



Robert Bein, William Frost & Associates
PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS

JN: 34123

STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes

ISSUE VERSION: FINAL

MEETING NO.: 1
DATE: March 30, 1998
TIME: 1:00 pm
LOCATION: Caltrans HQ

SUBJECT: Status Meeting for BMP Retrofit Pilot Program,
District 7

Prepared by: S. Taylor

Approved by: 

(Signature)

Date Prepared: 4/29/98

Attendee Names / Company

Steve Borroum / Caltrans
Kim Noonan / Caltrans
Yulya Davidova / Caltrans
Richard Horner / NRDC
Jeremy Johnstone/US EPA
Scott Taylor / RBF
Mike Barrett/RBF

Attendee Names / Company

Mike Chesney / RBF
Bill Wiedenbacher / MW-C
Gary Friedman / MW-C
Chip Paulson/MW-C
Bob Finn/BCC
Doug Robison/BCC

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The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	A general program overview was given covering progress to date, budgets (siting costs) and schedule.				
02	BCC and MW-C presented the designs for PSE and procurement. Detailed information was given for the PSE projects, less detail was available for procurement projects	New			
03	Caltrans/MW-C noted that the Trapping Catch Basin PSE would be revised to show a standard Caltrans piping system as opposed to the offline system shown at the meeting. The revised plans would be provided to NRDC on the expected plan check date of 4/15/97. The cost for this redesign will not be included in the Pilot Program cost accounting.	New			MW-C
04	MW-C noted that the Cerritos swale could be shortened. NRDC noted that the desired residence time (minimum) is 9 minutes with a minimum distance of 100 feet. A longer swale, or longer residence time is OK.	New			MW-C
05	NRDC noted that any information transmitted to Rich Horner should also be transmitted to Chris May.	New			All
06	MW-C noted at the Infiltration Basin site that the basin is 'offline', and that the depth must be controlled in the basin to avoid flooding the Cerritos MS. It was also noted that the upstream biofilter swale would act as a pretreatment system for the infiltration basin.	New			
07	MW-C noted that new drain inlets must be constructed at many locations for the Inserts Pilot to move the inlet offline for monitoring purposes	New			
08	BCC noted that two EDBs are to be constructed in District 7. One facility would be concrete lined, and the other earth lined to assess the potential advantages and disadvantages relative to maintenance	New			
09	BCC noted that there was very little relief at the I-5 EDB site. This facility is also off line.	New			
010	BCC noted that pumping would be required at all be one of the media filter sites due to a lack of available head for the filters.	New			
011	BCC noted that the oil/water separator would be drained by gravity flow. Design of the MCTT BMPs is underway, but lagging the other designs due to a delay in receiving design criteria.	New			
012	BCC noted that the MCTT designs would be developed in consultation with Dr. Pitt of UA.	New			



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STORMWATER PLANNING SERVICES
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Meeting Minutes

ISSUE VERSION: FINAL

MEETING NO.: 2
DATE: July 14, 1998
TIME: 12:45 pm
LOCATION: District 7

SUBJECT: Status Meeting No. 2 – BMP Retrofit Pilot Program

Prepared by: S. Taylor

Approved by: 

(Signature)

Date Prepared: July 21, 1998

Attendee Names / Company

Currier, Brian/Caltrans
Davidova, Yulya/Caltrans
Borroum, Steve/Caltrans
Messer, Dean/LWA
McCarthy, James/Caltrans
Failing, Doug/Caltrans
Taylor, Scott/RBF
Hill, Richard/Caltrans
Horner, Rich/NRDC
Helperin, Alex/NRDC
Beckman, David/NRDC
Johnstone, Jeremy/EPA
John, Steven/EPA
Kermish, Laurie/EPA

Attendee Names / Company

Van Riper, Pete/Caltrans
Higa, Larry/Caltrans
Gordon, Richard/Caltrans
Yamaguchi, Howard/Caltrans
Whittenberg, Bill/RBF
Robison, Doug/BCC
Finn, Bob/BCC
Friedman, Gary/MWC
Barrett, Mike/RBF
May, Chris/NRDC
Tesoro, Cid/Caltrans
Ramos, Sayra/Caltrans
Graff, Rick/SDBaykeeper

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MEETING MINUTES

Meeting Date: July 14, 1998

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	The Plaintiffs for the Consent Decree noted that the \$2.5 million indicated in the Consent Decree should not be construed as a cap on the construction cost, rather the number and type of projects indicated in the Scoping Study should prevail as provided in Paragraph 6.59 of the Consent Decree. It was noted that Caltrans and the Plaintiff must continue this discussion at a yet to be scheduled District 11 Consent Decree status meeting.				Plaintiffs/Caltrans
02	RBF provided a status update presentation providing a progress update the Retrofit Pilot Program relative to: 1) Design status, 2) Design and construction cost estimates, 3) Bid addenda and change orders, 4) Construction bidding and schedule, 5) OMM plan preparation, 6) biofilter seed mixture research, and 7) Project Calendar review.				
03	The Plaintiffs requested that costs be broken down for both design and construction to segregate the monitoring components from the costs strictly with design or construction of the BMP. Furthermore, the design and construction costs should be discounted to reflect the unique nature of the pilot program, economy of scale, overtime to comply with the consent decree time table, etc.				RBF
04	The Plaintiffs (BayKeeper) indicated that the project at the I-5/SR 78 park and ride should be constructed this year, but that it should be documented in the Annual Report that this is an example of lack of internal Caltrans coordination relative to the expansion of this Park and Ride facility and the retrofit pilot program. In addition, the Annual Report should identify Caltrans procedural modifications to avoid similar lack of coordination between expansion of facilities and the follow on retrofit program.				RBF
05	The Plaintiffs also noted that coordination did occur at the Palomar Airport Road Biofilter swale site, and that this appeared to be a good case where economies were gained through incorporation with an existing project. This will be documented in the project design report.				RBF
06	Decision Point 1C Meeting				
07	District 7, Project 3: NRDC noted that all issues relative to vegetation had been resolved. Sites 3, 4, 5 and 6: Note in record of experience (design report) that there is opportunity at these sites for other BMPs, or expanded BMPs or a BMP treatment train. NRDC distributed a portion of the King County Manual relative to dissipation and spreading of flow at swale/strip outlets and inlets respectively. NRDC requested that it be noted in the design documentation that this information was considered during design. These sites were approved for construction.				MWC
08	Site 7: This site is constrained by an existing sound wall. Issues similar to those noted in item 7 should be documented. Site approved for construction				MWC
09	Sites 8-10: Sites approved. It was previously agreed not to switch the monitored and controlled sites partway through the monitoring program. Site approved for construction.				
010	Sites 11, 12: Sites approved for construction.				
011	Sites 1 and 2: (Altadena MS): It was noted that apparent design concessions were made for sampling relative to the amount of space available and the proximity to the existing storage bins. Caltrans noted				MWC

MEETING MINUTES

Meeting Date: July 14, 1998

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	that the current site configuration and the way the drainage is concentrated significantly constrains the site design possibilities. It was agreed to document, in the design report, the problems and constraints in moving the storage bins to another location on site, and the constraints relative to site grading to obtain more area for the biofilter strip. Sites approved for construction.				
012	District 7, Project No. 4: Site 1: It was agreed to document that sheet flow at maintenance stations is a beneficial design relative to treatment through an infiltration trench/biofilter and for Deleware filters. It was also noted that future MS design should locate potential sources of stormwater contamination in central (adjacent) areas. It was also agreed that it would be documented that pumping could be avoided for many of the BMPs if construction offsite was an option. Offsite construction was precluded for the pilot program due to the time required to process encroachment permits with other agencies. Site 1 was approved for construction.				BCC/MWC/RBF
013	Site 2: It was agreed to document that source controls will be used at the MS, such as covering of the material storage bins. Site approved for construction.				BCC
014	Site 3 (Termination PR): It was agreed to document that there are opportunities for other BMPs/ expanded projects at this site. Site approved for construction.				BCC
015	Sites 4 through 8 were approved for construction.				
016	It was agreed that the time of the next Status Meeting would remain flexible, and probably occur toward the end of September to ensure that construction of all projects was underway.				RBF



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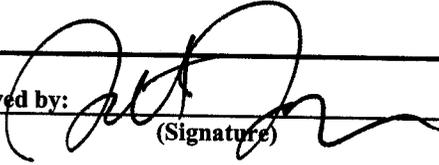
STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes

ISSUE VERSION: FINAL

MEETING NO.: 3
DATE: December 8, 1998
TIME: 8:00 AM
LOCATION: Dist. 11 Traffic Ops.

SUBJECT: Status Meeting No. 3, Decision Point No. 2

Prepared by: S. Taylor

Approved by: 

(Signature)

Date Prepared: 1/4/99

Attendee Names / Affiliation

Steve Borroum/Caltrans
Cid Tesoro/Caltrans
Marcelo Peinado/Caltrans
Brian Currier/Caltrans
Jim McCarthy/Caltrans
Howard Yamaguchi/Caltrans
Bob Wu/Caltrans
Jeremy Johnstone/EPA
Chris May/NRDC
Rich Horner/NRDC
Everett DeLano/NRDC
Rick Graff/SD BayKeeper
John Barth/SD BayKeeper

Attendee Names / Affiliation

Bill Whittenberg/RBF
Anna Lantin/RBF
Scott Taylor/RBF
Jerome Ruddins/RBF
Gary Conklin/RBF
Mike Barrett/RBF
Dean Messer/LWA
Gary Friedman/MW-C
Bob Finn/BC

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MEETING MINUTES

Meeting Date: December 8, 1998

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	Caltrans and the Plaintiffs indicated the desire to keep the Pilot Program an open process between the two parties, and to continue to develop effective communication on significant project issues.	FYI			
02	It was decided that Caltrans would further develop the cost accounting system for the Pilot Program and work with the Plaintiff so that the system was consistent with their expectations.	New	12/8	Ongoing	Caltrans
03	The Plaintiffs indicated that they did not feel that any pilots are ready to monitor at this time. There was agreement that Caltrans could bring each site 'on line' and begin monitoring as construction was finished without further field review of the site by the Plaintiff. The Plaintiff noted they may visit the sites as their schedule permits over the next few months.	New	12/8	Ongoing	Caltrans
04	RBF reviewed the construction status of each of the projects in both District 11 and District 7.	FYI			
05	Plaintiff asked if the filters could be pre-cast for Delaware and Austin units. Caltrans indicated this was not possible due to the size of the units.	FYI			
06	Caltrans reviewed the construction budget for both District 11 and District 7. Currently, construction costs are projected to be over the original budget in both Districts.	FYI			
07	Plaintiff noted that a cost estimate for seed should be developed since we had only developed a prototype cost for sod. Caltrans agreed to develop this cost.	New	12/8	3/99	Caltrans/RBF
08	A discussion followed relative to the construction cost of the Pilots. It was noted that on the CBI,s 90% of costs are for monitoring, construction of new inlets, manholes, etc. However, on other units, such as detention facilities and filters, the relatively high costs appeared to be due to the retrofit nature of the work, i.e., single projects not in close proximity to each other, difficult working conditions due to traffic control and Caltrans operations, unforeseen field conditions.	FYI			
09	OMM Plan Comments were distributed by the Plaintiff. Plaintiff indicated that the OMM plan was ready to be used as the pilot projects were brought on line for monitoring, but that the manuals should be refined further in accordance with the comments provided. Caltrans to review Plaintiff comments and respond.	New	12/8	1/99	Caltrans/RBF
010	Caltrans provided an update on interface with the Vector Control Districts. San Diego vector control will now be handled by the County instead of Caltrans at the County's request. In LA and San Diego, service agreements will be signed between the Consultants and the vector agencies rather than an MOU between Caltrans and the Agencies. It was noted that the timing of the MOU would not fit with the project schedule.	New	12/8	1/99	BCC/MW-C/KLI
011	The schedule for the Manchester EDB and the La Costa south Wet pond was discussed. Caltrans indicated that these projects may not be delivered by the June 30 1999 deadline in the consent decree, primarily due to regulatory issues, but that every effort was being made to deliver the projects by the deadline.	FYI			
012	A discussion was also held relative to the Palomar Airport Road bioswale. It was noted that construction of the swale may require the removal of existing trees, which would have to be mitigated at a ratio of 5:1	New	12/8	1/99	Caltrans/RBF

MEETING MINUTES

Meeting Date: December 8, 1998

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	per the project Coastal Development Permit. Caltrans is looking for alternatives to this since the District has a commitment with the City of Carlsbad to finish work in the area by 3/99.				
013	Following the meeting, a field trip was held for site review in both District 11 and District 7 over the next day and a half.	FYI			



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JN: 10-034123/034218

STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes

ISSUE VERSION: FINAL

MEETING NO.: 4
DATE: March 11, 1999
TIME: 9:00 am
LOCATION: RBF

SUBJECT: Status Meeting No. 4

Prepared by: S. Taylor

Approved by: 

(Signature)

Date Prepared: March 18, 1999

Attendee Names / Company

Jerome Ruddins/RBF
Ann Walker/RBF
Bill Whittenberg/RBF
Deborah Neiter/RBF
Charles Belenky/CT
Peter Van Riper/CT
Dean Messer/LWA
Ed Othmer/LC
Gary Fiedman/MW-C
Brian Currier/CT/UCD
Steve Borroum/CT
Jeremy Johnstone/EPA
Rick Graff/SD BayKeeper
Everett Delano/NRDC (phone)

Attendee Names / Company

Scott Taylor/RBF
Anna Lantin/RBF
Cid Tesoro/CT
Marcelo Peinado/CT
Mike Barrett/RBF/UT
Mark Moser/MW
Rich Horner/NRDC
Sayra Ramos/CT
Bob Finn/BCC
Doug Robison/BCC
Bob Wu/CT
Gary Conklin/RBF
Jeff Joseph/CT (phone)

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MEETING MINUTES

Meeting Date: March 11, 1999

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
1.	Opening remarks: Caltrans indicated a budget deficit for the Pilot program, but that the program was a priority with the Department. Plaintiffs indicated some of the information (letters) for the Status Meeting meeting arrived late, and they were not fully prepared to discuss all items contained therein. The Plaintiffs also indicated that they feel there have been some elements of the program where excess expenditures have occurred.	FYI			
2.	Item 3a: Background information is under development for the La Costa Infiltration Basin, it was noted that the report will be ready for Plaintiff review by March 31, 1999. Plaintiffs indicated that the site should not be unilaterally decommissioned by Caltrans	New	3/11	3/31	RBF
3.	Item 3b: The problem with the infiltration trench at Carlsbad MS was reviewed. It was noted that the problem is a lack of homogeneous fracturing of the terrace deposit at the site.	New	3/11		
4.	Item 3c: It was noted that the remaining issues with the I-15/SR78 EDB (slope rill, ponding in invert, area drainage) had been resolved. Photos of the site were shown.	Closed			
5.	Item 3d: The problems to date observed relative to drain inlet inserts were reviewed, principally flow by-pass and clogging. Caltrans offered that a different type of insert could be substituted for the Foss Streamguard unit at the Plaintiffs option. Plaintiff indicated that Mike Stenstrom of UCLA should be consulted for a possible substitute candidate. Caltrans directed MW-C to consult with UCLA and Gary Minton on this issue.	New	3/11	5/11	MW-C
6.	Item 3e: The problem with the poor quality of the sod was discussed. It was indicated that the sod will be overseeded and watered to ensure good growth by June. CT indicated full payment would not be made to the nursery. The issue of seed vs. sod was also discussed. Caltrans indicated that biofilters must be ready to accept flow virtually from the day they are installed. This would not be practical with seed. It was also noted that establishment from seed would require intensive watering, and irrigation is not available at most highway sites.	New	3/11	6/30	RBF
7.	Item 3f: The infiltration basin at I-605/SR 91 was constructed at the wrong grade. MW-C noted that the contractor will correct as his expense. Plaintiff noted that care must be taken in the regrading processes to ensure the basin invert is not compacted.	New	3/11	4/15	MW-C
8.	Item 3g: Problems with the flow spreading device at Altadena MS were discussed. MW-C noted that a new weir plate was installed to ensure even sheet flow. MW-C also indicated that some type of splash device would be installed to ensure that a concentrated flow 'jet' would not proceed across the strip during high flow events.	New	3/11	4/15	MW-C
9.	Item 3h: I-605/I-5 EDB outlet structure and potential erosion problems were discussed. Plaintiff is concerned that outlet structure may not perform well. BCC noted that this is a common type design, well supported in literature, and would be a good opportunity to compare performance with other outlet design types in San Diego. Plaintiff concurred and indicated this should be recorded as part of the project experience. The other issue at this site is potential erosion downstream of basin. CT directed	New	3/11	4/15	BCC

MEETING MINUTES

Meeting Date: March 11, 1999

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	BCC to study this issue and propose a solution. CT also directed BCC to install more riprap around the splitter structure.				
10.	Item 3I: Erosion issues: Plaintiff was concerned about the lack of erosion protection at Cerritos MS swale, I-605 swale. RBF indicated that the sites were currently being hydroseeded with the project erosion control mix.	New	3/11	3/31	MW-C
11.	Item 3j: Concrete Spillways: RBF explained that the purposed of the spillways on the project basins was for emergency overflow only, and that the spillways would likely never experience flow since the riser outlets were designed in each case to accept the maximum discharge to the basins. Plaintiffs concurred with explanation.	FYI			
12.	Caltrans indicated that it would not sample at the BMP sites but would instead use the remainder of the season to debug the sampling equipment. Empirical observations at all sites would continue this season for those sites that are online. Plaintiffs indicated that they would prefer that the monitoring and sampling be done for this season at those sites that are ready.				
13.	Plaintiffs indicated that the Caltrans design storm may be too large, resulting in higher costs for construction under the pilot program. Caltrans indicated that the current department design storm is consistent with other locations in the southwest, and may be too small from the regulators perspective. However, Caltrans is also currently reviewing SCWRP data and may fine tune the current design storm in the future.	FYI			
14.	Item 4: The review of the Caltrans response to the Plaintiff Memo dated February 11, 1999 was deferred. A response letter was provided to the Plaintiffs later in the meeting for review and comment.	FYI			
15.	Item 5: The La Costa Wetpond project is currently under bid through the PSE process. Bid opening will be on the 24 th of March, start of construction on the 29 th . There is a 60 calendar day work period, 45 working days. The engineer's estimate is \$720,000. Plant stock for the project has been secured from four nurseries, the contract has 120 days for plant establishment. The Manchester EDB is being processed as a change-order to the existing PSE contract with Excel Constructors. Work will start the week of March 22. Completion is scheduled for the end of May. The Change Order for this site is \$350,000.	FYI			
16.	Item 6a: Caltrans is in the process of developing a statement, as requested by the Plaintiffs, relative to the use of StormTreat for the current pilot project.	New	3/11	3/19	Caltrans
17.	Item 6b: The CDS units/sites are currently under design. Caltrans to set a design review meeting with the Plaintiffs for the week of either March 16 or March 22 nd . Caltrans is involving the manufacturer, CDS with the design of the units.	New	3/11	3/26	Caltrans
18.	Item 6c: The Paxton Park and Ride will be constructed as a sand media filter. Plans are currently being finalized, and no significant changes have been made as compared to the design originally shared with the Plaintiffs.	FYI			

