

**California Regional Water Quality Control Board
San Diego Region**

**Summary of Comments at the December 16, 2010 Workshop
on
Draft General NPDES Permit for
Residual Firework Pollutant Waste Discharges
to Waters of the United States in the San Diego Region
from the Public Display of Fireworks**

February 11, 2011

Table of Contents

I.	Brian Kelley, San Diego Water Board, Introductory Remarks	4
II.	David Gibson, San Diego Water Board Executive Officer, Opening Remarks	4
III.	Michelle Mata, San Diego Water Board	5
	A. Why is the San Diego Water Board Regulating Fireworks Events?.....	5
	B. Existing Fireworks Regulations	5
	C. Overview of Draft General Order	6
	1. Who can apply?	6
	3. Best Management Practices Requirements (BMPs)	6
	4. Post Event Reporting	7
	5. Receiving Water Monitoring	7
IV.	Chad Loflen, San Diego Water Board.....	8
	A. Assessment of Fireworks Monitoring Conducted by SeaWorld	8
	1. Water Chemistry Monitoring.....	8
	2. Sediment Chemistry	8
	3. Sediment Toxicity	8
	4. Benthic Infaunal Sampling	8
V.	Michelle Mata, San Diego Water Board	9
	A. Discharges into Areas of Special Biological Significance (ASBS).	9
	B. Next Steps.....	9
VI.	Comments by Roger Schneider, President and Co-owner of Rho Sigma Associates (Whitefish Bay, Wisconsin)	10
	1. David Barker, San Diego Water Board, Response to Comment	10
VII.	Comments by Joan Salat, Resident of Valley Center, California	11
	1. David Barker, San Diego Water Board, Response to Comment.	11
VIII.	Comments by Robert Howard, Counsel, Latham and Watkins – Representing La Jolla Community Fireworks Foundation.....	11
	1. David Barker, San Diego Water Board, Response to Comment.	12
IX.	Comments by Laura Hunter, Environmental Health Coalition.....	12
X.	Comments by Brian Kelley, San Diego Water Board.....	13
XI.	Comments by Nancy Palmer, Environmental Program Manager for the City of Laguna Niguel	13
XII.	Comments by Sherry Lightner, Counsel Member for the City of San Diego 1st District	13
XIII.	Comments by Paul Steffens, Executive Director, San Diego Armed Services, YMCA.....	14
XIV.	Comments by Marco Gonzalez, Executive Director Coastal Environmental Rights Foundation, Partner with Coast Law Group	14
XV.	Comments by John Banks, City of Laguna Niguel.....	15
XVI.	Comments by Donald Creadore , The Creadore Law Firm, P.C., representing the National Firework Association (NFA)	16
XVII.	Comments from Gabriel Solmer, Interim Executive Director, San Diego Coastkeeper.....	17

XVIII. Comments from Sylvia Rosenthal, Interim Manager, City of San Clemente	17
XIX. Joan Salat, Resident of Valley Center	17
1. Response by Brian Kelley, San Diego Water Board	17
XX. Comments from Sandy Purdon, Organizer of the Big Bay Boom on behalf of the Armed Services YMCA.....	18
XXI. Comments from Will Holloman, City of Laguna Beach	18
XXII. Closing Remarks from David Gibson, Executive Officer, San Diego Water Board	19

Workshop called to Order at 10:00 a.m. by Brian Kelley, San Diego Water Board

I. Brian Kelley, San Diego Water Board, Introductory Remarks

- A. The purpose of the workshop is to exchange information and to allow interested persons the opportunity to discuss the regulation of fireworks in the San Diego Region and to comment on the draft General NPDES permit (also referred to as Tentative Order) originally released on September 23, 2010. The San Diego Water Board will not be taking an action on the Tentative Order today.
- B. The Public Workshop Notice indicated that a revised tentative permit would be released in advance of the workshop however after further consideration San Diego Water Board felt it would be better to receive public input prior to releasing the next version of the permit.
- C. San Diego Water Board staff involved with the development of NPDES permit requirements for fireworks discharges are: Brian Kelley, Senior Water Resource Control Engineer, Michelle Mata, Water Resource Control Engineer, Chad Loflen, Environmental Scientist, David Barker, Supervising Engineer, and Catherine Hagan, Legal Counsel.

