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SIMPLIFIED TIR SUBMITTAL TEMPLATE

Public Works Department

Project Name: _____

Date of Submittal: _____

Prepared By: _____

PE License #: _____

PE stamp (if required per Appendix C.1.1):

Click to upload stamp image

For office use:

City of Kirkland Permit #: _____

SIMPLIFIED TECHNICAL INFORMATION REPORT (TIR)

PURPOSE AND INSTRUCTIONS FOR USE

This Simplified TIR template is based on the requirements of Appendix C of the 2016 King County Storm Water Design Manual (KCSWDM) and City of Kirkland's Addendum to the KCSWDM (Policy D-10), together known as "The Manual". Permit applicants are required to complete and submit the Simplified TIR for all simplified drainage review projects proposed within the City of Kirkland. Instructions for use are given throughout the document in italics. All page numbers reference the manual, unless otherwise specified.

DISCLAIMER

It is the responsibility of the applicant to ensure that all applicable codes and regulations have been addressed. Use of this template does not relieve the applicant of meeting all of the project's legal obligations, even if they are related to erosion sediment control and stormwater pollution prevention and do not appear in the template. Any conflicts between this document and 2016 KCSWDM shall defer to the manual.

PROJECT INFORMATION

Applicant contact

Name: _____

Site address: _____

Phone number: _____

Project

Name: _____

Site address: _____

Phone number: _____

Stormwater values

Total project size (sf): _____

Existing impervious (sf): _____

Percentage impervious on site (%): _____

New impervious (sf): _____

Replaced impervious (sf): _____

Total proposed impervious (sf): _____

New pervious (sf): _____

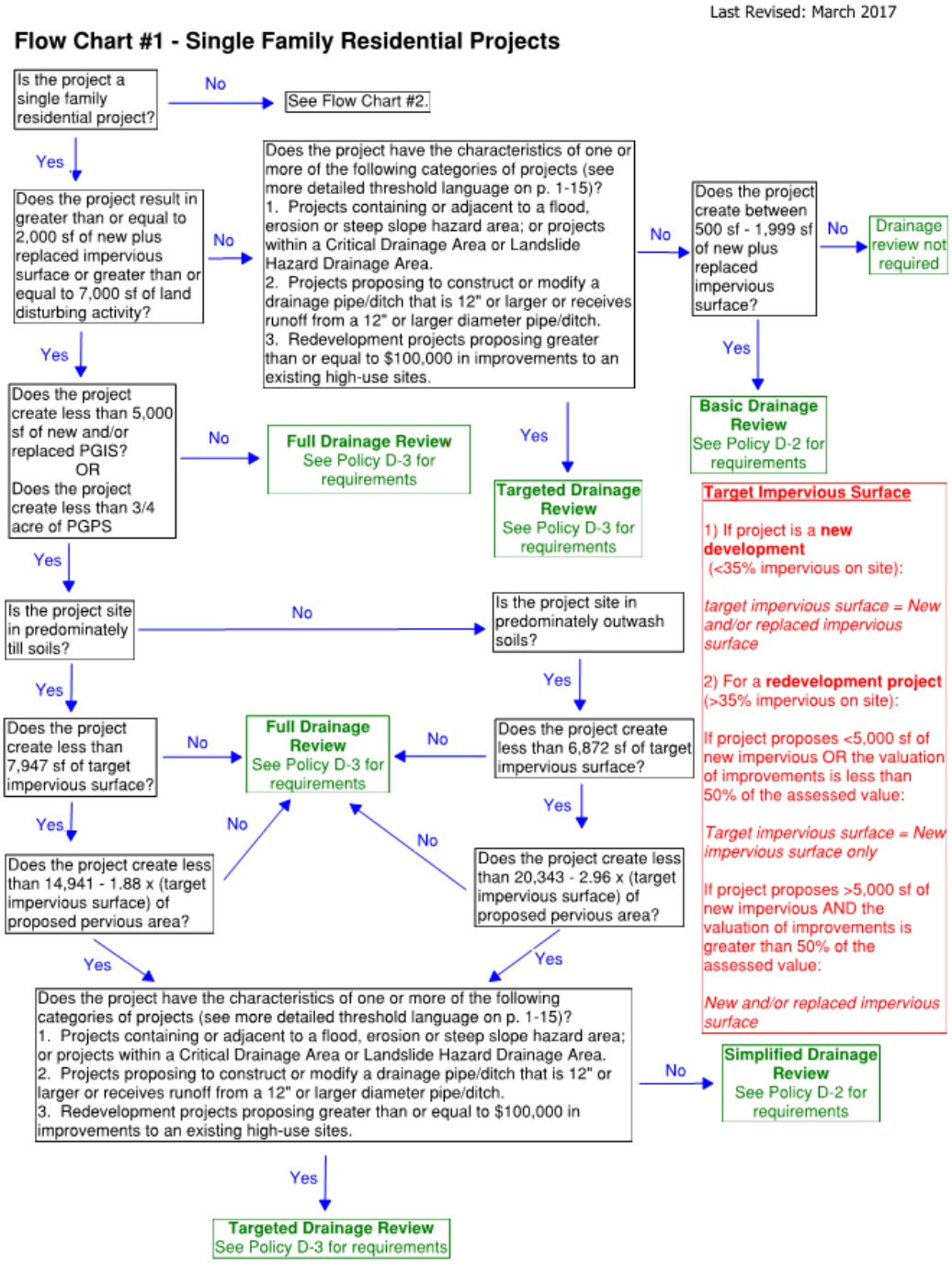
New PGIS (sf): _____

New PGPS (acres): _____

Predominant soil type (Till or Outwash?): _____

SIMPLIFIED DRAINAGE PLAN ELIGIBILITY

Before submittal, review the following flow chart to confirm that the project is eligible for simplified drainage review.



NARRATIVE DESCRIPTION

Include a written description of project in the space below. See C.4.4.1 (p. C-144) for an example.

For office use: Note any post-revision or field changes in the space below.

SOILS REPORT/SPECIAL STUDIES RESULTS

