

**SAN BERNARDINO VALLEY WATER CONSERVATION DISTRICT  
MINUTES OF THE OPERATIONS COMMITTEE MEETING**

August 04, 2015  
1:00 P.M.

Chairman Corneille called the Operations Committee Meeting to order at 1:06 p.m.

**OPERATIONS COMMITTEE MEMBERS PRESENT:**

Richard Corneille, Chairman  
Manuel Aranda, Director

**STAFF PRESENT:**

Daniel Cozad, General Manager  
Jeff Beehler, Land Resources Manager  
Athena Monge, Administrative Services Specialist  
Manuel Colunga, Field Operations Supervisor

**OTHERS PRESENT:**

None

**1. PUBLIC PARTICIPATION**

There was no public participation.

**2. ADDITIONS/DELETIONS TO AGENDA**

There were no additions or deletions to the agenda.

**3. APPROVAL OF MEETING MINUTES FROM SEPTEMBER 12, 2014.**

**It was moved by Director Aranda and seconded by Chairman Corneille to approve the minutes from the September 12, 2014 Operations Committee meeting. The motion carried with all members present voting in the affirmative.**

**Chairman Corneille: Yes**

**Director Aranda: Yes**

**4. MILL CREEK REDESIGN**

The Committee was provided a handout of the "Mill Creek Diversion Debris Management" PowerPoint presentation slides. Daniel Cozad gave an overview of the presentation slides, noting that CWE has had this project for about four months and they've worked on several design options to model. Mr. Cozad explained that all of the designs, with the exception of Concept No.1, have a larger gate opening, and all include a type of diversion to keep the debris out of the water. Mr. Cozad clarified that the overall idea was to make it easier to move debris out back toward the stream and make it more maintainable in order to move the clean water through to the other side. Currently the diversion blocks are shown to be 2 feet by 1 foot with about 1 foot of space in between them, but CWE would have to model the blocks to see the

appropriate spacing needed. One of the problems CWE identified with Concept No. 1 was its cleaning and whether or not it was constructible because of the extensive amount of pressure. Modeling would indicate the accurate pressures. Director Aranda indicated that Schematic No. 4 uses steel railing and asked what the difference in advantages were in having one or the other. Mr. Cozad replied that the desired result was to have the larger debris stay on one side but still have the water and smaller debris pass through. CWE is still trying to optimize the best way of doing that. He also noted that the diversion blocks are all 8-feet high and come up just below the height of the levee diversion. Concept No. 1 would replace the three 5-foot gates with one large 15-foot gate, widening up the angle (as the angle now is a sharp right hand turn), thus making it easier to get into by 15 degrees. Mr. Cozad continued to explain that they would harden the earthen berm, the levee that constantly blows out, with either reinforced concrete or powdered rock, and harden the channel bottom further up, thus resulting with a concrete approach. The importance of this, he noted, was that if it were to become obstructed, it wouldn't cause the problem of taking up a levee when it overflowed. Mr. Cozad added that the gate poles would now be out of the way so that if large logs were to come down, they can get through.

Mr. Cozad continued to Concept No. 2, indicating that it looks similar to Concept No. 1 but instead has a steel rail to direct the debris. It has the same stabilized head-gate system and is modeled on what is currently at the Santa Ana with rails across. Concept No. 3 is the one that looks significantly different. It has a system to allow an overflow, so when the debris-blocks stop up and flood, they push toward the proposed system rather than on the existing system. This was an idea that CWE brought forward, but it was not their favorite one. Concept No. 4 is a combination of several of the concepts; it has an alternative with a rubber dam or concrete weir and, essentially, a trash rack. Instead of the small blocks, they have large spaced blocks and a side canal that would allow passage of sediment if all was stopped up. With the rubber dam you would be able to close it and open the gate to the side and wash the sediment out, offering a lot of operational flexibility. This would be needed in order to attain the necessary flow to move the sediment out, however, the cost of those are very expensive. The difference in cost for Concept No. 4 is about \$20,000. Using a standard gate would be about \$450,000 for Concept No. 4, with the majority of the cost falling on the large 5 by 15-foot weir gate of \$118,000. Mr. Cozad noted that he believed the side stream outlet could be done with or without the rubber dam; the gate would just have to be physically raised or lowered.

