

2016 Intergovernmental Agreement

Oversight of Columbia Slough Sediment Remedial Action

**City of Portland, by and through its Bureau of Environmental Services and
Oregon Department of Environmental Quality, Multnomah County, Oregon**

Effective Date: January 1, 2016

ORS 190.110 permits state agencies and local government units to enter into an agreement for the performance of authorized actions, such as this intergovernmental agreement (Agreement). ORS 465.210(1)(a) and 465.260(2) authorize DEQ to enter into an agreement with BES to carry out the remedial action approach described in the Record of Decision (July 2005) for Columbia Slough Sediment. DEQ and the City have been operating under an Intergovernmental Agreement since June 2006, as the vehicle for implementing important elements of the remedial action selected in the Record of Decision for Columbia Slough Sediment. The 2016 DEQ/BES Intergovernmental Agreement will continue to provide the implementation vehicle for DEQ oversight of City actions to meet the Record of Decision, and will establish a new contract to fund the work.

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I. RECITALS

A. BES is a “person” under ORS 465.200(20).

B. The City of Portland, through its Bureau of Environmental Services (BES), and the Oregon Department of Environmental Quality (DEQ) desire to establish an agreement, the terms of which will govern implementation of a watershed management approach to remediating contamination in Columbia Slough sediment. This agreement covers work conducted by BES to improve sediment quality and meet requirements of the 2005 Record of Decision as it pertains to discharges from the City’s Stormwater Conveyance System (MS4) and City-owned properties. This document also includes work to be completed by DEQ to identify and oversee cleanup of individual sources of contamination to the Slough and provide technical assistance to parties managing hazardous wastes in the watershed.

C. BES and DEQ have documented the presence of hazardous substances (in concentrations which create human and aquatic life health risks), as defined in ORS 465.200(15) in sediments of the Columbia Slough. This Agreement addresses sediment impacted by hazardous substances.

D. The presence of hazardous substances in Columbia Slough sediment constitutes a “release” or “threat of release” into the environment under ORS 465.200(21).

At the termination of this agreement, BES and DEQ will review the status of sediment contamination in the Columbia Slough and will determine what additional work will be required to ensure that progress continues to be made toward a clean and healthy watershed.

II. AGREEMENT

BES and DEQ agree to exercise all appropriate authorities to implement the provisions of this Agreement. The parties agree as follows:

A. Work

1. Scope of Work

(a) General. BES and DEQ shall perform all remedial work under this Agreement in accordance with all applicable Oregon statutes, rules, and guidance as determined by DEQ based on DEQ's review of site-specific information, and in consultation with BES. A detailed scope of work (SOW) and schedule are provided in Attachment A. BES and DEQ will adhere to the terms and schedule of the SOW. Any amendments to Attachment A will be mutually approved in writing.

This 2016 IGA provides for continued implementation of specific actions by the City and DEQ. These actions include:

1. Continued implementation of the Watershed Action Plan (WAP). That plan describes source control activities that are being and will be conducted throughout the Columbia Slough Watershed and prioritizes areas where sediment and stormwater data indicate that source control measures are critical.
2. Continued implementation of the Long Term Management Plan, including sediment and fish tissue monitoring events intended to measure progress toward achieving remedial action objectives for the Slough. Data are evaluated and reports are prepared to present findings of the sediment and fish tissue sampling.
3. Characterizing contamination, assessing risk, evaluating cleanup options, and implementing remedial actions by DEQ or responsible parties at specific contaminant source and sediment hot spot areas in the Columbia Slough.
4. Issuing annual reports documenting actions taken to address contamination issues in the Columbia Slough.

(b) Work Plans. BES shall prepare plans for DEQ review and approval that describe the general procedures for completing necessary source control measures for each Slough segment and long-term monitoring of environmental conditions throughout the Slough. Such plans will include, as appropriate:

- (1) Sampling and Analysis Plans associated with Long Term Monitoring described in the Long-Term Monitoring Plan.
- (2) Source Investigation and Control Plans as described in the Watershed Action Plan and amendments to the WAP as described in Attachment A.
- (3) A Columbia Slough data management plan that describes the methodology for incorporating new environmental data, accessing and using the Columbia Slough database.
- (4) Risk Assessment Work Plans if warranted based on long-term monitoring.
- (5) Feasibility Study (FS) if warranted based on long-term monitoring.
- (6) Remedial Action Work plans (associated with any FS completed).

(c) Reports. BES shall prepare reports that document site environmental conditions and potential risks to human health and the environment for DEQ review and approval. These reports may include, but are not limited to:

- (1) Long-Term Monitoring Reports as specified in the Long-Term Monitoring Plan.
- (2) Source Investigation and Source Control Evaluation reports as described in Attachment A.
- (3) Columbia Slough Data Management Plan described in Attachment A.
- (4) Annual Reports as described in Attachment A. DEQ will provide input addressing its efforts to identify potential cleanup sites, and the status of cleanup site investigations.
- (5) Risk Assessments as determined to be warranted.
- (6) Feasibility Studies as determined to be warranted.

DEQ shall prepare reports documenting Site Discovery and Cleanup efforts including:

- (1) Strategy Recommendations for sites identified as potentially contributing to Slough contamination.
- (2) Source Control proposals and decision documents for individual sites, individual outfall basins or Slough segments as appropriate.
- (3) Sediment cleanup proposals and decision documents for individual sites.
- (4) Sediment investigation and cleanup reports for segments of the Slough subject to settlement agreements.
- (5) Annual Reports as described in Item (4) of the list of BES reports.

