

Joan C.

BOARD OF DIRECTORS  
BETTY H. OLSON, PH.D. CHARLEY WILSON  
SAUNDRA F. JACOBS SAM JOHNSON  
ROGER FAUBEL JOHN J. SCHATZ  
GENERAL MANAGER



# Santa Margarita Water District

October 31, 2008

SAN DIEGO REGIONAL  
WATER QUALITY  
CONTROL BOARD  
2008 NOV -4 P 1:15

Mr. Michael P. McCann, Assistant Executive Officer  
California Regional Water Quality Control Board  
San Diego Region  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123-4340

Attention: Supervisor Northern Core Regulatory Unit

Reference: **CAU:01-0771:jcofran**  
**Place ID: 631542**

Subject: Response to Complaint No. R9-2008-0057 Concerning Discharges of Untreated Sewage to San Juan Creek and Cristianitos Creek Watersheds, C-1486A

Dear Mr. McCann:

The District has received and reviewed Notice of Hearing and Issuance of Complaint No. R9-2008-0057 for Violation of Order Nos. 2006-003-DWQ and R9-2007-005 for wastewater spills in the San Juan Creek and Cristianitos Watersheds. The attached report contains the District's response to the complaint. The District is requesting the Regional Board to consider the response and enter into discussions for settlement of the issue.

If you have any questions or comments, please do not hesitate to call or email me at (949) 459-6590 or danf@smwd.com.

Very truly yours,

SANTA MARGARITA WATER DISTRICT

Daniel R. Ferons  
Chief Engineer

P:\Dan\ACL Complaint Response R9-2008-0057 Ortega & Talega Spill.doc.cl

26111 Antonio Parkway, Suite A, Las Flores, CA 92688  
Mailing Address: P.O. Box 7005, Mission Viejo, CA 92690-7005  
Customer Service (949) 459-6420 • Administration (949) 459-6600 • Operations (949) 459-6430

0000411

**Santa Margarita Water District  
Response to Complaint No. R9-2008-0057  
Concerning Discharges of Untreated Sewage to  
San Juan Creek and Cristianitos Creek Watersheds on  
April 5 to April 8, 2007 and July 3 to July 4, 2007**

The following are clarifications and comments on the Notice of Hearing and Issuance of Complaint No. R9-2008-0057 dated September 22, 2008 issued by the San Diego Regional Water Quality Control Board Staff. The comments follow the form of the Complaint and respond to specific sections.

The spill occurred over a four-day period as noted in the complaint. The complaint identifies a maximum per-day penalty of \$5,000 on a daily basis; however, the total identified is for \$40,000 (Section 4.1). The spill occurred because a blind flange on an upturned tee cracked causing the release of sewage whenever the lift station ran.

**ALLEGATIONS**

**Paragraph 4**

The Ortega Forcemain is located in the County of Orange unincorporated open space and is a part of the system that pumps wastewater from the Talega development to the Chiquita Water Reclamation Plant. The break in the forcemain was in an easement on open space owned by Rancho Mission Viejo. The site of the spill is outside of the City of San Juan Capistrano Boundary by approximately three miles.

**Paragraph 5**

The Talega Forcemain is located within an easement, there is no entity known as the Rancho Mission Viejo Ecological Reserve. The site is located in the County of Orange unincorporated area and outside the limits of the City of San Clemente.

**Paragraph 6**

As noted below in the discussion on the technical report, the minimum daily liability is identified as \$5,000/day; however, the sums provided are based on \$10,000 per day.

**Paragraph 8**

The District, based on the details provided below, is requesting the Regional Board to reconsider the amounts of the proposed liabilities.

**TECHNICAL ANALYSIS**

The numbering on the following items corresponds to the Technical Analysis accompanying the complaint.

**Page 2**

3.1 The spill is in the County of Orange unincorporated area as noted above.

3.2 The spill is in the County of Orange unincorporated area and in future Rancho Mission Viejo Habitat Reserve Lands as noted above.

4.1.1 The daily civil liability identified in section 4.1 is a maximum of \$5,000 per day; however, the total shown for the four-day period in April is \$40,000.

**Page 3**

4.1.2 The daily civil liability identified in section 4.1 is a maximum of \$5,000 per day; however, the total shown for the two day period in July is \$20,000.

