CITY OF BLOOMINGTON

NOTICE OF COMMENT PERIOD

NOTICE IS HEREBY GIVEN that the City of Bloomington wishes to notify all interested parties of the availability of an Environmental Assessment Worksheet (EAW) for the proposed Oxboro Lake Maintenance Project. The EAW includes review of sediment removal, culvert reconstruction and some shoreline stabilization and restoration within Oxboro Lake. The project will improve the lake's functionality and water quality while improving the quality of the water leaving the lake and flowing into Nine Mile Creek. The EAW, which assesses the potential environmental impacts of electronically the project, will be available to view at https://letstalk.bloomingtonmn.gov/oxboro and during business hours at the following location:

• Bloomington City Hall, 1700 West 98th Street, Bloomington, MN 55431

NOTICE IS FURTHER GIVEN that a 30-day public comment period for the EAW began on July 20, 2021. A Project Information and Public Meeting will also be conducted at 6:30 pm on Thursday, August 12, 2021 at Oxboro Lake Park (9301 Syndicate Avenue).

The purpose of this notice is to provide citizens the opportunity to comment on the EAW. Individuals or representatives of organizations are encouraged to submit written comments prior to 4:00 p.m. on Thursday, August 19, 2021. Please submit comments to Steve Gurney, Water Resources Specialist, City of Bloomington, 1700 West 98th Street, Bloomington, MN 55431.

All interested parties will be heard.

Dated this 22nd day of July 2021.

Steve Gurney Water Resources Specialist

The City of Bloomington is subject to Title II of the Americans with Disabilities Act, which prohibits discrimination on the basis of disability by public entities. The City is committed to full implementation of the Act to our services, programs, and activities. Information regarding the provisions of the Americans with Disabilities Act is available from the City Administrator's office at 952-563-8700.

ENVIRONMENTAL ASSESSMENT WORKSHEET

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at:

<u>http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm</u>. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project title: Oxboro Lake Maintenance Project

2. Proposer: City of Bloomington

Contact person: Steve Gurney Title: Civil Engineer, Water Resources Address:1700 West 98th Street City, State, ZIP: Bloomington, MN 55431 Phone: 952.563.4606 Fax: Email: sgurney@bloomingtonmn.gov

3. RGU: City of Bloomington

Contact person: Steve Gurney Title: Civil Engineer, Water Resources Address:1700 West 98th Street City, State, ZIP: Bloomington, MN 55431 Phone: 952.563.4606 Fax: Email: sgurney@bloomingtonmn.gov

4. Reason for EAW Preparation: (check one)

| 1 | |
|-----------------|--------------------|
| Required: | Discretionary: |
| EIS Scoping | Citizen petition |
| X Mandatory EAW | □ RGU discretion |
| - | Proposer initiated |
| | — |

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s): Wetlands and Public Waters (MR4410.4300 subpart 27A).

5. Project Location:

County: Hennepin City/Township: Bloomington PLS Location (¼, ¼, Section, Township, Range): SE ¼ of the SW ¼ of Section 10, T27N, R24W NW ¼ of the NW ¼ of section 15, T27N, R 24W Watershed (81 major watershed scale): Minnesota River- Shakopee (33) GPS Coordinates: 44.834097, -93.282234 Tax Parcel Number: 1002724340033, 1502724220025, 1502724220028, 1502724220027

At a minimum attach each of the following to the EAW:

- County map showing the general location of the project (Figure 1);
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable) (**Figure 2**); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan (**Figure 3**).

6. Project Description:

a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50 words).

The City of Bloomington proposes to complete a maintenance project to restore the hydraulic capacity and remove accumulated sediment within Oxboro Lake. The project will involve sediment removal, culvert reconstruction and some shoreline stabilization and restoration. The project will improve the lake's functionality and water quality while improving the quality of the water leaving lake and flowing into Nine Mile Creek.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

Oxboro Lake is located within the City of Bloomington, Hennepin County, MN. The lake is entirely owned by the City of Bloomington and is a DNR Public Water (PWI No. 11P). The proposed project will include maintenance activities that will restore the lake's depth, minimize transport of sediments, reconstruct culverts, and stabilize shoreline areas near outfalls. To accomplish these goals, the following will occur:

- Excavate up to 100,000 cubic yards of unconsolidated sediment from the lake.
- Remove trees at construction access points. Trees identified for removal are primarily green ash (*Fraxinus pennsylvanica*), boxelder (*Acer negundo*), and buckthorn (*Rhamnus cathartica*).
- Stabilize shoreline and reduce erosion by providing 3:1 slope along disturbed access areas.
- Reconstruct storm sewers in the northwest and northeast to improve flow of water and reduce erosion potential.
- Restore disturbed upland areas with native vegetation.

Excavation

The primary component of the Oxboro Lake Maintenance Project involves removing between 65,000 and 100,000 cubic yards of unconsolidated, accumulated sediment from the bottom of the lake to restore its depth to historic levels. This will restore storage volume within the lake. The water quality and clarity are also expected to improve due to this project. No excavation below the confining layer of the lake will occur.

The project has two alternatives. At a minimum, the project would involve the excavation of 65,000 cubic yards of accumulated sediment in the southern bay and northern bay, with no excavation across the center of the lake (Alternate 1, **Figure 4a**). Alternate 2 would involve excavation across the southern and center of the lake and at the northwest and northeast outfalls (**Figure 4b**). This alternate would involve excavation of 100,000 cubic yards of accumulated sediment. For the purpose of this EAW, both alternates are being assessed to capture all potential impacts.

Shoreline Stabilization and Erosion Minimization

The existing slopes at the proposed site access areas are eroded and present erosion issues. To reduce erosion and improve the stability of the shoreline, the slopes of the proposed site access areas will be reshaped at a 3:1 slope. The storm sewers in the northwest and northeast portions of the lake will be replaced, and riprap will be installed at these culverts and three other small outfalls within the project area to prevent scour. Riprap will be installed at the large culvert outfalls instead of bioengineering techniques because there is limited space to change the slope grade at these locations, and riprap will be installed at the three additional small pipe outfalls for erosion protection. The angle of the culvert in the northwest will also be realigned to redirect its flow from the shore. Disturbed access areas will have erosion control blankets and perimeter control installed for erosion control and will be restored by placing loam topsoil and reseeding with a mesic/pollinator mix.

Temporary Construction Entrances and Staging Area

The proposed project identifies four options for temporary construction entrance locations. All four accesses may, or may not, be used at the contractor's discretion. The temporary construction entrance location options are (1) off Syndicate Ave S and W 93rd Street to the northwest of the project area, (2) off Blaisdell Ave S and 93rd Street, northeast of the site, (3) off Grand Ave S, southwest of the site and (4) off Syndicate Ave. S, southwest of the project area (**Figure 4a, 4b**). All construction entrances will require temporary granular fill (1 = 80 cy; 2 = 263 cy; 3 = 875 cy; 4 = 841 cy), will be 20 feet wide, have a 10 percent maximum grade and have a 3:1 maximum side slope.

The construction contractor will also have the option to utilize properties owned by the City of Bloomington as a staging area located at 9244 Grand Ave S, 9439 Garfield Ave S, and 9431 Garfield Ave S. If used, erosion and sediment control BMPs will be installed over the entire staging area for the duration of the project.

Tree Removal and Restoration

Tree removal will be required to grade the construction entrances. Depending on which construction entrances are chosen by the contractor up to approximately 100 trees may be removed. The trees to be removed are primarily green ash, boxelder, and buckthorn. To promote natural mixing of Oxboro Lake, no tree replacement is proposed. The restoration of these construction entrances will consist of native plant mixes and shrubs. The construction staging area, if used, will be restored to its original grade and furnished with topsoil, seeded with MNDOT mix (25-151 lawn) and stabilized with erosion control blanket.

Timing and Duration

The project is expected to bid in October and begin construction as soon as November 2021 and is expected to last two years though it may be less if weather conditions are favorable.

c. Project magnitude:

| Total Project Acreage | 24.1 |
|---|------|
| Linear project length | N/A |
| Number and type of residential units | N/A |
| Commercial building area (in square feet) | N/A |
| Industrial building area (in square feet) | N/A |

| Institutional building area (in square feet) | N/A |
|--|-----|
| Other uses – specify (in square feet) | N/A |
| Structure height(s) | N/A |

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The purpose of this project is to remove historic sediment accumulation at stormwater outfalls, improve the treatment efficacy for future sediment deposition and reduce nutrient transport through Oxboro Lake. The project is being proposed by the City of Bloomington and will positively affect its residents by restoring Oxboro Lake to a condition closer to its pre-settlement depth, restoring the hydraulic capacity of the lake, and improving water quality in the lake and downstream Nine Mile Creek. Restoration of the upland disturbed areas with native plantings will also provide habitat for pollinators and other wildlife.

- e. Are future stages of this development including development on any other property planned or likely to happen?
 Yes X No
 If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.
- f. Is this project a subsequent stage of an earlier project? □ Yes X No If yes, briefly describe the past development, timeline and any past environmental review.
- 7. Cover types: Estimate the acreage of the site with each of the following cover types before and after development:

| | Before | After | | Before | After |
|-----------------|--------|-------|------------------|--------|-------|
| | | | | | |
| Wetlands | 0 | 0 | Lawn/landscaping | 2.2 | 2.45 |
| Deep | 16.9 | 16.9 | Impervious | 0 | 0 |
| water/streams | | | surface | | |
| Wooded/forest | 5 | 4.75 | Stormwater Pond | 0 | 0 |
| Brush/Grassland | 0 | 0 | Other (describe) | | |
| Cropland | 0 | 0 | | | |
| | | | TOTAL | 24.1 | 24.1 |

8. Permits and approvals required: List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

| Unit of Government | Type of application | Status |
|---------------------------------|-------------------------------|------------------------------|
| State | | |
| Department of Natural Resources | Public Waters Work Permit | To be obtained |
| Department of Natural Resources | Water Appropriation/ | To be obtained |
| | Dewatering | |
| Pollution Control Agency | NPDES Construction Stormwater | |
| | Permit | To be obtained |
| Local | | |
| Nine Mile Creek Watershed | | |
| District | Erosion Control Permit | To be obtained |
| City of Bloomington | Grading Permit | To be obtained, if necessary |
| | WCA No Loss | To be obtained, if necessary |

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 9-18, or the RGU can address all cumulative potential effects in response to EAW Item No. 19. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 19

9. Land use:

- a. Describe:
 - i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

The existing site consists of an open water basin surrounded by upland that has been developed with urban uses. Oxboro Lake is within and is owned by the City of Bloomington. The lake is within Oxboro Lake Park. Nicollet Avenue, east of the project, has an on-road bike facility. Maplewood Park is located 0.25 miles to the southeast and Vanderbie Park is located 0.35 miles to the northwest. Both are connected to Oxboro Lake via sidewalks. The lands adjacent and surrounding Oxboro Lake have various land uses. Syndicate Ave S is to the north and northwest, low density residential use takes up large portions of the north, east, south, and west with industrial areas to the west of the project area and north of Syndicate Ave S and high density residential east adjacent the site.

ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

The City of Bloomington's 2040 Comprehensive Plan indicates that the planned land use for the project area and its surrounding areas are open water, public, low and high density residential and industrial (**Figure 5**). The land use is proposed to remain the same.

The Nine Mile Creek Watershed District Water Management Plan has no improvements planned specific to Oxboro Lake except flood control.

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

Oxboro Lake is within the Flood Hazard (FH) Overlay District, but this overlay does not extend beyond the lake boundary. There are no special zoning provisions related to the development of shoreland in the project area. Oxboro Lake is mapped as Zone A on the current FEMA maps (**Figure 6**). The City's Hydrology & Hydraulics model indicates the lake overtops on the west side of Syndicate Ave S and the project will maintain this condition. The project area does not have scenic rivers, critical area, or agricultural preserves within or adjacent its boundary.

b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

Land uses in the project area are not changing. The project's goals and impacts are directly proportional to the improvement of the environmental quality of Oxboro Lake and its surrounding areas. The project will not impact surrounding parks or trails and is compatible with the land uses and zoning of the city.

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

This project has no foreseeable incompatibilities with the existing and future land uses and presents a net positive impact to the surrounding areas. During the construction, erosion control best management practices will be placed along slopes and in proposed access areas. The proposed project is consistent with maintenance activities aimed at environmental quality, water quality, reduced flooding and erosion minimization.

