

AGENDA

CV-SALTS Special Technical Workshop Applying Santa Ana to Central Valley Work Development

Central Valley Regional Water Quality Control Board Offices
 11020 Sun Center Drive #200, Rancho Cordova, CA [MAP](#)

Thursday May 28, 9:00 AM to 12:30 PM

Webcast <https://www2.gotomeeting.com/join/188881635> Meeting ID: 188-881-635
 Teleconference (218) 339-4600 Participant Code: 927571#

1. Welcome and Introductions – Chair Nigel Quinn 5 min
 Meeting Purpose: Review Beneficial Uses, identify work needed for beneficial use and objectives study and identify existing or developing programs and data sources
2. Phase 1 Work Plan Efforts - Cozad and All (materials at meeting) 80 min
 - a. Overview of overall [work plan process](#)
 - b. Beneficial Use and Objectives Study Scope
 - i. What are the existing beneficial uses [SSJBP TLBP?](#)
 - ii. What's wrong with them? What do we need to know?
 - c. Technical and policy questions and decisions for this area
 - d. [Beneficial Use and Objectives Study](#) (excerpt on page 2)
 - i. Areas of focus and needed work elements
 - ii. Development of Scope of Work
3. Break 15 min
4. Data sources/systems available for salinity/nutrients in the CV 50 min
 - a. CV-SALTS Salt and Nitrate Pilot Area Data – Consultant
 Prioritize for future meetings - All
 - b. USGS Studies and GAMA
 - c. CVRWQCB
 - i. Drinking Water Policy (Data Collection/Conceptual Models)
 - ii. Regional Monitoring Program
 - iii. Upstream TMDL Studies
 - d. State Board Salinity and Flow South San Joaquin River
 - e. Reclamation – Trinity Data Portal Project
 - f. Others
5. Triage CV-SALTS Technical issues/needs short and long term - Dorn 45 min
6. Scoping Meeting Outline/Presentations for July 15th September 10 min
7. Next Technical Workshop agenda and date June _____ 5 min

Mission of the CVSLG Technical Advisory Committee:

The mission of the Technical Advisory Committee is to provide guidance and direction for the ongoing compilation and management of data, [studies and technical information](#) needed to develop a comprehensive Central Valley Salinity Management Plan

Buff Sheet Excerpt

Salinity and Nutrient Management Regional Work Plan

The CV-SALTS Initiative Salinity and Nutrient Management Work Plan (Work Plan) defines the core of work required for development of a Central Valley Salt Management Plan. The Work Plan defines the technical and policy tasks and elements to be conducted to ensure protection of beneficial uses through objective setting based on surface and groundwater quality and integrated stakeholder implementation planning. Work Plan efforts include the identification and documentation of protocols and processes for all tasks required to develop a Salinity and Nutrient Management Plan. Projects are identified for three funding years with partially funding from the CAA, this effort will proceed with funding from the stakeholders through the Central Valley Salinity Coalition. The first critically important project identified in the Work Plan is Salinity and Nitrate Objective and Beneficial Use Study. This project involves the establishment of a process model developed through the use of existing, reliable and usable data from areas and water bodies within the Central Valley that can then be used to establish beneficial uses and objectives for areas where little or no data exists.

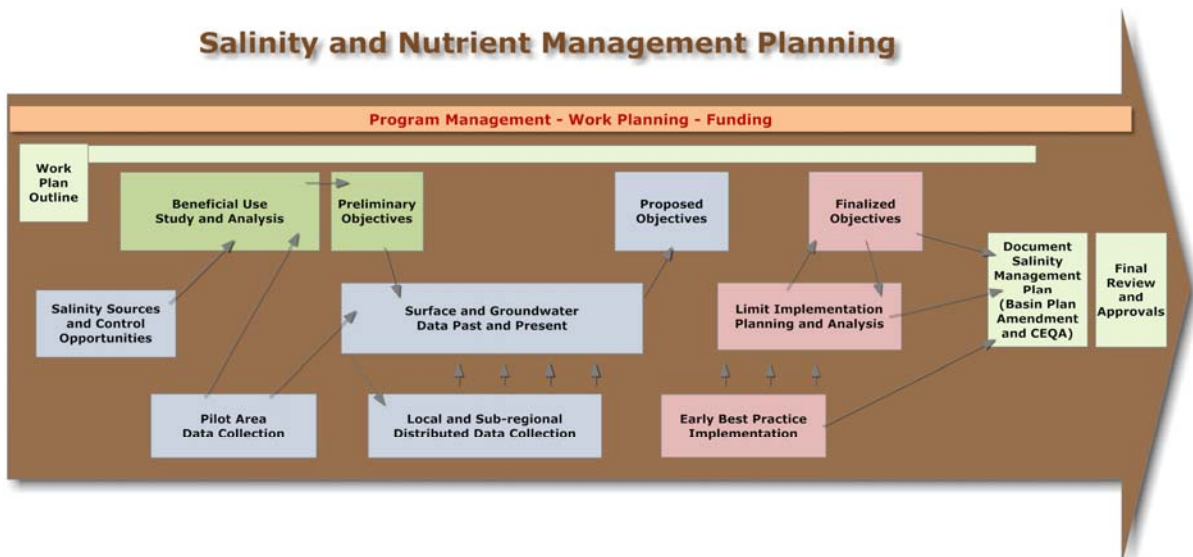
Salinity and Nitrate Objective and Beneficial Use Study Project - Funding Year 1

