DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE
BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: City of Bellevue Utilities Department

LOCATION OF PROPOSAL: City-wide

DESCRIPTION OF PROPOSAL: Programmatic project proposal to conduct in-stream maintenance activities for the removal of sediment, debris, and beaver dams by the City of Bellevue Utilities Department. The work is necessary to maintain storm and surface water conveyance and prevent flooding. The work will occur in various locations city-wide on the banks of streams and at the ends of culverts, pipe inlets, flow control stations, and regional detention ponds.

FILE NUMBERS: 15-111378-LO **PLANNER:** Heidi M. Bedwell

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Development Services Department. This information is available to the public on request.

☐ There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.

☒ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on **2/18/2016**

☐ This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5:00 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so as to have significant adverse environmental impacts; if there is significant new information indicating a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project): or if the DNS was procured by misrepresentation or lack of material disclosure.

Environmental Coordinator

2/4/2016
Date

OTHERS TO RECEIVE THIS DOCUMENT:
☒ State Department of Fish and Wildlife / Stewart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
☒ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
☒ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
☐ Attorney General ecyolyef@atg.wa.gov
☒ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

City of Bellevue
Development Services Department
Land Use Staff Report

Proposal Name:	**Programmatic Sediment Removal**
Proposal Address:	City-wide Storm & Surface Water Facilities
Proposal Description:	Programmatic permit to remove sediment and invasive vegetation (reed canary grass, blackberry, knotweed) from in-stream surface storm water detention and conveyance facilities owned and managed by the City of Bellevue Utilities Department. The facilities are distributed city-wide. Not all of the facilities have sediment or vegetation removed each year.
File Number:	**15-111378-LO**
Applicant:	**Don McQuilliams, City of Bellevue Utilities**
Decisions Included:	SEPA Threshold Determination
Planner:	Heidi M. Bedwell, Senior Planner
State Environmental Policy Act Threshold Determination:	**Determination of Non-Significance (See attached cover sheet)**

Application Date:	April 21, 2015
Notice of Application Publication Date:	May 28, 2015
Decision Publication Date:	February 4, 2016
Project/SEPA Appeal Deadline:	February 18, 2016

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

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1. Environmental Checklist
2. *Storm & Surface Water In-Stream Sediment Removal Programmatic Permit Maintenance Standards, with Attachments (including Beaver Intervention)*

I. Proposal Description

The Storm and Surface Water section of the Bellevue Utilities Department is requesting a SEPA Threshold Determination associated with a programmatic clearing and grading permit for the maintenance of multiple, in-stream sediment collection facilities throughout the City. The maintenance includes the removal of varying quantities of accumulated sediment that settles out of the water column and collects either in designed and constructed sedimentation or detention facilities or at the openings of culverts and flow control structures.

This permit includes the requirement that qualified city staff and contractors use site-specific best management practices and document these activities to ensure compliance with the terms of the permit and protect the resource. A description of the proposed maintenance activities is as follows.

Proposed Maintenance Activities: Actions vary for each site dependent on the type of infrastructure that is present at the site. The following is a list of infrastructure types associated with this permit and general actions necessary to properly maintain the infrastructure:

- Detention ponds – NPDES mandates maintenance occur within 12 months after an inspection reveals sediment levels greater than 6 inches in depth or 10% of the designed pond capacity.
- Sedimentation ponds – Cleaned based on sediment levels and historical loading levels. The Coal Creek sedimentation ponds are required to be cleaned annually by legal obligations.
- Pipe ends/culverts – Inlets & outlets are kept free of debris and sediment. Sediment is cleared from around the outlet if buildup has occurred.
- Pipe end / outfall discharge locations – storm system appurtenances and outfalls are kept free of sediment build-up at discharge points such as Lake Washington and Lake Sammamish.
- Flow stations – Kept free of debris and sediment as necessary to function as designed.
- High flow bypass inlets/outlets - Inlets & outlets are kept free of debris and sediment. Sediment is cleared from around the outlet if buildup has occurred.
- Ditches/open stream – Sediment, vegetation and debris is removed as buildup occurs that impedes flow.
- Beaver dams – Beaver dams are removed or breached to prevent flooding of structures or roadways as defined in the Utilities Beaver Intervention SOP (Attachment ‘F’).
- Brush control – Kelsey creek through the Lake Hills Greenbelt has the Canary reed grass and other invasive vegetation removed from its banks each year to maintain flows through the greenbelt and to reduce phosphorus loading to the stream.

II. Site Description, Zoning, Land Use and Critical Areas

A. Site Description

The location and characteristics of each site vary widely, but the sites can be categorized into five types based on their intended function and design. These include:

- Detention facilities
- Sedimentation facilities
- Pipe ends & culverts
- Flow stations
- High flow bypass inlets/outlets
- Engineered surface conveyance channels

B. Zoning

The zoning of the properties where the storm and surface water facilities are located varies depending on the individual site. In all cases, the site would be governed by the regulations contained in the critical areas overlay, due to the in-stream nature of the facilities themselves.

C. Land Use Context

The context of the sites included in this permit varies. The detention facilities, sedimentation facilities, flow stations and high-flow bypass structures are generally isolated from residential or commercial developments and located in densely-vegetated, low-lying depressions in close proximity to arterials or highways.

The pipes and culverts are located throughout the city. These facilities cross under arterial roadways and are generally outside of neighborhoods. The only notable exception is four culverts in the Newport Shores neighborhood.

D. Critical Areas Functions and Values

i. Streams and Riparian Areas

Streams are classified into four types, based on their flow and capacity to support fish. Artificial channels (e.g., ditches) are generally not protected, unless they are used by salmonids or convey a stream that previously occurred naturally in that location.

Stream needs healthy riparian areas along its banks and floodplain. Riparian vegetation provides shade, which protects water quality; retains soil, which prevents erosion that can affect salmon spawning and feeding areas; holds back flood flows; and provides wildlife habitat and the large woody debris that stores sediments, slows flood velocities, and creates good fish habitat.

ii. Wetlands

Wetlands include the vegetated edges of ponds and areas commonly called swamps, marshes, and bogs. Frequently, their water is only visible in the spring. Wetlands are classified into four categories, based on a combination of habitat, water quality, and flood-flow-reduction functions.

Wetlands provide rearing and foraging habitats for fish and wildlife and food chain support for downstream waters. Wetlands provide natural water quality improvement; flood-flow reduction and storage; shoreline erosion protection; and opportunities for passive recreation. Many urban wetlands are heavily disturbed, but still provide valuable water quality treatment and flood-flow reduction.

iii. Floodplains

Flood hazard areas are those subject to 100-year floods (identified on FEMA Flood Insurance Rate Maps). These areas are designated to protect development from flooding and to protect the inherent functions of floodplains. Undeveloped floodplains store water and slow the downstream delivery of flood flows, reducing the impacts of a flood and recharging wetlands, streams and underground aquifers. Floodplain development reduces the floodplain's water storage capacity and puts valued property and infrastructure in the path of floodwaters. Runoff from impervious surfaces changes flood size and frequency and can degrade water quality.

iv. Habitat Associated with Species of Local Importance

Species of local importance are specifically recognized local populations of native species that are at risk of being lost from Bellevue—western pond turtle, Oregon spotted frog, western toad, Chinook salmon, bull trout, coho salmon, river lamprey, bald eagle, peregrine falcon, common loon, pileated woodpecker, Vaux's swift, merlin, western grebe, great blue heron, osprey, green heron, red-tailed hawk, western big-eared bat, Keen's myotis (bat), long-legged myotis (bat), and long-eared myotis (bat)—and whose presence can be an indicator of environmental health.

Habitats for these species provide the food, water, nesting/rearing, and cover necessary to support their populations. Protected habitats include naturally occurring ponds less than 20 acres, concentrations of dead trees, caves and roosting structures, and large stands of conifers.

III. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

The sites are located in various zoning districts. No development of structures is proposed, therefore the general dimensional requirements of the zoning district to do not apply.

B. Performance Standard for Uses Allowed within Critical Areas LUC 20.25H.055

Repair and Maintenance and/or Construction Staging (LUC 20.25H.055.C.1)

The work described in the applicant's *Storm & Surface Water In-Stream Sediment Removal Programmatic Permit Maintenance Standards* (Attachment 2) and reviewed in this report is considered repair and maintenance under the terms of the critical areas overlay district (LUC 20.25H.055.B – Footnote 1 and Footnote 2).

The code requires that the work be consistent with all applicable City of Bellevue codes and standards. The applicant has applied for and demonstrated compliance with the applicable codes and standards related to the proposed work. The demonstration of these standards is described herein.

Removal of significant trees is prohibited for repair and maintenance activities

associated with storm and surface water facilities, unless it is deemed a hazard. If a tree is deemed a hazard by a qualified professional, its removal would be reviewed as a revision to the clearing and grading permit, and restoration would be required.

