Stormwater Pollution Prevention Plan

Naval Magazine Indian Island, Washington

January 2016

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Stormwater Pollution Prevention Plan

Naval Magazine Indian Island, Washington

January 2016

Prepared by:

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Prepared By:

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Plan Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

01/07/2016

N. A. VANDE GRIEND
Commander, U.S. Navy
Commanding Officer,
Naval Magazine Indian Island

Date

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Record of Review and Amendments

All reviews and amendments to this plan shall be summarized here. The NAVMAG Indian Island Environmental Division is responsible for maintaining the definitive copy of this plan.

Date	Revision Number	Section(s)	Reason for Change	Revised By
1/2001	0	All	MSGP 2000	
6/2006	1	All	MSGP 2000	NAVFAC NW
5-12-2009	2	All	New MSGP 2008	[redacted]
Sep 2013	3	All	Update per changes made on 6-24-09, 7-30-09, and 12-11-09. Update per revised MSGP requirements in EPA letter dated 4-15-11.	[redacted]

Public Disclaimer

Portions of this Stormwater Pollution Prevention Plan are withheld from public access. The following materials have been redacted:

- Building names and numbers;
- Facility Descriptions;
- Facility Maps;
- Outfall Locations; and
- Off-base inflows.

These items are Restricted Information as defined in the Multi-Sector General Permit 2015 Appendix C.

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List of Acronyms

BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
BOSC	Base Operations Support
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CoC	Chain of Custody
COD	Chemical Oxygen Demand
CSCE	Comprehensive Site Compliance Evaluation
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DRMO	Defense Reutilization and Marketing Office
EPA	Environmental Protection Agency
EPR	Environmental Project Requirements
ESA	Endangered Species Act
FEAD	Facilities Engineering and Acquisition Act
GPS	Global Positioning System
HDPE	high-density polyethylene
ICP	Integrated Contingency Plan
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
MSGP	Multi-Sector General Permit
NAVBASE	Naval Base
NAVFAC	Naval Facilities Engineering Command

NAVMAG	Naval Magazine
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
OHS	Oil and Hazardous Substances
OPA	Oil Pollution Act
POL	Petroleum Oils and Lubricants
SARA	Superfund Amendments and Reauthorization Act
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasure
SWPPP	Stormwater Pollution Prevention Plan
T&E	Threatened and Endangered
TMDL	Total Maximum Daily Load
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WDOE	Washington State Department of Ecology
WQA	Water Quality Assessment
WQS	Water Quality Standards
WRIA	Water Resource Inventory Area

1 Introduction and Overview

1.1 Regulatory Background

On November 16, 1990, the Environmental Protection Agency (EPA) established regulations to control the amount of pollutants that accumulate in stormwater and discharge into waters of the United States. Facilities that discharge stormwater associated with industrial activity into waters of the United States must comply with 40 CFR 122.26 and obtain a National Pollutant Discharge Elimination System (NPDES) Permit. The EPA regulates federal facilities in Washington State for NPDES permits, so Naval Magazine (NAVMAG) Indian Island follows the guidance documents and permits issued by EPA Region 10.

NAVMAG Indian Island chose to obtain permit coverage through application of the EPA issued Multi-Sector General Permit that was published on 30 October 2000 (MSGP 2000). This permit expired on October 30, 2005. Since NAVMAG Indian Island was a discharger previously covered by the MSGP 2000, the facility was covered by an administrative continuance under the MSGP 2000 until April 15, 2011, when the facility was approved for coverage under the Multi-Sector General Permit 2008 (MSGP 2008). The MSGP 2008 was published in September 2008. Additional requirements specific for federal facilities in Washington State were published on February 26, 2009. Coverage by the MSGP 2008 was initiated by a Notice of Intent (NOI) submitted by NAVMAG Indian Island to the EPA within 90 days of the date when the additional requirements for federal facilities became final. The NOI was submitted on May 21, 2009.

A time line of the events leading up to the approval for coverage of NAVMAG Indian Island under the MSGP follows:

- The Stormwater Pollution Prevention Plan (SWPPP) update, per the MSGP 2008 requirements, was completed in May 2009.
- The NOI for coverage under the MSGP 2008 was submitted with a letter dated May 21, 2009.
- EPA acknowledged receipt of the NOI in a letter dated August 5, 2009.
- EPA placed the NOI on hold in a letter dated July 30, 2009. This hold was requested by the National Marine Fisheries Service (NMFS)/National Oceanic and Atmospheric Administration (NOAA) because of concerns about eligibility for coverage under the MSGP 2008 with respect to the endangered species eligibility criteria.
- In a letter dated October 13, 2009 to EPA, the Navy agreed to comply with the 2008 MSGP even though the permit was placed on hold.
- From October 2009 and continuing through the current date, NAVMAG Indian Island has conducted all the quarterly monitoring and inspections required by the MSGP 2008.
- EPA provided additional monitoring requirements in a letter dated April 15, 2011. This letter removed the hold on the NOI and made the MSGP 2008 and the additional monitoring requirements enforceable 30 days from April 15, 2011.
- The Navy responded to the EPA April 15, 2011 letter with a letter dated May 13, 2011. This response letter indicated that the Navy will comply with the requirements of the April 15, 2011 letter but pointed out some concerns.

- The reissued MSGP became effective on July 21, 2015 for Federal Operators of industrial activities in Washington State. This permit and authorization to discharge will expire at midnight, June 4, 2020.

The MSGP 2015 is a broad based pre-published permit that spells out actions necessary to achieve compliance. The permit specifies 29 industrial types of facilities (called sectors) that trigger the requirement for permit coverage. A facility can obtain permit coverage through the MSGP 2015 if they conduct one or more of the industrial sectors specified in the MSGP 2015. NAVMAG Indian Island conducts the following sectors:

- Sector P: Land Transportation and Warehousing
- Sector Q: Water Transportation

The primary requirement of complying with the MSGP 2015 is to develop/update and implement a SWPPP that follows the requirements given in the MSGP 2015, covering industrial facilities at Sectors P and Q. The SWPPP update written per the MSGP 2015 was completed Jan 2016.

NAVMAG Indian Island must retain copies of the SWPPP, including any modifications to the SWPPP and all reports, certifications, monitoring data, and records of inspections for 3 years after the date that the MSGP 2015 expires.

1.1.1 Federal Stormwater Regulations

The 1972 amendments to the Federal Water Pollution Control Act [referred to as the Clean Water Act (CWA)] stipulated that the discharge of any pollutant to surface waters without a NPDES permit was unlawful. Between 1972 and 1987, national efforts to improve water quality focused on reducing pollutants of industrial process wastewater and municipal sewage. The reauthorization of the CWA in 1987 with the passage of the Water Quality Act (WQA), established a framework for regulating municipal and industrial stormwater discharges under the NPDES permit program. Final federal regulations regarding the EPA's NPDES stormwater permit program were published in the Federal Register on November 16, 1990.

Stormwater discharges associated with industrial activity have been divided into two categories: those associated with industrial activity except construction activity and those associated with industrial activity from construction activity. Permit options available for industrial activities excluding construction activity are described below.

1.1.2 Permit Application Options for Non-Construction Industrial Activity

The stormwater regulation allows two permit application options for stormwater discharges associated with industrial activity except construction activity. These include an application for an individual NPDES stormwater permit and a NOI to comply with a general permit, including the Multi-Sector general permit. Each of these application options is discussed briefly in the following paragraphs.

Individual NPDES stormwater permits are issued to a specific facility for stormwater discharges related to industrial activity. In most instances, the permit is tailored to meet the discharge characteristics of the facility and/or special requirements of the receiving waters. Individual NPDES stormwater permits are issued by states that have been delegated NPDES permitting authority or by the EPA in states that do not have this authority.

The Multi-Sector general permit for industrial activities is the result of the group permitting process initiated by EPA in the late 1980s. The permit was originally issued until September 29, 1995. EPA reissued the permit in 2000, 2008 and most recently in June 2015.

1.1.3 Navy Stormwater Policy

Requirements and policies regarding stormwater discharges for Navy facilities are stipulated in the Department of the Navy's Environmental and Natural Resources Program Manual, Office of the Chief of Naval Operations Instruction (OPNAVINST) 5090.1D (U.S. Navy 2014). These requirements, which are a part of the Clean Water Ashore Program, state that Navy facilities must comply with all substantive and procedural requirements applicable to point and non-point sources of pollution as required by Executive Order 12088 and the CWA. Navy policy regarding point-source stormwater discharges from Navy facilities is for these discharges to meet all applicable federal, state, or local requirements, including control requirements for toxic and non-conventional pollutants. The Navy's policy on stormwater management and non-point pollution-source control requires commands to ensure that all activities comply with stormwater management and pollution prevention requirements, as stipulated in permits under which the activity is covered.

Further, Navy facilities must comply with all requirements of federal, state, interstate, and local laws and regulations respecting the control and abatement of water pollution in the same manner and to the same extent as any non-governmental entity. Navy policy also states that the discharge of any pollutant that does not comply with effluent standards or other procedural requirements is unlawful.

1.1.4 Industrial Stormwater Compliance Strategy at NAVMAG Indian Island

The state of Washington is an NPDES-delegated state with general permitting authority. However, permitting for federal facilities in the state of Washington was retained by the EPA. Federal facilities in Washington are eligible for coverage under an individual NPDES permit or the MSGP. Administration of these permits is by EPA, Region 10, Water Management Division (WD-134), Stormwater Staff located at the Seattle, Washington office.

NAVMAG Indian Island is covering stormwater discharges from industrial activities under the MSGP. Coverage for the current permit term was granted by EPA beginning on 30 September 2009 under permit tracking number WAR05BA6F. An NOI will also be submitted to obtain coverage under the reissued MSGP 2015. Copies of the NOI form are provided in Appendix C.

In order to comply with the construction general permit, an NOI must also be submitted for all construction activities at NAVMAG Indian Island that will disturb more than one acre of land. Compliance with that permit requires the development of a site-specific stormwater management plan not related to this SWPPP document. Please refer to the construction general permit for additional guidance and requirements. A summary of Best Management Practices applicable to the stormwater management requirements of the construction general permit is provided in Section 4.

1.1.5 Permit Eligibility Determination

The MSGP requires that stormwater discharges, allowable non-stormwater discharges, and discharge related activities are protective of endangered species, critical habitat, and historic properties. Documentation of permit eligibility with respect to protection of endangered species, critical habitat, and historic properties is contained in Appendix C.

1.2 Purpose and Scope of the SWPPP

NAVMAG Indian Island has developed the SWPPP to:

- Identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges.
- Describe and ensure the implementation of practices to reduce the pollutants in stormwater.
- Comply with the terms and conditions of the Multi-Sector General Permit 2015 (MSGP), Authorization to Discharge Under the National Pollutant Discharge Elimination Systems (NPDES) for Stormwater Discharges Associated with Industrial Activity, United States Environmental Protection Agency (EPA) (2015).
- Present stormwater control measures, schedules of activities, prohibitions of practices, maintenance procedures, and other best management practices to prevent or reduce the pollution in runoff from industrial sites.

1.3 Document Organization

This NAVMAG Indian Island SWPPP is organized to present the information required in Part 5 of the MSGP. Part 5.2 of the MSGP outlines the following required elements:

- Stormwater pollution prevention team
- Site description
- Summary of potential pollutant sources
- Description of control measures
- Schedules and procedures
- Documentation to support eligibility considerations under other federal laws
- Signature requirements

The SWPPP presents all the required elements, although not in the order listed in the MSGP. Rather, the SWPPP is organized to accommodate specific NAVMAG Indian Island operations.

Tables are used as much as possible to clarify presentation of information. Figures are presented as simply as possible for use in the field. Appendices are used to organize procedures, to provide quick access to figures, and to provide for tracking and recordkeeping.

A SWPPP revision-record table is provided to document revisions to the SWPPP.

So as not to duplicate effort or run the risk of publishing conflicting information, whenever possible other applicable environmental, natural resource, and cultural resource management plans are referenced to fulfill requirements of the SWPPP. When these plans are referenced,

they are listed in Section 8 of the SWPPP along with all the other references in the SWPPP. Either a copy of each referenced plan or a description of where it may be accessed is included in Section 8.

1.4 Stormwater Pollution Prevention Team

Per the MSGP Section 5.2.1, a Pollution Prevention Team is responsible for assisting NAVMAG Indian Island's Commanding Officer in developing, implementing, maintaining, and revising the facility's SWPPP. The Pollution Prevention Team will meet on an as needed basis. Some specific tasks of the team include:

- Review and follow-up on any outstanding issues/concerns from the previous meeting.
- Discuss pollution prevention techniques/methods.
- Plan and discuss stormwater training needs/methods.
- Coordinate stormwater pollution prevention efforts.
- Plan and discuss implementation of required monitoring and inspections.
- Discuss and implement corrective actions that result from required monitoring and inspections.
- Assist with updating the SWPPP.
- Address any concerns that may have been raised since the last meeting.

Table 1-1 lists members of the NAVMAG Indian Island Stormwater Pollution Prevention Team.

Table 1-1: Stormwater Pollution Prevention Team

Leader:	[redacted]
Title: **Phone Number:** **E-mail:**	[redacted]
Responsibilities:	Ensure provisions of the SWPPP are carried out at NAVMAG Indian Island. Train team members on SWPPP requirements. Ensure appropriate NAVMAG Indian Island staff and contractors receive required stormwater training. Help personnel understand and implement the SWPPP. Call meetings of the team. Act as liaison between the team and Naval Base (NAVBASE) Kitsap. Ensure inspections and monitoring is completed. Update the SWPPP to ensure continued compliance with the MSGP, to reflect any facility changes, and by inserting inspection reports, monitoring results, certifications, Discharge Monitoring Reports, meeting minutes, significant e-mails, and correspondence.
Core Team Member:	Yes
Team Member:	[redacted]
Title: **Phone Number:** **E-mail:**	[redacted]
Responsibilities:	Primary point-of-contact at NAVMAG Indian Island. Coordinate and assist as needed with on-site efforts such as sampling/monitoring, inspections, and meetings. Interface between SWPPP team activities and Facilities Branch. Work with Facilities Branch to ensure that construction site stormwater controls are developed and implemented.
Core Team Member:	Yes
Team Member:	[redacted]
Title: **Phone Number:** **E-mail:**	[redacted]
Responsibilities:	Act as interface and advocate for the SWPPP Team with NAVMAG Indian Island upper management.
Core Team Member:	No
Team Member:	[redacted]
Title: **Phone Number:** **E-mail:**	[redacted]
Responsibilities:	Internal Navy consultant. Provide regulatory guidance including compliance with the MSGP, general Clean Water Act input, and environmental engineering advice as related to stormwater controls.
Core Team Member:	No

Table 1-1 designates team members as "core" or "non-core." Core team members are those that attend regular team meetings and work regularly with the team leader. Non-core team members take part on an as needed/as requested basis. Non-core team members will generally not take part in day-to-day activities of the team.

1.5 Endangered Species

The June 4, 2015 re-issuance of the MSGP required operators to certify that their stormwater discharges, allowable non-stormwater discharges and BMPs are not likely to jeopardize any species listed as endangered or threatened under the Endangered Species Act. The requirement for protection of Endangered and Threatened Species and Critical Habitat Protection is described in part 1.1.4.5 of the permit. Appendix E of the June 4, 2015 permit provides guidance that will be used in the following paragraphs to document NAVMAG Indian Island's permit eligibility with respect to endangered species.

Natural resources at NAVMAG Indian Island are managed primarily through the Integrated Natural Resources Management Plan (INRMP). The 1997 INRMP was updated in 2009 and signed by U. S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and the Washington Department of Fish and Wildlife (WDFW). The 2009 INRMP is used as a long-term planning document to guide the management of natural resources at NAVMAG Indian Island to support its military mission. This INRMP and the use of the natural resources comply with legal mandates. Information contained in this section is based on the August 2009 INRMP, called INRMP 2009 throughout the SWPPP.

The goals of the INRMP 2009 are to ensure the sustainability of all ecosystems encompassed by NAVMAG Indian Island and to ensure no net loss of the capability of installation lands to support the Department of Defense mission. These goals will be achieved by integrating management of fish and wildlife, vegetation [land use], facilities, and outdoor recreation, as practicable and consistent with the military mission and established land uses. Professionally trained personnel are assigned to this program and natural resource personnel are provided the opportunity to participate in job-training activities and professional meetings.

Appendix E of the MSGP, Procedures Relating to Endangered Species Protection, requires an industrial facility to determine and document eligibility to use the MSGP by determining the applicable criteria. In accordance with Part 5.2 of the MSGP, the facility must keep documentation with the SWPPP to support the determination of eligibility under Part 1.1.4.5 including the process employed and the results of the endangered species investigation. The Endangered Species Eligibility Determination (Criterion C form) is found in Appendix C of this SWPPP.

Appendix E, Procedures Relating to Endangered Species Protection, of the MSGP requires the applicant to determine eligibility to use the permit by going through a series of steps as follows:

Criterion A. No federally listed threatened or endangered species or their designated critical habitat(s) are likely to occur in the "action area".

In the case of NAVMAG Indian Island, the "action area" includes all of Indian Island. Federally threatened and endangered (T&E) species that potentially occur on or adjacent to NAVMAG Indian Island property are:

- Marbled murrelet (*Brachyramphus marmoratus*),
- Hood Canal summer-run chum salmon (*Oncorhynchus keta*),
- Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*),
- Bull trout (*Salvelinus confluentus*),
- Southern resident killer whale (*Orcinus orca*),
- Humpback whale (*Megatera novaengliae*),
- Puget Sound steelhead (*Oncorhynchus mykiss*)
- Boccaccio rockfish (*Sebastes pallcispinis*)
- Yelloweye rockfish (*Sebastes ruberrimus*)
- Canary rockfish (*Sebastes pinniger*)
- Leatherback sea turtle

Criterion B. Your industrial activity's discharges and discharge-related activities were already addressed in another operator's valid certification of eligibility for your action area under this permit, and there is no reason to believe that federally listed species or designated critical habitat not considered in the prior certification may be present or located in the "action area" (e.g., due to a new species listing or critical habitat designation).

No, stormwater activities at NAVMAG Indian Island have not been addressed in another discharger's certification of eligibility.

Criterion C. Federally listed threatened or endangered species or their designated critical habitat(s) are likely to occur in or near your facility's "action area," and your industrial activity's discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or critical habitat.

Dischargers should consider hydrological, habitat, and toxicity effects. Existing dischargers are required to (1) identify any pollutant parameters for which you have ever exceeded the benchmark or effluent limitations guidelines, or have ever been found to have caused or contributed to an exceedance of an applicable water quality standard, or violated a State or Tribal water quality requirement; (2) provide a list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the action area; and (3) provide your rationale supporting your determination that you qualify under Criterion E.

No critical habitat has been designated within the NAVMAG Indian Island "action area." In addition, the NAVMAG Indian Island installation is specifically excluded from critical habitat designation because the installation maintains an approved Integrated Natural Resources Management Plan (INRMP) (70 FR 52630) and the conservation measures provide adequate benefit to these ESA-listed species.

No threatened and endangered plant species are known to occur on NAVMAG Indian Island.

Criterion D. Consultation between a Federal Agency and the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded.

No, stormwater activities at NAVMAG Indian Island have not been addressed under an ESA Section 7 consultation. However, all other Navy activities and/or construction that could potentially adversely affect ESA species are consulted with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

Criterion E. Your industrial activities are the subject of a permit under section 10 of the ESA, and this authorization addresses the effects of your facility's discharges and discharge- related activities on federally listed species and designated critical habitat.

No, stormwater activities at NAVMAG Indian Island have not been addressed under an issued ESA Section 10 permit. However, all other Navy activities and/or construction that could potentially adversely affect ESA species are consulted with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

The implementation of the NAVMAG Indian Island INRMP further reinforces that adverse impacts are not likely.

- Item (3): The intent of the INMRP 2009 is to ensure activities at NAVMAG Indian Island will not adversely affect federally listed species. The INRMP 2009 addresses program elements as fish and wildlife management, threatened and endangered (T&E) species management, wetlands management, environmental protection measures, land use management, and vegetation and forestry management. The INRMP 2009 specifically addresses the following three criteria to determine if a plan provides adequate special management or protection for each T&E species that potentially occur on NAVMAG Indian Island property:
    - Criteria 1. Conservation Benefit: The plan provides a conservation benefit to the species,
    - Criteria 2. Implementation of the Plan: The plan provides assurances that the management plan will be implemented, and
    - Criteria 3. Management Effectiveness: The plan provides assurances that the conservation effort will be effective.

    The Navy ensures that the USFWS or NMFS are consulted regarding activities that may adversely affect federally listed species, marine mammals, or critical habitat. Additionally, USFWS, NMFS, and WDFW have participated in an annual INRMP evaluation, which is documented through the DoD Natural Resources Conservation metrics. The INRMP is updated annually through this regulatory agency review.

There is no reason to believe that NAVMAG Indian Island stormwater discharges, allowable non-stormwater discharges, and discharge related activities would cause adverse impacts to federally listed species or critical habitat.

1.6 Historic Places

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of federal "undertakings" on historic properties. The EPA's issuance of the MSGP is not a federal undertaking within the meaning of the NHPA regulations. To address any issues relating to historic properties in connection with issuance of a MSGP, the EPA included criteria for applicants to certify that potential impacts of their covered activities on historic properties have been appropriately considered and addressed.

Section 1.1.4.6 of the MSGP specifies that coverage under this permit is available only if stormwater discharges, allowable non-stormwater discharges, and stormwater discharge related activities meet one or more of the eligibility criteria in the MSGP. Appendix F of the MSGP provides the procedures to follow to determine which criteria are met.

There are two locations where the existing stormwater conveyance system exhibits erosion. One is at the intermittent waterfall located at [redacted], an area surveyed by Larson Anthropological Archaeological Services Limited in 1998. The erosion at this waterfall will have no effect on known historic sites. It is, however, being monitored to make sure the erosion does not adversely affect existing structures. The second location is at the curb cuts ([redacted]. This area is located on a [redacted]. As the stormwater drains off the paved laydown area, it can cause erosion of the sandy area next to the pavement. This sandy area is currently protected by riprap. The riprap is replenished as needed. A project to install a bio-retention basin has been completed. This project has eliminated the erosion at [redacted] by creating a constructed conveyance.

Based on observations and research completed during update of the SWPPP and historic stormwater drainage patterns, existing stormwater conveyances do not have the potential to adversely affect the characteristics that would make a property eligible for inclusion in the National Registry of Historical Places since existing patterns would potentially be part of those characteristics. In the case of subsurface disturbance required for stormwater control measures, which may become necessary to implement corrective actions per the MSGP, historic properties will not be affected.

Therefore Criterion A and B, described below, apply (MSGP, Appendix F).

Criterion A: Your stormwater discharges and allowable non-stormwater discharges do not have the potential to have an effect on historic properties and you are not constructing or installing new stormwater control measures on your site that cause subsurface disturbance.

Criterion B: Your discharge-related activities (i.e., construction and /or installation of stormwater control measures that involve subsurface disturbance) will not affect historic properties.

Also, see SWPPP Section 4.1.7 and Appendix D for requirements concerning future construction activities.

1.7 SWPPP Compliance Requirements

A number of ongoing activities related to the SWPPP are required for compliance under the MSGP. These SWPPP compliance requirements are summarized in Table 1-2.

Table 1-2: Summary of SWPPP Compliance Requirements

SWPPP Compliance Requirement	SWPPP Section	Permit Part
Form a stormwater pollution prevention team.	1.6.1	5.2.1
Implement control measures/BMP Plan.	4	2
Perform stormwater sampling and prepare reports.	5	6
Prepare and submit reports of releases of hazardous materials or oil in excess of reportable quantities.	1.6.2	2.1.2.4
Complete facility visual inspections and document.	6.1	3.1
Complete maintenance and document.	7.4	2.1.2.3, 5.5
Complete employee training and document.	7.4	2.1.2.8, 5.5
Submit Annual Report.	6.3	7.5
Update SWPPP when a change in industrial facilities occurs or if current SWPPP is ineffective.	1.6.4 and 7.1	4.3, 5.3
Implement and Document Corrective Actions	7.2	4
Retain SWPPP reports and records on-site until three years after event and at least three years after permit expires.	1.6.5	7.8
Ensure all reports are signed by an appropriate authority.	1.6.6	B.11

The permit also requires maintaining records of various compliance activities. These records include facility visual inspection, maintenance records, and employee training. Recordkeeping requirements are summarized in Section 7.

