

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 PROMENADE STREET
PROVIDENCE, RHODE ISLAND 02908-5767

FACT SHEET

RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PERMIT TO DISCHARGE TO WATERS OF THE STATE

RIPDES PERMIT NO. **RI0100293**

NAME AND ADDRESS OF APPLICANT:

The City of Newport **United Water Environmental Services, Inc.**
43 Broadway **and 250 Connell Highway**
Newport, RI 02840 **Newport, RI 02840**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

The Newport Pollution Control Plant (Newport WPCP)
250 Connell Highway
Newport, RI 02840,
Washington Street Combined Sewer Overflow (CSO) Facility, and
Wellington Avenue CSO Facility

RECEIVING WATER: **Narragansett Bay - Newport Harbor/Coddington Cove**
Water Body ID #: RI0007030E-01B (Newport WPCP)
and RI0007030E-01C (CSO Facilities)

CLASSIFICATION: **SB1 (Newport WPCP) & SB (CSO Facilities)**

I. Proposed Action, Type of Facility, and Discharge Location

The above-named applicant has applied to the Rhode Island Department of Environmental Management (DEM) for reissuance of a RIPDES Permit to discharge into the designated receiving water. The facility is engaged in the treatment of domestic and industrial sewage that is collected and transported to the Newport WPCP through a combined sewer system. The discharge is from the Newport WPCP (outfall 001A), Washington Street CSO Facility (outfall 010A), and Wellington Avenue CSO Facility (outfall 007A). Flow Diagrams of the facilities are shown in Figures 1 through 3.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from June 2009 through March 2014 is shown on Attachment A-2.

III. Permit Limitations and Conditions

The final effluent limitations and monitoring requirements may be found in the draft permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Introduction

The City of Newport (Newport) owns, and employs a consultant to operate, a wastewater treatment facility located at 250 Connell Highway, Newport, Rhode Island (the Newport WPCP). The discharge to the East Passage of Narragansett Bay consists of treated domestic, commercial, and industrial sewage contributed by the municipalities of Newport and Middletown and the Naval Station Newport. As of January 2014, the end of Newport's most recent Industrial Pretreatment Program reporting year, there were three Significant Industrial Users (SIUs) and twelve other (i.e., non-SIU) permitted industrial users contributing wastewater to the Newport WPCP. Treatment consists of the following: Coarse Screening, Primary Settling, Aeration, Secondary Settling, Chlorination, and Dechlorination.

Newport also owns, and the consultant operates, the Long Wharf Pumping Facility, Wellington Avenue CSO Facility, and the Washington Street CSO Facility. These Facilities are satellite facilities which serve the Newport WPCP and work in conjunction to maximize the conveyance of combined sewage and storm water flows to the Newport WPCP. The Long Wharf Pumping Facility was previously permitted to have a combined sewage overflow. However, since the last permit was issued, the overflow from the Long Wharf Pumping Facility was permanently eliminated and this facility is only operating as a pumping station. Therefore, this permit does not include the Long Wharf Pumping Facility as a permitted discharge. The other two (2) CSO facilities, Wellington Avenue and Washington Street, occasionally discharge combined sewage to Newport Harbor during wet weather events and are permitted under this permit.

Newport's most recent RIPDES permit, authorizing discharges from the above-mentioned facilities, was issued on September 28, 2007. This permit became effective on December 1, 2007 and expired November 30, 2012. Newport submitted an application for permit reissuance to the DEM on May 24, 2012. On August 7, 2012 the DEM issued an application complete letter to Newport. In accordance with Rule 13(a) of the Regulations for the Rhode Island Pollutant Discharge Elimination System, Newport's September 28, 2007 RIPDES permit remains in effect since the DEM has determined that a timely and complete permit application was submitted. Once this permit is reissued, it will supersede the September 28, 2007 permit.

In 2009 Environment Rhode Island and several citizen plaintiffs filed an action under the citizen suit provisions of the Clean Water Act (CWA) alleging that Newport and its contract operator violated Section 301(a) of the CWA by discharging pollutants into waters of the United States from the Newport WPCP and its wastewater collection system in violation of its RIPDES Permit and by discharging stormwater in violation of the Rhode Island General Permit for Storm Water Discharge from Small Municipal Separate Storm Sewer Systems. Based on this action, the Environmental Protection Agency (EPA), and the DEM filed a Motion to Intervene in the citizen suit to protect the interests of the United States and Rhode Island in the uniform and effective application of federal and state environmental laws. The Motion to Intervene was granted by the Court and the United States and Rhode Island subsequently filed a Complaint against Newport alleging that it violated Section 301(a) of the CWA and the Rhode Island Water Pollution Control Act, R.I.G.L. §§ 46-12, by discharging pollutants into waters of the United States from its WPCP and Collection System in violation of Newport's RIPDES permit and by discharging pollutants into waters of the United States without authorization under a RIPDES permit or any other provision of the CWA.

Based on these complaints, the parties entered a Judicial Consent Decree in the United States District Court, the District of Rhode Island, on October 18, 2011 requiring, among other things, that Newport undertake studies and develop and implement improvements to its WPCP and Collection System. The Consent Decree specifically required Newport to evaluate and recommend improvements to address CSOs from the Wellington Avenue CSO Facility and the Washington Street CSO Facility, including, as appropriate, upgrades to its WPCP and Collection System, public and private infiltration and inflow removal programs, and other measures, including in-line and off-line storage. The Consent Decree also specifically required Newport to prepare a Collection System Capacity Assessment and, if it was

determined during the development of the Capacity Assessment that the proposed collection system replacement and rehabilitation measures, infiltration and inflow removal programs, and WPCP flow optimization efforts alone would be insufficient to eliminate CSOs, to also develop a System Master Plan, which would evaluate other measures to eliminate CSOs. The System Master Plan functionally serves as a CSO Long-Term Control Plan (LTCP). Newport established a stakeholders group to provide input to the City during the development the Collection System Capacity Assessment and System Master Plan. On November 30, 2012, Newport submitted a Collection System Capacity Assessment and System Master Plan that proposed the following high level remedial measures:

- Disconnecting or removing private and public inflow sources to achieve a 50 percent reduction in rainfall-derived inflow;
- Upgrading the primary clarifiers and secondary treatment (aeration tank and final clarifier) at the WPCP to increase the wet weather capacity to a maximum daily flow of 30 MGD;
- Raising six existing weirs in the collection system: five weirs by 1.5 feet along the twin 54-inch diameter sewer on Long Wharf Mall and one weir by 1.2 feet in the overflow pipe on Wellington Avenue from the Thames Street Interceptor;
- Installing a new 3.5-MGD pump station on Van Zandt Avenue near the railroad to reroute flows currently going to the Long Wharf Pump Station directly to the Long Wharf force main and the WPCP;
- Upsizing two sanitary pumps at the Wellington Avenue CSO Facility to 2 MGD and upsizing the existing force main to convey the additional flows;
- Modifying the existing CSO treatment at the Washington Street CSO Facility by adding dechlorination, including installing chemical storage and dosing units; and
- Installing new or upgrading existing stormwater conveyance pipes (approximately 7,000 linear feet).

Newport's analysis indicates that, after implementation of the collection system improvements to improve conveyance to the WPCP and capital improvements to increase the wet weather capacity at the WPCP, CSO activations in a typical year are projected to significantly decrease by 2019. Newport also proposed a detailed schedule for final CSO mitigation in the System Master Plan that includes a June 30, 2033 final end date. Once all of the final CSO mitigation efforts are implemented, Newport's System Master Plan predicted that CSOs from the Wellington Avenue CSO Facility will be eliminated and CSOs from the Washington Street CSO Facility will nearly be eliminated for storms up to, and including, the 10-year, 6-hour design storm and for the typical precipitation year. EPA coordinated review of the System Master Plan with DEM and conditionally approved the Master Plan on November 20, 2013, subject to judicial approval of the end date for the completion of the System Master Plan. EPA is in the process of obtaining judicial approval and of modifying the Consent Decree to include the revised end date from the System Master Plan. Newport is currently in the process of moving forward with the recommendations of the System Master Plan to eliminate CSOs.

Receiving Water Description

The water body segment that receives the discharge from the Newport WPCP is described as Newport Harbor waters in the vicinity of Bishop Rock which are within 500 feet of the Newport marine sewer outfall. The waterbody identification # for these waters is RI0007030E-01B. This segment is located in Newport and is classified as a class SB1 water body according to the Rhode Island Water Quality Regulations. SB1 waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However, all Class SB criteria must be met. Currently, this segment is not listed as impaired in the DEM's 2012 303(d) List of Impaired Waters.

The water body segment that receives the discharges from the CSOs is described as Newport Harbor waters east of a line from Fort Adams light to Rose Island light, to buoy (FLR) bell 14 and south of a line from buoy (FLR) bell 14 to Bishop Rock, excluding Coaster's Harbor. The waterbody identification # for these waters is RI0007030E-01C. This segment is located in Newport and is classified as a class SB water body according to the Rhode Island Water Quality Regulations. SB waters are designated for primary and secondary contact recreational activities; shellfish harvesting for controlled relay and depuration; and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Currently, this segment is not listed as impaired in the DEM's 2012 303(d) List of Impaired Waters.

Permit Development

Development of RIPDES permit limitations is a multi-step process consisting of the following steps: calculating allowable water quality-based discharge levels using instream criteria, background data and available dilution; determining if technology based limits apply; developing Best Professional Judgment (BPJ)-based limits; taking the most stringent of the water quality-based, technology-based, and BPJ-based limits as the new allowable discharge levels; comparing existing permit limits to the new allowable discharge levels and performing an antidegradation/antibacksliding analysis to determine the final permit limits; and evaluating the ability of the facility to meet the final permit limits.

Water quality criteria are comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or State for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal. A technology-based limit is a numeric limit, which is determined by examining the capability of a treatment process to reduce or eliminate pollutants.

WPCP Flow Limitations

Design Flows for CSO communities

When planning WPCP improvements, CSO communities calculate the anticipated wastewater flows 20 years into the future resulting from population growth within currently sewered areas, any additional flows from planned new sewer line construction, and any additional flows resulting from maximizing the amount of combined sewage that will be accepted for treatment at the WPCP in order to reduce the discharge from CSOs. When evaluating whether an increase in design flow proposed as part of a CSO long term control plan complies with antidegradation the sanitary flow component and the combined sewage component are analyzed separately. Any increase in the sanitary component will result in an increase in pollutant loads discharged from the existing WPCP and CSO system. However, an increase in WPCP flow that results from increasing the volume of combine sewage transported to the WPCP for full treatment which was previously discharge untreated, or partially treated, at a CSO outfall, will result in a net decrease in the total pollutant load discharged from the WPCP and the CSOs.

Increases in Wastewater Flow

When a CSO community revises a facility plan DEM compares the wastewater component of the new 20 year design flow to the wastewater component of the previously approved design flow. It is not appropriate to compare the actual existing flows to the revised design flows since it would not account for previously approved sewer projects that have yet to be built or are only partially built. For example if the previously approved and revised design flow are both 5.0 MGD, it would not be appropriate to subject the permittee to an antidegradation analysis if actual flows are 3.0 MGD (i.e. the existing permit limits were already established based on compliance with antidegradation based on 5.0 MGD). This is why the antidegradation analysis is not performed by comparing actual flows to design flows.

The Newport WPCP's approved design flows are based on a 2005 projected population of 73,250 (completed in 1982) while the 2013 estimate of the 2033 population is projected to be 51,039. The 2010 actual population was 48,625 and Newport has projected a 1.0 MGD increase in current flows to accommodate growth over the next 20 years. This revised estimate of the wastewater component of the future design flow included in Newport's Basis of Design Report (BDR) is far below the currently approved design flow based on the previous population projections. Therefore, because the design sanitary wastewater flows are not projected to increase, no changes to the existing concentration limits are necessary to comply with the antidegradation requirements of the RI Water Quality Regulations.

WPCP Limit listed in the RIPDES Permit

The average monthly flow limit included in the RIPDES permit must be met each and every month. The limit is labeled average monthly since it is the average of daily flow records for every day of the month. However since it must be met each month, it represents a maximum monthly average limit.

The limit listed in Newport's current RIPDES permit, issued on September 28, 2007, is 10.7 MGD. However when reviewing the engineering report that established the design flow of 10.7 MGD it is clear that this value is based on the highest average of daily samples collected for an entire year. Therefore it was inappropriate to use the 10.7 MGD as a value that must be met each and every month (i.e. based on the way the 10.7 was original established there will be many months that exceed the value each year). The BDR uses historic annual total flows that include wastewater and stormwater (i.e. combined sewage) to establish an annual average flow of 11.7 MGD. This value is larger than the previous design flow due to the proposed facility modifications that will allow increased pumping of combined sewage to the WPCP for treatment (as explained above the wastewater component of the design is decreasing from the flow previously approved).

To be consistent with the method used to establish the previous design flows, the permit establishes a maximum annual average flow limit of 11.7 MGD; reporting of the monthly average flow with a requirement that standard operating procedures be established to ensure the monthly average flow discharged is below the maximum monthly average design flow of 16.0 MGD; and the inclusion of a daily maximum flow limit of 30 MGD which is the maximum flow that can be hydraulically processed by the WPCP after the recommendations of the System Master Plan have been implemented. Since the annual average flow limit of 11.7 MGD and the maximum daily flow limit of 30 MGD will not be achievable until after the recommendations of the System Master Plan have been implemented, the DEM's has established the following interim flow limits:

Period	Flow Limits (MGD)		
	Annual Average	Monthly Average	Daily Maximum
Prior to WPCP Upgrade	--- MGD	16.0 MGD	19.7 MGD
After WPCP Upgrade and Prior to Completion of Inflow Removal Work	13.1 MGD	16.0 MGD	30.0 MGD
Final Limits	11.7 MGD	--- MGD ¹	30.0 MGD

¹ The monthly average flow limit shall be monitor only with a footnote indicating that the WPCP shall be operated in a manner to treat a monthly average flow of 16.0 MGD

Increases in total WPCP flow and changes in pollutant loadings due to maximizing treatment of combined sewage at the WPCP.