Include a full geotechnical report prepared by or under the direction of a licensed onsite sewage system designer or geotechnical professional with your submittal. The report must meet the requirements of COK Policy D-8: Soil Information for Stormwater Development to Meet Flow Control BMP Requirements. Copy and paste the main recommendations regarding LID BMP feasibility in the space below.

FLOW CONTROL BMP SITE PLAN

Paste the flow control BMP site plan drawing in the space below (does not need to be to scale). The plan must show all target impervious surfaces, new pervious surfaces and required flow control BMPs proposed for the project site. Refer to City of Kirkland Policy G-7 for required plan elements. See Figure C.4.2.A (p. C-141) for an example site plan.

Click to upload image

FLOW CONTROL BMP DESIGN

This section provides descriptions of approved BMPs based on Section C.2 (p. C-31). Use the following pages of this section to provide design specifications and maintenance instructions for each flow control BMP proposed. Indicate in the checkbox lists if a BMP will not be used. Refer to Section C.2 (p. C-31) for guidance.

This project will: ☐ apply flow control BMPs as specified in the following section; OR

☐ demonstrate compliance with the LID Performance Standard of KCSWDM Section 1.2.9.

If applying flow control BMPs, indicate which types will be employed from the following checklist:

- ☐ Full Dispersion
- ☐ Full Infiltration
- ☐ Limited Infiltration
- ☐ Bioretention
- ☐ Permeable Pavement
- ☐ Basic Dispersion

FULL DISPERSION (Reference KCSWDM C.2.1, p. C-32 for additional information)

Select the type of Full Dispersion BMP to be applied, or indicate that Full Dispersion will not be applied.

- ☐ Check if Full Dispersion will not be applied to this project
- ☐ Splash Blocks (Section C.2.1.3, p. C-34)
- ☐ Rock Pads (Section C.2.1.4, p. C-35)
- ☐ 10-foot Gravel Trench (Section C.2.1.5, p. C-35)
- ☐ 50-foot Gravel Trench (Section C.2.1.5, p. C-35)
- ☐ Sheet Flow from Impervious Surface (Section C.2.1.6, p. C-37)
- ☐ Sheet Flow from Non-Native Pervious Surface (Section C.2.1.6, p. C-37)

Feasibility

Use the space below to describe how the proposed Full Dispersion BMP meets the minimum design requirements of C.2.1.1 (p. C-32 & -33) and COK Storm Drainage Pre-approved Plans; OR explain why it is infeasible or inapplicable to apply full dispersion.