1.7.1 Plan Availability

This SWPPP will be kept on-site at NAVMAG Indian Island by the NAVMAG Stormwater Program Manager and will be made available upon request to the EPA regional director or an authorized representative. The EPA may notify the Navy at any time that this SWPPP does not meet one or more of the minimum requirements of the MSGP. A notification of this type identifies the provisions of the Permit not being met by the SWPPP and identifies the provisions of the plan requiring modification.

Public access to SWPPP information is required by the 2015 MSGP. If you provide a URL in your NOI where your SWPPP can be found, and maintain your current SWPPP at this URL, you will have complied with the public availability requirements for the SWPPP. If you did not provide a SWPPP URL in your NOI, your NOI must include the information required by Part 7.3 of the MSGP.

1.7.2 Revisions and Updates

This SWPPP will be amended whenever there is a change in design, construction, operation, or maintenance of the facilities at NAVMAG Island covered by this plan or the addition of a new industrial facility that has a significant effect on the potential for the discharge of pollutants to the waters of the United States. In addition, this SWPPP will be amended if it proves to be ineffective in eliminating or significantly minimizing pollutants from the sources identified or in otherwise achieving the general objectives of controlling pollutants in stormwater associated with industrial activity. (See Part 5.3 of the permit.)

1.7.3 Retention of Records

Requirements for retention of SWPPP records are identified in Part 7.8 of the MSGP. In general, the Navy is required to retain this SWPPP, records of all monitoring information, copies of all reports required by the SWPPP, and records of all data used to complete the NOI until at least three years after coverage under the permit is terminated.

1.7.4 Signatory Requirements

As required by the permit, this SWPPP and all reports required by this SWPPP shall be signed by a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes (1) the chief executive officer of the agency, (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency, or a duly authorized representative of (1) or (2). The signature authority can be delegated to a duly authorized representative. If the authority is delegated, a signed, dated copy of the delegation authority must be included with the SWPPP. All documents shall have the following certification.

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

2 Site Description

2.1 Site Characteristics

NAVMAG Indian Island is located in Jefferson County, Washington. The Navy owns the majority of Indian Island (the island), which is approximately 5-miles long, 1.25-miles wide, and 2,716 acres in area. A small portion on the southern extent of the island is non-Navy owned, and State Route 116 traverses through this section allowing access to Marrowstone Island, which is located to the east of Indian Island. Approximately 2,100 acres of the island is third growth coniferous forest, although there is an extensive paved roadway system of about 26 miles connecting various areas throughout the island. Development on the island includes [redacted].

The southern half of Indian Island has fairly steep terrain with a maximum elevation of about 350 feet. The northern half of the island is generally level with some steep areas and a maximum elevation of about 150 feet. A ridge runs roughly north south down the center of the island promoting drainage to the west or east on respective sides of the island. The majority of the island is wooded. Land use on non-wooded areas includes structures [redacted], roads, and recreation. There are manicured grass areas around structures and in recreation areas (such as picnic areas). Small lakes/ponds and wetlands are the primary fresh surface water resources. There is a tidal salt marsh located near the Ammunition Wharf on the northwest corner of the island.

Appendix A, Figure A-1 shows the vicinity of Indian Island, general layout, overall drainage patterns, and fresh and marine water bodies.

2.2 Precipitation Information

The weather station closest to Indian Island is in Port Townsend, WA. Historic information from that station was used to develop Table 2-1. The period of record for this data is 10/1/1891 to 1/31/2010. The information was obtained from the following web site:

http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?wa6678

Table 2-1: Annual Precipitation Information

Month	Avg. Total Precipitation (inch)	Avg. Total Snowfall (inch)
January	2.21	1.7
February	1.64	1.5
March	1.60	0.5
April	1.38	0.0
May	1.53	0.0
June	1.28	0.0
July	0.75	0.0
August	0.80	0.0
September	1.08	0.0
October	1.54	0.0
November	2.39	0.5
December	2.55	1.2

The annual average total precipitation is 18.74 inches. While there is some snowfall noted in Table 2-1, it is sporadic and on average, the depth is zero. Winter has the highest rainfall followed by fall, spring, and summer.

2.3 Description of Stormwater Drainage

2.3.1 Drainage Basin Delineation

Appendix A, Figure A-1 shows the drainage basin outlines and flow directions. The majority of the Sector P and Q facilities are drained by areas C, D, and E. Appendix A, Figure A- 1 shows the location of the Sector P and Q facilities with respect to drainage basin.

2.3.2 Impervious Surface Area Estimate

There are about 163 acres of impervious surfaces at Indian Island, including facilities, roads, road shoulders, parking, laydown areas, storage areas and truck lots. The total island area is about 2,716 acres with about 6% of the island being impervious.

2.3.3 Receiving Waters and Wetlands

Receiving waters and wetlands are shown on Appendix A, Figure A-1. The majority of drainage from industrial areas, shown in the various figures in Appendix A, discharges into Port Townsend Bay with some minor drainage into Killisut Harbor. Anderson Lake, located on the southeastern corner of the island is the major fresh water resource. No industrial areas drain into Anderson Lake. A number of forested/shrub-scrub and tidal/marine wetlands exist on the island. Table 2-2 provides details on individual wetlands at NAVMAG Indian Island. Very little drainage from industrial areas enters wetlands. [redacted]

Table 2-2: Wetlands

Name (Appendix A Figure A-1 Ref. #)	Type	Area	Note
Boggy Spit (1)	Tidal/marine	4.8 acres	
Walan Point (2)	Tidal/marine	18.7 acres	Wildlife Refuge
Not named (3)	Fresh	6.4 acres	Located near [redacted].
Not named (4)	Tidal/marine	0.9 acre	
Puyallup Road (5)	Tidal/marine	2.4 acres	
Not named (6)	Fresh	4.5 acres	Located near [redacted]
Not named (7)	Fresh	2.8 acres	Located near [redacted]
Not named (8)	Fresh	3.1 acres	
Sunny Cove Salt Marsh (9)	Tidal/marine	0.4 acre	
Bishop Spit (10)	Tidal/marine	0.8 acre	Wetland surrounds surface water.
Anderson Lake (11)	Fresh	2.5 acres	Wetland surrounds Anderson Lake.

2.3.4 Water Quality and Impaired Receiving Waters

The Clean Water Act (CWA) mandates that each state develop a program to monitor the quality of its surface waters and prepare a report describing the status of its water quality. The most current Integrated Water Quality Monitoring and Assessment Report for Washington state is the 2012 Water Quality Assessment (WQA) 305(b) report and 303(d) list.

Per the 2012 303(d) list, marine waters are divided into grid cells and assigned to one of five WQA Categories as defined below. The grid cells adjacent to the east and west coasts of Indian Island, as well as some along the northwest shore of Indian Island, are Category 1, which reflects the highest water quality. However, there is a grid cell in Water Resource Inventory Area (WRIA) 17 Quilcene-Snow (listing ID 53180) along the northwest shore of Indian Island that is assessed as a Category 5 impaired water body for fecal coliform.

As part of the formal documentation, WDOE submitted a schedule and prioritization for the establishment of Total Maximum Daily Loads (TMDLs) for waters listed in Category 5. The WDOE 2012 WQA and 303(d) List Prioritization Schedule shows that efforts will begin in 2013 to establish TMDLs for WRIA 17 Quilcene – Snow, which is the area bordering NAVMAG Indian Island. Currently there is no TMDLs established for the NAVMAG Indian Island receiving waters.

More information concerning the WDOE 2012 WQA and 302(d) list can be found at the following web site.

http://www.ecy.wa.gov/programs/wq/303d/currentassessmt.html

See the following paragraph for a description of the WQA Categories taken directly from the WDOE web site

http://www.ecy.wa.gov/programs/wq/303d/WQAssessmentCats.html .

"Water quality assessment divides water-body impairments into the following categories:

- **Category 1 - Meets tested standards for clean waters**: Placement in this category does not necessarily mean that a water body is free of all pollutants. Most water quality monitoring is designed to detect a specific array of pollutants, so placement in this category means that the water body met standards for all the pollutants for which it was tested. Specific information about the monitoring results may be found in the individual listings.
- **Category 2 - Waters of concern**: Waters where there is some evidence of a water quality problem, but not presently enough to require production of a water quality improvement project or determine a Total Maximum Daily Load (TMDL). A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards (WQS). There are several reasons why a water body would be placed in this category. A water body might have pollution levels that are not quite high enough to violate the WQS, or there may not have been enough violations to categorize it as impaired according to WDOE listing policy. There might be data showing water quality violations, but the data were not collected using proper scientific methods. In all of these situations, these are waters that the state may want to continue to test.
- **Category 3 - Insufficient data:** This category will be largely empty. Water bodies that have not been tested will not be individually listed, but if they do not appear in one of the other categories, they are assumed to belong here.
- **Category 4 - Polluted waters that do not require a TMDL**: waters that have pollution problems that are being solved in one of three ways:
  - **Category 4a - Has a TMDL**: water bodies that have an approved TMDL in place and are actively being implemented.
  - **Category 4b – Has a pollution control program:** water bodies that have a program in place that is expected to solve the pollution problems. While pollution control programs are not TMDLs, they must have many of the same features, and there must be some legal or financial guarantee that they will be implemented.
  - **Category 4c - Is impaired by a non-pollutant:** water bodies impaired by causes that cannot be addressed through a TMDL. These impairments include low water flow, stream channelization, and dams. These problems require complex solutions to help restore streams to more natural conditions.
- **Category 5 - Polluted waters that require a TMDL**: The traditional list of impaired water bodies traditionally known as the **303(d) list**. Placement in this category means that WDOE has data showing that the WQS have been violated for one or more pollutants, and there is no TMDL or pollution control plan. TMDLs are required for the water bodies in this category."

2.3.5 Stormwater Outfalls

Most outfalls on the NAVMAG Indian Island facility are not associated with MSGP designated industrial activity and therefore are not addressed in the SWPPP. Table 2-3 lists outfalls and catch basins located at Sector P and Q facilities. Appendix A, Figure A-1 is an overall map of Indian Island showing the topography, drainage basins, stormwater flow directions, wetlands, and color-coded Sector P and Sector Q facilities. The outfalls and catch basins are shown on the

various figures in Appendix A. Figure A-13 indicates some of the Global Positioning System (GPS) coordinates of outfalls and wharfs.

Table 2-3 Stormwater Outfall GPS Locations

Outfall or Catch Basin #	Old # for Ref.	Sector Association	North Coordinate	West Coordinate	Observations
[redacted]	[redacted]	NA	[redacted]	[redacted]	8-9" dia. corrugated metal, not industrial
[redacted]	[redacted]	Q	[redacted]	[redacted]	8-9" dia. corrugated plastic
[redacted]	[redacted]	Q	[redacted]	[redacted]	Drains the crane testing area
[redacted]	[redacted]	NA			Located in the grass, is not near the crane testing area
[redacted]	[redacted]	Q	[redacted]	[redacted]	8-9" dia. concrete
[redacted]	[redacted]	Q	[redacted]	[redacted]	Drains the crane testing area
[redacted]	[redacted]	P	[redacted]	[redacted]	Located in the grass, is not near the crane testing area
[redacted]	[redacted]	P	[redacted]	[redacted]	Eight curb cuts along the quay slab w77
[redacted]	[redacted]	P	[redacted]	[redacted]	Farthest South
[redacted]	[redacted]	P			
[redacted]	[redacted]	P			
[redacted]	[redacted]	P			
[redacted]	[redacted]	P	[redacted]	[redacted]	Intermediate curb cut
[redacted]	[redacted]	P			
[redacted]	[redacted]	P			
[redacted]	[redacted]	P	[redacted]	[redacted]	Farthest North
[redacted]	[redacted]	P			
[redacted]	[redacted]	P	[redacted]	[redacted]	14-18" dia. steel with bell on end
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			[redacted]
[redacted]	[redacted]	P			
[redacted]	[redacted]	P			
[redacted]	[redacted]	P			
[redacted]	[redacted]	P	[redacted]	[redacted]	14-18" dia. Steel, No flow
[redacted]	[redacted]	Q	[redacted]	[redacted]	8-9" dia. PVC. LID bio filter

Outfall or Catch Basin #	Old # for Ref.	Sector Association	North Coordinate	West Coordinate	Observations
					installed Nov 2012.
[redacted]	[redacted]	Q	[redacted]	[redacted]	Near [redacted]
[redacted]	[redacted]	P & Q	[redacted]	[redacted]	2.5' dia. Concrete, No flow, dye testing indicates that this outfall is not connected to [redacted]
[redacted]	[redacted]	P&Q	[redacted]	[redacted]	Large catch basin, Stormwater rarely flows into this catch basin
[redacted]	[redacted]	P	[redacted]	[redacted]	White corrugated, No flow
[redacted]	[redacted]	P	[redacted]	[redacted]	12" dia. Aluminum, No Flow
[redacted]	[redacted]	P	[redacted]	[redacted]	12" dia. Aluminum, No flow
[redacted]	[redacted]	P	[redacted]	[redacted]	14" steel with white coating, No flow
[redacted]	[redacted]	P	[redacted]	[redacted]	At culvert that goes under the road
[redacted]	[redacted]	Q	[redacted]	[redacted]	This outfall now goes to a bio-infiltration pond. The curb cut on the southwest edge of [redacted]
[redacted]	[redacted]	Q	[redacted]	[redacted]	Distributed surface flow to regularly space curb cuts that drain directly into the receiving water.
[redacted]	[redacted]	P	[redacted]	[redacted]	Just north of the north leg of the wharf, No flow
[redacted]	[redacted]	P			Drainage swale along the road near the mud rinsing facility
[redacted]	[redacted]				Drainage trench across the street from [redacted] running north
[redacted]	[redacted]	P			Pond to the north of [redacted]
[redacted]	[redacted]	P			Drainage swales surrounding the [redacted]
[redacted]	[redacted]	P			Pond to the east of [redacted]
[redacted]	[redacted]	P			Pond to the west of [redacted]
[redacted]	[redacted]	P			Drainage swales surrounding the [redacted]
[redacted]	[redacted]	P			Drainage swales surrounding the [redacted]
[redacted]	[redacted]	P			Drainage swales surrounding the [redacted]
[redacted]	[redacted]	P			Drainage swales surrounding the [redacted]
[redacted]	[redacted]	P			Drainage swales surrounding the [redacted]
[redacted]	[redacted]	P			Drainage swales surrounding the

Outfall or Catch Basin #	Old # for Ref.	Sector Association	North Coordinate	West Coordinate	Observations
					[redacted]
[redacted]	NA	P			Drainage swales surrounding the [redacted]
[redacted]	NA	P	[redacted]	[redacted]	Toward the north edge of the compound, down the slope to the east of [redacted]
[redacted]	NA	P			
	NA	P			
	NA	P			
	NA	P			
	NA	P			
	NA	P			
	NA	P			
	NA	P			
	NA	P			
	NA	Q			
	NA	P			The fill depot is the infiltration area [redacted].

Notes:

SW = Stormwater outfall to receiving water from an industrial Sector. Stormwater outfalls are numbered from south to north.

IZ= Stormwater outfall to infiltration zone, does not reach receiving water and is not near receiving water. Infiltration zones are named for the building they are nearest.

CB= Catch basins are named to indicate which SW or which building it is near. Catch basin A is nearest the outfall or infiltration zone.

2.3.6

2.3.7 Water Quality Standards

The State of Washington establishes surface-water quality standards via Chapter 173-201A WAC (see http://www.ecy.wa.gov/pubs/wac173201a.pdf). The purpose of this section is to "establish water quality standards for surface waters of the state of Washington consistent with public health and public enjoyment of the waters and the propagation and protection of fish, shellfish, and wildlife, pursuant to the provisions of chapter 90.48 RCW." Table 2-4 has use designations for the marine waters adjacent to Indian Island. The marine water bodies adjacent to Indian Island are: Oak Bay to the south; Port Townsend Bay to the west and northwest; Kilisut Harbor to the east and northern end; and Scow Bay to the east toward the southern end of the Island.

Table 2-4: Water Quality Use Designations for Marine Waters Adjacent to Indian Island

Category	Classification
Aquatic Life Use Classification	Extraordinary - Extraordinary quality salmonid and other fish migration, rearing, and spawning; clam, oyster, and mussel rearing and spawning; crustaceans and other shellfish (crab, shrimp, scallops, etc.) rearing and spawning.
Shellfish Harvest	Yes
Recreational Use	Primary Contact Recreation
Miscellaneous Uses	A. Wildlife Habitat B. Harvesting. Salmonid and other finfish harvesting, and crustacean and other shellfish (crab, shrimp, scallops, etc.). C. Commerce and Navigation Boating D. Aesthetic Values.

Table 2-5 lists applicable water quality standards for toxic substances in marine waters. The full list is included in Table 240(3) of WAC 173-201A. Substances considered applicable (and therefore included in Table 2-5) are those that must be monitored per the applicable MSGP sector. The MSGP benchmark monitoring value concentration is included for reference. Freshwater standards are not included in Table 2-5 because industrial areas of NAVMAG Indian Island do not discharge into freshwater streams, lakes, or rivers.

Table 2-5: Selected Toxic Marine Water Quality Standards per WAC 173-201A

Substance	Acute Standard[a]	Chronic Standard[a]	Benchmark Value (Total Recoverable)[b]	Note
Aluminum	none	none	0.75 mg/L	Sector Q, water transportation, requires benchmark monitoring for aluminum. There is no marine water quality standard for aluminum.
Iron	none	none	1.0 mg/L	Sector Q, requires benchmark monitoring for iron. There is no marine water quality standard for iron.
Lead	210.0 µg/L	8.1 µg/L	0.262 mg/L , 262 µg/L	Sector Q, water transportation, requires benchmark monitoring for lead.
Zinc	90.0 ug/l	81.0 ug/l	117 ug/l c	Sector Q, requires benchmark monitoring for zinc. The water quality standard is the dissolved fraction of the metal. The benchmark value is the total recoverable fraction of the metal.

Notes:

[a]The Washington State Water Quality numbers are based on the dissolved fraction of the metal.

[b]Benchmark values are based on total recoverable metals as defined in EPA's MSGP, which is included in Appendix C of the SWPPP.

3 Industrial Facility Pollutant Sources

3.1 Industrial Activities

NAVMAG Indian Island is dedicated to [redacted]. In fulfilling this mission, the work conducted at NAVMAG Indian Island falls under two MSGP sectors, Sector P: Land Transportation and Warehousing and Sector Q: Water Transportation. See the figures in Appendix A, for Industrial Sectors P and Q locations. Industrial processes conducted at NAVMAG Indian Island that do not fall under a defined sector in the MSGP are not directly addressed in the SWPPP.

3.2 Spills and Leaks

Oil and Hazardous Substance (OHS) spill response at NAVMAG Indian Island is addressed in the Regional OHS Integrated Contingency Plan (ICP). The regional ICP is written to comply with the Oil Pollution Act (OPA) of 1990 regulations and 40 CFR 112.20.

The ICP contains information such as the description of actions that the station will take in response to an OHS spill and the process to notify the National Response Center (NRC) and other regulatory agencies. In addition, the ICP contains specific directions for ensuring prompt, efficient coordination and response to an OHS spill. The Navy spill response team would be called to assist immediately should an OHS release occur at NAVMAG Indian Island.

The current NAVMAG Indian Island Oil Spill Prevention, Control, and Countermeasure (SPCC) Plan refers to the ICP for a thorough description of spill response procedures for NAVMAG Indian Island. A brief summary of those procedures is as follows:

- Report oil spills immediately to Regional Dispatch at (360) 396-4444 or at 911 from a base telephone. Regional Dispatch will notify the Indian Island spill response team, which will, in turn, notify the following agencies:
    - Jefferson County Dept. of Emergency Management; Business Hours (360) 385-9368, After Hours (360) 385-3831, Ext. I
    - Washington State Department of Ecology - (425) 649-7000
    - Washington State Dept. of Emergency Management - (800) 258-5990
    - National Response Center - (800) 424-8802

The NAVMAG Indian Island SPCC Plan provides in depth coverage of oil spill issues. Table 3-1 is a table from the SPCC Plan dated September 2012 that lists all the oil storage locations at NAVMAG Indian Island.

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Table 3-1: Tanks and Containers

Facility	Container Identification	Location	Type & Year[1]	Capacity (gallons)	Contents	Secondary Containment
[redacted]	62-102	[redacted]	UST, FRP, 2011	2500	Diesel	Double-walled tank and pipes
[redacted]	64-102	[redacted]	AST, diked, steel, 1999	1,000	Diesel	Double-walled tank and pipes
[redacted]	69-102	[redacted]	AST, diked, steel, 1999	5,000	Diesel	Yes, except for short length of pipe near tank
[redacted]	77-103	[redacted]	UST, FRP, 2011	5,000	Diesel	Double-walled tank and pipes
[redacted]	Drum Storage	[redacted]	Drums	550[2]	Lube oil	Pallets
[redacted]	Oil Cart	[redacted]	Mobile lube cart	265	Lube oil	Diked cart
[redacted]	84-106	[redacted]	UST, FRP, 2011	2,500	Diesel	Double-walled tank and pipes
[redacted]	84-102	[redacted]	AST, diked, steel	120	Waste oil	Yes
[redacted]	84-103	[redacted]	AST, diked, steel	120	Waste oil	Yes
[redacted]	84-105	[redacted]	AST, diked, steel	270	Lube oil	Diked tank
[redacted]	132-101	[redacted]	UST, FRP, 2011	1,000	Diesel	Double-walled tank and pipes
[redacted]	Drum Storage	[redacted]	Drums	55	Lube oil	Containment pallet
[redacted]	184-103	[redacted]	AST, diked, 1999	1,000	Diesel	Double-walled tank and pipes
[redacted]	Drum Storage	[redacted]	Covered pallet	365	Fuels/ Hydraulic	Yes, pallet floor
[redacted]	185-101	[redacted]	AST, DW, steel, unk	5,000	Empty	Double walled tank
[redacted]	185-105	[redacted]	AST, SW, steel, unk	1,100	Waste oil	Vaulted tank.
[redacted]	187-102	[redacted]	UST, FRP, 2011	1,000	Diesel	Double-walled tank and pipes
[redacted]	189-102	[redacted]	UST, ST, 2008	1,000	Diesel	Double-walled tank and pipes
[redacted]	301-101	[redacted]	UST, FRP, 2011	2,500	Diesel	Double-walled tank and pipes

Facility	Container Identification	Location	Type & Year[1]	Capacity (gallons)	Contents	Secondary Containment
[redacted]	836-101	[redacted]	UST, FRP, 2011	5,000	Diesel	Double-walled tank and pipes
[redacted]	848-101	[redacted]	UST, FRP, 2011	2,500	Diesel	Double-walled tank and pipes
[redacted]	848A-101	[redacted]	AST, DW, steel, 2011	250	Diesel	Double-walled
[redacted]	849-101	[redacted]	UST, FRP, 2011	2,500	Diesel	Double-walled tank and pipes
[redacted]	853-101	[redacted]	AST, DW, steel, 2010	305	Diesel	Double-walled
[redacted]	925-101	[redacted]	AST, DW, 2006	145	Diesel	Double-walled
[redacted]	1030-102	[redacted]	UST, DW, FRP, 2005	1,000	Diesel	Yes, except for short length of pipe near building
[redacted]	1037-01	[redacted]	AST, DW, steel, 2002	200	Diesel	Yes
[redacted]	986-101	[redacted]	AST, DW, steel, 2006	10,000	Diesel	Double-walled tank and pipes
[redacted]	MFT-101	[redacted]	AST, SW, steel, unk	155	Diesel	None
[redacted]	MFT-102	[redacted]	AST, SW, steel, unk	65	Diesel	None

1 - Abbreviations:
AST = aboveground storage tank
DW = double-walled
FRP = fiberglass reinforced plastic
ST = Steel
SW = single-walled
unk = unknown
UST = underground storage tank

2 - Approximate

3- Less than 5 gallons remains in tank. Corrective action requires the tank to be emptied.

Two methods are used to identify areas where potential spills and leaks can occur, which can contribute pollutants to stormwater discharges. The first is to evaluate past spills and leaks (see Tables 3-2 and 3-3), and the second is to focus inspections on facilities with high or medium leak and spill potential (see Table 3-4).

Table 3-2 outlines reportable spills from 2009 to 2015.

Table 3-2: Reportable Spills from 2009-2015

Date	Spilled Material	Quantity	Location	Description/Cause (quoted from spill database)
4/22/2011	Hydraulic Fluid	2 oz.		At 0845, a leak from a hose on an outdrive unit was discovered.
No reportable spills occurred in 2009-2010.				

The low number of reportable spills over the past 6 years indicates that overall spill prevention procedures and control measures are effective.

