

San Diego Regional Stormwater Copermittees Regional Program Planning Subcommittee

Meeting Notes

Chairperson Stephanie Gaines (County of San Diego)

Date / Time	Agenda Summary
1/17/2019 Start time: 1:30 PM End time: 3:10 PM	<ul style="list-style-type: none"> • Call to Order • Roll Call • Time for public to speak on items • Meeting Summary *VOTE* • Old Business • Dry Weather Monitoring Strategy and Approach (County) • Dry Weather Flow Presentation (City of San Diego) • MTS MS4 Permit Presentation • Workgroup Updates • Announcements • Future Meetings
Location	
County of San Diego 5510 Overland Avenue 4th Floor Conference Room 472 San Diego, CA 92123	

Voting Members in Attendance: (one vote per watershed)		Number of Voting Copermittees at this Meeting: 9/9	
<input checked="" type="checkbox"/> Santa Margarita Watershed: County of San Diego JoAnn Weber	<input checked="" type="checkbox"/> Carlsbad Watershed: City of San Marcos Doug Dowden (on phone)	<input checked="" type="checkbox"/> Los Peñasquitos Watershed City of Poway Tracy Beach	
<input checked="" type="checkbox"/> San Diego River Watershed: City of Santee Cecilia Tipton (on phone)	<input checked="" type="checkbox"/> Tijuana Watershed: City of Imperial Beach Wbaldo Arellano	<input checked="" type="checkbox"/> San Luis Rey Watershed City of Oceanside Justin Gamble (on phone)	
<input checked="" type="checkbox"/> San Dieguito Watershed: City of Escondido Juan Magdaraog	<input checked="" type="checkbox"/> Mission Bay Watershed: City of San Diego Jim Harry	<input checked="" type="checkbox"/> San Diego Bay Watershed: City of Chula Vista Marisa Soriano (on phone)	
Non-Voting Members and Members of the Public in Attendance			
<input checked="" type="checkbox"/> County of San Diego Stephanie Gaines Rouya Rasoulzadeh René Vidales Scott Norris Mike Watt Joanna Wisniewska	<input checked="" type="checkbox"/> City of Vista Jonathan Nottage	<input checked="" type="checkbox"/> City of Coronado Jessie Powell	
	<input checked="" type="checkbox"/> City of El Cajon John Phillips	<input checked="" type="checkbox"/> Unified Port of San Diego Stephanie Bauer (on phone)	
	<input checked="" type="checkbox"/> City of La Mesa Joe Kuhn	<input checked="" type="checkbox"/> City of Vista Michelle Mattson (on phone)	
	<input checked="" type="checkbox"/> City of Carlsbad Tim Murphy	<input checked="" type="checkbox"/> Airport Authority Richard Gilb (on phone)	
<input checked="" type="checkbox"/> San Diego Metropolitan Transit System Kena Teon Natalie Osborn Rick Bottcher (WSP)	<input checked="" type="checkbox"/> City of San Diego Heather Krish	<input checked="" type="checkbox"/> Secretary Hilary Ellis (Michael Baker International)	
	<input checked="" type="checkbox"/> Alta Environmental Garth Englehorn		

1. Call to Order

Stephanie Gaines (County of San Diego) called the meeting to order at 1:30 p.m.

7 **2. Roll Call**

8 Stephanie Gaines (County of San Diego) completed roll call for voting members. Seven
9 voting members were in attendance at roll call. The San Luis Rey Watershed and San Diego
10 River Watershed representatives arrived later.

11 **3. Non-Agenda Public Comment**

12 No comments from members of the public.

13 **4. Meeting Summary**

14 The following revision was requested for the November 15 meeting summary:

- 15 • Lines 101-103 (page 5). Revise to: “Jim stated he would discuss the MOU with the
16 City attorney’s office.”

