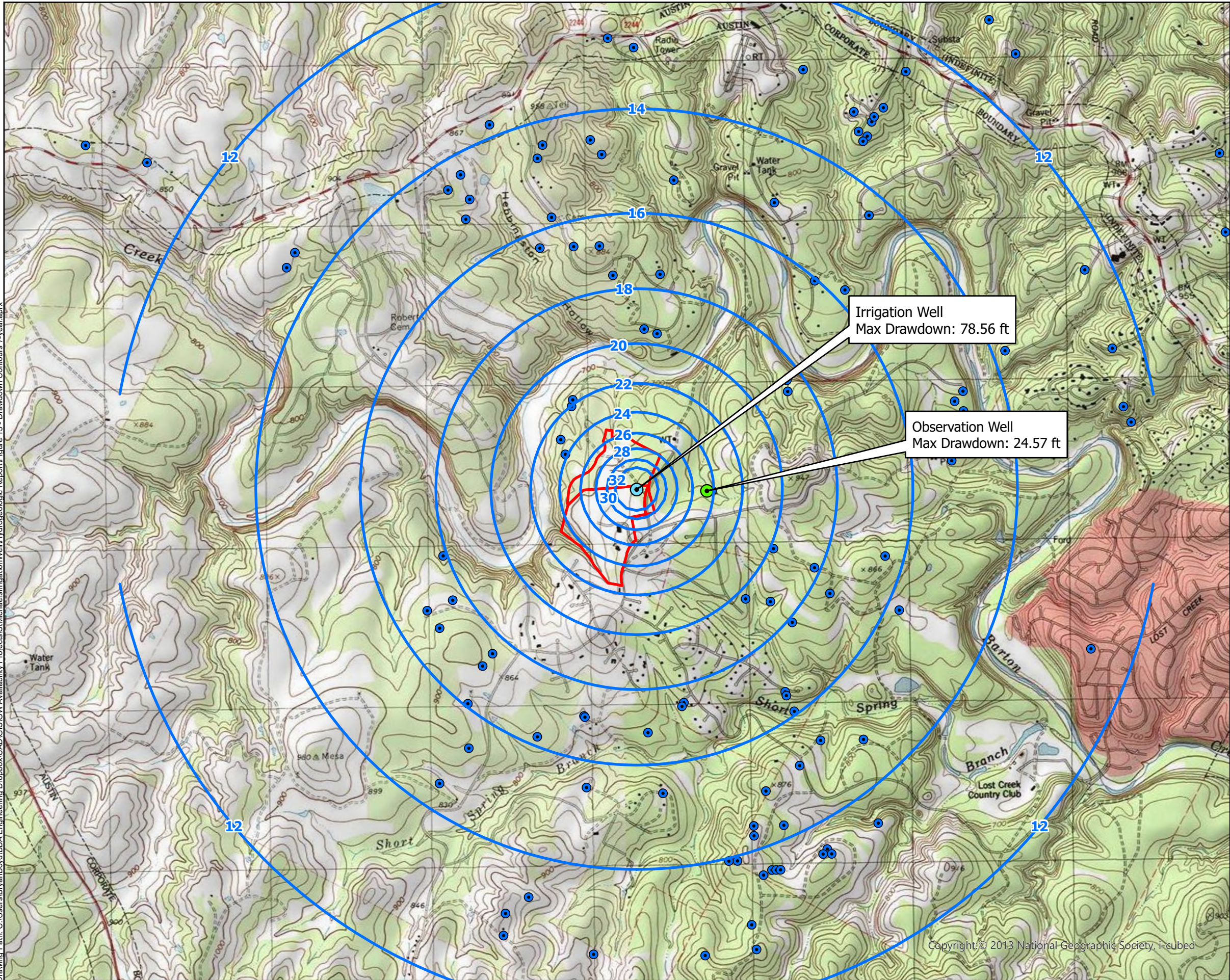
**1-YEAR SIMULATED DISTANCE DRAWDOWN MAP**

PROJECT: 23647	BY: BWB	REVISIONS
DATE: AUG. 2024	CHECKED: CEB	

**Bullock, Bennett & Associates, LLC**  
Engineering and Geoscience  
Texas Registrations: Engineering F-8542, Geoscience 50127



