

**YOLO BYPASS MANAGEMENT STRATEGY
STAKEHOLDERS WORKING GROUP MEETING NO. 9**

***DRAFT*
MEETING MINUTES**

MEETING DATE: August 17, 2000

LOCATION: California Department of Fish and Game
Yolo Wildlife Area Headquarters
45211 County Road 32B (Chiles Road)
Davis, CA 95616

IN ATTENDANCE: Lori Clamurro, Delta Protection Commission
John Currey, Mound Farms
Bob Dorian, H Pond Ranch
Mike Egan, Yolo Flyway Farms
Dave Feliz, Department of Fish and Game (DFG)
Terri Fong, Department of Water Resources (DWR)
Bob Gill, Gill Land & Farming
Mike Hall, Conaway Ranch
Mike Hardesty, Reclamation District 2068
Bill Harrell, DWR
Tom Harvey, U. S. Fish and Wildlife Service (USFWS)
Mark Hennelly, California Waterfowl Association (CWA)
Phil Hogan, U. S. Department of Agriculture (USDA) Natural Resources
Conservation Service (NRCS)
Elmer Jones, Lucky 5 Farms
Greg Kassis, Glide in Ranch
Bob Leonard, Yolo Basin Farms
Ken Martin, Rising Wings
Duncan McCormack II, Yolo Ranch
Duncan McCormack III, Yolo Ranch
John Mohr, Mound Farms
Selby Mohr, M.D., Mound Farms
David Morrison, Yolo County Planning Department
Dennis Murphy, Murphy Farms
Jack Palmer, H Pond Ranch
Steve Patek, City of West Sacramento
Patricia Perkins, DFG
Tom Scheeler, Port of Sacramento
Greg Schmid, Los Rios Farms

Mitch Sears, City of Davis
Ted Sommer, DWR
Ron Tadlock, Ron Tadlock Farms
Ray Thompson, Sky Rakers Club
Ed Towne, Bull Sprig Outing Duck Club
Will Wylie, H Pond Ranch
Gus Yates, Consulting Hydrologist
Robin Kulakow, Yolo Basin Foundation
Dave Ceppos, Jones & Stokes
Susan Imboden, Jones & Stokes
Mike Rushton, Jones & Stokes
Luke Rutten, Jones & Stokes
Jennifer Stock, Jones & Stokes

NEXT MEETING: The September 15, 2000 meeting has been POSTPONED. Chapter-specific meetings, regarding the Management Strategy, will be conducted between mid-September and mid-October, instead. A Working Group meeting focused on modeling issues will be held in mid-October.

ACTION ITEMS

1. Dave Ceppos will find out the specifics of what the City of Woodland Tule Canal/Toe Drain project intends to accomplish and the level and role of Jones & Stokes' involvement in this project.

DECISIONS MADE

1. Chapter-specific committees were established to review the Management Strategy document and are as follows:
Chapter 1: John Currey and Mike Hardesty
Chapter 2: Regina Chervovsky, Mike Egan, Mike Hardesty, Ken Martin, and Duncan McCormack III
Chapter 3: Chris Fulster, Mike Hardesty, Greg Kassis, Bob Leonard, and Ron Tadlock

Chapter 4: Bob Dorian, Dave Feliz, Chris Fulster, Mike Hardesty, Dennis Murphy, and Ray Thompson. *Auxiliary Reviewers:* Walt Cheechov and/or Phil Hogan, USDA NRCS, and Mark Hennelly, CWA

Chapter 5: Mike Hardesty

Chapter 6 & 7: To be determined at a later date

2. The following handouts will be made available to Working Group members at their request:
 - # Yolo Bypass Management Strategy, Revision 2, (dated August 17, 2000),
 - # Goin' to See the Delta Ecosystem Restoration, published by USACE,
 - # Safe Harbor: Helping Landowners Help Endangered Species, published by Environmental Defense, and Yolo Bypass Management Strategy (Revision 2) and related Figures

To obtain a copy of these documents, contact Jennifer Stock of Jones & Stokes at 916-739-3086.

SUMMARY OF MEETING

Introduction

Mr. Ceppos began the meeting by welcoming the group. He reviewed the agenda and asked for changes or additions; there were none. He also asked for changes or additions to the June 29, 2000 meeting minutes; there were none. The June meeting minutes were then adopted as final.