Non-reportable spills are spills that were cleaned up before they could reach surface water. Table 3-3 outlines non-reportable spills from 2009 to 2015.

Table 3-3: Non-Reportable Spills from 2009-2015

Date	Location	Time	Substance	Incident
2/2/2009		1025	Interthane Paint	Forklift punctured can. Drove POV to wash rack to clean out leaving trail.
12/12/2009		1320	Diesel	Overflow of 3 gallons on a tug boat (confined to the tug boat, the spill did not reach the water)
3/15/2010		0700	Diesel	Boiler Malfunction
4/8/2010		0850	Diesel	Fuel from a boiler tank burp.
4/13/2011		1500	Latex paint mixed with water	Latex paint was inappropriately disposed of in a solid waste dumpster. Five gallons were spilled in the dumpster, which then mixed with rainwater. This mixture leaked from the dumpster.

Date	Location	Time	Substance	Incident
6/1/2012	[redacted]	5 gallons	Hydraulic Fluid	Non-reportable. At 1125, USCG Cutter Melon.
3/20/2013	[redacted]	1 gallon	Hydraulic Fluid	Non-reportable. Hydraulic hose burst during cargo on-load operations.
9/30/2014	[redacted]	N/A	N/A	No reportable spills occurred in FY2014.

A review of non-reportable spills from 2009 to 2015 indicates:

- There were seven recorded spills during the period.
- The spills were associated with equipment malfunctions, operator error, and inappropriate disposal of wastes.

See SWPPP Revision 2 dated May 12, 2009 for spill information prior to 2009.

The method used to identify potential areas where spills and leaks could occur is based on the type and location of materials stored, amount of materials stored and overall activity in the area. Table 3-4 summarizes those facilities/areas deemed a high or medium priority with regard to potential spills and leaks to stormwater.

Each facility or area was evaluated and given a priority (high, medium, and low) based on the following criteria:

- Type of material stored. Liquids and fine granular material would have higher priority than solid materials.
- Amount of material stored.
- Relative likelihood of release of spills or leaks if they should occur. A facility, for example, with secondary containment would be given a lower priority than one without since the likelihood of release is less. Additionally materials stored indoors or under cover would have a lower priority than those stored outdoors.
- Location relative to surface water.
- Overall level of activity at the facility or area. Generally, the higher the activity levels the higher the chances for a spill to occur.

Table 3-4: Spill and Leak Potential: High and Medium Priority Facilities

Priority	Facility Number	Description
High		
Medium		
High		
Medium		
Medium		
Medium		
Medium		
High		
Medium		
Medium		
High		
Medium		
Medium		
Medium		
Medium		

Notes:

1. *These are designated storage/laydown/parking areas.
2. The "n, s, e, or w" prefix indicates the area is nearby and north, south, east, or west of the numbered facility.

3.3 Non-Stormwater Discharges

3.3.1 Certification of Non-Stormwater Discharges

Appendix J contains results of the NAVMAG Indian Island Non-Stormwater Discharge Assessment and Certification completed in 1993/1994. The original signed/certified copy of the assessment for [redacted], [redacted] was lost so a new assessment for the facility was completed in May 2006. It is also included in Appendix J.

As part of the 2007 SWPPP update, dyed water testing was done to determine the disposition of vessel rinse water from [redacted]. The testing was inconclusive, but the [redacted] vessel rinse area is presumed to infiltrate entirely into the ground. The floor drains in [redacted] have been plugged.

Dye testing was done in early 2013 in the [redacted] boiler room and restrooms floor drains. The dye testing showed that the drains flow to the sanitary sewer.

The MSGP allows non-stormwater discharges as follows:

- Discharges from firefighting activities
- Fire hydrant flushing
- Potable water including water line flushing
- Uncontaminated air conditioning or compressor condensate
- Irrigation drainage
- Landscape watering provided all pesticides, herbicides, and fertilizers have been applied in accordance with manufacturer's instructions
- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed)
- Routine external building wash down which does not use detergents
- Containment boom pressure washing using no detergents
- Uncontaminated ground water or spring water
- Foundation or footing drains where flows are not contaminated with process materials such as solvents
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blow-down or drains)
- Small boat rinsing

Most of the above non-stormwater discharges may occur at NAVMAG Indian Island with the exception of mist from cooling towers. Table 3-7 provides information on the source, location, and control measures/best management practices (BMPs), if any, employed for non-stormwater discharges.

Table 3-7: Allowable Non-Stormwater Discharges

Type of Non-Stormwater Discharge	Location of Discharge	Non-Stormwater Discharge BMP[1] Discussion
Fire Fighting	Various	No BMP
Fire Hydrant Flushing and Potable Water Line Flushing	NAVMAG Indian Island purchases water from Jefferson County. The water enters the Island near the main gate and is distributed through water mains that roughly run longitudinally down the center of the island. There are two reservoirs with capacities of 1.0 and 0.75 million gallons. Service lines branch off the mains to supply individual facilities. Hydrants are located along the mains and service lines. Hydrants and waterlines are flushed on an annual basis. Typically flush water discharges into roadside drainage swales. On an infrequent basis, the reservoirs are drained into the nearby woods to allow maintenance.	No BMP since flushing is done infrequently and there is a low probability of it causing erosion. There are no existing or proposed BMPs for this practice.
Potable Water	Potable water sources include small sources such as leaking hose bibs and freeze protection water on the [redacted] To prevent wharf water lines from freezing potable, water is either automatically or manually discharged. The water discharges directly into Port Townsend Bay.	No BMPs are necessary for this practice/source.
Uncontaminated Air Conditioning or Compressor Condensate	There are no significant sources of air conditioning or compressor condensate at NAVMAG Indian Island. Public Works maintains and uses both portable and fixed air compressors that discharge small volumes of condensate. There are a few window-type air conditioners that discharge condensate.	No BMPs are necessary for this practice/source.
Landscape Watering	Limited landscape watering may occur at the main gate area and at the [redacted]	BMP K-1
Pavement Wash Waters	[redacted] are washed using potable water to remove bird waste, accumulated shells left by the gulls, and dirt. Other pavements (roads, parking lots) are not typically washed.	BMP K-2
Boat Ramp Boom Cleaning	Sea growth from oil containment booms is removed at boat [redacted]	BMP F-1
Routine External Building Wash Downs	Buildings are occasionally washed (using either a pressure washer or hose) to remove dirt, debris, and mildew/mold. This is not a common/routine practice a NAVMAG Indian Island.	BMP K-3
Uncontaminated Ground Water or Spring Water	Some of the larger buildings such as [redacted] may have foundation drains. No springs are known to exist on station.	No BMPs are necessary for this practice/source.
[redacted]	This BMP applies to rinsing salt water and minor debris (e.g., seaweed) from vessel hulls and from internal parts of the outboard motor salt water-cooling system in the designated area behind [redacted]	BMP F-4
Pier-side Vessel Deck Rinsing	Boat decks are rinsed to remove salt water, and bird and otter waste.	BMP K-4
Bulk Mud Removal by Rinsing	Bulk mud is rinsed off vehicles at [redacted]. The purpose of this facility is to reduce large quantities of mud that can clog the vehicle wash area at [redacted]	BMP F-3
Mower Blade Rinsing	Grounds keeping mowers are rinsed to clean vegetation off the mower blades. This is done at [redacted]	BMP K-5

Note: See Table 4-1 for the BMP descriptions.

3.4 Salt Storage

See Control Measure/Best Management Practice C-7 in Table 4-1 for details.

3.5 Applicable Industrial Facilities/Areas, Potential Pollutant Sources

Table 3-8 is a summary of potential pollutant sources from each identified MSGP sector-specific facility/area.

Table 3-8: Facility Summary Table

Building #	Building Name	Sector	Description	Potential Pollutants	Exposed Materials Storage or Process	Spill/Leak Potential	Drainage Basin (see Figure A-1)	Figure A-	Designated leak-Prone Vehicle and Equipment Storage Areas[1]
[redacted]	[redacted]	P	[redacted] is a public works machine shop. The primary activity is metalworking (welding, cutting, grinding, forming, etc.). Carpentry is also done in the shop. There are four hazmat storage lockers located outside on the west side of [redacted]. All lockers are covered and have secondary containment. Materials stored outside include forklifts and an emergency generator. There is a cyclone located outside behind the building that is currently out of use.	POLs Acids Metals Paints	☒ Hazmat storage lockers are stored outside.	High	D	2 & 4	☐
[redacted]	[redacted]	P	[redacted] a shipping/receiving and supply center warehouse housing day-to-day supplies used at NAVMAG Indian Island. This includes office supplies, furniture, paints, adhesives, hoses, and cleaning supplies. Grounds maintenance equipment and supplies are stored at this facility. One large mowing vehicle and one large trailer are stored on the grass outside, in front of [redacted]	POLs Paints Cleaners	☐	Medium	D	2 & 4	☐
[redacted]	[redacted]	P	Inert materials are stored in this facility. The dust collection equipment located outside on the south side of the building is no longer used/active. Loading/unloading takes place inside the building. A malfunction of a truck or fork truck could result in a spill of POLs.	POLs	☐	Low	D	2	☐
[redacted]	[redacted]	P	Vehicle maintenance is accomplished in [redacted] Regular types of maintenance are performed such as oil/filter change, antifreeze, lubrication, brakes, tires, batteries, etc. Used vehicle batteries waiting recycling are collected inside the building. Some materials and equipment are stored outside behind the building. Liquid transfers occur inside the building near the garage door on the east side of the building.	POLs Solvents Metals Paints	☒ Materials and equipment are stored outside behind the building. Hazmat is stored outside in a fenced secondary containment behind the building.	Medium	D	2 & 4	☒
[redacted]	[redacted]	Q	This facility is associated with [redacted] has an office in this building and general storage [redacted] equipment. A parts washer and some machine tools are in the shop in [redacted]. Boats/trailers are parked outdoors to the west or in between this building and [redacted]. There is a covered vehicle area on the east side of the building where vehicles can be brought under cover. A metals recycling collection dumpster is located under the covered area. Areas north and east of [redacted] are used to rinse saltwater off vessels and out of the internal components of the outboard motor cooling system utilizing water and a product called Salt-Away (MSDS#	Metals Sediments	☒ Boat rinsing.	Low	D	2 & 5	☐

[1] Per BMP P-1(a) (see Table 4-1) leak-prone vehicles and equipment can only be stored in certain designated areas where identification and cleanup of any leak will be readily noticed. This column identifies those areas.

Building #	Building Name	Sector	Description	Potential Pollutants	Exposed Materials Storage or Process	Spill/Leak Potential	Drainage Basin (see Figure A-1)	Figure A-	Designated leak-Prone Vehicle and Equipment Storage Areas[1]
			[redacted]). Installation of a wash rack at [redacted] is in the initial planning stages.						
[redacted]	[redacted]	Q	The "floor" of the fabric building is the pavement. Small craft maintenance is done in this building. The building is located just south and west of Building [redacted]. Liquid transfers occur inside this building. A portable berm is used when conduction maintenance.	POLs Solvents Metals Paints	☒ Liquid transfers. No materials are stored outside.	High	D	5	☐
[redacted]	[redacted]	Q	This building is used for outboard engine repair and boat trailer maintenance. There are small amounts of POL from the outboard engines. There is an outboard engine testing tank at this building.	POLs Solvents Metals Paint	☒ Liquid transfers	Medium	D	2 & 5	☐
[redacted]	[redacted]	P	This is a support building for [redacted] [redacted]. It is used mainly to store materials. There are some forklifts and an emergency generator stored outside.	POLs	☒ Fuel tanks from equipment.	Low	D	2 & 4	☐
[redacted]	[redacted]	P	This facility consists of a two-pump fueling island dispensing unleaded gas and diesel to public works vehicles. Near the island are a small associated building, spill cleanup equipment/materials, and a vehicle wash pad. The pump island is covered and is surrounded by a trench drain that goes to the oil water separator that also services the vehicle wash pad. The oil water separator discharges into the sanitary sewer following oil/water separation.	POLs Wash water	☒ POL	Medium	D	2 & 4	☐
[redacted]	[redacted]	Q	Two security boats, one barrier boat, one log bronc, and one light tug are normally berthed at the pier [redacted] conducts fueling done at the port ops small craft berthing. NAVFAC from Bremerton arrives with a fuel truck and conducts fueling while the boats are on the water. All the proper spill kits and response personnel are present, the boats are contained with the booms There is a spill kit at the head of the pier adjacent to [redacted]. An exterior potable water hose connection is located at [redacted] A hose runs from this connection to supply water for rinsing the pier and the boats. This pier was upgraded and expanded in 2010-2011.	POLs	☒ Possible POL spills from the boats.	Medium	D	2	☐
[redacted]	[redacted]	Q	Oil Containment booms and rubber fenders are placed on the 0.2-acre concrete boat ramp and pressure washed to remove accumulated sea growth. The sea growth is left along the beach where it is consumed by wildlife.	POLs Organic matter Solids	☒ POLs could be present on the booms.	Low	D	2	☐

Building #	Building Name	Sector	Description	Potential Pollutants	Exposed Materials Storage or Process	Spill/Leak Potential	Drainage Basin (see Figure A-1)	Figure A-	Designated leak-Prone Vehicle and Equipment Storage Areas[1]
[redacted]	[redacted]	P Q	[redacted] is a 4.2-acre open concrete-surfaced area used for laydown and storage. Materials stored include inert materials, conex boxes, scrap/recyclable materials (wood, cardboard, metals), pallets, and ramps. The concrete pad is surrounded by grass. There are truck trailers parked along the west side and Port Operations boats and trailers parked on the south end toward the east side. The concrete pad is not sloped. Stormwater can flow in all directions off the pad. There is no indication of surface flow from the pad eroding pathways towards the water.	POLs Metals	☒ Materials containing metals are stored outside. Materials are moved with trucks and fork trucks (potential POL sources).	Low	D	2	☐
[redacted]	[redacted]	P	[redacted] is a less than 90-day hazardous waste storage facility. The building is open on one side to allow movement of wastes in and out. Drainage within the facility is controlled by a catch basin with a shut off valve. The entire facility is enclosed by a berm and a security fence.	POLs Wastes	☒ No materials or wastes are stored outside. Transfers are conducted.	Medium	D	2 & 6	☐
[redacted]	[redacted]	P	All the trucks that bring deliveries to NAVMAG Indian Island stop at this center. As such, there is potential for an oil spill on the pavement. There is a spill kit located outside near the truck holding area. A small stormwater retention pond serves [redacted] and the associated parking area. The pond is north of [redacted] between Anderson road and the facility exit (onto [redacted]).	POLs	☒ Trucks	Low	D	1 & 11	☐
[redacted]	[redacted]	P	These facilities conduct similar operations. Trucks, trailers, and/or containers are processed or temporarily parked on these paved areas. Materials loading/unloading may also be conducted. Some facilities have vegetative swales for stormwater runoff. Spill kits are staged at these facilities. Many of the facilities have scrap wood "recycle" bins. [redacted]) has two detention/retention ponds. 0.7-acre paved w/1,000 ft^2 pond [redacted] (1.33-acre covered)	POLs	☒Trucks, Truck trailer and container storage	Low	E	1 & 10	☐
[redacted]		P		POLs	☒Trucks, Truck trailer and container storage	Low	E	1 & 10	☐
[redacted]		P		POLs	☒Trucks, Truck trailer and container storage	Low	C	1 & 10	☐
[redacted]		P		POLs	☒Trucks, Truck trailer and container storage	Low	E	1 & 10	☐
[redacted]		P		POLs	☒Trucks, Truck trailer and container storage	Low	E	1 & 10	☐
[redacted]		P		POLs	☒Trucks, Truck trailer and container storage	Low	E	1 & 10	☐
[redacted]		P		POLs	☒Trucks, Truck trailer and container storage	Low	E	1 & 10	☐

Building #	Building Name	Sector	Description	Potential Pollutants	Exposed Materials Storage or Process	Spill/Leak Potential	Drainage Basin (see Figure A-1)	Figure A-	Designated leak-Prone Vehicle and Equipment Storage Areas[1]
[redacted]	[redacted]	P		POLs	☒Trucks, Truck trailer and container storage	Low	C	1 & 10	☐
[redacted]	[redacted]	Q	The 5.6-acre concrete [redacted] the primary Indian Island sector Q associated facility. Drainage is directly into Port Townsend Bay through curb cuts located along the length of the wharf. Vessels are loaded and unloaded using either the large container crane and/or mobile cranes. Fork trucks and trucks move materials on/off the [redacted]. Recycle bins and solid waste bins are located [redacted]. There is a spill kit located at the south end of the pier.	POLs Metals Paints Acids	☒ Cranes Trucks	High	D	3 & 9	☐
[redacted]	[redacted]	Q	This building is located on the [redacted] and houses operations and equipment critical to [redacted]. Included are office spaces, spill response equipment, generator, fork truck charging room, and rigging equipment. The floor drains in this building are plugged.	POLs Metals Paints	☒ Metal containers and scrap recycled metals stored outside.	Medium	D	3 & 8	☐
[redacted]	[redacted]	Q	This is the [redacted] area. Wood components are manufactured in this facility. Dust collection equipment is housed (inside) in the southeast corner of the facility. Wood to be processed is stored either inside or [redacted]. Primarily untreated wood is used. Finished products may remain outside for a short period of time.	TSS	☒ Saw dust	Low	D	3 & 7	☐
[redacted]	[redacted]	P	Metal and other containers are refurbished at this facility. Paint is removed and new coatings are reapplied. Materials are crushed for recycling. Metals and containers are stored outside. Paints are stored in nearby [redacted].	POL Paints Solvents Particulate	☒ Paints are transported from Building 838 to 837. Scrap metal is stored outside.	Medium	C	1 & 11	☐
[redacted]	[redacted]	Q	This storage area is covered (roofed) and is open on all sides. Primarily untreated lumber is stored.	POLs	☒ Trucks	Low	D	3 & 7	☐
[redacted]	[redacted]	Q	Materials are stored and staged on this paved 2.8-acre (including [redacted]) area. Storage generally is done along the southern and eastern edges and consists of trash containers; recycle containers, pallets, tractor-trailers, conex boxes, mobile cranes, lumber, vehicles, equipment, and crates. Private vehicles are parked in the area. Located in the southeast portion of the facility are two 1500-kw electric generators and a 10,000-gallon diesel fuel tank. Drainage is via curb cuts at the south and north ends of the slab.	POLs Metals	☒ Cranes 10,000 gallon diesel tank Exposed waste and recycle containers	High	D	3 & 7	☐

[2] Located near Building 38. Also known as Lot 7.

Building #	Building Name	Sector	Description	Potential Pollutants	Exposed Materials Storage or Process	Spill/Leak Potential	Drainage Basin (see Figure A-1)	Figure A-	Designated leak-Prone Vehicle and Equipment Storage Areas[1]
[redacted]	[redacted]	P	Operations at this complex are similar to that noted for [redacted], etc. The grass "roofed" buildings are adjacent to one another and form a single complex. There are 4.0-paved acres adjacent to the complex for vehicle parking and loading/unloading. Loading docks are roofed/covered. Scrap metal bins are located within the complex.	POLs Metals	☒ Trucks Loading equipment	Low	C	1	☐
[redacted]	[redacted]	Q	[redacted] is involved with [redacted] and is tied to the [redacted].	POLs Metals	☒ Trucks Loading equipment Metal containers and scrap recycled metals stored outside	Low	C	1 & 11	☐
[redacted]	[redacted]	P	This is a grassy area just east of [redacted]. It is used for storing truck trailers. There are no stormwater retention swales at this location. Some stormwater will infiltrate and the rest will flow onto the street and into surface ditches along the road heading east towards the waterfall. There is no gravel apron leading to the street. With repeated use, there may be mud track-out issues at this location.	POLs	☒ Trucks Mud track-out	Low	D	1, 2, & 5	☐
[redacted]	[redacted]	Q	Crane testing and calibration takes place in this area south of [redacted].	POLs	☒ Crane testing has the potential for fluids leaking from the cranes.	Medium	D	2	☐
[redacted]	[redacted]	P	Materials and equipment are stored primarily to the south and west of [redacted]. Tractor-trailers are parked to the south of [redacted] on a gravel/dirt area. Three temporary garages house spill-response equipment.	POLs sediment	☒	Low	D	2	☐
[redacted]	[redacted]	P	Located to the east of [redacted] near the intersection with [redacted]. The head of [redacted] is located adjacent to the facility. Bulk accumulated dirt/mud on vehicles and equipment is rinsed off in this area generally prior to washing at the vehicle wash pad ([redacted]).	POLs TSS	☒ Mud	Low	D	1	☐
[redacted]	[redacted]	P Q	The paved area north of [redacted] is used for crane maintenance and for storage of maintenance equipment. The unpaved area north [redacted] is used to stage equipment-awaiting transfer to [redacted]. There are also two shed covers that provide protection from stormwater for metal recycling bins. The fueling containment sheds are also located in this area.	POLs Metals Nutrients	☒ Leak prone vehicles	Medium	D	2	☒
[redacted]	[redacted]	P	This is approximately a one-acre paved area located to the east [redacted] Forklift training is conducted in this area. There is one covered recycling dumpster and one covered trash dumpster located at the north edge of this area.	POLs	☐	Low	D	2 & 5	☒
[redacted]	[redacted]	P	This unpaved area west of [redacted] is used for storing large maintenance	POLs	☒	Medium	D	2	☒

Building #	Building Name	Sector	Description	Potential Pollutants	Exposed Materials Storage or Process	Spill/Leak Potential	Drainage Basin (see Figure A-1)	Figure A-	Designated leak-Prone Vehicle and Equipment Storage Areas[1]
	[redacted]		vehicles and other large maintenance equipment. Large piles of sand and crushed rock used for maintenance are stored uncovered. These piles are not eroding and are not required to be covered.	TSS Metals	Sand Pile Exposed equipment				
[redacted]	[redacted]	P	This 0.6-acre gravel surfaced area is primarily used as an overflow parking lot for private vehicles when parking at the [redacted]) is full. Other items located in this area include tractor-trailers and lifting equipment.	POLs Sediments	☒ Vehicle mud track-out	Low	D	3	☐
[redacted]	[redacted]	P	This area is used for depositing clean fill materials from NAVMAG Indian Island sources.	Sediment	☒ Mud	Low	C	1 & 10	☐

Notes:

*These are designated storage/laydown/parking areas. The "n, s, e, or w" prefix indicates the area is nearby and north, south, east, or west of the numbered facility.
Sector P: Land Transportation and Warehousing
Sector Q: Water Transportation
POLS – Petroleum, Oils, and Lubricants
L/UL – Loading/Unloading
TSS – Total Suspended Solids

4 Stormwater Control Measures/Best Management Practices

NAVMAG Indian Island has the advantage of being well wooded with very few hard-piped stormwater conveyances. Wooded areas allow rainwater to infiltrate into the ground. The natural and man-made, non-hard-piped stormwater conveyance systems tend to allow stormwater runoff to infiltrate into the ground and also tend to "clean" it prior to discharge.

NAVMAG Indian Island will maintain all Stormwater Control Measures/Best Management Practices (BMPs) identified in this SWPPP in effective operating condition. If a site inspection identifies BMPs that are not operating effectively, maintenance will be performed before the next anticipated storm event or as necessary to maintain the continued effectiveness of stormwater controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance will be scheduled and accomplished as soon as practicable. In the case of non-structural BMPs, the effectiveness of the BMP will be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

The following types of BMPs are described in detail in Table 4-1:

- Core BMPs C-1 through C-12, applicable at all sectors
- Facility/Area Specific BMPs F-1 through F-8
- Structural Stormwater Controls S-1 through S-8
- Sector P Land Transportation and Warehousing BMPs P-1 through P-3
- Sector Q Water Transportation BMPs Q-1 through Q-4
- Non-Stormwater Discharge BMPs, K-1 through K-5 and F-1 through F-4, describe the actions for allowable non-stormwater discharge processes.

4.1 Control Measures/Best Management Practices

4.1.1 Core BMPs

NAVMAG Indian Island must select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in MSGP Part 2.1.1, meet the non-numeric effluent limits in Part 2.1.2, and meet limits contained in applicable effluent limitations guidelines in Part 2.1.3.

Core Stormwater Control Measures/Best Management Practices (Core BMPs) are those required in the MSGP (Part 2.1.2) that generally apply to industrial areas of NAVMAG Indian Island.

Some of the steeper slopes on the southern end of the Island may naturally experience erosion that is not a concern in the context of this SWPPP. Shoreline erosion also occurs on Indian Island that generally is not a concern in the context of the SWPPP. Areas of potential shoreline erosion and cliff erosion associated with man-made structures and potentially increased by stormwater runoff are addressed in Table 4-1 under the Core BMPs.

