

September 18, 2005

Draft KEY OUTCOMES MEMORANDUM

Merced River Stakeholders Meeting

September 19, 2005

This draft Key Outcomes Memorandum summarizes main discussion points that arose during the meeting, as well as any agreements by the group for action. It will be reviewed for approval by the stakeholders at their meeting on November 21, 2005.

The Stakeholders' meeting was held from 6:00pm-8:00pm at the Merced Tri-College Center in Merced, CA. Approximately 20 stakeholders attended the meeting, including representatives of the public, landowners, agency and special interest groups; the attendance sheet will be attached to the Final Key Outcomes Memorandum and placed on file with East Merced Resource Conservation District, 2135 Wardrobe Ave., Merced, CA.

The Key Outcomes Memoranda from May 16, 2005 meeting was approved.

1. Updates

Merced Irrigation District Update (Ted Selb, Merced Irrigation District)

Funding for the Merced River Hatchery: MID is close to finalizing the agreements for the hatchery.

Merced County Planning Update (Bill Nicholson and Jeff Wilson, Merced County Planning)

Mr. Wilson displayed a map showing existing permitted mining sites, as well as the location of two new applications, Bernard Wade and Michael Bermingham. Black Diamond has also submitted a modification requesting to mine below grade in the perched water table. These are all going through CEQA review and are still in the early stages. No determination has been made at this time.

Mr. Wilson also informed the group that a major subdivision of 30, 1-acre lots, is being planned along Merced Falls road across from Henderson park. This project has undergone environmental review and the initial study is being reviewed by staff.

2. The Bay Delta System & the Merced River's Contribution to It (Elise Holland, Trust for Public Land)

Ms. Holland gave a presentation of the Bay Delta system (see copy of presentation attached to final KOM on file with EMRCD). The presentation provided an overview of the extensive levee system and challenges to its integrity, an outline of inflows and outflows from the delta and the balancing act between urban, agricultural and environmental water used from the delta.

3. Lower Merced River's Watershed Map (Amanda Peisch, DWR)

Ms. Peisch brought two copies of a GIS-based map of the lower Merced River watershed. One copy was circulated to the stakeholders for review and stakeholders were asked to write any comments on the map for revision. No written comments were made. This map is a topographical map that shows the boundaries of the watershed, though Ms. Peisch noted that the lower reaches

of the watershed were difficult to map. Also included on the map are sub-watersheds, canals, ditches, fish passage screens, towns and roads.

The map is intended for use by the Merced River Stakeholders. DWR is reviewing their funding but it appears that they have no more funds to work on the map, nor to post the map on their website. Ted Selb of MID volunteered to post the map on MID's website if DWR was agreeable to that. Ms. Peisch will speak with her supervisor and get back in touch with Gwen Huff.

4. Easement Activities & Opportunities on the Lower Merced River (Erik Vink, Trust for Public Land)

The Trust for Public Land in the Central Valley has a focus of promoting livable communities. They are most interested in conservation easements for farms and ranches, river corridors and recreational and scenic lands. On river systems they seek to protect land in its natural and agricultural state by preventing parcelization and development.

The Trust for Public Land partners with local entities, such as Central Valley Farmland Trust, negotiates directly with landowners and finds the funds to acquire the easements.

5. Announcements

Gwen Huff announced a "Water Quality Testing Refresher" to be held by the Upper Merced Watershed Group on Friday September 30th. Stakeholders from the Lower Merced are encouraged to attend.

Cindy Lashbrook announced an upcoming Landowner Field Day on November 3rd that will highlight best management practices for maintaining good water quality in waterways.

6. Next Meeting

The next meeting of the MRS will be a joint meeting to kick off the Merced River Alliance Project with the Upper Merced Watershed Group, East Merced and Mariposa County RCDs. There will be a dinner, speakers and an opportunity to socialize with our counterparts from the Upper. The meeting will be held on November 21st from 6:00-8:00PM in Catheys Valley. For more information, go to: www.mercedriveralliance.org.

For more information, contact Gwen Huff at (559) 497-5033 or gwenhuff@comcast.net

May 16, 2005

Final KEY OUTCOMES MEMORANDUM
Merced River Stakeholders Meeting

This Key Outcomes Memorandum summarizes main discussion points that arose during the meeting, as well as any agreement by the group for action. The following is a final summary of the meeting outcomes that the stakeholders approved at their -September 19, 2005 meeting.