All areas of temporary disturbance associated with the maintenance activities shall be restored to pre-project conditions, pursuant to a the application of the best management practices contained in the applicant's *Storm & Surface Water In-Stream Sediment Removal Programmatic Permit Maintenance Standard.* Invasive and colonizing vegetation may be removed.

C. Performance Standards for Critical Areas:

Performance Standards for streams (LUC 20.25H.080)

The applicant has demonstrated compliance with the applicable performance standards for streams.

There will be no lighting associated with proposed maintenance activities, unless there is an emergency that requires the mobilization of the activities outside of daylight hours. If this is the case, the impacts will be temporary in nature for the duration of the necessary action to ensure protection of the facility or the surrounding infrastructure that is threatened by the blockage. No permanent lighting will be installed.

The activities that generate noise will be temporary and associated with equipment used to excavate sediment, dewater work areas, and bypass the stream flow. The noise will be minimized to greatest extent possible by keeping machinery in good working condition. The noise cannot be avoided altogether because activities require the use of machinery such as dump truck, backhoes, vactor trucks, and pumps.
No new impervious area will be created as part of the maintenance activities. Most of the sites are accessed from existing, developed rights-of-way. All maintenance access roads off the public right-of-way for facilities were constructed along with the installation of the facility itself.

Water that is removed from the work areas is often allowed to be released back into the stream. The water is passed through "Baker Tanks", filter fabrics or dispersed on the adjacent uplands in order to allow the suspended sediments to be filtered before reentering the stream.

Outside of invasive colonizing vegetation, no significant vegetation is planned to be removed as part of this permit, therefore replanting of the outer edge of the stream critical area buffer is not required. It is allowed and expected that some non-significant vegetation may be removed when it is physically growing in the sediments that are to be removed by the maintenance activities. Generally, this vegetation is non-woody, herbaceous material or grasses. From time to time, tree seedlings germinate in the sediment. These seedlings will be removed before they become significant.

If significant trees (greater than 4 inches in diameter at 4.5 feet above the existing grade) have developed in the sediment within the developed area of the facility and must be removed because they pose a risk to the function of the facility, their removal must be mitigated with the planting of three trees on the adjacent upland, outside of the functional area of the facility. Large woody debris (wood greater than 4 inches in diameter and/or 8 feet in length) generated from the tree removal or removed from the facilities must be placed within the stream or stream buffer either upstream or downstream of the facility.

No pesticides, insecticides and fertilizers are proposed for use within 150 feet of the stream critical area.

Performance Standards for wetlands (LUC 20.25H.100)

The applicant has demonstrated compliance with the applicable performance standards for wetlands.

There will be no lighting associated with proposed maintenance activities, unless there is an emergency that requires the mobilization of the activities outside of daylight hours. If this is the case, the impacts will be temporary in nature for the duration of the necessary action to ensure protection of the facility or the surrounding infrastructure that is threatened by the blockage. No permanent lighting will be installed.

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If significant trees have developed in the sediment within the developed area of the facility and must be removed because they are a high-risk to the function of the facility, their removal must be mitigate with the planting of three trees on the adjacent upland, outside of the functional area of the facility. The large woody debris (wood greater than 8 inches in diameter) generated from the removal must placed within the stream or stream buffer either upstream or downstream of the facility.

No pesticides, insecticides and fertilizers are proposed for use within 150 feet of the wetland critical area.

Performance standards for areas of special flood hazard (LUC 20.25H.180.C)

The code states, “where use or development is allowed pursuant to LUC 20.25H.055,

the following general performance standards apply." These performance standards are applicable to intrusions over the area of special flood hazard with structures. The proposed maintenance activities do not include the development of any additional structures with the area of special flood hazard. The maintenance activities proposed in this permit are intended to maintain the function of the storm and surface water system and prevent flooding outside of predetermined areas of the floodplain and protect permitted structures from the threat of flooding due to functional degradation of the constructed facilities.

Performance Standards for Habitat associated with Species of Local Importance (LUC 20.25H.160)

Habitat associated with species of local importance will be impacted by a proposal. The proposals included a series of best management practices that will be carried out by trained individuals. The proposal has received the approval from the Department of Fish and Wildlife.

The applicant has prepared fish exclusion and stream bypass plans to be implemented as part of the maintenance activities. Sediment removal activities at the In-Stream Detention facilities and other locations where fish have been identified, requires diverting the stream, dewatering the construction area and the implementation of measures to exclude and remove fish from the reach. BMPs to minimize or reduce impacts to aquatic resources will be implemented. Fish exclusion work prior to dewatering will be performed in accordance with the WDFW Hydraulic Project Approval issued to the City of Bellevue Utilities Department. A copy of the permit will be kept in the possession of the field personnel during fish exclusion and collection activities.

IV. Public Notice and Comment

Application Date:	April 21, 2015
Notice of Application Publication Date:	May 28, 2015
Minimum Comment Period:	June 11, 2015

The Notice of Application for this project was published in the City of Bellevue weekly permit bulletin on May 28, 2015. The applicant provided the following response to comments received from Karen Walters on behalf of the Muckleshoot Tribe:

1. We noted the City should determine how many culvert sediment removal projects are due to undersized culverts and develop a plan to improve these culverts so that annual sediment maintenance is not needed. The assessment and plan should be completed prior to the next programmatic SEPA environmental review. Bellevue's DPD group noted that they would forward this comment onto Utilities but we never received a follow-up response, a plan, etc.

Response: The sediment that is removed is typically from pipe ends or from sedimentation ponds designed to collect sediment. This is work conducted by the Operations and Maintenance division of Utilities. This comment will be provided to the Engineering division for their review.

2. We also commented in 2010 that the City should document how much

wood, species (if readily determined) and the size of wood (diameter and length) that is removed as part of maintenance actions and which culvert and stream the wood was removed. We were informed that DPD would consider making this a part of documentation/reporting necessary for the clearing and grading permit. Did this happen? Also we were informed that Bellevue's Utilities Department committed to make every attempt to maintain/replace wood where it is found and/or relocate it upstream/downstream of our worksite where appropriate. If wood over 4" diameter and/or greater than 8 feet long, it will be noted of it in the work order.
So how much wood, what sizes, and where has been removed or relocated as part of this program?

Response: We do not see much wood greater than 4" and 8 feet long. The material removed is mainly sand, sediment and organics. When we do come across large woody debris, we try to relocate it up or downstream of the excavation site as conditions allow.

3. In our 2010 comments, we also asked for additional information regarding the number, type and location of the culverts that have been upgraded to allow for the ease of maintenance while lessening the impacts to the stream during maintenance operations. The City responded that this information was being compiled by the Utilities Department and will be transmitted as soon as it is ready. However, we have no record of receiving this information.

Utilities has three projects that have been done in and near streams related to easing sediment removal or simply improving sediment transport and a fourth that has reduced or eliminated the need for sediment removal. The four projects are:

1. *Culvert replacement on Sunset Creek at SE 30th. This project replaced two older round metal culverts with a single larger clear span culvert that includes a sediment vault. The vault can be accessed through two manholes placed over the culvert in the street. As with other projects, there are multiple problems that are addressed with the single project. In this case flooding on adjacent properties was an issue along with easing the access to sediment.*
2. *Culvert replacement on East Creek at Kamber Road (SE 26th). This project is located at a site where the stream profile is pretty flat and sediment is removed. There were multiple goals for this project including improving reduction in flooding and replacement of older steel culverts and the end of their design life and sediment transport.*
3. *The Off-channel sedimentation pond on Coal Creek. This project does not include a culvert replacement, but was designed to capture stream sediment load during high flow events. The project has been successful in diverting excess sediment from Coal Creek and making the job of sediment removal easier for our operations staff.*
4. *We just finished the removal of a culvert on Yarrow Creek this past summer, just upstream of SR-520. This had been a site where sediment was removed occasionally by our maintenance staff. However, with the stabilization of an erosion point below 102nd Ave upstream of this site, the sediment load was reduced. With the removal of the culvert this past summer, the stream segment should have normal sediment transport and hopefully will not need sediment removal as a part of our maintenance operations.*

Other projects did include work in streams or culvert replacement such as the Coal Creek Culvert replacement on Coal Creek Boulevard. This project was initiated to replace a failing 9' diameter single steel culvert under the four lane arterial. Other aspects of the project included improved fish passage, but sediment removal was not a significant problem at this site. We have no other instream Capital Improvement Projects that have been accomplished over the past eight years that were focused on easing sediment removal. Other projects were focused on replacing culverts that were nearing the end of their design life.

4. In our 2010 comments, we requested a copy of the consolidated season end report and ask that the project be conditioned to require that they be sent to the MITFD. The Utilities Department offered to send one as a professional courtesy; however, we never received it. Please send us copies of all season end reports issued for this project since 2010. We again request that this project be conditioned to require the applicant to send us these reports when they are sent to WDFW.

