DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N00/193
April 4, 2008

Mr. Stuart Drown
Executive Director
Milton Marks Commission on California
State Government Organization and Economy
925 L Street, Suite 805
Sacramento, CA 95814

Dear Mr. Drown:

Thank you for inviting me to testify at the Little Hoover Commission hearing on April 24, 2008. I appreciate the role the Little Hoover Commission plays in independent policy oversight over California and welcome your interest and involvement in this issue. I understand the vital role the state and regional boards play in protecting and enhancing water quality and hope my testimony will contribute to improvements in the current structure and processes. As requested in your March 14, 2008 letter I am providing this written testimony for the Commissioners to review prior to the hearing.

The military in California has a long and proud history and continues to be one of the largest sectors of California's diverse economy. Military presence in California includes approximately 300,000 active duty, National Guard and civilian employees with direct expenditures of over $46 billion per year. Regionally, in San Diego County, the military economic impact is $18.3 billion. I have included a fact sheet with more details about California's military installations (enclosure (1)).

California is crucial to DoD's worldwide mission. Key installations house our ships, aircraft and outstanding Sailors, Soldiers, Airmen, and Marines. California's diverse landscape includes vital airspace where we train and is an important link between ocean and inland training areas. Central to this network are some of the largest coastal naval installations in the world.

Navy Region Southwest has nine major installation commands in California and a number of smaller facilities (e.g. reserve centers) with discharges regulated by regional boards, primarily through National Pollutant Discharge Elimination System (NPDES) permits. Recently there have been changes in how storm water is

regulated, particularly in the San Diego region, that have raised concerns for us and have the potential to significantly impact Navy installations. Our concerns have been and continue to be focused on the absence of scientific data and analyses to support permit standards.

The Navy has a great deal of experience with California's environmental program dating back more than 15 years. Operating installations resemble small cities with housing, commercial and industrial activities. Based on the diversity of our installations we have a perspective over a broad range of issues. We also have a strong commitment to innovative practices such as early adoption of low-toxic practices such as solvent-free parts cleaning, replacement of creosote pier pilings with non-treated pilings, installation of bilge water treatment plants, implementation of an award winning solid waste diversion and recycling program, implementation of programs to protect natural and cultural resources, and use of electrical vehicles. We have been leaders in energy reductions and a wide spectrum of alternative energy projects and fuels. It is in the context of this perspective that we offer our comments.

Our concerns with California's water quality program center on four broad areas:

1. Unlike California's world-renowned air quality program, the water quality program does not consistently utilize a science-based approach. Provided with this letter is our perspective on this issue having been heavily involved in both programs over several decades (enclosure (2)). The lack of a science-based approach has resulted in a storm water toxicity standard for certain San Diego permittees that even storm water discharges from the San Diego Regional Board's office facility fails. A more detail discussion on this issue is provided as enclosure (3).

2. California's water quality program lacks the transparency of other programs. Key elements of testimony at hearings are often not considered or answered in the record. In addition, often there is not a clear basis for decisions such as our long efforts to seek an answer as to the basis of the San Diego Regional Board's storm water toxicity standard. A letter to Tom Howard discussing this issue is provided as enclosure (4). In the end, as explained in the letter, we believe that there exists no basis in science or law for the application of the San Diego Board's toxicity standard to storm water. In this light, we also note that a letter from a San Diego congresswoman pertaining to this issue had similar concerns with the toxicity standard.

3. California's water quality program does not consider economic feasibility issues and as a result has adopted standards that threaten key economic sectors such as shipyards and the military. A fact sheet discussing these issues is provided as enclosure (5).

4. A lack of statewide guidance has resulted in inconsistent application of water quality standards, not because of dissimilarities between regional areas, but rather because differences in staff methodologies, interpretations of regulations, and staff and Board expertise. A statewide policy establishing a framework for developing water quality standards would improve consistency and the use of scientific principles in development of requirements. A letter March 2005 letter to Art Baggett discussion consistency and science based standards is provided with this letter (enclosure (6)).

I look forward to discussing these broad concerns and our specific experiences and recommendations on the 24th.

Sincerely,

L. R. HERING
Rear Admiral, U.S. Navy
Commander, Navy Region Southwest

Enclosures:

(1) DoD in California Fact Sheet
(2) Discussion of Navy's Experiences with State Air Resources Boards
(3) Stormwater Toxicity Standards Compared to SD RWQCB Parking Lot
(4) CNRSW letter to Tom Howard (8 May 2006)
(5) NRSW Toxicity Standards for Storm Water NPDES Permits Fact Sheet (May 2006)
(6) CNRSW letter to Art Baggett (4 Mar 2005)

DoD's Economic Contribution to CALIFORNIA

DoD in CALIFORNIA

Fiscal Year: 2005 (Dollars in Thousands)

Personnel/Expenditures	Total	Army	Navy & Marine Corps	Air Force	Other Defense Activities
I. Personnel - Total	295,517	52,350	189,776	46,399	6,992
Active Duty Military	151,945	7,789	124,659	19,497	0
Civilian	56,197	7,810	31,478	9,917	6,992
Reserve and National Guard	87,375	366,510	33,639	16,985	0
II. Expenditures – Total	46,380,823	7,401,151	17,668,755	15,647,722	5,926,357
A. Payroll Outlays - Total	14,937,094	1,872,499	9,718,699	2,877,693	458,203
Active Duty Military Pay	6,514,261	319,349	5,188,675	1,006,217	0
Civilian Pay	4,099,163	450,270	2,490,760	699,930	458,203
Reserve and National Guard Pay	697,264	577,042	71,032	49,190	0
Retired Military Pay	3,626,426	525,838	1,968,232	1,132,356	0
B. Contracts – Total	31,064,740	5,038,321	7,859,563	12,743,960	5,422,896
Supply and Equipment Contracts	14,671,817	1,780,976	3,485,984	6,692,303	2,712,554
RDT&E Contracts	7,031,753	1,539,486	796,600	4,485,212	210,455
Service Contracts	8,668,654	1,458,676	3,221,848	1,488,299	2,499,831
Construction Contracts	561,534	128,201	355,131	78,146	56
Civil Function Contracts	130,982	130,982	0	0	0
C. Grants	378,989	227,169	90,493	16,069	45,258

EXPENDITURES ($000) Major Locations	Total	Payroll Outlays	Grants/ Contracts
San Diego	7,874,477	3,537,765	4,336,712
Long Beach	4,364,908	57,625	4,307,283
Sunnyvale	3,542,428	48,981	3,493,447
Sacramento	2,232,950	189,586	2,043,364
Camp Pendleton	1,953,133	1,591,136	361,998
El Segundo	1,772,483	109,054	1,663,429
Palmdale	1,099,004	22,790	1,076,214
Redondo Beach	996,836	26,037	970,799
North Island NAS	702,042	627,964	74,078
Anaheim	679,433	22,223	6571220

MILITARY & CIVILIAN PERSONNEL Major Locations	Total	Active Duty Military	Civilian
San Diego	57,657	45,899	11,758
Camp Pendleton	39,794	37,609	2,185
North Island NAS	11,529	7,968	3,561
Twentynine Palms	10,524	9,671	853
Miramar NAS	9,508	8,969	539
Travis AFB	8,640	6,783	1,857
Monterey	6,977	4,949	2,028
Edwards AFB	5,917	2,793	3,124
Fort Irwin	5,713	4,906	807
Port Huememe	4,435	1,274	3161

