Stormwater Pollution Prevention Plan

For

West Bay Sidewalk

Prepared For
City of Olympia - Water Resources
601 4th Avenue SE
Olympia, WA 98507
360-709-2732

Owner
City of Olympia - Transportation
601 4th Avenue SE

Operator/Contractor
TBD

Project Site Location
Olympia, Thurston County, Washington
1115 to 1800 West Bay Drive

Certified Erosion and Sediment Control Lead
TBD
City of Olympia Project Inspector

SWPPP Prepared By
City of Olympia – Technical Services
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90% SWPPP Preparation Date
April 2014

Approximate Project Construction Dates
Sidewalk and Access Ramps Summer of 2014

Contents

1.0 Introduction

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared as part of the stormwater permit requirements for the West Bay Sidewalk construction project in Olympia, Washington.

This project site is approximately 1.6 acres in size, and is located in Olympia, Washington on the west side of Budd Inlet. Please see the vicinity map (Exhibit 1) provided in Appendix A.

The project will improve West Bay Drive from Brawne Avenue NW to Smyth Landing, a combined office space/condominium building located at 1801 West Bay Drive NW. The design will accommodate northbound and southbound 11-foot vehicle lanes and future 5-foot bicycle lanes. New sidewalk, curb, gutter, ADA ramps, and planter strips will be constructed along the west side of West Bay Drive from 1115 West Bay Drive to 1801 West Bay Drive (Smyth Landing). Retaining walls will also be constructed where necessary to keep the project within right-of-way. Stormwater collection and conveyance will be updated to accommodate the new roadway features.

Post development, the stormwater will be collected from the west side of the street along a curb, and be directed to Budd Inlet via a closed conveyance system. Please see the 90% plans for the proposed stormwater conveyance.

The project adds approximately 12,000 square feet (S.F.) of new impervious surface and contributes to 5 different outfalls to Budd Inlet along West Bay Drive..

Construction activities will include clearing and grubbing for widened areas, excavation, grading, relocation of onsite utilities, asphalt pavement, concrete sidewalk and retaining walls, and landscaping. The purpose of this SWPPP is to describe the proposed construction activities and all temporary and permanent erosion and sediment control (TESC) measures, pollution prevention measures, inspection/monitoring activities, and recordkeeping that will be implemented during the proposed construction project. The objectives of the SWPPP are to:

1. Implement Best Management Practices (BMPs) to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.

2. Prevent violations of surface water quality, ground water quality, or sediment management standards.

3. Prevent, during the construction phase, adverse water quality impacts including impacts on beneficial uses of the receiving water by controlling peak flow rates and volumes of stormwater runoff at the Permittee's outfalls and downstream of the outfalls.

This SWPPP was prepared based on the requirements set forth in the Stormwater Management Manual for Western Washington (SWMMWW 2005) and the City of Olympia Stormwater Manual (2009). The report is divided into seven main sections with several appendices that include stormwater related reference materials. The topics presented in each of the main section are:

- Section 1 – INTRODUCTION. This section provides a summary description of the project, and the organization of the SWPPP document.
- Section 2 – SITE DESCRIPTION. This section provides a detailed description of the existing site conditions, proposed construction activities, and calculated stormwater flow rates for existing conditions and post–construction conditions.
- Section 3 – CONSTRUCTION BMPs. This section provides a detailed description of the BMPs to be implemented based on the 12 required elements of the SWPPP (SWMMEW 2004).
- Section 4 – CONSTRUCTION PHASING AND BMP IMPLEMENTATION. This section provides a description of the timing of the BMP implementation in relation to the project schedule.
- Section 5 – POLLUTION PREVENTION TEAM. This section identifies the appropriate contact names (emergency and non-emergency), monitoring personnel, and the onsite temporary erosion and sedimentation control inspector
- Section 6 – INSPECTION AND MONITORING. This section provides a description of the inspection and monitoring requirements such as the parameters of concern to be monitored, sample locations, sample frequencies, and sampling methods for all stormwater discharge locations from the site.
- Section 7 – RECORDKEEPING. This section describes the requirements for documentation of the BMP implementation, site inspections, monitoring results, and changes to the implementation of certain BMPs due to site factors experienced during construction.