MEETING MINUTES

Meeting Date: March 11, 1999

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
19.	Item 6d: The MCTT unit at the Metro Maintenance Station is currently under redesign to avoid the influence area of the bridge column footing. A revised design will be forwarded to the Plaintiffs per the schedule in the bi-weekly report.	New	3/11	10/1/99	BCC
20.	Item 7: The County of San Diego and the three Vector Districts have agreed to the conditions, and are placing the consultant service agreements with their Boards as consent items. Caltrans indicated that they will request that the Vector Districts document that there will be a stepwise treatment approach, progressing from non-insecticide related to treatment with chemicals as required to abate the problem. The interagency agreement has been signed with the DHS. There have been two sites reported with vector problems to date, in District 7 (Cerritos MS and I-5/I-605 EDB). VCD's have been notified.	New	3/11	5/30	LWA
21.	Item 8: Plaintiffs indicated they had forwarded comments on the Maintenance Indicators document, and that overall it appeared to be comprehensive. RBF distributed manufacturers data for proprietary BMPs. Caltrans indicated that a bioassessment team had been initiated to pursue a safe harbors agreement with the FWS. The Plaintiffs will be kept abreast of developments with the FWS.	FYI			
22.	The meeting concluded with the Plaintiffs stating that they continue to feel that some of the program costs are excessive, and that too much detail and structure is being put in the processes, also tending to increase costs. Caltrans responded that the objective is to run the program professionally, and also fit the projects into the normal Caltrans delivery process. Caltrans will continue to look for areas where improvements can be made.	FYI			



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JN: 10-34123, 10-34218

STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes

ISSUE VERSION: Final

MEETING NO.: 5
DATE: June 29, 1999
TIME: 9:00 am
LOCATION: MW - Pasadena

SUBJECT: Quarterly Status Meeting No. 5 – BMP Retrofit Pilot Program

Prepared by: S. Taylor

Approved by: 
(Signature)

Date Prepared: August 20, 1999

Attendee Names / Company

John Barth/San Diego BayKeeper (SDBK)
Jeremy Johnstone/USEPA
Rich Horner/NRDC
Everett DeLano/NRDC
Chris May/NRDC
Rick Graff/San Diego BayKeeper
Marcelo Peinado/Caltrans (CT)
Doug Failing/Caltrans
Richard Gordon/Caltrans
Peter Van Riper/Caltrans
William Evans/Caltrans
Cid Tesoro/Caltrans
Jim McCarthy/Caltrans
Steve Borroum/Caltrans
Brian Currier/Caltrans
Bob Wu/Caltrans
Emilio Viramontes/Caltrans
Deborah Neiter/RBF
Bob Finn/BC

Copies To:

File, Attendees

Jeff Joseph, Caltrans

Attendee Names / Company

Scott Taylor/RBF
Martha Blane/RBF
Ann Walker/RBF
Ed Othmer/Law
Anna Lantin/RBF
Dean Messer/LWA
Matthew Zapala/KLI
Patrick Kinney/KLI
Bill Whittenberg/RBF
Mark Moser/MW
Trevor Smith/RBF
Brock Ortega/Dudek/RBF
Alec Gerry/DHS
Charles Myers/DHS
Jeanne-Maria Lane/DHS
Alan Batdorf/BC
Mark Williams/BC
Doug Robison/BC
Mike Barrett/UT/RBF

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MEETING MINUTES

Meeting Date: June 29, 1999

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	Opening Remarks (CT): . CT indicated the CT statewide permit should be issued in July. The permit indicates that CT must meet WQ objectives. CT indicated that they may have to deploy BMP devices to satisfy the permit. The Pilot Program is very import in this regard.	FYI			
02	Opening Remarks (Plaintiff): EPA: Plaintiffs are still very interested in having a second year of monitoring for the D11 Pilot sites. Plaintiffs may escalate the issue to dispute resolution. NRDC: Cautioned that the more often that Caltrans delays taking appropriate action in response to Plaintiffs' concerns, the more likely the Plaintiffs will see it necessary to engage in legal battles with CT. SDBK: They are supportive of EPA position of the monitoring for a second year in D11. NRDC: Would like to reinforce the idea that issues should be recorded on a site by site basis in the final program documentation.	FYI			
03	Agenda Item 3a: It was noted that the peer review report was mailed on June 28 th . RBF indicated that a conference call to discuss the report would be scheduled for early August. SDBK noted that the design water surface elevations should be plotted on the groundwater graph for the basin. CT indicated a desire to keep the teleconference on the infiltration basin technically focused.	New	6/29	8/3	Peinado/Taylor
04	Item 3b: CT indicated that they have agreed to monitor the infiltration trench at the Carlsbad MS per the Scoping Study.	New	6/29		KLI
05	Item 3c: RBF/CT agreed with the Plaintiff comment that flow entering the Palomar bioswale will be estimated, and taken into account (the reduced residence time of some of the flow) when evaluating the swale efficiency. This is attributed to the mainline sheet flow runoff entering along the BMP device.	New	6/29		KLI
06	Item 3d: RBF indicated that the final program documentation would include a discussion of providing ramp access to the filter and sedimentation chambers of Austin type sand filters	New	6/29		RBF
07	Item 3e: RBF indicated that a discussion of the cost of the storm drain system retrofits would be included in the program documentation at the Manchester EDB, since the storm drain system retrofit costs were a significant portion of the overall BMP Pilot cost at this site.	New	6/29		RBF
08	Item 3f: A brief overview of the drain inlet inserts alternatives report was given by LAW. Caltrans requested that further discussion of this issue be tabled until the Plaintiffs had the opportunity to review the report. The Plaintiffs also noted that the type of inlet must be considered as a part of the design, and that the program had proven so far that the installation of the devices into standard CT inlets is not generic. The Plaintiffs also questioned whether source controls at the sites should be investigated to further understand the apparent high TSS readings at some locations. After some internal discussion, CT agreed to two steps: (1) CT indicated that potential source control issues discovered as a part of the pilot program monitoring would be brought to the attention of the appropriate District staff, and (2) that the Pilot Program monitoring team would check in with the District staff (monthly) to determine if any events had occurred in the BMP watershed that could impact the monitoring data. CT also indicated that	New	6/29		MW

MEETING MINUTES

Meeting Date: June 29, 1998

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	the frequency of inspection by the Pilot Retrofit teams during non-storm events will be increased to weekly for sites where non stormwater runoff was observed to be a problem.				
09	The Plaintiffs noted that a permanent fix for the by-pass problem at the Carlsbad Infiltration Trench must be completed well before the next rainy season begins (October). RBF indicated that the work would be completed prior to the next Quarterly Status Meeting.	New	6/29		KLI
010	Item 4: CT reviewed the status of the construction projects in D7 and called the Plaintiffs attention to the revised schedules. The Plaintiffs questioned whether the schedules could be accelerated, and the District staff explained that public contracting requirements are largely dictating the schedule.	New	6/29		
011	Item 4 (cont): NRDC and EPA expressed concern about non-stormwater discharge activity, including from vehicle washing. NRDC noted that the non-stormwater activity impairs the proper functioning of the retrofit pilot project and is inconsistent with the retrofit requirements. CT claimed that non-stormwater discharges do occur and may not be a violation of any requirement. Both EPA and NRDC took issue with this position, explaining that the Clean Water Act, CT's permits, and CT's own plans call for the elimination of the types of non-stormwater discharges at issue here. The expressed concerns included that Altadena maintenance station, I-5/605 Extended Detention Basin and swale, Foothill sand filter, and Kearney Mesa maintenance station. NRDC had several device specific issues in District 7: 1. Cerritos MS and Del Amo Swales: Installation of drain plugs to drain the energy dissipators after storms. CT indicated this work would be completed during the month of July. 2. 605/91 EDB: Plaintiffs noted there is bare soil at the EDB. RBF responded that the slopes would be re-seeded per the Maintenance Indicator Document following the scheduled inspections. Noted that the basin has a detention time problem and there appeared to be tire tracks in the basin. BC responded that the detention time problem is under review, and that the tire tracks in the basin were from the mowing equipment. 3. Eastern MS SF: Leak detected in the sump. BC responded that the sump was constructed of plastic pipe, and that the leak may have occurred between the pipe and the concrete. The leak has been sealed with a new gasket on the pipe fitting and with pressure grout. 4. I-5/I-605 EDB and swale. It was noted that these sites were treated with Golden Bear oil. Plaintiff was concerned that this was not the correct action to take initially, which should consist of more preventative measures. LWA responded that the GLVCD was visiting the sites on a 10 day interval, and that the mosquito breeding situation had escalated rapidly at the site. The VCD will use a biological method for control in the future, and visit the sites on a weekly interval.	New	6/29		CT
012	Item 4 (cont): The SDBK noted that the maintenance of the BMPs should be through CT and not via contract through the Consultants in order to take advantage of economies available to the existing maintenance forces, and also for CT to gain the experience of the maintenance of these types of devices. CT responded that the devices are not within the standard maintenance practices and that training would be required which is not part of the pilot program. Further, CT noted that there are no fiscal resources	New	6/29		RBF

MEETING MINUTES

Meeting Date: June 29, 1998

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	available to fund the work by CT. The Plaintiff noted that the record of experience should reflect these issues.				
013	Item 5: CT provided an overview of the construction in District 11. It was noted that the construction was complete at the La Costa Wet Basin, Manchester EDB and Palomar Airport Road on or before June 29 th for each site. The Plaintiff asked about change orders for the Wetbasin, \$2k for partnering and \$5k for public information. CT indicated that these costs were not incurred at these sites, and are customarily put in as a contingency for use at the RE's discretion. Plaintiffs also asked what the plant establishment CO was for at Palomar Airport Road swale. CT noted that this was not a CO that was to be executed, and that the establishment work would be done by KLI.	New	6/29		KLI/RBF
014	Item 5 (cont): Plaintiffs noted that they are looking for all District 11 devices to be operational for the 1999-2000 monitoring season. RBF responded that all devices are currently ready. Plaintiff noted that some of the dates in the tables included in the Quarterly Report should be revised to show readiness as of October 1, 1999. RBF to forward documentation from the manufacturer indicating that zeolite and perlite are the preferred filter media's for the Stormfilter at Kearny Mesa MS. The Plaintiffs also noted there appeared to be a non-stormwater source at the KM facility per the OMM reports. The Plaintiffs also noted the leak in the gate valve at the Escondido MS sand filter, but it was decided after discussion that corrective action was not required.	New	6/29		RBF
015	Item 6c: KLI provided an overview of the D11 sampling data/results. The definition of a successfully sampled storm was discussed. Depends on a number of factors including: 1. Rainfall thresholds identified in OMM, 2. If there is flow in and out of the BMP, 3. If chemical analyses are successful per QA/QC specifications. This definition will be further refined in the OMM revisions.	New	6/29		RBF
016	Item 6c (cont): Plaintiffs noted a high degree of capture was evident. The question was raised as to what is the maximum holding time for a sample, particularly with a long event. KLI responded that the accepted definition of holding time starts from when the sample is pulled from the collector, therefore long duration of a storm is not a problem. Further, holding times are constituent specific, and if there is an issue with a specific constituent, a grab sample can be collected manually. Plaintiffs requested that individual storm summaries be provided for the entire 1998-99 sampling season.	New	6/29		KLI/RBF
017	Item 6c (cont): Plaintiffs expressed concern that the benefit assessment program has not yet been fully defined. Plaintiffs were also concerned that special effort is made to capture the first storms of the upcoming monitoring season.	New	6/29		KLI/RBF
018	Item 6a: BC gave an overview of the District 7 sites they are responsible for, for sampling and observation/maintenance. Plaintiffs expressed the desire for a uniform reporting format. RBF responded that the project database would satisfy this request.	New	6/29		RBF
019	Item 6a (cont): NRDC commented that the reports had possibly intimated that losses in the BMPs make the loading calculations inaccurate or invalid. NRDC pointed out that such losses are a legitimate part of	New	6/29		KLI/BC/MW

MEETING MINUTES

Meeting Date: June 29, 1998

Page 5

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	the BMP removal mechanism, and should be accounted for a such, and all agree with this point				
020	Item 6a (cont): NRDC indicated that some of the detection limits indicated in the Quarterly Report are too high, not consistent with Caltrans requirements. CT indicated that this remains an issue that is under review by a team from CSUS. CT to report on this issue in the next few weeks.	New	6/29		CT
021	Item 6b: Law provided an overview of the projects they are responsible for. It was noted that the Streamguard insert required significant field modification to achieve acceptable operation. Flow by-pass at all of the drain inlet inserts was discussed.	FYI	6/29		
022	Item 6d: The project data base objective was discussed (central repository and report tool for all pilot project information). It was noted that the database should be populated by mid-September.	New	6/29		Law/RBF
023	Item 7: RBF reviewed the proposed changes to both Volume I and Volume II and asked for Plaintiff comments by 7 July.	New	6/29	7/7	Plaintiffs
024	Item 7 (cont): The EPA commented that some of the changes in the Maintenance Indicator Document (MID) seem to have been made in response to endangered species, specifically the removal of wetland vegetation from the devices. Plaintiffs to comment specifically on the MID, but would prefer a means of accommodating endangered species in the project. It was also noted that the MID would differ depending upon region – subject to various endangered species.	New	6/29		Plaintiffs
025	Item 8: RBF reviewed the biofilter material selection criteria, development of the plants at the nursery, maintenance of the sites and the general condition of the sites. The Plaintiffs would like a report in the final record of experience as to recommendations for future plantings (type, timing, seed or sod). A contingency plan (prepared by Martha Blane, June 28, 1999) for ensuring good coverage for the 1999-2000 sampling season was also presented to the group for review and comment.	New	6/29		RBF/Pilot Team
026	Item 9: LWA gave an overview of the VCD activities, and a report on the status of the agreement with the DHS (approved) and their role in the project. There is one remaining unexecuted agreement with LACWVCD. In District 7 a total of nine sites have been abated to date. Energy dissipators storing water have been a problem to date.	FYI	6/29		
027	Item 10: RBF gave an overview of the biological review and discussed the project biologist role to evaluate endangered species issues relative to the operation of the pilots.	FYI	6/29		
028	Item 11: Closing issues. The next quarterly status meeting was set for September 30 th , 1999. The next bi-weekly conference call was scheduled for July 28 th , 1999. The meeting was adjourned for field visits of the sites.	FYI			



Robert Bein, William Frost & Associates
PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS

JN: 34123,34218

STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes

ISSUE VERSION: Final

MEETING NO.: 6
DATE: 9/30/99
TIME: 9:30 am
LOCATION:
District 7, Rm
416

SUBJECT: Quarterly Status Meeting No. 6

Prepared by: S. Taylor

Approved by:



(Signature)

Date Prepared: 10/7/99

Attendee Names / Company

Rich Horner/NRDC
Chris May/NRDC
Rick Graff/SD BayKeeper
John Barth/SD BayKeeper
Steve Fleischli/SM BayKeeper
Bruce Reznik/SD BayKeeper
Jeremy Johnstone/USEPA (Phone, partial)
Everett DeLano/NRDC (Phone, partial)
Steve Borroum/Caltrans
Brian Currier/UCD
Doug Failing/Caltrans
Peter Van Riper/Caltrans
Richard Gordon/Caltrans
Cid Tesoro/Caltrans
Sayra Ramos/Caltrans
Bob Wu/Caltrans
Emilo Veramontes/Caltrans
Bill Evans/Caltrans

Attendee Names / Company

Dean Messer/LWA
Anna Lantin/RBF
Scott Taylor/RBF
Trevor Smith/RBF
Ed Othmer/Law
Bill Whittenberg/RBF
Ann Walker/RBF
Brock Ortega/Dudek
Matt Zapala/KLI
Pat Kinney/KLI
Gary Freidman/MW
Steve Briniger/MW
Bob Finn/BC
Doug Robison/BC
Alan Batdorf/BC
Mike Barrett/RBF/UT
Mark Moser/MW

Copies To:

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The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

MEETING MINUTES

Meeting Date: September 30, 1999

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	The Plaintiffs noted that there was some disagreement over the meeting minutes for the last quarterly status meeting. BayKeeper asked if the primary issues could be summarized at the end of the meeting to make sure there was agreement. RBF agreed to provide a summary.	FYI			
02	BayKeeper asked that the La Costa Infiltration basin be added as an agenda item (11a). NRDC asked that the cost estimate issue also be added as an agenda item (11b), and SM BayKeeper asked that the North Hollywood site be added to the agenda (11c). Agenda Item 11 was taken first at the Plaintiffs request.	FYI			
03	Agenda Item 11(non-stormwater issues): EPA asked that the table indicating the non-stormwater inspection results be updated. The EPA also wanted an update from the Districts as to their investigation into the source of the non-stormwater discharges at each site. Caltrans responded that the reports can be produced in the timeframe needed by the Plaintiffs (monthly). It was agreed that the format for the reports would be consistent between the Districts, and the District 7 format would be shared with District 11. The reports will be available to coincide with the bi-weekly status calls.				RBF/District 11/District 7
04	Agenda Item 11 (con't): NRDC noted that the OMM manual needs to be updated to include the non-stormwater inspections. Caltrans agreed. SD BayKeeper requested that all of the maintenance stations in District 11 be inspected for non-stormwater discharges similar to that agreed to in District 7. District 11 will respond to BayKeeper on this issue.				RBF/Caltrans/Plaintiffs
05	Agenda Item 11 (con't): NRDC described a practice followed at the Rosemead Maintenance Station that was inimical to a good test of the drain inlet insert pilot BMP last winter and is contrary to District 7's Storm Water Management Plan. District 7 office, Baykeeper, and NRDC personnel learned of this practice during a tour on 9/29/99. When it was observed that some pollutant concentrations measured last winter were much higher than would be expected under circumstances of good source control, a station staff member unhesitatingly answered that the reason was likely the practice of the former superintendent of washing out road sweepers behind the office building and in a direct runoff path to one of the insert-equipped inlets, instead of at the clarifier.				
06	Agenda Item 11 (con't): Caltrans noted that Headquarters will be undertaking compliance (SWMP) reviews in District 7 this winter at the request of the District. The Plaintiffs requested copies of the compliance review reports. S. Borroum stated that he would check but "... would like to correct things before embarrassing people." He further indicated that, if shared, the reports will be seasonally summarized and will not focus on individuals. Caltrans and the Plaintiffs to discuss further the timing of the delivery of the reports to the Plaintiffs.				
07	Agenda Item 11a (La Costa Infiltration Basin): Caltrans noted that it is in the process of developing a formal response to EPA's letter and NRDC's letter on this subject. SD BayKeeper asked if the site would be monitored this winter. Caltrans indicated this would be addressed in the letter. Further investigation of the basin will be needed and may require withholding water to perform the investigation. SD				Caltrans D 11

MEETING MINUTES

Meeting Date: September 30, 1999

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	BayKeeper also asked about the notes from the technical conference call held on 8/25/99. Caltrans indicated that they had discussed the comments from R. Horner and R. Graff and would finalize the notes. NRDC and EPA requested written response to their letters on this issue.				
08	Agenda Item 11b (Construction Cost Estimates): Caltrans indicated that the Consultants are working on finalizing the construction costs (raw construction costs for those sites that are complete) and are expected to be finished within, at most, 4 weeks of this meeting. A conference call to discuss the costs, the format of the information, and the schedule for the cost workgroup has been set for October 15, at 9am.				All/Caltrans
09	Agenda Item 11c (North Hollywood site): SM Baykeeper requested to discuss this issue. Horner (NRDC) states that this issue is controversial and that he does not want this site demolished, instead "table it." Caltrans suggested that since this is a District 7 issue and outside of the pilot program, it should be discussed separately, Plaintiffs agreed. District 7 to discuss issue with the Plaintiffs. In the meantime, the District will ensure that the facility stays in place.				SM BayKeeper/ Caltrans District 7
010	Agenda Item 3 (Design Schedule): Caltrans reviewed design/construction schedule for CDS units and Paxton and Metro filters. The District noted that the schedule was predicated on not having challenges to the bid or significant rain delays. The Plaintiffs expressed concern about the schedule, noting that there is very little latitude to ensure the new pilots are ready to monitor by the Fall 2000. The Paxton 9/16/99 date has slipped to 10/12/99. D. Failing suggested for both Metro and Paxton that the Notice to Contractor note the need for Caltrans to get access to the sites early for installation of monitoring equipment.	FYI			
011	Agenda Item 4 (Vector Issues); LWA reviewed the program, two components: Adult and larval monitoring. Caltrans and DHS to determine whether adult monitoring will continue after this year. To date there does not appear to be a significant difference between control and study sites for adult mosquito population. Reviewed abatement that has occurred at existing sites this past summer. Plaintiffs asked that Bill Walton further discuss the control site and treatment relationship in his report. DHS has completed a study plan which has tentatively been accepted by Caltrans and will be distributed to the Plaintiffs in the month of October. DHS has also done a survey of BMPs across the country relative to abatement/breeding issues. This report of findings should be available in December 1999. An attempt will be made to link the vector and RBF data bases. The field costs for vector work are included in OM&M costs.	FYI			
012	Agenda Item 5 (Biological Issues): RBF/Dudek reviewed the biological reports (July/August). It was noted that Caltrans is preparing a letter to the FWS to note that the biofilters at Palomar Airport Road and Carlsbad MS may attract the salt marsh skipper, an endangered species. A similar letter will be prepared if habitat suitable for T&E species is noted at the La Costa Wet basin. It was noted that a net may be installed at the La Costa infiltration basin to preclude waterfowl from transferring fairy shrimp to	FYI			