Prime Contract Awards ($000) (Prior 7 Fiscal Years)	Total	Army	Navy & Marine Corps	Air Force	Other Defense Activities
2004	27,875,154	4,359,544	6,845,902	12,346,320	4,323,387
2003	28,681,090	4,031,940	7,349,198	12,770,710	4,529,243
2002	23,816,142	3,494,512	6,232,089	10,314,312	3,775,230
2001	19,939,088	3,057,610	5,100,329	8,763,596	3,017,554
2000	18,100,086	2,790,320	5,104,154	8,290,107	1,915,505
1999	17,371,556	2,770,843	4,742,032	8,074,652	1,784,029
1998	17,401,098	2,933,497	4,775,210	7,620,807	2,071,583
1997	18,477,307	3,006,196	5,765,253	7,654,991	2,050,867

TOP 10 Contractors Receiving the Largest Dollar Volume of Prime Contract Awards in this State	Total Amount ($000)
THE BOEING COMPANY	5,380,423
LOCKHEED MARTIN CORPORATION	3,980,464
NORTHROP GRUMMAN CORPORATION	3,543,081
HEALTH NET INC	2,016,028
RAYTHEON COMPANY	1,163,293
SCIENCE APPLICATIONS INTERNATIONAL	808,901
GENERAL DYNAMICS CORPORATION	807,901
BAE SYSTEMS PLC	696,890
THE AEROSPACE CORPORATION	611,298
GENERAL ATOMIC TECHNOLOGIES CO	507,442

URL - http://siadapp.dior.whs.mil/personnel/L03/fy05/atlas_2005.pdf

Discussion of Navy's Experiences with the State Air Resources Board

The Navy has a great deal of experience with California's air program dating back more than 15 years. Operating installations resemble small cities with housing, commercial and industrial activities. Based on the diversity of our installations we have a perspective over a broader range of issues. We also have a strong commitment to innovative practices such as early adoption low-toxic practices such as solvent-free parts cleaning, plastic media blasting instead of solvent based paint removal, and electrical vehicles.

In terms of structure and process the air and water programs are truly night and day. In setting up the air program the legislature recognized that California had to literally pave the way for the rest of the world. To do so a strong central research division of ARB was established in El Monte that conducts state of the art science on emerging technology to reduce air pollution. California literally redesigned the automobile through innovations such as the catalytic converter that are now taken as the standard. California continues this leadership process.

The air program, however, is entirely based upon strong science and technology. ARB does not impose a standard until it has assessed whether technology can provide for its feasible implementation. Decisions are based upon an evaluation of cost per ton removal of pollution and assessed against health based criteria. Finally, technology based standards are done uniformly throughout California.

The air program has also recognized the unique aspect of the military mission. ARB understands that the requirements for a battlefield ready vehicle are quite different than a vehicle only used for civilian purposes. ARB has worked closely with the military to ensure that regulations do not impede the military mission and tailored regulations to the effect. The military for our part ensures that we comply with all other rules and works hard to be a full partner with new technology such as our recent leadership in using biodiesel fuel.

The water program, on the other hand, has no central research division and does not have the capacity to do the study/innovation required for reducing the impacts from

ENCLOSURE (2)

non-point sources. It lacks the basic ability to foster research that might create the equivalent of a catalytic converter to remove the source of non-point pollution.

Our experience with water standards has been:

(1)there is not a scientific basis for the setting of standards,
(2)there is no demonstration that the standard is feasible,
(3)there is no demonstration that it is even possible to comply.

When it is pointed out that achievement of a standard is not even possible, for example our storm water standard in San Diego, there is barely even a response to testimony. A letter from a local congresswoman asking basic questions of feasibility of a standard remains unanswered to this day five years later.

We believe that the water program should learn from the world-class recognized successes of the air program. If California seeks to tackle a major problem such as non-point source water pollution it should establish a strong central research division to study and develop possible solutions. It should develop the in-house expertise to evaluate proposed rules and standards based on technological and economic feasibility. It should adopt the transparent process of the air program to ensure that all testimony is fully considered and responded to. Finally, it should strive to make the solutions to wide-ranging problems like non-point source water pollution consistent throughout the state and standards that are science based and demonstrate technological feasibility.

The Navy has a strong and positive relationship with California's air program and believes we have been part of the solution to the problem. We would welcome such an opportunity for the long-term non-point source water pollution issues such as stormwater, TMDL's and sediment cleanup.

Brian Gordon
1 Apr 2008

Subject: STORMWATER TOXICITY STANDARDS COMPARED TO SD RWQCB PARKING LOT SAMPLING RESULTS

BACKGROUND

Commander Navy Region Southwest (CNRSW) is facing regulatory requirements that could require a construction project of approximately $312 million to install storm water diversion systems for collecting, storing and treating storm water runoff. Storm water collection, storage and treatment may be required to comply with National Pollutant Discharge Elimination System (NPDES) permits issued to CNRSW by the San Diego Regional Water Quality Control Board (SD RWQCB). CNRSW believes that the regulatory standard driving this requirement is not consistently achievable and is not an accurate indicator of whether stormwater is toxic. In fact, test results of storm water runoff from the SD RWQCB's parking lot cannot consistently meet the toxicity standards imposed in Navy permits.

The SD RWQCB issued three NPDES permits covering discharges from Naval Base Coronado, Naval Station San Diego, and Naval Base Point Loma. These permits include an acute toxicity standard with a 90% survival requirement for industrial storm water discharges into San Diego Bay and the Pacific Ocean. If the storm water runoff does not pass the acute toxicity test with a 90% survival rate at least 50% of the time it must be prevented from discharging to the Bay or Ocean.

In order to compare storm water runoff from CNRSW installations to municipal parking lot runoff, CNRSW took grab samples of storm water runoff from the SD RWQCB parking lot. Located approximately 40yards from CNRSW's storm water sampling contractor's office, this site represents a typical suburban office park with pollutants limited to normal runoff from roofs and automobile parking lots. Samples were collected during the same rain events sampled for CNRSW storm water discharges and using the same sampling techniques and analytical methods. Sample results show storm water runoff from the SD RWQCB parking lot would not meet the 90% survival, 50% of the time acute toxicity test permit limit.

ENCLOSURE (3)

DISCUSSION

The existing 90% survival, 50% of the time acute toxicity test is very stringent. It is unlikely that industrial or municipal storm water runoff could consistently pass without using collection and treatment. Currently, shipyard storm water treatment systems do not meet toxicity limit and must meet this requirement by diverting millions of gallons of storm water to the City of San Diego sewer system. This requirement also impacts the shipyards ability to maintain production schedules because they use their drydocks as storm water holding tanks while the captured water is discharged to the sewer. This is not an option for Navy facilities due to the large volume of storm water runoff that would be generated.

The table below shows storm water runoff results from the SD RWQCB parking lot:

Summary of Storm Water Toxicity	
	SD RWQCB Parking Lot Acute Toxicity
Average Toxicity survival	57.6 % survival
# of samples	7
Sampling Period	2003 through 2008

Acute toxicity results are reported in percent survival rates, meaning how many specimens survive in the sample during a 96-hour test. The regulatory limits for acute toxicity are based on percent survival. The SD RWQCB has chosen a regulatory limit of not less than 90% survival 50% of the time and not less than 70% survival 10% of the time.

As shown above, storm water runoff from the SD RWQCB's parking lot does not consistently meet the limits they are applying to Navy installations (90% survival 50% of the time and 70% survival 10% of the time). The SD RWQCB parking lot did have a 90% survival once out of the seven times it has been monitored.

There are two logical conclusions which can be drawn from this. First, based on the SD RWQCB's definition of toxic, most runoff from any urban or suburban setting, is toxic. If this is the case, then all storm water runoff must be subject to similar requirements for treatment/diversion as this water also enters receiving waters (the San Diego River and Pacific Ocean in the case of the SD RWQCB office.) The second possible conclusion is the SD RWQCB's application of the toxicity test to storm water is flawed and produces false positives. In this outcome, "failing" the test is not indicative of toxicity. Under this outcome the SD RWQCB should undertake an effort for a more appropriate toxicity test grounded in a science-based approach.