2. DEQ/BES Review and Monitoring

DEQ shall provide review and approvals/disapprovals and general oversight of work carried out by BES and/or its consultants under this Agreement. BES shall provide review and input on site discovery efforts and coordinate Municipal Separate Storm Sewer System (MS) permit inspections with DEQ.

3. DEQ Approvals

(a) DEQ shall provide written approvals/disapprovals, as appropriate, for all work plans and reports, and other documents in accordance with the schedule agreed upon by BES and DEQ for each phase of work as set forth in the approved SOW. In the event that staff resources or workload prevent compliance with the schedule, any DEQ delay shall correspondingly extend BES's schedule for a related deliverable or activity.

(b) Upon completion of work under this Agreement and in accordance with all applicable SOW and DEQ-approved work plans for that site, DEQ will provide a written response indicating that protective cleanup levels have been achieved and/or no further action will be required at the site, or identifying the additional work needed to achieve cleanup levels and/or obtain a no further action determination.

B. Public Participation

1. Upon execution of this Agreement, DEQ will provide public notice of this Agreement through issuance of a press release, at a minimum to a local newspaper of general circulation. Copies of the Agreement will be made available to the public. DEQ shall provide BES a draft of such press release and consider any comments by BES on the draft press release before publication.

2. DEQ will maintain a web page, information repositories, and will issue periodic fact sheets on the project. DEQ will provide BES with a draft of such materials and consider any comments by BES on the materials prior to their publication or posting on a web page. DEQ will provide notice to the general public of any cleanup actions and receive and consider public comment before approving any remedial action as required by ORS 465.320 and OAR 340-122-0100.

C. DEQ Access and Oversight

1. Where the City owns the property, BES shall allow DEQ to enter and move freely about the site at all reasonable times for the purposes, among other things, observing BES's progress in implementing this Agreement, conducting such tests and taking such samples as DEQ deems necessary, verifying data submitted to DEQ by BES, and using camera, sound recording, or other recording equipment for purposes relating to work under this Agreement. Upon BES's verbal request, DEQ shall make available to BES a split or duplicate of any sample or recording taken by DEQ pursuant to this Agreement. DEQ shall use its best efforts, but not be obligated, to provide reasonable notice before entering City property. DEQ shall adhere to all health and safety requirements identified in applicable health and safety plans.
2. BES shall permit DEQ to inspect and copy all records, files, photographs, documents, and data in connection with work under this Agreement, except that BES shall not be required to permit DEQ inspection or copying of items subject to attorney-client or attorney-work product privilege, or the exclusions of the open public records laws. DEQ shall use its best efforts, but not be obligated, to provide reasonable notice before records inspection and copying requests. BES will satisfying such requests subject to availability of staff familiar with those records, and the availability of the records at the site specified by DEQ.

D. Project Managers

Project Managers. BES and DEQ will each identify a Project Manager for overseeing activities under this Agreement. The Project Managers will be responsible for coordinating all technical aspects of the respective agency's work on Columbia Slough sediments. The Project Managers shall ensure that project tasks are completed expeditiously and economically. To the extent possible, all reports, notices, and other communications required under or relating to this Agreement shall be directed to the Project Managers.

DEQ Project Manager:

Sarah Miller
 Northwest Cleanup Section
 Oregon DEQ
 700 NE Multnomah St. Suite #600
 Portland, Oregon 97232
 Phone: (503) 229-5040
 Fax: (503) 229-6899
 email: miller.sarah@deq.state.or.us

BES Project Manager:

Mary Stephens
 City of Portland BES
 1120 SW 5th Avenue, Room 1000
 Portland, Oregon 97204-1912
 Phone: (503) 823-7580
 Fax: (503) 823-5344
 email: mary.stephens@PortlandOregon.gov

BES's and DEQ's Project Managers shall be available and have the authority to make day-to-day decisions necessary to complete the scope of work provided in Attachment A of this Agreement.

Any change in Project Managers will be communicated in writing to the Partner Agency, with as much prior notice as possible. Project Managers will work together to keep a written record of important decisions made during their tenure. This record will facilitate seamless transition between Project Managers, and provide consistency and rationale for program decisions made over time.

E. Notice and Samples:

DEQ and BES shall make every reasonable attempt to notify the Partner Agency of any monitoring or sampling to be conducted under this Agreement at least five working days before such activity, but in no event less than 24 hours before such activity. Upon verbal request, DEQ and BES shall make available to the other a split or duplicate of any sample taken pursuant to this Agreement. DEQ and BES shall make every effort to complete analysis of any split or duplicate sample on a schedule consistent with the schedule for related activities. DEQ and BES shall provide copies of all analytical data from such samples as soon as practicable.

F. Quality Assurance

BES shall conduct all sampling, sample transport and sample analysis in accordance with the Quality Assurance/Quality Control (QA/QC) provisions provided as part of the Long-Term Monitoring Plan.

All sampling and analysis work plans conducted as part of this Agreement shall be consistent with DEQ's Quality Assurance Policy for the Environmental Cleanup Programs, document # DEQ10-LQ-0063-QAG (as updated 7/31/2015) and applicable EPA guidance and policy. BES shall ensure that each laboratory used by BES for analysis performs such analyses in accordance with such provisions.