17 **MOTION: Approve the meeting summary for November 15, 2018, as amended.**

18 **(APPROVED)**

- 19 ♦ Moved by: Jim Harry (City of San Diego, Mission Bay Watershed)
- 20 ♦ Seconded by: Tracy Beach (City of Poway, Los Peñasquitos Watershed)
- 21 ♦ Vote: 7-0-2 in favor (San Luis Rey Watershed and San Diego River Watershed
22 representatives not at meeting yet)

23 **5. Old Business**

Action Items	Status
1. Copermittees to have their attorneys review the 11/2 draft MOU and provide comments/revisions to Stephanie by 11/30.	MOU review is completed.
2. Stephanie to email Copermittees asking if second review of draft MOU should be due back to her by 1/7 or extended to 1/14 to allow delays due to holiday time.	Copermittees provided comments by 1/14 to Stephanie Gaines.
3. Stephanie to email Copermittees the Regional IRWMP Regional Advisory Committee membership application, noting that they are looking for a representative from south county or east county and applications are due next week.	Copermittees were emailed the information.
4. Stephanie/Rouya to email Copermittees with Outlook appointment for 12/13 RMC meeting, 10 AM to noon, to be followed by a holiday luncheon.	Copermittees were emailed the information.

24 **6. Dry Weather Monitoring Strategy and Approach**

25 Scott Norris (County of San Diego, Existing Development) provided an update on
26 strategies for dry weather monitoring, from the County’s perspective. Scott previously
27 worked on the policy side and is now, under supervision from Mike Watt (County of San

28 Diego), working on the implementation side. In recent, ongoing conversations with the
29 Regional Board, it is clear that dry weather flow remains of paramount importance to
30 the Regional Board, and the Regional Board expects Copermittees to eliminate all dry
31 weather flows.

32 The County has put in significant effort to identify and reduce flows within their
33 jurisdiction. One strategy the County implemented is that when weir monitoring
34 systems identified peak flows, typically between midnight and 6 a.m., consultants were
35 sent to find the flows (usually irrigation run-off) and take photos. Consultants would
36 then re-visit the source during daylight hours and offer outreach to residences and
37 commercial businesses. First contact was through leaving informational door hangers.
38 Follow-up investigations were conducted to confirm the identified dry weather flow
39 source had been addressed. Unfortunately, with this strategy, the County did not see
40 corresponding reductions at the outfalls.

41 The County has a series of strategies and would like an open dialogue with other
42 Copermittees to discuss strategies, lessons learned, and successes. This would
43 potentially lead to a larger conversation with Regional Board Staff about what is
44 realistic, what is and is not working, and what additional tools jurisdictions may need to
45 move forward. The County is also interested in discussing with other jurisdictions their
46 approaches to escalated enforcement.

47 Stephanie Gaines (County of San Diego) commented the Program Planning
48 Subcommittee is a good place to form an ad hoc committee to discuss these items, and
49 she reminded Copermittees that if more than four PPS voting members (a quorum) are
50 at any committee meeting, then Brown Act rules must be followed.

51 Scott Norris (County of San Diego) continued the County has met with water purveyors
52 through their manager meeting to try further collaboration to identify their
53 maintenance flows, emergency line breaks, etc., for which they have approved permits.
54 The water purveyors seemed generally receptive to working with the County.

55 Several Copermittees at the meeting expressed interest in participating in the ad hoc
56 committee. Stephanie Gaines (County of San Diego) will send a follow-up email to all
57 Copermittees to find out who is interested in participating on an ad hoc committee to
58 discuss dry weather flows.

59 **7. Dry Weather Flow – City of San Diego**

60 Heather Krish (City of San Diego) and Garth Englehorn (Alta Environmental) summarized
61 efforts from the City of San Diego to identify and eliminate dry weather flows.