**Page 4**

4.2.1.1 First paragraph on Page 4, the failure was a broken PVC blind flange on an up-turned ductile iron tee on.

4.2.1.1 Attachment A to this report is a memorandum prepared by Dudek that summarizes two issues relative to the "waters of the State" and the Arroyo Toad. Dudek notes that based on its previous surveys and research of surveys performed by others that it was unlikely there was a significant impact to arroyo toads due to the following:

- The area of the spill contained dry and non-aquatic conditions which are not conducive to breeding
- Based on the time of year, juveniles would not have been active yet and would still be in a tadpole state
- The spill occurred outside key arroyo toad regions in the creek
- The likely depth of percolation was only a few inches deep which is generally above the depth of burrowed adult toads
- The exposure to pollutants was temporary and not of a chronic nature and therefore reduces the potential for long-term impacts to the arroyo toad population.
- SMWD, by its participation in the Habitat Conservation Plan, is making a significant contribution to the management and preservation of Arroyo Toad Habitat

Based on the analysis provided by Dudek, the District disputes the conclusion that a substantial penalty should be imposed.

**Page 5**

4.2.1.3 Based on the technical review provided by Dudek which indicates that based on the lack of impact to Arroyo toads, as noted above, and the field walks by the District, the District did perform adequate sampling. The testing indicated elevated levels of total fecal and enterococcus were above background levels but did not significantly impact wildlife habitat beneficial use. Therefore, the District disputes the conclusion that a substantial penalty should be imposed.

**Page 6**

4.2.1.5 In addition, the District has replaced all similar PVC blind flanges on the forcemains as a preventative measure.

**Page 7**

4.2.1.6 Rupture of a blind flange on a forcemain had not occurred before to the best of my knowledge.

4.2.1.7 The Regional Board correctly notes that the District staff inspected the Ortega Lift Station twice during April 5<sup>th</sup> through April 8<sup>th</sup> and did not detect the spill. The summary conclusion from this however does not accurately state the sequence of events. During the site visits, the District staff did perform the routine tasks including checking and replacing the charts.

The station was operating during the time period, what the staff failed to note was that the pump flow rate was greater than normal. The higher flow rate was caused by the reduction in hydraulic gradient requirements of the system caused by some of the wastewater escaping to atmosphere at a lower elevation than design through the cracked blind flange. In other words, the pumps were working against a lower pressure and were able to move the wastewater at a higher flow rate.

In order to identify there was a problem, the District staff at the station needed to recognize the pumps were working on a different spot on the pump curve than normally done. The typical station site visit was focused on whether the pumps were on and pumping. In hindsight, the charts that were used note when the hydraulic gradeline of the system changed to determine when the break occurred. This level of sophistication in analysis of the operation of the lift stations was not a typical standard of review. The District has now implemented alarm points in the SCADA system in all of the District's lift stations, not just Ortega, to notify the District of higher-than-normal flow rates and has provided additional training to the staff.

The Regional Board's assumption is that an operator should have recognized unusual operating conditions that would have led to the discovery of the leak. It is not completely unreasonable to have overlooked the condition since the charts showed the pump station was working. An operator had to understand the pumps were off the operating curve and pumping at a flow rate greater than normal. The District concurs the charts should have raised a flag to the operators, but would not necessarily immediately trigger a look for a spill or failure in the system.

**Page 8**

4.2.1.7 It is common practice to have ductile iron and PVC used together in both water and wastewater applications. Typically, agencies will use ductile iron fittings for bends, tees and crosses. In this case, the forcemain is PVC and the fittings are ductile iron.

The District disputes the high-degree of culpability based on the technical nature of the leak detection, i.e. having to recognize the pumps are performing at a greater efficiency due to a loss of head from the break. The District recognizes it is culpable, but, it was not as if District staff ignored sewage spilling out a manhole.

**Page 9**

4.2.2.1 The Regional Board correctly notes that the District discovered the discharge after noticing the pump discharge flow was higher than normal. The staff analysis was a direct result of the training and discussions from the April spill at the Ortega Lift Station.

Dudek was first on-site August 3 in response to the investigative report by the Regional Board. Obtaining biological opinions on the effect of sewer spills was not a typical practice for the District until these spills occurred. The impacts to habitat were evaluated based on the damage done by the equipment and the repair. The damage to fauna was evaluated qualitatively based on Dudek's experience and observations. As noted in the attached memorandum from Dudek, the





Mr. Dan Ferons

Subject: Response to Notice of Hearing and Issuance of Complaint No. R9-2008-0057 for Administrative Civil Liability against SMWD for Violation of Order Nos. 2006-0003-DWQ and R9-2007-0005

---

Dudek reviewed the letter and attachments and provides the following comments organized by the relevant sections of the RWQCB's Staff Report (Attachment 4), which details each violation. The following points of clarification/arguments are for those items the RWQCB feels it should impose substantial penalties for the discharge.