G. Records

1. In addition to those technical reports and documents specifically required under this Agreement, BES shall provide to DEQ within 30 days of DEQ's written request copies of documents generated in connection with the actions required under this Agreement, including QA/QC memoranda and QA/QC audits, draft and final deliverable plans, final reports, task memoranda, field notes, and laboratory analytical data that have undergone data quality validation.
2. If DEQ determines that review of raw data or preliminary laboratory reports is necessary in order to ensure protection of public health, safety, and welfare or the environment, BES shall provide DEQ such information within 10 days of DEQ's written request.
3. BES may assert a claim of confidentiality regarding any documents or records submitted to or copied by DEQ pursuant to this Agreement. DEQ shall treat documents and records for which a claim of confidentiality has been made in accordance with ORS 192.410 through 192.505. If BES does not make a claim of confidentiality at the time the documents or records are first submitted to or copied by DEQ, the documents or records may be made available to the public without notice to BES.

H. Annual Reports

Annual reports documenting the "State of the Slough" shall be prepared jointly by DEQ and BES and made available to the public on or before January 31st of each year. Reports shall summarize activities performed during the previous fiscal year and will include general conclusions relating to the environmental characteristics of the Slough, and activities planned for the upcoming year.

I. Other Applicable Laws

Subject to ORS 465.315(3), all actions under this Agreement shall be performed in accordance with all applicable federal, state, and local laws and regulations. Without limiting the foregoing, all actions under this Agreement shall be performed in accordance with any applicable federal, state, and local laws and regulations related to archeological objects and sites and protection thereof.

J. Reimbursement of DEQ Oversight Costs

1. DEQ shall submit to BES monthly statements of costs incurred under this Agreement by DEQ in connection with oversight of BES's implementation of this Agreement. Each invoice will include a summary of costs billed to date. Actual costs include, but are not limited to, salary, other payroll expenses, indirect, overhead, and other related direct costs. Invoices will include a list of costs by the following categories: Personal Services (salaries at regular and overtime rates and related benefits), Services & Supplies (including travel), Dept. of Justice and Agency Indirect. DEQ's invoice will include a summary of labor, the persons charging time, the amount of time, the nature of the work performed, and the task or project name.

2. BES will make payment within thirty (30) days of receipt of invoices from DEQ.

Invoices will be sent to:

Attn: Mary Stephens

City of Portland- BES

1120 SW Fifth Ave Rm 1000

Portland, OR 97204-1912

Payments will be sent to:

Attn: Accounting Office

Oregon DEQ

811 SW Sixth Avenue

Portland, OR 97204-1390

BES shall pay the amount of costs billed by check made payable to the "State of Oregon, Hazardous Substance Remedial Action Fund." BES shall pay simple interest of 9% per annum on the unpaid balance of any oversight costs, which interest shall begin to accrue at the end of the 30-day payment period.

3. DEQ oversight costs under this IGA are not expected to exceed \$55,000 per year. The total contract amount associated with work conducted under this IGA will not exceed \$275,000.

K. Force Majeure

1. If any event occurs that is beyond BES's reasonable control and that causes or might cause a delay or deviation in performance under this Agreement, BES shall promptly notify DEQ's Project Manager verbally of the cause of the delay or deviation and its anticipated duration, the measures that have been or will be taken to prevent or minimize the delay or deviation, and the timetable by which BES proposes to carry out such measures. BES shall confirm in writing this information within 14 working days of the verbal notification.

2. If BES demonstrates to DEQ's satisfaction that the delay or deviation has been or will be caused by circumstances beyond the reasonable control and despite the due diligence of BES, DEQ shall extend times for performance of related activities under this Agreement as appropriate. Circumstances or events beyond BES's control might include but are not limited to acts of God, unforeseen strikes or work stoppages, fire, bid protests, explosion, riot, sabotage, or war. Increased cost of performance or changed business or economic circumstances shall be presumed not to be circumstances beyond BES's reasonable control.

L. Prior Approval

Where DEQ review and approval is required for any activity conducted under this Agreement, BES shall not proceed to implement the activity until DEQ approval is received. Any DEQ delay in granting or denying approval shall correspondingly extend the time for completion by BES. Prior approval shall not be required in emergencies where BES reasonably believes a delay in undertaking a particular action will threaten human health, safety, or the environment; provided that BES notifies DEQ of the emergency and action as soon as is practicable.

M. Dispute Resolution

In the event of disagreement between BES and DEQ regarding implementation of this Agreement (in general or with respect to a particular project), BES and DEQ shall, in the following order: (a) make a good faith effort to resolve the dispute between Project Managers; (b) if necessary, refer the dispute for resolution by the immediate supervisors of the Project Managers; (c) if necessary, provide each other their respective positions in writing and refer the dispute for resolution by DEQ's Administrator of the Land Quality Division or the appropriate Region Administrator and BES's Watershed Services Group Manager; and (d) if necessary, refer the dispute for resolution by DEQ's Director and BES's Director. DEQ's final decision after such dialogue shall be enforceable under this Agreement. The time required for dispute resolution shall correspondingly extend BES's schedule for all pending, affected deliverables or activities.

N. Enforcement of Agreement and Reservation of Rights

1. In the event of BES's failure to comply with this Agreement (including any failure to reimburse oversight costs), DEQ may enforce this Agreement as an order in accordance with ORS 465.260(5) or may terminate this Agreement after 30 days written notice to BES.
2. In the event of DEQ's failure to provide oversight or perform its other obligations in accordance with this Agreement, BES may terminate this Agreement after 30 days written notice to DEQ. Costs incurred or obligated by DEQ before the effective date of any termination of this Agreement shall be owed under the Agreement notwithstanding such termination unless those costs are a matter for dispute resolution.
3. BES does not admit any facts (including those recited herein), legal issues, liability, or violation of law by virtue of entering into this Agreement.
4. Except as otherwise provided in Subsection II.O. of this Agreement, nothing in this Agreement shall prevent BES from exercising any rights of contribution or indemnification BES might have against any person, including the State of Oregon, regarding the release(s) of hazardous substances that are the subject of this Agreement; provided that BES waives any right it might have under ORS 465.260(7) to

seek reimbursement from the Hazardous Substance Remedial Action Fund for costs incurred under this Agreement

