



Vina Groundwater Sustainability Agency

308 Nelson Avenue
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(530) 552-3592

Rock Creek Reclamation District

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Board Members:

Evan Tuchinsky, Chair
Jeff Rohwer, Vice-Chair
Raymond Cooper
Tod Kimmelshue
Kasey Reynolds

Board Members:

Hal Crain, Chair
Darren Rice, Vice-Chair
Elvin Bentz
Jon Lavy
Bruce McGowan
Dan Paiva
Jay Payne

**VINA GROUNDWATER SUSTAINABILITY AGENCY AND
ROCK CREEK RECLAMATION DISTRICT
JOINT BOARD MEETING**

Meeting Agenda

August 10, 2022, at 5:30 p.m.

Chico City Council Chamber Building, 421 Main Street, Chico CA
IN-PERSON AND ONLINE MEETING VIA ZOOM

Any materials related to an item on this Agenda are available for public inspection online at <https://www.vinagsa.org/>

PUBLIC PARTICIPATION:

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PUBLIC COMMENT INFORMATION:

All members of the public may address the GSA Board on the meeting item(s) during Public Comment, prior to the start of the meeting. For a Zoom only meeting, members of the public can submit public comment in one of two ways:

1. **EMAIL TO VINAGSAPUBLICCOMMENTS@CHICOCA.GOV.** When submitting public comment via email, please indicate the item number your comment corresponds to in the subject line. Comments submitted will be sent to the full GSA Board members electronically prior to the start of the meeting. At the meeting, email

comments will be acknowledged and read into the record by name only during the public comment period prior to the start of the meeting. Comments received after the meeting will be made part of the written record if received prior to the end of the meeting.

2. **VERBALLY VIA ZOOM APPLICATION OR BY TELEPHONE.** A member of the public may indicate their intent to speak by raising their hand any time prior to the beginning of the meeting. Speakers will be called upon by the Chair and unmuted by the Meeting Host.
 - a. If attending by Zoom application, please click the “raise hand button”.
 - b. If attending by telephone dial *9 to raise your hand. *6 to mute/unmute yourself.
 - c. ***Verbal comments will be limited to one comment per item, per attendee for no more than three (3) minutes, unless the Board Chair specifies a different time limit.***

Agenda Prepared: 8/5/2022

Agenda Posted: 8/5/2022

Prior to: 5:30 p.m.



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**VINA GROUNDWATER SUSTAINABILITY AGENCY (GSA) AND
ROCK CREEK RECLAMATION DISTRICT GSA
JOINT BOARD MEETING OF AUGUST 10, 2022**

1. VINA GROUNDWATER SUSTAINABILITY AGENCY (GSA) REGULAR BOARD MEETING

1.1. Call to Order - Chair Tuchinsky

1.2. Roll Call

1.3. Consent Agenda

1.3.1 **ADOPTION OF A RESOLUTION RENEWING AUTHORIZATION TO CONDUCT TELECONFERENCE MEETINGS FOR BOTH THE VINA GSA BOARD AND STAKEHOLDER ADVISORY COMMITTEE (SHAC) MEETINGS.**

The Vina GSA Board will consider a resolution finding that the state of the COVID-19 emergency still exists, and the Board renews its prior authorization that meetings of the GSA Board and its Stakeholder Advisory Committee may be held by teleconference as authorized by subdivision (e)(1)(C) of section 54943 of the Government Code.

Action: Adopt the following resolution:

**RESOLUTION OF THE VINA GROUNDWATER SUSTAINABILITY AGENCY BOARD
RENEWING THE AUTHORIZATION TO CONDUCT REMOTE TELECONFERENCE
MEETINGS OF THE BOARD AND ITS STAKEHOLDER ADVISORY COMMITTEE FOR 30
DAYS PURSUANT TO THE RALPH M. BROWN ACT AND CALIFORNIA ASSEMBLY BILL
361.**

1.4. Items Removed from the Consent Agenda – If Any

1.5. Closed Session Announcement of 8/03/22 Vina GSA Special Meeting

2. ROCK CREEK RECLAMATION DISTRICT (RCRD) GSA SPECIAL BOARD MEETING

2.1. Call to Order – Chair Crain

2.2. Roll Call

3. BUSINESS FROM THE FLOOR

Members of the public may address the Vina and RCRD GSA Boards at this time on any matter not already listed on the agenda; comments are limited to three minutes. The Boards cannot take any action at this meeting on requests made under this section of the agenda.

4. JOINT MEETING REGULAR AGENDA

4.1. **CONSIDERATION OF THE VINA GSA STAKEHOLDER ADVISORY COMMITTEE'S (SHAC) RECOMMENDATIONS OF SPECIFIC PROJECTS OR ACTIVITIES FOR WHICH A SCOPE OF WORK, BUDGET, AND SCHEDULE WOULD BE DEVELOPED FOR FUTURE CONSIDERATION AND POSSIBLE INCLUSION IN A SUSTAINABLE GROUNDWATER MANAGEMENT (SGM) GRANT PROGRAM FUNDING APPLICATION.**

The Vina GSA Management Committee will provide information on the SHAC's review and recommendations on which GSP projects or activities should be further evaluated for inclusion in the SGM Management Program Funding grant application. (*Report – Christina Buck*).

Action: Direction and approval from the two GSA Boards on which projects/activities should a work plan/budget/schedule be developed for the grant application.

5. COMMUNICATIONS AND REPORTS

These items are provided for the Board's information. Although the Board may discuss the items, no action can be taken at this meeting. Should the Board determine that action is required, the item or items may be included for action on a subsequent posted agenda.

5.1 Butte County Public Health Department Quarterly Well Permit Summary

- 6. ADJOURNMENT:** The Vina GSA Board will adjourn to a regular Vina GSA Board Meeting to be held on September 14, 2022, at 5:30 p.m. at the Chico City Council Chamber Building, 421 Main Street. Chico, CA 95928 and on Zoom. The RCRD Board will adjourn to their next regular meeting to be announced and publicly noticed



**Vina
Groundwater Sustainability Agency
Agenda Transmittal**

Agenda Item: 1.3.1

Subject: Resolution renewing the authorization of Teleconference Meetings

Contact: Linda Herman

Phone: 530.896.7800

Meeting Date: 8/10/22

Consent Agenda

Department Summary:

On September 16, 2021, Governor Newsom signed AB 361 to amend the Brown Act to allow legislative bodies to meet via teleconference during a proclaimed state of emergency in accordance with procedures established by AB 361 rather than under the Brown Act's more narrow standard rules. If the Vina GSA Board desires to continue to have the Board and its Stakeholder Advisory Committee (SHAC) the ability to meet remotely via teleconference without meeting the narrower standard Brown Act rules, the Vina GSA Board is required to adopt a resolution making the findings required by AB 361.

The Vina GSA Board may meet using the alternative rules of AB 361 if there is (1) a current state of emergency declared by the Governor pursuant to California Government Code section 8625 and either (2) state or local officials have imposed or recommended measures to promote social distancing or (3) the Vina GSA Board has met or is meeting to decide by a majority vote that meeting in person presents imminent risks to the health or safety of attendees.

On March 4, 2020, Governor Gavin Newsom issued a Proclamation of State of Emergency. Additionally, the Centers for Disease Control indicates that COVID-19 is a highly transmissible virus that is spread when an infected person breathes out droplets and very small particles that contain the virus, and such droplets and particles are breathed in by other people. Since June of 2021, more infectious variants of the virus, known as the Delta, Omicron, and other variants, have emerged.

Based on the state of emergency and the potential imminent risks to attendees of in-person meetings, the Vina GSA Board initially authorized tele/video conference meetings for both the Board and its SHAC at its meeting on 10/13/21 for 30-days. To continue conducting remote meetings after the initial 30-days, AB 361 requires that the Board redetermine whether the state of emergency still exists.

Therefore, the Board will consider the attached resolution making the following findings:

1. The Governor's COVID-19 State of Emergency Declaration issued on March 4, 2020, proclaiming a State of Emergency in the State of California still exists.
2. The Board finds that State officials continue to impose or recommend measures to promote social distancing based on the State Public Health Officer's and/or California Department of Public Health's social distancing recommendations)) and the Department of Industrial Relations' issuance of COVID-19 Prevention regulations through Title 8 of the California Code of Regulations, section 3205 et seq. promoting social distancing in the workplace.
3. That the Board desires to renew its authorization to conduct meetings via tele/video conference for all Regular and Special Meetings of the Board and the SHAC for the 30 days following this resolution, in accordance with Government Code Section 54953(e)(1)(C) and other applicable provisions of the Brown Act.

Fiscal Impact: None

Staff Recommendation: The Management Committee recommends approval of the following Resolution:

RESOLUTION OF THE VINA GROUNDWATER SUSTAINABILTY AGENCY BOARD RENEWING THE AUTHORIZATION TO CONDUCT REMOTE TELECONFERENCE MEETINGS OF THE BOARD AND ITS STAKEHOLDER ADVISORY COMMITTEE FOR 30 DAYS PURSUANT TO THE RALPH M. BROWN ACT AND CALIFORNIA ASSEMBLY BILL 361.

Attachment 1: - AB361 Renewal Resolution

RESOLUTION NO. 06-22

RESOLUTION OF THE VINA GROUNDWATER SUSTAINABILITY AGENCY BOARD RENEWING THE AUTHORIZATION TO CONDUCT REMOTE TELECONFERENCE MEETINGS OF THE BOARD AND ITS STAKEHOLDER ADVISORY COMMITTEE FOR 30 DAYS PURSUANT TO THE RALPH M. BROWN ACT AND CALIFORNIA ASSEMBLY BILL 361.

WHEREAS, all meetings of the Vina Groundwater Sustainability Agency Board (“Board”) and its Stakeholder Advisory Committee (“SHAC”) are open and public, as required by the Ralph M. Brown Act (Cal. Gov’t Code section 54950 *et seq.*), so that any member of the public may attend, participate, and view the SHAC’ conduct while conducting their business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions and requirements; and

WHEREAS, Government Code section 54953(e) requirements include but are not limited to (1) the existence of a state of emergency declared by the Governor pursuant to Government Code section 8625 and (2) State or local officials have imposed or recommended measures to promote social distancing; and

WHEREAS, on March 4, 2020, Governor Gavin Newsom issued a Proclamation of State of Emergency in response to the COVID-19 pandemic and as of the date of this Resolution, the proclaimed state of emergency remains in effect; and

WHEREAS, on March 17, 2020, Governor Newsom issued Executive Order N-29-20, which suspended and modified the teleconferencing requirements under the Brown Act (California Government Code Section 54950 *et seq.*) to allow local legislative bodies to hold public meetings via teleconference; and

WHEREAS, on June 11, 2021, the Governor issued Executive Order N-08-21, which extended the provisions of N-29-20 concerning the conduct of public meetings through September 30, 2021, and the Governor subsequently signed legislation revising Brown Act requirements for teleconferenced public meetings (Assembly Bill 361, referred to hereinafter as “AB 361”); and

WHEREAS, to preserve public health and safety, the State Public Health Officer and/or the California Department of Public Health has issued various orders and guidance regarding COVID-19 prevention measures, which include social distancing recommendations; and

WHEREAS, the California Department of Industrial Relations has issued COVID-19 Prevention regulations in Title 8 of the California Code of Regulations (Section 3205 *et seq.*) which requires employers to (1) have a written COVID-19 prevention program including employee training that promotes physical distancing as an infection prevention measure and (2) consider implementing physical distancing where feasible as a response to COVID-19 outbreaks; and

WHEREAS, based on the foregoing, the Board finds that State officials have imposed or recommended measures to promote social distancing; and

WHEREAS, the Board previously reauthorized conducting remote tele/video conference meetings for both the Board and its SHAC without compliance with Government Code section 54953(b)(3) pursuant to section 54953(e), and authorized such meetings to comply with the requirements to provide the public with access to the meetings as prescribed by section 54953(e)(2); and

WHEREAS, the Board desires to continue to have the flexibility to conduct remote tele/video conference meetings of the Board and its SHAC.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Vina GSA hereby finds as follows:

1. The facts set forth in the above recitals are true and correct and incorporated into this resolution by reference.
2. The Board has reconsidered the circumstances of the state of emergency that continues to exist and was proclaimed by Governor Newsom through a State of Emergency Proclamation on March 4, 2020.
3. The Board finds that State officials continue to impose or recommend measures to promote social distancing based on the State Public Health Officer's and/or California Department of Public Health's social distancing recommendations)) and the Department of Industrial Relations' issuance of COVID-19 Prevention regulations through Title 8 of the California Code of Regulations, section 3205 et seq. promoting social distancing in the workplace.
4. That the Board hereby renews its authorization to conduct meetings via tele/video conference for all Regular and Special Meetings of the Board and the SHAC for the 30 days following this resolution, in accordance with Government Code Section 54953(e)(1)(C) and other applicable provisions of the Brown Act.
5. This Resolution shall take effect immediately upon its adoption and shall be effective for 30 days, or at such time the Board adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the Board and its SHAC may continue to teleconference without compliance with Section 54953(b)(3) of the Brown Act.

THIS RESOLUTION IS PASSED AND ADOPTED by the Vina Groundwater Sustainability Agency Board this 10th day of August 2022, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Evan Tuchinsky, Chair
Vina Groundwater Sustainability Agency

ATTEST:

By: _____
Linda Herman, Management Committee Member
Vina Groundwater Sustainability Agency



Vina
Groundwater Sustainability Agency
Agenda Transmittal

Agenda Item: 4.1

Subject: Potential projects to further develop a more detailed Work Plan/Budget/Schedule for future consideration of grant funding

Contact: Christina Buck

Phone: (530) 552-3593

Meeting Date: August 10, 2022

Regular Agenda

Department Summary: The Department of Water Resources (DWR) is administering the Sustainable Groundwater Management (SGM) Grant Program which will provide Groundwater Sustainability Agencies (GSAs) funding to help implement projects and implementation activities identified in their Groundwater Sustainability Plans (GSPs). There must be one application submitted for the subbasin, but it can include multiple projects that could be implemented by multiple agencies. Therefore, the Vina GSA and Rock Creek Reclamation District GSA (GSAs) will need to coordinate and agree on what projects will be included in a single application for the subbasin. The main content of the SGM Grant Program application is the submission of a work plan, budget, and schedule for each project. Therefore, there is a need to dedicate time and resources to develop this level of detail for any project the GSAs wish to consider for inclusion in the grant application. The Vina GSA Stakeholder Advisory Committee (SHAC) discussed the projects and this topic at their meeting on July 27, 2022. They discussed each project and took a vote on each one whether to include it in the effort to develop more details for the project.

Included herein are the following:

Attachment A - Summary of Vina GSP Implementation Activities (Attachment A), shows a comprehensive list of projects, management actions, and implementation activities discussed in the GSP in the Projects and Management Actions (PMS) and Implementation Chapters (see Attachment D).

Attachment B - The attached table, SHAC Recommendations and Meeting Notes, July 27, 2022 (Attachment B), shows the SHAC's recommendation for each project that they discussed (mainly rows 17-28 from Attachment A).

Attachment C - The comprehensive list in Attachment A has been sorted and regrouped into the table, Summary of Potential Projects for SGM Funding (Attachment C), resulting in 12 possible projects and associated tasks for consideration.

Attachment D - Projects and Management Actions (PMS) and Implementation Chapters describing projects and management actions.

Fiscal Impact: None

Staff Recommendation: Action and direction by the two GSA Boards specifying which projects/activities for which a work plan/budget/schedule will be developed for the grant application.



