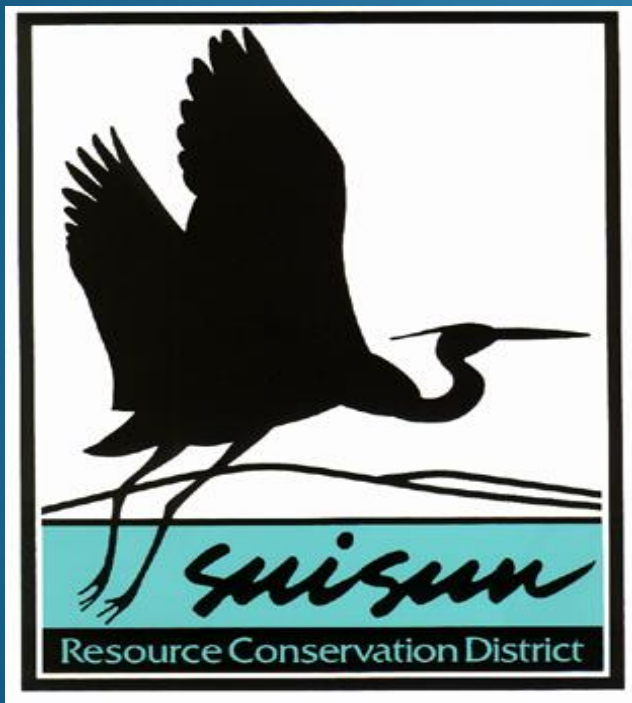


SRCD's Review of Impacts the Proposed Bay Delta Conservation Plan (BDCP) and Companion EIR/EIS on the Suisun Marsh–



By Steve Chappell,
Executive Director
Suisun RCD

BDCP Document is Extremely Challenging to Review & Analyze

- Over 34,000 pages and very Programmatic.
- Operational criteria defined - except spring and fall outflow.
- Diversion amounts and timing are based upon a spring and fall “Decision Tree”. Fish and wildlife agencies will determine these outflow requirements at the time of the initial operations of a new facility.
- “Will result in similar level of water deliveries as currently permitted”.
- No changes in existing Water Quality and Flow Standard under BDCP, but they could change in the future, with a new Water Quality Control Plan.
- Habitat restoration is identified at a general level over the next 40 years. With general areas of restoration defined, but no site specific locations to analyze impacts of proposed actions.
- Funding for full implementation of required conservation actions are unidentified and uncertain, but will cost billions (Water Bond?).

SRCD Board has not yet taken a position on the BDCP Project:

- ❖ The Board established formal process to review and comment on public draft of the BDCP Plan and EIR/EIS. Discussed at the monthly SRCD Board meetings. (**Comments: Due June 13, 2014**)
- ❖ Directed staff to review proposed operations of the new point of diversion, modeling results, effects analysis, and proposed mitigation for the Project
- ❖ Coordinate SRCD's comments and review with other public agencies and experts
- ❖ This Landowner Workshop to hear landowners concerns

SRCD's Comments will focus on the BDCP's Impacts to the Suisun Marsh, not the Delta

- **These comments fall into two primary categories:**
 1. **Diversions:** The new Projects Dual Conveyance operations impacts on Delta outflow and any increased Suisun Marsh salinities from baseline conditions.
 2. **Tidal Restoration:** The impacts of BDCP's mitigation (NCCP/HCP) on the existing Suisun Marsh habitats, wetlands, and wildlife resources.

Salinity Impacts of proposed Project to the Suisun Marsh from Baseline Conditions

1. Focus on changes in the timing and volume of water diverted at the new facility, compared to baseline and any reduction in Delta outflows.
2. The ability of the project operations to meet compliance with the existing Suisun Marsh protective water quality standards and contractual agreements.
 - Water Rights Decision 1641 & Suisun Marsh Preservation Agreement
 - Must meet Water Quality Standards in Water Right Decision 1641, but **New Standards Could be Developed Separately**
 - *“Water deliveries from the Projects under fully implemented BDCP would be roughly 10% +/- average annual amount diverted over the last 20 years.”*
 - The Salinity Modeling supporting their conclusions, but models have errors and must be verified.