10. Geology, soils and topography/land forms:

a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

According to the 2018 Minnesota Geologic Survey maps, bedrock depth varies at the site between 301 and 475 feet below grade and consists of the Jordan sandstone on the northern portion of the project area, the St. Lawrence Formation on the southern and north central portion of the project area, and the Lone Rock Formation in the south-central portion of the project area. The Jordan sandstone consist of medium to coarse grained friable, quartzose sandstone, the St Lawrence Formation consists of dolomitic, feldspathic siltstone with interbedded fine-grained sandstone and shale, and the Lone Rock Formation consists of glauconitic, feldspathic, sandstone and siltstone with thin shale partings. No surface geology data was available for the project area. The Minnesota Department of Health Minnesota Well Index identified multiple wells within 1,000 feet of the project area and only one (unique well ID 205256) encountered bedrock at a depth of 260 feet below grade. This well was located approximately 700 feet northeast of the project area and encountered the Shakopee limerock at a depth of 260 to 282 feet below grade followed by the Jordan sandrock at a depth of 282 to the well's terminal depth of 308 feet below grade. Shallow soils encountered in the surrounding wells identified alternating layers of sand, clay, gravel, and silt to depths ranging between 29 and 195 feet below grade.

The Minnesota DNR Aggregate Resource Web Map did not identify any gravel pits existing at the project area and according to the Minnesota Karst Land Map, the project area is not located near a region that is prone to surface karst feature development.

Based upon these geological findings, no project design limitations are anticipated.

b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b. ii.

<u>Soils</u>

The site soil information was retrieved from the U.S Department of Agriculture's Web Soil Survey database. The soil within the project area is generally found in hills on outwash plains and hills on stream terraces. Approximately 70.1 percent of the project area is open water and 29.9 percent is primarily soils of the Urban land -Malardi complex, 0 to 8 percent slopes (**Figure 8**).

| Map Unit Symbol | Map Unit Name | Project area (Acres) | Percentage of Project area |
|-----------------|-------------------------------------|----------------------------|-------------------------------|
| L55B | Urban land- Malardi complex, 0 to 8 | | |
| | percent slopes | 7.2 | 29.9 |
| W | Water | 16.9 | 70.1 |

The Urban land – Malardi complex, 0 to 8 percent slopes is in hydrologic soil group A due to its low runoff potential. The NRCS classifies hydrologic soil group A soils as soils with infiltration rates greater than 0.30 inches per hour and with textures of sand, sandy loam, loamy coarse sand, and gravelly sand.

Oxboro Lake sediment sampling and analysis was conducted in July of 2020 to characterize the allowable uses for the sediment to be dredged. Details of the sediment sampling can be found in the Oxboro Lake sediment analysis memo developed for the City of Bloomington (**Appendix B**).

The sediment analysis consisted of composite samples taken from six locations on Oxboro Lake. The analysis determined that based on the composite samples, the dredged sediments are suitable for residential and industrial reuse.

| Sediment Sample locations | Management levels |
|---------------------------|---|
| BL-01 | Level 0.3- Nonregulated material (suitable for residential use) |
| BL-02 | Level 2.3 Regulated material (suitable for industrial use) |
| BL-03 | Level 4.1 Regulated material (suitable for industrial use) |
| BL-04 | Level 0.8 Nonregulated material (suitable for residential use) |
| BL-05 | Level 2.5 Regulated material (suitable for industrial use) |
| BL-06 | Level 6.7 Regulated material (suitable for industrial use) |

Topography

A survey of the project's upland area and storm sewer outfalls and the use of LiDAR technology was used in creating the topographic contours of the project area. The existing lowest contour of the project area is 801 feet, and the proposed lowest contour is 795 feet.

Erosion/Steep Slopes

Erosion control measures will be implemented during construction and a combination of rip rap and willow waddles will be installed to strengthen and restore the shoreline and combat erosion permanently in areas where the outfalls are being replaced. The slopes around the proposed access areas will be flattened to no more then 3:1 slope.

A Stormwater Pollution Prevention Plan (SWPPP) will be created with the plan set prior to construction. The SWPPP will incorporate appropriate erosion control Best Management Practices (BMPs) along with project phasing and scheduling to reduce erosion control during and after construction. Erosion control BMPs may include, but not be limited to erosion control blanket, silt fence, biorolls, and inlet protection.

NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 11 must be consistent with the geology, soils and topography/landforms and potential effects described in EAW Item 10.

11. Water resources:

- a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
 - i. Surface water lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

The project area contains one DNR public water, Oxboro Lake (DNR Public Water ID No. 11P; **Figure 6**). The project is located within the Minnesota River- Shakopee watershed. (Major Watershed No. 33) and the lake discharges to Nine Mile Creek. This segment of Nine Mile Creek has an approved impairment for benthic macroinvertebrate bioassessments, chloride, *Escherichia coli*, and fishes bioassessments. It is approximately 1.3 miles southwest of the discharge point of Oxboro Lake.

A wetland delineation was conducted in 2020 at a parcel on the southern end of Oxboro (Appendix C). That delineation found a small fringe wetland. Due to the relatively steep slopes surrounding Oxboro, the extent of wetland is restricted. During site evaluations, it was determined that this wetland delineation was deterministic of the entire shoreline. Oxboro Lake was determined to not be a Water of the United States and is not subject to the US Army Corps of Engineers jurisdiction. Documentation from these agencies is in **Appendix C**.

There are no MPCA 303d impaired waters within the project area or within a mile of the project area.

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

According to the *Minnesota Hydrogeology Atlas* series HG-03 the groundwater is within 10 - 20 feet below the ground surface around the lake edge. The project area is in a Minnesota Department of Health (MDH) wellhead protection area and within the City of Bloomington's Drinking Water Supply Management area (DWSMA Mn-0665). The project area is classified as a low vulnerability under the DWSMA.

| Well No. | Surface Elevation (feet) | Depth (feet) | Location (Direction from site) |
|------------|--------------------------|--------------|--------------------------------|
| 205254 | 822 | 221 | Northwest |
| 205256 | 820 | 308 | Northeast |
| 222941 | 820 | 38 | North |
| 222947 | 817 | 41 | West |
| 222948 | 820 | 29 | West |
| 222991 | 812 | 42 | East |
| 222992 | 823 | 35 | Southeast |
| 223018 | 821 | 109 | Southwest |
| 223019 | 828 | 195 | Southwest |
| 223344 | 815 | 819 | Southwest |
| 644902 | 820 | 34 | Northwest |
| 644903 | 824 | 37 | West |
| 1000023870 | 827 | null | Southwest |

The following wells are located on parcels within and around the project area. None will be impacted by the project.

- b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.
 - i. Wastewater For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

The proposed project will not produce wastewater.

2) If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.

The proposed project will not produce wastewater.

3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.

The proposed project will not produce wastewater.

ii. Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

This project does not increase impervious surface and will therefore not require permanent stormwater management BMPs. However, during and following construction activities, including dewatering and stockpiling of excavated materials, erosion and sediment control BMPs will be incorporated in the design to reduce the transmission of sediment downstream. Temporary erosion control BMPs will be utilized in conformance with the NPDES requirements and may include silt fence, sediment logs, erosion control blanket, and inlet protection. Additional sediment control will be provided during the dewatering portion of the project, in the form of a temporary riser structure or equivalent.

Permanent erosion control BMPs will include rip rap stabilization for disturbed shorelines adjacent to storm sewer outlets and outfalls.

iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

Oxboro Lake will be dewatered to allow for ease of excavation when the ground is frozen during the winter months. The lake will be dewatered through a 42-inch pipe in the northwest corner and discharged into Nine Mile Creek (**Figure 7**). A temporary pipe will be connected for dewatering. The city will monitor the flows in the pipe during dewatering to prevent erosion and downstream flooding. A DNR water appropriation permit is required and will be obtained prior to any dewatering activity.

The city will conduct a public hearing prior to the temporary drawdown. The public hearing will meet the requirements of MN Statute 103G.408.

- iv. Surface Waters
 - a) Wetlands Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.

Based on the wetland delineation, there is likely a wetland fringe surrounding the entire lake. The extent of the wetland has been determined to be constrained by the shoreline gradient. The proposed grading of the shoreline either leaves the existing grade or decreases the slope. Therefore, the wetland fringe will not be lost and in some places may expand. A No Loss approval through WCA may be required. Erosion control and establishment of native species should limit any biological degradation of these wetland zones. Removal of invasive and weedy woody vegetation, such as buckthorn and box elder, should help to improve species diversity in the long term. Oxboro Lake was determined to not be a Water of the United States and is not subject to the US Army Corps of Engineers jurisdiction. Documentation from these agencies is in **Appendix C**.

b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage. The project area contains one public water basin, Oxboro Lake (Public Water ID No. 11P; **Figure 6**) and is within the Minnesota River-Shakopee Watershed (Major Watershed No.33). The lake is regulated by the DNR, which regulates public waters below the ordinary high water (OHW) elevation.

The project involves the temporary draining of the basin and sediment removal of up to 100,000 cubic yards. There is no compensatory mitigation proposed because the project will only remove accumulated sediment and will result in improved function of the lake. Erosion and sediment control BMPs, such as erosion control blanket, silt fence, inlet protection, riprap outfall protection, and a temporary riser during dewatering, will be in place throughout the duration of the project to minimize the potential for turbidity/sedimentation.

Watercraft usage will not be affected by the project.

12. Contamination/Hazardous Materials/Wastes:

a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

The city's consultant - WSB - reviewed public database information to identify sites that pose a contamination risk to the project area. The Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Agriculture (MDA) What is in My Neighborhood (WIMN) online databases were reviewed on June 1, 2021. The purpose of the MPCA/MDA WIMN database review was to determine if the project area, adjacent sites, or surrounding area sites (within 500 feet) were listed in a leak or spills database or other known databases indicating the presence of contamination. The MPCA/MDA WIMN listings are illustrated on **Figure 9**.

No listings indicating a hazardous material spill or release were identified at the project area.

Two sites (Sites 4 and 6) were identified adjacent to the project area (see **Figure 9**). The sites are associated with two listings which do not indicate potential contamination. One hazardous waste generator listing was identified at Site 4. Inclusion on the hazardous waste generator database indicates the site generates hazardous waste requiring a permit. One (1) underground storage tank (UST) listing was identified at Site 6. Inclusion on the tanks database does not indicate a petroleum spill or release.

Four sites (Sites 1, 2, 3, and 5) were identified in the surrounding area (beyond adjacent) within 500 feet of the project area (see **Figure 9**). The sites are associated with 10 database listings. Three surrounding area listings indicate a hazardous material spill or release (leak and brownfields listings). Brownfields are potentially contaminated sites where the MPCA is assisting with environmental investigations and/or redevelopment activities. Non-petroleum brownfields are referred to as Voluntary Investigation and Cleanup (VIC) sites. Leak sites are

locations where a release of petroleum products has occurred from a tank system. Site closure / inactive status of Brownfields and Leak listings does not mean the site is free of contamination.

The following surrounding area sites are associated with potential contamination:

Site 1 - FedEx Express-FBLA, 9219 Grand Avenue South, Bloomington, MN 55420

- <u>Leak Site LS0017909</u>: The identified leak was discovered in March 2010, consisted of diesel, impacted groundwater, and was issued site closure by the MPCA in January 2011. The release was from a fuel dispenser.
- <u>Leak Site LS0011214</u>: The identified leak was discovered in April 1998, consisted of hydraulic fluid, and was issued site closure by the MPCA in June 1998. The source of the leak is unknown.

Site 5 - Gjerdes Property, 9431 Garfield Avenue South, Bloomington, MN 55431

 <u>Brownfields BF0000407</u>: The southwest adjacent site located at 9431 Garfield Avenue (Site 5) was enrolled in the MPCA's Petroleum Brownfield and VIC Programs (ID BF0000407) from June 2017 to March 2020. A No Further Action for Soil / Response Action Plan Implementation Approval letter, issued for Site 5 by the MPCA and dated April 5, 2018, was obtained from the MPCA WIMN database. According to the letter, garages used for automobile detailing and painting occupied Site 5 in the 1940s. A subsurface investigation was completed at Site 5 in January 2017. The investigation identified multiple Resource Conservation and Recovery Act (RCRA) metals and polycyclic aromatic hydrocarbons (PAHs) in soil at concentrations greater than their respective MPCA Soil Reference Values (SRVs) for residential land use.

Approximately 400 tons of impacted soil and debris was removed from Site 5 between 2017 and 2018. During soil removal, empty drums, tires, possible asbestos containing materials (ACM) and miscellaneous debris was encountered. Post-excavation confirmation samples were collected and analyzed for RCRA metals, volatile organic compounds (VOCs), and PAHs. Results were below detection limits for VOCs and PAHS, and metal detections were within expected background ranges. Based on the soil removal and confirmation soil sample results, the site was issued closure by the MPCA on March 12, 2020.

Seven additional database listings were identified at sites surrounding the project area that do not indicate potential contamination (hazardous waste generator, tanks, and/or industrial stormwater listings).

