

Aston, Rosario@Waterboards

From: Robert Nast <nofrack@hotmail.com>
Sent: Sunday, August 05, 2018 8:44 PM
To: Thien Ng; Glickfeld, Madelyn@Waterboards; Owens, Cassandra@Waterboards; Aston, Rosario@Waterboards; bert.perello@ci.oxnard.ca.us; bert.perello@oxnard.org; Lourdes.Solorzano@ventura.org; george.piantka@nrg.com; thomas.diciolli@genon.com; Nemeth, Karla@DWR; audrey@swissfamilykeller.com; Jeff.Pratt@ventura.org; robert.bravo@ventura.org; Maryilyn.Miller@ventura.org; Mark.Sandoval@ventura.org; Suzy.Watkins@ventura.org; Gary.Hirtensteiner@ventura.org
Subject: Request the Los Angeles Regional Water Board Postpone Termination of the Mandalay Generating Station (MGS) (NPDES No. CA0001180, CI No. 2093) Permit
Attachments: Harbor Water Quality Issue_2 tracked changes (1).docx

Dear Ms. Aston, Councilman Perello, Asst. Director Ng, Director Pratt, Chairperson Keller, and Others,

Please find attached the subject letter. Comments are welcomed.

Best Regards,

Bob Nast
805-832-9895 (mobile)
"Know where your water comes from and your trash goes."

Letter Regarding the Channel Island (CI) Harbor Water Quality

From: Bob Nast, 3600 Harbor Blvd. #148, Oxnard, CA. 93035 (nofrack@hotmail.com) (mobile 805-832-9895) dated August 4, 2018

To: Public and Private Sector Stakeholders, Staff, and Other Concerned Individuals

- Los Angeles Regional Water Board Commissioners
Los Angeles Regional Water Quality Control Board-
320 West 4th Street, Suite 200, Los Angeles, CA 90013

Attention: Madelyn Glickfeld, Chair (Madelyn.Glickfeld@waterboards.ca.gov), Lawrence Yee,
Vice- Chair, Members: Irma Munoz, Charles Stringer, Cynthia Guzman
 - Cassandra D. Owens, Chief Industrial Permitting Unit, (cowens@waterboards.ca.gov)
 - Rosario Aston, LARWQB Staff Representative (raston@waterboards.ca.gov)
- Councilman Bert Perello, City of Oxnard (bert.perello@ci.oxnard.ca.us / bert.perello@oxnard.org)
- Supervisor John Zaragoza, Ventura County Board of Supervisors c/o Chief of Staff (COS) Lourdes Solórzano (Lourdes.Solorzano@ventura.org)
- Designated POC for GenOn Operations c/o US Bankruptcy Clerk 515 Rusk Ave., Huston, Tx. 77002 Re: Case # 17-33695 and (george.piantka@nrg.com or (760) 710-2156, or Tom Di Ciolli at thomas.diciolli@genon.com or (805) 984-5241
- Thien Ng, Oxnard's Assistant Public Works Director (thien.ng@oxnard.org)
- Copies to:
 - Director Karla Nemeth, CA Department of Water Resources (DWR) (Karla.Nemeth@water.ca.gov) Please forward to Appropriate Staff and DWR offices
 - Audrey Keller, Chair, Channel Islands Neighborhood Council, (audrey@swissfamilykeller.com) (818) 292-0447); Please forward to the neighborhood council as appropriate.
 - Jeff Pratt, Ventura County Public Works Agency Director (Jeff.Pratt@ventura.org) Please pass to staff as appropriate
 - Robert Bravo, Ventura County, Management Analyst II (robert.bravo@ventura.org)
 - Marilyn Miller, Director of Harbor Planning & Redevelopment Channel Islands Harbor (Marilyn.Miller@ventura.org)
 - Mark Sandoval, Channel Islands Harbor (CIH) Director (Mark.Sandoval@ventura.org)
 - Suzy Watkins, CIH Deputy Director (Suzy.Watkins@ventura.org)
 - Gary Hirtensteiner, CIH Patrol Captain (Gary.Hirtensteiner@ventura.org)

SUBJECT: Request the Los Angeles Regional Water Board Postpone Termination of the Mandalay Generating Station (MGS) (NPDES No. CA0001180, CI No. 2093) Permit

References: Please See Attachment (a)

Enclosure: (1) Recommendations Concerning the California Regional Water Quality Control Board (RWQCB) Public Hearing for the (MGS) Permit Termination Scheduled to be Conducted on Sept. 13, 2018 at 0900 at the Ventura County Government

Dear Ms. Aston, Councilman Perello, Asst. Director Ng, Director Pratt, Chairperson Keller, and Others,

Problem Statement/Background/Timeline.