II. David Gibson, San Diego Water Board Executive Officer, Opening Remarks

- A. The San Diego Water Board is inviting the regulated community's participation, comments, and engagement in the development of the Tentative Order. The Board has been regulating fireworks as a point source discharge of waste since 2007 at SeaWorld in Mission Bay and now it is time to continue this effort throughout the San Diego Region.
- B. Some of the pollutants that are discharged from firework displays, although they are discharged in small amounts, are toxic and the Clean Water Act compels the Regional Water Board, as a designated state agency, to regulate the discharges of waste regardless of the discharge amount. Common sense tells us an ounce of prevention is worth a pound of cure. The NPDES permitting process is intended not to prohibit fireworks but to ensure that public firework events can continue in such a way as not to cause water quality problems that the San Diego Water Board would have to address later on.
- C. The content, format, and direction of the Tentative Order are all open for discussion. Our goal is to see public firework event discharges

regulated so that everyone has the same rules and the same understanding of the requirements. Another goal is to make the Tentative Order cost-affordable; not to impose costs for monitoring that are not necessary, and to regulate firework discharges proportionate to the risk associated with them. We would also like to have the draft NPDES permit adopted in time to regulate the Fourth of July firework events.

- D. The San Diego Water Board is charged with regulating the discharges of waste to prevent problems as much as it is to solve them. We are currently working on a TMDL for copper and we are engaged in a clean-up action at two shipyards in San Diego Bay. These efforts are directed towards the cleanup and removal of heavy metals from San Diego Bay and involve chemical constituents similar to those found in firework discharges.
- E. The San Diego Water Board's overarching goal is to ensure that discharges are not causing or contributing to exceedances of water quality objectives even from relatively short term discharges like fireworks.

III. Michelle Mata, San Diego Water Board

A. Why is the San Diego Water Board Regulating Fireworks Events?

The San Diego Water Board has determined that fragmentation of fireworks over water bodies is considered to be a point source discharge. Therefore, coverage under an NPDES permit is required pursuant to the Clean Water Act. This is consistent with a previous decision made by the San Diego Water Board when it adopted an NPDES permit regulating firework discharges by SeaWorld in Mission Bay.

B. Existing Fireworks Regulations

With the exception of SeaWorld San Diego, discharges associated with public displays of fireworks event have previously been unregulated in the San Diego Region by the San Diego Water Board. The San Diego Water Board first began regulating fireworks in 2007 when it issued an individual NPDES permit for fireworks displays from SeaWorld. The SeaWorld permit established Best Management Practices and required water quality, sediment chemistry and toxicity, and benthic infauna analysis.

C. Overview of Draft General Order

1. ***Who can apply?*** Any person who proposes to discharge pollutant waste from the public display of fireworks to waters of the United States in the San Diego Region may apply for coverage under the Order. Under the terms of the Order, multiple sponsors discharging into the same water body may join together as a coalition and submit one notice of intent. The coalition would be subject to approval by the San Diego Water Board. Coalitions would be responsible for ensuring compliance for all of the events covered under the enrollment, including implementation of BMPs, reporting, and if necessary receiving water monitoring.
2. ***How do you apply?*** To enroll under the Order a Discharger must submit a complete Notice of Intent (NOI) included as attachment B in the tentative order, a copy of their fireworks best management practices plan, and the filing fee of \$1,452, which is also equal to the annual fee. The fee is specified in the California Code of Regulations and is the lowest fee for an NPDES permit of this type. An NOI needs to be submitted only once during the 5-year permit cycle. The tentative Order contains requirements based on Best Management Practices (or BMPs), post event reporting, and receiving water monitoring all of which will be discussed in further detail
3. ***Best Management Practices Requirements (BMPs).*** There are no effluent limitations in Tentative Order. Numeric effluent limitations for fireworks residual waste discharges are infeasible because:
 - Discharges of residual pollutant waste are present after the use of the fireworks for public display. Therefore the exact residual pollutant waste levels in the discharge are immeasurable and undefined; and
 - It would be impracticable to provide effective treatment, given the numerous short duration, intermittent residual firework pollutant releases to surface water at many different locations.