It is possible that soil, groundwater, and/or soil vapor impacts associated with the surrounding area Leak and Brownfields listings (Sites 1 and 5) have impacted areas surrounding the project and could pose a contamination risk if future redevelopment involves excavation activities in the vicinity of these sites. The proposed project will not involve redevelopment of these areas, so potential for encountering contamination from these sites is low.

Oxboro Lake sediment sampling and analysis was conducted in July 2020 to characterize the allowable uses for the sediment to be dredged. Details of the sediment sampling can be found in the Oxboro Lake sediment analysis memo developed for the City of Bloomington (**Appendix B**).

The sediment analysis consisted of composite samples taken from six locations on Oxboro Lake. The analysis determined that based on the composite samples, the dredged sediments are suitable for residential and industrial reuse. The contractor will be responsible for identifying disposal locations for the soils. Disposal will not occur in wetlands.

| Sediment Sample Locations | Management Levels |
|---------------------------|---|
| BL-01 | Level 0.3- Nonregulated material (suitable for residential use) |
| BL-02 | Level 2.3 Regulated material (suitable for industrial use) |
| BL-03 | Level 4.1 Regulated material (suitable for industrial use) |
| BL-04 | Level 0.8 Nonregulated material (suitable for residential use) |
| BL-05 | Level 2.5 Regulated material (suitable for industrial use) |
| BL-06 | Level 6.7 Regulated material (suitable for industrial use) |

b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

During construction, solid waste and construction debris typical of a construction site may be produced. All waste and unused materials will be properly disposed of off-site and not allowed to be carried by runoff to a receiving channel or storm sewer system.

Upon completion, the project will not generate solid or hazardous wastes.

c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

During construction, hazardous waste typical of construction sites (e.g., fuel oil) will be present. Minimal amounts of gasoline may be stored on site, in approved containers with secondary leak protection. The potential for contamination is low and no toxic or hazardous materials will be present after construction. Fuel trucks and any other hazardous materials will be locked when not in use to avoid vandalism. Degreasing and washing of construction equipment onsite are prohibited by the city's standard construction specifications.

Upon completion, the project will not use or store hazardous materials.

d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal.

Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

Construction of the project will not involve the generation of a significant amount of hazardous waste.

The project will not use or store hazardous wastes during operation.

13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):

a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

The project area is a lake surrounded by public, residential and industrial land uses within the North Central Hardwood Forests ecoregion, though it has been fully developed for more than 50 years. The bottom of the lake comprised of mainly unconsolidated organic sediment material. The lake has limited fish population due to its uniform shallow depth and the volume of accumulated sediment to the northwest of the lake; however, work will occur outside of fish spawning exclusion dates. Due to Oxboro Lake's shallow depth, it typically freezes to the bottom in the winter and likely does not provide overwintering habitat for turtles. There are trees and vegetation along the shore. The trees within the area could provide perching and nesting for some birds however, the birds would more than likely be used to industrial and construction activities as the project area and surroundings have been developed with urban uses for over 50 years.

b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-1003) and/or correspondence number (ERDB ______) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

A NHIS request form has been submitted to the DNR for formal review, but results have not been received. Review of the NHIS data using license agreement LA-1003 did not identify any state-listed species within an approximate one-mile radius of the project area.

Review of the USFWS Information for Planning Consultation website indicated that one federal threatened species, the northern long-eared bat (*Myotis septentrionalis*) is present within Hennepin County. The DNR/USFWS's map that documents townships that contain known northern long-eared bat hibernacula or roost trees was reviewed and the project area is not within a township that contains either of these resources.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

The proposed project will have no permanent adverse effects to the wildlife and plant communities in and around the project area; therefore, there are no mitigation efforts anticipated.

The lake is only three feet deep in most areas and likely freezes to the bottom in normal years, thus not providing overwintering habitat for turtles. There is no notable fish population within the lake; however, the project will adhere to the fish spawning exclusion dates to minimize impacts, if any. Some fish mortality may occur because of the dewatering, but the project will ultimately restore the lake's depth and improve water quality and therefore fish habitat, so the temporary impacts are considered minimal.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

The proposed project intends to work outside of the fish spawning exclusion dates. This avoidance measure is intended to ensure that there are no significant, long-term, adverse effect on wildlife and habitat. The project also plans to improve habitat quality by installing willow waddles near culverts to reduce erosion and creating native plant communities by reseeding the disturbed lake shore areas with mesic prairie or pollinator seed mixes.

Tree removal will occur within the construction access areas. These removals are planned to occur between September – May; therefore, while it is not expected that northern long-eared bats are present in the project area any tree removal that may occur because of the project is not prohibited under the Endangered Species Act Section 4(d) rule adopted for the species (**Appendix C**).

The proposed project will use the BMPs provided by the US Department of Agriculture's National Invasive Species Information Center to prevent or mitigate invasive species. Actions such as equipment cleaning, chipping invasive species and securing soil disturbances will be taken to help prevent the spread of invasive species during project construction and operation.

14. Historic properties:

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

A search of the historical property information database was requested from the Minnesota State Historic Preservation Office (SHPO) for the project area to assess whether known historic structures or archaeological sites exist in the project's vicinity. There are no known archaeological sites or historic structures within or adjacent to the project. The project will not involve the excavation of undisturbed soils, so no impacts to cultural resources are expected.

15. Visual:

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

Oxboro Lake is owned by the City of Bloomington and is surrounded by Oxboro Lake Park. There are no scenic views or vistas on or near the project area. During construction, the surrounding residential and industrial properties will experience temporary visual impacts because of tree removal and construction. Following construction, the area will be enhanced visually through establishment of native plants and improved water clarity.

16. Air:

a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

No stationary sources of emissions are proposed as part of this project.

b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

The proposed project will generate minor increased traffic levels due to road closures during the construction period. The minor increase in traffic will result in the increase in vehicle emissions, however it will be negligible and confined to the construction period. The project's construction equipment will have emissions controls.

c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

The project's construction process is expected to generate fugitive dust consistent with the usual development construction practices. The nearest and most sensitive receptors of the construction activity are the residential and industrial properties adjacent the project area. Dust control measures will be consistent with City ordinances and the NPDES Construction Stormwater permit.

The proposed project is not anticipated to generate odors during or after the construction period.

17. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

The existing noise sources and levels near the project area are typical of industrial, residential and park/public open space areas. The nearest and most sensitive noise receptors of the construction activity are the residential and industrial properties adjacent the project area. Noise levels will temporarily increase during construction due to the heavy equipment completing the excavation, grading and sediment hauling. The use of heavy machinery will be in conformance of the local noise ordinances (7 am to 10 pm on weekdays, 9 am to 9 pm Saturday and no construction on Sunday). Noise levels will return to pre-construction levels after the completion of the project.

18. Transportation

a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

There will be temporary road closures on Syndicate Ave S, W 93rd St and Blaisdell Ave S and the cul-de-sac on Grand Ave S during the entirety of the construction process for the project (**Figure 10**). The cul-de-sac closure is not expected to impact traffic at all. Traffic impacts on W 93rd St and Blaisdell Ave S are also not expected to impact local traffic as the closure would not impact access for residents or the industrial development to the north. The road closure on Syndicate Ave would result in local traffic rerouting on either Lyndale north to 92nd St or on W 95th St west to Nicollet Ave S and then north to 92nd St. Both Lyndale Ave and Nicollet Ave can accommodate the minor amount of traffic from Syndicate Ave S.

The project will not change parking. The proposed project will not generate traffic, so no traffic studies have been completed to determine total average daily traffic or maximum peak hour traffic. Minor, temporary impacts to traffic are expected due to road closures and construction vehicles arriving at and leaving the site. All traffic levels are expected to revert to preconstruction conditions after construction. The project will not impact public transit.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. *If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW.* Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (*available at: http://www.dot.state.mn.us/accessmanagement/resources.html*) or a similar local guidance.

The existing ADT on Syndicate Ave. is 900 vehicles per day and will be rerouted to either Lyndale north to 92nd St or on W 95th St west to Nicollet Ave S and then north to 92nd St. The combination of construction traffic and diverted local traffic is not expected to exceed 250 trips during peak traffic hours or 2,500 total daily trips. The project construction may cause minor traffic inconveniences to roadway users on Syndicate Ave S but will have no effect on traffic congestion or impact the regional transportation system.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

Advanced notice signs shall be posted 7 days in advance of project-related closures to allow undisturbed access to the site for construction purposes. A detour plan will be incorporated into the construction plans during final design.

- **19. Cumulative potential effects:** (Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)
 - a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

It is anticipated that the project will bid in early October, begin construction as early as November 2021, and is expected to last two years but may be less if weather conditions are favorable. Project benefits will begin immediately after construction is complete in the form of flood retention improvements, accumulated sediment removal, water quality improvements and erosion minimization.

b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

There are no foreseeable future projects that will interact with this project to produce cumulative potential effects.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

Temporary impacts to wildlife and fish may occur because of the temporary dewatering and sediment removal. Minimization measures will be incorporated into the project plan, including measures to avoid or minimize impacts to fish during spawning season.

Impacts from erosion may occur but will be minimized by utilizing erosion control BMPs such as silt fence, erosion control blanket, inlet protections, and outlet riprap stabilization. The proposed project will provide benefits to the lake and its surroundings by reducing flooding, reducing erosion potential at the outfalls to the lake, improving water quality and restoring the depth and hydraulic capacity of the lake. The maintenance activity within Oxboro Lake will also result in improvements to downstream resources, such as Nine Mile Creek.

RGU CERTIFICATION. (The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature <u>Julu m. Jorg</u> Date 7/12/21 Title BLOOMINGTON CITY ENGINEER

APPENDIX A

Figures























APPENDIX B

Sediment Analysis Memo

Memorandum

| To: | Steve Gurney, City of Bloomington |
|-------|---|
| From: | Bill Alms, WSB Dan O'Neill, WSB |
| Date: | August 4, 2020 |
| Re: | 2020 Oxboro Lake Sediment Analysis WSB Project No. R-01633-000 |

Introduction

Oxboro Lake is a shallow lake within a mostly urban setting within the City of Bloomington. The lake receives stormwater runoff. The city engaged WSB to collect sediment cores in accordance with the Minnesota Pollution Control Agency's (MPCA) Managing Stormwater Sediment Best Management Practice Guidance. The work that was completed is described below.

Field Procedures

Sediment samples were collected on July 7th, 2020, from six locations on Oxboro Lake. The sample locations are depicted on the attached Sample Location Map. The sediment samples were collected as core samples and were submitted to Pace Analytical for the analysis of RCRA 8 metals, copper, polycyclic aromatic hydrocarbons (PAHs), and carcinogenic PAHs (cPAHs). The Pace Lab Report is attached.

Data Review

The results of the analysis were compiled into the MPCA Sediment Spreadsheet for comparison to Residential and Industrial Soil Reference Values (SRV)s. The cPAH results were used to calculate a benzo(a)pyrene (BaP) equivalence value, which was also compared to the SRVs. Each sample was assigned a management level based on the following:

Management Levels:

Level 0.1-1.9: Non-Regulated Material (Suitable for residential reuse) Level 2-23: Regulated Material Suitable for Industrial Reuse (Exceeds Residential SRV) Over Level 23: Regulated Material Not Suitable for Reuse (Exceeds Residential and Industrial SRVs, landfill disposal required).