O. Hold Harmless

1. To the extent permitted by Article XI, Section 7 of the Oregon Constitution and by the Oregon Tort Claims Act, the City of Portland shall save and hold harmless the State of Oregon and its commissions, agencies, officers, employees, contractors, and agents, and indemnify the foregoing, from and against any and all claims arising from acts or omissions related to this Agreement of BES or its officers, employees, contractors, agents, receivers, trustees, or assigns. DEQ shall not be considered a party to any contract made by BES or its agents in carrying out activities under this Agreement.
2. To the extent permitted by Article XI, Section 7 of the Oregon Constitution and by the Oregon Tort Claims Act, the State of Oregon shall save and hold harmless the City of Portland and its officers, employees, contractors, and agents, and indemnify the foregoing, from and against any and all claims arising from acts or omissions related to this Agreement of the State of Oregon or its commissions, agencies, officers, employees, contractors, or agents (except for acts approving or omissions constituting approval of any activity of BES under this Agreement). BES shall not be considered a party to any contract made by DEQ or its agents in carrying out activities under this Agreement.

P. Parties Bound

This Agreement shall be binding on the parties and their respective successors, agents, and assigns. The undersigned representative of each party certifies that he or she is fully authorized to execute and bind such party to this Agreement. No change in ownership relating to any City project site covered by this Agreement shall in any way alter BES's obligations under this Agreement, unless otherwise approved in writing by DEQ.

Q. Anti-Deficiency

The DEQ's obligations under this Agreement are conditioned upon DEQ receiving funding, appropriations, limitations, allotments, or other expenditure authority sufficient to allow DEQ, in the exercise of its reasonable administrative discretion, to meet its obligations under this Agreement.

Nothing in this Agreement is to be construed as permitting any violation of Article XI, section 7 of the Oregon Constitution or any other law regulating liabilities or monetary obligations of the State of Oregon.

R. Modification

DEQ and BES may modify this Agreement by mutual written agreement, including extending this Agreement by up to five years including all costs of additional oversight under the Agreement and increasing the budget of all other costs by no more than 25% percent of the total cost of the original Agreement.

S. Duration and Termination

This Agreement shall terminate on December 31, 2020.

Signature

Nina DeConcini, Administrator
Northwest Region, DEQ


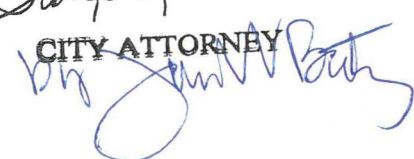
Date

Consent**By:**

Michael Jordan, Director
City of Portland
Bureau of Environmental Services

Date

APPROVED AS TO FORM


CITY ATTORNEY


ATTACHMENT A**CLEANUP PROGRAM*****COLUMBIA SLOUGH REMEDIAL ACTION******SCOPE OF WORK EXTENSION***

July 2015 through December 2020

Background

In July 2005, the Oregon Department of Environmental Quality (DEQ) issued a Remedial Action Record of Decision (ROD) for the Columbia Slough to address contaminated sediments posing unacceptable risk to human health and various ecological receptors. The ROD describes the selected remedial action approach for the Columbia Slough: source control, sediment cleanup, long-term monitoring, to be implemented by DEQ, the City of Portland (City) acting through the Bureau of Environmental Services (BES) and other responsible parties. The intergovernmental agreement (IGA) associated with this Scope of Work (SOW) includes specific tasks from the ROD that the City will continue to implement for its stormwater systems including:

- Institutional control measures to protect human health, as described in the City's Watershed Action Plan and Long Term Monitoring Plan;
- Source investigation to facilitate identification of upland areas contributing to sediment contamination adjacent to City stormwater outfalls;
- Investigation of discharges from City outfalls, sediment characterization, risk assessment, alternative evaluation/feasibility study, and support of remedy implementation by DEQ or responsible parties at specific contaminant source and in-water sediment locations in the Columbia Slough.
- A long term monitoring effort to assess fish tissue, sediment quality, and provide data to guide adaptive management, consistent with the City's Long Term Management Plan.

The ROD was developed in collaboration with the City, which conducted the bulk of the Remedial Investigation (RI) work over a ten year period, from 1994 through 2004. Since completion of the Slough-wide RI, the City has worked with DEQ to implement a number of actions to identify and reduce sources of contamination to the Slough, including:

- Administer The DEQ NPDES 1200-COLS Industrial Stormwater General Permits for those facilities located within the City of Portland that discharge to the municipal stormwater system or directly to surface waters;

- Provide technical assistance, and use BES and DEQ authorities to require stormwater permittees and other dischargers to reduce pollutant loads entering the City stormwater system;
- Conduct source investigations to identify commercial and industrial facilities that discharge pollutants in stormwater entering City pipes or flowing directly to the Slough;
- Identify and provide technical assistance to promote reduction of pollutants entering the Slough from contaminated upland sites;
- Install pollution reduction facilities to filter stormwater from targeted public roadways as appropriate, before it enters the Slough;
- Provide education and outreach to residents who consume fish caught in the Slough; and
- Monitor and assess pollutants in sediment, fish-tissue, stormwater and surfacewater to evaluate effectiveness of actions and track overall improvement of watershed health related to sediments.