Response: The project has been conditioned again to recommend copies of these reports be provided as a courtesy copy.

5. We need more information regarding the sediment removal work conducted at outfalls in Lake Washington and Lake Sammamish. Specifically, how many and where are these outfalls located? If dredging is not done (see page 7 of 2015) plan, how is sediment removed? How are fish excluded from outfall areas in these lakes?

Response: There is only one location where we remove sediment from the bottom of a lake. That is in Lake Washington at the outfall on the Meydenbauer Yacht Club property located at 9927 Meydenbauer Way SE. We remove about 100 yards of sediment per a Easement agreement we have with the MBYC. This work happens every 3 years or so and is done either through the use of a Vactor or a diver with a suction pump.

6. The volume and area amounts allowed under this programmatic are described as a range and quite high (up to 6000 cubic yards and 30,000 square feet potentially at each site). Is there a way to break out the information further to show a separation of constructed facilities versus in-stream facilities in a table and a figure showing locations? It seems unlikely that all of the sites are in-stream and all within waterbodies (see responses 3.a.1 and 3.a.2 in checklist).

Response: The majority of the sites that we remove sediment from within streams are pipe ends on either the upstream or downstream side of culverts on tributaries. Average amount of sediment removed for this type of work is around 5-10 yards and the locations vary from year to year. There are a few larger sites within the City where we do remove more sediment on an annual basis such as the Coal Creek sedimentation ponds that can be upwards of 3000 cubic yards (typically closer to 2000). Most of the sites require maintenance once every 3-5 years.

7. Can we get a copy of the City's beaver intervention procedures (Attachment F)?

Response: This is provided as an attachment to this report.

8. Is the City required to document all instances of handling of ESA salmonids? The plan suggests that ESA species are only documented when there is injury or mortalities during fish exclusion efforts. It seems that under the definition of "take" for ESA that any time an ESA listed salmonid is encountered is needs to be documented.

Response: During the project, we document all the fish that we relocate by taking inventory of the size and species of each fish we catch. We relocate the fish into an intermediate tank so we can monitor them before moving them out of the work site. We have had very good success with this method over the years and train staff on fish identification as well as send them to an offsite trainer to learn how to properly use an electro shocker.

9. What happens with the City's fish exclusion data?

Response: The documentation is typically in a paper format and is filled away at the end of the project.

V. Summary of Technical Reviews

Clearing and Grading:
The Clearing and Grading Division of the Development Services Department reviewed the proposal for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development.

VI. State Environmental Policy Act (SEPA)

Adverse impacts which are less than significant are usually subject to City Codes or Standards which are intended to mitigate those impacts. Where such impacts and regulatory items correspond, further documentation is not necessary. For other adverse impacts which are less than significant, Bellevue City Code Sec. 22.02.140 provides substantive authority to mitigate impacts disclosed through the environmental review process.

While routine maintenance of the open components of the surface water system have specific benefits for long-term water quality and flood control, these maintenance activities, if not properly implemented, could cause potentially significant adverse environmental impacts to resident and anadromous salmonids and their habitat, including species listed as threatened under the Endangered Species Act. Specific best management practices and conservation measures to mitigate possible impacts to fish are included in Attachment 2 with this application; therefore, the issuance of a Determination of Non-Significance (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements. Please refer to Attachment 2 for list of typical BMPs based on maintenance activities. Other conservation measures used in maintenance efforts are outlined in King County's Regional Road Maintenance - Endangered Species Act Program Guidelines.

VII. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director of Planning and Community Development does hereby **approve with conditions** the Clearing and Grading Permit for sediment removal from various storm & surface water facilities city-wide.

VIII. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

Applicable Ordinances	Contact Person
Clearing and Grading Code- BCC 23.76	Tom McFarlane, 425-452-5207
Land Use Code- BCC 20.25H	Heidi Bedwell, 425-452-4862
Noise Control- BCC 9.18	Heidi Bedwell, 425-452-4862

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. Rainy Season restriction. Due to the proximity to streams, no clearing and grading activity may occur during the rainy season, which is defined as October 1 through April 30 without written authorization of the Development Services Department. Should emergency approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work. Notification of such activities shall follow the protocol described in Attachment A.

Authority: Bellevue City Code 23.76.093.A,
Reviewer: Tom McFarlane, Clearing and Grading

2. Noise Control. Noise related to construction is exempt from the provisions of BCC 9.18 between the hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Noise emanating from construction is prohibited on Sundays or legal holidays unless expanded hours of operation are specifically authorized in advance. Requests for construction hour extension must be done in advance with submittal of a construction noise expanded exempt hours permit.

Authority: Bellevue City Code 9.18
Reviewer: Heidi Bedwell, Land Use

3. In-Water Work Window. Work in the active channel approved by the associated Clearing and Grading Permit must be completed during the in-water work window specified in the *Storm & Surface Water In-Stream Sediment Removal Programmatic*

Permit Maintenance Standards (Attachment 2), unless otherwise permitted in writing by the Washington Department of Fisheries and Wildlife. The removal of small debris such as brush and limbs and wood less than 4 inches diameter and less than 8 feet long may occur at any time at all locations, if the wood is determined to be affecting or could negatively affect the function of the facility as designed.

Authority: Land Use Code 20.25H.160
Reviewer: Heidi Bedwell, Land Use

4. Notification Process. The Storm and Surface Water Maintenance Plan in Attachment 2 shall be modified to include the following updated notification process information as part of the programmatic clearing and grading permit:

Utilities staff will notify DSD of work locations(s) and project scope prior to beginning work by submitting an over-the-counter permit application to the Permit Center. The permit application will include the following items:

A completed Activity Notification Form.
A *Site Sketch* showing the boundaries of the work area labeled with the square footage. If trees or shrubs are to be removed, each plant will be labeled with an "X" symbol and a count of the number being removed will be provided. Also, the location of all erosion control BMPs will be shown.
A completed *CSWPPP Addendum* for the specific activity.
A copy of the above items, along with the programmatic CSWPPP, will be kept on site while the work is being completed.

After the permit application is submitted, the Land Use Planner will have the opportunity to review the plan to verify that it meets the requirements and limitations of the programmatic SEPA approval. The Planner may also discuss concerns with Utilities staff and/or request additional information as it relates to the proposed work.

5. Preconstruction Meeting: As one form of inspection related to the clearing and grading permit, and to review and communicate applicable performance standards and best management practices, an annual preconstruction meeting will be held. The attendees at this meeting shall include representatives from the Bellevue Utilities Department, Development Services Department-Land Use Division, and Development Services Department-Clearing and Grading Section. A representative from the Washington State Department of Fish and Wildlife and the Muckleshoot Indian Tribe Fisheries Division should be notified of this meeting, but his/her attendance is not mandatory. The meeting shall take place prior to the commencement of permitted maintenance activities for the season.

The agenda for the meeting shall, at a minimum include:
- Present the list of inspected sites and those scheduled for seasonal maintenance
- Compare maintenance site list with the list attached to the approved permit
- Review seasonal schedule with assignment of staff or contractor lead

Authority: Bellevue City Code 23.76.160
Reviewer: Tom McFarlane, Clearing and Grading

6. Post-construction Reporting: To ensure best management practices were followed and were effective at protecting sensitive surface water resources, a report

shall be prepared and submitted to the Development Services Department no later than November 30 of the applicable season. At a minimum, the report shall include the following information organized by site:

- Sites inspected
- Sites maintained
- Quantity of material removed
- Fish capture and relocation records (include reporting of any fish kills, as necessary)
- Turbidity monitoring records
- Documentation by site of all large woody debris and any significant trees removed

Authority: Bellevue City Code 23.76.160
Reviewer: Tom McFarlane, Clearing and Grading

Attachment 1

SEPA Environmental Checklist

Environmental Checklist reviewed by
Heidi M. Bedwell 5/27/2015

City of Bellevue Submittal Requirements	27

ENVIRONMENTAL CHECKLIST

10/9/2009

Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

INTRODUCTION

Purpose of the Checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply." Giving complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include reference to any reports on studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

Use of a Checklist for Nonproject Proposals: *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

For nonproject actions, the references in the checklist to the words *project*, *applicant*, and *property* or *site* should be read as *proposal*, *proposer*, and *affected geographic area*, respectively.

Attach an 8 ½" x 11 vicinity map which accurately locates the proposed site.