BMPs are designated in the Tentative Order to address the considerations listed below. State fireworks laws and regulations already require that some of these BMPs be implemented for public firework events.

- Avoidance - have alternative sites been considered? Can the fireworks be conducted over land?

- Minimization – was the use of environmentally friendly fireworks considered; this also includes proper set-up and obtaining other necessary permits?
 - Clean-up – Was firework debris from ignited and un-ignited material (such as shells, stars, paper, cardboard, wires and fuses) collected and removed from the firing range and managed properly to the extent practical?
4. **Post Event Reporting.** The San Diego Water Board intends to change the pre-event notification required in the Tentative Order to a post event report and a format for the report will be included as an attachment to the Tentative Order. This report is needed to ensure compliance with the BMPs and to gather data on pollutant loading to the receiving water in this region. The Tentative Order will be revised to require a post event report within 10 days following a fireworks display event over waters of the United States containing the following items:
- Name of Public Firework Display Event Sponsor;
 - Location and receiving water;
 - Types of shells and quantities used;
 - Net Explosive Weight of the fireworks;
 - Amount of Debris collected from firing range; and
 - Amount of floating debris collected from surface water

5. **Receiving Water Monitoring.** Receiving water monitoring requirements in the September 23, 2010 version of the Tentative Order stipulate that all Dischargers regardless of number of shows or pyrotechnic mass loading considerations conduct receiving water monitoring. Under the Tentative Order, Dischargers may form or join a regional water-body coalition or alternatively may choose to conduct individual monitoring. Dischargers must also prepare and implement a Sediment Monitoring Plan containing specified information.

San Diego Water Board has reconsidered this receiving water monitoring approach and is considering the following revisions to the Tentative Order:

- a. Receiving Water Monitoring will not be required for all firework events.
- b. A requirement to monitor receiving waters will be triggered by an exceedance of a threshold based on the mass of fireworks released

at the event. San Diego Water Board staff is in the process of developing a mass based pyrotechnic threshold that could be used to trigger receiving water monitoring. The San Diego Water Board is requesting comments and proposals from fireworks dischargers on the development of a mass based threshold that would trigger receiving water monitoring by dischargers conducting major firework events.

- c. Receiving water monitoring requirements will concentrate on discharges to Mission Bay and San Diego Bay.

IV. Chad Loflen, San Diego Water Board

A. Assessment of Fireworks Monitoring Conducted by SeaWorld

1. **Water Chemistry Monitoring.** The vast majority of pollutants sampled, within the fireworks deposition zone were either not detected or detected below applicable water quality standards and the detection levels were comparable to levels at the reference sites, however, there were a couple of exceptions: zinc, DEHP, and perchlorate. Zinc was sampled at levels within the deposition zone that exceeded the California Toxics Rule instantaneous maximum criteria. DEHP and perchlorate were detected at elevated levels compared to the reference sites in Mission Bay.
2. **Sediment Chemistry.** Sediment chemistry monitoring showed elevated levels of pollutants in terms of metals in the deposition zone for barium, chromium, cobalt, copper, silver, and titanium these levels were considered elevated particularly when sediment grain size is considered.
3. **Sediment Toxicity.** Results from the short term sediment toxicity sampling were highly variable both spatially and temporally within the fireworks deposition zone and they were highly variable temporally within the reference sites. Samples in both the reference sites and the deposition zone range from non-toxic to highly toxic thus based on the information to date it's difficult to detect any difference in short term toxicity between sites.
4. **Benthic Infaunal Sampling.** The sampling of benthic organisms is also considered a line of evidence to determine compliance with sediment quality objectives. Evaluation of benthic infauna sampling results found the data to be inconclusive due to the differing habitat sites sampled. A review of the monitoring dive logs indicates that the deposition zone consists of vegetated soft-bottom subtidal habitat

(vegetation consisting of eelgrass, *Zostera marina*), while the reference sites are unvegetated soft-bottom. This makes the direct comparison of benthic communities between the reference sites and the deposition zone to be inconclusive. Not surprisingly, the July 2010 Monitoring Report found the infaunal assemblage at the reference sites to be much different than the deposition zone.