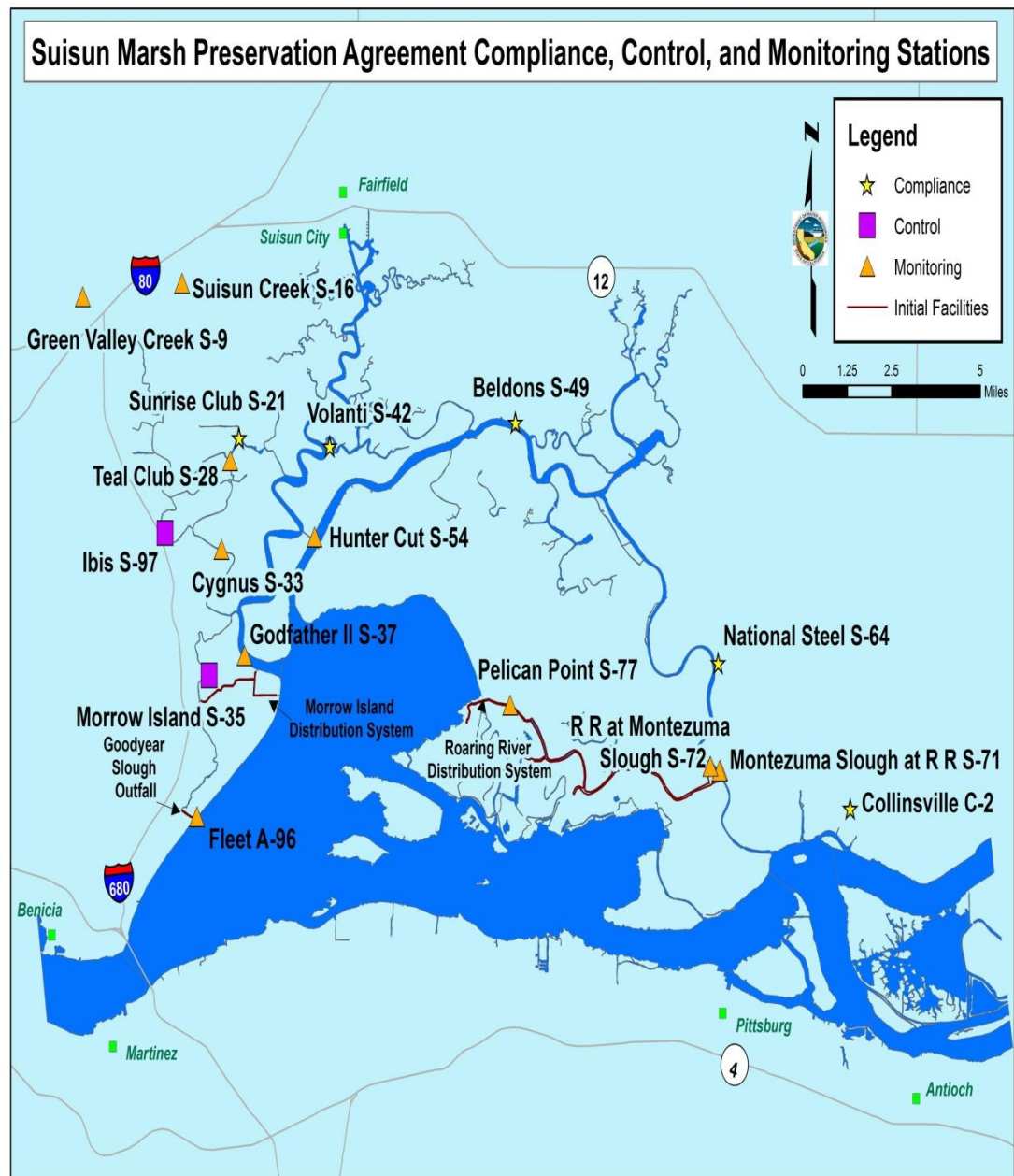
Suisun Marsh Salinity Standards D-1641

All Water Year Types
Except During Deficiency Period

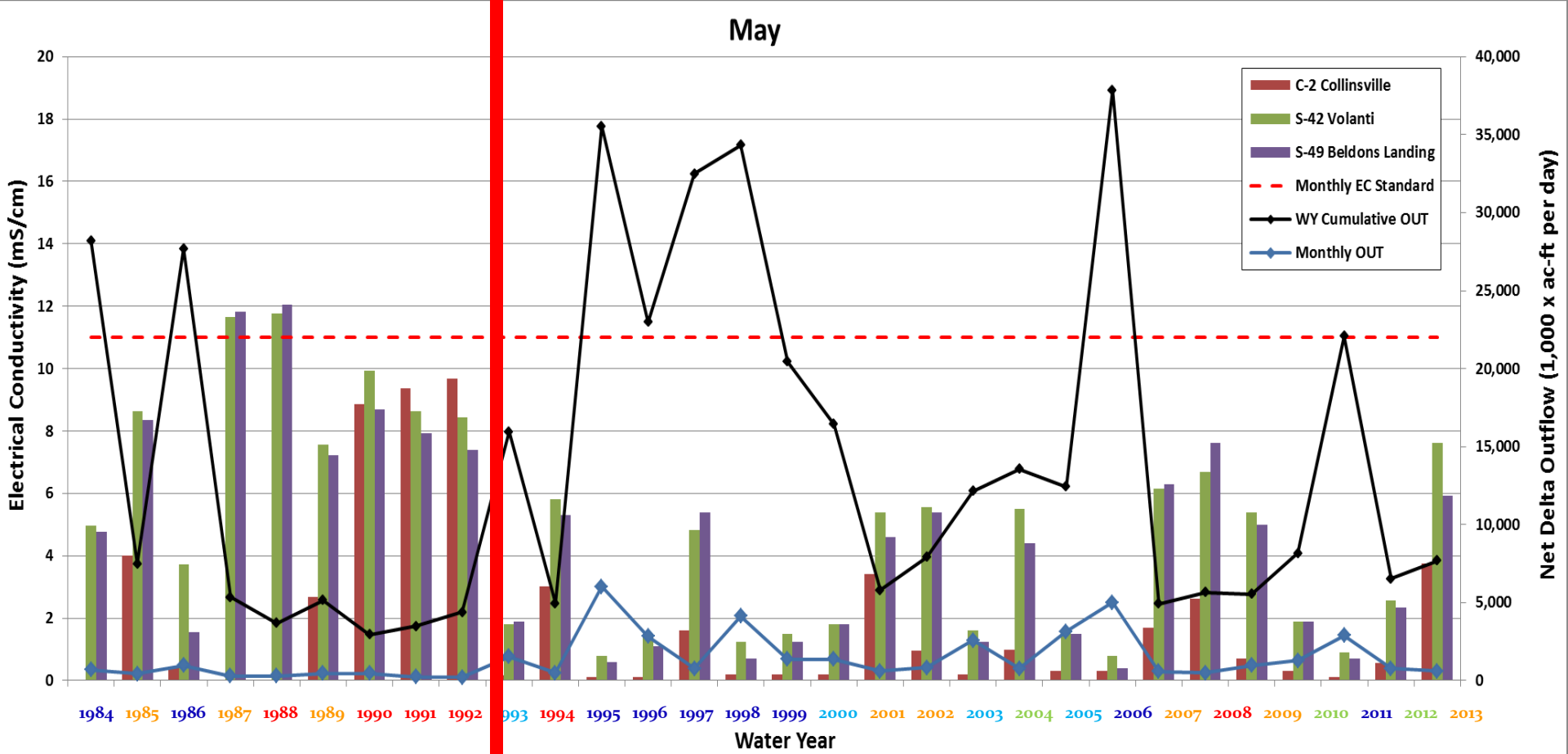
October	19.0
November	16.5
December	15.5
January	12.5
February - March	8.0
April – May	11.0

