



December 5, 2022

SWRCB - DWR
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Patricia D. Fernandez, P.E.
Senior Water Resource Engineer
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000
patricia.fernandez@waterboards.ca.gov



Subject: City of Davis Wastewater Change Petition Submittal

Ms. Fernandez:

The City of Davis is seeking to receive an approval from your office for a reduction in wastewater discharges and use of recycled water at identified places of use outlined in this petition packet.

This submittal includes the following documents in support of this Wastewater Change Petition:

- **Attachment 1** contains the City's Petition for Change and Environmental Information Form.
- **Attachment 2** explains why approval of the requested changes will not injure downstream water users or unreasonably harm fish and wildlife, and is in the public interest.
- The City electronically transferred \$11,048.00 to the State Water Resources Control Board as payment for processing the wastewater change petition. (**Attachment 3.**) This payment assumes that the City will reduce its discharges of wastewater by 1.8 million gallons per day (i.e., 2,016 acre-feet/year). Enclosed with this transmittal is a check for \$850.00 to California Department of Fish and Wildlife, as required by Public Resources Code section 10005.

530-757-5686 | @CityofDavis @  
Public Works Utilities and Operations Department
1717 5th Street, Davis, CA 95616

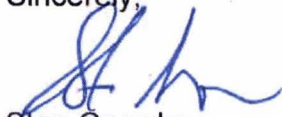
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The City is currently completing environmental review of the Project pursuant to the California Environmental Quality Act and will transmit relevant documentation to you once it is available.

Attorney Aaron Ferguson from Somach Simmons & Dunn is assisting the City in this submittal and submitting this application on the City's behalf.

Please contact Aaron Ferguson in regard to this submittal at (916) 469-3837 or at aferguson@somachlaw.com. Additionally, please copy Josie Tellers, Water Quality Compliance Specialist for the City at jtellers@cityofdavis.org, on all email correspondence.

Sincerely,



Stan Gryczko
Director, Public Works Utilities and Operations (PWUO)
City of Davis
(530) 747-8292
sgryczko@cityofdavis.org

Included: Attachments 1-3

cc: Michelle Snapp
Michelle.snapp@waterboards.ca.gov

Tiffanee Hutton
Tiffanee.hutton@wildlife.ca.gov

Briana Seapy
Briana.seapy@wildlife.ca.gov

Josie Tellers
jtellers@cityofdavis.org

Attachment 1

Please indicate County where your project is located here:

Yolo

MAIL FORM AND ATTACHMENTS TO:
State Water Resources Control Board
DIVISION OF WATER RIGHTS
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
http://www.waterboards.ca.gov/waterrights

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PETITION FOR CHANGE

Separate petitions are required for each water right. Mark all areas that apply to your proposed change(s). Incomplete forms may not be accepted. Location and area information must be provided on maps in accordance with established requirements. (Cal. Code Regs., tit. 23, § 715 et seq.) Provide attachments if necessary.

- Point of Diversion** **Point of Rediversion** **Place of Use** **Purpose of Use**
Wat. Code, § 1701 Cal. Code Regs., tit. 23, § 791(e) Wat. Code, § 1701 Wat. Code, § 1701
 - Distribution of Storage** **Temporary Urgency** **Instream Flow Dedication** **Waste Water**
Cal. Code Regs., tit. 23, § 791(e) Wat. Code, § 1435 Wat. Code, § 1707 Wat. Code, § 1211
 - Split** **Terms or Conditions** **Other**
Cal. Code Regs., tit. 23, § 836 Cal. Code Regs., tit. 23, § 791(e)
- Application Permit License Statement

I (we) hereby petition for change(s) noted above and described as follows:

Point of Diversion or Rediversion – Provide source name and identify points using both Public Land Survey System descriptions to ¼-¼ level and California Coordinate System (NAD 83).

Present: N/A

Proposed: N/A

Place of Use – Identify area using Public Land Survey System descriptions to ¼-¼ level; for irrigation, list number of acres irrigated.

Present: No current places of use

Proposed: See Attachment to this Petition - Places of Use

Purpose of Use

Present: No current purposes of use

Proposed: Irrigation, Industrial, Municipal

Split

Provide the names, addresses, and phone numbers for all proposed water right holders.

In addition, provide a separate sheet with a table describing how the water right will be split between the water right holders: for each party list amount by direct diversion and/or storage, season of diversion, maximum annual amount, maximum diversion to offstream storage, point(s) of diversion, place(s) of use, and purpose(s) of use. Maps showing the point(s) of diversion and place of use for each party should be provided.

Distribution of Storage

Present:

Proposed:

RECEIVED
12/16/22

chk#
450664
\$850.00
MS

Temporary Urgency

This temporary urgency change will be effective from _____ to _____

Include an attachment that describes the urgent need that is the basis of the temporary urgency change and whether the change will result in injury to any lawful user of water or have unreasonable effects on fish, wildlife or instream uses.

Instream Flow Dedication – Provide source name and identify points using both Public Land Survey System descriptions to ¼-¼ level and California Coordinate System (NAD 83).

Upstream Location:

Downstream Location:

List the quantities dedicated to instream flow in either: cubic feet per second or gallons per day:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Will the dedicated flow be diverted for consumptive use at a downstream location? Yes No

If yes, provide the source name, location coordinates, and the quantities of flow that will be diverted from the stream.

Waste Water

If applicable, provide the reduction in amount of treated waste water discharged in cubic feet per second. 2.80

Will this change involve water provided by a water service contract which prohibits your exclusive right to this treated waste water? Yes No

Will any legal user of the treated waste water discharged be affected? Yes No

General Information – For all Petitions, provide the following information, if applicable to your proposed change(s).