Plot Date: 10/11/2024 - 3:14 PM - Plotted by C.J. Bennett  
Drawing Path: C:\Users\BryanBoyd\BBA Engineering Dropbox\CAD\GIS\GW Availability Projects\SMichael's Irrigation Well\Hydrogeologic Report\Figure 15 - Drawdown Contours 7-year.aprx

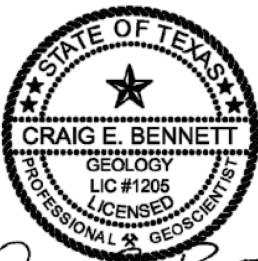


**Explanation**

- Archangel's Irrigation Well (Constructed in 2024)
- Querencia Existing Irrigation Well (Observation Well)
- Likely Lower Trinity Well - Total Depth >700 ft (Source: Submitted Driller's Report Database)

Property Boundary (Source: Travis CAD)

7-year Simulated Drawdown Contour in Feet (FWD:SOLV)



Craig E. Bennett  
10/22/2024



0 1,000 2,000 4,000 Feet

**ARCHANGEL CATHOLIC SCHOOL**

Figure 15

**7-YEAR SIMULATED  
DISTANCE DRAWDOWN MAP**

PROJECT: 23647	BY: BWB	REVISIONS
DATE: AUG. 2024	CHECKED: CEB	

**Bullock, Bennett & Associates, LLC**  
Engineering and Geoscience  
Texas Registrations: Engineering F-8542, Geoscience 50127



**Attachment F:**  
**Staff Irrigation Demand Calculations**

## Worksheet - Golf Courses/Sports Fields (Trinity Aquifer)

### Outdoor Volume Calculator

#### Warm-Season Turfgrass (Roughs and Fairways)

##### Irrigated Turf Grass (Non-playing Areas)

Proposed Irrigated Area	100,188 sq ft	2.30 acres
Maximum Application Rate (see appl. rate)		1.32 feet
<b>Total Outdoor Water Use</b>		<b>986,689 gallons/year</b>

#### Warm-Season Turfgrass (Tees, Greens, Sports Fields)

Proposed Irrigated Area	0 sq ft	0.00 acres
Maximum Application Rate (see appl. rate)		2.06 feet
<b>Total Outdoor Water Use</b>		<b>0 gallons/year</b>

#### Warm-Season Turf/Overseeded Turfgrass (Tees, Greens, Sports Fields)

Proposed Irrigated Area	252,212 sq ft	5.79 acres
Maximum Application Rate (see appl. rate)		2.37 feet
<b>Total Outdoor Water Use</b>		<b>4,464,161 gallons/year</b>

#### Overseeded Turfgrass ( Fairways)

Proposed Irrigated Area	0 sq ft	0.00 acres
Maximum Application Rate (see appl. rate)		1.87 feet
<b>Total Outdoor Water Use</b>		<b>0 gallons/year</b>

#### Mixed Landscape Beds

Proposed Irrigated Area	195,148.80 sq ft	4.48 acres
Maximum Application Rate (see appl. rate)		1.60 feet
<b>Total Outdoor Water Use</b>		<b>2,331,667 gallons/year</b>

#### Vegetable Garden

Proposed Irrigated Area	sq ft	0.00 acres
Maximum Application Rate (see appl. rate)		3.65 feet
<b>Total Outdoor Water Use</b>		<b>0 gallons/year</b>

#### Irrigated Trees (Isolated outside of irrigated turf areas)

Number of Trees	0 qty
Tree area (canopy) per tree	1256 sq. ft
Tree area (canopy) total	0 sq. ft
Tree area (canopy) total	0.00 acres
Maximum Application Rate (see appl. rate)	0.00 feet
<b>Fruit Trees (Deciduous) SubTotal</b>	<b>0 gallons/year</b>

Number of Trees	0 qty
Tree area (canopy) per tree	1256 sq. ft
Tree area (canopy) total	0 sq. ft
Tree area (canopy) total	0.00 acres
Maximum Application Rate (see appl. rate)	0.00 feet
<b>Fruit Trees (Evergreen) SubTotal</b>	<b>0 gallons/year</b>

#### Large Trees

Number of Trees	0 qty
Tree area (canopy) per tree	1100 sq. ft
Tree area (canopy) total	0 sq. ft

#### Medium Trees

Number of Trees	0 qty
Tree area (canopy) per tree	300 sq. ft
Tree area (canopy) total	0 sq. ft

#### Small Trees/Large Shrubs

Number of Trees	0 qty
Tree area (canopy) per tree	90 sq. ft
Tree area (canopy) total	0 sq. ft