Vina Groundwater Sustainability Agency
308 Nelson Avenue, Oroville, California 95965
(530) 552-3592 • VinaGSA@gmail.com

MEMORANDUM

DATE: August 10, 2022
TO: Vina GSA Board of Directors and Rock Creek Reclamation District GSA
FROM: Christina Buck, Asst. Director, Butte County Water and Resource Conservation
RE: Potential projects to further develop a more detailed Work Plan/Budget/Schedule for future consideration of grant funding

Overview

The Department of Water Resources (DWR) is administering the [Sustainable Groundwater Management \(SGM\) Grant Program](#) which will provide Groundwater Sustainability Agencies (GSAs) funding to help implement projects and implementation activities identified in their Groundwater Sustainability Plans (GSPs). The Final [Guidelines](#) and [Proposal Solicitation Package](#) (PSP) describing project eligibility and the application process were released in December 2021.

The Vina Subbasin is categorized as a “high priority subbasin” and is eligible for Round 2 of this funding opportunity. The timing is still uncertain, but the solicitation is expected to open late 2022 or early 2023. Grant awards will be a minimum of \$1 million per subbasin and up to \$20 million per subbasin. There must be one application submitted for the subbasin, but it can include multiple projects that could be implemented by multiple agencies. Therefore, the Vina GSA and Rock Creek Reclamation District GSA (GSAs) will need to coordinate and agree on what projects will be included in a single application for the subbasin.

The main content of the SGM Grant Program application is the submission of a work plan, budget and schedule for each project. That is, each project needs to clearly and consistently describe what will be done (tasks/subtasks and deliverables) for how much money, and over what time frame. Most of the projects or implementation activities in the Vina GSP are not described or developed out to this level of detail. Therefore, there is a need to dedicate time and resources to develop this level of detail for any project the GSAs wish to consider for inclusion in the grant application. This is especially evident by the fact that most of the GSP projects list “To Be Determined (TBD)” for the project cost. To be able to prioritize these projects for consideration of funding, additional effort is needed to estimate the cost of any given project. Therefore the question is, which projects should be moved forward with this additional effort.

The Board of Supervisors approved a budget for the Department of Water and Resource Conservation that included resources to support development of SGM Grant Program applications in the Vina,

Wyandotte Creek, and Butte Subbasins. A consultant will be retained to aide scoping these projects out with more detail. The first step is to identify which projects should be considered for funding at this time and therefore are worth dedicating time and money to moving forward. Or in contrast, which of the projects should not be pursued at this time, and therefore will simply remain on the GSP list of projects. They could be more fully developed at a later date when funding or circumstances warrant it. The result of more fully developing any given project right now will be a Work Plan, Budget, and Schedule consistent with the requirements of the grant application for each project identified by the GSA boards.

SHAC Discussion and Recommendations

The Stakeholder Advisory Committee (SHAC) discussed the projects and this topic at their meeting on July 27, 2022. Prior to the meeting, staff sent a survey to the SHAC members. The question was, “For each project, should this project be considered for funding and implementation at this time and therefore a more detailed scope/budget/schedule should be developed for future discussion and consideration by the public/SHAC/GSA Boards?” They could respond with *yes*, *no*, or *not sure-would like to discuss it*. The results of the survey provided a starting point for the SHAC’s discussion. They discussed each project and took a vote on each one whether to include it in the effort to develop more details for the project.

The attached table, **Summary of Vina GSP Implementation Activities** (Attachment A), shows a comprehensive list of projects, management actions, and implementation activities discussed in the GSP in the Projects and Management Actions (PMS) and Implementation Chapters (see Attachment D). The rows that are highlighted in gray are either projects or activities that are related to SGMA compliance, are “planned” projects, or are activities the Implementation Chapter indicates the GSAs will do (i.e. filling data gaps, inter-basin coordination). This includes rows 1-16. Rows 17-28 are projects/activities that may be considered for the SGM Implementation funding opportunity and were the focus of the SHAC’s discussion. The second table lists project/activities that are not eligible nor applicable to the current funding opportunity.

The attached table, **SHAC Recommendations and Meeting Notes, July 27, 2022** (Attachment B), shows the SHAC’s recommendation for each project that they discussed (mainly rows 17-28 from Attachment A). The notes column of the table captures aspects of their discussion and in some cases, concerns that were raised. The video time stamp for the discussion is included for easy reference if Board members or the public would like to hear the details of the discussion for any particular project. The recorded video and audio are available on the Vina GSA website, <https://www.vinaqsa.org/2022-07-27-stakeholder-advisory-committee-meeting>.

Potential Projects for Discussion and Direction

During the SHAC discussion of the projects/activities listed in Attachment A, it became clear that some of the 28 identified projects could be grouped as tasks under a broader project. Therefore, the comprehensive list in Attachment A has been sorted and regrouped into the table, **Summary of Potential Projects for SGM Funding** (Attachment C), resulting in 12 possible projects and associated tasks for consideration.

Requested Action

Action by the GSA Boards specifying which projects/activities for which a work plan/budget/schedule will be developed.

Attachments

- A. Summary of Vina GSP Implementation Activities
- B. SHAC Recommendations and Meeting Notes, July 27, 2022
- C. Summary of Potential Projects for SGM Funding
- D. GSP PMA and Implementation Chapters

Summary of Vina GSP Implementation Activities

version: August 10, 2022 GSA Board Meeting

Row #	Project/Activity	Cost	Category	Implementing Agency	SHAC Recommendation	Notes	Expected GW Demand Reduction (AF/yr)
1	Monitoring- Groundwater Levels	\$20,000/yr	Monitoring	DWRC	Include		NA
2	Monitoring- Water Quality	\$8000/yr	Monitoring	DWRC	Include		NA
3	Data Management System (Section 6.4)	\$5,000/yr	Data Analysis	DWRC	Include		NA
4	Update Data Management System	\$50,000	Data Analysis	DWRC	Include		NA
5	Review of Groundwater Data	\$5,000/yr	Data Analysis	DWRC	Include		NA
6	Annual Report	30,000/yr	Reporting and Evaluation	GSAs	Include		NA
7	GSP Updates and Response to DWR Comments	TBD	Implementation Activity	Vina GSA	Include	Include updates to address UR #6- deadline 2025	NA
8	5.4.2 Butte Basin Model Update	\$50,000 - \$100,000	Data Collection	DWRC	Include	Incorporate into other projects	NA
9	5.4.4 Interconnected Surface Water/Associated impacts on Groundwater Dependent Ecosystems	\$100,000 – \$250,000	Data Collection	DWRC/GSAs	Include	Address data gap	NA
10	5-year Evaluation Report	\$100,000	Reporting and Evaluation	GSAs	Include		NA
11	6.7 Interbasin Coordination		Implementation Activity	DWRC/GSAs	Include		NA
12	5.4.3 Community Monitoring	\$50,000 - \$150,000	Data Collection	Vina GSA	Include	Address data gap re establishing SMC based on domestic wells	NA
13	5.2.3.1 Agricultural Irrigation Efficiency	TBD **	Project (planned)	TBD	Include		Up to 4,000
14	5.2.3.3 Scoping for Flood MAR/Surface Water Supply and Recharge	TBD	Project (planned)	Vina GSA/RCRD GSA	Include		NA
15	5.2.3.4 Community Water Education Initiative	\$10,000 - \$200,000/year depending on component	Project (planned)	CSUC CWE	Include	Component 1: \$50-100K annually Component 2: \$10,000-\$200,000 annually Component 3: \$10,000-\$25,000 annually	NA
16	Sand Creek Phase 2 Implementation (5.2.4.8 Surface Water Supply and Recharge)	TBD	Project (potential)	RCRD	Develop Project for Consideration	A feasibility study is currently underway funded by Prop 1 IRWM grant	TBD
17	5.2.4.2 Agricultural Surface Water Supplies	TBD	Project (potential)	TBD	Include		2,000 – 3,000
18	5.2.4.3 Streamflow Augmentation	TBD	Project (potential)	Vina GSA	Include		1,000 – 5,000
19	5.2.4.4 Community Monitoring Program	TBD	Project (potential)	CSUC	Bring back (include)		NA
20	5.2.4.5 Recycled Wastewater	TBD	Project (potential)	City of Chico/Vina GSA	Include		5,000
21	5.2.4.7 Removal of Invasive Species	TBD	Project (potential)	CSUC	Bring back (include)		TBD
22	5.2.4.8 Surface Water Supply and Recharge (ex. Sand Creek, Lindo Channel)	TBD	Project (potential)	TBD	Do not include		1,000 per project
23	5.2.5.1 Extend Orchard Replacement	TBD	Project (conceptual)	TBD	Include		4,000 – 8,000
24	5.4.1 Contour Mapping	\$20,000 - \$50,000	Data Collection	Vina GSA	Include	Could incorporate into Interbasin Coordination and/or GWL monitoring	NA
25	5.3.2 Domestic Well Mitigation	TBD	Management Action	TBD	Include		NA
26	5.3.3 Well Permitting Ordinance	TBD	Management Action	Butte County	Include		NA
27	5.3.6 Expansion of Water Purveyors' Service Area (ex Cal Water, Durham Irrigation District)	TBD	Management Action	TBD	Include		TBD
28	5.3.7 Groundwater Allocation	TBD	Management Action	GSAs	Do not include		TBD

Not Considered for SGM Grant Application

Row #	Project/Activity	Cost	Category	Implementing Agency	Reason	Notes
1	5.2.3.2 Residential Conservation	TBD	Project (planned)	Cal Water	Ineligible	
2	Identify Funding Alternatives	TBD	Implementation Activity	Butte County/Vina GSA	Ineligible	
3	5.2.3.5 Fuel Management for Watershed Health	TBD	Project (planned)	CSUC	Ineligible	Outside of the subbasin
4	Administrative Activities (Table 6-1)	\$225,000	Implementation Activity	Vina GSA	Ineligible	
5	5.3.1 General Plan Updates		Management Action	Butte County/Chico/GSAs	Not Applicable	Funding not needed.
6	5.2.5.2 Recharge from the Miocene Canal	TBD	Project (conceptual)	PGE/Vina GSA	Not Applicable	Not ready for implementation
7	5.3.5 Prohibition of Groundwater Use for Ski (Recreational) Lakes	TBD	Management Action	Butte County/Vina GSA	Not Applicable	Funding not needed. GSA would need to work with Butte County Development Services directly.
8	5.2.4.6 Rangeland Management	TBD	Project (potential)	CSUC	Not Applicable	Not ready for implementation
9	5.2.4.1 Paradise Irrigation District Intertie	TBD	Project (potential)	Paradise Irrigation District	Not Applicable	PID Board not pursuing this project at this time.
10	5.3.4 Landscape Ordinance	TBD	Management Action	GSAs/Butte County/Chico	Not Applicable	Funding not needed. County uses state's landscaping requirements which are focused on water saving

DWRC- Butte County Department of Water and Resource Conservation
 CSUC - California State University Chico
 GSA- Groundwater Sustainability Agency
 RCRD- Rock Creek Reclamation District

TBD - To be determined
 NA- Not applicable

Attachment B: SHAC Recommendations and Meeting Notes, July 27,2022

Row #	Project/Activity	Category	Implementing Agency	Survey Results	SHAC Recommendation	Notes	SHAC Meeting Video Timestamp
1	5.2.4.5 Recycled Wastewater	Project (potential)	City of Chico/Vina GSA	Majority Yes	Include; 9-0-0-1*	Feasibility Study. City would help with scope development	54:38:00
2	5.2.5.1 Extend Orchard Replacement	Project (conceptual)	TBD	Majority Yes	Include; 9-0-0-1	Sam Lewis developing this project. Incentivize growers to delay orchard replacement through state/fed funding	1:05:35
3	5.4.1 Contour Mapping	Data Collection	Vina GSA	Majority Yes	Include; 9-0-0-1	CSUC could be involved.	1:14:10
4	5.3.6 Expansion of Water Purveyors' Service Area (ex Cal Water, Durham	Management Action	TBD	Majority Yes/Discuss	Include; 9-0-0-1	Feasibility study to define the opportunity. Growth including concerns- expand service to existing domestic wells reliant on gw	1:19:13
5	5.2.4.2 Agricultural Surface Water Supplies	Project (potential)	TBD	Majority Yes	Include; 6-2-1-1	Feasibility Study. Examine legal implications. Question re if this includes Table A. Consider effects to groundwater. And effectiveness of recharge to Vina (concerns of out of basin)	1:26:20
6	5.2.4.3 Streamflow Augmentation	Project (potential)	Vina GSA	Majority Yes	Include; 8-1-0-1	Concerns re legal implications of recharge projects. Question re inclusion of Big Chico Creek, Little Chico Creek	1:44:25
7	5.2.4.4 Community Monitoring Program (water table monitoring on CSUC Ecological Reserve)	Project (potential)	CSUC	Discuss	Bring back (include); 9-0-0-1	Could be integrated with shallow monitoring under Interconnected SW/GDE data gap. Expand to WB monitoring (ET etc)? CSUC seeking grant funding. Staff to work with CSUC to bring back more information if supported	1:54:45
8	5.2.4.7 Removal of Invasive Species	Project (potential)	CSUC	Discuss	Bring back (include); 6-3-0-1	Question: Has CSUC coord. with RCD for possible funding? When know answer, bring back for discussion.	2:15:45
9	5.2.4.8 Surface Water Supply and Recharge (ex. Sand Creek, Lindo Channel)	Project (potential)	TBD	Discuss	Do not include; motion to include failed 4-5-0-1	Focused in on Lindo Channel. There are infrastructure needs/rebuilding the system. There was an unfunded DWR project previously proposed. Nature of project to hold or send more water for longer periods of time down the channel to increase natural recharge. Concern of legal implications of recharge	2:22:10
10	5.3.2 Domestic Well Mitigation	Management Action	TBD	Discuss	Include; 9-0-0-1	Addresses human right to water and DACs. Expansion of Water Purveyors project is related to addressing domestic well mitigation. What other programs exist and how this falls into responsibility of GSA?	2:38:40
11	5.3.3 Well Permitting Ordinance	Management Action	Butte County	Discuss	Include; 7-2-0-1		2:54:35
12	5.3.7 Groundwater Allocation	Management Action	GSA's	Majority No	Do not include; 6-3-0-1**	Allocation addressed through interbasin coordination and agreements in light of mega drought	2:59:35
13	5.3.4 Landscape Ordinance	Management Action	Butte County/Chico	Majority Yes	Accepted staff recommendation; did not vote	Staff recommends pulling this	3:11:48

For each project, a motion was made to include the project (with exception of Groundwater Allocation). Vote Count Order: yes-no-abstain-absent