Design

If determined feasible, describe the device(s) used for Full Dispersion and how the relevant design specifications and native growth retention requirements of C.2.1.2-C.2.1.8 (p. C-34 through C-46) have been achieved in the space below.

FULL INFILTRATION (Reference KCSWDM C.2.2, p. C-48 for additional information)

Select the type of Full Infiltration BMP to be applied, or indicate that Full Infiltration will not be applied.

- ☐ Check if Full Infiltration will not be applied to this project
- ☐ Gravel Filled Trenches (Section C.2.2.3, p. C-50)
- ☐ Drywells (Section C.2.2.4, p. C-51)
- ☐ Ground Surface Depressions (Section C.2.2.5, p. C-51)

Feasibility

Use the space below to describe how the proposed Full Infiltration BMP meets the minimum design requirements of C.2.2.2 (p. C-48 through C-50) and COK Storm Drainage Pre-approved Plans; OR explain why it is infeasible or inapplicable to apply full infiltration.

Design

If determined feasible, describe the device(s) used for Full Infiltration and how the relevant design specifications of C.2.2.3-C.2.2.5 (p. C-50 through C-56) have been achieved in the space below.

LIMITED INFILTRATION (Reference KCSWDM C.2.3, p. C-57 for additional information)

Select the type of Limited Infiltration BMP to be applied, or indicate that Limited Infiltration will not be applied.

- ☐ Check if Limited Infiltration will not be applied to this project
- ☐ Gravel Filled Trenches (Section C.2.3.3, p. C-58)
- ☐ Drywells (Section C.2.3.4, p. C-58)

Feasibility

Use the space below to describe how the proposed Limited Infiltration BMP meets the minimum design requirements of C.2.3.2 (p. C-57) and COK Storm Drainage Pre-approved Plans; OR explain why it is infeasible or inapplicable to apply limited infiltration.

Design

If determined feasible, describe the device(s) used for Limited Infiltration and how the relevant design specifications requirements of C.2.3.3-C.2.3.4 (p. C-57 through C-58) have been achieved in the space below.

BIORETENTION (Reference KCSWDM C.2.6, p. C-73 for additional information)

Select the type of Bioretention BMP to be applied, or indicate that Bioretention will not be applied.

- ☐ Check if Bioretention will not be applied to this project
- ☐ Bioretention Cells
- ☐ Bioretention Swales
- ☐ Bioretention Planters
- ☐ Road-side Bioretention Ditch

Feasibility

Use the space below to describe how the proposed Bioretention BMP meets the feasibility requirements of C.2.6 (p. C-73 through C-76) and COK Storm Drainage Pre-approved Plans; OR explain why it is infeasible or inapplicable to apply bioretention.

Design

Describe how the relevant design specifications requirements of C.2.6.1-C.2.6.2 (p. C-77 through C-81) have been achieved in the space below.

PERMEABLE PAVEMENT (Reference KCSWDM C.2.7, p. C-86 for additional information)

Select the type of Permeable Pavement BMP to be applied, or indicate that Permeable Pavement will not be applied.

- ☐ Check if Permeable Pavement will not be applied to this project
- ☐ Porous Concrete (Section C.2.7.2, p. C-90)
- ☐ Porous Asphaltic Concrete (Section C.2.7.3, p. C-91)
- ☐ Permeable Pavers (Section C.2.7.4, p. C-91)
- ☐ Other permeable pavement BMP per Appendix C, modified by Policy D-10

Feasibility

Use the space below to describe how the proposed permeable pavement BMP meets the minimum design requirements of C.2.7 and C.2.7.1 (p. C-86 through C-90) and COK Storm Drainage Pre-approved Plans; OR explain why it is infeasible or inapplicable to apply permeable pavement.

Design

Describe the proposed type of Permeable Pavement and how the relevant design specifications requirements of C.2.7.2-C.2.7.6 (p. C-90 through C-92) have been achieved in the space below.

