

**YOLO BYPASS MANAGEMENT STRATEGY
STAKEHOLDERS WORKING GROUP MEETING NO. 10**

***DRAFT*
MEETING MINUTES**

MEETING DATE: October 12, 2000

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

IN ATTENDANCE: Margit Aramburu, Delta Protection Commission
Steve Bradley, State of California Recreation Board (Reclamation Board)
Walt Cheechov, U.S. Department of Agriculture National Resources
Conservation Service (NRCS)
Regina Cherovsky, Conaway Ranch
John S. Currey, Vaughn Ranch and Mound Farms
Bob Dorian, H Pond Ranch
Chuck Dudley, Heidrick Farms
Mike Egan, Yolo Flyway
Dave Feliz, California Department of Fish and Game
Chris Fulster, Jr., Glide-In Ranch
Richard Hadley, U.S. Fish and Wildlife Service
Dennis Kilkenny, Dawson's Duck Club
Robin Kulakow, Yolo Basin Foundation
Wayne Little, Dawson's Duck Club
Julie MacDonald, landowner
Ken Martin
Rick Martinez, Martinez Bros. Farms
Duncan McCormack II, Yolo Ranch
Duncan McCormack III, Yolo Ranch
John Mohr, Mound Farms
Selby Mohr, Mound Farms
Scott Morgan, William Morgan Realty
Dennis Murphy
Loren Murray, Northwest Hydraulics Consultants
Sally Negroni, NRCS
Caroline Quinn, City of West Sacramento
Mitch Sears, City of Davis
Greg Schmidt, Los Rios Farms

Meg Stallard, Yolo Basin Foundation Board
Ron Tadlock, Tadlock Farm
Ed Towne, Bull Sprig Outing
Jim Waller, Senator Duck Club
Will Wylie, H Pond Ranch
Dave Ceppos, Jones & Stokes
Kyle Keer, Jones & Stokes
Susan Imboden, Jones & Stokes
Gus Yates, Consulting Hydrologist

NEXT MEETING: The next meeting of the Working Group will be held November 16, 2000, at 10:30 a.m. at the Yolo Wildlife Area Headquarters. The meeting will focus exclusively on the draft Management Strategy document.

ACTION ITEMS

1. Contact Butch Hogkins of the Sacramento Area Flood Control Agency (SAFCA) and request that he speak at a future meeting regarding proposed changes to the Sacramento Weir and Yolo Bypass levees.
2. Provide Ms. McDonald and all Working Group members with the California Water Code citation regarding levee heights and freeboard requirements (see below).

California Code of Regulations, Title 23 Water Code, Division 1, Chapter 1, Article 8, Section 120.

SUMMARY OF MEETING

Introduction

Mr. Ceppos called the meeting to order and reminded the group that the purpose of the stakeholder meetings is to continue work on the development of a stakeholder-based vision of the future of the Bypass and to provide a forum for education on a range of issues pertaining to the Bypass. The focus of this meeting was to learn about hydraulic modeling issues in the Bypass. These issues are of great importance in the management of the state and federal Flood Control Project (FCP) and the long-range economics and land use options in the Bypass.

Mr. Ceppos asked for changes to the minutes of the last meeting; there were none. The minutes were accepted into the project administrative record as final. He also announced that educational brochures on Safe Harbor Agreement issues were procured for the Working Group from the National Cattlemen's Association and Environmental Defense Inc., and that the brochures were available at the meeting or from Jones & Stokes and the Yolo Basin Foundation.

Modeling Workshop

The first speaker was Gus Yates, who is working with Jones & Stokes to assess hydrologic conditions in the Bypass. Mr. Yates stated that he would introduce the concepts of hydraulics (such as simulation of water flow, the role of levees, etc.) and some basic terminology that would allow all present to participate in conversations on this topic and ask informed questions in the future.

