

ANOTICE OF EXEMPTION

TO: X Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

FROM: Tehama County-FCWCD
1509 Schwab Street
Red Bluff, CA 96080

Office of the County Clerk-Recorder
Tehama County
633 Washington Street – Room 11
Red Bluff, CA 96080

Project Title:

Tehama Groundwater Sustainability Plan Implementation Project in the Antelope and Corning Subbasins.

Project Location - Specific:

Antelope and Corning Subbasins per DWR Bulletin 118. See attached.

Project Location – City:

Red Bluff, CA

Project Location – County

Tehama County

Description of Nature, Purpose, and Beneficiaries of Project:

The Corning, Red Bluff, Los Molinos, and Antelope Subbasins are implementing their respective Groundwater Sustainability Plans (GSP), submitted in 2022, to achieve and maintain groundwater sustainability within the Subbasins in accordance with the 2014 Sustainable Groundwater Management Act (2014). This action covers the construction-related activities for expanding monitoring networks and filling data gaps through calendar year 2026 associated with implementation of approved GSPs.

Name of Public Agency Approving Project:

Tehama County Flood Control & Water Conservation District.

Name of Person or Agency Carrying Out Project:

Tehama County Flood Control & Water Conservation District.

Exempt Status: (Check one)

- Ministerial (Sec. 21080(b)(1); 15268);
- Declared Emergency (Sec. 21080(b)(3); 15269(a));
- Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- Categorical Exemption. State type and section number: Class 4, Section 15304, Title 14 CCR; Class 6, Section 15306, Title 14 CCR; and Class 1, Section 15301, Title 14 CCR.
- Statutory Exemptions. State code number:

FILED

MAR 25 2024

JENNIFER A. VISE
TEHAMA COUNTY CLERK & RECORDER

BY Ariana Zepeda

Reasons why project is exempt:

The construction activities consist of nonsignificant impacts to the condition of the land. The proposed project consists of basic data collection and resource evaluation activities that do not result in a significant impact to an environmental resource. And construction activities may occur at existing facilities (e.g. existing wells or stream gauges) consisting of nonsignificant impacts to those facilities.

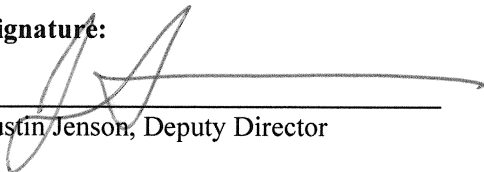
Lead Agency Contact Person:

Justin Jenson, Deputy Director

Area Code/Telephone/Extension:

530-690-0700

Signature:


Justin Jenson, Deputy Director

Date:

2/26/24

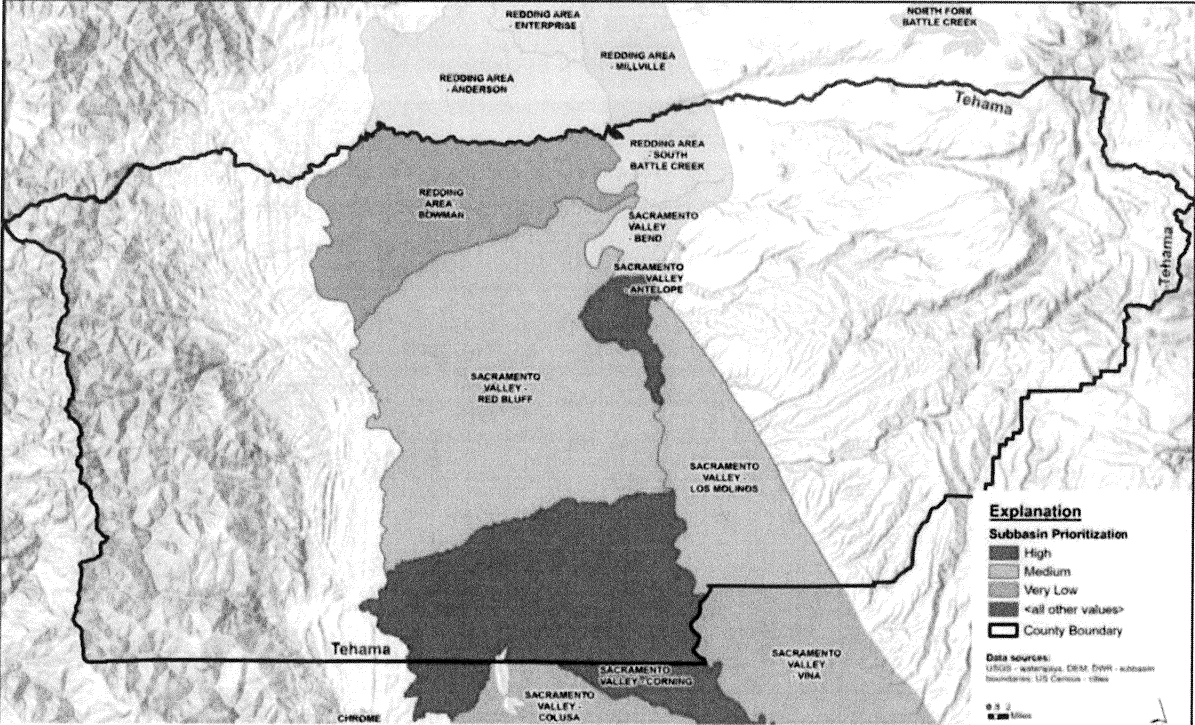
Signed by Lead Agency

Date received for filing at OPR:

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Groundwater Sustainability Agency

The Tehama County Flood Control and Water Conservation District has been listed as the Exclusive Groundwater Sustainability Agency (GSA) for the following seven subbasins or the portions of those subbasins located within the County: Bowman, Red Bluff, Corning, Los Molinos, Antelope, Bend, and South Battle Creek (see [GSA map](#)) as of February 11, 2016.