Chairman Corneille indicated his interest in Concept No. 3 with having the debris removed at a distance. He then proceeded to go through the cost and ratings of each concept, all on a scale ranked out of 19. The existing system was rated an 11 out of 19. (1) Concept No. 1, roughly at \$300,000 with an 18 out of 19 rating, (2) Concept No. 2, equally expensive, with a 15 out of 19 rating, (3) Concept No. 3, at \$250,000 with a 13 out of 19 rating, and (4) Concept No. 4 with the rubber dam, at about \$450,000 with a 19 out of 19 rating. These were rated relative to each other, where the higher the number, the better. Director Aranda asked whether Concept No. 1 was the best option. Mr. Cozad replied that aside from keeping what we currently have, the most cost effective option would be Concept No. 3, however, it falls short in Operations & Maintenance and Velocities, having been rated a 3 in velocity, although its sediment transport score is much better. The high scores for Concept No. 1 are in Operations & Maintenance and in Sediment Transport, with its real strength being its ability to move out unwanted sediment. Concept No. 2 received scores of three all across the board. Concept No. 1, while cost effective, was limitedly useful. Ben Willardson with CWE informed Mr. Cozad that Concepts No. 1, 2, and 4 were what they modeled. They are modeling the flows to see if there is a concept resistant enough to stand up to the boulders and to the amount of water and flow that they would expect.

Mr. Colunga commented that his favorite aspect about one of these concepts would be widening the angle and opening the gate, stating that with the 15 to 20 feet long debris, opening that angle will move it through much more easily than now. Chairman Corneille noted the issue with the rubber dam is it's maintenance might not work when needed to, indicating his preference for something more static. He

mentioned the possibility of a sub-screen concept and having wider spacing upstream. Discussion ensued regarding aiming for a concept that would be stable enough so a complete rebuild would not be necessary in the event of a blowout. Mr. Cozad asked the whether the \$250,000-\$350,000 cost range sounded reasonable. Chairman Corneille responded in the affirmative. Mr. Cozad then outlined the necessary next steps that will be taken: (1) finalize the proposed conditions/concepts, model them, and review the results; (2) attain an idea for what the velocities, flow rates, and forces on those facilities will be; and (3) CWE will return with recommendations and the Committee will select the final concept. The initial concepts will most likely be available end of August.

Mr. Cozad directed discussion to SBVMWD's Active Recharge Program and his conversation with Doug Headrick, who summarized it as optimizing SBVWCD's system and making small improvements that would allow a little more water to attain more variable conditions. Mr. Cozad sent them the basis of design and the concepts in hopes that they may be willing to be a participant in the project. A meeting was requested to sit down with them. Chairman Corneille mentioned that the Mentone Area Community Association was moving forward with the Garnet Street Bridge and asked whether the hydraulics of the river would be affected. Mr. Cozad responded that because it is a bigger opening, it would help. Discussion ensued on the commuting hours for the bridge and the possible need to have additional access outside of those hours. Chairman Corneille noted that the completion of the bridge is expected to take six months.

Jeff Beehler noted that the following Operations Committee Meeting will most likely take place in early September. Chairman Corneille requested an overview of project issues that the Committee should be concerned about. Mr. Beehler listed the need for a 404 Permit, as well as asking the US Army Corp of Engineers if SBVWCD can modify a flood-control structure. Also, a 1600 Permit will be needed in order to construct the total of the levee. Mr. Cozad added that the Committee will wait until 30-35% of the design was completed before starting the permitting process. Mr. Beehler also mentioned that the advantage with Mill Creek being so steep is that there are unlikely to be any direct species issues as nothing can live there for very long. Mr. Cozad added that Committee will also have to be able to prove that there aren't any Sucker issues either, even though there probably aren't.

##### 5. PLUNGE CREEK

Mr. Beehler stated Plunge Creek is about a half-step behind schedule. The Committee was provided with PowerPoint presentation slides used by Flood Control in a mid-July meeting. Mr. Beehler explained that a 2-D model for the design flow was created. Storm flows were correlated to the hospital rain-gage in San Bernardino in order to improve the general understanding of a 3-year storm, 5-year storm, and so on. Mr. Beehler and Mr. Colunga went out with the consultants and performed additional infiltration tests. They modeled the existing conditions as well as the habitat, and came up with two preliminary and one hybrid alternative. Modeling for those are currently being worked on, once finished there will be an Operations Committee meeting with FWS and CDFW. As this is a joint project with them, they will ultimately be the ones issuing the permits. The Committee would like to go through the technical steps first and then sit down with FWS and CDFW to receive input on what their preferred alternative is. The Committee here stood to review the posted maps and discussion ensued over the maps and their layouts.