Supporting documentation and standard forms are provided in the following Appendices:

Appendix A – Site plans
Appendix B – Construction BMPs
Appendix C – Alternative Construction BMP list
Appendix D – General Permit (waiting on comments from DOE for this project)
Appendix E – Site Log and Inspection Forms

2.0 Site Description

2.1 Existing Conditions

This project site is approximately 1.6 acres in size, and is located in Olympia, Washington on the west side of Budd Inlet. Please see the vicinity map (Exhibit 1) provided in Appendix A.

The project is on the west side of West Bay Drive from Brawne Avenue NW to Smyth Landing, a combined office space/condominium building located at 1801 West Bay Drive NW. The design will accommodate northbound and southbound 11-foot vehicle lanes and future 5-foot bicycle lanes. New sidewalk, curb, gutter, ADA ramps, and planter strips will be constructed along the west side of West Bay Drive from 1115 West Bay Drive to 1801 West Bay Drive (Smyth Landing). Retaining walls will also be constructed where necessary to keep the project within right-of-way. Stormwater collection and conveyance will be updated to accommodate the new roadway features.

Post development, the stormwater will be collected from the west side of the street along a curb, and be directed to Budd Inlet via a closed conveyance system to 5 different outfalls to Budd Inlet along West Bay Drive. Please see the 90% plans for the proposed stormwater runoff converyance.

Per the NRCS web soil survey website, soils at the project site are primarily Xerorthents, 0 to 5% slopes, which are described as tidal flats, with a parent material of "sandy and loamy cut and fill material". Other soil types shown at the site all have low (0 -0.06 in/hr) infiltration rates (Ksat) from their most limiting layer. The depth to the restrictive feature is 20 to 72 inches, and the depth to the water table is more than 80 inches. (USDA, 2011)

A geotechnical report specific to the project corridor was drafted in 2010 by Landau Associates. Please see this geotechnical report, provided in the 90% Design Conceptual Hydraulic Report

There will be medium erosion risk when the wire matting (90' x 70') is soil nailed on the slope east of the house at 1325 West Bay Drive. Geotech investigation showed that the slope in this area could sluff off if not shored. The work should only commence in good weather.

2.2 Proposed Construction Activities

The proposed project is on the west side of West Bay Drive from Brawne Avenue NW to Smyth Landing, a combined office space/condominium building located at 1801 West Bay Drive NW and encompasses 1.6 acres. Approximately 0.25 acres will become new impervious concrete sidewalk and over half of the 1.6 acres will be revegetated slopes and planter strips.

Project scope provides for the improvement of approximately 1600 feet of major collector roadway to accommodate pedestrian sidewalk and future bicycle lane improvements. Project elements include construction of the following: 6 inch concrete curb and sidewalk at existing edge of pavement, four each 2-4' high retaining walls, one matted and soil nailed slope, remove and repave five feet wide HMA strip along the curb for future bike lane, stormwater conveyance systems, conduit for future illumination system, landscaping, and channelization.

Construction activities will include site preparation, TESC installation, demolition of existing improvements within the construct limits, clearing and grubbing, road widening, excavation, backfill, pipe installation, concrete flatwork, asphalt paving, and site restoration. The following list is proposed construction activities to be completed on this project (not necessarily in chronologicial order):

- Clear and grub project limits,
- Install storm conveyance within pond limits,
- Import material and embankment compaction to bike lane,
- Install lighting conduit,
- Soil nail matting on slope east of 1325.
- Construct curb, sidewalk and retaining walls on the west side only, and pave 5' bike lane and four driveways (far enough back to catch new grades caused by lowering driveway entrances) with asphalt,
- Plant trees and shrubs in planter strips,
- Hydroseed all areas not planted or mulched,
- Channelization,

3.0 Construction Stormwater BMPs

3.1 The 12 BMP Elements

3.1.1 Element #1 – Mark Clearing Limits

To protect adjacent properties and to reduce the area of soil exposed to construction, the limits of construction will be clearly marked before land-disturbing activities begin. Trees that are to be preserved, as well as all sensitive areas and their buffers, shall be clearly delineated, both in the field and on the plans. In general, natural vegetation and native topsoil shall be retained in an undisturbed state to the maximum extent possible. The BMPs relevant to marking the clearing limits that will be applied for this project include:

- BMP C101: Preserving Natural Vegetation
- BMP C103: High Visibility Plastic Fence

3.1.2 Element #2 – Establish Construction Access

Construction access or activities occurring on unpaved areas shall be minimized, yet where necessary, access points shall be stabilized to minimize the tracking of sediment onto public roads, and wheel washing, street sweeping, and street cleaning shall be employed to prevent sediment from entering state waters. All wash wastewater shall be controlled on site. The specific BMPs related to establishing construction access that will be used on this project include:

- BMP C105: Stabilized Construction Entrance

3.1.3 Element #3 – Control Flow Rates

In order to protect the properties and waterways downstream of the project site, stormwater discharges from the site will be controlled. The specific BMPs for flow control that shall be used on this project include:

In general, discharge rates of stormwater from the site will be controlled where increases in impervious area or soil compaction during construction could lead to downstream erosion, or where necessary to meet local agency stormwater discharge requirements.