In 2006, DEQ and the City entered into the original IGA to implement elements of the DEQ ROD using a “watershed approach.” The intent of this approach has been to implement actions that address the specific sources of sediment contamination as well as improve the overall health of the watershed. The IGA presented the broad, watershed-based actions that DEQ and the City will implement in collaboration to control pollutant sources entering the City’s stormwater system. The 2006 IGA covered a five-year period, and was amended and reissued in October 2010.

DEQ cleanup, water quality and hazardous waste programs coordinate their activities to address ongoing loading of contaminants directly to the Slough and indirectly via the City’s systems, and to ensure that work completed addresses issues important to all programs. This coordination also supports the objective of improving watershed conditions by reducing pollutant loading to the Slough and by remediating existing contaminated sediments, as needed.

In October 2006, BES issued the Columbia Slough Sediment Program Watershed Action Plan (WAP). The WAP was updated in 2011 to reflect actions set forth in the 2010 IGA. The WAP provides detailed descriptions of the actions that BES and DEQ will implement to address sediment contamination within a comprehensive watershed based approach. The WAP also provides a schedule of actions that will be taken to control sources of contamination in discrete segments of the Slough. The 2011 WAP schedule will be revised to reflect work described in this SOW.

In August 2007, BES and DEQ finalized the *Columbia Slough Watershed Long-Term Monitoring Plan* (LTMP). The LTMP establishes the sediment, fish tissue and other monitoring that is being conducted on an on-going basis. Results from the monitoring are being used to track progress in reducing pollutant loads to the Slough, identify pollutant trends in sediments and biota in the Slough, and to modify programmatic actions as needed to continue progress toward overall watershed health. The LTMP was updated in 2011 to incorporate evaluation and maintenance of institutional controls.

Watershed-wide source investigation and control measures have been conducted in accordance with the WAP, and many of the actions described in the WAP reflect on-going programs implemented as part of a set of best management practices. Long-term monitoring and resulting adaptive management recommendations are expected to be warranted for the foreseeable future.

In 2011 and 2012, DEQ performed extensive sediment sampling in the Lower, Middle and Upper Slough segments. Using data collected from these events, DEQ identified the following areas as priorities (Priority Areas) for in-water sediment cleanup:

- Lower Slough – Pacific Meat near City outfall 60
- Lower Slough – Wastech and R&B Recycling near City outfalls 62/62a
- Whitaker Slough – In-channel sediment between Nu-Way Oil and Halton-Voith Machinery (City outfalls 73a and 74)
- Whitaker Slough - Portland Willamette Inlet near City outfall 77a (Remediation Completed in 2013)
- Marx-Whitaker Slough – Upland agricultural lands discharging to City outfall 104b

Section II Work Elements, describes the actions DEQ and BES will take to facilitate in-water cleanup of sediments in the areas identified above, as well as the subsequently identified area associated with the Pacific Carbide facility. DEQ will continue to work with upland property owners throughout the Slough to perform cleanup of contaminated upland sites. The City will assist DEQ in these efforts as appropriate to evaluate and control stormwater discharges entering City stormwater systems from contaminated upland sites.

I. OBJECTIVES

The overall objective of the Columbia Slough sediment project is to reduce contaminant concentrations in Slough sediment to levels that are protective of human health and the environment. DEQ and the City will achieve this objective via the following framework of actions:

- A. Identify, evaluate, and facilitate management and elimination of current and legacy sources of pollutants discharged to City stormwater facilities, including:
 - 1) Stormwater runoff from targeted public rights-of-way (mainly high-traffic road surfaces);
 - 2) Stormwater discharges from commercial/industrial sites (indirect dischargers) that are conveyed to the Slough through City stormwater pipes; and

3) Stormwater discharges from contaminated upland sites that are conveyed to the Slough through public or private outfalls.

The City will assist DEQ in identifying and evaluating sources of contamination in stormwater from commercial/industrial sites that discharge to the City system, and will refer those sites to DEQ for source control and remedial action, where appropriate. The City and DEQ will use a watershed approach to eliminate or reduce sources of contamination to outfalls, then evaluate monitoring data and modify cleanup approaches as warranted through adaptive management.

- B.** Implement actions that facilitate natural recovery and overall watershed health, where such actions will reduce sediment contamination to Tier 1 or 2 levels over time as described in the Columbia Slough ROD, or achieve alternative levels of cleanup.
- C.** Identify, characterize, and evaluate for remediation as appropriate any sediment contamination attributed to stormwater runoff from City roadways or City owned facilities that is not protective of human health and the environment.
- D.** Monitor sediment quality and fish tissue in the Slough to assess progress in achieving remedial action objectives for the Slough over time.
- E.** Provide on-going risk communication to the public about environmental conditions in the Slough and associated health advisories regarding consumption of fish caught in the Slough.

II. WORK ELEMENTS

The specific work elements as they relate to the objectives provided in “I. OBJECTIVES” above are as follows:

A. SEDIMENT PROGRAM COORDINATION

DEQ and the City will develop a schedule for implementing in-water sediment remediation at the following sites:

- Lower Slough – Pacific Meat near City outfall 60
- Lower Slough – Wastech near City outfalls 62/62a
- Lower Slough – Pacific Carbide
- Whitaker Slough – In-channel sediment between Nu-Way Oil and Halton-Voith Machinery (City outfalls 73a and 74)
- Whitaker Slough - Portland Willamette near City outfall 77a (Remediation Completed 2013)

- Marx-Whitaker Slough – Upland agricultural lands discharging to City outfall 104b

The schedule will identify the order and timeframe under which cleanup actions are projected to occur. This schedule will guide the priorities and timing of actions described in the SOW, particularly with regard to source investigation, source control and stormwater treatment. The implementation schedule will also be used to update the WAP.