Will any current Point of Diversion, Point of Storage, or Place of Use be abandoned? Yes No

I (we) have access to the proposed point of diversion or control the proposed place of use by virtue of:
 ownership lease verbal agreement written agreement

If by lease or agreement, state name and address of person(s) from whom access has been obtained.

See Attachment to this Petition- Access to Places of Use.

Give name and address of any person(s) taking water from the stream between the present point of diversion or redirection and the proposed point of diversion or redirection, as well as any other person(s) known to you who may be affected by the proposed change.

See Attachment to this Petition - Downstream Water Users. Also, see Attachment 2 to the City's submittal explaining why this Project will not injure downstream water right holders.

All Right Holders Must Sign This Form: I (we) declare under penalty of perjury that this change does not involve an increase in the amount of the appropriation or the season of diversion, and that the above is true and correct to the best of my (our) knowledge and belief. Dated 12/5/22 at 8:26

Right Holder or Authorized Agent Signature

Right Holder or Authorized Agent Signature

NOTE: All petitions must be accompanied by:

- (1) the form Environmental Information for Petitions, including required attachments, available at: http://www.waterboards.ca.gov/waterrights/publications_forms/forms/docs/pet_info.pdf
- (2) Division of Water Rights fee, per the Water Rights Fee Schedule, available at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/fees/
- (3) Department of Fish and Wildlife fee of \$850 (Pub. Resources Code, § 10005)

Petition Attachment – City of Davis Wastewater Change Petition

Places of Use

Treated wastewater will be used in the following locations:

Yolo County Central Landfill: Township 09N, E ½ of Section 25, NW ¼ of Section 29, Section 30; See Figure 1

Restoration Wetlands: Township 09N, E ½ of Section 33 and West ½ of Section 34; See Figure 1

City-Irrigated Trees: Water Service Area of City of Davis; See Figure 2

Access to Places of Use

Water used at the Yolo County Central Landfill (YCCL) will be by agreement with Yolo County because Yolo County owns the YCCL property. The City owns the Restoration Wetlands and parks and open spaces where it will irrigate trees.

Downstream Water Users

The table below lists all water rights downstream of the City of Davis discharge point on Willow Slough Bypass to the Toe Drain and to the southern tip of Liberty Island.

Appropriative Rights				
Application ID	Location	Season	Diversion Rate	Max. Annual Diversion Volume
A028453	Tule Canal; Toe Drain	May 1 – Oct. 1	45 cubic feet per second (cfs)	12,600 acre-feet (af)
A009806	Tule Canal	Apr. 1 – Oct. 1	25.4 cfs (<i>No more than 15.7 cfs when combined with diversions under A020376</i>)	270.1 af
A020376	Tule Canal	May 1 – June 30; Sept. 1 – 30	15.7 cfs (<i>See above</i>)	2,833.8 af
A013650	RD 999 West Levee Borrow Pit	May 1 – Sept. 1	10.2 cfs	2,508.7 af
A013651A	Borrow Pit West Levee RD No. 999	Apr. 15 – Oct. 15	7.7 cfs (<i>No more than 7.7 cfs when combined with diversions under A013651B</i>)	2,810.2 af (<i>No more than 2,810.2 af when combined with diversions under A013651B</i>)

Appropriative Rights				
Application ID	Location	Season	Diversion Rate	Max. Annual Diversion Volume
A013651B	Borrow Pit West Levee RD No. 999	Apr. 15 – Oct. 15	7.7 cfs (<i>see above</i>)	2,810.2 af (<i>see above</i>)
A020388	West Cut	Apr. 1 – June 30; Sept. 1 – Dec. 31	5.5 cfs	1,043 af
A018594	Yolo Canal	Nov. 1 – Jan. 15	0.35 cfs	52.8 af
A014174	Yolo Canal	Mar. 1 – Nov. 1	6.5 cfs	3,171.6 af
A013088	Yolo Canal	Apr. 1 – Nov. 1	2.4 cfs	1,023.5 af
A022903	Yolo Canal	Nov. 1 – Mar. 31	1.2 cfs	60 af
A001150	Toe Drain	Apr. 1 – Oct. 31	23 cfs	9,762.8 af
A004124	Toe Drain	Jan. 1 – Dec. 31	7.12 cfs	5,154.7 af
A004123	Toe Drain	Nov. 1 – Mar. 31	11.64 cfs	3,486.3 af
Riparian Rights				
Application ID		Location		
S015328		Willow Slough Bypass		
S017692		Willow Slough Bypass		
S019397		Tule Canal		
S021242		Toe Drain		
S017686		Toe Drain		
S022022		Toe Drain		
S020968		Toe Drain		
S024401		Toe Drain		
S016333		Toe Drain		
S016334		Toe Drain		
S006543		Toe Drain		
S014729		Toe Drain		
S022325		Toe Drain		
S021075		Yolo Canal		