- On May 4, 2010, the CA State Water Resources Control Board (SWRCB) approved a once-through-cooling (OTC) policy, which aimed to reduce the harmful effects associated with the cooling water intakes on marine life in the ocean and estuaries. As amended it requires existing power plants reduce their intake flow of cooling water by 93 percent. The policy included a compliance date of December 31, 2020 for CI's Mandalay Generating Station (MGS) Units 1 and 2. The operator of the MGS (NRG now GenOn) decided to retire the MGS Units 1 and 2 in February 6, 2018; 16 months ahead of the sunset compliance schedule. Failure to secure a contract to sell electricity to Southern California Edison (SCE) and subsequent bankruptcy was involved in the decision.
- The inlet from the MGS connecting the norther part of the CIH with the Pacific Ocean has been plugged.
- This closure triggered an adverse consequence for the Channel Islands Harbor (CIH) water quality, as documented below. Dark and murky water was reported in early June 2018; approximately 2.5 months following the cessation of the MGS operations; in particular, the cessation of the four (4) MGS circulating water pumps (CWPs), which ceased operation on March 29, 2018. Note: There may be other possible causes, which could adversely affect CIH water quality. These need to be identified and quantified. These actions are suggested for your consideration at enclosure (1).

Nexus of Four Circulating Water Pumps (CWP's) Causing the CIH Water Quality Issue.

- As discussed, the water quality problem started to manifest itself a few months after the circulating water pumps ceased operation. In the past, these pumps were pulling CIH water through the Edison Canal and out to the Pacific Ocean not allowing ag runoff contaminates to pollute the CIH or the canal with attendant increases in algae growth leading to reduced levels of Dissolved Oxygen (DO) causing potential hypoxia (oxygen starvation) to marine life.
- Past ag runoff contaminate can be confirmed by review and validation of past NRG NPDES reports.
- Those four pumps served a critical (albeit ancillary) function of keeping the CIH water circulated and supporting its marine life. "We believe that if the Edison Canal is reopened to allow circulation back to the ocean by the Mandalay plant, our harbor will be restored to its former clean state.
- More efficient pumps may be required to facilitate the circulation, but they will not need to run very often, as evidenced by the fact that the plant only ran 120 days at 6-8 hours/day over the past few years and the circulation was sufficient. New pumps can also be solar-powered."ⁱ
- To reiterate, the part of MGS's function that's germane to this letter is the continued operation and maintenance of four circulating water pumps (CWPs) ("44,000 gallons per minute [gpm]

each). They were originally designed to facilitate heat exchange, now they are needed to circulate water in the CI Harbor. When all four CWP's were operating, there was a total facility capacity of 176,000 gpm, or 253.4 million gallons per day (MGD)ⁱⁱ. Note: This proposed CIH water fix may be characterized as 'the solution to pollution is dilution'. Use the Pacific Ocean as the larger, more effective, more sustainable sink to mitigate ag runoff vice the smaller, confined and therefore more vulnerable, more populated (by humans), and less sustainable CIH as the 'most effective near-and mid-term solution'. Recommendation assumes the levels of potential pollutants (e.g. the total concentration of organic nitrogen and ammonia-TKN from ag runoff going to the Pacific will not exceed state levels iaw current NPDES or it can be mediated.

- Prior to the cessation of MGS operations, isolated algae blooms in the CIH, while sighted during the hot months, were not a major concern.