Deficiency Period (As defined in the
SMPA Agreement)

October	19.0
November	16.5
Dec. – March	15.6
April	14.0
May	12.5



Monthly progressive daily mean electrical conductivity from water years 1984 through 2013 for select stations in Suisun Marsh. Additionally, the annual cumulative Delta outflow over the water year (WY Cumulative OUT), along with the total monthly Delta outflow (Monthly OUT) are depicted by black and blue lines, respectively. Note that the scale of outflow on the right-side y-axis changes between months.



Water Year Type

Wet

Above Normal

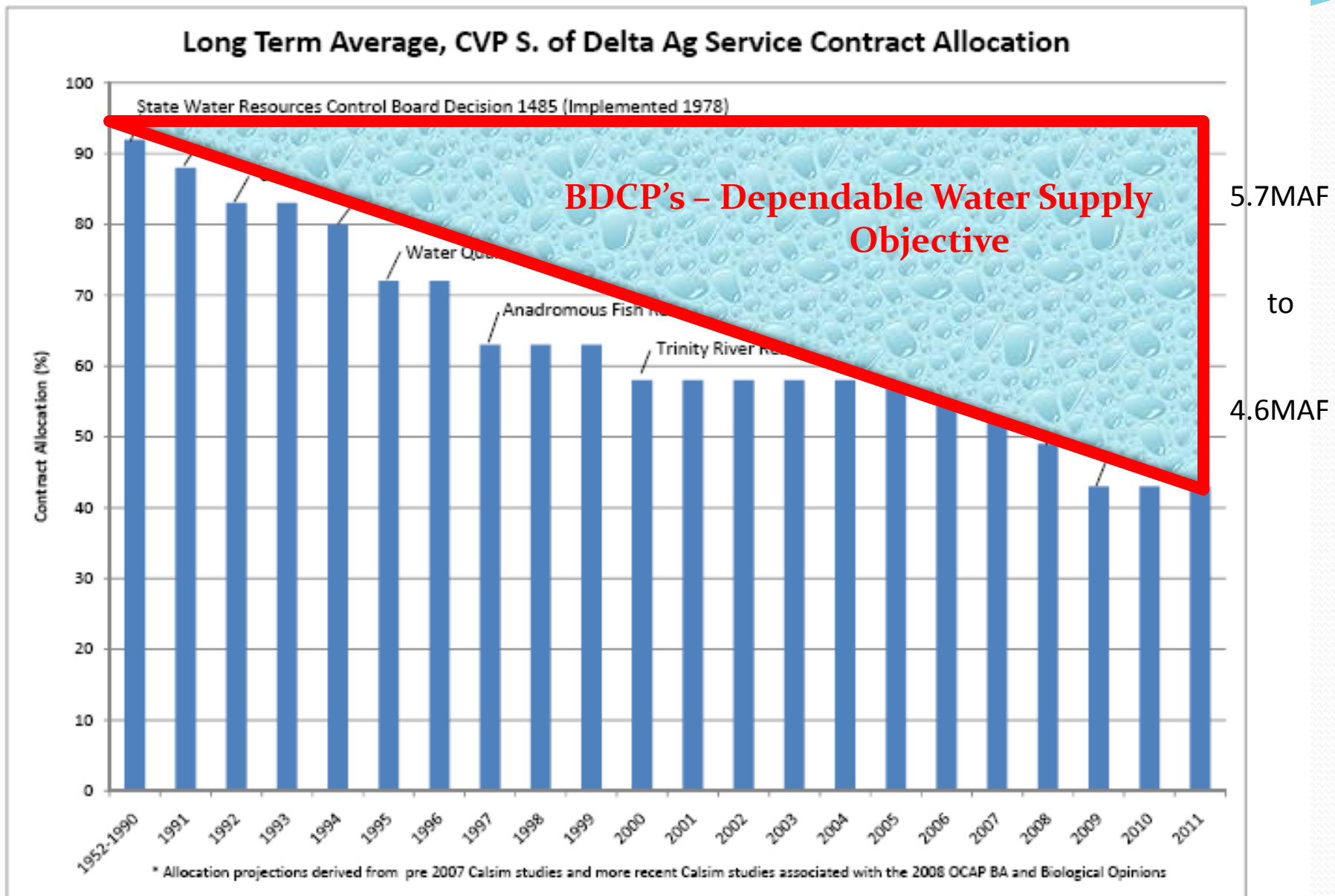
Below Normal

Dry

Critical

The last 20 years.

Note: Electrical conductivity values from 1984 through 1988 are based upon peak daily salinity, not high-tide salinity, due to missing stage data during these years.



“No increase in existing permitted total diversion amounts from the Delta, but obtain water supply reliability (4.7 to 5.6 MAF/year).”

The impacts of BDCPs' mitigation (NCCP/HCP) on the existing Suisun Marsh habitats, wetlands, and wildlife resources

Impacts of Proposed Tidal Restoration:

- Direct and indirect loss of managed wetlands and waterfowl habitats
- Direct and indirect loss of other existing wetland and wildlife values and functions
- Regional and local impacts of increase salinities on wetland condition and management capabilities
- Decreased life expectancy of managed wetland infrastructure and increase maintenance costs
- Dampening of tidal stage, impacting adjacent landowner ability to operate existing gravity drains increased pumping costs.