Total Tree Area (Lar, Med, Sm Trees)	0 sq ft
	0.00 acres
Maximum Application Rate (see appl. rate)	1.60 feet
All Lar,Med, Sm TreSubTotal	0 gallons/year

TOTAL IRRIGATION	7,782,516 gallons/year
TOTAL IRRIGATION (with distribution uniformity)	10,376,689 gallons/year

Water Features	
Pool/HotTub/Ponds/Fountain area	0 sq. ft
Net Evaporation (see appl. rate)	33 gallons/year
Pool/HotTub/Pond Total Calculated Evaporation Loss	- gallons/year

TOTAL OUTDOOR WATER USE	10,376,689 gallons/year
CALCULATED ANNUAL PERMITTED VOLUME	10,380,000 gallons/year

**Attachment G:**  
**Draft Operating Permit for Archangel Catholic School of Austin**



**Operating Permit for Withdrawal of Groundwater in  
Southwestern Travis County Groundwater Conservation District**

**Permit No.**

**Permittee/ Well Owner:** Archangel Catholic School of Austin  
c/o Audra McCleary

**Permittee Mailing Address:** 3000 Barton Creek Blvd.  
Austin, Texas 78735

**Permit Type:** Operating Permit

**Number of Wells:** 01

**Well Identifications:** District Well ID# 58427AC2 (State Well Report Tracking No. 675038)

**Well Location(s) and Place(s) of Use:** The well is located at 3000 Barton Creek Blvd., Austin, TX 78735 (Longitude W 97.874045, Latitude N 30.290714), and water produced from the well will be used to irrigate school athletic fields and landscaped grounds at the same address

**Permit Term:** The Permit Term is one year, beginning on the date of issuance listed below, and ending on \_\_ \_\_, 2026, and is renewable under District Rule 3.4(D)(3).

**Authorized Uses:** Irrigation of school athletic fields and landscaped grounds, subject to the Standard and Special Permit Conditions incorporated in this Permit, the District's Rules, and Chapter 36 of the Texas Water Code.

**No Export Authorization:** Groundwater produced under this Operating Permit must be used within the Place of Use and may not be exported outside the District's jurisdictional boundaries.

**Authorized Production Amount:**

The Permittee is authorized to withdraw up 9,850,000 gallons (30.23 acre-feet) of groundwater annually from the Lower Trinity Aquifer at a rate not to exceed 30 gallons per minute and place it to beneficial use for the purpose stated in this Permit, subject to restrictions on withdrawals set



forth in this Permit and the District rules, which may be amended from time to time in the future. The Permittee's authorized groundwater withdrawal is limited to only the amount of water which is required without being wasteful during the term of the Permit, but not to exceed the Authorized Production Amount in place at the time.

### **Fees**

#### **Production Fee:**

- a) Permittee must pay a quarterly production fee based on the actual amount of groundwater withdrawn at the rate of \$0.20 per thousand gallons of water reported as actually withdrawn from the well in accordance with District Rule 3.4(D)(7) and the District's Fee Schedule.
- b) The aforementioned production fee rate is subject to future changes in accordance with the District rules.

#### **Export Fee:**

Not Applicable

#### **Service Connection Fees:**

Not Applicable

### **Standard Permit Conditions**

#### **Meter Requirements:**

- a) Prior to producing any groundwater, each well must be equipped with a water meter, purchased, installed, and maintained at the Permittee's expense.
- b) The Permittee must register the meters with the District, and the meters must be approved by the District in accordance with District Rule 3.4(D)(6). The registration must identify the manufacturer and model of the meters, and the serial number of the particular meter installed at each well.
- c) The Permittee must provide the District with a time-stamped photograph of the face plate of each meter showing its identification number and current reading.
- d) Each meter must be a mechanically driven, digital, totalizing water meter and functioning at all times. The digital totalizer must not be resettable by the Permittee and must be capable of a maximum reading greater than the maximum expected pumpage and rate during the expected lifetime of the meter.
- e) Battery operated registers must have a minimum five-year life expectancy and must be permanently hermetically sealed. Battery operated registers must visibly display the expiration date of the battery.
- f) All meters must meet the requirements for registration accuracy set forth in the American Water Works Association standards for cold-water meters.
- g) Meters may be inspected for proper installation and operation, and they may be read by District personnel at any time between regular use reporting, subject to property access conditions set forth in District Rule 4.5.