Information follows on the proposed construction activities associated with expanding groundwater monitoring networks and filling data gaps for implementation of GSPs in the Antelope and Corning subbasins within Tehama County.

Antelope Subbasin

Monitoring Network and Data Gaps – Planned Construction Activities (2024-2026)

Description

Task 3: Data Gaps, Monitoring, and Domestic Well Monitoring Planning

Conduct planning, design activities, and provide maps associated with the three (3) multi-completion wells potential locations, five (5) shallow monitoring wells (shallow < 50 ft), fifteen (15) stream gages, and domestic well monitoring network. Perform a technical assessment of the number and location of groundwater monitoring sites, stream gages, and domestic wells. Acquire necessary permits required for the installation of the monitoring sites or modification of existing surface water gages, biological study, and synoptic stream gauging.

This component will enhance the monitoring network and fill data gaps. This component includes the installation of monitoring wells (both multi-completion and single completion), the installation of surface water stream gages, a biological survey, a domestic well program, and domestic well outreach. The single completion monitoring wells will be shallow and proximal to the surface water gages in order to improve the understanding of the connection and flow between the surface water and groundwater systems. The stream gages and shallow wells will be equipped with dataloggers to compare the stream stage with shallow groundwater levels at comparable times. Synoptic measurements in combination with stream gage data will be used to obtain flow measurements for major creeks. A biological survey will be conducted to identify Groundwater Dependent Ecosystems (GDE's) and assess potential undesirable effects from the depletion of groundwater feeding surface water related ecological communities. Each stream gage will have proximal shallow monitoring wells as described in Section 3 of the GSP.

There will be a total of three (3) multi-completion monitoring wells, five (5) stream gages and fifteen (15) shallow monitoring wells installed. The shallow wells and surface water gages are needed to fill data gaps described in Section 3 of the GSP. The installation of monitoring wells will also further characterize the hydrogeology in the Subbasin. The enhanced monitoring network supports development of the GSP and understanding basin water use.

Making enhancements to the monitoring network will expand groundwater level and quality monitoring of groundwater and surface water monitoring to reduce data gaps. It will provide needed additional information to update and modify the hydrogeologic conceptual model (HCM) and the ground water model. Installation of the multi-completion monitoring wells includes lithologic logging and geophysical logging. The multi-completion monitoring wells will be designed to obtain vertical information within different hydrogeologic zones. Water quality and water level data collected from the wells will be representative since the lithology and well construction will be known. These wells fill vertical and horizontal data gaps; higher density data means shorter distances to interpolate geology and water conditions thereby improving estimates of change in storage based on equipotential lines and storage coefficients.

Installation of shallow monitoring wells and stream gages will further characterize the hydrogeology and hydrology in the Subbasin. Monitoring of wells and streams will enhance the understanding of conditions and the relationship between the groundwater and surface water systems. Specifically for streams, synoptic measurements and stream gage data may be processed and used to better characterize if major creeks are gaining or losing, this data also contributes to defining the relationship between groundwater and surface water. The interconnected surface water indicator is described in the GSP as having the most prominent data gaps compared to all other indicators. Preliminary locations where synoptic measurements may be collected are at basin boundaries (inflow and outflow of the basin) and at

confluences. The final location of these synoptic measurement locations will be based on a review of available stream gages, available hydrogeologic and hydraulic information, and adjusted based on secured access agreements.

The existing groundwater monitoring network is limited by its geographic distribution with obvious data gaps. Section 3 of the GSP identifies 88 monitoring wells with water level data, however the GSA identifies only five wells that have enough geographical variation, historical data, and complete well construction information to allow the GSA to monitor groundwater elevation with certainty. Only one of the five wells is in the lower aquifer and does not currently exist but is planned (TSS-4). The GSP identifies 233 monitoring wells with water quality data, however only three wells comprise the groundwater quality monitoring network. Multi-completion wells are valuable for characterizing groundwater conditions in the Subbasin as they provide information about groundwater levels from different hydrogeologic zones at different depths at a single point in the Subbasin. They can be used to help define vertical flow of groundwater. Isotopic analysis of groundwater samples collected from different depths in the multi-completion wells will provide discrete recharge rates in the Subbasin. Samples will be collected following the methods of the Stable Isotope Recharge Study (Brown and Caldwell, 2017).