All SHAC members were present except SHAC member Greg Sohnrey

** Motion was made to not include the project and it passed, 6-3-0-1

Attachment C: Summary of Potential Projects for SGM Funding

#	Potential Project	Category	Implementing Agency	SHAC Recommendation	Notes	Expected GW Demand Reduction (AF/yr)
A.	Grant Administration	NA	Vina GSA/TBD	NA	The cost of administering this grant can be included for reimbursement.	NA
1	GSP Implementation, Outreach, and Compliance Activities					
1.1	Monitoring- Groundwater Levels	Monitoring	DWRC	Include		NA
1.2	Monitoring- Water Quality	Monitoring	DWRC	Include		NA
1.3	Update and Maintain Data Management System (Section 6.4)	Data Analysis	DWRC	Include		NA
1.4	Annual Reports	Reporting and Evaluation	GSA's	Include	Incorporate analysis of Groundwater Data (\$5K/yr)	NA
1.5	GSP Updates and Response to DWR Comments	Implementation Activity	GSA's	Include	Include updates to address UR #6- deadline 2025	NA
1.6	5-year Evaluation Report	Reporting and Evaluation	GSA's	Include		NA
1.7	Outreach and Education Program.	Project (planned)	GSA's/CSUC CWE	Include	5.2.3.4 Community Water Education Initiative	NA
2	Interbasin Coordination (Section 6.7)					
2.1	GSP Evaluation	Data Analysis	TBD	NA		
2.2	Technical Coordination on Undesirable Result #6: Depletion of Surface Water		TBD	NA		
2.3	5.4.1** Contour Mapping	Data Collection	TBD	Include	Or could be incorporated into Project 1 above	NA
3	Addressing Data Gaps					
3.1	5.4.4 Interconnected Surface Water/Associated impacts on Groundwater Dependent Ecosystems	Data Collection	DWRC/GSA's	Include	Address data gap	NA
3.2	5.4.3 Community Monitoring: Domestic Well Survey	Data Collection	Vina GSA	Include	Address data gap re establishing SMC based on domestic wells	NA
3.3	Enhancements to Monitoring Networks	Data Collection	GSA's	NA		NA
3.4	5.2.4.4 Community Monitoring Program	Project (potential)	CSUC	Bring back (include)	Monitoring sw, groundwater levels on Big Chico Creek Ecological Reserve within Vina Subbasin	NA
3.5	5.4.2 Butte Basin Model Update	Data Collection	DWRC	Include	Incorporate into other projects	NA
4	Evaluation and Implementation of Surface Water Supply and Recharge Opportunities					
4.1	5.2.3.3 Scoping for Flood MAR/Surface Water Supply and Recharge	Project (planned)	Vina GSA/RCRD GSA	Include		NA
4.2	Sand Creek Phase 2 Implementation (5.2.4.8 Surface Water Supply and Recharge)	Project (potential)	RCRD	Develop Project for Consideration	A feasibility study is currently underway funded by Prop 1 IRWM grant	TBD
4.3	5.2.4.2 Agricultural Surface Water Supplies	Project (potential)	TBD	Include		2,000 – 3,000
4.4	5.2.4.3 Streamflow Augmentation	Project (potential)	Vina GSA	Include		1,000 – 5,000
4.5	5.2.4.8 Surface Water Supply and Recharge (ex. Sand Creek, Lindo Channel)	Project (potential)	TBD	Do not include		1,000 per project
5	5.2.3.1 Agricultural Irrigation Efficiency	Project (planned)	TBD	Include		Up to 4,000
6	5.2.5.1 Extend Orchard Replacement	Project (conceptual)	TBD	Include		4,000 – 8,000
7	5.3.2 Domestic Well Mitigation	Management Action	TBD	Include		NA
8	5.3.3 Well Permitting Ordinance	Management Action	Butte County	Include	Butte County in coordination with GSA's	NA
9	5.3.6 Expansion of Water Purveyors' Service Area (ex Cal Water, Durham Irrigation District)	Management Action	TBD	Include	Feasibility study to define the opportunity.	TBD
10	5.2.4.5 Recycled Wastewater	Project (potential)	City of Chico/Vina GSA	Include		5,000
11	5.2.4.7 Removal of Invasive Species	Project (potential)	CSUC	Bring back (include)		TBD
12	5.3.7 Groundwater Allocation	Management Action	GSA's	Do not include		TBD

Gray rows indicate projects/activities required for SGMA compliance or consistent with planned activities as described in the GSP

** Refers to section number in the GSP where project is described

DWRC- Butte County Department of Water and Resource Conservation

CSUC - California State University Chico

GSA- Groundwater Sustainability Agency

NA- Not applicable

RCRD- Rock Creek Reclamation District

TBD - To be determined

5. PROJECT AND MANAGEMENT ACTIONS

This section includes relevant projects and management actions information to satisfy CCR Title 23 § 354.42 and 354.44. The projects and management actions described in this section will help achieve the Vina Subbasin’s sustainability goal.

5.1 Projects, Management Actions, and Adaptive Management Strategies

The objective and purpose of the GSP is to achieve groundwater sustainability in the Vina Subbasin. This will require projects and management actions aimed at avoiding undesirable results, achieving measurable objectives, and responding to changing conditions in the basin. The Vina GSA and the RCRD GSA have identified projects and management actions tailored to benefit the Vina Subbasin’s groundwater supply and quality for the benefit of rural areas, communities, agricultural users and the environment. The approach targets both identifying and increasing alternative sources of supply and reducing groundwater demand. The GSP identifies groundwater monitoring programs to monitor groundwater conditions, investigation of additional water sources to supplement the use of groundwater, and conservation and educational programs to reduce groundwater demand.

5.2 Projects

5.2.1 Project Identification

Projects were identified through a lengthy outreach effort involving the SHAC and the GSAs. The process included soliciting input from governmental agencies, water purveyors, and local landowners. The Vina GSA’s website allowed project proponents to input the available information on each project.

The majority of projects submitted were proposed by the Vina GSA, with some being a joint effort with the RCRD GSA. Some of the projects also include other proponents, such as CSUC, PG&E, Cal Water, local agricultural farmers, and others. The list of proponents and other entities involved in the projects is included in Table 5-1 below. The schedule to implement the projects is likely to vary depending upon Subbasin conditions, and the expected benefits of PMAs may also vary year to year.

The provided project information was compiled into an initial draft list with similar and overlapping projects combined as appropriate. The draft list was presented to the Vina GSA Stakeholder Advisory Committee in their July 15, 2021, meeting and to the GSA Boards at their August meetings. The projects were then evaluated based on the following criteria:

- Project addresses one or more of the Undesirable Results
- Project is implementable with respect to technical complexity, regulatory complexity, institutional consideration, and public acceptance
- Project is implementable within the SGMA timeframe
- Project benefits Underrepresented Communities (URCs)
- Project is in an area where water quality is suitable for use

5.2.2 Project Implementation

The purpose of planning and implementing projects is to ensure the Vina Subbasin achieves sustainability. Projects are categorized in three categories - Planned, Potential, and Conceptual – based on current stage of planning or implementation. This section includes Planned, Potential, and Conceptual projects. Additional projects may be added in the future once identified. The specific projects included in the GSP will be implemented, operated, and owned by the individual project proponent(s). Through annual reports, GSP updates, and the evaluation of IMs, MT, and MO, the GSAs will evaluate whether the implementation of projects is sufficient to achieve sustainability. Depending on how projects are achieving sustainability, or otherwise impacting the ability of the Vina Subbasin to achieve sustainability, the GSAs may prioritize the development of projects, seek funding for prioritized projects, or develop guidelines for existing projects.

5.2.2.1 List of Projects

Several projects to achieve the Vina Subbasin’s sustainability goal were identified. The initial set of projects was reviewed by the SHAC. A final list of 15 possible projects is included in this GSP, and they are categorized into several project types, including direct and in-lieu recharge, intra-basin water transfers, water recycling, demand conservation, and monitoring. Projects are further classified into three categories based on project status: Planned, Potential, and Conceptual, as defined below. All projects, regardless of status, remain subject to available funding, any required CEQA compliance, and any required approvals. The list of possible projects identified in this GSP are an initial list that may be further expanded or modified as the GSAs work toward sustainability by 2042.

- Planned Projects – Currently, five Planned Projects have been identified. Projects in this category are anticipated to move forward to help achieve the region’s sustainability before 2042.
- Potential Projects – Currently, eight Potential Projects have been identified. Projects in this category are currently in the initial planning stages and may move forward as feasibility and project requirements are determined. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects.
- Conceptual Projects – Currently, two Conceptual Projects have been identified. Projects in this category are in the early conceptual planning states and would require significant additional work to move forward. Conceptual Projects represent potential future projects that could conceptually provide a benefit to the Vina Subbasin in the future, but that would need to be further developed.

This subsection of the GSP satisfies the requirements of CCR title 23 § 354.44. Consistent with SGMA requirements, the project descriptions for projects contain information regarding:

- The MO benefitted by the project
- Permitting and regulatory processes
- Timetable for initiation and completion

- Expected benefits
- How the project will be accomplished
- Legal authority
- Estimated costs and plans to meet costs
- Implementation circumstances
- Public noticing

Table 5-1 provides a summary of the 15 projects. Full descriptions are included below.

Table 5-1: List of Sustainable Groundwater Management Act Projects

Project Name	Project Type	Identified Project Proponent and Other Potential Participating Entities	Measurable Objective Expected to Benefit	Current Status	Timetable (initiation and completion)	Estimated Costs	Expected Groundwater Demand Reduction (Acre-Feet/year)
Planned Projects							
5.2.3.1 Agricultural Irrigation Efficiency	Conservation	Vina GSA; local landowners, other entities to be determined	Groundwater Levels, Groundwater Storage	Planning Stage	2024-2030	To be determined	Up to 4,000 (based on a reduction up to 2%)
5.2.3.2 Residential Conservation	Conservation	Cal Water Chico, Vina GSA, local landowners, other entities to be determined	Groundwater Levels	Planning Stage	2022-2025	To be determined	100
5.2.3.3 Scoping for Flood Managed Aquifer Recharge (FloodMAR)/Surface Water Supply and Recharge	Direct Recharge, In-lieu Recharge	Vina GSA, RCRCD GSA, local landowners, other entities to be determined	Groundwater Levels	Planning Stage	2022-2032	To be determined	Not applicable
5.2.3.4 Community Water Education Initiative	Education and Outreach	Vina GSA, CSUC, CWE, Chico State Enterprises, local landowners, other entities to be determined	Groundwater Levels, Groundwater Storage, Water Quality, Land Subsidence, Surface Water Depletion, Education and Outreach	Ready for Implementation	Currently ongoing, expansion by 2023 depending on funding	Component 1: \$50-100K annually Component 2: \$10,000-\$200,000 annually Component 3: \$10,000-\$25,000 annually	To be determined
5.2.3.5 Fuels Management for Watershed Health	Conservation	Vina GSA, CSUC, Chico State Enterprises, local landowners, other entities to be determined	Groundwater Levels, Groundwater Storage, Water Quality, Surface Water Depletion	Part of project currently ongoing, rest in planning stage	450 acres ongoing; 4,000 acres 2021-2030; 6,000 to 10,000 acres 2025-2040	\$8.0 million - \$14.0 million	To be determined
Potential Projects							
5.2.4.1 Paradise Irrigation District Intertie	In-Lieu Recharge	Vina GSA; PID, Cal Water, local landowners, other entities to be determined	Groundwater Levels	Planning Stage	To be determined, after Spring 2022	To be determined	5,000
5.2.4.2 Agricultural Surface Water Supplies	Intra-Basin Water Transfer	Vina GSA, RCRD, local landowners, other entities to be determined	Groundwater Levels	Planning Stage	2025-2032	To be determined	2,000 – 3,000
5.2.4.3 Streamflow Augmentation	Direct Recharge, In-Lieu Recharge	Vina GSA, RCRD GSA, PID, PG&E, local landowners, other entities to be determined	Groundwater Levels, Surface Water Depletion	Initial Planning Stage	2022-2025	\$50-\$100 per acre-foot	1,000-5,000
5.2.4.4 Community Monitoring Program	Monitoring	Vina GSA, CSUC, Chico Ecological Reserves, local landowners, other entities To be determined	Groundwater Levels	Planning Stage	2022-2025	To be determined	Not applicable
5.2.4.5 Recycled Wastewater	Direct Recharge, Water Recycling	Vina GSA, City of Chico, local landowners, other entities to be determined	Groundwater Levels	Planning Stage	2030-2038	To be determined	5,000
5.2.4.6 Rangeland Management	Conservation	Vina GSA, CSUC, Chico State Enterprises, other entities to be determined	Groundwater Levels	Planning Stage	Baseline data collection (2021-2022) Development of Master Management Plan (2022-2024)	To be determined	To be determined

Project Name	Project Type	Identified Project Proponent and Other Potential Participating Entities	Measurable Objective Expected to Benefit	Current Status	Timetable (initiation and completion)	Estimated Costs	Expected Groundwater Demand Reduction (Acre-Feet/year)
5.2.4.7 Removal of Invasive Species	Conservation	Vina GSA, CSUC, Chico State Enterprises, other entities to be determined	Groundwater Levels, Groundwater Storage	Planning Stage	Inventory and mapping of properties: 2022-2023 Development of invasive management for water retention plan: 2023-2024 Identify and secure funding: 2022-2026 Implement projects and measure results: 2025 and beyond	To be determined	To be determined
5.2.4.8 Surface Water Supply and Recharge	Direct Recharge	Vina GSA, RCRD GSA, local landowners, other entities to be determined	Groundwater Levels	Planning Stage	Sand Creek / Lindo Channel – 2022-2032; Other projects – 2022 – 2042	To be determined	1,000 / project
Conceptual Projects							
5.2.5.1 Extend Orchard Replacement	Conservation	Vina GSA, local landowners, other entities to be determined	Groundwater Levels	Conceptual Planning Stage	To be determined	To be determined	4,000-8,000
5.2.5.2 Recharge from the Miocene Canal	Direct Recharge	Vina GSA PG&E, Butte County, local landowners, other entities to be determined	Groundwater Levels	Conceptual Planning Stage	After 2025	To be determined	2,000 based on 10,000 acre-feet available for recharge (20% efficiency)

5.2.3 Planned Projects

Projects categorized as Planned Projects are expected to move forward and be completed to achieve the Vina Subbasin’s sustainability goal by 2042. The estimated groundwater supply from these projects is expected to offset the projected overdraft of 10,000 AFY.

5.2.3.1 Agricultural Irrigation Efficiency

A survey is currently being conducted in North and South Vina by the Vina GSA, Agricultural Groundwater Users of Butte County, and Butte County Farm Bureau in order to evaluate current irrigation methods and practices, identify opportunities and methods to improve irrigation efficiency, determine potential issues preventing the adoption of efficiency practices, and provide recommendations for increasing participation in these practices. The results of this survey are expected to be available in September 2022, with implementation of the project expected to be initiated between 2024 and 2030. Recommendations from the survey will be made available to the local agricultural community, and implementation of the practices will be voluntary. The Vina GSA along with participating partners will pursue grant funds to help implement these practices. It is estimated that the adoption of more efficient practices could reduce groundwater demand by up to 2%, which translates to a reduction in groundwater demand of up to 4,000 AFY.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA; local landowners, other entities to be determined
Project Type:	Conservation
Estimated Groundwater Offset and/or Recharge:	–Up to 4,000 acre-feet/year

Measurable Objective Expected to Benefit: This project will address declining water levels and the declining volume of groundwater stored in the aquifer. The main objective of the project is to reduce groundwater demand by modifying irrigation practices.

Project Status: This project is in the planning stages.

Required Permitting and Regulatory Process: None

Timetable for Initiation and Completion: Project will be initiated in 2024

Expected Benefits and Evaluation: A survey that consolidates data on the adoption of irrigation methods and practices by agricultural groundwater users will identify where more efficient practices can be implemented. This can help focus efforts and finances on areas where a reduction in overall groundwater demand is needed and feasible.

How Project Will Be Accomplished/Evaluation of Water Source: This project is a demand-side conservation project. No additional water source will be utilized for this project.

Legal Authority: The project would be under the authority of Vina GSA and potential future participating partners.

Estimated Costs and Plans to Meet Costs: To be determined, funding via Proposition 1, Proposition 68, USDA, Drought Resiliency Grants

Circumstances for Implementation: This project is a Planned Project that is anticipated to move forward.

Trigger for Implementation and Termination: The project will be initiated after the recommendations from the initial survey results are available.

Process for Determining Conditions Requiring the Project to Occur: As mentioned above, the survey is already underway and once analysis is complete, recommendations based off the results will be made available for voluntary implementation.

5.2.3.2 *Project: Residential Conservation*

Cal Water Chico, which provides water to the City of Chico via groundwater, proposed a series of conservation projects under their 2020 UWMP, including toilet replacement, urinal valve and bowl replacement, clothes washer replacement, residential conservation kits, smart controllers, high efficiency irrigation nozzles, and turf buy-back.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Cal Water Chico, Vina GSA, local landowners, other entities to be determined
Project Type:	Conservation
Estimated Groundwater Offset and/or Recharge:	100 AFY

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is in the planning stages.

