

Priority	Project Description	Proponent	Acre-Feet	Project Stage
1	Residential Conservation	Cal Water Service	100	Planned
2	Agricultural Irrigation Efficiency	WCGSA	1,000	Planned
3	Flood-MAR	WCGSA	TBD	Planned
4	Orville Wildlife Area Robinson's Riffle Project	Sutter FCA, GSSA	TBD	Planned
5	Inter-Basin Water Transfer	TWSD	5,000	Potential
6	Streamflow Augmentation	WCGSA	TBD	Planned
7	Agricultural Surface Water Supplies	WCGSA, Farm Bereau	TBD	Potential
8	Palermo CleanWater improvement Poject	Butte County	TBD	Potential
9	Recharge Well	TWSD	TBD	Conceptual
10	Well Upgardes	TWSD	TBD	Potential
11	TWSD Water Treatment Plant Expansion	TWSD	TBD	Planned
12	Hydrant Metering	South Feather Water& Power	TBD	Planned
13	Fuel Management for Watershed Health	WCGSA, BC Fire Safe, BCRCDD	TBD	Potential
14	Removal of Invasive Species	WCGSA	TBD	Potential
15	Extend Orchard Replacement	WCGSA	TBD	Conceptual
		<b>Total</b>	<b>6,100</b>	

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Residential Water Conservation

**Contact Person:** Kelly Peterson

**Organization/Affiliation:** Wyandotte Creek GSA

**Contact Phone:** 530-522-3595

**Contact Email:** wyandotteGSA@gmail.com

### Project or Management Action Description and Status

**Project or Management Action Name:** Residential Water Conservation

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Wyandotte Creek GSA and municipal water providers including but not limited to California Water Service Oroville and Thermalito Water and Sewer District

**Project or Management Action Location:** Wyandotte Creek subbasin, including municipal water provider's service areas

**Project or Management Action Status (Planned, Potential, or Conceptual):** Planned

### **Brief Project or Management Action Description (1-2 short paragraphs):**

Municipal water service providers provide water to the City of Oroville and other residents throughout the subbasin. Groundwater is one source of the water. The annual demand in the subbasin has fluctuated over the years. The anticipated demand is expected to increase based on planned developments through the City of Oroville General Plan and the Butte County General Plan. In their 2020 Urban Water Management Plans municipal service providers have identified residential water conservation projects including things such as installing low flow fixtures, toilet replacement, urinal valve and bowl replacement, clothes washer replacement, residential conservation kits, smart controllers, high efficiency irrigation nozzles and turf buy-back. Other projects include water waste prevention ordinances, metering, conservation pricing, public education and outreach, programs to assess and manage distribution system real loss, water conservation program coordination and staffing support, and other demand management measures.

**Measurable Objectives Expected to Benefit:** Chronic Lowering of Groundwater Levels, Groundwater Storage

**Implementation Timing/ Criteria for Implementation:** 2022-2025

**Estimated Cost:** TBD

**Potential Funding Sources:** Grants, local entities

**Required Permitting and Regulatory Process:** N/A

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** 100 - 200 acre feet/year

**Status of permitting and CEQA/NEPA compliance:** N/A

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, Oroville and Thermalito

**Additional Information Sources:**

2020 Urban Water Management Plan (Chapter 9) Oroville District

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Agricultural Irrigation Efficiency

**Contact Person:** Kelly Peterson

**Organization/Affiliation:** Wyandotte Creek GSA

**Contact Phone:** 530.552.3595

**Contact Email:** WyandotteGSA@gmail.com

### Project or Management Action Description and Status

**Project or Management Action Name:** Agricultural Irrigation Efficiency

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Wyandotte Creek GSA

**Project or Management Action Location:** Wyandotte Creek subbasin

**Project or Management Action Status (Planned, Potential, or Conceptual):** Planned

### **Brief Project or Management Action Description (1-2 short paragraphs):**

A survey of agricultural groundwater users is being conducted by the Agricultural Groundwater Users of Butte County, Butte County Farm Bureau and the Vina GSA to characterize current irrigation methods and practices and to identify opportunities to improve irrigation efficiency. The survey will determine the extent of adoption of irrigation efficient practices and the barriers to increased adoption. The project will identify recommendations to increase the adoption of efficient irrigation practices and methods that could lead to a reduction in groundwater demand which could be applied to users in the Wyandotte Creek subbasin. The survey and results are expected to be completed by July 2021. Agricultural groundwater demand in the Wyandotte Creek subbasin is approximately 36,000 acre-feet per year. Overall agricultural groundwater demand has declined over the past twenty years due to less agricultural acreage and increased irrigation efficiency with new plantings. A 3% reduction in groundwater demand from irrigation efficiency would reduce the groundwater demand by 1080 acre-feet per year.