To further characterize hydrogeology and expand the groundwater monitoring network, the Antelope GSA will install three (3) multi-completion monitoring wells in the Subbasin at locations that lack deeper monitoring sites. Preliminary locations will focus on areas where deeper wells are needed. The final location of these monitoring wells will be based on a planning phase and adjusted based on secured access agreements. The final construction of these monitoring wells will be based on the known geology, groundwater conditions, the HCM, and field conditions encountered during drilling. The budget and schedule contained herein is based on the preliminary design that each multi-completion well will consist of up to three discrete wells at varying depths with the deepest being completed to approximately 1,000 ft bgs. Each monitoring well will have pressure transducers, data loggers, and telemetry equipment installed and set to record groundwater levels at least hourly. This will result in a substantial increase in groundwater level measurements. The monitoring wells will be incorporated into the GSP monitoring network and monitored by the GSA on a regular basis following the same protocols for monitoring the current network.

Currently, the groundwater level monitoring network is serving as a proxy for interconnected surface waters, using only the four RMS wells in the upper aquifer. Section 3 of the GSP describes the two main contributors to the data gap for this indicator as 1. A lack of shallow (<50 ft) monitoring wells in the vicinity of interconnected surface waters and GDEs, and 2. A lack of stream gages. High priority GDEs have been mapped in the Subbasin, although no suitable monitoring wells were identified within a mile from the GDEs. Updates to the monitoring network to fill this data gap are proposed in the GSP by installing additional wells and other monitoring networks, as appropriate.

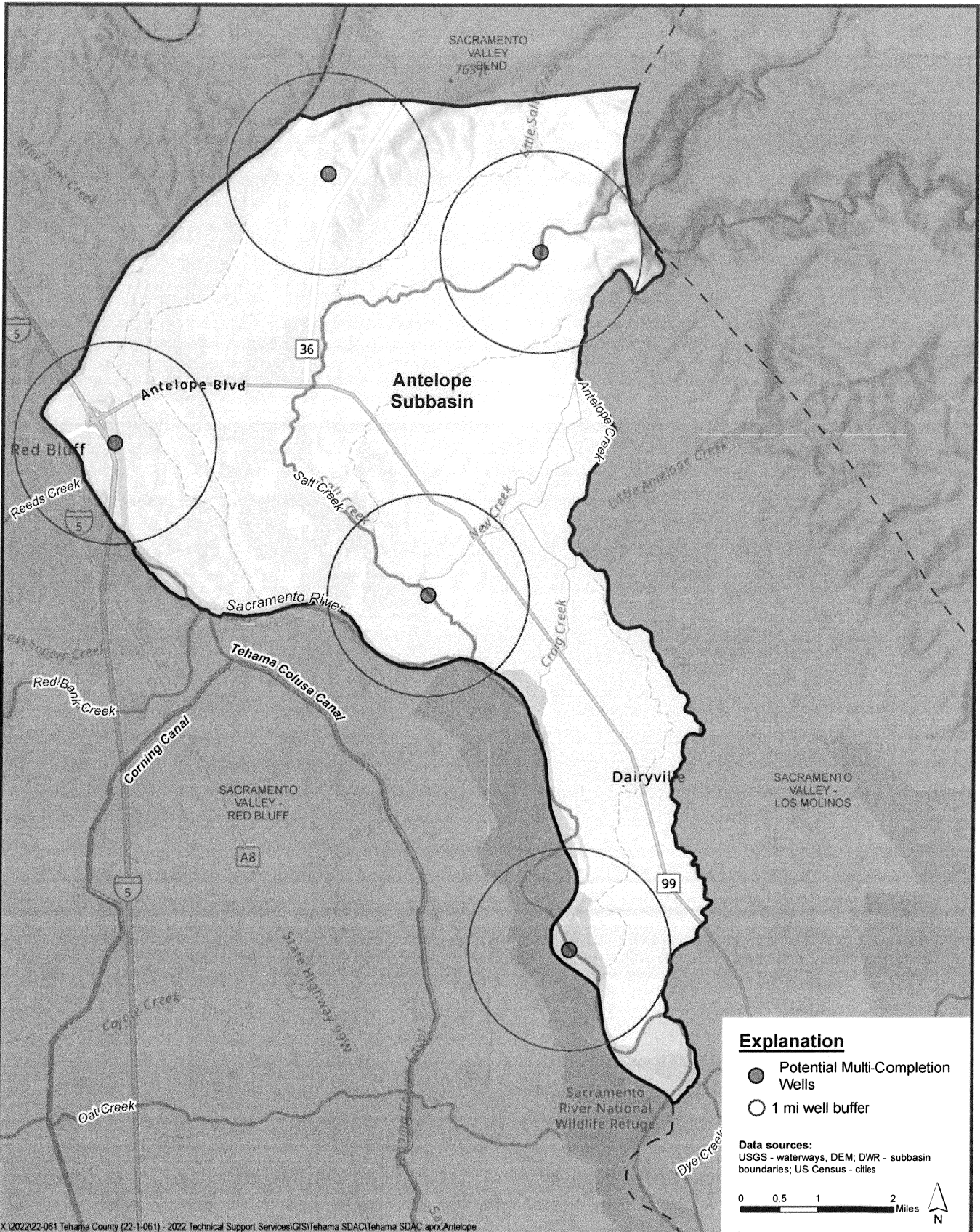
To fill this data gap, the GSA will install fifteen (15) shallow monitoring wells or piezometers in total and five (5) new stream gages. The shallow monitoring wells or piezometers will be installed adjacent to and in conjunction with new stream gages. Each stream gage will have three (3) shallow wells or piezometers installed at varying depths to be finalized based on a review of the HCM. For planning purposes, the wells are expected to be less than 50 feet below ground surface (bgs) as outlined in Section 3 of the GSP. New stream gages will be equipped with transducers and data loggers. The proximal wells and piezometers will be equipped with pressure transducers and data loggers. Measurements will be at least hourly and synchronized. Preliminary locations where new surface water/groundwater monitoring sites are needed are shown on the attached Antelope Subbasin maps. The final location of these monitoring sites will be based on a review of groundwater dependent ecosystems, available hydrogeologic and hydraulic information, and adjusted based on secured access agreements.