4.1.2 Facility/Area Specific BMPs

Facility BMPs include BMPs associated with a specific area, facility, or process. Some facility specific BMPs address allowable non-stormwater discharges.

4.1.3 Structural Stormwater Controls

Structural stormwater controls at NAVMAG Indian Island are mainly associated with specific facilities and are engineered type stormwater controls.

4.1.4 Sector P BMPs

These BMPs are the sector specific BMPs required by the MSGP, Section 8, P Land Transportation and Warehousing. Unless otherwise noted, these BMPs apply mainly to those facilities/operations associated with that sector (see Table 3-8 for sector designations).

4.1.5 Sector Q BMPs

These BMPs are the sector specific BMPs required by the MSGP, Section 8, Q Water Transportation. Unless otherwise noted, these BMPs apply mainly to those facilities/operations associated with that sector (see Table 3-8 for sector designations).

4.1.6 Non-Stormwater Discharge BMPs

These are BMPs associated with facilities or processes that have allowed non-stormwater discharges.

4.1.7 Construction BMPs

Additionally construction activities are addressed in Appendix D.

Table 4-1: Stormwater Control Measures/Best Management Practices

BMP Number	BMP Title	BMP	Notes
C-1	Eliminate and Minimize Exposure (Core BMPs)	Where practicable, industrial materials and activities will be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or run-off. Pay particular attention to minimizing exposure from dust/debris causing activities and non-ferrous (copper, aluminum, zinc, etc.) metals storage. -Do not conduct outdoor vehicle, equipment, or material washing activities that will drain into the storm sewer. Certain exceptions using only potable water are authorized in the SWPPP. -All outdoor trash containers shall be covered to minimize rainfall exposure. -All large metal recycling containers (40-yard roll-off type) shall be covered with a solid lid, to prevent precipitation from entering them. They shall be used to collect and store metals for recycling. They may receive any type of metal (i.e., ferrous and non-ferrous) for recycling, as long as they are kept covered. These containers are taken to a recycle center on an as-needed basis (when they are full). These containers shall be painted blue and be labeled on at least two sides with the words "METAL RECYCLING ONLY." -All smaller metal recycling containers (self-dumping hoppers) shall be under cover or have lids unless safety is an issue. An example of safety issue is on the wharf where high winds could rip a lid off a recycling container or a canopy would obstruct visibility and maneuverability. In a case where safety is an issue, the small recycling bins must be painted blue and will NOT require lids or to be under cover. They must be labeled on at least two sides with the words, "NO COPPER, NO ZINC, NO LEAD, NO SHAVINGS" (RED LETTERS ON WHITE BACKGROUND). These self-dumping hoppers shall be emptied into larger holding containers (40-yard, covered roll-offs) once per week or when full (whichever comes first). All metal recycling containers shall be checked periodically by a qualified Environmental Specialist to ensure that the BMPs are being followed. -Dispose of obsolete equipment and unused metal stock. -Cover metal stock stored outside. -Use grading, berming, or curbing to prevent run-off of contaminated flows and divert run-on away from these areas. -Locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas). -Clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants. -Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible. -Use spill/overflow protection equipment. -Drain fluids from equipment and vehicles prior to on-site storage or disposal. -Perform all cleaning operations indoors, under cover, or in bermed areas that prevent run-off and run-on, and also that capture any overspray. -Ensure that all wash water drains to a proper collection system, not the stormwater drainage system.	Minimizing exposure of pollutants to stormwater is a core BMP required under the MSGP.

BMP Number	BMP Title	BMP	Notes
C-2	Good Housekeeping (Core BMP)	Keep all exposed areas of NAVMAG Indian Island in a clean, orderly manner where such exposed areas could contribute pollutants to stormwater discharges. Recommended measures include, frequent sweeping, covering the trenches with rubber mats if grinding, sandblasting, or machine work is conducted near a trench, and minimizing storage of hazardous materials near the trenches. Conduct all maintenance work inside to the maximum extent practicable. If work is conducted outside, vacuum all particulates.	The MSGP requires implementation of good housekeeping practices. The Facilities Branch oversees a number of contractors that provide services such as pavement sweeping, solid waste removal, and recyclable removal.
C-3	Preventative Maintenance (Core BMP)	The NAVMAG Indian Island preventive maintenance program will include timely inspection and maintenance of stormwater management devices (e.g., cleaning oil/water separators, catch basins) as well as inspection, testing, maintaining, and repairing facility equipment and systems to avoid breakdowns or failures that may result in discharge of pollutants to surface waters.	Preventative maintenance is one of the core BMPs required under the MSGP. The West Sound Base Operating Support contract/contractor provides most facility and equipment preventative maintenance. The contract requires the contractor to: Pump septic tanks; operate, maintain, clean, and repair the wastewater and stormwater systems; clean oil water separators; provide some crane services, conduct vehicle maintenance, and sweep pavements.
C-4	Spill Prevention and Response Procedures (Core BMP)	-Applicable personnel shall be trained in spill response. Adequate spill response supplies will be stationed near potential spill locations. -The NAVMAG Indian Island Spill Prevention, Control, and Countermeasures (SPCC) Plan and Navy Region Northwest Oil and Hazardous Substance Integrated Contingency Plan (NRNW ICP) are active and effective in preventing and responding to spills. NAVMAG Indian Island is Annex H of the NRNW ICP. No significant actions with regard to spill prevention and response procedures are included or necessary in this plan. However, the SWPPP does require that regular (quarterly and annual) inspections include consideration of spill potential. Spill response phone numbers are included in SWPPP section 3.2. -The SPCC Plan also includes evaluations and recommended actions for oil storage facilities at NAVMAG Indian Island where spills may have a negative impact on the environment. The SPCC Plan applies to oil storage and management. Oil means oil of any kind and in any form, including, but not limited to: fats, oils, or greases of animal, fish, or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits, or kernels; and other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil. -The SPCC plan applies to: Each aboveground container (e.g., a tank or a drum) with an oil storage capacity of 55 gallons or greater that is not associated with the transfer to or from vessels or wastewater treatment. The plan is applicable to operational equipment, such as transformers, for each piece of equipment with an oil storage capacity of 55 gallons or greater. Underground storage tanks storing heating oil are also included.	Spill prevention and response measures are required as a core BMP under the MSGP.

BMP Number	BMP Title	BMP	Notes
C-5	Erosion and Sedimentation Controls (Core BMP)	The following procedures apply: -Inspect possible areas of erosion regularly. Recommend stormwater control studies and stormwater structural or procedural controls as needed. -Use SWPPP Tables E-1 and G-1 to document quarterly and annual inspections of areas of excessive erosion. Appendices E and G provide inspection details. Inspect the waterfall at the cliff behind the [redacted] in quarterly and annual inspections. The cliff is experiencing significant erosion. -Follow the practices for controlling erosion from new construction that are included in Appendix D.	The MSGP requires that the SWPPP identify areas of the facility that have the potential for erosion and implement BMPs to control that erosion. Although the outfalls along the shoreline and the shoreline itself need to be inspected as part of the CSI, erosion along the shore that is not due to stormwater run-off should not be addressed in the SWPPP BMPs. Although not required by the MSGP, consider erosion prevention measures south [redacted] and at the cliff [redacted]. These two areas could eventually effect operations and facilities. Could take periodic photographs to monitor the erosion.
C-6	Management of Run-off (Core BMP)	Permanent structural run-off management measures in use at NAVMAG Indian Island include oil/water separators, retention ponds, catch basins, riprap, and bio filtration swales. See specific structural BMPs for a list of run-off management control structures.	The MSGP requires that stormwater runoff management include practices such as permanent structural BMPs.
C-7	Salt Storage (salt and sand)	If salt is used at NAVMAG Indian Island for ice control, it will be stored to minimize contact with stormwater. Store bulk road deicing materials in a covered area, or use tarps to prevent exposure to rainfall. Store sidewalk-deicing material in closed containers. Consider alternatives to traditional salt such as calcium chloride, magnesium chloride, potassium chloride, and calcium magnesium acetate. Control measures including covering piles must be described and implemented through the SWPPP.	Winter Road and Sidewalk Safety (Salt and Sand).
C-8	Sector Specific	See sector specific BMPs.	Non-numeric Effluent Limits.
C-9	Employee Training (Core BMP)	NAVMAG Indian Island will train employees who work in areas where industrial materials or activities are exposed to stormwater, and employees who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance people) as necessary. Training will focus on the components and goals of the SWPPP. Training will be conducted on an annual basis. Appendix I contains guidance to help develop the training.	Employee training is required as a core BMP under the MSGP. Training is conducted annually in-person at the annual environmental awareness training. Other training may be conducted for specific areas or work processes of concern as needed. This training may be formal or relayed informally through meetings, phone calls, e-mails, posters, pamphlets, or intranet.
C-10	Non-	See MSGP Part 1.1.3 for a list of non-stormwater discharges authorized by this permit. See Section	Permitees must eliminate non-

BMP Number	BMP Title	BMP	Notes
	Stormwater Discharges	3.3, Non-Stormwater Discharges, of the SWPPP. See BMPs K-1, K2, K-3, K-4, K-5, F-1, F-2, F-3, and F-4, which are applicable to non-stormwater discharges.	stormwater discharges not authorized by an NPDES permit.
C-11	Waste, Garbage and Floatable Debris	See C-1, C-2, P-1, and Q-1 for good housekeeping BMPs. This is the primary means used by NAVMAG Indian Island to prevent waste, garbage, and floatable debris from entering receiving waters.	Permitees must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.
C-12	Generation of dust - Vehicle Tracking of Industrial Materials	See BMPs F-3, F-4, and S-7 for specific BMPs related to this issue.	Permitees must minimize generation of dust and off-site tracking of raw, final, or waste materials.
F-1	[redacted] Boat Ramp Boom and Rubber Fender Cleaning	The following restrictions apply: Only use potable water in the pressure washer. Do not use detergents, soaps, disinfectants, or solvents. Booms and Rubber Fenders that were oil or otherwise contaminated cannot be washed in this area. During the washing operation, periodically check the adjacent surface water for discoloration caused by the washing process. Stop the process if discoloration is observed. Contact the Environmental office if discoloration is observed.	This BMP applies to removal of sea growth from oil containment booms and Rubber Fenders staged on this facility.
F-2	Non-Stormwater Discharges	See BMPs K-1, K-2, K-3, K-4, and K-5 applicable to non-stormwater discharges.	See specific BMPs.
F-3	[redacted]	The intent of the Pre-Wash Facility is to remove bulk material prior to washing at the vehicle wash pad [redacted]). The following restrictions apply: Examine the area prior to pre-washing for the following: -Ensure the area is adequately graveled so rainwater run-off and/or wash water will not transport dirt/debris off-site (beyond the boundaries of the Pre-Wash Facility). The gravel in the vehicle wash pad must be cleaned and or replenished periodically; -Check for signs that dirt/debris from previous washings was transported off-site. Check the drainage ditch for dirt/debris as well as the road; and -Look for stains indicating that grease, fuels, or paint chips were released during a previous pre-wash If any one of the above requirements is not met, pre-washing cannot occur. Correct the problem prior to further pre-washing. Then: -Use only potable water to minimize water usage use of a pressure washer is acceptable; -Do not use detergents or any other additives to assist in the pre-wash; -Avoid pre-washing areas on the equipment that could release fuels or greases; -Minimize use of the [redacted] to only those vehicles and equipment that have significant build-up of dirt/debris. Vehicles and equipment with minor quantities of dirt/debris must go directly to the [redacted]; and -No vehicle and equipment maintenance of any kind is allowed at the [redacted].	This BMP applies to removal of bulk dirt, mud, and organic debris (e.g., grass) that may accumulate on vehicles and equipment.

BMP Number	BMP Title	BMP	Notes
F-4	[redacted]	The following restrictions apply: Examine the hull and motor prior to rinsing. Make sure: -The hull and motor are not contaminated with fuel, oil, or grease that would be removed during the rinse. If contamination is observed, rinse the hull and motor at [redacted] Wash Pad; and -That bottom paint, if applicable, will not be removed during the rinse process. Contact the Environmental Office if bottom paint is in disrepair. -Only use only potable water to rinse vessels. -Only use potable water and Salt-Away to rinse outboard motor cooling system. -Avoid rinsing areas on the vessel that could release fuels or greases. -Vessels may be rinsed on the driveway to the northeast of [redacted]. Rinse water infiltrates completely and does not flow into the catch basin.	This BMP applies to rinsing salt water and minor debris (e.g., seaweed) from vessel hulls and from internal parts of the outboard motor salt water-cooling system in the designated area behind [redacted].
F-5	[redacted]	There are floor drains located in the north and south bays of [redacted] Both of these floor drains are plugged. Drips from vessels that have been rinsed, dry off the floor by evaporation.	This BMP applies to vessels that are brought inside [redacted] to dry.
F-6	[redacted]	The Fill Depot has a locked cable gate across the entrance. Environmental is in control of the key. Only clean fill may be placed at this site.	This BMP applies to the procedures and allowed materials that may be placed in this fill depot.
F-7	[redacted]	The following procedures apply: -Weights must be stored at least 20 feet south of [redacted]; -Testing must be done at least 20 feet south of [redacted]; -When testing is concluded, the area must be cleared of debris and any drips must be cleaned off the pavement.	Crane testing weights need to be stored away from [redacted]. The crane testing process needs to be located away from [redacted].
S-1	[redacted]	There is a retention pond located north of this facility. It serves the large associated parking area. A spill kit must be located at this area.	This pond provides increased stormwater infiltration and protection against runoff.
S-2	[redacted]	Two retention ponds serve the facility. They are located to the east and west of the facility. Reforestation of the non-developed parts of the site was attempted as an additional land use enhancement, with potential positive stormwater impacts.	This pond provides increased stormwater infiltration and protection against runoff.
S-3	Catch Basins	The following procedures apply: Clean the catch basins on a regular basis; Clean the stormwater piping at outfalls where benchmarks have been exceeded.	Many catch basins have sumps to retain sediment/debris.
S-4	[redacted]	The following procedures apply: Do not stage any materials or equipment near the curb cut outfall; Do not store any materials or equipment along the south edge of the staging area; Put all trash and recycle containers under the cover [redacted] Remove all old or unused equipment from under [redacted] and off of the [redacted]; Store equipment as far north as possible; and Clean all spills ASAP.	A new bio-retention stormwater treatment system was constructed in Feb 2014. Runoff primarily sheet flows to the pond and infiltrates. Any overflow from the pond drains to the adjacent beach and infiltrates. Visual inspections occurred from Feb through May 2014 and no runoff was observed flowing to Pt. Townsend Bay.

BMP Number	BMP Title	BMP	Notes
S-5	[redacted]	Some of these facilities employ bio swales to enhance stormwater quality.	These swales provide increased stormwater infiltration and protection against runoff.
S-6		While this facility is not currently in use, there is a small retention pond associated with it. It collects stormwater from the pavement adjacent to the building. Maintain the riprap.	This pond provides increased stormwater infiltration and protection against runoff.
S-7		Monitor the following locations for mud and track out issues: [redacted] Install gravel or crushed rock in the area where vessel rinsing takes place and on the dirt drive way leading to the vessel rinsing area The parking area and the shoulder alongside the inside curve are also causing soil to enter the [redacted] [redacted]: Install gravel or crushed rock in the south of [redacted] where trucks can track sediments out onto the pavement. [redacted]: Install gravel or crushed rock in the new storage lot next to [redacted] to prevent trucks from tracking sediments out onto the pavement. [redacted]: Install gravel or crushed rock in the entry to the [redacted] [redacted]: Replenish traffic areas with crushed rock as needed. [redacted]: Replenish traffic areas with crushed rock as needed.	Port Ops staff states that the mud track-out problem has been resolved with the addition of gravel. The area around [redacted] is the most critical track out issue because it is adjacent to [redacted] and along the water. [redacted] goes directly to [redacted] which has had Benchmark exceedances, though installation of the LID biofilter in Nov 2012 has resulted in reduction in some of the numbers.
S-8	[redacted]	The following procedures apply: The stormwater drainage isolation valve is kept in the closed position at all times. The Environmental Division personnel monitor the collection basin. When the basin gets too full of water, the valve is opened to allow the water to drain. The collection basin will be drained before it reaches the overflow bypass level. The water in the collection basin will be visually assessed prior to allowing the water to drain.	Drainage isolation valve.
P-1	Good Housekeeping Measures	See BMPs P-1 a) through P-1 e).	The MSGP requires implementation of good housekeeping practices.
P-1(a)	Vehicle and Equipment Storage Areas	Confine the storage of leaky or leak-prone vehicles/equipment awaiting maintenance to areas designated in SWPPP Table 3-8. Use the following measures: Place drip pans under vehicles/equipment, indoor storage of vehicles and equipment, Install berms or dikes, Use absorbents to clean spills, Use roofing or covered storage areas, and Clean pavement surfaces to remove oil and grease.	The MSGP requires implementation of good housekeeping practices.
P-1(b)	Fueling Areas	Prevent or minimize contamination of stormwater run-off from the fueling station. The fueling station is covered and the drainage form the fueling area goes to the oil water separator at the wash pad, which goes to the sanitary sewer.	The MSGP requires implementation of good housekeeping practices.
P-1(c)	Material Storage Areas	Maintain material storage vessels (for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., Used Oil, Spent Solvents, etc.). Store all materials indoors as much as possible. Install berms/dikes around storage areas as necessary. Use dry cleanup methods.	The MSGP requires implementation of good housekeeping practices.

BMP Number	BMP Title	BMP	Notes
P-1(d)	Vehicle and Equipment Cleaning Areas	Vehicles and equipment will be cleaned at the [redacted] Wash Pad per the following restrictions: Pre-washing of bulk dirt/debris can occur at the [redacted] if done in accordance with BMP F-3. Keep all over spray on the Wash Pad. Use of soap in permitted (soap provided by wash pad users). Wash pad users will provide a label on the soap container. Post a vehicle wash pad procedure at the vehicle wash pad as needed Fire truck/equipment may be washed in [redacted] designed for that purpose.	The MSGP requires implementation of good housekeeping practices.
P-1(e)	Vehicle and Equipment Maintenance Areas	Perform maintenance activities as much as possible indoors. Cranes and other larger equipment may be maintained outdoors. Use drip pans when necessary. Minimize run-on/run-off of stormwater to maintenance areas.	The MSGP requires implementation of good housekeeping practices.
P-2	Employee Training	See C-9 for details. Sector specific training will be conducted as needed. Address the following activities, as applicable: Used oil and spent solvent management; Fueling procedures; General good housekeeping practices; Proper painting procedures; Used battery management; Material storage; Vehicle washing; and Recycling.	Train personnel at least once a year.
P-3	Salt Storage (salt and sand)	See BMP C-7.	
Q-1	Good Housekeeping Measures	See BMPs Q-1 (a) through (e).	The MSGP requires implementation of good housekeeping practices.
Q-1(a)	Vessel Pressure Washing	Pressure washing to remove marine growth from vessels is only allowed at the vehicle wash pad [redacted] Rinsing residual salt water from vessels using potable water is allowed at the facility on the east side [redacted]. Pressure washing at this facility is not allowed.	The MSGP requires implementation of good housekeeping practices.
Q-1(b)	Blasting and Painting	Vessel blasting is not allowed. Over water vessel touch-up painting is not allowed.	The MSGP requires implementation of good housekeeping practices.
Q-1(c)	Materials Storage Areas	Store all containerized materials, with a potential to spill (e.g., paints, fuels, waste oil, antifreeze, batteries, solvents) in a protected, secure location away from drains.	The MSGP requires implementation of good housekeeping practices.
Q-1(d)	Engine Maintenance and Repair Areas	Conduct small marine engine maintenance and repairs indoors or under cover and isolated from stormwater. Engine flushing using potable water is allowed at the vehicle wash pad [redacted]). Only four-cycle engines may be rinsed with potable water to remove residual salt water, at the [redacted] rinse area.	The MSGP requires implementation of good housekeeping practices.

BMP Number	BMP Title	BMP	Notes
Q-1(e)	Material Handling Area	Minimize the contamination of precipitation or surface run-off from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels).	The MSGP requires implementation of good housekeeping practices.
Q-2	Employee Training	See C-9 for details. Sector specific training will be conducted as needed. Address the following activities, as applicable: Used oil and Spent solvent management Disposal of spent abrasives and vessel wastewaters Spill prevention and control Fueling procedures General good housekeeping practices Painting and blasting procedures Used battery management Material storage Vehicle washing Recycling	Train personnel at least once a year.
Q-3	Preventive Maintenance	See BMP C-3 and Section 6 of the SWPPP for maintenance and inspection requirements. This includes cleaning oil/water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system, as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.	As part of the preventive maintenance program, perform timely inspection and maintenance of stormwater management devices.
Q-4	General Yard Area	Keep the [redacted] clean to minimize stormwater pollution. Remove from the general yard area: scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc. This BMP is currently implemented at NAVMAG Indian Island. Reference to the temporary storage of mobile cranes in [redacted] was deleted because the area is no longer used to park cranes.	
K-1	Landscape Watering	Pesticides, herbicides, and fertilizers are applied in accordance with manufacturer's instructions.	Limited landscape watering may occur at the main gate area and at the [redacted]
K-2	Pavement Rinse Waters	The following procedures apply: Remove trash/litter prior to rinse. Do not use detergents. Do not wash areas where spills have occurred unless all spilled material has been removed. Use of power washing is permitted as long as paint does not chip away.	[redacted] are rinsed occasionally using potable water to remove bird and otter waste, accumulated shells left by the gulls, and dirt. Other pavements (roads, parking lots) are not typically washed.
K-3	Routine External Building Wash Downs	Examine building prior to washing checking for: -Staining not from a known source (e.g., staining under a vent should be investigated prior to washing) -Chipping/peeling paint that would release into the wash water -Asbestos siding Do not use detergents or disinfectants in the washing process. Use of a power washer is permitted as long as paint does not chip away.	Buildings are occasionally washed (using either a pressure washer or hose) to remove dirt, debris, and mildew/mold. This is not a common/routine practice at NAVMAG Indian Island.

BMP Number	BMP Title	BMP	Notes
K-4	[redacted]	The following procedures apply: -Remove trash/litter prior to rinsing. -Do not use detergents. -Do not wash areas where spills have occurred unless all spilled material has been removed.	Vessel decks are rinsed occasionally using potable water to remove salt water, bird and otter waste, accumulated shells left by the gulls, and dirt.
K-5	[redacted]	The following procedures apply: -Potable water may be used to rinse vegetation clippings off the blades of mowing equipment. -No pressure washing is allowed. -Rinsing must be conducted on a vegetated surface at a location where the vegetative clippings will not enter the stormwater. -Vegetative clippings area disposed of off-site by the grounds keeping contractor.	

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4.2 Facilities and Applicable BMPs

Table 4-2 lists each of the sector P and Q facilities and their associated site specific BMPs. All the facilities are covered by the Core BMPs C-1 through C-12. All facilities are covered by K-1 through K-5 non-stormwater discharge BMPs. Although all catch basins are covered by BMP S-3, the locations noted below are of particular concern because they are located near the water.

Table 4-2 Facilities and Applicable BMPs

Building #	Building Name	Sector	Facility BMP	Structural BMP
		P		
		P	K-5	
		P		S-7
		P		S-3
		Q	F-4 F-5	S-3, S-7
		Q		S-3
		Q		
		P		
		P		S-3
		Q	K-4, K-2	
		P		
		Q	F-1	
		P, Q		
		P		S-3, S-8
		P		S-1
		P		S-2
		P		S-2
		P		S-5
		P		S-5
		P		S-5
		P		S-5
		P		S-5
		P		S-5
		Q	K-4, K-2	
		Q		

[3]Located near Building 38. Also known as Lot 7.

Building #	Building Name	Sector	Facility BMP	Structural BMP
		Q		
		P		
		Q		
		P		S-6
		Q		S-4
		P		
		P		
		P		S-7
		P		S-7
		P & Q	F-7	S-3
		P	F-3	
		P, Q		
		P		S-3
		P		
		P		S-7
		P	F-6	S-7

Notes:

1. *These are designated storage/laydown/parking areas.
2. The "n, s, e, or w" prefix indicates the area is nearby and north, south, east, or west of the numbered facility.
3. Sector P: Land Transportation and Warehousing
4. Sector Q: Water Transportation

5 Analytical Monitoring

5.1 Analytical Monitoring Requirements

NAVMAG Indian Island must collect and analyze stormwater samples and document monitoring activities consistent with the procedures described in Part 6 MSGP, Appendix B, Subsections 10-12.