The Key Outcomes Memoranda from March 21, 2005 meeting were approved.

1. Updates

- Merced Irrigation District Update: (Ted Selb, Merced Irrigation District)
 - Pending
 - Merced County Planning Update: (Bill Nicholson, Merced County Planning) Not present.
2. Merced River Ranch: Channel Design Input Work Session, (Pete Downs, Stillwater Sciences) Pending
3. Merced River Ranch Plans (Bill Loudermilk, California Department of Fish & Game) Pending

Announcements:

- EMRCD will host a River Fair at Riverdance Organic Farms on Sunday, May 22nd in association with the Heartland Festival. Flyers are available at www.mercedriveralliance.org . (Cindy Lashbrook)

Items on next agenda:

- Bay Delta System and how Merced River Contributes to it, Elise Holland, Trust for Public Land
- Easement Opportunities and Activities on the Merced River, Erik Vink, Trust for Public Land

Next Meeting: 6:00-8:30 pm, Monday, July 18, 2005, at the Board Room, Tri-College Center, Tri-College Drive (take G Street and turn left on Cornucopia Way), Merced.

Snacks: Ted Selb, snacks; Cindy Lashbrook, coffee, Teri Murrison, cold drinks.

For more information, contact Teri Murrison at 209-852-0112 or info@mercedriverstakeholders.org.

March 21, 2005

Final KEY OUTCOMES MEMORANDUM
Merced River Stakeholders Meeting

This Key Outcomes Memorandum summarizes main discussion points that arose during the meeting, as well as any agreement by the group for action. The following is a final summary of the meeting outcomes that the stakeholders approved at their May 16, 2005 meeting.

The Stakeholder's meeting was held from 5:30 pm – 8:30 pm at the Merced Tri-College Center in Merced, CA. Approximately 24 stakeholders attended the meeting, including representatives of the public, landowners, agency, and special interest groups; the attendance sheet will be attached to the Final Key Outcomes Memorandum and placed on file with East Merced Resource Conservation District, 2135 Wardrobe, Merced, CA.

The Key Outcomes Memoranda from September 2004 and January 24, 2005 meeting were approved.

1. Updates

- Merced Irrigation District Update: (Ted Selb, Merced Irrigation District)
 - Merced River Hatchery Funding: MID is in the process of finalizing the funding agreement with CDF&G to continue funding for the Merced River Hatchery. Funding will come in part from the 4-Pumps Agreement fund (47%) and in part from MID (53%). MID will seek financial assistance from its sister agencies involved in the VAMP agreement for a portion of its 53% share. CDF&G has budgeted hatchery funding up to July 1, 2005. MID anticipates there will be no gap in funding for ongoing hatchery operations.
 - Merced River Flows: the snow-pack in the Sierra requires above average releases into the Merced River from Lake McClure. If it continues to be a wet spring, MID will make flood control releases through July, depending on whether there is late or early runoff.
 - VAMP pulse flows: If the weather stays dry there will be a VAMP pulse flow release this spring. If flows are high due to flood control releases from the SJR tributaries, the fish barrier normally constructed at the confluence may not be installed, however tagged salmon smolt will still be released and survival studies in the Delta will continue.
 - If the barrier is installed, MID will release pulses of between 1,000 and 1,400 cfs around May 1st.
 - If the weather is very wet, overall flows will exceed 7,000 cfs in the San Joaquin River at Vernalis with all tributaries releasing and there will be no VAMP pulses, however salmon survival studies will continue through May.

- MID is negotiating with the Environmental Water Account for a water transfer to release an additional 10,000 acre feet, in addition to the existing 12,500 acre feet of water to benefit migrating adult salmon in October with an option to buy an additional amount. Jill Ratzlaff asked how many cfs the River contains presently. Ted said the flow is currently between 260-300 cfs below Crocker Huffman dam.
 - Merced County Planning Update: (Bill Nicholson, Merced County Planning) Not present.
2. Merced River Ranch: Channel Design Input Work Session, (Pete Downs, Stillwater Sciences)

Pete gave a PowerPoint presentation (see copy attached to final KOM on file with EMRCD) with an overview of river management that led to a discussion of present conditions. He listed a hierarchy of fundamentals for restoration and gave a background of Merced River Ranch and River history, wildlife, pre and post-dam flows, etc. He showed a photo of aggregate swales from approx. 1919. Bernie Wade asked if the swales in the photo are the same as the ones we see now. Yes. Pete noted that the flows being altered affected the sediment supply and the channel form was changed through dredging. This broke down the process that shapes the river channel and it needs to be reconfigured and augmented with gravels, floodplain grading and side channels. The riparian area and vegetation also needs to be restored.