Mr. Yates presented a map (Attachment A) of the Sacramento Valley Flood Control System to show how the Yolo Bypass fits into that system. Attachment A shows the network of rivers and existing flood bypasses in the northern California watershed. The flood bypasses are separate from the rivers but mimic historic natural flood basins within the Sacramento Valley. Attachment B shows the approximate extent of the historic drainage basins. Mr. Yates pointed out that, to understand the relationship of the Yolo Bypass to the downstream portion of the Sacramento River FCP, one must compare the conveyance capacity of the Bypass with that of the Sacramento River downstream of the Fremont Weir. The river conveys 110,000 cubic feet per second (cfs), whereas the Basin conveys 500,000 cfs.

Mr. Schmidt asked whether information is available regarding changes over time of these carrying capacities.

Mr. Yates stated that there hasn't been much change over the last 20 years. But, because of mining deposits in the Feather and Yuba Rivers, there are still materials moving through the lower Sacramento River system.

Mr. Schmidt inquired whether dredging the Sacramento River has increased its capacity.

Mr. Yates replied that most of the dredging has been done in the Port of Sacramento Ship Channel.

Mr. Fulster added that some entity used to be responsible for dredging sediment out of the Sacramento River all the way up to the city of Sacramento. He further stated that he has heard from his customers that sloughs and channels in the north Delta are getting more and more sediment deposited in them, minimizing the water-carrying capacity of these features.

Mr. Ceppos pointed out that this issue has been raised several times by members of the Working Group, and that Chapter 3 (Assurances Section) of the Management Strategy identifies this issue.

Ms. MacDonald stated that the question about the capacity of the Sacramento River is significant because the capacity is presently smaller than originally designed.

Mr. Yates stated that it is not necessarily that the capacity of the Sacramento River has been greatly reduced but rather that the flood-control features along the river have been recalculated, and it was determined that they provide less protection than was originally believed. He further explained that this is largely because there was very little hydrologic data on storm event size and subsequent flows when the FCP was built. In recent years, the region has had two very large storm events (1986 and 1997) that have required recalculation of the level of flood protection provided by the Sacramento River FCP.

Ms. Aramburu asked if the group can get a report on the U.S. Army Corps of Engineers (Corps) Sacramento-San Joaquin Rivers Comprehensive Study (Comprehensive Study) . She also pointed out that the Corps is not looking at the Delta as a whole, but the agency is including the Bypass in its study.

Mr. Ceppos stated that the Comprehensive Study has been discussed at previous meetings; the Corps has not completed any of its planning tasks yet, and the large-scale modeling for the study has been completed just recently.

Mr. Murray added that one reason the Corps is doing the study is because it believes the actual design capacity of the FCP may not coincide with the original FCP design. The capacity of the system has changed and this change needs to be quantified to resolve this issue.

A general question was asked as to whether the flow rates shown on Attachment A represent a 100-year event.

Mr. Yates stated that the map shows the design capacity, which was based on a 100-year flood event. The 1986–1987 flood brought the Bypass above design capacity. That even was a 70-year flood event. He noted that this was the condition he spoke of when answering Ms. MacDonald’s previous question.

Mr. Yates explained that the two flood-control weirs in the Bypass function in different ways. The Fremont Weir is a concrete grade control structure that is not operated in any way. When water reaches a certain height in the Sacramento River, the water spills over the weir. The Sacramento Weir operates differently; it has large gates that can be opened, but there is no adjustment. Once the gates are open, they stay open until water surface elevations in the river drop.

Ms. Aramburu asked for the elevation of the Fremont Weir; Mr. Yates responded that it is 33.5 feet.

Mr. Yates continued his presentation by explaining that the terms “hydraulics” and “hydrology” mean different things. “Hydrology” refers to the amount of flow from rainfall and runoff (in cfs). “Hydraulics” refers to the depth and speed of flow. There is a hydraulic difference in wet and dry seasons. Mr. Yates presented Attachment C and explained that the Lisbon Gage (just

below the Putah Creek outflow at the “dogleg” of the Bypass, south of I-80) hourly gage data show a little creek during the dry season largely affected by daily tidal fluctuations (Toe Drain) that flows into the Delta. In the wet season, the whole Bypass becomes a river. As storm events occur, all tidal influences get pushed downstream. These situations require different hydraulic modeling tools to assess conditions.

Ms. Aramburu asked what volume of floodflows is required to dampen tidal influence.