Quarterly monitoring must be performed on a storm event that results in an actual discharge from the facility ("measurable storm event") that follows the preceding measurable storm event by at least 72 hours (3 days). Samples must be collected within the first 30 minutes of a measurable storm event. Deviations from these requirements must be documented. Quarterly analytical monitoring requirements began in the first full quarter following the date of discharge authorization under the MSGP 2015.

All required analytical monitoring must be conducted in accordance with the procedures described in MSGP, Appendix B, Subsection 10.D (40 CFR Part 136). See Table 5-1 for a summary of the quarterly analytical monitoring requirements.

Table 5-1: Quarterly Monitoring Requirements

Analyte	[redacted]	[redacted]	[redacted]
Aluminum	Quarterly	Quarterly	Quarterly
Iron	Quarterly	Quarterly	Quarterly
Lead	Quarterly	Quarterly	Quarterly
Zinc	Quarterly	Quarterly	Quarterly
Copper	Quarterly	Quarterly	Quarterly

* This outfall now goes to a bio-infiltration pond. The curb cut on the southwest edge of [redacted]

5.1.1 Required Outfall Monitoring Locations

See Appendix A, Figure A-2 for outfall locations shown on a map. See Table 2-3 for a complete list of outfalls, outfall GPS locations, and physical description.

Table 5-2 lists the outfalls at which benchmark monitoring was conducted. [redacted] because the same process is conducted near each of these outfalls and the outfalls are very near to each other. Therefore [redacted] was not sampled. See SWPPP Section 5.3 for sampling and analysis procedures.

The outfalls that must be monitored and the frequency of monitoring depend on the type of monitoring. In the sections below, the requirements for each type of monitoring are described.

5.1.2 Benchmark Monitoring

MSGP 2015 Part 6.2.1 gives the requirements for benchmark monitoring. Although Sectors P and Q are applicable at NAVMAG Indian Island, only Sector Q requires benchmark monitoring. The latest general permit coverage began in July 2015. The first quarterly sample is to be collected in the first full quarter following the quarter that NAVMAG Indian Island is granted permit coverage.

Quarterly benchmark monitoring must be conducted for the first four full quarters of permit coverage. After collection of four quarterly samples, if the average of the four monitoring values for any parameter does not exceed the benchmark, the benchmark monitoring requirements for that parameter are fulfilled for the permit term. See MSGP 2015 Part 6.2.1.2 for details concerning the calculation of the average and for details concerning what to do if the average exceeds the benchmark.

Table 5-2 lists the outfalls at which benchmark monitoring must be conducted. [redacted] because the same process is conducted near each of these outfalls and the outfalls are very near to each other. Therefore, [redacted] is not sampled.

Table 5-2: Bench Mark Monitoring Locations

Outfall or Catch Basin #	Sector Association	Collection Point Description
[redacted]	Q	See Table 2-3
[redacted]	Q	See Table 2-3
[redacted]	Q	This outfall now goes to a bio-infiltration pond. The curb cut on the southwest edge of the [redacted] is no longer an outfall (2013).

See SWPPP Section 5.3 for sampling and analysis procedures.

5.1.3 Effluent Limitations Guidelines Monitoring

The MSGP gives the requirements for monitoring based on effluent guidelines. Effluent guideline monitoring is required for processes listed in MSGP Table 6-1. None of the processes listed in Table 6-1are conducted at NAVMAG Indian Island, so this type of monitoring is not required at NAVMAG Indian Island.

5.1.4 State or Tribal Specific Monitoring

MSGP 2015 Parts 6.2.3 and 9.10.7 give the additional requirements for monitoring specified by Washington State or Tribal agreements. These additional requirements include sampling and effluent limits for discharges to certain impaired waters and Puget Sound Sediment Cleanup Sites.

5.1.5 Impaired Water Monitoring

MSGP 2015 Part 6.2.4 gives the requirements for facilities that discharge to an impaired water body. It states that, "Beginning in the first full quarter following September 2, 2015 or your date of discharge authorization, whichever date comes later, you must monitor all pollutants for which the waterbody is impaired and for which a standard aualytical method exists (see 40 CFR 136) once per year at each outfall (except substantially identical outfalls) discharging stormwater to impaired waters without an EPA-approved or established Total Maximum Daily Load (TMDL)."

Receiving waters are considered impaired if they are listed on the EPA approved 303(d) list or, if a TMDL has been established for the water body. Water bodies are placed on the 303(d) list if they are designated as Category 5 (see SWPPP Section 2.3.4 for a discussion of "Categories").

SWPPP Section 2.3.4 discusses impaired water bodies near NAVMAG Indian Island, and points to fecal coliform as being responsible for the single area being classified as a category 5 impaired water body. This pollutant was listed on the 2008 Candidate list. Because there is no TMDL in effect for this water body, NAVMAG Indian Island is required to begin monitoring in the first full quarter after permit coverage begins. Monitoring must be done once per year at each outfall.

This monitoring requirement does not apply after 1 year if the pollutant for which the water body is impaired is not detected above natural background levels in the stormwater discharge. Per requirements of the MSGP Part 5.4, documentation is required stating that this pollutant is not expected to be present above natural background levels in the discharge.

Table 5-3 lists the outfall at which impaired water monitoring must be conducted.

Table 5-3: Impaired Water Monitoring Location

Outfall or Catch Basin #	Sector Association	Collection Point Description
[redacted]	Q	This outfall now goes to a bio-infiltration pond. The curb cut on the southwest edge of [redacted] is no longer an outfall (2013).

See SWPPP Section 5.3 for sampling and analysis procedures.

5.2 Summary of Sampling and Analysis

The SWPPP must include a summary of analytical sampling data collected during the term of the permit. Sampling data must be maintained for a period of at least three years after coverage under the permit expires or is terminated.

Table 5-4 is a summary of quarterly stormwater sampling and analysis done at NAVMAG Indian Island per the 2008 MSGP from 2009 to 2014. The analyses were done for Total Metals. See the annual comprehensive site inspection reports for up-to-date analytical results.

The data was evaluated based on Sector Q Water Transportation benchmark values for aluminum, iron, lead, and zinc. The MSGP only requires benchmark monitoring (and provides associated benchmark values) for Sector Q associated facilities. Benchmark monitoring is not required for Sector P associated facilities. State of Washington Water Quality Standards (WQS) Chapter 173-201A addresses zinc and lead. It should be noted that WQSs are not directly

applicable to a specific stormwater discharge/outfall. WQSs apply to a water-body as a whole and are designed to help ensure designated uses (which might include drinking water, irrigation, fishing, and/or recreation) are achieved. EPA's benchmark values are reasonably in line with State of WQSs. Zinc and lead are, as defined by EPA, priority pollutants.

WQSs do not address aluminum or iron and these metals are not EPA defined priority pollutants. EPA does recommend water quality criteria for aluminum and iron. These recommendations are only for fresh water. Therefore, sampling results that may exceed benchmark values for aluminum and iron may not indicate a potential negative impact to marine water quality. As such, aluminum and iron results will be given lower priority in terms of potential implementation of BMPs designed to lower aluminum and/or iron concentrations.

An experiment was done at outfall [redacted] after the November 16, 2009 sampling event and before the March 29, 2010 sampling event. The roadway area next the curb cut stormwater collection points was washed with a fire hose. The dramatic reduction in the iron, zinc, aluminum, and lead analytes is likely due to this experiment.

Similarly, washing was completed at outfalls [redacted] prior to the May 10, 2010 sampling events. It is likely that the washing with a fire hose is responsible for the reduction in aluminum, iron, zinc, and lead.

The reason for conducting these experiments was that there were currently no other apparent BMPs to apply in the areas that could reduce the contaminant concentrations enough to get below the Benchmarks. There were no spills or other housekeeping measures that could be accomplished. This experiment indicates that the only way to reduce contaminant concentrations using BMPs will be through washing or sweeping. However, it is not certain that washing with a street washer or sweeper will be sufficient to result in discharge levels below the Benchmarks.

In 2012 a filtration catch basin was installed at [redacted] to address the Benchmark exceedance. Also in 2012, in this same area a stormwater swale and culvert were constructed to prevent stormwater from pooling in an area where traffic was tracking mud [redacted].

At [redacted] a stormwater infiltration pond was designed in 2012 and constructed in February 2014. This pond infiltrates all of the stormwater from [redacted], thus eliminating the outfall.

Table 5-4: Quarterly and Monthly Stormwater Analytical Monitoring Results 2009-2014

Outfall / Sample ID	Analyte	Test Method	Units	Benchmark	28 Oct 11	21 Nov 11	Dec 11	4 Jan 12	13 Feb 12	14 Mar 12	3 Apr 12	1 May 12	7 Jun 12	3 Jul 12	Aug 12	Sep 12	Avg	31 Oct 12	19 Nov 12	19 Dec 12	7 Jan 13	11 Feb 13	5 Mar 13	Apr 13	13 May 13	13 Jun 13	Jul 13	2 Aug 13	5 Sep 13	Avg	Oct 13	15 Nov 13	27 Dec 13	29 Jan 14	Feb 14	Mar 14	24 Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep 14	Avg	Oct 14	Nov 4	Dec 14	Field Notes
[redacted]	Aluminum	EPA 200.7	µg/L	750 µg/L		2080				570	304			2060	No rain	No rain	1264	181			485				5940			NF	2350	2239		406		84.7			289				1560		686	NFT	X	X	Quarterly Lead monitoring stopped after 2010. The 2010 quarterly average for Lead was 49.6 µg/L.
	Iron	EPA 200.7	µg/L	1000 µg/L		3050				919	837			2960			1942	242			619				6910				3190	2740		688		150			509				2150		877	NFT	X	X	
	Lead	EPA 200.7	µg/L	262 µg/L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Copper	EPA 200.7	µg/L	14 µg/L		13.3	NF	NF	NF	9.92	3.74	8.34	7.96	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Zinc	EPA 200.7	µg/L	117 µg/L		50.0	NF	NF	NF	37.40	7.51	44.5	24.9	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TSS		mg/L			17				15.00	<4	4.00	<4	5.00							ND				47				45			45															
	Aluminum	EPA 200.7	µg/L	750 µg/L	1930			2170				589		1580	No rain	No rain	1085	625			207				296			112		310	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Quarterly Lead monitoring stopped after 2010. The 2010 quarterly average for Lead was 5.3 µg/L.
	Iron	EPA 200.7	µg/L	1000 µg/L	2750			3180				881		2100			1643	823			277				334			142		394	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Lead	EPA 200.7	µg/L	262 µg/L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Copper	EPA 200.7	µg/L	14 µg/L	28.30	12.20	NF	18	NF	11.60	5.00	11.9	7.05	12.20	No rain	No rain	13	9.01	12.4	5.26	12.40	14.3	12	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Zinc	EPA 200.7	µg/L	117 µg/L	230	51.70	NF	98.8	NF	61.10	25.10	65.2	29.0	77.4	No rain	No rain	86	75.6	72.9	35.7	49.50	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TSS		mg/L					37.00			<4	4	<4	21							ND				11																					
	Aluminum	EPA 200.7	µg/L	750 µg/L	432	103		145				148		480	No rain	No rain	219	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Quarterly Zinc monitoring stopped and monthly monioring started on 6/28/11. Quarterly Lead monitoring stopped after 2010. The 2010 quarterly average for Lead was 27.4 µg/L.
	Iron	EPA 200.7	µg/L	1000 µg/L	489	150		189				117		599			264	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Lead	EPA 200.7	µg/L	262 µg/L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Copper	EPA 200.7	µg/L	14 µg/L	30.10	10.90	NF	9.27	NF	16.10	6.48	36.5	29.9	32.1	No rain	No rain		19.6	16.4	16.2	11.7	29.4	9.9	NF	40.4	98.4	NF	53.8	7		no rain	9.32	10.9	7.15	bio-filtration pond installed. No flow to bay, NFT as of Jun 2014									
	Zinc	EPA 200.7	µg/L	117 µg/L	67.50	50.10	NF	34.5	NF	39.40	32.40	58	50.7	NFT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TSS		mg/L			<4		<4			<4	3		16																															
	Fecal Coliform	SM 9222 D	cfu/100ml	200 cfu/100ml				120											130															300												
	Hardness	SM 2340 B	mg/L					4810																																						

Notes:

1. 117 µg/L is used instead of 260 µg/L in anticipation of additional requirements imposed by EPA.
2. [redacted] was designated as a Sector Q and so should require Benchmark Monitoring. Outfall [redacted], however, never flows.
3. Copper was not analyzed because it was not known until April 15, 2011 that monthly copper analysis would be required. See Table 5-5 for monthly copper monitoring results.
4. Yellow shading means that the analytical result was above a benchmark.
5. Orange shading means that the average of four consecutive analytical values exceeded a benchmark.
6. Grey shading means that the monitoring is completed or no longer required.

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5.3 Sampling and Analysis Procedures

See Appendix H for the Benchmark Monitoring and Impaired Waters monitoring procedures as well as procedures for documenting deviations from the required monitoring.

5.4 Reporting, Recordkeeping, and Documentation Requirements

5.4.1 Reporting

Monitoring data must be reported using EPA's electronic NetDMR tool at www.epa.gov/netdmr, as described in Part 7.4 (unless a waiver from electronic reporting has been granted from the EPA Regional Office, in which case a paper DMR form may be submitted). Reporting procedures for analytical monitoring are included in SWPPP, Appendix H. Tracking for all kinds of reporting is included in Appendix L.

Report monitoring data to EPA as follows: (MSGP 2015 Part 7.4)

- All monitoring data collected pursuant to Part 6.2 must be submitted to EPA no later than 30 days after you have received your complete laboratory results for all monitoring outfalls for the reporting period. Your monitoring requirements (i.e., parameters required to be monitored and sample frequency) will be prepopulated on your electronic Discharge Monitoring Report (DMR) form based on the information you reported on your NOI form (through the NDPES eReporting tool (NeT)). Accordingly, the following changes to your monitoring frequency must be reported to EPA through the submittal of a "Change NOI" form in NeT, which will trigger changes to your monitoring requirements in NetDMR:
- For benchmark monitoring, note that sampling results must be submitted to EPA no later than 30 days after receiving laboratory results for each required sampling event. If multiple samples are collected in a single sampling period (e.g., due to adverse weather conditions, climates with irregular stormwater runoff, or areas subject to snow), submit all sampling results to EPA within 30 days of receiving the laboratory results.

Report corrective actions arising from analytical monitoring results as follows: (MSGP Part 7.2)

- Submit an annual report to EPA that includes any corrective action documentation, as required in MSGP Part 4, upon completion or if EPA determines existing control measures are not stringent enough for the discharge to meet applicable water quality standards.
- If corrective action is not yet completed at the time of submission of this annual report, describe the status of any outstanding corrective action(s). In addition to the information required in MSGP Parts 4.4 (Corrective Action Report) and 3.1.2 (Routine Facility Inspection Documentation), include the following information with the annual report:
  - Facility name
  - NPDES permit tracking number
  - Facility physical address
  - Contact person name, title, and phone number

EPA strongly recommends that submitting this report using the Annual Reporting Form provided as MSGP, Appendix I. You must submit an Annual Report to EPA electronically, per Part 7.2, by January 30th for each year of permit coverage containing information generated from the past calendar year

Additional Reporting (MSGP Part 7.7 and Appendix B, Subsection 12)

- See SWPPP, Appendix L for details concerning additional reporting.

5.4.2 Recordkeeping and Documentation

Appendix L is provided as a repository for records required by the MSGP.

- Table L-1 is provided to summarize the location of required records and reports.
- Form L-1 is provided to help track and organize the required reporting and recordkeeping.

6 Inspections

6.1 Summary of Past Inspections

Per the MSGP 2000, monthly inspections were required for Water Transportation (Sector Q) facilities and adjacent areas. Facilities that fell under the Land Transportation and Warehousing sector (Sector P) were also inspected on a regular interval of no longer than a year. NAVMAG Indian Island's annual Sector P inspection corresponded with the annual Comprehensive Site Compliance Evaluation (CSCE). The previous CSCE reports document detailed results of the past inspections. Appendix E contains hard or electronic copies of previous CSCE and Comprehensive Site Inspection (CSI) reports.

6.2 MSGP 2015 Stormwater Inspection Requirements

6.2.1 Quarterly Routine Facility Inspections

Per MSGP Part 3.1, routine facility inspections are required of all areas of the facility where industrial materials or activities are exposed to stormwater, and of all stormwater control measures (BMPs) used to comply with the effluent limits contained in the permit. Routine facility inspections must be conducted quarterly at NAVMAG Indian Island. Inspections must be done during periods when the facility is in operation. The inspections must be conducted by qualified personnel with at least one member of the stormwater pollution prevention team participating. At least once each calendar year, the routine facility inspection must be conducted during a period when a stormwater discharge is occurring.

See SWPPP, Appendix E for the procedures for conducting Routine Facility Inspections.

6.2.2 Quarterly Visual Assessment of Stormwater Discharges

Visual assessment is collection of a stormwater sample for on-site physical/visual examination for signs of pollution. This may include observation for discoloration, odor, sheen, solids, etc.

Per MSGP Part 3.2, once each quarter for the entire permit term, the facility must collect a stormwater sample from each outfall and conduct a visual assessment of each of these samples. The facility may choose to sample only one outfall from each essentially identical group of outfalls. [redacted] are essentially identical because they are near each other and similar processes are conducted near each outfall.

These samples are not required to be collected consistent with 40 CFR Part 136 procedures, but should be collected in such a manner that the samples are representative of the stormwater discharge.

See Appendix F for the procedures for conducting the Quarterly Visual Assessment of Stormwater. See Appendix F Table F-1 for outfalls that require Quarterly Visual Assessment.

6.2.3 Inspection Documentation

Findings and results from the quarterly inspections must be documented and maintained with the SWPPP as required in MSGP 2015 Part 5.5. The findings and results of quarterly inspections must be summarized in the annual report per MSGP 2015 Part 7.5.

6.3 Reporting Recordkeeping, and Documentation Requirements

6.3.1 Reporting

Reporting procedures for quarterly visual assessment and routine inspections are included in Appendices E, F, and G. Tracking for all kinds of reporting is included in Appendix L.

Types of reporting that may be required from inspections fall into the following categories:

- **Annual Report:** (MSGP Part 7.5)
  - Submit an annual report to EPA that includes the findings from the CSI and any corrective action documentation as required in Part 4.4. If corrective action is not yet completed at the time of submission of this annual report, describe the status of any outstanding corrective action(s). In addition to the information required in Parts 3.4 (Corrective Action Report), include the following information with the annual report:
    - Facility name
    - NPDES permit tracking number
    - Facility physical address
    - Contact person name, title, and phone number
  - EPA strongly recommends that submitting this report using the Annual Reporting Form provided as MSGP Appendix I.

Additional Reporting: (MSGP Part 7.7 and Appendix B, Subsection 12)

- See Appendix L for details concerning additional reporting.

6.3.2 Recordkeeping and Documentation

Appendix L is provided as a repository for records required by the MSGP.

- Table L-1 is provided to summarize the location of required records and reports.
- Form L-1 is provided to help track and organize the required reporting and recordkeeping.

7 Corrective Actions and Recordkeeping

The need for corrective actions will typically be discovered through routine quarterly inspections, quarterly visual assessment, spill or leak events, equipment upsets, structural control measure maintenance problems, etc.

MSGP Part 4 describes the requirements for corrective actions.

7.1 Condition Requiring Review and Revision to Eliminate Problems

If any of the following conditions occur, review and revise the selection, design, installation, and implementation of any control measures to ensure that the condition is eliminated and will not be repeated in the future:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at the facility;
- A discharge violates a numeric effluent limit;
- Knowledge is obtained, or EPA determines, that existing control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of the facility by an EPA official, or local, state, or Tribal entity, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- Routine facility inspections, quarterly visual assessments, or comprehensive site inspections reveal that control measures are not being properly operated and maintained.

7.2 Conditions Requiring Review to Determine if Modifications Are Necessary

If any of the following conditions occur, review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in this permit:

- Construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in stormwater from the facility, or significantly increases the quantity of pollutants discharged; or
- For iron and aluminum, if less than four benchmark samples have been taken, but the results are such that an exceedance of the four quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than four times the benchmark level) this is considered a benchmark exceedance, triggering this review.

7.3 Corrective Action Deadlines

- Immediately take all reasonable steps to prevent discharge of pollutants until a permanent solution is found.
- You must document your discovery of any of the conditions listed in SWPPP Sections 7.1 or 7.2 within 24 hours of making such discovery.

- Complete corrective actions within 14 calendar days from the discovery of the corrective action condition. If infeasible to complete the corrective action in this timeframe, it must be documented as discussed in MSGP 2015 Section 4.3.
- If the time to compete corrective actions exceeds 45 days, then the EPA Regional Office must be contacted with the intention to exceed the 45-day timeframe and the reason for doing so.
- Within 14 days calendar days of completing the corrective action work, this SWPPP must be modified if there were any modifications to the stormwater controls.

Specific documentation required within 24 hours and 14 days is detailed in SWPPP Section 7.4. If you determine that changes are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in the MSGP 2015 to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

7.4 Corrective Action Documentation

The following information must be documented within 24 hours of discovery of any condition listed in SWPPP Section 7.1 and 7.2 SWPPP:

- Description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information: a description of the incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through stormwater or otherwise;
- Date the problem was identified;
- Description of immediate actions taken pursuant to MSGP 2015 Part 4.3.1 to minimize or prevent the discharge of pollutants. For any spills or leaks, include response actions, the date/time clean up complete, notifications made, and staff involved. Also include any measure taken to prevent the reoccurrence of such releases; and
- A statement signed and certified in accordance with MSGP 2015 Appendix B, Subsection 11.

The following information must be documented within 14 days of discovery of any condition listed in SWPPP Section 7.1 and 7.2 SWPPP:

- Summary of corrective action taken or to be taken (or, for triggering events identified in MSGP 2015 Part 4.2, where you determine that corrective action is not necessary, the basis for this determination);
- Date corrective action initiated, completed, or expected to be completed; and
- If applicable, document why it is infeasible to complete the corrective actions within the 14-day timeframe and document the alternate schedule.

You must submit this documentation in an annual report as required in MSGP 2015 Part 7.5 and retain a copy on-site with your SWPPP as required in MSGP 2015 Part 5.4.

7.5 NAVMAG Indian Island Corrective Action Tracking

NAVMAG Indian Island may use Appendix M, Form M-1, a combination of Appendix E, Forms E-1 through E-3 and Appendix M, Form M-2, or another method that complies with MSGP Part 4, to document and track corrective actions to include the requirements listed in SWPPP Sections 7.3 and 7.4. These forms may be used as living documents/records. They may be updated as new problems are discovered and corrective actions are completed. As such, changes to the entries in these forms will not be considered SWPPP revisions. The information recorded in these forms will be used to compile the required annual report to EPA.

8 References

1) Multi Sector General Permit, July 2015 (MSGP 2015)
2) Environmental Protection Agency Letter dated April 15, 2011 (additional MSGP 2008 requirements)
3) NAVMAG Indian Island Integrated Natural Resource Management Plan, August 2009 (INRMP)
4) Draft NAVMAG Indian Island Integrated Cultural Resources Management Plan, March 2006 (ICRMP)
5) NAVMAG Indian Island Oil and Hazardous Substance (OHS) Release Contingency and Response Plan (ICP)
6) NAVMAG Indian Island Oil Spill Prevention, Control, and Countermeasure Plan, January 2012 (SPCC Plan)

APPENDIX A: FACILITY DRAWINGS

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Figure A-1: Stormwater Pollution Prevention Plan Site Map

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Figure A-2: [redacted]

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Figure A-3: [redacted]

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Figure A-4: [redacted]

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Figure A-5: Public Works Area

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Figure A-6: [redacted] Area

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Figure A-7: [redacted] Area

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Figure A-8: [redacted]

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Figure A-9: [redacted] Bio-Retention Pond

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Figure A-10: Truck Storage Lots

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Figure A-11: [redacted]

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Figure A-12: Visual Assessment and Monitoring Locations

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Figure A-13: GPS Coordinates

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APPENDIX B: GLOSSARY OF TERMS

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Glossary of Terms

Aeration: A process that promotes biological degradation of organic matter. The process may be passive (as when waste is exposed to air) or active (as when a mixing or bubbling device introduces the air).

Best Management Practice (BMP): Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control facility-site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

Biochemical Oxygen Demand (BOD): The amount of oxygen in water required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

Biodegradable: The ability to break down or decompose under natural conditions and processes.

Chemical Oxygen Demand (COD): Measurement of the total quantity of oxygen required in water for the chemical oxidation of organic matter to carbon dioxide.