**Measurable Objectives Expected to Benefit:** Chronic Lowering of Groundwater Levels

**Implementation Timing/ Criteria for Implementation:** 2022-2025

**Estimated Cost:** TBD

**Potential Funding Sources:** Prop 1, Prop 68, USDA, Drought Resiliency Grants

**Required Permitting and Regulatory Process:** N/A

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** 4,000  
acre feet (based on a 2% reduction)

**Status of permitting and CEQA/NEPA compliance:** N/A

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Potentially

**Additional Information Sources:**

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Flood MAR

**Contact Person:** Kelly Peterson

**Organization/Affiliation:** Wyandotte Creek GSA

**Contact Phone:** 530.552.3595

**Contact Email:** Wyandottegsa@gmail.com

### Project or Management Action Description and Status

**Project or Management Action Name:** Flood MAR

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Wyandotte Creek GSA

**Project or Management Action Location:** Basin-wide

**Project or Management Action Status (Planned, Potential, or Conceptual):** Planned

### **Brief Project or Management Action Description (1-2 short paragraphs):**

Studies have indicated that a number of opportunities exist for recharge projects. In 2018, Butte County prepared a study of recharge opportunities entitled, "Evaluation of Restoration and Recharge within Butte County Basins." The report found opportunities in the Wyandotte Creek subbasin for recharge programs using fields, recharge basins and/or recharge ponds. The report provides the foundation to conduct feasibility studies on specific locations. Groundwater sustainability in the Wyandotte Creek subbasin could benefit from recharge projects utilizing seasonal high flows in various creeks and streams. The Department of Water Resources has developed a Flood MAR initiative to advance recharge programs. The project would be an initial scoping of potential recharge opportunities to be conducted by the Wyandotte Creek GSA and implementation of the feasible projects identified as priority. The project will build upon previous analyses of potential recharge opportunities in the Wyandotte Creek subbasin to identify specific recharge opportunities. The project will focus on areas of greatest need to achieve measurable objectives, availability of a water supply, local acceptance and regulatory requirements. The Wyandotte Creek GSA will seek grant and other funds to implement the recharge projects. By having the Wyandotte Creek GSA conduct the recharge projects would avoid unintended consequences.

Potential recharge projects involve utilizing existing creek and rivers such as Wyandotte Creek, Wyman Ravine, Wilson Creek, North Honcut Creek, the Feather River and Ruddy creek and the recycling of irrigation tail water as a potential recharge sources. Projects could be located on

privately and publically owned properties including existing mine tailings which already pond water.

In addition to benefits to the groundwater conditions, catchment and recharge would benefit water use for wildlife habitat, riparian habitat restoration, and for irrigation purposes that would offset pumping in this region.

In addition, the Wyandotte Creek GSA will identify and develop other Flood MAR projects in the subbasin.

**Measurable Objectives Expected to Benefit:** Chronic Lowering of Groundwater Levels

**Implementation Timing/ Criteria for Implementation:** 2022-2032

**Estimated Cost:** TBD

**Potential Funding Sources:** Proposition 1, Proposition 68

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

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** TBD

**Status of permitting and CEQA/NEPA compliance:** Not initiated

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** No

**Additional Information Sources:**

“Evaluation of Restoration and Recharge within Butte County Basins” (Butte County, 2018)

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Oroville Wildlife Area Robinson's Riffle Project

**Contact Person:** Chris Fritz

**Organization/Affiliation:** Sutter Butte Flood Control Agency

**Contact Phone:** (209) 304-1739

**Contact Email:** cfritz@pbieng.com

### Project or Management Action Description and Status

**Project or Management Action Name:** Oroville Wildlife Area Robinson's Riffle Project

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Sutter Butte Flood Control Agency, Golden State Salmon Association