MEETING MINUTES

Meeting Date: September 30, 1999

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	the site. It was decided that biological costs should be kept separate, but not included in the O&M cost for the pilots at this time.				
013	Agenda Item 6 (Device Specific Issues): MW reviewed the changes to the 605/91 strip monitoring equipment requested by the CHP, and modifications to energy dissipators at the Cerritos MS, 5/605 605/91 and 605 Del Amo swales to preclude ponding. Drain plugs were not considered since sediment could accumulate and plug the drain holes, and energy dissipators were grouted instead. The monitoring equipment at the Los Flores MS was moved to accommodate a request from Caltrans personnel. The Altadena drain was increased from 2 to 6 inches in June. Erosion control seeding of bare areas will occur in November according to the MID. Bare areas on biofiltration swale side slopes will be seeded with erosion control mix and tackifier. Irrigation will be removed when vegetation becomes dormant.	FYI			
014	Agenda Item 7 (Saltgrass Report): RBF reviewed the status of the saltgrass and indicated that all sites have achieved the coverage required by the MID and are therefore, 'operational' and ready for monitoring as of October 1. The Plaintiffs requested that the recommendations contained in the Peer Review Report be incorporated into the MID. Caltrans indicated the recommendations would be incorporated, or an explanation given as to why the recommendation is not appropriate. Caltrans noted that non-native species would not be used for the biofilters.	New			RBF
015	Agenda Item 8 (OMM Update): RBF reviewed the changes to the OMM plan, and noted the revision schedule. The OMM plan has been updated, and the monitoring consultants have the proper direction to begin monitoring. Actual reproduction of the Volumes may not occur until about the first of November to ensure that changes are cross checked and allow time for reproduction. All references to detection limits in the OMM plan will be made consistent in terms of reporting limits, which are what the numbers in the plan represent. Non-stormwater considerations will be included at all appropriate places in OMM forms.	New			RBF
016	Agenda Item 8 (con't): The Plaintiffs questioned when the mid term report, noted in Volume 1 of the OMM would be available. Caltrans responded that the current reporting (data available on the web, the bi-weekly reports and the quarterly reports) fulfill this purpose. SD BayKeeper indicated that Caltrans must also evaluate whether and to what extent BMP retrofit is appropriate per the requirements of the Consent Decree. Caltrans responded that this question was the primary focus of the San Diego Water Quality Control Control Study (SDWQCS). The Plaintiffs do not feel that they have been a part of the SDWQCS and are 'out of the loop'. Caltrans indicated that the study has been in a hiatus pending the appointment of full time staff persons both in the District and at Headquarters. Caltrans agreed to meet with the Plaintiffs soon on the study. It was agreed that the mid-term report was an annual status report, presenting the study findings to date, and that a good job had been done of providing this information.	New			Caltrans
017	Agenda Item No. 9 (Water Quality Monitoring Preparedness): The monitoring status for each Consultant (MW and BC in District 7, KLI in District 11) was reviewed. Each consultant confirmed readiness to	FYI			

MEETING MINUTES

Meeting Date: September 30, 1999

Page 5

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	monitor beginning October 1. SD BayKeeper noted that they take exception to the number of storms required for each site in District 11. It was agreed that pending the number of storms that could be collected this winter, the issue may be moot.				
018	Agenda Item No. 10 (Database): The database was reviewed and demonstrated for the Plaintiffs. Both the executable form and the data provided on the internet were reviewed. The suggestion was put forth to allow sorting on an individual site. The Plaintiffs noted that the OMM cost in District 7 was significantly higher than in District 11. They cautioned that construction and monitoring costs not be billed to O&M. It was agreed to further monitor this trend. The Plaintiffs further questioned why BMPs not built yet have O&M costs and were told that they were billed a share of training.	New			RBF
019	Agenda Item No. 12 (Closing): The next bi-weekly conference call was set for October 21, 1999 at 10 am. It was agreed that the bi-weekly calls would occur on Thursdays from this point forward. The next Quarterly Status Meeting was set for December 15 th .	FYI			



Robert Bein, William Frost & Associates
PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS

JN: 34123,34218

STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes

ISSUE VERSION: Final

MEETING NO.: 7

DATE: 12/15/99

TIME: 9:00 am

LOCATION: RBF

SUBJECT: Meeting Minutes for Quarterly Status Meeting No. 7

Prepared by: S. Taylor

Approved by: 

(Signature)

Date Prepared: 12/20/99

Attendee Names / Company

Steve Borroum/Caltrans
Brian Currier/Caltrans-UCD
Lanny Chronert/Caltrans
Emilio Viramontes/Caltrans
Pete Van Riper/Caltrans
Richard Gordon/Caltrans
Doug Failing/Caltrans
Bob Wu/Caltrans
Sayra Ramos/Caltrans
Cid Tesoro/Caltrans
Jim McCarthy/Caltrans
Rick Graff/SD BayKeeper
Chris May/NRDC
John Barth/SD BayKeeper
Jeremy Johnstone/EPA Region 9
Rich Horner/NRDC
Everett DeLano/NRDC
Bruce Reznik/SD BayKeeper
G. Wakoli Wekesa/DHS
Jeanne-Marie Lane/DHS
Mark Moser/MW-C

Attendee Names / Company

Ed Othmer/Law/MW-C
Margot Griswold/Earthworks/MW-C
Gary Friedman/MW-C
Byron Berger/Law/MW-C
Frances Palmer/RBF
Trevor Smith/RBF
Brock Ortega/Dudek/RBF
Bill Whittenberg/RBF
Mike Barrett/UT/RBF
Anna Lantin/RBF
Scott Taylor/RBF
Ann Walker/RBF
Dean Messer/LWA
Richard Haller/CDM
Jeff Endicott/CDM
Pat Kinney/KLI
Matt Zapala/KLI
Mark Williams/BC
Bob Finn/BC
Alan Batdorf/BC

Copies To: File, Jeff Joseph/Caltrans, Bill Evans/Caltrans

The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

MEETING MINUTES

Meeting Date: December 15, 1999

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
1.	Agenda Items 1 and 2. EPA indicated that the Pilot study and San Diego Water Quality Control Study (SDWQCS) may not fulfill the objectives of the consent decree. EPA is in a 'wait and see' mode to determine if the SDWQCS will fulfill the consent decree requirements. If they don't agree that the final report meets the requirements of the consent decree, they will seek program revisions and to collect stipulated penalties.	FYI	12/15		Caltrans
2.	Caltrans indicated that the SDWQCS is proceeding, but that there are few products to share at this time. The study team has completed some monitoring last winter and will monitor again this winter, Caltrans has also met with the Regional Board to discuss the study program. Caltrans has also discussed the study with those parties that may fund the programs. Caltrans has no doubt that the study will successfully fulfill the requirements of the consent decree.	FYI	12/15		
3.	SD BayKeeper inquired about the water quality studies in San Diego, relative to scope and status, and when copies would be available for review. Caltrans indicated that the studies were not complete yet and would not be for about 1 year, the monitoring data needs to be compiled and reviewed in total. Caltrans is monitoring receiving waters this winter, one location may be changing based on comments received from the Regional Board.	FYI	12/15		
4.	NRDC had three brief comments: 1) Liked the location for the meeting. 2) Inquired about the availability of Caltrans' SWMP. Caltrans indicated that the SWMP is out, and that staged mailings, as copies are available, are occurring. 3) Meeting minutes: Two versions are included in the current Status report. Caltrans intends to final both versions. NRDC objects to having two final versions. It was agreed that attorneys from NRDC and Caltrans would discuss this issue.	FYI	12/15	3/15	Caltrans/NRDC
5.	Agenda Item 3. Non stormwater discharges – District 7: Non stormwater discharge at Altadena MS, broken irrigation line from car hitting the line was the cause. In the future, MS staff will test the sprinklers before they will go home. Began weekly non-stormwater inspections during the week of November 21st at the Pilot Maintenance Stations and other MS sites in the District. The only other discharge was at the Via Verde park and ride, again due to the irrigation system. This P&R is maintained by the City of San Dimas, not Caltrans. Caltrans has spoken to the City about correcting the over-irrigation problem. NRDC inquired about the non-stormwater reports, the District noted that the NRDC attorney should be receiving the reports through the District 7 legal counsel.	FYI	12/15		District 7
6.	Non-stormwater discharges – District 11: No non-stormwater discharges to report at this time. Report forwarded early this week by the District. KLI performed the inspections, no non-stormwater discharges found. District 11 will track the weekly inspections. NRDC inquired about the language in the report table, terms are different, i.e., sometimes it says no water present, sometimes says no evidence of water. Caltrans responded that this is language is meant to be equivalent, and that the changed wording was not intentional. Plaintiff noted they are interested in	New	12/15	3/15	District 11

MEETING MINUTES

Meeting Date: December 15, 1999

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>either flow or evidence of flow. NRDC also noted that there are five sites that have had persistent water. Does Caltrans believe we are seeing the discharges, or that we are missing the discharges during the inspections? Caltrans responded that the non-stormwater flows appear to have been abated, and that we are not missing flows between inspections. NRDC further inquired as to how the evidence of flow is reported. Caltrans indicated that flows are classified as either past or present. The District will try to coordinate KLI inspections with VCD inspections, so there are not problems with interpretation of what flow is seen by which inspection team.</p>				
7.	<p>Agenda Item 4. Metro/Paxton projects are on track and on schedule for submittal of comments from HQ back to the District, Caltrans HQ will submit comments back to the District on the 24th (December) as previously committed.</p> <p>NRDC noted that Metro/Paxton projects are more than 6 months behind schedule, and noted concern relative to being ready for monitoring by next fall.</p> <p>CDS sites: The District reported there is a problem with the bids relative to a review of the DVBE material, which was lost in review;- this adds a week to the award process. No problem in awarding to the apparent low bidder. NRDC noted that the District has previously agreed to augment the Notice to Contractor in the specifications to allow the installation of sampling equipment during construction. The District agreed to follow up on this.</p> <p>NRDC inquired as to the participation of the CDS manufacturer in assisting during construction. MW-C noted that the manufacturer will be onsite to assist, but they are not part of the United Pumping Team (low bidder).</p>	New	12/15	3/15	District 7
8.	<p>Agenda Item 5. (5a): Lakewood Park and Ride: Voltage problem, too low to start pumps. The cause was not determined. BC has installed a buck booster, the problem has been corrected. (5b): La Costa Infiltration Basin: Caltrans indicated that this will be resolved by legal counsel. District 11 will be responding to EPA's letter on this issue. Caltrans asked if the letter was coordinated between the Plaintiffs. Region 9 responded that the letter was coordinated, but it was an EPA only letter, not formally representing any of the other Plaintiffs on the issue. Caltrans indicated that Jeff Joseph will be handling the issue, Jeff has left a message and email with Laurie Kermish at EPA, they will set up a teleconference.</p>	New	12/15	1/15	Caltrans/Region 9
9.	<p>(5c): Kearny Mesa MS: RBF explained how the media was installed by Stormwater without following established procedures for a change to the project specifications. It was decided that the perlite/zeolite media would be retained for this year, and reevaluated as to whether to change it for the following season. Caltrans noted that regardless of the media selection, only one-year of monitoring would be</p>	New	12/15	3/15	Caltrans/Plaintiffs/ RBF

MEETING MINUTES

Meeting Date: December 15, 1999

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>completed at the site after this season.</p> <p>NRDC asked why Caltrans had not shared preliminary data with Stormwater (referring to the memorandum from the manufacturer in the Quarterly Report). Caltrans responded that this was because they want the pilot program team to be comfortable with the data before it is released to the general public. Caltrans further indicated that with the plaintiffs' permission, at the time the data is shared with the pilot team, we would also share it with the public. NRDC responded that no one should get raw unprocessed data, but that for the present case, last year's data could be shared with the manufacturers. Caltrans agreed to provide last year's data to Stormwater, and with Plaintiff concurrence, will do the same with other proprietary devices.</p> <p>The following was agreed to by all parties: 1. Stormwater would be contacted for procedures relative to 'seasoning' the media in the filter, to ensure it is ready to operate at peak performance. 2. Provide Stormwater a package with last years data, 3. Meet next summer to decide if the media will be changed to compost; and, 4. The MID would be made consistent with StormFilter's recommendations regarding backflushing. No agreement has been reached to extend the time of the monitoring program. This decision would be independent of the media change; the Plaintiffs did not agree on this point. Caltrans indicated that the process as defined is a good faith effort, and any dispute resolution process would probably view this effort favorably. Caltrans may want to formally amend the Pilot Program study plan, Caltrans to speak with their Council on this issue. It was also agreed that at the end of the pilot program, the media would be sent to Stormwater for their analysis to develop a site-specific estimate as to the remaining life of the media between major maintenance activities. The OMM plan will be changed to reflect this final analysis by the manufacturer.</p>				
10.	(5d): Manchester Hydroseeding: Re-seeding done as a follow-up to construction, when initial application did not germinate in June.	FYI	12/15		
11.	(5e): 605/91 Energy dissipator. The original construction over-grouted the dissipator, resulting in flow bypassing the basin. The grouting was chipped out and the weir plate raised 30mm. The Contractor was responsible for the cost of these changes.	FYI	12/15		
12.	(5f): Altadena: MW-C explained why the spreader ditch is retaining water. The source of water is rain, and per the MID the spreader ditch drain plug is closed during the winter. The Plaintiffs suggested that Caltrans consider draining the spreader ditch after each storm to avoid the problems of vector abatement. Caltrans directed MW-C to work with RBF to change the MID to include this suggestion. Caltrans also directed MW-C to develop an alternative design for the spreader ditch so that it would not retain water. This alternative design is to be documented in the Summary Design Report.	FYI	12/15	3/15	MW-C/RBF

MEETING MINUTES

Meeting Date: December 15, 1999

Page 5

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
13.	<p>Agenda Item 6. Vector Activities: Vector Issues Summary: 13 abatement actions this quarter, 12 in District 7. San Diego had some abatement at a detention basin (I-5/SR 56) since breeding was occurring on a regular basis. Altosid for abatement. It was noted that the I-5/SR 56 site is close to a number of mosquito sources. DHS activities: The U.S. survey report is behind schedule since the primary author has left DHS employ. The report is scheduled to be completed on Jan 15, 2000. The report scope will be expanded to include a questionnaire focused on the abatement practices of other vector districts in other states. Production study: Underway, collecting data in September. The study used to incorporate primary sites (DHS) and secondary sites, surveyed by the VCDs. DHS is now treating every site as a primary site.</p> <p>Database: DHS is currently working on technical issues with the database. DHS will provide an updated version of the database to RBF so that it can be included as a part of the Pilot Program database. DHS is also working to ensure that sampling is consistent between the vector districts. SD Baykeeper indicated that monitoring should be completed at all District 11 sites through 2001.</p> <p>The adult mosquito monitoring program is scheduled to terminate in two weeks. Dr. Walton will then analyze the data set. Caltrans will meet with Dr. Walton to discuss the results of the adult mosquito study at end of January and determine if it would appear useful to monitor for an additional year. NRDC asked if there are any findings from the control vs. treatment (BMP sites) pairs in the adult study. LWA indicated that Dr. Walton does not want to draw conclusions until he has had the opportunity to review the entire data set. Caltrans indicated that the raw data from the adult study would be shared with the Plaintiffs as soon as possible, with a target of the next bi-weekly call.</p> <p>SD BayKeeper noted that the DHS position that the sites should be monitored in San Diego for two years (for vectors) through 2001 supports the SDBK assertion that accompanying water quality monitoring should be continued through 2001 at all sites.</p>	New	12/15	1/20	LWA
14.	<p>Agenda Item 7: Biology: Gophers and squirrels were the main issues this quarter. Two survey letters that were forwarded to the Fish and Wildlife Service were distributed and discussed. The first letter concerns the La Costa Wet Basin and provides a survey protocol for the light footed clapper rail. The second letter concerns coastal locations with saltgrass, and provides a survey protocol for the salt marsh skipper. The purpose of the letters is to begin an early consultation with the Service relative to potential endangered species harborage at the pilot sites. NRDC noted that this appeared to be a follow-up to the Plaintiffs suggestion from the prior quarterly status meeting. Caltrans indicated that they would keep the Plaintiffs informed of any response from the service.</p>	FYI	12/15	New	
15.	<p>Agenda Item 8: OMM O&M Cost Data: RBF reviewed the cost data and graphs in the Status Report.</p>				

MEETING MINUTES

Meeting Date: December 15, 1999

Page 6

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>NRDC asked if backup data was available by task for the summary hours shown on the spreadsheet. RBF indicated that full backup is available, and could be provided with a bi-weekly report. It was also suggested that a final graph by device type be developed at the end of the study, showing average O&M cost.</p>				
16.	<p>Agenda Item 9: OMM Activities: Brown and Caldwell Sites: All sites ready for monitoring. Noted the hydroseed application was completed in November at sites that did not meet MID required coverage requirement. The hydroseed has not sprouted yet due to lack of rainfall. NRDC asked about an area adjacent to the BMP at I-605/SR 91 that appeared disturbed (graded). BC noted that this area was outside of the pilot project. District 7 indicated they would review this situation. BC has asked DHS for suggestions to modify the MCTTs to improve inspection for vectors. DHS has yet to provide the suggested modifications.</p> <p>LAW sites: NRDC was pleased with the use of a gravel access road rather than asphalt at the I-605/SR 91 site. The maintenance access was modified due to changes in the site requested by the CHP.</p> <p>NRDC asked about the storm mobilization criteria. Law explained that the teams use the same forecast for each site, from the NWS and a private consultant. The teams also look at micro-forecasts. Region 9 asked about the maintenance of the drain inlet inserts and noted that the Rosemead station requires more maintenance than the other sites (per the OMM information provided in the Status Report).</p> <p>District 11 Sites: I-5/SR 56: SD BayKeeper asked to look into grouting the riprap at the basin inlet to abate the standing water at this location. KLI to review the feasibility of this. Reviewed the maintenance that has occurred at each site during this quarter.</p>	New	12/15	3/15	KLI
17.	<p>Agenda Item 10: Cost Workgroup Update: Caltrans introduced CDM, the 3rd party consultants for the pilot cost review. Caltrans is working on packaging the data, including the lingering elements of construction (change orders). NRDC asked what the timeline for release of the data is. Caltrans indicated the data should be ready by the first part of the year, or by the first two weeks of January. SD BayKeeper inquired if Caltrans is also putting together costs for deployment of the BMPs. Caltrans responded that a preliminary estimate would be provided to the cost work group to get the Consultants' perspective on the cost.</p>	New	12/15	1/31	Caltrans
18.	<p>Non Agenda Item: A Memo from Woodward Clyde Consultants responding to NRDC's comments on the Sod Peer Review report was handed out and discussed.</p> <p>NRDC saw the Memo as information for future reference, and believes the saltgrass is suitable for the pilot program.</p> <p>Caltrans concurred with NRDC on the use of the Woodward Clyde Memo. Caltrans remains concerned</p>	New	12/15	6/2001	Caltrans

MEETING MINUTES

Meeting Date: December 15, 1999

Page 7

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	about the saltgrass and its survivability over the summer without irrigation. After the pilot project is completed, there is a need to look at the type of plant material used for biofilters. Seed mixture, type of plant material, and planting method will be a future work item that will be explored in the Pilot Program Summary Report.				
19.	The next meeting was scheduled for March 15, 2000, at RBF. The next bi-weekly conference call was scheduled for January 13, 10am. Meeting Adjourned.				