The approach by the SD RWQCB of requiring a 90% survival acute toxicity standard is based on the San Diego Basin Plan water quality objectives for toxicity. "All water shall be maintained free of toxic substances in concentrations that are toxic to or that produce detrimental physiological responses in human, plant animal, or aquatic life." Because the acute toxicity test has an allowable variance of up to 10%, choosing a 90% survival requirement can mean the storm water discharge will have no measurable toxicity in it before it can be discharged into the receiving water. The only regulatory reference, beyond the SD RWQCB issued permits, for an acute toxicity test with a 90% survival rate is the 1974 *Water Quality Control Policy for the Enclosed Bays and Estuaries of California.* However, page 1 of this policy states it does not apply to land runoff. The SD RWQCB's position is by requiring the storm water discharges to have no measurable toxicity, they will ensure the receiving water is maintained free of toxic substances. This is an overly conservative approach to storm water regulation and receiving water protection. As shown in the table above, consistently applying this conservative regulatory approach would mean municipal parking lot runoff is toxic and must be diverted. CNRSW conducted a study to identify how storm water diversion could be achieved and how much it would cost. It is estimated to cost $312 million to divert storm water runoff on Navy sites in San Diego.

In order to identify if storm water runoff is causing toxicity in the receiving water, CNRSW conducted a $1million, peer reviewed, study to measure toxicity levels in the receiving water during rain events. Using the SD RWQCB's current criteria of 90% survival, the report found no toxicity in the receiving water before, during, or after the rain events. It is the Navy's position that storm water runoff toxicity limits should be established by what pollutant levels cause toxicity in the receiving water. Based upon this toxicity study, CNRSW proposed to the SD RWQCB two alternate methods of measuring discharge toxicity. However, instead of using scientific data to develop an appropriate storm water toxicity standard, the SD RWQCB chose to continue using the extremely conservative toxicity requirement described in the paragraph above. Not meeting this 90% acute toxicity requirement means that the discharger must divert storm water runoff from entering the Bay or Ocean.

CONCLUSION/RECOMMENDATION

The SD RWQCB included a stringent toxicity standard in Navy NPDES permits that was not scientifically developed and will be difficult and costly to comply with. CNRSW is developing the science to support a storm water toxicity standard for storm water discharges into the bay that is also protective of the receiving water. The SD RWQCB should consider the Navy's toxicity proposals or consistently impose the storm water toxicity standard of 90% survival on all storm water runoff including their own parking lot.

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 N. HARBOR DR.
SAN DIEGO, CA 92132-0058

IN REPLY REFER TO:
5090
Ser N45/140
May 8, 2006

Mr. Tom Howard,
Chief Deputy Director
California Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Dear Mr. Howard,

I would like to thank you for your efforts to obtain information from the San Diego Regional Water Quality Control Board (SD RWQCB) concerning the scientific basis for their toxicity standard as applied to storm water discharges at our San Diego Bay installations. We have reviewed their March 9, 2006 response letter (enclosure 1) and offer the following comments regarding their basis for the standard and their failure to provide supporting scientific data as we had requested. I am also including information on the Navy's efforts to develop a scientifically-based alternative standard.

The SD RWQCB letter cites 1974 *Water Quality Control Policy for the Enclosed Bays and Estuaries of California* (EBEP) as the source of the toxicity standard. We continue to question the applicability of this 1974 policy to storm water discharges. The Introduction section of the EBEP (enclosure 2) states, "*This policy does not apply to wastes from vessels or land runoff except as specifically indicated for siltation (Chapter III4.) and combined sewer flows (Chapter III 7.).*" Since land runoff is synonymous with storm water runoff it is clear the EBEP was not intended to apply to storm water discharges. The SD RWQCB specifically justifies the use of the toxicity standard in the following statement "Storm water runoff from industrial areas is considered industrial process water. Therefore, in accordance with the EBEP, specifically footnote 3, the permit established a performance standard for toxicity for the base's storm water discharges."

This interpretation of how the EBEP applies to storm water discharges contradicts information we previously received from the State Water Board. On April 11, 2002, we submitted a letter (enclosure 3) to the State Water Board seeking clarification on the definition of "industrial process waters" in the EBEP as it relates to industrial storm water runoff. The State Water Board response letter (enclosure 4) states, "You are correct that the policy's provisions concerning "industrial process water" does not apply to

ENCLOSURE (4)

storm water discharges covered under the NPDES Industrial Activities Storm Water General Permit."

The SD RWQCB's interpretation of the EBEP's provisions if applied consistently to all discharges would require the phasing out of industrial storm water discharges throughout the state in accordance with the EBEP. Chapter I.A. *"Principles of Management of Water Quality in Enclosed Bays and Estuaries,"* of the EBEP states, "It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date." I may agree that such an interpretation, and the ensuing phase out of storm water discharges, would likely create significant disruption if applied to other ports and industrial activities throughout California.

The SD RWQCB's response letter also failed to provide any scientific data supporting the toxicity standard as we requested. The SD RWQCB has not provided any evidence that a 90% survival toxicity standard is necessary to support San Diego Bay beneficial uses rather than a less stringent standard. Nor have they addressed the questions Congresswoman Susan Davis provided in her 2002 letter (enclosure 5), such as her question as to whether this toxicity test had ever been used on non-industrial storm water and whether general urban storm water could pass the test.

It remains the Navy's position that the application of a standard from a 1974 policy that was designed for continuous industrial discharges should not be applied to episodic storm water discharges without specific scientific data supporting it. This is particularly important in this case where the cost for compliance is very high. The estimated capital expenditure to comply with the toxicity standard is $312 million, plus significant ongoing operational costs. Furthermore, the construction, operation, and new procedures necessary for compliance could substantially disrupt the function of the largest naval complex in the Pacific.

For the last four years, the Navy has been working on an alternative toxicity standard to present to the SD RWQCB. The proposed alternative standard is supported by an extensive scientific study based on whole effluent and receiving water sampling and analyses to evaluate Navy storm water discharges and to develop a toxicity standard that is both representative of actual marine life exposures and protective of beneficial uses. An

update on this toxicity study was presented to the SD RWQCB on March 9, 2005 and the final will be presented on June 14, 2006.

In conclusion, the SD RWQCB cites the EBEP as a basis for the storm water toxicity standard in Navy NPDES permits. It is our position, based on our interpretation of the EBEP and information from the State Water Board, that the EBEP is not applicable to storm water discharges and is being incorrectly applied by the SD RWQCB. The SD RWQCB has not provided any additional supporting scientific data to justify the use of a toxicity standard that will be disruptive to our national security mission and extremely costly to implement.

Furthermore, the precedent of applying this standard to our port facilities could have significant implications to port facilities throughout California, as well as other industrial areas, and have implications to the ongoing goods movement initiative underway by the Business, Transportation and Housing Agency and Cal/EPA.

To support the development of a scientifically based toxicity standard, the Navy has conducted an extensive study over the last four years. The Navy will present the results of the study and propose an alternative standard that will be protective of beneficial uses to the SD RWQCB on June 14, 2006.

Again, we appreciate your efforts in this matter and request your continued assistance. If you have any questions regarding this matter, my point of contact is Mr. Robert Chichester, Water Quality Program Manager, at (619) 524-6417.