A critical reason for expanding the interconnected surface water monitoring network is to predict and avoid undesirable results to beneficial uses of surface water including GDEs. GDE's in the Subbasin exist where vegetation depends on access to the shallow groundwater and in areas where streams and creeks are connected to groundwater as described in Section 2.2.2.7 of the GSP. Expanding the monitoring as explained above will help define where and when groundwater is connected to surface water. Potential groundwater dependent ecosystems (iGDE) were mapped by refining the available data from the Natural Communities Associated with Groundwater (NCCAG) database. The iGDE dataset was then prioritized/ categorized into high and low priority iGDEs. A field biological study will identify and map GDE. The GSA will partner with qualified CSU, Chico staff with experience and expertise in ecological mapping. Standard ecological mapping techniques will be used to define the boundaries where GDE exist in the Subbasin. The studies will initially be conducted in areas identified as iGDE in the GSP as shown on the attached Antelope Subbasin maps and then expanded based on information from planning efforts and field observations. Biological studies will take place multiple times over a period of three years to define how GDE changes over time.

The domestic well program is intended to enhance the Subbasin monitoring network by incorporating domestic wells. It will also help create an inventory of dry wells. A dry well occurs when groundwater levels have fallen below the total depth of the well or below the pump. From October 2021 to October 2022, 78 wells throughout Tehama County were reported dry through the State's online reporting system. A dry well inventory will also allow the GSA to better manage assistance to domestic well owners and enable the GSA to target well owners in locations where domestic wells are known to go dry. It will better define how well conditions relate to beneficial uses and users. Shallow domestic wells are susceptible to depressed water levels (become dry) creating a barrier to the **Human Right To Water**. Domestic well users, particularly those who are economically disadvantaged, are more vulnerable as the cost for well deepening/replacement and alternative supplies may be prohibitive.

Domestic well outreach, as part of this component, will provide educational materials and resources to domestic well owners, focusing on domestic well owners who live in areas where wells are known to go dry as described above. This effort will engage the domestic community in the Subbasin. **The goals** of domestic well outreach are to provide education, engage, and educate stakeholders. **The objectives** are 1. Develop a well owners guide, including educational resources and resources for testing, inspection, and replacement. 2. Summarize the program and findings on the GSA's website, annually. The **need** for domestic well outreach, in addition to funding, is the dedicated GSA staff and participation by the Antelope Subbasin community. Potential locations for implementing the domestic well program and outreach are shown on the attached Antelope Subbasin maps.

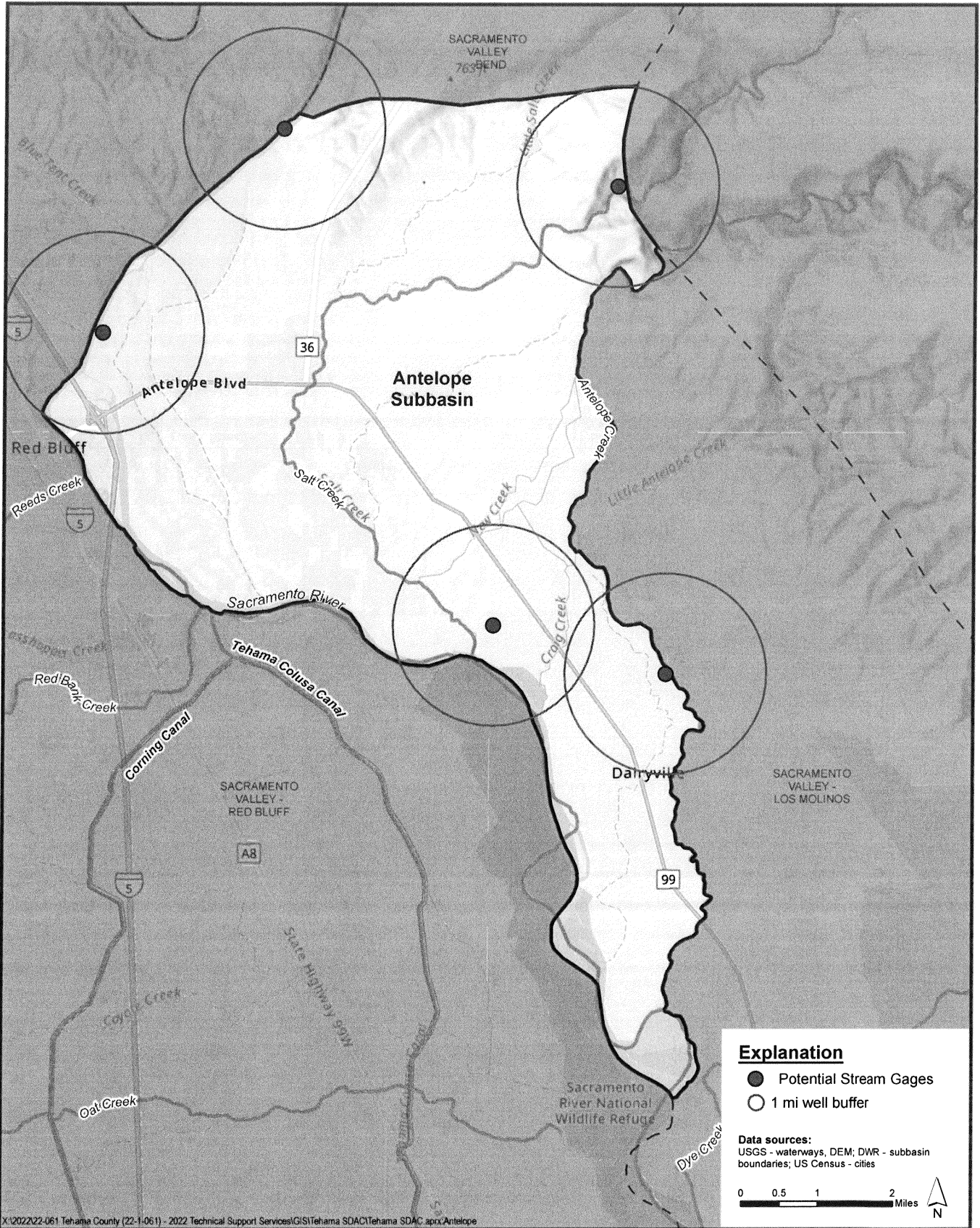
The **goals** of this component are delivery of a valuable service to the well owner community and enhanced characterization of both hydrogeologic and hydrologic conditions. The **objectives** are to fill data gaps, enhance groundwater and surface water monitoring, assess the surface water ecology, and engage and educate stakeholders. The **needs** for this component, in addition to funding, are skilled and experienced personnel to conduct each task of the component. The component will meet the goals, objectives and needs by implementing the scope of work, providing there is sufficient funding, based on the budget request, herein.