Director: Regional Administrator or an authorized representative of the EPA.

Detention Basin: A holding pond or reservoir used to store polluted runoff for a limited time and then release it.

Hazardous Substance: 1) Any material that poses a threat to human health and/or the environment. Hazardous substances can be toxic, corrosive, ignitable, explosive, or chemically reactive. 2) Any substance named required by EPA to be reported if a designated quantity of the substance is spilled in the waters of the United States or if otherwise emitted into the environment.

Hazardous Waste: By-products of human activities that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

Illicit Discharge: Any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater except discharges authorized by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.

Impervious surface: A surface such as pavement or rooftops that prevents the infiltration of water into the soil.

Leaching: The process by which soluble constituents are dissolved in a solvent such as water and carried down through the soil.

Retention Basin: A pond or reservoir that hold runoff without release except by means of evaporation, infiltration, or emergency bypass.

Run-on: Stormwater surface flow or other surface flow that enters property other than where it originated.

Sheetflow: Runoff that flows over the ground surface as a thin, even layer, not concentrated in a channel. For purposes of this SWPPP, sheetflow areas are areas of industrial concern that do not drain to a point discharge, but drain by sheetflow directly to a receiving waterbody.

Significant Materials: Include, but are not limited to, raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have a potential to be released with stormwater discharges [122.26(b)(12)].

Significant Spills: Includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (CWA) (see 40 CFR 110.10 and CFR 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).

Waters of the United States: (a) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate wetlands; (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition; (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial sea; and (g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to man-made bodies of water that neither were originally created in waters of the United States (such as disposal in wetlands) nor resulted from the impoundment of waters of the United States.

Wetlands: An area that is regularly saturated by surface or groundwater and subsequently is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include: swamps, bogs, fens, marshes, and estuaries.

APPENDIX C: MSGP 2015, NOTICE OF INTENT, CRITERION C ELIGIBILITY FORM AND OFFICIAL LETTERS

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Table C-1 shows the location where each type of record/report is kept.

Table C-1: Summary of SWPPP Appendix C Contents

Record/Document	Record Location
MSGP 2015	Attached DVD and or Share Drive
Notice of Intent	SWPPP, Appendix C and or Share Drive
Criterion C Eligibility Form	SWPPP, Appendix C and or Share Drive
Official Letters	SWPPP, Appendix C and or Share Drive

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Criterion C Eligibility Form

Instructions:

In order to be eligible for coverage under criterion C, you must complete the following form and you must submit it to EPA following the instructions in Section VII a **minimum of 30 days prior to filing your NOI for permit coverage.** After you submit your form, you may be contacted by EPA with additional measures (e.g., additional stormwater controls or modifications to your discharge-related activities) that you must implement in order to ensure your eligibility under criterion C.

If after completing this worksheet you cannot make a determination that your discharges and discharge-related activities are not likely to adversely affect listed threatened or endangered species or designated critical habitat, you must submit this completed worksheet to EPA, and you may not file your NOI for permit coverage until you receive a determination from EPA that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat.

Note: Much of the information needed for this form can be obtained from your draft SWPPP which will be needed when you file your NOI.

SECTION I. OPERATOR, FACILITY, AND SITE LOCATION INFORMATION.

1) **Operator Information**

a) **Operator Name:** Naval Magazine Indian Island

b) **Point of Contact**

First Name: [redacted] **Last Name:** [redacted]

Phone Number: [redacted]

E-mail: [redacted]

2) **Facility Information**

a) **Facility Name:** Naval Magazine Indian Island

b) **Check which of the following applies:**

☐ I am seeking coverage under the MSGP as a new discharger or as a new source

☒ I am seeking coverage under the MSGP as an existing discharger and my facility has modifications to its discharge characteristics (e.g., changes in discharge flow or area drained, different pollutants) and/or discharge-related activities (e.g., stormwater controls)

Indicate the number of years the facility has been in operation: 74 years

Provide your NPDES ID (i.e., permit tracking number) from your previous MSGP coverage: WAR05BA5F

☐ I am seeking coverage under the MSGP as an existing discharger and there are no modifications to my facility.

Indicate the number of year the facility has been in operation: _____ years

Provide your NPDES ID (i.e., permit tracking number) from your previous MSGP coverage: _____

Criterion C Eligibility Form Page 1 of 11

c) **Facility Address:**

Address 1: 100 Indian Island Road Bldg 69

Address 2: _____

City: Port Hadlock **State:** WA **Zip Code:** 98339

d) **Identify the primary industrial sector to be covered under the 2015 MSGP:**

SIC Code 9711 or Primary Activity Code _____

Sector P and Subsector 1

e) **Identify the sectors of any co-located activities to be covered under the 201r MSGP:**

Sector Q Subsector 1

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

Sector _____ Subsector _____

f) **Estimated area of industrial activity exposed to stormwater:** 160 **acres**

g) **Provide a general description of the industrial activities that are taking place at this facility:**

See Attached "Indian Island Criterion C Supplemental Info"

3) **Receiving Waters Information** See Attached "Indian Island Criterion C Supplement

List all the stormwater outfalls from your facility.				For each outfall, provide the following receiving water information:	
Outfall ID	Design Capacity (if known)	Latitude (decimal degrees)	Longitude (decimal degrees)	Name of the receiving water that receives stormwater from the outfall and/or from the MS4 that the outfall discharges to	Type of Waterbody (e.g., lake, pond, river/stream/creek, estuarine/marine water)
		___.____	___.____		
		___.____	___.____		
		___.____	___.____		
		___.____	___.____		
		___.____	___.____		

SECTION II. ACTION AREA

Ensure that your action area is described in Attachment 1, as required in Step 2.

SECTION III. LISTED SPECIES AND CRITICAL HABITAT LIST

Ensure that the listed species and critical habitat list is included in Attachment 2, as required in Step 3.

Review your species list in Attachment 2, choose one of the following three statements, and follow the corresponding instructions:

☐ The species list includes only terrestrial species and/or their designated critical habitat. No aquatic or aquatic-dependent species or their critical habitat are present in the action area. **You may skip to Section IV of this form. You are not required to fill out Section V.**

Note: For the purposes of this permit, "terrestrial species" would not include animal or plant species that 1) spends any portion of its life cycle in a waterbody or wetland, or 2) if an animal, depends on prey or habitat that occurs in a waterbody or wetland. For example, shorebirds, wading birds, amphibians, and certain reptiles would not be considered terrestrial species under this definition. Please also be aware that some terrestrial animals (e.g., certain insects, amphibians) may have an aquatic egg or larval/juvenile phase.

☒ The species list includes only aquatic and/or aquatic-dependent species and/or their designated critical habitat. No terrestrial species or their critical habitat are present in the action area. **You may skip to Section V of this form and are not required to fill out Section IV.**

☐ The species list includes both terrestrial and aquatic or aquatic-dependent species and/or their designated critical habitat. **You must fill out both Sections IV and V of this form.**

SECTION IV. EVALUATION OF DISCHARGE-RELATED ACTIVITIES EFFECTS

Note: You are only required to fill out this section if your facility's action area contains terrestrial species and/or their designated critical habitat. If your action area only contains aquatic and/or aquatic-dependent species and/or their designated critical habitat, you can skip directly to Section V.

Most of the potential effects related to coverage under the MSGP are assumed to occur to aquatic and/or aquatic-dependent species. However, in some cases, potential effects to terrestrial species and/or their critical habitat should be considered as well from any discharge-related activities that occur during coverage under the MSGP. Examples of discharge-related activities that could have potential effects on listed terrestrial species or their critical habitat include the storage of materials and land disturbances associated with stormwater management-related activities (e.g., the installation or placement of stormwater control measures).

A. Select the applicable statement(s) below and follow the corresponding instructions:

☐ There are no discharge-related activities that are planned to occur during my coverage under the MSGP. You can conclude that your discharge-related activities will have no likely adverse effects, and:

- If there are any aquatic or aquatic-dependent species and/or their critical habitat in your action area, you must skip to Section V, *Evaluation of Discharge Effects*, below.
- If there are no aquatic or aquatic-dependent species you may skip to Section VI and verify that your activities will have no likely adverse effects. You must submit this form to EPA as specified in Section VII of this form. You may select criterion C on your NOI form and may submit your NOI for permit coverage 30 days after you have submitted this *Criterion C Eligibility Form*. You must also provide a description of the basis for the criterion you selected on your NOI form, **including the species and critical habitat list(s) in your action area**, as well as any other documentation supporting your eligibility. You must also include this completed *Criterion C Eligibility Form* in your SWPPP.

☐ There are discharge-related activities planned as part of the proposal. Describe your discharge-related activities in the following box and continue to (b) below.

Describe discharge-related activities:

8. In order to ensure any discharge-related activities will have no likely adverse effects on listed species and/or their designated critical habitat, you must certify that all the following are true:

☐ Discharge-related activities will occur:

- on previously cleared/developed areas of the site where maintenance and operation of the facility are currently occurring or where existing conditions of the area(s) in which the discharge-related activities will occur precludes its use by listed species (e.g., work on existing impervious surfaces, work occurring inside buildings, area is not used by species), and
- if discharge-related activities will include the establishment of structures (including, but not limited to, infiltration ponds and other controls) or any related disturbances, these structures and/or disturbances will be sited in areas that will not result in isolation or degradation of nesting, breeding, or foraging habitat or other habitat functions for listed animal species (or their designated critical habitat), and will avoid the destruction of native vegetation (including listed plant species).

☐ If vegetation removal (e.g., brush clearing) or other similar activities will occur, no terrestrial listed species that use these areas for habitat would be expected to be present during vegetation removal.

If all the above are true, you can conclude that your discharge-related activities will have no likely adverse effects, and:

- If there are any aquatic or aquatic-dependent species and/or critical habitat in your action area, you must skip to Section V, *Evaluation of Discharge Effects*, below.
- If there are no aquatic or aquatic-dependent species you may skip to Section VI and verify that your activities will have no likely adverse effects. You must submit this form to EPA as specified in Section VII of this form. You may select criterion C on your NOI and may submit your NOI for permit coverage 30 days after you have submitted this completed form. You must also provide a description of the basis for the criterion you selected on your NOI form, **including the species and critical habitat list(s)**, and any other documentation supporting your eligibility. You must also include this completed *Criterion C Eligibility Form* in your SWPPP.
- **If any of the above are not true**, you cannot conclude that your discharge-related activities will have no likely adverse effects. You must complete the rest of this form (if applicable), and must submit the form to EPA for assistance in determining your eligibility for coverage.

SECTION V. EVALUATION OF DISCHARGE EFFECTS

Note: *You are only required to fill out this section if your facility's action area includes aquatic and/or aquatic-dependent species and/or their critical habitat.*

In this section, you will evaluate the likelihood of adverse effects from your facility's discharges. The scope of effects to consider will vary with each facility and species/critical habitat characteristics. The following are examples of discharge effects you should consider:

- *Hydrological Effects.* Stormwater discharges may adversely affect receiving waters from pollutant parameters such as turbidity, temperature, salinity, or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely.
- *Toxicity of Pollutants.* Pollutants in stormwater may have toxic effects on listed species and may adversely affect critical habitat. Exceedances of benchmarks, effluent limitation guidelines, or state or tribal water quality requirements may be indicative of potential adverse effects on listed species or critical habitat. However, some listed species may be adversely affected at pollutant concentrations below benchmarks, effluent limitation guidelines, and state or tribal water quality standards. In addition, stormwater pollutants identified in Part 5.2.3.2 of your SWPPP, but not monitored as benchmarks or effluent limitation guidelines, may also adversely affect listed species and critical habitat.

As these effects are difficult to analyze for listed species, their prey, habitat, and designated critical habitat, this form helps you to analyze your discharges and make a determination of whether your discharges will have likely adverse effects and whether there are any additional controls you can implement to ensure no likely adverse effects.

A. Evaluation of Pollutants and Controls to Avoid Adverse Effects. In this section, you must document all of your pollutant sources and pollutants expected to be discharged in stormwater. You must also document the controls you will implement to avoid adverse effects on listed aquatic and aquatic-dependent species. You must include specific details about the expected effectiveness of the controls in avoiding adverse effects to the listed aquatic-and aquatic-dependent species. Attach additional pages if needed.

Potential Pollutant Source	Potential Pollutants	**Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.** Include information supporting why the control(s) will ensure no adverse effects, including any data you have about the effectiveness of the control(s) in reducing pollutant concentrations. You may also attach photos of your controls to this form.
e.g., vehicle and equipment fueling	e.g., • Oil & grease • Diesel • Gasoline • TSS • Antifreeze	e.g., • Fueling operators (including the transfer of fuel from tank trucks) will be conducted on an impervious or contained pad or under cover • Drip pans will be used where leaks or spills of fuel can occur and where making and breaking hose connections • Spill kit will be kept on-site in close proximity to potential spill areas • Any spills will be cleaned-up immediately using dry clean up methods • Stormwater runoff will be diverted around fueling areas using diversion dikes and curbing

Potential Pollutant Source	Potential Pollutants	Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.
See Attached "Indian Island Criterion C Supplemental Info"	See Attached "Indian Island Criterion C Supplemental Info"	See Attached "Indian Island Criterion C Supplemental Info"

Potential Pollutant Source	Potential Pollutants	Controls to Avoid Adverse Effects on Listed Aquatic and Aquatic-Dependent Species.

☐ Check if you are not able to make a preliminary determination that any of your pollutants will be controlled to a level necessary to avoid adverse effects on aquatic and/or aquatic-dependent listed species and their designated critical habitat. You must check in Section VI that you are unable to make a determination of no likely adverse effects, and must complete the rest of the form. You must submit your completed form to EPA for assistance in determining your eligibility for coverage.

B. Analysis of Effects Based on Past Monitoring Data. Select which of the following applies to your facility:

☐ I have no previous monitoring data for my facility because there are no applicable monitoring requirements for my facility's sector(s).

☐ I have no previous monitoring data for my facility because I am a new discharger or a new source, but I am subject to monitoring under the 2015 MSGP. You must provide information to support a conclusion that your facility's discharges are not expected to result in benchmark or numeric effluent limit exceedances that will adversely affect listed species or their critical habitat:

☐ My facility has not had any exceedances under the 2008 MSGP of any required benchmark(s) or numeric effluent limits.

☒ My facility has had exceedances of one or more benchmark(s) or numeric effluent limits under the 2008 MSGP, but I have addressed them during my coverage under the 2008 MSGP, or in my evaluation of controls to avoid adverse effects in (A) above. Describe all actions (including specific controls) that you will implement to ensure that the pollutants in your discharge(s) will not result in likely adverse effects from future exceedances.

See Attached "Indian Island Criterion C Supplemental Info"

☐ Check if your facility has had exceedances of one or more benchmarks or numeric effluent limits under the 2008 MSGP and you have not been able to address them to avoid adverse effects from future exceedances, or if you are a new discharger or a new source but you are not sure if you can avoid adverse effects from possible exceedances. You must check in Section VI that you are unable to make a determination of no likely adverse effects. You must submit your completed form to EPA for assistance in determining your eligibility for coverage. You may not file your NOI for permit coverage until you are able to make a determination that your discharges will avoid adverse effects on listed species and designated critical habitat.

SECTION VI VERIFICATION OF PRELIMINARY EFFECTS DETERMINATION

Based on Steps I – V of this form, you must verify your preliminary determination of effects on listed species and designated critical habitat from your discharges and/or discharge-related activities :

☒ Following the applicable Steps in I – V above, I have made a preliminary determination that my discharges and/or discharge-related activities are not likely to adversely affect listed species and designated critical habitats.

☐ Following the applicable Steps in I – V above, I am **not** able to make a preliminary determination that my discharges and/or discharge-related activities are not likely to adversely affect listed species and designated critical habitats.

Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

First Name, Middle Initial, Last Name: [redacted] H [redacted]

Title: ENVIRONMENTAL SITE MANAGER

Signature: [redacted] Date: / /

Email: [redacted]

SECTION VII CRITERION C ELIGIBILITY FORM SUBMISSION INSTRUCTIONS

You must submit this completed form to EPA at msapesa@epa.gov, including any attachments and any additional information that demonstrates how you will avoid or eliminate adverse effects to listed species or critical habitat (e.g., specific controls you will implement to avoid or eliminate adverse effects). **Any missing or incomplete information may result in a delay of your coverage under the permit**.

If you have made a preliminary determination that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat, this form must be submitted a minimum of 30 days prior to submitting your NOI for permit coverage under criterion C. Please note that during either the 30-day *Criterion C Eligibility Form* review period prior to your NOI submission, or within 30 days after your NOI submission and before you have been authorized for permit coverage, EPA may advise you that additional information is needed, or that there are additional measures you must implement to avoid likely adverse effects.

If you are unable to make a preliminary determination that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat, this worksheet must be submitted to EPA, but you may not file your NOI for permit coverage until you have received a determination from EPA that your discharges and/or discharge-related activities are not likely to adversely affect listed species and critical habitat.

Attachment 1

Include a map **and a written description** of the action area of your facility, as required in Step 2. You may choose to include the map that is generated from the FWS' on-line mapping tool IPaC (the *Information, Planning, and Consultation System*) located at http://ecos.fws.gov/ipac/.

The written description of your action area that accompanies your action area map must explain your rationale for the extant of the action area drawn on your map. For example, your action area written description may look something like this:

> *The action area for the (name of your facility)'s stormwater discharges extends downstream from the outfall(s) in (name of receiving waterbody) (# of meters/feet/kilometers/miles). The downstream limit of the action area reflects the approximate distance at which the discharge waters and any pollutants would be expected to cause potential adverse effects to listed species and/or critical habitat because (insert rationale). The action area does/does not extend to the (name of receiving waterbody)'s confluence with (name of confluence waterbody) because (insert rationale).*

Note that you action area written description will be highly site-specific, depending on the expected effects of your facility's dishcarges and discharge-related activities, receiving waterbody characteristics, etc.

See Attached "Indian Island Criterion C Supplemental Info"

Attachment 2

List or attach the listed species and critical habitat in your action area on this sheet, as required in Step 3. You must include a list for applicable listed NMFS and FWS species and critical habitat. If there are listed species and/or critical habitat for only one Service, you must include a statement confirming there are no listed species and/or critical habitat for the other Service. For FWS species, include the full printout from your IPaC query. *Note: If your Official Species List from the USFWS indicated no species or critical habitat were present in your action area, include the full consultation tracking code at the top of your Official Species List in your NOI submittal in the question "Provide a brief summary of the basis for the criterion selected in Appendix E." If an Official Species List was not available on IPaC, list the contact date and name of the Service staff with whom you corresponded to identify the existence of any USFWS species or critical habitat present in your action area.*

See Attached "Indian Island Criterion C Supplemental Info"

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APPENDIX D: STORMWATER MANAGEMENT AT CONSTRUCTION ACTIVITIES

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Stormwater Permitting at Construction Sites

All construction sites disturbing one or more acres of land or smaller sites that are part of a common plan of development or sale will obtain permit coverage under the most current EPA NPDES General Permit for Discharges from Construction Activities.

In order to obtain permit coverage the contractor must prepare a Stormwater Pollution Prevention Plan (SWPPP) for the construction site and a Notice of Intent (NOI) must be filed with the EPA. The Navy must also submit an NOI per Navy procedures. Navy and contractor NOIs should be coordinated so that they agree. Information regarding the EPA General Permit for Discharges from Construction Activities at the EPA's website, http://epa.gov/npdes/stormwater/-discharges-construction-activities#overview.

Construction SWPPP

The construction SWPPP must be completed before the NOI is filed and must include:

- A site description giving:
  - Project description
  - Sequence and timing of major soil disturbing activities
  - Estimates of total site area and total area to be disturbed by clearing, grubbing, or excavating

- A site map indicating drainage patterns and anticipated slopes after grading and:
  - Locations of disturbed and undisturbed areas
  - Location of major structural and non-structural controls identified in the plan
  - Locations where stabilization practices will occur
  - Locations of offsite material, borrow, waste or equipment storage areas
  - Surface waters and wetlands
  - Locations of stormwater discharge

- Controls (BMPs) that will be implemented at the site for erosion and sediment control and pollution prevention.
- Sequencing of controls
- Describe which "operator" is responsible for implementing specific controls
- Description of procedures to ensure timely maintenance of controls
- Information on endangered species/critical habitat at the site and whether discharges or BMPs affect them,
- Certifications

- All contractors and subcontractors identified in the construction SWPPP as being responsible for implementing controls shall sign a certification that is included in the plan. The NAVBASE Kitsap Bangor PWD Facilities Engineering and Acquisition Division (FEAD) director must also certify the construction SWPPP.
- A copy of the permit
- Copy of completed NOI and copy of EPA's receipt acknowledgement

Additional guidance on preparing construction SWPPPs is at the EPA website address listed above.

Notice of Intent

- A Notice of Intent (NOI) needs to be filed by both the Contractor and the party administering the construction project (usually the FEAD).
- The contractor's NOI must be signed by the company owner or general partner or, in the case of a corporation by a "responsible corporate officer."
- The FEAD's NOI should be signed by the head military person onsite FEAD director or, the lead civilian, the resident Engineer if the FEAD chooses to delegate signature authority.
- To minimize the possibility for confusion and errors the FEAD NOI should be created after the Contractor has submitted their NOI to the FEAD for review/approval.
- Submit the NOI electronically after receiving electronic signature authority. Information on the EPA's electronic NOI program is available at the following link: http://epa.gov/npdes/stormwater/-discharges-construction-activities#ereporting.
- If paper NOIs must be used for the project, contact the EPA regional office.
- Site work cannot begin until 14 days after the NOI shows up in the EPA's database, which is available at the following link: http://ofmpub.epa.gov/apex/aps/f?p=CGP_2012:Home.

APPENDIX E: ROUTINE FACILITY INSPECTION PLAN

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Form E-1: Quarterly Routine Facility Inspection Documentation, [redacted] Lot

NAVMAG Indian Island: [redacted]
Inspection Date/Time: _____ **Inspector:** _____
Weather: _____ **Signature:** _____
Discharges at time of Inspection: _____

BMPs and other things to look for:	**Notes**:
C-1 Good Housekeeping	
C-2 Minimize Exposure	
C-3 Preventative Maintenance	
C-4 Spill Prevention and Response Procedures	
C-5 Routine Facility Inspections	
Q-1 Vessel Pressure Washing	
Q-3 Materials Storage Areas	
Q-4 Engine or Vehicle Maintenance and Repair Area	
Q-5 General Yard Area	

Bldg Area #	Sector	Condition around Outfall or Building (B.5)	Previously Unidentified Discharges of Pollutants (B.3)	Control Measures Needing Repair (C.2)	Failed Control Measures Need Replacement (C.3)	Additional Control Measures needed. (C.4)	Condition Triggering Corrective Action/Problem to be Corrected (D.3)
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							

Form E-2: Quarterly Routine Facility Inspection Documentation, [redacted]

NAVMAG Indian Island: [redacted]
Inspection Date/Time: _____ Inspector: _____
Weather: _____ Signature: _____
Discharges at time of Inspection: _____

[redacted]

BMPs and other things to look for:	**Notes**:
C-1 Good Housekeeping	
C-2 Minimize Exposure	
C-3 Preventative Maintenance	
C-4 Spill Prevention and Response Procedures	
C-5 Routine Facility Inspections	
P-1 Vehicle and Equipment Storage Area	
P-2 Fueling Area	
P-3 Materials Storage Areas	
P-4 Vehicle and Equipment Cleaning Areas	

Bldg Area #	Sector	Condition around Outfall or Building (B.5)	Previously Unidentified Discharges of Pollutants (B.3)	Control Measures Needing Repair (C.2)	Failed Control Measures Need Replacement (C.3)	Additional Control Measures needed. (C.4)	Condition Triggering Corrective Action/Problem to be Corrected (D.3)
[redacted]							
[redacted]							
[redacted]							
[redacted]							

Bldg Area #	Sector	Condition around Outfall or Building (B.5)	Previously Unidentified Discharges of Pollutants (B.3)	Control Measures Needing Repair (C.2)	Failed Control Measures Need Replacement (C.3)	Additional Control Measures needed. (C.4)	Condition Triggering Corrective Action/Problem to be Corrected (D.3)
[redacted]							
[redacted]							
[redacted]							

Form E-3: Quarterly Routine Facility Inspection Documentation, [redacted]

NAVMAG Indian Island: [redacted]
Inspection Date/Time: _____ Inspector: _____
Weather: _____ Signature: _____
Discharges at time of Inspection: _____

BMPs and other things to look for:		**Notes:**
C-1 Good Housekeeping	P-5 Vehicle and Equipment Maintenance Areas	
C-2 Minimize Exposure	Q-4 and P-5 Engine or Vehicle Maintenance and Repair Area	
C-3 Preventative Maintenance	Q-5 General Yard Area	
C-4 Spill Prevention and Response Procedures	F-1 Vehicle Pre-wash Facility	
C-5 Routine Facility Inspections	Non-stormwater Discharges	
P-1 Vehicle and Equipment Storage Area	**Notes:**	
P-2 Fueling Area		
P-3 and Q-3 Materials Storage Areas		
P-4 Vehicle and Equipment Cleaning Areas		

[redacted]

Bldg Area #	Sector	Condition around Outfall or Building (B.5)	Previously Unidentified Discharges of Pollutants (B.3)	Control Measures Needing Repair (C.2)	Failed Control Measures Need Replacement (C.3)	Additional Control Measures needed. (C.4)	Condition Triggering Corrective Action/Problem to be Corrected (D.3)
[redacted]							
[redacted]							
[redacted]							
[redacted]							

Bldg Area #	Sector	Condition around Outfall or Building (B.5)	Previously Unidentified Discharges of Pollutants (B.3)	Control Measures Needing Repair (C.2)	Failed Control Measures Need Replacement (C.3)	Additional Control Measures needed. (C.4)	Condition Triggering Corrective Action/Problem to be Corrected (D.3)
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							
[redacted]							

Bldg Area #	Sector	Condition around Outfall or Building (B.5)	Previously Unidentified Discharges of Pollutants (B.3)	Control Measures Needing Repair (C.2)	Failed Control Measures Need Replacement (C.3)	Additional Control Measures needed. (C.4)	Condition Triggering Corrective Action/Problem to be Corrected (D.3)
[redacted]							
[redacted]							
[redacted]							
[redacted]							

APPENDIX F: QUARTERLY VISUAL ASSESSMENT PLAN

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Quarterly Visual Assessment Plan

Sampling Frequency and Recordkeeping:

Visual assessment of stormwater outfall discharges shall be conducted every quarter, at the locations shown in Table F-1, unless no storm event occurs within the quarter. Form F-1can be used for documenting the visual assessment. If no runoff occurs within a quarter, Form F-1 should also be used to document that it was not possible to conduct the assessment. Form F-1 should be signed by the observer. The signed visual assessment reports must be kept onsite with the SWPPP. Place all completed visual assessment forms into Appendix L, or other designated location, as the permanent record that visual assessments were completed.

