From: Ben King <bking@pacgoldag.com>
Sent: Friday, May 16, 2025 11:34 AM
To: Steiner, Fern@CWC <Fern.Steiner@cwc.ca.gov>; Jensen, Laura@DWR <Laura.Jensen@water.ca.gov>
Cc: Ben King <bking@pacgoldag.com>
Subject: Background for Intended Public Comments on May 21,2025 California Water Commission Meeting ("CWC")

Dear Chairperson Steiner and Executive Director Jensen,

As I have mentioned in previous CWC, we fully support the construction of the Sites Reservoir, but we object to the current Operations Plan for the conveyance of water from the Reservoir via the proposed Dunnigan Pipeline. The Dunnigan Pipeline was introduced in the 2021 WSIP filing as part of the proposed downsizing of the Project but was not included in the original 2017 WSIP Application. The State Filed Application for the proposed Colusa Reservoir filed in September 1977 did not include any pipeline as part of the Application and did not consider the use of the Tehama Colusa Canal for discharge of stored water. The Tehama Colusa Canal was under construction at the time and was described as a 56-mile canal terminating at the site of the proposed Reservoir. The Colusa Basin Drain was the only feasible conveyance channel to the Sacramento River at the time of the 1977 Application. Attached is the 1977 Application 25517 and you can the COLUSA RESERVOIR – RIVER DIVERSION PLAN CONVEYANCE FACILITY DATA on Attachment 3 of the Application pdf page 8.

Our objective in our engagement with the CWC is to advocate for the long-term sustainability of the riparian habitat and seasonal wetlands in the historical Colusa Trough which have been providing drainage for the coastal streams and Sacramento River overflow since time immemorial. As you may remember, I have been working on the conversion of approximately 250 acres of property on historical Patwin tribal land that was granted to my great grandfather in 1869 (See the attached Wetland Reserve Plan and the attached Deed from President U.S. Grant to T.C. King on May 15, 1869). We are currently working with the California Waterfowl Association on the development of

these 250 acres (see the attached T&M King Wetlands Overview attachment).

As currently designed, the Sites Operations plan does not provide for any flow for the six-mile portion of the Colusa Basin Drain/Colusa Trough below Davis Weir at the south end of the Colusa Refuge and Balsdon Dam which is the northern border of RD 108. There is another approximately 7 miles of the Colusa Basin Drain within the southern portion of Colusa County that will only have flows if water backs up approximately 13 miles from the south where the proposed Dunnigan Pipeline intersects with the Colusa Basin Drain at Byrd Creek. Historically this area was Swamp and Overflow land since time immemorial as evidenced by the attached 1868 State Surveyor Map. Our wetlands are located on the attachment titled Markup of 1868 State Surveyor Map showing T&M King Property is Swamp and Overflow Lands.

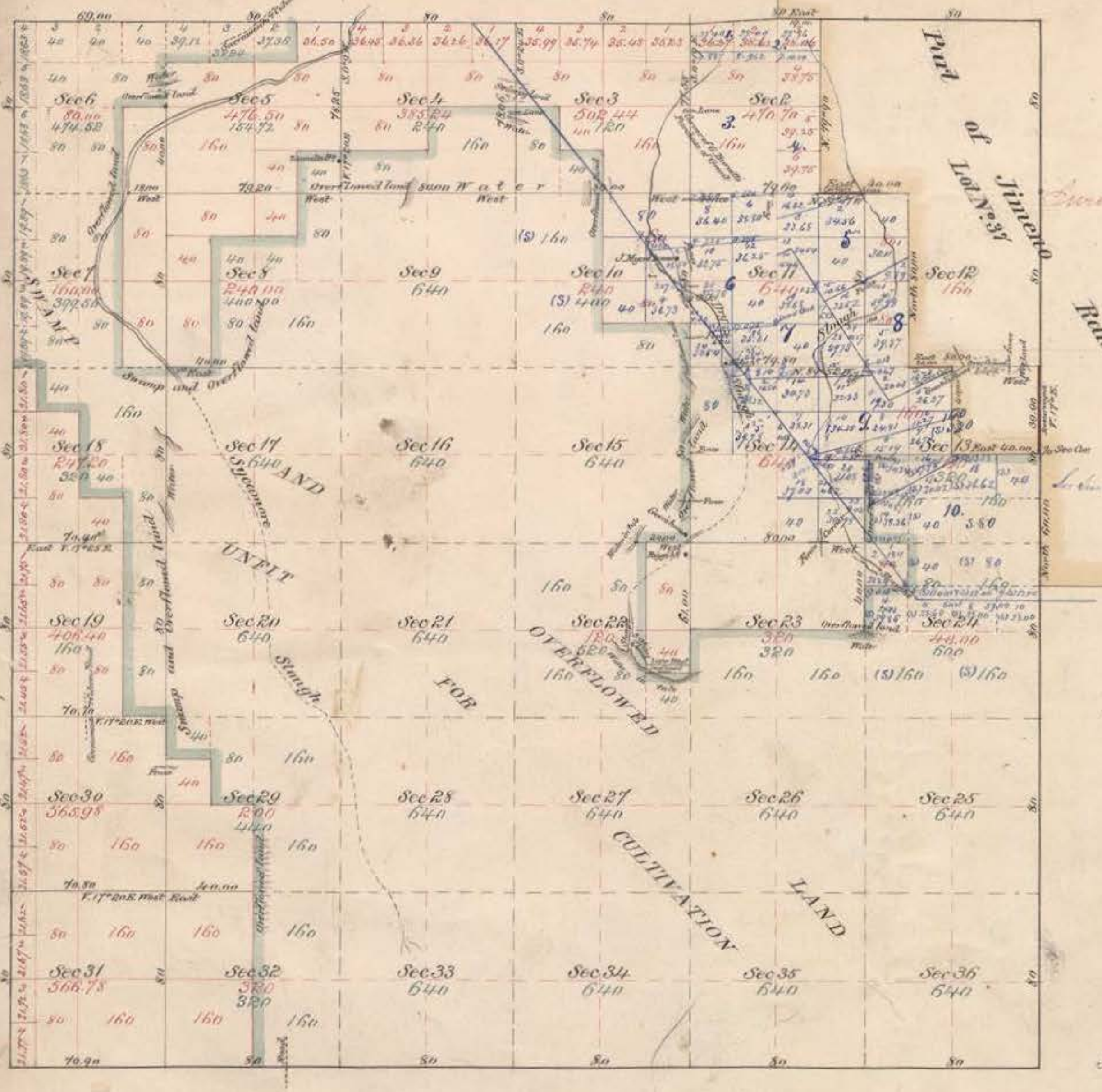
The continuous flow of water across the full length of the Colusa Trough to the Knights Landing Outfall Gates at Knights Landing or to the Yolo Bypass is necessary for the riparian habitat, wetlands, and water quality of the historical Colusa Trough in southern Colusa County. It is our position that a critical use of the Environment Water that will be stored in the proposed Sites Reservoir should be used to protect the sustainability of the riparian habitat, wetlands and water quality of the historical Colusa Trough and also provide needed recharge for the domestic wells in the area of historical College City just east of Arbuckle.

Thank you for allowing this submission of background information and for the opportunity to make Public Comment.