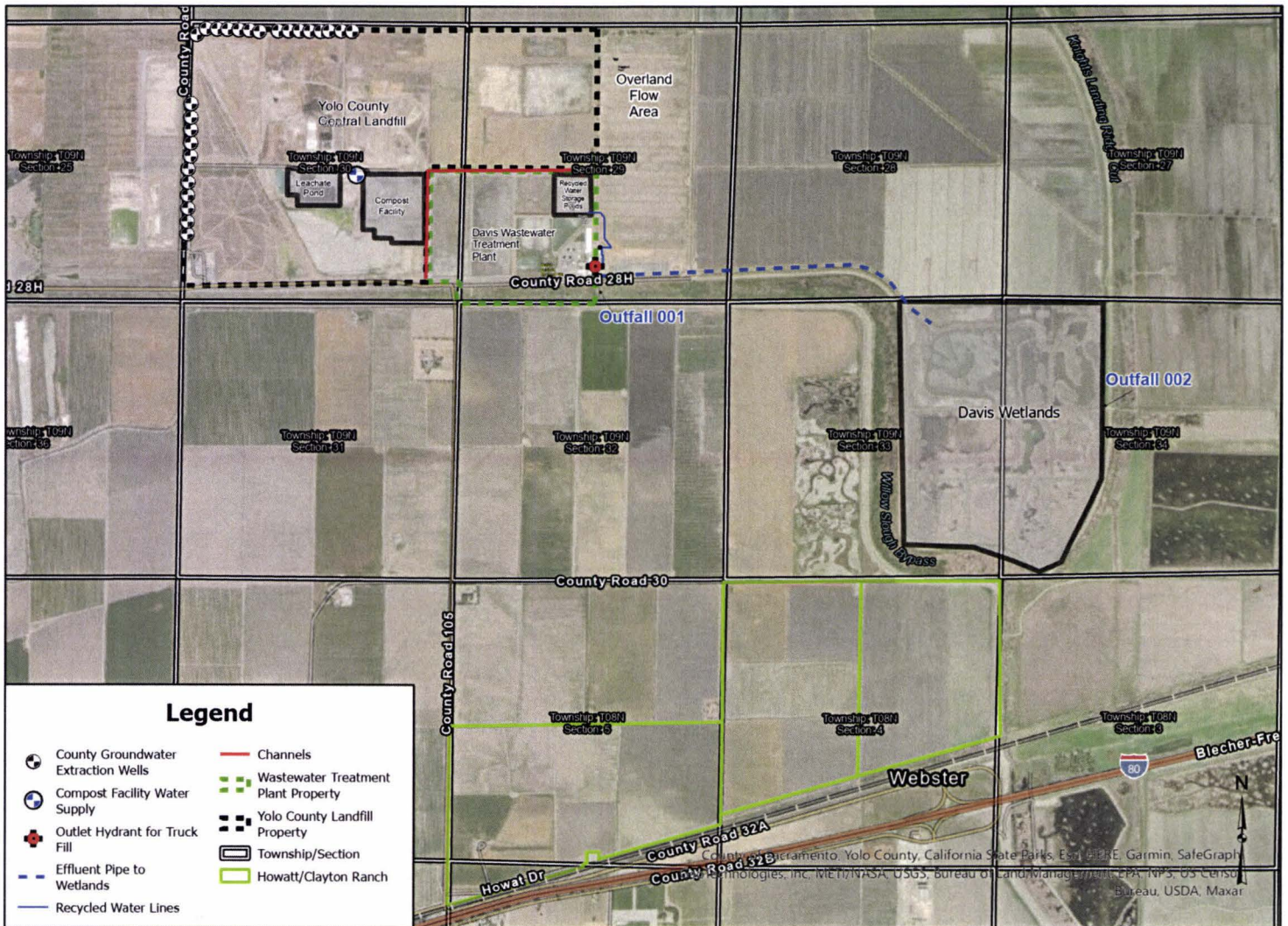


Figure 1: Recycled Water Use Area at the Wastewater Treatment Plant and Yolo County Landfill