B. WATERSHED ACTION PLAN UPDATE

The City and DEQ will amend the WAP to reflect a revised schedule of actions to be completed by the City and DEQ, consistent with tasks described in C through G below.

C. STORMWATER SOURCE CONTROL EVALUATION AND MANAGEMENT

1. **CITY ROADWAYS** (Objective A.1.) The City will treat stormwater runoff from selected City-owned roadways using green streets, planters, and other stormwater treatment facilities, as described in the WAP.

Treatment of stormwater runoff from City roadways is being accomplished in two broad phases; pre-design, and design/construction. The pre-design phase included identification of stormwater treatment priorities throughout the Slough watershed, and development of recommended alternatives to treat identified priorities. In December 2013 BES completed the Final Columbia Slough Outfalls Pre-Design document that identifies stormwater treatment facilities that will reduce pollutants entering the Slough from City roadways that have high traffic volumes, serve commercial/industrial land use, or for other reasons, are likely to have elevated pollutant loads.

Design and construction of stormwater treatment systems will be phased over time to accommodate the scale, complexities and significant costs of these actions. The scope and schedule of facilities to be constructed (including locations and types of treatment systems) during the calendar year, and planned for the upcoming year will be described in the annual report submitted to DEQ by November 30, each year.

2. **COMMERCIAL/INDUSTRIAL FACILITIES** (Objective A.2.) DEQ and the City will continue to collaborate on source identification and control activities at facilities that are

considered to be potential sources of contamination and/or recontamination. Efforts will be prioritized to address sources in and around DEQ in-water cleanup areas.

The City and DEQ will continue to collaborate on stormwater basin specific Source Investigation and Control efforts that identify the actions and timelines needed to control any known or suspected significant pollutant sources. This work includes City sampling of solids and stormwater in priority basins and using the resulting data to focus source control efforts.

Source Investigation and Control efforts will identify significant upland sources discharging to City stormwater pipes or directly to the Slough; facilitate or require actions to address stormwater management practices at identified sites, and manage residual contamination that may have been discharged to the City's stormwater system. These actions include:

- Industrial Stormwater Permit Administration: The City will continue to work under DEQ authority to administer the 1200 COLS Industrial Stormwater Permit Program in the Columbia Slough. The City will identify permitted and unpermitted upland discharges to the City stormwater system and make recommendations regarding source control measures as appropriate to reduce pollutants entering the City system from permitted and unpermitted sites in the Slough. DEQ and the City, using their respective authorities, will require implementation of source control measures at permitted or unpermitted sites as needed.
- Stormwater Pathway Evaluations: DEQ and the City will work together to assess sites that require stormwater pathway evaluations to identify contaminants entering the City stormwater system from upland sites. For cleanup sites, DEQ will ensure that Source Investigation/Source Control Workplans are developed, including a scope and schedule of actions to be implemented by responsible parties at identified sites. For sites with both cleanup activities and stormwater permits, DEQ project managers and City stormwater permit managers will coordinate actions to ensure that stormwater source control is consistently addressed throughout the watershed.
- Stormwater System Clean-out - City stormwater pipes are designed to limit sediment accumulation; it is unknown whether there are areas where the stormwater system (catch basin and/or stormwater pipes) has accumulated sediment at concentrations that could contribute to recontamination of Slough sediment or would otherwise be harmful to the Slough. The City will support the work of DEQ and responsible parties to identify

locations where accumulated sediment may be present in the City stormwater system and may contain elevated levels of contaminants; perform investigations to determine if accumulation has occurred; evaluate the feasibility of accumulated sediment removal; and complete pipe cleanout where appropriate.

D. COLUMBIA SLOUGH DATABASE (Objective B, D and E.)

Develop a Columbia Slough Database to facilitate access, analysis and mapping of data from over 20 years of environmental monitoring in the Columbia Slough. The database will support decision making, and analysis of data trends over time. Most of the available data was loaded into a database in 2014, but refinements are needed to identify missing information, continue normalization of the disparate data sets, and provide improvements to the user interface. Procedures for collecting, accessing and using the database will be provided in a Data Management Plan. Methods to maintain and update the database will also be provided.

E. SEDIMENT CHARACTERIZATION AND REMEDIATION (Objective C.)

1. **Lower Slough** - Pollutant sources in the Lower Slough are complex and varied. Significant pollutant sources include heavy commercial/industrial land use, recycling, salvage and manufacturing, high-traffic roadways, and contaminated site cleanups. DEQ and the City have actively pursued source investigation and source control work in this area since 2005. Additional source control and stormwater treatment measures are needed to address remaining sources. DEQ and the City will implement any or all of the actions listed below as part of the watershed approach. Actions implemented in the reporting year, as well as actions and a schedule for the coming year will be described in the Annual report.

- i. **Review Sediment Data** – In 2012, DEQ identified in-water cleanup areas for the Lower Slough based on the results of broad based sediment sampling and data evaluation. Comprehensive Slough-wide sediment sampling will be performed by the City in 2016 as part of the Long Term Monitoring Plan. DEQ and the City will evaluate the results of the 2016 Slough-Wide sampling effort and additional DEQ data collection planned for 2015 to identify where additional focused source control investigations or sediment cleanup actions may be needed. Additional in water cleanup areas will be identified using criteria that is consistent with DEQ selection of priority cleanup sites in 2012. The Columbia Slough sediment data management plan and database will be finalized and updated with the new data to facilitate this evaluation.