Purpose of This Letter Is Two-Fold

- **First**, request the Los Angeles Regional Water Quality Control Board (RWQCB) and GenOn reconsider the complete decommissioning of the Mandalay Generating Station (MGS). Reasons:
 - Prevent further degradation of the CI Harbor (CIH) water quality. RWQCB is asked to postpone termination of the subject National Pollutant Discharge Elimination System (NPDES) No. CA0001180, CI No. 2093 Permit.
 - Request RWQCB modify the existing permit to allow GenOn 'or' a third party, if GenOn is either unable or un-willing to use the revised permit, to renew operation and maintenance of the four circulating water pumps (CWPs) currently located at MGS. Note: This request does not imply a return to either full or part time operation of the MGS Units 1 and 2 for generating electric power. Nor does it imply the local governments (e.g. City of Oxnard, Ventura County or the designated representative of the OLY Mandalay Bay General Partnership ("OMB")), assume any MGS final plant dismantling or remediation costs or future liabilities re: the operation of the CWPs.
- **Second**, provide stakeholders with other recommended corrective actions necessary to prevent further degradation to CIH water quality and reduce the threats posed to marine life, to include:
 - "Continue and 'expand' current water quality testing to further define the problem and source
 - Review historical data to see if the blooms or hypoxia are periodic and under what circumstances or if July's was an unprecedented occurrence.
 - Compile a baseline of ecological resources and applicable regulations.
 - Identify and evaluate potential sources of Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) that could lead to hypoxia such as sediments, discharges from marina vessels, stormwater and ag runoff, groundwater discharges, other discharges to surface water or leaking sewers. ([One of the questions asked and answered would be:] Also, is there any

relationship between Northern Channel Islands (Noci) water quality and the oil dump on 5th St undergoing remediation?)

- Restore pumping. [Question.] Can the CWP's be divorced from the plant and remain operational if the facility is dismantled? That may get around the Once-Through-Cooling policy if there is no discharge of heated water but would not eliminate entrainmentⁱⁱⁱ (i.e. fish being caught/killed in the screens) concerns.
- Install mitigation measures such as aerators or other devices to maintain circulation and water quality at or above selected criteria. (Note: Oxnard just installed six aerators.)
- Fill in the canal:
- Open and maintain a canal connection to the ocean at some location in the northern part of the CI Harbor." Ref. (f) applies.
- Take actions to reduce or eliminate pollutant sources to the harbor"^{iv} Please see enclosure (1) for a full list of recommendations.

What's the status of identifying the point/non-point source of the pollutant(s) causing the problem?

Recent water testing (June 19, 21, and 22, 2018) conducted by the City of Oxnard's scientific consultants, Aquatic Bioassay & Consulting (ABC) Laboratories, monitored and collected water quality samples. They found high levels of total nitrogen (TKN). TKN is found in ag runoff of fertilizers. Range of Concern for TKN is >10-20. The tests indicated a range of 17.14-69.29. Therefore, recent initial testing confirmed elevated levels of TKN with resultant increases in algae blooms with concurrent drops in total dissolved oxygen (DO), also tested.

Discussion. A revised NPDES permit would allow for the 're-operation' of the four circulating water pumps (or replacement pumps) at the MGS, which have since been decommissioned. Other stakeholders (e.g. Oxnard and Ventura County and others) are asked to enter into 'timely' and good faith negotiations with GenOn to include the pumps' operation, maintenance, and providing electrical power from the McGrath Peaker Plant. The incentive for GenOn would be the sale of electricity at fair market value to Oxnard/Ventura County and the profits from an Operation and Maintenance contract/lease. Schedule, cost, terms, and duration to be negotiated.

- Costs to accomplish these tasks would be allocated and resourced as per the Seabridge Memorandum of Understanding (MOU); please see ref. (d).
- Revised NPDES permit would stipulate the concurrent reopening of the Edison Canal allowing circulation of water in the CIH to the Pacific Ocean once again completing the connection at both ends of the CIH with the Pacific Ocean.
- The quality of the effluent wastewater to be dispositioned to the Pacific Ocean would once again be governed and regulated by the modified NPDES permit, as before the decommissioning of the MDS Units 1 and 2.
- According to references (b) and (d) CIH water quality issue was both **foreseen and therefore considered avoidable**

Actions Taken to Date. Ever since the CIH water quality problem was reported in June 2018, the City of Oxnard Engineering Staff have been taking responsive and responsible actions, such as, testing the CIH water and installing 6 aerators in the Seabridge Marina area. They are to be commended. This letter endorses their 'next step' actions as follows:

- Finalize analysis of data collected on July 6th
- Reduce frequency of City Water Quality sampling to two times per week
[Recommendation: return to twice a weekly 'after' rain events or excessive heat e.g. >90 degrees F. Include additional analytes [test candidates] in the testing. Please see enclosure (1).
- Establish a Monitoring & Action Plan
 - Install remote sensors (s) to continuously monitor dissolve oxygen, pH and chlorophyll
 - Prepare action plan to mitigate water quality problems

What else is required? The proposed near-term and mid-term solution presupposes a no-kidding, proactive and timely approach on the part of the stakeholders as discussed in enclosure (1). First, the stakeholders should start negotiations with OnGen designated representatives re: operation and maintenance of the four WCPs. The Seabridge Environmental Report (EIR), and the Seabridge Memorandum of Understanding (MOU); refs. (b) and (d) respectively, provide sufficient direction, guidance, and resource allocation for an *expedited* way forward.

- In a few words, we need increased timely cooperation between the stakeholders listed in this letter and NRG (now GenOn) if we're going to prevent a potentially catastrophic environmental event.
- A comprehensive MGS decommissioning plan should have been:
 - Properly staffed for comment
 - Endorsed by the major stakeholders now being adversely impacted
 - Included local governments and environmental regulators (specifically Ventura County, Oxnard, and the RWQCB). Question: Is a copy of the signed-off plan available?
 - Included deliberate consideration of the adverse effects the MGS decommissioning would have on the CIH water quality and marine life as identified in refs. (b) and (d).
 - **Question.** Was the LA RWQCB adequately briefed re: the negative impacts on ceasing operation of the MGS and specifically the 4 CWPS 'and' what the negative impacts would be on CIH water quality and circulation?

Rationale for RWQCB to Take Recommended Regulatory Action.

- The CIH and Edison Canal Estuary are included in the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan).

- RWQCB uses this Basin Plan to identify beneficial uses and define the water quality objectives of the water bodies. It also uses the Basin plan information to regulate point and non-point sources discharges into the water bodies (in this case, the Pacific Ocean and estuaries).

Initial Water Testing Results.

- CIH dark, murky, and odorous water was reported in June 2018
- Initial scientific water testing resourced by Oxnard indicated high levels of total nitrogen (TKN) from ag runoff as the potential leading source of pollution. Suggest, other possible sources need to be identified or ruled out, as soon as possible.
- Testing by Aquatic Bioassay & Consulting (ABC) Laboratories, the City of Oxnard's consultant marine biologists indicated a lack of circulation and ag run off (specifically total nitrogen -TKN) going into the northern basin of the CIH as the major source of the problem. Ortho Phosphate also found in ag runoff was detected in amounts of lesser concern.
- Currently, levels of dissolved oxygen (DO) in the CIH are being closely monitored by ABC Labs.
- Ask the RWQCB to act 'now', while still awaiting the expedited results of more definitive source identification, modeling, and quantification, as outlined in enclosure (1). Once again, time is of the essence.

Long-term solution.

- Work to effectively reduce and regulate commercial agricultural reliance on fertilizers containing high levels of total nitrogen and other pollutants would be one of our long-term goals.
- Runoff from farms is the leading source of impairments to rivers, lakes, and in this case, harbors. *Note: Agriculture contributed \$2.2 B in 2015 to Ventura County's economy. v Tourism contributed \$1.453 B to Ventura County's economy in 2017^{vi}. They should not be mutually exclusive enterprises.*

Past Environmental Arguments Against the Seabridge Project (Sour Grapes Then; But Still Topical).