The CSO LTCP and WPCP BDR include sewer system and WPCP modifications to transport combined sewage, that is currently being discharged through CSOs with minimal or no treatment, to the WPCP for full treatment and disinfection prior to discharge. As a result, CSO discharges at the Wellington Avenue and Washington Street CSO locations will be greatly decreased and these flows will be treated and discharged from the WPCP. Implementation of the CSO System Master Plan will result in a net decrease in the total quantity of TSS, BOD₅ and fecal coliform discharged from the WPCP, Wellington Avenue CSO Facility, and the Washington Street CSO Facility.

As noted in table 3-10 of the System Master Plan, during a typical year the Wellington Avenue CSO Facility and Washington Street CSO Facility discharge 12 times and result in a discharge of 11,038 pounds of TSS/year and 12,145 lbs of BOD₅/ year. As indicated above, after implementation of the System Master Plan, these discharges will be eliminated during a typical year and the corresponding increase in TSS and BOD₅ discharged from the WWTF will be 3,000 lbs/year (using 12 overflow events/year and the associated 250 lbs/day increase in average pollutant loads from these events). Note: During dry weather, when the WPCP's flows are below 11.7 MGD, the WPCP's concentration based limits and percent removal limits will prevent the WPCP from discharging the 250 lbs/d increased BOD₅ and TSS load. Therefore increasing the WPCP's BOD₅ and TSS limits by 250 lbs/day will result in a net decrease in the pollutant loading to receiving waters by allowing the discharges from the CSO facilities to be eliminated during a typical year.

WPCP Conventional Pollutant Permit Limitations

BOD₅, TSS, and pH

The "Average Monthly" and "Average Weekly" biochemical oxygen demand (BOD₅) and total suspended solids (TSS) concentration-based limits, and the pH limitations are based upon the secondary treatment requirements in Section 301(b)(1)(B) of the Clean Water Act (CWA), as defined in 40 CFR 133.102 (a)-(c). "Maximum Daily" BOD₅ and TSS concentration-based limits are based on Rhode Island requirements for Publicly Owned Treatment Works (POTWs) under Rule 17.04(b) of the RIPDES Regulations and as provided in 40 CFR 123.25. The "Average Monthly" and "Maximum Daily" BOD₅ and TSS load-based limits were determined by multiplying the "Average Monthly" and "Maximum Daily" BOD₅ and TSS concentration-based limits, in mg/l, by the WPCP's design flow, in MGD, and the appropriate conversion factor, 8.34.

Oil and Grease

Oil and Grease monitoring requirements were assigned in the previous permit and have been maintained in this permit in order to serve as a process control parameter. Monitoring data will serve as an indicator of excessive levels of Oil and Grease in the collection system that is typically attributed to restaurants and other sources of Oil and Grease loading which discharge to the sewer collection system. Newport and DEM will be able to use this data to track and potentially initiate corrective action if necessary to prevent backups and blockages within the sewer collection system.

Settleable Solids

DEM and EPA agree that the TSS is an appropriate measure of the solids content being discharged to the receiving waters and that Settleable solids are a "process-control parameter" that can aid in assessment of the operation of the plant but need not be an effluent limit. Therefore, the permit requirements for Settleable Solids are monitor only.

BOD₅ and TSS % Removal

The "Percent Removal" requirements for BOD₅ and TSS are in accordance with 40 CFR 133.102(a) and (b) respectively. Since Newport's collection system is a combined system and may experience dilute influent conditions during wet weather, in accordance with 40 CFR 133.103(a) the percent removal shall be calculated only using data obtained during dry weather conditions. Dry weather is defined as any calendar day on which there is less than 0.1 inch of rain and no snow melt. Sample results from calendar days in which there is 0.1 inches or more of rain or snow on the ground and the average temperature exceeds 32°F, shall not be included in the percent removal calculation.

Bacteria

Table 2.8.D(3) of the Rhode Island Water Quality Regulations includes Enterococci criteria for primary contact/swimming of a geometric mean of 35 colonies/100 ml and a single sample maximum of 104 colonies/100 ml. However, the "single sample maximum" value is only used by the Rhode Island Department of Health to evaluate swimming advisories at public beaches and is not applied to the receiving water in the area of the Newport WPCP's outfall. EPA's November 12, 2008 memorandum regarding "Initial Zones of Dilution for Bacteria in Rivers and Streams Designated for Primary Contact Recreation" specifies that it is not appropriate to use dilution for bacteria criteria in receiving waters that are designated for primary contact recreation. Therefore, because the receiving water is designated for primary contact recreation, the DEM has assigned a monthly average Enterococci limit of 35 colonies/100 ml. This limit is consistent with the water quality criteria from Table 2.8.D(3) of the Rhode Island Water Quality Regulations. The daily maximum enterococci limit has been set at the 90% upper confidence level value for "lightly used full body contact recreation" of 276 colonies/100 ml. The DEM has also assigned Fecal Coliform monitoring to ensure that the discharge from the WWTF will not have an impact on any areas designated for shellfish harvesting outside of the immediate vicinity of the outfall.

WPCP Toxic Pollutant Limits

Water Quality-Based Limit Calculations

The allowable effluent limitations were established on the basis of acute and chronic aquatic life criteria and human health criteria using the following: available instream dilution; an allocation factor; and background concentrations when available and/or appropriate. The aquatic life and human health criteria are specified in the Rhode Island Water Quality Regulations. Aquatic life criteria have been established to ensure the protection and propagation of aquatic life while human health criteria represent the pollutant levels that would not result in a significant risk to public health from ingestion of aquatic organisms. The more stringent of the two criteria was then used in establishing allowable effluent limitations. Details concerning the calculation of potential permit limitations, selection of factors, which influence their calculation, and the selection of final permit limitations are included below or in the attached documents. The City's first permit to contain water quality based limits was issued in November 1997.

Mixing Zones and Dilution Factors

On November 10, 1997, the Office of Water Resources reissued a RIPDES permit for the Newport WPCP. This permit contained water quality based permit limits using an acute and chronic dilution factor of 66:1 and 78:1, determined from the EPA computer model CORMIX2. Attached Figure #4 depicts the acute and chronic mixing zones as superimposed on an aerial photograph. CORMIX2 is designed to simulate the dilution characteristics of submerged multiport diffuser discharges. The Newport WPCP effluent is discharged through a 42-inch pipe, which is approximately 600 feet offshore and fitted with a diffuser. The pipe diffuser consists of four (4) 24-inch ports, each of which is 30 feet in length. Figure #5 is a schematic of the Newport WPCP's outfall diffuser. Based on the results of the CORMIX2 Prediction File (March 1995) a chronic dilution factor of 78 and an acute dilution factor of 66 were established, with respective mixing zone radii of 100 meters (approximately 328 feet) and 27 meters (approximately 88.56 feet). The DEM has determined that these dilution factors are still appropriate.

Using the above-mentioned dilution factors the allowable discharge limits were calculated as follows:

- a) Background concentration unknown or available data is impacted by sources that have not yet achieved water quality based limits.

$$Limit_1 = (DF) * (Criteria) * (80\%)$$

Where: DF = acute or chronic dilution factor, as appropriate

b) Using available background concentration data¹.

$$Limit_1 = (DF) * (Criteria) * 90\% - (Background) * (DF - 1)$$

Where: DF = acute or chronic dilution factor, as appropriate

Reference Attachment A-3 for calculations of allowable limits based on Aquatic Life and Human Health Criteria.

The formulas and data noted above were applied with the following exceptions

- A) Pollutants that based on the acute and chronic dilution factors, have a higher allowable chronic limit than allowable acute limit. For this situation, both the "Monthly Average" and "Daily Maximum" limits were set at the allowable acute limit.
- B) Total Residual Chlorine (TRC). The limits for TRC were established in accordance with the DEM Effluent Disinfection Policy. The "Monthly Average" and "Daily Maximum" were based on a 100% allocation, a zero background concentration, and the appropriate dilution factors. The 100% allocation factor for TRC was used due to the non-conservative nature of chlorine and the improbability of the receiving water having a detectable background TRC concentration.

The potential ammonia limitations were derived from acute and chronic water quality criteria for saltwater from the Rhode Island Water Quality Regulations, which are based upon salinity, pH, and temperature. A salinity equal to 30 ppt., pH equal to 8.0 standard units, and average temperatures equal to 20°C and 5°C during Summer and Winter seasons, respectively, were used to calculate the allowable water quality-based discharge levels for ammonia. Salinity and temperature values were based upon data contained in the Narragansett Bay Project Reports, #NBP-89-22 and #NBP-89-24, titled "Water Quality Survey of Narragansett Bay-A Summary of the SINBADD 1985-1986" and "SPRAY Cruise-Dissolved Oxygen and Chlorophyll", respectively. The pH value was determined from data contained in a report titled "Monitoring of the Providence and Seekonk Rivers for Trace Metals and Associated Parameters-SPRAY Cruises I, II, III" [Deoring et al., 1988], and from a University of Rhode Island Graduate School of Oceanography research paper titled "Co-occurrence of Dinoflagellate Blooms and High pH in Marine Enclosures", [Hinga, 1992].

Reasonable Potential

In accordance with 40 CFR 122.4(d)(1)(i), it is only necessary to establish permit limits for those pollutants in the discharge which have the reasonable potential to cause or contribute to the exceedance of instream criteria. In order to evaluate the need for permit limits, the most stringent calculated acute and chronic limits are compared to the Discharge Monitoring Report (DMR) and the State User Fee Program data. A summary of the DMR data for the period June 2009 through March 2014 and a complete listing of any pollutants detected as part of the State User Fee Program data for the period June 2009 through March 2014 are provided in Attachments A-4 and A-5, respectively. Attachment A-6 is a summary comparison of the allowable water quality-based limits vs. the DMR and State User Fee Program data.

Based on the analysis presented above, permit limits are required for Total Residual Chlorine.

Although these pollutants did not have "reasonable potential", quarterly monitoring for Total Cyanide, Total Ammonia, Total Aluminum, Total Cadmium, Total Copper, Total Chromium, Total Lead, Total Nickel, and Total Zinc have been included in the permit as part of the standard list of pollutants monitored as part of the quarterly toxicity testing.

¹Source of background data is *Water Quality Survey of Narragansett Bay - A Summary of Results from the SINBADD 1985-1986*; Pilson, Michael E.Q. and Hunt, Carlton, D.; March 1989; Report #NBP-89-22.

WPCP Nonconventional Pollutant Limits

BPJ-Based Permit Limits for Nutrients

The requirement of testing for nutrients (e.g., Total Kjeldahl Nitrogen (TKN), nitrate, and nitrite) is necessary to make a determination on nutrient loadings in the receiving water. This information will aid the Department in future decision making on the necessity of nutrient removals from the treatment plant wastewater.

Bioassay Testing

DEM's toxicity permitting policy is based on past toxicity data and the level of available dilution. Past bioassay monitoring data for Newport has shown no occurrences of toxicity over the past five-(5) years. DEM's toxicity permitting policy requires that acute toxicity be evaluated for effluents with dilutions between 20:1 and 100:1. Therefore, the permit requires that an acute toxicity test be conducted once per quarter on Mysids. The permit contains an acute $LC_{50} \geq 100\%$ effluent limit that shall assure control of the toxicity in the effluent. If recurrent toxicity is demonstrated, then toxicity identification and reduction will be required.

CSO Limits

As indicated above, Newport's sewer collection system consists of combined sewers that convey both sanitary sewage and stormwater runoff during rain events. During wet weather, the combined flow may exceed the capacity of the WPCP and the interceptor sewers, and a portion of the combined flow is discharged to the receiving waters through the CSO facilities. The City currently has two (2) CSO facilities in its system: the Wellington Avenue CSO Facility (007A) and the Washington Street CSO Facility (outfall 010A).

Since the issuance of the last permit, Newport has made improvements to its collection system that has resulted in the overflow from the Long Wharf facility being permanently sealed. Therefore, since the outfall pipe has been permanently sealed this outfall is no longer permitted. The Wellington Avenue CSO Facility is a former microstraining facility that is currently being used for disinfection. Under the first phase of the System Master Plan, this facility will be upgraded to provide better treatment, including disinfection. Once the System Master Plan has been fully implemented, discharges from this outfall will be eliminated up to the 10-year design storm. The Washington Street CSO Facility is an ageing screening and disinfection facility. Under the first phase of the System Master Plan, this facility will be upgraded to provide better screening, disinfection, and dechlorination. Once the System Master Plan has been fully implemented, discharges from this outfall will be significantly reduced, but not eliminated (i.e., there will still be a small volume discharged during a 10-year design storm).

While Newport has achieved significant reduction in CSO discharges, the remaining discharges are still substantial. Implementation of the final System Master Plan, as conditionally approved by EPA, will eliminate all CSOs with the exception of CSO 010A, the discharge location of the Washington Street CSO Treatment Facility.

CSOs are point sources subject to RIPDES permit requirements for both water-quality based and technology-based requirements but are not subject to the secondary treatment regulations applicable to publicly owned treatment works in accordance with 40 CFR §133.103(a). Section 301(b)(1)(C) of the Clean Water Act mandated compliance with water quality standards by July 1, 1977. Technology-based permit limits must be established for best conventional pollutant control technology (BCT) and best available technology economically achievable (BAT) based on best professional judgment (BPJ) in accordance with Section 301(b) and Section 402(a) of the Clean Water Act.

The framework for compliance with Clean Water Act requirements for CSOs is set forth in EPA's National CSO Control Policy, 59 Fed. Reg. 18688 (1994). It sets the following objectives:

- 1) To ensure that if the CSO discharges occur, they are only as a result of wet weather;
- 2) To bring all wet weather CSO discharge points into compliance with the technology based requirements of the CWA and applicable federal and state water quality standards; and
- 3) To minimize water quality, aquatic biota, and human health impacts from wet weather flows.