- ii. **Source Control and Stormwater Treatment** - Focused source investigation and control actions will continue to be used to identify and control the most significant pollutant sources. In-line sediment sampling, stormwater monitoring and stormwater pathway evaluations will continue to be used to identify sites discharging pollutants to the City system.

Stormwater monitoring will also be used by the City to determine project need, and facilitate design decisions regarding the location, type and level of stormwater treatment facilities to be constructed within Lower Slough basins.

Based on recommendations of the Pre-Design Report and stormwater sampling results, the City will construct facilities to treat stormwater runoff from City-owned roadways as necessary to prevent recontamination of Slough sediment and reduce the risk to human health and the environment.

DEQ will evaluate Preliminary NFA or Source Control decisions brought forth by the City. DEQ will determine the need for additional source control actions in the Lower Slough based on the results of basin sediment and stormwater sampling and the compliance status of 1200-COLS permit holders within each basin.

- iii. **Identify Solutions** - DEQ has identified three priority areas for sediment cleanup in the Lower Slough based on available data collected through private party actions, City long-term monitoring, and investigations DEQ has conducted using settlement funds:

- Sediment adjacent to the former Pacific Meat site, downstream from City outfall 60 (Pacific Meat sediment);
- Sediment adjacent to the Pacific Carbide site; and
- Sediment along the bank adjacent to the WasTech site near City outfall 62/62A.

DEQ has completed additional sediment characterization and is initiating a pilot study of activated carbon amendments at the Pacific Meat sediment area. To date, DEQ has used funds from settlements reached with parties in this section of the Lower Columbia Slough to complete this work. DEQ plans to continue this work, including developing and implementing sediment cleanup plans using settlement funds until they are depleted.

If contamination in sediments at elevated levels exists in areas in the vicinity of City outfalls in this or other segments of the Columbia Slough, the City will investigate and evaluate discharges from its outfall and will conduct additional sediment

characterization, risk assessment, alternative evaluation/feasibility study and, as appropriate under ORS 465.255, cleanup actions.

2. **Buffalo Slough Target Area** – Sediment sampling conducted from 1995-1997 and 2006 characterized sediment concentrations in Buffalo Slough sufficient to identify areas where baseline concentrations are exceeded. DEQ and the City have implemented actions to control and treat several sources within Buffalo Slough. In the fall of 2014, the City submitted the Buffalo Slough Characterization and Source Control report (March 2014). The City will provide a supplement to this report summarizing all available stormwater data for City outfalls discharging to the Buffalo Slough. DEQ will assess whether this data supports a No Further Action determination.
3. **Whitaker Slough** – The Whitaker Slough includes two main segments, the Whitaker Slough and the Marx-Whitaker Slough. There are two DEQ priority in-water cleanup areas in the Whitaker and Marx-Whitaker Slough. Actions described below will be implemented to facilitate in-water sediment cleanup at the identified priority areas:
 - Marx-Whitaker Slough Segment near City outfall 104b
 - In channel Sediment between Nu-Way Oil and Halton-Voith (in-channel sediment between City outfalls 73a and 74)

DEQ and the City will implement any or all of the actions listed below as part of the watershed approach. Actions implemented in the reporting year, as well as actions and a schedule for the coming year will be described in the Annual report.

- a. **Marx-Whitaker Slough** –The Marx-Whitaker Slough forms the easternmost segment of the Whitaker Slough, from approximately NE 112th St. to NE 138th St. where it terminates. The Marx-Whitaker Slough was identified as a priority in the WAP due to elevated concentrations of pesticides.
 - i. **Source Control and Stormwater Treatment** Stormwater runoff entering the Marx-Whitaker Slough includes drainage from actively farmed agricultural land conveyed through the City Stormwater system via outfall 104b. Around 2002, fifteen acres of farmland owned by the City were taken out of production and a cover crop was established to eliminate erosion originating from City property. Since then, the agricultural land owners and managers have been working with the local Soil and Water Conservation District to implement erosion and stormwater treatment controls on their land. Permanent stormwater controls were constructed by the land owners in 2012. The City continues to monitor

runoff from the farms that enters the City's storm sewer system and has established performance criteria under City code.

- ii. **Review Sediment Data and Identify Solutions** In the summer of 2014 DEQ and the Multnomah County Drainage District (MCDD), conducted a sediment investigation in the Marx-Whitaker Slough, in order to provide a current data set supporting decision making for flood mitigation dredging and contaminated sediment cleanup. The results showed that high levels of pesticides are still present within the Marx-Whitaker Slough.

DEQ will work with MCDD and the City to coordinate sediment cleanup and maintenance dredging actions such that cleanup levels protective of human health and the environment are achieved in the Marx-Whitaker Slough. DEQ will continue to work with the City on evaluating current stormwater inputs into the Marx-Whitaker Slough.

- b. **Whitaker Slough - Portland Willamette Inlet** - In 2009, DEQ reached a settlement with the Portland Willamette facility for contribution to sediment contamination in a Whitaker Slough "inlet," referred to as the Portland-Willamette Inlet (PWI), which also receives stormwater discharge from City outfall 77a. In 2014 DEQ completed an in-water remedial action to address contaminants in the PWI. DEQ issued a No Further Action determination with respect to stormwater source control for the Portland-Willamette operation. The City will construct a stormwater treatment facility to treat public roadway runoff discharged to the PWI from City outfall 77a. DEQ will continue to work with PWI and the City to ensure that discharges to the inlet do not recontaminate Slough sediments.
- c. **Remaining Whitaker Slough** – DEQ identified in-channel sediment in the vicinity of Nu-Way Oil and the Halton-Voith facility (between City Outfalls 73a and 74), as containing contaminant concentrations at high enough levels to warrant active cleanup.
 - i. **Source Control and Stormwater Treatment** - DEQ and the City will work together to identify significant sources that may be conveyed to the Slough from outfall basins 73a and 74. In-line sediment sampling, stormwater monitoring and stormwater pathway evaluations will be used to identify sites discharging pollutants to the City system. Focused source investigations will be used to identify and control significant sources that may be conveyed to the Slough from outfall basins 73a and 74.