Mr. Ceppos asked the attendees to introduce themselves. He then told the Working Group about a project he is working on with the U.S. Army Corps of Engineers (USACE). Mr. Ceppos will be handling the public involvement portion of the project, which will look at options to raise the Folsom Dam to increase flood storage capacity. Through this project, additional studies will be conducted to determine the potential need for levee upgrades and expansion (widening) of the Sacramento Weir. There will be three public meetings, beginning in September, that will take place in Folsom, Woodland, and Sacramento. The governing agencies that are involved in this project are USACE, Sacramento Area Flood Control Agency (SAFCA), and the State of California (DWR and California State Reclamation Board). Mr. Ceppos would like to transfer the names of the Stakeholders to this project's database, so the members of the Working Group will be informed of the meetings. He asked Stakeholders who do not wish to have their names transferred to let him know.

Mr. Ceppos then introduced Gus Yates, hydrologist, and Luke Rutten, geomorphologist, from Jones & Stokes, to present the results of their field interviews and give a final report on hydrology for Putah and Cache Creeks and Knights Landing Ridge Cut.

Hydrologic Update

Mr. Rutten began by explaining that the purpose of the field interviews was to gather information that could be used to identify opportunities and constraints for habitat enhancement in the Bypass. Stakeholders in the Northern and Southern Bypass were interviewed about current cropping and land use patterns, effects of flooding, infrastructure, and the use of government hydrology data. He stated that if any of the information had been misrepresented, he welcomes clarification.

The main crops in the Northern Bypass, north of Interstate 80 (I-80), are rice, corn, tomatoes, melons, and safflower. In the Southern Bypass, south of I-80, rice does not produce well because of lower temperatures caused by the delta breezes. Wild rice can be grown in lower temperatures and does do well in the Southern Bypass, but it has a limited market. There has been a decline in tomato production in recent years as a result of repeated wet years and crop destruction by late spring flooding.

Soils in the Northern Bypass are high quality and very productive; however, the west side soils have a higher clay content that makes it less productive. These higher clay areas may be a result of historic flood patterns in the Bypass. There is no significant evidence that flooding has affected soil quality, except by leveling the land and from limited erosion around infrastructure elements in the landscape. In the Southern Bypass, soils to the north are more conducive to farming, especially in the vicinity of Putah Creek, where there are better quality soils and higher elevations of sediment deposited by the creek.

Irrigation systems in the Northern Bypass are fed by Willow Slough, the Knights Landing Ridge Cut, Cache Creek, Sacramento River, and Tule Canal. The Knights Landing Ridge Cut has a small check dam that aids in moving the water north and south. There is a small, fallow floodway (approximately 100 feet wide) that directs nuisance spring flood waters towards the Tule Canal. A pump in the east supplies water to the Tule Canal when the Knights Landing Ridge Cut water elevation is too low. Cache Creek water flows through the settling basin and exits a pipe in the southeast end of the basin. From there, a screw gate can divert water into the Conaway Canal or into the Woodland Settling Ponds, which drain into the Tule Canal. Water is also pumped from the Sacramento River to the Conaway Canal. In the bottom of the North Bypass, irrigation water is tailwater that comes from the Conaway Canal and Tule Canal/Toe Drain with minimal pumping. In the Toe Drain in the Southern Bypass, the Lisbon Weir lets tidal waters enter and leave the Bypass, while keeping levels high enough to pump for irrigation. Putah Creek has a dam and provides a limited amount of water for irrigation.

Flooding has similar effects in both the North and South Bypass. Damage to infrastructure (electrical boxes, pumps, pipes, and buildings), eroded roads, sedimentation of canals (mainly canals that are oriented to the east and west, which are perpendicular to flows), and littering of fields (trees, irrigation pipes, corn stalks) are all common effects of flooding in the Bypass.

Mr. Rutten continued his discussion by explaining that climate and hydrological data from the Department of Water Resources on the Knights Landing Ridge Cut, Clear Lake, and the Fremont Weir have been used to a limited extent to predict flooding. If annual rainfall totals are near or above average levels, flooding is expected. Even when flooding is likely to occur, some farmers feel they have to take a gamble, plant their fields, and hope the crops aren't damaged. In general, there is a feeling that upstream dams are now used more for water supply than for flood control, resulting in more late spring flooding.