The following describes the work to be done as part of the Salinity and Nitrate Objective and Beneficial Use Study project:

1. Establish a project work plan in accordance with program work plan outline.
2. Collect salinity and nitrate water quality data, land and site characteristics, waterbody characteristics and other key information from all available sources throughout the Central Valley,
3. Analyze and evaluate the known data to establish appropriate beneficial uses and salinity and nitrate objectives for protection for waterbodies with existing data,
4. Using the data and characteristics of known sites, develop a decision matrix protocol and process that can be used as a model to establish beneficial uses and preliminary objectives.

Deliverable - final report and data attachments supporting establishment of beneficial uses and preliminary objectives acceptable for protection of beneficial uses in known areas and a model to be used for establishment of uses and objectives throughout the region with limited or no data.

Salinity and Nutrient Management Planning

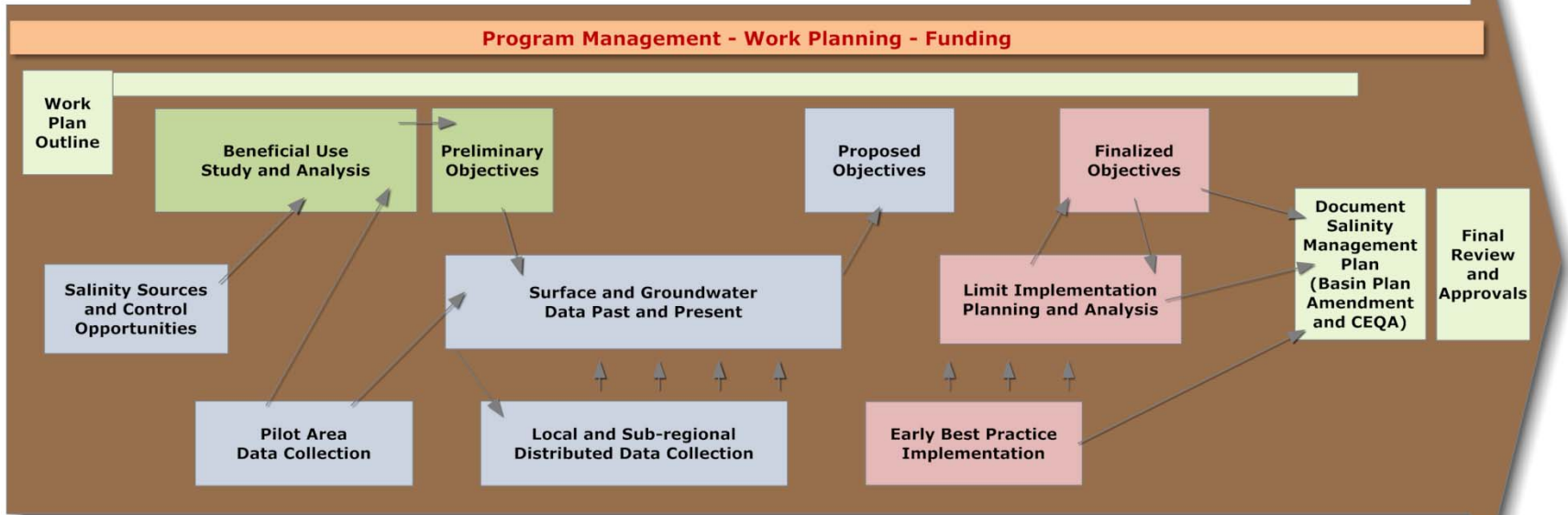


Beneficial Uses in CV Basin Plans

CV-SALTS Workshop Topics

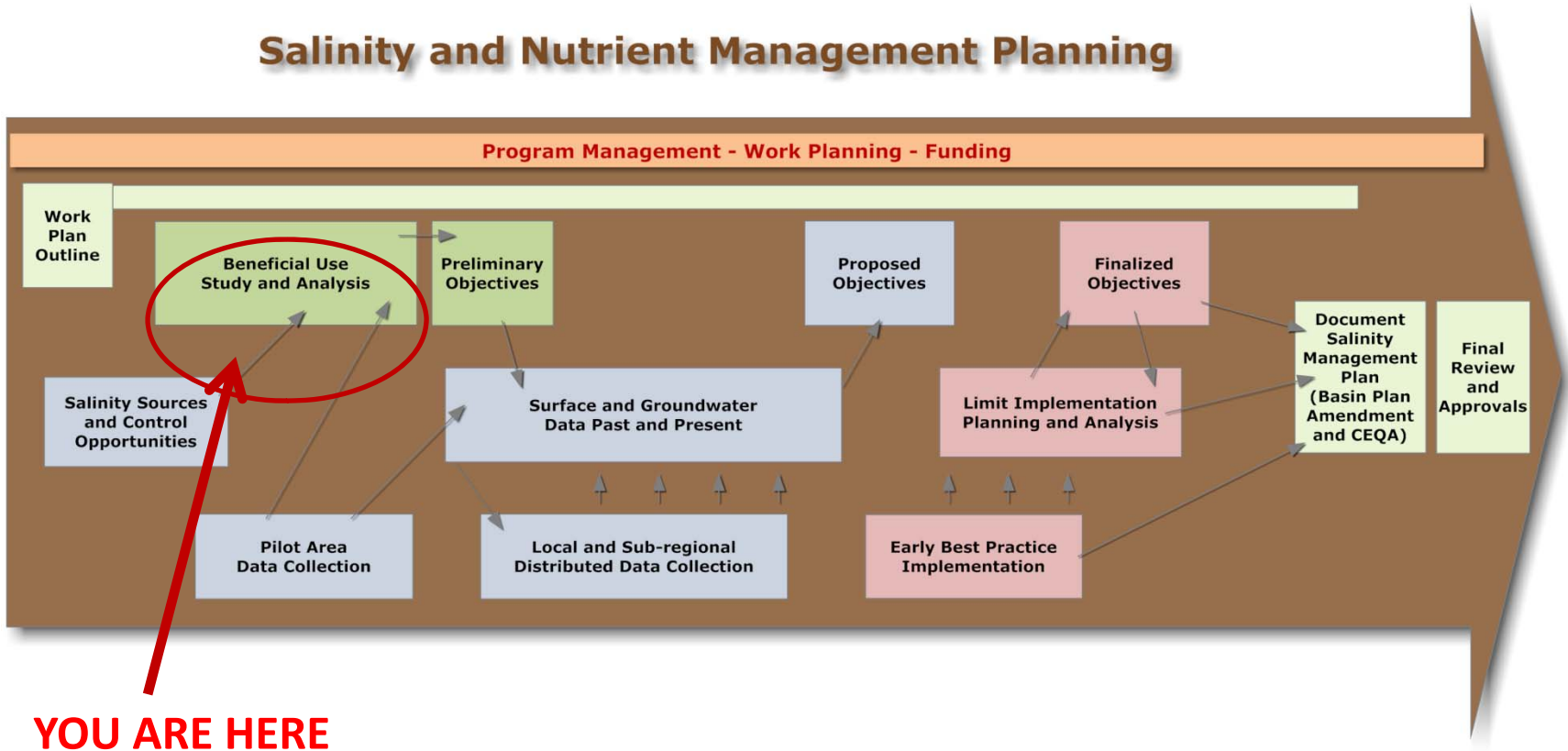
Workplan Process

Salinity and Nutrient Management Planning



Workplan Process

Salinity and Nutrient Management Planning



Salinity and Nitrate Objective and Beneficial Use Study Project - Funding Year 1

The following describes the work to be done as part of the Salinity and Nitrate Objective and Beneficial Use Study project:

1. Establish a project work plan in accordance with program work plan outline.
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3. Analyze and evaluate the known data to establish appropriate beneficial uses and salinity and nitrate objectives for protection for waterbodies with existing data,