62 Heather Krish (City of San Diego) explained how identifying dry weather sources can be
63 labor intensive since visiting persistent flowing outfalls twice a year does not guarantee
64 accurate data collection., Data from two instantaneous site visits are not necessarily
65 helpful and do not allow for trend analysis or understanding of temporal patterns. With

66 the City of San Diego, multiple outfalls are inaccessible for monitoring and, therefore,
67 are monitoring upstream of the outfall. Flow data often is reported months after
68 collection. These are all challenges with eliminating dry weather flows.

69 The City of San Diego implemented a data collection and management system that
70 allows field teams to identify, reduce, and eliminate dry weather flows. The approach
71 involves providing accurate estimates of flow to staff in real time via a web portal. The
72 data is used to plan targeted field investigations. Further, field staff have access to data
73 in real-time during inspections.

74 Alta Environmental worked with a local vendor from El Cajon to develop a low cost flow
75 meter device with quick installation and minimal maintenance, starting with a flow
76 meter device commonly used in the wastewater industry. The device has a waterproof
77 casing, three-year battery life (at 15-minute data recovery), and ultrasonic sensor to
78 provide precision non-contact distance measurements. A web portal allows users and
79 field teams to track real-time flow conditions and receive flow alerts.

80 For use by the City of San Diego in its dry weather flow program, the flow meter was set
81 to provide 5-minute data and call out every two hours, which extends the battery to a
82 one year life. The ultrasonic sensor has a 45-degree plate and can be mounted at the
83 top of a pipe to shoot the beam straight down. The antennas for the meters look similar
84 to road markers and can be driven over. Everything can be installed within the City's
85 MS4 infrastructure, thereby protecting it from vandalism and theft.

86 The web portal includes a map that shows a quick snapshot of all metered sites,
87 signaling green if the measurements are below the specified threshold and red if above
88 the threshold. The web portal also shows tabular data, hydrographs, summary tables,
89 and statistics. The data can be exported into Excel, Word, and Adobe Acrobat formats
90 for specific sites and timeframes.

91 The system was originally designed to work on the AMI network, which is the metering
92 network that water districts use. If not connected to the AMI network, it is
93 approximately \$300 per year for cellular service to connect the flow meters to the web
94 portal.

95 The City of San Diego chose to lease the meters, not outright purchase them. Garth
96 Englehorn (Alta Environmental) estimated while most flow meters are approximately
97 \$10,000 for a quality unit, these flow meters would be around \$3,000 each with the
98 sensor. Economies of scale would be expected if used for an entire watershed.

99 There are opportunities for stormwater programs to work with water districts to
100 combine their networking structure and save costs. For example, a grant through the
101 Metropolitan Water District established a Smart Watershed in Orange County. This is a
102 partnership between Public Works and water districts to use the water districts'
103 metering network, with every flow meter installed appearing as another house water
104 meter, feeding all data through one network to share flow data and water usage. Often,

105 there is correlation between high water consumption zones and corresponding dry
106 weather flows. Some Bureau of Reclamation grants will soon be available for addressing
107 drought resiliency and will include water monitoring components.

108 Heather Krish (City of San Diego) provided more details on using the meters for three
109 specific goals: accurate flow estimates, investigation of unknown inputs into the MS4,
110 and identification of flow patterns.

111 The City of San Diego was interested in obtaining accurate flow measurements with
112 these meters because of a situation with constant flow into a storm drain system that
113 was then diverted into the sewer system, requiring the City to pay per gallon of water
114 entering the sewer system. First, City staff conducted a visual flow assessment. The
115 calculated average base flow, after repeated measurements with rulers, was 4 GPM.
116 The meter was then installed directly inside the inlet, and over 22,000 data points were
117 collected, which indicated an average flow of 1.21 GPM. This illustrated that ruler
118 measurements and calculations are not accurate for curbs as they do not take
119 irregularities into consideration. Using the meter measurements cut the City's cost by
120 more than 50 percent.