Required Permitting and Regulatory Process: None

Timetable for Initiation and Completion: 2022-2025

Expected Benefits and Evaluation: The implementation of several different conservation projects for residential areas is expected to reduce groundwater demand by 100 AFY in Chico.

How Project Will Be Accomplished/Evaluation of Water Source: This project is a demand-side conservation project implemented by Cal Water in residential areas. No additional water source will be utilized for this project.

Legal Authority: The project would be under the authority of Vina GSA and Cal Water Chico. Cal Water Chico would initiate the conservation programs.

Estimated Costs and Plans to Meet Costs: To be determined, funding via Proposition 1, Proposition 68, Drought Resiliency Grants, Cal Water.

Circumstances for Implementation: This project is a Planned Project that is anticipated to move forward.

Trigger for Implementation and Termination: Increased groundwater demand due to an increasing number of planned residential developments in Chico (according to the City of Chico and Butte County General Plans).

Process for Determining Conditions Requiring the Project to Occur: This is a Planned Project that is anticipated to move forward.

5.2.3.3 Project: Scoping for Flood MAR/Surface Water Supply and Recharge

Under this project, Vina GSA and RCRD GSA will expand on the Flood MAR initiative, which was originally developed by DWR to promote recharge programs that use fields, recharge basins, and/or recharge ponds to divert high flows in creeks and streams. Individual recharge projects will eventually occur, but this particular project will focus on the initial scoping and identify specific recharge opportunities in the Vina Subbasin. At first, Vina GSA and RCRD GSA will focus their efforts on areas with the greatest need for recharge and seek grants and other funding sources to implement the projects. Interested landowners would be identified and participation in the program would be voluntary.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, RCRCD GSA, local landowners, other entities to be determined
Project Type:	Direct Recharge, In-Lieu Recharge
Estimated Groundwater Offset and/or Recharge:	Not applicable

Estimated Groundwater Offset and/or Recharge: Not applicable. Future recharge projects are possible based on results of scoping.

Measurable Objective Expected to Benefit: Future increase of groundwater levels.

Project Status: This project is in the planning stages.

Required Permitting and Regulatory Process: Not applicable

Timetable for Initiation and Completion: 2022-2032

Expected Benefits and Evaluation: This project would develop the first steps of the Flood MAR initiative and recharge efforts for the Vina Subbasin region and identify specific groundwater recharge and management projects based on feasibility, need, and available funding. The initiation of this project would then lead to future recharge projects.

How Project Will Be Accomplished/Evaluation of Water Source: This project will help to identify and develop specific recharge projects in the region, which will then individually determine recharge sources.

Legal Authority: The project would be under the authority of the Vina GSA and RCRD GSA.

Estimated Costs and Plans to Meet Costs: To be determined, funding via Proposition 1 and Proposition 68.

Circumstances for Implementation: This project is a Planned Project that is anticipated to move forward.

Trigger for Implementation and Termination: None

e This is a Planned Project that is anticipated to move forward.

5.2.3.4 Project: Community Water Education Initiative

The Community Water Education Initiative, proposed by CSUC’s CWE, would consist of two main components:

Community Water Education Project – The CWE would lead this component of the project to expand on community outreach and education associated with water-related topics and issues of the region. CWE would focus on topics such as regional groundwater issues, connectivity of surface and groundwater, decision-making during drought years, basic aquifer knowledge, and more, and target agricultural well users, domestic well users, and municipal customers. The scope would also include technical seminars and field trips, as well as creating educational materials such as fact sheets, printed materials, and website content.

Big Chico Creek Watershed Tour – CWE currently hosts a Big Chico Creek Watershed Tour every year that lasts for four days (2 weekends in March and April) and that takes participants from the watershed’s headwaters to the Big Chico Creek Ecological Reserve, through CSUC campus, and to its confluence with the Sacramento River. During the program, participants learn about the watershed, explore various water issues, and help CSUC faculty research the health of the watershed. Under this project, CSUC proposes to expand the program to include community members and more groundwater education, with a focus on the Vina Subbasin, with the goal to help community members better understand their role in sustainable groundwater management.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, CSUC, CWE, Chico State Enterprises, local landowners, other entities to be determined
Project Type:	Education and Outreach
Estimated Groundwater Offset and/or Recharge:	Not applicable

Measurable Objective Expected to Benefit: Groundwater Levels, Groundwater Storage, Water Quality, Land Subsidence, Surface Water Depletion, Education and Outreach

Project Status: This project is ready for implementation. Possible expansion by 2023 depending on funding.

Required Permitting and Regulatory Process: None

Timetable for Initiation and Completion: Currently measuring and providing community education with the possibility of expansion by 2023 depending on funding.

Expected Benefits and Evaluation: This project would expand the education and outreach on important watershed and groundwater issues in the region, helping community members better understand their role in sustainable water management.

How Project Will Be Accomplished/Evaluation of Water Source: This is an education and outreach project provided through CSUC that does not require a water source.

Legal Authority: The project would be under the authority of CSUC’s CWE.

Estimated Costs and Plans to Meet Costs: \$50-100K annually (Component 1); \$10,000-\$200,000 annually (Component 2); \$10,000-\$25,000 annually (Component 3). Funding via Proposition 1 and Proposition 68

Circumstances for Implementation: This project is a Planned Project that is anticipated to move forward.

As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management. Implementation of Potential Projects will be based on long-term management or changing needs of the GSA or Subbasin. Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Subbasin.

5.2.3.5 *Project: Fuel Management for Watershed Health*

This project would involve fuel management in the Upper Watershed, including multiple sites on the 3,950-acre Big Chico Creek Ecological Reserve, 1,500 acres above the Reserve in the Big Chico Creek Watershed, and on private land within the watershed. Fuel reduction projects are currently ongoing at 460 acres. Further fuel reduction is planned for an additional 4,000 acres between 2021 and 2030 and another 6,000 to 10,000 acres for 2025 through 2040 with the City of Chico Parks Department and other private landowners.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, CSUC, Chico State Enterprises, local landowners, other entities to be determined
Project Type:	Conservation
Estimated Groundwater Offset and/or Recharge:	To be determined
Other Potential Participating Entities	CSUC, Chico State Enterprises

Measurable Objective Expected to Benefit: Groundwater Levels, Groundwater Storage, Water Quality, Surface Water Depletion

Project Status: Part of this project is currently ongoing, with other parts in the planning stages.

Required Permitting and Regulatory Process: CEQA

Timetable for Initiation and Completion: 450 acres have ongoing fuel reduction; 4,000 acres planned for 2021-2030; 6,000 to 10,000 acres planned for 2025-2040

Expected Benefits and Evaluation: Improved fuel management would prevent inadvertent spillage and the degradation of water quality.

How Project Will Be Accomplished/Evaluation of Water Source: This project is a demand-side conservation project conducted by CSUC. No additional water source will be utilized for this project.

Legal Authority: The project would be conducted by CSUC.

Estimated Costs and Plans to Meet Costs: \$8.0 million -\$14.0 million (based on \$2,000 and \$3,500 per acre with a target of 4,000 acres); funding via CAL FIRE, Sierra Nevada Conservancy, California Fire Safe Council, other state, and federal funding agencies

Circumstances for Implementation: This project is a Planned that is anticipated to move forward.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Subbasin.

5.2.4 Potential Projects

Projects categorized as Potential Projects are currently in the initial planning stages and may move forward as feasibility and project requirements are determined. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects.

5.2.4.1 Project: Paradise Irrigation District Intertie

After the devastation of the 2018 Camp Fire in Paradise, California, PID lost 95% of their customers. To help PID sustain their business, this project proposes that PID supply Cal Water, which serves the City of Chico, with water from one of their surface waters sources. Currently, Chico’s only water source is groundwater, and their annual demand is 25,000 AF. The additional water source would help offset the groundwater demand and help groundwater levels stabilize in the Vina Subbasin. The SWRCB is currently conducting a study through Spring 2022 to help PID evaluate their options for long-term sustainability. This study will include the feasibility of the PID-Cal Water Intertie project.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA; PID, Cal Water, local landowners, other entities to be determined
Project Type:	In-Lieu Recharge
Estimated Groundwater Offset and/or Recharge:	5,000 AFY

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is in the initial planning stages.

Required Permitting and Regulatory Process: County encroachment permit, CEQA.

Timetable for Initiation and Completion: To be determined, after Spring 2022

Expected Benefits and Evaluation: An additional source for Chico from surface water would help offset the demand on groundwater in the Vina Subbasin and allow groundwater levels to stabilize. In addition, this would help PID’s business after they lost customers during the Camp Fire.

How Project Will Be Accomplished/Evaluation of Water Source: This project will allow PID to provide a surface water source to the City of Chico to help offset groundwater demand. Groundwater is currently the only source of water for Chico.

Legal Authority: The project would be under the authority of Vina GSA, PID, and Cal Water.

Estimated Costs and Plans to Meet Costs: To be determined, funding via Proposition 1, Proposition 68, State Revolving Fund, Federal Infrastructure Funds

Circumstances for Implementation: The decision to move forward with the project will be based on discussions with PID.

Trigger for Implementation and Termination: PID's loss of customers from the Camp Fire, decreasing groundwater levels in the Vina Subbasin, increasing groundwater demand in Chico

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSA or Subbasin.

5.2.4.2 *Project: Agricultural Surface Water Supplies*

Under this project, surface water from water right holders in the neighboring Butte Subbasin and the upper watershed would provide water for the Vina North and South areas. Some of these surface water sources would include the Sacramento River and Lake Oroville. Surface water would help agricultural users reduce their groundwater usage. Agricultural users may need to install a dual irrigation system that allows them to switch between groundwater and surface water depending on the availability of the surface water. Implementation of some of the projects could also lead to recharge opportunities, as additional water may be available during the off-peak irrigation season.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, RCRD, local landowners, other entities to be determined
Project Type:	Intra-Water Basin Transfer
Estimated Groundwater Offset and/or Recharge:	2,000 to 3,000 AFY

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is in the initial planning stages.

Required Permitting and Regulatory Process: Projects with diversions of surface water will require a SWRCB Water Right Permit, CEQA, others to be determined.

Timetable for Initiation and Completion: 2025-2032

Expected Benefits and Evaluation: Surface water sources from neighboring basins would decrease the Vina Subbasin's dependence on groundwater and allow groundwater levels to stabilize.

How Project Will Be Accomplished/Evaluation of Water Source: The water sources for this project would include available surface water from the Butte Subbasin and upper watershed (Sacramento River, Lake Oroville, etc.).

Legal Authority: The project would be under the authority of Vina GSA, the RCRD GSA, local landowners or other entities to be determined.

Estimated Costs and Plans to Meet Costs: To be determined, funding via Proposition 1 and Proposition 68.

Circumstances for Implementation: This project is a Potential Project, meaning it is currently in the planning stages. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects. As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Vina Subbasin.

5.2.4.3 Project: Streamflow Augmentation

Under the management of the Vina GSA, this project would transport excess untreated surface water from PID, PG&E, and / or other water right holders in the upper watershed to various parts of the Vina Subbasin through creeks and streams. The goal of the project would be to provide additional water sources to riparian water holders such as Durham Mutual, Rancho Esquon, M&T Ranch, and Gorrill Ranches as well as increase stream flows and direct and in-lieu recharge. Prior to the start of the project, Vina GSA would conduct an investigation and feasibility study to ensure that enough surface water would be available. The project would primarily take place at Comanche Creek, Butte Creek, Little Chico Creek, and Big Chico Creek.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, RCRD GSA, PID, PG&E, local landowners, other entities to be determined
Project Type:	Direct Recharge, In-Lieu Recharge
Estimated Groundwater Offset and/or Recharge:	1,000 – 5,000 acre-feet/year

Measurable Objective Expected to Benefit: Groundwater Levels, Surface Water Depletion

Project Status: This project is in the initial planning stages.

Required Permitting and Regulatory Process: SWRCB Water Right Permit, CEQA

Timetable for Initiation and Completion: 2022-2025

Expected Benefits and Evaluation: Additional sources of surface water would help to increase surface water levels in creeks and streams, groundwater levels via direct and in-lieu recharge, and overall water availability for riparian water holders.

How Project Will Be Accomplished/Evaluation of Water Source: The additional water sources would come from any available surface water from PID, PG&E, and other water right holders in the upper watershed.

Legal Authority: The project would be under the authority of Vina GSA.

Estimated Costs and Plans to Meet Costs: \$50 - \$100/acre-foot, funding via California Wildlife Conservation Board, Resource Renewal Institute, Proposition 1, Proposition 68, Vina fees

Circumstances for Implementation: This project is a Potential Project. As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management. Implementation of Potential Projects will be based on long-term management or changing needs of the GSA or Subbasin.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSA or Subbasin.

5.2.4.4 Community Monitoring Program

This project would create routine water table monitoring programs for approximately 8,000 acres of Ecological Reserves in the region between lower Forest Ranch and Cohasset Road near Chico Airport, including the Big Chico Creek, Sheep Hollow, and Cabin Hollow tributaries.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, CSUC, Chico Ecological Reserves, local landowners, other entities to be determined
Project Type:	Monitoring
Estimated Groundwater Offset and/or Recharge:	Not applicable

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is in the initial planning stages.

Required Permitting and Regulatory Process: None.

Timetable for Initiation and Completion: The establishment of these new monitoring programs is planned to take place between 2022 and 2025.

Expected Benefits and Evaluation: Routine water table monitoring programs will track overall water table trends in the region and provide important, up-to-date data for making decisions on water management.

How Project Will Be Accomplished/Evaluation of Water Source: CSUC and Chico Ecological Reserves will implement the monitoring programs on a routine basis through their university programs. No additional water source will be utilized for this project.

Legal Authority: The project would be under the authority of CSUC and Chico Ecological Reserves.

Estimated Costs and Plans to Meet Costs: To be determined, funding sources to be determined.

Circumstances for Implementation: This project is a Potential Project, meaning it is currently in the planning stages. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects. As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Vina Subbasin.

5.2.4.5 *Project: Wastewater Recycling*

The City of Chico currently operates a wastewater treatment plant with a treatment capacity of 12 million gallons (36 AF) per day and discharges 13,000 AFY of the treated wastewater into the Sacramento River (in accordance with their waste discharge permit from the California Water Resources Control Board). Under this project, the city would review the feasibility of diverting some of their recycled wastewater from the Sacramento River to recharge ponds and/or non-crop vegetation in Chico. Existing regulations will be reviewed for the use of the recycled water for crop production.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, City of Chico, local landowners, other entities to be determined
Project Type:	Direct Recharge, Water Recycling
Estimated Groundwater Offset and/or Recharge:	5,000 AFY

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is in the initial planning stages.

Required Permitting and Regulatory Process: SWRCB Water Right permit, CEQA, National Pollutant Discharge Elimination System permit, others to be determined.

Timetable for Initiation and Completion: 2030-2038

Expected Benefits and Evaluation: This project would divert treated wastewater, that would otherwise be pumped into the Sacramento River, towards recharge ponds and non-crop vegetation. This would increase groundwater recharge, decrease groundwater demand for farming, and help groundwater levels stabilize in the region.

How Project Will Be Accomplished/Evaluation of Water Source: This project would be initiated by the Vina GSA and the City of Chico, and the water source for this project would be the treated wastewater from the City of Chico’s wastewater treatment plant.

Legal Authority: The project would be under the authority of Vina GSA and the City of Chico.

Estimated Costs and Plans to Meet Costs: To be determined, funding via Proposition 1, Proposition 68, and SWRCB, and other sources to be determined.

Circumstances for Implementation: This project is a Potential Project, meaning it is currently in the planning stages. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects. As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Vina Subbasin.