The management levels identified for the 2020 Oxboro LakeSediment samples are:

- BL-01: Level 0.3
- BL-02: Level 2.3
- BL-03: Level 4.1
- BL-04: Level 0.8
- BL-05: Level 2.5
- BL-06: Level 6.7

Attachments

Sample Location Map MPCA Sediment Spreadsheet Pace Analytical Lab Report




| | | | Summar Sedin | ary of Stormwater Pond ment Testing Results (Non-detects as 0) | | | | | | | | | | | | | | | | | | |
|--|------------------|----------------------|--------------------|--|-----------|-------------|-------------|-----------|------------|-----------------------------|-----------|--------|-------|--------|--------|--------|--------|----------------|------------|----------|---------|-----|
| Project name: Oxboro Lake - 016333 | | | | | | | | | | | | | | | | | | | | | | I |
| Sample date: 7-7-2020 | | | | | | | | | | | | | | | | | | | | | | |
| · · | | | | | | | | | | Sample locations and depths | | | | | | | | | | 1 | | |
| | | | | | | | r | | | 1 | | | 1 | | | 1 | | | r | | | 1 |
| | | Residential SRV | Industrial SRV | | BI -01 | | | BI -02 | | | BI -03 | | | BL-04 | | | BL-05 | | | BL-06 | | |
| Chemical | limit* mg/kg | mg/kg | mg/kg | | DL-VI | | | DL-VL | | | DL-00 | | | DL-04 | | | DL-00 | | | DL-00 | | |
| Metals | | | • | | | | | | | | | | | | | | | | | | | i |
| Arsenic | | 9 | 20 | | 0.019 | | | 0.026 | | | 0.094 | | | 0.019 | | | 0.027 | | | 0.030 | | 1 |
| Copper | | 100 | 9000 | | 7.4 | | | 6.0 | | | 12.1 | | | 6.0 | | | 9.0 | | - | 10.8 | | l l |
| Noncarcinogenic PAHs | | | | | | | | | | | | | | | | | | | | | | i i |
| Acenaphthene | | 1,200 | 5,260 | | 0.0119 | 1 | | 0.113 | | | 0.227 | | | 0.106 | | | 0.119 | | | 0.267 | | i |
| Acenaphthylene | İ | na | na | | 0.0098 | | 1 | 0.0930 | | | 0.107 | | | 0.0877 | | | 0.0979 |) | | 0.105 | | l . |
| Anthracene | | 7.880 | 45,400 | | 0.0141 | | | 0.160 | | | 0.44 | | | 0.0522 | | | 0.176 | | | 0.714 | | 1 |
| Benzo(a.h.i)pervlene | | na | na | | 0.0110 | | | 0.0816 | | | 0.0305 | | | 0.0440 | | | 0.0859 | | | 0.232 | | Í |
| Fluoranthene | | 1,080 | 6,800 | | 0.266 | | | 2 | | | 4.75 | | | 0.798 | | | 2.48 | | | 8.1 | | Í |
| Fluorene | | 850 | 4,120 | | 0.0080 | | | 0.119 | | | 0.357 | | | 0.0711 | | | 0.121 | | | 0.401 | | 1 |
| 2-Methylnaphthalene | | 100 | 369 | | 0.0035 | | | 0.0328 | | | 0.0319 | | | 0.0309 | | | 0.0345 | 5 | | 0.0224 | | I |
| Naphthalene | | 10 | 28 | | 0.0112 | | | 0.106 | | | 0.0695 | | | 0.100 | | | 0.112 | | | 0.0672 | | i |
| Phenanthrene | | na | na | | 0.05 | | | 0.778 | | | 2.46 | | | 0.213 | | | 0.789 | | | 3.41 | | i |
| Pyrene | | 890 | 5,800 | | 0.204 | | | 1.51 | | | 3.39 | | | 0.623 | | | 1.88 | | | 6.06 | | i |
| | Penorting | | | Sito | | BaP | Sito | | BaP | Sito | | BaP | Sito | | BaP | Sito | | BaP | Sito | | BaP | Í |
| Carcinogenic PAHs/ | limit* | Potency Equiv. | | Conc. | | Equiv. | Conc. | | Equiv. | Conc. | | Equiv. | Conc. | | Equiv. | Conc. | | Equiv. | Conc. | | Equiv. | I |
| B[a]P Equivalents | mg/kg | Factor (PEF) | | mg/kg | | Conc. | mg/kg | | Conc. | mg/kg | | Conc. | mg/kg | | Conc. | mg/kg | | Conc. | mg/kg | | Conc. | 1 |
| Danza (a) anthroson a | | 0.10 | | 0.12 | 1 | 0.012 | 0.50 | - | 0.050 | 1.20 | 1 | 0.120 | 0.272 | | 0.027 | 0.76 | - | 0.076 | 2.50 | — | 0.250 | |
| Benzo(a)anthracene | | 0.10 | | 0.13 | | 0.013 | 0.59 | | 0.059 | 1.30 | | 0.130 | 1.05 | J | 0.027 | 2.00 | | 0.070 | 2.59 | ┝─── | 0.255 | 1 |
| Benzolaurana | | 1.00 | | 0.27 | | 0.027 | 2.15 | | 0.215 | 4.41 | | 1.620 | 0.26 | | 0.105 | 2.00 | | 1.020 | 2.00 | ┝─── | 2 900 | 1 |
| Chrysono | | 0.01 | | 0.10 | | 0.090 | 1.03 | | 0.000 | 2.42 | | 0.024 | 0.30 | | 0.356 | 1.02 | | 0.014 | 2.09 | | 2.090 | 1 |
| Dihenz(a b)aaridina | | 0.01 | | 0.10 | | 0.002 | 0.00 | ~ | 0.010 | 0.00 | ~ | 0.024 | 0.47 | ~ | 0.000 | 0.00 | ~ | 0.014 | 4.04 | | 0.040 | 1 |
| | | 0.56 | | 0.00 | Ż | 0.000 | 0.00 | ì | 0.085 | 0.00 | - | 0.142 | 0.00 | ż | 0.000 | 0.00 | ì | 0.000 | 0.00 | <u> </u> | 0.000 | |
| 7H-Dibenzo(c.d)carbazole | | 1.00 | | 0.00 | < | 0.000 | 0.00 | ۰ ۲ | 0.000 | 0.00 | < | 0.000 | 0.00 | , , | 0.000 | 0.102 | ~ | 0.000 | 0.00 | < | 0.000 | 1 |
| Dibenzo(a e)pyrene | | 1.00 | | 0.00 | j | 0.032 | 0.203 | Ļ | 0.203 | 0.00 | , | 0.242 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | | 0.448 | 1 |
| | | 10.00 | | 0.0129 | | 0.129 | 0.0913 | | 0.913 | 0.106 | | 1 060 | 0.00 | < | 0.000 | 0.0015 | , , | 0.915 | 0.189 | | 1 890 | |
| Dibenzo(a i)pyrene | | 10.00 | | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 1 |
| Dibenzo(a,I)pyrene | | 10.00 | | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | i |
| 7.12-Dimethylbenz(a)anthracene | 1 | 34.00 | | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | i |
| Indeno(1,2,3-cd)pyrene | 1 | 0.10 | | 0.07 | 1 | 0.007 | 0.52 | | 0.052 | 0.76 | - | 0.076 | 0.221 | J | 0.022 | 0.57 | | 0.057 | 1.33 | <u> </u> | 0.133 | i |
| 3-Methylcholanthrene | İ | 3.00 | | 0.0 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | i |
| 5-Methylchrysene | İ | 1.00 | | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.31 | 1 | 0.308 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | 0.00 | < | 0.000 | i |
| Total B[a]P Equivalents | | 2* | 23 | | 1 | 0.304 | | | 2.342 | | | 4.054 | | | 0.517 | | | 2.472 | | | 6.669 | i |
| Total B[a]P Equivalents - Kaplan Meier | | 2* | 23 | | | | | | | | | | | | 0.810 | | | | | | | í – |
| | | | - | | | | | | | | | | | | | | | | | | | |
| | * Based on bad | ckground threshol | d value (BTV) si | nce reside | ntial SRV | / calculate | ed to be be | elow an e | estimate o | of ambien | t backgro | ound | 1 | | 1 | | | 1 | 1 | | | |
| | | Residential SRV | (suitable for res | idential lan | nd use) | | | | | | | | | | | | | ER 103 | 14 7/11/22 | - I - | | |
| | | Industrial SRV (s | suitable for indus | strial land u | ise) | | | | l | | | | | | | | | $\backslash /$ | \sqrt{c} | in | | I |
| | | , | | | | • | | | | | | 1 | | | 1 | | | V | VJ | S | / | |
| "J" flagged data - sample concentration is above m | nethod detection | limit but below repo | orting limit | | | | | | | | | 1 | | | 1 | | | | | | | |
| SRV = soil reference value | | | | 1 | 1 | 1 | | | | | | 1 | | | 1 | | | | | | | |
| PAHs = polycyclic aromatic hydrocarbons | | | | | | | | | | | | | | | | | | | | <u> </u> | | |
| B[a]P = benzo[a]pyrene | | | | | | | | | | | | | | | | | | | | | | |
| conc. = concentration | | | | | | | | | | | | | | | | | | | | | | |
| B[a]P Equivalent - Each contaminant sample of | concentration is | multiplied by it's I | Potency Equivale | ency Facto | r (PEF) t | o obtain a | B[a]P eq | uivalent | | | | | | | | | | | | | | |
| concentration. All B[a]P equivalent concentration | ons are summe | d to calculate the | total B[a]P equiv | [a]P equivalent concentration. For nondetect data, use the | | | | | | | | | | | | | | | | | I | |
| procedures outlined in Appendix B of "Managin | g Stormwater S | ediment BMP Gu | idance For Muni | cipalities". | | | | | | | | | | | | | | | | | | ı |