V. Michelle Mata, San Diego Water Board

A. Discharges into Areas of Special Biological Significance (ASBS).

ASBS are areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. In the San Diego Region ASBS include the following:

La Jolla Ecological Reserve, in San Diego County
Heisler Park Ecological Reserve, in Orange County

The State Water Board's Ocean Plan currently prohibits any discharges of waste into an ASBS. The Ocean Plan does, however, provide the San Diego Water Board with the flexibility to allow discharges from short term events like public fireworks displays into an ASBS provided that certain Findings of Fact are established demonstrating that the firework events are limited-term, short duration activities that will not permanently alter natural water quality conditions in the ASBS receiving waters.

The Tentative Order currently prohibits discharges into an ASBS. Public displays of fireworks are conducted every Fourth of July by the La Jolla Community Fireworks Foundation over or adjacent to the La Jolla ASBS in San Diego County and by the City of Laguna Beach over or adjacent to the Heisler Park ASBS in Orange County. These events result in the discharge of residual firework pollutant waste to these ASBS areas. The San Diego Water Board is seeking the assistance of these entities to develop the Findings of Fact that would allow public displays of fireworks over these ASBS areas to continue.

B. Next Steps

1. The San Diego Water Board will make revisions to the Tentative Order based on comments received at the Workshop and other written submittals by interested persons received to date.
2. The San Diego Water Board will be looking to City of San Diego and the City of Laguna Beach to assist with the development of Findings

of Fact that to allow the continued discharge of discharges of firework waste into the La Jolla ASBS and the Heisler Park ASBS.

3. The San Diego Water Board is requesting comments and proposals from fireworks dischargers on the development of a mass based threshold that would trigger receiving water monitoring by dischargers conducting major firework events.
4. The next draft version of the Tentative Order will be released prior to the next workshop.

VI. Comments by Roger Schneider, President and Co-owner of Rho Sigma Associates (Whitefish Bay, Wisconsin)

- A. Rho Sigma Associates has been retained by the National Fireworks Association to address the scientific and engineering matters germane to the firework display NPDES permitting process.
- B. Mr. Schneider visited a fireworks plant and was given a material which is known to contain many of the elements and compounds of interest to the proponents of the permitting process. This material contained potassium, calcium, magnesium, chlorine, sodium, sulfur, copper, iron, silicon, fluorine, selenium, phosphorus, and zinc. It also contained triacylglycerides, polyphenols, peroxide, and polycyclic aromatic hydrocarbons (PAH's). It was also acidic having a pH of about 5. The substance was broccoli and it was coated with vinaigrette dressing. Listing a number of "bad apples" is not the important issue.
- C. The key issues are qualitative versus quantitative; how much of a pollutant is being released.
- D. Mr. Schneider has reviewed some of the elements that have been cited as firework constituents, such as chlorine, perchlorate and phosphorus. There is no phosphorus in display fireworks. Also, there is no silver in display fireworks. Molybdenum, manganese, selenium are listed but are not used in display fireworks and have no pyrotechnic value. They are not a source from display fireworks; maybe barges are contributors of these elements.
- E. Dose makes the poison. What may be toxic at high levels is not, and actually may be beneficial, at lower levels.
 1. **David Barker, San Diego Water Board, Response to Comment.**
The federal Clean Water Act established the NPDES permit program to regulate the discharge of pollutants from point sources to waters of

the United States. The Clean Water Act's requirement that all discharges covered by the statute must have a NPDES permit is unconditional and absolute. Any discharge except pursuant to a permit is illegal. To establish the applicability of the Clean Water Act's NPDES permit requirement, it must be demonstrated that a discharger has (1) discharged (2) a pollutant (3) to waters of the United States (4) from a point source. These are all defined terms in the Clean Water Act. The San Diego Water Board has applied these terms to fireworks display events in the San Diego Region and determined that the discharge of residual firework waste to surface waters in amounts at any level does constitute a "discharge" of a "pollutant" to "waters of the United States."

VII. Comments by Joan Salat, Resident of Valley Center, California

A. The State Fire Marshall has indicated that information at freepyroinfo.com is the recipe book for the fireworks industry. The information indicates that all three forms of barium are highly toxic. Does the barium stay in the smoke produced during a fireworks display or is it transformed into something else. Are we breathing in these pollutants?