3.1.4 Element #4 – Install Sediment Controls

All stormwater runoff from disturbed areas shall pass through an appropriate sediment removal BMP before leaving the construction site or prior to being discharged to an infiltration facility. The specific BMPs to be used for controlling sediment on this project include:

- Specified BMP – Filter socks (BMP 220: Storm Drain Inlet Protection

In addition, sediment will be removed from paved areas in and adjacent to construction work areas manually or using mechanical sweepers daily to minimize tracking of sediments on vehicle

3.1.5 Element #5 – Stabilize Soils

Exposed and unworked soils shall be stabilized with the application of effective BMPs to prevent erosion throughout the life of the project. The specific BMPs for soil stabilization that shall be used on this project include:

- BMP C120: Temporary and Permanent Seeding
- BMP C124: Sodding
- BMP C125: Topsoiling
- BMP C140: Dust Control

In general, cut and fill slopes will be stabilized as soon as possible and soil stockpiles will be temporarily covered with plastic sheeting. All stockpiled soils shall be stabilized from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.

3.1.6 Element #6 – Protect Slopes

All cut and fill slopes will be designed, constructed, and protected in a manner that minimizes erosion. The following specific BMPs will be used to protect slopes for this project:

- BMP C120: Temporary and Permanent Seeding

3.1.7 Element #7 – Protect Drain Inlets

All storm drain inlets and culverts made operable during construction shall be protected to prevent unfiltered or untreated water from entering the drainage conveyance system. However, the first priority is to keep all access roads clean of sediment and keep street wash water separate from entering storm drains until treatment can be provided. Storm Drain Inlet Protection (BMP C220) will be implemented for all drainage inlets and culverts that could potentially be impacted by sediment-laden runoff on and near the project site. The following inlet protection measures will be applied on this project:

- BMP C220: Storm Drain Inlet Protection

3.1.8 Element #8 – Stabilize Channels and Outlets

Where site runoff is to be conveyed in channels, or discharged to a stream or some other natural drainage point, efforts will be taken to prevent downstream erosion. The specific BMPs for channel and outlet stabilization that shall be used on this project include:

No BMPs to be implemented. There will be no stormwater discharged to a channel.

3.1.9 Element #9 – Control Pollutants

All pollutants, including waste materials and demolition debris, that occur onsite shall be handled and disposed of in a manner that does not cause contamination of stormwater. Good housekeeping and preventative measures will be taken to ensure that the site will be kept clean, well organized, and free of debris. If required, BMPs to be implemented to control specific sources of pollutants are discussed below.

- BMP C151: Concrete Handling
- BMP C152: Sawcutting and Surface Pollution Prevention

The project requires a separate Spill Prevention Control and Countermeasure Plan to be submitted and followed by the Contractor. The plan will address specific contaminants that may possibly use or encountered on the project and construction equipment.

3.1.10 Element #10 – Control Dewatering

There is no dewatering expected as part of this construction project.

3.1.11 Element #11 – Maintain BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. Maintenance and repair shall be conducted in accordance with each particular BMPs specifications (attached). Visual monitoring of the BMPs will be conducted at least once every calendar week and within 24 hours of any stormwater or non-stormwater discharge from the site. If the site becomes inactive, and is temporarily stabilized, the inspection frequency will be reduced to once every month.

All temporary erosion and sediment control BMPs shall be removed within 30 days after the final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on site. Disturbed soil resulting from removal of BMPs or vegetation shall be permanently stabilized.

3.1.12 Element #12 – Manage the Project

Erosion and sediment control BMPs for this project have been designed based on the following principles:

- Design the project to fit the existing topography, soils, and drainage patterns.
- Emphasize erosion control rather than sediment control.
- Minimize the extent and duration of the area exposed.
- Keep runoff velocities low.
- Retain sediment on site.
- Thoroughly monitor site and maintain all ESC measures.
- Schedule major earthwork during the dry season.

