



WINTER/SPRING 2001 • VOLUME 4 • NUMBER 1

The Dilemma of Human Waste

When Heal the Ocean first formed, we jumped up and down about the need to upgrade the quality of the sixteen million gallons of sewage effluent that flows into the Santa Barbara Channel every day. The sanitary districts countered with the fact that upgrading sewage treatment to tertiary levels would be expensive (it would be) – and that it is unnecessary, since the discharged effluent meets regulatory standards. They may be totally correct – but Heal the Ocean is still not convinced that the state standards are high enough.

Since the early days, Heal the Ocean has refined its focus on this issue. Number one, it is important to understand that sewage treatment plants are a vital necessity of life, we can't live

without them. Sewage plants, and the managers who run them, are not the enemy. The managers will do what the public wants – and wants to pay for.

This is where Heal the Ocean comes in. We are testing for viruses in ocean-swimming water and in sewage effluent before it leaves the plant. We have tried viability testing on viruses, to see if they are “dead or alive.” We have completed a sewage reclamation report, which takes a look at how much more reclaimed effluent can be used in Santa Barbara County for irrigation purposes. We are initiating a study of groundwater, to see if sewer pipes might be leaking into these unseen passageways to the ocean.

Heal the Ocean is now working with sanitary

district managers on conceptual economic studies for tertiary upgrade. We want to see exactly how much it would cost to voluntarily increase our sewage treatment levels to the point where we are putting into the ocean the equivalent of irrigation water. We want to know exactly what this would mean to homeowners like you and me. Is it \$100 a year? \$200 a year? A million dollars a year? No one knows for sure, because no one has asked the question. But we are in the process of finding out.

We might be surprised at what we find out! It might come down to \$9 per month per homeowner, who knows? Wouldn't it be lovely to know that it might be very economical to put into the ocean an effluent we could water our lawns with? It may not just be a “pipe” dream! ☀

Viruses and the Groundwater Issue

Heal the Ocean's last round of virus testing, done in November, revealed a very strong presence of enteroviruses – as well as a weaker reading for Hepatitis A – in sewage effluent being discharged into the ocean from the city of Santa Barbara's El Estero wastewater treatment plant.

A researcher in the USC laboratory that confirmed the presence of the viruses in the El Estero sample, said the enterovirus reading was as strong as the straight polio vaccine used as a test control. Alison Davis noted in her report that the Hepatitis A virus was present as well, but “was much lighter and fainter.” Enteroviruses include polio, coxsackie and echoviruses.

The November 11 sampling was done at Arroyo Burro Beach, Butterfly Beach, Carpinteria Beach, El Estero Wastewater Treatment Plant,

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Reclamation and Tertiary Upgrade

Although sanitary districts operate under state standards and according to state and federal law, Heal the Ocean feels that the sea may be sending a message that these standards are not high enough. We are not cheered by new reports coming out about scientists finding increasing numbers of complex drugs – including heart medication, anti-depressants, anti-epileptics, anti-cancer chemicals, sex hormones and antibiotics passing through sewage works and entering rivers and the sea. Some scientists have found anti-depressants altering sperm levels and spawning patterns in aquatic life, and that compounds from perfumes and suntan lotion accumulate in fish.

This sort of news, together with so much being said about future water woes for California, was the impetus for Heal the Ocean's research

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Dead or Alive? The Viability Issue

Heal the Ocean's virus testing in November showed both enteric (polio-type) and Hepatitis A viruses in the sewage effluent in the final settling tank of the city's El Estero Wastewater treatment plant. The “hot” sample was taken from the treatment plant's final settling tank of effluent, just before the effluent goes out to sea.

On the same day the samples were sent to USC, Heal the Ocean sent a split sample of the El Estero effluent to a laboratory in Northern California, to test the sample for viability – to see if the viruses are “dead or alive.” Public health officials say the presence of such viruses may be insignificant because they may be “dead” viruses.

Being unaware of any testing to determine whether or not the viruses are dead or alive, Heal the Ocean contacted BioVir Laboratories in

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Hi From Hillary

I would like to take this space to thank all of you who continue to help us logistically and financially. I cannot say it enough: having money means we can

act swiftly and independently – to hire experts and to implement problem-solving, without having to wait for approval from anyone.