121 The City of San Diego used the meters to investigate unknown inputs into the MS4. The
122 City had an upstream manhole and a downstream manhole with no known inputs
123 between them; however, the downstream location consistently had high bacteria levels,
124 even after flushing and cleaning the system. A flow meter was installed at both
125 manholes and found a minimal, non-observable difference in flow rate. The
126 downstream meter also found distinct spikes in flow. Through use of the meters, the
127 City discovered an unknown illicit sewer connection.

128 The City of San Diego used the flow meters to identify flow patterns and inform
129 investigations. The City had a situation with persistent flow that varied between a trickle
130 and a large flow depending on when it was visited. Despite multiple upstream
131 investigations, no inputs were found to explain increased flows at the outfall. With the
132 meter installed, distinct patterns of flow were identified at the outfall. This informed the
133 City as to when to send out staff to look for illicit discharges.

134 Joanna Wisniewska (County of San Diego) asked for more technical details on the
135 meters. Garth Englehorn (Alta Environmental) responded that ultrasonic sensors do as
136 good or better than anything else available. The lowest profile meter at 1/8 inch fully
137 submersed would be a bubbler flow meter. Most meters need at least a quarter, if not
138 half, inch to work reliably. A weir approach mitigates that issue; however, the goal for
139 the City of San Diego was to have a system easy to install and move between sites. The
140 accuracy for the meter they used is around 0.25 inches, depending on slope of pipe and
141 pipe smoothness. Without ponding the water, this is the best available. An ultrasonic
142 sensor shoots a beam down that hits the surface and bounces back. Garth explained
143 there is an art to placing the sensor exactly plumb with the flow, and Alta Environmental
144 did adjust frequencies depending on pipe size to have the beam cone focused on a

145 narrow spot of flow. When ultrasonic meters indicate dry conditions, the conditions are
146 definitely dry.

147 Heather Krish (City of San Diego) commented the flow meters could be used in areas
148 where BMPs will be installed to determine if before and after conditions are as
149 expected. It would be hard, scientific data to show the Regional Board if BMP efforts
150 have produced the expected effects.

151 Stephanie Gaines (County of San Diego) will email the PDF of this presentation to all
152 Copermittees.

153 **8. MTS MS4 Permit Presentation**

154 Richard Bottcher (WSP) updated the Copermittees on how the San Diego Metropolitan
155 Transit System (MTS) is developing their programs to meet requirements of their Phase
156 II MS4 Permit from the Regional Board, in which they were named a permittee in
157 February 2017.

158 MTS was established in 1975 and is authorized to operate mass transit in the southern
159 portion of San Diego County and some unincorporated parts of San Diego County not
160 served by the North County Transit District. MTS is focused on operations of transit
161 systems, where SANDAG handles the construction portion. MTS has a 15-member board
162 represented by cities in San Diego County. MTS serves about 570 square miles in San
163 Diego County.

164 MTS owns and operates facilities under the Phase II MS4 Permit and also has several
165 facilities covered by the Industrial General Permit. They are keeping separation between
166 the Industrial General Permit facilities and the Phase II portions of their business.

167 MTS has created GIS-based maps of drainage systems and locations of their facilities and
168 transit lines. There are multiple connection points to city and county MS4s.

169 MTS has developed Water Quality Fact Sheets for each of their 64 mapped facilities. The
170 sheets summarize the overall stormwater infrastructure at each facility, identify
171 connection points to the city or county MS4, evaluate existing BMPs at the facilities, and
172 include proposed BMPs to bring the facilities into compliance with the Phase II MS4
173 Permit requirements as well as full trash capture. Cost estimates were also developed
174 for the proposed BMPs; the proposed BMPs are conceptual in nature at this stage.

175 For public education and outreach, MTS is looking to work with the Copermittees. In
176 Year 1 of their Phase II MS4 Permit, MTS performed outreach with the cities in obtaining
177 their GIS files. They plan to continue connecting with the cities and would like to work
178 with the cities to identify and confirm connections since MTS used as-builts for their
179 progress to date. MTS would also like to develop posters for the trolley and bus shelters,
180 possibly using the Think Blue campaign. They are interested in learning more from the
181 Copermittees and discussing what should be included on outreach posters.