Robert Bein, William Frost & Associates

PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS

JN: 34123,34218

STORMWATER PLANNING AND RESEARCH SERVICES

CONTRACT NO. 43A0004A

Meeting Minutes

ISSUE VERSION: Final

MEETING NO.: 8

DATE: 3/15/00

TIME: 9:00 am

LOCATION:

RBF Irvine

SUBJECT: Quarterly Status Meeting No. 8

Prepared by: S. Taylor

Approved by:

(Signature)

Date Prepared: 3/17/00

Attendee Names / Company

Sayra Ramos/CT District 11
Doug Failing/CT District 7
Steve Borroum/CT HQ
Brian Currier/CT HQ/UCD
Bob Wu/CT HQ
John Johnston/CSUS
William Evans/CT District 7
Richard Gordon/CT District 7
Pete Van Riper/CT District 7
Michael Samadian/CT HQ
Jeremy Johnstone/USEPA
Rick Graff/SDBK
Bruce Reznik/SDBK
Steve Fleischli/SMBayKeeper
Rich Horner/NRDC/SMBK
Everett DeLano/NRDC
Julie Hamilton/SDBK
Bill Whittenberg/RBF

Attendee Names / Company

Anna Lantin/RBF
Scott Taylor/RBF
Alan Batdorf/BC
Robert Finn/BC
Mark Williams/BC
Ed Othmer/MW/Law
Byron Berger/MW/Law
Marty Stevenson/KLI
Matt Zapala/KLI
Jeanne-Marie Lane/DHS
Mike Barrett/RBF/UT
Mike Devine/CSDVC
Wakoli Wekesa/DHS
Brock Ortega/RBF/Dudek
Ann Walker/RBF
Mark Moser/MW
Dean Messer/LWA
Trevor Smith/RBF

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The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

Quarterly Status Meeting No. 8

March 15, 2000

Page 2

Cid Tesoro/CT D11

Jeffrey Joseph/CT D11

L. Chronert/CT D11

Chris May/NRDC

Vicki Kramer/DHS

Chuck Meyers/DHS

MEETING MINUTES

Meeting Date: March 15, 2000

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	Agenda Item 2, Opening Remarks: Opening remarks from Plaintiffs – Plaintiffs inquired if comments on meeting minutes were addressed (from Q7). CT responded that the minutes were final with Plaintiff comments incorporated. Plaintiffs asked if Caltrans was updating the master schedule to show that the final reports would come out (for the Consent Decree) next year. Further discussion was deferred to later in the meeting.	FYI	3/15		
02	Agenda Item 3, Non-Stormwater Discharge Reports: District 7: Only one nonstormwater discharge, at I 605 Del Amo Bioswale. A rainbird was dripping water, the problem was corrected. Plaintiffs asked if vehicle washing is being done at designated wash racks per the separate agreement with the District. CT indicated that the agreement has been communicated to the supervisors at the Maintenance Stations. The Plaintiffs asked for follow-up to make sure the agreement has been implemented. Caltrans agreed. Doug Failing suggested that continuing communication on this issue be incorporated into Richard Gordon’s regular reviews.	New	3/15	6/15	Caltrans D7
03	Agenda Item 3, Con’t: District 11: No non-stormwater discharges in District 11. Plaintiffs requested that the report should indicate that there is no evidence of non-stormwater discharge, rather stating that there is no discharge. CT agreed to change the wording in the report.	New	3/15	3/30	Caltrans D7/D11
04	Agenda Item 4, Design Activities in District 7: The status of the CDS pilot construction was briefly reviewed. Questions were deferred since the MW-C representative was in the field with Plaintiff representatives. Plaintiffs asked when monitoring equipment would be in place at the sites. Pilot team to respond at the next bi-weekly conference call.	New	3/15	3/30	MW-C
05	Agenda Item 4, Con’t: Metro MCTT/Paxton Sand Filter – The new construction schedule was shared with an additional geotechnical review, the schedule shows construction complete at the end of the year (12/20). District 7 will look at 'risk listing' of the projects. Risk listing may save up to 4-6 weeks, but it is unknown if this process can be used for this project. Plaintiffs indicated that it will require an additional monitoring season to satisfy the program. CT noted that they could still get the required 4 storms even if the pilots are not completed until January 2001. Plaintiffs agreed the decision would be weather dependent.	FYI	3/15		
06	Agenda Item 5, Monitoring Discussion: There has been intense monitoring activity in February. Mobilization Criteria: Missed at least one event that did not meet the threshold criteria. The minimum criteria for mobilization was lowered for the remainder of the 99/00 season from 50 % chance of 0.25 inch to 25% chance of 0.25 inch. This was accepted by the various parties in a bi-weekly call on 2/17/00, and the criteria was changed accordingly at that time. Discussed some of the issues surrounding the effort for, and problems of mobilization, and time required to mobilize. Plaintiffs noted that if there is an event and it is not monitored because it does not meet the threshold, then the next event, even if not spaced by 48 hrs, may be monitorable from an OMM rainfall criteria perspective. The Plaintiffs want to consider setting a maximum rainfall depth, or other suitable criteria that will initiate the 48 hr waiting	New	3/15	4/15	Caltrans

MEETING MINUTES

Meeting Date: March 15, 2000

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>period. Otherwise, the 48 hour minimum interevent time may not be needed. CT was open to this approach. CT to confer with the consultant teams and get back to the Plaintiffs with a proposal to modify the 48 hr interevent criteria. On a related note, CT indicated that they are doing a first flush study, the study results are about 1-year out, also corresponding with SCCWRP on their work in this area.</p>				
07	<p>Agenda Item 5, Con't: Sample Aliquots/use of previous events: A minimum of 12 aliquots is required per storm (OMM), an aliquot is a sample, taken each time the pump in the sampling unit is activated. The goal is 12 aliquots per storm and a 75 percent overall storm capture, so that the sample is representative of the event. The samplers are generally set to 78 samples (aliquots) for an event, and the spacing is longer or shorter between the samples depending on the length of the hydrograph. Due to infiltration and storm time, some effluent samples at some sites did not get the required number of aliquots. It was agreed to keep an asterisk by this data, and see, after the end of the monitoring season, if the data should be incorporated into the final efficiency calculations for the device. It was agreed that CT will bring a proposal to the Plaintiffs discussing aliquots and percent of storm capture relative to inclusion of data that does not meet the current criteria (as stated in the OMM) in the final device efficiency calculations.</p>	New	3/15	6/15	Caltrans/Consultants
08	<p>Agenda Item 6, OMM Presentations: District 7: BC Sites: BMPs operating well, some locations have gone into bypass mode during the three storms covered in this report. The January 25th event was not sampled, however, empirical observations were made. Sampling occurred on the other two events in February. Experienced bypass at all BMPs except the I-605/SR 91 EDB and Alameda MS OWS on February 20th event. Overall percent capture is near 100 %, the lowest is 66%. No events had less than 12 aliquots. Minor problems were experienced: a battery failure, flow meter failure (I 605/SR 91 EDB, 2/20), storm lost at this location due to the equipment problems. There is also a problem at some sites with a high head loss on the influent side of the sampler, causing premature equipment wear. BC inspecting the equipment now to ensure it remains serviceable. It was further clarified that there were two bypass storm events at most sites in LA. Plaintiffs noted that the lack of effluent at biofilters is OK, since they are then performing at 100% effectiveness. A practice that is evolving at WSDOT is to manage roadside ditches according to water quality considerations, as long as they can still perform their conveyance function effectively, including among various techniques soil aeration to promote infiltration, followed by stabilizing with vegetation. CT noted that disturbing the soil could lead to erosion and discharge of sediment. Plaintiffs noted if stabilization is done after disturbance, erosion should not be a problem. CT believes that the jury is still out on the technical feasibility of bioswales, and noted that maintaining the vegetation will be an issue, specifically in dealing with potential fire hazard that biofilters may develop in dry summer conditions.</p>	New	3/15	9/15	BC

MEETING MINUTES

Meeting Date: March 15, 2000

Page 5

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>BC OMM inspections: Replacing pumps at a number of sites because of current draw problems, and pumps failing to operate at certain times. Some media filters are building up sediment, resulting in longer detention on the filter. DHS is assessing options for MCTT vector monitoring. Hydroseed is doing well at all sites. Via Verde sedimentation chamber is leaking, the cause will be found and fixed in the dry season.</p>				
09	<p>Agenda Item 6, Con't: District 7: MW/LC sites: All percent storm captures were above 75% for the storms monitored during this period. The number of aliquots is greater than 12 with the exception of 6 samples. It was noted that we had yet to get a successful sample from the lysimeters. The Plaintiffs noted that it is a problematic form of monitoring, but has worked on some occasions in the past. In particular, the Plaintiffs asked if the vacuum is applied for an extended time, or only around the sampling time. When informed the latter is true, the Plaintiffs noted that other applications in their experience applied the vacuum continuously for an extended time before sampling; and they assumed that procedure was being used in this study, as it should be. We have met the four-storm goal for most Drain Inlet insert sites, except Las Flores and Rosemead (2 locations). It was stated that there is not much effluent out of the biofilters. The Plaintiffs noted a similar experience in monitoring a bioswale in the Pacific northwest. Additional discussion occurred relative to percent storm capture at biofilter devices.</p> <p>The analytical cost for sampling is about \$6000 per year per site. The Fossil Filter must be cleaned during events, the crews are seeing bypass because the capacity of the filter is exceeded. The absorbent in the Fossil Filters does not need to be replaced per the guidance in the MID. The Plaintiffs asked why trash and debris accumulating more in the Fossil Filters than the Streamguard inserts. Law indicated that this was due to the number of trees and size of drainage area tributary to the Streamguard devices. Generally, the Fossil Filters are in watersheds that have more debris production. The Plaintiffs asked when bypass of the filters is occurring. Bypass occurs regularly at the sites for most storms for the Fossil Filter units. For Streamguard there have been observed bypass events also, and some ponded water in the inserts, and flooding at the inlet has occurred. The Vendor (Foss) indicates that these are not uncommon issues with the Streamguard. The maintenance threshold may need to be changed for the Streamguard to reduce bypass/flooding problems. Streamguard did fall into the drain during one event, at one location. It fell due to weight of water and debris (mostly leaves) in the filter bag. Shims were added to hold the bag in place, this 'fix' is beyond the normal installation practice.</p> <p>The flow in the bioswale is being distributed uniformly. Trash/debris is building up at the upstream energy dissipator for most bioswales. Gophers are a continuing problem, with implications for the type of material that is planted for the biofilters. The Plaintiffs suggested that it be noted in the record of experience that it is preferable for swales to be in cut rather than fill. The Plaintiffs noted that the burrowing owl should not be driving maintenance issues for the pilots with respect to the trapping of</p>	New	3/15	4/15	Caltrans

MEETING MINUTES

Meeting Date: March 15, 2000

Page 6

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>gophers. Caltrans agreed to take this idea under advisement, and will suggest some changes to Plaintiffs with respect to the current trapping protocol for gophers listed in the MID. CT noted that we don't want to create a false environment for the pilot operation, but we must also be sensitive to the burrowing owl problem as well since their presence could limit maintenance of the device. It was clarified that trapping of gophers is an OM cost, not a pilot/monitoring cost.</p> <p>Traffic problems at the I 605/SR 91 infiltration basin were discussed. It was noted that flow bypass is occurring through the splitter/junction because the flow rate is too great. The weir plate can not be raised further because Cerritos Maintenance Station would flood from the resulting backwater. This is a retrofit problem due to limited head, and should be noted in the record of experience. MW to comment on this item in the next bi-weekly conference call. It was noted that at Rosemead MS, there is a lot of wind blow trash from adjacent railroad.</p>				
010	<p>Agenda Item 6, Con't: District 11 sites/KLI: Monitored five events during this quarter. Four sites with less than the 12 aliquots during first storm event, two sites with less than the required aliquots on second storm event. All sites got the required aliquots on February 20th. Successful residence time calculations were completed at the Palomar Airport Road swale. Sediment from the I-5/SR78 media filter site (possibly from the surrounding slopes) continues to be an issue. The Plaintiffs indicated that the slope planting should be checked to see if coverage is adequate. There was a problem with influent bypassing the swale at Palomar. Sandbags were installed and this stopped the problem.</p> <p>The Plaintiffs asked that the Consultants try to give the OMM information in a uniform way and manner. CT responded that the goal is to organize the data similarly, but time constraints are often a problem. The Plaintiffs indicated that it is not a big issue and they can live with some variety in the presentation.</p> <p>The Plaintiffs asked about the sampling on January 16, empirical observations were apparently made but no sampling occurred. Law indicated that the storm did not meet the established mobilization criteria. The Plaintiffs also inquired why the February 20th percent capture was apparently low at the I 605/SR 91 biofilter site. Law responded that the percent capture on the effluent was low (due to infiltration) and did not meet the OMM criteria. The Plaintiffs also asked why there was no deployment on February 10th, with 0.41 inch in LA, and why samples collected on January 4th exceeded holding times. Law responded that the deployment criteria were not met by the February 10th storm, except at one site. The January 4th event exceeded the holding time because the rain fell on the January 1st, a blackout date, the sample water was discarded. The Plaintiffs asked that the date the sampling team mobilization criteria was changed be documented. (see Item No. 6 above for date)</p>	New	3/15	3/30	RBF
011	<p>Agenda Item 8, MID: (Note, Agenda Item 7 deferred to later in meeting): The proposed changes to the</p>	New	3/15	6/15	RBF/Caltrans

MEETING MINUTES

Meeting Date: March 15, 2000

Page 7

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>MID were briefly summarized: A more detailed maintenance protocol for the District 11 wet basin, and the changes requested by the Plaintiffs over the preceding quarter. It was also noted that the separate bound copy of the MID distributed at the meeting was the MID version to be reviewed by the group, as opposed to the version included in the Quarterly report. It was agreed that CT would develop a maintenance item for pumping the MCTT dry during the summer season, and review this with the group.</p>				
012	<p>Agenda Item 9, Vector Report: There is a continuing problem with mosquito inspection and breeding at the MCTTs. Minor problems at other sites. Adult monitoring report: Bill Walton will give his final presentation after adult monitoring is concluded in June of this year. The Plaintiffs asked why the adult monitoring study was extended. LWA responded that we wanted to capture a second wet season. The final report will be available in late summer. The Plaintiffs asked that Bill Walton document why he chose the monitoring stations within CT right-of-way only. Requested BW to include mosquito flight adjacent to BMPs, i.e. right-of-way effects.</p> <p>DHS reported that they are working with local agencies on monitoring consistency. DHS Sampling is continuing on a bi-weekly schedule, transitioning to weekly in late spring or summer. DHS has substantially completed their database, and it should be ready by April for review. Update on survey of other agencies/experience with BMPs: Sent out the survey at the beginning of January, 2000. Over 200 surveys were sent, about 20-30 percent were returned. DHS will make some telephone follow-up calls. DHS is trying to recruit an engineer to help develop recommendations relative to vector control at BMPs, and concurs that the MCTT is a problem device. Proper methodology and sampling techniques are a problem at the MCTT due to limited access. Protocols will evolve over the next several months, and there will most likely remain the necessity for abatement action at this device.</p> <p>Relative to the La Costa wet basin, the County priorities are to maintain access, and maintain vegetation density at a level that does not inhibit vector abatement.</p>	New	3/15	9/15	LWA/Bill Walton
013	<p>Agenda Item 7, Comments from Manufacturers: Plaintiffs asked why the whole data report wasn't given to Stormwater Management. KLI responded that there was general discussion that was not sent to them, but that analytical data was provided. The entire report was not forwarded to Stormwater Management so they would not have to cull through all of the other sites/data to find the StormFilter information. The Plaintiffs emphasized that once the entire team has reviewed the sampling data, it should be shared with the appropriate manufacturer.</p> <p>The Plaintiffs asked about the KLI response to Stormwater Management on TPH sampling. KLI</p>	New	3/15	Open	Plaintiffs/Caltrans

MEETING MINUTES

Meeting Date: March 15, 2000

Page 8

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>responded that we are not evaluating TPH as a part of the program, since a grab procedure is required.</p> <p>Comments on Dr. Pitt's letter: A more detailed discussion of the responses to Dr. Pitt's letter will be conducted at the next bi-weekly conference call, since the lead person from BC was unavailable on a field trip with the Plaintiffs. The primary problem is vector sampling and the fact that water is retained year round in the MCTT. The Plaintiffs asked if a cover could be installed, and an opening in the cover provided (sealable) to do the sampling. DHS responded that several locations are needed to sample effectively, and a cover may be unworkable. It was agreed that pumping the MCTT dry for the summer is feasible and will be done.</p> <p>The Plaintiffs asked about the pickup of two drums of sediment at the Altadena Maintenance Station, and how long it took to accumulate the sediment. The sediment is from the spreader ditch, removed per the MID, accumulated over about the previous 9 months. The Plaintiffs asked if the MS is swept. CT responded that parts of the station are swept daily. The Plaintiffs believe the housekeeping practices can be improved to cut down on the amount of material through source control. The Plaintiffs noted that the devices [BMPs] we have installed are imperfect, and this is known, but the goal is to get source control to the point that the devices are unnecessary. CT will continue to pursue source control, and has elevated efforts in this regard, but there may not be a lot more that can be done without fundamental changes in the facilities themselves (i.e., reconstruct the yards). The Plaintiffs disagreed with this assessment and would like to follow up on the issue of doing a better job through source control. CT District 7 was willing to work with the Plaintiffs on developing additional source control BMPs.</p>				
014	<p>Agenda Item 10, Environmental (Biological) Report: In the January monthly report there is a recommendation that we deploy a net to restrict access to the infiltration basin in District 11 so that the waterfowl would not carry in San Diego fairy shrimp.</p> <p>The letter from the Fish and Wildlife Service was briefly reviewed, the Service had concerns about the type of monitoring being proposed for the Clapper Rail, the protocol was modified to forego tape playback type monitoring at their request. The Plaintiffs offered to go with CT to talk with the Service about endangered species issues. CT noted that the Service said they will only talk when we have a species of concern present. CT will continue to pursue a proactive dialogue with the Service. Caltrans invited the Plaintiffs to also dialogue with the Service.</p>	FYI	3/15	Open	
015	<p>Agenda Item 11, Cost Workgroup: A cost summary document was previously forwarded to the</p>				

MEETING MINUTES

Meeting Date: March 15, 2000

Page 9

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>Plaintiffs. This document is a summary of data reflecting the cost for each BMP as it was constructed. This was developed so the cost workgroup would have something in hand as a starting point. The raw data is being collected, and it will be centralized at each District to facilitate review. Caltrans proposed to start the cost workgroup meeting ASAP, maybe during the week of March 27th. The Plaintiffs referred to two letters from them on this subject, dated February 28th and February 29th. One letter deals with the technical issues and problems. Caltrans is responding point by point to this letter. The response letter (on the technical points) will be transmitted by first of next week. The Plaintiffs noted that the data had a significant number of errors, and took several months to compile. CT responded that the data came from some contracts that had not been closed out, causing delay. CT agreed that the report contained errors, these will be corrected and an updated report forwarded to the Plaintiffs in mid-April. CT noted that the time built into the Stipulation amendment for the cost issue is probably not realistic.</p> <p>The Plaintiffs also noted that the stipulation requires that there be no pre-judgement of the study outcome, and putting together a final report, or part of the final report would fall into that category. CT indicated that to date, only a report outline has been started, and that the outline will be provided to the Plaintiffs.</p>				
016	<p>Agenda Item 12, Infiltration Opportunities Study in District 11: The Plaintiffs asked about the study plan for infiltration in District 11. RBF noted that a report should be to the Plaintiffs by early summer. The Plaintiffs talked about the need for a workplan for the study. District 11 to call Jeremy Johnstone and Rich Horner to discuss the study further.</p>	New	3/15	6/15	District 11/RBF
017	<p>Miscellaneous Agenda Additions: The Plaintiffs inquired about updating the overall Pilot Program Schedule, to bring it in agreement with the estimated completion date for the program. CT responded that they would look at the existing schedule in the Scoping Study and respond on this issue.</p> <p>An initial field report (as a result of the field visit by NRDC rep during the meeting) noted a flaw in the installation of the CDS unit at one of the sites. A construction report on this item will be provided at the next biweekly meeting.</p> <p>Caltrans noted that the Consultant contracts have very limited remaining authority, and that the contracts are up for renewal at the end of June. There may be a change in the Consultant teams as a result of new contracts being let.</p>	New	3/15	4/15	Caltrans
018	<p>Next Meeting: June 14, 2000 at RBF at 9:30am. Next Bi-Weekly call, March 30th at 10 am.</p>	FYI			