As has happened in the past, and as you will read in this newsletter, these programs and activities tend to encourage government collaboration. The support that has poured in from federal, state and county officials on the Rincon septic-to-sewer project has been awe-inspiring. Despite the unlovely things we discover (and which we yell about) in sewage effluent, the managers of the sanitary districts are helping us. In our meetings, they are helping us ask the right questions, so that we can arrive at a common sense plan for change.

Heal the Ocean stays ever mindful that the real problem of ocean pollution stems not only from polluted creeks, but from societal practices of how we deal with human waste on a broad scale. We continue to cry “ridiculous,” when we hear the ocean’s ills blamed on homeless encampments, dogs, and nothing else. Heal the Ocean is glad for whatever work is going on to educate the public not to throw junk into creeks and storm drains, but we also are staying committed to change – *real change* – to the bigger picture. We are particularly thrilled to see our government representatives making some real changes in their thinking on the issue of septic systems in the coastal zone.

We re-list our five-point platform in every newsletter, to remind our members what we are staying focused on. At the bottom of our commitment is our deep feeling that

using the ocean for a dump is not only unsafe and unhealthy, it is immoral. The ocean is the source of our life, the source of our air, weather, and of our ability to live on this planet. Our interconnectedness to the sea is felt on a conscious and subconscious level by each of us.

Recently I was pulling out of a parking lot when I noticed a sticker on the side window of a car that had been cut up from a Heal the Ocean bumper sticker. I see a lot of customized Heal the Ocean stickers (such as “Heal Me”) around town.

This one said, “Al Ocean.” I was looking at it with some amusement, and studying how the sticker had been redesigned. Just then the owner of the car came out, and, leaning across to talk to him from my passenger window, I asked the man, “Is your name really Al Ocean?”

“No!” he answered. “That’s my spiritual name, though. We’re all connected to the ocean, you know. It’s where we came from.”

Very simple, very direct – and it made me recall an incident that happened about a year ago. I had just finished speaking to an elementary school class, when the teacher told me one of her students thought my name was “Hillary Ocean.” It struck me then as funny, but later I thought how proud I would be to have such a name.

I tell you these incidences for a reason: as soon as you finish reading this, try saying, or thinking, your first name with the last name of “Ocean,” and see what you feel. I believe you will feel a surge in your heart about your own personal relationship to the sea – and with this, a recommitment to honoring the ocean as it should be honored.

Thanks for helping,

Executive Director, Heal the Ocean

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New Board Members at Heal the Ocean

Heal the Ocean is proud to announce the addition of one new member to its Board of Directors, and three new appointments to the Advisory Board. These additions further strengthen our organization, and increase our ability to do the work we need to do.

- RICHARD MONK, a senior land-use attorney with the law firm of Hollister and Brace, is the newest member of Heal the Ocean’s Board of Directors.
- PATRICIA DUFFY has served as chairman of Project Clean Water’s Sewer Systems Committee, and with advisory board membership she is bringing her work under Heal the Ocean’s umbrella.

- STEVE HALSTED, who earned his doctorate in engineering from Stanford University, is on the boards of the Scholarship Foundation of Santa Barbara and also serves on the Investment Committee of the Music Academy of the West. As president of the Rincon Point Property Owners Association, Steve has worked very hard to push the South Coast beach communities septic-to-sewer project forward.

- SAM SCRANTON, well known in Santa Barbara for his role as general manager of the Santa Barbara County Bowl, brings to our organization a lot of expertise on community involvement, as well as his long-time love of the sea. ☀

Septic-to-Sewer Conversions

Gathering Momentum

Whew! A massive letter-writing campaign, pushed and supported and prodded by Heal the Ocean, took place in February – to support Carpinteria Sanitary District's application to the State Water Resources Control Board for a \$425,000 grant. This money is needed to pay for the EIR that's necessary for the South Coast beach communities septic-to-sewer project.

The status of grant funding for "South Coast Beach Communities Septic-to-Sewer Project" could be known as soon as May – and if the grant is successful, the money will be in hand to start the septic-to-sewer EIR work this fall. The study would encompass not only the Rincon, but Sandyland, Sand Point, Padaro Lane and Beach Club Road as well.