**Project or Management Action Location:** Oroville Wildlife Area (near Oroville, CA)

**Project or Management Action Status (Planned, Potential, or Conceptual):** Planned

**Brief Project or Management Action Description (1-2 short paragraphs):** The proposed Robinson's Riffle Restoration Project is a multi-benefit initiative located within the Oroville Wildlife Area (OWA) which provides hydraulic, ecological, recreational, flood management, educational, and local economic benefits to the disadvantaged community of Oroville and the surrounding area. The project area lies within the State owned 12,000-acre OWA in Butte County, California and is cooperatively managed by the California Department of Water Resources (DWR) and the California Department of Fish and Wildlife (CDFW). The project would directly enhance streamflow through grading improvements along the Feather River to reconnect the overbank areas to the main channel and by providing new additional side-channel and floodplain habitat. The project would also directly enhance the quality of water (reducing temperatures/improving flow) within this reach of the Feather River, providing new shaded riverine habitat, and by removing invasive vegetation, which are all critical stressors for this portion of the river, and further downstream. Additionally, the increased acreage of frequently inundated areas of the Feather River during small flood events will increase the surface available for recharge into the aquifer.

As part of the proposed project the Sutter Butte Flood Control Agency (SBFCA), in partnership with DWR and CDFW, would develop, design, and obtain permits for the Robinson's Riffle Restoration Project. The project aims to restore habitat, reduce flood stages, and increase flood conveyance and transitory storage within the Feather River by excavating tailing piles. This will lower the floodplain surface to a more naturalized condition, which will markedly improve conditions for listed salmonids including improving flows, reducing temperatures, and providing more frequently inundated rearing habitat. The ecosystem restoration component of this project will target streamflow enhancements to benefit critical habitat and the following species: Chinook - Central Valley fall/late fall run, Central Valley spring-run, Sacramento River winter-run, and Central Valley steelhead; green sturgeon, Swainson's Hawk, Monarch butterfly, giant garter snake, yellow billed cuckoo, Valley elderberry longhorn beetle (VELB) and others.



**Measurable Objectives Expected to Benefit:** Lowering Groundwater Levels, Reduction of Storage, Degraded Quality, Land Subsidence

**Implementation Timing/ Criteria for Implementation:** SBFCA is currently seeking ~\$1.7M in funding to get the Robinson's Riffle Project started. The goal is to develop the details of a preferred project in coordination with interested stakeholders and resource agencies through a series of workshops to build consensus support for moving the project forward through construction. In addition to developing the details of the preferred project, the funding would also be used to initiate the design, environmental documentation, and permitting. The planning, design, and permitting phases are scheduled to take approximately 18 months.

**Estimated Cost:** \$1.7M for Planning, Design, Environmental, and Permitting

**Potential Funding Sources:** Prop 1; Prop 68, Grants, DWR programs

**Required Permitting and Regulatory Process:** It is anticipated that the project will require CEQA/NEPA; USACE 408; USACE 404; CDFW ITP; CDFW 1600 LSAA; State Lands Commission Lease; CVRWQCB 401; CVFPB Encroachment Permit; DWR Encroachment Permit

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** TBD

**Status of permitting and CEQA/NEPA compliance:** Not yet started

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, Oroville, CA

**Additional Information Sources:** California Department of Fish and Wildlife Oroville Field Office

**Other:** A summary of the benefits of the OWA Robinson's Riffle Project is listed below.

Flood benefits for Urban Areas & Small Communities:

- Attenuates small flood events caused by potential failure of gated or other issues in the Oroville complex.
- Lowers WSE locally for larger hydrologic events and increases resiliency of flood management structures in an urban area.
- Flood maintenance is reduced by improving hydraulic performance of the floodway and removal of invasive vegetative species.
- Improves sediment control.

Recreation and Education Benefits:

- Improved and increased access for both motorized and non-motorized boating.
- Improved trails and increased access for hikers and walkers.
- Increased fishing access.
- Interpretive opportunities including access to observe outgoing salmon and steelhead, as well as increased numbers of fish, and other rare and endangered species.
- Increased public parking.
- Increased and improved cycling routes.
- Improved hunting in designated areas.
- Improved viewscape.
- Improves conditions and venues for bird watching.
- Improved site security and public safety of a formerly blighted area.