Primary Mitigation Elements of the BDCP

- Mitigation for the Projects impacts (NCCP /HCP)
- Protect and restore up to 145,000 acres of habitat
- 80,000 is restoration
- 65,000 of tidal habitats
- At least 7,000 is identified in Suisun, but up to 50,000 is possible
- Most all of this acreage will come from Suisun managed wetlands, Delta Ag. lands and Yolo Bypass
- Restoration Actions: are based upon predictions of how habitat conditions and species might respond

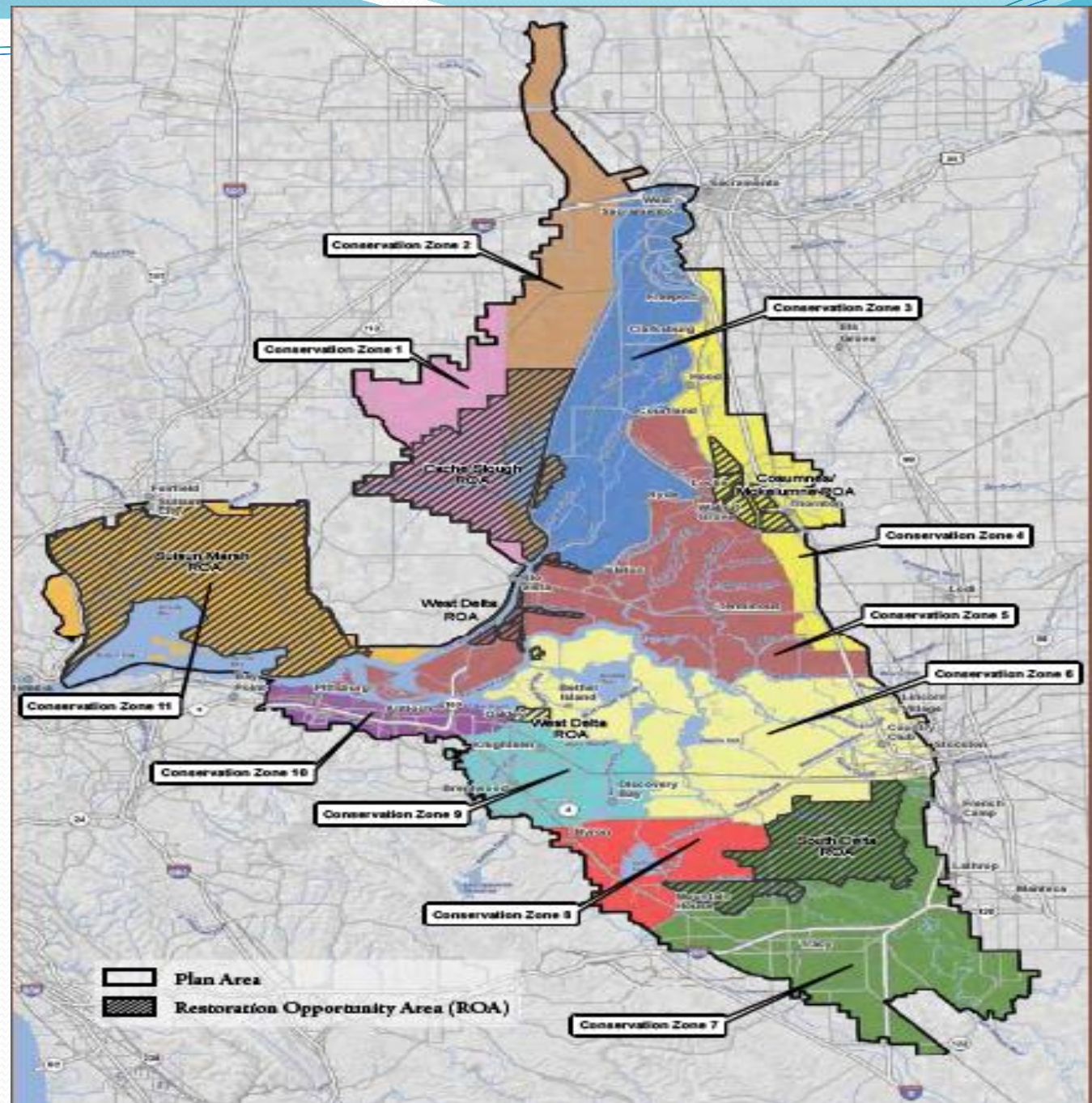
Natural Communities Restoration Target Impacting Suisun Marsh Existing Habitats

BDCP's Tidal Natural Communities Restoration Targets for Delta and Suisun.