Sincerely,

L. R. HERING
Rear Admiral, U.S. Navy
Commander, Navy Region Southwest

Enclosure:
1. State Water Resource Control Board ltr of 09 Mar 06
2. Water Quality Control Policy for the Enclosed Bays and Estuaries of California of May 1974
3. CNRSW ltr 5090 Ser N45RW.rc/0109 of 11 Apr 02
4. State Water Resource Control Board ltr of 12 Jun 02
5. U.S. House of Representatives ltr of 5 Aug 02

5090
Ser N45/140
May 8, 2006

Copy to:
Congresswoman Susan Davis
Senator Christine Kehoe
Senator Denise Moreno Ducheny
Assemblymember Lori Saldana
Assemblymember Juan Vargas
Dan Skopec, Undersecretary, California Environmental Protection Agency
Sunne Wright McPeak, Secretary, California Business, Transportation and Housing Agency

California Regional Water Quality Control Board

San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties

Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Alan C. Lloyd, Ph.D.
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340
(858) 467-2952 • Fax (858) 571-6972
http://www.waterboards.ca.gov/sandiego

TO: Tom Howard
Chief Deputy Director
State Water Resources Control Board

FROM: Michael McCann
Supervising Water Resource Control Engineer
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

DATE: March 9, 2006

SUBJECT: STORMWATER TOXICITY LIMITATION—US NAVY AND SAN DIEGO BAY

This is in response to your request for information on questions raised by the US Navy in an email to you dated February 2, 2006 from Mr. Randal Friedman, US Navy, Navy Region Southwest.

Specifically, the Navy has requested the San Diego Regional Board provide scientific analysis and studies supporting the current performance standard toxicity established in the 3 NPDES permits for the Navy's stormwater discharges to San Diego Bay. The Navy refers to the standard as, "90% survival, 50% of the time and 70% survival, 10% of the time".

The toxicity standard of concern is the toxicity limitation established in The Water Quality Control Plans for the Inland Bays and Estuaries of California as adopted by Resolution No. 95-84 on November 16, 1995 (EBEP). Specifically, Footnote No. 3 to the opening paragraph of Chapter I reads as follows:

"Undiluted wastewaters covered under this exception provision shall not produce less than 90 percent survival, 50 percent of the time, and not less than 70 percent survival, 10 percent of the time of a standard test species in 96-hour static or continuous flow bioassay test using undiluted waste. Maintenance of these levels of survival shall not by themselves constitute sufficient evidence that the discharge satisfies the criteria of enhancing the quality of the receiving water above that which occur in the absence of the discharge. Full and uninterrupted protection for the beneficial uses of the receiving water must be maintained. A Regional Board may require physical, chemical, bioassay, and bacteriological assessment of treated wastewater quality prior to authorizing release to the bay or estuary of concern."

Encl (1)

This is consistent with, and the appropriate way to implement, the Basin Plan water quality objective for toxicity that states "All wastes shall be maintained free from toxic substances in concentrations that are toxic to or produce detrimental physiological responses in human, plant, animal, or aquatic life..." The CWA sec. 101(a)(3) declares "that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." By complying with the industrial discharge specifications for toxicity established in the EBEP, the discharges of industrial storm water will be protective of the receiving water quality.

On Sept. 11, 2002 the San Diego Regional Board adopted a NPDES permit to the US Navy for discharges of stormwater to San Diego Bay from its Navy Base Point Loma. Storm water runoff from industrial areas is considered industrial process water. Therefore, in accordance with the EBEP, specifically Footnote No. 3, the permit establishes a performance standard for toxicity for the base's stormwater water discharges. The permit specifies that this performance standard would become an enforceable effluent limitation on Sept. 11, 2006. The Board had initially considered the EBEP toxicity limit as an enforceable effluent limitation, but the US Navy objected and argued before the Board that the specific toxicity limitation was too stringent to meet and not scientifically based. The US Navy requested sufficient time to review the limitation and, if possible, to develop sufficient data to support an alternative, scientifically based, toxicity limitation. In response to the Navy's request, the Board established the toxicity limit as an nonenforceable performance standard until Sept. 11, 2006 when the standard would become an enforceable effluent limitation.

It is important to point out that Order No. R9-2002-0002, the order serving as the NPDES permit, has a finding, Finding No. 3, that references the EBEP. In addition, the Fact Sheet to the order also references the EBEP.

Subsequent to the Board's adoption of the NPDES permit for Navy Base Point Loma, the Board adopted NPDES permits to two other Navy Base facilities adjacent to San Diego Bay—Navy Base San Diego and Navy Base Coronado. These permits also establish the same toxicity performance standard with a 4-year time period before the performance standard becomes an enforceable effluent limitation.

The toxicity limit from the EBEP should not have come as a surprise to the Navy in 2002 with the adoption of the permit for Navy Base Point Loma. On August 12, 1998, the Regional Board adopted a NPDES permit, Order No. 98-53, to the US Navy for its Graving Dock facility adjacent to San Diego Bay. This order established the same toxicity performance standard as the US Navy Point Loma permit and specified that the standard would become an enforceable effluent limitation in 2000. The US Navy has complied with the permit by terminating stormwater discharges to San Diego Bay.

Tom Howard March 7, 2006

Since the Sept. 11, 2002, the US Navy is supposed to have been working on developing information to support an alternate toxicity effluent limitation. I is not apparent at this time what progress the Navy has achieved in developing sufficient information to support an alternative toxicity limit. The US Navy has contacted us recently that they intend to meet with Board staff to provide the information they have developed. It is our expectation that the Navy will also provide a plan and schedule for complying with the enforceable toxicity effluent limitation by Sept. 11, 2006.

The Navy is not the first discharger required to meet this EBEP toxicity limitation. Since 1999, the three major shipyards in San Diego Bay—NASSCO, Continental Maritime, and BAE (formerly Southwest Marine)—have been required to meet this same toxicity limitation for stormwater discharges to San Diego Bay. The shipyards have complied with their NPDES permits by configuring their exposed work areas to prevent stormwater discharges to the bay. The Navy may have to take the same approach in complying with their NPDES permits.

The specific toxicity limitation was established for the EBEP when it was first adopted by the State Board in 1974. I am not aware of any challenges received by the State Board regarding this long-standing toxicity limit. Also, I am not aware of all the information that formed the basis for the toxicity limit in the 1974 EBEP. I recently learned from State Board staff that the following two reports may have been used to partially support the 1974 EBEP toxicity limit:

1. A 1972 study titled "A Study of Toxicity and Biostimulation in San Francisco Bay-Delta Waters. Volume III. Acute Toxicity of Discharged Wastes".
2. Kaiser Engineers, Inc. 1969. San Francisco Bay-Delta Water Quality Control Program.

The Water Quality Control Plan for the Enclosed Bays and Estuaries of California as adopted by Resolution No. 95-84 on the November 16, 1995 specifies the following:

Chapter 1:

It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters[2] (exclusive of cooling water discharges) to enclosed bays and estuaries, other than San Francisco Bay-Delta system, shall be phased out as the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge[3].

Footnote No. 2: For the purpose of this policy, treated ballast waters and innocuous nonmunicipal wastewater such as clear brines, wastewater, and pool drains are not necessarily considered industrial process wastes, and may be allowed by the Regional Boards under discharge requirements that provide protection to the beneficial uses of the receiving water.

Footnote No. 3: Undiluted wastewaters covered under this exception provision shall not produce less than 90 percent survival, 50 percent of the time, and not less than 70 percent survival, 10 percent of the time of a standard test species in 96-hour static or continuous flow bioassay test using undiluted waste. Maintenance of these levels of survival shall not by themselves constitute sufficient evidence that the discharge satisfies the criteria of enhancing the quality of the receiving water above that which occur in the absence of the discharge. Full and uninterrupted protection for the beneficial uses of the receiving water must be maintained. A Regional Board may require physical, chemical, bioassay, and bacteriological assessment of treated wastewater quality prior to authorizing release to the bay or estuary of concern.

Discharge Specifications B. 4.a and b of Order No. R9-2002-0002 reads as follows:

4a. For the SUBASE facility, effective 4 years after the adoption of this order, in a 96-hour static or continuous flow bioassay (toxicity) test, undiluted storm water runoff associated with industrial activity shall not produce less than 90 % survival, 50 % of the time, and not less than 70 percent survival 10 % of the time, using standard test species and protocol.