BACKGROUND INFORMATION

Property Owner: CITY OF BELLEVUE

Proponent: COB UTILITIES, STORM & SURFACE WATER

Contact Person: BRIAN KRAUSE
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 2901 115TH ST Ave NE, Bellevue, WA 98004

Phone: 425-452-6992

Proposal Title: IN-STREAM SEDIMENT REMOVAL OF STORMWATER FACILITIES

Proposal Location: MULTIPLE
(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature:

1. General description: Removal of sediment from maintained stormwater outfalls throughout the City.
2. Acreage of site: VARIES, most sites are under 1/4 Acre.
3. Number of dwelling units/buildings to be demolished: ϕ
4. Number of dwelling units/buildings to be constructed: ϕ
5. Square footage of buildings to be demolished: ϕ
6. Square footage of buildings to be constructed: ϕ
7. Quantity of earth movement (in cubic yards): 1500 - 6,000 yds^3
8. Proposed land use: STORMWATER FACILITIES
9. Design features, including building height, number of stories and proposed exterior materials:
   N/A
10. Other

Estimated date of completion of the proposal or timing of phasing:
WORK WILL BE CONDUCTED ANNUALLY JUNE-SEPTEMBER UNLESS EMERGENCY WORK IS REQUIRED TO MITIGATE HAZARD CONDITIONS.

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. NO

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List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. 2015 STORM & SURFACE WATER IN-STREAM SEDIMENT REMOVAL PROGRAMMATIC PERMIT MAINTENANCE STANDARDS

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

COB LANDUSE, COB CLEARING & GRADING #15-111379GD
HPA is current, COB # 15-111378LO

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

HPA is current
COB LAND USE

Please provide one or more of the following exhibits, if applicable to your proposal.
(Please check appropriate box(es) for exhibits submitted with your proposal):

- ☐ Land Use Reclassification (rezone) Map of existing and proposed zoning
- ☐ Preliminary Plat or Planned Unit Development
  Preliminary plat map
- ☐ Clearing & Grading Permit
  Plan of existing and proposed grading
  Development plans
- ☐ Building Permit (or Design Review)
  Site plan
  Clearing & grading plan
- ☐ Shoreline Management Permit
  Site plan

☑ 2015 STORM & SURFACE WATER IN-STREAM SEDIMENT REMOVAL PROGRAMMATIC PERMIT MAINTENANCE STANDARDS

A. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: ☐ Flat ☐ Rolling ☐ Hilly ☑ Steep slopes ☐ Mountains ☑ Other

b. What is the steepest slope on the site (approximate percent slope)?
SEVERAL OUTFALLS ARE IN AREAS OF STEEP SLOPES

c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.
GENERALLY SAND, GRAVEL AND MUCK DEPOSITS ARE REMOVED

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
SOME LOCATIONS HAVE ACTIVE EROSION AREAS

HMB 5/27/2015

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill. SEDIMENT IS REMOVED TO PROVIDE CONVEYANCE OR CAPACITY FOR STORMWATER TO MOVE THROUGH THE SYSTEM AS WELL AS FOR FUTURE SEDIMENT STORAGE.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. APPROPRIATE BMP'S ARE IN PLACE TO PREVENT EROSION

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? ∅

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: BMP's will be chosen and utilized base on conditions at each location.

Sediment and erosion control per BCC 23.76

2. AIR

a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

GENERAL CONSTRUCTION EXHAUST FROM EXCAVATION EQUIPMENT AND TRUCKS

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

NO

c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

NONE

3. WATER

a. Surface

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

YES, ALL SITES ARE IN-STREAM FACILITIES

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If Yes, please describe and attach available plans.

YES, ALL WORK IS WITHIN WATERBODIES.

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(3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. ANNUAL REMOVAL AMOUNTS VARY BY SITE WITH 1,500 – 6,000 cy^3 TOTAL YARDS REMOVED FROM THE SYSTEM ANNUALLY.

(4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

SOME SITES REQUIRE STREAM BYPASS DIVERSIONS DURING EXCAVATION.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

SOME LOCATIONS ARE IN THE 100 yr Floodplain

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground

(1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.

No

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

NONE

c. Water Runoff (Including storm water)

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

MAINTENANCE WORK IS IN-STREAM. CHANNEL FLOW WILL REMAIN IN THE CHANNEL.

(2) Could waste materials enter ground or surface waters? If so, generally describe.

No

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d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

STANDARD BMP's for protection

Per BCC Utilities Development Code and 23.76 clearing and grading code

4. Plants

a. Check or circle types of vegetation found on the site:

- [x] deciduous tree: alder, maple, aspen, other
- [x] evergreen tree: fir, cedar, pine, other
- [x] shrubs
- [x] grass
- [ ] pasture
- [ ] crop or grain
- [ ] wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- [ ] water plants: water lily, eelgrass, milfoil, other
- [ ] other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

LITTLE TO NONE, ONLY VEGETATION THAT HAS GROWN SINCE PREVIOUS MAINTENANCE CYCLE WILL BE REMOVED.

c. List threatened or endangered species known to be on or near the site.

NONE KNOWN.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

NONE ANTICIPATED. ANY UNFORESEEN VEGETATION IMPACTS WILL BE MITIGATED WITH NATIVE MATERIAL SUITED FOR SPECIFIC SITE CONDITIONS.

5. ANIMALS

a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

- [x] Birds: hawk, heron, eagle, songbirds, other:
- [x] Mammals: deer, bear, elk, beaver, other:
- [x] Fish: bass, salmon, trout, herring, shellfish, other:

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b. List any threatened or endangered species known to be on or near the site.

SALMON SPECIES

Puget Sound Chinook-threatened
Bull trout-threatened

c. Is the site part of a migration route? If so, explain.

d. Proposed measures to preserve or enhance wildlife, if any: WORK WILL BE COMPLETED DURING THE FISH WINDOW ESTABLISHED BY WDFW

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy need? Describe whether it will be used for heating, manufacturing, etc.

NONE

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

NO

c. What kinds of energy conservation features are included in the plans of the proposal? List other proposed measures to reduce or control energy impacts, if any:

NONE

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

NO

(1) Describe special emergency services that might be required.

NONE

(2) Proposed measures to reduce or control environmental health hazards, if any.

NONE

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b. Noise

(1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)?

AT MOST LOCATIONS THERE ARE NO NOISE SOURCES. TRAFFIC NOISE MAY BE PRESENT AT SITES IN THE RIGHT-OF-WAY.

(2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site.

NORMAL CONSTRUCTION NOISE

(3) Proposed measures to reduce or control noise impacts, if any:

NONE

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

STORMWATER FACILITIES

b. Has the site been used for agriculture? If so, describe.

No

c. Describe any structures on the site.

SOME SITES HAVE ENGINEERED STORM WATER STRUCTURES (I.E. bypass systems, settling ponds)

d. Will any structures be demolished? If so, what?

No

e. What is the current zoning classification of the site?

VARIOUS

f. What is the current comprehensive plan designation of the site?

UTILITIES STORM WATER OUTFALLS & CRITICAL AREAS & STREAMS, I

g. If applicable, what is the current shoreline master program designation of the site?

N/A

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

UNKNOWN

I. Approximately how many people would reside or work in the completed project?

Ø

j. Approximately how many people would the completed project displace?

Ø

Critical Areas include: geologic hazard areas, streams, wetlands, lake shorelines, areas of special flood hazard

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k. Proposed measures to avoid or reduce displacement impacts, if any: NONE

i. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: NONE

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Ø

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Ø

c. Proposed measures to reduce or control housing impacts, if any: NONE

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? N/A

b. What views in the immediate vicinity would be altered or obstructed? NONE

c. Proposed measures to reduce or control aesthetic impacts, if any: NONE

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11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

NONE

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

NONE

d. Proposed measures to reduce or control light or glare impacts, if any:

NONE

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

PASSIVE, CITY HIKINGTRAILS

b. Would the proposed project displace any existing recreational uses? If so, describe.

NO

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

NONE

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe. NO

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site. NO KNOWN

c. Proposed measures to reduce or control impacts, if any:

NONE

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. VARIOUS

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

N/A

c. How many parking spaces would be completed project have? How many would the project eliminate?

N/A

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d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

NO

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

NO

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

NO LONG-TERM IMPACTS

g. Proposed measures to reduce or control transportation impacts, if any:

NONE

15. Public Services

a. Would the project result in an increased need for the public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

NO

b. Proposed measures to reduce or control direct impacts on public services, if any:

NONE

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

STORM & SURFACE WATER

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

NOTHING NEW PROPOSED

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature..... Date Submitted..... 4/21/15

Attachment 2

Storm & Surface Water In-Stream Sediment Removal Programmatic Permit Maintenance Standards (Including Beaver Intervention)

ATTACHMENT 'A'

Programmatic Construction Stormwater Pollution Prevention Plan (CSWPPP) Worksheet for Sediment Removal

Background Information

Applicant: Utilities Department, City of Bellevue

Property Owner, if different from Applicant: City is owner

Contact Person: Brian Krause

All questions and correspondence will be directed to the individual listed as Contact Person.