- Environmental organizations against the Seabridge Project were not listened to as of 2/14/03; please see <https://documents.coastal.ca.gov/reports/2003/7/Th8a-7-2003.pdf>.
- Quoting this source..." In addition, there is some question about the timing of the proposed remediation measures to be implemented should water quality fall below State standards. Finally, the monitoring program, as currently proposed, does not meet State standards (Health and Safety Code section 115880 and 17 C.C.R. sections 7956 et seq.) with respect to the frequency of monitoring and monitoring locations. "
- To quote ref. (d)..." If such degradation occurs and is below generally accepted State standards in place at that time, then, in order to achieve water flows and water quality consistent with such standards; the County and Oxnard agree to implement the Study's Remediation Measure **at the time of closure of the Mandalay Plant** [emphasis added] to the extent that such water quality and water flow remediation is not otherwise required and satisfied by conditions placed by regulatory agencies on the owners or operators of the Mandalay Plant at the time of its closure." Reference (e) provided the State Water Resources Control Board policy information about the MGS. Reference (f) provided much appreciated and needed technical expertise with regards to recommended resolution strategies, plans, and actions. Reference (g) provides suggestions for deployment of aerators as one of the alternative solutions to the low dissolved

oxygen (DO) levels. Lastly, reference (h) provided cost estimates for providing spill reports in the southern basin of the harbor.

Possible Adverse Effects of Climate Change?

- “The causes of hypoxic events can be attributed to both natural and anthropogenically enhanced processes (Grantham et al. 2004; Lowe et al. 1991), and the frequencies and extent of coastal hypoxia are reported to be increasing (Diaz and Rosenberg 1995,2008). This trend is predicted to persist with future climate change as a consequence of warming of surface waters which may decrease gas solubility, increase organismal metabolic rates, and increase surface stratification (Meehl et al. 2007). Continued eutrophication and decreased oxygen content in eastern boundary currents may also contribute to these events (Diaz and Rosenberg 2008; Poertner and Peck 2010). Hypoxia can occur in a variety of aquatic habitats including enclosed inland seas and hydrodynamically constrained estuaries.” Reference:
https://www.researchgate.net/publication/233783733_Effects_of_an_Acute_Hypoxic_Event_on_Microplankton_Community_Structure_in_a_Coastal_Harbor_of_Southern_California

Communications.

- Necessary involvement and cooperation between multiple local and state governmental agencies and GenOn who filed for bankruptcy-please see <https://www.reuters.com/article/us-nrg-energy-genon-bankruptcy-idUSKBN1952G7>) could make effective communications, collaboration, and negotiation a challenge.
- The enclosed recommendations and actions are meant to provide a starting point for a productive dialogue and cooperation between public and private sector stakeholders. Once again, time is of the essence. They represent the author’s suggestions along with Mr. Peck’s based on experience, internet research and information from third party subject matter experts as contained in relevant peer-reviewed published papers. The views are solely the author’s. Time did not allow staffing of this letter for comment with the stakeholders prior to sending.

In summation.

Thanks for your patience. A Channel Islands Harbor with water quality degraded past acceptable state limits and devoid of marine life on a prolonged basis will prove to be catastrophic for the City of Oxnard, Ventura County, and the Central Coast, in general. The adverse effects of ceasing the operation of the four (4) Mandalay Generating Station’s circulating water pumps were *foreseen* approximately 20 years ago. Remedial actions and costs allocations were identified at that time. Recommend stakeholders continue to enlist timely assistance from subject matter experts and update the remediation plan, execute that plan in a timely manner, and resource the plan according to reference (d).

Feedback is solicited at nofrack@hotmail.com.

Best Regards,

Bob Nast

“Know where your water comes from and your trash goes”

ATTACHMENT (A) REFERENCES

- (a) MGS (NPDES No. CA0001180, CI No. 2093)
https://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/individual/npdes/NRG_California_South_LP/Mandalay/MandalayGenSta_TentTrmntnCvrLtr.pdf for Current Status
- (b) Seabridge Environmental Impact Report (EIR) part 1 (Note: Soft Copies Not Readily Available on the Internet – please see attached. Note: In the Interests of Transparency for Public Information the City of Oxnard Public Work's Department Was Requested to Post a Copy of the Entire EIR on Their Official Website.)
- (c) Additional Information (Engineering Study) on the Mandalay Generating Station (MGS)
http://www.opc.ca.gov/webmaster/ftp/project_pages/OTC/engineering%20study/Chapter_7H_Mandalay_Generating_Station.pdf
- (d) Seabridge Memorandum of Understanding (MOU) https://www.oxnard.org/wp-content/uploads/2016/05/CIH_Seabridge-MOU.pdf
- (e) State Water Resources Control Board policy information about the MGS
https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/powerplants/mandalay/
- (f) E-mail from Gene Peck (gene.peck@viridianalliance.com) to Bob Nast; Subject: Channel Islands [Harbor] Water Quality dtd. 7/17/18
- (g) E-mail from CI Harbor Department Marilyn Miller (Marilyn.Miller@ventura.org) to Bob Nast; Subj: Request for Information on Channel Islands Harbor dtd. 7/27/18

Reference Synopsis.