4b. During the 4-year period before the effective date of the toxicity limit set forth in *paragraph a* of this specification, the U.S. Navy shall conduct a study of the toxicity in storm water discharges from all areas of the SUBASE at which industrial activities are undertaken and shall recommend a scientifically valid survival rate for acute exposure to discharges of storm water from industrial areas at SUBASE. The study may include a Toxicity Identification Evaluation (TIE), or a Toxicity Reduction Evaluation (TRE).

State of California

The Resources Agency

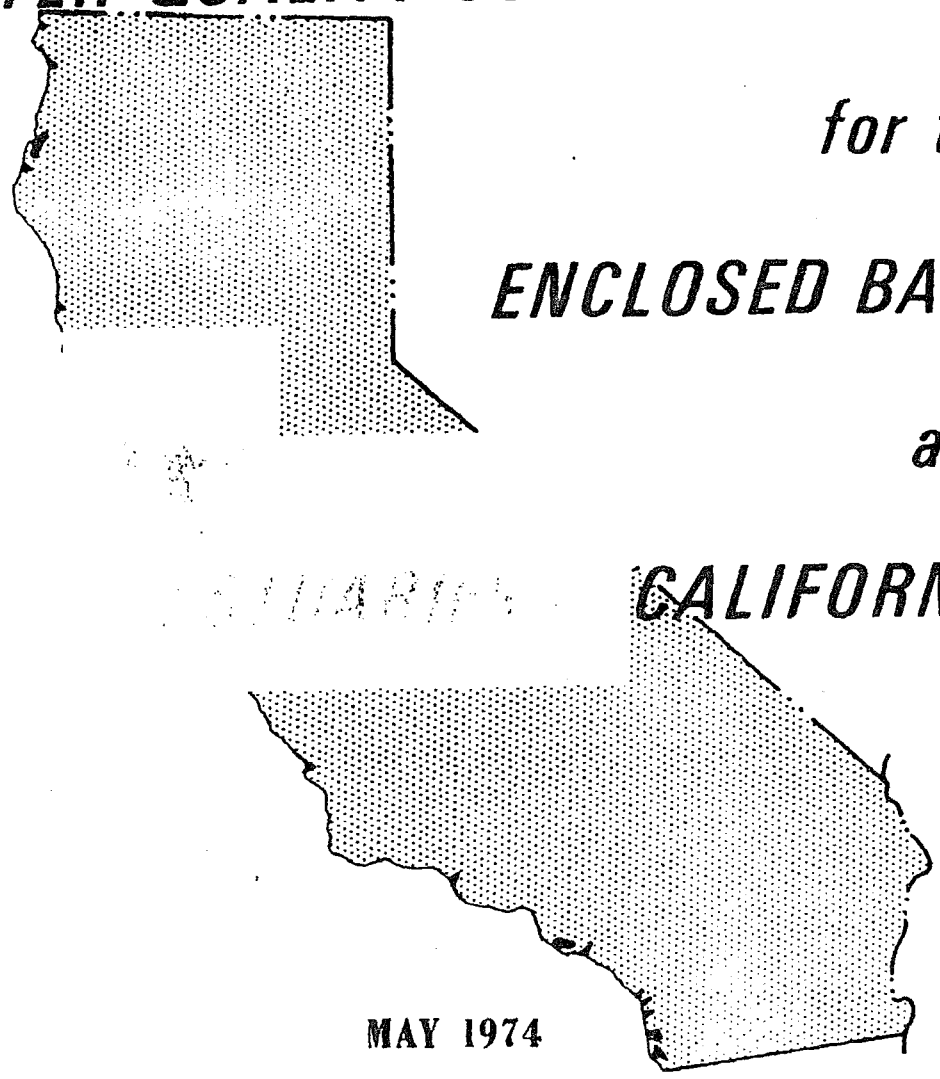
WATER QUALITY CONTROL POLICY

for the

ENCLOSED BAYS

and

CALIFORNIA



MAY 1974

STATE WATER RESOURCES CONTROL BOARD

Encl (2)

WATER QUALITY CONTROL POLICY FOR THE ENCLOSED BAYS AND ESTUARIES OF CALIFORNIA[1/]

INTRODUCTION

The purpose of this policy is to provide water quality principles and guidelines to prevent water quality degradation and to protect the beneficial uses of waters of enclosed bays and estuaries. Decisions on water quality control plans, waste discharge requirements, construction grant projects, water rights permits, and other specific water quality control implementing actions of the State and Regional Boards shall be consistent with the provisions of this policy.

The Board declares its intent to determine from time to time the need for revising this policy.

CHAPTER I.

PRINCIPLES FOR MANAGEMENT OF
WATER QUALITY IN ENCLOSED BAYS AND ESTUARIES

A.

(exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge. 3/

B. With regard to the waters of the San Francisco Bay-Delta system, the State Board finds and directs as follows:

1a. There is a considerable body of scientific evidence and opinion which suggests the existence of biological degradation due to long-term exposure to toxicants which have been discharged to the San Francisco Bay-Delta system. Therefore, implementation of a program which controls toxic effects through a combination of source control for toxic materials, upgraded wastewater treatment, and improved dilution of wastewaters, shall proceed as rapidly as is practicable with the objective of providing full protection to the biota and the beneficial uses of Bay-Delta waters in a cost-effective manner

1b. A comprehensive understanding of the biological effects of wastewater discharge on San Francisco Bay, as a whole, must await the results of further scientific study. There is, however, sufficient evidence at this time to indicate that the continuation of wastewater discharges to the southern reach of San Francisco Bay, south of the Dumbarton Bridge, is an unacceptable condition. The State Board and the San Francisco Regional Board shall take such action as is necessary to assure the elimination of wastewater discharges to waters of the San Francisco Bay, south of Dumbarton Bridge, at the earliest practicable date.

1c. In order to prevent excessive investment which would unduly impact the limited funds available to California for construction of publicly owned treatment works, construction of such works shall proceed in a staged fashion, and each stage shall be fully evaluated by the State and Regional Boards to determine the necessity for additional expenditures. Monitoring requirements shall be established to evaluate any effects on water quality, particularly changes in species diversity and abundance, which may result from the operation of each stage of planned facilities

and source control programs. Such a staged construction program, in combination with an increased monitoring effort, will result in the most cost-effective and rapid progress toward a goal of maintaining and enhancing water quality in the San Francisco Bay-Delta system.

2. Where a waste discharger has an alternative of in-bay or ocean disposal and where both alternatives offer a similar degree of environmental and public health protection, prime consideration shall be given to the alternative which offers the greater degree of flexibility for the implementation of economically feasible wastewater reclamation options.

The following policies apply to all of California's enclosed bays and estuaries:

1. Persistent or cumulative toxic substances shall be removed from the waste to the maximum extent practicable through source control or adequate treatment prior to discharge.
2. Bay or estuarine outfall and diffuser systems shall be designed to achieve the most rapid initial dilution[4/] practicable to minimize concentrations of substances not removed by source control or treatment.
3. Wastes shall not be discharged into or adjacent to areas where the protection of beneficial uses requires spatial separation from waste fields.
4. Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.
5. Nonpoint sources of pollutants shall be controlled to the maximum practicable extent.

FOOTNOTES

1/ Enclosed bays are indentations along the coast which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outer most harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes, but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Estuaries, including coastal lagoons, are waters at the mouths of streams which serve as mixing zones for fresh and ocean waters.
Mouths of streams which are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters shall be considered to extend seaward if significant mixing of fresh and saltwater occurs in the open coastal waters. Estuarine waters include, but are not limited to, the Sacramento-San Joaquin Delta, as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

2/ For the purpose of this policy, treated ballast waters and innocuous nonmunicipal wastewater such as clear brines, wash-water, and pool drains are not necessarily considered industrial process wastes, and may be allowed by Regional Boards under discharge requirements that provide protection to the beneficial uses of the receiving water.

