BMP PILOT STUDIES BI-WEEKLY CONFERENCE CALL
DRAFT AGENDA

DATE:	February 22, 2001 Thursday
TIME:	10:00 am – 11:00 am
PLACE:	Via phone (916-657-4102)
ATTENDEES:	Rich Horner/Chris May, Jeremy Johnstone, Rick Graff, Bruce Reznik, Steve Fleischli, Steve Borroum, Brian Currier, Cathy Beitia, Cid Tesoro, Sayra Ramos, Barbara Ronimus, Pete Van Riper, Richard Gordon, Paul Thakur, Dean Messer, Brown and Caldwell, Montgomery Watson/Law, KLI, RBF, Mike Barrett, Dudek
COPIES TO:	RBF File 34123, 34218
SUBJECT:	BMP Pilot Study Status

AGENDA ITEMS

1. Sand Filters – performance during recent events (clogging, Operation and Maintenance)
2. CDS Units – Mosquito net/litter basket fix follow-up
3. Storm Events Feb 10, 12-13, 2001 – LawCrandall/KLI

>>Next meeting: Quarterly Status Meeting, March 14, Wednesday 9:30 am-2pm<<

BMP Pilot Studies
Bi-weekly Status Report

BMP Retrofit Pilot Projects, District 7 and District 11

February 15, 2001

UPDATES IN THIS BI-WEEKLY REPORT COVER THE PERIOD JANUARY 26 – FEBRUARY 15 , 2001

STORM SAMPLING EVENTS

During this reporting period, the teams mobilized for the following two storm events: February 10 and February 12-13, 2001. Details of these two events will be provided in the next Quarterly Report.

Results of the January 24th and 26th 2001 sampling events are provided below.

January 24, 2001

District 11 BMP sites:

The January 24, 2001 storm event forecasted a 90% chance of 0.25-0.5 inch of precipitation. Mobilization occurred to all sites except for the Via Verde Multi-Chambered Treatment Train, which was offline due to the leak being fixed. Empirical observations were made at all other sites, however.

Observations of note include the following:

Swales:

- Cerritos Maintenance Station Swale: Flow bypass occurred through gopher holes. Subsequently, there was no flow at the effluent. Erosion was observed on the north slope.

Strips:

- No significant observations noted.

Infiltration Basin:

- An oily sheen was observed on the inlet flow.

Infiltration Trench:

- No significant observations noted.

Drain Inlet Inserts:

Fossil Filter DIIs:

- Foothill Maintenance Station: Flow bypass occurred.
- Rosemead Maintenance Station: Flow bypass occurred.

StreamGuard DIIs:

- Foothill Maintenance Station: Flow bypass occurred.

Oil/Water Separator:

- The effluent was clear and colorless with no sheen, compared to the influent, which was a brown emulsion with suspended solids. However, the effluent had a musty, hydrogen sulfide smell. During previous storms, the effluent had often been a black color with

suspended oil globules and solids.

Sand Filters:

- Eastern Maintenance Station, Foothill Maintenance Station and Termination P&R Sand Filters: The Sand Filters took approximately five days to drain.
- Foothill Maintenance Station Sand Filter: The sand filter was observed to be 80% covered with water up to 2 inches deep.
- Termination P&R Sand Filter: 6 inches of standing water was observed on the sand filter.

MCTTs:

- Via Verde P&R MCTT: The site was offline for this storm due to the leak fix.
- Lakewood P&R MCTT: No significant observations noted.

EDBs:

- I-5/I-605 EDB: Trash and debris was resuspended near the outlet structure.
- I-605/SR-91 EDB: No significant observations noted.

CDS Units:

- Filmore CDS: Flow bypass occurred through the weir box.
- Orcas CDS: Flow bypass occurred through the weir box. The flow meter failed and no sample was collected.