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Potential Locations for New Multi-Completion Wells
Antelope Subbasin Proposition 68 Round 2 Gant Application



Corning Subbasin

Monitoring Network and Data Gaps – Planned Construction Activities (2024-2026)

Description

Task 3: Data Gaps, Monitoring, and Domestic Well Monitoring Planning

Component 3 consists of the installation of monitoring wells, surface water stream gages, a biological survey, conducting geophysical surveys, performing aquifer tests, a domestic well program, and domestic well outreach. Implementing the following tasks will expand the understanding of Subbasin hydrogeologic and hydrologic conditions. Task 1: Data Gaps, Monitoring, and Domestic Well Monitoring Planning, Task 2: Data Gaps, Task 3: Groundwater Level and Quality Monitoring, Task 4: Domestic Well Program, Task 5: Stream Gaging, Task 6: Biological Survey, Task 7: Expand Groundwater Quality Network, Task 8: Understand Subbasin Subsurface, and 9: Domestic Well Outreach.

This component will enhance the monitoring network and fill data gaps. The component includes the installation of monitoring wells (both multi-completion and single completion), the installation of surface water stream gages, a biological survey, video logging, conducting geophysical surveys, performing aquifer tests, a domestic well program, and domestic well outreach. The single completion monitoring wells will be shallow and proximal to the surface water gages to improve the understanding of the connection and flow between the surface water and groundwater systems. The stream gages and shallow wells will be equipped with dataloggers to compare the stream stage with shallow groundwater levels at comparable times. Synoptic measurements in combination with stream gage data will be used to obtain flow measurements for major creeks. A biological survey will be conducted to identify Groundwater Dependent Ecosystems (GDE's) and assess potential undesirable effects from the depletion of groundwater feeding surface water related ecological communities. Each stream gage will have proximal shallow monitoring wells as described in Section 5 of the GSP.

There will be five (5) multi-completion monitoring wells, ten (10) stream gages and thirty (30) shallow monitoring wells installed in total. The shallow wells and surface water gages are needed to fill data gaps described in Section 5 of the GSP. The installation of monitoring wells will also further characterize the hydrogeology in the Subbasin.

Making enhancements to the monitoring network will enhance groundwater level and quality monitoring groundwater and surface water monitoring. It will provide needed additional information to update and modify the hydrogeologic conceptual model (HCM) and the ground water model. Installation of the multi-completion monitoring wells includes lithologic logging and geophysical logging. The multi-completion monitoring wells will be designed to obtain vertical information within different hydrogeologic zones. Water quality and water level data collected from the wells will be representative since the lithology and well construction will be known. Additionally, new AEM surveys and aquifer tests will provide new data to refine the HCM. These wells and surveys will fill vertical and horizontal data gaps; higher density data means shorter distances to interpolate geology and water conditions. It follows that it will improve estimates of change in storage based on equipotential lines and storage coefficients.