The CSO Control Policy also established as a matter of national policy the minimum BCT/BAT controls that represent the BPJ of the agency on a consistent, national basis. These are the "nine minimum controls" defined in the CSO Control Policy and set forth in the Part I.B of the Permit. The nine minimum controls include: (1) proper operation and maintenance of the sewer system and the CSOs, (2) maximum use of the collection system for storage, (3) review pretreatment programs to assure that CSO impacts are minimized, (4) maximization of flow to the POTW for treatment, (5) prohibition of dry weather overflows, (6) control of solid and floatable materials in CSOs, (7) pollution prevention programs, (8) public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts, and (9) monitoring to effectively characterize CSO impacts and the efficacy of CSO controls. In accordance with the National CSO Control Policy and consistent with the conditions in the previous permit, the draft permit contains conditions that ensure that Newport complies with the nine minimum controls.

The previous permit required that each CSO discharge receives equivalent to primary treatment. Equivalent to primary treatment was defined as the use of technologies such that the treated effluent results in removal rates of 50% of TSS and 35% of BOD₅ loadings, or 100% removal of settleable solids, whichever is demonstrated to have the greatest water quality benefit. As indicated above, the DEM and EPA agree that TSS is an appropriate measure of the solids content being discharged to the receiving waters. Therefore, the DEM has determined that the removal of 50% of TSS and 35% of BOD₅ loadings will have the greatest water quality benefit and, as a result, these limits continue to be assigned to Newport's CSOs and % removal limits for settleable solids are no longer required for the CSOs. The permit limitations for BOD₅ %-removal and TSS %-removal for Newport's CSO facilities are consistent with the limits from Newport's previous RIPDES permit.

All flows generated by the one (1)-year six (6)-hour storm, and all storms occurring more frequently are subject to the CSO percent removal limitations. Combined sewage entering the Washington Street CSO Facility, designated as Outfall 010A, will either: (1) receive primary treatment and disinfection and discharge through Outfall 010A or (2) be stored and pumped back to Newport's WPCP to receive secondary treatment. The Washington Street combined flows (Outfall 010A) shall be allowed to include flows of combined sewage pumped to the Newport WPCP and receiving secondary treatment when calculating percent removal data. Compliance with the % removal limitations for Outfall 010A shall be evaluated using the following formula:

$$\text{Monthly \% Removal For CSO Facility} = \frac{\sum_{i=1}^n \left[\frac{(V_1 C_1) - [(V_2 C_2) + V_3 C_3 (1 - R)]}{V_1 C_1 + V_4 C_4} \right]}{n}$$

Where:

i = each storm event which activates CSO facility;

n = the number of storm events that CSO facility is activated in a month;

V_1 = volume of flow that enters the Washington Street CSO Facility (prior to screening);

C_1 = concentration of pollutants that enters the Washington Street CSO Facility (prior to screening);

V_2 = volume of flow that is treated and discharged from the Washington Street CSO Facility (Outfall 010A);

C_2 = concentration of pollutants that is treated and discharged from the Washington Street CSO Facility (Outfall 010A);

V_3 = volume of flow that is pumped back to the Newport WPCP (including stored flows pumped after storm);

C_3 = concentration of pollutants that is pumped back to the Newport WPCP (based on flow proportioned composite samples taken during the pump back cycle);

R = monthly percent removal from the Newport WPCP.

Note: The numbering used in Figure 2 corresponds to the subscripts above.

The above formula is not applicable for the Wellington Avenue CSO Facility since flows of combined sewage pumped to the Newport WPCP, untreated effluent, and primary treated CSO discharges cannot be quantified during wet weather events. A simplified percent removal calculation based upon influent and effluent data shall be used for the Wellington Avenue CSO Facility.

In addition, because it will remain as an active discharge after full implementation the System Master Plan, the Washington Street CSO Treatment Facility is subject to additional technology-based effluent limitations. The Washington Street CSO Treatment Facility represents an enhancement of the Nine Minimum Controls, allowing greater use of the system for storage (control #2) and return of the flow to the WPCP for treatment (control #3), removal of floatables and some solid materials (control #6), and reduction of bacteria through disinfection (and the related control of chlorine discharges) (control # 7). DEM has determined additional BCT/BAT effluent limitations using BPJ that are consistent with the requirements of the Consent Decree entered in civil action *Environment Rhode Island, et. al. v. City of Newport*, US Dist. Ct. Dist. of RI, CA 08-265S. These effluent limitations are:

Fecal coliform: 35 cfu/100 ml average monthly; 276 cfu/100 ml maximum daily
Total Residual Chlorine: 20 ug/l maximum daily

These limits shall not go into effect until after the date of completion of the Washington Street CSO Facility improvements required by the Consent Decree, and any amendments thereto, entered in civil action *Environment Rhode Island, et. al. v. City of Newport*, US Dist. Ct. Dist. of RI, CA 08-265S. In making this determination DEM considered the factors identified in 40 C.F.R § 125.3(d), including the cost and benefits of the facility (analyzed in connection with the development of the Newport's CSO control plan), the age of the facility, the fact that the facility can be engineered to meet the design parameters, and the demonstrated ability of treatment technologies to meet the limitations. The permit also requires that the permittee conduct concurrent monitoring for Fecal Coliform to evaluate potential impacts to shellfishing.

For the purposes of CSO monitoring requirements, an overflow shall be defined as any event which causes effluent to enter the receiving water via Outfalls 007A or 010A, for a time greater than or equal to fifteen (15) minutes. Any discharge from a CSO to the receiving water, regardless of the duration, must be reported as a CSO to the DEM's Operations and Maintenance Program. Overflow occurrences shall be considered to be separate overflows if six (6) or more hours separate two (2) overflow events. This is consistent with the design storm used by Newport to design the CSO facilities. A rainfall depth-duration-frequency relationship for the City of Newport was developed by Metcalf and Eddy in 1986 and is presented in Attachment A-7. In order to determine if a particular storm event is equal to or more

frequently occurring than the one (1)-year six (6)-hour design storm, and therefore subject to the CSO permit limits, the depth and duration of a particular event are entered into the chart. If the corresponding location in the chart falls on or below the one (1) year design storm curve, then the rain event is equal to or more frequently occurring than the design storm, and the CSO numeric permit limitations apply.

The monitor only requirements for fecal coliform, enterococci (outfall 007), total residual chlorine (outfall 007), and oil and grease, as well as the requirement to submit a semiannual CSO Summary Report, are included to provide a database to assist in the evaluation of wet weather impacts upon Newport Harbor and Narragansett Bay water quality resulting from CSOs. Dry weather overflows from the CSO facilities are not permitted. A regular maintenance/inspection program, a plan to maximize flow to the Newport Water Pollution Control Plant and storage within the collection system are also required.

Other Limits and Conditions

The effluent monitoring requirements have been specified in accordance with RIPDES regulations as well as 40 CFR 122.41(j)(1), 122.44(i), and 122.48 to yield data representative of the discharge.

Permits must contain sludge conditions requiring compliance with limits, State laws, and applicable regulations as per Section 405(d) of the CWA and 40 CFR 503. The DEM Sludge Order of Approval sets forth the conditions to ensure this compliance. The permit contains requirements for the permittee to comply with the State's Sludge Regulations and the permittee's DEM Order of Approval for sludge disposal in accordance with the requirements of Section 405(d) of the CWA.

The permit contains a reporting requirement for a local program to regulate industrial discharges to the sewer system (referred to as pretreatment program). This program is being required under authority of Section 402(b)(8) of the CWA and 40 CFR 122.44(j)(2) and 403.8 because Newport receives significant discharges of industrial wastewater.

The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and consist primarily of management requirements common to all permits.

Antidegradation Analysis of Permit limit changes

Antibacksliding

Antibacksliding restricts the level of relaxation of water quality based limits from the previous permit. Section 303(d)(4) of the Clean Water Act addresses antibacksliding as the following:

Section 303(d)(4)

- A) Standards not attained - For receiving waters that have not attained the applicable water quality standards, limits based on a TMDL or WLA can only be revised if the water quality standards will be met. This may be done by (i) determining that the cumulative effect of all such revised limits would assure the attainment of such water quality standards; or (ii) removing the designated use which is not being attained in accordance with regulations under Section 303.
- B) Standards attained - For receiving waters achieving or exceeding applicable water quality standards, limits can be relaxed if the revision is consistent with the State's Antidegradation Policy.

Therefore, in order to determine whether backsliding is permissible, the first question that must be answered is whether or not the receiving water is attaining the water quality standard. The office has determined the most appropriate evaluation of existing water quality is by calculating the pollutant levels, which would result after consideration of all currently valid RIPDES permit limits or historic discharge data (whichever is greater), background data (when available), and any new information (i.e.: dilution factors).

Antidegradation

The DEM's "Policy on the Implementation of the Antidegradation Provisions of the Rhode Island Water Quality Regulations" (the Policy) establishes four tiers of water quality protection:

- Tier 1 - In all surface waters, existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
- Tier 2 - In waters where the existing water quality exceeds the levels necessary to support the propagation of fish and wildlife and recreation in and on the water, that quality shall be maintained and protected except for insignificant changes (i.e.: short-term minor changes) in water quality as determined by the Director and in accordance with the Antidegradation Policy. In addition, the Director may allow significant degradation, which is determined to be necessary to achieve important economic or social benefits to the State (important benefits demonstration) in accordance with the Antidegradation Policy.
- Tier 2½ - Where high quality waters constitute Special Resource Protection Waters SRPWs², there shall be no measurable degradation of the existing water quality necessary to protect the characteristics which cause the waterbody to be designated a SRPW. The new or increased discharge or activity will not be allowed unless the applicant can provide adequate evidence that specific pollution controls and/or other mitigation measures will completely eliminate any measurable impacts to the water quality necessary to protect the characteristics that cause the waterbody to be designated an SRPW. Notwithstanding that all public drinking water supplies are SRPWs, public drinking water suppliers may undertake temporary and short-term activities within the boundary perimeter of a public drinking water supply impoundment for essential maintenance or to address emergency conditions in order to prevent adverse effect on public health or safety. These activities must comply with the requirements set forth in Tier 1 and Tier 2.
- Tier 3 - Where high quality waters constitute an Outstanding Natural Resource Water ONRW³, that water quality shall be maintained and protected. The State may allow some limited activities that result in temporary and short-term changes in the water quality of an ONRW. Such activities must not permanently degrade water quality or result in water quality lower than necessary to protect the existing uses in the ONRW.

In order to implement the controls identified in the SMP, the average monthly and daily maximum mass limitations for TSS and BOD₅ for the WPCP included in the RIPDES permit will be increased by 250 lbs/day and 417 lbs/day, respectively. In addition the average annual flow will be increased by 1.0 MGD and the daily maximum flow will be increased from 19.7 MGD to 30.0 MGD. However, as indicated above, these changes are only necessary to allow for an increased volume of combine sewage to be transported to the WPCP for full treatment instead of being partially treated and discharged through a CSO outfall. As a result, these permit limit increases result in a net decrease in the total pollutant loads discharged from the combined WWTF and CSO discharges. All other limits in this permit are at least as stringent as those in the previous permit. For the reasons provided above, the DEM has determined that all of these limits comply with the antidegradation requirements of the RI Water Quality Regulations.

² SRPWs are surface waters identified by the Director as having significant recreational or ecological uses.

³ ONRWs are a special subset of high quality water bodies, identified by the State as having significant recreational or ecological water uses.

Final Permit Limits

Presented in the following Tables is a summary of the permit limitations set forth in the Final Permit for all Outfalls.

Table #1: Outfall 001A – Newport WPCP Effluent

Parameter	Monthly Average	Weekly Average	Daily Maximum
Flow ¹	--- MGD (Annual Ave)	16.0 MGD (Monthly Ave)	19.7 MGD (Daily Max)
Flow ²	13.1 MGD (Annual Ave)	16.0 MGD (Monthly Ave)	30.0 MGD (Daily Max)
Flow ³	11.7 MGD (Annual Ave)	--- MGD ⁴ (Monthly Ave)	30.0 MGD (Daily Max)
BOD ₅ ⁵	30 mg/L	45 mg/L	50 mg/L
BOD ₅ Mass Limits	2,927 lbs/day		4,879 lbs/day
BOD ₅ % Removal	85 % ⁶		
TSS ⁵	30 mg/L	45 mg/L	50 mg/L
TSS Mass Limits	2,927 lbs/day		4,879 lbs/day
TSS % Removal	85 % ⁶		
Oil & Grease ⁵	--- mg/L		--- mg/L
Enterococci	<u>35 cfu</u> 100 mL		<u>276 cfu</u> 100 mL
Fecal Coliform	<u>--- MPN</u> 100 mL		<u>--- MPN</u> 100 mL
Total Residual Chlorine	590 µg/L		860 µg/L
pH	6.0 SU (min.)		9.0 SU (max.)
Settleable Solids		--- ml/L	--- ml/L
TKN (as N)	--- mg/L		--- mg/L
Total Nitrate (as N)	--- mg/L		--- mg/L
Total Nitrite (as N)	--- mg/L		--- mg/L
Total Nitrogen (as N)	--- mg/L		--- mg/L
Total Nitrogen (as N) Mass Limits	--- lb/d		
Cyanide ⁷	--- ug/L		--- ug/L
Ammonia, Total ⁷	--- mg/L		--- mg/L

Aluminum, Total ⁷	--- ug/L		--- ug/L
Cadmium, Total ⁷	--- ug/L		--- ug/L
Copper, Total ⁷	--- ug/L		--- ug/L
Chromium, Hexavalent ⁷	--- ug/L		--- ug/L
Lead, Total ⁷	--- ug/L		--- ug/L
Nickel, Total ⁷	--- ug/L		--- ug/L
Zinc, Total ⁷	--- ug/L		--- ug/L
LC ₅₀ - <i>Mysidopsis bahia</i>			≥ 100%

Note: --- signifies a parameter that must be monitored and data reported; no limit has been established at this time.