5.2.4.6 Project: Rangeland Management and Water Retention

Under this project, CSUC and Chico State Enterprises would initiate a study of adaptive/regenerative grazing practices on 2,000 or more acres in the region. The study, which would take place between 2021 and 2022, would measure soil compaction, erosion, groundwater retention, and biological diversity. If this study finds that water retention engineering projects would be feasible in the region, based on the collected data on local soil, then CSUC would create a master management plan and take necessary steps to complete the water retention projects.

This project would take place in two locations across 3,850 acres of historical rangeland between Musty Buck Ridge and Cohasset Road.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, CSUC, Chico State Enterprises, other entities to be determined
Project Type:	Conservation
Estimated Groundwater Offset and/or Recharge:	To be determined

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is currently in the initial planning stages.

Required Permitting and Regulatory Process: CEQA and/or National Environmental Policy Act (NEPA), depending on project impact.

Timetable for Initiation and Completion: Baseline data collection (2021-2022); Development of Master Management Plan (2022-2024).

Expected Benefits and Evaluation: This project would evaluate characteristics of local soil and the feasibility to initiate water retention projects. Water retention would help increase the overall water supply for the region.

How Project Will Be Accomplished/Evaluation of Water Source: This project is a demand-side conservation project through CSUC. No additional water source will be utilized for this project.

Legal Authority: The project would be conducted by CSUC.

Estimated Costs and Plans to Meet Costs: To be determined, funding via state funding through watershed health grants, federal funding through USDA, private funding sources to be determined.

Circumstances for Implementation: This project is a Potential Project, meaning it is currently in the planning stages. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects. As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management.

Trigger for Implementation and Termination: Once the study is complete on soil compaction, erosion, groundwater retention, and biological diversity, and it shows that water retention is feasible, then a master management plan will be developed.

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Vina Subbasin.

5.2.4.7 *Project: Removal of Invasive Species*

Invasive species negatively impact the natural ecosystem in several ways, including consuming water and hampering recharge. Under this project, invasive species and native grasses in meadows and oak savannahs would be mapped between 2022 and 2023. This would then be followed by the development of an invasive management for water retention plan between 2023 and 2024, the acquisition of funding between 2022 and 2026, and the implementation of invasive species removal projects after 2025. This project would take place in the Upper Watershed at approximately 8,000 acres between lower Forest Ranch and the Chico Airport, including the Big Chico Creek, Sheep Hollow, and Cabin Hollow drainages.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, CSUC, Chico State Enterprises, other entities to be determined
Project Type:	Conservation
Estimated Groundwater Offset and/or Recharge:	To be determined

Measurable Objective Expected to Benefit: The project will address declining water levels and the declining volume of groundwater stored in the aquifer.

Project Status: This project is currently in the initial planning stages.

Required Permitting and Regulatory Process: CEQA and/or NEPA, depending on project location and impact.

Timetable for Initiation and Completion:

- Inventory and mapping of properties: 2022-2023
- Development of invasive management for water retention plan: 2023-2024
- Identify and secure funding: 2022-2026
- Implement projects and measure results: 2025 and beyond.

Expected Benefits and Evaluation: The removal of invasive species would benefit the natural ecosystem and prevent them from negatively affecting the amount of available water and the ability for water to recharge.

How Project Will Be Accomplished/Evaluation of Water Source: This project is a demand-side conservation project conducted through CSUC. No additional water source will be utilized for this project.

Legal Authority: The project would be conducted by CSUC.

Estimated Costs and Plans to Meet Costs: To be determined, funding via state and federal wildfire resiliency grants.

Circumstances for Implementation: This project is a Potential Project, meaning it is currently in the planning stages. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects. As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Vina Subbasin.

5.2.4.8 Project: Surface Water Supply and Recharge

Projects under this category would involve activities that increase the surface water supply to the Vina Subbasin through: 1) direct application of surface water to crops along the lines of the Agricultural Surface Water Supplies Project described above; 2) application of surface water and/or flood water to land surface (i.e. existing orchards) for recharge purposes, sometimes referred to as Flood MAR projects; 3) surface water and/or flood water application to recharge basins and/or recharge ponds; or 4) other applications.

The following are examples of potential projects in the Vina Subbasin:

Sand Creek Project – This project would take place in the North Chico and Nord areas and would involve obtaining data that would later be used to develop mitigation measures for flooding and recharge. The data may also be used to decide future actions towards habitat

restoration and runoff management to sustain groundwater. This project is currently developing a Decision Support Tool to determine future construction scope and feasibility.

Lindo Channel – This project would divert water from Big Chico Creek when flow exceeds 75 cfs and store the water in the Lindo Channel. The Lindo Channel can then be used as a recharge source for other areas and potentially provide 2,000 AF.

Other additional recharge projects would be developed by the Vina GSA, the RCRD GSA, local landowners, and/or entities to be determined.

Estimated Groundwater Offset and/or Recharge: 1,000 AFY per project.

Measurable Objective Expected to Benefit: increase of groundwater levels by enhancing in-lieu recharge opportunities.

Project Status: The Sand Creek project and Lindo Channel project are in the initial planning stages. Other projects to be developed in the future.

Required Permitting and Regulatory Process: Projects with diversions of surface water will require a SWRCB permit; CEQA and others to be determined.

Timetable for Initiation and Completion: Sand Creek and Lindo Channel – 2022-2032; Other projects – 2022 – 2042.

Expected Benefits and Evaluation: This project would reduce reliance on native groundwater supply.

How Project Will Be Accomplished/Evaluation of Water Source: Evaluate and analyze results of scoping project for potential locations of recharge activity. The Sand Creek project and Lindo Channel project are in the planning stages. The Lindo Channel project is anticipated to divert water from Big Chico Creek to the Lindo Channel, which can then be used as a recharge source on-site or at other locations. The Sand Creek project is anticipated to divert water from the creek to a recharge basin.

Legal Authority: The projects would be under the authority of the Vina GSA, the RCRD GSA, local landowners and / or other entities to be determined.

Estimated Costs and Plans to Meet Costs: To be determined, potential funding via Proposition 1 and Proposition 68.

Circumstances for Implementation: These projects are Potential Projects to bring additional resources for adaptive management. Potential Projects represent a “menu of options” for the Vina Subbasin to achieve long-term sustainability and offset the remaining imbalance above and beyond implementation of the Planned Projects. As scenarios change, the Potential Projects can come online to bring additional resources for adaptive management.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: The Sand Creek project and Lindo Channel project are in the planning stages and will be implemented, assuming that

feasibility is determined. Implementation of Potential Projects will be based on long-term management or changing needs of the GSAs or Vina Subbasin.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, RCRD GSA, local landowners, other entities to be determined
Project Type:	Direct Recharge, In-Lieu Recharge
Estimated Groundwater Offset and/or Recharge:	1,000 acre-feet/project

5.2.5 Conceptual Projects

Projects categorized as Conceptual Projects are in the early conceptual stages and would require significant additional work to move forward. Conceptual Projects represent potential future projects that could conceptually provide a benefit to the Vina Subbasin in the future, but that would need to be further developed.

5.2.5.1 Extend Orchard Replacement

Under this project, various funding sources would incentivize local growers to increase the duration of their current fallowing practice between orchard removal and replanting by one growing season. The extra time would allow the soil to fallow and decrease the overall demand on groundwater and other water sources. Additionally, this program may also reduce the need for soil treatments such as fumigation and expand recycling options for the previous orchard. This project has the potential to fallow between 1,600 and 3,200 acres per year in North and South Vina. As envisioned, this project would be dependent on the availability of financial incentives and willingness of landowners to participate. Participation in the program would be voluntary.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA, local landowners, other entities to be determined
Project Type:	Conservation
Estimated Groundwater Offset and/or Recharge:	4,000 – 8,000 acre-feet/year

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is still in the early conceptual planning stages.

Required Permitting and Regulatory Process: None

Timetable for Initiation and Completion: To be determined. The timetable would be dependent on the availability of financial incentives and willingness of farmers to participate.

Expected Benefits and Evaluation: By increasing the time between orchard removal and replanting, the soil may be allowed to fallow, restoring its fertility, and decreasing its water demand. This would decrease the overall use of groundwater in the Subbasin.

How Project Will Be Accomplished/Evaluation of Water Source: This project is a demand-side conservation project. No additional water source will be utilized for this project.

Legal Authority: The project would be under the Vina GSA, local landowners and other entities to be determined.

Estimated Costs and Plans to Meet Costs: To be determined; funding via Proposition 1, Proposition 68, USDA, National Resource Conservation Service (NRCS)

Circumstances for Implementation: This project is a Conceptual project in the early conceptual planning stages and would require significant additional work to move forward.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: The project proponents are in the process of determining the feasibility of this project including the possibility of securing the necessary finances to move forward.

5.2.5.2 Recharge from the Miocene Canal

During the 2018 Camp Fire, the upper Miocene Canal, which is operated by PG&E, was destroyed. Under this project, the upper canal would be rebuilt and re-watered. Additionally, PG&E would sell the Miocene Canal system by mid-2022 and modify the system to increase water supply reliability. One such modification might include establishing recharge ponds along the west side of the Miocene Canal in areas conducive to recharging the Vina South Subbasin.

Project Summary	
Identified project proponent(s) and other potential participating entities:	Vina GSA PG&E, Butte County, local landowners, other entities to be determined
Project Type:	Direct Recharge
Estimated Groundwater Offset and/or Recharge:	2,000 acre-feet/year based on 10,000 acre-feet available for recharge (assuming a 20% efficiency)

Measurable Objective Expected to Benefit: Groundwater Levels

Project Status: This project is still in the early conceptual planning stages.

Required Permitting and Regulatory Process: CEQA, SWRCB Water Rights Permit

Timetable for Initiation and Completion: After 2025

Expected Benefits and Evaluation: Rebuilding the upper Miocene Canal and making improvements to the overall system would increase recharge into the Vina South Subbasin and surface water availability for other uses.

How Project Will Be Accomplished/Evaluation of Water Source: This project would be initiated by PG&E, who would obtain water from the same water sources that currently supply the Miocene Canal.

Legal Authority: The project would be under the authority of Vina GSA and PG&E.

Estimated Costs and Plans to Meet Costs: To be determined, funding via state and federal grants

Circumstances for Implementation: This project is a Conceptual Project, meaning it is in the early conceptual planning stages and would require significant additional work to move forward. Conceptual Projects represent potential future projects that could conceptually provide a benefit to the Subbasin in the future. As scenarios change, Conceptual Projects can come online to bring additional resources for adaptive management. The project proponents are in the process of determining the feasibility of this project including the possibility of securing the necessary finances to move forward.

Trigger for Implementation and Termination: None

Process for Determining Conditions Requiring the Project to Occur: Implementation of Conceptual Projects will be based on long-term management or changing needs of the GSA or Subbasin.

5.2.6 Notification Process

The GSAs will continue to conduct public outreach and will be responsible for notification of the projects. Regular updates will be provided to the GSA Boards and presented on the websites www.vinagsa.org and rockcreekreclamation.com as projects are implemented. Outreach is likely to include public notices, meetings, website, social media, and email lists.

5.3 Management Actions

To achieve sustainable groundwater management, management actions can be implemented to focus on reduction of groundwater demand. The management actions can include increased data collection, education and outreach, regulatory policies, incentive programs, and enforcement actions.

An evaluation of potential GSA actions (projects or management actions) will occur on an annual basis relying on information reported in the annual report. The following sections will present a suite of management action options that the GSA may consider during GSP implementation. The schedule to implement the management actions is likely to vary depending upon Vina Subbasin conditions and the expected benefits of PMAs may also vary year to year.

5.3.1 General Plan Updates

The GSA(s) will cooperate with Butte County and the City of Chico with updates to their General Plans. The GSA(s) will participate and collaborate as appropriate with land use agencies during general plan updates to ensure that land use planning recognizes the Vina GSP. The GSAs will collaborate to ensure that the important components of the GSP are addressed in the general plans. The recognition and use of groundwater sustainability practices would remain consistent.

5.3.2 Domestic Well Mitigation

If an increasing number of domestic groundwater wells go dry in the Vina Subbasin, the GSAs could propose a series of steps to help mitigate this issue. The following steps are proposed under this management action:

1. Establish a voluntary registry of domestic wells.
2. Compile domestic well logs, screen depths, and locations.

3. Secure financial resources to improve, deepen or replace select domestic wells.
4. Provide emergency response to homes with dry domestic wells, including supplying bottled water and potable water for sanitation. Priority would be given to disadvantaged communities dependent on groundwater as a drinking water resource.

Creating a registry of domestic wells in the region, with information on well location and screen depths, would help the GSAs compile important data into a centralized location. This would allow the GSAs to determine which wells need to be updated to the current standards and which may need to be deepened, as well as to help them prioritize certain communities for emergency response.

5.3.3 Well Permitting Ordinance

According to the current Butte County code, domestic wells are required to be screened below the groundwater levels measured during the 1989 to 1994 drought. This management action proposes that the GSAs will work with Butte County to amend the well ordinance as it relates to small and large diameter wells to take into consideration the HCM based on best available data (i.e. AES data), adopted SMC, historical groundwater conditions, and impacts of new wells on existing wells. The code could be amended with requirements for well screens to account for MT established for the Vina Subbasin. This would improve water supply reliability of future agricultural and domestic wells.

5.3.4 Landscape Ordinance

Butte County and/or the City of Chico would enact an ordinance requiring new residential, commercial, and industrial development to use drought-resistant species for landscaping and to limit the size of grass lawns that require regular irrigation. The ordinance would focus efforts and money on reducing the amount of water used for landscape irrigation and swimming pools while promoting xeriscaping. The reduction in irrigation for landscaping and swimming pools would allow groundwater use for other purposes in the Vina Subbasin.

5.3.5 Prohibition of Groundwater Use for Ski (Recreational) Lakes

In the Vina Subbasin, there are several ski lakes that are currently supplied with groundwater. The Vina GSA would encourage Butte County to amend the zoning ordinance to prohibit the use of groundwater for future ski lakes.

5.3.6 Expansion of Water Purveyors' Service Area

The Vina GSA would encourage the expansion of water purveyors' service area to areas across the Vina Subbasin that are reliant on private groundwater wells. This would require action by individual water purveyors, support of residents, and governmental approval. By expanding the service area of water purveyors, areas that rely solely on groundwater would have another source of water and would reduce groundwater extraction.

5.3.7 Groundwater Allocation

SGMA requires that GSPs describe the projects and management actions to be implemented as part of bringing the Vina Subbasin into sustainability. As a last resort, in the event that the proposed projects fail to achieve IMs and the Vina Subbasin is projected to not be able to

achieve sustainability goals by 2042, the GSAs may need to consider implementation of groundwater allocations to manage groundwater demand. The implementation of this management action would be based on an evaluation by the Joint Management Committee. The consideration of groundwater allocation would be based on the groundwater budgets and updated monitoring data throughout the Vina Subbasin, as presented in annual reports.

Groundwater allocation management actions could include, but are not limited to, targeted maximum extraction levels to address specific MT violations or Vina Subbasin-wide adjustments to extractions to address overall chronic lowering of groundwater levels. Should the GSAs determine that groundwater allocation management actions are necessary, the GSAs will consider such management actions through a public process ultimately decided by the GSA Boards.

5.4 Data Collection

5.4.1 County Contour Mapping

As part of the efforts to collect the information necessary to fill the information needs and data gaps identified in Section 3, this project proposes to expand the existing monitoring program to include Butte, Glenn, Colusa, and Tehama counties and conduct these groundwater elevation surveys in the spring, summer, and fall. The monitoring program would gather data used to produce groundwater contours and estimates of lateral and vertical flow direction and volume. Producing these data for the four counties will help to identify interbasin flow patterns and influences on surface water flows and replenishment locations, thereby improving coordination between counties and water management decision-making.