Mr. Rutten said that duck club hunters in the Bypass hunt the land from October to January and grow rice or manage the land for waterfowl habitat in the summer. They try to control weed vegetation by mowing, disking, burning, and flooding, and through the limited use of pesticides. Some duck club land is in the USDA NRCS Water Bank and State DFG Presley Programs, which pay club operators to keep the land flooded after the hunting season to provide spring brooding habitat until approximately mid-July. The Tule Canal supplies water for these fields. With the exception of late spring flood damage to crops, duck club lands experience the same flood impacts as do farms.

Mr. Rutten opened the floor for comments and input. There were none. He concluded by thanking those interviewees who were present for their time and help. The write-up for these interviews is included in Revision 2 of the Management Strategy.

Mr. Yates' discussion focused on flood flows, sources, timing, and frequency for the six major inflows to the Bypass: Fremont Weir, Sacramento Weir, Cache Creek, Putah Creek, the Knights Landing Ridge Cut, and Willow Slough. Mr. Yates presented several large graphs showing time span in months and years (beginning in ~~1935~~ 1968) and flows (from the previous six inflow sources) in cubic feet per second (cfs). He told the Working Group that data covering more than 30 years exist for these sources; however, some records had significant gaps for which information had to be estimated.

He explained that the graphs show that **Fremont Weir spills, which coincide with Sacramento Weir spills, contribute the largest inflow to the Bypass.** ~~Sacramento Weir spills are dependant upon Fremont Weir spills.~~ Cache Creek and **Knights Landing Ridge Cut** (which picks up **Coast Range runoff** south of Stoney Creek) contribute most of the **remaining** flows into the Bypass. Cache Creek and the Knights Landing Ridge Cut (which picks up water south of Stoney Creek) contribute most of the flows into the Bypass. Spills over the Fremont Weir correlate with flows in the Knights Landing Ridge Cut and tributary flooding. ~~Even when no spilling occurs over the weirs~~ **Major inflows from local tributaries generally coincide with (and are dwarfed by) spills over the Fremont and Sacramento Weirs. However, tributary inflows in dry years (without weir spills) can generate flow peaks of flood events ranging from 2,000-5,000cfs have registered at the I-5 and Lisbon Weir gages. due to Cache Creek and Ridge Cut inflows.**

Mr. Yates continued by saying that, in the absence of weir spills, 1,000-5,000 cfs flows are not likely to cause out-of-bank flooding **along the Tule Canal or Toe Drain.** ~~where Putah and Cache Creek tributaries flow into irrigation canals in the Bypass.~~ There is a chance, however, that some flooding could occur **along** in some of the canals **that convey tributary inflows across the Bypass to**

the Tule Canal/Toe Drain. Mr. Yates expressed to the Working Group that if any member has experienced this, he would like to know.

He stated that there have been no major changes to the Folsom Dam since the 1980s and that changes in the operation of Shasta and Oroville Dams do not seem to point to any change in timing, frequency, or duration in weir spills. The last 15 years have included six of the driest years and six of the wettest years in recorded California history. Respectively, this has resulted in associated extremely dry years and prolonged flood flows in the Bypass.

Mr. Thompson asked if deepening the Toe Drain would help shorten the flood period.

Mr. Yates answered that the Toe Drain is so small in comparison to the overall conveyance capacity area of the Bypass that deepening the channel would have little effect.

Ms. Kulakow asked if higher elevations of the Bypass levees cause floods to last longer.

Mr. Yates responded that he's not sure. The duration of peak flows is affected by factors upstream of the Bypass. Improvements to levees increase water surface elevation, but he does not know the duration of the increased elevation.

Mr. Martin questioned whether more water enclosed in the Bypass would increase velocities. He also wondered how increased velocities would affect infrastructure.

Mr. Yates said that if peak flows and stages increase, there would be an increase in velocity. He did not think this increase would present a large problem. He asked if any of the Stakeholders had experienced problems with flood damage to infrastructure that he is not aware of.

Several Working Group members expressed that scouring occurs near the bank of the Toe Drain.

Mr. Yates was not aware of this, but said that modeling could help predict how these trouble spots would be affected.

Mr. Leonard commented that some areas have eroded so much that a tractor could be lost. He added that it seems that floods are now lasting for months, instead of a couple of weeks.