Address of Contact Person: BSC 2901 115th Ave NE, Bellevue, WA 98004

Phone Number: 425-452-6992

Project Title: Programmatic Sediment Removal Permit

Site Address: N/A

Parcel Number: N/A

Scope:

Give an accurate, brief description of the proposed project's scope and nature:

1. General description:
   Annual sediment removal from in-stream sedimentation ponds, culverts and lake outfalls/pipe ends at various locations around the City to provide storm water storage for flood protection and water quality. Most locations require maintenance every several years while a some require annual maintenance. Total size of the project varies annually dependent on site characteristics but typically annual project scope is approximately 30,000 square feet of in-stream disturbance and up to 3,500 cubic yards of sediment removed annually.

2. Area of site (square feet): Up to 30,000 square feet annually

3. Proposed area of land disturbance (square feet): Varies by site

4. Proposed quantity of excavation (cubic yards): Up to 6,000 cubic yards

5. Proposed quantity of fill (cubic yards): N/A

6. Total proposed impervious area to be constructed (square feet): N/A

7. Existing site conditions including descriptions of existing topography, existing vegetation, and existing drainage:

Stream and drainage course locations:

These range from year round high volume streams such as Kelsey and Coal Creek to seasonal drainages. Topography varies per site but generally is within stream course channels and critical areas. Vegetation again varies with each site but is typical of northwest native shrubs and trees.

Lake outfall locations:

Sediment removal work at pipe outfall locations is on the lake bottom and is relatively flat. Some outfall locations have no vegetation on the lake bottom. Where vegetation does exist it is typically Milfoil, an invasive species.

8. Description of site soils including soil unit, erodibility, settleability, permeability, depth, texture, and soil texture:

Soil conditions will vary. The excavated material will either be stockpiled or removed from the site as maintenance work proceeds. Any stockpiles will covered within 48 hours and may require covering at the end of each day's work if rainfall is forecast.

9. Description of adjacent areas which may be affected by site disturbance (i.e. streams, lakes, wetlands, residential areas, roads)

Sites will be located on City property, easements or right-of-way with a variety of adjacent land uses. The sediment removal work will occur in and adjacent to streams, wetlands, ponds and lakes. BMP's will be used in accordance with the CSWPPP.

10. Description of critical areas that are on or adjacent to the site.

Sediment removal areas are in critical area streams, lakes and buffers. Work will be conducted from the road right-of-way and outside buffer zones wherever feasible. Silt fencing will be used along with other erosion control BMP’s when necessary to prevent sediment from re-entering a stream or channel.

Describe potential erosion problems on site.

Many of the sites pose challenging erosion concerns if proper BMP’s are not setup to address ahead of time. Each site will be dewatered before the work is to be done and appropriate BMP’s will be put in place ahead of and during work operations to minimize erosion impacts.

11. Describe the intended sequence and timing of construction activities and any proposed construction phasing.

The following sequence of events summarizes the proposed activities required to accomplish these projects as necessary.

1. Delineate the extent of the project site.

2. Field locate Utilities.

3. Install WDFW approved fish exclusion block nets at upper and lower extremes of each stream reach,

4. Install erosion control measures as needed around work site.

5. Conduct fish exclusion by electro-fishing, and by dragging a seine through the stream reach to remove trapped fish.

6. Construct a temporary plastic lined sandbag dike across the reach approximately upstream of the work area.

7. Set-up pumps and layout discharge piping for stream by-pass system as necessary. Discharge areas will ensure filtration through natural vegetation and/or the use of an approved bypass channel. Additional erosion control will be installed as needed.

8. Route the stream through the bypass system.

9. Allow the by-passed reach to naturally dewater.

10. Stage small backhoe/excavator and Vactor trucks as needed on existing paved or graveled surfaces (as available) adjacent to each work area.

11. Remove the permitted volume of accumulated sediments.

12. Turbidity monitoring will be conducted during sediment removal operations. This will be done according to City of Bellevue Turbidity Monitoring Requirements.

13. Remove the temporary sandbag dike and all materials used to construct the by-pass to allow the stream to return to its channel.

14. Observe stream flow through the area of sediment removal to confirm free unhindered flow through the area impacted by construction.

15. After continuous free flow is achieved through the construction area, the downstream and upstream block nets may be removed.

13. Describe the construction schedule

Describe ownership and financial obligations for the project. Include bond forms and other evidence of financial responsibility for environmental liabilities associated with construction.

All activities and associated responsibilities as part of these projects are conducted by the City of Bellevue Storm and Surface Water Utility.

14. Describe ownership and financial obligations for the project. Include bond forms and other evidence of financial responsibility for environmental liabilities associated with construction.

All activities and associated responsibilities as part of these projects are conducted by the City of Bellevue Storm and Surface Water Utility.

15. Engineering calculations for design of sediment ponds, diversion, waterways, etc. Also include calculations for runoff and stormwater detention design, if applicable.

Original Engineering designs approved are available for several of the sites listed and are available upon request. Each site will be returned as close to the original intent of the Engineer as

possible during sediment removal. Major site modifications will be discussed with the Engineering section of Utilities prior to work being done.

SECTION ONE: CSWPPP NARRATIVE

EROSION CONTROL ELEMENT # 1 - Mark Clearing Limits.

Requirements – Mark Clearing Limits

1. Prior to beginning land disturbing activities, including clearing and grading, the Contractor shall clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area. (These areas shall be clearly marked in the field and on the TESC plans to prevent damage and offsite impacts.)

2. • Plastic, metal, or stake wire fence shall be used to mark the clearing limits.
   • Lath and Flagging shall be used to mark the clearing limits.

3. The duff layer, native top soil, and natural vegetation shall be retained in an undisturbed state to the maximum extent practicable. If it is not practicable to retain the duff layer in place, it should be stockpiled on-site, covered to prevent erosion, and replaced immediately upon completion of the ground disturbing activities.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on the Applicant's site, to meet the erosion control requirements listed above.

- ✓ Preserve existing vegetation – BMP C 101
- ✓ Buffer Zones – BMP C102
- ✓ High Visibility Plastic or Metal Fence – BMP C103
- ✓ Stake and Wire Fence – BMP C104
- ✓ Tree Protection During Construction – BMP T101
- ✓ Lath and Flagging
- ✓ Other
- o Not Applicable – See explanation below

Best Management Practices: Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, is located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to address the "Mark Clearing Limits" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

Site Conditions

Work under this CSWPPP is in critical areas and buffers. Work includes sediment removal from pipes, pipe ends, channels, channel banks, buffers and lake-bottom dredging. Project limits within critical areas and their buffers shall be clearly flagged in the field utilizing all the BMP's listed above.

Work occurs on city property, right of way and in easements. Trees within 10' of the work area will be marked by flagging or fencing for protection, unless removal and replacement are proposed.

Private landscaping within the work area will be marked by flagging or fencing and protected from disturbance during maintenance work.

EROSION CONTROL ELEMENT # 2 - Establish Construction Access.

Requirements – Establish Construction Access

1. Construction vehicle access and exit shall be limited to one route, if possible, or two for linear projects such as roadways where more than one access is necessary for large equipment maneuvering.

2. Access point(s) shall be stabilized with a pad of quarry spalls or crushed rock prior to traffic leaving the construction site to minimize the tracking of soil onto public roads.

3. Wheel wash or tire baths should be located on site, if applicable.

4. If soil is tracked off site, the Contractor shall clean paved roads if necessary to prevent sediment from entering surface waters. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area. Street washing is not allowed.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on your site, to meet the erosion control requirements listed above.

- ✓ Stabilized Construction Entrance – BMP C105
- ✓ Wheel Wash – BMP C106
- ✓ Construction Road/Parking Area Stabilization – BMP C107
- ✓ Other – See below
- o Not Applicable – See explanation below.

Best Management Practices: Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, is located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Establish Construction Access" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

1. Work access will be determined by Right-of-Way Use Permit, together with traffic control, restrictions on hours, areas where stockpiling is allowed (if at all) and other requirements.

2. A construction wheel wash will be required on a case-by-case basis and generally only in cases where the amount of disturbance or the presence of stockpiles is likely to result in soil tracking by trucks and other equipment on unimproved property and/or easements.

3. Roads will be cleaned as necessary to prevent sediment from entering surfaces waters. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area. A street sweeper will be available, but will not be on-site at all times unless specified. Street washing is not allowed.

EROSION CONTROL ELEMENT # 3 - Control Flow Rates.

Requirements – Control Flow Rates

Any stormwater retention/detention facilities that are part of providing temporary erosion control for the project shall be constructed as one of the first steps in grading.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on your site, to meet the erosion control requirements listed above.

- ✓ Sediment trap – BMP C240
- ✓ Temporary Sediment Pond – C241
- ✓ Other: Each "Over the counter permit" TESC will specify the BMP's for the maintenance work.
- ○ Not Applicable – See explanation below.