¹Limits shall be in effect from the effective date of the permit until the completion of WPCP upgrades required under the Consent Decree, as amended, that was entered to resolve the following civil action: *Environment Rhode Island, et. al. v. City of Newport*, US Dist. Ct. Dist. of RI, CA 08-265S

²Limits shall be in effect from the date of completion of the WPCP upgrades until completion of implementation of the System Master Plan required under the Consent Decree, as amended, that was entered to resolve the following civil action: *Environment Rhode Island, et. al. v. City of Newport*, US Dist. Ct. Dist. of RI, CA 08-265S

³Limits shall be in effect after the completion of implementation of the System Master Plan required under the Consent Decree, as amended, that was entered to resolve the following civil action: *Environment Rhode Island, et. al. v. City of Newport*, US Dist. Ct. Dist. of RI, CA 08-265S

⁴The WPCP shall be operated in accordance with standard operating procedures to treat a monthly average flow of 16.0 MGD

⁵Testing for these parameters shall be performed and reported for influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

⁶Percent removal shall be calculated using data obtained during dry weather conditions. Sample results from calendar days in which there is 0.1 inches or more of rain or snow on the ground and the average temperature exceeds 32°F, shall not be included in the percent removal calculation.

⁷Monitoring data may be obtained in conjunction with bioassay testing.

Table #2: Outfall 010A – Washington Street CSO Facility

Parameter	Monthly Average	Weekly Average	Daily Maximum
Flow (Volume)			--- MG
BOD ₅ ¹	--- mg/L		--- mg/L
TSS ¹	--- mg/L		--- mg/L
BOD ₅ % Removal ²	35% ⁵		
TSS % Removal ²	50% ⁵		
Enterococci ³	--- cfu 100 mL		--- cfu 100 mL
Enterococci ⁴	35 cfu ⁵ 100 mL		276 cfu ⁵ 100 mL
Fecal Coliform	--- MPN 100 mL		--- MPN 100 mL
Total Residual Chlorine ³	--- ug/L		--- ug/L
Total Residual Chlorine ⁴	--- ug/L		20 ug/L ⁵
Oil & Grease	--- mg/L		--- mg/L

Note: --- signifies a parameter that must be monitored and data reported; no limit has been established at this time.

¹ Testing for these parameters shall be performed and reported for influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

² Percent removal shall be computed using the formula in the CSO Limitations section of this document.

³Limits shall be in effect from the effective date of the permit until the completion of the Washington Street CSO Facility Dechlorination improvements required by the Consent Decree, and any amendments thereto, entered in civil action *Environment Rhode Island, et. al. v. City of Newport*, US Dist. Ct. Dist. of RI, CA 08-265S.

⁴Limits shall be in effect after the date of completion of the Washington Street CSO Facility Dechlorination improvements required by the Consent Decree, and any amendments thereto, entered in civil action *Environment Rhode Island, et. al. v. City of Newport*, US Dist. Ct. Dist. of RI, CA 08-265S.

⁵ All flows created by the greater than the one (1)-year six (6)-hour storm (depth = 1.95 inches), and all storms occurring less frequently as defined by the Figure in Attachment A-7, are not subject to these limitations.

* For monitoring purposes, an overflow is defined as any occurrence of a discharge from a CSO to the receiving water with a minimum duration of 15 minutes. Overflows shall be considered to be separate if they are separated by six (6) or more hours. During months of no overflow DMRs shall be marked as "no discharge." Dry weather overflows of any duration are prohibited. Any discharge from a CSO to the receiving water, regardless of the duration, must be reported as a CSO to the DEM's Operations and Maintenance Program.

Table #3: Outfall 007A – Wellington Avenue Microstraining Facility

Parameter	Monthly Average	Weekly Average	Daily Maximum
Flow (Volume)			--- MG
BOD ₅ ¹	--- mg/L		--- mg/L
BOD ₅ % Removal	35% ²		
TSS ¹	--- mg/L		--- mg/L
TSS % Removal	50% ²		
Enterococci	--- cfu 100 mL		--- cfu 100 mL
Fecal Coliform	--- MPN 100 mL		--- MPN 100 mL
Total Residual Chlorine	--- ug/L		--- ug/L
Oil & Grease	--- mg/L		--- mg/L

Note: --- signifies a parameter that must be monitored and data reported; no limit has been established at this time.

¹ Testing for these parameters shall be performed and reported for influent and effluent with appropriate allowances for hydraulic detention (flow-through) time.

² All flows created by the greater than the one (1)-year six (6)-hour storm (depth = 1.95 inches), and all storms occurring less frequently as defined by the Figure in Attachment A-7, are not subject to these limitations.

* For monitoring purposes, an overflow is defined as any occurrence of a discharge from a CSO to the receiving water with a minimum duration of 15 minutes. Overflows shall be considered to be separate if they are separated by six (6) or more hours. During months of no overflow DMRs shall be marked as "no discharge." Dry weather overflows of any duration are prohibited. Any discharge from a CSO to the receiving water, regardless of the duration, must be reported as a CSO to the DEM's Operations and Maintenance Program.

V. Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. In accordance with Chapter 46-17.4 of Rhode Island General Laws, a public hearing will be held prior to the close of the public comment period. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

Following the close of the comment period, and after a public hearing, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments, provided oral testimony, or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

VI. DEM Contact

Additional information concerning the permit may be obtained between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday, excluding holidays from:

Joseph B. Haberek, P.E.
Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-6820, Ext. 7715
E-mail: joseph.haberek@dem.ri.gov

DRAFT

Date

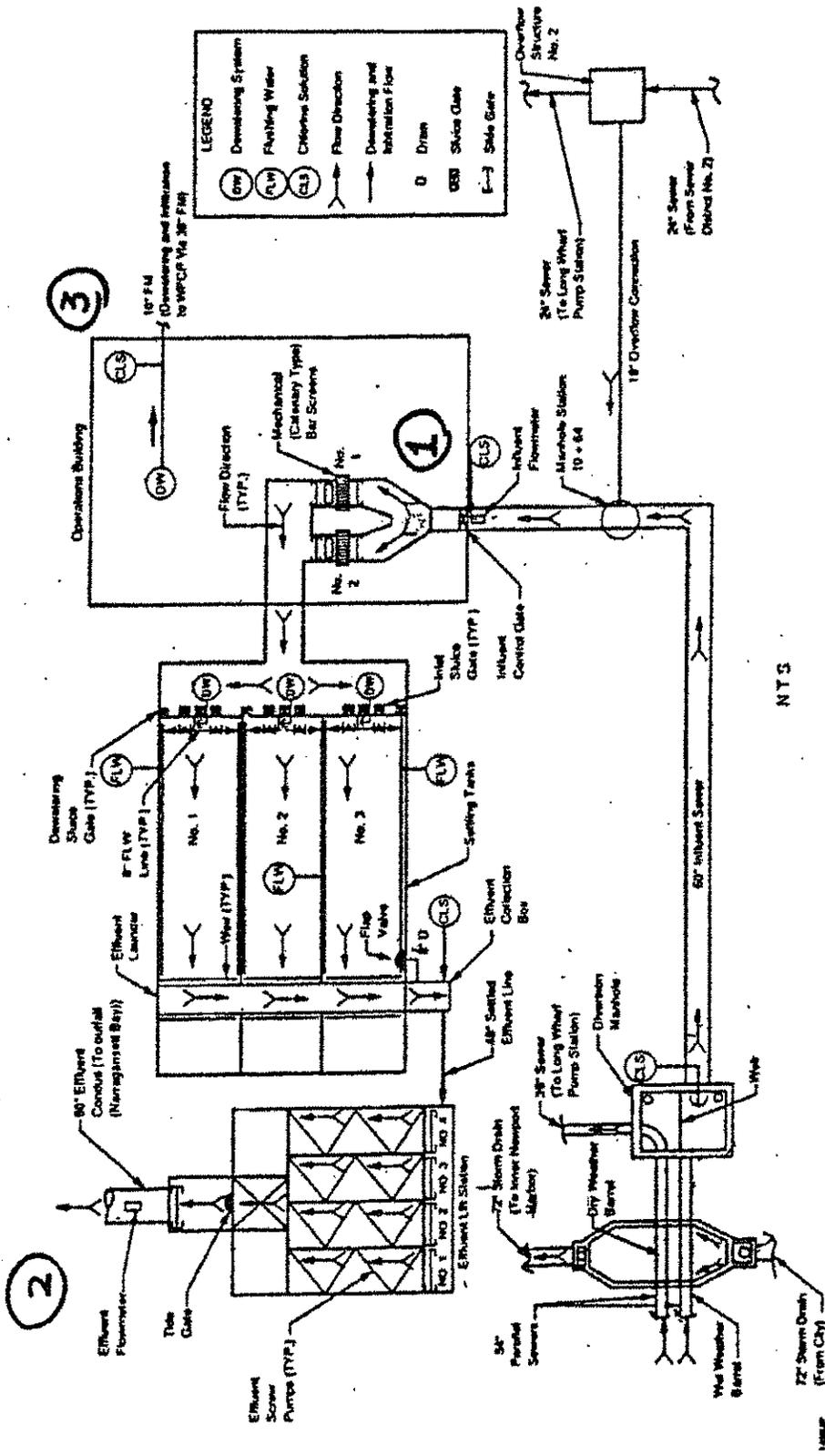
Joseph B. Haberek, P.E.
Principal Sanitary Engineer
RIPDES Program
Office of Water Resources
Department of Environmental Management

FIGURE #1
Newport WPCP Flow Diagram

FIGURE #2

Washington Street CSO Facility Flow Diagram

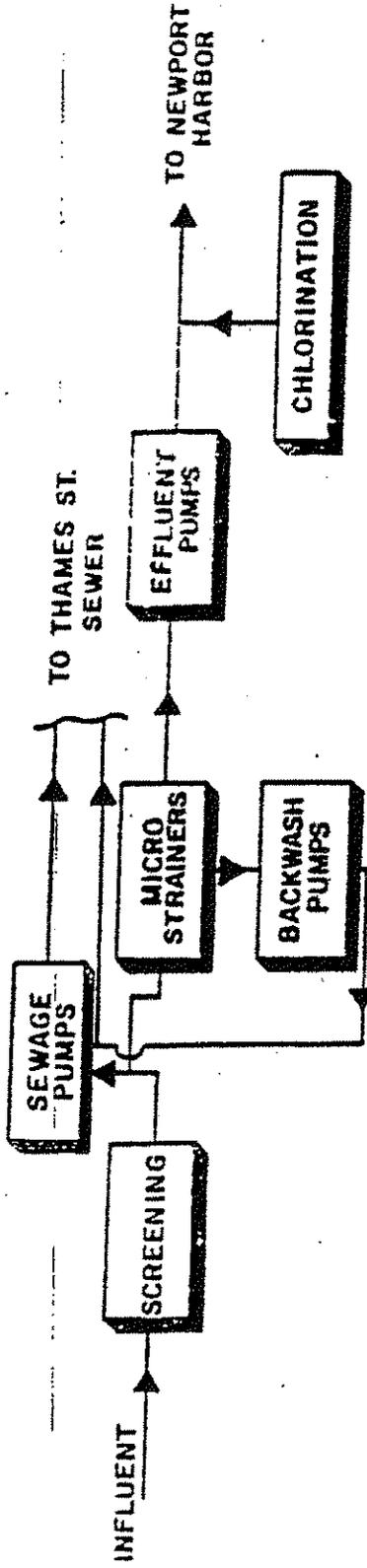
10/10/2014 10:10:10 AM



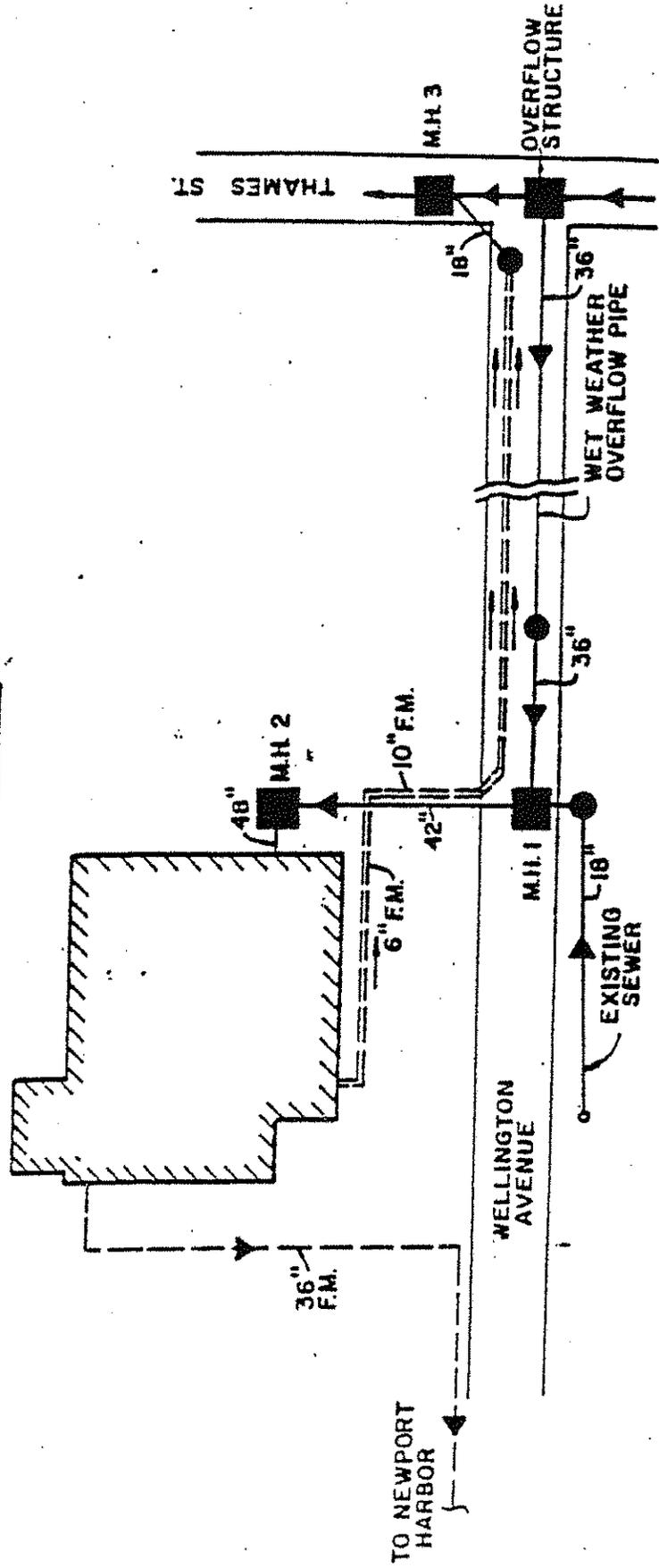
Source: Metcalf and Eddy

Washington Street
CSO Facility Flow Diagram

FIGURE #3
Wellington Avenue CSO Facility Flow Diagram



WELLINGTON AVENUE PUMPING STATION & MICROSTRAINING FACILITY SCHEMATIC



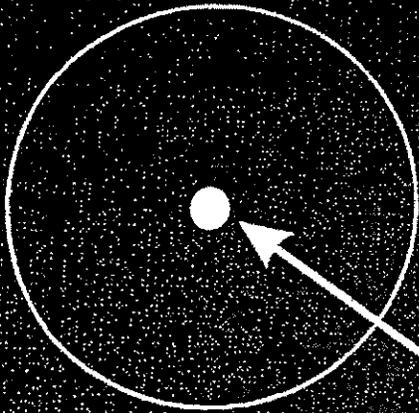
Wellington Avenue CSO Facility
Flow Diagram