BASIC DISPERSION (Reference KCSWDM C.2.4, p. C-60 for additional information)
Select the type of Basic Dispersion BMP to be applied, or indicate that Basic Dispersion will not be applied.

- ☐ Check if Basic Dispersion will not be applied to this project
- ☐ Splash Blocks (Section C.2.4.2, p. C-61)
- ☐ Rock Pads (Section C.2.4.3, p. C-62)
- ☐ Gravel Filled Trenches (Section C.2.4.4, p. C-62)
- ☐ Sheet Flow (Section C.2.4.5, p. C-63)

Feasibility

Use the space below to describe how the proposed Basic Dispersion BMP meets the minimum design requirements of C.2.4.1 (p. C-60 through C-61) and COK Storm Drainage Pre-approved Plans; OR explain why it is infeasible or inapplicable to apply basic dispersion.

Design

Describe the device(s) used for Basic Dispersion and how the relevant design specifications requirements of C.2.4.2-C.2.4.5 (p. C-61 through C-69) have been achieved in the space below.

SITE CSWPP PLAN

Introduction

The following Simplified Construction Stormwater Pollution Prevention (CSWPP) plan conforms to Core Requirement #5 from the 2016 King County Stormwater Design Manual and City of Kirkland Pre-approved Plans regarding erosion and sediment control and pollution prevention. These rules require the submittal of a CSWPP plan for review and approval by Kirkland staff. This plan consists of two parts: an Erosion and Sediment Control (ESC) plan and a Stormwater Pollution Prevention and Spill Control (SWPPS) plan.

The placement and type of proposed ESC and SWPPS measures are shown in the following section. The contractor or other persons performing construction activities shall comply with the stormwater pollution prevention and spill control measures/BMPs specified for such activities in Appendix D, the King County Stormwater Pollution Prevention Manual and/or Section E of COK Pre-approved plans.

Compliance Contact Person: _____

Address: _____

Phone Number: _____

Email: _____

Both the applicant and contractor are responsible for implementation and maintenance of the approved Simplified site CSWPP plan and any additional measures required by COK.

The Simplified site CSWPP plan shall be retained onsite or within reasonable access to the site. The plan shall be modified whenever there is a significant 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 plan shall be modified, if during inspections or investigations conducted by the City, it is determined that the plan is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The plan shall be modified as necessary to include additional or modified measures designed to correct problems identified.

CSWPP PLAN

Paste the CSWPP Plan in the space below. See CK-E.04 for an example.

Click to upload image

EROSION AND SEDIMENT CONTROL PLAN

A. MARK CLEARING LIMITS/MINIMIZE CLEARING (Reference KCSWDM D.3.2.A, p. D-126 for additional information)

Prior to beginning land disturbing activities, all clearing limits, sensitive areas and their buffers, trees that are to be preserved within the construction area and any existing or proposed flow control BMP areas shall be clearly marked, both in the field and on the small site CSWPP plan, to prevent damage and offsite impacts. Also, clearing shall be minimized to the maximum extent practicable. See "Mark Clearing Limits/Minimize Clearing," Section D.3.4.1 (p. D-129), for more detailed specifications.

Design & Installation

Use the following space to specify how clearing limits are to be delineated, and instructions on their installation.

Maintenance

Use the following space to specify maintenance requirements for the clearing limits measures.

B. MINIMIZE SEDIMENT TRACKED OFFSITE (Reference KCSWDM D.3.2.B, p. D-126 and COK pre-approved plans CK-3.01 & .02 for additional information)

1. Establish a stabilized entrance for construction vehicle access to minimize the tracking of sediment onto public roads. Entrance and exit shall be limited to one route, if possible. See "Stabilized Construction Entrance," Section D.2.1.4.1 (p. D-42), for detailed specifications.
2. If sediment is tracked offsite, public roads shall be cleaned thoroughly at the end of each day, or more frequently during wet weather, if necessary to prevent sediment from entering waters of the state. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area. Street washing will be allowed only after sediment is removed in this manner. Street wash wastewater shall be controlled by pumping back onsite, or otherwise be prevented from discharging into drainage systems tributary to surface waters. This requirement shall be included as a note on the small site CSWPP plan.