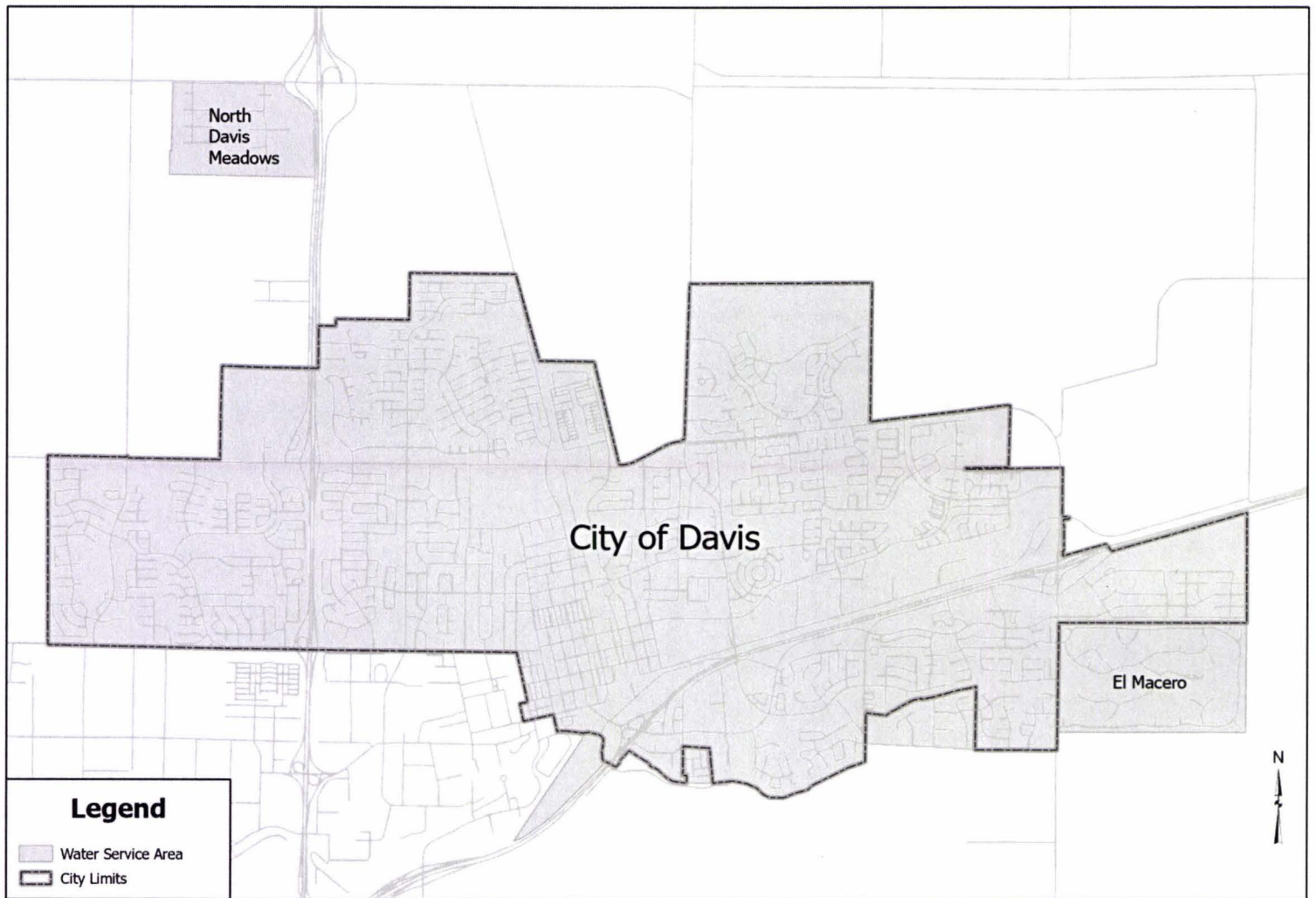


Figure 2: City Limit and Water Service Area

ENVIRONMENTAL INFORMATION FOR PETITIONS

This form is required for all petitions.

Before the State Water Resources Control Board (State Water Board) can approve a petition, the State Water Board must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared, a determination must be made of who is responsible for its preparation. As the petitioner, you are responsible for all costs associated with the environmental evaluation and preparation of the required CEQA documents. Please answer the following questions to the best of your ability and submit any studies that have been conducted regarding the environmental evaluation of your project. If you need more space to completely answer the questions, please number and attach additional sheets.

DESCRIPTION OF PROPOSED CHANGES OR WORK REMAINING TO BE COMPLETED

For a petition for change, provide a description of the proposed changes to your project including, but not limited to, type of construction activity, structures existing or to be built, area to be graded or excavated, increase in water diversion and use (up to the amount authorized by the permit), changes in land use, and project operational changes, including changes in how the water will be used. For a petition for extension of time, provide a description of what work has been completed and what remains to be done. Include in your description any of the above elements that will occur during the requested extension period.

The City of Davis (City) proposes to remove treated wastewater from the Willow Slough Bypass by reducing its discharge by up to 1.8 million gallons per day (2.8 cubic feet per second), as an annual average. The total annual volume the City proposes to remove is approximately 2,016 acre-feet per year (af/yr).

The City proposes to use the treated wastewater at the Yolo County Central Landfill (YCCL) to augment the use of pumped groundwater, controlled leachate, and stored stormwater for onsite uses at the YCCL. This anticipated use at the YCCL includes approximately 491-613 af/yr for dust control, soil compaction, phytoremediation, and agriculture. Additionally, approximately 45,000 to 100,000 gpd (50-112 af/yr) will be used for Napa Recycle's planned composting facility located at the YCCL.

The City will also use treated wastewater at its Restoration Wetlands, which has an estimated water demand of 350 million gallons per year (1,074 af/yr).

Finally, the City will use treated wastewater to irrigate trees on City-owned property, including parks and open spaces. The City trees have an estimated demand of 80,000-100,000 gallons per year (0.25-0.30 af/yr).

The City's proposed changes will not result in any unreasonable impacts on fish and wildlife, as further explained in Attachment 2 to the City's submittal.

Insert the attachment number here, if applicable:

Coordination with Regional Water Quality Control Board

For change petitions only, you must request consultation with the Regional Water Quality Control Board regarding the potential effects of your proposed change on water quality and other instream beneficial uses. (Cal. Code Regs., tit. 23, § 794.) In order to determine the appropriate office for consultation, see: http://www.waterboards.ca.gov/waterboards_map.shtml. Provide the date you submitted your request for consultation here, then provide the following information.

Date of Request

(Date sent to State Board)

Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation?

Yes No

Will a waste discharge permit be required for the project?

Yes No

If necessary, provide additional information below:

Michelle Snapp, michelle.snapp@waterboards.ca.gov, received a copy of this Petition on December 8, 2022

Insert the attachment number here, if applicable:

Local Permits

For temporary transfers only, you must contact the board of supervisors for the county(ies) both for where you currently store or use water and where you propose to transfer the water. (Wat. Code § 1726.) Provide the date you submitted your request for consultation here.

Date of Contact

For change petitions only, you should contact your local planning or public works department and provide the information below.

Person Contacted: Stephanie Cormier, Principal Planner

Date of Contact: 09/13/2022

Department: Yolo County Dept. of Community Services

Phone Number: (530) 666-8041

County Zoning Designation: N/A

Are any county permits required for your project? If yes, indicate type below.

Yes No

Grading Permit

Use Permit

Watercourse

Obstruction Permit

Change of Zoning

General Plan Change

Other (explain below)

If applicable, have you obtained any of the permits listed above? If yes, provide copies.