4. Using the data and characteristics of known sites, develop a decision matrix protocol and process that can be used as a model to establish beneficial uses and preliminary objectives.

Deliverable - final report and data attachments supporting establishment of beneficial uses and preliminary objectives acceptable for protection of beneficial uses in known areas and a model to be used for establishment of uses and objectives throughout the region with limited or no data.

Protection and enhancement of beneficial uses of water against quality degradation is a basic requirement of water quality planning under the Porter-Cologne Water Quality Control Act, the Regional Water Board must consider past, present, and probable future beneficial uses. Paraphrased from the Tulare Lake Basin Plan.

Significant points concerning beneficial uses are:

1. All water related problems can be stated in terms of whether there is water of sufficient quantity and quality to protect or enhance beneficial uses.
2. Fish, plants, and other wildlife, as well as humans, depend on and use water beneficially both directly or indirectly.
3. Defined beneficial uses do not include all possible uses of water. (waters for disposal of wastewaters or dilution of salt is not included as a beneficial uses they may be reasonable and desirable uses of water, but are not protected uses
4. The protection and enhancement of beneficial uses requires that certain quality and quantity objectives be met for surface and ground waters.
5. Quality of water in upstream reaches and upper aquifers may impact the quality and beneficial uses of downstream reaches and lower aquifers.

Municipal and Domestic Supply (MUN) - Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.

Agricultural Supply (AGR) - Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

Industrial Process Supply (PRO) - Uses of water for industrial activities that depend primarily on water quality.

Industrial Service Supply (IND) - Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.