3/

[illegible] of survival shall not by themselves constitute sufficient evidence that the discharge satisfies the criteria of enhancing the quality of the receiving water above that which occur in the absence of the discharge. Full and uninterrupted protection for the beneficial uses of the receiving water [illegible] be maintained. A Regional Board may require physical, chemical, bioassay, and bacteriological assessment of treated wastewater quality prior to authorizing release to the bay or estuary of concern.

4/ Initial dilution zone is defined as the volume of water near the point of discharge within which the waste immediately mixes with the bay or estuarine water due to the momentum of the waste-discharge and the difference in density between the waste and receiving water.

5/ A new discharge is a discharge for which a Regional Board has not received a report of waste discharge prior to the date of adoption of this policy, and which was not in existence prior to the date of adoption of th.s policy.

6/ Rubbish and refuse include any cans, bottles, paper, plastic, vegetable matter, or dead animals or dead fish deposited or caused to be deposited by man.

7/ The prohibition does not apply to cooling water streams which comply with the "Water Quality Control Plan for the Control of Temperature in Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" - State Water Resources Control Board.

DEPARTMENT OF THE NAVY
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N45RW.rc/0109
April 11, 2002

Ms. Celeste Cantu
State Water Resources Control Board
PO Box 100
Sacramento, CA 95812-100

Dear Ms. Cantu:

We are [illegible] 1974, Water Quality Control Pol[icy] and Estuaries of California, [illegible] Resources Control Board. In the policy, Chapter I., Section A. states,

> "It is the policy of the State Board that the discharge of Municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other then the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date."

We are looking for clarification on the definition of "industrial process waters" as it is used in the text above and some examples. Our concern is that the definition of "industrial process waters" would include storm water runoff currently covered under the California General Industrial Storm Water Permit and therefore, would be required to be phased out.

Our interpretation of this Policy is that it was not written to apply to land runoff as stated in the Policy Introduction.

If there are any questions regarding this letter, please contact me at (619) 524-6390.

Sincerely,

Brian S. Gordon

BRIAN S. GORDON
Director, Water Program
By direction of the Commander

Encl (3)

State Water Resources Control Board

Division of Water Quality
1001 I Street • Sacramento, California 95814 • (916) 341-5455
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
FAX (916) 341-5463 • Internet Address: http://www.swrcb.ca.gov

Winston H. Hickox
Secretary for
Environmental
Protection

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at http://www.swrcb.ca.gov.

JUN 12 2002

Mr. Brian S. Gordon
Director, Water Program
Department of the Navy
Commander Navy Region Southwest
937 North Harbor Drive
San Diego, CA 92132-0058

Dear Mr. Gordon:

APPLICABILITY OF MAY 1974 WATER QUALITY CONTROL POLICY FOR THE ENCLOSED BAYS AND ESTUARIES OF CALIFORNIA TO STORM WATER DISCHARGES

Thank you for your letter of April 11, 2002 to Celeste Cantú, Executive Director of the State Water Resources Control Board, regarding the applicability of the May 1974 Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Policy) to discharges currently permitted by the National Pollutant Discharge Elimination System (NPDES) Industrial Activities Storm Water General Permit.

You are correct that the Policy's provisions concerning "industrial process water" does not apply to storm water discharges covered under the NPDES Industrial Activities Storm Water General Permit (Permit). Dischargers complying with the NPDES Permit may continue to discharge their storm water and are not subject to the phase-out policy.

If you have any questions, the staff person most knowledgeable on this subject is Leo Cosentini, and he can be reached at (916) 341-5524. You may also call Maryann Jones, Chief of the Industrial, Construction and Dairies Unit, at (916) 341-5531.

Sincerely,

Stan Martinson, Chief
Division of Water Quality

Encl (4)

SUSAN A. DAVIS
49TH DISTRICT, CALIFORNIA

WASHINGTON OFFICE:
1617 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-2040

DISTRICT OFFICE:
2150 WEST WASHINGTON STREET, SUITE 210
SAN DIEGO, CA 92110
(619) 291-1430

Congress of the United States
House of Representatives
Washington, DC 20515–0549

COMMITTEES:
ARMED SERVICES

SUBCOMMITTEES:
MILITARY PERSONNEL
MILITARY READINESS
MWR PANEL

EDUCATION AND THE WORKFORCE

SUBCOMMITTEES:
EDUCATION REFORM
SELECT EDUCATION

August 5, 2002

John Robertus, Executive Officer
California Regional Water Quality
Control Board - San Diego Region
9174 Sky Park Court, Suite 100
San Diego, Ca 92123

Dear Mr. Robertus:

As the Regional Water Quality Control Board considers Navy Region Southwest's pending storm water permit (Tentative Order #R9-2002-02, NBPL NPDES Permit #CA0109363), I am writing to ask you to work with the Navy to develop a permitting standard that will allow the Navy to carry out its mission while protecting the health of San Diego Bay.

In determining this standard, I hope that you and the Navy will consider some basic questions including:

- What is the overall quality of water in the Bay? How has this changed since passage and implementation of the Clean Water Act in the 1970s?
- What level of toxicity can San Diego Bay accommodate?
- What is the scientific basis for the toxicity tests used by the Regional Board? If you applied the toxicity test to general urban runoff, how would it rate? Have you done such testing?
- If diversion of substantial volumes of storm water is required, what options exist for disposal of that storm water? Are you working with the City of San Diego on a coordinated approach to storm water management? Is it feasible for the Navy to discharge millions of gallons of storm water to the City of San Diego? If not, where is that storm water to go?

Answering basic questions like these would give both the Board and the Navy a clear baseline and guidance for the path ahead. As a strong believer in the missions of both the U.S. Navy and the Regional Water Quality Control Board, I sincerely hope that you can work together to develop a reasonable and defensible storm water permit based on the best available data.

If you have any questions, or if I may be of any service to you in this process, please contact Dan Hammer in my San Diego office at (619) 291-1430.

S. Davis

Member of Congress

PRINTED ON RECYCLED PAPER

Encl (5)

Toxicity Standards for Storm Water NPDES Permits

Navy Region Southwest

May 2006

Issue

The San Diego Regional Water Quality Control Board (SDRWQCB) has issued a storm water toxicity standard in Navy permits that will have significant impacts on Navy installations. It is the Navy's position that the new storm water toxicity standard is not based on sound science. At the Board's request, the Navy conducted a scientific study and will propose a scientifically-based alternative standard that is protective of beneficial uses and water quality. If the Board rejects the Navy's alternative standard, then the current standard will go into effect requiring the installation of systems to capture and collect millions of gallons of storm water runoff at a cost in excess of $300 million. This financial impact will have a tremendous negative effect on the Navy Region Southwest's ability to support training our Sailors and Marines in support of the War on Terrorism.

Background

In late 2002 and early 2003 the SDRWQCB issued three National Pollutant Discharge Elimination System (NPDES) permits regulating discharges from San Diego area naval installations. These permits include a stormwater discharge toxicity standard based on a 1974 state policy that applies to industrial discharges such as those originating from waste water treatment plants, and was never intended for storm water discharges. Specifically, the toxicity standard requires that industrial storm water discharges maintain a 90% survival rate in test organisms. While this standard may be appropriate for regulating continuous discharges like wastewater treatment plant effluent, the SDRWQCB has not provided a scientific rationale for applying the standard to intermittent discharges like storm water. During the hearings on these permits, the Board recognized the need for a scientifically based standard and requested the Navy develop and propose a scientifically-based alternative standard. The Navy has completed the study and has developed alternative standards that are scientifically-based and are protective of beneficial uses and water quality. If the Board does not approve the Navy's proposed alternative, the existing toxicity standard with the 90% survival rate would be applied to Navy industrial storm water discharges commencing in September 2006. An engineering study determined the capital cost estimate for compliance with the existing standard is approximately $312 million, not including ongoing operations and maintenance costs.