Yes No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Federal and State Permits

Check any additional agencies that may require permits or other approvals for your project:

- Regional Water Quality Control Board Department of Fish and Game
- Dept of Water Resources, Division of Safety of Dams California Coastal Commission
- State Reclamation Board U.S. Army Corps of Engineers U.S. Forest Service
- Bureau of Land Management Federal Energy Regulatory Commission
- Natural Resources Conservation Service

Have you obtained any of the permits listed above? If yes, provide copies. Yes No

For each agency from which a permit is required, provide the following information:

Agency	Permit Type	Person(s) Contacted	Contact Date	Phone Number
State Water Board, DDW	Recycled Water			
Central Valley RWQCB	Recycled Water			

If necessary, provide additional information below:

The City of Davis is in the process of obtaining a Recycled Water Permit.

Insert the attachment number here, if applicable:

Construction or Grading Activity

Does the project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed, bank or riparian habitat of any stream or lake? Yes No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Archeology

Has an archeological report been prepared for this project? If yes, provide a copy. Yes No

Will another public agency be preparing an archeological report? Yes No

Do you know of any archeological or historic sites in the area? If yes, explain below. Yes No

If necessary, provide additional information below:

Insert the attachment number here, if applicable:

Photographs

For all petitions other than time extensions, attach complete sets of color photographs, clearly dated and labeled, showing the vegetation that exists at the following three locations:

- Along the stream channel immediately downstream from each point of diversion
- Along the stream channel immediately upstream from each point of diversion
- At the place where water subject to this water right will be used

Maps

For all petitions other than time extensions, attach maps labeled in accordance with the regulations showing all applicable features, both present and proposed, including but not limited to: point of diversion, point of rediversion, distribution of storage reservoirs, point of discharge of treated wastewater, place of use, and location of instream flow dedication reach. (Cal. Code Regs., tit. 23, §§ 715 et seq., 794.)

Pursuant to California Code of Regulations, title 23, section 794, petitions for change submitted without maps may not be accepted.

All Water Right Holders Must Sign This Form:

I (we) hereby certify that the statements I (we) have furnished above and in the attachments are complete to the best of my (our) ability and that the facts, statements, and information presented are true and correct to the best of my (our) knowledge. Dated 12/5/22 at 8:27



Water Right Holder or Authorized Agent Signature

Water Right Holder or Authorized Agent Signature

NOTE:

- Petitions for Change may not be accepted unless you include proof that a copy of the petition was served on the Department of Fish and Game. (Cal. Code Regs., tit. 23, § 794.)
- Petitions for Temporary Transfer may not be accepted unless you include proof that a copy of the petition was served on the Department of Fish and Game and the board of supervisors for the county(ies) where you currently store or use water and the county(ies) where you propose to transfer the water. (Wat. Code § 1726.)



Figure 1: Active disposal area and access roads. Recycled water will be used for dust suppression 10/3/2022



Figure 2: Water truck will be used for recycled water application 10/3/22



Figure 3: Phytoremediation farm fields. Recycled water will be used for supplemental irrigation.
10/3/22



Figure 4: Compost facility. Recycled water will be used for moisture addition to aid in composting process 10/3/22



Figure 5: Water truck or fixed sprinklers will be used for recycled water addition. 10/3/22