Installation of shallow monitoring wells and stream gages will further characterize the hydrogeology and hydrology in the Subbasin. Monitoring of wells and streams will enhance the understanding of conditions and the relationship between the groundwater and surface water systems. Specifically for streams, synoptic measurements and stream gage data may be processed and used to better characterize if major creeks are gaining or losing, this data also contributes to defining the relationship between groundwater and surface water. The interconnected surface water indicator is described in the GSP as having the most prominent data gaps compared to all other indicators. Preliminary locations where synoptic

measurements may be collected are at basin boundaries (inflow and outflow of the basin) and at confluences. The final location of these synoptic measurement locations will be based on a review of available stream gages, available hydrogeologic and hydraulic information, and adjusted based on secured access agreements.

The existing groundwater monitoring network is limited in its geographic distribution within the service area. Section 5 of the GSP identifies 58 representative monitoring points (RMPs) indicative of the general conditions in the Subbasin. RMP wells were divided into two categories of shallow and deep wells, where shallow wells are defined as < 450 ft bgs. Only about a third or 21 wells in the RMP are in the deep category. To better understand groundwater conditions, wells in the RMP and general monitoring network with unknown construction will be video logged to determine the screening interval of the well. RMP and wells with unknown construction will be identified as well.

The GSP does not utilize the same network for groundwater quality monitoring, the GSP uses a combination of existing active groundwater quality monitoring networks such as State Water Resource Control Board (SWRCB) water supply well monitoring, DWR quality data, CVRWQCB IRLP, Glenn County annual testing, and Central Valley Dairy Representative Monitoring Program as described in Section 5 of the GSP. Relying on existing monitoring programs, leaves the Subbasin subject to other agencies. As described in Section 5 of the GSP, DWR does not currently plan to continue monitoring the observation well groundwater quality network in the Subbasin. To further expand the groundwater monitoring network described above, Corning GSA plans to expand the groundwater quality monitoring network to include domestic wells.

There are twelve (12) existing multi-completion monitoring wells or clusters in the Subbasin, six (6) in Tehama County and six (6) in Glenn County. Two (2) additional multi-completion wells are planned (Glenn TSS Well, Tehama CWT Well). Multi-completion wells are valuable for characterizing groundwater conditions in the Subbasin as they provide information about groundwater levels from different hydrogeologic zones at different depths at a single point in the Subbasin. They can be used to help define vertical flow of groundwater. Isotopic analysis of groundwater samples collected from different depths in the multi-completion wells will provide discrete recharge rates in the Subbasin. Samples will be collected following the methods of the Stable Isotope Recharge Study (Brown and Caldwell, 2017).

To further characterize hydrogeology and expand the groundwater monitoring network, Corning GSA will install five (5) multi-completion monitoring wells in the Subbasin at locations that lack deeper monitoring sites. Notably, data gaps in groundwater conditions have been described in Section 3 of the GSP, these gaps are mostly located in the western portion of the Subbasin. Preliminary locations where deeper wells are needed are shown on the attached Corning Subbasin maps. The final location of these monitoring wells will be based on a planning phase and adjusted based on secured access agreements. The final construction of these monitoring wells will be based on the known geology, groundwater conditions, the HCM, and field conditions encountered during drilling. The budget and schedule contained herein is based on the preliminary design that each multi-completion well will consist of up to three (3) discrete wells at varying depths with the deepest being completed to approximately 1,000 ft bgs. Each monitoring well will have pressure transducers, data loggers, and telemetry equipment installed and set to record groundwater levels at least hourly. This will result in a substantial increase in groundwater level measurements. The monitoring wells will be incorporated into the GSP monitoring network and monitored by the GSA on a regular basis following the same protocols for monitoring the current network.

Currently, the interconnected surface water monitoring network consists of five active stream gages that measure river stage, and a subset of eight (8) of the thirty-seven (37) shallow wells in the RMP

groundwater monitoring network. Section 5 of the GSP describes the main contributor to this data gap as a lack of shallow (<450 ft) monitoring wells in the vicinity of interconnected surface waters and GDEs. Updates to the monitoring network to fill this data gap are proposed in the GSP by installing additional wells and other monitoring networks, as appropriate.

To fill this data gap, the GSA will install thirty (30) shallow monitoring wells or piezometers in total and ten (10) new stream gages. The shallow monitoring wells or piezometers will be installed adjacent to and in conjunction with new stream gages. Each stream gage will have three (3) shallow wells or piezometers installed at varying depths to be finalized based on a review of the HCM. For planning purposes, the wells are expected to be < 450 feet below ground surface (bgs) as outlined in Section 5 of the GSP. A review of the operational capacity will be conducted on current stream gages to identify if any of the current stream gages need to be updated or replaced to fulfill data collection requirements. New stream gages will record hourly, and the proximal wells and piezometers will be equipped with pressure transducers and data loggers so that measurements are synchronized. Preliminary locations where new surface water/groundwater monitoring sites are needed are shown on the attached Corning Subbasin maps. The final location of these monitoring sites will be based on a review of groundwater dependent ecosystems, available hydrogeologic and hydraulic information, and adjusted based on secured access agreements.