Source: Keyes Associates

FIGURE #4
Newport WPCP Acute and Chronic Mixing Zones

Newport WPCF Outfall

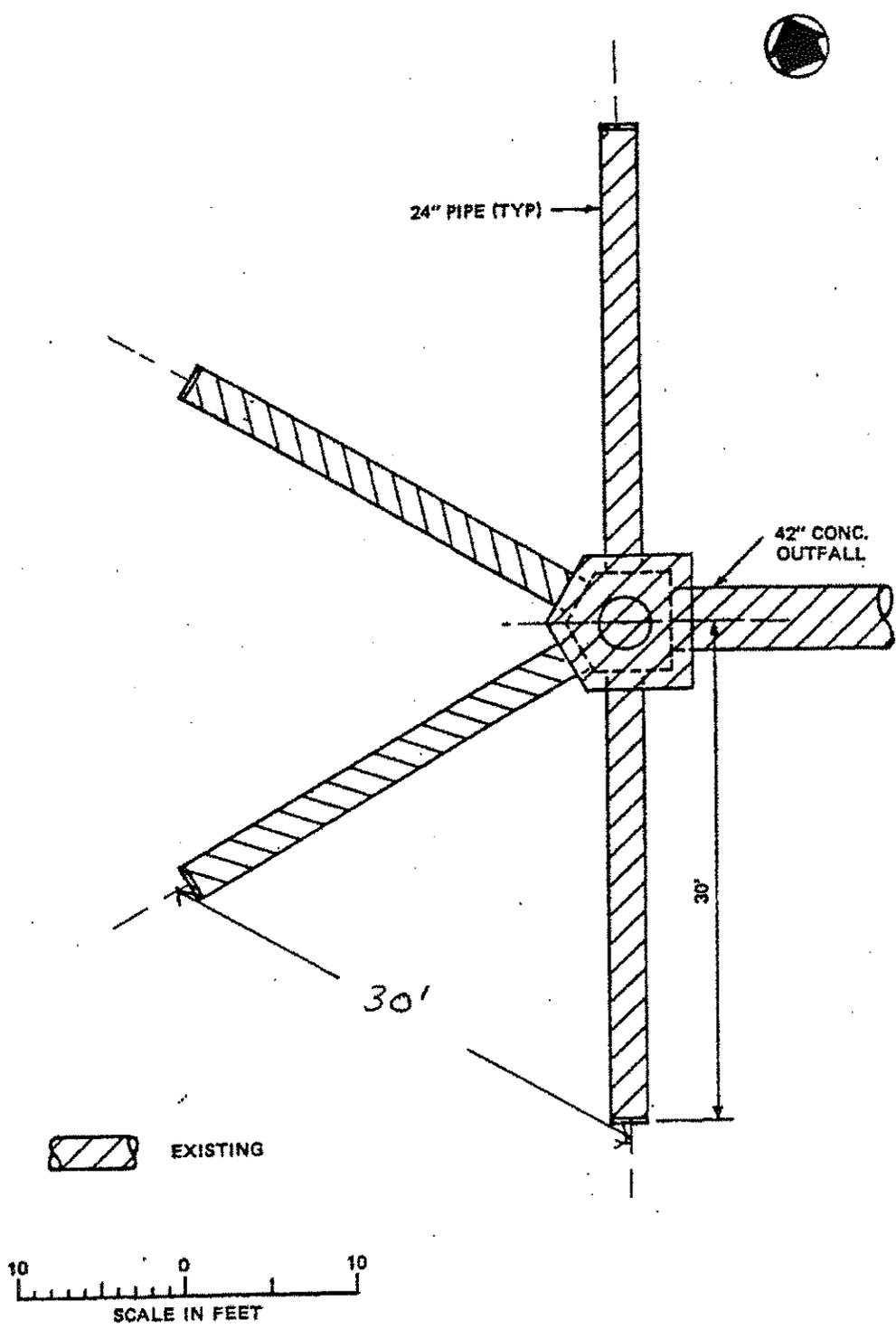
Chronic Mixing Zone
Dilution = 78:1
Radius = 100m



Acute Mixing Zone
Dilution = 66:1
Radius = 27m

Newport WPCF Mixing Zone Diagram

FIGURE #5
Newport WPCP Outfall Pipe Diffuser Schematic



Newport's WPCP Outfall as shown in the "Application for Modification of Secondary Treatment Requirements for its Water Pollution Control Plant Effluent Discharge into Marine Waters", Vol I., Metcalf & Eddy, Inc.

Newport WPCP's Outfall Pipe Diffuser Schematic

**Attachment A-1 –
EPA Region 1 Annual Pretreatment Report Summary Sheet**

POTW Name:

NPDES Permit #:

Pretreatment Report Period Start Date:

Pretreatment Report Period End Date:

of Significant Industrial Users (SIUs):

of SIUs Without Control Mechanisms:

of SIUs not Inspected:

of SIUs not Sampled:

of SIUs in Significant Noncompliance (SNC) with Pretreatment Standards:

of SIUs in SNC with Reporting Requirements:

of SIUs in SNC with Pretreatment Compliance Schedule:

of SIUs in SNC Published in Newspaper:

of SIUs with Compliance Schedules:

of Violation Notices Issued to SIUs:

of Administrative Orders Issued to SIUs:

of Civil Suits Filed Against SIUs:

of Criminal Suits Filed Against SIUs:

of Categorical Industrial Users (CIUs):

of CIUs in SNC:

Penalties

Total Dollar Amount of Penalties Collected \$

of IUs from which Penalties have been collected:

Local Limits

Date of Most Recent Technical Evaluation of Local Limits:

ATTACHMENT A-3

**Calculation of Allowable Acute and Chronic Discharge Limitations
Based on Saltwater Aquatic Life Criteria and Human Health Criteria**

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS FACILITY SPECIFIC DATA INPUT SHEET

NOTE: LIMITS BASED ON RI WATER QUALITY CRITERIA DATED JULY 2006

FACILITY NAME: Newport WPCP

RIPDES PERMIT #: RI0100293

	DISSOLVED BACKGROUND DATA (ug/L)	ACUTE METAL TRANSLATOR	CHRONIC METAL TRANSLATOR
ALUMINUM	NA	NA	NA
ARSENIC	NA	1	1
CADMIUM	0.0351	0.994	0.994
CHROMIUM III	NA	NA	NA
CHROMIUM VI	0.1873	0.993	0.993
COPPER	0.6629	0.83	0.83
LEAD	0.046	0.951	0.951
MERCURY	NA	0.85	NA
NICKEL	1.1598	0.99	0.99
SELENIUM	NA	0.998	0.998
SILVER	0.0048	0.85	0.85
ZINC	NA	0.946	0.946

USE NA WHEN NO DATA IS AVAILABLE

NOTE 1: BACKGROUND DATA BASED ON AVERAGE CONCENTRATIONS OBTAINED FROM THE FOUR SINBADD CRUISES IN CURRENT REPORT #: NBP-89-22 (LOCATIONS B7, B8, B9, B13, B14, B15, & B16).

NOTE 2: METAL TRANSLATORS FROM RI WATER QUALITY REGS.

DILUTION FACTORS	
ACUTE =	66 x
CHRONIC =	78 x
HUMAN HEALTH =	78 x

NOTE: TEST WWTF'S DILUTION FACTORS OBTAINED FROM A DYE STUDY.

TOTAL AMMONIA CRITERIA (ug/L)	
WINTER ACUTE =	21000
CHRONIC =	3100
SUMMER ACUTE =	7300
CHRONIC =	1100

NOTE 1: LIMITS ARE FROM TABLE 3 IN THE RI WATER QUALITY REGS. USING:

SALINITY = 30 g/Kg
 WINTER (NOV-APRIL) pH=8.0 s.u.;
 SUMMER (MAY-OCT) pH=8.0 s.u.
 WINTER (NOV-APRIL) TEMP=5.0 C;
 SUMMER (MAY-OCT) TEMP=20.0 C.

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: Newport WPCP RIPDES PERMIT #: RI0100293

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS							
TOXIC METALS AND CYANIDE							
ANTIMONY	7440360			No Criteria		640	39936
ARSENIC (limits are total recoverable)	7440382	NA	69	3643.2	36	1.4	87.36
ASBESTOS	1332214			No Criteria			No Criteria
BERYLLIUM	7440417			No Criteria			No Criteria
CADMIUM (limits are total recoverable)	7440439	0.0351	40	2388.046781	8.8		618.7699195
CHROMIUM III (limits are total recoverable)	16065831	NA		No Criteria			No Criteria
CHROMIUM VI (limits are total recoverable)	18540299	0.1873	1100	65788.34391	50		3520.219436
COPPER (limits are total recoverable)	7440508	0.6629	4.8	291.6042169	3.1		200.6948193
CYANIDE	57125		1	52.80	1	140	62.4
LEAD (limits are total recoverable)	7439921	0.046	210	13113.57518	8.1		594.1934805
MERCURY (limits are total recoverable)	7439976	NA	1.8	111.8117647	0.94	0.15	9.36
NICKEL (limits are total recoverable)	7440020	1.1598	74	4363.851515	8.2	4600	491.2478788
SELENIUM (limits are total recoverable)	7782492	NA	290	15342.68537	71	4200	4439.278557
SILVER (limits are total recoverable)	7440224	0.0048	1.9	132.4094118		0.47	No Criteria
THALLIUM	7440280			No Criteria		26000	29.328
ZINC (limits are total recoverable)	7440666	NA	90	5023.255814	81		5342.917548
VOLATILE ORGANIC COMPOUNDS							
ACROLEIN	107028			No Criteria		290	18096
ACRYLONITRILE	107131			No Criteria		2.5	156
BENZENE	71432			No Criteria		510	31824
BROMOFORM	75252			No Criteria		1400	87360
CARBON TETRACHLORIDE	56235			No Criteria		16	998.4
CHLOROBENZENE	108907			No Criteria		1600	99840
CHLORODIBROMOMETHANE	124481			No Criteria		130	8112
CHLOROFORM	67663			No Criteria		4700	293280
DICHLOROBROMOMETHANE	75274			No Criteria		170	10608
1,2DICHLOROETHANE	107062			No Criteria		370	23088
1,1DICHLOROETHYLENE	75354			No Criteria		7100	443040
1,2DICHLOROPROPANE	78875			No Criteria		150	9360
1,3DICHLOROPROPYLENE	542756			No Criteria		21	1310.4
ETHYLBENZENE	100414			No Criteria		2100	131040
BROMOMETHANE (methyl bromide)	74839			No Criteria		1500	93600
CHLOROMETHANE (methyl chloride)	74873			No Criteria			No Criteria
METHYLENE CHLORIDE	75092			No Criteria		5900	368160

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: Newport WPCP RIPDES PERMIT #: RI0100293

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,1,2,2-TETRACHLOROETHANE	79345			No Criteria		40	2496
TETRACHLOROETHYLENE	127184			No Criteria		33	2059.2
TOLUENE	108883			No Criteria		15000	936000
1,2-TRANS-DICHLOROETHYLENE	156605			No Criteria		10000	624000
1,1,1-TRICHLOROETHANE	71556			No Criteria		160	No Criteria
1,1,2-TRICHLOROETHANE	79005			No Criteria		300	9984
TRICHLOROETHYLENE	79016			No Criteria		2.4	18720
VINYL CHLORIDE	75014			No Criteria			149.76
ACID ORGANIC COMPOUNDS							
2-CHLOROPHENOL	95578			No Criteria		150	9360
2,4-DICHLOROPHENOL	120832			No Criteria		290	18096
2,4-DIMETHYLPHENOL	105679			No Criteria		850	53040
4,6-DINITRO-2-METHYL PHENOL	534521			No Criteria		280	17472
2,4-DINITROPHENOL	51285			No Criteria		5300	330720
4-NITROPHENOL	88755			No Criteria			No Criteria
PENTACHLOROPHENOL	87865			686.4	7.9	30	492.96
PHENOL	108952		13	No Criteria		1700000	106080000
2,4,6-TRICHLOROPHENOL	88062			No Criteria		24	1497.6
BASE NEUTRAL COMPOUNDS							
ACENAPHTHENE	83329			No Criteria		990	61776
ANTHRACENE	120127			No Criteria		40000	2496000
BENZIDINE	92875			No Criteria		0.002	0.1248
POLYCYCLIC AROMATIC HYDROCARBONS				No Criteria		0.18	11.232
BIS(2-CHLOROETHYL)ETHER	111444			No Criteria		5.3	330.72
BIS(2-CHLOROISOPROPYL)ETHER	108601			No Criteria		65000	4056000
BIS(2-ETHYLHEXYL)PHTHALATE	117817			No Criteria		22	1372.8
BUTYL BENZYL PHTHALATE	85687			No Criteria		1900	118560
2-CHLORONAPHTHALENE	91587			No Criteria		1600	99840
1,2-DICHLOROBENZENE	95501			No Criteria		1300	81120
1,3-DICHLOROBENZENE	541731			No Criteria		960	59904
1,4-DICHLOROBENZENE	106467			No Criteria		190	11856
3,3-DICHLOROBENZIDENE	91941			No Criteria		0.28	17.472
DIETHYL PHTHALATE	84662			No Criteria		44000	2745600
DIMETHYL PHTHALATE	131113			No Criteria		1100000	68640000
Di-n-BUTYL PHTHALATE	84742			No Criteria		4500	280800
2,4-DINITROTOLUENE	121142			No Criteria		34	2121.6