Routine water table monitoring programs will track overall water table trends in the region and provide important, up-to-date data for making decisions on water management. Establishing these programs amongst the four counties will aid in the exchange of data and improve regional coordination on various water projects. The expanded water monitoring programs will be established by the Vina and RCRD GSAs, with assistance from the four counties.

5.4.2 Update the Butte Basin Groundwater Model

The existing BBGM covers the Vina, Butte, and Wyandotte Creek Subbasins. This project will help fill the identified data gaps by 1) updating the BBGM with newly acquired data; and 2) using the updated version of the model to run simulations to support evaluation of projects or GSP updates as appropriate and warranted. Some of the new data to be incorporated is the AEM data and data on the different hydraulic conductivities of each layer of the aquifer. The AEM data will be used, among other things, to adjust the various surfaces in the model to better represent the aquifer's hydrogeologic layers.

Once the model has been updated with the new data, it will be better suited for running simulations of different water or land use management scenarios as well as predictions for climate and precipitation fluctuations. Lateral and vertical connectivity between aquifer layers and connections to surface water features will be more accurate and help identify areas of the basin where groundwater recharge may be needed. Overall, this will help shape management actions by focusing efforts on those particular areas. Ongoing updates to the model will emphasize the importance of accurate and up-to-date data and help continue monitoring efforts

such as measuring water levels and stream flows. It is expected that at least two updates to the model will be prepared as the GSP is implemented and additional data is collected.

An updated groundwater model is vital for running accurate simulations that may be used to make important decisions regarding groundwater allocation, pumping, recharge, and other activities. The model should contain the most up-to-date data to represent the basin realistically and accurately.

5.4.3 Community Monitoring Program

As discussed in Section 4.10, the MT for groundwater levels is based on the depths of domestic wells. The dataset used for this assessment is limited and likely includes wells no longer in use or poorly maintained wells. To resolve this data gap, the GSAs will conduct surveys of domestic wells within the Vina Subbasin to assess if the wells are still active and collect the well construction details. As domestic well construction information may be limited, selected wells may be video logged to obtain additional information.

The GSAs will also maintain a record of verifiable domestic wells that go dry during the implementation period that will include depth of these wells, screen intervals, and available maintenance records. These data will be used to modify the MO and MT over the implementation period, as appropriate.

5.4.4 Interconnected Surface Water/Associated Impacts on Groundwater Dependent Ecosystems

Also discussed in Section 4.10 and in Section 3.8 is the lack of sufficient data to analyze the interaction of streams and groundwater pumping within the primary aquifer system. Additional wells and other monitoring networks will be installed, as appropriate, following the framework discussed in Section 3.8.

5.5 Adaptive Management Strategies

The GSAs will be requesting annual reports from the project proponents to evaluate progress on implementation. If the projects are not progressing or if monitoring efforts demonstrate that those projects are not achieving their targets, the GSAs will evaluate the need for additional or modified projects and to begin implementation of management actions.

5.6 Potential Available Funding Mechanisms

As listed above in the individual project descriptions, several funding mechanisms have been identified to help with the planning and implementation of the GSP projects. The following is an abbreviated list of some of the funding mechanisms proposed:

Project Type	Funding Type	Program	Dates
IRWM (projects included in an adopted IRWM Plan)	Implementation Grant	Proposition 1, Water Quality, Supply, and Infrastructure Improvement Act of 2014	Round 2 solicitation expected in late 2021
Recharge Projects	Planning and construction grants	Proposition 68, California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Act of 2018	Round 2 solicitation to be released early 2022
Wastewater treatment for underrepresented communities projects	Planning and construction grants	Small Community Grant Fund	Applications accepted continuously
Public water systems improvement	Planning and construction grants	Drinking water grants	Applications accepted continuously
Land Conservation	USDA Farm Service Agency	Conservation Reserve Program	Applications accepted continuously

6. PLAN IMPLEMENTATION

SGMA requires the GSAs to partner with groundwater users to develop and implement GSPs to achieve groundwater sustainability. SGMA requires the Vina Subbasin to be sustainable by 2042. The GSP includes provisions to evaluate current conditions in the Vina Subbasin (Section 2), establish SMC (Section 3), gather and analyze groundwater data (Section 4), and report findings. The provisions in the GSP will be evaluated every five years and updated as necessary. The Vina Subbasin GSAs are required to submit the GSP to DWR by January 31, 2022. DWR will evaluate the GSP within 24 months of submittal. Upon submittal of this GSP to DWR, GSP implementation will begin in the Vina Subbasin. The GSAs will continue their efforts with public engagement and to secure funding to monitor and manage groundwater resources. This section presents the manner in which the GSAs will execute the GSP consistent with the requirements in CCR Title 23 § 354.6(e).

The GSP includes provisions for:

- Gathering data at RMS locations
- Evaluation of SMCs
- Report of findings and analysis
- Implementation of PMAs

Each of these provisions will require funding and schedule coordination to help achieve Vina Subbasin sustainability goals. The following sections describe the funding mechanisms and timetable for the GSP implementation.

6.1 Estimate of Groundwater Sustainability Plan Implementation Costs

Where feasible, the GSAs will use existing funding and/or programs for use in the GSP implementation. The GSAs, member agencies, and water purveyors will coordinate to implement the actions outlined in this GSP. The GSAs will fund the implementation of the GSP where other sources are not available. The cost of implementation of the GSP by activity is presented below.

6.1.1 Administrative Costs

These include the cost of annually operating the GSAs, including staff expenses, audit, outreach, legal and other administrative costs. This does not include agency-specific project implementation costs. Costs are estimated to be in the range of approximately \$200,000 to \$400,000 annually.

Table 6-1: Estimated Administrative Costs

GSP Implementation	Estimated Annual Costs
Public Outreach	\$25,000
Staff	\$150,00
Legal	\$30,000
Other	\$20,000
Total Estimate	\$225,000

Public outreach efforts will continue during GSP implementation with a focus on progress updates particularly regarding the PMAs. Staff time will likely be in-kind contribution from member agencies of the Vina and RCRD GSAs. Outside counsel will continue to provide legal advice to the GSAs Boards. The budget also includes other miscellaneous costs such as printing and insurance.

6.1.2 Monitoring

Monitoring for compliance with SGMA regulations will include semi-annual collection of groundwater levels at 17 RMS locations and annual collection of groundwater quality at 8 RMS locations. Monitoring activity costs will include labor (field data collection, surveying, laboratory analysis, project management) and equipment (vehicles, meters, pumps, field tools/supplies).

Table 6-2: Monitoring Activities and Estimated Cost

Monitoring Activity	Frequency	Estimated Annual Cost
Groundwater Levels	Semi-Annual, 2 events	\$20,000
Groundwater Quality	Annual, one event	\$8,000

Some RMS locations include wells that are monitored and funded under existing programs.

6.1.3 Data Analysis

The data gathered from the ongoing monitoring program will be analyzed to assess trends for determination of undesirable results. Analysis of the data may lead to modifications in the RMS network, the hydrogeological conceptual model, and the priority of PMAs. Data gaps that arise from analysis may require installation of new RMS locations.

Table 6-3: Data Analysis Activities and Estimated Cost

Data Analysis Activity	Frequency	Estimated Annual Cost
Data Management System	Annual	\$5,000
Review of Groundwater Data	Annual	\$5,000

6.1.4 Reporting and Evaluation

Annual reports are required after GSP adoption to provide updates to general GSP information, basin conditions, and plan implementation progress. Section 6.5 discusses the annual reporting

plan in more detail. GSAs are required to conduct an evaluation of the GSP and prepare a report every five years or whenever the GSP is amended. Section 6.6 discusses the evaluation report in more detail.

Table 6-4: Reporting and Evaluation Activities and Estimated Cost

Reporting Activity	Frequency	Estimated Cost
Annual Report	Annual	\$30,000
5-year Evaluation Report	5 Years	\$100,000

6.1.5 Data Collection

A discussion of the data collection needed to address identified data gaps is presented in Section 5.4, and the estimated costs are presented below.

Table 6-5: Estimated Costs for Implementing Data Gaps

Data Gaps	Estimated Costs
Interconnected Stream Monitoring	\$100,000 – \$250,000
Contour Mapping	\$20,000 - \$50,000
Community Monitoring	\$50,000 - \$150,000
Butte Basin Model Update 1	\$50,000 - \$100,000
Butte Basin Model Update 2	\$50,000 - \$100,000

6.1.6 Project and Management Actions

The PMAs and anticipated costs are presented in Section 5. The PMAs with a planned initiation date in or before 2032 are presented below.

Table 6-6: Estimated Project Costs

Project Name	Capital Costs	Expected Groundwater Demand Reduction (AFY)
5.2.3.1 Agricultural Irrigation Efficiency	TBD **	Up to 4,000
5.2.3.2 Residential Conservation	TBD	100
5.2.3.3 Scoping for Flood MAR/Surface Water Supply and Recharge	TBD	NA
5.2.3.4 Community Water Education Initiative	Component 1: \$50-100K annually Component 2: \$10,000-\$200,000 annually Component 3: \$10,000-\$25,000 annually	NA
5.2.3.5 Fuel Management for Watershed Health	TBD	TBD
5.2.4.1 Paradise Irrigation District Intertie	TBD	5,000
5.2.4.2 Agricultural Surface Water Supplies	TBD	2,000 – 3,000
5.2.4.3 Streamflow Augmentation	TBD	1,000 – 5,000
5.2.4.4 Community Monitoring Program	TBD	NA
5.2.4.5 Recycled Wastewater	TBD	5,000
5.2.4.6 Rangeland Management	TBD	TBD
5.2.4.7 Removal of Invasive Species	TBD	TBD
5.2.4.8 Surface Water Supply and Recharge	TBD	1,000 per project
5.2.5.1 Extend Orchard Redevelopment	TBD	4,000 – 8,000
5.2.5.2 Recharge from the Miocene Canal	TBD	2,000

Note:

**To be Determined (TBD)

6.2 Identify Funding Alternatives

The GSAs will seek to capitalize on existing funding and programs that overlap with GSP requirements. For example, Butte County, DWR, and other entities currently fund groundwater data collection programs at locations within the Vina Subbasin. The GSAs will ensure that the existing programs meet the technical requirements of the monitoring and reporting as outlined in the GSP.

In cases where no funding or programs are established, the GSAs will be responsible for securing funding for the GSP implementation. The GSAs will coordinate funding with their respective constituent members within the Vina Subbasin. GSAs may fund the GSP through a cost-sharing collaboration to be determined after adoption of GSP.

Funding is anticipated to be met from one or a combination of the following sources: direct contributions from the GSAs constituent members; state and federal grant funding, and taxes or assessments levied on landowners and groundwater users in accordance with local and state law.

The GSAs are evaluating a variety of funding mechanisms, including Proposition 218 or Proposition 26, to support ongoing operational costs and to fund agency operations. These costs include retaining consulting firms and legal counsel to provide oversight and assist with SGMA compliance. Expenses consist of administrative support, GSP development, and GSP implementation.

6.3 Schedule for Implementation

Figure 6-1 presents the estimated schedule for GSP implementation for the Vina Subbasin GSP starting in 2022 through 2042. Project schedules may shift or be altered by the GSAs Board of Directors based on funding opportunities and circumstances. Some activities such as monitoring, data analysis, and reporting will begin upon submittal of the GSP and will continue through GSP implementation. Other activities such as the PMAs will be completed by priority as funding and resources become available.

6.4 Data Management Systems

In development of this GSP, the GSAs developed a groundwater model that was calibrated to estimate future scenarios. The DMS plans to build on existing data inputs in the groundwater model and develop a more formalized approach to collecting and capturing data. As stated in Section 4, Monitoring Network, future data will be gathered to develop annual reports, as well as provide necessary information for future and ongoing updates to the groundwater model at five-year intervals upon GSP implementation. The DMS that will be used is a geographical relational database that will include information on water levels, land elevation measurements, and water quality testing. The DMS will allow the GSAs to share data and store the necessary information for annual reporting.

The DMS will be on local servers and data will be transmitted annually to form a single repository for data analysis for the Vina Subbasin's groundwater, as well as to allow for preparation of annual reports. GSA representatives will have access to data and will be able to ask for a copy of the regional DMS. The DMS currently includes the necessary elements required by the regulations, including:

- Well location and construction information for the representative monitoring points (where available)
- Water level readings and hydrographs including water year type
- Land based measurements
- Water quality testing results
- Estimate of groundwater storage change, including map and tables of estimation
- Graph with Water Year type, Groundwater Use, Annual Cumulative Storage Change

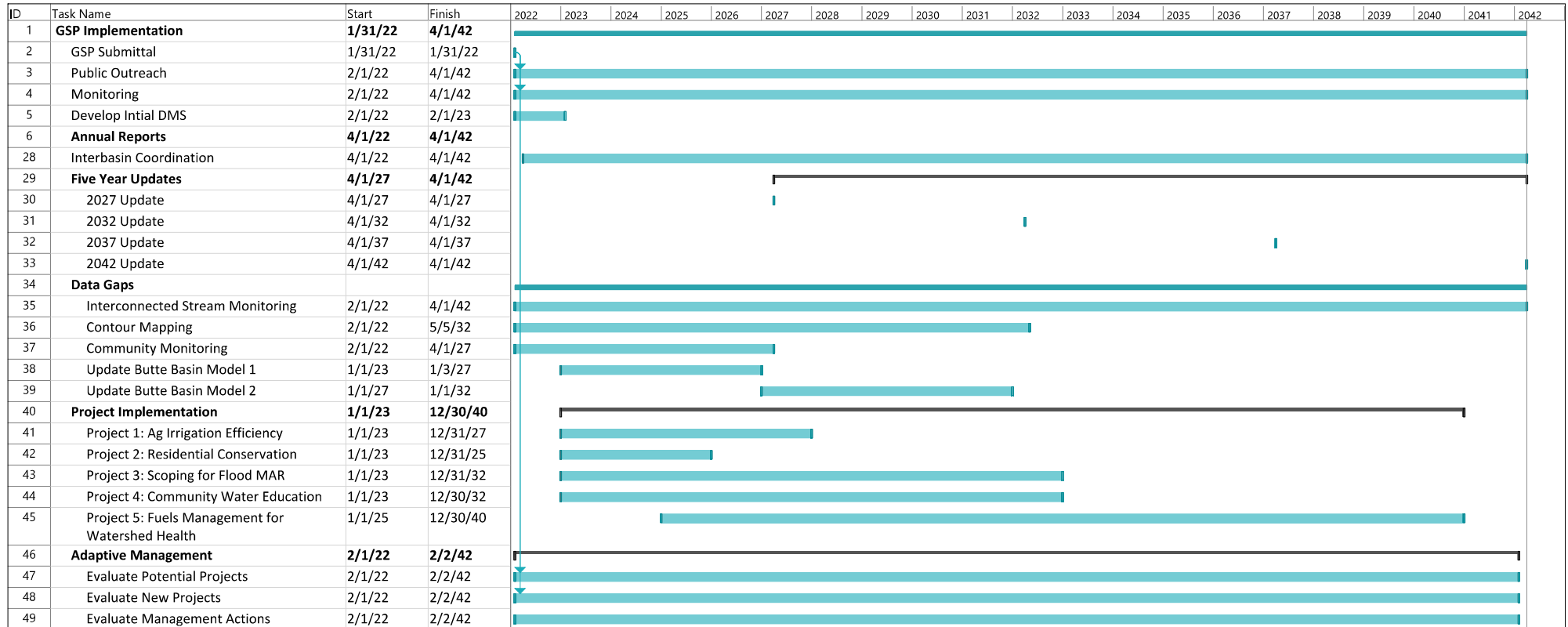


Figure 6-1
Vina Subbasin
Implementation Schedule

Summary [dark teal bar] Manual Task [light teal bar] Start-only [light teal bar with left bracket]
 Project Summary [grey bar] Manual Summary Rollup [light teal bar with left bracket] Finish-only [light teal bar with right bracket]

Reporting generated from data from the GSAs will include, but is not limited to:

- Seasonal groundwater elevation contours
- Estimated groundwater extraction by category
- Total water uses by source

Additional items may be added to the DMS in the future as required. Data will be entered into the DMS. The majority of the data will then be aggregated to the entity that is responsible for the regional DMS and summarized for reporting to DWR. Groundwater contours will be prepared outside of the DMS because of the need to evaluate the integrity of the data collected and generate a static contour set that has been reviewed and will not change once approved. Groundwater storage calculations will be calculated in accordance with the method described in Section 2, outside of the DMS. Results are uploaded to the DMS for annual reporting and trend monitoring. Since most of the pumping in the Vina Subbasin is not currently measured, the groundwater pumping estimates are also calculated outside of the DMS using the methods developed by GSAs and uploaded to the DMS for annual reporting and trend analysis. The GSAs may choose to have their own separate system for additional analysis.