#### Local Economic Benefits:

- Increased short- and long-term economic activity from capital construction and long-term maintenance activity in a disadvantaged community.
- Potential source of aggregate for local construction.
- Increased local spending from visitors, fishermen and hunters in a disadvantaged community.

#### Species Benefits:

- Floodplain salmonid habitat (rearing & cover) for Chinook - Central Valley fall/late fall run, Central Valley spring-run, Sacramento River winter-run and Central Valley steelhead.
- Reduced juvenile salmonid predation.
- Elimination or reduction of fish stranding and enhanced fish entry and exit from the floodplain.
- Habitat improvements/benefits for other listed species: green sturgeon, Swanson's Hawk, Monarch butterfly, giant garter snake, VELB and others.
- Improved species connectivity throughout State-owned conservation areas.

#### Ecological Benefits:

- Reduction or elimination of numerous invasive species.
- Improved floodplain connectivity.
- Increased volume and frequency of floodplain inundation
- Improved riparian habitat (riparian forest and shaded riverine aquatic).
- Increased local aquifer recharge (greater infiltration), resulting in improved conditions for groundwater dependent species.

#### State Water Project (SWP) Benefits:

- Elimination of largest upstream source of water primrose that threatens Delta pumping. Leverages recently completed Oroville Wildlife Area primrose removal and ongoing Live Oak sediment and primrose removal projects.
- Increases resiliency to absorb unplanned releases from SWP facilities and reduces associated liability.
- Meets or exceeds ecological and recreational requirements of FERC license.
- Delivers on commitments made to local community following 2017 Oroville spillways incident, improving local SWP relationships and reducing the potential for Oroville FERC relicensing delays.

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Inter-Basin Water Transfer

**Contact Person:** Christopher Heindell

**Organization/Affiliation:** Thermalito Water and Sewer District

**Contact Phone:** (530) 533-0740

**Contact Email:** cheindell@twsd.info

### Project or Management Action Description and Status

**Project or Management Action Name:** Inter-Basin Water Transfer

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** TWSD, Butte County, DWR, Ag Users

**Project or Management Action Location:** Wyandotte Creek Subbasin

**Project or Management Action Status (Planned, Potential, or Conceptual):** Potential

**Brief Project or Management Action Description (1-2 short paragraphs):** Offset groundwater pumping by Agricultural users with available surface water

**Measurable Objectives Expected to Benefit:** Lowering Groundwater Levels, Reduction of Storage, Degraded Quality, Land Subsidence

**Implementation Timing/ Criteria for Implementation:** 6-12 months

**Estimated Cost:** TBD

**Potential Funding Sources:** TBD

**Required Permitting and Regulatory Process:** DWR and Butte County

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** 3,000-5,000 acre-ft per year

**Status of permitting and CEQA/NEPA compliance:** TBD

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, Thermalito

**Additional Information Sources:**

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Streamflow Augmentation

**Contact Person:** Kelly Peterson

**Organization/Affiliation:** Wyandotte Creek GSA

**Contact Phone:** 530.552.3595

**Contact Email:** WyandotteGSA@gmail.com

### Project or Management Action Description and Status

**Project or Management Action Name:** Streamflow Augmentation

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Wyandotte Creek GSA, PG&E, other surface water right holders in the subbasin

**Project or Management Action Location:** All surface waters in the subbasin

**Project or Management Action Status (Planned, Potential, or Conceptual):** Planned

### **Brief Project or Management Action Description (1-2 short paragraphs):**

Excess untreated surface water available from water right holders in the watershed would be channeled via certain creeks or streams to portions of the Wyandotte Creek subbasin to increase stream flows and potential recharge (e.g., recharge ponds, in-lieu). The Wyandotte Creek GSA would acquire available surface water supplies and manage the project. Available surface water conveyed in creeks and streams could be made available for riparian water holders. The project could leave significant water in these waterways for natural aquifer recharge and enhanced salmon passage. A portion of the available surface water could be diverted to recharge ponds/basins. The initial step would involve the Wyandotte Creek GSA conducting an investigation and feasibility study. Surface water may not be available every year.