The overarching goals of restoring the Merced River Ranch from a design standpoint are:

1. River channel reconfiguration (form and sediment transport) and gravel augmentation;
2. floodplain grading;
3. restoring open water wetlands; and
4. site revegetation to promote a diverse assemblage of vegetation, increase connectivity (for wildlife), create terrace topography that is favorable to restoration of habitation patches; and
5. facilitate progressive development of organic matter (soils) on planted parts of the Ranch.

Bernie Wade noted that in the mining of the Merced River Ranch that only the gold was removed. He asked if the top soil is still there. Pete responded that was essentially turned upside down and yes, the top soil is there. Bernie asked if one could push the cobbles aside and get down to soil. Pete responded that you have to go down 15-20 ft. to get to sand, however it is not advisable to disturb the fine layer since it has a greater potential for Mercury contamination due to settling.

3. Monitoring Merced River Restoration Projects, Region-wide Salmon Population Trends, (Randy Mager, DWR)

Randy spoke on the Merced River Salmon Habitat Enhancement Project, approximately 4 miles above the Gallo property to Robinson Ranch. The project was precipitated by a fish passage issue - predatory Bass were thriving in the habitat to the detriment of salmon fry. The goal was to increase spawning habitat through river channel construction and adding spawning gravel. He talked about Phase I, the Ratzlaff Project, where DWR isolated a pit, created a floodplain, and added salmon spawning habitat. He gave the history of the Robinson Restoration Project, its design, purpose, eventual "look" and function. Then he reviewed the spawning data (determined through carcass surveys) since both projects were completed. While the Ratzlaff site has low numbers, he stated that it is on the low end of the spawning area. The Robinson project area historically (in the 90's) experienced 15% of fish spawning in the River and after construction is experiencing almost the same amount of fish spawning as before the reconstruction (12%).

DWR utilized the Robinson Project site to vary riffle designs to assess the quality of spawning habitat. They sought to create some diversity of topography to determine how the salmon would utilize each design. They constructed small humps and tried to determine what the fish prefer to spawn in. Over 3 years the salmon have shown preferences in some instances, but the results have so far been largely inconclusive with non recognizable pattern to their preferences for spawning habitat. However, the salmon are not using marginal habitat where they used to spawn. Overall, spawning in the restoration area is approaching pre-1997 levels.

The revegetation element of the project area entailed planting 7,500 cuttings, 400 elderberry plants, and 5,000 containers of plants grown from local seeds. Randy said that they are hoping to conduct a future study in the hard-pan layer to determine if the clay layer is affecting the upwelling of ground water.

Pat Ferrigno asked if DWR is exchanging information yielded from the reconstruction projects with Stillwater Sciences. Pete responded that they are doing so even more so now that Stillwater is working on the Merced River Ranch. They are in touch with Kevin Faulkenberry and that it is important to keep these projects connected. Jeff Engle asked Randy if he is communicating with people on restoration projects in other states. Randy said yes, that is why they experimented with the humps. Jeff wondered about the influence of groundwater coming up and said that the salmon like that. Randy stated that's why he wants to look at upwelling - it's looking like upwelling may be happening [in those areas that are more utilized.] Cindy Lashbrook asked if the hardpan layer is native. Randy said it is and that they need to look more at that issue.

Jill Ratzlaff asked regarding the revegetation and plantings - what will happen when the irrigation is taken off and river flows are the only source of water. Randy noted that this is the type of system these plant types were originally in. Jeff wondered if the plants have enough soil [in the tailings areas]. Jill said that the plants need the flows except they took all the top soil. Randy agreed and noted that the soil was then deposited somewhere else.

Bernie asked about whether there are any plans to continue the work upstream of the Robinson Project. Randy said yes, that they are evaluating what would work and who can fund such work. Bruce Orr asked if they had talked about doing any permeability studies. Yes.

Mike Bettencourt noted that they are mining upstream in the old Blasingame site and asked what requirements are for restoration. Carl Mesick said he didn't know and pointed out that the requirements depend on individual permits. Bernie Wade asked if people could just go out and mine and not do restoration under CEQA or NEPA. Carl responded that it depends on the individual permit. John stated that the best place to discuss permits is in the stakeholders group.