In addition, project management will incorporate the key components listed below:

Phasing of Construction

- The construction project is being phased to the extent practicable in order to prevent soil erosion, and, to the maximum extent possible, the transport of sediment from the site during construction.
- Revegetation of exposed areas and maintenance of that vegetation shall be an integral part of the clearing activities during each phase of construction, per the Scheduling BMP (C162).

Seasonal Work Limitations

- From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if shown to the satisfaction of the local permitting authority that silt-laden runoff will be prevented from leaving the site through a combination of the following:
  - Site conditions including existing vegetative coverage, slope, soil type, and proximity to receiving waters; and
  - Limitations on activities and the extent of disturbed areas; and
  - Proposed erosion and sediment control measures.
- Based on the information provided and/or local weather conditions, the local permitting authority may expand or restrict the seasonal limitation on site disturbance.

- The following activities are exempt from the seasonal clearing and grading limitations:

  - Routine maintenance and necessary repair of erosion and sediment control BMPs;

  - Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil; and

  - Activities where there is 100 percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.

Coordination with Utilities and Other Jurisdictions

- Care has been taken to coordinate with utilities, other construction projects, and the local jurisdiction in preparing this SWPPP and scheduling the construction work.

Inspection and Monitoring

- All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. Site inspections shall be conducted by a person who is knowledgeable in the principles and practices of erosion and sediment control. This person has the necessary skills to:

  - Assess the site conditions and construction activities that could impact the quality of stormwater, and

  - Assess the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.

- A Certified Erosion and Sediment Control Lead shall be on-site or on-call at all times.

- Whenever inspection and/or monitoring reveals that the BMPs identified in this SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, appropriate BMPs or design changes shall be implemented as soon as possible.

Maintaining an Updated Construction SWPPP

- This SWPPP shall be retained on-site or within reasonable access to the site.
- The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the state.
- The SWPPP shall be modified if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The SWPPP shall be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP shall be completed within seven (7) days following the inspection.

4.0 Construction Phasing and BMP Implementation

The BMP implementation schedule will be driven by the construction schedule. The following provides a sequential list of the proposed construction schedule milestones and the corresponding BMP implementation schedule. The list contains key milestones such as wet season construction.

The BMP implementation schedule listed below is keyed to proposed phases of the construction project, and reflects differences in BMP installations and inspections that relate to wet season construction. The project site is located west of the Cascade Mountain Crest. As such, the dry season is considered to be from May 1 to September 30 and the wet season is considered to be from October 1 to April 30.

- Estimate of Construction start date: 07/15/2014
- Estimate of Construction finish date: 11/15/2014
- Mobilize equipment on site: 07/15/2014
- Mobilize and store all ESC and soil stabilization products (store materials on hand BMP C150): 07/15/2014
- Install ESC measures: 07/15/2014
- Begin clearing and grubbing: 07/15/2014
- Site grading begins: 07/20/2014
- Construct soil nailed slope 08/15/2014
- Construct sidewalk and retaining walls 08/15/2014
- Construct four partial driveways 09/15/2014
- Pave driveways and bike lane 10/30/2014
- Final landscaping and planting begins: 10/15/2014
- Road improvements construction complete: 10/30/2014
- Permanent erosion control measures (hydroseeding): 10/15/2014

5.0 Pollution Prevention Team

5.1 Roles and Responsibilities

The pollution prevention team consists of personnel responsible for implementation of the SWPPP, including the following:

- Certified Erosion and Sediment Control Lead (CESCL) – primary contractor contact, responsible for site inspections (BMPs, visual monitoring, sampling, etc.); to be called upon in case of failure of any ESC measures.
- Resident Engineer – For projects with engineered structures only (sediment ponds/traps, sand filters, etc.): site representative for the owner that is the project's supervising engineer responsible for inspections and issuing instructions and drawings to the contractor's site supervisor or representative
- Emergency Ecology Contact – individual to be contacted at Ecology in case of emergency.
- Emergency Owner Contact – individual that is the site owner or representative of the site owner to be contacted in the case of an emergency.
- Non-Emergency Ecology Contact – individual that is the site owner or representative of the site owner than can be contacted if required.
- Monitoring Personnel – personnel responsible for conducting water quality monitoring; for most sites this person is also the Certified Erosion and Sediment Control Lead.

5.2 Team Members

Names and contact information for those identified as members of the pollution prevention team are provided in the following table.