This represents *seven miles* of county coastline that could soon be swept clean of badly located septic systems! John Miko, manager of the Carpinteria Sanitary District, can be credited for blazing the trail on this septic-to-sewer issue. At the end of 1998, when Heal the Ocean first approached the District for help in getting faulty septic systems off the beaches at the Rincon and nearby communities, Miko and the CSD readily took up the challenge.

Sewer engineering studies were coordinated by Heal the Ocean and the homeowner associations involved. Interviews were conducted, votes were taken – and in August there was a final balloting at the Rincon that resulted in a "yes" vote to form a sewer assessment district. This is the procedure by which liens are put on the homes to pay for the sewer project.

At the end of August, five homeowners in the Rincon enclave filed a lawsuit against the CSD, charging that under the California Environmental Quality Act (CEQA) a full EIR needs to be done *before* a sewer assessment district is formed. The CSD rescinded its action to form the sewer assessment district, and the case was dropped. Heal the Ocean hired environmental attorney Phil Seymour to help put the project back on track – but in the final analysis there was nothing left to do but find the money for the EIR study.

Miko began searching for grant funds – and arrived at the Costa-Machado Water Act of 2000, which earmarks millions of dollars of Proposition 13 money to fund clean-water programs in the state, administered through the State Water Resources Control Board. Miko then attended a grant-writing workshop in San Luis Obispo at the beginning of the year, and by the end of February had a grant application

submitted to the State Water Resources Control Board. With our attorney, Phil Seymour, Heal the Ocean lobbied our county supervisors, both separately and at a public hearing, to get support for the Carpinteria Sanitary District. We then banged on the doors of every local, state and federal representative we could, asking for written support of the CSD grant.

Even with a deadline pressure of only a few days, many of these representatives responded immediately, and by March 1, strong written endorsements had been sent to Sacramento by state Assemblywoman Hannah-Beth Jackson, Congresswoman Lois Capps, state senator Jack O'Connell, as well as the boards of supervisors from both Santa Barbara and Ventura counties.

Support also came from Santa Barbara Health Officer/Medical Director Elliot Schulman, Rob Almy, director of Santa Barbara County's Project Clean Water, and from the Santa Barbara Surf Club, CURE, Zog Industries, Groundswell, and of course Heal the Ocean.

We learned soon after the March 1 deadline that the CSD grant was prioritized by the Regional Water Quality Control Board as a *Number One priority!* As this newsletter goes to press, Heal the Ocean remains hopeful.

The Rincon project is probably the first, or one of the first, septic-to-sewer conversions in the state that has arisen from a homeowner group voluntarily choosing to get rid of an environmental menace. Everyone involved in this proposed project has been learning some tough lessons along the way of getting this through, but at Heal the Ocean we think the difficulties may help pave the way for other septic-to-sewer conversions – not only in Santa Barbara county, but throughout the state. ☀

Heal the Ocean platform

Heal the Ocean is a non-profit citizen's action group in Santa Barbara. Our philosophy is simple: the ocean can no longer be used as a dump. Our focus is on the following:

- Zero pathogens in sewage discharges to the sea
- Septic systems
- Non-point source pollution (storm drains)
- Harbor dredging
- The Tajiguas Landfill

The \$67,000 Lobby

Heal the Ocean is lobbying for the out-of-pocket expenses paid by the Carpinteria Sanitary District to perform preliminary studies for the Rincon sewer project.

These expenses amount to \$66,900, a risk taken by CSD for a project that is officially outside the boundaries of its service district. These funds would be paid back out of the sewer assessment district formation (which is the hopeful end of the EIR process), and the Carpinteria Sanitary District cannot move forward through the EIR process without a guarantee of repayment.

In February, Heal the Ocean appeared before the CSD Board of Directors and guaranteed that we will have found reimbursement for these out-of-pocket expenses by the time the CSD is in position to accept state grant funds for the EIR.