Best Regards,

Ben King
T&M King Farms, LLC

Township No. 14 North   Range No. 1 West   Mount Diablo Meridian



Surveys paid per G.L.O. Report No. 15,837

Aggregate Area of Public land fit for cultivation 6.941.24 Acres
Estimated Area of Lot No. 37 and swamp and Overflowed land 15.580.00 "
Aggregate 22.521.24 "

Subdivision lines not otherwise noted, run at a Variation of 17° East

Surveys Designated	By Whom Surveyed	Date of Contract	Amount of Surveys	When Surveyed
East boundary of Township	F. R. Loring	September 26th 1851	———	1851
Rest of Township lines	F. R. Conway	January 29th 1853	———	1853
Exterior boundaries of Lot No. 37	O. P. Sutton	Instructions ———	———	1861
Part of East boundary of Township colored brown, Resurveyed	James Balsdon	May 15th 1867	0 Miles 39 Chs 90 lks	1867
Section lines, Ranch boundaries colored brown, included	" "	" " "	24 " 67 " 86 "	May 24th 1867

The above Map of Township No. 14 North, Range No. 1 West, Mount Diablo Meridian is strictly conformable to the field notes of the Surveys thereof on file in this Office which have been examined and approved
Surveyor General's Office
San Francisco, California
September 11th 1867

L. Upson
Surveyor Genl. Cal.

A full true and correct Copy of the Original Map on file in this Office
Surveyor General's Office
San Francisco, California
November 19th 1868

Sherman Day
Surr. Genl. Cal.

MINIMUM FILING FEE: $10.00
FILE TWO COPIES
TYPE OR PRINT IN INK

State Water Resources Control Board
DIVISION OF WATER RIGHTS
2125–19th Street, Sacramento, CA 95818
Telephone: (916) 445–0846

APPLICATION to APPROPRIATE UNAPPROPRIATED WATER

(For explanation of entries required, see booklet "How to File an Application to Appropriate Unappropriated Water in California")

Application No. 25517 Filed Sept. 30, 1977 at 9:59 AM.

(Do NOT fill in the above blanks)

1. APPLICANT

I, Department of Water Resources
(Name of Applicant)

(Telephone Number where you may be reached between 8 a.m. and 5 p.m.–include area code)

P. O. Box 388 (Address) | Sacramento (City or Town) | California (State) | 95802 (Zip Code)

do hereby make application for a permit to appropriate the following described UNAPPROPRIATED waters of the State of California, SUBJECT TO VESTED RIGHTS

2. SOURCE

a. The name of the source at the point of diversion is Willow Creek trib. to Sacramento River; Funks Creek trib. to Sacramento River; Stone Corral Creek trib. to Sacramento River; Sacramento River
(If unnamed, state nature of source and that it IS unnamed)

tributary to _____

b. In a normal year does the stream dry up at any point downstream from your project? YES ☐ NO ☐. If Yes, in what months does it usually dry up? _____

3. POINT of DIVERSION and REDIVERSION

a.

List all points giving coordinate distances from section corner or other tie as allowed by Board regulations	Point is within (40-acre Subdivision)	Section	Township	Range	Base and Meridian
See Supplement	¼ of ¼				
	¼ of ¼				
	¼ of ¼				

b. The point of diversion will be in the County of Tehama, Glenn & Colusa

c. Does applicant own the land at the point of diversion? YES ☐ NO ☐.

d. If applicant does not own land at point of diversion, state name and address of owner and state what steps have been taken to obtain right of access: _____

4. PURPOSE of USE, AMOUNT and SEASON

a. State the purpose(s) for which water is to be appropriated, the amounts of water for each purpose and dates between which diversions will be made in the table below.

PURPOSE OF USE	DIRECT DIVERSION				STORAGE		
	AMOUNT		SEASON OF DIVERSION		AMOUNT	COLLECTION SEASON	
	Cubic feet per second or gallons per day	Acre-feet annually	Beginning Date	Ending Date	Acre-feet annually	Beginning Date	Ending Date
Irrigation			Jan. 1	Dec. 31		Jan. 1	Dec. 31
Domestic			"	"		"	"
Municipal			"	"		"	"
Industrial			"	"		"	"
Recreation			"	"		"	
Incidental Power			"	"		"	
Water Quality Control and Fish & Wildlife Enhancement						"	
	4,200	3,164,000 (TOTAL)			3,164,000 (TOTAL)		

b. Total combined direct diversion and storage during any one year will be 3,164,000 acre-feet.

c. If water will be stored and the reservoir is not at the diversion point, the maximum rate of diversion to offstream Diversion to offstream storage will be made by pumping ☐; gravity ☐.

(Submit "Environmental Information" SWRCB Form 1–2 if project is NOT exempt from CEQA, See Appendix D of the "How to File an Application to Appropriate Unappropriated Water in California".)

5. JUSTIFICATION OF AMOUNT

a. IRRIGATION: Maximum acreage to be irrigated in any one year will be _____ acres.

CROP	ACRES	METHOD OF IRRIGATION (Sprinklers, flooding, etc.)	ACRE-FEET (annually)	NORMAL SEASON	
				Beginning Date	Ending Date

b. DOMESTIC: The number of residences to be served _____. Separately owned: YES ☐ NO ☐

The total number of people to be served _____. Estimated daily use per person _____. (gallons per day)

The total area of domestic lawns and gardens _____. (square feet)

Miscellaneous domestic uses _____. (Dust control area. Number and kind of domestic animals, etc.)

c. STOCKWATERING: Kind of stock _____. Maximum Number _____. Describe type of operation (feedlot, dairy, range, etc.)

_____

d. RECREATIONAL: Type of recreation _____.

Private _____. Open to public without charge _____. Open to public admission charged _____.

(Submit "Supplement to Application", form SWRCB 1-1, for justification of amount for uses not listed above.)

6. DIVERSION WORKS (See Attachments (3))

a. Diversion will be by pumping from _____ (sump, offset well, channel, reservoir, etc.). Pump discharge _____. Horsepower _____.

b. Diversion will be by gravity by means of _____ (pipe in unobstructed channel, pipe through dam, siphon, gate, etc.)

c. Main conduit from diversion point to first lateral or offstream storage reservoir:

CONDUIT (Pipe or channel)	MATERIAL (Kind of Pipe or channel lining)	CROSS SECTIONAL DIMENSION (Pipe diameter or ditch depth and top and bottom width)	LENGTH (feet)	TOTAL LIFT OR FALL		CAPACITY (estimated)
				(feet)	(+ or -)	

d. The following applies to storage reservoirs: (For reservoirs having a capacity of 25 acre-feet or more, complete supplemental form SWRCB 1-1).

Name or number of reservoir, if any	DAM				RESERVOIR		
	Height of dam from streambed to spillway level (ft.)	Material of construction	Dam Length (ft.)	Freeboard Dam height above spillway crest (ft.)	Approximate surface area when full (acres)	Approximate capacity (acre-feet)	Max. water depth
Colusa	520	earth fill				3,160,000	

e. Estimated total cost of the diversion works proposed is _____ (Give only cost of intake, or headworks, pumps, storage reservoirs, and main conduits.)

7. PLACE OF USE

a. Applicant owns the land where the water will be used: YES ☐ NO ☐. Land is in joint ownership: YES ☐ NO ☐.

All joint owners should include their names as applicants and sign the application. If applicant does not own land where the water will be used, give name and address of owner and state what arrangements have been made with the owner.

_____

_____

b.

USE IS WITHIN (40-acre Subdivision)		SECTION	TOWNSHIP	RANGE	BASE AND MERIDIAN	IF IRRIGATION	
						State Number of Acres	Presently cultivated (Yes or No)
¼ of	¼	Water will be used in the service area of the State					
¼ of	¼	Water Resources Development System. (State Water					
¼ of	¼	Project maps delineating place of use are on file					
¼ of	¼	at the Board having been submitted with Application					
¼ of	¼	No's. 5630, 14443, 14445A, 17512, and 17514A, and					
¼ of	¼	will indicate place of use as of date of this filing.)					

If area is unsurveyed, state the location as if lines of the public land survey were projected. If space does not permit listing all 40-acre tracts include on another sheet or state sections, townships and ranges, and show detail on map. For public districts or other extremely large areas see Page 16 of instruction booklet "How to File an Application to Appropriate Unappropriated Water in California".

