

Agua Hedionda Lagoon

Mussels, Water Quality, storm water committee
DMA work,

See ^{Jimmy} ~~Chiara~~ Clemente

*Keri,
Here
Wat
PRI*

*Mission Bay
&
Hedionda Lagoon*

Metals

Water Samples collected on 10/31/00

Sampling Key

AH Infl High = Outer Agua Hedionda Lagoon at high tide
 AH Infl Low = Outer Agua Hedionda Lagoon at low tide
 Mbay Inf = Mission Bay at high tide

METHOD	EPA 6020
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Max of CONCENTRATION COMPOUND_NAME	CLIENT SAMPLE NUMBER		
	AH Infl High	AH Infl Low	Mbay Infl
Antimony			
Arsenic	0.0212	0.0191	0.0232
Barium			
Beryllium			
Cadmium			
Chromium (Total)			
Cobalt			
Copper	0.0313	0.0296	0.0304
Lead			
Manganese	0.0106		
Molybdenum	0.0115	0.0113	0.0115
Nickel			
Selenium	0.103	0.0958	0.0976
Silver			
Strontium	6.8	6.85	7.1
Thallium			
Tin			
Titanium			
Vanadium			
Zinc			

Pri	Unit	
	CMC	CCC
		mg/L
	0.069	0.036
		mg/L
		mg/L
	0.042	0.0093
	1.1	0.05
		mg/L
	0.0048	0.0031
	0.21	0.0081
		mg/L
		mg/L
	0.074	0.0082
	0.29	0.071
	0.0019	
		mg/L
		mg/L
		mg/L
		mg/L
	0.09	0.081
		mg/L

*Std
0.5 → 1*

*1724
/oi*

Water Samples collected on 11/08/00

Sampling Key

AH Infl High = Outer Agua Hedionda Lagoon at high tide
 AH Infl Low = Outer Agua Hedionda Lagoon at low tide
 Mbay Inf = Mission Bay at high tide

METHOD	EPA 6020
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Max of CONCENTRATION COMPOU_NAME	CLIENT SAMPLE NUMBER			Priority Polutant Limits		Unit
	Mbay Infl	AH Infl Low	AH Infl High	CMC	CCC	
Antimony						mg/L
Arsenic	0.0229	0.0252	0.0268	0.069	0.036	mg/L
Barium	0.0161					mg/L
Beryllium						mg/L
Cadmium				0.042	0.0093	mg/L
Chromium (Total)				1.1	0.05	mg/L
Cobalt						mg/L
Copper	0.0695	0.0357	0.0376	0.0048	0.0031	mg/L
Lead				0.21	0.0081	mg/L
Manganese	0.4150					mg/L
Molybdenum	0.0119	0.0134	0.0139			mg/L
Nickel	0.0151			0.074	0.0082	mg/L
Selenium	0.0970	0.1140	0.1090	0.29	0.071	mg/L
Silver				0.0019		mg/L
Thallium						mg/L
Tin	0.0101					mg/L
Titanium						mg/L
Vanadium						mg/L
Zinc	0.1400			0.09	0.081	mg/L

Water Samples collected on 11/13/00

Sampling Key

AH Infl High = Outer Agua Hedionda Lagoon at high tide
 AH Infl Low = Outer Agua Hedionda Lagoon at low tide
 Mbay Inf = Mission Bay at high tide

METHOD	EPA 6020
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Max of CONCENTRATION Compound	CLIENT SAMPLE NUMBER		
	AH Infl High	AH Infl Low	Mbay Infl
Antimony			
Arsenic	0.0337	0.0266	0.0279
Barium			
Beryllium			
Cadmium			
Chromium (Total)			
Cobalt			
Copper	0.0299	0.0276	0.037
Lead			
Manganese			0.0161
Molybdenum	0.0139	0.0141	0.0148
Nickel			
Selenium	0.135	0.134	0.121
Silver			
Thallium			
Tin			
Titanium			
Vanadium			
Zinc			

Priority Polutant Limits		Unit
CMC	CCC	
		mg/L
0.069	0.036	mg/L
		mg/L
		mg/L
0.042	0.0093	mg/L
1.1	0.05	mg/L
		mg/L
0.0048	0.0031	mg/L
0.21	0.0081	mg/L
		mg/L
0.074	0.0082	mg/L
0.29	0.071	mg/L
0.0019		mg/L
		mg/L
		mg/L
		mg/L
0.09	0.081	mg/L

See
K. Cole
See Report
Back?

1999 – 2000 CITY OF SAN DIEGO AND CO-PERMITTEE NPDES STORMWATER MONITORING PROGRAM REPORT

Prepared for
The City of San Diego
Engineering & Development Department
1010 Second Avenue, Suite 500
San Diego, CA 92101

August 10, 2000

URS Greiner Woodward Clyde

1615 Murray Canyon Road, Suite 1000
San Diego, CA 92108-4314
619-294-9400 Fax: 619-293-7920

In association with:

APPL, Inc.
California Watersports
D-TEK Environmental Testing Laboratory
MBC Applied Environmental Sciences
MGD Technologies, Inc.
Motile Laboratory Services
University of Washington
Weatherwatch Services

Hedionda stations to identify water-borne pathogens. In addition, sediment samples were collected within a public access point in the lagoon to assess the bacteria trapped in the sediment and possibly available for resuspension. A new quality assurance/quality control procedure (QA/QC) was established and implemented for bacteria samples to assess possible contamination.