We believe the Carpinteria Sanitary District not only has a right to have philosophical support from the county of Santa Barbara, but that it deserves practical/financial support, too. The improvement to ocean water quality along this seven-mile stretch of beach is going to benefit everybody.

With Deep Appreciation

Heal the Ocean sends its sincere thanks to these contributors who have helped assure the success of our campaign for a clean and healthy ocean. This roster records donations made from October 28, 2000 – March 28, 2001. If your name has been omitted, please call (805) 965-7570 so we can correct our records.

The Board of Directors of Heal the Ocean would like to thank the following for their exceptional support of our organization:

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In Memory of Helen Woodward:
Adam Rhodes

In Memory of lost fishermen:
Michael Harrington

Heal the Ocean invites YOU to join in directly on our campaign for a clean and healthy ocean by funding specific projects. (Virus testing will be conducted in late summer.)

- Virus test El Estero (\$900)
- Virus test Goleta Sanitary District (\$900)
- Virus test Goleta Beach (\$900)
- Virus test Summerland Beach (\$900)
- Virus test Butterfly Beach (Montecito) (\$900)
- Virus test Carpinteria State Beach (\$900)
- Virus test Leadbetter Beach (\$900)
- One hour attorney's fees for septic-to-sewer conversion work (\$125)
- Groundwater pollution study (\$16,700)
- Tertiary sewage treatment conceptual study (\$10,000)

...Viruses, continued from page 1

Goleta Beach, Leadbetter Beach and Summerland Beach. Except for El Estero, all sites were negative for both enteric and Hepatitis A viruses. There had been a strong rain two weeks before test day, and Heal the Ocean had hoped to test before the rains came. We have been working with USC researchers on their theory that there is a "Hepatitis A season" during the spring and summer months – when the creeks are NOT running.

In a way, our November results support the USC theory, because the creeks were running and the beach water we collected contained no viruses.

The fact that the Hepatitis A and enteric viruses are showing up in the ocean when the creeks are not running may mean that human waste is getting into the ocean from a source or sources no one has yet investigated – which includes groundwater, as well as sewage outfalls.

Heal the Ocean has therefore initiated an "Environmental Quality Assessment of Shallow Groundwater/Ocean Interface" – a four-part study now underway that

will take a close look at the possibility of leaking sewer pipes getting into the flow of groundwater to the sea. We have contracted with D.M. Bernal Geologic Consulting, which is already at work on Phase I information-gathering from public records, with the other three phases to follow afterward – including sampling from wells, seepage, beneath creeks and by drilling new wells.

Heal the Ocean advisory board member Patricia Duffy, who worked on this issue during her tenure as chair of Project Clean Water's sewer systems committee, is bringing to this project the results of her years of information gathering. Although the majority of her committee voted on a professional hydrogeological study and possibly drilling of wells to investigate the problem, Project Clean Water deemed such a study "inappropriate" to PCW goals. Patricia has therefore brought her work to us.

We are also pleased to have additional input on this project from Drew Bohan, director of Santa Barbara ChannelKeeper. Drew contributes a research expertise that the Keeper program is noted for nationwide. Our aim is to collaborate and work on this investigation, and whatever problems emerge, together with our city officials.

Heal the Ocean Quarterly Virus Testing
Conducted in the laboratory of Dr. Jed Fuhrman, USC

Fall (Nov. 11) 2000	Hepatitis A	Enteric viruses
Arroyo Burro	No	No
Butterfly Beach	No	No
Carpinteria State	No	No
El Estero sewage treatment plant	Yes	Yes
Goleta Beach	No	No
Leadbetter Beach	No	No
Summerland Beach	No	No
Summer 2000	Hepatitis A	Enteric viruses
Arroyo Burro	No	No
Butterfly Beach	Yes	No
Carpinteria State	Yes	No
East Beach @ Mission Creek	Yes	No
Goleta Beach	No	No
Hope Ranch Beach	No	No
Leadbetter Beach	No	No
Summerland Beach	Yes	No
Winter 1999	Hepatitis A	Enteric viruses
Arroyo Burro	No	Yes
Butterfly Beach	No	Yes
Carpinteria State	No	Yes
East Beach @ Mission Creek	No	Yes
Goleta Beach	No	No
Hope Ranch Beach	No	No
Las Palmas Creek (Hope Ranch)	No	No
Leadbetter Beach	No	No
Summerland Beach	No	Yes
Fall 1999	Hepatitis A	Enteric viruses
Arroyo Burro	No	No
El Estero sewage treatment plant	Yes	Yes
Goleta Sanitary District	No	Yes
Goleta Beach East	Yes	No
Goleta Beach West	No	Yes
Hope Ranch Beach	No	No
Las Palmas Creek (Hope Ranch)	Yes	No
Leadbetter Beach	Yes	Yes
East Beach @ Mission Creek	No	Yes