**Measurable Objectives Expected to Benefit:** Depletion of Interconnected Streams, Chronic Lowering of Groundwater Levels

**Implementation Timing/ Criteria for Implementation:** 2022-2025

**Estimated Cost:** \$50,000-\$100,000 per 1,000 acre feet (\$50-100/acre foot)

**Potential Funding Sources:**

<https://wcb.ca.gov/Programs/Stream-Flow-Enhancement>, Resource Renewal Institute

Proposition 1, Proposition 68, Wyandotte Creek GSA fees

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

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** 1,000 to 5,000 acre-feet

**Status of permitting and CEQA/NEPA compliance:** Not initiated

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** No

**Additional Information Sources:**

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Palermo Clean Water Improvement Project

**Contact Person:** Christina Buck

**Organization/Affiliation:** Butte County Dept. Water and Resource Conservation

**Contact Phone:** 530-552-3593

**Contact Email:** cbuck@buttecounty.net

### Project or Management Action Description and Status

**Project or Management Action Name:** Palermo Clean Water Improvement Project

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Butte County, South Feather Water and Power, Palermo Community Council

**Project or Management Action Location:** Palermo, CA

**Project or Management Action Status (Planned, Potential, or Conceptual):** Potential

**Brief Project or Management Action Description (1-2 short paragraphs):** Palermo is an unincorporated, semi-rural community located approximately five miles south of the City of Oroville. As of 2010, there are 774 parcels in the project area with an estimated 635 dwellings corresponding to a population of almost 2000 people. Most parcels in this area are smaller in size, and served by individual water wells for potable water supply, as well as on-site septic systems for wastewater treatment and disposal. Because of the predominant soil types in the area, most parcels are subject to periodic flooding due to inadequate surface drainage, high groundwater and slower percolation rates. These issues combined are problematic for the long-term adequate functioning of septic systems, and there are an inordinate number of failures occurring throughout the winter months. Due to the inability of the soils to adequately treat effluent effectively and completely, it is common to have surfacing effluent, plumbing back-ups into homes, and the potential for cross contamination of the existing wells and possibly the drinking water aquifer with pathogens. Additionally, there are concerns that these failures may be contributing to elevated nitrate levels in the area. The community is desperate for a long-term solution to this public health risk.

There was a study conducted in 2010 to specifically evaluate alternatives to address the wastewater treatment needs in the Palermo Community (Palermo Wastewater Study Preliminary Engineering Report). The high cost, estimated \$28.4M, of the preferred alternative has made the project difficult to implement. Over the past eight years, there has been ongoing dialogue as to potential solutions to address the increasing public health concerns over contaminated groundwater in Palermo. The most promising option involves providing a treated water supply to residents in the Palermo Community by expanding the service area and water delivery capabilities of the South Feather Water and Power Agency to these residences.

**Measurable Objectives Expected to Benefit:** Lowering Groundwater Levels

**Implementation Timing/ Criteria for Implementation:** Project Design and Evaluation of Funding Sources is currently underway through a Technical Assistance grant project. Implementation could begin as early as 2021

**Estimated Cost:** TBD

**Potential Funding Sources:** Grant Funding

**Required Permitting and Regulatory Process:** TBD

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):**  
Reduced domestic groundwater pumping. Amount unknown.

**Status of permitting and CEQA/NEPA compliance:** Not started

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, Palermo

**Additional Information Sources:**

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Recharge Well (Injection Well)

**Contact Person:** Christopher Heindell

**Organization/Affiliation:** Thermalito Water and Sewer District

**Contact Phone:** (530) 533-0740

**Contact Email:** cheindell@twsd.info

### Project or Management Action Description and Status

**Project or Management Action Name:** Recharge Well (Injection Well)

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** DWR, Butte County, WCGSA

**Project or Management Action Location:** TWSD Service Area

**Project or Management Action Status (Planned, Potential, or Conceptual):** Conceptual

**Brief Project or Management Action Description (1-2 short paragraphs):** Installation of an injection well at the TWSD treatment plant. Raw water and backwash water would be discharged into the recharge well