1. *David Barker, San Diego Water Board, Response to Comment.*

When a firework is launched and detonated the chemical constituents burn at high temperatures and are scattered by the burst charge which separates them from the fireworks casing and internal shell components. A firework combustion residue is produced in the form of smoke, airborne particulates, chemical pollutants, and debris including paper, cardboard, wires and fuses. The air quality effects of firework displays are under the jurisdiction of the San Diego Air Pollution Control District (APCD) for all of San Diego County and the South Coast Air Quality Management District (AQMD) for all of Orange County and the urban portions of Riverside County. Questions regarding the effects of emissions from fireworks displays or pyrotechnics and their effects on air quality and human health should be directed to those agencies.

B. Phosphorus, according to the recipe book, phosphorus is also toxic to breathe or handle and requires special facilities.

VIII. Comments by Robert Howard, Counsel, Latham and Watkins – Representing La Jolla Community Fireworks Foundation

A. The legal issues are a lot more difficult than suggested by San Diego Water Board. The regulation of something that USEPA and 49 other

states, and eight of the nine California Regional Water Boards has not yet seen in the 38 years that the Clean Water Act has been around.

1. *David Barker, San Diego Water Board, Response to Comment.*

The San Diego Water Board did consult with USEPA in developing a prior NPDES permit for SeaWorld's firework discharges to Mission Bay. The San Diego Water Board is also consulting with USEPA on the Tentative Order and USEPA has indicated support for the San Diego Water Board's plans to regulate firework events in the San Diego Region under an NPDES permit.

- B.** It makes sense to move towards a threshold based permit. Everyone agrees that BMPs should be in place and many of the BMPs are already in place.
- C.** Clarity is needed on the ASBS issues, because if the thinking is a permit needs to give safe harbor against litigation, the permit needs to be clear enough so that those who are opponents don't use that as fodder for litigation.

IX. Comments by Laura Hunter, Environmental Health Coalition

- A.** Fireworks have toxic chemicals in them and they are being discharged into the bay and need to be regulated under the Clean Water Act.
- B.** Receiving water monitoring is needed because regulation should be based on data. Monitoring needs to be done on all events as we do not have enough information to know the extent of the impact, but we know there are impacts. Adequate monitoring is needed to assess the size of the firework discharge problem and how it can be reduced.
- C.** Fireworks events do not need to be held over the water.
- D.** If there are environmentally friendly fireworks available now, their use should be required. Regulation will make firework manufacturers come up with safe alternatives.
- E.** The proposed annual permit fee is low and needs to be enough to cover staff costs.
- F.** Some aspects of firework display pollution are an air quality issue. However the San Diego Water Board has some cross media responsibility and some of the air pollution is going to ultimately end up in San Diego Bay.

- G.** San Diego Bay is an enclosed water body and has limited flushing. Firework discharges may dissipate quickly in ocean waters but in San Diego Bay the effects of the discharges may linger longer.

X. Comments by Brian Kelley, San Diego Water Board

Often times when considering the amounts and the concentrations of pollutants in fireworks, one can get lost in those issues. The San Diego Water Board is tasked with protecting the biological and fish community within those waters and the water quality levels needed to protect those communities is much more stringent than the levels needed to protect human. The San Diego Water Board's jurisdiction is not limited to just protecting public health. The San Diego Water Board is charged with all of the beneficial uses of the waters.

XI. Comments by Nancy Palmer, Environmental Program Manager for the City of Laguna Niguel

The City of Laguna Niguel sponsors one annual 20-minute fireworks show conducted next to Laguna Niguel Lake. The City is supportive of implementing Best Management Practices for firework display events but believes that shows conducted once-per-year should have an exception or waiver from the proposed permit. The City is prepared to incorporate minimum designated BMP's into their Jurisdictional Run-Off Management Program, conduct inspections to make sure the BMP's are implemented, and to report on the inspections. Consideration should be given to exempting once-a year shows from the additional workload and expense of filing for the Notice of Intent, paying the annual permit fee, preparing detailed reports.

XII. Comments by Sherry Lightner, Counsel Member for the City of San Diego 1st District

- A.** There is no scientific data that demonstrates the effects of firework events.
- B.** It's important for the San Diego Water Board to define "significant distance" as it relates to the prohibition of fireworks in an ASBS
- C.** Firework displays promote tourism and create profit for local businesses.