Hydropower Generation (POW) - Uses of water for hydropower generation.

Water Contact Recreation (REC-1) - Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

Non-Contact Water Recreation (REC-2) - Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Warm Freshwater Habitat (WARM) - Uses of water that support warm water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates

Cold Freshwater Habitat (COLD) - Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife.

Wildlife Habitat (WILD) - Uses of water that support terrestrial or wetland ecosystems, terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Rare, Threatened, or Endangered Species (RARE) - Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

Spawning, Reproduction, and/or Early Development (SPWN) - Uses of water that support high quality aquatic habitats suitable for reproduction early development of fish. SPWN only in COLD.

Migration of Aquatic Organisms (MIGR) - Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.

Ground Water Recharge (GWR) - Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or saltwater intrusion into aquifers.

Freshwater Replenishment (FRSH) - Uses of water for natural or artificial maintenance of surface water quantity or quality.

Aquaculture (AQUA) - Uses of water for aquaculture or mariculture operations including, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals.

Preservation of Biological Habitats of Special Significance (BIOL) - Uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or **Areas of Special Biological Significance (ASBS)**, where the preservation or enhancement of natural resources requires special protection.

Navigation (NAV) - Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.

The beneficial uses of any specifically identified water body generally apply to its tributary streams.

In some cases a beneficial use may not be applicable to the entire body of water. In these cases the Regional Water Board's judgement will be applied. It should be noted that it is impractical to list every surface water body in the Region. For unidentified water bodies, the beneficial uses will be evaluated on a case-by-case basis.

Upstream from the foothill reservoirs, the quality of surface waters remains good to excellent. The quality of the major streams is suitable for all beneficial uses. Beneficial uses below the dams, however, may be significantly impacted because of the reduced flows in the channels.

For ground water, the following beneficial uses occur throughout the Basin:

- ✓ **Municipal and Domestic Supply (MUN)**
- ✓ **Agricultural Supply (AGR)**
- ✓ **Industrial Process Supply (PRO)**
- ✓ **Industrial Service Supply (IND)**
- ✓ **Water Contact Recreation (REC-I)**
- ✓ **Wildlife Habitat (WILD)**

Surface Water Beneficial Uses Potentially Impacted by Salinity

Municipal and Domestic Supply (MUN) - Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.

Agricultural Supply (AGR) - Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

Industrial Process Supply (PRO) - Uses of water for industrial activities that depend primarily on water quality.

Ground Water Recharge (GWR) - Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or saltwater intrusion into aquifers.

Freshwater Replenishment (FRSH) - Uses of water for natural or artificial maintenance of surface water quantity or quality.

Groundwater Beneficial Uses Potentially Impacted by Salinity

- ✓ **Municipal and Domestic Supply (MUN)**
- ✓ **Agricultural Supply (AGR)**
- ✓ **Industrial Process Supply (PRO)**