Mr. Yates replied that Attachment C depicts stages, not volume or cfs. However, as the Toe Drain fills, tidal effects to stage height within the Toe Drain seem to be eliminated.

Mr. Towne indicated that the water stopped flowing once in the Bypass when the rivers were at flood stage and a high tide occurred. This effect occurred as far up as the Lisbon Gage. Several participants then asked how well the Bypass has performed at flood stage.

Mr. Yates agreed that high storms and lunar tides can create this effect. With regard to the question of how well the Bypass has done, he noted that during the last two major floods (1986 and 1997), it functioned at or above its original design capacity. Attachment D shows a longitudinal profile of the levee crown and water surface profiles representing the 1986 and 1997 floods and how the water surface encroached into the design freeboard for the Bypass.

Ms. Aramburu asked how many feet above design freeboard the water encroached.

Mr. Yates responded that water surfaces encroached into freeboard by 2–3 feet.

Mr. Ceppos pointed out that the California State Code of Regulations (Title 23 for water issues) states that, in flood bypasses and upstream and downstream of bridges, there must be 6 feet of freeboard.

Ms. Aramburu commented that this isn't the case for agricultural levees.

Mr. Yates went on to explain that the levee built at the ship channel (navigational levee, east levee of the Bypass, south of I-80) is not a federal flood-control levee and was not built to these standards. However, this levee is actually higher than the original FCP levee located east of the ship channel and south of the Port of Sacramento.

Mr. Hadley asked if the high-water mark shown on Attachment D was taken on the FCP levee or along the ship channel levee. He further asked if there was enough freeboard along the levee shown. Lastly, he asked what the date range of the high-water marks was and if anyone has reviewed other historical data to investigate changes.

Mr. Yates stated that he is fairly certain that the longitudinal levee profile is based on the original FCP levee design and that the 1986 and 1997 high-water marks were taken from the Bypass side of the west ship channel levee but were charted on information from the original FCP levee

design. He further stated that it is estimated that 10–15% of the conveyance capacity at the south end of the Bypass was removed by the construction of the navigational ship channel levee.

Mr. Yates continued his presentation about hydraulic models. He presented Attachment E and explained that models represent how water moves and relate that movement to depth, velocity, friction, and the overall geometry of the feature being studied. Geometry is often a measure of a cross-sectional area of a feature. In the Bypass, cross-sectional areas are defined by the width and depth of the Bypass. During floodflows in the Bypass, decreased cross-sectional areas can result in increased flow depth. If there are objects within a channel causing resistance, increased flow resistance will also result in increased flow depth. Resistance factors are referred to as “roughness”. In the Bypass, resistance factors can include trees, shrubs, agricultural crops, small internal levees, railroad and highway embankments, and other features that can be resistant to flows. Hydraulic models show the relationships of these resistance factors to flows. Some commonly used models are mathematical models. Mr. Yates pointed out that, by contrast, the San Francisco Bay Model operated by the Corps near Sausalito, California, is an example of a physical model in which a very small replica of the Bay has been built to physically simulate flow conditions in San Francisco Bay.

A mathematical model contains the factors shown in Attachment E. Mathematical models use channel geometry to describe surface water topography. Flow is assumed, and roughness is judged based on conditions and known/investigated parameters. A historical event with known flow data is chosen for a simulation that is used to calibrate the model. Modelers use the known information from the historical event to see if the model will match the exact water surface profile from that event. If the model doesn’t replicate the historic data, roughness coefficients and other variables may be adjusted to ensure a match. This process is called calibration. The calibrated model provides a tool to simulate “what ifs”, such as planting a riparian forest or moving a levee.

Mr. Yates presented examples of roughness coefficient values (Attachment F) assigned to different types of vegetation. He pointed out the subjectivity in some of the values. Some of the factors requiring subjective judgment are open water, tule marsh, grassland, seasonal wetland, riparian vegetation, and dense riparian vegetation. A modeler must use judgment with all of these.

Ms. MacDonald asked whether a higher roughness coefficient means more resistance to flow.

Mr. Yates stated that it does; however, the depth of flow also plays an important role in measuring the resistance. For example, a 4-foot shrub barely flooded by water provides a lot more resistance to that water than if that same shrub is flooded under 20 feet of water.