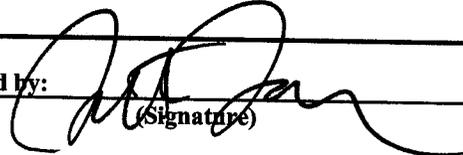
**BMP Pilot Studies Quarterly Status Meeting No. 9
Meeting Minutes**

ISSUE VERSION: Final

MEETING NO.: 9
DATE: 6/14/00
TIME: 9:30 am
LOCATION: RBF, Irvine, CA

SUBJECT: Quarterly Status Meeting No. 9

Prepared by: S. Taylor

Approved by: 

(Signature)

Date Prepared: 6/16/00

Attendee Names / Company

Ron Russak/Caltrans D7
Howard Yamaguchi/Caltrans HQ/UCD
Pete Van Riper/Caltrans D7
Richard Gordon/Caltrans D7
Sayra Ramos/Caltrans D11
Cid Tesoro/Caltrans D11
Steve Borroum/CaltransHQ
Brian Currier/Caltrans HQ/UCD
Doug Failing/CaltransD7
Glenn Moeller/Caltrans/CSUS
Catherine Beitia/Caltrans/CSUS
Rick Graff/SD BayKeeper
Steve Flejschli/SM BayKeeper
Rich Horner/NRDC/BayKeepers
Everett DeLano/NRDC/SM BayKeeper
Chris May/NRDC/BayKeepers
Bruce Reznik/SD BayKeeper
Chris Warn/KLI
Pat Kinney/KLI
Marco Metzger/DHS
Toby Roy/DHS

Attendee Names / Company

Steve Brinigar/Law
Ed Othmer/Law
Gary Friedman/MW
Brock Ortega/Dudek/RBF
Trevor Smith/RBF
Ann Walker/RBF
Anna Lantin/RBF
Scott Taylor/RBF
Laura Hansen/RBF
Michael Barrett/UT/RBF
Alan Batdorf/BC
Doug Robison/BC
Adrienne Saboya/BC
Mark Williams/BC
Bill Walton/UC Riverside
Chris Takerio/Hawaii DOT
Suzanne Bevash/Env. Advocates
Jeffrey Munic/CH2MHill
Dean Messer/LWA

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The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

MEETING MINUTES

Meeting Date: June 14, 2000

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	<p>Agenda Items 1 and 2: Introductions were made. Plaintiff remarks: Cautioned that the Plaintiff representative's time is limited, and that schedules must be anticipated to the extent possible to efficiently use time. When comments are submitted by the Plaintiffs, they need to be evaluated and appropriate responses provided. It was noted that the Plaintiffs were not contacted about the infiltration basin siting study in D11 to discuss the Work plan before the study was done.</p>				
02	<p>Agenda Item 3: District 7 non-stormwater discharges: None to report. District 11 non-stormwater discharges: Ice machine malfunction at Carlsbad MS was primary problem this quarter. Plaintiffs: There were non stormwater discharges for about a month and a half, why were these not solved? Caltrans: The discharges were not a repeat of the same source. A report was developed by District 11 on June 7, describing each discharge. CT also noted that the table in the quarterly report is developed by the Consultant, District personnel follow up on the report within a day, and the discharge may no longer be evident. Plaintiffs: perhaps CT should take a closer look at the Carlsbad MS since there appears to be more problems at this location. CT: agreed</p>	New	6/14	9/20	Caltrans D11
03	<p>Agenda Item 4: Design/construction in D7: CDS sites: Contractor is replacing hardware that was not per specification (was not galvanized). Construction to be completed this week, monitoring equipment to be installed next week. Estimated costs (Construction) were presented. Metro/Paxton MCTT and Media Filter: Geotechnical comments with Headquarters are the last item to resolve. Construction scheduled to be completed next spring. Monitoring to start September 2001. Plaintiffs: This schedule has continuously slipped from the original. If it slips further, the monitoring may not be ready for the start of the 2001-2002 wet season. Caltrans/Consultants: It appears the design issues are very close to resolution. Plaintiffs: What are the problems, why are these pilots taking so much longer for approval? CT: Metro/Paxton have some more technical issues than some of the other sites due to closer proximity to existing structures.</p>	Old		9/20	BCC
04	<p>Agenda Item 5: The pilot program is to be completed by Sept. 2002 per the stipulation. It would not appear that the requisite storms could be obtained in one winter for Metro/Paxton sites. Caltrans: address on a device by device basis, the MCTT devices would not be wrapped up with the rest of the pilot program sites. Austin Sand Filters could be completed preliminarily pending completion of the Paxton monitoring, since there are several other examples currently being piloted, but not the MCTT since there are fewer of those sites in operation. Plaintiffs: We need to start looking at the conclusions we are going to be drawing from this study. Set up a meeting to discuss the final report, and this will help with how Metro/Paxton should be handled. Caltrans: We must keep in mind there is a Consent Decree and Stipulation, each with separate requirements. Target August for the first meeting to discuss the final report, and how to summarize the study, general approach to reports. CT to contact Plaintiffs to set a meeting. Mike Barrett suggested unified reports by BMP covering the whole retrofit study (both districts). Steve Borroum could not commit to that approach because of the differing reporting</p>	New	6/14	9/20	Caltrans

MEETING MINUTES

Meeting Date: June 14, 2000

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	requirements and timing in each district.				
05	<p>Agenda Item 6: Specific Operation, Monitoring and Maintenance Issues: Gopher abatement letters. No more trapping, this has been memorialized in letter to the Plaintiffs. Wet Basin Maintenance: Conferred with the plant and vector specialists, a harvest plan for plant materials was developed and distributed (at the meeting). This item will be discussed at the next bi-weekly call. Caltrans noted that the plan has not been shared with FWS yet. It was agreed that the plan would be shared with the Service prior to finalizing with the Plaintiffs. RBF noted that we were going to notify the Service that we have seen a species of concern utilizing the wetbasin. A least tern was seen foraging briefly. The opinion of the biological consultants is that nesting would affect basin maintenance but not foraging. The Service will be notified of the Least tern siting, and also transmitted a copy of the wetbasin maintenance plan.</p> <p>Plaintiffs requested that the DOJ receive a copy of the maintenance plan and be copied on correspondence.</p> <p>Cerritos MS Swale gopher damage: Recommendation from Consultant is to leave as-is. Discussion followed: a single vertical barrier on the maintenance station side was agreed to be the best option. The final configuration/approach to the single barrier will be discussed at the next bi-weekly call. Doug Failing recommended recording in “lessons learned” that when a swale is built with a berm, a vertical gopher barrier should be placed starting at the top of the berm slope and extended below the bed of the swale.</p>	New	6/14	6/29	MW
06	Plaintiffs noted that the District 11 infiltration basin study was not on the agenda, and needed to be discussed. Caltrans suggested that this should be the topic of a separate meeting, Plaintiffs agreed	New	6/14	7/15	Caltrans D11
07	<p>Agenda Item 7a: Vector Report for Quarter: District 7, ten sites breeding, 21 abatement actions, 13 were at MCTTs, and 4 at CDS units. District 11: 4 sites breeding: Wet basin and infiltration basin were greater than 90% of the observed breeding in District 11 sites, 1 abatement action at the La Costa IB. Abatement actions: Applied altosid liquid, juvenile hormone. One treatment of golden bear at a D7 EDB, treating pupae washed into the detention basin, not as a result of breeding in the basin. Plaintiffs noted that the subject basin drains within 72 hrs. Rich noted that this breeding was not a function of the basin’s presence and that there are substantial existing breeding opportunities elsewhere in the storm drain and sewer systems, that are not subject to the same level of scrutiny as the Pilot Program. Caltrans: We are not in a position to draw conclusions at this time as to the relative significance of sources. If we were to deploy MCTTs or CDS devices on a widespread basis, we would be creating quite a bit of additional breeding opportunity.</p> <p>Adult monitoring: Scheduled to end at the end of this month, with a report in September.</p>	New	6/14		
08	Agenda Item 7c: DHS provided an update on the out of state survey: DHS was interested in knowing the status of BMPs around the country with respect to vector problems. Sent 338 surveys out, received 62, only 39 had comments on BMPs. DHS is in the process of setting trips to visit some of the more	New	6/14	8/15	DHS

MEETING MINUTES

Meeting Date: June 14, 2000

Page 5

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>interesting sites outside of the state for evaluation. The DHS database has been updated, and is available through RBF on the website. DHS started a weekly sampling (mosquito production study) this week. Method: Water quality sampling parameters (pH, TDS, Temp) to determine favorable conditions for BMP/mosquito production, and working with the vector districts doing larval sampling, no adult sampling as a part of this study. A report is expected in August. Plaintiffs: Is this original work for BMPs or has other similar work been done previously? DHS: Quite a bit of research has been completed in storm drains, less on BMPs. Caltrans: Only 39 responded to survey on BMPs, why is the response so low? DHS: Districts did not seem to have any awareness of stormwater systems. DHS plans to follow-up by telephone to non-respondents. DHS is concerned that underground structures would create additional habitat, covering or undergrounding would be a problem if BMPs were constructed this way. This is a separate issue from covering above ground structures. Surveillance and inspection would be complicated for underground structures. DHS would want strict design criteria such as no standing water greater than 72 hrs etc. Plaintiffs: How widespread of a vector problem is there with respect to current underground sources/problems. DHS: There is very little 'publicity' on this issue, but the problems are very real, and very acute in some areas. Surveillance and control is very difficult on underground systems, but they (underground systems) are easily the biggest source of mosquitoes in an urban area. Plaintiffs: Where specifically does this occur underground? DHS: anywhere mosquitoes can find a suitable location (still ponded water, such as utility vaults and pipes). Plaintiffs: It would seem like the existing breeding capacity is immense, so what kind of treatment can reasonably be accomplished? DHS: Best that can be done is to prevent more breeding areas from being constructed, and try to control what breeding areas currently exist. Prevention is the key, treatment is a losing battle, vector tolerance is building to the chemical controls. For example, DHS has worked with utility companies to design underground vaults that do not 'breed' (trap water). One techniques uses restrictions to vector entry, such as a pressure-sensitive flap. This has been fairly successful.</p>				
09	<p>Agenda Item 7d: MCTT cover proposal: BC submitted a proposal for a hinged cover on the portion of the MCTT that retains the water. Covers would be constructed of aluminum or mesh fabric. DHS: Believes the covers may work, but need a safety system for their workers. The proposed net bag needs to be designed so that it can be inserted and removed easily. Cover on the main sedimentation chamber is a possible solution, except there are concerns where there are penetrations through the cover. Need to have surveillance doors on corners of the cover for vector personnel access. Gaskets on the aluminum cover must be replaced when needed. Caltrans inquired if the covers will substantially abate the mosquito problems, as they are very expensive and should not be constructed unless there is a good chance of success. DHS: It is hard to know if the problem will be solved, but should be a solution that at a minimum reduces the problem. The covers should be piloted at a location to understand the problems and benefits. The covers appear to be well manufactured as applied in wastewater applications. Caltrans noted there may be a problem with the mosquitoes washing in from the upstream catchbasin chamber on</p>	New	6/14	9/15	BC/Law

MEETING MINUTES

Meeting Date: June 14, 2000

Page 6

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>the MCTT, rendering the cover ineffective. A pressure-sensitive flap should be deployed to alleviate this problem. DHS likes the aluminum better than the fabric cover because of longevity. Agreement was reached to deploy the covers to evaluate their efficacy. Covers to be installed at the two existing MCTTs, the filter to be constructed at Metro will remain uncovered, as a control site. DHS indicated that a rat and roach problem may be exacerbated with the installation of the covers.</p>				
010	<p>Agenda Item 7e: CDS Units mosquito proofing: It was agreed that the units would be operated without special effort made to drain the sump, which retains water. If mosquito breeding occurs, this will be addressed on a case by case basis. Since the units have not been in operation yet, there is insufficient evidence to declare a problem. Law noted that the manufacturer requires that the units be filled with 'clean' water prior to the start of the storm season for proper operation. Caltrans asked Law to document in writing from the manufacturer that the unit needs to be filled with water prior to the first storm. Law will request the documentation from CDS, and copy the plaintiffs on all correspondence in this matter. The manufacturer's response will be discussed in the next status call in connection with deciding how to operate the units.</p>	New	6/14	9/15	Law
011	<p>Agenda Item 8: Environmental Report. Environmental and biological reports are provided in Appendix G of the Quarterly Report, which includes the February, March and April surveys. A Least tern was observed foraging in District 11 wet basin site. RBF to send a letter to the Service which will include: a boilerplate species observation notice, and the revised wet basin maintenance plan review by the Service. Netting was installed at the La Costa infiltration basin to prevent habitation by Fairy shrimp. Netting was placed over the sand beds at the I-5/SR 78 and La Costa park and ride Austin Sand Filters to preclude nesting of Least terns.</p>	New	6/14	7/1	RBF
012	<p>Agenda Item 9a: OMM for District 7 (Law): This was a dryer than normal wet season. Six of the samples did not meet aliquot goals specified in the OMM and as agreed with the Plaintiffs. Law recommends that the 6 samples that did not meet the aliquots be considered as valid data since the aliquots are representative of the hydrographs.</p> <p>Biofilters There was no biofilter effluent during the first part of season since most flow infiltrated in the biofilter. Design hydraulic residence time measurement: Had unsteady flow conditions, infiltration and nonuniform flow, further, turbidity impacted absorbance measurements. The sites generally met the design residence time per the dye testing/measurement. Design removal efficiencies: Biofilters, reduction in TSS and metals, increase in nutrients. Operation/maintenance: 605/91 biostrip, errant drivers resulted in some turf damage and gophers also resulted in some damage. At Altadena MS, it was necessary to drain the spreader ditch after each event. Cerritos MS, had the gopher problem that resulted in a flow bypass. Other swales functioned well and as intended in District 7. Law noted a significant amount of leaves accumulating at the I-605/Carson & Del</p>	New	6/14	9/15	Law/Caltrans

MEETING MINUTES

Meeting Date: June 14, 2000

Page 7

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>Amo biofilter, and had been removing the leaves. It was agreed to discontinue this practice.</p> <p>Drain Inlet Inserts Streamguard: Had flow bypass and flooding problems. Inserts tend to pond/retain water after the storm event. Attention was directed to the memorandum from the Streamguard manufacturer in the quarterly report. All Streamguard filters will have differing permeability, there is no suggested solution for specific inserts that appear to bypass flow too easily. Fossil Filter: Required pre-storm and post-storm cleaning. Plaintiffs: why were sand bags placed around inlets at some of the maintenance stations? Caltrans responded that this is done as a routine maintenance BMP by the station. Richard Gordon will investigate the specific reason for the Las Flores placement.</p> <p>Infiltration Devices Functioned as designed, some flow bypass for larger events, drained within 72 hrs. The weir plate at the I-605/SR 91 IB was raised to maximum height possible. Some erosion on north slope of the basin previously, however, hydroseed has germinated and mitigated the problem. Altadena MS IT: Had bypass when design capacity of the trench was exceeded. Drained within 36 hrs maximum. Plaintiffs asked about Lysimeter sampling: The idea was to have the vacuum applied continuously, rather than for 24 hours. Caltrans noted that the vacuum does not hold after the initial application, so the pump would have to run continuously (District 7). It may be possible to keep a vacuum in D11, and this will be tried. Plaintiffs noted that the device efficiencies will be computed on a mass loading level. Caltrans concurred. The Plaintiffs noted that having the reporting limit shown in the tables where non-detect occurred is misleading. It was agreed that 'ND' would be specified where this occurs.</p>				
013	<p>Agenda Item 9b: District 11 OMM: Had a variety of depths of rainstorms, but overall a dry year: Rain depths varied from 4.9in to 8.7in, mean is usually about 10 inches. Low aliquot sample events are recommended to be included as valid data since they are representative of the hydrograph. Plaintiffs noted for the record they did not agree with the Maximum Storms Required column in the table on page 75 of the Quarterly Status Report as it does not include all required storms per the Scoping Study. In addition, the column should be updated to include an additional year of monitoring in District 11 per agreement with Caltrans.</p> <p>Removal Efficiency Extended Detention Basins: Good particulate removal, relatively poor dissolved constituent removal. Stormfilter: Midpack dissolved removal and particulate removal, there is an improvement as compared to last year. Plaintiffs want to discuss a possible change in the filter media for the Stormfilter. It was agreed to release the data to the manufacturer (Stormwater Management) for this season. Caltrans to forward the stormfilter monitoring data from this year and last year to the Plaintiffs to help with the evaluation of the media and the decision to possibly switch the media, which will be considered in the next status call. Austin Sand Filters: Do well on particulate removal, fair removals with respect to dissolved constituents.</p>	New	6/14	9/15	KLI/RBF

MEETING MINUTES

Meeting Date: June 14, 2000

Page 8

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>Wet Basin: Doing very well on removals across the board.</p> <p>Samples were collected from the wells at the infiltration devices.</p> <p>Hydraulic residence time at Palomar Airport Road swale was measured: Calculated time is 53 min. The Carlsbad infiltration trench has not overflowed with inflows up to the design storm runoff but is not functioning per design (drain time is too long). No hydraulic residence time was evaluated for the Melrose swale since there was insufficient effluent flow to perform the test.</p> <p>Baykeeper indicated that it was OK to keep the sand bag dam in place at the wet basin for monitoring purposes. It was further decided to do paired sampling of influent and effluent for non-storm discharges at the wetbasin.</p> <p>The bird deterrent nets at the Austin Sand Filter and La Costa Infiltration Basin were described. They have been installed.</p> <p>The Plaintiffs noted that there is some repetition in the text of the Quarterly OMM reports, especially of background and methods common to all consultants, and asked Caltrans to try to consolidate the text in the next report.</p>				
014	<p>Agenda Item 9c: OMM - BC: This was an average to less than average rain year. Four of Five possible storms were captured/sampled. It was a wetter than usual February. Two events did not meet aliquot requirements, but recommend that this data be included in the data set as they are representative of the hydrographs.</p> <p>Efficiencies:</p> <p>Extended Detention: Good particulate removal, no appreciable dissolved constituent or nutrient removal.</p> <p>Sand Filter and MCTT: Each had about the same level of constituent removal efficiency.</p> <p>Operation: No specific issues to report.</p> <p>Plaintiffs asked about the non-detect for free oil and grease at the oil/water separator site. Caltrans noted that this was correct, and that the source control program must be working at this MS.</p> <p>Caltrans noted that there is a transition of consultants, MW and BCC will be transitioned out, LC will</p>	New	6/14	9/30	Caltrans/RBF

MEETING MINUTES

Meeting Date: June 14, 2000

Page 9

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	take responsibility for sites in District 7. Caltrans is gathering design and construction data from the design teams for the project record Plaintiffs confirmed that they would be provided with siting, design construction reports in the next few months.				
015	Agenda Item 10: Cost Workgroup: Plaintiffs will be responding to the revised Cost Summary report. NRDC noted that EPA wanted to be included in the cost workgroup issues.	New	6/14	7/1	Plaintiffs
016	Agenda Item 11/12: The next bi-weekly call is scheduled for June 29, at 10 am and the next Quarterly meeting is scheduled for September 20. Items for next bi weekly call: 1. Discussion of the wet basin vegetation management plan, 2. Report on CDS unit pre-storm water level requirement, 3. Stormfilter, discussion of current media/replacement. Plaintiffs noted that the summer Biweekly meetings and reports would be issue-focused rather than detailed routine OMM activities reporting.	FYI	6/14		All

Note: Bolded text under each item subheading refers to action items.