Certified Erosion and Sediment Control Lead (CESCL)	TBD	
Resident Engineer	Craig Andersen	(360) 753-8709
Emergency Owner Contact	TBD	
Emergency Ecology Contact	TBD	
Ecology Contact	DOE SW Region	(360) 407-6300
Non-Emergency for Ecology to Contact	Jim Rioux	(360) 753-8484
Non-Emergency for Ecology to Contact	Craig Andersen	(360) 753-8709
Monitoring Personnel	TBD	

6.0 Site Inspections and Monitoring

Monitoring includes visual inspection, monitoring for water quality parameters of concern and documentation of the inspection and monitoring findings in a site log book. A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements;
- Site inspections; and,
- Stormwater quality monitoring.

For convenience, the inspection form and water quality monitoring forms included in this SWPPP include the required information for the site log book. This SWPPP may function as the site log book if desired, or the forms may be separated and included in a separate site log book. However, if separated, the site log book but must be maintained on-site or within reasonable access to the site and be made available upon request to Ecology or the local jurisdiction.

6.1 Site Inspection

All BMPs will be inspected, maintained, and repaired as needed to assure continued performance of their intended function. The inspector will be a Certified Erosion and Sediment Control Lead (CESCL) per BMP C160. The name and contact information for the CESCL is provided in Section 5 of this SWPPP.

Site inspection will occur in all areas disturbed by construction activities and at all stormwater discharge points. Stormwater will be examined for the presence of suspended sediment, turbidity, discoloration, and oily sheen. The site inspector will evaluate and document the effectiveness of the installed BMPs and determine if it is necessary to repair or replace any of the BMPs to improve the quality of stormwater discharges. All maintenance and repairs will be documented in the site log book or forms provided in this document. All new BMPs or design changes will be documented in the SWPPP as soon as possible.

6.1.1 Site Inspection Frequency

Site inspections will be conducted at least once a week and within 24 hours following any discharge from the site. For sites with temporary stabilization measures, the site inspection frequency can be reduced to once every month.

6.1.2 Site Inspection Documentation

The site inspector will record each site inspection using the site log inspection forms provided in Appendix E. The site inspection log forms may be separated from this SWPPP document, but

will be maintained on-site or within reasonable access to the site and be made available upon request to Ecology or the local jurisdiction.

6.2 Stormwater Quality Monitoring

6.2.1 Turbidity

Monitoring requirements for the proposed project will include either turbidity or water transparency sampling to monitor site discharges for water quality compliance with the Construction Stormwater General Permit (Appendix D/pending approval from DOE). If discharge is present at either flow control structure, turbidity sampling and monitoring will be conducted at the point of compliance (dispersion trench or outfall) for each catchment area a minimum of once a week. If there is no discharge from a flow control structure, the attempt to sample will be recorded in the site log book and reported to Ecology in the monthly Discharge Monitoring Report (DMR) as "No Discharge". Samples will be analyzed for turbidity using the EPA 180.1 analytical method.

The key benchmark turbidity value is 25 nephelometric turbidity units (NTU) for the downstream receiving water body. If the 25 NTU benchmark is exceeded in any sample collected from CB5, the following steps will be conducted:

1. Ensure all BMPs specified in this SWPPP are installed and functioning as intended.

2. Assess whether additional BMPs should be implemented, and document modified BMPs in the SWPPP as necessary.

3. Sample discharge daily until the discharge is 25 NTU or lower.

If the turbidity exceeds 250 NTU at any time, the following steps will be conducted:

1. Notify Ecology by phone within 24 hours of analysis (see Section 5.0 of this SWPPP for contact information).

2. Continue sampling daily until the discharge is 25 NTU or lower and initiate additional treatment BMPs such as off-site treatment, infiltration, filtration and chemical treatment within 24 hours, and implement those additional treatment BMPs as soon as possible, but within a minimum of 7 days.

3. Describe inspection results and remedial actions taken in the site log book and in monthly discharge monitoring reports as described in Section 7.0 of this SWPPP.

7.0 Reporting and Recordkeeping

7.1 Recordkeeping

7.1.1 Site Log Book

A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements;
- Site inspections; and,
- Stormwater quality monitoring.

For convenience, the inspection form and water quality monitoring forms included in this SWPPP include the required information for the site log book.