SURFACE WATER BODIES AND BENEFICIAL USES

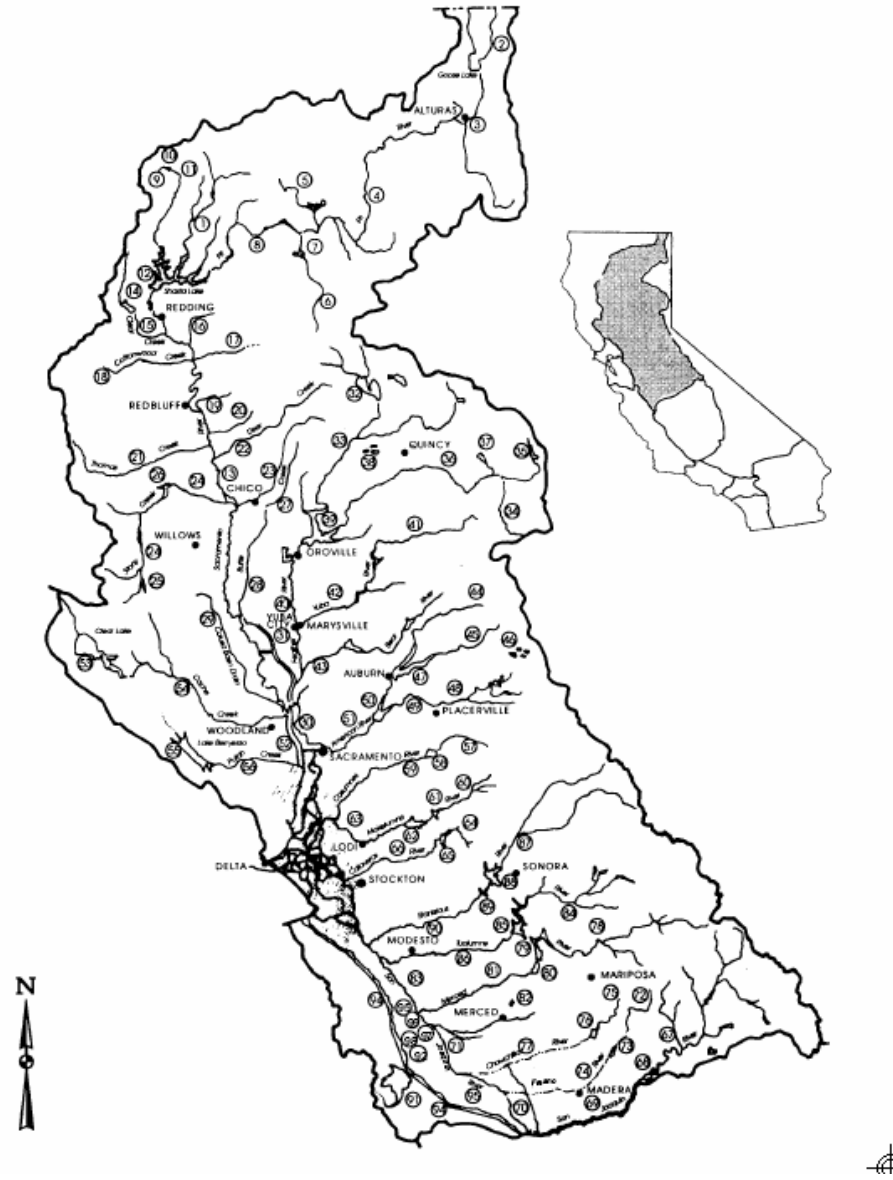


TABLE II-1

SURFACE WATER BODIES AND BENEFICIAL USES

SURFACE WATER BODIES (1)		HYDRO UNIT NUMBER	MUN	AGRI-CULTURE		INDUSTRY			RECREATION		FRESHWATER HABITAT (2)		MIGRATION		SPAWNING		WILD	NAV
				AGR	STOCK WATERING	PROC	IND	POW	REC-1	REC-2	WARM	COLD	MIGR	SPWN				
															IRRIGATION	PROCESS		
1	McCLOUD RIVER	505	m															
2	GOOSE LAKE	527.20	m	m														
3	PIT RIVER		m	m														
3	NORTH FORK, SOUTH FORK, PIT RIVER	526.00	m	m														
4	CONFLUENCE OF FORKS TO HAT CREEK	526.35	m	m														
5	FALL RIVER	526.41	m	m														
6	HAT CREEK	526.30	m	m														
7	BAUM LAKE	526.34	m	m														
8	MOUTH OF HAT CREEK TO SHASTA LAKE	526	m	m														
9	SACRAMENTO RIVER		m	m														
9	SOURCE TO BOX CANYON RESERVOIR	525.22	m	m														
10	LAKE SISKIYOU	525.22	m	m														
11	BOX CANYON DAM TO SHASTA LAKE	525.2	m	m														
12	SHASTA LAKE	506.10	m	m														
13	SHASTA DAM TO COLUSA BASIN DRAIN		m	m														
14	WHISKEY TOWN RESERVOIR	524.61	m	m														
15	CLEAR CREEK BELOW WHISKEYTOWN RESERVOIR	524.62	m	m														
16	COW CREEK	507.3	m	m														
17	BATTLE CREEK	507.12	m	m														
18	COTTONWOOD CREEK	524.3	m	m														
19	ANTELOPE CREEK	509.63	m	m														
20	MILL CREEK	509.42	m	m														
21	THOMAS CREEK	523.10	m	m														
22	DEER CREEK	509.20	m	m														
23	BIG CHICO CREEK	509.14	m	m														
24	STONY CREEK	522.00	m	m														
25	EAST PARK RESERVOIR	522.33	m	m														
26	BLACK BUTTE RESERVOIR	522.12	m	m														
27	BUTTE CREEK		m	m														
27	SOURCES TO CHICO	521.30	m	m														
28	BELOW CHICO, INCLUDING BUTTE SLOUGH	520.40	m	m														
29	COLUSA BASIN DRAIN	520.21	m	m														

LEGEND
 E = EXISTING BENEFICIAL USES
 P = POTENTIAL BENEFICIAL USES
 L = EXISTING LIMITED BENEFICIAL USE

NOTE:
 Surface waters with the beneficial uses of Groundwater Recharge (GWR), Freshwater Replenishment (FRSH), and Preservation of Rare and Endangered Species (RARE) have not been identified in this plan. Surface waters of the Sacramento and San Joaquin River Basins falling within these beneficial use categories will be identified in the future as part of the continuous planning process to be conducted by the State Water Resources Control Board.