8. COMPLETION SCHEDULE

a. Proposed date of project commencement: _____. b. Estimated date of Project completion: _____

c. Estimated date of complete application of water to proposed use: _____. d. If complete, date of completion: _____

(ATTACH SUPPLEMENTAL SHEETS HERE)

9. GENERAL

a. What is the name of the post office most used by those living near the proposed point of diversion? _____

b. Does any part of the place of use comprise a subdivision on file with the State Department of Real Estate? YES ☐ NO ☐. If Yes, state name of subdivision _____ If No, is subdivision of these lands contemplated? YES ☐ NO ☐.

Is it planned to individually meter each service connection? YES ☐ NO ☐. If Yes, when? _____

c. Have you consulted the California Department of Fish and Game concerning this proposed project? YES ☐ NO ☐. If Yes, state the Department's opinion concerning the potential effects of your proposed project on fish and other wildlife and state measures required for mitigation _____

If No, state the effects on fish and other wildlife you foresee as potentially arising from your proposed project. _____

d. Please name other public agencies, if any, from which you have obtained or are required to obtain approvals regarding this project: _____

e. Is reclaimed water available or do you expect such to be available in the near future which could be used in lieu of the water sought under this application? YES ☐ NO ☐ If Yes, explain: _____

f. Is it practical to reduce the amount applied for by reusing or reclaiming a portion of the water appropriated? YES ☐ NO ☐

g. What are the names and addresses of diverters of water from the source of supply downstream from the proposed point of diversion? _____

10. EXISTING WATER RIGHT

Check the appropriate box below:

A. ☐ Applicant does not claim an existing right for the use of water sought by this application.

B. ☐ Applicant claims an existing right for use of water sought by this application but agrees NOT to exercise said right so long as a permit or license for such use remains in effect.

C. ☐ The water sought by this application is for additional water over that claimed under an existing right.

Complete Table below if B or C is checked:

Nature of Rights (riparian, appropriative, purchased water, etc.)	Year of First Use	Use made in recent years including amount, if known	Season of Use	Source	Location of Point of Diversion

11. AUTHORIZED AGENT (Optional)

With respect to: ☐ All matters concerning this water right application, ☐ those matters designated as follows: _____

Name _____ Address _____

_____ Zip Code: _____ (Telephone No. of agent between 8 a.m. and 5 p.m.)

is authorized to act on my behalf as my agent.

12. SIGNATURE of APPLICANT

I (we) declare under penalty of perjury that the above is true and correct to the best of my (our) knowledge and belief.

Dated July 22 1977, at Sacramento, California

Ms. Mr.
Miss, Mrs. Charles R. Shoemaker
(Signature of applicant) (Refer to Section 671 of the Board's regulations)

for Director of Water Resources

If applicants are members of the same family (i.e., husband, wife, mother, father, son, brother, sister, etc.) or reside at the same address, please indicate their relationship:

Ms. Mr.
Miss, Mrs. _____
(Signature of applicant) (Refer to Section 671 of the Board's regulations)

Additional information needed for preparation of this application may be found in the leaflet entitled "HOW TO FILE AN APPLICATION TO APPROPRIATE UNAPPROPRIATED WATER IN CALIFORNIA". If there is insufficient space for answers in this form, attach extra sheets. Please cross reference all remarks to the numbered paragraph to which they may refer. Send application in duplicate to the STATE WATER RESOURCES CONTROL BOARD, DIVISION OF WATER RIGHTS, 2125-19th Street, Sacramento, CA 95818, with $10 minimum filing fee.

ORNIA

APPLICATION NO. _____

State Water Resources Control Board
DIVISION OF WATER RIGHTS

ENVIRONMENTAL INFORMATION

(Submit this form if application is for 1200 gallons or more per day by direct diversion or 15 acre-feet or more per year by direct diversion and/or by storage)

1. ENVIRONMENTAL IMPACT REPORT

(a) Has an Environmental Impact Report (EIR) been prepared to cover the project described in this application? YES ☐ NO ☒
If Yes, give name of agency that prepared the Report: _____

(b) If the answer to (a) above is No, do you presently intend to prepare an EIR? YES ☐ NO ☒ If Yes, when do you expect to submit it? Remarks* _____

2. WATER QUALITY

(a) During low flow conditions, what is the greatest percentage of the total streamflow which will be diverted in conjunction with your proposed project _____%. In what month of the year will this take place? _____

(b) Will all of the water diverted be consumed? YES ☐ NO ☐ If No, the wastewater or surplus will be (1) retained in a reservoir ☐, (2) discharged into a stream or lake ☐, (3) discharged into settling ponds ☐, (4) discharged to land disposal ☐, (5) other ☐, (describe): _____

If (4) is checked, describe location of disposal by 40-acre subdivision of public land survey or a projection thereof: _____

(c) What percent of water diverted will be returned to the stream? _____

(d) Will the project as a whole involve a substantial change in land use? YES ☐ NO ☐
Describe the change and the land use you propose to initiate: _____

(1) Will you be plowing under or grading away the natural sod and exposing bare ground to the elements? YES ☐ NO ☐. If Yes, Number of acres involved: _____. Average slope: _____% Soil Classification: _____. Erodibility: _____.
(2) Describe methods you intend to utilize in order to minimize erosion and prevent the entry of silt into surface waters:

(e) Will the wastewater or runoff contain waste material? YES ☐ NO ☐. If Yes, check box(es) below:
(1) Domestic ☐ (2) Municipal ☐ (3) Industrial ☐ (4) Agricultural ☐ (5) Other ☐ Describe:

(f) Will wastewater or runoff contain any industrial material such as heavy metals or oils which are deleterious to fish and wildlife or which would impair the water for beneficial uses? YES ☐ NO ☐. If Yes, describe: _____

(g) Describe method of sewage disposal, if any: Septic tank: _____ Community sewer: _____ Released untreated: _____
Other (describe): _____

(h) Will pesticides, herbicides, fungicides, and/or fertilizers be used in conjunction with the overall project? YES ☐ NO ☐
If Yes, describe either by chemical composition or brand name: _____

(i) Describe methods of wastewater treatment which will be utilized in minimizing the entry of waste materials into surface and groundwaters.

2. WASTEWATER RECLAMATION

Describe what steps have been or will be taken to reclaim or reuse the water sought to be appropriated?

_____

_____

4. GENERAL

(a) What other significant environmental effects, adverse or beneficial, do you foresee as possibly arising from your proposed project as a whole, and what methods are you prepared to utilize in dealing with the adverse effects? _____

_____

_____

_____

_____

(b) Attach captioned photographs if available of the project area and site showing the project elements, point of diversion and place of use.

*Remarks: The filing of a water rights application under provisions of Sec. 10500 of the Water Code is not a "project" as defined in the State EIR Guidelines. At such time as the application is assigned or released from priority, a full environmental assessment will be made.

(I (we) declare under penalty of perjury that the above is true and correct to the best of my (our) knowledge and belief.

Dated _____ 19____, at _____, California.

If applicants are members of the same family (i.e., husband, wife, mother, father, son, brother, sister, etc.) or reside at the same address, please indicate their relationship:

Ms. Mr.
Miss, Mrs. _____

Director of Water Resources

Ms. Mr.
Miss, Mrs. _____

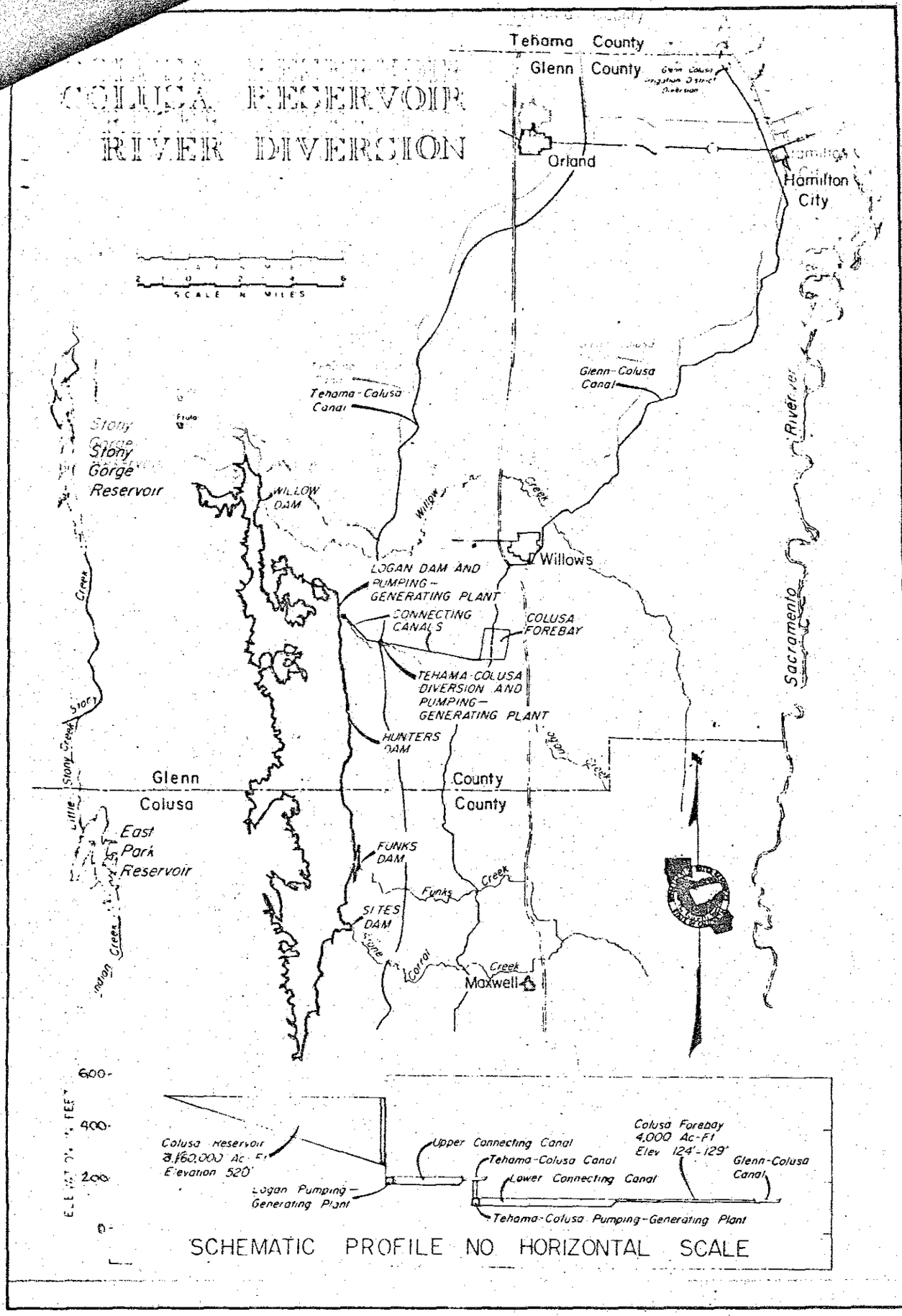
Point of Diversion Supplement
Colusa Reservoir

Willow Creek (Willow Dam)	Trib. to Sacramento River	NW¼SE¼ Sec35 T20NR5W MDB&M
Funks Creek (Funks Dam)	Trib. to Sacramento River	SW¼NW¼ Sec9 T17NR4W MDB&M
Stone Corral Creek (Sites Dam)	Trib. to Sacramento River	SW¼SE¼ Sec20 T17NR4W MDB&M
Sacramento River (Tehama Colusa Canal)		SE¼NE¼ Sec33 T27NR3W MDB&M
Sacramento River (Glenn Colusa Canal)		NE¼SE¼ Sec2 T22NR2W MDB&M

40 acre Subdivisions added by Mary Peyton 9/29/77 MWZ

MB 1

Attachment #1



COLUSA RESERVOIR-RIVER DIVERSION PLAN
DAM AND RESERVOIR DATA SUMMARY

	Colusa Reservoir
Drainage area, square miles	148
Mean annual flows, acre-feet Runoff at damsite (1916-66)	Operation studies for this plan used flows from the Sacramento River only. The natural inflow to this reservoir is negligible.
Elevations, feet	
Dam crest	535
Maximum pool	520
Top of flood reservation	--
Top of conservation pool	520
Minimum pool	320
Streambed 1/	375, 279, 265, 240, 240
Dam height, feet 1/	160, 256, 270, 295, 295
Dam construction time, years	6
Capacities, acre-feet	
Flood reservation	0
Conservation storage	3,100,000
Inactive, dead, sediment 2/	60,000
Gross	3,160,000
Area, acres	
Reservoir @ gross storage	30,000
Total land required	40,000
Reservoir shoreline, miles	210
Live streams inundated, miles	0
Population displaced, 1970	60
1990	100
Average fish runs at damsite	
Salmon, fish per year	0
Steelhead, fish per year	0
Recreation use, days per year	
Initial use	650,000
Maximum use	2,200,000
Years to reach maximum use	100
Deer displaced	Negligible impact

1/ Willow, Logan, Hunters, Funks, and Sites Dams.

2/ Total of all impoundments.

Attachment #3

COLUSA RESERVOIR-RIVER DIVERSION PLAN
CONVEYANCE FACILITY DATA

Tehama-Colusa Canal (Under construction)	
Type	Concrete-lined
Length, Red Bluff to project diversion, miles	56
Capacity at project diversion, cfs	2,100
Maximum water surface elevation at project diversion, feet	210
Glenn-Colusa Irrigation District Canal (Existing)	
Type	Unlined
Length, Sacramento River to project forebay, miles	23
Capacity at forebay (with planned improvements), cfs	2,100
Maximum water surface elevation at forebay	129
Colusa Forebay	
Active storage capacity, acre-feet	4,600
Operating water surface elevation, feet	124 to 129
Maximum area, acres	840
Lower Connecting Canal (Forebay to Tehama-Colusa Canal)	
Type	Unlined, level bottom
Length, miles	3.8
Capacity, cfs	6,300
Upper Connecting Canal (Tehama-Colusa Canal to Logan Dam)	
Type	Unlined, level bottom
Length, miles	1.9
Capacity, cfs	8,400
Tehama-Colusa Pumping-Generating Plant	
Maximum static head, feet	86
Minimum static head, feet	81
Maximum pumping rate, cfs	6,300
Maximum generating flow, cfs	2,100
Pumping capacity, megawatts	56
Installed generating capacity, megawatts	39
Dependable generating capacity, megawatts	0
Logan Pumping-Generating Plant	
Maximum static head, feet	310
Minimum static head, feet	110
Maximum pumping rate, cfs	8,400
Maximum generating flow, cfs	2,600
Pumping capacity, megawatts	265
Installed generating capacity, megawatts	195
Dependable generating capacity, megawatts	0

Preemption CERTIFICATE No. 3021

THE UNITED STATES OF AMERICA,

To all to whom these presents shall come, Greeting:

Whereas Thomas C. King, of Calusa County, California

has deposited in the GENERAL LAND OFFICE of the United States, a Certificate of the REGISTER OF THE LAND OFFICE at Marysville whereby it appears that full payment has been made by the said Thomas C. King according to the provisions of the Act of Congress of the 24th of April, 1820, entitled "An act making further provision for the sale of the Public Lands," for the North half of the South West quarter of Section twenty nine, and the North half of the South East quarter of Section thirty, in Township fourteen North, of Range one West, Mount Diablo Meridian, in the District of Lands subject to sale at Marysville, California, containing One hundred and sixty acres

according to the official plat of the Survey of the said Lands, returned to the General Land Office by the SURVEYOR GENERAL, which said tract has been purchased by the said Thomas C. King

NOW KNOW YE, That the United States of America, in consideration of the premises, and in conformity with the several acts of Congress in such case made and provided, HAVE GIVEN AND GRANTED, and by these presents DO GIVE AND GRANT, unto the said Thomas C. King and to his heirs, the said tract above described: To have and to hold the same, together with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said Thomas C. King and to his heirs and assigns forever.