Specification

Use the following space to describe how offsite sediment tracking will be minimized.

C. CONTROL SEDIMENT (Reference KCSWDM D.3.2.C, p. D-126 for additional information)

Runoff from disturbed areas must pass through a sediment control measure to prevent the transport of sediment downstream until the disturbed area is fully stabilized. Sediment controls must be installed as one of the first steps in grading and shall be functional before other land disturbing activities take place. One or more the following sediment controls may be used to meet this requirement:

- ☐ Silt Fence (See COK Pre-approved plan CK-E.03)
- ☐ Vegetated Strip (See Section D.2.1.3.3, p. D-37)
- ☐ Triangular Silt Dike (See Section D.2.1.3.4, p. D-37)
- ☐ Storm Drain Inlet Protection (See Section D.2.1.5.3, p. D-53)

Design & Installation

Use the following space to specify the measures to be employed for sediment control.

Maintenance

Use the following space to specify maintenance requirements for sediment control measures.

D. STABILIZE EXPOSED SOILS (Reference KCSWDM D.3.2.D, p. D-126 for additional information)

All exposed and unworked soils shall be stabilized through the application of cover measures to protect the soil from the erosive forces of raindrop impact, flowing water, and wind erosion. One or more of the following cover measures may be used to meet this requirement during the construction phase:

- ☐ Mulching (See Section D.2.1.2.2, p. D-16)
- ☐ Plastic Covering (See COK Pre-approved plan CK-E.05)
- ☐ Nets and Blankets (See COK Pre-approved plan CK-E.06)
- ☐ Seeding (See Section D.2.1.2.6, p. D-24)
- ☐ Sodding (See Section D.2.1.2.7, p. D-28)

Cover measures shall be applied in accordance with the following requirements:

1. Cover measures must be installed if an area is to remain unworked for more than seven days during the dry season (May 1 to September 30) or for more than two consecutive working days during the wet season (October 1 to April 30). These time limits may be relaxed if an area poses a low risk of erosion due to soil type, slope gradient, anticipated weather conditions, or other factors. Conversely, the City may reduce these time limits if site conditions warrant greater protection (e.g., adjacent to significant aquatic resources or highly erosive soils) or if significant precipitation is expected.
2. Any area to remain unworked for more than 30 days shall be seeded or sodded unless the City determines that winter weather makes vegetation establishment infeasible. During the wet season, exposed ground slopes and stockpile slopes with an incline of 3 horizontal to 1 vertical (3H:1V) or steeper and with more than ten feet of vertical relief shall be covered if they are to remain unworked for more than 12 hours. Also during the wet season, the material necessary to cover all disturbed areas must be stockpiled on site. The intent of these cover requirements is to have as much area as possible covered during any period of precipitation.

Design & Installation

Use the following space to specify the measures to be employed for stabilization of exposed soils.

Maintenance

Use the following space to specify maintenance requirements for sediment control measures.

E. CONTROL RUNOFF (Reference KCSWDM D.3.2.E, p. D-127 for additional information)

Stormwater runoff originating on the site and/or entering the site from offsite areas must be controlled so as to minimize erosion of disturbed areas and exposed cut and fill slopes, and to minimize erosive impacts on existing or proposed flow control BMP areas. The following runoff control measures shall be used as needed per the conditions of use and specifications for each measure:

- ☐ Interceptor Dikes and Swales (see Section D.2.1.6.1, p. D-60 for conditions of use and specifications)
- ☐ Ditches (see Section D.3.4.2, p. D-129 for conditions of use and specifications)
- ☐ Pipe Slope Drain (see Section D.3.4.3, p. D-130 for conditions of use and specifications)
- ☐ Check Dams (COK Pre-approved Plan CK-E.07)
- ☐ Catch Basin/Inlet Sedimentation Trap (COK Pre-approved Plan CK-E.08)
- ☐ Temporary Sediment Pond (COK Pre-approved Plan CK-E.09)
- ☐ Temporary Sediment Trap (COK Pre-approved Plan CK-E.09A)
- ☐ Straw Wattles (COK Pre-approved Plan CK-E.10)
- ☐ Storm Drain Protection Insert (COK Pre-approved Plan CK-E.11)

Design & Installation

Use the following space to specify the design and installation of runoff control measures. Show sizing for temporary sediment pond for both the 2 and 10 year storm events.