Jill asked why, if the Merced is the southernmost spawning habitat, why not spend the money in a successful river? Why spend it on the Merced? Is the Merced a viable salmon river? Randy said that at some point you have to draw the line. If not the Merced, then the Tuolumne, if not the Tuolumne, then the Stanislaus, and so on.

Bernie noted that Pat Brantley had been asked to bring information back to the group on whether CDF&G is going to mine aggregate on Merced River Ranch and that Pat was not at the meeting. Lydia Miller asked if Bill Loudermilk or Dale Mitchell can come to the next meeting to discuss future plans for Merced River Ranch and the stakeholders concurred that they would welcome such a presentation. Teri will arrange for that to take place.

The stakeholders indicated that they want to continue the channel design at the next meeting, as well as hear from CDF&G on the Merced River Ranch, and from Erik Vink on easement opportunities and activities on Merced River. They directed Teri to allow for time to ask questions if desired, after each presentation.

Announcements:

- Santa Fe Aggregates is in the very early planning stages of removing tailings from several parcels in the tailings reach. They are looking at making it a restoration/tailings mining project. They have been in discussion with Carl Mesick, USFWS, Pat Brantley, CDF&G, and others about a private/public partnership on a grant application. They feel this project has potential to reduce public cost for a restoration project by utilizing aggregate mining machinery and resources. They will continue to keep the MRS up-to-date on progress as they go forward. (Jean Kiel)
- The Upper Merced River Watershed Council will hold their annual Day in the Watershed on Saturday, April 2, at Briceburg. In light of the upcoming Merced River Alliance Project that will connect watershed efforts on the lower and upper reaches, stakeholders were encouraged to attend, if possible. (Teri Murrison)
- Stillwater Sciences is seeking a part-time person to irrigate and do some monitoring of revegetation experiments at the Merced River Ranch. Duties will include taking head counts of plants, turning pumps

on and off, and keeping track of the site. For more information, contact [Zooney Diggory](#) at Stillwater. (Pete Downs)

- EMRCD will host a River Fair at Riverdance Organic Farms on Sunday, May 22nd in association with the Heartland Festival. More details will be available soon. (Cindy Lashbrook)

Items on next agenda:

- Continuation of discussion of potential options for channel design on Merced River Ranch, Pete Downs, Stillwater
- CDFG's Plans for Merced River Ranch, Bill Loudermilk or Dale Mitchell (to be invited by Pete Downs)
- Easement Opportunities and Activities on the Merced River, Erik Vink, Trust for Public Land

Next Meeting: 6:00-8:30 pm, Monday, May 16, 2005, at the Board Room, Tri-College Center, Tri-College Drive (take G Street and turn left on Cornucopia Way), Merced.

Snacks: Bernie Wade, snacks; Cindy Lashbrook, coffee, Jean Kiel, cold drinks.

For more information, contact Teri Murrison at 209-852-0112 or info@mercedriverstakeholders.org.

January 24, 2005

FINAL KEY OUTCOMES MEMORANDUM
Merced River Stakeholders Meeting

This Key Outcomes Memorandum summarizes main discussion points that arose during the meeting, as well as any agreement by the group for action. The following is a final summary of the meeting outcomes that the stakeholders approved at their March 21, 2005 meeting.

The Stakeholder's meeting was held from 5:30 pm – 8:30 pm at the Merced Tri-College Center in Merced, CA. Approximately 24 stakeholders attended the meeting, including representatives of the public, landowners, agency, and special interest groups; the attendance sheet will be attached to the Final Key Outcomes Memorandum and placed on file with East Merced Resource Conservation District, 2135 Wardrobe, Merced, CA.

The Key Outcome Memorandum from the November 15, 2004 meeting was approved. The Key Outcomes Memorandum for September was not reviewed and will be proposed for consideration at the March meeting..

1. Updates

- Merced Irrigation District Update: (Ted Selb, Merced Irrigation District) Not present.
- Merced County Planning Update: (Bill Nicholson, Merced County Planning) Not present.

2. Merced River Ranch: Channel Design Input Work Session. (Pete Downs, Stillwater Sciences) *Thanks to Stillwater for meeting notes.*

The entire meeting was dedicated to providing input to Stillwater Sciences's conceptual restoration design for CDFG's Merced River Ranch (MRR) property. Pete Downs presented the objectives and format of the workshop.