Best Management Practices: Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, is located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the contractor selects to control the "Control Flow Rates" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

Sediment traps, coir logs and other sediment measures if required by the "Over the Counter Clearing and Grading Permit Individual CSWPPP/TESC Plan" will be install prior to sediment and soil disturbance.

EROSION CONTROL ELEMENT # 5 - Stabilize Soils

Requirements – Stabilize Soils

1.From October 1 through April 30, no soils shall remain exposed and unworked for more than 2 days. From May 1 to September 30, no soils shall remain exposed and unworked for more than 7 days. This condition applies to all soils on site, whether at final grade or not. These time limits may be adjusted by the city if it can be shown that the average time between storm events justifies a different standard. (Requests to modify these timeframes must be made in writing and approved by the City of Bellevue before any deviation in these erosion control measures is permitted.)

2.Soils shall be stabilized at the end of the shift before a holiday or weekend if needed based on the weather forecast.

3.Soil stockpiles must be stabilized from erosion, protected with sediment trapping measures and when possible, be located away from storm drain inlets, waterways and drainage channels.

4.Linear construction activities, including right-of-way and easement clearing, roadway development, pipelines, and trenching for utilities, shall be conducted to meet the soil stabilization requirements. Contractors shall install the bedding materials, roadbeds, structures, pipeline, or utilities and re-stabilize the disturbed soils so that:

From October 1 through April 30 no soils shall remain exposed and unworked for more than 2 days and

From May 1 to September 30, no soils shall remain exposed and unworked for more than 7 days.

CSWPPP Guidance: Soil stabilization measures should be appropriate for the time of year, site conditions, estimated duration of use, and potential water quality impacts that stabilization agents may have on downstream water or ground water. Applicable practices include, but are not limited to, temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on the site, to meet the erosion control requirements listed above.

- ✓ Temporary & Permanent Seeding – BMP C120
- ✓ Mulching – BMP C121

- ✓ Nets & blankets – BMP C122
- ✓ Plastic Covering – BMP C123
- ✓ Sodding – BMP C124
- ✓ Topsoiling – BMP C125
- ✓ Polyacrylamide for Soil Erosion Protection – BMP C126
- ✓ Surface Roughening – BMP C130
- ✓ Gradient Terraces – BMP C131
- ✓ Dust Control – BMP C140
- ✓ Small project construction stormwater pollution prevention - BMP C180
- ✓ Other: Each "Over the counter permit" TESC will specify the BMP's for the maintenance work.
- o Not Applicable – See explanation below.

Best Management Practices: Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, is located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Stabilize Soils" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

All excavated material or materials brought to the site for installation will be covered if they are exposed for more than 48 hours. Streets will kept clean. A sweeper will be available and used as needed to keep streets clean.

EROSION CONTROL ELEMENT # 6 - Protect Slopes

Requirements – Protect Slopes

1. Off-site stormwater (run-on) shall be diverted away from slopes and disturbed areas with interceptor dikes and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.

2. At the top of slopes drainage shall be collected in pipe slope drains or protected channels to prevent erosion. Temporary pipe slope drains shall handle the peak flow from a 10 year, 24 hour event assuming a Type 1A rainfall distribution. Alternatively, the 10-year and 25-year, 1-hour flow rates indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. Consult the Utilities Engineering Standards for sizing PERMANENT pipe slope drains.

3. Provide drainage to remove ground water intersecting the slope surface of exposed soil areas. Excavated material shall be placed on the uphill side of trenches, consistent with safety and space considerations.

4. Check dams shall be placed at regular intervals within channels that are cut down a slope. (Show a detail on TESC plan if this technique is to be used onsite.) Soils shall be stabilized as specified in Element # 5.

5. Minimize cut slope length and steepness. Slope surfaces shall be roughened.

CSWPPP Guidance: Consider soil type and its potential for erosion. Reduce slope runoff velocities by reducing the continuous length of slope with terracing and diversions, reduce slope steepness, and roughen slope surface.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on the site, to meet the erosion control requirements listed above.

- ✓ Temporary & permanent seeding – BMP C120
- ✓ Nets & blankets – BMP C122
- ✓ Plastic covering – BMP C123
- ✓ Surface Roughening – BMP C130
- ✓ Gradient Terraces – BMP C131
- ✓ Interceptor dike and swale – BMP C200
- ✓ Pipe Slope Drains – BMP C204
- ✓ Subsurface Drains – BMP C205
- ✓ Level Spreader – BMP C206
- ✓ Other: Each "Over the counter permit" TESC will specify the BMP's for the maintenance work.
- ○ Not Applicable – See explanation below.

Best Management Practices: Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, is located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Protect Slopes" erosion control element of your project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

Erosion control measures to protect slopes if required by the "Over the Counter Clearing and Grading Permits Individual CSWPPP/TESC Plan" will be installed prior to sediment and soil disturbance.

EROSION CONTROL ELEMENT # 7 - Protect Drain Inlets

Requirements – Protect Drain Inlets

1. All storm drain inlets made operable during construction shall be protected so that stormwater runoff does not enter the conveyance system without first being treated to remove sediment.

2. All approach roads shall be kept clean. Sediment shall not be allowed to enter storm drains without prior and adequate treatment unless on-site treatment is provided before the storm drain discharges to surface waters.

3. Inlets should be inspected weekly at a minimum and daily during storm events. Inlet protection devices should be cleaned or removed and replaced when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer.)

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on the site, to meet the erosion control requirements listed above.

- ✓ Storm drain inlet protection – BMP C220
- ✓ Other: Each "Over the counter permit" TESC will specify the BMP's for the maintenance work.
- ○ Not Applicable – See explanation below.

Best Management Practices: Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, is located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Protect Drain Inlets" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

Erosion control BMP measures to prevent sediments from entering the conveyance system if required by the "Over the Counter Clearing and Grading Permits Individual CSWPPP/TESC Plan" will be installed prior to sediment and soil disturbance. Conveyance systems will be isolated by silt fencing prior to any excavation. If discharge to open conveyance system is proposed, BMP's shall be installed to control flow rates as required by Control Element #3, and Stabilize Channel and Outlets as required by Erosion Control element #8.

ELEMENT # 8 - Stabilize Channel and Outlets.

Requirements – Stabilize Channel Outlets

1. All temporary on-site conveyance channels shall be designed, constructed and stabilized to prevent erosion from the expected peak 10 minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used.

2. Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream reaches shall be provided at the outlets of all conveyance systems.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on your site, to meet the erosion control requirements listed above.

- ✓ Channel lining – BMP C202
- ✓ Outlet protection – BMP C209
- ✓ Other: Each "Over the counter permit" TESC will specify the BMP's for the maintenance work.
- o Not Applicable – See explanation below.

Best Management Practices: Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, is located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Stabilize Channel and Outlets" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

Channel stabilization and measures to protect outlet controls if required by the "Over the Counter Clearing and Grading Permits Individual CSWPPP/TESC Plan" will be installed prior to sediment and soil disturbance. Open conveyance systems will be isolated by silt fencing, straw waddles, check dams or a combination thereof. Any excavated material stockpiles on site will be covered within 24 hours.

EROSION CONTROL ELEMENT # 9 - Control Pollutants.

Requirements – Control Pollutants

1. 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. Woody debris may be chopped and spread on site.

2. Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and non-inert wastes present on the site (see Chapter 173-304 WAC for the definition of inert waste). On-site fueling tanks shall include secondary containment.

3. Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drain down, solvent and de-greasing cleaning operations, fuel tank drain down and removal, and other activities which may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures, such as drip pans. Contaminated surfaces shall be cleaned immediately following any discharge or spill incident.

4. Emergency repairs may be performed on-site using temporary plastic placed beneath and, if raining, over the vehicle. Wheel wash or tire bath wastewater shall be discharged to a separate on-site treatment system or to the sanitary sewer, when permitted.

5. Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Manufacturers' recommendations for application rates and procedures shall be followed.

6. BMPs shall be used to prevent or treat contamination of stormwater runoff by pH modifying sources. These sources include, but are not limited to, bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters. Stormwater discharges shall not cause or contribute to a violation of the water quality standard for pH in the receiving water.

7. Construction sites with significant concrete work shall adjust the pH of stormwater if necessary to prevent violations of water quality standards

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on your site, to meet the erosion control requirements listed above.

- o Concrete Handling – BMP C151
- ✓ Sawcutting and Surfacing Pollution Prevention – BMP C152
- ✓ Material Delivery, Storage Containment – BMP C153
- ✓ Other: Each "Over the counter permit" TESC will specify the BMP's for the maintenance work.
- o Not Applicable – See explanation below.

Best Management Practices: Also see Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Control Pollutants" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

Channel stabilization and measures to protect outlet controls if required by the "Over the Counter Clearing and Grading Permits Individual CSWPPP/TESC Plan" will be installed prior to sediment and soil disturbance. Generally, sediment removal maintenance work does not utilize concrete or other pH modifying sources. Control of potential pollutants from fuel, lubricants and other sources related to equipment will be controlled with these BMP's.