...Reclamation, continued from page 1

into the possibility of using more tertiary-treated effluent for irrigation in Santa Barbara county.

Heal the Ocean's "Water Reclamation Research," funded by the team entry fees to last year's Rincon Clean Water Classic surf contest, was finished last Fall by Ian Adam, an intern at UCSB's Bren School of Environmental Science and Management. Synthesizing previous studies and investigations done by local sanitary districts and water districts, Adam's report also focused on the successes, and failures, of other communities that have tried "toilet to tap" tertiary-treatment programs.

As noted in the Heal the Ocean report, such re-use of effluent is rife with problems – legal and societal, and with current regulations, create a complicated permitting nightmare. Tertiary-treated effluent, re-used as "reclaimed water," is also expensive – more so than tap water. The reclaimed

water produced by El Estero and Goleta is subsidized.

Based on the information in Adam's report, Heal the Ocean has proceeded to the next step: investigate what it would mean both economically and logistically for sewage effluent to be boosted to tertiary treatment levels and still be piped to sea.

The sanitary district managers from all five South Coast districts are currently helping us gather information about the economics of upgrade, and how such projects might be financed by means such as bond issues. If "ballpark" prices sound right and reasonable, Heal the Ocean will search for expert help to get exact prices so that the public can make its own choice about what kind of sewage effluent it wants to put into the sea. We will also be weighing the benefits of tertiary treatment against the value of other clean-water measures – i.e., getting more septic systems removed, upping the frequency of sewer pipe repair, replacing old laterals, or enforcement of illegal encampments and dumping in creeks.

Heal the Ocean News

Please send us your e-mail addresses

We are updating our e-mail lists — which will be used more frequently to send you up-to-date notices and information. Please send us your e-mail addresses to HealTheOcean@rain.org

¡Curemos el océano!

Heal the Ocean now has bumper stickers and T-shirts in Spanish!

¡Curemos el océano! (“Let’s heal the ocean”) bumper stickers will be available for the first time on Earth Day, and will be free handouts at Heal the Ocean’s booth during the April 22 festivities. ¡Curemos el océano! T-shirts will also be available for sale.

Heal the Ocean has added these Spanish-language items to its inventory in the spirit of Earth Day, which will be held this year in the sunken gardens of the Santa Barbara Court House. Conceived as an outreach to the Spanish-speaking community, the Earth Day theme is, “All of One Earth/De la Tierra Somos.”

Please call the office, 965-7570, for your free bumper sticker, or to buy a T-shirt. ¡Curemos el océano! T-shirts come in Blue, White, Gray in XL and L; Earth Day special price (at the festival) is \$15; \$20 thereafter or by mail/phone order. Please add \$3 for postage and handling.) A clip-and-mail coupon for all Heal the Ocean shirts and hats is included in this newsletter.

Muchas gracias to advisory board member Chris Wilkinson, who designed the original Heal the Ocean logo, as well as its Spanish version. To make certain the language of the “Curemos” series is exactly right, Chris sought advice from Harvey Sharrer, UCSB’s Dept. of Spanish and Portuguese, as well as from Maria Carmen Lozana, of UCSB’s Latin American and Iberian Studies.



Heal the Ocean launches Illness Survey

After receiving numerous public complaints from ocean users who believe they became ill while swimming or surfing off the Santa Barbara County coast, Heal the Ocean began interviewing doctors (including the physicians on our advisory board) to see how a connection between illness and ocean use could be investigated. Without a doctor’s examination of the patient, we learned, the connection is difficult to make and thus considered “largely anecdotal.”