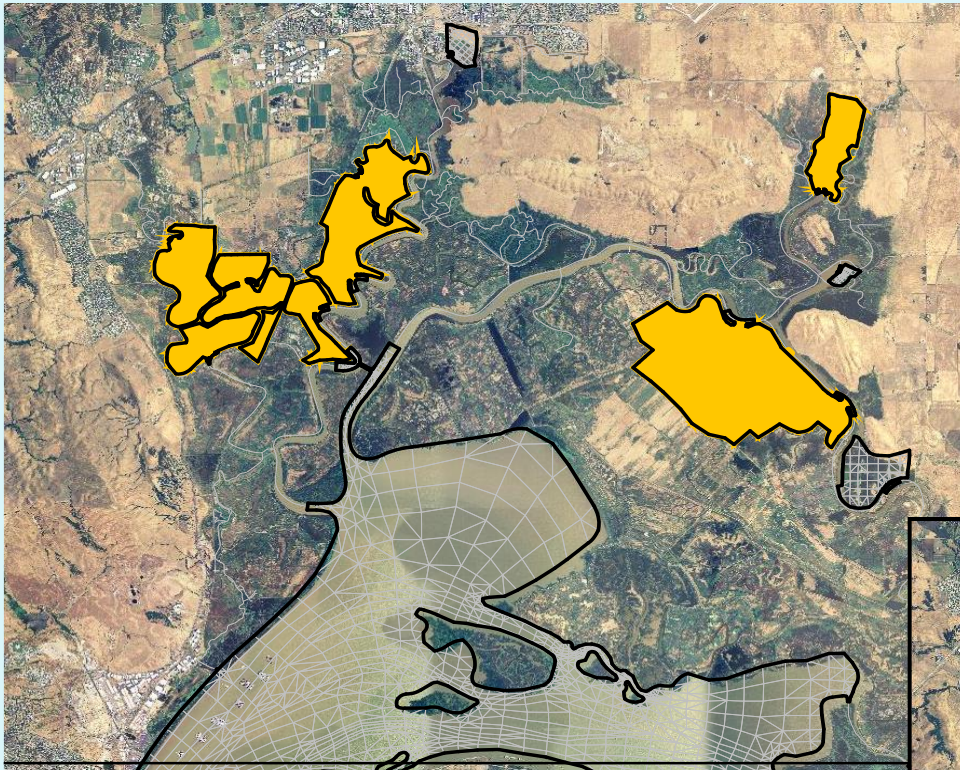
• Tidal brackish emergent wetlands	3,000
• Tidal freshwater emergent wetlands	13,900
• Tidal perennial aquatic (below MLLW)	10,000
• Tidal wetland of any type	28,100
• Adjacent uplands	10,000
Total:	65,000 acres

- **At least** 7,000 (14%) acres planned for Suisun Marsh, a target of 11,500 acres (22%), but could be higher.
- Plus conserve 8,100 acres of protected habitats for cover species
- Up to **20,000** acres of the exiting privately and public owned lands in the Marsh (40%).

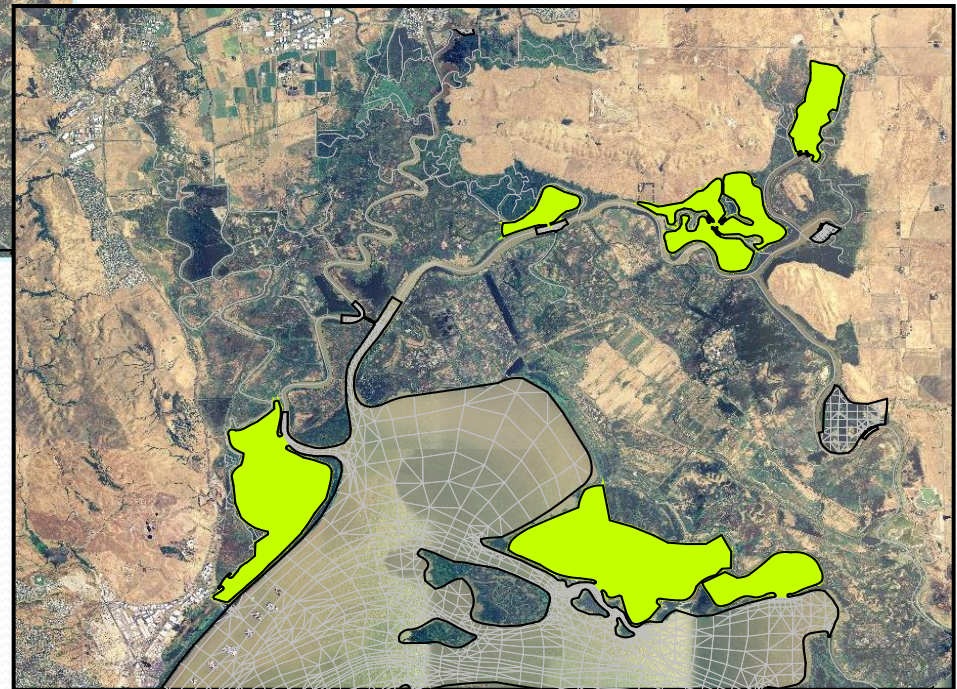
- Habitat Restoration Opportunity Areas 2014 Document
- Suisun Marsh & Solano County the majority of the focused restoration areas.



Model Comparisons of Suisun Marsh Salinity Impacts from Potential Tidal Restorations (7,000 ac)