**Reporting Requirements:**

- a) Permittee shall report monthly meter readings from each meter indicating actual groundwater use on forms provided by the District. Meter readings must be read within five (5) days of the end of each reporting month and submitted to the District no later than ten (10) days after the end of the reporting month.
- b) False reporting or logging of meter readings, intentionally tampering with or disabling a meter, or similar actions to avoid accurate reporting of groundwater use and pumpage constitute a violation of the District Rule 3.4(D)(6) and this Permit, and will result in such penalties as the Board may assess, in accordance in Chapter 36 of the Texas Water Code and District Rule 7.4, as may be amended from time to time.
- c) The District may charge late fees for meter readings that are not timely provided by the Permittee in accordance with the District's Fee Schedule, in addition to or in lieu of assessing enforcement penalties for violating permit conditions.

**Drought Management:**

By accepting this Permit, the Permittee acknowledges and agrees that the Permittee will comply with the District's Drought Management Rules and the Permittee's adopted User Drought Contingency Plan in accordance with District Rule 5.2.

**Well Construction Standards:**

By accepting this Permit, the Permittee acknowledges and agrees that the Permittee will comply with District Well Construction Standards in accordance with District Rule 4.3.

**Periodic Permit Review:**

This Permit is subject to periodic review and enforcement by the General Manager or the General Manager's designees to assess and record each well's use, pumpage volume, and compliance for use in future permit renewal assessments and enforcement in accordance with District Rule 3.6(A).

**Enforcement and Involuntary Amendment or Revocation:**

This Permit is subject to all enforcement remedies available to the District under the laws of the State of Texas and the District rules, including involuntary amendment or revocation for violation of District rules, this Permit, Chapter 36 of the Texas Water Code, the District's Enabling Legislation, waste of groundwater, falsifying records or reports, or other actions the Board determines to be detrimental to the groundwater resources in the District.

**Change of Well Ownership:**

Any change of ownership in the wells must be reported by the new owner by submitting the appropriate form to the General Manager within 90 days following the change of ownership in accordance with District Rules 3.2(C)(1) and 3.6(C).

**Change of Well Condition, Operation, or Status:**

No person may change the type of use of a registered well; alter the size of a registered well, the well pump, or its production amount or capacity, including the elevation of the pump within the borehole; or plug a registered well without prior District authorization. Any such changes require the Permittee/Well Owner to submit the appropriate form to the District, which shall be processed in accordance District Rules 3.2(C) and 3.6(D).

**Notification Required Prior Pump Installation:**

Permittee or Permittee's pump installer must notify the District either verbally or in writing no less than 24 hours before a pump is installed in the well in accordance with District Rule 4.1(A)(2).

**Well Inspections:**

- a) District employees, Board members, District consultants, or other District agents may access the Well and Well Property to conduct random or periodic inspections of wells for any District purpose, including enforcement, in accordance with Texas Water Code § 36.123, Texas Spec. Dist. Code § 8871.105, and District Rule 4.5.
- b) Permittee or Permittee's pump-installer shall equip the Well with an inspection port, inspection tube, or some other means that will allow free and clear vertical access to the water table for the purposes of measuring water levels or disinfecting the Well in accordance with District Rule 4.3(C).
- c) Permittee shall provide access to District personnel and their designees to collect groundwater data on a monthly basis, or upon request of the District's General Manager.

**Laws, Policies, and Rules in Effect:**

This Permit is issued contingent on Permittee's continued compliance with any future changes to the laws of the State of Texas, the District's Drought Curtailments and Contingency Plans, Groundwater Management Plan, and other applicable District rules. The Permittee shall comply with all such laws, policies, and rules now in effect, and as may be amended from time to time in the future.

**Avoidance of Waste:**

By accepting this Permit, the Permittee acknowledges and agrees that the Permittee, and any successor(s) in interest, must avoid waste and achieve water conservation and shall comply with all the terms and conditions embodied in the Permit, and District rules, District orders, and approved Management Plan, as may be amended from time to time, and to the continuing right of the District to manage the groundwater within the District.

**Sealing, Capping, and Plugging Requirements:**

By accepting this Permit, the Permittee acknowledges and agrees that the District may require the sealing, capping, or plugging of the Well for the reasons provided by District Rule 4.4.