**Measurable Objectives Expected to Benefit:** Lowering Groundwater Levels, Reduction of Storage, Degraded Quality, Land Subsidence

**Implementation Timing/ Criteria for Implementation:** 12-24 months

**Estimated Cost:** TBD

**Potential Funding Sources:** DWR, WCGSA, Butte County

**Required Permitting and Regulatory Process:** TBD

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** TBD

**Status of permitting and CEQA/NEPA compliance:** TBD

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, Thermalito

**Additional Information Sources:**

**Other:**



## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Well Upgrades

**Contact Person:** Christopher Heindell

**Organization/Affiliation:** Thermalito Water and Sewer District

**Contact Phone:** (530) 533-0740

**Contact Email:** cheindell@twsd.info

### Project or Management Action Description and Status

**Project or Management Action Name:** Well Upgrades

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** DWR, Butte County, WCGSA

**Project or Management Action Location:** TWSD Service Area

**Project or Management Action Status (Planned, Potential, or Conceptual):** Potential

**Brief Project or Management Action Description (1-2 short paragraphs):** Installation of variable frequency drives and telemetry on groundwater wells would provide additional control and efficiencies.

**Measurable Objectives Expected to Benefit:** Lowering Groundwater Levels, Reduction of Storage, Degraded Quality, Land Subsidence

**Implementation Timing/ Criteria for Implementation:** 6-12 months

**Estimated Cost:** TBD

**Potential Funding Sources:** DWR, WCGSA, Butte County

**Required Permitting and Regulatory Process:** TBD

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** TBD

**Status of permitting and CEQA/NEPA compliance:** TBD

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, Thermalito

**Additional Information Sources:**

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** TWSD Water Treatment Plant Capacity Upgrade

**Contact Person:** Christopher Heindell

**Organization/Affiliation:** Thermalito Water and Sewer District

**Contact Phone:** (530) 533-0740

**Contact Email:** cheindell@twsd.info

### Project or Management Action Description and Status

**Project or Management Action Name:** TWSD Water Treatment Plant Capacity Upgrade

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** TWSD, Division of Drinking Water, DWR

**Project or Management Action Location:** 535 Table Mountain Blvd, Oroville, CA

**Project or Management Action Status (Planned, Potential, or Conceptual):** Planned

**Brief Project or Management Action Description (1-2 short paragraphs):** Upgrading the capacity of the District's treatment plant would directly offset groundwater usage in the subbasin.

**Measurable Objectives Expected to Benefit:** Lowering Groundwater Levels, Reduction of Storage, Degraded Quality, Land Subsidence

**Implementation Timing/ Criteria for Implementation:** 6-12 months

**Estimated Cost:** 1,500,000-3,000,000

**Potential Funding Sources:** TBD

**Required Permitting and Regulatory Process:** Division of Drinking Water, Department of Water Resources

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** 500+ acre-ft per year

**Status of permitting and CEQA/NEPA compliance:** Exempt

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, Thermalito

**Additional Information Sources:**

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### **Project or Management Action Name and Contact**

**Project or Management Action Name:** Hydrant Metering to Reduce Non-Beneficial Consumptive Use

**Contact Person:** Kristen McKillop

**Organization/Affiliation:** South Feather Water & Power

**Contact Phone:** 530-534-1221

**Contact Email:** kmckillop@southfeather.com

### **Project or Management Action Description and Status**

**Project or Management Action Name:** Hydrant Metering to Reduce Non-Beneficial Consumptive Use

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Butte County, South Feather Water and Power

**Project or Management Action Location:** Multiple locations throughout the service area

**Project or Management Action Status (Planned, Potential, or Conceptual):** Planned

**Brief Project or Management Action Description (1-2 short paragraphs):** Fire hydrants located throughout the service area are primarily utilized for fire suppression activities. However, at times, the Agency loans hydrant meters that track volume for payment to members of the public. These approved uses of hydrant water are most frequently for construction purposes, and ancillary support to fire suppression efforts. However, these hydrants are being accessed routinely by those without meters, and for a multitude of unconfirmed uses. Because the hydrants themselves do not all have meters installed, we are unable to account for the volume lost from our system through this extraction method. The Agency is working diligently to accurately account for all water uses, and this is a critical missing piece.