TABLE II-1 (cont'd)

SURFACE WATER BODIES AND BENEFICIAL USES

	SURFACE WATER BODIES (1)	HYDRO UNIT NUMBER	MUN	AGRI-CULTURE		INDUSTRY			RECREATION		FRESHWATER HABITAT (2)		MIGRATION		SPAWNING		WILD	NAV
				AGR	PROC	IND	POW	REC-1	REC-2	WARM	COLD	MIGR	SPWN					
				MUNICIPAL AND DOMESTIC SUPPLY	IRRIGATION	STOCK WATERING	PROCESS	SERVICE SUPPLY	POWER	CONTACT	CANOEING (1) AND RAFTING	OTHER NONCONTACT	WARM	COLD	WARM (3)	COLD (4)		
30	COLUSA BASIN DRAIN TO EYE ("I") STREET BRIDGE	520.00	m															
31	SUTTER BYPASS	520.3		m														
32	FEATHER RIVER			m														
33	LAKE ALMANOR	518.41						m										
34	NORTH FORK, FEATHER RIVER	518.4	m															
35	MIDDLE FORK, FEATHER RIVER	518.3																
36	SOURCE TO LITTLE LAST CHANCE CREEK	518.35		m														
37	FRENCHMAN RESERVOIR	518.36									y							
38	LITTLE LAST CHANCE CREEK TO LAKE OROVILLE	518.3	m															
39	LAKE DAVIS	518.34																
40	LAKES BASIN LAKES	518.5									y							
41	LAKE OROVILLE	518.12	m															
42	FISH BARRIER DAM TO SACRAMENTO RIVER	515.	m															
43	YUBA RIVER			m														
44	SOURCES TO ENGLEBRIGHT RESERVOIR	517.		m														
45	ENGLEBRIGHT DAM TO FEATHER RIVER	515.3		m														
46	BEAR RIVER	515.1		m										y				
47	AMERICAN RIVER			m														
48	NORTH FORK, SOURCE TO FOLSOM LAKE	514.5		m														
49	MIDDLE FORK, SOURCE TO FOLSOM LAKE	514.4		m							y							
50	DESOLATION VALLEY LAKES	514.4																
51	SOUTH FORK	514.3																
52	SOURCE TO PLACERVILLE	514.3		m							y							
53	PLACERVILLE TO FOLSOM LAKE	514.32	m															
54	FOLSOM LAKE	514.23	m															
55	FOLSOM DAM TO SACRAMENTO RIVER	519.21		m														
56	YOLO BYPASS	510.																
57	CACHE CREEK																	
58	CLEAR LAKE (a)	513.52																
59	CLEAR LAKE TO YOLO BYPASS (a)	511/513																

(1) Shown for streams and rivers only with the implication that certain flows are required for this beneficial use.
 (2) Resident does not include anadromous. Any Segments with both COLD and WARM beneficial use designations will be considered COLD water bodies for the application of water quality objectives.
 (3) Striped bass, sturgeon, and shad.
 (a) The following beneficial uses EXIST in addition to those noted in Table II-1:

Mud Slough (north): COMM and SHELL
 Salt Slough: COMM, BIOL, and SHELL
 Wetland Water Supply Channels: BIOL
 Clear Lake: COMM

(4) Salmon and steelhead.
 (5) As a primary beneficial use.
 (6) The indicated beneficial uses are to be protected for all waters except in specific cases where evidence indicates the appropriateness of additional or alternative beneficial use designations.
 (7) Sport fishing is the only recreation activity permitted.

(d) In addition to the beneficial uses noted in Table II-1, COMM exists for Cache Creek from Clear Lake to Yolo Bypass and in the following tributaries only: North Fork Cache Creek and Bear Creek.

(8) Beneficial uses vary throughout the Delta and will be evaluated on a case-by-case basis.
 (9) Per State Board Resolution No. 90-28, Marsh Creek and Marsh Creek Reservoir in Contra Costa County are assigned the following beneficial uses: REC1 and REC2
 A/ Hidden Reservoir = Hershey Lake
 B/ Buchanan Reservoir = Eastman Lake



TABLE II-1 (cont'd)

SURFACE WATER BODIES AND BENEFICIAL USES

SURFACE WATER BODIES (1)		HYDRO UNIT NUMBER	MUN	AGRI-CULTURE		INDUSTRY			RECREATION		FRESHWATER HABITAT (2)		MIGRATION		SPAWNING		WILD	NAV
				AGR	PROC	IND	POW	REC-1	REC-2	WARM	COLD	MIGR	COLD (4)	SPWN	COLD (4)	WILDLIFE HABITAT		
78	MERCED RIVER																	
79	SOURCE TO McCLURE LAKE	537	m	m														
80	McCLURE LAKE	537.22	m	m														
81	McSWAIN RESERVOIR	537.1	m	m														
82	McSWAIN RESERVOIR TO SAN JOAQUIN RIVER	536	m	m														
83	YOSEMITE LAKE	536.9																
84	MOUTH OF MERCED RIVER TO VERNALIS	536/541	m															
85	TUOLUMNE RIVER																	
86	SOURCE TO (NEW) DON PEDRO RESERVOIR	536	m															
87	NEW DON PEDRO RESERVOIR	536.32	m															
88	NEW DON PEDRO DAM TO SAN JOAQUIN RIVER	536	m															
89	STANISLAUS RIVER																	
90	SOURCE TO NEW MELONES RESERVOIR (PROPOSED)	534	m															
91	NEW MELONES RESERVOIR	534.21	m															
92	TULLOCH RESERVOIR	534.22	m															
93	GOODWIN DAM TO SAN JOAQUIN RIVER	536	m															
94	SAN LUIS RESERVOIR	542.32	m															
95	ONEILL RESERVOIR	541.2	m															
96	OTHER LAKES AND RESERVOIRS IN SAN JOAQUIN R. BASIN, (EXCLUDING HYDRO UNIT NOS. 531-533, 543, 544) (6)	541	m															
97	CALIFORNIA AQUEDUCT																	
98	DELTA-MENDOTA CANAL	541/543	m															
99	GRASSLAND WATERSHED (a)	541.2																
100	MUD SLOUGH (NORTH)																	
101	SALT SLOUGH																	
102	WETLAND WATER SUPPLY CHANNELS (10)																	
103	C. SACRAMENTO-SAN JOAQUIN DELTA (8, 9)	544	m															