The one-time cost of expanding the existing data systems is estimated between \$50,000 to \$200,000, as the system is still being evaluated. The Board has indicated a desire to make the data transparent and available to the public while respecting the privacy of individual landowners.

6.5 Annual Reporting

Annual reports will be submitted by April 1 for the prior year's activities. The report will include a general update in the form of an executive summary with an accompanying map of the Vina Subbasin. The body of the report will include a detailed discussion and graphical representation of the following:

- Groundwater elevation data, including contour maps at seasonal high and low conditions and hydrographs using water year type and historical data from at least 2015
- Groundwater extraction data divided into volume by water usage sectors with accompanying map, including a description of the methodology and accuracy of the groundwater extraction estimation
- Surface water volume used or available for use for groundwater recharge or in-lieu use, including a description of the water sources
- Total water volume use divided into water use sector and water source type, including a description of the methodology and accuracy of the water use estimation
- Changes in groundwater storage with accompanying map, including a graph with water year type, groundwater use, annual change in groundwater storage, and cumulative change in groundwater storage using historical data from at least 2015

The annual report will also include a discussion and update on the plan implementation, including the status of IMs and the execution of PMAs

6.6 Evaluation Report

The GSAs will evaluate the GSP and provide an evaluation report every five years or whenever the GSP is amended for submittal to DWR.

The assessment will include a detailed discussion of the following:

- Significant new information and whether the information warrants changes to the basin setting, MO, MT, and SIs, including completed or planned GSP amendments
- Current groundwater conditions relating to each MO, MT, and IMs
- Implementation of any project and management actions and the resulting effects on groundwater conditions
- Assessment of the basin setting, MAs, undesirable results, MO, and MT
- Evaluation of the basin setting and overdraft conditions to include changes in water use, along with overdraft mitigation measures (if applicable)
- Assessment of the monitoring network with analysis of data collected to date, including identification of data gaps and suggested improvements of the network
- Program to address data gaps, including timing and incorporation of data into the GSP, with prioritization on the installation of new data collection sites and analysis of new data based on the needs of the basin
- Relevant actions taken by the GSAs, including a summary of regulations, ordinances, legal enforcement or action related to the implementation of the GSP and sustainability goals

Summary of coordination by GSAs within the basin or within hydrogeologically connected basins and land use agencies.

6.7 Inter-basin Coordination

The Vina Subbasin understands that in the Sacramento Valley inter-basin coordination is critical due to the interconnectedness of groundwater, as each Vina Subbasin prepares and implements its GSP. As such, the Vina Subbasin participated with the surrounding 10 subbasins (Antelope, Bowman, Butte, Colusa, Corning, Los Molinos, Red Bluff, Sutter, Wyandotte Creek, and Yolo). Inter-basin coordination efforts were focused on establishing a foundation and guidelines for sustained inter-basin coordination by identifying priorities and resources. The main objective of the coordination efforts is to identify any significant discrepancies in the GSPs, understand why those differences exist, and evaluate to the extent they need to be reconciled.

As part of the coordination efforts, the Northern Sacramento Valley Inter-basin Coordination Report was prepared (Appendix 6-A). The report outlined a framework for inter-basin coordination for sustainable groundwater management in the Northern Sacramento Valley. It

described a menu of options for ongoing communication and collaboration between and among groundwater subbasins over the 20-year implementation of SGMA. The framework is intended to be used by the GSAs to support GSP development and implementation.

The Vina Subbasin intends to coordinate in the following ways with its neighboring subbasins and with subbasins in the North Sacramento River Corridor group (Antelope, Los Molinos, Red Bluff, Corning, Butte, and Colusa Subbasins):

1. Information Sharing

The Vina Subbasin will work with the GSA's staff of neighboring subbasins to identify lines of communication and methods for information sharing that would be agreed upon by the respective GSA Boards. This will continue throughout GSP implementation and may include:

1. Informing each other on changing conditions (i.e., surface water cutbacks, land use changes, policy changes that inform groundwater management)
2. Sharing annual reports and interim progress reports
3. Sharing data and technical information and work towards building shared data across and/or along basin boundaries (e.g., monitoring data, water budgets, modeling inputs and outputs, and Groundwater Dependent Ecosystems)

2. Conducting Joint Analysis and Evaluation of GSPs

In the near term, the Vina Subbasin intends to pursue grant funding and collaboratively work with subbasins in the North Sac River Corridor group to:

1. Contract with a consultant to conduct this work
2. Evaluate and compare contents of GSPs with a focus on establishing a common understanding of basin conditions at boundaries
3. Identify significant differences, uncertainties, and potential issues of concern related to groundwater interaction at the boundaries
4. Engage in analysis and evaluation of SMCs between GSPs to assess impacts and identify significant differences and possible impacts between subbasins that could potentially lead to undesirable results

The North Sac River Corridor is the appropriate scale of coordination for these activities due to the shared boundary of the Sacramento River, shared data gaps, and the interconnectedness of the subbasins.

3. Coordination on mutually beneficial activities

The Vina Subbasin will work collaboratively with North Sac River Corridor Subbasins to identify items in our GSPs that are ripe for a coordinated project and pursuit of funding such as Projects and Management Actions, Data Gaps (new monitoring wells, stream gaging etc.).

1. GSAs Boards will jointly identify projects/programs to coordinate on.

2. Vina Subbasin will pursue partnerships to obtain grant funding to support a consultant to conduct this work.
3. Vina Subbasin will work collaboratively with entities such as the Northern California Water Association and others in their efforts to pursue funding and support local and state agency activities to identify and fill regional data gaps.

4. Coordinated Communication and Outreach

Staff of the Vina Subbasin GSAs will continue to participate in regional public engagement activities and efforts related to implementation of SGMA in the Northern Sacramento Valley. These efforts will include GSA Board members and will foster transparency of communications.

This may include:

1. Coordinating and collaborating on regional-scale public engagement and communication strategies that promote awareness on groundwater sustainability, enhancing public trust, and maintaining institutional knowledge
2. Maintaining a list of GSP/subbasin staff contacts and websites

5. Issue Resolution Process

Vina Subbasin will pursue development of an issue-resolution process with neighboring subbasins in the North Sac River Corridor group.

Butte County Public Health Department
Environmental Health Division

Well Permit Summary

Quarter 3 (April 1, 2022 – June 30, 2022) of Water Year 2022

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Definitions

Permits Issued – Number of new water well permits issued as new construction. This excludes repairs, destructions, abandonments.

Permits Finaled – Number of water well permits that have been finaled (i.e. final construction completed and well is operational). This excludes repairs, destructions, abandonments.

Small Diameter Wells - A well with an eight-inch or smaller diameter well casing.

Large Diameter Wells - A well with larger than eight-inch diameter well casing.

Repair – Well repair; this includes but is not limited to casing replacement, re-lining or perforation.

Deepening – Well deepening; increasing the depth of an existing well.

Well Destruction – Well is destroyed (sealed off) by an approved method.

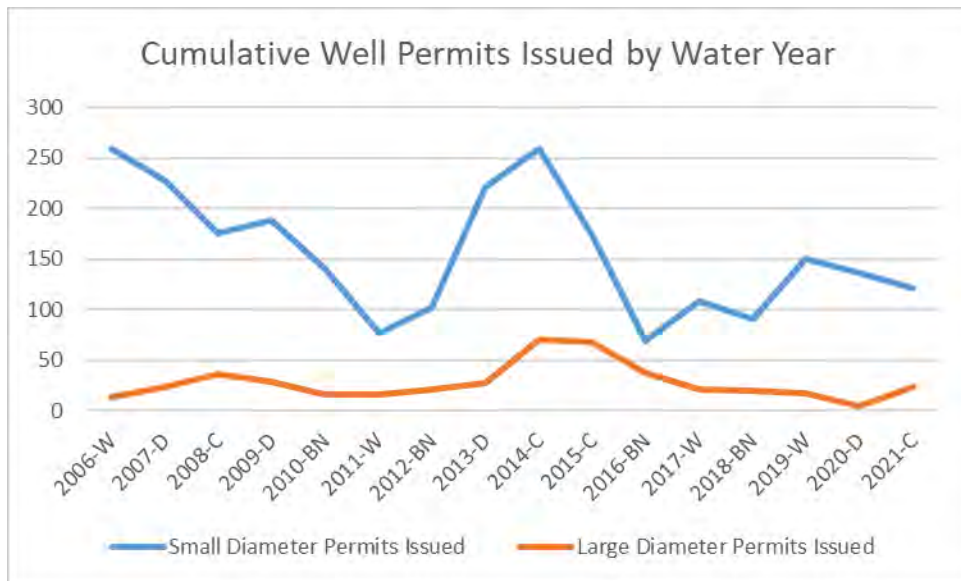
Dry Well – Well that is no longer producing water or has reduced production to a point where it can no longer sustain a residence (< 1 gpm).

Water Year - A water year is a 12-month period that extends from October 1st to September 30th. Water year can be classified into Wet (W), Above Normal (AN), Below Normal (BN), Dry (D) or Critical (C).

Executive Order N-7-22 – Effective March 28, 2022 and impacting permits that have not been issued to date. Implements increased drought response and established requirements for water well permit reviews to include Groundwater Sustainability Agencies (GSAs) and ground water impact considerations prior to permit issuance.

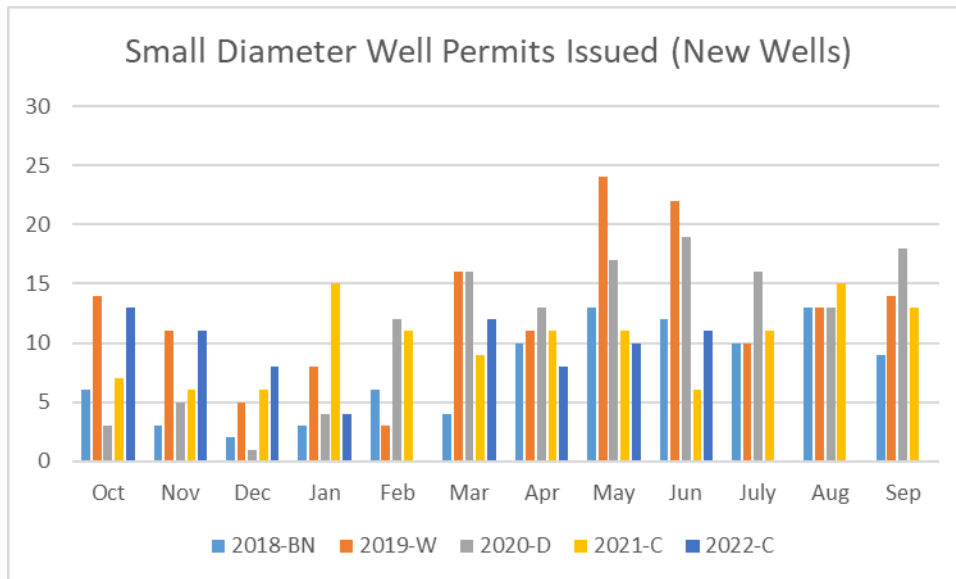
Cumulative Well Permit Data

Cumulative (WY) Well Permits Issued		
Water Year	Small Diameter Permits Issued	Large Diameter Permits Issued
2006-W	260	14
2007-D	228	24
2008-C	176	36
2009-D	188	29
2010-BN	140	16
2011-W	77	16
2012-BN	102	21
2013-D	221	28
2014-C	259	71
2015-C	175	68
2016-BN	69	38
2017-W	109	21
2018-BN	91	20
2019-W	151	18
2020-D	137	5
2021-C	121	24
2022-C	77	8



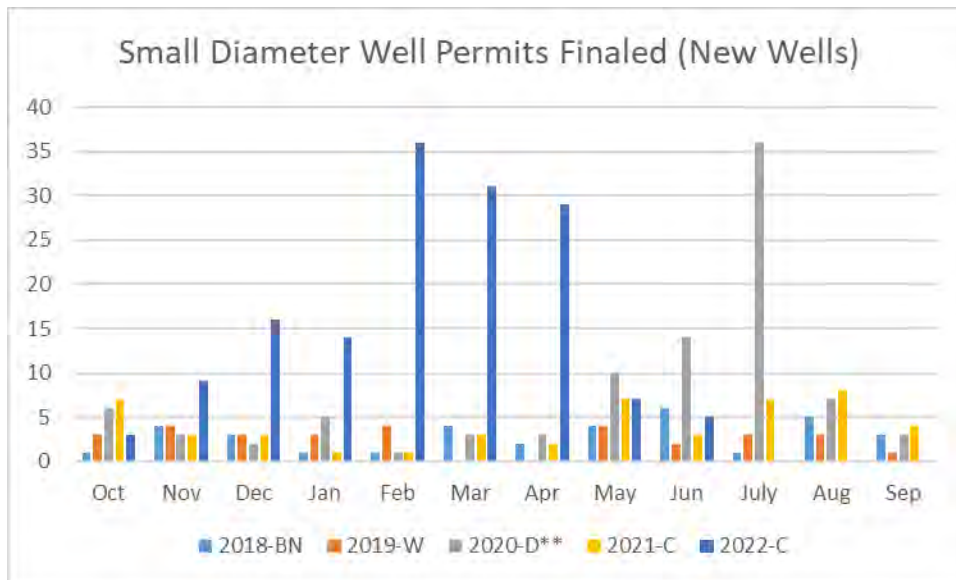
Small Diameter Well Permit Data - Issued

Water Year	Small Diameter Well Permits Issued (New Wells)												Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	
2006-W	34	13	18	17	21	21	16	19	36	19	26	20	260
2007-D	24	14	8	16	14	20	28	19	25	20	22	18	228
2008-C	16	15	10	8	7	15	19	17	15	20	22	12	176
2009-D	17	10	8	13	10	11	21	17	23	23	20	15	188
2010-BN	9	9	8	2	4	14	22	10	22	18	14	8	140
2011-W	7	2	1	2	4	6	4	14	16	5	11	5	77
2012-BN	8	2	4	10	8	6	11	18	9	16	6	4	102
2013-D	9	10	2	11	22	27	35	36	19	17	24	9	221
2014-C	9	10	10	24	14	20	33	32	34	31	23	19	259
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Total
2015-C	18	7	6	15	11	22	27	15	13	18	17	6	175
2016-BN	4	5	7	6	8	17	9	12	16	14	12	3	113
2017-W	7	7	5	2	8	19	19	17	17	5	2	1	109
2018-BN	6	3	2	3	6	4	10	13	12	10	13	9	91
2019-W	14	11	5	8	3	16	11	24	22	10	13	14	151
2020-D	3	5	1	4	12	16	13	17	19	16	13	18	137
2021-C	7	6	6	15	11	9	11	11	6	11	15	13	121
2022-C	13	11	8	4	0	12	8	10	11				77