Nevertheless, Heal the Ocean has launched an Illness Reporting survey on its Web Site. We are asking ocean users to report when and where they believe they contracted illness after being in the ocean, and to describe their symptoms. This information can be kept confidential.

With this information, Heal the Ocean will develop a database and compile a map of these occurrences, to see if a pattern emerges.

The Illness Reporting form can be found by logging onto healthocean.org.

Heal the Ocean gets its own 501 (c)(3)

It’s official! Heal the Ocean, which has been operating as a division of the Jean-Michel Cousteau Institute, now has its own non-profit corporate identity. (Our tax I.D. number is 77-0565183).

We are indebted to Jean-Michel Cousteau for taking us under his wing at the moment of our birth, when Heal the Ocean was scrambling to get organized in front of an avalanche of public pressure for cleaning up the ocean. We still have an association with Ocean Futures (which is a merger of JMCI and the Free Willy Keiko Foundation). Jean-Michel Cousteau and Charles Vinick (Ocean Futures general manager) will continue to serve on Heal the Ocean’s Board of Directors.

Volunteer Coordinator for HTO

Heal the Ocean is stepping up its community outreach capabilities by appointing Rebecca Griffith to the post of Volunteer Coordinator. This is in response to an ever-growing number of requests from people telling us they want to get involved in Heal the Ocean’s work.

Rebecca, who will receive her degree in geography from UCSB in June, also works in the assistant office of Kenny Loggins. For Heal the Ocean, she will be scheduling volunteers for our booths at public events, and she will be developing programs that include actual work in the field, and collaborations with other community groups.

One of the first things Rebecca will be doing is activating the volunteer list that has been building since the beginnings of Heal the Ocean. If you are on this list already, and haven’t heard from us, you can expect to hear from Becky! If you’re not on this list, please e-mail her at HealTheOcean@rain.org, and include your phone number.

News in brief

Save the dates – June 22 & 23, when local artists, including *plein air* artists of the celebrated Oak Group, are staging an art show to benefit Heal the Ocean. Artists include Michael Drury, Hank Pitcher, John Comer, Arturo Tello, and many others. To be held at the Santa Barbara Club, 1105 Chapala St. A future mailing will advise of the time ... Thanks to the surfers of the Rincon Cleanwater Classic, which for the third year in a row donated surf-team entry fees to Heal the Ocean’s Rincon Fund... KTMS radio (99.9) has run continual public service announcements about Heal the Ocean, narrated and donated by Sam Chew. (Thanks KTMS! Thanks, Sam!) ... Check out the greeting cards of local artists Peggy Oki and Sean Kirkpatrick, which on the back recommend and endorse Heal the Ocean... The FisHouse on Cabrillo Blvd. staged its annual Golf-Dinner Tournament on February 26, with benefits going to Heal the Ocean. Owner Tom White installed some time ago a beautiful piece of glass at the oyster bar that is etched with “Heal the Ocean.” Go check it out!

Clip and Mail

Heal the Ocean Wear

Heal the Ocean T-shirts are cool! They're in heavy, scrubbed-look cotton, and we have new colors – gray, plum (purple), lime green, and white, in addition to the standby favorites of denim blue, moss green and brick. Short sleeve (\$20) or long sleeve (\$25). Med, Large, XL.

¡Curemos el océano! T-shirts are short sleeve only, in blue, gray and white (\$20). L, XL

Hats are in purple, maroon, green, denim, tan and gray (\$15) (one size fits all).

Name _____

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Price

Yes, I would like to order: _____

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...Viability, continued from page 1

Benicia, California, where a head researcher said the laboratory would give the El Estero sample a try. If USC's test proved the El Estero sample to be positive for viruses, BioVir would run the split sample through its testing equipment.

The sample proved positive for viruses at USC, so we gave the go-ahead to BioVir, even though the USC researchers told us the odds of a successful test were slim. There has been some success with viability testing on enteric viruses, but methods for Hepatitis A have not yet been adequately developed in any laboratory.