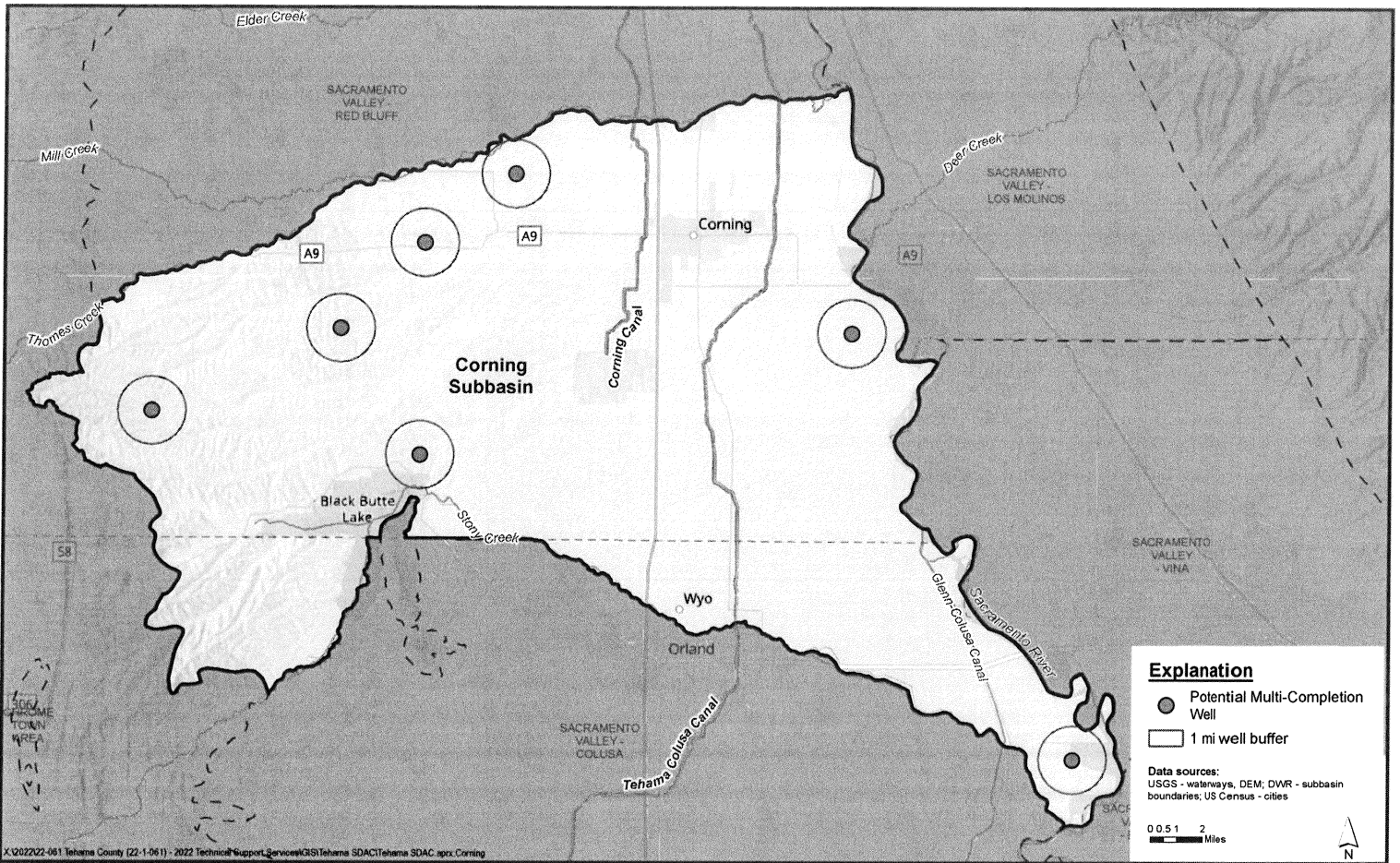
A critical reason for expanding the interconnected surface water monitoring network is to predict and avoid undesirable results to beneficial uses of surface water including GDEs. GDE's in the Subbasin exist where vegetation depends on access to the shallow groundwater and in areas where streams and creeks are connected to groundwater as described in Section 3 of the GSP. Expanding the monitoring as explained above will help define where and when groundwater is connected to surface water. Potential groundwater dependent ecosystems (iGDE) must meet three (3) criteria 1. iGDEs exist as defined by The Nature Conservancy and DWR. 2. The area is near a riverine environment and existing data demonstrate surface water and groundwater are interconnected. 3. Water levels in this area are consistently less than 30 feet below ground surface, the maximum groundwater level thought to be accessible to the deepest root systems of GDE species. A field biological study will further identify and map GDE. The GSA will partner with qualified CSU, Chico staff with experience and expertise in ecological mapping. Standard ecological mapping techniques will be used to define the boundaries where GDE exist in the Subbasin. The studies will initially be conducted in areas identified as iGDE in the GSP as shown on the attached Corning Subbasin maps and then expanded based on information from planning efforts and field observations. Biological studies will take place multiple times over a period of three years to define how GDE changes over time.