182 Stephanie Gaines (County of San Diego) asked if MTS has conducted demographic
183 studies that could be used to determine effective messaging for their audiences. Rouya
184 Rasoulzadeh (County of San Diego) will send a calendar invitation to MTS
185 representatives for the next Education and Outreach Workgroup meeting.

186 Joe Kuhn (City of La Mesa) commented that adding cigarette ash cans at bus shelters
187 would aid in trash capture. This has been resisted by MTS in the past, but he believes
188 should be reconsidered. Cecilia Tipton (City of Santee) shared North County Transit
189 District (NCTD) has engaged with the Copermittees in previous years, with several of the
190 same ideas mentioned by MTS. She suggested MTS reach out to NCTD to find out what
191 they specifically did for their stormwater education and outreach. René Vidales (County
192 of San Diego) commented one of the best and most efficient messaging locations is
193 inside the buses. He has found those spaces usually under-utilized, boring, and
194 unattractive. If done properly, views would be multiplied, but they should be more
195 photos and graphics, less words.

196 **9. Workgroup Updates**

197 ***Land Development Workgroup***

198 René Vidales (County of San Diego) updated the PPS from the last meeting of the Land
199 Development Workgroup (LDW), which was held in October 2018. The October meeting
200 included a presentation from Richard Gilb (San Diego Airport Authority) about the
201 success of the Terminal 2 and Parking Plaza which included stormwater storage tanks
202 and are LEED and Vision certified. The Airport Authority is now pushing to the next
203 phase of development. Lessons learned with stormwater reuse from Terminal 2 and
204 Parking Plaza will be implemented with the next phase.

205 The LDW also discussed the BMP Design Manual. There was a typographical error in the
206 version published on Project Clean Water. The correct effective date is May 15, 2018
207 (not 2016).

208 The LDW surveyed Copermittees on who is updating their jurisdiction BMP design
209 manuals based on the Model BMP Design Manual. The City of San Diego and County of
210 San Diego have updated theirs already. Seven other jurisdictions will be revising theirs.

211 The LDW also discussed issues that arose through implementation of the BMP Design
212 Manual, including a white paper produced that had not been published yet. The white
213 paper was from Michael Trapp of the Storm Water Monitoring Coalition and addressed
214 bioretention soil media. The LDW decided to release and publish the white paper.

215 The LDW talked about mulch as it pertains to BMPs since several received interesting
216 questions from developers and contractors, one of which pointed out that using well-
217 aged mulch contradicts CalRecycle regulations and another who suggested the 85th
218 percentile map in the BMP Design Manual has inconsistencies. As a result, the County is
219 revising their manual to not include well-aged mulch in its fact sheets, and the 85th

220 percentile map may be revised as part of the County of San Diego Hydrology Manual
221 Update currently in process.

222 The City of San Diego gave an updated on their alternative compliance program, for
223 which they are planning to have the Environmental Impact Report done early this year
224 to allow the program to be running by 2020.

225 The Water Quality Equivalency update has been posted on the Regional Board website,
226 and the comment period closed November 10. Once written approval from the Regional
227 Board is received, their approval will also be posted.

228 The LDW completed several administrative tasks, including approving the 4th quarter
229 expenditures for last fiscal year, recommending rollover between fiscal years be
230 approved by the PPS, and approving their proposed budget for the next fiscal year to be
231 sent to the PPS.

232 All Copermittees are asked to send any agenda items for the February 22 LDW meeting
233 to René Vidales (County of San Diego).

234 ***Education and Outreach Workgroup***

235 Rouya Rasoulzadeh (County of San Diego) updated the Copermittees that Action
236 Research recently completed the regional telephone survey, and the Education and
237 Outreach Workgroup will review the results at the next meeting, scheduled for Tuesday,
238 February 5. At the meeting, the Workgroup will also share ideas on messaging. There is
239 a full agenda for the meeting, and all Copermittees and interested parties are welcome
240 to attend and participate.