| CITY OF BLOOMINGTON MINNESOTA | | Summary Sedim (N | y of Storm ent Testin on-detects as | water g Resi MDL) | Pond ults | | | | | | | | | | | |
|--|------------------------------------|-------------------------------------|---|-------------------------|---------------------------------|------------------------|---------------------------------|-----------------------------|---------------------------------|------------------------|---------------------------------|------------------------|---------------------------------|------------------------|---------------------------------|----------|
| Project name: Oxboro Lake - 016333 | | | | | | | | | | | | | | | | |
| Sample date: 7-7-2020 | | | | | | | | | | | | | | | | |
| | | | | | | | | Sample locations and depths | | | | | | | | |
| | | Residential SRV | Industrial SRV | | | | | | | | | | | | | |
| Chemical | Reporting limit* mg/kg | mg/kg | mg/kg | BL | -01 | BL | -02 | BI | L-03 | BL | 04 | BL | -05 | BL | -06 | |
| Metals | | | | | | | | | | | | | | | | |
| Arsenic | | 9 | 20 | 0.0 | 019 | 0.0 | 026 | 0. | 094 | 0. | 019 | 0.0 | 27 | 0.0 | 30 | |
| Copper | | 100 | 9000 | 7 | .4 | 6 | .0 | 1 | 2.1 | 6 | 5.0 | 9 | .0 | 10 |).8 | |
| Noncarcinogenic PAHs | | | | | _ | Ĭ | | İ | · | | | ľ | - | | | |
| Acenaphthene | | 1,200 | 5,260 | 0.0 | 119 | 0.4 | 113 | 0 | 227 | 0 | 106 | 0. | 119 | 0 3 | 267 | 1 |
| Acenaphthylene | | na | 0,200 | 0.0 | 098 | 0.0 | 930 | 0. | 107 | 0. | 877 | 0.0 | 979 | 0.1 | 05 | |
| Anthracene | | 7 880 | 45 400 | 0.0 | 141 | 0.0 | 160 | 0. | 44 | 0.0 | 522 | 0.0 | 76 | 0.1 | 714 | |
| Benzo(a h i)pervlene | | 7,000 pa | +3,400 pa | 0.0 | 110 | 0.0 | 816 | 0.0 | 0305 | 0.0 | 440 | 0.0 | 859 | 0.1 | 232 | |
| Elucronthono | | 1 090 | 6 900 | 0.0 | 266 | 0.0 | 010 | 0. | 75 | 0.0 | 708 | 0.0 | 18 | 0.2 Q | 1 | |
| Elucropo | | 1,000 | 4,120 | 0.2 | 080 | 2.0 | 110 | | 357 | 0.0 | 130 | 0.1 | 21 | 0/ | 101 | |
| 2 Mathukashthalana | | 100 | 4,120 | 0.0 | 000 | 0. | 220 | 0. | 1210 | 0.0 | 200 | 0.0 | 245 | 0 | 224 | |
| 2-Methylnaphthalene | | 100 | 309 | 0.0 | 112 | 0.0 | 106 | 0.0 | 1019 | 0.0 | 100 | 0.0 | 140 | 0.0 | 670 | |
| Napritialene | | 10 | 20 | 0.0 | | 0. | 770 | 0.0 | 1095 | 0. | 100 | 0. | 700 | 0.0 | 41 | |
| Phenanthrene | | na | na | 0.0 | 004 | 0.1 | 10 | 2 | .40 | 0.4 | 213 | 0.1 | 09 | 3. 6 | 41 | |
| Pyrene | | 890 | 5,800 | 0.2 | 204 | 1.3 | | 3 | .39 | 0. | 023 | 1. | 88 | 0. | 06 | |
| Carcinogenic PAHs/ B[a]P Equivalents | Reporting limit* mg/kg | Potency Equiv. Factor (PEF) | | Site Conc. mg/kg | BaP Equiv. Conc. mg/kg | Site Conc. mg/kg | BaP Equiv. Conc. mg/kg | Site Conc. mg/kg | BaP Equiv. Conc. mg/kg | Site Conc. mg/kg | BaP Equiv. Conc. mg/kg | Site Conc. mg/kg | BaP Equiv. Conc. mg/kg | Site Conc. mg/kg | BaP Equiv. Conc. mg/kg | |
| Benzo(a)anthracene | | 0.10 | | 0.13 | 0.013 | 0.59 | 0.059 | 1.30 | 0.130 | 0.272 | 0.027 | 0.76 | 0.076 | 2.59 | 0.259 | |
| Benzofluoranthenes (Total) | | 0.10 | | 0.27 | 0.027 | 2.15 | 0.215 | 4.41 | 0.441 | 1.05 | 0.105 | 2.88 | 0.288 | 7.63 | 0.763 | |
| Benzo(a)pyrene | | 1.00 | | 0.10 | 0.096 | 0.81 | 0.806 | 1.63 | 1.630 | 0.36 | 0.358 | 1.02 | 1.020 | 2.89 | 2.890 | |
| Chrysene | | 0.01 | | 0.16 | 0.002 | 1.03 | 0.010 | 2.42 | 0.024 | 0.47 | 0.005 | 1.42 | 0.014 | 4.04 | 0.040 | |
| Dibenz(a h)acridine | | 0.10 | | 0.0123 | 0.001 | 0.116 | 0.012 | 0.0760 | 0.008 | 0.110 | 0.011 | 0.123 | 0.012 | 0.0735 | 0.007 | |
| Dibenz(a,h)achane | | 0.56 | | 0.0046 | 0.003 | 0.151 | 0.085 | 0.25 | 0.142 | 0.0406 | 0.023 | 0.182 | 0.102 | 0.44 | 0.245 | |
| 7H-Dibenzo(c.g)carbazole | | 1.00 | | 0.0050 | 0.005 | 0.0470 | 0.047 | 0.0307 | 0.031 | 0.0444 | 0.044 | 0.102 | 0.050 | 0.0297 | 0.030 | |
| | | 1.00 | | 0.0030 | 0.032 | 0.203 | 0.203 | 0.0307 | 0.242 | 0.0444 | 0.043 | 0.0433 | 0.048 | 0.0257 | 0.448 | |
| Dibenzo(a,c)pyrene | | 10.00 | | 0.0017 | 0.129 | 0.0013 | 0.913 | 0.106 | 1 060 | 0.0711 | 0 711 | 0.0404 | 0.915 | 0.40 | 1 890 | |
| Dibenzo(a i)pyrene | | 10.00 | | 0.0098 | 0.098 | 0.0923 | 0.923 | 0.0603 | 0.603 | 0.0870 | 0.870 | 0.0972 | 0.972 | 0.0583 | 0.583 | I |
| Dibenzo(a l)pyrene | | 10.00 | | 0.0087 | 0.087 | 0.0826 | 0.826 | 0.0540 | 0.540 | 0.0770 | 0 779 | 0.0870 | 0.870 | 0.0522 | 0.522 | I |
| 7 12-Dimethylbenz(a)apthracene | | 34.00 | | 0.0130 | 0.473 | 0.131 | 4,454 | 0.0850 | 2,921 | 0.124 | 4,216 | 0.138 | 4,692 | 0.0831 | 2.825 | I |
| Indeno(1.2.3-cd)pyrene | | 0.10 | | 0.07 | 0.007 | 0.52 | 0.052 | 0.76 | 0.076 | 0.221 | 0.022 | 0.57 | 0.057 | 1.33 | 0.133 | 1 |
| 3-Methylcholanthrene | | 3.00 | | 0.0042 | 0.013 | 0.0402 | 0.121 | 0.0263 | 0.079 | 0.0370 | 0.114 | 0.0424 | 0.127 | 0.0254 | 0.076 | I |
| 5-Methylchrysene | | 1.00 | | 0.0026 | 0.003 | 0.0248 | 0.025 | 0.31 | 0.308 | 0.0234 | 0.023 | 0.0424 | 0.026 | 0.0157 | 0.016 | I |
| Total B[a]P Equivalents | | 2* | 23 | 0.0020 | 0.986 | 0.0240 | 8,749 | 0.01 | 8,234 | 0.0204 | 7,352 | 0.0201 | 9,270 | 0.0107 | 10,728 | I |
| Total B[a]P Equivalents - Kaplan Meier | | - 2* | 23 | | 0.000 | | 0.140 | | 0.204 | | 0.810 | | 0.270 | | .0.720 | 1 |
| | | - | 20 | | | | | | | | 0.010 | | | | | |
| | * Recod on ho | akaround throsho | ld value (PT\/) ei | nco rocido | ntial SBV | coloulate | d to bo l | holow on | octimato d | of ombiont | backgrou | nd | | | | |
| | Dased of Da | Residential SP | (suitable for res | idential lar | nd use) | calcuidle | | | Sumale | and and and | Sackyrou | | 1 | - 1 | 4 | <u> </u> |
| | | Industrial SBV/ | suitable for induc | trial land u | (G 000) | 1 | | - | | | | | 1 1 | ICH | γ | |
| | | industrial SRV (| | | 50) | 1 | 1 | - | | | | | V | 121 |) | |
| " I" flagged data - sample concentration is chose | method detection | on limit but below | reporting limit | | | 1 | 1 | - | | | | | | | | |
| SPV - soil reference value | metrioù delecti | ST III III DUI DEIOW | | | - | 1 | 1 | - | | | 1 | 1 | | | | |
| | | | | | | 1 | | | | | | | | | | <u> </u> |
| FARS - polycyclic aromatic nydrocardons | | | | | - | | | | | | - | - | | | | + |
| | | | | | | 1 | | | | | | | | | | <u> </u> |
| | L | | ا | .L, | | | J | | | | - | - | | | | <u> </u> |
| equivalent concentration. All B[a]P equivalent For nondetect data, use the procedures outline Municipalities". | concentrations ed in Appendix I | are summed to c B of "Managing S | alculate the total tormwater Sedim | B[a]P equ ent BMP (| ivalent co Guidance | ncentratio For | on. | | | | | | | | | |
| | | | | | | | | | | | | | | | | |



Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

July 24, 2020

Dan O'Neill WSB & Associates 178 East 9th St Suite 200 Saint Paul, MN 55101

RE: Project: Oxboro Lake Sed-Revised Report Pace Project No.: 10523852

Dear Dan O'Neill:

Enclosed are the analytical results for sample(s) received by the laboratory on July 07, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Minneapolis

This report was revised on July 24, 2020, to add results for copper.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jared Dickinson jared.dickinson@pacelabs.com (612)607-1700 Project Manager

Enclosures





Pace Analytical Services, LLC 1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

CERTIFICATIONS

Project: Oxboro Lake Sed-Revised Report Pace Project No.: 10523852

Pace Analytical Services - Minneapolis MN

A2LA Certification #: 2926.01 Alabama Certification #: 40770 Alaska Contaminated Sites Certification #: 17-009 Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064 Connecticut Certification #: PH-0256 EPA Region 8+Wyoming DW Certification #: via MN 027-053-137 Florida Certification #: E87605 Georgia Certification #: 959 Guam EPA Certification #: MN00064 Hawaii Certification #: MN00064 Idaho Certification #: MN00064 Illinois Certification #: 200011 Indiana Certification #: C-MN-01 Iowa Certification #: 368 Kansas Certification #: E-10167 Kentucky DW Certification #: 90062 Kentucky WW Certification #: 90062 Louisiana DEQ Certification #: 03086 Louisiana DW Certification #: MN00064 Maine Certification #: MN00064 Marvland Certification #: 322 Massachusetts DWP Certification #: via MN 027-053-137 Michigan Certification #: 9909 Minnesota Certification #: 027-053-137 Minnesota Dept of Ag Certification #: via MN 027-053-137 Minnesota Petrofund Certification #: 1240 Mississippi Certification #: MN00064 Missouri Certification #: 10100 Montana Certification #: CERT0092 Nebraska Certification #: NE-OS-18-06 Nevada Certification #: MN00064 New Hampshire Certification #: 2081 New Jersey Certification #: MN002 New York Certification #: 11647 North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Primary Certification #: MN300001 Oregon Secondary Certification #: MN200001 Pennsylvania Certification #: 68-00563 Puerto Rico Certification #: MN00064 South Carolina Certification #:74003001 Tennessee Certification #: TN02818 Texas Certification #: T104704192 Utah Certification #: MN00064 Vermont Certification #: VT-027053137 Virginia Certification #: 460163 Washington Certification #: C486 West Virginia DEP Certification #: 382 West Virginia DW Certification #: 9952 C Wisconsin Certification #: 999407970 Wyoming UST Certification #: via A2LA 2926.01



SAMPLE SUMMARY

Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------|--------|----------------|----------------|
| 10523852001 | BL-01 | Solid | 07/07/20 09:36 | 07/07/20 11:54 |
| 10523852002 | BL-02 | Solid | 07/07/20 09:57 | 07/07/20 11:54 |
| 10523852003 | BL-03 | Solid | 07/07/20 10:15 | 07/07/20 11:54 |
| 10523852004 | BL-04 | Solid | 07/07/20 11:01 | 07/07/20 11:54 |
| 10523852005 | BL-05 | Solid | 07/07/20 10:40 | 07/07/20 11:54 |
| 10523852006 | BL-06 | Solid | 07/07/20 10:27 | 07/07/20 11:54 |



SAMPLE ANALYTE COUNT

Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|------------------|----------|----------------------|------------|
| 10523852001 | BL-01 | EPA 6010D | DM | 8 | PASI-M |
| | | EPA 7470A | LMW | 1 | PASI-M |
| | | ASTM D2974 | JDL | 1 | PASI-M |
| | | EPA 8270E by SIM | СНЗ | 28 | PASI-M |
| 10523852002 | BL-02 | EPA 6010D | DM | 8 | PASI-M |
| | | EPA 7470A | LMW | 1 | PASI-M |
| | | ASTM D2974 | JDL | 1 | PASI-M |
| | | EPA 8270E by SIM | СНЗ | 28 | PASI-M |
| 10523852003 | BL-03 | EPA 6010D | DM | 8 | PASI-M |
| | | EPA 7470A | LMW | 1 | PASI-M |
| | | ASTM D2974 | JDL | 1 | PASI-M |
| | | EPA 8270E by SIM | СНЗ | 28 | PASI-M |
| 10523852004 | BL-04 | EPA 6010D | DM | 8 | PASI-M |
| | | EPA 7470A | LMW | 1 | PASI-M |
| | | ASTM D2974 | JDL | 1 | PASI-M |
| | | EPA 8270E by SIM | CH3 | 28 | PASI-M |
| 10523852005 | BL-05 | EPA 6010D | DM | 8 | PASI-M |
| | | EPA 7470A | LMW | 1 | PASI-M |
| | | ASTM D2974 | JDL | 1 | PASI-M |
| | | EPA 8270E by SIM | CH3 | 28 | PASI-M |
| 10523852006 | BL-06 | EPA 6010D | DM | 8 | PASI-M |
| | | EPA 7470A | LMW | 1 | PASI-M |
| | | ASTM D2974 | JDL | 1 | PASI-M |
| | | EPA 8270E by SIM | СНЗ | 28 | PASI-M |

PASI-M = Pace Analytical Services - Minneapolis



| Project: | Oxboro Lake Sed-Revised Report |
|----------|--------------------------------|
|----------|--------------------------------|