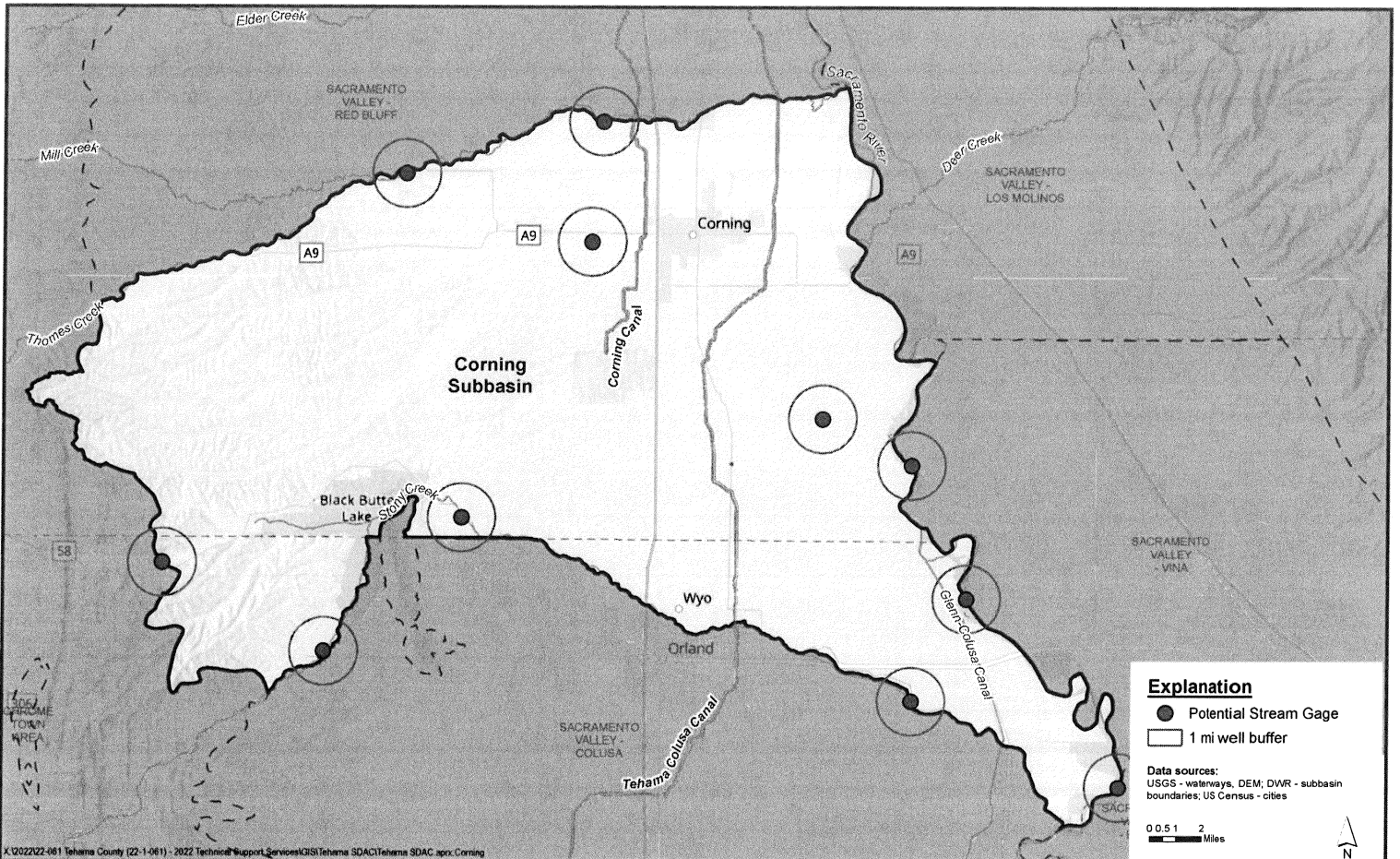
The domestic well program is intended to enhance the Subbasin monitoring network by incorporating domestic wells. It will also help create an inventory of dry wells. A dry well occurs when groundwater levels have fallen below the total depth of the well or below the pump. From October 2021 to October 2022, 78 wells throughout Tehama County and 9 in Glenn County were reported dry through the State's online reporting system. A dry well inventory will also allow the GSA to better manage assistance to domestic well owners and enable the GSA to target well owners in locations where domestic wells are known to go dry. It will better define how well conditions relate to beneficial uses and users. Shallow domestic wells are susceptible to depressed water levels (become dry) creating a barrier to the **Human Right To Water**. Domestic well users, particularly those who are economically disadvantaged, are more vulnerable as the cost for well deepening/replacement and alternative supplies may be prohibitive.

Domestic well outreach, as part of this component, will provide educational materials and resources to domestic well owners, focusing on domestic well owners who live in areas where wells are known to go dry as described above. This effort will engage the domestic community in the Subbasin. **The goal** of domestic well outreach is to provide education, engage, and educate stakeholders. **The objectives** are 1.

Develop a well owners guide, including educational resources and resources for testing, inspection, and replacement. 2. Summarize the program and findings on the GSA's website, annually. The **need** for domestic well outreach, in addition to funding, is the dedicated GSA staff and participation by the Corning Subbasin community. Potential locations for implementing the domestic well program and outreach are shown on the attached Corning Subbasin maps.

The **goal** of this component are delivery of a valuable service to the well owner community and enhanced characterization of both hydrogeologic and hydrologic conditions. The **objectives** are to fill data gaps, enhance groundwater and surface water monitoring, assess the surface water ecology and engage and educate stakeholders. The **needs** for this component, in addition to funding, are skilled and experienced people to conduct each task of the component. The component will meet the goals, objectives and needs by implementing the scope of work, providing there is sufficient funding, based on the budget request, herein.





Potential Surface Water/Groundwater Monitoring Points

Corning Subbasin Proposition 68 Round 2 Gant Application