241 ***MOU Update Ad Hoc Committee***

242 Stephanie Gaines (County of San Diego) shared the MOU is nearing completion. The
243 most recent comment period was extended through January 14. Stephanie Gaines
244 (County of San Diego) received minimal comments and several “no comments” from
245 Copermittees. The comments received were mostly editorial and not substantial. One
246 comment raised a minor issue that will be reconciled. Stephanie Gaines (County of San
247 Diego) will email Copermittees the MOU comment table, tracked changes version of the
248 MOU, and clean version of the MOU by January 22.

249 The issue sent to counsel for opinion is the language about fully burdened wages. The
250 suggestion is to use direct cost instead and then remove language about depreciation,
251 equipment, and office space. Stephanie Gaines (County of San Diego) reviewed the
252 other comments received and the revisions, if any, that have been made. There are no
253 major changes to the latest version of the MOU.

254 Stephanie Gaines (County of San Diego) discussed the revised schedule for the MOU
255 update. Copermittees should start routing the MOU for approval within their agencies

256 by the end of January. This will allow jurisdictions with lengthy approval processes to
257 have the MOU enacted by the end of July.

258 All Copermittees are to find out who the responsible person is for signing the MOU at
259 their jurisdiction and begin the process of having the MOU approved by their
260 appropriate deciding bodies. Tim Murphy (City of Carlsbad) will poll the Copermittees as
261 to whether they need a wet signature of the MOU for their own jurisdiction's records.

262 **10. Announcements**

263 The City of Oceanside is seeking a part-time professional assistant for their storm water
264 program. Justin Gamble (City of Oceanside) will send the job announcement to
265 Stephanie Gaines and Rouya Rasoulzadeh (County of San Diego) for distribution to all
266 Copermittees. Tasks would be whatever is needed and could involve field work,
267 inspections, monitoring, and data management.

268 **11. Future Meetings**

269 All Copermittees are asked to notify Stephanie Gaines (County of San Diego) when they
270 have PPS agenda suggestions or ideas on presentations for work products, work plans,
271 etc. to further collaboration among the Copermittees.

272 Stephanie Gaines (County of San Diego) adjourned the meeting at 3:10 PM.

New Action Items	Responsible Party	Due Date
1. Send follow-up email to all Copermittees to find out who is interested in participating on an ad hoc committee to discuss dry weather flows.	Stephanie Gaines (County of San Diego)	
2. Email PDFs of presentations from the January 17 PPS meeting to all Copermittees.	County of San Diego	
3. Send calendar invitation to MTS representatives for the next Education and Outreach Workgroup meeting and have MTS added to that agenda.	Rouya Rasoulzadeh (County of San Diego)	2/5/2019
4. Send any agenda items for the February 22 Land Development Workgroup meeting to Rene Vidales (County of San Diego).	All Copermittees	2/21/2019
5. Email Copermittees the MOU comment table, tracked changes version of the MOU, and clean version of the MOU.	Stephanie Gaines (County of San Diego)	1/22/2019

New Action Items	Responsible Party	Due Date
6. Find out who the responsible person is for signing the MOU at their jurisdiction and begin the process of having the MOU approved by their appropriate deciding bodies.	All Copermittees	
7. Poll Copermittees as to whether they need a wet signature of the MOU for their own jurisdiction's records.	Tim Murphy (City of Carlsbad)	
8. Send job announcement for Part-time Professional Assistant to Stephanie Gaines and Rouya Rasoulzadeh (County of San Diego) for distribution to all Copermittees.	Justin Gamble (City of Oceanside)	
9. Notify Stephanie Gaines (County of San Diego) when they have PPS agenda suggestions or ideas on presentations for work products, work plans, etc. to further collaboration among the Copermittees.	All Copermittees	

273