In testimony Whereof, I, Ulysses S. Grant PRESIDENT OF THE UNITED STATES OF AMERICA, have caused these letters to be made PATENT, and the SEAL of the GENERAL LAND OFFICE to be hereunto affixed.

GIVEN under my hand, at the CITY OF WASHINGTON, the fifteenth day of ~~March~~ May in the year of our Lord one thousand eight hundred and sixty-nine, and of the INDEPENDENCE OF THE UNITED STATES the ninety third

BY THE PRESIDENT: U. S. Grant

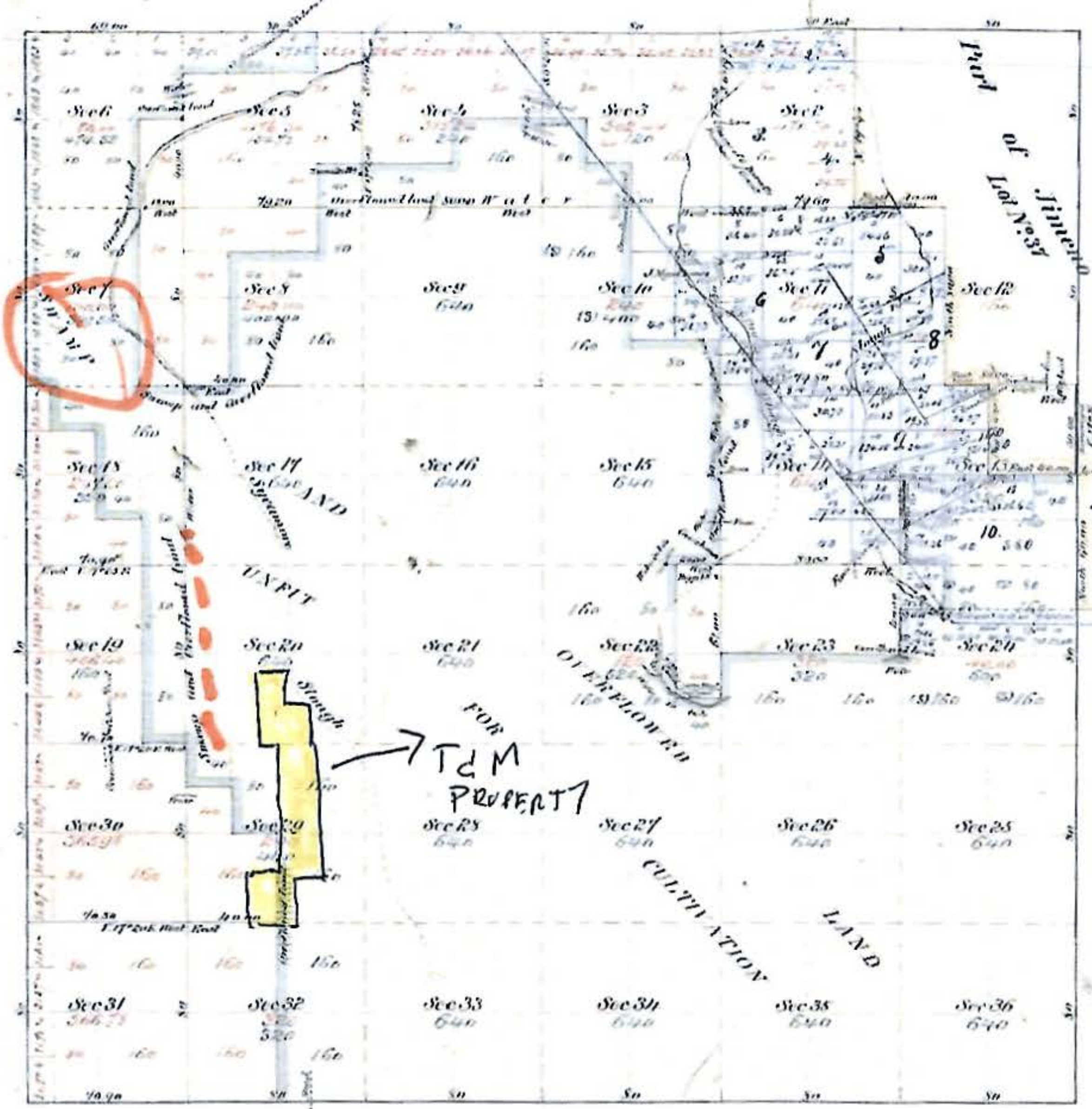
By F. D. Fitzburgh(?) Secretary.

J. M. Granger Recorder of the General Land Office.

Township No. 14 North Range No. 1 West Mount Diablo Meridian

WR EXHIBIT C2

SITES EXHIBIT 4
KING 1867 STATE SURVEYOR MAP.



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Exterior boundaries of Lot No. 37	O. P. Sutton	Instructions ———	———	1861
[illegible]	James Baldwin	May 18th 1867	9 Miles 38 Chs 90 lks	1867
[illegible]	" "	" " "	24 " 61 " 86 " May 29th	1867

The above Map of Township No. 14 North, Range No. 1 West, Mount Diablo Meridian is strictly conformable to the field notes of the Surveys thereof on file in this Office which have been examined and approved
Surveyor Generals Office
San Francisco, California
September 11th 1867

L. Upson
Surveyor Gen'l Cal.

A full true and correct Copy of the Original Map on file in this Office
Surveyor Generals Office

KING 23

FINAL

T & M King Farms LLC

PERPETUAL WETLAND RESERVE PROGRAM EASEMENT
235.14 ACRES WRP

NEST # 54-9104-22-01XL3 WRP

COLUSA COUNTY, CALIFORNIA

PREPARED BY: BENJAMIN MARTIN
April 30, 2024

TABLE OF CONTENTS

INTRODUCTION

This Wetland Reserve Plan of Operations (WRPO) outlines NRCS and landowner goals and objectives related to the acquisition and restoration through the Wetland Reserve Program of a 235.14-acre perpetual easement. The property is located just outside of Arbuckle, CA in Colusa County. Legal access to the easement is from Grimes-Arbuckle Road, down a gravel road that has an access easement agreement. The surrounding landscape within a 1-2-mile radius is a mix of cropland (row crop/orchard) to the north, west, and south. Over to the east there is cropland as well, but to the southeast is existing wetland easements of USDA-NRCS.

The landowner's objectives are consistent with NRCS objectives to manage and restore the property to seasonal marsh wetlands. The landowner intends to actively manage the easement through the implementation of NRCS approved compatible use authorizations on all 235.14 acres with a focus on wildlife habitat and recreational use.

1.1 Purpose and Objectives

Wetlands are one of the most critically important and endangered habitat types in North America. They provide abundant ecosystem services such as sediment retention, flood water attenuation, ground water recharge, water quality improvement, carbon sequestration, open space, recreation, and habitat for fish and wildlife - including birds, reptiles and amphibians, mammals, and invertebrates. Historically, most of our nation's wetlands have been severely altered and/or degraded. The Wetland Reserve Program established conservation easements on wetlands throughout the nation to conserve, restore, and enhance wetland function and values on private lands.

The purpose of this Wetlands Reserve Plan of Operations (WRPO) is to:

- provide an overview of the easement area's existing resources.
- describe restoration and management objectives.
- describe restoration practices and schedule to restore native vegetation and hydrology.
- describe the management plan including any compatible uses for the WRP easement area.
- describe the operation and maintenance requirements of the restoration practices.
- identify the responsibilities of all parties involved in the restoration, management, and maintenance of the easement area.
- summarize costs of activities to restore, maintain, and protect the easement area.
- describe monitoring protocol.

1.2 WRPO Overview

NRCS reserves the right, in consultation with the landowner, to modify the management plan in a manner it deems reasonable to meet long-term restoration objectives (subject to regulatory and budgetary limitations). This plan can be updated and revised over time as requested by the landowner or NRCS to ensure the goals and objectives of WRE's are fully and effectively achieved. NRCS must approve in writing all changes before they are implemented.