Pace Project No.: 10523852

| Sample: BL-01 | Lab ID: | 10523852001 | Collected | d: 07/07/20 | 0 09:36 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|-----------------------------------|-----------------|-----------------|--------------|--------------|---------|---------------------|----------------|--------------|------|
| Results reported on a "dry weight | " basis and are | adjusted for | r percent mo | oisture, sai | mple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010D MET ICP, TCLP | Analytical | Method: EPA | 6010D Prep | aration Me | thod: E | PA 3010A | | | |
| | Leachate I | Method/Date: | EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 8.59; Final | pH: 6.19 | | |
| | Pace Anal | vtical Services | s - Minneapo | lis | | • | | | |
| | | , | | | | | | | |
| Arsenic | <0.019 | mg/L | 0.50 | 0.019 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7440-38-2 | |
| Barium | 1.6 | mg/L | 1.0 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7440-39-3 | |
| Cadmium | <0.0016 | mg/L | 0.050 | 0.0016 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7440-43-9 | |
| Chromium | 0.0054J | mg/L | 0.50 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7440-47-3 | |
| Copper | 7.4J | ug/L | 100 | 6.0 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7440-50-8 | |
| Lead | 0.046J | mg/L | 0.50 | 0.0098 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7439-92-1 | |
| Selenium | <0.029 | mg/L | 0.10 | 0.029 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7782-49-2 | |
| Silver | <0.0029 | mg/L | 0.10 | 0.0029 | 1 | 07/15/20 10:48 | 07/16/20 09:52 | 7440-22-4 | |
| 7470A Mercury, TCLP | Analytical | Method: EPA | 7470A Prepa | aration Met | hod: E | PA 7470A | | | |
| | Leachate I | Method/Date: | EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 8.59; Final | pH: 6.19 | | |
| | Pace Anal | ytical Services | s - Minneapo | lis | | | | | |
| Mercury | <0.24 | ug/L | 0.60 | 0.24 | 1 | 07/15/20 12:33 | 07/16/20 14:23 | 7439-97-6 | |
| Dry Weight / %M by ASTM D2974 | Analytical | Method: ASTN | M D2974 | | | | | | |
| | Pace Anal | ytical Services | s - Minneapo | lis | | | | | |
| Percent Moisture | 73.6 | % | 0.10 | 0.10 | 1 | | 07/14/20 13:12 | | N2 |
| 8270E MSSV CRAH by SIM | Analytical | Method: EPA | 8270E by SI | M Prenara | tion Me | athod: EPA 3550C | | | |
| | Pace Anal | vtical Services | s - Minneapo | lis | | | | | |
| Acenaphthene | <11.9 | ua/ka | 37.9 | 11.9 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 83-32-9 | |
| Acenaphthylene | <9.8 | ua/ka | 37.9 | 9.8 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 208-96-8 | |
| Anthracene | 14.1J | ua/ka | 37.9 | 2.9 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 120-12-7 | |
| Benzo(a)anthracene | 126 | ua/ka | 37.9 | 4.4 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 56-55-3 | |
| Benzo(a)pvrene | 95.8 | ua/ka | 37.9 | 3.4 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 50-32-8 | |
| Benzo(g.h.i)pervlene | 11.0J | ua/ka | 37.9 | 4.9 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 191-24-2 | |
| Benzofluoranthenes (Total) | 269 | ua/ka | 114 | 9.2 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | | N2 |
| Chrvsene | 163 | ua/ka | 37.9 | 5.4 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 218-01-9 | |
| Dibenz(a,h)acridine | <12.3 | ua/ka | 37.9 | 12.3 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 226-36-8 | |
| Dibenz(a,h)anthracene | <4.6 | ua/ka | 37.9 | 4.6 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 53-70-3 | |
| Dibenzo(a.e)pyrene | 31.7J | ua/ka | 37.9 | 4.9 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 192-65-4 | |
| Dibenzo(a,h)pyrene | 12.9J | ua/ka | 37.9 | 8.0 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 189-64-0 | M1 |
| Dibenzo(a.i)pyrene | <9.8 | ua/ka | 37.9 | 9.8 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 189-55-9 | M1 |
| Dibenzo(a,l)pyrene | <8.7 | ua/ka | 37.9 | 8.7 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 191-30-0 | M1 |
| 7H-Dibenzo(c.g)carbazole | <5.0 | ua/ka | 37.9 | 5.0 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 194-59-2 | |
| 7.12-Dimethylbenz(a)anthracene | <13.9 | ua/ka | 37.9 | 13.9 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 57-97-6 | |
| Fluoranthene | 266 | ua/ka | 37.9 | 3.3 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 206-44-0 | |
| Fluorene | <8.0 | ua/ka | 37.9 | 8.0 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | 68.4 | ug/kg | 37.9 | 4 2 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 193-39-5 | |
| 3-Methylcholanthrene | <4.2 | ug/ka | 37.9 | 4.2 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 56-49-5 | |
| 5-Methylchrysene | <2.6 | ua/ka | 37.9 | 2.6 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 3697-24-3 | |
| 2-Methylnaphthalene | <3.5 | ua/ka | 37.9 | 3.5 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 91-57-6 | |
| Naphthalene | <11.2 | ug/kg | 37.9 | 11.2 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 91-20-3 | |
| | | | | | | | | | |



Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

| Sample: BL-01 | Lab ID: | 10523852001 | Collecte | d: 07/07/20 | 0 09:36 | Received: 07/ | /07/20 11:54 Ma | atrix: Solid | |
|---------------------------------|-------------------|------------------|------------|--------------|---------|--------------------|-----------------|--------------|------|
| Results reported on a "dry weig | ght" basis and ar | e adjusted for | percent m | oisture, saı | nple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8270E MSSV CPAH by SIM | Analytical | Method: EPA 8 | 270E by SI | IM Prepara | tion Me | ethod: EPA 3550C | | | |
| | Pace Ana | lytical Services | - Minneapo | olis | | | | | |
| Phenanthrene | 50.8 | ug/kg | 37.9 | 6.4 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 85-01-8 | |
| Dumana | 204 | | 27.0 | 4 5 | 4 | 07/07/00 40.00 | 07/00/00 40.05 | 100.00.0 | |

| Pyrene | 204 | ug/kg | 37.9 | 4.5 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 129-00-0 | |
|----------------------|------|-------|--------|-----|---|----------------|----------------|-----------|----|
| Quinoline | <9.1 | ug/kg | 37.9 | 9.1 | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 91-22-5 | |
| Surrogates | | | | | | | | | |
| 2-Fluorobiphenyl (S) | 57 | %. | 42-125 | | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 321-60-8 | |
| p-Terphenyl-d14 (S) | 45 | %. | 46-125 | | 1 | 07/07/20 12:00 | 07/08/20 16:25 | 1718-51-0 | S5 |



| Project: | Oxboro Lake Sed-Revised Report |
|--------------------|--------------------------------|
| Pace Project No .: | 10523852 |

Pace Project No.:

| | | 405005000 | | 07/07/0/ | | | | | |
|-----------------------------------|-----------------|------------------|-----------------|--------------|---------|---------------------|----------------|---------------------|------|
| Sample: BL-02 | Lab ID: | 1052385200 | J2 Collected | : 07/07/20 | 09:57 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
| Results reported on a "dry weight | " basis and are | e adjusted fo | or percent moi | isture, sar | nple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010D MET ICP, TCLP | Analytical | Method: EPA | | aration Met | hod: E | PA 3010A | | _ | _ |
| | Leachate I | Method/Date | : EPA 1311; 07 | /14/20 14: | 20 Init | ial pH: 8.45; Final | pH: 5.89 | | |
| | Pace Anal | ytical Service | es - Minneapoli | S | | • | | | |
| Arsenic | 0.026J | mg/L | 0.50 | 0.019 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7440-38-2 | |
| Barium | 1.2 | mg/L | 1.0 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7440-39-3 | |
| Cadmium | <0.0016 | mg/L | 0.050 | 0.0016 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7440-43-9 | |
| Chromium | <0.0033 | mg/L | 0.50 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7440-47-3 | |
| Copper | <6.0 | ug/L | 100 | 6.0 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7440-50-8 | |
| Lead | 0.072J | mg/L | 0.50 | 0.0098 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7439-92-1 | |
| Selenium | <0.029 | mg/L | 0.10 | 0.029 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7782-49-2 | |
| Silver | <0.0029 | mg/L | 0.10 | 0.0029 | 1 | 07/15/20 10:48 | 07/16/20 09:53 | 7440-22-4 | |
| 7470A Mercury, TCLP | Analytical | Method: EPA | A7470A Prepa | ration Met | hod: E | PA 7470A | | | |
| , , , | Leachate I | Method/Date | EPA 1311 07 | /14/20 14 | 20 Init | ial pH: 8.45' Final | pH: 5.89 | | |
| | Pace Anal | vtical Service | es - Minneapoli | s | | | p 0.00 | | |
| Mercury | <0.24 | ug/L | 0.60 | 0.24 | 1 | 07/15/20 12:33 | 07/16/20 14:29 | 7439-97-6 | |
| Dry Weight / % M by ASTM D2074 | Analytical | - Method: ASI | | | | | | | |
| bry weight / //win by ASTIM D2974 | Pace Anal | vtical Service | es - Minneapoli | s | | | | | |
| Percent Moisture | 72.2 | % | 0.10 | 0.10 | 1 | | 07/14/20 13:12 | | N2 |
| 8270E MSSV CPAH by SIM | Analvtical | Method: EPA | A 8270E by SIN | Preparat | tion Me | ethod: EPA 3550C | | | |
| ·····, ···· | Pace Anal | ytical Service | es - Minneapoli | s | | | | | |
| Acenaphthene | <113 | ua/ka | 359 | 113 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 83-32-9 | |
| Acenaphthylene | <93.0 | ua/ka | 359 | 93.0 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 208-96-8 | |
| Anthracene | 160J | ua/ka | 359 | 27.4 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 120-12-7 | |
| Benzo(a)anthracene | 585 | ug/kg | 359 | 41 7 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 56-55-3 | |
| Benzo(a)pyrene | 806 | ug/kg | 359 | 32.4 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 50-32-8 | |
| Benzo(a, h, i)pervlene | 81.6. | ug/kg | 359 | 46.7 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 191-24-2 | |
| Benzofluoranthenes (Total) | 2150 | ug/kg | 1080 | 87.3 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 101 212 | N2 |
| Chrysene | 1030 | ug/kg | 359 | 51.0 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 218-01-9 | |
| Dibenz(a h)acridine | <116 | ug/kg | 359 | 116 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 226-36-8 | |
| Dibenz(a,h)aothane | 151.1 | ug/kg | 359 | 43.1 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 53-70-3 | |
| | 203.1 | ug/kg | 359 | 46.0 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 192-65-4 | |
| Dibenzo(a,b)pyrene | 91 3 1 | ug/kg | 359 | 75.4 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 189-64-0 | |
| | ~92.3 | ug/kg | 359 | 02 3 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 189-55-9 | |
| | <82.6 | ug/kg | 359 | 82.6 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 191-30-0 | |
| 7H-Dibenzo(c.d)carbazole | <47.0 | ug/kg | 359 | 47.0 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 194-59-2 | |
| 7 12-Dimethylbenz(a)anthracene | ~131 | ug/kg | 359 | 131 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 57-97-6 | |
| Fluoranthene | 2000 | ug/kg | 350 | 30.0 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 206-44-0 | |
| Eluorono | 110 1 | ug/kg | 350 | 75 / | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 200-44-0 | |
| Indeno(1.2.3-cd)purana | F195 | ug/kg | 250 | 20 F | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 103_20 F | |
| 3-Methylcholanthropo | JIO -10 2 | ug/kg | 209 | 39.0 10 0 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 193-39-3 56-40 5 | |
| 5-Methylchrysene | <40.2 | ug/kg | 250 | 40.Z | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 3607.24.2 | |
| 2-Methyloanbthalena | <24.0 | ug/kg | 250 | 24.0 22 0 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 01-57 G | |
| Nanhthalana | <32.0 ~106 | ug/kg | 250 | 32.0 106 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 01-20 2 | |
| Naphillalelle | <100 | uy/ky | 309 | 100 | 10 | 01/01/20 12.00 | 01/00/20 11.49 | 31-20-3 | |



Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

| Sample: BL-02 | Lab ID: | 10523852002 | Collecte | d: 07/07/2 | 0 09:57 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|---------------------------------|------------------------|----------------|--------------------------|------------------|-----------|-------------------|----------------|--------------|------|
| Results reported on a "dry weig | ght" basis and ar | e adjusted for | percent mo | oisture, sa | mple siz | ze and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8270E MSSV CPAH by SIM | Analytical Pace Ana | Method: EPA 8 | 270E by SI - Minneapo | M Prepara lis | ation Met | thod: EPA 3550C | | | |
| Dhananthrana | 770 | | 250 | 60.7 | 10 | 07/07/20 42:00 | 07/00/20 17.40 | 05 01 0 | |

| Phenanthrene | //8 | ug/kg | 359 | 60.7 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 85-01-8 | |
|----------------------|-------|-------|--------|------|----|----------------|----------------|-----------|----|
| Pyrene | 1510 | ug/kg | 359 | 42.7 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 129-00-0 | |
| Quinoline | <86.2 | ug/kg | 359 | 86.2 | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 91-22-5 | |
| Surrogates | | | | | | | | | |
| 2-Fluorobiphenyl (S) | 74 | %. | 42-125 | | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 321-60-8 | D3 |
| p-Terphenyl-d14 (S) | 66 | %. | 46-125 | | 10 | 07/07/20 12:00 | 07/08/20 17:49 | 1718-51-0 | |



| Project: | Oxboro Lake Sed-Revised Report |
|-------------------|--------------------------------|
| Pace Project No.: | 10523852 |