XIII. Comments by Paul Steffens, Executive Director, San Diego Armed Services, YMCA

The San Diego Armed Services YMCA has provided free programs specifically to address the stresses and needs of the San Diego Military and their families. Proceeds from the annual Big Bay Boom Firework Show on San Diego Bay enables the San Diego Armed Services YMCA to maintain their programs to take care of junior enlisted military personnel and their families. The San Diego Water Board should carefully consider the cost to an agency of implementing the requirements of the Tentative Order. These costs will divert funds away from military family support programs.

XIV. Comments by Marco Gonzalez, Executive Director Coastal Environmental Rights Foundation, Partner with Coast Law Group

A. In 2004, San Diego Coastkeeper began informing the San Diego Unified Port District (Port District) and SeaWorld that firework discharges were point source discharges subject to NPDES permit regulation and nothing was done. In 2006, San Diego Coastkeeper sent a 60-day notice letter to SeaWorld to sue and SeaWorld responded by cancelling the fireworks shows. SeaWorld and the environmental community worked out a compromise where SeaWorld's NPDES permit was amended to cover firework discharges and the litigation was not filed. In 2007, environmental groups continued to inform the Port and others that regulation of firework discharges needed to be implemented and received no response. In 2009, the Port Tenants Association cancelled their San Diego Bay fireworks event, after San Diego Coastkeeper had threatened to sue and the Port Tenants Association responded that an NPDES permit be developed to shield them from litigation. The message was heard loud and clear and the environmental community did not sue anyone for Clean Water Act violations. The environmental community is now asking for the development of an appropriate NPDES permit for fireworks discharges so that they do not have to go to court and sue each and every organization conducting firework events that continues to violate the Clean Water Act. The best approach is for all parties to work cooperatively to get the most appropriate NPDES permit for regulating firework discharges.

B. With regards to monitoring, the San Diego Water Board has two options:

1. Issue a Water Code section 13267 Investigative Order requiring that the monitoring be conducted; or
2. Issue a NPDES permit which gives the Discharger the opportunity to monitor firework discharges and tell us what is going on in the water.

We cannot simply turn a blind eye to what's going into the water as recommended by Mr. Schneider and others, it's not legal.

- C.** It is recommend that a draft NPDES permit be scheduled for the San Diego Water Board's consideration and adoption in late January or early February 2011.
- D.** It cannot be said with certainty what the make-up of the fireworks is. Its not ascertainable as to what is going up into the air and into the water unless the discharge and receiving water are monitored. The state and health water bodies needs to be monitored and accessed that discharges can be effectively regulated.
- E.** The proposed exemption of firework events from the prohibition against discharging waste into an ASBS exemption must be in conformance with CEQA. The La Jolla Cove is not an appropriate place to have fireworks shows due to its close proximity to seals, the La Jolla ASBS, and nesting shore birds.
- F.** The SeaWorld fireworks monitoring data provides a stepping stone to require more intensive monitoring and possibly even changes to the SeaWorld permit. Mission Bay is a 303-d listed water body. The reason why the reference stations don't show much difference from the fireworks fallout zone is because the whole bay is already polluted so the monitoring needs to be revised to identify the differences between the reference sites and fallout zones.
- G.** The San Diego Coastkeeper has demonstrated their willingness to work with the Big Bay Boom promoters and that with appropriate monitoring, San Diego Coastkeeper will allow firework event displays to move forward without litigation. Firework discharges need to be regulated and San Diego Coastkeeper will continue to work with willing parties to come up with feasible regulations that have fireworks taking place in the appropriate locations.

XV. Comments by John Banks, City of Laguna Niguel

- A.** The possibility of NPDES Permit requirements regulations being imposed in March or April 2011 is very late in the event process for the City of Laguna Niguel. The City bids their show in January, selects the vendor and contractually commit to them by March. The possibility of some yet to be, fully determined, and potentially costly monitoring requirements would create some challenging and non-budgeted burdens for staff with the quickly approaching July 4, 2011 show date.