Mr. Morrison stated that most pumps at design depth get flooded. He then asked if there would be a breakout of specific river inflows shown in the models.

Mr. Yates answered that models calculate water surface elevation for a specified set of inflows. Inflows from the two weirs and the four west side tributaries would be represented individually in the flood hydraulics model, but the sources of water arriving at each of the weirs would not be itemized. identified? from contributing flows and that they take into account what happens upstream but not necessarily breaking the data out by source.

Mr. Ceppos said that the dams (Shasta, Oroville, and Folsom) were built with only 30 years of data and were considered to provide 100-year protection at the time of construction. The 1986 and 1997 floods, however, were very large, expanded the body of regional hydrologic data, and were determined to be 70-year events.

Mr. Ceppos said that Mr. Rutten will conduct a few more interviews and asked that any Stakeholder with an erosion problem area let either him or Mr. Rutten know. He then introduced Tom Scheeler, Director of Engineering of the Port of Sacramento to speak about the Port of Sacramento Ship Channel.

Ship Channel

Mr. Scheeler gave a brief history of the Ship Channel that began with the project's authorization by Congress in 1947. Construction by the USACE began in 1949 and was halted during the Korean War. Construction resumed in 1956 and the channel was completed and began operations in 1963. The State Flood Control Project (FCP) levee is located on the east side of the Ship Channel. The Bypass levee (separating the Bypass from the Ship Channel) is located on the west side of the channel, approximately 600-700 feet west of the FCP levee. In 1988, dredging began to deepen the channel by 5 feet. This work continues, to date.

Mr. Scheeler told the Working Group about USACE's proposed bike trail. The bike trail's purpose would be to bring people into anticipated and existing habitat restoration areas in the Delta. There was also a concept to ferry bikers back and forth across the Ship Channel somewhere downstream of the Port, but the safety issues and logistics of such a concept quickly squelched the idea. Many landowners in the Bypass and west of the Ship Channel are opposed to the bike trail, even though it would be on USACE's levees, because their private lands lie directly adjacent to the levees. There are still issues that need to be addressed regarding design constraints and landowner concerns. The project has not received funding from CALFED or from any other source and, USACE is still seeking some financial means to support the data.

Mr. Ceppos called the Working Group's attention to a marketing booklet that was published by USACE called *Goin' to See: The Delta Ecosystem Restoration*. He explained that the booklet gives a brief overview of the bike trail project and that it acts as a tool not only to promote public understanding and support, but to attract potential investors in the project.

Mr. Jones asked if it was the bicyclists who came up with the idea for the bike trail.

Mr. Scheeler answered that no it wasn't the bicyclists but USACE who proposed the bike trail project.

Mr. Ceppos added that it is part of USACE's mission to provide recreational opportunities in conjunction with its other responsibilities for flood control navigation and ecosystem restoration projects.

Mr. Scheeler said that the bike trail was originally envisioned by the USACE as a CALFED project, to provide public access to natural areas. Since they couldn't get funding from CALFED, the plan is to iron out some rough spots and continue searching for funding for the project.

Mr. Scheeler spoke about the Ship Channel levee, stating that, for the long-term, the Port of Sacramento is looking at areas in which to dispose of dredging material from the Ship Channel. The focus of this investigation is to see how the disposal site can potentially be used for habitat creation and/or mitigation banking.

Mr. Ceppos stated that several Working Group members have asked in the past if there is some way to divert water from the Sacramento River into the Ship Channel to create an alternate flow corridor.

Mr. Scheeler responded that, in theory, they could accomplish this diversion. However, there would be two adverse affects: One affect would be the creation of siltation and deposition in the channel. (There is currently no flow in the channel.) This would result in unknown deposition sites or sandbars that could potentially ground ships. Timely removal of the sandbars is unlikely, since it would require a contract (to do the work) to be secured through the governmental contractual bidding process. This process is too lengthy to fit with the scheme of Ship Channel operating schedules. The second adverse affect is that the flows themselves would hinder shipping operations. The skippers of the ships use the tides to time their arrivals and departures. Ships catch the tides at Rio Vista so that they are floated over sandbars, avoiding grounding. Added flows would disrupt this balance that presently exists in the channel.

Mr. Yates stated that using the Ship Channel as an alternative means of flood flow delivery might only happen once every 50 years and would therefore likely not be worth the cost.