Maintenance

Use the following space to specify maintenance requirements for the runoff control measures.

Sizing Calculations

In the space below, paste an image of the report from WWHM stating the 2- and 10-year peak flows.

Click to upload image

In the space below, paste calculations showing the sizing requirements.

Click to upload image

F. CONTROL DEWATERING (Reference KCSWDM D.3.2.F, p. D-127 for additional information)

All surface water from disturbed areas shall be intercepted, conveyed to a sediment pond or trap, and discharged downslope of any disturbed areas. The purpose of surface water control is to collect and convey surface water so that erosion is minimized, and runoff from disturbed areas is treated by a sediment pond or trap.

Design & Installation

Use the following space to specify the design and installation of dewatering control measures. If not applicable, include language from geotechnical report stating that no groundwater will be present on site. Note if there are contaminated soils on site.

Maintenance

Use the following space to specify maintenance requirements for the dewatering control measures.

G. CONTROL OTHER POLLUTANTS (Reference KCSWDM D.3.2.G, p. D-127 for additional information)

The requirements for this section are covered in the Stormwater Pollution Prevention and Spill (SWPPS) Plan, beginning on p. 27 of this document.

H. FINAL STABILIZATION (Reference KCSWDM D.3.2.H, p. D-127 for additional information)

1. Prior to final construction approval, the project site shall be stabilized to prevent sediment-laden water from leaving the project site after project completion. All disturbed areas of the project site shall be vegetated or otherwise permanently stabilized. At a minimum, disturbed areas must be seeded and mulched to ensure that sufficient cover will develop shortly after final approval. Mulch without seeding is adequate for small areas to be landscaped before October 1.
2. All temporary ESC and SWPPS measures shall be removed within 30 days after final site stabilization is achieved or after the temporary measures are no longer needed. Trapped sediment shall be removed or stabilized onsite. Flow control BMPs impacted during construction shall be restored. Disturbed soil areas resulting from removal of measures or vegetation shall be permanently stabilized with seeding or sodding.

Design & Installation

Use the following space to specify the measures to be employed for final stabilization.

Maintenance

Use the following space to specify maintenance requirements for final stabilization measure.

STORMWATER POLLUTION PREVENTION AND SPILL (SWPPS) MEASURES (Reference KCSWDM D.3.5, p. D-131 for additional information)

The purpose of stormwater pollution prevention and spill control is to prevent, reduce, or eliminate the discharge of pollutants to onsite or adjacent stormwater systems or watercourses from construction-related activities such as materials delivery and storage, onsite equipment fueling and maintenance, demolition of existing buildings and disposition of demolition materials and other waste, and concrete handling, washout and disposal.

The implementation of this SWPPS plan and the construction, maintenance, replacement, and upgrading of the SWPPS facilities is the responsibility of the Permittee/Contractor until all construction is approved.

1. All pollutants, including waste materials, that occur onsite shall be handled and disposed of in a manner that does not cause contamination of stormwater. Describe how effective pollutant handling and disposal procedures will be achieved.

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. Onsite fueling tanks shall include secondary containment. Describe how cover and containment for materials, fuel and other pollutants will be achieved.

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 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. Emergency repairs may be performed onsite using temporary plastic placed beneath and, if raining, over the vehicle. Describe additional measures that will be employed to protect the environment from spills and drips of petroleum products and other pollutants.

4. 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. Describe any additional measures that will be employed to prevent the over-application and untimely application of chemicals and fertilizers.

5. Stormwater discharges shall not cause or contribute to a violation of the water quality standard for pH in the receiving water. Measures shall be used to prevent or treat contamination of stormwater runoff by pH modifying sources. Describe any additional measures that will be employed to prevent or treat contamination of stormwater runoff by pH modifying sources.

6. For full compliance with KMC 15.52.110 - Water Quality Standards, the project may need to include measures for the permanent structures and features constructed under other permits. Describe any additional measures that must be employed during construction.

Appendix A & B

Please include the geotechnical report and WWHM 2012 report with your submittal.