7.1.2 Records Retention

Records of all monitoring information (site log book, inspection reports/checklists, etc.), this Stormwater Pollution Prevention Plan, and any other documentation of compliance with permit requirements will be retained during the life of the construction project and for a minimum of three years following the termination of permit coverage in accordance with permit condition S5.C.

7.1.3 Access to Plans and Records

The SWPPP, General Permit, Notice of Authorization letter, and Site Log Book will be retained on site or within reasonable access to the site and will be made immediately available upon request to Ecology or the local jurisdiction. A copy of this SWPPP will be provided to Ecology within 14 days of receipt of a written request for the SWPPP from Ecology. Any other information requested by Ecology will be submitted within a reasonable time. A copy of the SWPPP or access to the SWPPP will be provided to the public when requested in writing in accordance with permit condition S5.G.

7.1.4 Updating the SWPPP

In accordance with Conditions S3, S4.B, and S9.B.3 of the General Permit, this SWPPP will be modified if the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site or there has been a change in design, construction, operation, or maintenance at the site that has a significant effect on the discharge, or potential for discharge, of pollutants to the waters of the State. The SWPPP will be modified within seven days of

determination based on inspection(s) that additional or modified BMPs are necessary to correct problems identified, and an updated timeline for BMP implementation will be prepared.

7.2 Reporting

7.2.1 Discharge Monitoring Reports

If cumulative soil disturbance is 5 acres or larger: Discharge Monitoring Reports (DMRs) will be submitted to Ecology monthly. If there was no discharge during a given monitoring period, the Permittee shall submit the form as required, with the words "No discharge" entered in the place of monitoring results. The DMR due date is 15 days following the end of each month.

7.2.2 Notification of Noncompliance

If any of the terms and conditions of the permit are not met, and it causes a threat to human health or the environment, the following steps will be taken in accordance with permit section S5.F:

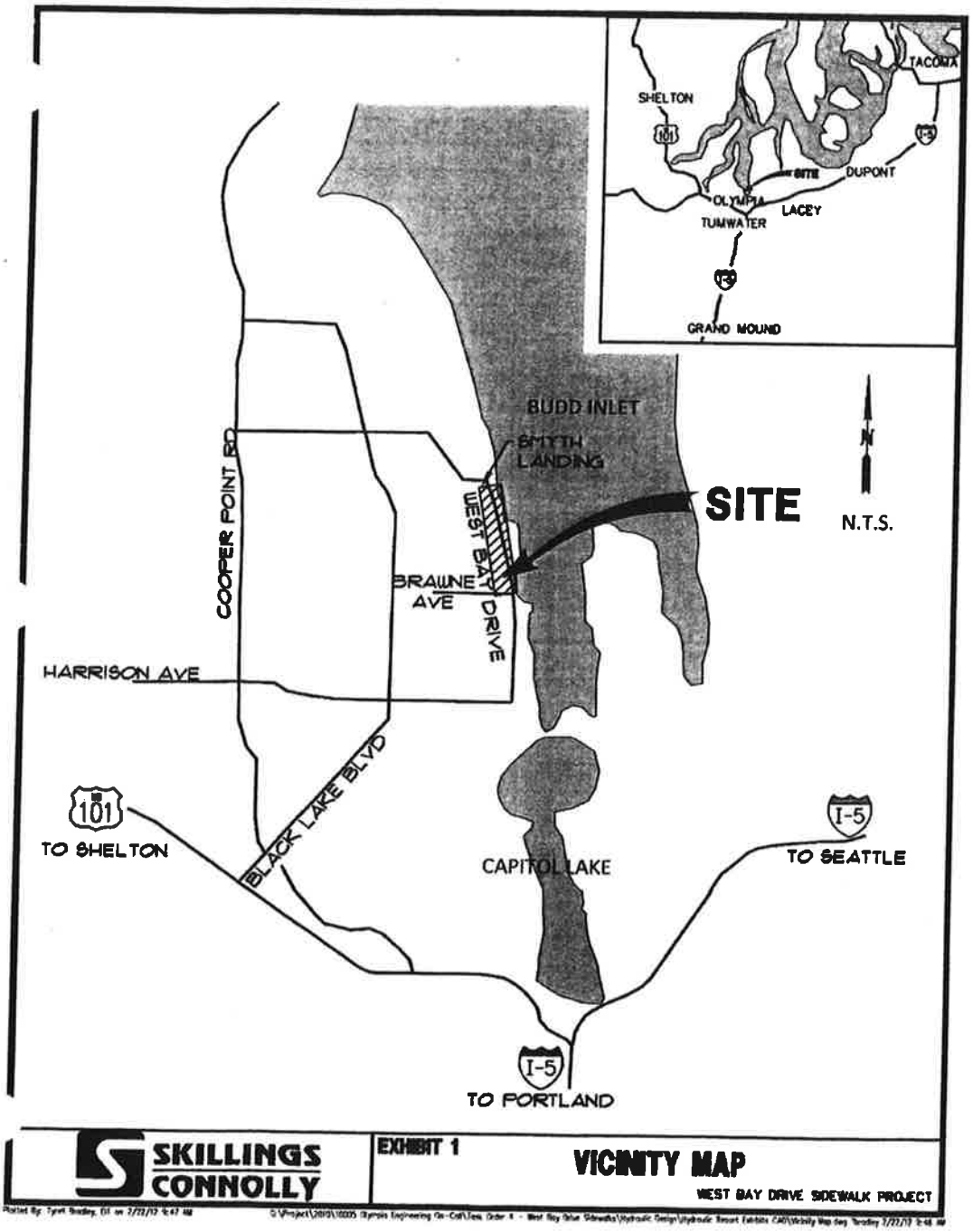
1. Ecology will be immediately notified of the failure to comply.