(1) Shown for streams and rivers only with the implication that certain flows are required for the beneficial use.

(2) Resident does not include anadromous. Any Segments with both COLD and WARM beneficial use designations will be considered COLD water bodies for the application of water quality objectives.

(3) Striped bass, sturgeon, and shad.

(4) Salmon and steelhead.

(5) Also primary beneficial use.

(6) The indicated beneficial uses are to be protected for all waters except in specific cases where evidence indicates the appropriateness of additional or alternate beneficial use designations.

(7) Sport fishing is the only recreation activity permitted.

(8) Beneficial uses vary throughout the Delta and will be evaluated on a case-by-case basis.

(9) Per State Board Resolution No. 90-38, Marsh Creek and Marsh Creek Reservoir in Contra Costa County are assigned the following beneficial uses: REC1 and REC2.

(10) Wetland water supply channels for which beneficial uses are designated are defined in Appendix 40.

(a) The following beneficial uses EXIST in addition to those noted in Table II-1

Mud Slough (north): COMM and SHELL
Salt Slough: COMM, BICL, and SHELL
Wetland Water Supply Channels: BICL
Clear Lake: COMM

(b) Elevated natural salt and boron concentrations may limit this use to irrigation of salt and boron tolerant crops. Intermittent low flow conditions may also limit this use.

(c) Wetland channels can sustain aquatic life, but due to fluctuating flow regimes and habitat limitations, may not be suitable for nesting and/or propagation.



**TABLE III-2
TULARE LAKE BASIN
MAXIMUM ELECTRICAL CONDUCTIVITY LEVELS**

<u>Stream</u>	<u>Location</u>	<u>Max. Electrical Conductivity ($\mu\text{mho/cm}$)</u>
Kings River		
Reach I	Above Kirch Flat	100
Reach II	Kirch Flat to Pine Flat Dam	100 ^a
Reach III	Pine Flat Dam to Friant-Kern	100
Reach IV	Friant-Kern to Peoples Weir	200
Reach V	Peoples Weir to Island Weir	300 ^b
Reach VI	Island Weir to Stinson Weir on North Fork and Empire Weir No. 2 on South Fork	300 ^b
Kaweah River		
Reach I	Above Lake Kaweah	175
Reach II	Lake Kaweah	175 ^c
Reach III	Below Lake Kaweah	^d
Tule River		
Reach I	Above Lake Success	450
Reach II	Lake Success	450 ^e
Reach III	Below Lake Success	^d
Kern River		
Reach I	Above Lake Isabella	200
Reach II	Lake Isabella	300
Reach III	Lake Isabella to Southern California Edison Powerhouse (KR-1)	300
Reach IV	KR-1 to Bakersfield	300 ^f
Reach V	Below Bakersfield	^d

^a Maximum 10-year average - 50 μmhos

^b During the period of irrigation deliveries. Providing, further, that for 10 percent of the time (period of low flow) the following shall apply to the following reaches of the Kings River:

Reach V 400 μmhos

Reach VI 600 μmhos

^c Maximum 10-year average - 100 μmhos

^d During the irrigation season releases should meet the levels shown in the preceding reach. At other times the channel will be dry or controlled by storm flows.

Table III-3

ELECTRICAL CONDUCTIVITY AND TOTAL DISSOLVED SOLIDS

<u>PARAMETER</u>	<u>WATER QUALITY OBJECTIVES</u>	<u>APPLICABLE WATER BODIES</u>
Electrical Conductivity (at 25°C)	Shall not exceed 230 micromhos/cm (50 percentile) or 235 micromhos/cm (90 percentile) at Knights Landing above Colusa Basin Drain; or 240 micromhos/cm (50 percentile) or 340 micromhos/cm (90 percentile) at I Street Bridge, based upon previous 10 years of record.	Sacramento River (13, 30)
	Shall not exceed 150 micromhos/cm (90 percentile) in well-mixed waters of the Feather River.	North Fork of the Feather River (33); Middle Fork of the Feather River from Little Last Chance Creek to Lake Oroville (36); Feather River from the Fish Barrier Dam at Oroville to Sacramento River (40)
	Shall not exceed 150 micromhos/cm from Friant Dam to Gravelly Ford (90 percentile).	San Joaquin River, Friant Dam to Mendota Pool (69)
Total Dissolved Solids	Shall not exceed 125 mg/l (90 percentile)	North Fork of the American River from the source to Folsom Lake (44); Middle Fork of the American River from the source to Folsom Lake (45); South Fork of the American River from the source to Folsom Lake (48, 49); American River from Folsom Dam to Sacramento River (51)
	Shall not exceed 100 mg/l (90 percentile)	Folsom Lake (50)
	Shall not exceed 1,300,000 tons	Goose Lake (2)