Discussion

What is the SDRWQCB's current acute toxicity standard?

Navy NPDES permits include the following standard for storm water discharges *"undiluted storm water runoff associated with industrial activity shall not produce less than 90% survival 50% of the time, and not less than 70% survival, 10% of the time, using standard test species and protocol."* The standard applies to storm water prior to entering the receiving water (San Diego Bay). To comply with the standard, the Navy is required to collect storm water runoff at the "end of the pipe" before it enters the Bay and then expose marine organisms to the storm water sample, which has had sea salts added to it, for 96 hours.

ENCLOSURE (5)

Why is application of the SDRWQCB acute toxicity standard flawed?

The basis for the standard is a 32-year-old policy that does not apply to storm water runoff. In a March 9, 2006 letter to the State Water Resources Control Board the SDRWQCB staff cite the *1974 Water Quality Control Policy for Enclosed Bays and Estuaries of California* (EBEP) as the source for the toxicity standard applied to Navy industrial storm water discharges. While this standard may be appropriate for regulating continuous discharges like wastewater treatment plant effluent, it was never intended to apply to intermittent discharges like storm water. The SDRWQCB application of the EBEP to storm water discharges is inappropriate, inconsistent, and impractical for the reasons listed below.

1. The introduction section of the EBEP states, *"This policy does not apply to wastes from vessels or land runoff except as specifically indicated for siltation (Chapter III 4.) and combined sewer flows (Chapter III 7.)."* Therefore the EBEP does not apply to storm water runoff.

2. In their letter, the SDRWQCB specifically justifies using the toxicity standard in the following statement, *"Storm water runoff from industrial areas is considered industrial process water. Therefore, in accordance with the EBEP, specifically footnote 3, the permit established a performance standard for toxicity for the base's storm water discharges."* This interpretation of how the state policy applies to storm water discharges contradicts information the Navy previously received from the State Water Board. In a June 12, 2002 letter, the State Water Board stated *"You are correct that the Policy's provisions concerning "industrial process water" does not apply to storm water discharges covered under the NPDES Industrial Activities Storm Water General Permit."*

3. The SDRWQCB has selectively applied the EBEP to a small number of industrial facilities and the Navy. Using the SDRWQCB's rationale, the EBEP would need to be applied to hundreds if not thousands of industrial storm water dischargers in San Diego County. Instead they have only included the toxicity standard from the EBEP in a small number of permits that apply to the Navy and the local commercial shipyards. They have also only applied the toxicity provision from the Policy while ignoring its other provisions. The EBEP states "It is policy of the State Board that the discharge of municipal wastewaters and industrial process waters... to enclosed bays and estuaries... shall be phased out at the earliest practicable date." In other words, if the SDRWQCB includes industrial storm water discharges as industrial process waters and subject to the EBEP, they would need to phase out all industrial storm water discharges to enclosed bays and estuaries, with a result of substantial costs to industries throughout the county.

4. Other than the EBEP, the SDRWQCB has yet to provide any other basis for the standard. Both the State Water Resources Control Board and the Navy have requested scientific data supporting the standard. The SDRWQCB have not provided any requested scientific data demonstrating the toxicity standard is necessary to protect beneficial uses and water quality. In addition to the SWRCB and the Navy requests, questions concerning the standard have also been raised by Congresswoman Susan Davis. In an August 5, 2002 letter to the SDRWQCB Executive Officer, Congresswoman Davis asked several questions on the scientific basis for the standard and on how compliance with the standard could be achieved. One such question was, "If you applied the toxicity test to general urban runoff, how would it rate? Have you done such testing?" The questions raised by the Congresswoman have not been addressed by the SDRWQCB.

What would be the impacts to the Navy?

The estimated cost for Navy installations to comply with the 90% toxicity standard is $312 million, not including operations and maintenance costs. The estimate assumes the Navy will need to segregate storm water runoff from industrial areas from that generated from non-industrial areas at the installation (i.e. offices, homes, etc.). The runoff will then need to be

collected and treated or infiltrated into the ground. The construction, operation, and new procedures necessary for compliance would substantially disrupt the function of the largest naval complex in the Pacific.

If in addition to the impacts caused by the toxicity standard, if the SDRWQCB phased out all discharges to the Bay as anticipated by the EBEP, the impacts to the Navy would be even greater. Without the option to discharge treated storm water to the Bay, the only feasible option for eliminating all industrial storm water discharges at Navy installations would be to discharge significant volumes of runoff into the City of San Diego's sanitary sewer system. Unless the City greatly expands their collection and treatment systems, this option would not be available leaving the Navy with no realistic options for compliance.

How will this standard impact other dischargers throughout California?

The SDRWQCB's 90% acute toxicity standard for storm water discharges is so stringent that it is unlikely any industrial or municipal storm water runoff could consistently meet the standard without using collection and treatment systems. Best Management Practices implemented by most industries or municipalities throughout the state, including the Navy, would do little to bring them into compliance with the standard. If applied equally to all industries in California it would require the diversion of millions of gallons of storm water and installation of collection and treatment systems without any guarantee of success in meeting the standard. The enormous costs for compliance with the standard would be in billions of dollars. The City of San Diego recently studied a similar situation where stringent numeric limits are applied to storm water and found that compliance for the 25 square mile Chollas Creek watershed would require condemnation of land for large treatment facilities displacing thousands of homes and businesses at a cost of approximately $1.7 billion. This cost is only for one drainage basin in San Diego. A 2002 study estimated the cost for Los Angeles County to catch and treat just 70% of their storm water runoff at approximately $44 billion and 6 times that amount to catch and treat 97% of the storm water runoff.

As mentioned above, the SDRWQCB's interpretation of the EBEP's provisions if applied consistently to all storm water dischargers would require the phasing out of industrial storm water discharges throughout the state in accordance with the policy. Such an interpretation, and the ensuing phase out of storm water discharges, would create significant disruption if applied to other ports and industrial activities throughout California. As one example of the potential consequences, the Ports of Los Angeles, Long Beach, and San Diego could not continue port operations unless they diverted all storm water from their berths, cargo operations and maintenance facilities.

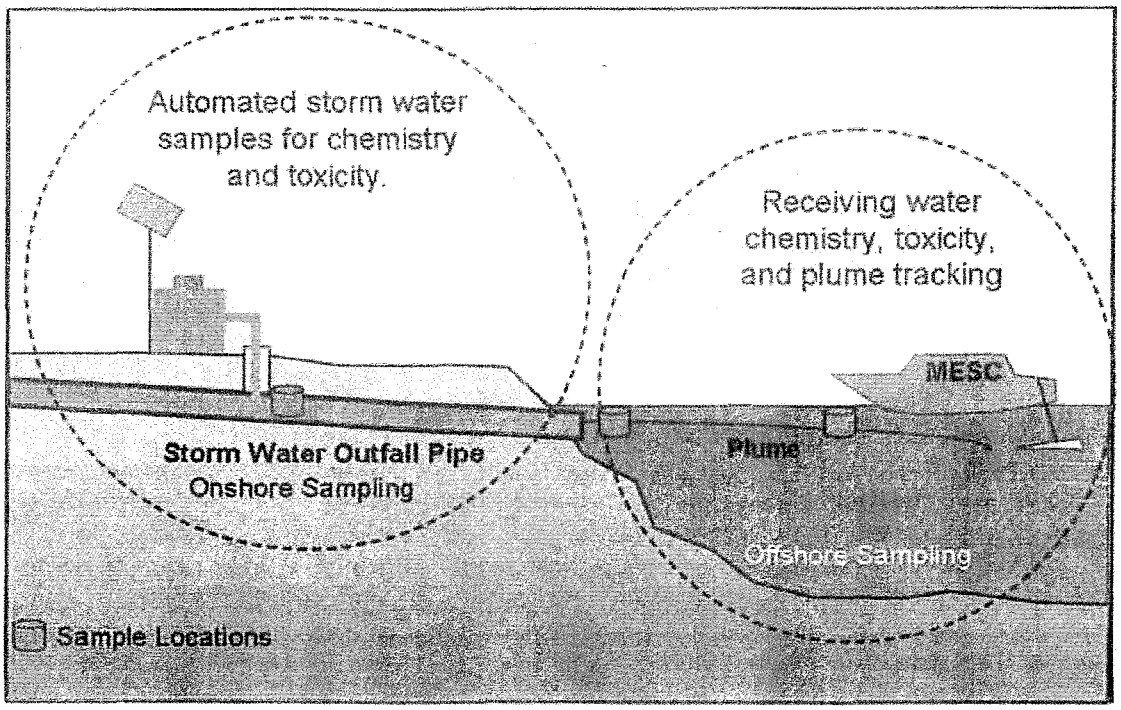
What is the Navy doing to protect San Diego Bay water quality?