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: Newport WPCP RIPDES PERMIT #: RI0100293

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
1,2-DIPHENYLHYDRAZINE	122667			No Criteria		2	124.8
FLUORANTHENE	206440			No Criteria		140	8736
FLUORENE	86737			No Criteria		5300	330720
HEXACHLOROBENZENE	118741			No Criteria		0.0029	0.18096
HEXACHLOROBUTADIENE	87683			No Criteria		180	11232
HEXACHLOROCYCLOPENTADIENE	77474			No Criteria		1100	68640
HEXACHLOROETHANE	67721			No Criteria		33	2059.2
ISOPHORONE	78591			No Criteria		9600	599040
NAPHTHALENE	91203			No Criteria			No Criteria
NITROBENZENE	98953			No Criteria		690	43056
NNITROSODIMETHYLAMINE	62759			No Criteria		30	1872
NNITROSODINPROPYLAMINE	621647			No Criteria		5.1	318.24
NNITROSODIPHENYLAMINE	86306			No Criteria		60	3744
PYRENE	129000			No Criteria		4000	249600
1,2,4trichlorobenzene	120821			No Criteria		70	4368
PESTICIDES/PCBs							
ALDRIN	309002		1.3	68.64		0.0005	0.0312
Alpha BHC	319846			No Criteria		0.049	3.0576
Beta BHC	319857			No Criteria		0.17	10.608
Gamma BHC (Lindane)	58899		0.16	8.448		1.8	112.32
CHLORDANE	57749		0.09	4.752	0.004	0.0081	0.2496
4,4DDT	50293		0.13	6.864	0.001	0.0022	0.0624
4,4DDE	72559			No Criteria		0.0022	0.13728
4,4DDD	72548			No Criteria		0.0031	0.19344
DIELDRIN	60571		0.71	37.488	0.0019	0.00054	0.033696
ENDOSULFAN (alpha)	959988		0.034	1.7952	0.0087	89	0.54288
ENDOSULFAN (beta)	33213659		0.034	1.7952	0.0087	89	0.54288
ENDOSULFAN (sulfate)	1031078			No Criteria		89	5553.6
ENDRIN	72208		0.037	1.9536	0.0023	0.06	0.14352
ENDRIN ALDEHYDE	7421934			No Criteria		0.3	18.72
HEPTACHLOR	76448		0.053	2.7984	0.0036	0.00079	0.049296
HEPTACHLOR EPOXIDE	1024573		0.053	2.7984	0.0036	0.00039	0.024336
POLYCHLORINATED BIPHENYLS3	1336363			No Criteria	0.03	0.00064	0.039936
2,3,7,8TCDD (Dioxin)	1746016		0.21	No Criteria		0.000000051	3.1824E-06
TOXAPHENE	8001352		0.42	11.088	0.0002	0.0028	0.01248
TRIBUTYL TIN				22.176	0.0074		0.46176

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS

FACILITY NAME: Newport WPCP RIPDES PERMIT #: RI0100293

NOTE: METALS CRITERIA ARE DISSOLVED, METALS LIMITS ARE TOTAL; AMMONIA CRITERIA AND LIMITS HAVE BEEN CONVERTED TO ug/l N.

CHEMICAL NAME	CAS #	BACKGROUND CONCENTRATION (ug/L)	SALTWATER CRITERIA ACUTE (ug/L)	DAILY MAX LIMIT (ug/L)	SALTWATER CRITERIA CHRONIC (ug/L)	HUMAN HEALTH NON-CLASS A CRITERIA (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS							
OTHER SUBSTANCES							
ALUMINUM (limits are total recoverable)	7429905	NA		No Criteria			No Criteria
AMMONIA as N (winter/summer)	7664417		17262	911434	2548		159008 56422.1
4BROMOPHENYL PHENYL ETHER	16887006			No Criteria			No Criteria
CHLORIDE	7782505		13	No Criteria	7.5		No Criteria
CHLORINE				858			585
4CHLORO2METHYLPHENOL				No Criteria			No Criteria
1CHLORONAPHTHALENE				No Criteria			No Criteria
4CHLOROPHENOL	106489			No Criteria			No Criteria
2,4DICHLORO6METHYLPHENOL				No Criteria			No Criteria
1,1DICHLOROPROPANE	142289			No Criteria			No Criteria
1,3DICHLOROPROPANE				No Criteria			No Criteria
2,3DINITROTOLUENE				No Criteria			No Criteria
2,4DINITRO6METHYL PHENOL				No Criteria			No Criteria
IRON	7439896			No Criteria			No Criteria
pentachlorobenzene	608935			No Criteria			No Criteria
PENTACHLOROETHANE				No Criteria			No Criteria
1,2,3,5tetrachlorobenzene				No Criteria			No Criteria
1,1,1,2TETRACHLOROETHANE	630206			No Criteria			No Criteria
2,3,4,6TETRACHLOROPHENOL	58902			No Criteria			No Criteria
2,3,5,6TETRACHLOROPHENOL				No Criteria			No Criteria
2,4,5TRICHLOROPHENOL	95954			No Criteria			No Criteria
2,4,6TRINITROPHENOL	88062			No Criteria			No Criteria
XYLENE	1330207			No Criteria			No Criteria

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS
FACILITY NAME: Newport WPCP **RIPDES PERMIT #: RI0100293**

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
PRIORITY POLLUTANTS			
TOXIC METALS AND CYANIDE			
ANTIMONY	7440360	No Criteria	39936.00
ARSENIC, TOTAL	7440382	3643.20	87.36
ASBESTOS	1332214	No Criteria	No Criteria
BERYLLIUM	7440417	No Criteria	No Criteria
CADMIUM, TOTAL	7440439	2388.05	618.77
CHROMIUM III, TOTAL	16065831	No Criteria	No Criteria
CHROMIUM VI, TOTAL	18540299	65788.34	3520.22
COPPER, TOTAL	7440508	291.60	200.69
CYANIDE	57125	52.80	52.80
LEAD, TOTAL	7439921	13113.58	594.19
MERCURY, TOTAL	7439976	111.81	9.36
NICKEL, TOTAL	7440020	4363.85	491.25
SELENIUM, TOTAL	7782492	15342.69	4439.28
SILVER, TOTAL	7440224	132.41	No Criteria
THALLIUM	7440280	No Criteria	29.33
ZINC, TOTAL	7440666	5023.26	5023.26
VOLATILE ORGANIC COMPOUNDS			
ACROLEIN	107028	No Criteria	18096.00
ACRYLONITRILE	107131	No Criteria	156.00
BENZENE	71432	No Criteria	31824.00
BROMOFORM	75252	No Criteria	87360.00
CARBON TETRACHLORIDE	56235	No Criteria	998.40
CHLOROBENZENE	108907	No Criteria	99840.00
CHLORODIBROMOMETHANE	124481	No Criteria	8112.00
CHLOROFORM	67663	No Criteria	293280.00
DICHLOROBROMOMETHANE	75274	No Criteria	10608.00
1,2-DICHLOROETHANE	107062	No Criteria	23088.00
1,1-DICHLOROETHYLENE	75354	No Criteria	443040.00
1,2-DICHLOROPROPANE	78875	No Criteria	9360.00
1,3-DICHLOROPROPYLENE	542756	No Criteria	1310.40
ETHYLBENZENE	100414	No Criteria	131040.00
BROMOMETHANE (methyl bromide)	74839	No Criteria	93600.00
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria
METHYLENE CHLORIDE	75092	No Criteria	368160.00
1,1,2,2-TETRACHLOROETHANE	79345	No Criteria	2496.00

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
TETRACHLOROETHYLENE	127184	No Criteria	2059.20
TOLUENE	108883	No Criteria	936000.00
1,2-TRANS-DICHLOROETHYLENE	156605	No Criteria	624000.00
1,1,1-TRICHLOROETHANE	71556	No Criteria	No Criteria
1,1,2-TRICHLOROETHANE	79005	No Criteria	9984.00
TRICHLOROETHYLENE	79016	No Criteria	18720.00
VINYL CHLORIDE	75014	No Criteria	149.76
ACID ORGANIC COMPOUNDS			
2-CHLOROPHENOL	95578	No Criteria	9360.00
2,4-DICHLOROPHENOL	120832	No Criteria	18096.00
2,4-DIMETHYLPHENOL	105679	No Criteria	53040.00
4,6-DINITRO-2-METHYL PHENOL	534521	No Criteria	17472.00
2,4-DINITROPHENOL	51285	No Criteria	330720.00
4-NITROPHENOL	88755	No Criteria	No Criteria
PENTACHLOROPHENOL	87865	686.40	492.96
PHENOL	108952	No Criteria	10608000.00
2,4,6-TRICHLOROPHENOL	88062	No Criteria	1497.60
BASE NEUTRAL COMPOUNDS			
ACENAPHTHENE	83329	No Criteria	61776.00
ANTHRACENE	120127	No Criteria	2496000.00
BENZIDINE	92875	No Criteria	0.12
PAHS		No Criteria	11.23
BIS(2-CHLOROETHYL)ETHER	111444	No Criteria	330.72
BIS(2-CHLOROISOPROPYL)ETHER	108601	No Criteria	4056000.00
BIS(2-ETHYLHEXYL)PHTHALATE	117817	No Criteria	1372.80
BUTYL BENZYL PHTHALATE	85687	No Criteria	118560.00
2-CHLORONAPHTHALENE	91587	No Criteria	99840.00
1,2-DICHLOROBENZENE	95501	No Criteria	81120.00
1,3-DICHLOROBENZENE	541731	No Criteria	59904.00
1,4-DICHLOROBENZENE	106467	No Criteria	11856.00
3,3-DICHLOROBENZIDENE	91941	No Criteria	17.47
DIETHYL PHTHALATE	84662	No Criteria	2745600.00
DIMETHYL PHTHALATE	131113	No Criteria	6864000.00
DI-n-BUTYL PHTHALATE	84742	No Criteria	280800.00
2,4-DINITROTOLUENE	121142	No Criteria	2121.60
1,2-DIPHENYLHYDRAZINE	122667	No Criteria	124.80
FLUORANTHENE	206440	No Criteria	8736.00

CALCULATION OF WATER QUALITY BASED SALTWATER DISCHARGE LIMITS
RIPDES PERMIT #: RI0100293

FACILITY NAME: Newport WPCP

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
FLUORENE	86737	No Criteria	330720.00
HEXACHLOROBENZENE	118741	No Criteria	0.18
HEXACHLOROBUTADIENE	87683	No Criteria	11232.00
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	68640.00
HEXACHLOROETHANE	67721	No Criteria	2059.20
ISOPHORONE	78591	No Criteria	599040.00
NAPHTHALENE	91203	No Criteria	No Criteria
NITROBENZENE	98953	No Criteria	43056.00
N-NITROSODIMETHYLAMINE	62759	No Criteria	1872.00
N-NITROSODI-N-PROPYLAMINE	621647	No Criteria	318.24
N-NITROSODIPHENYLAMINE	86306	No Criteria	3744.00
PYRENE	129000	No Criteria	249600.00
1,2,4trichlorobenzene	120821	No Criteria	4368.00
PESTICIDES/PCBs			
ALDRIN	309002	68.64	0.03
Alpha BHC	319846	No Criteria	3.06
Beta BHC	319857	No Criteria	10.61
Gamma BHC (Lindane)	58899	8.45	8.45
CHLORDANE	57749	4.75	0.25
4,4DDT	50293	6.86	0.06
4,4DDE	72559	No Criteria	0.14
4,4DDD	72548	No Criteria	0.19
DIELDRIN	60571	37.49	0.03
ENDOSULFAN (alpha)	959988	1.80	0.54
ENDOSULFAN (beta)	33213659	1.80	0.54
ENDOSULFAN (sulfate)	1031078	No Criteria	5553.60
ENDRIN	72208	1.95	0.14
ENDRIN ALDEHYDE	7421934	No Criteria	18.72
HEPTACHLOR	76448	2.80	0.05
HEPTACHLOR EPOXIDE	1024573	2.80	0.02
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.04
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00
TOXAPHENE	8001352	11.09	0.01
TRIBUTYL TIN		22.18	0.46

CHEMICAL NAME	CAS#	DAILY MAX LIMIT (ug/L)	MONTHLY AVE LIMIT (ug/L)
NON PRIORITY POLLUTANTS			
OTHER SUBSTANCES			
ALUMINUM, TOTAL	7429905	No Criteria	No Criteria
AMMONIA (as N), WINTER (NOV-APR)	7664417	911433.60	159007.68
AMMONIA (as N), SUMMER (MAY-OC)	7664417	316831.68	56422.08
4BROMOPHENYL PHENYL ETHER	16887006	No Criteria	No Criteria
CHLORIDE	7782505	No Criteria	No Criteria
CHLORINE		858.00	585.00
4CHLORO2METHYLPHENOL		No Criteria	No Criteria
1CHLORONAPHTHALENE		No Criteria	No Criteria
4CHLOROPHENOL	106489	No Criteria	No Criteria
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria
1,1DICHLOROPROPANE		No Criteria	No Criteria
1,3DICHLOROPROPANE	142289	No Criteria	No Criteria
2,3DINITROTOLUENE		No Criteria	No Criteria
2,4DINITRO6METHYL PHENOL		No Criteria	No Criteria
IRON	7439896	No Criteria	No Criteria
pentachlorobenzene	608935	No Criteria	No Criteria
PENTACHLOROETHANE		No Criteria	No Criteria
1,2,3,5tetrachlorobenzene		No Criteria	No Criteria
1,1,1,2TETRACHLOROETHANE	630206	No Criteria	No Criteria
2,3,4,6TETRACHLOROPHENOL	58902	No Criteria	No Criteria
2,3,5,6TETRACHLOROPHENOL		No Criteria	No Criteria
2,4,5TRICHLOROPHENOL	95954	No Criteria	No Criteria
2,4,6TRINITROPHENOL	88062	No Criteria	No Criteria
XYLENE	1330207	No Criteria	No Criteria