Stormwater monitoring data will also be used by the City to determine project need and facilitate design decisions regarding the location, type and level of stormwater treatment facilities to be constructed within the Whitaker Slough basins. Based on recommendations of the Pre-Design Report and stormwater sampling results, the City will construct facilities to treat stormwater runoff from City-owned roadways as necessary to prevent recontamination of Slough sediment and reduce the risk to human health and the environment.

DEQ will determine the need for additional source control actions in the Whitaker Slough based on the results of basin sediment and stormwater sampling and the compliance status of 1200-COLS permit holders within each basin. DEQ will use basin sediment and stormwater data to evaluate Preliminary NFA or Source Control decisions brought forth by the City.

- ii. **Review Sediment Data and Identify Solutions** - DEQ plans to complete additional sediment characterization in this area and evaluate cleanup options for these areas as resources allow.

4. Remaining Slough Segments - Evaluation of remaining Slough segments will be completed as resources allow during the implementation of this SOW, once results of the 2015 fish tissue and 2016 sediment sampling events are reviewed.

F. LONG TERM MONITORING PLAN REVIEW/UPDATE (Objective D.E & F.)

The Long Term Monitoring Plan (LTMP) describes actions the City will implement to measure the long-term health of the Slough, and to assess the effectiveness of actions being implemented to reduce sediment contamination to protective levels. The LTMP describes the actions the City will perform to provide comprehensive long-term monitoring of stormwater, fish tissue and sediment quality. Data generated by this monitoring will provide the basis for adaptive management of the Slough. The last Slough-wide fish tissue sampling event was completed in 2005. The work plan for the 2015 tissue sampling was finalized in 2015 and sampling is underway.

The City will inspect signage at known fishing locations to evaluate the physical condition of signs advising anglers of potential risks posed from consumption of fish caught from the Slough. This evaluation will be performed and the results summarized in a brief report. If needed, the City will amend Section 9 – Human Receptors – of the LTMP to reflect changes related to signage placement, messaging, maintenance or other factors.

Data collection and reporting for Water Quality has been eliminated from the LTMP due to the lack of observable correlation between in-stream water quality conditions and impacts to in-water sediment. The LTMP will be amended to remove the requirement to submit a Water Quality Report.

G. ANNUAL REPORTS (Objective E&F)

A combined BES and DEQ report will be produced in January of each year describing the actions taken to identify sources and reduce contaminant concentrations in Columbia Slough sediments.

III. SCHEDULE

The City will submit work plans and reports that address this SOW for DEQ review and approval (aside from the Columbia Slough Database task which is already in process). All work completed under this Agreement will proceed in accordance with the schedule below

The schedule for any additional deliverables determined to be appropriate for completion of the SOW will be determined as needed. The City, in order to reflect or incorporate newly discovered information and/or environmental conditions, may amend all work plans as necessary. Additional work plans and work plan amendments are subject to DEQ review and approval and will be processed according to schedules negotiated between the parties at the time of each phase change or task addition. The City and DEQ will initiate and complete work according to the schedule specified in this SOW, individual task workplans, letter agreements, or amendments to this SOW. This adaptive management approach is expected to result in the most efficient and effective process for achieving remedial action objectives for Slough sediment. The criteria for achieving NFAs for Tier 1 and Tier 2 evaluations are specified in the ROD for the Columbia Slough Sediment (July 2005).

SOW Schedule:

OBJECTIVE	WORK ELEMENT	SUBMITTALS	SCHEDULE
Implementation Document	II B: Watershed Action Plan	Draft WAP schedule update	To DEQ within 90 days of issuance of this agreement
		DEQ review	To City within 30 days of receipt of the draft WAP
		Revised WAP update	To DEQ within 60 days of receipt of DEQ input
Objective A.1.	II C1: Stormwater Source Control and Management	Updates on implementation of Stormwater Treatment Facilities	Annually or sooner when appropriate
Objective B, D and E	II D: Columbia Slough Database	Columbia Slough Database- updates and user guide	To DEQ within 12 months of issuance of this Agreement
Objective C	II E2: Buffalo Slough Source Control & Remediation	Draft Buffalo Slough NFA Report	According to schedule specified in the WAP
Objective D,E and F	II F: Long term Monitoring Plan	Draft Fish Tissue sampling results report	To DEQ within 240 days of receipt of final data package.

OBJECTIVE	WORK ELEMENT	SUBMITTALS	SCHEDULE
Objective D,E and F	II F: Long term Monitoring Plan	Draft Sediment sampling workplan	Not later than 2 months in advance of the sampling event
		Sediment sampling implementation	As scheduled in the Sediment Sampling work plan
		Draft Sediment sampling report	To DEQ within 240 days of receipt of final data package.
Objective E&F	II G: Annual Reports	Annual Reports – City Sections	To DEQ on or before November 30 th of each year.
		Annual Reports – DEQ Sections	To City on or before November 30 th of each year.
		Review and Comment	To City/DEQ within 30 days of receipt of the Annual Report sections
		Combined Annual Report	Issued by January 31, of each year.