Note that Form F-1can be used with either or both Visual Assessment and Benchmark Monitoring. Circle the "V" to designate a Visual Monitoring record.

When and Where to Collect Samples for Visual Assessment:

- Collect a grab sample at each location listed in Appendix F, Table F-1.
- Collect samples during daylight hours.
- Collect samples from storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if there is documentation that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period. Document all discrepancies on Form F-1.
- Collect samples within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site.

What Water Quality Characteristics to Assess:

- Color,
- Odor,
- Clarity,
- Floating solids,
- Settled solids,
- Suspended solids,
- Foam,
- Oil sheen, and
- Other obvious indicators of stormwater pollution.

Quarterly Visual Assessment Records and Reporting:

Document the results of your visual assessments and maintain these records on-site with the SWPPP. It is not required to submit quarterly visual assessment records to EPA, unless specifically requested to do so. However, corrective actions that arise from the visual assessment will be reported to EPA in the Annual Report. Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Section 7 and Appendix M and with MSGP Part 4.

Form F-1 may be used to record visual assessments. At a minimum, documentation of the visual assessment must include:

- Sample location(s);
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the stormwater discharge;
- Probable sources of any observed stormwater contamination;
- If applicable, why it was not possible to take samples within the first 30 minutes; and
- Deviations from requirements.

Safety:

- Personal Protective Equipment: Raincoat, rain pants, hat/hood, gloves, colored safety vest, hard hat, and sturdy shoes or steel toe boots (if needed, e.g. when lifting storm drain covers)
- Traffic cones
- All monitoring must be done during daylight hours and monitoring must not be done during severe/extreme storm events
- Consider taking along a partner for sampling in some locations
- For emergency communication purposes, a cell phone and/or radio

Sampling:

- Equipment and Supplies:
  - Map
  - A clean dipper-type sampler
  - Clear glass or plastic wide-mouthed jar or beaker
  - A rainproof logbook such as "Rite in the Rain" type notebook
  - Form F-1: NAVMAG Indian Island Stormwater Visual Assessment
  - A copy of the Visual Assessment Plan
  - Paper towels
  - Scrub brush
  - Bucket

- Mild Detergent
- Bottle of clean potable water

- Sample-Collection:
  - Locate the outfall. If there is no discharge, record this information on Form F-1 beside the outfall number in the Description/Observation column.
  - See Table F-1 for specific information about each outfall.
  - Check the condition of the sampler (discoloration, residues, etc.) and clean as necessary using a mild detergent (if necessary) and water. See decontamination procedure below.
  - Insert the dipper into effluent flow to collect sample. Be careful as to not disturb sediment/debris in the outfall pipe. Stay safely back from any ledges, bluffs, or drops.
  - Fill and rinse the dipper 3 times with stormwater first, and then fill again with the stormwater sample. Collect one liter sample per outfall
  - Pour the sample into a clear jar or beaker.
  - Examine the sample for color, odor, turbidity, floating solids, foam, oil sheen, or other obvious indicators of stormwater pollution.
  - Make notes of the sample's physical details on Form F-1. Check the box on Form F-1 "Visual Assessment Parameters" under each indicator that is present in the sample. Describe the indicator under "Notes."

- Decontamination Procedures
  - Dipper-type sampler:

    Examine for discoloration or residue prior to use.

    If there are signs of contamination, clean using detergent and clear water. Collect the wash water in the bucket.

    Rinse the dipper with effluent flow three times prior to sampling, for each outfall.
  - Clear glass wide-mouthed jars or beakers:

    Examine for discoloration or residue prior to use.

    If there are signs of contamination, clean using detergent and clear water. Collect the wash water in the bucket.

    Make sure the glass jar or beaker is clear, so that visual examination is possible.

Recordkeeping Procedures:

- Complete a separate Form F-1 for each quarterly sampling event.
- Make sure the form is signed and dated.
- These forms then become part of the permanent stormwater record.

Place these records in Appendix L, or other designated location, as the permanent record that visual assessments were completed.

Outfall Locations

See Figure A-12 for color-coded visual assessment outfall locations. See Figures A-1 through A-12 for more outfall and catch basin details.

Table F-1: Visual Assessment Sampling Locations

Sampling Event	Outfall or Catch Basin #	Collection Point Description	Sampling Notes (Sample size is one liter)
Collect 1 per sampling event at either of these locations*	[redacted]	[redacted]	Collect one, sample at the outfall or catch basin.
	[redacted]	[redacted]	Collect one, sample at the outfall or catch basin.
Collect 1 per sampling event at either of these locations*	[redacted]	[redacted]	Collect one, sample at the outfall or catch basin.
	[redacted]	[redacted]	Collect sample at one of the curb cuts along the slab. Vary the curb cut with each visual assessment.
Collect 1 per sampling event	[redacted]	[redacted]	Collect one, sample at the outfall.
Collect 1 per sampling event	[redacted]	[redacted]	Benchmark monitoring stopped in January 2014.

* May do visual assessment of either location. They must, however, be done on a rotating basis.

Form F-1: Visual Assessment and Analytical Monitoring

Facility Name:		**Year:**		**Things to note for each outfall:**	
Sampler's Name:		**Month:**		• Description of sample observations.	
Sampler's Signature:				• Probable sources of observed stormwater contamination.	
Storm Event Duration:				• If applicable, why it was not possible to take sample with the first 30 minutes.	
Rainfall Amount:		**Quarter:**	Jan-Mar		• If applicable, why it was not possible to take a sample.
Days Since Last Discharge:			Apr-Jun		• For quarterly monitoring, if a 72 hour interval is not possible, provide documentation to show that the representative local interval is <72 hours.
Runoff or Snowmelt:			Jul-Sep		
Estimated Time Discharge Began:			Oct-Dec		• For monthly samples, collect during a measurable storm event that follows a preceding storm event by at least a 24-hour dry period.

				Visual Assessment Parameters								Analytical Parameters							Notes
Out fall No.	Date	Time	Visual (V) or Benchmark (B) (circle)	Color	Odor	Clarity	Floating Solids	Settled Solids	Suspended Solids	Foam	Oil Sheen	Copper	Zinc	Aluminum	Iron	Lead	TSS	Fecal Coliform	
[redacted]			V																
[redacted]			V B																
[redacted]			V																
[redacted]			V																
[redacted]			V B																
[redacted]			V																

				Visual Assessment Parameters								Analytical Parameters							Notes
Out fall No.	Date	Time	Visual (V) or Benchmark (B)	Color	Odor	Clarity	Floating Solids	Settled Solids	Suspended Solids	Foam	Oil Sheen	Copper	Zinc	Aluminum	Iron	Lead	TSS	Fecal Coliform	

APPENDIX G: COMPREHENSIVE SITE INSPECTIONS

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SWPPP Form G-1: Annual Compliance Site Inspection Documentation for MSGP 2008, Facilities

Facility Name: NAVMAG Indian Island **Date:** September 17, 2015

Inspector Name: [redacted] **Inspector Title:** [redacted]

Note: The numbers indicated below the column titles refer to numbers in the MSGP 2008, Appendix I Annual Reporting Form parts B and C, General Inspection Findings and Industrial Activity Area Specific Findings.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P	[redacted]	Unacceptable Housekeeping	No	Yes	No	No	No	No	Yes	Materials stored outside without cover.
[redacted]	P	[redacted]	Acceptable Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
		[redacted]									
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	*Previous corrective actions included removal/recycling of wastes and* moving useable materials inside for storage. Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Good housekeeping	No	No	No	No	No	No	No	
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Issues associated with material and equipment storage identified in previous CSIs have been resolved. Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Fair Housekeeping	No	Yes	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Construction is complete; The paved area now drains to trench drains at fuel station, which flows to the oil water separator.
[redacted]	P	[redacted]	Acceptable Fair Housekeeping	No	No	No	No	No	No	No	Signs regarding proper use of the wash rack and reminders to clean large debris from area should be posted. A hose holder should be mounted on the building wall so that the hose is not stored on the ground. Recommend placing hose aboveground and installing a check valve on the hose.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	A hose from [redacted] is used in this area for rinsing the pier and boats. Acceptable conditions were observed during the CSI.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	Q	[redacted]	Acceptable Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Recycling bins from [redacted] were relocated to this area. At present, 2 large recycling bins are located here and are in good repair.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	A spill kit is located in the truck holding area, and a retention pond collects stormwater runoff from the area. Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]		[redacted]									
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	The recycling bins and solid waste bins have been relocated to the truck storage area at [redacted]. Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.

Bldg. Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P		Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P		Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q		Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q		Unacceptable Housekeeping	No	Yes	Yes	No	No	No	Yes	A new bio-retention stormwater treatment system was constructed in Feb 2014. Runoff primarily sheet flows to the pond and infiltrates. Any overflow from the pond drains to the adjacent beach and infiltrates. Visual inspections occurred from Feb through May 2014 and no runoff was observed flowing to Pt. Townsend Bay.
[redacted]	P		Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	All recycle bins with lids were recently placed in the area. Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]		[redacted]	Acceptable Fair Housekeeping	No	Yes	No	No	No	No	No	The exposed stockpile materials have been discussed with the installation environmental staff. It was determined that no cover was necessary. However, any eroding material will flow toward the catch basin located on the road edge in the middle of the dirt road access. The location of this catch basin creates a potential for sedimentation in the storm drain.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P	[redacted]	Acceptable Fair Housekeeping	No	Yes	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	N/A	[redacted]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	Sampling results met benchmark requirements in 2014. Samples no longer required.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Fair	No	Yes	No	No	No	No	No	Metal pipe has significant rusting.

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	Q	[redacted]	Fair	No	Yes	No	No	No	No	No	Metal pipe has significant rusting.
[redacted]	Q	[redacted]	Good	No	No	No	No	Yes	Yes	Yes	A bio-filter was recently installed in catch basin in effort to meet benchmark requirements (see Table M-1b for details) for discharge to bay.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	Benchmark requirements were met Sept. 2013. See Table M-1 for details.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	Yes	No	No	No	No	Catch basin could not be found. Maintenance in grassy area is needed to find and evaluate condition of inlet.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	Yes	No	No	No	No	Bio-retention pond has overgrown vegetation and should be maintained for optimal infiltration.
[redacted]	P	[redacted]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Bldg, Area or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P	[redacted]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
[redacted]	P	[redacted]	Erosion	No	No	No	No	No	No	No	The shoreline to the south of the reinforced quay wall next to [redacted] is experiencing significant erosion due to wind and wave action. The cliff behind the [redacted] is experiencing significant erosion. The waterfall at the cliff has cut back 20 feet to the east.
[redacted]	P Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.

Form G-2: Annual Compliance Site Inspection Documentation for MSGP, Outfalls and Catch Basins

Facility Name: _____ Date: _____ Time: _____

Inspector Name: _____ Inspector Title: _____

Inspector Signature: _____

Bldg, Area, or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non-stormwater.	Evidence or Potential for Pollutants entering the drainage System or receiving waters.	Control Measures in need of Maintenance or Repair.	Control measures failed and need replacement.	Additional Control Measures needed.	SWPPP Revision Required.	Incidents of Non-compliance with Control Measures	Describe Observations and Any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
SW-010	N/A	Not an industrial sector. There is no discharge at this outfall.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB-020A	Q	This catch basin collects water from a concrete pad that is sometimes used to stage equipment and material for the wharf and ship support activities.									
SW-020	Q	This outfall is located directly east of CB-020A. The pipe appears to run straight to the shore.									
CB-030A	Q	This catch basin is located on the east edge of slab s77. It is next to the area where crane lift testing is conducted.									
CB-030B	Q	This catch basin is located directly east of CB-030A and appears to be the farthest upstream catch basin that feeds SW-030.									
SW-030	Q	This outfall is located directly east of CB-030A. The pipe appears to run straight to the shore.									
SW-035	P	Eight curb cuts along concrete pad 263.									
CB-040A	P	At the edge of the road surrounded by grassy swale.									
CB-040I	P	Collects water from RV Park and the roof of Building 77.									
SW-040	P	This outfall is west of CB-040A.									
SW-050	Q	There is no discharge at this outfall so it was not inspected.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB-060A	Q	This catch basin is located very near the water next to a busy road and next to Building 90.									
SW-060	Q	This outfall is located a short distance east and south of CB-060A.									

Bldg, Area, or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non-stormwater.	Evidence or Potential for Pollutants entering the drainage System or receiving waters.	Control Measures in need of Maintenance or Repair.	Control measures failed and need replacement.	Additional Control Measures needed.	SWPPP Revision Required.	Incidents of Non-compliance with Control Measures	Describe Observations and Any Problems
		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
CB-070A	P	Although this catch basin is very large and is located at the base of a long swale, the stormwater infiltrates before it gets to the catch basin.									
SW-070	P	There is rarely discharge at this outfall so it is not inspected.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW-080	Q	There is no discharge at this outfall so it is not inspected.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW-090	Q	There is no discharge at this outfall so it is not inspected.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW-100	Q	There is no discharge at this outfall so it is not inspected.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW-110	P	There is no discharge at this outfall so it is not inspected.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CB-110A	P	This is a grassy swale down from the Public Works industrial area. Water collects here prior to going under a road and over a cliff where it forms a waterfall.									
SW-120	Q	This outfall now goes to a bio-infiltration pond. The curb cut on the southwest edge of the pier cargo staging area 986 is no longer an outfall (2013).									
SW-140	P	There is no discharge at this outfall so it is not inspected.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW-150	P	This outfall does not reach waters of the U.S.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Erosion and Sedimentation	P	The shoreline to the south of the reinforced quay wall next to Building 77 is experiencing significant erosion due to wind and wave action. Not associated with an industrial sector The cliff behind the north end of 290 is experiencing significant erosion.									
Catch Basins	P & Q	The catch basins in the industrial areas are inspected.									

APPENDIX H: ANALYTICAL MONITORING SOP

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Background:

NAVMAG Indian Island must collect and analyze stormwater samples and document monitoring activities consistent with the procedures described in Part 6 MSGP and any sector specific or State/Tribal specific requirements.

Introduction and Purpose:

This NAVMAG Indian Island Analytical Monitoring Standard Operating Procedure (SOP) is a component of the Stormwater Pollution Prevention Plan.

The purpose of the SWPPP is to identify and minimize potential sources of stormwater pollution. Stormwater monitoring can help evaluate the effectiveness of implemented stormwater pollution control measures/BMPs and also help recognize otherwise unidentified pollution sources.

This analytical monitoring SOP provides assistance to personnel who monitor stormwater at NAVMAG Indian Island, under the requirement of the MSGP.

Read this SOP in its entirety before proceeding with monitoring.

Benchmark Monitoring:

MSGP Part 6.2.1 gives the detailed requirements for benchmark monitoring. Additional benchmark monitoring requirements are in the Sector Specific section, MSGP Part 8. Perform benchmark monitoring on the samples collected at the outfalls listed in Table H-1. Form F-1 is a log that can be used to record monitoring events. Only those outfalls associated with Sector Q facilities require benchmark monitoring.

See Figures A-9, A-11, and A-12 for color-coded outfall locations. See Figures A-1 through A-12 for more outfall and catch basin details.

Benchmark monitoring is the collection of stormwater samples for laboratory analysis. The samples will be analyzed for the constituents indicated in Table H-2. Results of the sampling will be compared to MSGP specifying "benchmark" values, also shown in Table H-2. Results with levels above the benchmark values may require further evaluation.

Impaired Waters Monitoring

Beginning in the first full quarter following the date of discharge authorization, monitor once per year at each outfall (except substantially identical outfalls) discharging stormwater to impaired waters that does not have an EPA approved or established TMDL. This monitoring requirement does not apply after one year if the pollutant for which the waterbody is impaired is not detected above natural background levels in the facility's stormwater discharge, and documentation is completed, as required in Part 5.4 (Additional Documentation Requirements), that this pollutant is not expected to be present above natural background levels in your discharge.

If the pollutant for which the water is impaired is not present and not expected to be present in the discharge, or it is present but it has been determined that its presence is caused solely by natural background sources, include a notification to this effect in the first monitoring report, after which annual monitoring may be discontinued. To support a determination that the pollutant's presence is caused solely by natural background sources, keep the following documentation with the SWPPP records:

The rational for determining that the presence of the pollutant causing the impairment in the discharge is not related to the activities at the facility; and

Data and/or studies that tie the presence of the pollutant causing the impairment in the discharge to natural background sources in the watershed.

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on the facility or pollutants from neighboring sources, which are not naturally occurring.

Monitoring Locations and Frequency:

Perform benchmark monitoring on the samples collected at the outfalls listed in Table H-1. Form H-1 is a log that can be used to record monitoring events. Only those outfalls associated with Sector Q facilities require quarterly benchmark monitoring.

Collect a grab sample at each outfall location listed in Table H-1.

Collect a sample of the receiving water to analyze for hardness.

Collect samples during daylight hours.

Quarterly samples and annual impaired water sampling must be collected from storm events on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if it is documented that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period. Document this on Form F-1.

Collect samples within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and document is required as to why it was not possible to take samples within the first 30 minutes. Such documentation shall be signed and certified. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site.

If it is not possible to take the sample at the outfall itself, visual assessment or benchmark sampling may be done at a designated catch basin upstream from an outfall. If a sample is taken at a catch basin, collect the sample from the fresh incoming stormwater and not from the pooled water in the catch basin.

Table H-1: Benchmark Monitoring Locations

Outfall or Catch Basin #	Sector Association	Collection Point Location
[redacted]	Q	See Table 2-3 and Figure A-4
[redacted]	Q	See Table 2-3 and Figure A-6
[redacted]	Q	[redacted] is no longer an outfall. The curb cut at south end [redacted] flows to a bio-retention pond. Benchmark monitoring stopped in January 2014.

Required Analytical Analyses:

1) Analysis of outfall samples:

All samples in Table H-2 are required to be stored in containers supplied by the contract laboratory (typically a 500-mL High-Density Polyethylene (HDPE) container) and must be cooled to 6°C. See Table H-2 for a schedule of the required analyses.

2) Analysis of receiving water sample:

The receiving water is sampled during the first quarter of Benchmark sampling. This is the only time this sample is collected for the entire permit term. This sample is analyzed for hardness in order to determine which benchmark cutoff concentration to use for lead. See Table H-2 for hardness dependent benchmark for lead.

Table H-2: WDOE Surface Water Quality Standards and EPA Benchmark Values

Analyte	WDOE Surface Water Quality Standards[1]	EPA Multi-Sector Benchmarks
Aluminum, Total (mg/L)	0.75 (fresh)	0.75
Ammonia[c] (un-ionized) (mg/L)	0.233 (marine as NH3)	2.14 (as N)
Arsenic, Total [c] (mg/L)	0.36 (fresh), 0.069 (marine) c	0.15 (fresh), 0.069 (marine)
Cadmium, Total[b, c] (mg/L)	0.001 (fresh), 0.042 (marine)	(fresh)[d], 0.04 (marine)
Copper, Total[b, c] (mg/L)	0.00547 (fresh), 0.0048 (marine)	(fresh)[d], 0.0048 (marine)
Cyanide (mg/L)	0.022 (fresh), 0.001 (marine)	0.022(fresh), 0.001 (marine)
Iron, Total (µg/L)	No Standard	1.0
Lead, Total[b,c] (µg/L)	0.01704 (fresh), 0.21 (marine)	(fresh)[d], 0.21 (marine)
Magnesium, Total (mg/L)	No Standard	0.064
Mercury Total [c] (mg/L)	0.0021 (fresh), 0.0018 (marine)	0.0014 (fresh), 0.0018 (marine)
Silver, Total (mg/L)	0.00043 (fresh)[a], 0.0019 (marine)[a]	(fresh)[d], 0.0019 (marine)
Zinc, Total[b, c] (mg/L)	0.04126 (fresh), 0.090 (marine)	(fresh)[d], 0.09 (marine)
BOD_5 (mg/L)	No Standard	30
COD (mg/L)	No Standard	120
Dissolved Oxygen (DO) (mg/L)	Class AA: > 7.0 mg/L Class A: > 6.0 mg/L (When natural conditions, such as upwelling, occur, causing the DO to be depressed near or below value stated above for particular class, natural DO levels may be degraded by up to 0.2 mg/L by human caused activities.)	No Value
Nitrate + Nitrite as N (mg/L)	No Standard	0.68
Oil & Grease (mg/L)	No Standard	No Value
Total Phosphorus (mg/L)	No Standard	2.0
Total Suspended Solids (mg/L)	No Standard	100
pH	7.0 to 8.5 with a human caused variation of less than 0.2 units (Class AA) or 0.5 units (Class A)	6.0 - 9.0
Fecal Coliform	< 100 colonies/100ml geometric mean.	

	Standard is for "Primary Contact Recreation" and applies to fresh water outfalls on east side of base	

1. WDOE standards for Cadmium, Copper, Lead, Silver and Zinc are hardness dependent. State shown in this table assume a hardness of 30 mg/L. Benchmark values as defined in EPA's Multi-Sector General Permit, 2015.
a. An instantaneous concentration not to be exceeded at any time.
b. A 1-hour average concentration not to be exceeded more than once every three hours.
c. The WDOE criteria are based on the dissolved fraction of the metal. The criteria will be applied as total recoverable values to calculate effluent limits unless data is made available regarding seasonal partitioning of the dissolved metal. See 173-201A Washington Administrative Code (WAC). EPA concentrations are total recoverable fraction.
d. Hardness dependent Benchmarks shown below. Hardness of receiving water must be calculated in accordance with Appendix J of the permit.

Water Hardness Range	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Silver (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.0005	0.0038	0.014	0.0007	0.04
25-49.99 mg/L	0.0008	0.0056	0.023	0.0007	0.05
50-74.99 mg/L	0.0013	0.0090	0.045	0.0017	0.08
75-99.99 mg/L	0.0018	0.0123	0.069	0.003	0.11
100-124.99 mg/L	0.0023	0.0156	0.095	0.0046	0.13
125-149.99 mg/L	0.0029	0.0189	0.122	0.0065	0.16
150-174.99 mg/L	0.0034	0.0221	0.151	0.0087	0.18
175-199.99 mg/L	0.0039	0.0253	0.182	0.0112	0.20
200-224.99 mg/L	0.0045	0.0285	0.213	0.0138	0.23
225-249.99 mg/L	0.0050	0.0316	0.246	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	0.0183	0.26

Records and Reporting:

Monitoring data must be reported using EPA's electronic NetDMR tool at www.epa.gov/netdmr, as described in Part 7.4 (unless a waiver from electronic reporting has been granted from the EPA Regional Office, in which case a paper DMR form may be submitted). It shall be submitted no later than 30 days (email date or postmark date) after receiving laboratory results for all monitored outfalls for the reporting period.