- Reference (a) provides the latest status on the subject NPDES permit.
- Reference (b) is the Seabridge Environmental Impact Report (EIR) part 1. (Note: Copies are not available from internet searching. Oxnard was asked to post a full copy its web site fostering transparency and discussion.
- Reference (c) provides an original engineering study of the MGS.
- Reference (d) provides a joint Memorandum of Understanding (MOU) between Ventura County, City of Oxnard, and OLY Mandalay Bay General Partnership (OMB).
- Reference (e) provides the State Water Resources Control Board policy information about the MGS.
- Reference (f) provided subject matter expert review comments and recommendations from Mr. Gene Peck.
- And, lastly, reference (g) provided a cost estimate for what it would cost the public to (1) copy 7 years' worth of CIH spill (incident) reports and (2) redact personal information allowing for public dissemination. Note: The southern portion of the CIH is the responsibility of the Ventura County Harbor Department. Oxnard is responsible for the northern part of CIH (i.e. the harbor north of CI Blvd.).

ENCLOSURE (1)-

Recommendations Concerning the Los Angeles Regional Water Quality Control Board (RWQCB) Public Hearing for the Mandalay Generating Station (MGS) Permit Termination Scheduled to be Conducted on Sept. 13, 2018 at 0900 at the Ventura County Government

Note: Reference (f) applies. In the author's view, the Oxnard recommended plan of action and milestones and accurate characterization and solution of the CIH water quality issue would benefit from the technical expertise and experience of Mr. Gene Peck, Viridian Alliance (gene.peck@viridianalliance.com). Mr. Peck, along with the author participated in the CI Harbor Task Force Special Meeting, conducted on Wednesday, Jul 11, 2018, 6:00pm at the Performing Arts Center, Ventura Room, 800 Hobson Way, Oxnard, CA 93030. It was conducted by the Oxnard Public Works Department and facilitated by Mayor Flynn and Councilman Perello. The following recommendations are offered by Mr. Peck and the author. They are based in part on the preliminary results from Aquatic Bioassay & Consulting (ABC) Laboratories, the City of Oxnard's consultant marine biologists' who continue to monitor and collect water quality samples for-

- Dissolved oxygen; pH, temperature; salinity- beginning mid-June
- Nutrients
 - Nitrate,
 - Nitrite,
 - Total nitrogen (TKN), and
 - Ortho Phosphate
- Bacteria
 - Total Coliform,
 - Fecal Coliform, and
 - Enterococcus
- Phytoplankton

"RECOMMENDATION #1 – Expand the water quality testing parameters listed above to include Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) and Total Organic Carbon (or NPOC- non-purgeable organic carbon) as indicators of pollutant load and potential sources.

RECOMMENDATION #2- Stopping the circulation induced by pumping was the leading cause of the water quality problem in the north of Channel Islands (Noci) though there are probably other contributors (such as stormwater and ag runoff, sediments and various discharges from marina vessels). The Final Supplemental Environmental Impact Report (FSEIR) for the Seabridge (development stated that circulation and water quality in Noci (North Channel Islands) harbor is driven by the pumping and indicated that cessation could extend flushing time from 6 days to at least 17 days. Slower flushing or water exchange in channels allows nutrients and pollutants to accumulate and organisms that can cause blooms to multiply. Oxnard's Mr. Ng estimated \$TBDM per year for electricity to power the pumps; if that is that high, then it raises the question of whether there are other effective, but less costly alternatives that should be considered. Initially, these could include:

- a. Restore pumping (Can the pumps be divorced from the plant and remain operational if the facility is dismantled? That may get around the Once-Through-Cooling policy if there is no discharge of heated water but would not eliminate entrainment concerns.)