26 July 1994

TO: Members of the TIN/TDS Scoping Committee
FROM: Tim Moore @ Risk Sciences
RE: Questions for Next Meeting

At our last meeting, we defined some of the problems and concerns held by each agency. Burnie Cavender summarized these in a memo last week.

At our next meeting, we want to focus on the regulatory requirements associated with nitrogen and salt control in the Santa Ana River Basin. In particular, we want to begin defining the specific scientific demonstrations which must be made and the level of proof required in order to revise water quality objectives, permit limits, or monitoring procedures for TIN and TDS.

I have prepared a list of questions to help guide our discussion. It is unlikely that Regional Board staff will have answers to all of these questions. In fact, some of the questions will require the Board itself to provide policy guidance. The more specific we can be, the easier it will be for them to provide answers. The more up-front guidance we can get, the easier it will be for us to accurately scope the study tasks and estimate the final cost.

See you at the meeting Friday, July 29th, 9am at SAWPA HQ.

PROTECTING BENEFICIAL USES:

- 1) What concentration of TIN and TDS is necessary to protect the MUN use in the groundwater basins?
- 2) What percentage cumulative-total safety factor should be applied when establishing water quality objectives to protect beneficial uses? Is the safety factor different for TIN than for TDS?
- 3) Where and how should water quality be assessed to determine whether the water body has attained it's designated use?
- 4) Given that upstream discharges must protect downstream beneficial uses, where should water quality be assessed to determine whether it fully protects downstream uses?
- 5) What evidence is required to demonstrate that a use is not impaired?
- 6) What evidence is required to demonstrate that a discharge will not impair the use?

ASSIMILATIVE CAPACITY:

- 7) How should the historical ambient concentrations of TIN & TDS be calculated and validated?
- 8) What presumptive assumptions exist regarding the fate of TIN discharged to the Santa Ana River?

OVER...

ASSIMILATIVE CAPACITY: (continued)

- 9) What evidence is required to demonstrate that nitrate-nitrogen is not a conservative element but, rather, is converted to more benign forms prior to reaching groundwater basins?
- 10) How should groundwater basins be defined: hydrologically, geologically, water quality gradients, surface geography, politically, or a combo?
- 11) What showings are required to determine whether part of a groundwater basin is not "under the influence" of recharge flows from surface streams.

ANTI-DEGRADATION:

- 12) What percentage increase in ambient concentration triggers a need to conduct an anti-degradation analysis?
- 13) When conducting an anti-degradation analysis, what evidence is necessary to make the following 68-16 demonstrations:
 - a) "...necessary to support..."
 - b) "...important..."
 - c) "...social and economic development..."
 - d) "...in the region..."
- 14) How should the economic impact of degradation be evaluated?
- 15) How should the cost-of-compliance be evaluated?
- 16) What government mandated minimum flow requirements would preclude full reclamation? (This is considered an anti-degradation issue because of the recent Supreme Court decision in the Tacoma case.)

REGULATORY CONSIDERATIONS:

- 17) What are requirements of Porter-Cologne with regard to revising TIN or TDS objectives?
- 18) What are the requirements of 68-16 (Anti-degradation policy)
- 19) What are the requirements of the Clean Water Act and the associated Code of Federal regulations.
- 20) What are EPA's concerns?
- 21) What are the State Boards concerns?
- 22) What are Fish & Game and Fish & Wildlife's concerns?
- 23) What are the Dept. of Health's concerns?

Salinity and Nitrate Objective and Beneficial Use Study Project - Funding Year 1

The following describes the work to be done as part of the Salinity and Nitrate Objective and Beneficial Use Study project:

1. Establish a project work plan in accordance with program work plan outline.
2. Collect salinity and nitrate water quality data, land and site characteristics, waterbody characteristics and other key information from all available sources throughout the Central Valley,
3. Analyze and evaluate the known data to establish appropriate beneficial uses and salinity and nitrate objectives for protection for waterbodies with existing data,
4. Using the data and characteristics of known sites, develop a decision matrix protocol and process that can be used as a model to establish beneficial uses and preliminary objectives.

Deliverable - final report and data attachments supporting establishment of beneficial uses and preliminary objectives acceptable for protection of beneficial uses in known areas and a model to be used for establishment of uses and objectives throughout the region with limited or no data.