The first session of the input workshop was to review and discuss input that had been provided to Stillwater Sciences via two memos since the last MRS meeting. Pete Downs presented the summarized list of input/issues and asked the authors of the memos if the list accurately captured their comments and if anyone in the group would like to add any other issues to the list. The memo authors felt the presented list accurately represented their comments and several issues were added by other MRS members. The presented list, as well as additional input provided, is summarized at the end of this document. During this first session there was some discussion regarding the history and future of the MRR project. Concern was expressed from several MRS members over the effect that the MRR project might have on aggregate value of dredger tailings; that 1) the value of tailings will determine demand which in turn dictates the rate at which tailings will be excavated, and 2) the tailings should be considered a resource, not planted

over or left unutilized. Pete Downs responded that it could take many years to remove stockpiled tailings from the MRR and that use of the graded upper terrace for grazing would be temporary, citing Santa Fe Aggregate's Doolittle Site expected lifespan of 15 to 30 years.

Jon Kelsey expressed concern that the excavated tailing piles would be transported off-site and would compete with local aggregate companies as a source of gravels. Pete Downs responded that it was his understanding that CDFG would not be mining for commercial purposes and that the gravels would be for internal salmon-spawning gravel augmentation use only.

Pet Ferrigno commented that Stillwater should investigate how landowners can transport materials off their property, not how to put tailings into the river. Her point was that there has to be a reason for doing this project. What she heard on the November 18, 2004 MRR tour was that Stillwater was trying to fast-track this work to apply for the next round of CALFED funding. In response, Pete Downs provided a brief history of the Merced project to illustrate that the work done to date was intended to eventually go into the ground in a future phase, and that if further funding was not sought until after the absolute completion of the current project, there could be a delay of years before construction occurred. In addition, it is often rumored that CALFED funding may run out and that each round of funding may be the last. He emphasized that Stillwater has not made enough progress to even consider applying for another grant yet. Pete added that the current contract structure doesn't provide for the preparation of a digestible summary document for public benefit and stated that he would work to develop a "lessons learned" document at the end of the project to pull together all the findings of the project, although there is currently no funding to do this. Pat Ferrigno suggested it would be good to ask other landowners what information they want to know.

Pat Ferrigno commented that the conceptual restoration project was too specific to the Merced River Ranch and would not be applicable elsewhere in the reach. Michelle Cunningham commented that the grant money for this project was partly for reach-wide studies. Pete responded that many studies conducted to characterize reach-wide conditions, and could be useful to any dredger tailing reach landowner. Zooey Diggory commented that during development of the Merced River Corridor Restoration Plan it was largely agreed that the DTR was a priority area for restoration; conditions are highly degraded for salmon and most DTR landowners are eager to remove tailings from their property. Near this time, CDFG had purchased the MRR. This site then provided an opportunity to investigate the quality of tailings and ways of removing it from the floodplain while enhancing the site for habitat and wildlife values. Pete Downs said it is necessary for the project findings to balance the market for rock, ecological needs, and the desire to remove tailing piles from property. Michelle Cunningham pointed out the potential for Stillwater's findings to affect the aggregate value and/or possibilities on other dredger tailings reach properties. This concern was added to the list of input (see list at end of document).

Gwen Huff recalled her experience presenting an early proposal to the MRS, and stated that although it was traumatic at the time, having her "feet held to

the fire” by the stakeholders was a very worthwhile experience and had an overall positive effect on her and the project. Pat Ferrigno asked if the Phase IV project had ever been presented to the MRS. Pete Downs and Zooney Diggory assured that it had several times over the last few years. Lydia Miller commented that the original project was presented at MRS meetings but that the MRS did not, or could not, endorse it. She commented that the MRR purchase had gone through a CEQA Negative Declaration process and asked how plans for the MRR conflict with the Neg. Dec. Pete Downs responded that conceptual restoration designs will need to be balanced with what is stated in the Neg. Dec. The outcome of this project is to develop documents, drawings, and draft permit applications as if the actual construction were going to occur. Lydia Miller continued that this project was not being brought before the group for endorsement. She commented that Stillwater was here asking the stakeholders for input, although they are not obligated to and could continue the process without it. She confirmed that participation is optional. Cindy Lashbrook commented that this workshop for MRS input was planned prior to the circulation of the memos. Teri Murrison clarified that this is a conceptual design, not an actual on-the-ground project and suggested referring to it as a study.