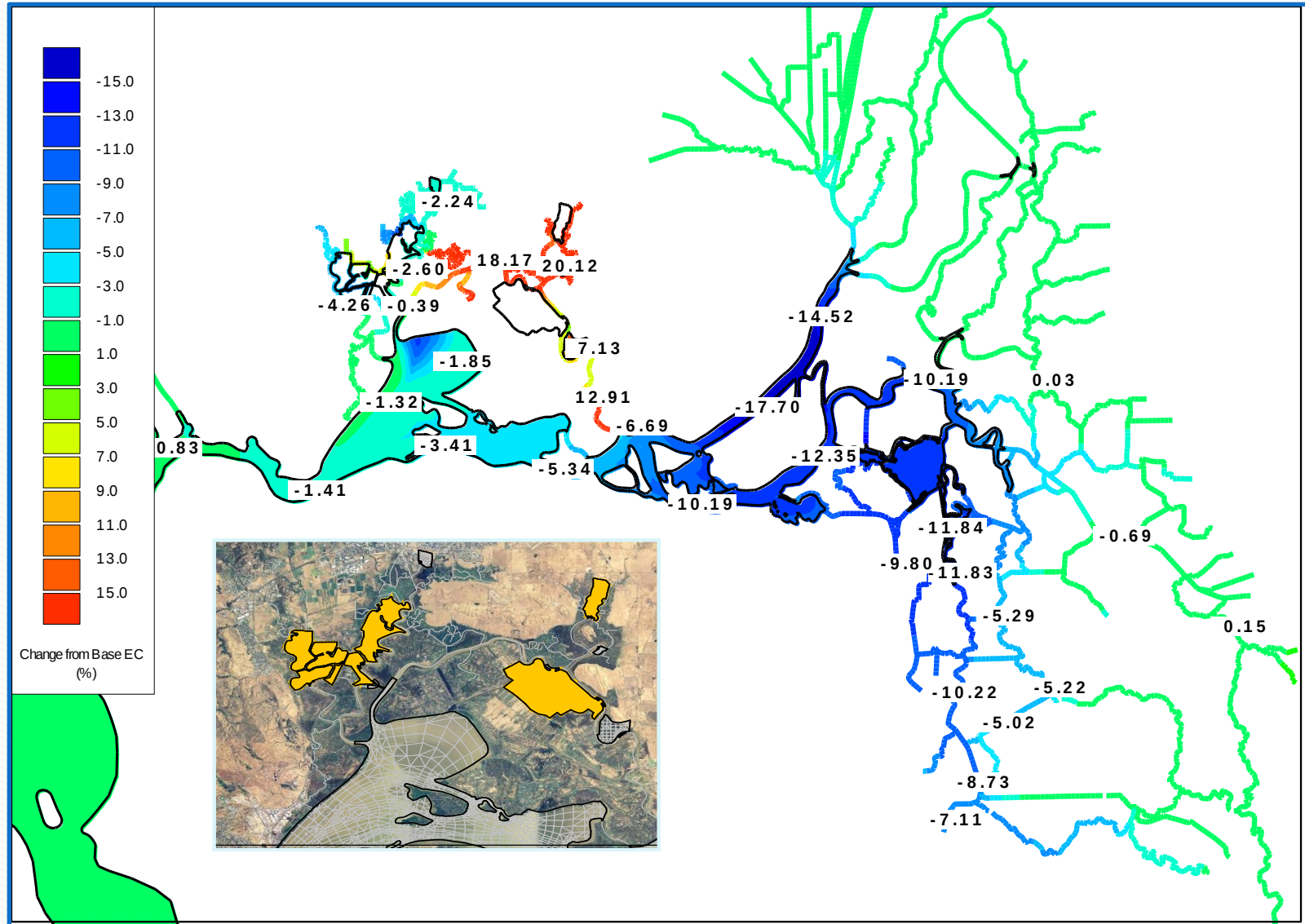
Set 1



Set 2

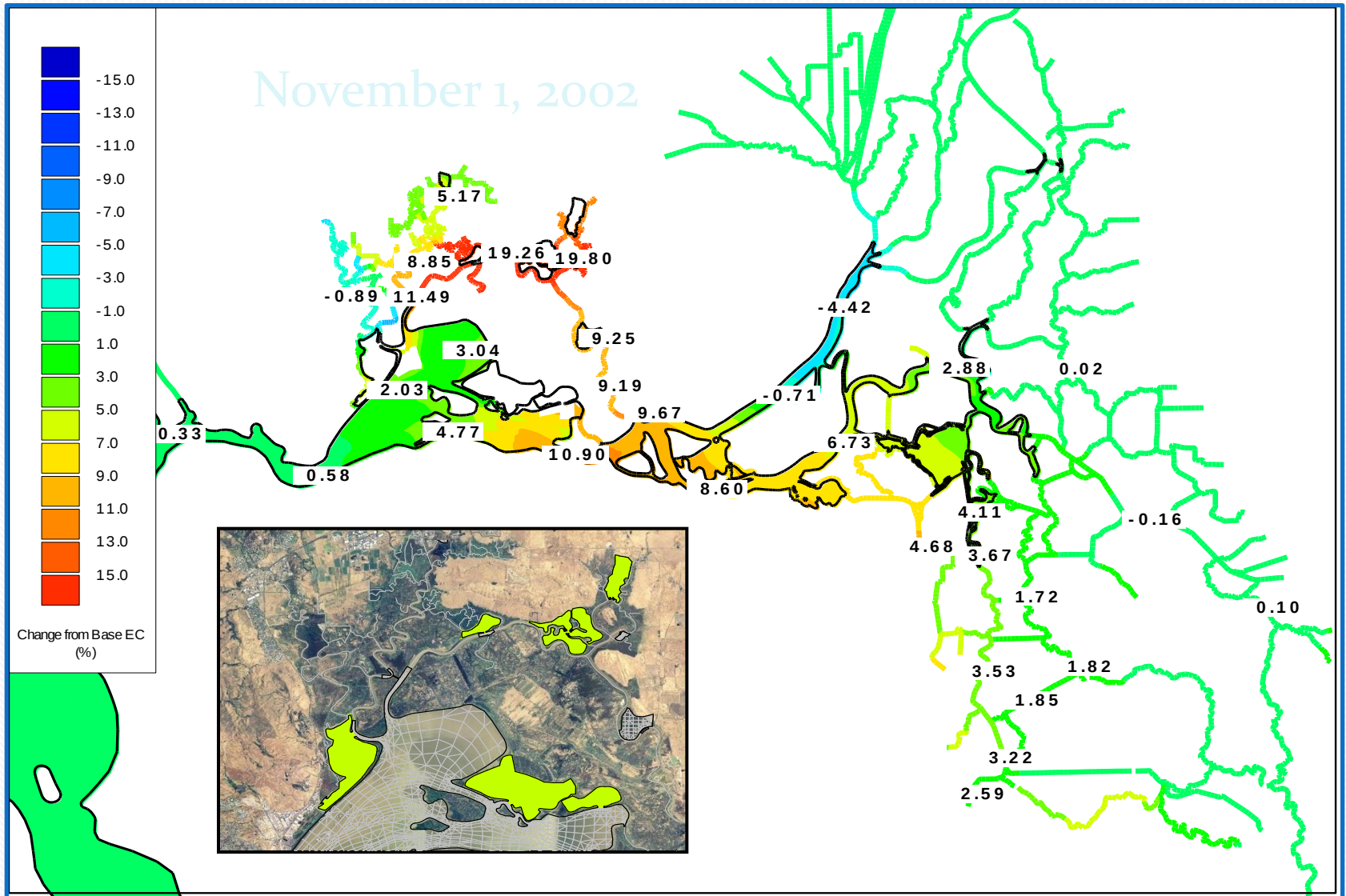
Set 1 - Dry year Comparison November 1, 2002