2. Immediate action will be taken to control the noncompliance issue and to correct the problem. If applicable, sampling and analysis of any noncompliance will be repeated immediately and the results submitted to Ecology within five (5) days of becoming aware of the violation.

3. A detailed written report describing the noncompliance will be submitted to Ecology within five (5) days, unless requested earlier by Ecology.

In accordance with permit condition S2.A, a complete application form will be submitted to Ecology and the appropriate local jurisdiction (if applicable) to be covered by the General Permit.

Appendix A – Site Plans



Appendix B – Construction BMPs

The following includes a list of BMPs for each of the 12 elements described in the main SWPPP text.

Element #1 - Mark Clearing Limits
BMP C102: Buffer Zones
BMP C103: High Visibility Plastic Fence

Element #2 - Establish Construction Access
BMP C105: Stabilized Construction Entrance

Element #3 - Control Flow Rates

Element #4 - Install Sediment Controls
BMP C220: Storm Drain inlet Protection

Element #5 - Stabilize Soils
BMP C120: Temporary and Permanent Seeding
BMP C124: Sodding
BMP C125: Topsoiling
BMP C140: Dust Control

Element #6 - Protect Slopes
BMP C120: Temporary and Permanent Seeding

Element #7 – Protect Drain Inlets
BMP C220: Storm Drain Inlet Protection

Element #8 - Stabilize Channels and Outlets

Element #9 –Control Pollutants
BMP C151: Concrete Handling
BMP C152: Sawcutting and Surface Pollution Prevention

Appendix C – Alternative BMPs

The following includes a list of possible alternative BMPs for each of the 12 elements not described in the main SWPPP text. This list can be referenced in the event a BMP for a specific element is not functioning as designed and an alternative BMP needs to be implemented.

Element #1 - Mark Clearing Limits
BMP C102: Buffer Zones
BMP C104: Stake and Wire Fence

Element #2 - Establish Construction Access
BMP C106: Wheel Wash
BMP C107: Construction Road/Parking Area Stabilization

Element #3 - Control Flow Rates
BMP C240: Sediment Trap
BMP C241: Temporary Sediment Pond

Element #4 - Install Sediment Controls
BMP C230: Straw Bale Barrier
BMP C230: Brush Barrier
BMP C230: Gravel Filter Berm
BMP C230: Silt Fence
BMP C230: Vegetated Strip
BMP C230: Straw Wattles
BMP C230: Sediment Trap
BMP C230: Temporary Sediment Pond
BMP C230: Construction Stormwater Chemical Treatment
BMP C230: Construction Stormwater Filtration

Element #5 - Stabilize Soils
BMP C121: Mulching
BMP C122: Nets and Blankets
BMP C123: Plastic Covering
BMP C126: Polyacrylamide for Soil Erosion Protection
BMP C130: Surface Roughening
BMP C131: Gradient Terraces
BMP C180: Small Project Construction Stormwater Pollution Prevention

Element #6 - Protect Slopes
BMP C130: Surface Roughening
BMP C131: Gradient Terraces