Table 1. District 7 January 24, 2001 Event

Site	BMP Type	Date of Sample Event	Rainfall Total	Mobilized	Sampled		% Storm Capture	Number of Aliquots	Empirical Observations
					Comp	Grab			
District 7									
I-605/SR-91	IB	1/24/01	0.30	Y	NA	NA	NA	NA	Y
I-210 East of Orcas	CDS	1/24/01	0.47	Y	NA[1]	NA	NA	NA	Y
I-210 East of Filmore	CDS	1/24/01	0.60	Y	Y	Y	>75,>75	>12,>12	Y
I-5/I-605	EDB	1/24/01	0.54	Y	Y	NA	>75,>75	>12,>12	Y
I-605/SR-91	EDB	1/24/01	0.30	Y	Y	NA	>75,>75	>12, 9	Y
Alameda MS	OWS	1/24/01	0.31	Y	NA	Y	NA	NA	Y
Eastern MS	MF	1/24/01	0.64	Y	Y	Y	>75,>75	>12,>12	Y
Foothill MS	MF	1/24/01	0.50	Y	Y	Y	>75,>75	>12,>12	Y
Termination P & R	MF	1/24/01	0.36	Y	Y	Y	>75,>75	>12,>12	Y
Via Verde P & R	MCTT	1/24/01	0.53	NA	NA	NA	NA	NA	NA
Lakewood P & R	MCTT	1/24/01	0.43	Y	Y	NA	>75,>75	>12,>12	Y
Altadena	Bio Strip	1/24/01	0.44	Y	Y	NA	>75,>75	>12,>12	Y

Site	BMP Type	Date of Sample Event	Rainfall Total	Mobilized	Sampled		% Storm Capture	Number of Aliquots	Empirical Observations
					Comp	Grab			
	Infiltration Trench	1/24/01	0.44	Y	NA	NA	NA	NA	Y
Foothill MS	DII north- SG Insert	1/24/01	0.50	Y	Y	NA	>75	>12	Y
	DII south- FF Insert	1/24/01	0.50	Y	Y	NA	>75	>12	Y
Las Flores MS	DII north-SG Insert	1/24/01	0.52	Y	Y	NA	>75	>12	Y
	DII south-FF Insert	1/24/01	0.52	Y	Y	NA	>75	>12	Y
Rosemead MS	DII north-FF Insert	1/24/01	0.49	Y	Y	NA	>75	>12	Y
	DII south-SG Insert	1/24/01	0.49	Y	Y	NA	>75	>12	Y
I-605/SR-91	Bio Strip	1/24/01	0.30	Y	N[2]	NA	NA	NA	Y
	Bio Swale	1/24/01	0.30	Y	Y[3]	NA	>75,NA	>12,NA	Y
Cerritos MS	Bio Swale	1/24/01	0.30	Y	Y[3,4]	NA	>75,NA	>12,NA	Y
I-5/I-605	Bioswale	1/24/01	0.54	Y	Y[3]	Y	>75,NA	>12,NA	Y
I-605/ Del Amo	Bioswale	1/24/01	0.30	Y	Y	NA	>75,>75	>12,>12	Y

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[1] The flow meter failed and no sample was collected.

[2] Sampler pacing was set too high for the total storm volume received; only 5 aliquots were collected at the influent, and none at the effluent due to no flow.

[3] Influent sample collected and submitted to laboratory. No flow at effluent due to infiltration.

[4] No flow at effluent due to bypass through gopher burrows.

District 11 BMP sites:

On January 25, crews were mobilized for an incoming storm. The forecast was for an 80% chance of 0.5 to1.0 inches of precipitation. All sites were successfully sampled and sent to the laboratory for analysis.