Mr. Beehler stated that he and the interns went 100 feet off of the channel and plotted the location of the Woolly Star and a number of other plants, including the spine flower. He mentioned that the Woolly Star prefers the 5-year and 10-year flow area. This project is included in the HCP. Mr. Beehler noted there will be about 18 feet per day in the middle of the active channel, as opposed to an old channel where there is about 11.1 feet per day. Director Aranda asked what would be used to force a new channel. Mr. Beehler responded that water will be moved into the old channels either by cutting a pilot channel or by using large boulders. Discussion followed on information over the Woolly Star, with Mr. Beehler stating that

some would be lost so that there is habitat for more. He continued by noting that as of now the flow has been modeled, the plants relative to the flow have been looked at, and there are three general design concepts to run the models on. The next step, in early September, is to meet with Geary Hund and Jeff Brandt and go through the scenarios with them, and then have them do the final selection of the design concepts, as this is supposed to be a joint habitat water project. Director Aranda asked about what is being done to protect SBVMWD's pipeline. Mr. Beehler responded that nothing would be done as we don't want that liability and the project doesn't start until below the pipeline. We will share this with Metropolitan Water District and see what they think. Mr. Cozad added that the hope is to become a joint project partner.

Mr. Cozad continued on to explain that when the design charrette with Flood Control was created, several things would first need to happen, one of them is ensuring that Weaver Street Drain is adequate to contain flows should they get away. Mr. Beehler added that the flow regime contains two fixed points in all of this: (1) leaving the Orange Street Crossing the same and (2) that the MET pipeline has to be protected. Discussion ensued over the divided property ownership and the pending MOU with BLM to allow work to be done. Mr. Beehler noted that we are at the preliminary conceptual design and that the Resources Agencies want to see the conceptual designs with the hydraulic modeling on top of them so they can see for themselves.

#### 6. TRAILS PLAN UPDATE

Mr. Beehler informed the Committee that the Plan was circulated to the City of Redlands and City of Highland, the latter having given extensive comments. Intern Jakob Larson has been identifying bus routes and other corridors that might be useful. The next step would be developing a scope of work to have a professional come in and create a real live trail plan that could attract grant money. Mr. Beehler also noted that originally it was believed the plan could serve dual purpose to ensure there was no more take of species while also using it as a document to attract funding. This has since been separated out in order to avoid adopting it as a CEQA legal document and going through that process. The discussion followed with Highland's interest in equestrian access, as they are developing the equestrian corridor on the old Greens land. Mr. Beehler posed the question of what parties would be involved in the project; whether it would be a District project, a Highland-Redlands-District project and at what point to bring in the partners. Director Aranda suggested doing so immediately. Chairman Corneille suggested having better estimates on costs before bringing in the partners. Mr. Cozad then suggested placing a request for proposals with the first task being to scope out the work.

Chairman Corneille carried the discussion to the Santa Ana River Crossing. Mr. Beehler stated the Crossing would be a part of the Trail Plan; however, we would like to pull out of the crossing of the WSPA. Mr. Beehler has met with the Army Corp. who manages the WSPA with Flood Control. If an analysis shows there is no conditional state that can be developed, it becomes relatively routine for FWS to say this habitat activity is not incompatible with the operation of the WSPA. Flood Control will not formally tell us that we can cross the WSPA until FWS says that they do not see any additional take. Mr. Cozad noted that the timing was optimal because of the construction, as it does not look like a habitat for anything. Chairman Corneille proposed bringing forward as a conceptual master plan for now. Mr. Colunga expressed high hopes for the plan. Discussion ensued over minimizing illegal access and maintaining litter off of the trail. Mr. Beehler indicated that in the HCP it was called out in the budget for a BLM patrol for approximately three days out of the month.

#### 7. OPERATIONS BRIEFING BY FIELD SUPERVISOR

Mr. Colunga stated that he and Bill Boggan are continuously cleaning the roads, knocking down plants around the shop and around the field. He indicated one of the biggest issues encountered is the leak at the

Santa Ana River intake. He explained that when the high-flow test was done 4 to 5 years ago, it knocked everything out and it was put back using sandier walls, so even though 99% of the water goes one way, the other 1% gets over and promotes growth in our channel. The growth includes reeds, mule fat, cottonwoods, and the tamarisk, right in front of our intake. Although there is water there, it is not measurable; this is because the leak does not come down the main canal, but rather at a diagonal from between the two. The source of the leak has not been located but Bear Valley had someone come and clean the River pickup right before everything shut down. They blocked about three-quarters of it, so now there's maybe less than half a cfs. Mr. Cozad suggested putting silt along the channel walls to stop it. Mr. Colunga explained that this cannot be done as long as people are taking water and using that water in the drought. Mr. Colunga also mentioned SCE issued a notice of non-compliance for blocking access. Edison thought the temporary road Spiniello built would remain available to them, but it no longer is and they asked if they can have it back. SCE offered to pay for a gate, and it is currently being looked into whether one could be placed off of the dike. Mr. Cozad noted their easement would have to be looked into to see what it allows for in order to remain in compliance. Mr. Colunga noted all of the woodwork and gate maintenance was done earlier this year.