- b. Install mitigation measures such as aerators or other devices to maintain circulation and water quality at or above selected criteria. [Note Oxnard recently installed 6 aerators]
- c. Fill the canal.
- d. Open and maintain a canal connection to the ocean at some location in the northern part of the CI Harbor.
- e. Actions to reduce or eliminate pollutant sources to the harbor

All can be costly, have regulatory hurdles and may not be feasible. With a better understanding of nutrient and pollutant sources and a better understanding of the dynamics of the harbor system, it may be that most implementable is pollutant source control.

From the brief conversations with Mr. Ng and Mr. Nguyen following last week's meeting, the City of Oxnard would benefit from the use of a hydrodynamic model. A model would increase our understanding of the harbor system and Noci conditions in order to adequately evaluate these or additional alternatives. No doubt there is more information available that is still being compiled by the city, but Mr. Ng believed at the time that the City has no current model of the harbor system available to examine the problem or evaluate the effectiveness of remedial measures.

Ideally, one would want to:

- Review historical data to see if the blooms or hypoxia are periodic and under what circumstances or if July's was an unprecedented occurrence.
- Compile a baseline of ecological resources and applicable regulations.
- Identify and evaluate potential sources of BOD and COD that could lead to hypoxia such as sediments, discharges from marina vessels, stormwater and ag runoff, groundwater discharges, other discharges to surface water or leaking sewers. (Also, is there any relationship between Noci water quality and the oil dump on 5th St undergoing remediation?)
- Develop a model to understand the dynamics of the system; ideally a 3-D hydrodynamic model should be used to capture stratification and other lateral and vertical variations. Two of the best are Delft 3D or Environmental Fluid Dynamics Code (Mr. Gene Peck who provided much appreciated comments on this letter has worked with the developers of both and can put cognizant County and City staff in contact with them.
- Develop and test alternative remedies.
- Design, permit, build

Any solution would require a demonstration of a net environmental benefit to regulators and a justification of the expenditure to city management. Potentially, these steps can be streamlined, but I do not think they can be avoided. Also, addressing the problem from a perspective of the harbor system potentially could lead to long-term environmental enhancements unanticipated now by our lack of understanding of the system and its stressors. For example, reduced pollutant loading through improved source control and enforcement of regulations could be one outcome. I would like to talk more and meet with Mr. Ng to see if I can be of assistance. "Reference (f) applies.

RECOMMENDATION #3-The City of Oxnard formally request in writing that the RWQCB provide them with a history of NRG's (now OnGen) NPDES Reporting under NPDES No. CA0001180, CI No. 2093) Permit indicating potential pollutants regulated and monitored under that permit which exceeded or approached the Maximum Contamination Level (MCL), Range of Concern or REC 1 Standard. Of particular concern are: Nitrate, Nitrite, Total nitrogen (TKN), and Ortho Phosphate; in addition Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) and Total Organic Carbon (or NPOC- non-purgeable organic carbon) and what remedial actions were taken to reduce or eliminate the pollutant. Due Date: Prior to

RECOMMENDATION #4- The City of Oxnard provide stakeholders with the latest soundings and an historical compilation of incident (spill) reports re: that portion of the CIH for which they are responsible. Note: The Ventura County Harbor Department provided the author with following information needed for risk assessment of potential contaminants and characterizing the CIH water movement: (1) a soft copy of the latest soundings of the south CIH. The soundings were just completed by the Department on 7/25/2018 adjusted to zero tide and are available from the Ventura County POC Ms. Marilyn Miller (Marilyn.Miller@ventura.org) (2) a soft copy of 7 years' worth of incident (spill) reports is available if individuals or agencies are willing to pay for copying and redacting (of personal information) charges.

RECOMMENDATION #5- Future possible use of the MGS.

Background. Associated costs of MGS decommissioning are not addressed or solicited in this letter.

The below information and references are **submitted for informational and discussion purposes only.**

"It's costly to tear down a power plant like the Mandalay facility. NRG has indicated it would not have the money to demolish the plant without the opportunity to build a new one, [which is apparently not going to happen]. The remaining Gas-Powered McGrath Peaker Plant will continue to operate. Oxnard will likely need help from Sacramento, whether it's in the form of legislation or tax incentives, to tear down old industrial sites like Mandalay".^{vii} In addition, the costs to remediate the fossil-fuel (oil) MGS built circa 1959 have not been quantified or resourced with responsibility legally assigned.