ATTACHMENT A-4

**Summary of Discharge Monitoring Report Data
June 2009 through March 2014**

NEWPORT WPCF

DMR Data Summary 7/1/14

***** NOT ICIS CERTIFIED*****

002C

BOD, 5-day, percent removal Location=

	MINIMUM %
Mean	52.9074
Minimum	.
Maximum	120.
Data Count	27

Settleable solids percent removal Location=

	DAILY MX %
Mean	208.1852
Minimum	.
Maximum	3842.
Data Count	27

Solids, suspended percent removal

	MINIMUM %
Mean	57.1296
Minimum	.
Maximum	469.
Data Count	27

007A

Chlorine, total residual Location= 1

	DAILY MX mg/L
Mean	3.0588
Minimum	.03
Maximum	8.8
Data Count	32

Coliform, fecal general Location= 1

	DAILY MX MPN/100mL
Mean	9315591.9355
Minimum	2.
Maximum	24000000.
Data Count	31

BOD, 5-day, 20 deg. C Location= C

	DAILY MX mg/L
Mean	85.0625
Minimum	21.
Maximum	388.
Data Count	32

Coliform, fecal general Location= G

DAILY MX MPN/100mL
Mean 10341214.1935
Minimum 1600.
Maximum 24000000.
Data Count 31

Flow, total Location= G

DAILY MX Mgal
Mean 1.2805
Minimum .02
Maximum 14.32
Data Count 36

Oil & Grease Location= G

DAILY MX mg/L
Mean 9.9906
Minimum 1.7
Maximum 29.
Data Count 32

Solids, settleable Location= G

DAILY MX mL/L
Mean 2.675
Minimum .
Maximum 8.
Data Count 32

Solids, total suspended Location= (

DAILY MX mg/L
Mean 80.7188
Minimum 20.
Maximum 375.
Data Count 32

010A

BOD, 5-day, 20 deg. C Location= 1

DAILY MX mg/L
Mean 75.0714
Minimum 3.
Maximum 651.
Data Count 28

Chlorine, total residual Location= 1

DAILY MX mg/L
Mean 5.9136
Minimum .98
Maximum 11.
Data Count 28

Coliform, fecal general Location= 1

DAILY MX MPN/100mL
 Mean 8976120.5185
 Minimum 2.
 Maximum 24000000.
 Data Count 27

Flow, total Location= 1

DAILY MX Mgal
 Mean 448579.0636
 Minimum .19
 Maximum 12560000.
 Data Count 28

Oil & Grease Location= 1

DAILY MX mg/L
 Mean 9.9143
 Minimum 3.3
 Maximum 21.
 Data Count 28

Solids, settleable Location= 1

DAILY MX mL/L
 Mean .5857
 Minimum .1
 Maximum 8.
 Data Count 28

Solids, total suspended Location= 1

DAILY MX mg/L
 Mean 61.4643
 Minimum 12.
 Maximum 870.
 Data Count 28

FACA

BOD, 5-day, 20 deg. C Location= 1

	MO AVG lb/d	DAILY MX lb/d
Mean	1041.9828	2748.4655
Minimum	228.	450.
Maximum	3414.	10278.
Data Count	58	58

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	13.431	21.6724	31.8448
Minimum	3.	3.	10.
Maximum	33.	63.	122.
Data Count	58	58	58

Chlorine, total residual Location= 1

	MO AVG ug/L	DAILY MX ug/L
Mean	179.9138	468.3103
Minimum	77.	148.
Maximum	339.	950.

Data Count 58 58

Coliform, fecal general Location= 1

	MO GEO MPN/100mL	WKLY GEO MPN/100mL	DAILY MX MPN/100mL
Mean	6.7759	307.8276	827667.5862
Minimum	1.	1.	2.
Maximum	75.	15492.	24000000.
Data Count	58	58	58

Flow, in conduit or thru treatment pl:

	MO AVG MGD	DAILY MX MGD
Mean	8.8122	14.035
Minimum	3.7	7.3
Maximum	16.	21.1
Data Count	58	58

Nitrogen, Kjeldahl, total [as N] Loca

	DAILY MX mg/L
Mean	6.2397
Minimum	.01
Maximum	19.
Data Count	29

Nitrogen, nitrate total [as N] Locatio

	DAILY MX mg/L
Mean	2.8672
Minimum	.03
Maximum	11.
Data Count	29

Nitrogen, nitrite total [as N] Locatio

	DAILY MX mg/L
Mean	.8976
Minimum	.01
Maximum	6.02
Data Count	29

Nitrogen, total Location= 1

	DAILY MX mg/L
Mean	10.7383
Minimum	.86
Maximum	22.04
Data Count	29

Oil & Grease Location= 1

	DAILY MX mg/L
Mean	3.7241
Minimum	.1
Maximum	8.9
Data Count	58

pH Location= 1

	MINIMUM SU	MAXIMUM SU
Mean	6.7124	7.306

Minimum	6.2	7.
Maximum	7.	7.6
Data Count	58	58

Solids, settleable Location= 1

	WKLY AVG m/L/L	DAILY MX m/L/L
Mean	.2638	1.0724
Minimum	.1	.1
Maximum	6.4	32.
Data Count	58	58

Solids, total suspended Location= 1

	MO AVG lb/d	DAILY MX lb/d
Mean	1127.9828	3260.1724
Minimum	360.	691.
Maximum	4016.	14158.
Data Count	58	58

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	15.1207	24.	39.3793
Minimum	6.	6.	10.
Maximum	39.	79.	180.
Data Count	58	58	58

LC50 Statre 48Hr Acute Mysid. Bah

	DAILY MN %
Mean	95.
Minimum	.
Maximum	100.
Data Count	20

BOD, 5-day, 20 deg. C Location= C

	MO AVG lb/d	DAILY MX lb/d
Mean	13835.3276	23918.4655
Minimum	6462.	8885.
Maximum	24346.	59839.
Data Count	58	58

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	200.8103	248.9655	330.8793
Minimum	72.	99.	127.
Maximum	341.	425.	700.
Data Count	58	58	58

Oil & Grease Location= G

	DAILY MX mg/L
Mean	34.5172
Minimum	9.
Maximum	91.
Data Count	58

Solids, total suspended Location= C

	MO AVG lb/d	DAILY MX lb/d
Mean	14729.9828	26169.2759
Minimum	9947.	10532.

Maximum 22495. 76270.
Data Count 58 58

	MO AVG mg/L	WKLY AVG mg/L	DAILY MX mg/L
Mean	218.0345	278.3448	411.4828
Minimum	85.	121.	159.
Maximum	354.	566.	1200.
Data Count	58	58	58

BOD, 5-day, percent removal Local

	MINIMUM %
Mean	92.1172
Minimum	66.
Maximum	99.
Data Count	58

Solids, suspended percent removal

	MINIMUM %
Mean	92.3362
Minimum	67.
Maximum	98.
Data Count	58

ATTACHMENT A-5

**Summary of State User Fee Program Data
June 2009 through March 2014**

Newport WPCP

State User Fee Program Data Summary

Parameter	Date	Result
Arsenic	8/12/2009	4
	8/3/2010	4
	8/22/2011	3
	Maximum	4
	Average	3.666666667
BOD	8/12/2009	8000
	8/3/2010	4000
	8/22/2011	7000
	Maximum	8000
	Average	6333.333333
Bromoform	8/22/2011	1.3
	Maximum	1.3
	Average	1.3
Chloroform	8/12/2009	2.2
	8/3/2010	1.4
	8/22/2011	1.2
	Maximum	2.2
	Average	1.6
Cadmium	8/3/2010	2
	Maximum	2
	Average	2
Chromium	8/12/2009	1
	8/3/2010	1
	8/22/2011	1
	Maximum	1
	Average	1

Parameter	Date	Result
Copper	8/12/2009	13
	8/3/2010	11
	8/22/2011	8
	Maximum	13
	Average	10.66666667
Dibromochloromethane	8/22/2011	1
	Maximum	1
	Average	1
Diethyl Phthalate	8/3/2010	12.02
	Maximum	12.02
	Average	12.02
Selenium	8/12/2009	11
	8/3/2010	8
	8/22/2011	8
	Maximum	11
	Average	9
Toluene	8/12/2009	1.3
	Maximum	1.3
	Average	1.3
TSS	8/12/2009	9000
	8/3/2010	13000
	8/22/2011	5000
	Maximum	13000
	Average	9000
Zinc	8/22/2011	22
	Maximum	22
	Average	22

ATTACHMENT A-6

**Comparison of Allowable Limits with Discharge Monitoring Report Data
and State User Fee Data**

Facility Name: Newport WPCP
 RIPDES Permit #: RI0100293

Outfall #: 001A

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Ave UFP Data (ug/L) 1/93 - 4/98		Ave. DMR Data (ug/L) 1/06-12/10		Potential Limits (ug/L)		Reasonable Potential (y/n)
		Daily Max	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	
PRIORITY POLLUTANTS										
TOXIC METALS AND CYANIDE										
ANTIMONY	7440360	No Criteria	39936.00						39936.00	no
ARSENIC (limits are total recoverable)	7440382	3643.20	87.36	4	3.67			3643.2	87.36	no
ASBESTOS	1332214	No Criteria	No Criteria							no
BERYLLIUM	7440417	No Criteria	No Criteria							no
CADMIUM (limits are total recoverable)	7440439	2388.05	618.77	2	2			2388.046781	618.7699195	no
CHROMIUM III (limits are total recoverable)	16065831	No Criteria	No Criteria							no
CHROMIUM VI (limits are total recoverable)	18540299	65788.34	3520.22	1	1			65788.34391	3520.219436	no
COPPER (limits are total recoverable)	7440508	291.60	200.69	13	10.67			291.6042169	200.6948193	no
CYANIDE	57125	52.80	52.80					52.8	52.8	no
LEAD (limits are total recoverable)	7439921	13113.58	594.19					13113.57518	594.1934805	no
MERCURY (limits are total recoverable)	7439976	111.81	9.36					111.8117647	9.36	no
NICKEL (limits are total recoverable)	7440020	4363.85	491.25					4363.851515	491.2478788	no
SELENIUM (limits are total recoverable)	7782492	15342.69	4439.28	11	9			15342.68537	4439.278557	no
SILVER (limits are total recoverable)	7440224	132.41	No Criteria					132.4094118		no
THALLIUM	7440280	No Criteria	29.33						29.328	no
ZINC (limits are total recoverable)	7440666	5023.26	5023.26	22	22			5023.255814	5023.255814	no
VOLATILE ORGANIC COMPOUNDS										
ACROLEIN	107028	No Criteria	18096.00						18096	no
ACRYLONITRILE	107131	No Criteria	156.00						156	no
BENZENE	71432	No Criteria	31824.00						31824	no
BROMOFORM	75252	No Criteria	87360.00	1.3	1.3				87360	no
CARBON TETRACHLORIDE	56235	No Criteria	998.40						998.4	no
CHLOROBENZENE	108907	No Criteria	99840.00						99840	no
CHLORODIBROMOMETHANE	124481	No Criteria	8112.00	1	1				8112	no
CHLOROFORM	67663	No Criteria	293280.00	2.2	1.6				293280	no
DICHLOROBROMOMETHANE	75274	No Criteria	10608.00						10608	no
1,2-DICHLOROETHANE	107062	No Criteria	23088.00						23088	no
1,1-DICHLOROETHYLENE	75354	No Criteria	443040.00						443040	no
1,2-DICHLOROPROPANE	78875	No Criteria	9360.00						9360	no
1,3-DICHLOROPROPYLENE	542756	No Criteria	1310.40						1310.4	no
ETHYLBENZENE	100414	No Criteria	131040.00						131040	no
BROMOMETHANE (methyl bromide)	74839	No Criteria	93600.00						93600	no
CHLOROMETHANE (methyl chloride)	74873	No Criteria	No Criteria							no