- B.** The Tentative Order appears to be a work in progress with many different issues still being considered. It appears that more time is needed to adequately gather and analyze all the needed information.
- C.** The City request that the San Diego Water Board consider delaying any final Order to not take effect until January 1, 2012 to avoid impacts on the one time events that have already been planned and budgeted for in 2011

XVI. Comments by Donald Creadore , The Creadore Law Firm, P.C., representing the National Firework Association (NFA)

- A.** The NFA members are involved in thousands of firework shows annually. The NFA continues to develop best management practices while also adhering to the best management practices that may be prevailing within a specific jurisdiction, such as California. The NFA has always given due consideration to any suggested practice that ensures the health and safety of the worker and general public alike and they want to work cooperatively with the San Diego Water Board. The NFA has to work with certain constraints to ensure that the best management practices and monitoring procedures are reasonable, sensible, and practicable.
- B.** The NFA does not feel the San Diego Water Board has the authority nor the jurisdiction to impose the regulatory scheme envisioned in the Tentative Order. The San Diego Water Board should suspend all further consideration of this issue until the final proposed Order is distributed for public comment.
- C.** The data in the SeaWorld monitoring reports does not support the San Diego Water Board's contention that firework discharges pose significant harm to the receiving waters. In a letter dated April 5, 2010, the San Diego Water Board acknowledged receipt of the SeaWorld monitoring study and indicated that the board was evaluating the monitoring data for fireworks over Mission Bay. The NFA wants to know the results of the San Diego Water Board's evaluation of the SeaWorld monitoring data.
- D.** The San Diego Water Board should be influenced by the fact that fireworks displays are temporary events often less than 20 minutes in duration. The need to create a regional monitoring program is unjustified under the current facts since fireworks displays have been determined to create the lowest threat to the environment. To create a monitoring program in search of an environmental threat, especially where that threat is unproven, appears to be an arrogant abuse of the San Diego Water Boards mandate and power.

XVII. Comments from Gabriel Solmer, Interim Executive Director, San Diego Coastkeeper

- A.** We do know that there are impacts to the environment due to fireworks. We do not know the scale of issues from acute toxicity to cumulative effects. On the acute toxicity side, we do not know what the impact is on a fish and other species from a one time fireworks display event. We do not know the cumulative impacts. There is a long and expensive clean-up of sediment in San Diego Bay that is based on consideration of the cumulative effects of pollutants.
- B.** Fireworks are no different from any other discharge. There is no right to pollute, it is a privilege to discharge waste and not a right and monitoring needs to be conducted.

XVIII. Comments from Sylvia Rosenthal, Interim Manager, City of San Clemente

Cities that host provide annual firework show should be exempt and not be required to do monitoring. The city of San Clemente is concerned that the expense of monitoring could be prohibitive.

XIX. Joan Salat, Resident of Valley Center

- A.** In a study conducted by the USEPA, water was tested before and after a fireworks display. After the fireworks display there was between 24 - 1,028 times the background levels of perchlorate in the water. USEPA research conducted in 2005 showed that after 28 days of exposure to perchlorate, fathead minnows were developmentally stunted. The USEPA study indicated that fish from contaminated sites had been found to contain several thousands of parts per billion of perchlorate in the head area and hundreds of parts per billion in the filets.
- B.** It took a month to collect 10 pounds of firework debris from only 9 minutes of a fireworks display. The debris included wires, fuses, and other paper waste. The drainage of all of the debris goes into Moosa Creek.
- C.** For discharges into the ocean, how many pounds of debris go into the ocean and who collects it?
 - 1. *Response by Brian Kelley, San Diego Water Board.*** The San Diego Water Board does not have much information on the typical volume of debris generated by a fireworks display event. Some

information is available from the SeaWorld monitoring effort. SeaWorld typically collects approximately 11 pounds of debris, in wet weight following its public firework displays. The Tentative Order requires BMPs to be implemented to control the firework discharges. If BMPs are not being implemented, and a discharger is enrolled in the Order, the San Diego Water Board could cite them for violating the Order.

Implementation of BMPs to control firework discharges to ocean waters is more difficult because of the tidal influence, so the debris would move in whichever direction the tide is going. The language in the Tentative Order requires implementation of BMPs to the extent practicable.