**Measurable Objectives Expected to Benefit:** Surface Water Depletion

**Implementation Timing/ Criteria for Implementation:** To be completed by 2025

**Estimated Cost:** \$800,000

**Potential Funding Sources:** Federal/State Water Use Efficiency grants

**Required Permitting and Regulatory Process:** N/A

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):**  
Unknown.

**Status of permitting and CEQA/NEPA compliance:** N/A

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, All DAC within the service area, including Oroville and Palermo.

**Additional Information Sources/Other:** This metering project not only serves to quantify non-beneficial consumptive use, but will allow the Agency to comply with numerous state regulatory requirements.

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Fuel Management for Watershed Health

**Contact Person:** Kelly Peterson

**Organization/Affiliation:** Wyandotte Creek GSA

**Contact Phone:** 530-552-3595

**Contact Email:** WyandotteGSA@gmail.com

### Project or Management Action Description and Status

**Project or Management Action Name:** Upper Watershed Recharge

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Wyandotte Creek GSA, Butte County Fire Safe Council, Butte County Resource Conservation District, NRCS

**Project or Management Action Location:** Multiple sites in the Wyandotte Creek Watershed and the upper watershed of the subbasin

**Project or Management Action Status (Planned, Potential, or Conceptual):** Potential

### **Brief Project or Management Action Description (1-2 short paragraphs):**

Fuel management projects within the Wyandotte Creek subbasin and the upper watershed of the subbasin on public and private land.

**Measurable Objectives Expected to Benefit:** Lowering Groundwater Levels, Reduction of Storage, Degraded Quality, Surface Water Depletion

**Implementation Timing/ Criteria for Implementation:** 2022-2042

**Estimated Cost:** TBD

**Potential Funding Sources:** CAL FIRE, Sierra Nevada Conservancy, California Fire Safe Council, and other state and federal funding agencies

**Required Permitting and Regulatory Process:** CEQA

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** TBD

**Status of permitting and CEQA/NEPA compliance:** TBD

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?** Yes, all DACs in the subbasin and in the upper watershed of the subbasin

**Additional Information Sources:**

**Other:**

## Wyandotte Creek Subbasin GSP Project and Management Actions

### Project or Management Action Name and Contact

**Project or Management Action Name:** Extend Orchard Replacement

**Contact Person:** Kelly Peterson

**Organization/Affiliation:** Wyandotte Creek GSA

**Contact Phone:** 530- 552-3595

**Contact Email:** WyandotteGSA@gmail.com

### Project or Management Action Description and Status

**Project or Management Action Name:** Extend Orchard Replacement

**Project or Management Action Type:** Project

**Project or Management Action Proponent(s):** Butte County

**Project or Management Action Location:** Wyandotte Creek subbasin

**Project or Management Action Status (Planned, Potential, or Conceptual):** Conceptual

### **Brief Project or Management Action Description (1-2 short paragraphs):**

Orchards are a predominant agricultural land use in the Wyandotte Creek subbasin. As a permanent crop, orchards cannot be fallowed. However, a voluntary program to delay in replanting of orchards could be a fallowing type program. Approximately 2-4% of almond and walnut orchards are redeveloped during a given year. The timing of the removal of the existing orchard to replanting usually occurs within one season to reduce the revenue impact to the farm. If farmers were financially incentivized to voluntarily extend this timeline by an extra growing season, it could effectively fallow numerous acres per year. The extended redevelopment timeline would have the additional benefit of reducing the need for certain soil treatments including fumigation and expand recycling options for the previous orchard.

**Measurable Objectives Expected to Benefit:** Chronic lowering of groundwater levels.

### **Implementation Timing/ Criteria for Implementation:**

Timing would be dependent upon the availability of financial incentives and the willingness of growers to participate.

**Estimated Cost:** TBD

**Potential Funding Sources:** Prop 1, Prop 68, USDA, NRCS

**Required Permitting and Regulatory Process:** N/A

**Expected Yield (e.g. water contributed to the groundwater system, acre-feet per year):** TBD

**Status of permitting and CEQA/NEPA compliance:** None

**Does this Management Action or Project serve a disadvantaged community? If so, which one(s)?**

**Additional Information Sources:**

**Other:**