Finally, in response to TMDL issues concerning diazinon and chlorpyrifos in urban runoff, an Insecticide Use Survey was created and distributed to 5,000 households and posted on the County of San Diego web site to assess trends of purchase, use, and disposal.

1.3 OVERVIEW OF SCOPE OF WORK

URSGWC provided storm water monitoring services for the co-permittees during the seventh year of the wet-weather monitoring program (1999/2000). The 1999/2000 monitoring program consisted of the following sampling services:

- Pre- and post season sediment sampling at Chollas Creek and San Diego Bay locations. These locations have been monitored since wet-weather monitoring season 1994/95.
- Chemical water quality monitoring during three storm events at five mass loading stations throughout San Diego County, AH1-Agua Hedionda, SV1-Sorrento Valley, SD13-California, SD5-Tecolote, SD8-Chollas. The mass loading stations represent large areas of the County that drain into important receiving waters. Stations SD5-Tecolote and SD8-Chollas have been monitored since the start of the wet-weather monitoring program in 1993/94. Stations SD13-California and SV1-Sorrento Valley were added to the program in 1996/97. Station AH1-Agua Hedionda was added to the program in 1998/99, concurrently with the bacteria monitoring program.
- Bacteria monitoring during three storm events at two creek monitoring stations, AH-Co and AH-Re, and two stations representing direct inputs to the creeks, AH-Coc and AH-Rec, for a total of four stations in the Agua Hedionda watershed. Stations AH-Co and AH-Re were monitored for bacteria in 1998/99. Stations AH-Coc and AH-Rec were added to the program in 1999/2000.
- Pathogen monitoring during three storm events at four creek monitoring stations, AH-Os, AH-Co, AH-Re, and AH1, and two stations representing direct inputs to the creeks, AH-Coc and AH-Rec, for a total of six stations in the Agua Hedionda watershed. Two of the creek stations monitored for pathogens, AH-Co and AH-Re, and the two stations representing direct inputs to the creeks, AH-Coc and AH-Rec, were also monitored for bacteria. One of the creek stations, AH1, monitored for pathogens was also monitored as a mass loading station.
- Post storm event bacteria and pathogen monitoring at three sampling transect locations, AH-L, AH-Lc, and AH-Lm, in Agua Hedionda Lagoon. This monitoring was performed one day and seven days after the first and third storm events that bacteria monitoring in creek and creek input stations was performed. This monitoring was not conducted following the second bacteria monitoring event because rain occurred one day and seven days following the event. Station AH-L was monitored for bacteria in 1998/99. Stations AH-Lc and AH-Lm were added to the program in 1999/2000.

From: <Kozelka.Peter@epamail.epa.gov>
To: Lesley Dobalian <dobal@rb9.swrcb.ca.gov>
Date: 7/6/01 11:11AM
Subject: Re: 303(d) list and Caulerpa

Hello Leslie:

here are some highlights of a discussion I had with my boss, Janet Hashimoto:

1. While there is no "official word", we believe States do not have to list waters impaired due to exotics. "Non-natives" are not technically considered "pollutants."
2. Whereas Caulerpa is an exotic, it may be easier for States to list certain nutrients or other parameters that induce nuisance species growth. However, one should have a good understanding of the ecology of the various growth of algae in system, and/or know what level is their control point (acceptable target load).
3. RB2 has listed the SF Bay for "exotic species," yet they have considerable evidence of more than just one exotic species. This gets minimal support from EPA since we may be responsible for doing a TMDL for exotics if States fail to do so. (We may argue that we do not, since it's technically not a pollutant.)

Sorry this info probably raises more questions than provides answers but you get a sense of the limitations of listing and then performing a TMDL. In my opinion, you are better off not listing it and dealing with it as a emergency situation; thereby resisting the constraints of regulatory framework of 303(d) process.

respectfully,

Peter Kozelka, Ph.D.
EPA Region 9--Water Div.
75 Hawthorne St.
San Francisco, CA 94105
415-744-1941 fax -1078
www.epa.gov/region09/water/

Lesley
Dobalian To: Peter Kozelka/R9/USEPA/US@EPA
<dobal@rb9.swr cc:
cb.ca.gov> Subject: 303(d) list and Caulerpa

07/05/2001
04:15 PM

Hi Peter,

We have been talking about the possibility of listing Agua Hedionda Lagoon on the 303(d) list for the exotic algae Caulerpa. Since I work on Caulerpa in other capacities, Keri has asked me to gather information on this possible listing. Does EPA have thoughts about listing waterbodies for exotics? Thank you.