Mr. Schmidt asked whether tidal changes are factored into the coefficient.

Mr. Yates said that it depends on the question you’re trying to answer; it is common to assume a worst-case scenario, such as high lunar tide/high flood stage conditions, when developing a model.

Mr. Ceppos pointed out that in preparing for this presentation, the consultant/presentation team was aware of the inherent flaws in modeling; the team considered whether to point them out.

The group of presenters and project management staff unanimously agreed that it is important for stakeholders to know that there are inherent inconsistencies and subjectivity involved in creating models.

Mr. Egan stated that, when the FCP was designed, the Bypass was covered by tule marsh. Mr. Egan wondered if this fact is taken into consideration in present-day modeling and assessment of Bypass capacity.

Mr. Yates was uncertain whether such conditions have been considered.

Mr. Ceppos stated that the project team and other teams that have worked previously on Bypass issues have never been able to find the historic engineering records regarding the roughness coefficients used to design the Bypass.

Several participants pointed out that changes, such as narrowing the Bypass could cause changes in flood capacity. They further wondered whether the original flood-control easements contracted by the state were affected by these changes.

Mr. Ceppos answered that Jones & Stokes is in the process of doing easement research. The results of this research will be discussed at a later date and will be included in the Management Strategy document.

Mr. Yates continued his discussion of modeling: when constructing a longitudinal profile of the Bypass, if one increases the roughness coefficient, the water depth will increase.

Ms. Aramburu asked if upstream elevation will increase but downstream elevation won't.

Mr. Yates answered that most resistance (and subsequent increased water surface elevations) does happen upstream; however, sometimes downstream effects are seen also.

Next, Mr. Murray, hydraulic engineer with Northwest Hydraulic Consultants, provided information about the different types of hydraulic models.

Mr. Murray began with a discussion of the different kind of hydraulic models used to model floodflow. He noted that the decision of which type to use is based on several factors (Attachment G). Modelers look at existing conditions and ask how deep the water will get if a change, such as planting trees, is made. The degree of analysis is also defined by the cost.

Mr. Murray introduced three types of model analyses: steady versus unsteady, 1- versus 2-dimensional, and high- versus low-flow conditions (Attachments H and I).

A steady-flow model provides a snapshot of a water surface profile, velocity, and depth, and is independent of time. An example of this type of model is the river shown in Attachment J. An unsteady-flow model reflects change over time, such as tidal change and inflows from multiple tributaries (Attachment K). This type of model reflects water surface, depth, velocity, water storage

capacity, and changes over time. Modelers ask: how do the characteristics of water flow change over time at discreet locations? The time relationship is key to this type of model.

A 1-dimensional model indicates flows that are parallel to the main channel direction, e.g., the north-to-south Bypass flow (Attachment L). A 2-dimensional model provides much more specificity. For example, it reflects changing flow patterns (e.g., flow splits around obstacles such as tree plantings). A 2-dimensional model also provides information on turbulence at the confluence of two flows and indicates how much flow goes in each direction around obstacles (Attachment M). The names of some of the different 1- and 2-dimensional models used are shown on Attachment N. A 3-dimensional model is extremely complex and unstable.

A high-flow model addresses flood-related issues of interest to everyone (Attachment O), such as the integrity and capacity of a flood conveyance facility at flood stage. A low-flow model is localized for a specific issue, such as restoration or a specific land use change.

Mr. Feliz asked for an example of when a low-flow model would be used.

Mr. Murray responded that, when building a road or channel or changing crop types, rerouted flows could impact a neighbor's property. He added that separate modeling tools are constructed depending on conditions.

Mr. Martinez gave an example of a model prepared for the Dixon Resource Conservation District. He indicated that conditions that seemed acceptable during high flows actually seemed more questionable when low-flow conditions were assessed.

Mr. Ceppos stated that the Working Group should have the ability to assess site-specific hydraulic impacts because questions being addressed by the Corps' Comprehensive Study are capturing multiwatershed issues. These macrolevel analyses are being modeled using a 1-dimensional model on 1,000-foot cross sections throughout the entire Sacramento and San Joaquin River valleys (excluding the Delta, as pointed out by Ms. Aramburu). This work by the Corps does not assess microscale conditions that could occur if individual landowners wanted to change their land uses. Mr. Ceppos said that the request to conduct this type of assessment was a key component of the CALFED proposal that the Working Group prepared last Spring.