Small Diameter Well Permit Data - Finaled

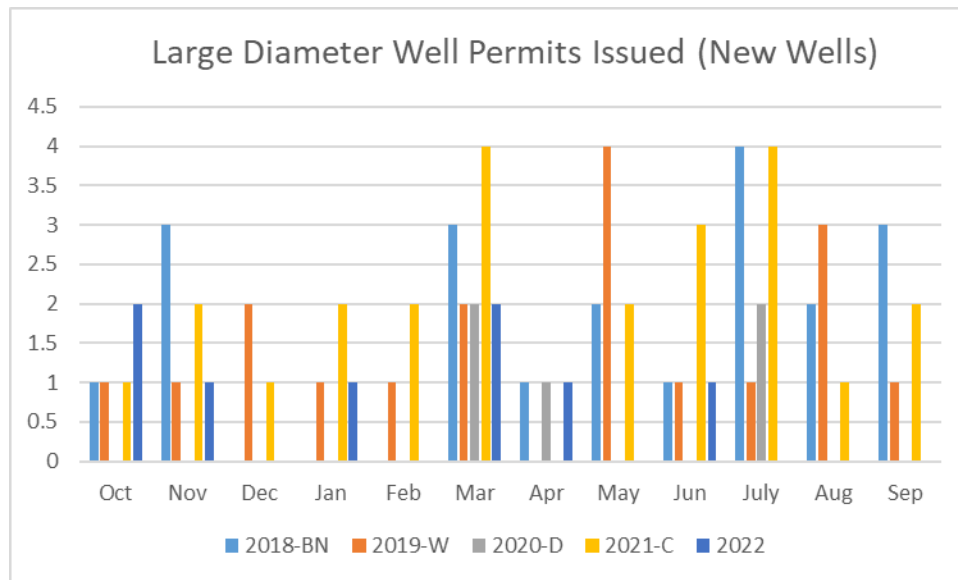
Water Year	Small Diameter Well Permits Finaled (New Wells)													Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep		
2016-BN	7	4	3	4	3	1	1	4	5	1	3	0	36	
2017-W	3	2	2	3	3	3	1	1	1	0	5	0	24	
2018-BN	1	4	3	1	1	4	2	4	6	1	5	3	35	
2019-W	3	4	3	3	4	0	0	4	2	3	3	1	30	
2020-D**	6	3	2	5	1	3	3	10	14	36	7	3	93	
2021-C	7	3	3	1	1	3	2	7	3	7	8	4	49	
2022-C	3	9	16	14	36	31	29	7	5				150	



**Water Year 2020 and forward - Implemented improvements to the well permit process and working on backlog status updates.

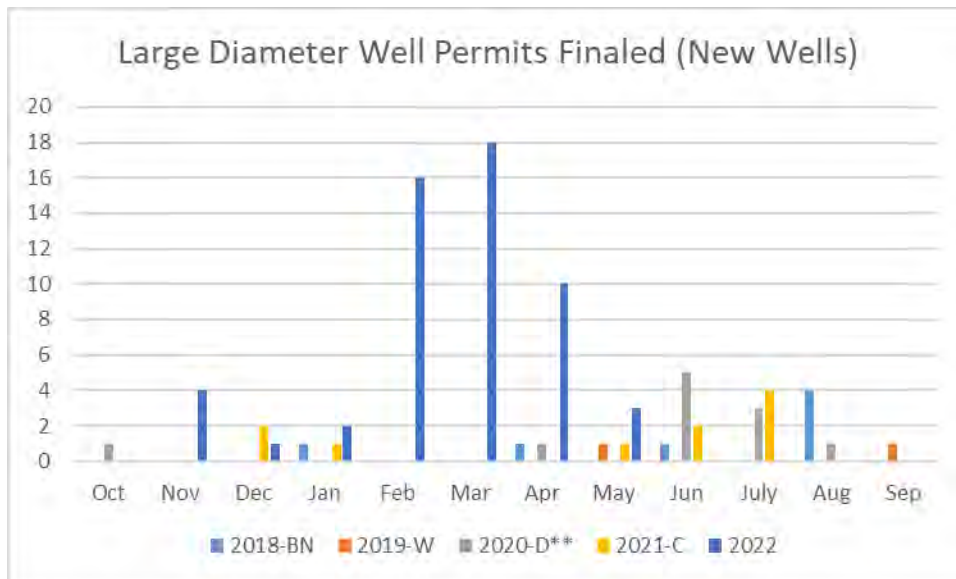
Large Diameter Well Permit Data - Issued

Water Year	Large Diameter Well Permits Issued (New Wells)												Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	
2006-W	2	1	0	4	0	4	1	1	0	1	0	0	14
2007-D	2	1	0	4	5	0	5	0	5	1	0	1	24
2008-C	2	1	6	1	3	0	2	2	15	3	0	1	36
2009-D	2	1	2	6	6	2	0	0	4	2	0	4	29
2010-BN	3	3	1	2	0	1	2	2	1	1	0	0	16
2011-W	3	1	0	3	3	0	0	2	1	2	1	0	16
2012-BN	1	1	1	2	0	0	1	1	0	4	8	2	21
2013-D	1	0	1	1	2	2	2	6	1	0	8	4	28
2014-C	2	0	3	15	12	10	5	2	5	6	6	5	71
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Total
2015-C	5	7	4	1	4	7	6	1	5	14	11	3	68
2016-BN	5	5	5	5	4	2	2	3	1	1	2	3	38
2017-W	1	0	1	2	2	3	3	2	2	0	5	0	21
2018-BN	1	3	0	0	0	3	1	2	1	4	2	3	20
2019-W	1	1	2	1	1	2	0	4	1	1	3	1	18
2020-D	0	0	0	0	0	2	1	0	0	2	0	0	5
2021-C	1	2	1	2	2	4	0	2	3	4	1	2	24
2022	2	1	0	1	0	2	1	0	1				8



Large Diameter Well Permit Data – Finaled

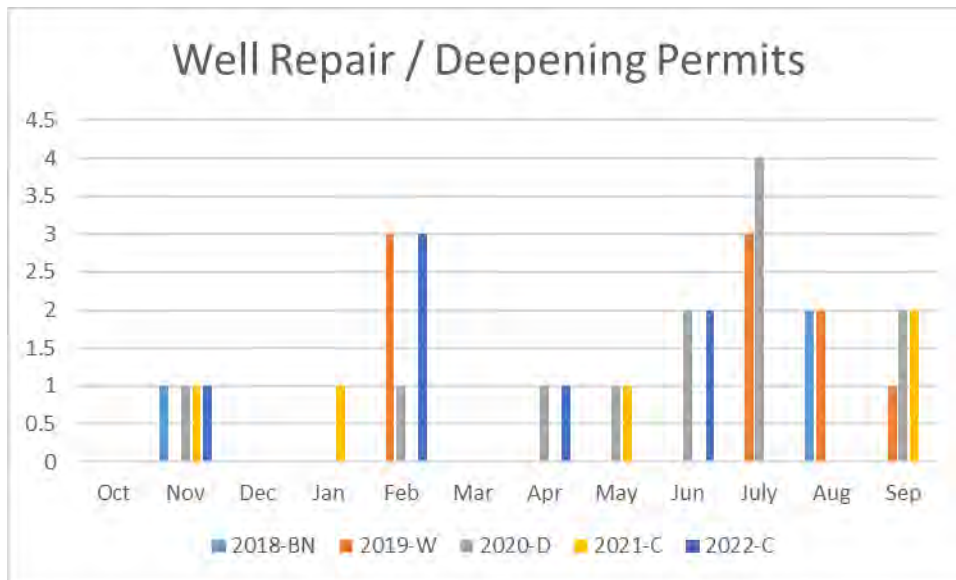
Water Year	Large Diameter Well Permits Finaled (New Wells)												Total	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep		
2016-BN	2	0	0	0	0	0	0	0	0	1	0	0	0	3
2017-W	0	0	0	0	0	0	0	0	0	2	0	0	0	2
2018-BN	0	0	0	1	0	0	1	0	1	0	4	0	0	7
2019-W	0	0	0	0	0	0	0	1	0	0	0	0	1	2
2020-D**	1	0	0	0	0	0	1	0	5	3	1	0	0	11
2021-C	0	0	2	1	0	0	0	1	2	4	0	0	0	10
2022	0	4	1	2	16	18	10	3	0					54



**Water Year 2020 and forward - Implemented improvements to the well permit process and working on backlog status updates.

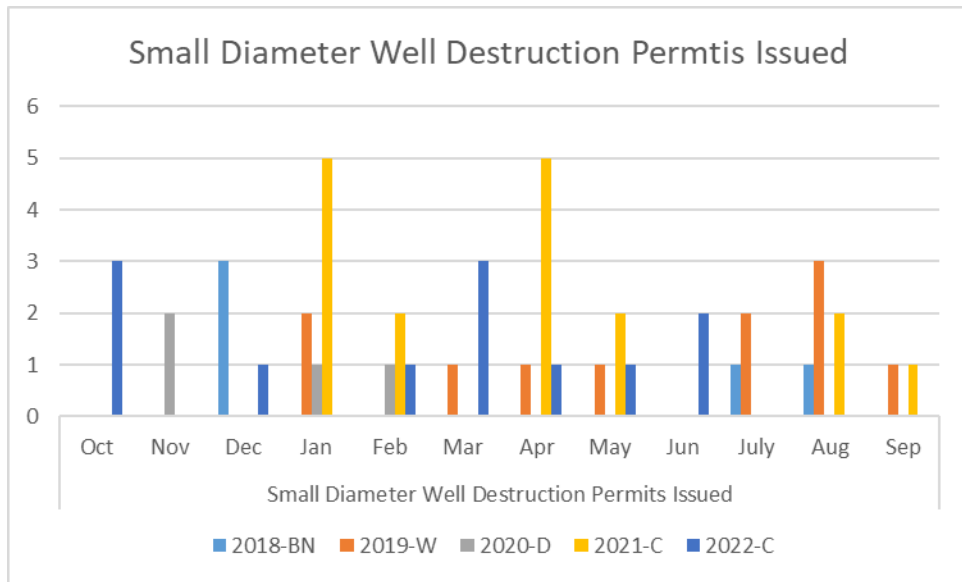
Well Repair and Deepening Data

Water Year	Well Repair/Deepening Permits Issued												Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	
2006-W	0	0	0	0	0	0	0	0	3	1	0	0	4
2007-D	0	0	0	0	1	0	0	1	0	2	2	3	9
2008-C	3	2	1	1	1	0	1	0	0	3	3	0	15
2009-D	0	1	2	2	3	0	1	2	1	4	1	3	20
2010-BN	0	1	0	0	0	3	0	3	1	1	1	0	10
2011-W	2	0	0	0	0	0	0	0	2	1	4	0	9
2012-BN	1	0	0	0	0	0	1	1	2	0	1	1	7
2013-D	0	0	1	0	2	0	0	2	0	2	0	3	10
2014-C	2	0	1	8	0	2	1	0	2	0	1	0	17
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Total
2015-C	1	0	1	0	1	3	2	1	1	3	4	2	19
2016-BN	2	1	0	0	0	0	0	0	0	1	4	1	4
2017-W	0	1	0	0	0	0	0	0	0	0	1	0	2
2018-BN	0	1	0	0	0	0	0	0	0	0	2	0	3
2019-W	0	0	0	0	3	0	0	0	0	3	2	1	9
2020-D	0	1	0	0	1	0	1	1	2	4	0	2	12
2021-C	0	1	0	1	0	0	0	1	0	0	0	2	5
2022-C	0	1	0	0	3	0	1	0	2				7



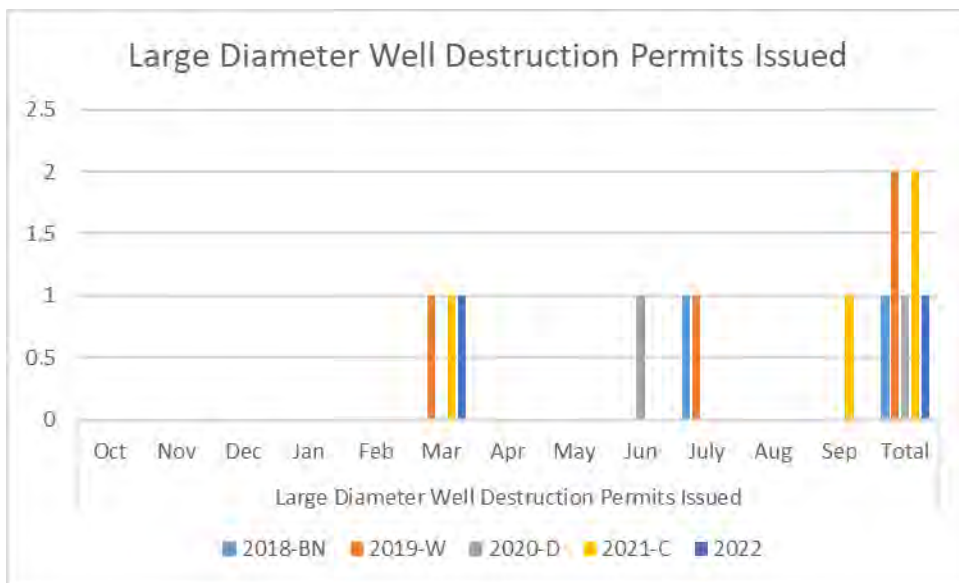
Well Destruction Data – Small Diameter Wells

Water Year	Small Diameter Well Destruction Permits Issued												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	
2017-W	0	2	0	0	0	0	1	0	0	4	1	0	8
2018-BN	0	0	3	0	0	0	0	0	0	1	1	0	5
2019-W	0	0	0	2	0	1	1	1	0	2	3	1	11
2020-D	0	2	0	1	1	0	0	0	0	0	0	0	4
2021-C	0	0	0	5	2	0	5	2	0	0	2	1	17
2022-C	3	0	1	0	1	3	1	1	2				12



Well Destruction Data – Large Diameter Wells

Water Year	Small Diameter Well Destruction Permits Issued												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	
2017-W	0	2	0	0	0	0	1	0	0	4	1	0	8
2018-BN	0	0	3	0	0	0	0	0	0	1	1	0	5
2019-W	0	0	0	2	0	1	1	1	0	2	3	1	11
2020-D	0	2	0	1	1	0	0	0	0	0	0	0	4
2021-C	0	0	0	5	2	0	5	2	0	0	2	1	17
2022-C	3	0	1	0	1	3	1	1	2				12



Dry Well Data

Water Year	Dry Small Diameter Wells												Total	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep		
2021-C												11	7	18
2022-C	1	0	1	0	1	0	0	0	0	2				5

Dry well data started being collected August 2021.

Water Year	Dry Large Diameter Wells												Total	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep		
2021-C												1	0	1
2022-C	0	0	0	0	0	0	0	0	0	0				0

Dry well data started being collected August 2021.

Cumulative Dry Wells by Water Year		
Water Year	Small Diameter Dry Wells	Large Diameter Dry Wells
2021-C	18	1
2022-C	5	0

Cumulative Dry Wells By City	
Chico	16
Durham	5
Cohasset	2
Berry Creek	1

Known Depth of Dry Wells			
Chico	Durham	Cohasset	Berry Creek
80 feet			
172 feet			
84 feet			
105 feet			

Executive Order N-7-22 Data

Cumulative Number of Wells Under Executive Oder N-7-22			
By Subbasin	Small Diameter	Large Diameter	Totals
BUTTE	0	11	11
VINA	1	2	3
WYANDOTTE	0	4	4
			18
By GSA	Small Diameter	Large Diameter	Totals
Biggs-West Gridley Water District	0	3	3
Butte County	0	2	2
Butte Water District	0	3	3
Richvale Irrigation District	0	1	1
Rock Creek Reclamation District	0	1	1
Vina	1	2	3
Western Canal	0	1	1
Wyandotte Creek	0	4	4
			18