Table 2. District 11 January 26, 2001

Site	BMP Type	Date of Sample Event	Rainfall Total	Mobilized	Sampled		% Storm Capture	Number of Aliquots	Empirical Observations
					Comp	Grab			
District 11									
I-5/SR-56	EDB	1/26/01	0.78	Y	Y	NA	>75	>12	Y
I-15/SR-78	EDB	1/26/01	0.58	Y	Y	Y	>75	>12	Y
I-5/La Costa (West)	IB	1/26/01	0.59	Y	NA	NA	NA	NA	Y
I-5/La Costa (East)	WB	1/26/01	0.60	Y	Y	Y	>75	>12	Y
I-5/Manchester	EDB	1/26/01	0.95	Y	Y	NA	>75	>12	Y
Kearney Mesa MS	StormFilter	1/26/01	0.73	Y	Y	NA	>75	>12	Y
Escondido MS	MF	1/26/01	0.75	Y	Y	Y	>75	>12	Y
La Costa P & R	MF	1/26/01	0.58	Y	Y	NA	>75	>12	Y
SR-78/I-5 P& R	MF	1/26/01	0.55	Y	Y	NA	>75	>12	Y
Melrose Ave/SR-78	Bio Swale	1/26/01	0.93	Y	Y	Y	>75	>12	Y
I-5 Palomar Airport Rd	Bio Swale	1/26/01	0.59	Y	Y	Y	>75	>12	Y
Carlsbad MS	Bio Strip	1/26/01	0.56	Y	Y	Y	>75	>12	Y
	Infiltration Trench	1/26/01	0.56	Y	Y	N	>75	>12	Y

February 10-12th ,2001 Events

District 7 BMP sites:

During this reporting period, the teams mobilized for storm events on February 10 and 11-12, 2001. The first storm forecasted a 90% chance of 0.25-0.5 inch of precipitation. The second event forecasted a 90% chance of 1-2 inches of precipitation. Hydraulic residence time (HRT) testing was done at the Biofiltration Swales over the period February 10-12, 2001. During a previous Biweekly meeting, the decision was made to take three measurements of HRT for each Biofiltration Swale. For swales in District 7, the following results were achieved:

Cerritos Maintenance Station Swale: successfully completed 2 out of 3 HRT tests

I-605/Del Amo Avenue Swale: successfully completed 2 out of 3 HRT tests

I-5/I-605 Swale: successfully completed 1 out of 3 HRT tests

I-605/SR-91 Swale: no HRT tests completed.

Due to the difficulty of seeing the dye during nighttime hours, HRT tests need to be performed during daylight hours. Future events will be targeted for HRT tests.

Details of these two events will be provided in the next Quarterly Report.

District 11 BMP sites:

On February 10, the forecast was for an 80% chance of 0.25 to 0.50 inches of precipitation. Crews were put on standby and all monitoring stations were armed. Only three sites received enough rainfall to be sampled: SR-78/I-5 P& R, Escondido MS , and I-15/SR-78. Details of this event will be provided in the quarterly report.

On February 12, crews were mobilized for an incoming storm. NWS had forecast a 100% chance of 1.0 to 1.5-inches of precipitation. At the time of this writing some monitoring stations are still running. Details of this event will be provided in the quarterly report.