Figure 6: Downstream of Discharge 001 10/3/22



Figure 7: Upstream of Discharge 001 10/3/22

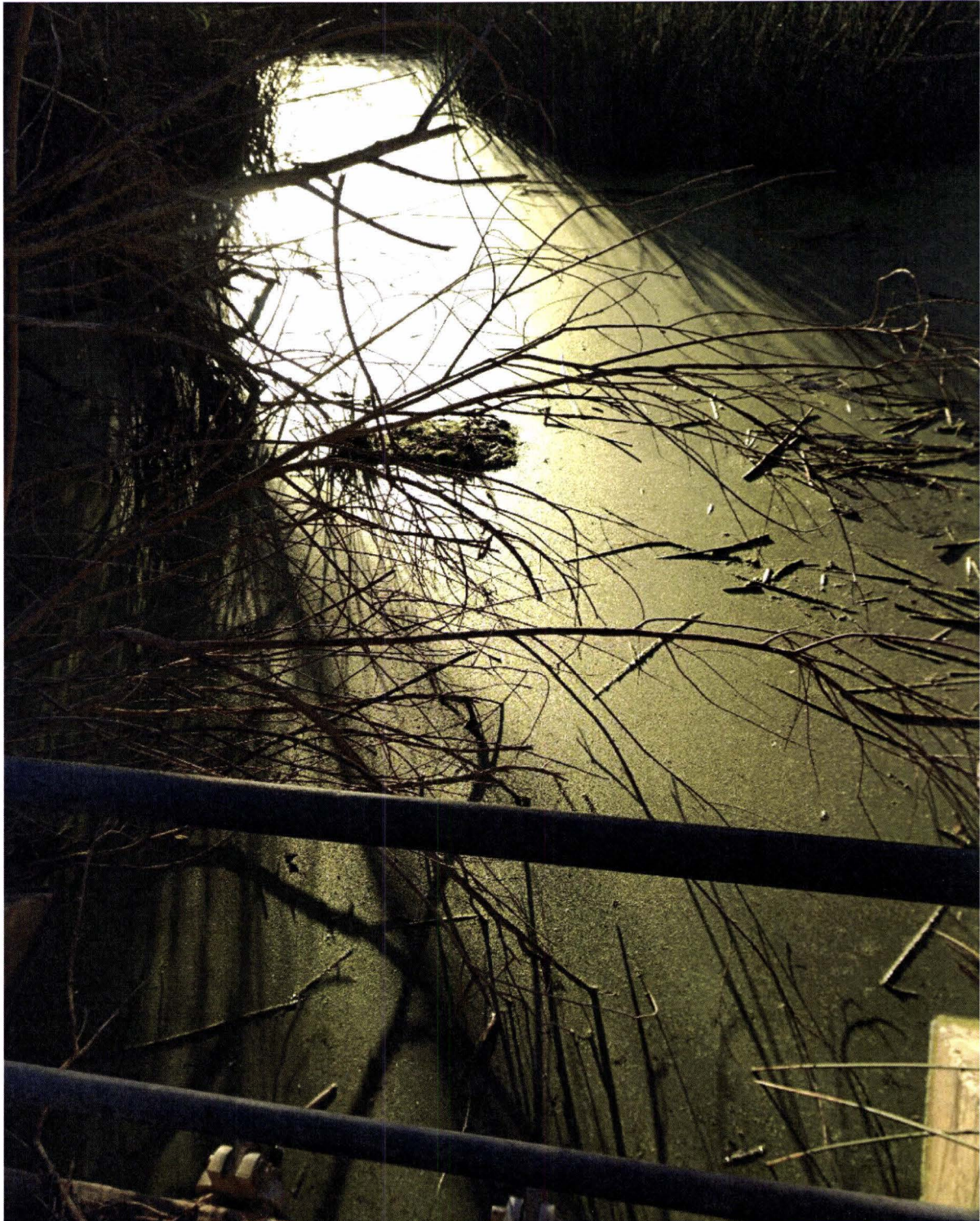


Figure 8: Downstream of Discharge 002 10/3/22



Figure 9: Upstream of Discharge 002 10/3/22



Figure 10: Wetlands Wastewater Tract Inlet 10/3/22



Figure 11: Wetlands Wastewater Track 10/5/22



Figure 12: Wetlands Wastewater Track 10/5/22



*Figure 13: City Owned Trees for RW Irrigation in the greenbelt 10/5/22
828 Braddock Rd.*

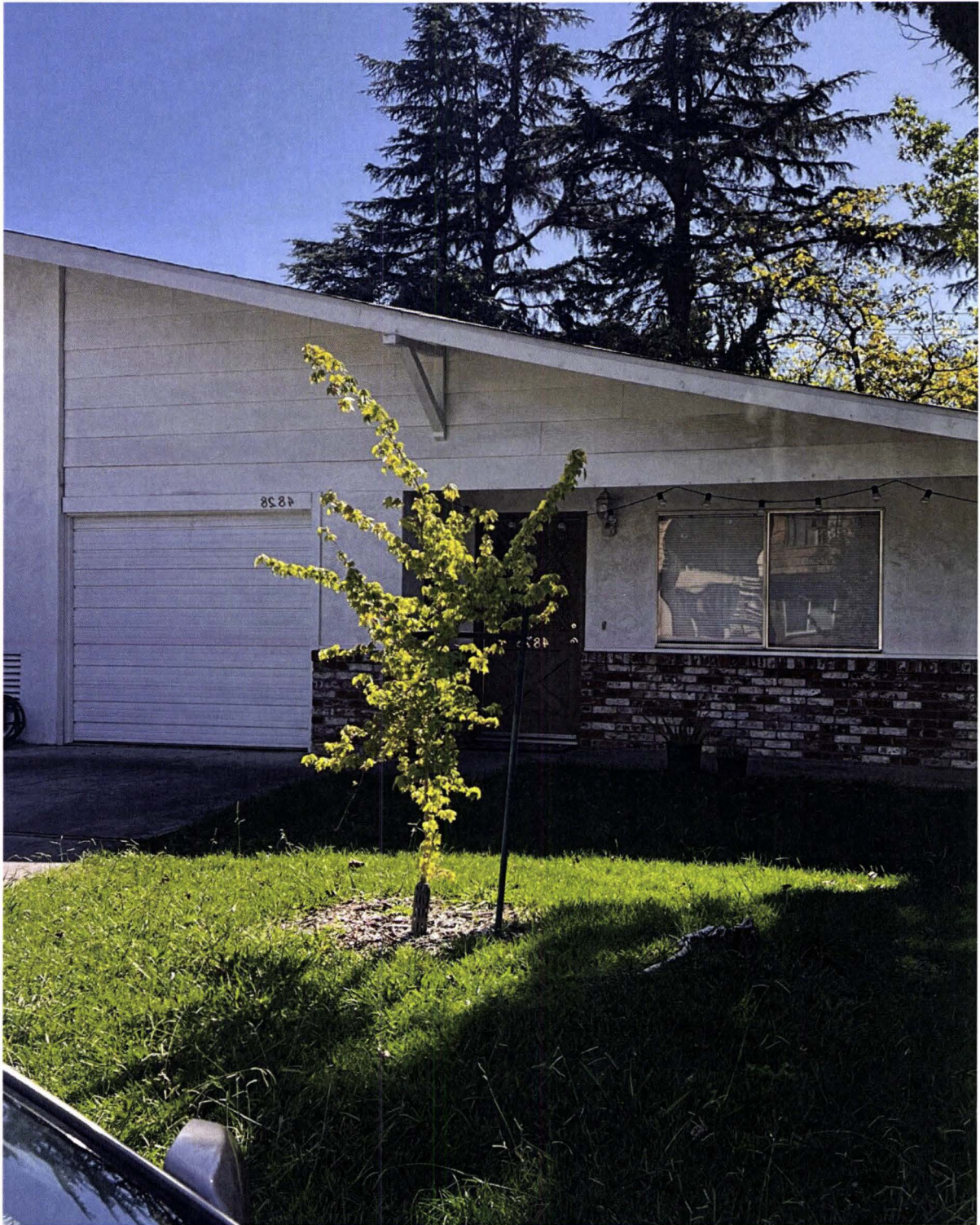


Figure 14: City Owned Trees for RW Irrigation in the greenbelt 10/5/22

1721 Sapphire Court



*Figure 15: City Owned Trees for RW Irrigation on Private Property with City Easement 10/5/22
4935 Cowell Blvd.*