Pace Project No.:

| Sample: BL-03 | Lab ID: | 1052385200 | 3 Collected | d: 07/07/20 | 0 10:15 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|------------------------------------|-----------------|----------------|--------------|--------------|---------|---------------------------------|----------------|--------------|------|
| Results reported on a "dry weight" | " basis and are | e adjusted fo | r percent mo | oisture, sai | nple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010D MET ICP, TCLP | Analytical | Method: EPA | 6010D Prep | aration Met | thod: E | PA 3010A | | | |
| | Leachate | Method/Date: | EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 8.05; Final | pH: 2.66 | | |
| | Pace Anal | ytical Service | s - Minneapo | lis | | • | | | |
| Arsenic | 0.094J | ma/L | 0.50 | 0.019 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7440-38-2 | |
| Barium | 1.8 | ma/L | 1.0 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7440-39-3 | |
| Cadmium | 0.036J | ma/L | 0.050 | 0.0016 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7440-43-9 | |
| Chromium | 0.017J | mg/L | 0.50 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7440-47-3 | |
| Copper | 12.1J | ug/L | 100 | 6.0 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7440-50-8 | |
| Lead | 1.9 | ma/L | 0.50 | 0.0098 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7439-92-1 | |
| Selenium | <0.029 | ma/L | 0.10 | 0.029 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7782-49-2 | |
| Silver | <0.0029 | mg/L | 0.10 | 0.0029 | 1 | 07/15/20 10:48 | 07/16/20 09:55 | 7440-22-4 | |
| 7470A Mercury, TCLP | Analytical | Method: EPA | 7470A Prepa | aration Met | hod: E | PA 7470A | | | |
| , , , | Leachate | Method/Date: | FPA 1311 0 | 7/14/20 14: | 20 Init | ial pH: 8.05 [.] Final | pH: 2.66 | | |
| | Pace Anal | vtical Service | s - Minneapo | lis | | | p <u>_</u> o | | |
| Mercury | <0.24 | ug/L | 0.60 | 0.24 | 1 | 07/15/20 12:33 | 07/16/20 14:31 | 7439-97-6 | M1 |
| Dry Weight / %M by ASTM D2974 | Analytical | Method: AST | M D2974 | | | | | | |
| | Pace Anal | ytical Service | s - Minneapo | lis | | | | | |
| Percent Moisture | 57.4 | % | 0.10 | 0.10 | 1 | | 07/14/20 13:12 | | N2 |
| 8270E MSSV CPAH by SIM | Analytical | Method: EPA | 8270E by SI | M Prepara | tion Me | thod: EPA 3550C | | | |
| | Pace Anal | ytical Service | s - Minneapo | lis | | | | | |
| Acenaphthene | 227J | ug/kg | 235 | 73.7 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 83-32-9 | |
| Acenaphthylene | 107J | ug/kg | 235 | 60.8 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 208-96-8 | |
| Anthracene | 440 | ug/kg | 235 | 17.9 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 120-12-7 | |
| Benzo(a)anthracene | 1300 | ug/kg | 235 | 27.2 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 56-55-3 | |
| Benzo(a)pyrene | 1630 | ug/kg | 235 | 21.2 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 50-32-8 | |
| Benzo(g,h,i)perylene | <30.5 | ug/kg | 235 | 30.5 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 191-24-2 | |
| Benzofluoranthenes (Total) | 4410 | ug/kg | 704 | 57.0 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | | N2 |
| Chrysene | 2420 | ug/kg | 235 | 33.3 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 218-01-9 | |
| Dibenz(a,h)acridine | <76.0 | ug/kg | 235 | 76.0 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 226-36-8 | |
| Dibenz(a,h)anthracene | 254 | ug/kg | 235 | 28.2 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 53-70-3 | |
| Dibenzo(a,e)pyrene | 242 | ug/kg | 235 | 30.0 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 192-65-4 | |
| Dibenzo(a,h)pyrene | 106J | ug/kg | 235 | 49.3 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 189-64-0 | |
| Dibenzo(a,i)pyrene | <60.3 | ug/kg | 235 | 60.3 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 189-55-9 | |
| Dibenzo(a,I)pyrene | <54.0 | ug/kg | 235 | 54.0 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 191-30-0 | |
| 7H-Dibenzo(c,g)carbazole | <30.7 | ug/kg | 235 | 30.7 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 194-59-2 | |
| 7,12-Dimethylbenz(a)anthracene | <85.9 | ug/kg | 235 | 85.9 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 57-97-6 | |
| Fluoranthene | 4750 | ug/kg | 235 | 20.2 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 206-44-0 | |
| Fluorene | 357 | ug/kg | 235 | 49.3 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | 761 | ug/kg | 235 | 25.8 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 193-39-5 | |
| 3-Methylcholanthrene | <26.3 | ug/kg | 235 | 26.3 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 56-49-5 | |
| 5-Methylchrysene | 308 | ug/kg | 235 | 16.2 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 3697-24-3 | |
| 2-Methylnaphthalene | 31.9J | ug/kg | 235 | 21.4 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 91-57-6 | |
| Naphthalene | <69.5 | ug/kg | 235 | 69.5 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 91-20-3 | |



Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

| Sample: BL-03 | Lab ID: | 10523852003 | Collected: | 07/07/20 10 | :15 Received: | 07/07/20 11:54 | Matrix: Solid | |
|------------------------------------|----------------|-------------------|--------------|--------------|------------------|----------------|---------------|------|
| Results reported on a "dry weight" | ' basis and ar | re adjusted for p | percent mois | ture, sample | e size and any o | lilutions. | | |
| Parameters | Results | Units | PQL | | F Prepare | d Analyzed | CAS No. | Qual |

| 8270E MSSV CPAH by SIM | SV CPAH by SIM Analytical Method: EPA 8270E by SIM Preparation Method: EPA 3550C | | | | | | | | | | |
|------------------------|--|-------|--------|------|----|----------------|----------------|-----------|----|--|--|
| | Pace Analytical Services - Minneapolis | | | | | | | | | | |
| Phenanthrene | 2460 | ug/kg | 235 | 39.7 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 85-01-8 | | | |
| Pyrene | 3390 | ug/kg | 235 | 27.9 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 129-00-0 | | | |
| Quinoline | <56.3 | ug/kg | 235 | 56.3 | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 91-22-5 | | | |
| Surrogates | | | | | | | | | | | |
| 2-Fluorobiphenyl (S) | 78 | %. | 42-125 | | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 321-60-8 | D3 | | |
| p-Terphenyl-d14 (S) | 77 | %. | 46-125 | | 10 | 07/07/20 12:00 | 07/08/20 18:16 | 1718-51-0 | | | |



| Proiect: | Oxboro Lake Sed-Revised Repo |
|----------|------------------------------|
| | |

Pace Project No.: 10523852

| Sample: BL-04 | Lab ID: | 10523852004 | 4 Collected | d: 07/07/20 | 0 11:01 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|------------------------------------|-------------------------|---------------------------------|------------------------------|------------------|---------|---------------------|----------------|--------------|------|
| Results reported on a "dry weight" | " basis and ar | e adjusted for | r percent mo | oisture, sa | mple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010D MET ICP, TCLP | Analytical | Method: EPA | 6010D Prep | aration Me | thod: E | PA 3010A | | | |
| | Leachate | Method/Date: | EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 8.32; Final | pH: 6.18 | | |
| | Pace Anal | ytical Services | s - Minneapo | lis | | | | | |
| Arsenic | <0.019 | ma/L | 0.50 | 0.019 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7440-38-2 | |
| Barium | 1.8 | ma/L | 1.0 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7440-39-3 | |
| Cadmium | <0.0016 | ma/L | 0.050 | 0.0016 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7440-43-9 | |
| Chromium | <0.0033 | mg/L | 0.50 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7440-47-3 | |
| Copper | <6.0 | ug/L | 100 | 6.0 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7440-50-8 | |
| Lead | 0.020J | ma/L | 0.50 | 0.0098 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7439-92-1 | |
| Selenium | <0.029 | mg/L | 0.10 | 0.029 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7782-49-2 | |
| Silver | <0.0029 | mg/L | 0.10 | 0.0029 | 1 | 07/15/20 10:48 | 07/16/20 10:07 | 7440-22-4 | |
| 7470A Mercury, TCLP | Analytical | Method: EPA | 7470A Prep | aration Met | hod: E | PA 7470A | | | |
| - | Leachate | Method/Date: | EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 8.32; Final | pH: 6.18 | | |
| | Pace Anal | ytical Services | s - Minneapo | lis | | | | | |
| Mercury | <0.24 | ug/L | 0.60 | 0.24 | 1 | 07/15/20 12:33 | 07/16/20 14:38 | 7439-97-6 | |
| Dry Weight / %M by ASTM D2974 | Analytical Pace Anal | Method: ASTI ytical Service: | M D2974 s - Minneapo | lis | | | | | |
| Percent Moisture | 70.5 | % | 0.10 | 0.10 | 1 | | 07/14/20 13:12 | | N2 |
| 8270E MSSV CPAH by SIM | Analytical Pace Anal | Method: EPA ytical Service: | 8270E by Sli s - Minneapo | M Prepara lis | tion Me | ethod: EPA 3550C | | | |
| Acenaphthene | <106 | ug/kg | 339 | 106 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 83-32-9 | |
| Acenaphthylene | <87.7 | ug/kg | 339 | 87.7 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 208-96-8 | |
| Anthracene | 52.2J | ug/kg | 339 | 25.8 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 120-12-7 | |
| Benzo(a)anthracene | 272J | ug/kg | 339 | 39.3 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 56-55-3 | |
| Benzo(a)pyrene | 358 | ug/kg | 339 | 30.6 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 50-32-8 | |
| Benzo(g,h,i)perylene | <44.0 | ug/kg | 339 | 44.0 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 191-24-2 | |
| Benzofluoranthenes (Total) | 1050 | ug/kg | 1020 | 82.3 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | | N2 |
| Chrysene | 473 | ug/kg | 339 | 48.1 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 218-01-9 | |
| Dibenz(a,h)acridine | <110 | ug/kg | 339 | 110 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 226-36-8 | |
| Dibenz(a,h)anthracene | <40.6 | ug/kg | 339 | 40.6 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 53-70-3 | |
| Dibenzo(a,e)pyrene | <43.3 | ug/kg | 339 | 43.3 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 192-65-4 | |
| Dibenzo(a,h)pyrene | <71.1 | ug/kg | 339 | 71.1 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 189-64-0 | |
| Dibenzo(a,i)pyrene | <87.0 | ug/kg | 339 | 87.0 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 189-55-9 | |
| Dibenzo(a,l)pyrene | <77.9 | ug/kg | 339 | 77.9 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 191-30-0 | |
| 7H-Dibenzo(c,g)carbazole | <44.4 | ug/kg | 339 | 44.4 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 194-59-2 | |
| 7,12-Dimethylbenz(a)anthracene | <124 | ug/kg | 339 | 124 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 57-97-6 | |
| Fluoranthene | 798 | ug/kg | 339 | 29.1 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 206-44-0 | |
| Fluorene | <71.1 | ug/kg | 339 | 71.1 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | 221J | ug/kg | 339 | 37.2 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 193-39-5 | |
| 3-Methylcholanthrene | <37.9 | ug/kg | 339 | 37.9 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 56-49-5 | |
| 5-Methylchrysene | <23.4 | ug/kg | 339 | 23.4 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 3697-24-3 | |
| 2-Methylnaphthalene | <30.9 | ug/kg | 339 | 30.9 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 91-57-6 | |
| Naphthalene | <100 | ug/kg | 339 | 100 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 91-20-3 | |



D3

07/07/20 12:00 07/08/20 18:44 91-22-5

07/07/20 12:00 07/08/20 18:44 321-60-8

07/07/20 12:00 07/08/20 18:44 1718-51-0

ANALYTICAL RESULTS

Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

Quinoline

Surrogates 2-Fluorobiphenyl (S)

p-Terphenyl-d14 (S)

| Sample: BL-04 | Lab ID: | 10523852004 | Collecte | d: 07/07/20 |) 11:01 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|---------------------------------|-------------------|-----------------------------|------------------------------|--------------|---------|--------------------|----------------|--------------|------|
| Results reported on a "dry weig | ght" basis and ar | e adjusted for _l | percent m | oisture, sar | nple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8270E MSSV CPAH by SIM | Analytical | Method: EPA 8 | 270E by SI | M Preparat | ion Me | ethod: EPA 3550C | | | |
| | Pace Ana | lytical Services | Minneapo | olis | | | | | |
| Phenanthrene | 213J | ug/kg | 339 | 57.2 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 85-01-8 | |
| Pyrene | 623 | ug/kg | 339 | 40.3 | 10 | 07/07/20 12:00 | 07/08/20 18:44 | 129-00-0 | |

339

42-125

46-125

81.3

10

10

10

ug/kg

%.

%.