XX. Comments from Sandy Purdon, Organizer of the Big Bay Boom on behalf of the Armed Services YMCA

- A.** We all agree that there are discharges from firework displays; however, the discharges don't seem to be significant and do not damage the water either in Mission Bay or San Diego Bay. This is supported by the review of the SeaWorld monitoring data for Mission Bay as well as the monitoring done in San Diego Bay for the 2010 Fourth of July firework event.
- B.** A portion of the permit fee (\$252) of the total \$1452.00 permit fee is allocated to support the State Water Board's surface water ambient monitoring program. No additional monitoring should be required.
- C.** Many people think that metals are discharged into the water bodies from firework events at significant levels. The Port Tenants Association disagrees, the metals dissipate in the water very quickly
- D.** Best Management Practices continue to be expanded for the Big Bay Boon show. Volunteer people are in boats on San Diego Bay, before and after the show to collect debris.
- E.** The San Diego Water Board should not impose extensive financial burdens on fireworks shows in the Tentative Order.

XXI. Comments from Will Holloman, City of Laguna Beach

There is a lot of monitoring going on already, and it had been for many years. The city of Laguna Beach has a large amount of monitoring data for the ASBS in Heisler Park that can be reviewed to determine the effects of firework discharges on the Heisler Park ASBS.

XXII. Closing Remarks from David Gibson, Executive Officer, San Diego Water Board

- A.** We heard talk about the dose, if the dose is small then it doesn't matter. Do we in fact know that the dose is small? Has the National Fireworks Association (NFA) done detailed analyses across the country of fireworks displays and water quality effects and the fate and transport of all the pollutants? Can they answer the question, where does the barium go?
- B.** So far as we know the only studies conducted have been the one's done here in San Diego by SeaWorld. SeaWorld did not do the definitive study on fireworks because to do that it would have cost them much more. The San Diego Water Board compromised with SeaWorld and when we make compromises in monitoring we sometimes don't get a very clear picture. Moreover, San Diego Bay or Mission Bay are not pristine. These water bodies have multiple stressors
- C.** It's the mission of the San Diego Water Board to regulate the discharges of waste to protect all of the beneficial uses not just the anthropogenic or human based beneficial uses. It is time to look at the small discharges now that we have managed most of the large discharges. The water quality effects of many small discharges can add up to a big effect. Numerous fireworks shows can add up to a big effect even if you don't see a significant effect from one single show.
- D.** There is discussion on making the Tentative Order a threshold based permit, and the San Diego Water Board is in concurrence with that approach. It is necessary to regulate discharges proportionate to their risks and establishing thresholds to moderate the actions of the San Diego Water Board and that regulatory paradigm is appropriate
- E.** The San Diego Water Board could issue investigative orders to all parties and require extensive monitoring that would be costly. That is not the approach the San Diego Water Board wants to take. The Board wants to go forward with the stakeholders to consider the questions appropriately, in the right manner and in a cost effective way so that we can get the answers needed.
- F.** This item will not be taken before the San Diego Water Board members before March 2011, but this date can be moved forward or delayed as necessary.

- G.** There is a third option for monitoring. In the Notice of Intent filing fee, there is a surcharge for the Surface Water Ambient Monitoring Program (SWAMP), and the San Diego Water Board have committed internally to directing the San Diego Water Board's contribution for SWAMP to the Bight 2011 monitoring project conducted by the Southern California Coastal Water Research Project. We will ask SCCWRCP to include study questions for the entire southern California bight that would address the issue of fireworks discharges.
- H.** Under the Tentative Order one party can file one notice of intent for multiple operators of fireworks displays. The NFA could submit the NOI for all of its members discharging fireworks in the San Diego Region
- I.** Monitoring can be shared by a number of operators over a number of events. The door is wide open to discuss with the San Diego Water Board how to structure the monitoring. It could be either one monitoring event or several monitoring events per year so that the cost is proportionate to the risk and that the data answers the questions that need to be answered.
- J.** Finally with regard to ASBS's the San Diego Water Board has an approach that we think will work. It requires establishing findings of facts to support the changes in the Tentative Order that would allow fireworks displays over or near ASBS's. The burden of proof is on all of us to show that should be allowed. I am asking specifically the Cities of Laguna Beach and City of San Diego to assist in that. I will also extend the offer to anyone in the environmental community to work with us on drafting the findings of fact that would support this approach.

End of Workshop