### **Attachment 4: Staff Report/Technical Analysis**

#### **4.2.1 April 5-8, 2007 Ortega Force Main Sanitary Sewer Overflow**

##### **4.2.1.1 Nature, Circumstance, Extent, and Gravity of the Violation**

The RWQCB asserts that a substantial penalty should be imposed for the discharge of raw sewage to occupied endangered species habitat and waters of the state with beneficial uses, including wildlife habitat, warm and cold freshwater habitat and contact and non-contact recreation and agricultural supply. The RWQCB's assertion that potential harm to federally-listed endangered arroyo toad (*Bufo californicus*) resulted from the San Juan Creek spill would be difficult to refute because of the April timing of the spill. Although Dudek did not respond to the spill or analyze the biological effects of the Ortega spill, the RWQCB, however, should consider the following points:

- Location of spill in proximity to "waters of the State" – The spill most likely did not enter "waters of the State." The RWQCB did not define the limits of their jurisdiction in relation to the spill. The RWQCB regulates the "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code Section 13260 (a)), pursuant to provisions of the Porter-Cologne Water Quality Act. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050 (e)). Areas regulated by the RWQCB are generally coincident with the U.S. Army Corps of Engineers (ACOE) definition of an "ordinary high water mark" (OHWM), but also include features isolated from navigable waters of the U.S. that have evidence of surface water inundation. Based on a formal jurisdictional delineation performed by Dudek in April 2008 within San Juan Creek near the Ortega Lift Station (for another unrelated project), the jurisdictional "water of the State" width ranges from 10 to 13 feet. A majority of the streambed lacks vegetation with the exception of a vegetated terrace on either side of the OHWM that measures an average 25 feet in width on either side. The vegetated terrace was characterized by a riparian herbaceous community. Based on the information provided, the RWQCB failed to prove that the discharge entered "waters of the State."

Mr. Dan Ferons

Subject: Response to Notice of Hearing and Issuance of Complaint No. R9-2008-0057 for Administrative Civil Liability against SMWD for Violation of Order Nos. 2006-0003-DWQ and R9-2007-0005

---

- Status of arroyo toad activity – Although the actual status of arroyo toad breeding activity during the April spill is not known, arroyo toads were not likely actively breeding (breeding pools, eggs, or larvae) due to the dry, non-aquatic conditions of San Juan Creek within the 3.5-mile reach in which the spill occurred. Also, because the spill occurred in early April, it is highly unlikely that juveniles would have been active at the time of the spill. Breeding may occur as early as January or February, but typically is March-June and it takes about 65-85 days for tadpoles to develop into juveniles that would be active away from breeding pools (70 FR 19580). The arroyo toad population within the spill area is small according to surveys conducted by Dudek (1997, 1998), Bloom (1998), and Bloom/Niemela (2001). Additionally, the spill occurred in an area outside of key locations for the species within San Juan Creek. However, there would be a low to moderate potential for indirect contact of sewage discharge to adult arroyo toads that may have been burrowed in the streambed (outside the OHWM) where the spill occurred. The sewage percolation is expected to be no more than a few inches deep, generally above the depth expected for toads to occur (mean depth of 3.6 inches), so the likelihood of actual contact of sewage with individual toads is considered to be relatively low.
- Pollutant impacts to arroyo toad – Although the scientific work on specific effects of pollution is still in its infancy, the USFWS' general comments regarding the stressors of raw sewage and pollutants to amphibians is valid. There is building evidence that nitrates can affect eggs and larvae, and estrogenic substances in sewage can also have adverse effects. Because a focused survey for toad activity at the time of the spill was not conducted, it would be difficult to defend that no harm occurred to toads. On the other hand, because of relatively low probability of actual contact and because of the very temporary exposure to pollutants (as opposed to chronic exposure), if it did occur, it is unlikely that any significant long-term adverse effects to the arroyo toad population in San Juan Creek occurred. Regardless, the potential for such pollution-related impacts to the arroyo toad were anticipated under the Southern Subregion NCCP/MsAA/HCP as a consequence of development in proximity to arroyo toad populations. The long-term management and monitoring program, including population and habitat monitoring and implementation of mitigation measures (e.g., hydrology and water quality management) and adaptive management, to which SMWD has made a substantial contribution, is designed to address such impacts.
- Beneficial Use – After identifying whether the discharge actually enter waters of the state (OHWM), the assessment of impacts to beneficial uses of San Juan Creek is required. The RWQCB identified the following beneficial uses as being impacted by the sewage spill: wildlife habitat, warm freshwater habitat, cold freshwater habitat, water contact

*Mr. Dan Ferons*

*Subject: Response to Notice of Hearing and Issuance of Complaint No. R9-2008-0057 for Administrative Civil Liability against SMWD for Violation of Order Nos. 2006-0003-DWQ and R9-2007-0005*

---

recreation, and non-contact water recreation. Although the San Juan Creek Watershed supports endangered species, such as the arroyo toad, the San Diego Water Board has not designated RARE as a beneficial use for this Watershed. According to the definitions for the applicable beneficial uses within the Basin Plan for the San Diego Region, none of the beneficial uses would have been significantly impaired.