BMP C200: Interceptor Dike and Swale
BMP C201: Grass-Lined Channels
BMP C204: Pipe Slope Drains
BMP C205: Subsurface Drains
BMP C206: Level Spreader
BMP C207: Check Dams
BMP C208: Triangular Silt Dike

Element #8 - Stabilize Channels and Outlets
BMP C202: Channel Lining
BMP C204: Outlet Protection

Appendix D – General Permit

Pending approval from Washington State Department of Ecology

Appendix E – Site Inspection Forms (and Site Log)

The results of each inspection shall be summarized in an inspection report or checklist that is entered into or attached to the site log book. It is suggested that the inspection report or checklist be included in this appendix to keep monitoring and inspection information in one document, but this is optional. However, it is mandatory that this SWPPP and the site inspection forms be kept onsite at all times during construction, and that inspections be performed and documented as outlined below.

At a minimum, each inspection report or checklist shall include:

a. Inspection date/times

b. Weather information: general conditions during inspection, approximate amount of precipitation since the last inspection, and approximate amount of precipitation within the last 24 hours.

c. A summary or list of all BMPs that have been implemented, including observations of all erosion/sediment control structures or practices.

d. The following shall be noted:

   i. locations of BMPs inspected,

   ii. locations of BMPs that need maintenance,

   iii. the reason maintenance is needed,

   iv. locations of BMPs that failed to operate as designed or intended, and

   v. locations where additional or different BMPs are needed, and the reason(s) why

e. A description of stormwater discharged from the site. The presence of suspended sediment, turbid water, discoloration, and/or oil sheen shall be noted, as applicable.

f. A description of any water quality monitoring performed during inspection, and the results of that monitoring.

g. General comments and notes, including a brief description of any BMP r repairs, maintenance or installations made as a result of the inspection.

h. A statement that, in the judgment of the person conducting the site inspection, the site is either in compliance or out of compliance with the terms and conditions of the SWPPP and the NPDES permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance, as well as a schedule of implementation.

i. Name, title, and signature of person conducting the site inspection; and the following statement: "I certify under penalty of law that this report is true, accurate, and complete, to the best of my knowledge and belief".

When the site inspection indicates that the site is not in compliance with any terms and conditions of the NPDES permit, the Permittee shall take immediate action(s) to: stop, contain, and clean up the unauthorized discharges, or otherwise stop the noncompliance; correct the problem(s); implement appropriate Best Management Practices (BMPs), and/or conduct maintenance of existing BMPs; and achieve compliance with all applicable standards and permit conditions. In addition, if the noncompliance causes a threat to human health or the environment, the Permittee shall comply with the Noncompliance Notification requirements in Special Condition S5.F of the permit.

Site Inspection Form

General Information			
Project Name:			
Inspector Name:		**Title:**	
		CESCL # :	
Date:		**Time:**	
Inspection Type:	□ After a rain event □ Weekly □ Turbidity/transparency benchmark exceedance □ Other		
Weather			
Precipitation	Since last inspection	In last 24 hours	
Description of General Site Conditions:			

Inspection of BMPs

Element 1: Mark Clearing Limits

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

Element 2: Establish Construction Access

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

Element 3: Control Flow Rates

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

Element 4: Install Sediment Controls

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

Element 5: Stabilize Soils

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

Element 6: Protect Slopes

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

BMP:

Location	Inspected Y N	Functioning Y N NIP	Problem/Corrective Action

Element 7: Protect Drain Inlets

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

Element 8: Stabilize Channels and Outlets

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

Element 9: Control Pollutants

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

Element 10: Control Dewatering

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

BMP:

Location	Inspected Y	Inspected N	Functioning Y	Functioning N	Functioning NIP	Problem/Corrective Action

Stormwater Discharges From the Site			
	Observed? Y	N	Problem/Corrective Action
Location			
Turbidity			
Discoloration			
Sheen			
Location			
Turbidity			
Discoloration			
Sheen			

Water Quality Monitoring		
Was any water quality monitoring conducted?	□ Yes	□ No
If water quality monitoring was conducted, record results here:		
If water quality monitoring indicated turbidity 250 NTU or greater; or transparency 6 cm or less, was Ecology notified by phone within 24 hrs?	□ Yes	□ No
If Ecology was notified, indicate the date, time, contact name and phone number below: Date: Time: Contact Name: Phone #:		
General Comments and Notes Include BMP repairs, maintenance, or installations made as a result of the inspection.		
Were Photos Taken?	□ Yes	□ No
If photos taken, describe photos below:		