### Special Permit Conditions

- 1. Monitoring and Data Collection** – To assess actual impacts of pumping, the permittee must agree to ongoing data collection and monitoring. The permitted well must be equipped with a 1-inch drop pipe to facilitate water-level measurements and accommodate a pressure transducer/data logger. The District will install and maintain monitoring equipment at its own expense. The permittee must provide District staff with access to install monitoring equipment and collect groundwater data monthly or as requested by the District's General Manager.

If the District determines that the permitted well or any nearby existing well is inadequate for reliably monitoring groundwater levels—due to interference from pumping, well design, or other factors—it may require the installation of a dedicated monitoring well. This well will serve as a benchmark for tracking aquifer conditions and implementing the compliance-indexed response measures specified below. The permittee is responsible for all costs associated with the well's installation and must cooperate with the District to identify a suitable location and ensure timely installation in accordance with District specifications.

- 2. Compliance-Indexed Response Measures** – Water-level data collected from the permittee's well, or from an alternative monitoring well designated by the District, will be used to track aquifer conditions and serve as a benchmark for implementing responsive measures. The following compliance levels, based on observed water-level trends and modeled impacts, will apply:

Compliance Level	Trigger Water Level (feet <del>below ground</del> <del>surface</del> <u>above mean</u> <del>sea level</del> )	Response Measure	Comments
Level 1 – Baseline Monitoring	<del>555 ftBGS</del> <u>295 ftAMSL</u> (40 feet above top of aquifer*)	No curtailment; continue monitoring and data collection	Represents approximate current conditions
Level 2 – Moderate Decline	<del>570 ftBGS</del> <u>280 ftAMSL</u> (25 feet above top of aquifer*)	10% reduction in permitted pumping volume	Accounts for seasonal and annual fluctuations while initiating reductions to prevent/minimize unconfined conditions
Level 3 – Significant Decline	<del>585 ftBGS</del> <u>265 ftAMSL</u> (10 feet above top of aquifer*)	25% reduction in permitted pumping volume	
Level 4 – Critical Threshold	<del>595 ftBGS</del> <u>255 ftAMSL</u> (at top of aquifer*)	50% reduction in permitted pumping volume	Aquifer transitions to unconfined conditions at this level, risking loss of artesian pressure, reduced well yields, and dewatering

\*Top of Lower Trinity Aquifer determined by District staff from geophysical log

The District will determine the applicable compliance level based on the average maximum daily water level measured over the previous 10-day period. If the 10-day average maximum daily water level is at or below the specified trigger level for a compliance level, that level shall apply. Pumping curtailments must be implemented within 30 days of reaching a compliance level.

If a compliance-level-based curtailment coincides with a District-declared drought stage that requires mandatory pumping reductions, the greater reduction shall apply. This ensures that groundwater withdrawals align with both aquifer conditions and broader drought management efforts.

The District may modify response measures based on emerging data trends and regional aquifer conditions. If a new monitoring well is installed in accordance with Condition 1 above, future compliance determinations may be based on data from that well, as deemed appropriate by the District.

3. **Rainwater Harvesting System Installation** – Modeling results indicate that the permitted well may not sustain its current production rate beyond 7 years, as the aquifer is expected to transition from confined to unconfined conditions. Additionally, the well will be subject to mandatory drought curtailments under District rules. To help offset potential water shortages resulting from reduced production rates and drought curtailments, this condition phases in alternative water supplies to mitigate groundwater declines while meeting the Applicant's irrigation needs.

The permittee must install and have operational a rainwater harvesting system with a minimum storage capacity of 80,000 gallons (approximately 3 times the existing groundwater storage capacity to ensure meaningful supplementation) within 2 years of permit issuance. Captured rainwater is not subject to District drought curtailments and may be used to supplement groundwater for irrigation under both drought and non-drought conditions. Additionally, other alternative water sources, such as air conditioning condensate, could be evaluated.

This Permit is hereby issued this the \_\_\_\_ day of \_\_\_\_\_, 2025, by the order of the Southwestern Travis County Groundwater Conservation District, and agreed to by the Permittee, who hereby binds himself to the duties outlined hereabove.

---

Richard Scadden, Board President  
Southwestern Travis County Groundwater Conservation District

ATTEST:

\_\_\_\_\_,  
Tim Van Ackeren, Secretary  
Southwestern Travis County Groundwater Conservation District

PERMITTEE:

\_\_\_\_\_,  
Audra McCleary  
Archangel Catholic School of Austin

DRAFT