Mr. Leonard asked what lands the Port of Sacramento owns.

Mr. Scheeler answered that they own the shipping channel. USACE constructed the channel and the levees and is still required to maintain them.

Mr. Yates asked if there were any hydrologic and hydraulic studies done on potential impacts to the Bypass before the Ship Channel was built.

Mr. Scheeler said that he didn't know of any studies, but could point Mr. Yates in the direction of finding out if any exist.

Mr. Sommer asked if there is a reason for the Bypass levee.

Mr. Scheeler responded that its purpose is to keep flood waters out of the Port and West Sacramento.

Mr. Jones asked Mr. McCormack if he recalled any flooding in West Sacramento before the channel was built.

Mr. McCormack answered that he didn't remember there being any flooding.

Mr. Scheeler recounted that in his 20 years with the Port, the 1986 flood water level was the highest he'd ever seen in the port. He said tidal influences were absorbed by the flood waters, and had there been another 6 inches of water, it would have overflowed the dock and flooded the storage warehouses located 63 feet away.

Mr. Leonard humored that if any changes are made to the Bypass, the port is in the same boat as the Stakeholders, it would seem.

Mr. Harvey asked what the tidal fluctuation ranges are at the docks.

Mr. Scheeler replied that there is a 5–7 foot fluctuation between tides, depending on the season.

Mr. Jones inquired about how often the Ship Channel has to be dredged.

Mr. Scheeler responded that the Port dredges on a 7–10 year cycle, but now that ships are getting bigger this may change. He ended his discussion with the interesting fact that the longest ship that has ever come into the port was 746 feet long.

Management Strategy

Mr. Ceppos began by stressing to all attendees that the document being handed out (Revision 2) is only a draft and should not be publically quoted or referenced.

He suggested that the Working Group should create chapter-specific subcommittees to review the draft document and provide their input. Future drafts will be sent out for the individuals' review and then the subcommittees will meet, independent of the entire Working Group, to discuss any concerns or suggestions.

Mr. Martin asked what the time frame is for completion of the document.

Mr. Ceppos answered that he would like to see the document finished by the end of November or the beginning of December. He then asked for volunteers to review specific chapters of the document. See Decisions Made (above) for a list of chapter reviewers.

City of Woodland Study

Mr. Scheeler inquired about a study that Jones & Stokes is involved in regarding the Tule Canal/Toe Drain. He said that, according to his understanding, the study is looking at the Tule Canal/Toe Drain as a conduit for the City of Woodland, to deliver water discharges from its wastewater treatment facility. He thinks Jones & Stokes employees have been working with graduate students to conduct interviews with recreational users of the Tule Canal/Toe Drain for that study.

Mr. Ceppos stated that he had just found out about this project, unfortunately. He said he would make it an Action Item to find out more about the project and relate it back to the Working Group.

Mr. Murphy added that he believed the purpose of the project is to find out what is going on in the Tule Canal/Toe Drain to determine how to treat water that is going to be discharged.

Conclusion

Mr. Hennelly informed the group that CWA is involved in a task force created by Congressman Doug Ose's office to address issues regarding the proposed North Delta National Wildlife Refuge. The first meeting was to be held Monday, August 21, and the contact person for this task force is Deputy District Director for Congressman Ose, Julie Lillywhite. Ms. Lillywhite can be reached at (530)669-3540.

Mr. Ceppos told the group this task force had recently been formed and indicated that his understanding was that the USFWS Refuge staff had not been asked to participate thus far. He asked Mr. Harvey if this was correct.

Mr. Harvey confirmed that he had not been informed of, or been invited to participate in, this meeting.

Mr. Ceppos said that one of the next steps for the Working Group is to increase everyone's understanding of modeling. He stated that future meetings will be focused on modeling issues. He continued that YBF and Jones & Stokes will continue their efforts on the Management Strategy report.

The meeting was adjourned.

****REMINDER****

If you would like a copy of the following handouts, contact Jennifer Stock of Jones & Stokes at 916-739-3086:

- # Yolo Bypass Management Strategy, Revision 2, (dated August 17, 2000),
- # Goin' to See: The Delta Ecosystem Restoration, published by USACE,
- # Safe Harbor: Helping Landowners Help Endangered Species”, published by Environmental Defense, and
- # Yolo Bypass Management Strategy (Revision 2) and related Figures