*Figure 16: City Owned Trees for RW Irrigation on Private Property with City Easement 10/5/22
4828 Cowell Blvd.*

Attachment 2



Attachment 2

The City's Proposed Changes Will Not Injure Downstream Water Users

Prior to the City's Wastewater Treatment Plant (WWTP) improvements, 4.4 million gallons per day (MGD) of raw wastewater was received by the City and 2.3 MGD was discharged. Since construction of the improvements, the City's most recent maximum Average Dry Weather Flow was 4.1 MGD. The difference between the recent maximum flow and historic discharge prior to the WWTP upgrades, approximately 1.8 MGD (Saved Water), is salvaged water created as a result of the City's improvements. (See City of Davis, Near-Term Recycled Water Master Plan, p. 2-1.)

The City's proposed removal of Saved Water from Willow Slough Bypass, and resulting reduction in discharge, will not injure downstream legal water users. The Saved Water comprises salvaged water, which exists where a water user constructs improvements that save water that would otherwise be lost to evaporation or percolation. (*Pomona Land & Water Co. v. San Antonio Water Co.* (1908) 152 Cal. 618, 631.) The creator of salvaged water obtains the benefits of the water that would otherwise be wasted; downstream users do not have any claim to salvaged water. (*Ibid*; *City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 304.)

Only the City has the right to put this Saved Water to beneficial use and downstream users may not claim a right to beneficially use this water. Thus, the City's Petition does not have the ability to injure downstream users.

The City's Proposed Changes Will Not Unreasonably Affect Fish and Wildlife

The discharge of Saved Water to the Willow Slough Bypass has resulted in an increase in effluent discharge of approximately 2 MGD as an annual average for a total effluent discharge rate of approximately 4 MGD. The Willow Slough Bypass is a flood water bypass that receives overflow from Willow Slough and backflow flood waters from the Yolo Bypass during winter flooding events. Earthen levees contain the wide flood plain with an unlined low flow channel along the foot of the southern levee. The low flow channel drains the Willow Slough Bypass flood plain and conveys non-flood flows during summer months.

Willow Slough Bypass supports a wide variety of wildlife species, including the federally threatened giant garter snake (GGS). This is because the Willow Slough Bypass contains wetland habitat. Additionally, the Willow Slough Bypass and surrounding area, is home

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Public Works Utilities and Operations Department

1717 5th Street, Davis, CA 95616

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to communities of beavers, who are largely responsible for regulating the wetland habitat along the slough through their dam-building activities. The GGS and other species then may utilize this wetland habitat. Currently, water primarily travels down the Willow Slough Bypass via the low flow channel on the south side. Beaver activity (i.e. dams) in the channel intermittently causes flows to back up and flood adjacent floodplain area within the Willow Slough Bypass creating emergent freshwater wetlands habitat. When these beaver dams break, the water is released and the wetlands habitat changes back to ephemeral floodplain riparian.

The ordinary depth of water within the low flow channel is 5.5 feet. Under the Project, with the removal of approximately 2 MGD (3 cubic feet per second), the water level in the low-flow channel of the Willow Slough Bypass will decrease by about 1.3". This will result in a new ordinary water depth of 5.6' or 5.4', respectively. Given the naturally intermittent flooding and draining of the Willow Slough Bypass area due to beaver activity, the relatively minor decrease in overall water level in the slough as a result of the Project will not meaningfully affect wetlands and riparian habitats in the project area.

The minor decrease in the water level in the Willow Slough Bypass would not significantly impact beaver activity within the slough. The removal of this small amount of water relative to base volume would not significantly change or degrade the quality of the beaver-created wetland habitat.

The Willow Slough Bypass also provides habitat for native and non-native warm water fish and invertebrates. However, the marginal decrease in the flow rate associated with the Project would not adversely affect conditions for fish species and/or invertebrates. (See Memorandum from John McNerney to Josie Tellers Re: Habitat Impact on Willow Slough (June 20, 2022), attached hereto.)

The Project would not significantly change the quality of the water in Willow Slough Bypass. Thus, the Project would not result in any significant impacts on fish or special status species.

The City's Proposed Changes Are In the Public Interest

The City's proposed changes will help advance California's goal of increasing recycled water use by 800,000 acre-feet by 2030. (California's Water Supply Strategy, August 2022, p. 3.) The changes do not require additional permitting and funding, and with the State Water Board's approval of the City's wastewater change petition, the Project could be operational well before 2030. The use of recycled water to meet existing demands at the Yolo County Central Landfill and to irrigate trees on City-owned property will offset the use of surface water and groundwater, and thereby conserve resources. The Restoration Wetlands is a managed, native California freshwater emergent wetland ecosystem that includes oak riparian woodlands and native grasslands. Adjacent to the Yolo Bypass, the restoration wetlands provide valuable habitat for countless waterfowl migrating along the Pacific Flyway. The wetlands also support an abundance of other

terrestrial, aquatic and semi-aquatic wildlife species. Irrigation of the Restoration Wetlands with recycled water will maintain and enhance these uses.



PUBLIC WORKS
UTILITIES AND OPERATIONS
DEPARTMENT
MAIN 530.757.5686
FAX 530.758.4738

Technical Memorandum

Date: June 20, 2022
To: Josie Tellers, Water Quality Coordinator
From: John McNERney, Wildlife Resource Specialist
Subject: Habitat Impact Assessment Associated with the Temporal Decrease in Effluent Discharge from the Davis Wastewater Treatment Plant to the Willow Slough Bypass.