EROSION CONTROL ELEMENT # 10 – Control De-Watering.

Requirements – Control De-Watering

1. Foundation, vault, and trench de-watering water, which have similar characteristics to stormwater runoff at the site, shall be discharged into a

controlled conveyance system prior to discharge to a sediment trap or sediment pond. Channels must be stabilized, as specified in Element #8.

2. Clean, non-turbid de-watering water, such as well-point ground water, can be discharged to systems tributary to waters, as specified in Element #8, provided the de-watering flow does not cause erosion or flooding. These clean waters should not be routed through stormwater sediment ponds. February 2005 Volume II – Construction Stormwater Pollution Prevention 3-13

3. Highly turbid or contaminated dewatering water from construction equipment operation, clamshell digging, concrete tremie pour, or work inside a cofferdam, shall be treated separately from stormwater.

CSWPPP Guidance: Other disposal options, depending on site constraints, may include:

1. Infiltration
2. Transport offsite in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute surface waters,
3. Ecology-approved on-site chemical treatment or other suitable treatment technologies,
4. Sanitary sewer discharge with City and King County Wastewater Treatment Division approval.
5. Use of a sedimentation bag with outfall to a ditch or swale for small volumes of localized dewatering.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on your site, to meet the erosion control requirements listed above.

- ✓ Level Spreader – BMP C206
- ✓ Infiltration (Provide details below and on TESC plan below and on the TESC plan.)
- ✓ Discharge to sanitary sewer (KC METRO and Bellevue Utilities permits required) – List permit numbers
- ✓ Other: 1. Each "Over the counter permit" TESC will specify the BMP's for the maintenance work. A log book shall be kept by the designated erosion control specialist or CECIL.
- ○ Not Applicable – See explanation below.

Best Management Practices: Also see Volume 2, Construction Stormwater Pollution Prevention, of the Ecology Stormwater Management Manual for Western Washington, located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Control De-watering" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

De-watering erosion control BMP measures to prevent sediments from entering the conveyance system if required by the "Over the Counter Clearing and Grading Permits Individual CSWPPP/TESC Plan" will be installed prior to sediment and soil disturbance.

EROSION CONTROL ELEMENT # 11 - Maintain BMPs.

Requirements – Maintain BMPs

1. 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 the BMP specifications.

2. All temporary erosion and sediment control BMPs shall be removed within 30 days after
final site stabilization is achieved or after the temporary BMPs are no longer needed.

3. Trapped sediment shall be removed or stabilized on site. Disturbed soil resulting from removal of BMPs or vegetation shall be permanently stabilized.

Select from the following Best Management Practices, (BMPs), the ones that the Contractor will implement on your site, to meet the erosion control requirements listed above.

- ✓ Maintain and repair in accordance with BMP specifications
- ✓ O t h e r : Each "Over the counter permit" TESC will specify the BMP's for the maintenance work.
- ○ Not Applicable – See explanation below.

Best Management Practices: Also see Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to control the "Maintain BMPs" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

BMP's will be inspected and adjusted as necessary by a CESCL present of the work site once per day or more frequently depending on the BMP type and it's requirements. Filtration BMP's and disposal of material will be done consistent with the Department of Ecology Manual.

EROSION CONTROL ELEMENT # 12 - Manage the Project.

Requirements - Phasing of Construction: (If applicable)

1. Development projects shall be phased where feasible in order to prevent soil erosion and, to the maximum extent practicable, the transport of soil from the site during construction.

2. Re-vegetation of exposed areas and maintenance of that vegetation shall be an integral part of the clearing activities for any phase.

3. Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g., subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling.

Construction Phasing - Generally phasing will not occur

CSWPPP Guidance: When establishing these permitted clearing and grading areas, consideration should be given to minimizing removal of existing trees and minimizing disturbance/compaction of native soils except as needed for building purposes. These permitted clearing and grading areas and any other areas required

to preserve critical or sensitive areas, buffers, native growth protection easements, or tree retention areas, shall be delineated on the site/TESC plans and the development site.

Requirements – 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:

a) Site conditions including existing vegetative coverage, slope, soil type, and proximity to surface waters; and
b) Limitations on activities and the extent of disturbed areas; and
c) Proposed erosion and sediment control measures.

CSWPPP Guidance: Based on the information provided and/or local weather conditions, the City may expand or restrict the seasonal limitation on site disturbance. The City shall take enforcement action - such as a notice of violation, administrative order, penalty, or stop-work order under the following circumstances: − If, during the course of any construction activity or soil disturbance during the seasonal limitation period, soil leaves the construction site causing a violation of the surface water quality standard; or − If clearing and grading limits or erosion and sediment control measures shown in the approved TESC plan are not maintained.

Requirements – Coordination with Utilities and Other Contractors

1. Coordination with Utilities and Other Contractors:
   The primary project proponent shall evaluate, with input from utilities and other Contractors, the stormwater management requirements for the entire project, including the utilities, when preparing the CSWPPP.

Requirements – Inspection and Monitoring

2. 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 a person who is knowledgeable in the principles and practices of erosion and sediment control. The person must have the skills to 1) assess the site conditions and construction activities that could impact the quality of stormwater, and 2) assess the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.

3. Requirements – Erosion Control Lead

□ An Erosion and Sediment Control Lead shall be identified in the Construction SWPPP and shall be on site or on-call at all times. Whenever inspection and/or monitoring reveals that the BMPs identified in the Construction 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:

O R

□ A Certified Erosion and Sediment Control Specialist shall be identified in the Construction SWPPP and shall be on-site or on-call at all times. Certification may be obtained through an approved training program that meets the erosion and sediment control training standards established by Ecology. Whenever inspection and/or monitoring reveals that the BMPs identified in the Construction 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:

Requirements – Retain CSWPPP on-site, Modify as necessary.

4. The Construction SWPPP shall be retained on-site with the construction drawings. The CSWPPP 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 surface waters. The CSWPPP shall be modified if, during inspections or investigations conducted by the owner/operator, or the City 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.

List the Best Management Practices (BMPs) that the Contractor will implement on your site to meet the erosion control requirements listed above.

Each “Over the counter permit” TESC will specify the BMP’s for the maintenance work.

Best Management Practices: Also see Volume 2, Construction Stormwater Pollution Prevention, of the Department of Ecology Stormwater Management Manual for Western Washington, located at http://www.ecy.wa.gov/pubs/0510030.pdf

Note: The BMPs that the Contractor selects to implement the "Manage the Project" erosion control element of the project need to be shown or added as a note on the TESC plan.

Describe what actions will be taken to accomplish these requirements and objectives, given the unique circumstances of the project and or site. The Applicant must explain the site conditions or project design features that allow the project to meet the erosion control requirements using some or all of the BMPs listed above.

Phase construction – describe

Work may occur year round to alleviate flood hazards. To limit erosion potential from sites during both wet and dry season's on-site storage of excavated materials will be covered if it's to remain on site for more than 48 hours.

Limit work to the dry season

Work will be completed during the dry season unless immediate removal of sediment is required to alleviate flood hazards.

Inspect and monitor all BMPs

Sediment controls will be installed and monitored in order to maintain turbidity levels (if any) within allowable ranges. BMP's will be installed and monitored to ensure vegetative and channel habitat are protected. Streets will be kept clean. Any material stored on-site will be kept covered if it is to remain on site for more than 48 hours.

Pollution prevention contact list – attach a list to be posed at job site

Each "Over the counter permit" TESC will be specify the Pollution Prevention contacts for the work activity.

Reporting and recordkeeping – Attach inspection forms and other site log forms

City of Bellevue Utilities Department will complete required site logs, note changes made to the erosion control measures made during work activity, inspect each project and record inspections.

Other:

Filtration BMP C250: Construction Stormwater Chemical Treatment and C251: Construction Stormwater Filtration may be used to maintain water quality and turbidity at required levels on some maintenance projects. Each "Over the Counter Permit" TESC will specify stormwater treatment and filtration BMP's being utilized.

Utilities Department Standard Operating Procedure

City of Bellevue, WA

Title:

Beaver Intervention by Utilities

Responsible Division:
O&M

Point of Contact:
Surface Water Superintendent

Category:
Operations

Frequency:
As Needed

Applicable Accreditation Chapter:

Approved Date:
2/28/2002

Last Review:
5/1/2009

Next Review:
5/1/2012

Applicable Divisions (Click all that apply):

☐ Entire Department ☐ Director's Office ☐ Engineering ☐ O&M ☐ RMCS

Applicable Sections (Skip this section if SOP is applicable to entire department):
O&M Sections (Click all that apply):

☐ Administration
☐ Transportation Operations
☐ Telemetry
☐ Water
☐ Water Quality
☐ Emergency Operations
☐ Surface Water
☐ Projects and Programs
☐ Wastewater

Purpose:

This SOP is to define appropriate response to reports of beavers causing problems. The presence of beavers is generally regarded as a sign of a healthy natural environment. However, there are locations where allowing the population of beaver to grow and build dams could cause a threat to infrastructure, listed salmon, and/or public safety. When beaver related issues arise, the following procedures are to be followed:

The criteria used to determine if a Utility response is necessary are:

- Existing or potential culvert blockage, roadway or structure flooding.
- Significant migration blockage of Chinook salmon or other listed species to spawning habitat. A significant migration blockage is defined as the presence of migratory fish below the dam and not above due to the dam acting as a barrier to upstream navigation. Typically, these dams are greater than 3-4 feet in height and have no side channels during high flow.