Same Acreage Different Location

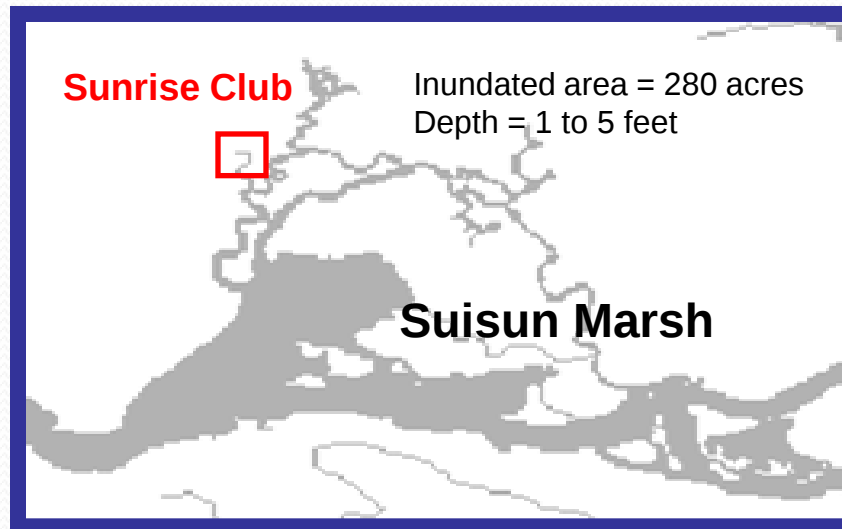
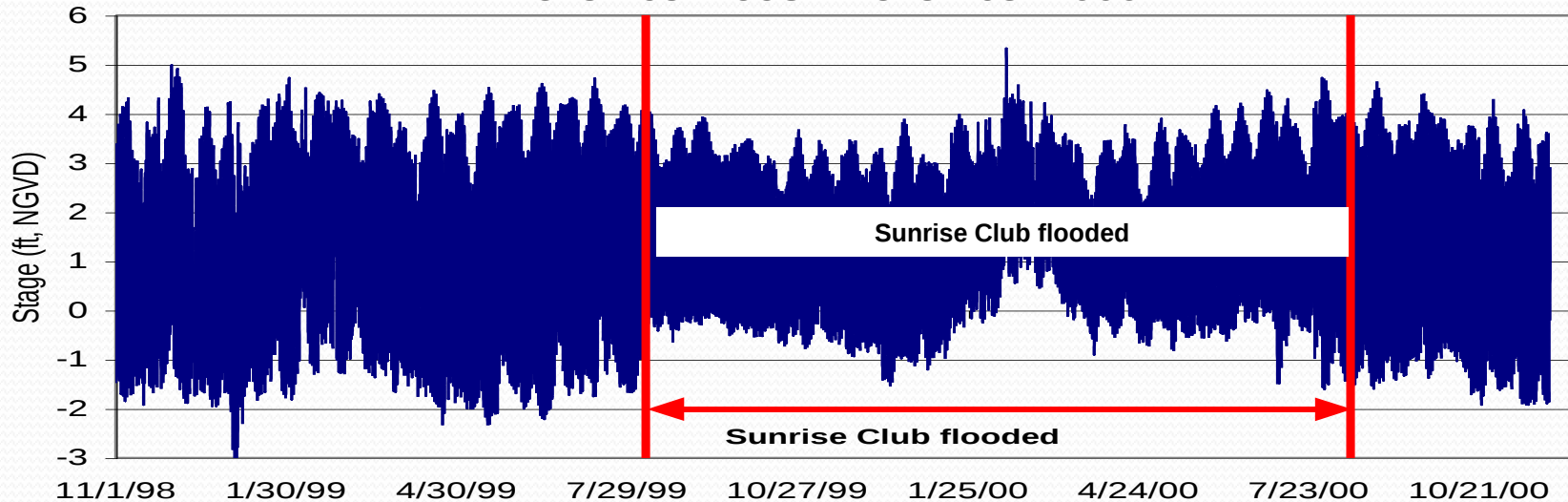


Set 2 – Dry year Comparison November 1, 2002

Same Acreage Different Location



Water Surface Elevation at S-21 Sunrise Club in Suisun Marsh
November 1998 - November 2000



Dampening of Tidal Stage from Tidal Restoration

Comments on the BDCP EIR/EIS: Due June 13, 2014

SRCD is coordinating comments and project impacts assessment with:

- Solano County
- Solano Delta Water Coordination Working Group
- Bay Conservation and Development Commission
- Central Valley Joint Venture
- Ducks Unlimited
- California Waterfowl Association
- Bay Conservation and Development Commission

Additional types of mitigation that are needed to address inadequacy of BDCP EIR/EIS