Summary of Target and Successfully Sampled Storms Per Site

Location	BMP Type	Monitoring Consultant	Operational (yes/no)	Operational Date	Target Number of Storms	Successfully Sampled Storms [1, 4] (PRELIMINARY)			
						1998-1999	1999-2000	2000-2001	Total to Date
District 7									
I-605/SR-91	IB	MW/Law	Yes	4/9/99	**4**	0	8[3]	5[3]	**13[3]**
I-210 East of Orcas	CDS	MW/Law	Yes	8/10/00	**8**	0	0	0	**0**
I-210 East of Filmore	CDS	MW/Law	Yes	8/10/00	**8**	0	0	3	**3**
I-5/I-605	EDB	MW/Law	Yes	2/26/99	**10**	2	4	4	**10**
I-605/SR-91	EDB	MW/Law	Yes	2/22/99	**10**	3	3	3[6]	**9**
Paxton P & R	MF	MW/Law	No	5/21/01[2]	**8**	0	0	0	**0**
Metro MS	MCTT	MW/Law	No	5/21/01[2]	**8**	0	0	0	**0**
Alameda MS	OWS	MW/Law	Yes	5/17/99	**8**	0	4	4	**8**
Eastern MS	MF	MW/Law	Yes	2/15/99	**8**	1	4	2	**7**
Foothill MS	MF	MW/Law	Yes	3/8/99	**8**	2	4	2	**8**
Termination P & R	MF	MW/Law	Yes	5/17/99	**8**	0	4	2	**6**
Via Verde P & R	MCTT	MW/Law	Yes	5/17/99	**8**	0	4	2	**6**
Lakewood P & R	MCTT	MW/Law	Yes	5/17/99	**8**	0	4	5	**9**
Altadena	Bio Strip	MW/Law	Yes	10/1/99	**8**	0	6[8]	3	**9**
	Infiltration Trench	MW/Law	Yes	10/1/99	**8**	0	6[3]	4[3]	**10[3]**
Foothill MS	DII north- SG Insert	MW/Law	Yes	1/22/99	**8**	0[7]	7	3	**10**
	DII south- FF Insert	MW/Law	Yes	1/22/99	**8**	0[7]	7	3	**10**
Las Flores MS	DII north-SG Insert	MW/Law	Yes	1/22/99	**8**	0[7]	5	3	**8**
	DII south-FF Insert	MW/Law	Yes	1/22/99	**8**	0[7]	5	4	**9**
Rosemead MS	DII north-FF Insert	MW/Law	Yes	1/22/99	**8**	0[7]	5	4[5]	**9**
	DII south-SG Insert	MW/Law	Yes	1/22/99	**8**	0[7]	5	4	**9**
I-605/SR-91	Bio Strip	MW/Law	Yes	10/1/99	**8**	0	3[6]	3[6]	**6**
	Bio Swale	MW/Law	Yes	10/1/99	**8**	0	3[6]	5[10]	**8**
Cerritos MS	Bio Swale	MW/Law	Yes	10/1/99	**8**	0	4	5[6]	**9**
I-5/I-605	Bio Swale	MW/Law	Yes	10/1/99	**8**	0	4	4	**8**
I-605/ Del Amo	Bio Swale	MW/Law	Yes	10/1/99	**8**	0	2	5[6]	**7**
District 11									
I-5/SR-56	EDB	KLI	Yes	1/24/99	**12**	5	5	3	**13**
I-15/SR-78	EDB	KLI	Yes	1/24/99	**12**	4	5	4	**13**
I-5/La Costa (West)	IB	KLI	Yes	1/24/99	**12**	8[3]	13[3]	4[3]	**25[3]**
I-5/La Costa (East)	WB	KLI	Yes	10/1/99	**8**	0	5	3	**8**
I-5/Manchester (East)	EDB	KLI	Yes	10/1/99	**8**	0	4	5	**9**
Kearney Mesa MS	StormFilter	KLI	Yes	10/1/99	**12**	3	6	4	**13**
Escondido MS	MF	KLI	Yes	2/16/99	**12**	3	5	2	**10**
La Costa P & R	MF	KLI	Yes	2/16/99	**12**	3	5	3	**11**
SR-78/I-5 P& R	MF	KLI	Yes	2/26/99	**12**	2	6	4	**12**
Melrose Ave/SR-78	Bio Swale	KLI	Yes	3/1/99	**12**	0	2[9]	4[10]	**6**
I-5 Palomar Airport Rd	Bio Swale	KLI	Yes	10/1/99	**12**	0	3[6]	1	**4**
Carlsbad MS	Bio Strip	KLI	Yes	10/1/99	**12**	0	3	3	**6**
	Infiltration Trench	KLI	Yes	10/1/99	**12**	8[3]	11[3]	5[3]	**24[3]**