#### 8. MAINTENANCE ISSUES RELATED TO LAKE FIRE

Chairman Corneille asked whether the recent storms had made any effect on Lake Fire. Mr. Colunga mentioned there was no evidence of rain on that side of the watershed. Mr. Beehler stated there are live indications there will not be average rainfall this year with the probable El Niño. Based on rainfall modeling results from San Diego, Mr. Beehler explained in a normal precipitation scenario, approximately 5,400 dump trucks worth of sediment will come down the Santa Ana River in the first year after a drought and slightly less each year thereafter. The ash and fine sediment will come down over a general span of 5 years. He mentioned only a small proportion of Mill Creek burned but a fire is still burning just below the ridge. Most of the burn was in Seven Oaks. That fire has been contained. Staff estimates, worst case scenario, in an El Niño year would be having all the fine sediment pass Seven Oaks Dam and the District receive about 2,800 tons of sediment per acre of our facilities. However, early modeling assumes it will be distributed throughout our basins and that will not be the case. In a moderate case scenario, 30% of fines would be held at the dam and about 2,100 tons of sediment per acre passes through our gates. Mr. Beehler noted the advantage of having the dam and being able to look and get a good sense with the timeline, before the sediment arrives in any significant amount. Mr. Cozad noted the issue is not knowing what the sediment looks like, as it can range in appearance depending on where it is drained. Discussion ensued on exploring different ways to divert the sediment.

#### 9. SECURITY ENHANCEMENT UPDATE

Mr. Cozad informed the Committee of the contractor selected to install security system at Mentone Shop and complete upgrades to the District office system. Side-fencing at the District is a few weeks behind. Mr. Cozad mentioned his recent ownership discovery of the land at the edge of the Wash Plan area where Greenspot Road makes that bend and turns up Florida Avenue. Mr. Colunga put field cable gates back up. North of that location is a new road that is being piloted which the public uses for alternatively dumping or parties; this property will be blocked as well. Mr. Colunga added that approximately 300-330 feet of rock will be needed to do this. Mr. Cozad estimated the cost of having the area blocked and cleaned to be about \$15,000-\$20,000. Discussion ensued over the issue of homeless in the area. Mr. Cozad reviewed acquiring the properties where facilities exist on easements. With the Committee's support Mr. Cozad would like to move forward with discussing this with the property owners. Discussion ensued over the 16-acre parcel for sale that is east of our existing property in Mill Creek and the existing drain outlet into Mill Creek, that if need be, could be used to move water across, further upstream. Chairman Corneille noted this was not a high priority. Mr. Cozad continued to discuss the main canal on easement with EVWD and acquiring small surrounding properties before they increase in value in future years.

Chairman Corneille noted that he considered this to be of higher priority. Discussion ensued over review of the mapped parcels.

10. MENTONE AREA COMMUNITY GARDEN

Mr. Beehler stated the University of Redlands is working in conjunction with Jakob Larson on estimating the amount of soil that would have to be brought in for the Community Garden. Mr. Cozad noted that the size and quantity of the plots are still being calculated. Also, a considerable amount of fencing will be needed, as site access control will be important. Mr. Cozad added the interns are looking at what makes a successful garden and in what ways these differ from unsuccessful ones. Discussion ensued over the rocky and sandy garden land, it not being suitable for garden growth, and working on a way to resolve this. Chairman Corneille moved to discussion to whether the garden should be moved around back rather than having access off of Mentone Boulevard. The Committee is currently working on a conceptual plan to find the costs and hopes to have it for MACA within a few months.

11. FUTURE AGENDA ITEMS/ISSUES

Chairman Corneille requested a scope of work for the trails consultant in regards to Plunge Creek and Mill Creek Redesign, and asked whether there are any local firms that do trail planning. Mr. Cozad mentioned possibly having a parks planner type of professional for the planning. Director Aranda and Chairman Corneille thanked everybody.

12. ADJOURN

**It was moved by Director Aranda and seconded by Chairman Corneille that the meeting be adjourned. The motion carried with all directors present voting in the affirmative.**

**Chairman Corneille: Yes**  
**Director Aranda: Yes**

There was no further business, and the meeting adjourned at 3:27 p.m.