The second session of the input workshop was to review and discuss the conceptual restoration design elements as a group. Pete began the presentation with an overview of the project history and then discussed the channel reconfiguration and floodplain grading elements of the restoration plan. During the presentation the floor was opened to discussion. This discussion is further summarized as a list of input to the design elements at the end of this document.

Gwen Huff commented that both the Robinson and Ratzlaff projects experienced scoured terrestrial habitat as a result of reconfiguring the channel and lowering floodplain elevations. Pat Ferrigno asked why the MRR should continue to be studied when we already know what has happened at the Robinson property. She suggested studying something different and also made the point that the findings should be transferable. Pete Downs responded that the Robinson property is not within the DTR and that that the former project was primarily realigning the channel to isolate mining pits from the channel, but agreed that Stillwater would not be starting from scratch.

George Strnad commented that the channel design is the basis for the rest of the design elements. Jeff Ingle commented that the region can experience 6 to 7 year droughts and that there are limits to the amount of water that will be available to the reach. He stated that building a channel for a 10-year flood event is wishful thinking.

The importance of post-implementation monitoring was discussed in addition to the lack of funding for monitoring. Jill Ratzlaff expressed concern over the side-effects of channel restoration on her property - death of mature oaks and riparian vegetation following restoration, lack of plant growth and regeneration, and less spawning activity than before restoration – and the lack of monitoring being done to evaluate the success of the restoration project and these side-effects. She made the point that sometimes what looks good on paper doesn't work out in reality.

Carl Mesick commented on the short-term impacts vs. long-term benefits of channel restoration. The MRR is near the upstream limit of spawning on the Merced River and that spawning is concentrated in the area. Would the short-term impacts of channel restoration in such an important spawning area be intense enough to negate the long-term benefits of the project? He stated that there is quite a bit of vegetation on the streambanks that will likely be lost once the project begins. Pete Downs responded that Stillwater would attempt to design around areas of existing ecological value as much as possible and would attempt to minimize short-term impacts to spawning areas while designing for long-term gain. Michelle Cunningham suggested breaking up the work into smaller stages to minimize impacts. Bruce Orr brought up the economy of scale (it's cheaper to do more at once), and mentioned the possibility of restoring the worst areas first. Carl Mesick commented that raising the channel bed has less impact than narrowing the channel, which would destroy streambank vegetation and strain already stressed fish. John Shelton responded that the channel is always changing and that at some point you have to take a chance and jump-start the restoration process. Short-term impacts will happen but a good design will absorb many of those impacts. Jill Ratzlaff added that the oaks on her property had died almost immediately after restoration implementation. Mike Bettencourt countered that on their property oaks die periodically. Jill Ratzlaff stated that her trees had died off faster than what is seen naturally and that from a landowner perspective this was a saddening short-term impact of the restoration. Pat Ferrigno commented on the accountability of those heading up restoration projects; she felt that upon project completion, they go away and leave the landowners to deal with the consequences. This is why landowners are so critical of proposed restoration projects. Cathy Weber pointed out the value of using the MRR as a laboratory, using public lands to conduct restoration projects and evaluate project performance before implementing projects on private lands.

As an example of what can be achieved, Pete Downs introduced the channel and floodplain restoration on Clear Creek and the revegetation scheme used there. The plants on Clear Creek have the effect of creating better habitat for themselves by accumulating fine and organic material from flood flows. Bruce Orr pointed out the use of microtopography on the restored floodplains of Clear Creek, and that design element would be incorporated at the MRR. Pete Downs mentioned that the Clear Creek project is likely the closest surrogate to the conditions on the Merced River. Carl Mesick said that the Robinson project was also designed so that the floodplain would develop naturally. There are things you can do, however, to jump-start the process and see more immediate benefits (e.g., using soil to promote vegetation and providing better sized gravels for salmon). Pete Downs pointed out that major restoration projects have only really occurred in the past 10 years while straightening rivers has occurred for 300 years, so there is still a lot to learn. Destroying ecosystems is easy, but it's hard to put them back together. He doesn't believe that bad experiences have to be the norm. People are getting better at restoration and learning more each time. Bernie Wade commented that we can't remain frozen with fear of the potential negative short-term impacts of restoration.