Introduction and Background

Improvements to the Davis Wastewater Treatment Plant reduced the loss of water during the treatment process, resulting in an increase of effluent discharge by a magnitude of approx. 2 million gallons per day (MGD) as an annual average for a total effluent discharge rate of 4 MGD. The additional water has resulted in an increase of flow within the receiving stream known as Willow Slough Bypass (WSB). The WSB is a flood water bypass that receives overflow from Willow Slough and/or backflow flood waters from the Yolo Bypass during winter flooding events. Earthen levees contain the wide flood plain with an unlined low flow channel along the foot of the southern levee. The low flow channel drains the WSB flood plain and conveys non-flood-related flow during the summer months. The City of Davis is interested in reclaiming this "new saved water" for other future beneficial uses for its long-term planning purposes. The temporary decrease in discharge is not expected to result in a significant impact on habitat conditions or wildlife in the WSB.

The City estimates that the 2 MGD of additional water represents only 0.05% of the capacity of the WSB. (See Attachment 1, Estimation of Decrease in Water Levels in Willow Slough Bypass.). The ordinary depth of water within the low flow channel is 5.5 feet deep. Adding or removing 2 MGD would result in a 1.3" change in water elevation. This would result in a new ordinary water depth of 5.6' or 5.4', respectively. (See Attachment 1.)

Discussion

The WSB has two main habitat features including a low flow drainage channel and an emergent freshwater wetland floodplain – all occurring within the confines of earthen levees. Existing habitat conditions in the WSB may be considered dependent on the current/baseline flows discharged by the WWTP. However, habitat is also significantly influenced by natural biotic activity (ex. beaver dams), sedimentation, agricultural runoff, and rainfall/ flooding of the Yolo Bypass, etc. Habitat within the WSB supports protected species such as the giant garter snake

(*Thamnophis gigas*), as well a large diversity and abundance of other wildlife that utilize freshwater emergent wetlands habitat. The low flow channel of the WSB provides habitat for native and non-native warm water fish and invertebrates.

American beavers (*Castor canadensis*) are considered a “keystone” species within the WSB and are largely responsible for regulating the existing wetlands habitat within the bypass. Currently, water primarily travels down the WSB via the low flow channel on the south side. Beaver activity (i.e. dams) in the channel intermittently cause flows to back up and flood adjacent floodplain area creating emergent freshwater wetlands habitat. When these dams break, the water is released and the wetlands habitat changes back to ephemeral floodplain riparian.

The 2 MGD decrease in flow to the channel is not expected to significantly degrade the quality or area of the beaver maintained freshwater emergent wetlands habitats, nor have significant effect on low flow channel hydrology. A decrease in the volume of flow in the channel, and subsequent reduction of flow relative to baseline, is not expected to change ordinary water depth or chemistry, nor negatively impact habitat availability or quality for existing wildlife.

Conclusion

In summary, the 2 MGD of “new saved water” in the WSB is considered supplemental in support of existing habitat. Wetlands habitat conditions within WSB are largely regulated by biotic activity rather than flow dependent. A future reduction of the additional 2 MGD flow relative to baseline flow would not result in the loss of existing habitat type, availability or quality.

Estimation of Decrease in Water Levels in Willow Slough Bypass from Removal of 2 MGD to Recycled Water Project

Davis WWTP discharge flows						Willow Slough Bypass Capacity	*WWTP % of WSB flows
mgd	gpd	gph	gpm	gps	cfs	cfs	
1.0	1000000	41667	694	12	1.5	6000	0.03%
1.5	1500000	62500	1042	17	2.3	6000	0.04%
2.0	2000000	83333	1389	23	3.1	6000	0.05%
2.5	2500000	104167	1736	29	3.9	6000	0.06%
3.0	3000000	125000	2083	35	4.6	6000	0.08%
3.5	3500000	145833	2431	41	5.4	6000	0.09%
4.0	4000000	166667	2778	46	6.2	6000	0.10%

WWTP mgd	WSB Area SF	**Low Flow Channel				
	Area SF	% of WSB	Capacity cfs	Decrease %	Decrease inches (est)	
1.0	4231	130	3%	184	0.8%	0.7
1.5	4231	130	3%	184	1.3%	1
2.0	4231	130	3%	184	1.7%	1.3
2.5	4231	130	3%	184	2.1%	1.6
3.0	4231	130	3%	184	2.5%	1.9
3.5	4231	130	3%	184	2.9%	2.2
4.0	4231	130	3%	184	3.4%	2.5

*Removal of 2 MGD flows from Willow Slough Bypass has negligible decrease to full capacity of the flood channel.

**Removal of 2 MGD flows from Low Flow Channel (approximately 30 feet wide across the top and 5.5 feet deep) within the WSB, has an impact of decreasing water level by approximately 1.3 inches.

Attachment 3

FINANCE DEPARTMENT

23 Russell Blvd, Suite 3 – Davis, California 95616
Accounts Payable 530/757-5615 -- FAX: 530/758-0204 – TDD: 530/757-5666
Utilities, Citations & Business Licenses 530/757-55651

www.cityofdavis.org



Vendor Number:
0020451

Name / Address:
STATE WATER RESOURCES CONTROL BOARD
CWSRF PROGRAM
PO BOX 1888
SACRAMENTO CA 958121888

Email Address to send remittance notice to:
Receipts_Unit@waterboards.ca.gov

Payment Date: Aug 25, 2022 **Payment Number:** 0010750 **Payment Amount:** 11,048.00

Please apply the payment of the items noted below to our account.
The total amount noted above will be processed by the bank electronically.

Invoice Information	Invoice Amount	PO Number
AUGUST 2022	11,048.00	085280

79958
19558