BMP Retrofit Pilot Program Caltrans District 7 and District 11 Meeting Minutes

ISSUE VERSION: Final

MEETING NO.: 10
DATE: September 20, 2000
TIME: 9:30 am
LOCATION: RBF Consulting

SUBJECT: Meeting Minutes for Quarterly Status Meeting No. 10

Prepared by: S. Taylor

Approved by:



(Signature)

Date Prepared: 10/5/00

Attendee Names / Company

Ron Russak/Caltrans D7
Howard Yamaguchi/Caltrans HQ/UCD
Pete Van Riper/Caltrans D7
Richard Gordon/Caltrans D7
Sayra Ramos/Caltrans D11
Cid Tesoro/Caltrans D11
Steve Borroum/CaltransHQ
Brian Currier/Caltrans HQ/UCD
Doug Failing/CaltransD7
Glenn Moeller/Caltrans/CSUS
Catherine Beitia/Caltrans/CSUS
Rick Graff/SD BayKeeper
Steve Fleischli/SM BayKeeper
Rich Horner/NRDC/BayKeepers
Everett DeLano/NRDC/SM BayKeeper
Chris May/NRDC/BayKeepers
Bruce Reznik/SD BayKeeper
Chris Warn/KLI
Pat Kinney/KLI
Marco Metzger/DHS
Toby Roy/DHS

Attendee Names / Company

Steve Brinigar/Law
Ed Othmer/Law
Gary Friedman/MW
Brock Ortega/Dudek/RBF
Trevor Smith/RBF
Ann Walker/RBF
Anna Lantin/RBF
Scott Taylor/RBF
Laura Hansen/RBF
Michael Barrett/UT/RBF
Alan Batdorf/BC
Doug Robison/BC
Adrienne Saboya/BC
Mark Williams/BC
Bill Walton/UC Riverside
Chris Takerio/Hawaii DOT
Suzanne Bevash/Env. Advocates
Jeffrey Munic/CH2MHill
Dean Messer/LWA

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The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

MEETING MINUTES

Meeting Date: September 20, 2000

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	<p>Agenda Item No. 1 Plaintiff opening remarks: We are 1-year from completion of most of the Pilot Program. With some of the other programs the Plaintiffs are involved in, the Plaintiffs have had to object to the final reports since the study documentation did not take the project to the point of ‘readiness for implementation’. The Plaintiffs would like the group to think about what it will take to get the data and observations for the Pilot Project into a final form. The Plaintiffs want to see recommendations and implementation provisions in the final pilot program report.</p>	New	9/20	Ongoing	All
02	<p>Agenda Item No. 2 Caltrans opening remarks: The Department’s mechanism for making decisions relative to the storm water program lies with the SWMP. The SWMP is negotiated with the State Board, and serves as the vehicle for implementing the findings of department research programs such as the Pilots. As a research program, the pilot studies are not the place to set Department policy. It is suggested that other meetings could be set with the Plaintiffs to determine what could be carried forward to the SWMP from the BMP Retrofit Pilot Program. The Plaintiffs also have a direct dialogue with the Districts, and they can discuss these types of issues directly with the Districts. The Department has policy level determinations that must be considered when incorporating the results of the research programs.</p> <p>Plaintiffs: There is something lost by not having the people who collected the data and performed the study make the recommendations to the Department. The Plaintiffs would like the study to present results, and argue a case relative to the retrofit of BMPs in existing infrastructure. If there are policy issues, the Department could make those decisions. However, if the final policy is counter to the evidence gathered from the research programs, then the Plaintiffs would like this to be evident in the record.</p>	New	9/20	FYI	
03	<p>Agenda Item No. 3 Vector Reports from Vector Districts. District 7: Three sites breeding, 22 abatement actions, 10 at MCTT and 12 at CDS sites. In District 11, two abatements, one at the wet basin and one at the La Costa infiltration basin. DHS update: The out of state survey has been completed. The purpose of the survey was to get a better understanding of what problems are associated with BMPs relative to vectors, there is very little published data available. The DHS mailed out 338 surveys in January, had 105 agencies respond, and 72 agencies were able to give information on storm water management structures. Many of the structures the respondents referenced in the survey have been in place for 5 to 10 years. Some of the main issues were: a) lack of maintenance, b) excessive vegetation and silt and debris accumulation, high in organic content, c) damage to units and d) improper design or construction that kept water locally impounded in the unit. Some cases reported where infiltration sites did not drain. The DHS report is provided in Appendix J of the Quarterly Report. The Mosquito database has been updated and is on the RBF Pilot Program website. The first year report summarizing vector data will be submitted soon in a bi-weekly report. DHS also met with Caltrans and Montgomery</p>	New	9/20	12/15	Plaintiffs and DHS

MEETING MINUTES

Meeting Date: September 20, 2000

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>Watson to develop ideas for mosquito-proofing the CDS units.</p> <p>Plaintiffs: The issues noted in the DHS report, such as maintenance, are things we need to highlight in this study as a cause of problems for operating BMPs. These issues must be brought out in implementation reporting for the Pilot Program. Design and construction needs to be considered very carefully as well. The Plaintiffs are in general agreement with the DHS findings, but want to note that vegetation and standing water is not, in every instance, going to lead to breeding and standing water may have a performance function. The mailing list for the DHS study did not target the areas such as Denver, Maryland, Somerset County, New Jersey, the City of Portland, western Washington or Washington County, Oregon. Cities and counties that have active programs but were not surveyed include: Fairfax County, Virginia, City of Alexandria, VA, Austin Texas, Madison and Milwaukee Wisconsin or Seattle. DHS: There were more areas that could have been surveyed, but the basic findings of the study would probably not change, and the trends are established with this information. Plaintiffs: Concur that the trends are established. But to be more certain, it would be nice to address the major omissions listed. Can more surveys be sent out? DHS will look into this possibility. One of the difficulties is locating addresses and the proper contact person. Plaintiffs to forward contacts at storm water agencies in the locations listed to Caltrans and DHS.</p>				
04	<p>Agenda Item No. 4: UC Riverside adult mosquito study. Objectives: To determine the abundance of mosquitoes before and after pilot program operation. Also, to compare the activity where there is and is not a pilot BMP site for mosquitoes and midges. Rationale: Climate is conducive to mosquito activity. They are active from April to end of October. This area does not freeze, so the vectors don't die as readily. Mosquitoes represent a public health threat with arboviruses. Groups most susceptible are the young and elderly. Birds can amplify viruses, meaning that they can spread the disease. Midges don't bite humans, but they are a public nuisance. There are 'sentinel' chicken flocks put out by the DHS in May of each year, and then they are sampled during the year for viruses. Wild bird populations are also sampled for viruses by DHS. There have been about 16 outbreaks of malaria in the general California population since 1957. Want to control mosquitoes at the larvae and pupae stage. Adults feed about every two days. Adults live about 14 days. Adult mosquitoes must feed at least 2 times to pick up and then transmit a virus. Don't need to have standing water, some mosquitoes lay eggs on damp substrates. But in all instances, must have standing water for larvae to develop. Mosquito species differ in their potential to transmit pathogens. Measured: host seeking mosquitoes. Gravid mosquitoes (preparing to lay eggs). Two type of traps were used in the study: 1)(CO2) and UV and 2)gravid trap.</p> <p>Results: There was no significant increase of activity at the sites between the baseline sites and the test sites. Analyzed two periods of comparatively small rainfall. Host seeking mosquito and midge abundance did not differ significantly at the operational BMP sites. Gravid mosquitoes differed</p>	FYI	9/19		

MEETING MINUTES

Meeting Date: September 20, 2000

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>significantly at 5 sites in D7 and one site in D11. In D7 the differences were at Altadena MS, Cerritos MS, Eastern Region MS, Lakewood PR, Via Verde and 1-5/SR 78 in D11. These are the sites that were significantly higher in 1999 than 1998. Overall, host mosquito trapping is fairly low, gravid numbers are also relatively low. The mosquito development rate is a function of ambient air temperature. 1999 was generally cooler than 1998, and that could be significant in influencing adult activity. Comparing the post construction years (BMP), in D7 the populations differed significantly at 7 sites, and only at 2 sites the following year. The differences were at the CDS sites, media filter sites, and biofilters. Midge abundance at operational storm water BMPs was not significantly increased over background levels. There are annual population variations that need to be accounted for as well. The CDS units did show a significant increase in gravids once they were installed and online. In D11, host seeking population did not differ significantly in 1999, but did differ in 2000 at 4 sites. Gravid mosquito abundance was greater at 11 of the 14 monitoring sites in 2000. Study Summary: Enhanced adult activity was not associated with any BMP type. There is not sufficient evidence to say that a particular BMP type is a problem. However, it is clear that if there is standing water, then have a enhanced potential for mosquitoes. Mosquito abundance in control locations was lower than BMP sites for 1/2 to 3/4 of the sites. Overall adult activity is low. The operating BMPs are not producing midges in significant quantities.</p> <p>Questions: CT: Do we have information to assess the abatement practices? No, this study will not provide that. NRDC: What are your recommendations for control in terms of numbers and patterns. Do the numbers we have trigger a recommendation to enact control. Dr. Walton: Adults, no control is necessary unless there is an encephalitis outbreak. Would recommend control of larvae in standing water in the BMPs where that is present. You must also monitor the wet basin. These types of BMPs (perennial ponds) have a history of vector problems. CT: would it be beneficial to continue the adult program for a longer time? Dr. Walton: if you are doing larval control, you will get enough information from that program, and additional study of adults is not necessary. The Wet Basin would be the only site where a further adult monitoring program may be a benefit.</p>				
05	<p>Agenda Item 5 Overview of Sampling Data Collected to Date: Overall, the wet basin had best TSS removal, and the Stormfilter worst. Ranked by total copper removal, the wet basin is the best.</p> <p>Comparison of biofilter efficiencies in Texas to California. Virtually no difference between a non-engineered swale and the associated removals in Texas and the engineered bioswales in the pilot study. Extended Detention: constituent removal similar at most sites.</p> <p>Questions for ED and biofilters: NRDC: in the final analysis, we want to look at what minimum removal concentration for each measured constituent we can achieve and also what the removal efficiency by constituent is.</p>	FYI	9/19		

MEETING MINUTES

Meeting Date: September 20, 2000

Page 5

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>Media Filters: No difference in the removals from site to site. The Austin type filter appears to be the best design. It is unclear why the Delaware had a TSS removal problem in the first year of operation. Lessons Learned: Need access ramps to service the filters. Avoid pumping in the designs (cost and maintenance burden). Can also do partial sedimentation designs for the Austin Filter to save space. A probability plot was introduced to show how often a specific effluent limit could be met.</p> <p>Questions relative to the media filter. CT: What about the nitrate issue? Is this a problem that the filters tend to export nitrate? Yes. More research needed to understand the nitrate removal of the filters. NRDC: Nitrate will not always be an objective for the BMP. CT: Still a concern and issue since we need to strive for WQ objectives for all constituents, including nutrients.</p> <p>Oil/water separator (OWS) and drain inlet inserts (DII): Results show that influent levels are not sufficiently high to result in removal in the oil water separator unit. See as a technology for spill containment only, with the coalescing plates as extraneous. The drain inlet inserts had only modest removals.</p> <p>Discussion: NRDC: Agree that the OWS is not useful for our application. Don't want to count all DIIs out yet however, more review of the data is needed. SM BayKeeper: Are we monitoring for litter, is that data available? Caltrans: Yes, Caltrans has other pilot programs focused on litter removal and BMPs for litter removal.</p>				
06	<p>Agenda Item 6 Overview of CDS Devices: MW-C reviewed the activities since the last Quarterly meeting relative to the CDS device construction. A construction costs summary was presented. Both units installed cost about \$87,000, which includes monitoring equipment. The baskets for the CDS units sump are only going to be installed for monitoring purposes, to facilitate removal of the material in the sump for analysis. CDS typically recommends using a vactor truck for cleaning the device, not the sump baskets. The manufacturer replaced the screens at no cost to the project, with 2400 and 4700 micron units, since the 1200 micron screen is discontinued. They also increased the height of the internal weir to be 12" above the diversion weir at one of the sites at no cost to the project.</p>	New	9/19		
07	<p>Agenda Item 7 Mosquito Elimination Alternatives – CDS Devices: Several options were presented: 1. install weepholes in bottom of the CDS unit. It was noted that it is not possible to daylight an underdrain system for the unit. 2. Install a sump pump in the device to keep the sump dry after rain events. It was noted that this type of discharge is not permitted under the Caltrans NPDES permit. CT to inquire with the SWRCB as to the feasibility of being allowed to drain the sumps of BMPs that contain water via a pump system. 3. Incorporate a siphon to drain the sump, however this has the same potential problem</p>	New	9/19	10/19	MW-C

MEETING MINUTES

Meeting Date: September 20, 2000

Page 6

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>option No. 2. 4. Install a flap gate on the discharge line. This is a problem since considerable rework of system would be required. This is an option for future installations. 5. Install a Mosquito screen. Replace the litter-bag on the effluent pipe with a mesh screen. A flap gate would still be required on the inlet side of the device. 6. Use an inlet and outlet flap made of rubber, however, the manufacturer is against this option for the inlet side. 7. Agitator. Install an agitator in the unit to keep the water moving for a minimum period of time, to be operated by battery.</p> <p>No decision was made on any of the options presented. MW-C to look at the best combination of the items presented and give a report at an upcoming bi-weekly call for further discussion.</p>				
08	<p>Agenda Item No. 8 Final Report Discussion: NRDC indicated there should be a team of people getting together to discuss the final report content. SD BayKeeper asked how this report relates to the SDWQCS report. CT indicated that this is a building block for that report, and that an outline of the SDWQCS report may be needed to assist in understanding the overall structure. The Plaintiffs asked that the latest versions of the Pilot reports (Siting, Design and Construction Summaries) be forwarded to BayKeeper and the EPA. This was agreed. CT indicated that it may be useful to break up the reports by technology, rather than wait for the monitoring at each site to be completed. It was agreed that this issue would be further discussed during biweekly calls. Other issues noted were the appropriate location for the conclusions and recommendations, and a purpose and need section in or after the Executive Summary, as well as in the individual report sections. All parties agreed that the goal was to have a short, 'readable' report with most of the technical detail in Appendices. The detailed data may be best placed on a CD instead of paper. It was noted that vector design issues should be in the 'design' section of the report. It was also agreed that one person must serve as the executive author to ensure overall consistency.</p>	New	9/19		All
09	<p>Agenda Item No. 9 OMM Discussion for District 7 and District 11. District 7: It was agreed to discuss the CDS protocols (monitoring) during the next biweekly call, in reference to the letter from the manufacturer on the subject. It was agreed that we need to characterize what ends up in the sump in addition to completing the in/out flow sampling. The proposal to extend the inspection frequency for the OWS from monthly to quarterly was approved. MCTT mosquito covers are in the PS&E process right now.</p> <p>NRDC: Why is it taking 8 months to design and install the covers? CT to review the process and see if the cover installation can be speeded up. It was noted that the aeration units would be removed from the MCTT. New drain inlet inserts were installed last week. It was determined that the DII data from 98/99 did not meet the agreed criteria, so they will be monitored for another year. All biofilters in D7 meet coverage requirements.</p> <p>District 11: The wet pond site was showed both before and after the harvest. All swales meet MID</p>	New	9/19	1/2001	Caltrans

MEETING MINUTES

Meeting Date: September 20, 2000

Page 7

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>coverage criteria.</p> <p>NRDC asked if there were any non storm water discharges. It appeared there were in D7, and Plaintiffs did not receive a written report. CT to check on this.</p> <p>SM BayKeeper: Can we invite the RWQCB to the Quarterly Status meetings in the future. CT will consider this and respond to the Plaintiffs.</p>				
010	<p>Agenda Item No. 10 Overview of Biofilters: The status of the biofilter material was reviewed. It was noted that all sites had coverage and would be ready per the MID coverage requirements for the upcoming monitoring season. It was reported that the vegetation at Altadena and the I-5/I-605 bioswale was dead. It was noted that the fact that the material was dead would not impact the completion of monitoring for the upcoming season</p>	New	9/19		
011	<p>Agenda Item No. 11 Meeting Closure: The next bi-weekly conference call is on October 5th, and the next Quarterly Status Meeting is scheduled for December 14th at 9:30am</p>	New	9/19		

BMP Retrofit Pilot Program Meeting Minutes

ISSUE VERSION: FINAL

MEETING NO.: 11
DATE: 12/14/00
TIME: 9:30 am
LOCATION: RBF

SUBJECT: Quarterly Status Meeting No. 11

Prepared by: S. Taylor

Approved by: 

(Signature)

Date Prepared: 1/3/01

Attendee Names / Company

A. Lantin/RBF
S. Taylor/RBF
L. Hansen/RBF
K. Smarke/Caltrans HQ
D. Failing/Caltrans D7
P. Thakur/Caltrans D7
R. Gordon/Caltrans
S. Ramos/Caltrans D11
C. Tesoro/Caltrans D11
M. Barrett/UT
R. Graff/SD Baykeeper

Attendee Names / Company

B. Currier/UC Davis
E. DeLano/NRDC
R. Horner/NRDC
E. Othmer/Law Crandall
C. Myers/DHS
D. Messer/Larry Walker Associates
G. Friedman/Montgomery Watson
D. Robison/Brown/Caldwell
C. Warn/Kinnetic Labs
S. Fleshli/SM Baykeeper

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The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

MEETING MINUTES

Meeting Date: 12/14/00

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	<p>Agenda Item 2 (Opening Remarks): Plaintiffs noted that the Agenda Item 8 is a '3rd Party Team' Update rather than Cost Workgroup Update (the Cost Workgroup has concluded). Plaintiffs also noted that the Paxton and Metro sites in District 7 are not going to be completed by the stipulated schedule (Schedule in the District 7 Stipulation). They expressed concern about this and asked that Caltrans respond and engage in dialogue on the issue.</p>	Old	3/15/00		District 7
02	<p>Agenda Item 3a (Vector Monitoring): There were very few abatements from mid July to mid September. Most abatements in District 7 were at the MCTT or CDS sites. The I-5/605 EDB also had some abatements. In District 11, three abatements at I-5/SR 56 and sand filters. Rich Horner noted that the I-5/I-605 has been abated more often than other sites, but also that there is a change to the outlet structure being completed that should correct the standing water and associated breeding problem. Avoiding this kind of EDB outlet design in the future is a lesson learned. I-5/SR 56 in District 11 has also been observed breeding. The riprap pockets tend to breed at the basin inlet area. Eastern MS and all of the sand filters in D11 breed more often than other D7 filters. Caltrans to look at the conditions causing sand filters in District 11 to breed more regularly. In District 7, Lakewood PR breeds more often than Via Verde. Caltrans to respond to these issues at the next bi-weekly call. Plaintiffs also noted on page 44 of the Quarterly report relative to the La Costa sand filter that breeding was noted on the sand portion of the filter. Caltrans to investigate and determine where the breeding was occurring on the filter.</p>	New	12/14/00	1/4/01	Caltrans/RBF
03	<p>Agenda Items 3a,b (DHS Report/Survey): DHS noted that the CDS devices and the MCTT units are the big mosquito producers. The retrofits of these devices to seal openings may help this issue. In the future, if we install mosquito proofing on structures (BMPs) that hold water, there is still a concern that the mosquito proofing can be maintained on a long-term basis. DHS would like to look at these devices over the long-term to see if the mitigation is effective before rendering a final judgment. Cost of maintaining the vector abatement mitigation on the devices is also a factor.</p> <p>In another few months, DHS should have an updated report on the expanded survey/questionnaire. It should be noted that the California vector program is significantly advanced as compared to many other parts of the country, and this makes gathering information from those areas difficult. It is also a problem that DHS does not have out of state travel authority. Rich Horner noted that the county in King County does not have a mosquito control agency, and receives few complaints. He further noted that getting information of this type, when a vector agency does not exist, is a result that should be factored into the analysis. DHS responded that public complaints are not necessarily a good indicator of a problem or lack thereof. Unless the problem becomes acute, there is no real reporting or way to gauge the magnitude of the problem through public comment.</p>	New	12/14/00	3/14/01	DHS
04	<p>Agenda Item 4 (Overview of O&M Labor Hours and Cost): Prior to the main agenda item, several non-agenda items were discussed:</p>	New	12/14/00	3/14/01	Plaintiffs/Caltrans

