Sole Source Aquifer Checklist

PROJECT NAME: Division Street Bus Rapid Transit (BRT) Project Geotechnical Investigations

NAME OF SOLE SOURCE AQUIFER OR SOURCE AREA:
Spokane-Rathdrum Prairie Sole Source Aquifer

1. **Location of project:**
   The project is located in the City of Spokane, as well as a portion of unincorporated Spokane County, Washington. Twenty-two boring investigations will occur within the operational right-of-way. Attachment A includes a map showing the Division Street BRT geotechnical investigations boring locations.

2. **Project description.**
   Spokane Transit Authority (STA) is planning to conduct subsurface geotechnical explorations within the operational right-of-way in support of the Division Street BRT project. Activities will include drilling test bores for geotechnical evaluation and sampling. The purpose of these borings is to collect essential subsurface information to support engineering and design activities related to planned transit infrastructure improvements. The project is limited to data collection activities and does not involve any construction or substantial ground disturbance.

   The geotechnical explorations will consist of twenty-two test borings at specific locations along the project alignment. These borings will extend to a maximum depth of 25-feet and will be executed using a truck-mounted drill. The borings will be started by advancing a 12-inch-diameter core barrel through the existing pavement section. The remaining depth of boring will be drilled from the bottom of the pavement section by employing 4.5-inch-diameter air rotary drilling methods. The air rotary method has been chosen for its capacity to generate minimal drill cuttings, eliminating the need for drilling fluid during the process.

   To ensure environmental responsibility and compliance, cuttings generated during drilling will be carefully returned to the borehole, and the borings will be sealed with a bentonite hole plug. Throughout the drilling process, they will collect 2.5-inch split spoon samples of encountered soils at approximately 5-foot-depth intervals. These samples are integral for both on-site logging and subsequent laboratory testing. This systematic sampling approach aims to provide comprehensive insights into the soil composition and properties at various depths. After drilling to final depth, the borings will be backfilled with bentonite chips to within 5 feet of ground surface. Crushed surfacing top course will then be placed and compacted from 5-feet below ground surface to the bottom of the existing pavement section using an autohammer.

   Asphalt cold patch will then be placed and compacted using an autohammer to restore the existing pavement thickness. These backfilling and drilling methods

will adhere to local requirements to ensure the restoration and integrity of the affected surfaces, thereby minimizing potential disruptions to the surrounding environment.

Laboratory testing will encompass various analyses, such as sieve analyses, Atterberg limits, moisture content, pH, minimum resistivity, and consolidation testing, tailored to the specific soil type and engineering properties encountered. To assess subgrade support conditions for pavement design, Dynamic Cone Penetrometer (DCP) testing will be conducted at each boring location. These comprehensive measures aim to gather essential data and insights for the successful execution and design of the project.

3. **Is there any increase of impervious surface? If so, what is the area?**
   This project will not result in an increase in impervious surface.

4. **Describe how storm water is currently treated on the site?**
   Stormwater infrastructure in the City of Spokane includes separate storm sewers and combined stormwater and wastewater systems. Much of the combined stormwater and wastewater system is located south of the Spokane River. Combined systems are treated at the City's water reclamation facility prior to discharge into the Spokane River. Stormwater infrastructure in Spokane County includes combined stormwater and wastewater sewer systems which carry stormwater to Spokane County's water reclamation facilities.

5. **How will storm water be treated on this site during construction and after the project is complete?**
   The geotechnical contractor will prepare a Temporary Erosion and Sediment Control (TESC) Plan and identify best management practices (BMPs) to manage stormwater. The amount of stormwater runoff would not change during operation of the project because the project would be located within existing roadway right-of-way and areas associated with existing impervious surfaces.

6. **Are there any underground storage tanks present or to be installed? Include details of such tanks.**
   The geotechnical explorations will occur within the operational right-of-way, where there are no underground storage tanks (USTs). While there may be USTs present on adjacent parcels, we do not anticipate the boring will impact those USTs. The project does not include the installation of any underground storage tanks.

7. **Will there be any liquid or solid waste generated? If so how will it be disposed of?**
   No liquid or solid waste would be generated by the project.

8. **What is the depth of excavation?**

The borings will extend to a maximum depth of 25 feet.

9. **Are there any wells in the area that may provide direct routes for contaminates to access the aquifer and how close are they to the project?**
   There are no known wells in the project area.

10. **Are there any hazardous waste sites in the project area, especially if the waste site has an underground plume with monitoring wells that may be disturbed? Include details.**
    There are no hazardous waste sites in the project area with an underground plume with monitoring wells that would be disturbed. Please refer to Attachment B for the Hazmat Site Figures.

    Parametrix reviewed an environmental database search and identified and screened sites within the Division Street BRT corridor that have known or suspected conditions that could impact the project. The majority of sites were found to have low potential risk and no likely impact on the project. Several sites were identified as having moderate to high potential risk.

    Before geotechnical investigations begin, the contractor will prepare a contaminated media management plan (CMMP) to adhere to during boring activities. The depth to groundwater is approximately 100 feet or more below ground surface for the majority of the corridor. Groundwater is much shallower near the Spokane River(within 20 to 50 feet below ground surface); however, this portion of the project is outside of the Spokane County Aquifer Protection Area (APA) and the Wellhead protection area. Additionally, the borings will be drilled and sealed in accordance with Washington State Department of Ecology well drilling procedures; therefore no impacts to groundwater are anticipated

11. **Are there any deep pilings that may provide access to the aquifer?**
    There are no pilings associated with the project.

12. **Are Best Management Practices planned to address any possible risks or concerns?**
    The SWPPP would identify BMPs to address stormwater during geotechnical investigations. Project contractors would adhere to a CMMP if contaminated soil is encountered during the project.

13. **Is there any other information that could be helpful in determining if this project may have an effect on the aquifer?**
    At this time, there is no known additional information associated with potential effects on the aquifer.

14. **Does this Project include any improvements that may be beneficial to the aquifer, such as improvements to the wastewater treatment plan?**

This project does not propose any improvements that could be beneficial to the aquifer such as enhancements to the wastewater treatment plan.

The EPA Sole Source Aquifer Program may request additional information if impacts to the aquifer are questionable after this information is submitted for review.