Mr. Murray added that the cumulative results of many land use changes may have an effect, whereas a localized change would not. The flood-control system is always changing. Conditions (e.g., flow, geometry, land use) need to be reassessed, as do the modeling parameters. Part of a modeling scheme is understanding how the model is being used and how valid its information will be in years to come.

A participant asked what the procedure is for obtaining accurate cross sections.

Mr. Ceppos answered that the Corps conducted aerial studies in 1998 to develop digital terrain data that was used to create topographic maps at 1- to 2-foot intervals throughout much of the Sacramento and San Joaquin River valleys (excluding the Delta). This data was then supported

by bathymetric data on the geometry of the rivers. Recently, the Foundation has learned that, in the Bypass, the Corps did not create full topographic data, but rather only developed topographic information at the location of the cross sections (approximately every 1,000 feet down the Bypass). Mr. Ceppos noted that the Working Group needs alternate means to obtain the topographic data so that the Working Group can make Bypass-level assessments of impacts in the future.

Mr. Murray agreed that the 1,000-foot cross sections approach may not provide an accurate representation of land use changes between cross sections (Attachment P).

Ms. MacDonald asked whether information missed between cross sections would be picked up through calibration for the roughness coefficient.

Mr. Murray responded that, to some degree, such conditions might be observed. It boils down to what question you're asking. He stated that people relying on modeling results have to understand the limitations of the tools being used. A 2-dimensional model calculates information within each box of a grid (Attachments Q and R). The grid is created by the modeler to overlap the area being modeled. Mr. Murray explained that, when constructing a 2-dimensional model, the grid needs to be more detailed in areas that are suspected to have greater flow velocity, direction, and depth changes (e.g., Putah Creek outflow, the Sacramento Weir bypass). He added that 2-dimensional models are always unsteady; some may run as steady, but limitations on results begin to occur.

A participant asked what model was used in assessing the impacts of the Vic Fazio Yolo Basin Wildlife Area.

Mr. Murray responded that the RMA-2, 2-dimensional model was used (Attachments Q and R).

Several Working Group members began to ask related questions, such as whether models are run using known conditions first.

Mr. Murray responded that they are, but that many variables might influence the results; exactly what those variables are might not be known.

Presenting Attachments S and T, Mr. Murray explained that most 2-dimensional models are based on a mesh grid. He described how the model results show how individual cells change with respect to flow, velocity, etc. The vector arrows shown on Attachments S and T reflect changes in direction and velocity. The bigger the vector arrow, the higher the velocity.

A participant asked who sets the size of the mesh grid.

Mr. Murray responded that grid size and variability are set by the modeler; in the case of the RMA-2 model for the Bypass, the grid was created by hydrologists at the Corps many years ago. The model computes a lot of information for each cell in the grid. It also requires a lot of information. Detail is needed in some areas but not required in others. A continuity-type equation

is used. Two-dimensional models require substantially more information than 1-dimensional models; a lack of detail may mean poor output.

Mr. Ceppos noted that the 2-dimensional model for the Bypass has many idiosyncracies in the present grid form. The idiosyncracies provide complications for the model, so it crashes often when provided with too much physical data input. The Corps has indicated that it doesn't have the funding necessary to modify the tool. Mr. Ceppos further stated that he and Ms. Kulakow have been investigating to see who might have funding available to update the RMA-2 model in the near future. The Corps has indicated that it would be amenable to someone else doing such revision work on the model as long as the Corps remains the repository of all the data.

Ms. Kulakow asked whether a 1-dimensional model is less expensive than the 2-dimensional model.

Mr. Murray responded that it is not necessarily less expensive; the cost depends on the level of detail sought. He further explained that "what if" games may be played by changing channel geometry to assess how land use changes might affect localized hydrology.

Mr. Fulster asked if Mr. Murray was suggesting that there should be no tules in the Bypass.