Proposed Actions.

- a. Stakeholders (to include TBD) quantify the costs to decommission and remove (or repurpose) MGS Units 1 and 2.
- b. Research and request tax incentives. Please See "5.3.1.1. Federal, State, and Local Incentives".^{viii}
- c. Complete updating the study as follows: ... "(4) The County and Oxnard further agree to have the Study updated ("Updated Study") at the time closure of the Mandalay Plant is approved and to implement such Updated Study's remediation measure in lieu of the Remediation Measure identified in the (initial) Study." Ref (d) applies. Include in the updated study the comparison between completely dismantling of the MGS or it's repurposing based upon an objective Cost Benefit Analysis.
- d. Research and request state legislators consider new legislation to exempt Oxnard and Ventura County from any possible decommissioning and environmental **remediation costs** and revert the liability for such **costs** to the abandoned facility's former owner. Please see <https://www.nixonpeabody.com/en/ideas/articles/2015/09/28/state-legislatures-moving-to-regulated-power-plant-decommissioning-decontamination-and>
- e. Determine the site's highest and best future use, which would be critical to maximizing the value of the site and minimize the risk to the owner, as well as, surrounding communities.^{ix} Repurpose MGS as a Regional Desal Plant (Ventura, Oxnard, Port Hueneme, Naval Bases Ventura County, and Channel Islands Beach Community). Formally request in writing a solicited proposal by Poseidon

Resources (at no costs to stakeholders) to conduct a feasibility study for planning, permitting, constructing, and operating a desal plant utilizing electrical power from the McGrath Peaker Plant. Note: Electricity is the major cost driver (up to 50%) for desal operations. Please See <http://www.latimes.com/socal/daily-pilot/news/tn-dpt-me-poseidon-rate-sheet-20180720-story.html>

RECOMMENDATION #6- Answer the question..." Who has the standing make the signers of the Seabridge MOU (ref. f) live up to the agreements made in the MOU?

RECOMMENDATION #7- With regards to the installation of six (6) aerators in the Northern CIH in the Seabridge Marina area, this remediation should not be considered a major or sustainable solution. It will require future monitoring to determine effectiveness throughout the entire CIH area; and should not preclude acting on the other recommendations.

RECOMMENDATION # 8- Review the periodicity and locations of the periodic dredging.

ⁱ E-Mail from Rocco Belmonte to Bob Nast Subj: Harbor Water Quality dtd. 7/23/18

ⁱⁱ Multiple Citizens Journal Articles by George Miller and Keith Moore- Title- Oxnard to Discuss Channel Islands (CI) Water Problems (dtd. 7/5) Special Mtg. and <http://citizensjournal.us/water-test-results-clean-for-channel-islands-harbor/> and <http://citizensjournal.us/the-channel-islands-harbor-water-circulation-saga/> for Synopsis of Problem, Timelines, Background, and Current Testing Status

ⁱⁱⁱ **Fish entrainment** is defined in this letter as: **fish** being transported along with the flow of water and out of their normal river, lake or reservoir habitat into unnatural or harmful environments. ... Conversely, defining and addressing environmental concern, such as **fish** losses, results in positive public perception

^{iv} E-mail from Gene Peck (gene.peck@viridianalliance.com) to Bob Nast; Subject: Channel Islands [Harbor] Water Quality dtd. 7/17/18

^v <http://www.farmbureauvc.com/county-crop-data>

^{vi} <http://heritagevalley.net/californias-tourism-industry-prosperity-in-ventura>

^{vii} <https://www.vcstar.com/story/news/2017/10/24/nrg-plans-shut-down-oxnard-power-plant-earlier-than-expected/786325001/>

^{viii} <http://www.rff.org/files/document/file/RFF%20Rpt%20Decommissioning%20Power%20Plants.pdf>

^{ix} <https://trcsolutions.com/writable/images/Natural-Gas-and-Electric-May-2015.pdf>