Facility Name: Newport WPCP
RIPDES Permit #: RI0100293
Outfall #: 001A

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L)		Ave UFP Data (ug/L)		Ave. DMR Data (ug/L)		Potential		Reasonable Potential (y/n)
		Daily Max	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Daily Max	Monthly Ave	
METHYLENE CHLORIDE	75092	No Criteria	368160.00	---	---	---	---	---	368160	no
1,1,2,2-TETRACHLOROETHANE	79345	No Criteria	2496.00	---	---	---	---	---	2496	no
TETRACHLOROETHYLENE	127184	No Criteria	2059.20	---	---	---	---	---	2059.2	no
TOLUENE	108883	No Criteria	936000.00	1.3	1.3	---	---	---	936000	no
1,2-TRANS-DICHLOROETHYLENE	156605	No Criteria	624000.00	---	---	---	---	---	624000	no
1,1,1-TRICHLOROETHANE	71556	No Criteria	No Criteria	---	---	---	---	---	---	no
1,1,2-TRICHLOROETHANE	79005	No Criteria	9984.00	---	---	---	---	---	9984	no
TRICHLOROETHYLENE	79016	No Criteria	18720.00	---	---	---	---	---	18720	no
VINYL CHLORIDE	75014	No Criteria	149.76	---	---	---	---	---	149.76	no
ACID ORGANIC COMPOUNDS										
2-CHLOROPHENOL	95578	No Criteria	9360.00	---	---	---	---	---	9360	no
2,4-DICHLOROPHENOL	120832	No Criteria	18096.00	---	---	---	---	---	18096	no
2,4-DIMETHYLPHENOL	105679	No Criteria	53040.00	---	---	---	---	---	53040	no
4,6-DINITRO-2-METHYL PHENOL	534521	No Criteria	17472.00	---	---	---	---	---	17472	no
2,4-DINITROPHENOL	51285	No Criteria	330720.00	---	---	---	---	---	330720	no
4-NITROPHENOL	88755	No Criteria	No Criteria	---	---	---	---	---	---	no
PENTACHLOROPHENOL	87865	686.40	492.96	---	---	---	---	686.4	492.96	no
PHENOL	108952	No Criteria	106080000.00	---	---	---	---	---	106080000	no
2,4,6-TRICHLOROPHENOL	88062	No Criteria	1497.60	---	---	---	---	---	1497.6	no
BASE NEUTRAL COMPOUNDS										
ACENAPHTHENE	83329	No Criteria	61776.00	---	---	---	---	---	61776	no
ANTHRACENE	120127	No Criteria	2496000.00	---	---	---	---	---	2496000	no
BENZIDINE	92875	No Criteria	0.12	---	---	---	---	---	0.1248	no
POLYCYCLIC AROMATIC HYDROCARBONS		No Criteria	11.23	---	---	---	---	---	11.232	no
BIS(2-CHLOROETHYL)ETHER	111444	No Criteria	330.72	---	---	---	---	---	330.72	no
BIS(2-CHLOROISOPROPYL)ETHER	108601	No Criteria	4056000.00	---	---	---	---	---	4056000	no
BIS(2-ETHYLHEXYL)PHTHALATE	117817	No Criteria	1372.80	---	---	---	---	---	1372.8	no
BUTYL BENZYL PHTHALATE	85687	No Criteria	118560.00	---	---	---	---	---	118560	no
2-CHLORONAPHTHALENE	91587	No Criteria	99840.00	---	---	---	---	---	99840	no
1,2-DICHLOROBENZENE	95501	No Criteria	81120.00	---	---	---	---	---	81120	no
1,3-DICHLOROBENZENE	541731	No Criteria	59904.00	---	---	---	---	---	59904	no
1,4-DICHLOROBENZENE	106467	No Criteria	11856.00	---	---	---	---	---	11856	no
3,3-DICHLOROBENZIDENE	91941	No Criteria	17.47	---	---	---	---	---	17.472	no
DIETHYL PHTHALATE	84662	No Criteria	2745600.00	12.02	12.02	---	---	---	2745600	no
DIMETHYL PHTHALATE	131113	No Criteria	68640000.00	---	---	---	---	---	68640000	no

Facility Name: Newport WPCP
 RIPDES Permit #: RI0100293

Outfall #: 001A

NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L)		Ave UFP Data (ug/L)		Ave. DMR Data (ug/L)		Potential		Reasonable Potential (y/n)
		Based on WQ Criteria Daily Max	Monthly Ave	1/93 - 4/98 Max	Ave	1/06-12/10 Daily Max	Monthly Ave	Permit Limits (ug/L) Daily Max	Monthly Ave	
DiNBTYL PHTHALATE	84742	No Criteria	280800.00	---	---	---	---	---	280800	no
2,4DINITROTOLUENE	121142	No Criteria	2121.60	---	---	---	---	---	2121.6	no
1,2DIPHENYLHYDRAZINE	122667	No Criteria	124.80	---	---	---	---	---	124.8	no
FLUORANTHENE	206440	No Criteria	8736.00	---	---	---	---	---	8736	no
FLUORENE	86737	No Criteria	330720.00	---	---	---	---	---	330720	no
HEXACHLOROBENZENE	118741	No Criteria	0.18	---	---	---	---	---	0.18096	no
HEXACHLOROBUTADIENE	87683	No Criteria	11232.00	---	---	---	---	---	11232	no
HEXACHLOROCYCLOPENTADIENE	77474	No Criteria	68640.00	---	---	---	---	---	68640	no
HEXACHLOROETHANE	67721	No Criteria	2059.20	---	---	---	---	---	2059.2	no
ISOPHORONE	78591	No Criteria	599040.00	---	---	---	---	---	599040	no
NAPHTHALENE	91203	No Criteria	No Criteria	---	---	---	---	---	---	no
NITROBENZENE	98953	No Criteria	43056.00	---	---	---	---	---	43056	no
NNITROSODIMETHYLAMINE	62759	No Criteria	1872.00	---	---	---	---	---	1872	no
NNITROSODINPROPYLAMINE	621647	No Criteria	318.24	---	---	---	---	---	318.24	no
NNITROSODIPHENYLAMINE	86306	No Criteria	3744.00	---	---	---	---	---	3744	no
PYRENE	129000	No Criteria	249600.00	---	---	---	---	---	249600	no
1,2,4trichlorobenzene	120821	No Criteria	4368.00	---	---	---	---	---	4368	no
PESTICIDES/PCBS										
ALDRIN	309002	68.64	0.03	---	---	---	---	68.64	0.0312	no
Alpha BHC	319846	No Criteria	3.06	---	---	---	---	---	3.0576	no
Beta BHC	319857	No Criteria	10.61	---	---	---	---	---	10.608	no
Gamma BHC (Lindane)	58899	8.45	8.45	---	---	---	---	8.448	8.448	no
CHLORDANE	57749	4.75	0.25	---	---	---	---	4.752	0.2496	no
4,4DDT	50293	6.86	0.06	---	---	---	---	6.864	0.0624	no
4,4DDE	72559	No Criteria	0.14	---	---	---	---	---	0.13728	no
4,4DDD	72548	No Criteria	0.19	---	---	---	---	---	0.19344	no
DIELDRIN	60571	37.49	0.03	---	---	---	---	37.488	0.033696	no
ENDOSULFAN (alpha)	95998	1.80	0.54	---	---	---	---	1.7952	0.54288	no
ENDOSULFAN (beta)	33213659	1.80	0.54	---	---	---	---	1.7952	0.54288	no
ENDOSULFAN (sulfate)	1031078	No Criteria	5553.60	---	---	---	---	---	5553.6	no
ENDRIN	72208	1.95	0.14	---	---	---	---	1.9536	0.14352	no
ENDRIN ALDEHYDE	7421934	No Criteria	18.72	---	---	---	---	---	18.72	no
HEPTACHLOR	76448	2.80	0.05	---	---	---	---	2.7984	0.049296	no
HEPTACHLOR EPOXIDE	1024573	2.80	0.02	---	---	---	---	2.7984	0.024336	no
POLYCHLORINATED BIPHENYLS3	1336363	No Criteria	0.04	---	---	---	---	---	0.039936	no

Facility Name: Newport WPCP
 RIPDES Permit #: RI0100293

Outfall #: 001A

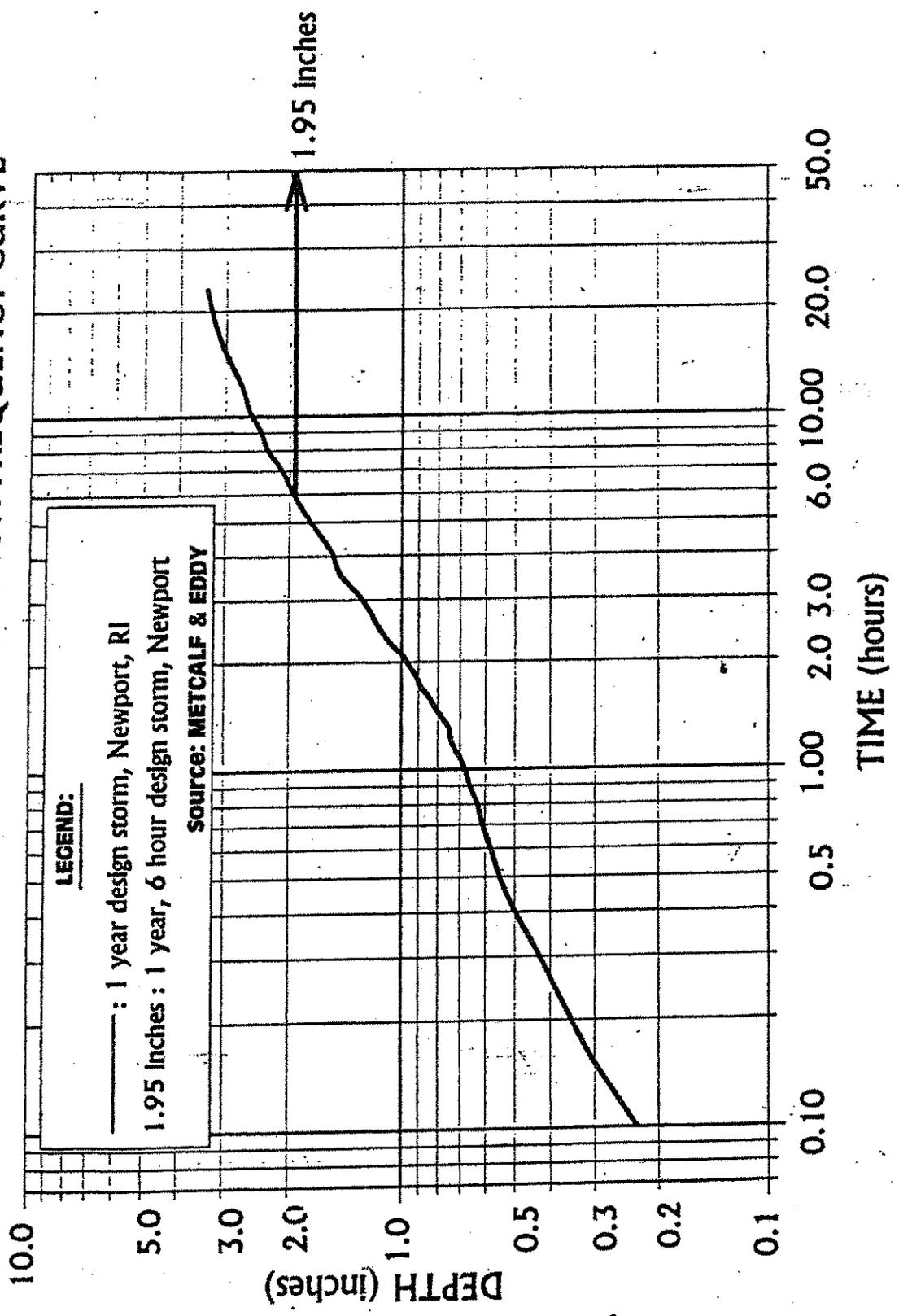
NOTE: METALS LIMITS ARE TOTAL METALS

Parameter	CAS #	Concentration Limits (ug/L) Based on WQ Criteria		Ave UFP Data (ug/L) 1/93 - 4/98		Ave. DMR Data (ug/L) 1/06-12/10		Potential Limits (ug/L)		Reasonable Potential (y/n)
		Daily Max	Monthly Ave	Max	Ave	Daily Max	Monthly Ave	Permit Max	Monthly Ave	
2,3,7,8TCDD (Dioxin)	1746016	No Criteria	0.00	---	---	---	---	---	3.1824E-06	no
TOXAPHENE	8001352	11.09	0.01	---	---	---	---	11.088	0.01248	no
TRIBUTYL TIN		22.18	0.46	---	---	---	---	22.176	0.46176	no
NON-PRIORITY POLLUTANTS										
OTHER SUBSTANCES										
ALUMINUM (limits are total recoverable)	7429905	No Criteria	No Criteria	---	---	---	---	---	---	no
AMMONIA (winter)	7664417	911433.60	159007.68	---	---	---	---	911433.6	159007.68	no
AMMONIA (summer)		316831.68	56422.08	---	---	---	---	316831.68	56422.08	no
4BROMOPHENYL PHENYL ETHER	16887006	No Criteria	No Criteria	---	---	---	---	---	---	no
CHLORIDE	7782505	No Criteria	No Criteria	---	---	---	---	---	---	no
CHLORINE		858.00	585.00	---	---	468.3	179.9	858	585	yes
4CHLORO2METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	no
1CHLORONAPHTHALENE	106489	No Criteria	No Criteria	---	---	---	---	---	---	no
4CHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	no
2,4DICHLORO6METHYLPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	no
1,1DICHLOROPROPANE	142289	No Criteria	No Criteria	---	---	---	---	---	---	no
1,3DICHLOROPROPANE		No Criteria	No Criteria	---	---	---	---	---	---	no
2,3DINITROTOLUENE		No Criteria	No Criteria	---	---	---	---	---	---	no
2,4DINITRO6METHYL PHENOL	7439896	No Criteria	No Criteria	---	---	---	---	---	---	no
IRON	608935	No Criteria	No Criteria	---	---	---	---	---	---	no
pentachlorobenzene		No Criteria	No Criteria	---	---	---	---	---	---	no
PENTACHLOROETHANE		No Criteria	No Criteria	---	---	---	---	---	---	no
1,2,3,5tetrachlorobenzene		No Criteria	No Criteria	---	---	---	---	---	---	no
1,1,1,2TETRACHLOROETHANE	630206	No Criteria	No Criteria	---	---	---	---	---	---	no
1,1,1,2TETRACHLOROETHANE	58902	No Criteria	No Criteria	---	---	---	---	---	---	no
2,3,4,6TETRACHLOROPHENOL		No Criteria	No Criteria	---	---	---	---	---	---	no
2,3,5,6TETRACHLOROPHENOL	95954	No Criteria	No Criteria	---	---	---	---	---	---	no
2,4,5TRICHLOROPHENOL	88062	No Criteria	No Criteria	---	---	---	---	---	---	no
2,4,6TRINITROPHENOL	1330207	No Criteria	No Criteria	---	---	---	---	---	---	no
XYLENE		No Criteria	No Criteria	---	---	---	---	---	---	no

ATTACHMENT A-7

City of Newport Rainfall Depth-Duration-Frequency Curve

MINUTALL DEFINT-UKATION-FREQUENCY CURVE



One year rainfall depth-duration-frequency relationship for Newport, Rhode Island. Flows generated by a rain event which is more frequently occurring than the Newport one year, six hour storm and have a total depth less than 1.95 inches are subject to the limitations and requirements contained in the RIPDES Permit. If when the depth and duration of a storm are plotted, the corresponding point on the graph falls below the one year design storm curve, then the storm is more frequently occurring.