NRCS will meet annually with the landowner to perform site visits and evaluations. During this visit, NRCS will work with the landowner to identify specific management practices (e.g., mowing, burning, water manipulations, etc.) that should be completed to maintain wildlife habitat or meet other wetland function and values; the landowner may also propose additional management activities for inclusion in the WRPO or as stand-alone management practices.

Compatible use authorizations (management practices) are approved by NRCS and provided to the landowner to carry out recommended actions that further the goals and objectives for which the easement was purchased. A Compatible Use Authorization (CUA) temporarily grants rights purchased by the NRCS to the landowner if the landowner is willing to assume an active role in the management and enhancement of the habitat. CUA's are required any time a landowner is affecting the hydrology or vegetation of the easement area, even when the landowner is carrying out management activities outlined in the WRPO. The initiation of the CUA process may stem from a landowner request or from NRCS-initiated discussions and subsequent agreement with the landowner that certain activities are warranted. A landowner who obtains approval to implement compatible use activities is not under any obligation to implement the activities; however, if the landowner chooses to implement the activities, they must be conducted in accordance with the terms of the CUA. With concurrence of the State Conservationist, NRCS will issue a CUA to the landowner that describes the details of management practices and activities permitted. If the landowner is unwilling or unable to perform the management activities then NRCS may enter into an agreement to perform the necessary activities if it is necessary to restore, protect, manage, maintain, enhance, and monitor the wetland and other natural values of the easement area (see section 4.1). **All management activities that occur on the easements must have a CUA prior to implementation.**

1.3 Legal Reference

A description of the easement area, boundary survey, legal routes of ingress and egress, rights reserved to the landowner, prohibitions and authorities granted to the Natural Resources Conservation Services are referenced in the Warranty Easement Deeds and are recorded in the Colusa County Clerk & Recorders office. The deeds are the official reference which outlines permissible activities on the easement. Nothing in the WRPO replaces or supersedes the terms and conditions outlined in the Warranty Easement Deeds and associated exhibits.

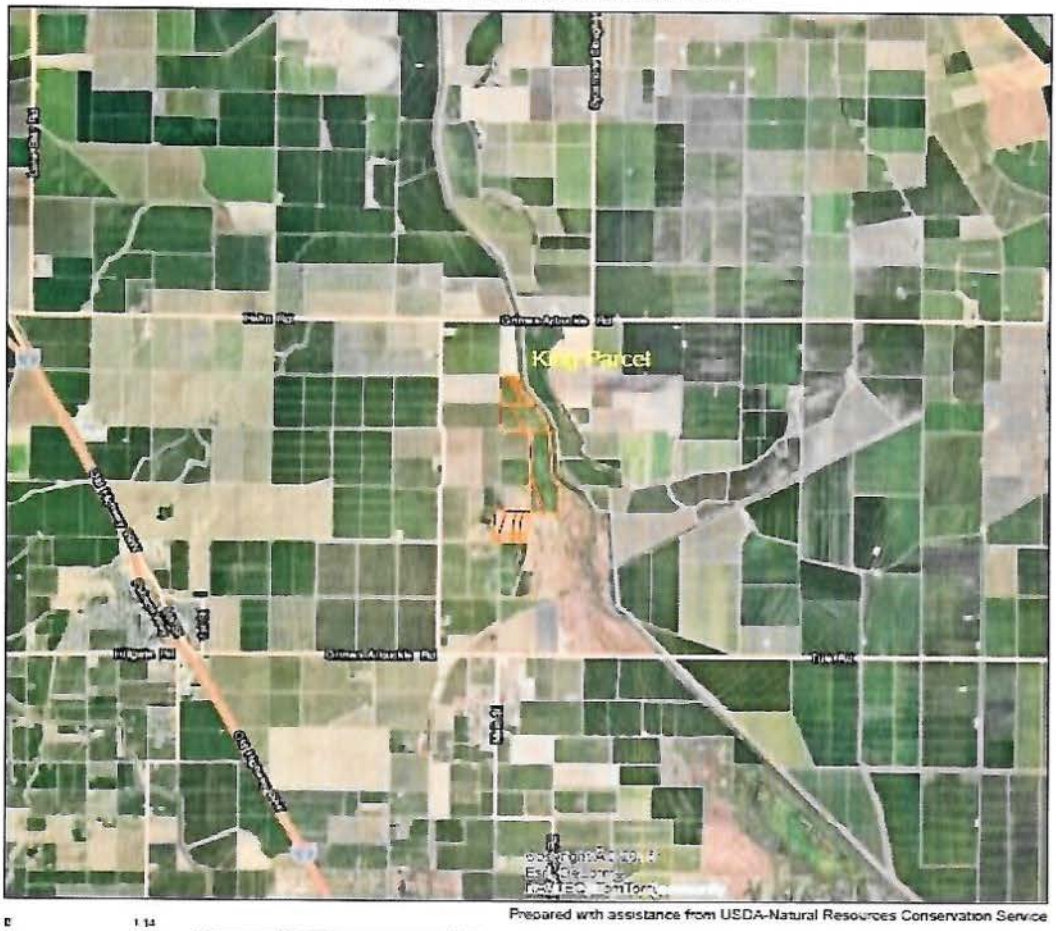
Date: 1/4/2022

Location Map

Client(s): BENJAMIN KING
Colusa County, California
Approximate Acres: 235.14
Legal Description: Sections 20 and 29; T14N R1W
Arbuckle Quad, o39122a1
Perpetual Easement

Assisted By: BENJAMIN MARTIN
USDA-NRCS
COLUSA SERVICE CENTER
COLUSA COUNTY RCD

Land Units:Farm 5374/Tract 10466, Fields 11,13,5,6,7,9 Farm 5378/Tract 10469, Fields 1,2,3,4,5



Prepared with assistance from USDA-Natural Resources Conservation Service

0 1.14 Miles

WRE Boundary

USDA

USDA is an equal opportunity provider, employer, and lender

Figure 1: T & M King Farms LLC WRE Location Map

BASELINE CONDITIONS

The easement and much of the surrounding land have been heavily influenced by agricultural modifications over the past 100 years. Construction of levees, irrigation ditches, water control structures and precision land leveling have replaced natural landscape features, hydrology functions and biological diversity. Due to past intensive farming and exclusive use of the easement for rice production, natural vegetation has been replaced by annual invasive plants such as johnsongrass, hybrid cattail, sprangle top, curly dock and purslane primarily along ditch banks, field borders and other fringe areas. Agricultural fields have been modified and managed to support a monoculture of rice which is typically planted in April-May. Once rice seeds germinate, fields are artificially flooded through the summer months and drained 2-3 weeks prior to harvest in September-October.

Due to the Mediterranean climate of the Sacramento Valley, flooded rice fields during the summer months provide critical brood water habitat for certain species of resident nesting waterfowl such as cinnamon teal, mallard, and gadwall. In addition, spring and winter shorebird migrations benefit from continuously flooded rice fields and provide habitat for species as black-necked stilts, avocets, and greater yellowlegs, as well as wading birds such as great egrets, herons, and bitterns. Rice fields also provide feeding habitat for other winter migrants such as ducks, geese, and swans.

Although rice fields support a variety of wildlife species, including state listed giant garter snake and greater sandhill cranes, the lack of habitat diversity along with seasonal disturbances (disking, land smoothing, harvesting, etc.) negatively impacts many of the life cycle needs of these species. Restoration objectives are to reestablish natural landscape features and permanent vegetative cover that provides for the nesting, feeding, estivation, shelter and linear movement of native birds, reptiles, amphibians, and mammals.