[1] All 1998-1999 DII data in question. A criteria for acceptance has been established. 1998-1999 Data will be reviewed at the end of the year (2000).
[2] Subject to schedule update
[3] Empirical Observations and runoff testing from influent only. No runoff effluent; groundwater or vadose zone samples only.
[4] All Stormwater sampling will terminate at the end of the defined monitoring season – Spring 2001
[5] Subject to review: first sample of the season did not meet minimum number of aliquots but did meet percent storm capture
[6] During one storm, influent sample collected; no effluent flow, thus no effluent sampled.
[7] 1998/1999 DII data was disqualified
[8] Subject to review: did not meet minimum number of aliquots but did meet percent storm capture
[9] Influent samples collected; no effluent flow, thus no effluent sampled.
[10] During two storms, influent samples collected; no effluent flow, thus no effluent sampled.

Storm Sampling Totals do not include results of the February 10, 12-13th events. Updates will be provided in the next Biweekly Report.

DISTRICT 7 BMP PILOT SITES

OMM Activities: Routine inspection and maintenance per MID have been conducted during this reporting period. Additional site-specific inspection and maintenance activities are listed in the table below.

Additional Site-Specific O&M Activities

BMP	Activities
Via Verde Park & Ride Multi Chambered Treatment Trains	• Ace Restoration & Waterproofing, Inc. completed work to repair the leaking sedimentation chamber of the MCTT on January 30, 2001. However, the inlet pipe from the grit chamber to the sedimentation chamber was subsequently tested and also leaked. The following options are currently being assessed to leak-proof the pipe: 1) Slip-line the pipe 2) Grout the pipe if there is an open joint. SandCon, a slip-lining contractor, will visit the site on February 15, 2001 to survey the pipe using closed circuit television. They will assess whether or not their technology can be used to fix the leak. If so, the cost estimate is $21,000. In-Situ Form, another slip-lining contractor, evaluated the site and determined that they could not repair the leak with their technology. A memorandum prepared by LawCrandall of the observation/assessment of the MCTT leak is provided in Appendix A of this document.
I-5/I-605 Extended Detention Basin	• On February 2, 2001, the outlet structure was modified by core hole drilling the outlet structure, installing stainless steel orifice plates, and grouting the sump to eliminate the ponding water problem.

BMP	Activities
Eastern Maintenance Station, Foothill Maintenance Station and Termination Park & Ride Sand Filters	• Drain time of the sand filters was found to be up to five days, exceeding the 48 hour threshold defined in the OMM Plan. Inlet pipes were blocked on January 25, 2001 to prevent flow into the BMPs from the January 26, 2001 storm event, and to allow subsequent maintenance. Caltrans and Law personnel inspected the Sand Filter sites on February 5, 2001. All the orifices in the standpipe at Foothill were found to be clear; one of the bottom orifices at Eastern was blocked, and all three bottom orifices at Termination were blocked. It did not appear that the gravel bags interfered with flow. The orifices were cleared and the decision was made to increase the orifice size at all sites from ½ inch to 5/8 inch to increase flow from the sedimentation chamber to the sand filter, and to minimize the chance of blockage. A hard, crusty layer of silt was observed on top of the sand at all the sand filter sites, ranging in depth from ¼ - 1¼ inches. Drain time during the next storm event will be evaluated to determine if additional maintenance is required
I-210 East of Orcas Avenue and I-210 East of Filmore Street Continuous Deflective Separation Units	• On February 9, 2001, the ends of the litter bypass/mosquito proofing bags were cut off in order to prevent impedance of flow from the CDS units, which was observed during the January 10-12, 2001 storm event. The end of the bag was weighted down to prevent mosquitoes entering. New bypass/litter collection baskets were fabricated and installed downstream of the H-flumes on February 9, 2001 at both CDS sites.