Mr. Murray responded that he was suggesting that land use changes can affect neighbors and that modeling can indicate what those effects might be.

Mr. Martinez asked whether the models are verified by physical examination and whether the Corps has any accountability with regard to its flood-control models.

Mr. Murray said that he didn't know what the Corps' legal obligation is, but that when it turns the model over to a local organization, the Corps walks away free and clear. Ideally, modeling should be done at both high and low flow. Many decisions are made on anecdotal information from landowners, which is figured into the model. Modelers definitely take advantage of this type of information. Changes may be made to adjust the model; if a significant event occurs, modelers will go out and survey again specifically to refine the model.

Ms. MacDonald noted that big flood events were used by the Corps for modeling in the second half of the century and asked if there is a window of non-event. Big flood events occurred in 1955, 1964, 1986, 1992, 1995, and 1997.

Mr. Murray responded that many flood-control facilities were built in the middle of the 20th century. He gave an example: when Folsom Dam was built, 50 years of records were available. Now we have 50 more years of records, so the statistical representations are changing.

Ms. MacDonald pointed out that capacity changes seem to be a result of land use changes also.

A participant asked if sedimentation behind the dams is being accounted for.

Mr. Murray commented that most design studies for the construction of large dams account for the accumulation of sediment, although accumulation may not have been assessed correctly.

Mr. Ceppos announced that more information on modeling will be provided in the future and closed the discussion on modeling.

Management Strategy Update

Mr. Ceppos raised the topic of the Management Strategy document process, noting that it is a little behind schedule. The subcommittee sections are going to be sent out for independent review in the coming weeks. He stated that the subcommittees are set up so that not all Working Group members have to read the entire document; however, they are encouraged to do so if they have the time. Chapter 2 of the document will include easement information (as previously discussed). Mr. Ceppos explained that the research on easements has not been an exhaustive study, but was based on samples from various kinds of easements. He explained that Jones & Stokes staff is looking at how the language changed over time and what the different restrictions are in various geographic locations in the Bypass. Finding this information is a difficult process because it is located in different county and state offices. Instructions will be included in the Management Strategy document to help Working Group members gather more specific information on easement language for their specific properties.

Mr. Ceppos added that none of the easement language that has been examined to date prohibits the state from moving water across the Bypass at any time of the year, and that the state hold several different types of easements regarding flowage, site clearing, mineral removal, and others.

Mr. Fulster asked whether the easements grant a landowner the right to restrict access to his or her property.

Mr. Ceppos responded that the easements allow for only federal, state, or state-contracted personnel to access easement lands and not the general public.

Ms. MacDonald asked who will use the Management Strategy and whether it will dictate what a property owner can and cannot do with his or her property.

Mr. Ceppos explained that the Management Strategy process arose in response to CALFED's intended Ecological Restoration Project Program. That program's document identified goals and visions for the restoration of lands, including Bypass lands. However, the document did not take into account that the lands in the Bypass largely are privately owned and the effects its specified restoration projects or "programmatic actions" could have on those private lands, landowners, and tenants. Mr. Ceppos explained that this issue concerned the Yolo Basin Foundation and that the Foundation sought CALFED funding to provide local stakeholders a voice in identifying a vision for the Bypass.

Generally, the Management Strategy is intended to be a tool to integrate collective Bypass interests into the CALFED decision-making process. Specifically, the Management Strategy will address each CALFED programmatic action regarding the local, real-world effects of such an action on landowners. In other words, the Strategy will let CALFED know, from the voice of local landowners, what actions are feasible and what assurances are needed by landowners to safeguard their interests in the Bypass.

Ms. MacDonald asked if the Management Strategy will be a consensus document.

Mr. Ceppos responded that it would.

Ms. Aramburu noted that there may be other materials that describe the thought processes behind the writing of the easements. She thinks the Working Group should be looking for the original intent of the easements; when they were written, the intention probably wasn't to put people out of business.

Mr. Ceppos stated that he'd like Ms. Aramburu to let him know if she is aware of any documents that discuss the original intent of the easements.

Mr. Ceppos expressed an understanding that the conditions present when these easements were adopted were different than they are now. One of the fundamental questions that has been posed by numerous stakeholders is whether these easements are fair under present conditions.