In keeping with the agenda, Pete Downs suggested ending the large-group discussion in order to move on with the small group discussions. Mike

Bettencourt suggested that it would be more useful to have 2 or 3 alternative design plans to comment on.

The third session of the input workshop was to breakup into smaller groups to review and discuss specific restoration design elements: channel and floodplain reconstruction; revegetation and habitat conservation; and public access and infrastructure. At each element station, meeting attendees could look at maps of the MRR, review design element materials, ask questions, and provide input. Input was recorded at each station and then summarized and read back to the entire group at the end of the session. In closing, Pete stated that he would like 30 minutes at the next MRS meeting to present a conceptual restoration plan for the MRR that incorporates the input gathered today - a straw proposal for people to comment on. He also solicited any additional comments. John Kelsey again voiced concern about the potential for excavated materials from the MRR to compete with local aggregate companies. Pete Downs and Pat Brantley both stated that tailings material would be used for CDFG use only for work on the Merced River. Lydia Miller pointed out the absence of a CDFG management plan for the property - without it we are "picking out furniture, with no place to put it." Pat Brantley stated that it was the intention of CDFG to develop a management plan and to designate the area as an Ecological Reserve.

Carl Mesick said it would be useful to have 2 or 3 alternative plans available to comment on.

Zoey Diggory emphasized that Stillwater appreciates all comments and everyone should feel welcome to contact anyone at Stillwater at any time.

SUMMARY OF MRS INPUT TO MRR CONCEPTUAL RESTORATION PLAN BY SUBJECT

(purple = input from memos and discussion of memo issues; green = input from large-group discussion; red = input from small-group discussions)

Channel Reconfiguration, Floodplain Grading, Gravel Augmentation

1. Learn from other restoration efforts on the Merced River and elsewhere in the Central Valley.
2. Consider aggregate value of tailings; evaluate effect on demand/removal rates; treat tailings as resource – do not revegetate or make inaccessible.
3. Consider implications of project findings on other properties aggregate values and property rights.
4. Consider potential adverse impacts of channel scour and floodplain vegetation scour as a result of channel and/or floodplain reconfiguration.

5. Have monitoring in effect both before and after project implementation in order to evaluate success of the project and provide means of learning from the effort (adaptively manage the project).
6. Theory vs. practice; evaluate the ability of the project to realistically achieve the objectives and conditions described in the restoration plan. Inform landowner of and avoid unintended side-effects. Learn from other projects to evaluate the potential for unintended side-effects.
7. Minimize short-term impacts from the project; evaluate the balance between short-term impacts and long-term benefits; if short-term impacts are likely to be significant, consider revisions to the channel and floodplain designs.
8. Potentially scale the project over time to minimize short-term ecological impacts. Balance economy of scale with risk of short-term impacts.
9. Raising the channel bed should have less impact on the ecosystem than moving the channel and/or modifying streambanks; consider this in developing channel reconfiguration design alternatives.
10. Incorporate short-term benefits to design to offset short-term impacts.
11. Avoid removal of tailing material from the site.
12. Incorporate immediately beneficial actions, such as revegetation, to offset short-term impacts of project.
13. Minimize impacts to fish; scrape off armor layer from spawning areas and rebuild by adding spawning sized gravels; leave some holes for various fish life stages; avoid damaging overhanging riparian vegetation.
14. Avoid installing any bridges across the channel; closely evaluate the pros/cons of installing a bridge.
15. Evaluate cost and effort associated with impacts to wetlands/mitigation for short-term impacts or impacts to existing wetlands; do not expect to create a functional wetland quickly – they take time to develop; could create wetlands as mitigation in advance of groundwork in order to minimize habitat loss during project implementation and allow maximum time possible for created wetlands to develop.
16. Consider permit costs and complexity in developing channel and floodplain design and scheduling work.
17. Evaluate salmon populations valley-wide and site specifically to justify project and evaluate project success.
18. Consider on-site, immediate tailing processing and use in adjacent channel using track-mounted 2-deck screens (Ritchie Bros. Auction House

may have appropriate equipment) vs. moving grading tailings to stockpile, processing there, and then transporting material back to the river.

19. Track-mounted 2-deck screens could also be used to organize stockpile area and separate size classes.
20. Use on-site cottonwood snags as large woody debris in the restored channel.