Paxton/Metro Maintenance Station Sites

Paxton project is scheduled to be advertised January 29 with a tentative bid

opening of March 1. The Metro project is tentatively scheduled for advertisement on March 5, 2001 and bid opening of April 1. The updated schedule is as follows:

Action	Duration	Milestone	Estimated Completion Date	
			Paxton	Metro
Incorporate preliminary Structures and D7OE review comments		Submit entire PS&E package	03/08/00 (actual)	03/08/00 (actual)
Structures and D7OE Review	4 weeks			
		Receive comments from Structures and D7OE	04/06/00 (actual)	04/06/00 (actual)
Consultant revise PS&E	17.4 weeks			

		Submit to D7	08/07/00 (actual)	08/07/00 (actual)
Structures final review and Final Revisions	2 weeks			
		Submit final to D7	08/21/00 (actual)	08/21/00 (actual)
D7 process and format PS&E	12.3 weeks			
		D7 submit to HQ	11/15/00 (actual)	11/15/00 (actual)
HQ review and processing; advertise contract	13 weeks			
		Advertise contract	01/29/01(actual)	03/05/01
Bid Period, evaluate bids, Award and Approval of Contract	12 weeks			
		Notice to Proceed	04/23/01	5/28/01
Construction	21 weeks			
		Construction complete	09/17/01	10/22/01
Install Instrumentation	2 weeks			
		Operational	10/1/01	11/05/01

DISTRICT 11 BMP PILOT SITES

OMM activities: Routine inspection and maintenance per MID has been conducted during this reporting period. Site specific activities are summarized below.

Additional Site-Specific OMM Activities

BMP	Activities
La Costa Wet Basin	• January 30 and February 8, field crews rebuilt the sandbag wall. • February 5-7, crews conducted the paired monthly baseline sampling.
Palomar Swale	• On January 30, field crews collapsed gopher holes.
La Costa Infiltration Basin	• On February 5, field crews reinforced support poles.

VECTOR ACTIVITIES

Vector Monitoring Update

During this period, both DHS and the VCDs continued monitoring BMPs within their respective districts. In District 7, no breeding was observed; therefore, no treatment was applied to any of the sites. In District 11, breeding was observed at Kearney Mesa MS (Site #112201), La Costa P&R Media Filter (Site #112203), La Costa Wet Basin (Site #111104), La Costa IB (Site #111103), and the SR-78 / I-5 P&R Media Filter (Site #112204) on Monday, January 22, 2001. Additionally, breeding was observed at the SR-78 / I-5 P&R Media Filter on Tuesday, January 30, 2001. The La Costa P&R Media Filter (Site #112203) was breeding on February 5, 2001 as well as the I-5 / SR-56 EDB rip rap area (Site #111101) and the La Costa IB (Site #111103) on February 12, 2001.

On January 26, 2001 Caltrans, Larry Walker Associates, DHS, and the San Diego County Vector Surveillance and Control met at the wet basin to discuss the vegetation management plan. Several options were presented, and results to that meeting are attached.

Standing water at the I-5 / I-605 EDB sump has persisted consistently during this wet season. To alleviate the breeding problem, on January 31, 2001 work began to retrofit the sump. For further details, see Law Crandall's operation and maintenance summary.

Because the mosquito-proofing screen mesh bag impeded flow through the CDS units, it was decided that the ends of the bags would be cut, and washers tied to the ends so that as flow terminated, the bag would collapse upon itself to prevent entry of mosquitoes. DHS and the local VCD that monitors and abates agree to the idea.

DHS continues work on the out of state survey supplemental report and the vector breeding design review. Due to some lack of responses, DHS has asked for a time extension on the out of state survey report. As an additional supplement to the out of state survey report, DHS has submitted a memo to Caltrans that inquires about travel status to cities outside of California where local vector control agencies have experience with storm water management structures. It has been approved and travel is slated to occur in early March, where a presentation documenting the trip's events is planned for the upcoming Quarterly meeting.