2.1 Landscape Description

The easement is in the Sacramento Valley at an elevation of 65 feet. Due to the presence of heavy clay basin and floodplain soils with slopes of O - 2% and a Mediterranean climate, historical use of the easement has been limited to rice production. The area is characterized by cool, wet winters and hot dry summers with average temperatures ranging from 37 - 55 degrees Fahrenheit in the winter and 60- 95 degrees in the summer. Annual precipitation ranges from 18 - 24 inches and nearly 100 percent comes in the form of winter rain. Since the property is in the Central Valley of California and within the Pacific Flyway waterfowl migration route, it has the potential to provide significant wintering habitat for ducks, geese, swans, and shorebirds. In addition, restoration and management considerations can significantly benefit nesting, feeding and brood habitat for resident nesting species such as mallards, gadwall, and cinnamon teal, as well as for the state threatened Greater Sandhill Crane and Giant Garter Snake.

2.2 Soils and Hydrology

The easement consists of a wide array of soil types that can be viewed in the table below. The soil is classified as hydric, somewhat poorly drained, and is considered prime, unique, or important farmland. It also has a high shrink-swell potential and exhibits slight to moderate levels of salinity.

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
107	Scribner silt loam, 0 to 1 percent slopes, occasionally flooded	6.8	2.9%
109	Scribner silt loam, 0 to 1 percent slopes, frequently flooded	52.1	22.2%
115	Clear Lake clay, 0 to 1 percent slopes, occasionally flooded, MLRA 17	46.4	19.8%
116	Clear Lake clay, calcareous, 0 to 2 percent slopes, occasionally flooded	53.9	23.0%
117	Clear Lake clay, calcareous, 0 to 1 percent slopes, frequently flooded	0.8	0.3%
128	Mallard loam, 0 to 1 percent slopes	26.7	11.4%
129	Mallard clay loam, 0 to 1 percent slopes, occasionally flooded	47.7	20.4%
Totals for Area of Interest		**234.2**	**100.0%**

Figure 2: T & M King Farms LLC Soils Report

Previous landscape modifications associated with agricultural production include laser leveling, irrigation canals and drainage ditches, water control structures, and a closed system of levees. Although the major sources of flooding hydrology from the Sacramento River have basically been eliminated, flooding still occurs from the Moulton Weir along with runoff from agricultural fields to the north. In addition, the presence of a seasonal, high-water table provides additional options for restoring hydrology and natural topographic features to the landscape. Restoration design will take advantage of the frequent flooding characteristics along the Moulton Weir through the excavation of deeper channels and shallow water areas to direct surface flooding to other designated wetland units on the easement.

Figure 3: Restoration Plan Layout

2.3 Vegetation

Currently on the WRE there are four large row crop fields with plants such as johnsongrass, hybrid cattail, sprangle top, curly dock and purslane primarily along ditch banks, field borders and other fringe areas. There is also an array of levees, irrigation ditches, water control structures and precision land leveling that have replaced natural landscape features, hydrology functions, and biological diversity. Most of the vegetation appears to be controlled as these fields are actively utilized for seasonal row crop farming throughout the spring and summer months.

RESTORATION PLAN

3.1 Restoration Objectives

The easement will be restored to a complex of seasonal wetlands habitat. Although the goal of the restoration plan is to reestablish vegetation and wetland types to as close as what existed historically, ACEP-WRE objectives also include maximizing habitat for migratory birds and other wetland dependent species to the extent practicable. Because more than 90% of California's wetlands have been degraded or converted, and there is limited opportunity to recreate large expanses of wetland habitat anywhere in the state, this plan will attempt to maximize wetland functions, habitat diversity and ecological health through a partnership between NRCS and the landowner. In addition, the restoration plan recognizes the need for active management to be able to influence water and vegetation, which will require the issuance of compatible use authorizations (CUA's)

The easement will be divided into 3 separate and independently managed habitat units, including 191.00 acres of seasonal wetlands with independent water supply and drainage, and an independently controlled moist soil management unit which will allow for propagation of wetland food plants such as watergrass and smartweed. The southwest field will be managed as an upland unit with pollinator friendly plant species.

Table 1. Pre- and post-restoration habitat types and acreage.

Table 1: Pre and Past Habitat Types and Acres

Habitat Type	Acres Pre-Restoration	Acres Post-Restoration
Uplands	0 acres	44.14 acres
Seasonal Wetlands	0 acres	191.00 acres
Total	0 acres	235.14 acres

3.2 Target Species and Key Habitat Elements Being Restored

The restoration design will emphasize the restoration of natural hydrology where possible and allow for active management through supplemental water as a way to maximize habitat benefits. Due to large scale modifications to the surrounding landscape (levees, flood control weirs, surface drainage systems,

etc.), that will impact the ability to restore ecological and hydrology functions to the easement, active management will be encouraged but is not required for successful wetland restoration. Therefore, restoration design will include class IV-A overtopping dikes to control the placement of water, structures for water control to control the flow and delivery of water, and artificial nest boxes to encourage use of the easement by cavity-nesting birds.

The restoration design will focus on habitat diversity to the extent practicable. Even though the historical classification of the property was wetland, recreating what was likely a monoculture of permanent marsh vegetation is not the goal of the ACEP-WRE. Therefore, the restoration plan will include 191.00 acres of seasonal wetland habitat. All of the wetland units will include a complex of moist soil management areas throughout the restored easement property. Also included amongst the seasonal wetland units there will be a border of Cottonwood and Willow cuttings in addition to various potted trees and shrubs planted along the west, north, south, and east edges of the easement, adjacent to the property boundary. Transplants of hard stem bulrush will also be randomly spaced throughout the shallow water areas establishing cover/shelter that will be managed as the transplants begin to expand throughout the easement. Other than those plantings, propagation of wetland plants will be through natural regeneration and water management.

Building water management into the design is critical. Being able to control the timing and fluctuations of water depth and location within the easement is necessary to meet the habitat objectives of species such as shorebirds and to be able to manage moist soil vegetation. In addition, precision water management is needed to limit salinity, reduce the incidence of avian diseases, control the growth of emergent vegetation, and reduce the spread of mosquitoes and vector-borne diseases such as west nile virus.

Target Species for Restoration:

Waterfowl - Includes spring/summer nesting habitat for mallard, gadwall, and cinnamon teal in addition to winter feeding habitat for other migratory ducks, geese, and swans. NRCS encourages the practice of fall/winter flooding of the wetland acres as well as spring and early summer irrigations of moist soil management units for the production of watergrass (echinochloa) and smartweed (polygonum). Also, the design includes construction of a 3-acre brood pond since the landowner has expressed interest in actively managing the easement to promote nesting waterfowl. Note: Any artificial applications of water to any part of the easement area will require an NRCS approved Compatible Use Permit.

Shorebirds - Establishing shallow water habitat to a depth of 4-6 inches down to¼ - ½ inch during the spring shorebird migration (April-May) and the winter migration (August-September) will be encouraged. Managing for shorebirds not only requires precise water depths ranging from a few inches down to a mudflat, but also, shorebirds require little to no vegetation, so a compatible use authorization disk or otherwise remove vegetation may be required.

Greater Sandhill Cranes - Limited use for feeding habitat by GSC's during the winter months. GSC's feed on crustaceans, rodents, frogs, snails, insects, and waste grain from agricultural fields. GSC's are expected to be frequent visitors to the easement and will benefit from the diversity of wetlands and uplands restored to the site.

Giant Garter Snakes - The biggest threat to GGS in the Sacramento Valley is from farming disturbances during the non-estivation period, typically April through October 31st. Habitat restoration that incorporates grass-vegetated channels, delivery ditches, and a mosaic of interconnected uplands and wetlands consisting of permanent vegetation while removing the threats of agricultural equipment performing disking and harvest operations will significantly reduce direct mortality to GGS and other species. In addition, there will not be any disturbances associated with levee removal/construction or other excavation work done while snakes are hibernating. Avoidance and minimization measures will be written into compatible use authorizations when habitat management work is conducted when the snake is active (non-hibernation period).

3.3 Permitting

Based on the restoration objectives, varying levels of permits may be required. Below is general guidance list of permits that may be required for earthwork or ground disturbing type restoration activities.