MEETING MINUTES

Meeting Date: 12/14/00

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>As a follow-up on removal efficiency of biofilter swales presented at the previous Quarterly Status Meeting, M Barrett went over the data that included infiltration of storm water in biofilters (previously this was excluded from preliminary efficiency calculations for this device). Numbers were computed using the Scoping study methodology. Rick Graff noted that the La Costa WB had two failures of sampling equipment. KLI replied that they were two different sampler units, and the failures were unrelated. KLI is working with Sigma to determine the problem with the equipment. It was noted that a higher level of vigilance will be provided for the wet basin to make sure that we get as many successful storms at the site as possible. KLI noted that at Palomar swale, the flow-measuring pipe was removed and the flow sensor mounted directly to the concrete because debris was routinely blocking the pipe. It was confirmed that sheet flow to the Palomar swale will be estimated and its loading added to the point influent loading in final calculations.</p> <p>Rich Horner noted that we had a problem with adopt a highway cutting the biofilter at the site. KLI responded that the site has now been signed.</p> <p>Rich Horner also noted that the media filter data were compromised by a late storm influent (La Costa SF). KLI responded that the data will be asterisked, and this will be accommodated in the calculations. Rich Horner asked that Caltrans come up with a solution to this problem and talk about it at the next bi-weekly conference call.</p> <p>Rick Graff noted that slope at the Melrose biofilter should not be shot with hydroseed again, we are not getting growth. Rick also inquired as to the pace of the wet basin regrowth and asked to have an estimate of the % coverage returned after the August harvest to discuss at the next bi-weekly call.</p> <p>OMM Data: Rick Graff asked for clarification of the ‘travel’ category. Law responded that it is the time spent in the car getting to the site. It was noted that the costs shown for maintenance are not meant to be used in the final report. Rather, the hours will be used to identify the effort required for each site/device. Plaintiffs were concerned about the extrapolation of the data. For example, it was noted that the administration hours are a big line item. Santa Monica BK inquired why are drain inlet inserts have such relatively high administration time. Law responded that they have a relatively high maintenance burden, and consequently have a high associated administration time.</p> <p>Operations category: Includes inspections, these are a significant part of total OM hours.</p> <p>Maintenance category: Large data range, from 1% to 78% of the total OM effort. But less than 15% of the hours are attributable to maintenance at about half the sites. 66% of the maintenance is scheduled (via the MID).</p> <p>Rich Horner asked that we note if there is scheduled maintenance that we deem unnecessary in the final</p>				

MEETING MINUTES

Meeting Date: 12/14/00

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>report. Can we reduce the maintenance without hurting performance of the device? There are also significant differences between vector control costs in District 7 and District 11.</p> <p>It was noted that sand filter inspection requirements are relatively high. For biofilter swales, about 50% of the OM hours are administration, there is also a significant effort for watering biofilters in District 7.</p> <p>Possible Adjustments: Administration - get Caltrans general overhead numbers for other maintenance tasks. Assign plant establishment costs to construction rather than OM. VCD costs need to be normalized between vector districts. Eliminate specific outlier values for any category that appears suspect during the data reduction process.</p> <p>The Plaintiffs asked how we can resolve the maintenance effort requirements and how they will be incorporated into the final report. It was suggested to have a small subgroup to discuss this issue. Everett DeLano and Bill Evans to discuss this. BayKeeper to be kept informed on these exchanges (email)</p>				
05	<p>Agenda Item No. 5 (Overview of Empirical Observations Data): Rich Horner noted that this part of the study was his idea, and that he included it so that the study team would be alert for new information to help improve the operation and maintenance of the devices. There are probably some valuable observations recorded as a part of this program, and we need to find the significant items and report on them. RBF reviewed the empirical observation information and how the data reduction will proceed. The Plaintiffs agreed with the overall approach, and added that no special data reduction or compilations are necessary for the empirical observations.</p> <p>It was agreed to implement the suggestions given in the slides and have an example to discuss for the next meeting. The observations suggested would be done during one of the inspections in February. RBF to develop suggested changes for the other devices (changes to empirical observations, suggestions to EDBs were presented) and have them available at the next Quarterly meeting.</p>	New	12/14/00	3/14/01	Caltrans/RBF
06	<p>Note: Agenda Items 7 and 8 were presented ahead of Agenda Item 6</p>				
07	<p>Agenda Item No. 7 (Final Report Development Update): It was noted that the report Subcommittee met on 12/13, and discussed a draft outline. The Plaintiffs concurred with the outline and made several suggestions. The revised report outline will be distributed with the next bi-weekly report (1/4/01). Everett DeLano suggested that an executive summary be added to the report/outline.</p>	New	12/14/00	1/4/01	RBF
08	<p>Agenda Item No. 8 (3rd Party Team Update): There is an agreed upon summary table of cost issues, this was distributed to the 3rd party team. The 3rd party team must produce a progress report in 2-3</p>	New	12/14/00	3/14/01	3 rd Party Team

MEETING MINUTES

Meeting Date: 12/14/00

Page 5

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	months from now, and in 6 months they must be done with the final report. Work by the 3 rd party team was initiated on October 30 th , 2000.				
09	Agenda Item No. 6a (CDS Mosquito-proofing): MW_C reported that the litter bag was replaced with a net (too small for mosquito entry), foam was installed to seal openings/cracks, and holes were sealed etc. Rich Horner inquired as to the result of the mosquito-proofing. Dean Messer indicated that the VCDs are optimistic that the new additions are working, but given the time of the year, they want to monitor the results during the spring when the vector problem is more acute. This issue will be followed-up at the next bi-weekly conference call.	New	12/14/00	1/4/01	LWA
010	Agenda Item No. 6b (MCTT Covers): Received 4 bids for the construction of the MCTT covers, selected the low bidder of \$34,957. Law feels the low bidder understands the work and that the bid is good even though there is quite a spread between the bidders.	New	12/14/00	3/14/01	Law
011	Agenda Item No. 6c (Metro/Paxton Schedule Update): These two sites will not be operational this winter, and are scheduled for operation in the Fall of 2001. They could have challenges causing their completion to slip later than the currently scheduled 9/01.	Old	3/15/00	9/01	District 7
012	Agenda Item No. 9 (Closing): Next bi-weekly conference call scheduled for January 4, 2001 and next quarterly meeting scheduled for March 14, 2001 at RBF. Doug Failing noted that we were not going to be monitoring on Christmas and New Year holidays. After further discussion, it was agreed that the black out periods would be from noon Friday the 22nd until 8am Tuesday the 25th and on Saturday the 30th to midnight on day of first. Rick Graff wanted the critical sites (wetbasin) to be monitored on the Saturday before each holiday if possible.				

**STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes**

ISSUE VERSION: Final

MEETING NO.: 12
DATE: 3/14/01
TIME: 9:30am
LOCATION: RBF Irvine

SUBJECT: Quarterly Meeting No. 12

Prepared by: S. Taylor

Approved by:


(Signature)

Date Prepared: 4/10/01

Attendee Names / Company

E. Delano, NRDC
S. Fleischli, SMBaykeeper
R. Graff, SDBaykeeper
R. Horner, NRDC

S. Borroum, Caltrans
B. Currier, Caltrans
K. Smarkel, Caltrans
W. Evans, Caltrans
D. Failing, Caltrans
S. Ramos, Caltrans
M. Sanchez, Caltrans

Attendee Names / Company

C. Tesoro, Caltrans
J. Smith, Caltrans
P. Thakur, Caltrans
L. Chronert, Caltrans

J. Welch, SWRCB
P. Barksdale, SWRCB

M. Barrett, UT/RBF
L. Hansen, RBF
A. Lantin, RBF
S. Taylor, RBF

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The following items presented summarize the substantive items discussed or issues resolved at the above meeting to the best of the writer's memory.

MEETING MINUTES

Meeting Date: 3/14/01

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	<p>Agenda Item 2. Opening Remarks. US EPA regarding the La Costa infiltration basin: Laurie Kermish sent a letter that says that the EPA does not see the need to modify the consent decree, and would like to see the work proceed in a collaborative manner. What was the purpose of the meeting at SCCWRP on infiltration? Caltrans responded that the meeting at SCCWRP was a result of the District 7 stipulation, and not to discuss the particulars of the studies in District 11. The objective was to discuss the technical aspect of concerns from the Board if infiltration devices should be deployed. There was no intent to exclude interested parties from the pilot team. The EPA noted that it is not really possible to distinguish between infiltration in the Districts, rather it is all one issue. Caltrans had previously noted that it had to hold on consideration of infiltration due to the language in the San Diego municipal permit. NRDC asked if the preliminary siting study (for District 11) was underway? District 11 indicated that a draft report was developed, and now the District (11), wants to move forward based on the letter the district legal staff has put forth. NRDC noted they still have some concerns as to the scope of the District 11 investigation, and those comments have not been shared with Caltrans yet. District 11 noted the December letter was just a mechanism to memorialize the understanding and agreement regarding the La Costa basin settlement.</p>	New	3/14	6/15	Caltrans D 11
02	<p>Agenda Item 3a. Vector larval monitoring and abatement update. This quarter in District 7 there were a total of six sites breeding, and 21 abatement actions, in District 11 seven breeding incidents and four abatements. NRDC asked why there were no abatement actions in January or February. Caltrans will follow up on this, but it is probably due to the fact that there was a series of storm events during this period.</p>	New	3/14	4/12	Caltrans HQ
03	<p>Agenda Item 3b,c. Update on DHS Survey and Portland field investigation. DHS has been given an extension to complete their report. DHS went to Portland, OR, to assess how this jurisdiction deals with BMP vector issues, they are summarizing what they learned. April 30th is the new deadline for completion of the out of state survey for BMP/Vector activities. NRDC: What are the findings in Portland? Caltrans: They have a more limited BMP palette, mostly EDBs and biofilters. Concerns expressed by the agencies there were O&M driven. A summary of the Portland experience will be in the next bi-weekly report. It was noted that the next bi-weekly call is on the 29th of March.</p>	New	3/14	3/29	Caltrans HQ
04	<p>Agenda Item 4. Empirical Observations Data. A brief overview of the findings of the empirical observations was given, and a handout supplied. NRDC indicated the findings were on target with their view of things, and noted that the findings will appear in a subsection of each final report chapter. NRDC would like to get a more a numerical assessment. Look at the observations, and say what the extent (number) of observations were, to give the reader some context as to the extent of the problem. Also, we need to note in the final report that the swales can be constructed on fill, although a swale should not be formed with berms made of fill (the gopher problem at the Cerritos MS was because of a relatively thin berm constructed of fill dirt).</p>	New	3/14	6/14	Caltrans HQ/RBF

MEETING MINUTES

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
05	<p>Agenda Item 5. Storm Sampling Activities in District 7: Had two recent storm events that were successfully sampled. Only CDS sites that are short for the overall program (4 storms). District 11: Five events in the quarterly reporting period. Two events are not in the quarterly report, all sites were successfully monitored during the captured events. All sites meet criteria for target storms except at the swales. USEPA: Flow meters failed at 5/56, why? Caltrans: Had blockage in the sample intake tubes, they were subsequently retested and reinstalled after the event. NRDC: Is there construction at the Escondido MS? Caltrans: No, there is only normal maintenance activity at this station. NRDC also noted that the CDS units may need to be monitored beyond this year. No other sites where this is a problem.</p> <p>CDS Vector prevention fix: Put a bag on the downstream pipe outlet. This fix was a problem for storm flows, and created an unacceptable hydraulic condition (blocked flow and caused a backwater in the unit). The next step was to put in a more pliable fabric at the end of the pipe to get rid of the gaps that may allow mosquitoes in, and cut the end out of the bag to let it collapse on itself, but still allow flow and debris to pass during storms. On the inlet side, it does not appear that mosquitoes are coming through the inlet system. EPA: CDS representatives had some conversations with Caltrans regarding putting in a mixer to agitate the permanent pool in the device. What happened to this plan? Caltrans We want to try to exhaust the passive approaches before resorting to a more complex and maintenance intensive active approach. Caltrans also noted that litter baskets were installed downstream to catch (measure) the trash that bypasses the CDS unit.</p> <p>Caltrans noted that with the smaller design storms being recommended by the Board (0.75 inch as compared to the 1 inch plus the pilot program used for design), the bypasses may be more frequent. Santa Monica BayKeeper noted that Caltrans is not subject to the SUSMPs, or the Municipal permit. They further noted that the SUSMPs are not a mandate, they are a minimum standard, and Caltrans can implement a more conservative design storm. The Baykeeper also reminded Caltrans that complying with the litter TMDL is an issue separate from the design storm. Caltrans recognized that the basis for specifying BMPs does need further consideration, especially with respect to TMDLs. Caltrans noted that the SUSMPs are the most current thinking and guidance from the Board, and that the design storm issue remains unsettled. Caltrans wants to continue the dialogue on this issue. The State Board representative noted that the Regional Boards are concerned about the costs of the devices if they are designed with too big of a water quality volume or peak discharge rate. The Boards want flexibility, to get the most devices deployed. Caltrans noted they are not locked into any particular design storm because they believe the best solution is location, pollutant and watershed specific, and noted they are currently doing research in this area.</p>	FYI	3/14		
06	<p>Agenda Item 6. Device Specific Updates (6a). The vector covers were successfully installed at Via Verde. The units were smoke tested, found no leaks. The installation will be monitored for</p>	New	3/14	6/15	Caltrans

MEETING MINUTES

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>effectiveness. It was noted that the covers are also safe for personnel load.</p> <p>Sand Filter Maintenance (6b). Delaware Filter in District 11: Removed and replaced top two inches of filter sand. The unit is now working fine and has drain times comparable to when new. NRDC noted that it looks like other filters in District 7 are now clogging, and that mimics the national experience with respect to filter run time (about 3 – 5 years). It was also noted that they are seeing the crusting of the filter surface in Austin, Texas. Caltrans noted they are looking at alternative media for the SFs, and maybe the research will find a way around the surface crusting problem. NRDC noted that infiltration basin surfaces are known to crust, and this can be somewhat alleviated with the application of gypsum (calcium sulfate). Vegetation also helps mitigate this problem. NRDC requested that some testing of the cores taken at the sand filters. Maybe test for particle size and organic analysis. Caltrans indicated this could be done, but noted that there will be no baseline to compare the results to. It was decided to have this as a discussion item in the next bi-weekly call. Mike Barrett speculated that evaporation and deposition of dissolved solids in the surface layer could be a cause of clogging, which could be assessed by analyzing the crust. Steve Borroum thought that placing filter fabric on the surface and rolling it up when needed could be an easy, cheap solution.</p> <p>Metro and Paxton Update (6c): Bid came in at 40% of engineer’s estimate at Paxton park and ride, 15 bids were received. No award yet. Metro maintenance station has been advertised, bids to be opened on April 5th. The plan now is to build the sites but not to monitor/sample them, and have the monitoring money saved to build some biofilters in the District instead. The agreement to accomplish this has yet to be formalized.</p>				
07	<p>Agenda Item 7. Final Report Development Update. The report development group held a meeting on 3/13, and talked about structure of the document, where the lessons learned would be placed in the text (integrated in the body and tabulated the end of each section). NRDC: Term the lessons learned as ‘criteria/guidelines’ as appropriate to help users develop design manuals in the future. NRDC indicated the process is working well, and that Caltrans and the Plaintiffs have exchanged on all the lessons learned for each BMP, and there are no remaining disagreements. The plan is to continue to exchange draft chapters for comment. It appears the report can be finalized by September 2001. There will also be a concluding chapter that compares the sampling results between the different technologies to indicate what technology appears better suited to the removal of the specified constituent. It was agreed that the summary reports previously developed (siting, design and construction) would not be used in the final report. The Plaintiffs requested that Caltrans go back and make sure that there is nothing in the summary reports that should be brought forward to the final report (important points that were left out). All report chapters will be completed in draft by the end of May, with September 1 being the target for a final draft. The District 11 Plaintiffs noted they are OK with final report development being guided and reviewed by the District 7 Plaintiff experts.</p>	New	3/14	9/14	Caltrans HQ/NRDC Consultants

MEETING MINUTES

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
08	<p>Agenda Item 8. O&M Cost Update and MID Analysis. OMM Cost update: The objective of the committee that has been formed is developing O&M costs that would be representative if Caltrans was to perform the work. The committee is going to meet with the Pilot consultants, and develop a questionnaire. The Plaintiffs noted they would like to be involved in this process. NRDC: Are you working to cost or hours? Caltrans: both.</p> <p>Caltrans suggested that this summer would be a good chance to check back on the MID, and go through it and make it reflect with what we have learned over the course of the program, and refine the maintenance intervals to reflect this experience.</p> <p>The Plaintiffs inquired if the pilots will be maintained through next year, including the consent decree only pilot sites. Caltrans indicated the Consent Decree has specified deadlines, and we need to make sure those deadlines are honored. District 11 would like to sit down with the Plaintiffs and determine what (if any) sites would be decommissioned, and how they will be maintained from this point forward. If the sites are functioning, the District will continue to operate them, and if they are not functioning, the District will most likely retrofit or decommission them. District 11 will have a resolution/disposition proposal for each site by June if possible, by September at the latest. NRDC noted they would require a high standard for any decision to decommission a site. District 11 noted we are coming to a point where the legal obligations under the Consent Decree are ending.</p>	New	3/14	9/14	District 11
09	<p>Agenda Item 9. Closure and Meeting Summary. Dates to highlight: A field trip will be held on April 24 and 25th.</p> <p>June 13th, Wednesday is the next Quarterly Meeting date.</p> <p>The State Board Representative noted that they were invited and were concerned and wanted to see the process, and how Caltrans will be complying with their permit. The Board staff would like to put together a list of comments for Caltrans to respond to.</p>				



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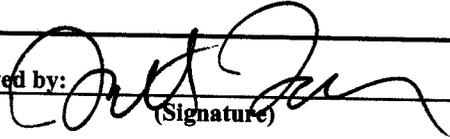
**STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes**

ISSUE VERSION: FINAL

MEETING NO.: 13
DATE: June 13, 2001
TIME: 9:30am to 12:00pm
LOCATION: RBF Consulting

SUBJECT: Quarterly Status Meeting No. 13 – BMP Retrofit Pilot Program

Prepared by: S. Taylor

Approved by: 
(Signature)

Date Prepared: 7/10/01

Attendee Names / Company

- K. Smarke/Caltrans
- B. Currier/Caltrans
- P. Barksdale/SWRCB
- R. Cargill/Caltrans
- D. Failing/Caltrans
- C. Tesoro/Caltrans
- J. Smith/Caltrans
- M. Barrett/UT

Attendee Names / Company

- C. May/NRDC
- R. Horner/NRDC
- E. DeLano/NRDC
- L. Hansen/RBF
- S. Taylor/RBF
- A. Lantin/RBF
- R. Graff/SDBK

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MEETING MINUTES

Meeting Date:

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	Agenda Item 2 (Other Items): It was noted that a 3 rd party cost review meeting would be held after the Quarterly meeting.	FYI	6/13		
02	Agenda Item 3 (Vector Update): DHS completed an 'engineering' report for the pilots. Caltrans and the Plaintiffs generally agree with the conclusions in the report, and they will be discussed in the final report as appropriate. DHS also has a Vector Production Report - due at the end of the month. NRDC: The use of DHS recommendations will be evaluated prior to being placed into the final report, since the recommendations were only advanced in the interest of vector reduction, and do not take water quality into account. Caltrans noted that Dean Messer will develop an executive summary of the program vector reports, and this summary will be put into the final Pilot Program report (as an appendix). NRDC noted that this will probably be the definitive work for vectors and BMPs.	New	6/13	8/30	Caltrans
03	Agenda Item 4 (OMM/Sampling): Past quarter, had four sampling events, one each in February and March, two in April. All sites have met the target number of storms, with exception of the CDS sites. In District 11, Five events were monitored, all sites met the target number of storms. Swales and strip sites did not always have effluent flow however. It was noted that the QA/QC data was not yet available. It was agreed to hold off on sending the data to the proprietary device manufactures. Routine maintenance was completed during the past quarter, and will continue during the summer.	FYI	6/13		
04	Agenda Item 5 (Data Results Summary): Over 13,400 chemical analyses have been completed as a part of the program. The average constituent removal tables were reviewed by device. Caltrans will be looking at the data to determine what can reliably be estimated as the minimum effluent concentration. It was noted that there is no single way to look at the removal efficiencies and completely understand the relative removal performance between the devices. The confounding factors are influent concentration of the constituent, the way the device operates, and load reduction from infiltration. These sensitivities will be accounted for in the presentation of the final data in the report. The 3rd year data did not change significantly change the conclusions in the 2nd year report. Media filters have very singular effluent quality that is practically unrelated to influent quality. There is an irreducible minimum of about 8 mg/l for TSS for MFs. It was noted that there is Phosphorus export for biofilters, filter strips tend to be better in this regard. About 1/2 the influent runoff is lost in the biofilters. For Extended Detention facilities, Manchester at I-5 and the SR 78/I-15 sites were best overall for constituent removal. The best load reduction occurred at I-605/91 as a result of relatively good infiltration: up to 60% of runoff volume. It was noted that the L:W ratio did not appear to effect the removal efficiencies, for the range of ratios we studied.	FYI	6/13		

MEETING MINUTES

Meeting Date: July 14, 1998

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>The drain inlet inserts had relatively poor removals. The data presented excluded litter.</p> <p>The TSS removal for the Oil/Water Separator was much better than last year. No free oil and grease removal due to the low influent concentration of this constituent.</p> <p>The CDS devices captured mostly grass/leaves etc, and about 20% litter by weight.</p>				
05	<p>Agenda Item 6 (MID Modifications): Caltrans indicated that the latest version of the MID (v.16) is the result of consultations with the Districts and the monitoring consultants. The goal of the modification was to reduce inspection time without compromising the performance of the device. Plaintiffs to review v.16 and give Caltrans any comments. Once v.16 is finalized, it will be passed to Paul Thakur to analyze for O&M cost.</p> <p>The Plaintiffs asked when the O&M costs would be complete.</p> <p>Caltrans noted a status call was set for June 21 to discuss the Plaintiff comments (a bi-weekly call).</p> <p>Plaintiffs noted that some of the maintenance done for the pilot program seems extreme and not sustainable in a broader program, and needs to be reviewed prior to reporting a 'final' maintenance regimen for each type of technology. Caltrans concurred with this opinion.</p>	New	6/13	7/15	Caltrans
06	<p>Agenda Item 7 (O&M Cost): District 7 is working on the number of hours and cost based on the old MID will be complete with this analysis by end of July. It was determined that the effort would be put on hold, pending the completion of MID v.16, and completed using the new maintenance program.</p>	New	6/13	8/30	Caltrans
07	<p>Agenda Item 8 (Final Report): Caltrans received comments on the final report chapters from the Plaintiffs for: Oil/Water Separator, Stormfilter and biofilters. Caltrans will incorporate these comments into the final report chapters. Caltrans and the Plaintiffs met separately for a discussion of the contents of the final chapter (conclusion chapter). It was determined that the Plaintiffs would receive the report chapters and the conclusion by the end of August. Caltrans will have technical editors review the report. The final report is scheduled to be completed by the end of September. Version 16 of the MID will be include the new MID in the final report.</p> <p>Caltrans noted that the 3rd party report should be separate from the final report since there is additional analysis added beyond the pilot findings. Plaintiffs noted that there would need to be a lot of explanation if the pilot construction costs were left to 'stand alone' in the final report.</p> <p>BayKeeper asked what the San Diego Retrofit Study would use for cost data. Caltrans replied that the pilot data would be used. The Plaintiffs remained concerned with how the final costs will be presented in the final report since they feed into a report to the Board required by the Consent Decree.</p>	FYI	6/13		
08	<p>Agenda Item 9 (Continuation of Pilot Sites): Caltrans will continue to operate all pilot sites as is with</p>				

MEETING MINUTES

Meeting Date: July 14, 1998

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>three exceptions: 1) the CDS sites will continue under the pilot program. 2) The Drain Inlet Inserts will be removed, but the sites will be maintained to test other Drain Inlet Inserts in the future. 3)La Costa Infiltration Basin: This site will be decommissioned.</p> <p>28. Pilots continue to be operated as they have been under the pilot program with the exception of monitoring. Caltrans has no plans (firm) in place now to modify the other Pilot Sites. The Plaintiffs asked what would happen to the CDS units after monitoring? Caltrans indicated they will stay and be operated as they are. BayKeeper asked about the study to respond to the Consent Decree complaint relative to the La Costa basin. Caltrans indicated they would have a response to the Plaintiffs by the first of next week.</p>				
09	<p>Agenda Item 10 (Closing): It was noted that bi-weekly calls will be ad-hoc from this point forward. The next Quarterly meeting is scheduled for September. 26th.</p>	FYI	6/13		



JN: 100979, 100980

**STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0004A
Meeting Minutes**

ISSUE VERSION : FINAL

MEETING NO.: 14
DATE: September 26, 2001
TIME: 10:00am to 3:00pm
LOCATION: RBF Consulting

SUBJECT: Quarterly Status Meeting No. 14 – BMP Retrofit Pilot Program

Prepared by: A. Lantin

Approved by: 

(Signature)

Date Prepared: 12/14/01

Attendee Names / Company

Mike Barrett, UT
Dave Beckman, NRDC (via conference line)
Brian Currier, UC Davis- Caltrans
Everett DeLano, Representing Plaintiffs
Doug Failing, Caltrans District 7
Steve Fleischli, Santa Monica Baykeepers
Richard Gordon, Caltrans D7
Laura Hansen, RBF
Richard Horner, NRDC
Jeremy Johnstone, EPA (via conference line)
Anna Lantin, RBF
Chris May, NRDC
Sayra Ramos, Caltrans District 11
Bruce Reznik, San Diego Baykeepers
John Frederick Smith, Caltrans Legal, D7
Scott Taylor, RBF
Cid Tesoro, Caltrans D11
Paul Thakur, Caltrans D7
Ken Smarkel, Caltrans HQ
John Welch, SWRCB (via conference line)

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MEETING MINUTES

Meeting Date:

Page 2

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
01	<p>Agenda Item 2 (Remarks): Rich Horner asked John Welch about the guideline development for infiltration devices. It was clarified by Ken Smarkel and John Welch that the infiltration guidelines were being developed by Caltrans with input from the Regional Boards (LA and Lahontan in particular). Caltrans to check on status.</p> <p>Rich noted the passing of Pete Van Riper. Rich noted that the report should be dedicated with Pete. D7 to check if this can be done.</p>	FYI	9/26		Caltrans D7
02	<p>Agenda Item 3 (Final Report Presentation and Overview): Mike Barrett provided an overview of the final data. It was noted that MCTT data shows poor removal on TSS but that the MCTTs are installed at Park and Ride facilities, with relatively clean influent. Noted that it is concentration reduction for concrete devices, load reduction for others. For Stormfilter™, TSS and total metals removals are statistically significant. For sand filters, the effluent quality is irrespective of influent quality for particulate copper. Need to be aware that some efficiencies are highly dependent on influent quality, some are not (i.e., particulates through sand filter).</p> <p>Rich Horner noted that for the constant effluent cases, could also express as a loading percent (%) reduction. Rich asked that this should be better explained in the report. It was shown that all effluent concentrations are independent of influent concentrations for particulate related constituents when treated with sand filters, for all other BMPs, there is a linear relationship between influent and effluent concentrations.</p> <p>Rich Horner noted that it should be explained in detail in the report how the Wet Basin works, and that there is a displacement of the permanent pool with incoming flow In the final report, it was agreed to do a relative cost ranking rather than using actual unit costs (\$/WQV).</p> <p>Mike Barrett described how to interpret a box and whisker diagram. Lines indicate the uncertainty around the data point for a 90% confidence interval. . Noted that for nitrate, no BMPs had a significant reduction except for the WB. There are no devices that can remove dissolved phosphorus.</p> <p>Plaintiffs requested a description in the report as to why vegetated devices exported phosphorus. DIIs and OWS were shown as not appropriate for the applications tested due to low removal.</p>	FYI	9/26		
03	<p>Agenda Item 3 (Final Report Overview – Maintenance) Overall, the Wetbasin required the most maintenance, the Infiltration Trench required the least. For most devices, vegetation management was the largest single item by a large factor. BMPs that appeared to have applicability for the conditions tested: Biofilters, EDBs, IT/IB, Sand Filters, Wet Basin. BMPs not appropriate for the conditions tested: OWS, Stormfilter™, inlet inserts. Steve Fleischli requested that it be noted that all DIIs should</p>	FYI	9/26		Caltrans/RBF

MEETING MINUTES

Meeting Date: September 26, 2001

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>not be condemned, that some may be useful for trash.</p> <p>Dave Beckman would like it noted that the poor performers be noted in the final report as less desirable. "Most technically effective" for our situation, etc. rather than statements like "this indicates that widespread implementation of these devices, would likely not result in measurable improvements in receiving water quality".</p> <p>Most applicable BMPs: Biofilters, EDBs, Austin SF. Noted that WB and IB, can be useful, however, that they have significant siting constraints. Plaintiffs agreed. Site specific applications would be a larger list (WB and IB).</p> <p>Plaintiffs noted that the report has to accommodate other areas of the state, and allow the application of Infiltration devices, WB and Delaware SF, that may be workable elsewhere. Report needs to note that regional cooperation may eliminate some of the siting limitations.</p>				
04	<p>Statewide Infiltration Issue: There is a draft set of guidelines under preparation by the LA Regional Water Quality Control Board, but it has not been finalized. D7 (D. Failing or P. Thakur) to check with Xavier and determine status of the guidelines document, and set a meeting to continue to finalize it. (Siting criteria for infiltration for CT).</p>	New	9/26	12/13	Caltrans D7
05	<p>Agenda Item 3 (Final Report – General Comments): On O&M cost, there should be discussion regarding progressive interagency relations (Infiltration, wetland plants etc). Threatened and endangered species, need to discuss this issue in the report.</p> <p>The Plaintiffs requested that the conclusions chapter of the report discuss what was done for avoidance measures and recommend that they be done in the future. Brock Ortega (Dudek) will provide a summary paragraph describing what the biological issues were. Note the design standards that were used for the Wet Basin, and that these differ from the criteria that are published.</p> <p>Plaintiffs suggested for someone to put together a way to track the comments made to the final report, highlight the changes Caltrans objects to in a memo, and explain why the comment was not addressed.</p>	New	9/26	12/13	RBF
06	<p>Agenda Item 4 (O&M Cost Development Update): Distribution to Plaintiffs by end of week of Oct 1, 2001. The O&M Cost workgroup noted that this was not intended to be part of the final report.</p> <p>It was clarified that both MID v 15 and 16 would be in the final report, as well as discussion explaining the difference between the two versions. Hours will be presented, not dollars in the final report.</p>	FYI	9/26	10/5	Caltrans- D7

MEETING MINUTES

Meeting Date: September 26, 2001

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
07	<p>Agenda Item 5 (Construction Cost Data Evaluation): The lessons learned need to be reviewed by the work group. Plaintiffs noted that the Pilot Program costs will be widely reviewed. Plaintiffs indicated support for using a cost range to be presented in the final report, in a table with a few supporting paragraphs. The cost group will come up with cost ranges and a description for incorporation into final report. A cost meeting was tentatively set for 2nd week in October (cost workgroup).</p>	FYI	9/26	10/10	Caltrans/Plaintiffs
08	<p>David Beckman commented that someone gave a presentation at CEEB that was negative with respect to the pilot program findings. Plaintiffs requested follow up as to how information from pilot study is being currently distributed (WSPA and CEEB).</p>	FYI	9/26		Caltrans
09	<p>Next Quarterly Meeting scheduled for December 13th at RBF.</p> <p>Requests from Plaintiffs for next Quarterly meeting discussion:</p> <ol style="list-style-type: none"> 1. Cost 2. Poorly performing devices (how they are reported, don't close door on better technologies, don't close door on other appropriate uses) 	FYI	9/26		



JN: 100979, 100980

**STORMWATER PLANNING SERVICES
CONTRACT NO. 43A0051
Meeting Minutes**

ISSUE VERSION: Draft

MEETING NO.: 15
DATE: January 9, 2002
TIME: 10:00 am to 2:30 pm
LOCATION: RBF Consulting

SUBJECT: Quarterly Status Meeting No. 15 – BMP Retrofit Pilot Program

Prepared by: S. Taylor

Approved by:

(Signature)

Date Prepared: 07/02/02

Attendee Names / Company

- Mike Barrett, UT
- Brian Currier, UC Davis- Caltrans
- Everett DeLano, Representing Plaintiffs
- Steve Fleischli, Santa Monica Baykeepers
- Richard Gordon, Caltrans D7
- Laura Hansen, RBF
- Richard Horner, NRDC
- Anna Lantin, RBF
- Chris May, NRDC
- Sayra Ramos, Caltrans District 11
- Bruce Reznik, San Diego Baykeepers
- John Frederick Smith, Caltrans Legal, D11
- Scott Taylor, RBF
- Paul Thakur, Caltrans D7
- Ken Smarkel, Caltrans HQ
- John Welch, SWRCB
- Bill Evans, Caltrans Legal D7
- Bill Reagan, Caltrans D7

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MEETING MINUTES

Meeting Date: January 9, 2002

Page 2

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01	<p>Agenda Item 1 (Introductions and Objectives): It was noted that Jeremy Johnstone's father was ill, and Jeremy could not join the meeting. The Plaintiffs asked that all handouts and materials from the meeting be forwarded to him. It was also noted that Steve Borroum and Doug Failing could not attend. In the future, Plaintiffs want to ensure that decision makers from Caltrans are present at the meetings. The Plaintiffs also expressed concern relative to information (via presentations and professional papers) that is being distributed about the Pilot Program, and requested that this practice be stopped.</p>	FYI	1/09		Caltrans
02	<p>Agenda Item 2 (Review of Pilot Capital Cost Items): The last Plaintiff/Caltrans meeting on this issue was on Jan 3, when the team went through each cost section for each chapter of the final report, discussed revisions, and incorporated the comments into the chapters. The updates to each chapter were subsequently sent to the meeting participants for final comment. RBF also distributed a revised version of the Cost Chapter from the final report at the meeting. Plaintiffs asked for tracking (as to what portions of the text was incorporated into the final report, and what portion was excluded) of the final comments in Chris Mays and Rich Horner's two memorandums on cost. It was noted that most of the 'recommendations' memo was included in the final cost chapter, and that none of the 'magnitude of potential savings' memo was included in the final cost chapter.</p> <p>Caltrans indicated that including the 'Glenrose Engineering' capital cost numbers from other parts of the country was not appropriate since this is a focused retrofit study, and the costs compiled by Glenrose Engineering are not a direct comparison for the data in the final report, and would be out of context. Plaintiffs responded that this has been an issue for a long time, and that looking at other jurisdiction's costs are a part of the program. Plaintiffs note that the numbers can provide valuable reference for discussion in the report. Parties agreed to disagree on this issue.</p> <p>Plaintiffs noted that other jurisdictions are implementing BMP retrofits, but that the costs may not have been tracked with the 'rigor' that they would prefer. Plaintiffs fear that Caltrans will use the Pilot Program data to show that BMP retrofit is not economically feasible. In other jurisdictions BMP retrofit is occurring, and this is the primary objective. Plaintiffs want Caltrans to use the pilot program cost numbers to evaluate how they can bring down costs to allow implementation of the devices.</p> <p>Caltrans responded that the Storm Water Management Plan does include pilot BMPs, so they are not using the costs from the Pilot Program to avoid BMP implementation. Rather, the goal is to produce retrofit cost numbers that reflect the Caltrans environment, and that is what the study has produced.</p> <p>The Plaintiffs reiterated that they don't want to say that the country-wide data collected by Glenrose has no 'value', and that the ideas for cost savings from other jurisdictions need to be carried forward. Caltrans agreed that bringing the ideas forward will assist in making the program more successful. It was</p>	New	1/02		Caltrans

MEETING MINUTES

Meeting Date: January 9, 2002

Page 3

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>noted that some of these ideas were incorporated into the current version of the cost chapter.</p> <p>Plaintiffs again, reiterated that the costs from the other jurisdictions must be included in the final report, and that the Holmes and Narver/Glenrose report must be included as an appendix to the final report. Plaintiffs noted that all of the changes made to the final report thus far in collaboration with their technical representatives, are not acceptable to the Plaintiffs. The Plaintiffs also requested that Caltrans clarify who has 'approval' authority for the final report within the organization.</p> <p>O&M cost: There are two current cost accountings, what was experienced for the Maintenance Indicator Document (MID) as the project was completed, and an estimate based on the final revised version of the MID (Version 16). The Plaintiffs feel that the estimates have a number of problems, and they don't agree with either version. Specifically, the Plaintiffs agree with MID Version 16 maintenance items, but the number of hours applied to each item is a subject of disagreement. A solution that both parties agreed to on a preliminary basis is to include the MID v.16 document in the final report without an estimate of cost to implement it.</p>				
03	<p>Agenda Item 3 (Devices that Performed Less Effectively): Plaintiffs want the characterization in the final report of the devices that did not perform as well as others not to condemn them as ineffective. Rather, continue to leave open the possibility of application of the device for other conditions. The Plaintiffs will suggest language changes to the report relative to how the less effective devices are discussed. Both parties agreed that they are not that far apart on this language, and Plaintiffs will suggest refinements.</p>	FYI	1/02		Plaintiffs
04	<p>Agenda Item 4 (Final Report Recommendations and Conclusions): Caltrans noted that when each chapter was drafted, phrases such as 'should be considered' were used. Plaintiffs suggested that the language be revised to make more positive recommendations. This change was subsequently made, but Caltrans upper management did not approve of this change. In the interim, the Caltrans SWMP has been approved, and the Caltrans Storm Water Advisory Teams (SWATs) are a part of the Caltrans storm water program approval process. With a formal approval process is now in place, the policy decisions lie with this defined process and associated committees, and a research report can not put forth policy type language. Caltrans is amenable to phrase things such as, "future guidelines should consider the results of the study that showed....." The important concepts can be in the report, but the way the statements are made must be changed. The Plaintiffs disagree that the report should not put forth recommendations, and that the Stipulation and Consent Decree have specific language to this effect. Caltrans agreed to reconsider this point. Plaintiffs reiterated that if the strong recommendation type language is not put in</p>	New	1/02		Caltrans

MEETING MINUTES

Meeting Date: January 9, 2002

Page 4

ITEM	DESCRIPTION	STATUS	OPENED	DUE	ACTION FOR:
	<p>the report, this would not be acceptable to the Plaintiffs.</p> <p>Plaintiffs noted that decision makers from Caltrans need to be engaged on the issues noted above.</p> <p>Summary of outstanding issues: Recommendations/conclusions language and the third party cost data - are they included? O&M costs, Glenrose Engineering costs and how the study phrases the conclusions and recommendations to respond to Plaintiff concerns.</p>				
05	<p>Agenda Item 5 (Final Report Dedication to Peter Van Riper) Doug Failing was unable to attend meeting, and in his absence, the decision was deferred.</p>	Old	9/26	7/10	Caltrans