Coordination with SD Vector Control on the Wet Basin

San Diego County Vector Control met with DHS, Caltrans and consultants on January 26, 2001 to discuss their views on vegetation management at the wet basin. The County stated its willingness to remain flexible with the current annual cutting program. However, they also made it known that they believed that annual cutting would be insufficient and reserved the right to use drastic measures (i.e. Golden Bear Oil) if mosquito larvae populations increased to unacceptable levels. The County also made several recommendations:

1.) Cut wet basin vegetation at least semi-annually.
2.) Pulling the vegetation rather than cutting it, as it tends to grow back thicker when cut. (Thicker vegetation provides better habitat and a refuge from predation for mosquito larvae)

The County also offered other management options:

1.) Treat wet basin vegetation with herbicide. The County recommends Rodeo (Glyphosate), an emergent aquatic weed herbicide often used in drinking water reservoirs.
2.) Cut swaths or patches of vegetation at various times of the year such that no patch grows too thickly and predators can still impact mosquito larvae.

The County also provided herbicide documentation (MSDS documents) and photographs of the wet basin at several stages of re-growth following cutting.

ENVIRONMENTAL ISSUES

Dudek and Associates Inc. surveyed the BMPs January 30, 31 and February 1, 2000. The survey consisted of reviewing the sites for potential endangered, threatened, or sensitive species issues. Conditions reviewed included presence of water, nesting birds or suitable habitat.

Standing water was present at the following BMP sites: La Costa Wet Basin (*i.e.*, entire basin and adjacent storm channel), La Costa Infiltration Basin (*i.e.*, water surface within five inches of basin rim; high water mark above basin rim), SR-56/I-5 Extended Detention Basin (*i.e.*, basin was saturated within standing water among rip-rap strip) and I-5/Manchester Avenue (*i.e.*, basin saturated with 12-18 square meters of surface water approximately one inch deep). In addition, the south side of the La costa Media Filter was saturated, but supported no standing water; the 605/I-5 Biofiltration Swale was damp but contained no flowing water; and the north side of the I-5/SR-78 Media Filter was wet but contained no standing water.

Nesting birds were not detected during the survey. The vegetation at the La Costa Wet Basin is growing back quickly (*i.e.*, cattails) and provides suitable habitat for amphibians and nesting birds.

Wildlife species observed during this monitoring period include: SR-56/I-5 Extended Detention Basin- killdeer (*Charadrius vociferus*), bushtit (*Psaltriparus minimus*), California towhee (*Pipilo crissalis*), Costa's hummingbird (*Calypte costae*), lesser goldfinch (*Carduelis psaltria*) and common raven (*Corvus corax*); I5/Manchester Ave. (East)- house finch (*Carpodacus mexicanus*), mourning dove (*Zenaida macroura*) and rock dove (*Columba livia*); 605/5 Biofiltration Swale- rock dove and black phoebe (*Sayornis nigricans*); 605/5 Extended Detention Basin-common raven; S605 /91 W Extended Detention Basin- no species observed; I-605/SR-91 Bio-strip and Bio-swale- rock dove, common raven; N605/W91 Extended Detention Basin-

rock dove and cabbage butterfly (*Pieris rapae*); Cerritos MS Bio-swale- rock dove; La Costa Wet Basin red-winged blackbird (*Agelaius phoeniceus*), mallard (*Anas platyrhynchos*), house finch, green-backed heron (*Butorides striatus*), common yellowthroat (*Geothlypis trichas*) and Costa's hummingbird; La Costa Media Filter- Costa's hummingbird, California towhee, lesser goldfinch, common raven and great egret (*Casmerodius albus*); La Costa Infiltration Basin- bushtit, California towhee, common raven and Costa's hummingbird; I-5/ Palomar Airport Rd. Bio-swale- no species observed; SR--78/ Melrose Ave. Bio-swale- house finch and common raven; SR-78/I-15 Extended Detention Basin - California ground squirrel (*Spermophilus beecheyi*), mourning dove and rock dove; and I-5/SR-78 Media Filter- common raven.