Mr. Martin asked if the group's responses to the chapters of the Management Strategy could be emailed.

Mr. Ceppos said that they could.

Farming in the Bypass

Mr. Martinez introduced the issue of the present state of farming in the Bypass. He began by stating that farm prices have taken a downward spiral. Hunts and other canning/processing plants have closed down. The sugar beet market has dried up for Northern California. Cargill had a grain shipping facility port, but now rice is being shipped by truck from the Port of Sacramento to Stockton. Also, the Bypass isn't the best place to farm. He asked the group if they feel that this is a long-term situation.

Mr. Fulster said that there is still a lot of money generated from hunting. Farmland can be converted to hunting land.

Mr. Martinez added that the NRCS has proposed various farming incentives for which the agency is trying to obtain funds.

Mr. Cheechov asked if modeling can be used to predict how many times individual areas will be affected by flooding.

Mr. Yates responded that it could, but not easily. Two issues affect this analysis: when water spills over weirs, everything floods. When the creeks flow, it's not such a major event. A combination of tools may be used to assess these situations.

Mr. Martinez stated that he attended the recent Corps/Department of Water Resources/SAFCA public workshop regarding the American River emergency releases from Folsom Dam. One proposal is to raise Bypass levees. Mr. Martinez asked the Corps engineers how high the Bypass levees will have to be raised; they told him they would be raised 6 inches. Mr. Martinez stated that more flooding in the lower-lying areas could occur and reiterated that whatever is done at Folsom Dam will affect landowners in the Bypass.

Mr. Martin stated that the meetings regarding the Folsom project were too close together for some people, so if you were out of town you missed both meetings.

A participant commented that SAFCA representatives should know what impacts occur in the Bypass. At the last SAFCA meeting he attended, the representative did not have any information on those impacts.

An unknown attendee stated that that was because the Sacramento Weir is SAFCA's boundary.

Mr. Thompson suggested that maybe the Working Group should hire a water attorney.

Mr. Martinez responded that he talked to one who said that determining potential flooding impacts in the Bypass would be difficult. Someone would have to determine what a substantial impact is.

Ms. MacDonald suggested it would be worthwhile to ask an attorney what the Working Group's recourse is and whether an environmental study should be done.

Mr. Ceppos pointed out that the project being started by the Corps/Department of Water Resources/SAFCA is that requested study; there will be several opportunities in the future for stakeholders to comment on potential impacts.

Mrs. MacDonald asked what the legal rights for landowners are regarding changing land uses and endangered species. Ms. MacDonald also asked how much the agencies would have to pay for additional easements.

Mr. Ceppos replied that it is difficult for Jones & Stokes to ask a lawyer to come to the Working Group's Management Strategy meetings because there is no lawyer under contract to the project. If the stakeholders wish to speak with an attorney, they should hire one because this type of service has not been contracted.

Mr. Thompson said he thinks Jones & Stokes should hire an attorney to come talk to the group.

Mr. Ceppos replied that there are too many stakeholders with too many different scenarios requiring representation; he isn't sure that such a suggestion is feasible. He stated that perhaps the project management team could identify a state attorney to speak to the group but he asked the group whether they would trust a state attorney to advise them on this issue.

Ms. Aramburu said that someone should ask an attorney about prior litigation.

Ms. MacDonald suggested that two or three attorneys should attend pro bono because it would be a good investment for them.

Mr. Cheechov stated that it would be a waste of time to have attorneys speak to the group because the attorneys couldn't advise the stakeholders on a case-by-case basis.

Mr. Mohr assured the group that Butch Hogkins of SAFCA will be a good person to explain the matter; Mr. Mohr suggested the group have Mr. Hogkins come, then have a panel of attorneys following Mr. Hodgkins' visit.

Mr. Ceppos said that he and Ms. Kulakow will arrange these visits and will have someone give an update on CALFED in the near future.

A participant asked if representatives from the Corps' Comprehensive Study could come and speak.

Mr. Ceppos replied that he will try to get someone to attend. He then asked the group if there were any other comments regarding Mr. Martinez' question about agriculture in the Bypass.

There were no further comments and the meeting was adjourned.