- Site specific modeling and verification of salinity impacts for all future tidal restoration projects.
- Protection of existing water quality (low salinity) for continued management of diked seasonal wetlands.
- Significant long term funding to mitigate for the required more intensive management of the remaining managed wetland habitats. Insuring that all properties can complete 2 or 3 leach cycles each spring and optimize water management.
- Pumping will be the primary way to achieve objectives on most of the properties in the Marsh, offset electrical or diesel cost to achieve the additional leach cycles each year.
- Invest in exterior levee improvements. Suisun Marsh managed wetlands are dependent on the exterior levees. If the levees fail, all of the existing wetlands functions will be lost. This would result in tidal restoration, but likely in the wrong location, and impact infrastructure, Delta water quality, and yield negative ecological values for targeted fish species.
- Continue operations of the Montezuma Salinity Control Gates and increase operations to offset impacts increased salinities from of tidal restoration



Dual Conveyance Flow and Habitat Fundamentals

1 East/west
flow pattern

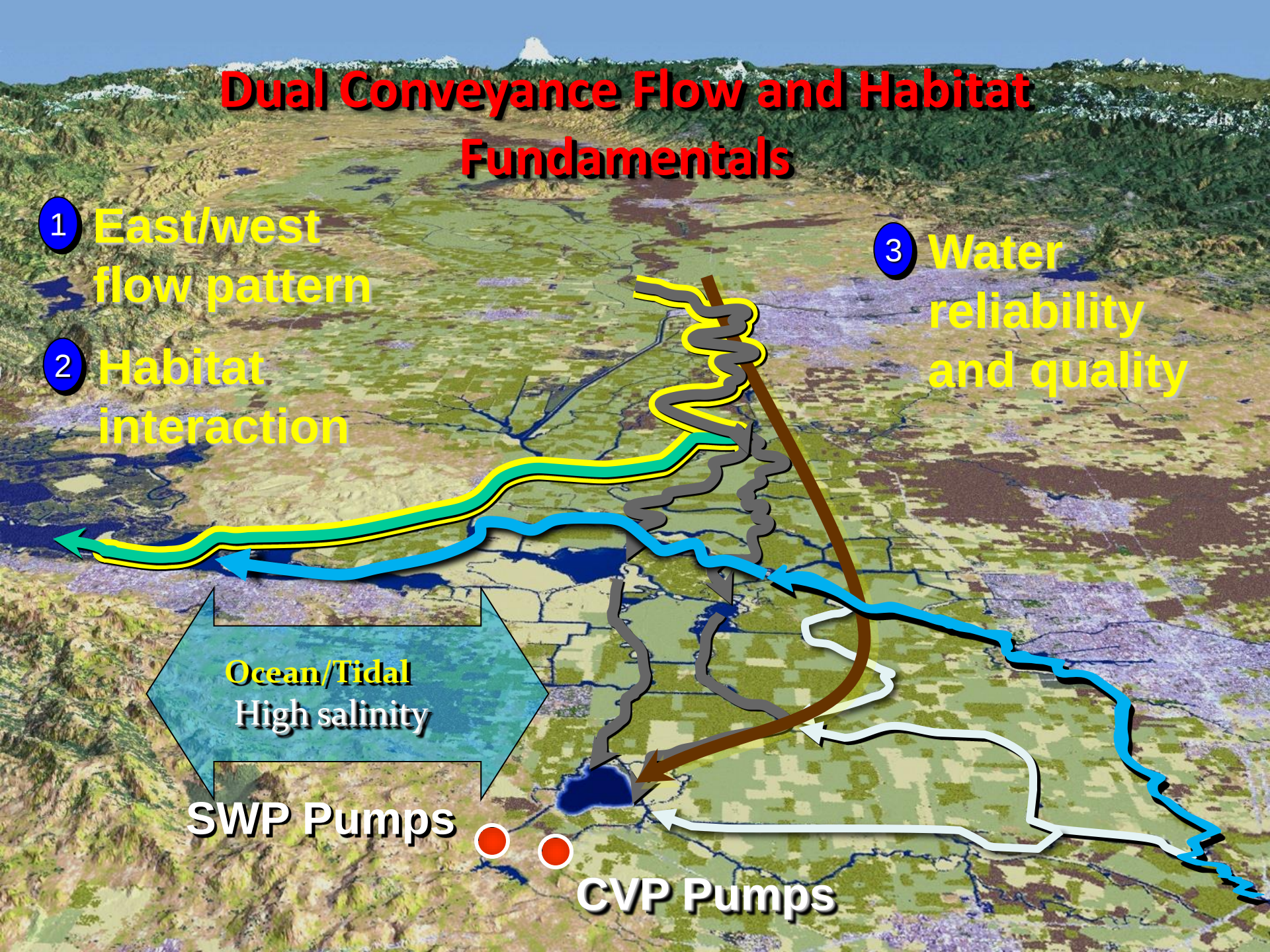
2 Habitat
interaction

3 Water
reliability
and quality

Ocean/Tidal
High salinity

SWP Pumps

CVP Pumps



Bay Delta Conservation Plan

Summary – Started in 2006

- A 50 year multi-purpose Plan, with a co-equal goal of **water supply reliability** and **ecosystem restoration**
- Habitat Conservation Plan (HCP) and Natural Communities Conservation Plan (NCCP) compliance docs for SWP and CVP
- Creates a new water conveyance facility that shifts Delta exports to the north Delta on the Sac. River approximately 55% of the time
- **2 – 30 mile long, 40' diameter tunnels capable of moving 9,000 cfs of water by gravity to the existing south Delta State and Federal pumping plants**
 - ✓ Protect and restores up to 145,000 acres of habitat in the Delta and Suisun Marsh over the next 40 years
 - ✓ Construction to take approximately 10 years, starting in 2017 (2027)
 - ✓ Cost estimate \$24.7 billion dollars