It should be noted that mitigation/maintenance of the BMP facilities will continue according to the previously agreed to Maintenance Indicator Document (MID).

Appendix A: Observation of the Via Verde MCTT Leak

MEMORANDUM

To: Brian Currier, Caltrans

From: Greg Rzonca

Date: February 1, 2001

Subject: Via Verde Park and Ride MCTT Sedimentation Chamber Observations

PURPOSE AND SITE CONDITIONS

Observations of the Via Verde Park and Ride MCTT sedimentation chamber were performed on January 22, 2001 by Clifford Craft, Ed Othmer and Greg Rzonca, representatives of Law Engineering and Environmental Services, Inc. The purpose of the observations was to evaluate areas of potential leakage from the sedimentation chamber and to check for visual indications of slope deterioration due to the leakage. At the time of the observations the settling tubes had been removed from the sedimentation chamber, and cleaning of the concrete walls and floor had been performed. Subsurface exploration or testing were not performed in preparation of the Memorandum. Our observations, and analyses and conclusions are qualitative in nature and do not take into account subsurface information. It would be necessary to perform a geotechnical investigation including soil borings, sampling, laboratory analyses and engineering calculations to determine if the slope has an adequate safety factor.

2.1 OBSERVATIONS

Sedimentation Chamber

The walls of the sedimentation chamber were cleaned and appeared to have several hair line shrinkage cracks in them. Also, bored one-half inch diameter holes up to about three inches deep were at the bottom of the concrete walls near existing filter bolts. The holes in the concrete did not appear to extend through the walls of the sedimentation chamber. The floor of the sedimentation chamber was partially cleaned at the time of our site observations and visible dark water stains were at the contact of the walls and floor on all four sides of the sedimentation chamber. The stains reappeared after particle blasting for preparation of the sedimentation chamber to receive applications to water proof it. The contact between the floor and wall was probed by a screwdriver and trowel and a gap out to 0.1 inch and penetration up to about one inch was apparent. Local rock pockets up to about six inches in maximum dimension were present on the sedimentation chamber interior walls. The pipe leading into the sedimentation chamber was observed and appeared to be tight.

Slope

The sedimentation chamber and adjacent parking area, and slope descending to Interstate 210 were observed for indications of slippage. Top of slope tension cracks were not present and bulging of the slope below the sedimentation chamber were not observed. The slope about 20 feet below the sedimentation chamber did appear to have increased moisture content comparative to other slope exposures and offered little resistance to probing by a sharpened steel rod.

2.2 ANALYSES AND CONCLUSIONS

1.1.1 Sedimentation Chamber

Based upon the observation of dark water stains, indicating seepage, it appears that one source for leakage from the sedimentation chamber may be at the contact of the walls and floor. The bored holes into the sedimentation chamber walls do not appear to have completely penetrated through the walls. However, these holes may have exposed steel reinforcement that could result in corrosion. It is believed the planned waterproofing of the sedimentation chamber will prevent further seepage and stop further potential water exposure of reinforcement members. Additionally, leak testing of the inlet pipe to the sedimentation chamber will be performed while the settling tubes are removed.

1.1.2 Slope

Based upon the site observations it appears the slope below the sedimentation chamber has not experienced visible downslope movement at this time. However, it is soft and has increased moisture comparative to adjacent slopes. Consequently, the slope below the sedimentation chamber is considered to have an increased potential for down slope movement comparative to similar adjacent slopes. It should be noted that after the leakage from the sedimentation chamber is stopped the slope below the sedimentation chamber still has an increased potential for instability due to strain softening of the materials forming the slope and residual subsurface moisture that will take a significant amount of time to dissipate.

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