- Assessment by a qualified professional – SMWD and RWQCB did not employ a qualified biologist for a site-specific investigation to evaluate the potential impacts of the sanitary sewer overflow (SSO) to wildlife. However, as stated above, impacts to individual species are not evaluated under beneficial uses, but instead under the Federal Endangered Species Act.
- Consultation with USFWS – The Southern Subregion HCP IA is the controlling document for permit obligations, responsibilities, and tasks of the federal Endangered Species Act section 10(a)(1)(B) incidental take permit. Per the Southern Subregion HCP IA, SMWD implements each of its obligations, responsibilities and tasks under the Conservation Strategy. SMWD implemented all of the infrastructure emergency procedures and policies to minimize and mitigation take of the arroyo toad. The USFWS did not require any additional mitigation measures. The SMWD should confirm when the USFWS was contacted and informed of the sewage spill as part of SMWD's Southern Subregion HCP procedures, and if any subsequent correspondence regarding minimization or mitigation measures were required and implemented.

#### **4.2.1.3 Degree of Toxicity**

The RWQCB's assertion that SMWD did not perform adequate sampling to determine the long- and short-term impacts of the release is incorrect. Impacts to wildlife habitats, not indirect impacts to species, are covered under the Basin Plan and should be analyzed. Surface water samples at four locations within San Juan Creek were collected within three days of the spill. Additionally, the SSO site was inspected over a two-week period and did not observe any impacts to areas that potentially support riparian-dependent wildlife, including arroyo toad. Elevated levels of total fecal and enterococcus bacteria were present three days after the spill. However, no thresholds for bacteria have been established for the inland creek. The bacteria levels are above and beyond background levels but did not significantly impact the beneficial use identified in the letter (wildlife habitat). Furthermore, the RWQCB did not request additional water quality testing to challenge SMWD's determination that no long- or short-term impacts would occur to San Juan Creek's beneficial uses.



*Mr. Dan Ferons*

*Subject: Response to Notice of Hearing and Issuance of Complaint No. R9-2008-0057 for Administrative Civil Liability against SMWD for Violation of Order Nos. 2006-0003-DWQ and R9-2007-0005*

---

- Beneficial Use – see response for Ortega spill.
- Consultation with USFWS – SMWD implemented all of the infrastructure emergency procedures and policies to minimize and mitigation take of the arroyo toad. The USFWS did not require any additional mitigation measures.

#### **4.2.2.3 Degree of Toxicity**

The RWQCB's assertion that SMWD did not perform adequate sampling to determine the long- and short-term impacts of the release is incorrect. First responders to the spill noted that the liquid discharge quickly absorbed into the soil preventing water sample collection. Dudek conducted a biological assessment four weeks after the spill and noted that dry sewage residue was present within the narrow floodplain of Cristianitos Creek where sandbags slowed the flow and blocked residue from continuing downstream. The assessment concluded that it was very unlikely that arroyo toads were directly impacted by the sewage spill, as noted above. Potential impacts were low due to the duration and location of sewage flow. Most of the upland flow path was across an existing dirt road with compacted soils that would not support estivating arroyo toads, which burrows in friable soils. Additionally, the sewage percolation was expected to be no more than a few inches deep well above the depth expected for estivating toads to occur (several inches to several feet).

Also, as mentioned above for the Ortega spill, impacts to wildlife habitats, not indirect impacts to species, are covered under the Basin Plan and should be analyzed. However, no thresholds for bacteria have been established for the inland creek. Bacteria levels within the soil could reasonably be expected to have increased above background levels, but would not have significantly impacted, or impaired, the beneficial use identified in the letter (wildlife habitat). Furthermore, the RWQCB did not request additional mitigation measures or testing following the technical report to challenge deny SMWDs determination that no long- or short-term impacts would occur to beneficial uses of downstream waters of the state.

#### **4.2.2.7 Degree of Culpability**

The RWQCB asserts that a substantial penalty should be issued because the spill was not detected earlier. Dudek recommends that the SMWD describe their inspection criteria and present the results of independent lab work performed on the faulty pipe.

Please contact me at (949) 450-7991 or via email at [rhenry@dudek.com](mailto:rhenry@dudek.com) if you have any questions regarding the memorandum.

**DUDEK**