The viability test for enteric viruses also takes hundreds of gallons of water to successfully filter out the viruses for culturing. USC researcher Alison Davis explained that too much "junk" in the water – like waste, acids, silt, solids, pollution – can make it impossible for viruses to grow in a laboratory medium. The viability of viruses is determined by whether or not the laboratory sees the viruses grow, which shows if they are "dead or alive."

Orange County, which has tested for viability of viruses at its beaches, dealt with the problem of seawater volume by using a seawater pumping truck, which pulled up onto a beach and siphoned hundreds of gallons of seawater into testing equipment inside the truck.

Despite the small odds of success in testing the El Estero sample, Heal the Ocean decided to try – with its five-gallon sample. The test came back negative.

What this shows us is that if we (or public health officials) are interested in pursuing the answer to the viability of viruses in the ocean, we are going to have to figure out a way to filter greater volumes of seawater, like Orange County has – or wait until laboratory testing methods improve. Or, we can continue to work with such laboratories, sending them more samples to try, to help further their testing methods.

As far as the "dead or alive" issue, Davis said an "intact" virus is one that has RNA and a protein coat, and is potentially infectious until it loses its protein coat. For it to show up in laboratory testing, the virus had a protein coat at the time of collection.

When polio viruses are found in the sea, Davis explained, this does not mean "that everyone is going to get polio by swimming in the ocean... what it says is that there is people poop in the water. Polio vaccine is found in people poop, and if we are finding enteric viruses, then chances are the water has people poop in it."

Hepatitis A, which only comes from humans, can live in seawater for as long as a month or more, Davis said. ☀

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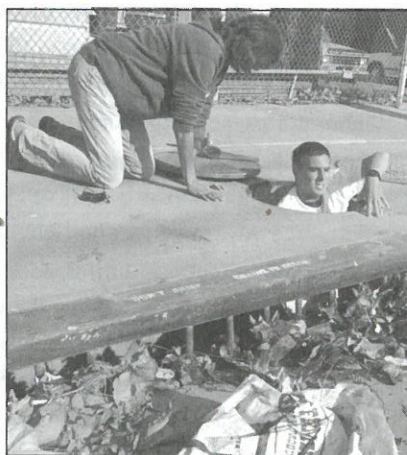
At the beginning of January, weather forecasters were predicting the first "biggest rain" of the winter. Heal the Ocean advisory board member Jeff Maassen called the office to report dirty, cluttered storm drains everywhere he looked.

We called the city Public Works department and learned that the last time the storm drains had been cleaned was in November 2000, and that the entire fiscal year budget for storm drains – \$25,000 – had been spent. There were no plans to do any further cleaning for the "rest of the fiscal year," meaning June 2001.

The city official we talked to said he hoped that Measure B money would be devoted to this "multi-faceted problem," which includes the need to figure out how to store the drain junk somewhere for drying out. Catch basin filters would be tested, he said. "These things can't be maintained by guys with shovels," the official explained.

To which we responded by calling the Santa Barbara News-Press and asking a reporter to meet us at a clogged up storm drain, which we would clean in about two minutes – to prove that maybe "guys with shovels" could solve this problem at a

A last laugh



Hillary Hauser watches HTO office manager Bret Stewart pop up out of a manhole on the Eastside.

Photo credit: Steve Malone, Santa Barbara News-Press
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lot less expense than the price of a study.

The reporter met us on the Eastside, and photographed Heal the Ocean executive director Hillary Hauser on her hands and knees on the sidewalk, with HTO office manager Bret Stewart climbing out of a manhole. We told the reporter the point we were trying to make – don't study, just do it!

The next day's news trumpeted the headline that Heal the Ocean was cleaning drains of "sea-bound crud." On the KEYT evening news, the "Storm Watch 2001" report was that although the creeks were flowing, the city of Santa Barbara could "thank Heal the Ocean for cleaning all the storm drains." We got numerous calls with fears about our getting sick!

Amid all the serious pollution work being done around here, it is important to have (and share) a little levity. Our groveling around on the sidewalk maybe only proved we can get down and dirty to make a point! Maybe it proved we're good at groveling around on the sidewalk! Meanwhile, the city and county (Project Clean Water) have proceeded with their important programs of testing and fitting storm drains with catchment devices just as they had planned all along.