For benchmark monitoring, note the requirement to submit sampling results to EPA no later than 30 days after receiving laboratory results for each sampling event, in accordance with MSGP Part 6.2.1.2. If multiple samples are collected in a single quarter (e.g., due to adverse weather conditions, climates with irregular stormwater runoff, or areas subject to snow), submit all sampling results to EPA within 30 days of receiving the laboratory results.

Corrective actions that arise from the analytical monitoring will be reported to EPA in the Annual Report. Any corrective action required must be performed consistent with Section 7 and Appendix M and with MSGP Part 3.

Use the Form F-1included in Appendix F to record benchmark sampling events. Keep this record along with the analysis results in Appendix L.

Safety:

Use the following:

- Personal Protective Equipment: raincoat, rain pants, hat/hood, gloves, colored safety vest, hardhat, and sturdy shoes or steel toe boots (if needed, e.g. when lifting storm drain covers).
- Use traffic cones as needed in traffic areas.
- All monitoring must be done during daylight hours and monitoring must not be done during severe/extreme storm events.
- Consider taking along a partner for sampling in some locations.
- For emergency communication purposes, use a cell phone and/or radio.
- Wear safety/lab goggles if acids are used to preserve samples.

In addition, monitoring personnel should be aware of the cautionary measures appropriate for handling nitric acid (a preservative), which may have been placed in the sample container by the contract lab. When opening each of the sample bottles, be sure to face away from the opening, as the moisture in the air will cause the nitric acid to fume.

Quality Assurance/Quality Control:

- QA/QC samples should be collected to detect potential errors introduced during sampling, handling, shipping, and analysis. The QA/QC samples should be collected and handled in the same manner as actual samples and in accordance with the procedures outlined in the NPDES Guidance Document (EPA 1992). Sample Chain of Custody (CoC) also should be maintained as prescribed in the Guidance.
- All laboratory analyses should be performed in accordance with EPA Methods for Chemical Analysis of Water and Wastewater, EPA Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, and Standard Methods for the Examination of Water and Wastewater. The analytical data should be reviewed to assess data quality and usability based on the EPA Functional Guidelines for Data Validation. The data should be evaluated for use in stormwater characterization and regulatory decision-making.

Field Sampling Procedures:

Preparation:

- Sampling SOP
- 24-hour dry period for monthly sampling or 72-hour dry period for quarterly and annual sampling.
- Check safety gear (see list above)
- Check gear
- Sample bottles
- Notebook
- Manhole puller

- Pen/sharpie and spares
- Chain-of-custody (CoC) – see samples at end of this procedure
- Bottle labels
- CoC seals
- Dipper (inspect and clean if necessary)
- Cooler (s)
- Ice/blue ice
- Plastic sheeting
- Paper towels or lab towels
- Analytical monitoring Form F-1
- Extra clean sample container – transfer container
- Zip-lock bags

Paperwork:

- Fill out labels and CoC as much as possible prior to leaving the office.
- Fill out Form F-1 as much as possible prior to leaving the office.

Sampling:

- Note when the rainfall started.
- Put on gloves and safety goggles.
- Place traffic cones if applicable.
- Take care when removing manhole cover/catch basin grates. Do not fully remove catch basin grates. Just move to the side but leave some in groove. Take care not to allow the grate to fall in catch basin.
- Note details of discharge. Estimate flow rate or depth of flow and other details.
- Decontaminate the dipper. Rinse in effluent three times. Do not touch dipper to sides or bottom of pipe, manhole, or catch basin. See decontamination procedures in this section.
- Insert dipper into effluent flow to collect sample. Be careful not disturb sediment/debris in the outfall pipe. Stay safely back from any ledges, bluffs, or drops.
- Fill and rinse the sampler with stormwater first, and then fill again with the stormwater sample.
- Fill bottles to about the neck, but do not overfill. This will prevent loss of any preservative that might have been added by the laboratory (e.g. some labs may have added a few ml of acid to the bottle). Take care when removing cap as moisture in the air can react with the acid. This is especially true with nitric acid, which is used to preserve metals samples. Hold the bottle away from the body when opening. Keep cap oriented down to prevent pollutants from settling in the cap.

- If necessary add nitric acid until the pH of the sample falls below 2.
- A pH indicator is useful but not required. It would be used to ensure the pH of the sample is at or below required levels for adequate preservation.
- For metals, an interim container is ok provided it is clean.
- Note the time when sample was collected on Form F-1.
- Note weather conditions on Form F-1.
- Note: Multiple bottles can still be one sample.
- Fill out sample container label and apply to the container. Apply custody seal if provided by the laboratory.
- Store the container in the prepared cooler.
- Complete the CoC. Line out and initial any mistake. Make sure to note the required analytical method and the digestion method (total recoverable). Sign and date the CoC when sampling is complete.
- Seal the completed CoC in a zip lock bag, and store in the cooler with the sample bottles.
- Transport the cooler to contractor's laboratory within required holding time.
- Complete Form F-1.
- Proceed to next outfall.

Decontamination Procedures:

- Examine the dipper for discoloration or residue prior to use.
- If there are signs of contamination, clean using detergent and water. Make sure the last rinse is with deionized water.

Post Sampling:

- Complete Form F-1, container labels and CoC. Line out and initial any mistake. Make sure to note the required analytical method and the digestion method (total recoverable). Sign and date forms when sampling is complete.
- Make sure to ask for the necessary analysis on the CoC.
- Pack samples in cooler. Use cube ice if available but blue ice is ok. If using cube ice place it inside zip lock bags. May want to place each bottle inside a zip-lock bag. Place CoC in zip lock bag and place inside cooler.
- Transport the cooler to contractor laboratory within the required holding time. For the majority of metals it is six months, but some parameters are shorter so need to be careful not to exceed a holding time
- Sign off on CoC and make sure lab "takes" custody.
- Get a copy of the CoC.

APPENDIX I: TRAINING GUIDANCE AND RECORDS

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Training Guidance and Records

NAVMAG Indian Island will train employees that work in areas where industrial materials or activities are exposed to stormwater, and employees that are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance people) as necessary.

Annual training is required. Training can be conducted in-person at the annual NAVMAG Indian Island Environmental Awareness Training. Other training may be conducted for specific areas or work processes of concern as needed. Other training may be formal or relayed informally through meetings, phone calls, e-mails, posters, pamphlets, or intranet.

Training must include the following three areas:

1. Background. Provide the very basics of stormwater runoff. This aspect of the training should be brief. Most personnel will have some existing knowledge in this area. The intent is to develop that knowledge to the point where it is in a coherent framework setting the stage for follow-on training. Strive to answer questions such as:

- What is stormwater?
- What types of pollutants can stormwater runoff pick up? Explain how pollution can be entrained in stormwater. Make it as much as possible specific to NAVMAG Indian Island operations.
- What are the potential impacts of those potential pollutants?
- How does stormwater runoff from NAVMAG Indian Island get to surface waters and what if any treatment is provided on the way? Many people do not realize that generally little if any treatment is provided.

2. Regulation. Again this aspect of the training should be brief. The main intent is to relay that there is an existing regulatory framework that NAVMAG Indian Island is obligated to comply. Relay the following points as a minimum:

- NAVMAG Indian Island has a Clean Water Act permit authorizing discharge of stormwater.
- The permit requires NAVMAG Indian Island to:
    - Identify potential sources of pollution, which may reasonably be expected to affect the quality of stormwater discharges.
    - Describe and ensure the implementation of practices to reduce the pollutants in stormwater.
- Note that NAVMAG Indian Island has done this through development and implementation of a SWPPP, and this training is one required component of the Plan. Bring along a few copies of the SWPPP on CD or hardcopy in case anyone wants to take a look.
- Note that quarterly inspections are required and who will conduct the inspections.
- Describe the corrective action process and the reporting requirements to the EPA.
- Comment that NAVMAG Indian Island is required to collect and analyze stormwater samples. If results are too high additional restriction may need to be implemented.

3. Required Actions. Relay that the SWPPP requires NAVMAG Indian Island to develop and implement control measures/best management practices (BMPs) to minimize stormwater pollution. Relay the following:

- Go through the core BMPs. Be prepared to spend time on each BMP to fully answer questions on how each BMP specifically applies to each particular type of work. Be prepared for and volunteer to provide follow-up. For example, someone may be unsure if a particular work practice is acceptable or not. Volunteer to stop by and witness the practice to help with a determination.
- Go through the Sector-specific BMPs. It may be prudent to consolidate similar BMPs. It may also be worthwhile to clarify which BMPs relate to which locations/work practices.
- Facility-specific BMPs may not need to be relayed during the training depending on who attends the training and the allotted time. For instance BMP F-1, Oil Containment Boom pressure washing, only applies to a very limited number of personnel and can be briefed separately.
- Other facility-specific BMPs, including F-2, F-4, F-5, F-7, F-8, and all the S BMPs, will be briefed to facility specific personnel.
- Training can be augmented in the form of posters, pamphlets, e-mails, internal newsletters, intranet, and attendance at other environmental/safety related meetings.

Be sure to distribute a sign-in roster or otherwise document attendance for all training. Maintain a copy of the roster or other record in this Appendix. Place copies of SWPPP related training materials in this Appendix. Also be sure to document "other" training. This could include newsletter articles, e-mails, pictures, and slides/handouts. Form I-1 may be used to document training.

Form I-1: SWPPP Training Roster/Record

Date: _____ Type of Training:

_____

Instructor Name: _____ Instructor Signature:

Name (Printed)	Signature (Initial)	Work Center or Command	E-mail Contact

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APPENDIX J: NON-STORMWATER DISCHARGE ASSESSMENT

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Non-Stormwater Discharge Assessment Report
Naval Magazine Indian Island, WA

Conducted by: [redacted]

Assessment Date: 14 August 2007

Purpose: The assessment was completed as a component of updating the Stormwater Pollution Prevention Plan (SWPPP) for Naval Magazine. The purpose of the assessment was twofold.

Determine the disposition of rinse water generated at the [redacted] rinse area.

Find [redacted] which drawn to the northeast of [redacted]

Discussion: The roofed area behind [redacted] west side) is used by [redacted] to park vessels on trailers and rinse off salt water after in-water use. A concrete mix/batch plant formerly occupied this area and the drainage system was likely built to serve the plant. Rinse water enters an approximate 4 ft. by 8 ft. grated sump. The sump may be baffled to enhance settling. Rinse water exits the sump via a concrete trench with diamond plate steel covers. The trench drains into perhaps another settling sump. The plate over this sump is too heavy to manually move so it could not be inspected. We looked through facility drawings but they did not contain any applicable information. We added red dye and water to the grated sump to try to determine the ultimate disposition of the rinse water but we were unsuccessful. The water level in the grated sump was a few inches below the outlet so it took some time for the dyed water to outflow. In addition, the trench had a layer of sand/pebbles, which would have retarded flow. For the purposes of the Stormwater Pollution Prevention Plan (SWPPP) we will presume that the rinse area discharges into the storm sewer or directly to surface water.

Figure J-1: [redacted] Area

We added red dye and water to the catch basin adjacent [redacted], which, per the drawings, discharges to [redacted]. The purpose of this effort was to locate the outfall pipe so samples could be collected in the future. It appeared that the majority of stormwater from the outfall is from the roof of [redacted] not from surrounding pavement. The outfall was not found. The dyed water may show up during a future rainfall event. It is likely that the outfall pipe is behind the shoreline armoring system. The SWPPP will continue to note this outfall as "not found."

[redacted]

Naval Facilities Engineering Command Northwest

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APPENDIX K: RESERVED FOR FUTURE USE IF NECESSARY

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APPENDIX L: REPORTING REQUIREMENTS SUMMARY INCLUDING ANNUAL EPA REPORT, DISCHARGE MONITORING REPORTS, AND RELATED DOCUMENTATION

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Table L-1 shows the location where each type of record/report is kept.

Table L-1: Summary of SWPPP Reporting and Recordkeeping Requirements

Reporting/ Recording Requirement	Requirement Description	Record Location
Stormwater Analytical Monitoring Reports	SWPPP Section 5	SWPPP, Appendix L and or Share Drive
Spill Reports	SWPPP Section 3.2	NAVMAG Indian Island Environmental Office
Visual Assessment Reports	SWPPP Section 6.2.1	SWPPP, Appendix L and or Share Drive
Quarterly Routine Inspection Reports	SWPPP Section 6.2.2	SWPPP, Appendix L and or Share Drive
Maintenance Records: Stormwater conveyance system Oil/water separators	MSGP 8N.3.2.5 and 8Q.3.3 and Appendix B, B.10	Public Works Office Files and BOSC Files
Employee Training Records	MSGP 2.1.2.9 and Sector specific BMPs	SWPPP, Appendix L, and or Share Drive
Annual Compliance Site Inspection Reports/Annual Report to EPA	SWPPP Section 6.2.3	Attached DVD, and or Share Drive

Form L-1 is provided to help organize and track requirements and to keep records as required by the MSGP. Recommend that one of these forms be created for each reporting year and that all the records and reports associated with that reporting year be filed "behind" the form.

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Form L-1: Sampling, Inspection, and Reporting Requirements Summary and Tracking

Facility: _____

Reporting Year/Date Span: _____

Event / Requirement	Reporting Period	Rain Event Dependent?	"DMR" Report to EPA	Annual Report to EPA MSGP, Appendix I[4]	Annual Event Completion Date	1st Quarter Event Completion Date	2nd Quarter Event Completion Date	3rd Quarter Event Completion Date	4th Quarter Event Completion Date	Date Annual Report Submitted[3]
Routine Inspection	Quarterly	No/Yes[5]	No	No[2]						
Comprehensive Site Inspection	Annual	No	No	Yes						
Visual Assessment	Quarterly	Yes	No	No[2]						
Benchmark Monitoring	Quarterly	Yes	Yes[1]	No[2]						
Quarterly DMR Sent	Quarterly	No	Yes[1]	No[2]						

Notes:

1. All monitoring data must be submitted to EPA using EPA's online netDMR system (www.epa.gov/netDMR) no later than 30 days (email date or postmark date) receipt of laboratory results for all monitored outfalls for the reporting period.
2. Although the Annual Report to EPA comes as a result of the CSI, Benchmark and Impaired Monitoring data will be reviewed as part of the CSI. Findings from the monitoring data will be reported in Section B of the Annual Report. Visual assessment findings and findings from routine quarterly inspections will be included in Section D of the Annual Report that describes corrective actions.
3. Submit an annual report to EPA that includes the findings from the comprehensive site inspection and all required corrective action documentation If corrective action is not yet completed at the time of submission of this annual report, describe the status of any outstanding corrective action(s). EPA strongly recommends submitting this report using the Annual Reporting Form provided as MSGP, Appendix I. Submit the annual report to EPA within 45 days (postmark date) after conducting the CSI.
4. The permit requires this report be signed by an "authorized representative" of the "principal executive officer" of a federal facility, which includes an individual "having overall responsibility for environmental matters." An individual is considered "duly authorized" only if the "principal executive officer" of the federal facility has documented the delegation in writing with the EPA Regional Administrator.
5. One quarterly inspection per year must occur during a rain event.

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Additional Reporting Requirements:

- In addition to the reporting requirements outlined in Form L-1, facilities are also subject to the standard permit reporting provisions of MSGP Part 7.4 and MSGP, Appendix B, Subsection 12.
- Where applicable, submit the following reports to the appropriate EPA Regional Office listed in MSGP Part 7.6.2:
  - 24-hour reporting (see MSGP, Appendix B, Subsection 12.F) – Report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time noncompliance is identified;
  - 5-day follow-up reporting to the 24 hour reporting (see MSGP, Appendix B, Subsection 12.F) – A written submission must also be provided within five days of the time circumstances are identified;
  - Reportable quantity spills (see MSGP Part 2.1.2.4) – Provide notification, as required under MSGP Part 2.1.2.4, upon gaining knowledge of a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity.
- Where applicable, submit the following reports to EPA Headquarters at the appropriate address in MSGP Part 7.6.1:
  - Planned changes (see MSGP, Appendix B, Subsection 12.A) – Give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility that qualify the facility as a new source or that could significantly change the nature or significantly increase the quantity of pollutants discharged;
  - Anticipated noncompliance (see MSGP, Appendix B, Subsection 12.B) –Give advance notice to EPA of any planned changes in the permitted facility or activity which is expected to result in noncompliance with permit requirements;
  - Transfer of ownership and/or operation –Submit a complete and accurate NOI in accordance with the requirements of MSGP, Appendix G and by the deadlines specified in MSGP Table 1-2;
  - Compliance schedules (see MSGP, Appendix B, Subsection 12.F) – Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date;
  - Other noncompliance (see MSGP, Appendix B, Subsection 12.G) – Report all instances of noncompliance not reported in the monitoring report (pursuant to MSGP Part 7.1), compliance schedule report, or 24-hour report at the time monitoring reports are submitted; and
  - Other information (see MSGP, Appendix B, Subsection 12.H) –Promptly submit facts or information upon becoming aware of a failure to submit relevant facts in an NOI or that incorrect information was submitted in an NOI or in any report.

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APPENDIX M: CORRECTIVE ACTION DOCUMENTATION

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Form M-1: Corrective Action Tracking for Annual Report

Reporting Period: _____
Note: The numbers indicated below the column titles refer to numbers in the MSGP, Appendix I Annual Reporting Form part D, Corrective Actions.

Corrective Action #	New or Update	Bldg #	Condition Triggering Corrective Action Review/Problem to Be Corrected	Date Identified	How the Problem was Identified	Description of Corrective Action	SWPPP Mod Required	Responsible Party	Date Initiated	Expected Date of Completion	Date Completed	Status, Remaining Steps
(D.1.)	(D.2.)		(D.3. & D.4.)	(D.5.)	(D.6.)	(D.7.)	(D.8.)		(D.9.)	(D.10.)	(D.10.)	(D.11.)

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Form M-2: NAVMAG Indian Island Corrective Action Table

Date: Reporting Period:

Note: The numbers indicated below the column titles refer to numbers in the MSGP, Appendix I Annual Reporting Form part D, Corrective Actions.

Bldg #	Issue	New or Update	Date Identified	Date Action Initiated	How Problem Was Identified	Description of Corrective Action	Responsible Party	SWPPP Update Required	Status/ Completion Date
	(D.3. & D.4.)	(D.2.)	(D.5.)	(D.9.)	(D.6.)	(D.7.)		(D.8.)	(D.10. & D.11.

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APPENDIX N: SIGNIFICANT MATERIALS

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APPENDIX O: RECORD OF SPILLS

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Table O-1 shows the locations of spills and leaks for the past 3 years. In accordance with the SWPPP, reportable spills include all spills that involve a release to surface water.

Table O-1: Spills and Releases

	Spilled			Description/Cause
6/1/2012	Hydraulic Fluid	5 gallons	[redacted]	Non-reportable. At 1125, USCG Cutter Melon.
3/20/2013	Hydraulic Fluid	1 gallon	[redacted]	Non-reportable. Hydraulic hose burst during cargo on-load operations.
9/30/2014	N/A	N/A	N/A	No reportable spills occurred in FY2014.

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APPENDIX P: MAINTENANCE DOCUMENTS

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Table P-1: Facility Maintenance Documentation

Bldg. Area, or Outfall #	Sector	Brief Description	Condition Around Outfall or Building	Previously Unidentified Discharges of Pollutants from Stormwater or Non- stormwater	Evidence or Potential for Pollutants Entering the Drainage System or Receiving Water	Control Measures in Need of Maintenance or Repair	Control Measures Failed and Need Replacement	Additional Control Measures Needed	SWPPP Revision Required	Incidents of Non- compliance with Control Measures	Describe Observations and any Problems
	{C.1.}		{B.5.}	{B.3.}	{B.5.}	{C.2.}	{C.3.}	{C.4.}			
[redacted]	P	[redacted]	Unacceptable Housekeeping	No	Yes	No	No	No	No	Yes	Materials stored outside without cover.
[redacted]	P	[redacted]	Acceptable Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Previous corrective actions included removal/recycling of wastes and moving useable materials inside for storage. Acceptable conditions were observed during the CSI.

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		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	Q	[redacted]	Acceptable Good housekeeping	No	No	No	No	No	No	No	Port Ops staff states that the mud track-out problem has been resolved with the addition of gravel.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Issues associated with material and equipment storage identified in previous CSIs have been resolved. Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Fair	No	Yes	No	No	No	No	No	Acceptable conditions were observed during the CSI.

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		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
			Housekeeping								
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Construction is complete; The paved area now drains to trench drains at fuel station, which flows to the oil water separator.
[redacted]	P	[redacted]	Acceptable Fair Housekeeping	No	No	No	No	No	No	No	Signs regarding proper use of the wash rack and reminders to clean large debris from area should be posted. A hose holder should be mounted on the building wall so that the hose is not stored on the ground. Recommend placing hose aboveground and installing a check valve on the hose.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	A hose from [redacted] is used in this area for rinsing the pier and boats. Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Recycling bins from [redacted] were relocated to this area. At present, 2 large recycling bins are located here and are in good repair.

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		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	A spill kit is located in the truck holding area, and a retention pond collects stormwater runoff from the area. Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.

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	(C.1.)		(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
	Q		Acceptable Good Housekeeping	No	No	No	No	No	No	No	The recycling bins and solid waste bins have been relocated to the truck storage area at [redacted]. Acceptable conditions were observed during the CSI.
	Q		Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
	Q		Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
	P		Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
	P		Acceptable Good	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.

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	(C.1.)		(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
			Housekeeping								
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Unacceptable Housekeeping	No	Yes	Yes	No	No	No	Yes	A new bio-retention stormwater treatment system was constructed in Feb 2014. Runoff primarily sheet flows to the pond and infiltrates. Any overflow from the pond drains to the adjacent beach and infiltrates. Visual inspections occurred from Feb through May 2014 and no runoff was observed flowing to Pt. Townsend Bay.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	All recycle bins with lids were recently placed in the area. Acceptable conditions were observed during the CSI.

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		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	P	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]	P Q	[redacted]	Acceptable Good Housekeeping	No	No	No	No	No	No	No	Acceptable conditions were observed during the CSI.
[redacted]		[redacted]	Acceptable Fair Housekeeping	No	Yes	No	No	No	No	No	The exposed stockpile materials have been discussed with the installation environmental staff. It was determined that no cover was necessary. However, any eroding material will flow toward the catch basin located on the road edge in the middle of the dirt road access. The location of this catch basin creates a potential for sedimentation in the storm drain.
[redacted]	P	[redacted]	Acceptable Fair Housekeeping	No	Yes	No	No	No	No	No	Acceptable conditions were observed during the CSI.

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		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	N/A	[redacted]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	Sampling results met benchmark requirements in 2014. Samples no longer required.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Fair	No	Yes	No	No	No	No	No	Metal pipe has significant rusting.
[redacted]	Q	[redacted]	Fair	No	Yes	No	No	No	No	No	Metal pipe has significant rusting.
[redacted]	Q	[redacted]	Good	No	No	No	No	Yes	Yes	Yes	A bio-filter was recently installed in catch basin in effort to meet benchmark requirements (see Table M-1b for details) for discharge to bay.

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		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	Benchmark requirements were met Sept. 2013. See Table M-1 for details.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	Yes	No	No	No	No	Catch basin could not be found. Maintenance in grassy area is needed to find and evaluate condition of inlet.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	P	[redacted]	Good	No	No	No	No	No	No	No	There were no issues.
[redacted]	Q	[redacted]	Good	No	No	Yes	No	No	No	No	Bio-retention pond has overgrown vegetation and should be maintained for optimal infiltration.
[redacted]	P	[redacted]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
[redacted]	P	[redacted]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
[redacted]	P	[redacted]	Erosion	No	No	No	No	No	No	No	The shoreline to the south of the reinforced quay wall next to [redacted] is experiencing significant erosion due to wind and wave action. The cliff behind [redacted] is experiencing significant erosion.

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		(C.1.)	(B.5.)	(B.3.)	(B.5.)	(C.2.)	(C.3.)	(C.4.)			
[redacted]		[redacted]									The waterfall at the cliff has cut back 20 feet to the east.
Catch Basins	P Q	*The catch basins in the industrial areas have been inspected.*	Good	No	No	No	No	No	No	No	*There were no issues.*

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