The Navy has a robust storm water pollution prevention program. Site specific Storm Water Pollution Prevention Plans (SWPPPs) have been developed for the Navy installations that include Best Management Practices (BMPs) to address potential sources of storm water pollution. Both procedural and structural BMPs have been implemented. Some of the procedural BMPs include housekeeping and maintenance procedures, the use of street sweepers, compliance inspection programs, and pollution prevention training. Some of the structural BMPs implemented include roofs over and containment berming around outdoor industrial activities, the movement of outdoor industrial activities inside buildings, storm water collection systems, and storm water treatment systems. The Navy has established a Storm Water Working Group that's membership includes representatives from a wide spectrum of Navy organizations to ensure there is a comprehensive approach to storm water pollution prevention. In addition, the Navy has also implemented other programs to protect and enhance water quality. One example is a program to eliminate pollutants that leach into the Bay from treated pier pilings. This pier piling

replacement program has removed thousands of creosote treated pier pilings from the Bay and replaced them with pilings made from recycled plastics.

How was the Navy scientific study conducted?

For the last four years, the Navy has conducted an extensive scientific study based on whole effluent and receiving water sampling and analyses to evaluate Navy storm water discharges and to develop a toxicity standard that is both representative of actual marine life exposures on one of the most sensitive species in San Diego Bay and therefore protective of beneficial uses and water quality. During the study the Navy collected 136 samples and conducted 333 toxicity tests. The figure presented below provides a graphical schematic of the study's technical approach that included simultaneous toxicity and chemistry measurements in storm water and in receiving waters, and storm water plume mapping. To ensure the quality of the study the Navy established a peer review team that included representatives from EPA Region IX, Wright State University, Applied Marine Sciences, Southern California Coastal Water Research Program, and the Port of San Diego.



What did the study show?

The study results showed that toxicity measurements on samples collected before storm water enters the bay (end of pipe), as required in the current standard, overestimates the exposure conditions in the receiving water and thereby greatly exaggerates the potential toxic impacts to marine life. This is clearly shown when comparing the end of pipe and receiving water toxicity results.

1. End of Pipe - The study results showed that **58%** of storm water samples collected at the end of the pipe, as required in Navy permits, did not meet the 90% survival rate (current standard).

2. Receiving Water - Less than 1% of the receiving water samples (202 samples) collected had toxic results. The receiving water toxicity measurements included a mussel larvae test species. Mussel larvae are endemic to San Diego Bay and more sensitive than the test species used under the current standard.

The study concluded that to be scientifically defensible the toxicity standard should include the following.

1. Realistic exposure conditions when conducting toxicity testing to infer toxicity in the receiving water. In other words, the samples collected for toxicity testing should be representative of the exposure conditions (concentration and duration) found in San Diego Bay.

2. The use of standard EPA toxicity test methods and data evaluation criteria when declaring a test result is toxic or not toxic.

What are the Navy's proposed alternatives?

The Navy will propose an alternative toxicity standard, based on the results of the study, that includes either receiving water sampling or end-of-pipe sampling that are adjusted to simulate real life exposures. The standard will also incorporate EPA toxicity test methods (Whole Effluent Toxicity or WET) and data evaluation criteria for determining whether a test result is toxic or not toxic. The standard will require compliance 90% of the time, as opposed to the 50% requirement currently in Navy permits. Both proposed alternatives will provide a toxicity standard in Navy permits that will be protective of receiving water quality and beneficial uses, is scientifically defensible, and requires the implementation of effective Best Management Practices for compliance.

Conclusion

The SDRWQCB cites the EBEP as a basis for the storm water toxicity standard in Navy NPDES permits. It is our position, based on interpretation of this policy and information from the State Water Board, that it is not applicable to storm water discharges and is being incorrectly applied by the SDRWQCB. The SDRWQCB has not provided any supporting scientific data to justify the use of a toxicity standard that will be disruptive to the Navy and would be disruptive to all industrial activities in California if it were equally applied. The Navy's study has provided the data that support an alternative toxicity standard that is both scientifically-defensible and protective of receiving water beneficial uses. The Navy will present the results of the study and propose alternative standards to the SDRWQCB on June 14, 2006.

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO
5090
Ser N45PA/036
March 4, 2005

Art Baggett, Chairman
California State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812

Dear Chairman Baggett:

This letter is a follow-up to the Navy testimony at the Diamond Bar and Sacramento workshops on the statewide storm water policy. I would like to begin by thanking you and the Board Members for kicking off a public process to develop a statewide storm water policy. As you are aware, the military services have expressed concerns over the last several years about the Regional Board's storm water programs. Navy testimony at the workshops focused on concerns of inadequate science supporting the San Diego Regional Board's storm water toxicity standards and the inconsistent application of the standards. In addition to the technical issues with the standards, testimony covered the history of the standards and the limitations associated with diverting storm water runoff to the City of San Diego sewer system as a means of compliance.

My purpose in this letter is not to repeat this testimony, but to explore the impacts of this issue on a more macro level. The combined direct economic contribution of the Navy in San Diego is almost $13.5 billion dollars per year. Compare this to the tourism industry, which in its entirety contributed $4.3 billion (San Diego Convention and Visitors Bureau). The Navy in San Diego, however, is not about money; it is about supporting our service members with the infrastructure and training necessary for meeting mission requirements. San Diego, alone, is homeport to three aircraft carriers, 58 surface ships, 5 submarines, and 5 U.S. naval ships. A key component of ship homeporting is the ability to do routine maintenance, maintenance critical for ships to meet mission requirements.

The inability to meet the proposed permit standards either due to cost or San Diego City sewer system limitations could create significant impacts to scheduling maintenance activities that are critical to this homeport infrastructure. Some of the work may have to be done in other ports resulting in economic losses for the local ship repair/maintenance industry. Even worse, the long-term impacts could affect the readiness of these ships to meet mission requirements. Consistent with Navy testimony at the workshops, we urge you to take up this issue to ensure toxicity standards are based on science and consistently applied.

In August 2002 Congresswoman Susan Davis sent the San Diego Regional Board a letter, enclosure (1), with a series of questions to consider prior to imposing the storm water standard. Unfortunately these questions, which are at the heart of this issue, were not addressed. We would ask that you consider these still relevant questions in your process.

Sincerely,

A. J. GONZALES
Captain, U.S. Navy
Program Director Environment

Enclosure: 1. Congresswoman Susan A. Davis Letter dated August 5, 2002

ENCLOSURE (6)