NOTE: Fish passage blockages associated with beaver activity usually occur where the natural stream channel

1. has been constrained and is limited in width from human activities. Constrained stream channels are usually limited on one or both sides of the stream by structures, fill, roadways, landscaping, down-cut channels, or other constructed constraints.
2. flows through a very low gradient and wide floodplain area with no side channels formed around the dam.

Criteria for Problem Identification

When a call or a report of a beaver dam is received the following steps are taken by the section receiving the call/report:

- Identify location of problem and property address. if a dam is present, document the location and report the location to the Superintendent for insertion into GIS.
- Determine if structures or roadways are at risk of flooding, and if those locations are public or privately owned.
- Determine if Chinook or other listed species migration routes are potentially being blocked. A map is available showing the normal distribution of spawning Chinook in Bellevue streams. If there is a potential fish passage blockage, contact the Environmental Scientist to determine if there is sufficient upstream habitat to warrant intervention.
- Determine if the public is in danger of falling trees from beaver damage close to trails, buildings or roads.
- Determine the potential for damage of public and private trees. If damages have occurred, identify the owner and attempt to notify of the situation. Share information with the owner appropriate for protecting trees (i.e. using wire mesh around the trunk, building a fence around the tree(s).

NOTE: Ponding of water in yards or other natural areas is not considered sufficient for intervention. If there is any question about whether there is an impact to salmon migration that should be addressed, the staff should contact the Environmental Scientist for assistance.

Criteria for Staff Assignments

To determine if action is needed, check the following table:

Beaver Dam Location	Impacted Location	Lead
Public	Public or Private	City - Operations & Maintenance
Private	Public	City - Operations & Maintenance
Private	Private	Private (see note below)

When a beaver dam is on private property and only affecting private property, information and advice should be shared with the property owner to assist with the permit acquisition process and to inform the property owner of other information and considerations that they should be aware of such as fish passage, potential flooding, etc.

Procedures:

-
    - Conduct a site visit to assess the situation and map all locations of Beaver activity.
    - Call the Washington Department of Fish and Wildlife (WDFW) to inform them of the location and the situation.
    - Contact the Environmental Scientist to report and discuss situations with Chinook salmon or other listed species migration blockages.
- Determine the best method for resolving the situation (dam breaching, side channel creation, leveler installation, deceiver installation, trapping or no action)
- If breaching of the beaver dam or installation of a leveler and/or deceiver is required to reduce flooding or restore fish passage, obtain Hydraulic Project Approval (HPA).

Dam Breaching

- Set up stream bypass and erosion control devices as needed to prevent downstream surging of sediments.
- Examine the dam for any safety hazard that may occur during the breaching process (i.e. sharp sticks angled towards a fall area) and reasonably eliminate all hazards before any further work is conducted.
- Breach the dam by carefully removing the pieces of debris from the dam down to a level that is sufficient to reduce flooding or allow fish passage. Remove debris evenly from the top of the dam by hand or with the use of hand powered tools only. Should heavy equipment be necessary to breach a dam, contact the Superintendent first to discuss the situation.
- After all other in-stream work has been completed, slowly remove bypass and erosion control measures to avoid unnecessary turbidity from entering the stream. Monitor the dam as needed to inspect for rapid rebuilding of the dam. If Beavers are active in the area, it is likely that rebuilding of the dam may occur. If rebuilding occurs, other treatment options may be necessary.

Pond Leveler Installation (refer to attached file)

Pond levelers are pipes placed under and through the dam to lower upstream water levels and prevent the dam form being built higher.

- Pond levelers come in many forms, can be pre-assembled off site or assembled in place. Check with your Supervisor to choose a design of leveler that will be most effective for the situation.
- Gather all necessary supplies and stage at the site. It is important that once the installation process begins that it be finished within a reasonable timeframe to avoid dam reconstruction and/or damage to the installation process.
- Set up stream bypass and erosion control devices as needed to prevent downstream surging of sediments.
- Examine the dam for any safety hazard that may occur during the breaching process (i.e. sharp sticks angled towards a fall area) and reasonably eliminate all hazards before any further work is conducted.

- Breach a portion of the dam by carefully removing the pieces of debris down to a level near the base of the existing dam for installation of PVC through pipe. The size of the breach will vary depending on the size of the pipe used.
- Place the through pipe in the breached area trying to avoid placing any pipe joints under the area where the dam is to be rebuilt.
- Install pipe extensions as necessary upstream and downstream to position the intake and outfall where both can be fully submerged throughout the year. A maximum pipe length of 25 feet should be observed to promote fish passage.
- Install the intake and wire to the bottom of the pond with rebar and wire ties. Ensure that all of the intake device is below the average water line to promote fish passage.
- After all other in-stream work has been completed, slowly remove bypass and erosion control measures to avoid unnecessary turbidity from entering the stream. Either put the dam back together or allow the Beavers to rebuild over the top of the leveler if the water is flowing over the pipe. Monitor the leveler on a regular basis to ensure it is functioning correctly.
- Regular maintenance of the Leveler will need to be performed to ensure that fish passage remains open. Maintenance will be triggered as needed by inspection and as needed after each storm event following an inspection. This is expected to be a requirement of the WDFW HPA.

Deceivers

- Deceivers are to be used at culvert or structure openings where Beaver activity has blocked flow into the structure near where Beaver activity will be allowed.
- Deceivers can be made of many different materials, shapes and sizes. Determine the best choice to protect the structure and provide adequate flow.
- Gather all necessary supplies and stage at the site; it is important that once the installation process begins that it be finished within the work day to avoid overnight dam reconstruction and/or damage to the installation process.
- Set up stream bypass and erosion control devices as needed to prevent downstream surging of sediments.
- Examine the dam for any safety hazard that may occur during the breaching process (i.e. sharp sticks angled towards a fall area) and reasonably eliminate all hazards before any further work is conducted.
- Slowly breach the dam by hand from above or with the use of machinery to the extent necessary to install the deceiver. Minimize all turbidity from entering the stream during this process.
- Install the deceiver around the structure such that there are no gaps where the Beavers can get inside the deceiver area and in a shape that does not allow blockage.
- Remove the bypass and erosion control measures. Monitor the deceiver site on a regular basis to ensure it is functioning correctly.
- Regular maintenance of the Deciever will need to be performed to ensure that fish passage

remains open. Maintenance will be triggered as needed by inspection and as needed after each storm event following an inspection. This is expected to be a requirement of the WDFW HPA.

Trapping:

- Contact a trapper, licensed to set up a contract to catch and relocate Beaver (if possible). A list of licensed trappers is maintained by enforcement office of WDFW at the Region 4 Office.
- Conduct a site visit with the trapper to evaluate the site.

  Note: the following steps may be required if the trapper is not prepared to inspect the trap site on a daily basis:

  - Check traps daily, including weekends and holidays, according to inspection procedures listed below. If the licensed trapper is not available on weekends, staff will be assigned the task of checking the trap(s) daily.
  - Check all traps after sunrise and before 8:00am daily.
  - If there are beavers in any trap, call the trapper immediately so they can be removed in a timely manner. Do not attempt to remove or disturb animals in the traps.
  - Record the time and findings of the trap inspection. If the Surface Water crew checks the trap, documentation will be on a work order created for the beaver removal activity and cost tracking.

- If community members or media raise concerns about intervention activities, contact the Utilities Public Information Officer immediately. He/she will determine appropriate media/community response.
- For more in-depth questions about salmon impacts or benefits, the Environmental Scientist will work with the Community Relations Specialist to respond.

Attachments:

Clemson Leveler.pdf Adobe Acrobat Document 104 KB	Deceiver.pdf Adobe Acrobat Document 1.35 MB
File Attachment	File Attachment
File Attachment	File Attachment
File Attachment	File Attachment

File Attachment	File Attachment
File Attachment	File Attachment

Revision History:

Revision Date	Revision By	Reason for Revision
3/1/2005	Pete Blane	Clarification of criteria for problem ider
5/7/2008	Pete Blane	Clarification of criteria for problem identification
5/1/2009	Don McQuilliams	Procedures for breaching dams and installation of levelers and deceivers.