Revegetation and Habitat Conservation

21. Use natural vegetation patterns and processes as a guide for restoration and revegetation design.
22. Take advantage of local knowledge – landowners, farmers, aggregate miners, etc. – in evaluating potential for revegetation efforts.
23. Evaluate the design and value of the revegetation experiment in providing appropriate input to revegetation plans.
24. Evaluate/prioritize where and when revegetation efforts should be implemented to maximize plant survival, establishment, and habitat value.
25. Evaluate what plant species are most appropriate for revegetation effort.
26. Learn from other revegetation efforts on the Merced River and elsewhere in the Central Valley.
27. Minimize impacts to streambank vegetation during channel and floodplain work.
28. Consider cost-effective means of acquiring organic material for soil development; trade gravels for organics from mining or development areas; yard and orchard clippings from Merced Co. dump; almond tree clippings from neighboring orchards; chip on-site cottonwood snags.
29. Since fine materials are encountered at the same elevations as the bed of wetlands, creation of more wetlands could result in production of more on-site fine material.
30. Study groundwater dynamics at the site; evaluate groundwater patterns in developing and prioritizing revegetation and conservation areas.

Public Access, Education, and Infrastructure

31. Consider public access issues during restoration planning.
32. Consider potential for school fieldtrips for kids.

33. Consider trails or boardwalks so as not to impact vegetation; perhaps a walking bridge from the north side of the property.
34. Assess access demand, who wants to go there; because access demand will likely shift through project progress, have available access evolve with the project as feasible (minimize damage)
35. Educators from local schools, UC Merced would likely be interested; identify someone from UC Merced that could start attending MRS meetings.
36. Consider enforcement concerns: unmanaged access could destroy the site; haul roads and access roads should not be advertised as public access road; evaluate what form enforcement should take; minimize serious impacts by vandals, overuse, and misuse.
37. Evaluate potential to combine management responsibility with Merced ID.

Restoration Planning Process

38. Evaluate desired end-points of restoration – removal and use of tailings, restoration of desired ecological conditions and functions – and the value of reach-scale studies.
39. Learn from other efforts on the Merced and elsewhere in Central Valley; incorporate other project's successes; avoid their failures.
40. Consider importance of public review and input (particularly via the MRS) on project elements.
41. Consider effect of the project on other dredger tailings reach properties.
42. Consider effect of the project on aggregate value of tailings.
43. Have monitoring in effect both before and after project implementation in order to evaluate success of the project and provide means of learning from the effort (adaptively manage the project).
44. Theory vs. practice; evaluate the ability of the project to realistically achieve the objectives and conditions described in the restoration plan. Inform landowner of and avoid unintended side-effects. Learn from other projects to evaluate the potential for unintended side-effects.
45. Use the MRR as a lab to evaluate restoration actions before implementing more projects on private property.
46. Consider actions to provide immediate positive results of restoration while waiting for long-term benefits to kick-in.

47. Evaluate salmon populations valley-wide and site specifically to justify project and evaluate project success.

Actions to be taken:

- The March meeting will be a continuation of the Channel Design session held at the January meeting. Stillwater will present 2-3 potential options for design of the River channel based on input received at the January meeting. Pete will work arrange a presentation on regional salmon populations and monitoring of existing restoration projects.

Announcements:

- Gwen Huff announced she has begun working for the East Merced RCD on the DOC Watershed Coordinator grant's task to develop a streamlined permit for voluntary conservation practices initiated by landowners. She is in training this week and will begin working with agencies and landowners.
- Bernie Wade announced that a book has been published on the Yosemite Valley Railroad that stakeholders may be interested in reading.

Items on next agenda:

- Presentation of 2-3 potential options for channel design on Merced River Ranch, Pete Downs, Stillwater
- Monitoring existing restoration projects on the Merced River and regional salmon populations, Randy Mager, DWR

Next Meeting: 6:00-8:00 pm, Monday, March 21, 2005, at the Board Room, Tri-College Center, Tri-College Drive (take G Street and turn left on Cornucopia Way), Merced.

Snacks: Gwen Huff, snacks; Cindy Lashbrook, coffee, Pat Ferrigno, cold drinks.

+/- Discussion: Break out groups worked well (Michelle Cunningham); Appreciated the opportunity to comment in an even field (Pat Ferrigno)

For more information, contact Teri Murrison at 209-852-0112 or info@mercedriverstakeholders.org.

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