Lesley

Lesley Dobalian, Environmental Specialist
San Diego Regional Water Quality Control Board
9771 Clairemont Mesa Blvd., Suite A
San Diego, CA 92124-1324
858-637-7139
dobal@rb9.swrcb.ca.gov

From: Lesley Dobalian
To: CAT; David Barker; Deborah Jayne; Keri Cole
Date: 5/2/01 11:13AM
Subject: Caulerpa and the 303(d) List

Hi all,

We have been doing some investigating into the issues surrounding listing Caulerpa on the 303(d) list and developing a TMDL. This is what we have found so far...

I placed a call to Steve Moore at Region 2, since they have completed a TMDL for exotics based on a 303(d) listing. He told me that Oregon has also listed some waterbodies on their 303(d) list for exotic species. San Francisco Bay has been listed for all exotic species. Based on this listing, Region 2 developed a TMDL. The source was determined to be ballast water. Allocations were set to zero, similar to the recently EPA-approved Trash TMDL.

As for Implementation, they are planning to use the same tools available to address NPS urban pollution, including NPDES and WDR (again similar to what will be used for the Trash TMDL). Education will be the primary mechanism to meet the TMDL. As for Caulerpa, under the CWA, and our NPDES permit, aquarium discharges are prohibited. The city of San Diego is currently drafting language for a city ordinance that will ban possession and sale of Caulerpa. There could possibly be room to address exotics in the NPDES permits of large scale aquariums, such as Sea World, also.

The SF Bay exotics TMDL was submitted one ago year ago, but no action has been taken yet by EPA. Steve speculates that EPA is not sure how to proceed with this particular TMDL. However, EPA may be soon forced to make some decisions due to a pending lawsuit by an environmental group that will be forcing the issue.

Pros of Listing

- *Increased recognition of the problem
- *Increased resources and PY's
- *Increased outreach and education
- *Allows us to more comprehensively address the problem (such as through ordinances and permits under the CWA)
- *Puts in place a plan of action if/when another infestation is identified

Cons

- *It may be controversial since it is a new issue for TMDLs and 303(d) listing (The public response to our efforts to combat Caulerpa has been overwhelmingly positive so far.)

A final comment: The 303(d) list is a list of impaired waterbodies. Agua Hedionda is impaired and the beneficial uses are threatened by Caulerpa.

Lesley

CC: Alan Monji; Joan Brackin; Kyle Olewnik; Linda Pardy; Lisa Brown; Tom Alo

From: Lesley Dobalian
To: Keri Cole
Date: 4/23/01 4:06PM
Subject: Re: caulerpa

Hi Keri,

A TMDL would be a good avenue to help address the Caulerpa problem. The Regional Boards have stepped in already with resources and money to address this problem because it is recognized as a major threat to the beneficial uses of our waters.

Although I am not aware of any other waterbody that has been put on the 303(d) list as impaired for an exotic, I believe San Francisco is interested and looking into it. We are leading the way in the efforts. Caulerpa has been found in two areas in California, one in Region 8 and one here in Carlsbad. The SWRCB has spent \$1.4 million alone already from the Clean up and Abatement Account to try to address this problem!

As for writing the TMDL, it seems relatively straightforward. The source of the problem is well recognized. The numeric target and allocations should be set to zero, just like with the approved LA River TMDL for trash.

Implementation should be no more challenging than for any other TMDL I would think. The city would certainly be involved in implementation to some degree. They have already joined in the efforts. Furthermore, they have a history of directing resources to battling exotics already. In the past, the City of San Diego has spent \$5.7 million and many years fighting the exotic aquatic plant, Hydrilla, from Lake Murray. It is now an eradication success story.

Definitely email John Richards! Let me know if I can help, and how things progress.
Lesley

>>> Keri Cole 04/20/01 09:12AM >>>

Hey Leslie

Deborah and I discussed the potential for a 303(d) listing for caulerpa a while back. But in talking with David Barker the other day, he suggested that I contact John Richards before going too far down that road, because he wasn't really sure if 303(d) is the appropriate avenue for addressing it since it would be tough to followup with a TMDL process (i.e. source ID, implementation, etc.). What would be your recommendation?

Forgive my ignorance, but where exactly have they found evidence or it? Do you know how wide spread an area it impacted? Are there any other regions discussing potential listings?

I wanted to have a little better idea about it before I sent an email off to John Richard's.

Thanks for your input.
KC

CC: CAT; David Barker; Deborah Jayne; Linda Pardy

From: Linda Pardy
To: Keri Cole; Lesley Dobalian
Date: 4/24/01 7:43AM
Subject: Re: caulerpa

Keri, Leslie, You might want to talk with R2 Steve Moore, since he has experience with marine exotic species in SF Bay. He's at 8-561-2439. He has submitted the exotic species TMDL to US EPA. It would be good to find out what happened since then. Some of the issues: (1) Is the TMDL the best way to address this issue? (2) What advantage/disadvantage does listing provide? ... -Linda

>>> Lesley Dobalian 04/23/01 04:06PM >>>

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KC

CC: Bruce Posthumus; Chiara Clemente; David Barker; Deborah Jayne; Greig Peters; Jesus Calleros; Pete Michael; Steve Moore