- Water Quality Certification (401) from Regional Water Quality Board
- Dredging/discharge Permit {404) from Army Corps of Engineers

3.4 Operation and Maintenance (O&M)

While NRCS provides cost-share assistance for implementing restoration, it will be the responsibility of the landowner to maintain conservation practices for the useful life of the practices, as designated in the specifications and job sheets. This section will identify the O&M responsibilities and how such responsibilities will be met.

NRCS Responsibility: NRCS will provide cost-share assistance for implementing this WRPO to the extent that NRCS determines is appropriate and in the public interest, based on the availability of funds. Future O&M and financial assistance is not guaranteed, however the NRCS fully intends to implement the WRPO to the extent practicable and according to the WRP policy. NRCS is always available for technical assistance.

Landowner Responsibility: As identified in the WRP Warranty Easement Deed, the landowner is responsible for operation and maintenance. This may include (but is not limited to) maintaining fencing and other infrastructure for its intended lifespan, maintaining easement signage, managing invasive weeds, and managing trespass and other uses that are detrimental to the conservation values of the easement.

The restoration has been designed to minimize structural features that may require O&M. Anticipated O&M includes:

1. Maintain easement boundary markers
2. Maintain installed concrete water control structures

MANAGEMENT PLAN

4.1 Anticipated Management Actions - Compatible Use Authorization

Compatible uses are specific management activities or uses on the easement that NRCS is authorized to permit through a Compatible Use Authorization (CUA) according to the Part IV of the Warranty Easement Deed. A CUA is required any time the landowner carries out an activity that has the potential to affect the hydrology, soil, or vegetation of the easement area, even when they are carrying out activities determined necessary by NRCS. The management and maintenance activities included in this plan are considered by NRCS to be beneficial and compatible with the easement purposes and objectives for which it was established. These activities are indicated below along with a description of their purpose, conditions under which they apply, and general criteria for implementation. Site specific specifications for implementation of these activities will be issued to the landowner upon approval of the CUA.

The landowner may request from NRCS modifications to the WRPO for inclusion of additional compatible uses. If NRCS agrees that the use is beneficial and compatible with the long-term protection and enhancement of the wetland and other natural resource values of the easement area, this plan can be updated to include the additional compatible use(s). Activities carried out on the easement area without the NRCS written approval are in violation of the terms of the Warranty Easement Deed.

All CUA's must be signed by the NRCS State Conservationist or the Assistant State Conservationist for Programs prior to beginning an activity. Implementing activities without prior NRCS approval is a violation of the terms of the easement. All CUA requests must be in writing and supported by a technical determination; CUA's are not granted verbally. Only activities that provide additional benefits and further the long-term protection and enhancement of the wetland functions and values as identified in this WRPO may be authorized as compatible uses. Authorized uses may only be conducted during the period specified in the CUA, and according to the conditions set forth in the CUA sheets. Even if approved, a CUA may be modified or cancelled by NRCS at any time if deemed necessary to protect the values and functions of the easement.

General Easement Management Actions

No regular management activities are anticipated outside of those listed below. Should a need for a management activity not described below arise, NRCS staff will assist in determining the best approach with the landowner and issue an appropriate CUA.

Based on the landowner's willingness to assume management and enhancement responsibilities associated with the habitat objectives of this easement, the following compatible use practices would be appropriate to benefit the target species:

Water Management- Seasonal flooding necessary to establish wintering habitat for migratory birds, establishment of and brood water for resident nesting waterfowl.

Prescribed Burning - Vegetation control, creating open water areas and limiting growth of emergent plants such as cattails.

Disking/Mowing - Vegetation control, necessary to create mosaic patterns of open water and emergent marsh vegetation.

Wildlife Food Plots - NTE 5% of the total acreage of the easement. Food plots may be authorized if considered a necessary component in the restoration of the easement or 30-year contract habitat objectives. Note: Conditions where food plots would be authorized by NRCS should be discussed with the landowner prior to implementing the restoration plan and should consider the following:

- Location and configuration must be approved by NRCS.

- In order to avoid unnecessary disturbances to the easement, the location of the food plot will remain stationary.

- If the landowner decides to cease management of the food plot, the site must be restored to natural vegetation.

- Should be limited to upland portions of the easement.

- Required to include a statement of compliance with federal and state baiting regulations.

- Must be justified from a habitat priority standpoint (food plot versus nesting habitat?). Does a food plot provide for missing or limited habitat components necessary to achieve restoration goals identified in the ranking scores?

- Treatment of noxious and invasive plants. Annual disking and planting of food plots may be considered as an effective method in control or eradication of unwanted vegetation.

4.2 Maintaining Easement Boundaries

The easement boundary must remain clearly marked at all times with permanent markers (WRE signs) at each corner and approximately every 500 feet of straight run or at minimum distance determined necessary by NRCS. This will help reduce accidental encroachment or inappropriate use on the easement. If signs are damaged and need to be replaced, please let your local NRCS representative know.

MONITORING

5.1 NRCS Compliance Monitoring

NRCS must conduct annual monitoring of easements to determine if easement purposes and objectives are being met. Monitoring will be completed in the field using the most recent Annual Monitoring Worksheet issued by the national office. When scheduling a field visit, the property owner will be notified in advance and provided the opportunity to participate. To the extent possible, NRCS will accommodate the landowner's schedule. The most recent aerial photography and easement boundary should be reviewed before the field visit. In addition, the easement deed and any existing WRPOs should be reviewed to determine if restoration objectives are being met and to determine the need for compatible use authorizations. Per California NRCS specific guidance, each easement should be monitored annually using an on-site field visit.

5.2 Additional Monitoring

Optional: Additional monitoring of vegetative/soils/habitat conditions and trends is encouraged, however, NRCS acknowledges that staff time necessary to conduct higher levels of monitoring may be limited. For use by NRCS staff or the landowner, photo points located in areas representing the various habitat types will be established. Photo points will be used to illustrate seasonal use by migratory birds and other wildlife, successional stages of vegetative growth, natural and artificial hydrology, and will serve as supplemental documentation to reinforce decisions on management, enhancement, and issuance of CUA's.

PLAN APPROVAL

Plan Approved By:

BENJAMIN MARTIN Digitally signed by BENJAMIN MARTIN Date: 2024.05.09 08:26:50 -07'00' Date: 05/09/2024

Benjamin Martin, Wildlife Biologist

NATHAN KEY Digitally signed by NATHAN KEY Date: 2024.05.20 08:15:45 -07'00' Date: 05/20/2024

Nathan Key, WRE Team Leader

Date: 05/20/2024

Dean Kwasny, NRCS Easement Program Specialist

I acknowledge that I have received, reviewed and agree to the implementation of this plan.

[signature], MANAGER Date: 5/8/24.

T & M King Farms LLC

Landowner
T & M King Farms LLC
(530) 723-3119
PO Box 29 Colusa, CA 95932

NRCS
NRCS Easement Program Specialist
(530) 792-5648
430 G St., Davis, CA 95616

6.1 SUPPORTING DOCUMENTATION

Additional supporting documentation located in WRP project folder includes: Warranty Easement Deeds, Grazing Management Plan, Conservation Plans, NRCS-CPA-1155, NRCS-CPA-1202 + Appendix, Soils Reports, Conservation Practice Standards and Specifications, NRCS-CPA-52 Environmental Evaluation, Photo Documentation, WRPO Map, Location Map, Topographic Map, Legal Easement Boundary Survey Map, Inventory Worksheets, Technical Notes, and Photos.

King Property Topo Map

Produced by CWA December 2024
Chadd Santerre, Director of Wetland Programs
916-275-0983, csanterre@calwaterfowl.org
Scott Capra, Sacramento Valley Regional Biologist
530-519-8960, scapra@calwaterfowl.org
Map created by Danny Lechtaler, Wetland Habitat Technician

0 200 400 800 1,200 1,600 Feet

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