<81.3

66

55



| Project. Oxboro Lake Sed-Revised Repo | Proiect: | Oxboro Lake Sed-Revised Report |
|---------------------------------------|----------|--------------------------------|
|---------------------------------------|----------|--------------------------------|

Pace Project No.: 10523852

| Sample: BL-05 | Lab ID: | 1052385200 | 5 Collected | d: 07/07/20 | 0 10:40 | Received: 07/ | /07/20 11:54 Ma | atrix: Solid | |
|------------------------------------|--------------------|----------------|---------------|--------------|---------|---------------------|-----------------|--------------|------|
| Results reported on a "dry weight" | " basis and are | e adjusted fo | or percent mo | oisture, sai | nple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010D MET ICP, TCLP | Analytical | Method: EPA | 6010D Prep | aration Met | thod: E | PA 3010A | | | |
| | Leachate | Method/Date | : EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 8.25; Final | pH: 5.77 | | |
| | Pace Anal | vtical Service | es - Minneapo | lis | | | | | |
| Aroonio | 0.007.1 | , | 0.50 | 0.010 | 4 | 07/15/00 10.49 | 07/16/20 10:00 | 7440 20 2 | |
| Arsenic | 0.0273 | mg/L | 0.50 | 0.019 | 1 | 07/15/20 10:48 | 07/16/20 10:06 | 7440-36-2 | |
| Codmium | 0.0029.1 | mg/L | 0.050 | 0.0035 | 1 | 07/15/20 10:40 | 07/16/20 10:00 | 7440-39-3 | |
| Chromium | 0.0020J ∠0.0023 | mg/L | 0.050 | 0.0010 | 1 | 07/15/20 10:48 | 07/16/20 10:08 | 7440-43-9 | |
| Coppor | <0.0033 | ing/∟ | 100 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 10:08 | 7440-47-3 | |
| | 9.05 | ug/L | 0.50 | 0.0 | 1 | 07/15/20 10:48 | 07/16/20 10:08 | 7440-30-8 | |
| Selenium | ~0.029 | mg/L | 0.30 | 0.0098 | 1 | 07/15/20 10:48 | 07/16/20 10:08 | 7439-92-1 | |
| Silver | <0.0029 | mg/L | 0.10 | 0.0029 | 1 | 07/15/20 10:48 | 07/16/20 10:08 | 7440-22-4 | |
| | | | 00 | 0.0020 | · | 0.710/2010110 | 01,10,20 10100 | | |
| 7470A Mercury, TCLP | Analytical | Method: EPA | 7470A Prep | aration Met | hod: E | PA 7470A | | | |
| | Leachate | Method/Date | : EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 8.25; Final | pH: 5.77 | | |
| | Pace Anal | ytical Service | es - Minneapo | lis | | | | | |
| Mercury | <0.24 | ug/L | 0.60 | 0.24 | 1 | 07/15/20 12:33 | 07/16/20 14:45 | 7439-97-6 | |
| Dry Weight / %M by ASTM D2974 | Analytical | Method: AST | M D2974 | | | | | | |
| ,, | Pace Anal | vtical Service | es - Minneapo | lis | | | | | |
| Percent Moisture | 73.6 | % | 0.10 | 0.10 | 1 | | 07/14/20 13:13 | | N2 |
| ANTOE MOON ODALLAN CIM | Analytical | Mathad. CDA | | M Dronoro | tion Ma | thad EDA 25500 | | | |
| 8270E MSSV CPAH by SIM | Pace Anal | vtical Service | NOZIUE DY SI | lie lie | | einou: EPA 3550C | | | |
| | Face Ana | ylical Service | | 115 | | | | | |
| Acenaphthene | <119 | ug/kg | 378 | 119 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 83-32-9 | |
| Acenaphthylene | <97.9 | ug/kg | 378 | 97.9 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 208-96-8 | |
| Anthracene | 176J | ug/kg | 378 | 28.8 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 120-12-7 | |
| Benzo(a)anthracene | 755 | ug/kg | 378 | 43.9 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 56-55-3 | |
| Benzo(a)pyrene | 1020 | ug/kg | 378 | 34.1 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 50-32-8 | |
| Benzo(g,h,ı)perylene | 85.9J | ug/kg | 378 | 49.2 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 191-24-2 | |
| Benzofluoranthenes (Iotal) | 2880 | ug/kg | 1130 | 91.9 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | | N2 |
| Chrysene | 1420 | ug/kg | 378 | 53.7 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 218-01-9 | |
| Dibenz(a,h)acridine | <123 | ug/kg | 378 | 123 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 226-36-8 | |
| Dibenz(a,h)anthracene | 182J | ug/kg | 378 | 45.4 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 53-70-3 | |
| Dibenzo(a,e)pyrene | <48.4 | ug/kg | 378 | 48.4 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 192-65-4 | |
| Dibenzo(a,n)pyrene | 91.5J | ug/kg | 378 | 79.4 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 189-64-0 | |
| Dibenzo(a,i)pyrene | <97.2 | ug/kg | 378 | 97.2 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 189-55-9 | |
| Dibenzo(a,I)pyrene | <87.0 | ug/kg | 378 | 87.0 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 191-30-0 | |
| 7H-Dibenzo(c,g)carbazole | <49.5 | ug/kg | 378 | 49.5 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 194-59-2 | |
| 7,12-Dimethylbenz(a)anthracene | <138 | ug/kg | 378 | 138 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 57-97-6 | |
| | 2480 | ug/kg | 3/8 | 32.5 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 200-44-0 | |
| | 121J | ug/kg | 3/8 | /9.4 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 00-13-1 | |
| Indeno(1,2,3-ca)pyrene | 5/4 | ug/kg | 3/8 | 41.6 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 193-39-5 | |
| S-ivieuryicholanuniene | <42.4 | ug/kg | 3/8 | 42.4 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 2607 24 2 | |
| 2 Mothylpaphthalass | <20.1 | ug/kg | 3/0 270 | 20.1 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 01 57 6 | |
| Nanhthalana | <04.0 | ug/kg | 310 270 | 04.0 110 | 10 | 07/07/20 12:00 | 07/08/20 10:12 | 01-20 2 | |
| naphiliaiche | 5112 | uy/ky | 5/0 | 112 | 10 | 01/01/20 12.00 | 01/00/20 19.12 | 51-20-5 | |



Project: Oxboro Lake Sed-Revised Report

61

%.

Pace Project No.: 10523852

p-Terphenyl-d14 (S)

| Sample: BL-05 | Lab ID: | 10523852005 | 5 Collecte | d: 07/07/20 | 0 10:40 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|---------------------------------|-------------------------|--------------------------------|-----------------------------|--------------|---------|--------------------|----------------|--------------|------|
| Results reported on a "dry weig | ht" basis and are | e adjusted fo | r percent m | oisture, sar | nple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8270E MSSV CPAH by SIM | Analytical Pace Anal | Method: EPA ytical Services | 8270E by SI s - Minneapc | M Preparat | tion Me | ethod: EPA 3550C | | | |
| Phenanthrene | 789 | ug/kg | 378 | 63.9 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 85-01-8 | |
| Pyrene | 1880 | ug/kg | 378 | 45.0 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 129-00-0 | |
| Quinoline | <90.8 | ug/kg | 378 | 90.8 | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 91-22-5 | |
| Surrogates | | | | | | | | | |
| 2-Fluorobiphenyl (S) | 68 | %. | 42-125 | | 10 | 07/07/20 12:00 | 07/08/20 19:12 | 321-60-8 | D3 |

10

07/07/20 12:00 07/08/20 19:12 1718-51-0

46-125



| CADUIO Lake Seu-Keviseu Kepu | Project: | Oxboro Lake Sed-Revised | Report |
|------------------------------|----------|-------------------------|--------|
|------------------------------|----------|-------------------------|--------|

Pace Project No.: 10523852

| Sample: BL-06 | Lab ID: | 10523852006 | Collected | d: 07/07/20 | 0 10:27 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|-----------------------------------|---------------------------------------|--|---|-----------------------------------|-------------------|---------------------------------|----------------|--------------|------|
| Results reported on a "dry weight | " basis and are | adjusted for | percent mo | oisture, sai | mple s | ize and any diluti | ions. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010D MET ICP, TCLP | Analytical | Method: EPA 6 | 6010D Prep | aration Me | thod: E | PA 3010A | | | |
| | Leachate I | Method/Date: | EPA 1311; 0 | 7/14/20 14: | 20 Init | ial pH: 7.87; Final | pH: 2.61 | | |
| | Pace Anal | vtical Services | - Minneapo | lis | | | | | |
| Araania | 0 0 2 0 1 | , | 0.50 | 0.010 | 4 | 07/15/20 10.49 | 07/16/20 10.10 | 7440 20 2 | |
| Arsenic | 0.0303 | mg/L | 0.50 | 0.019 | 1 | 07/15/20 10:48 | 07/16/20 10:10 | 7440-36-2 | |
| Cadmium | 0.0181 | mg/L | 0.050 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 10:10 | 7440-39-3 | |
| Chromium | ~0.0133 | mg/L | 0.050 | 0.0010 | 1 | 07/15/20 10:48 | 07/16/20 10:10 | 7440-43-9 | |
| Copper | 10.81 | ling/∟ | 100 | 0.0033 | 1 | 07/15/20 10:48 | 07/16/20 10:10 | 7440-47-3 | |
| Lead | 10.00 | mg/L | 0.50 | 0.0 | 1 | 07/15/20 10:48 | 07/16/20 10:10 | 7440-30-0 | |
| Selenium | <0 029 | mg/L | 0.30 | 0.0030 | 1 | 07/15/20 10:48 | 07/16/20 10:10 | 7439-92-1 | |
| Silver | <0.0029 | mg/L | 0.10 | 0.0029 | 1 | 07/15/20 10:48 | 07/16/20 10:10 | 7440-22-4 | |
| 7470A Mercury, TCLP | Analytical Leachate I Pace Anal | Method: EPA 7 Method/Date: I ytical Services | 7470A Prep EPA 1311; 0 - Minneapo | aration Met 7/14/20 14: lis | hod: E 20 Init | PA 7470A ial pH: 7.87; Final | pH: 2.61 | | |
| Mercury | <0.24 | ug/L | 0.60 | 0.24 | 1 | 07/15/20 12:33 | 07/16/20 14:48 | 7439-97-6 | |
| Dry Weight / %M by ASTM D2974 | Analytical Pace Anal | Method: ASTN ytical Services | 1 D2974 - Minneapo | lis | | | | | |
| Percent Moisture | 55.9 | % | 0.10 | 0.10 | 1 | | 07/14/20 13:13 | | N2 |
| 8270E MSSV CPAH by SIM | Analytical Pace Anal | Method: EPA & ytical Services | 3270E by SI - Minneapo | M Prepara lis | tion Me | ethod: EPA 3550C | | | |
| Acenaphthene | 267 | ug/kg | 227 | 71.3 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 83-32-9 | |
| Acenaphthylene | 105J | ug/kg | 227 | 58.8 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 208-96-8 | |
| Anthracene | 714 | ug/kg | 227 | 17.3 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 120-12-7 | |
| Benzo(a)anthracene | 2590 | ug/kg | 227 | 26.3 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 56-55-3 | |
| Benzo(a)pyrene | 2890 | ug/kg | 227 | 20.5 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 50-32-8 | |
| Benzo(g,h,i)perylene | 232 | ug/kg | 227 | 29.5 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 191-24-2 | |
| Benzofluoranthenes (Total) | 7630 | ug/kg | 681 | 55.1 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | | N2 |
| Chrysene | 4040 | ug/kg | 227 | 32.2 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 218-01-9 | |
| Dibenz(a,h)acridine | <73.5 | ug/kg | 227 | 73.5 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 226-36-8 | |
| Dibenz(a,h)anthracene | 438 | ug/kg | 227 | 27.2 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 53-70-3 | |
| Dibenzo(a,e)pyrene | 448 | ug/kg | 227 | 29.0 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 192-65-4 | |
| Dibenzo(a,h)pyrene | 189J | ug/kg | 227 | 47.7 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 189-64-0 | |
| Dibenzo(a,i)pyrene | <58.3 | ug/kg | 227 | 58.3 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 189-55-9 | |
| Dibenzo(a,l)pyrene | <52.2 | ug/kg | 227 | 52.2 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 191-30-0 | |
| 7H-Dibenzo(c,g)carbazole | <29.7 | ug/kg | 227 | 29.7 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 194-59-2 | |
| 7,12-Dimethylbenz(a)anthracene | <83.1 | ug/kg | 227 | 83.1 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 57-97-6 | |
| Fluoranthene | 8100 | ug/kg | 454 | 39.0 | 20 | 07/07/20 12:00 | 07/09/20 21:22 | 206-44-0 | |
| Fluorene | 401 | ug/kg | 227 | 47.7 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | 1330 | ug/kg | 227 | 25.0 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 193-39-5 | |
| 3-Methylcholanthrene | <25.4 | ug/kg | 227 | 25.4 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 56-49-5 | |
| 5-Methylchrysene | <15.7 | ug/kg | 227 | 15.7 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 3697-24-3 | |
| 2-Methylnaphthalene | 22.4J | ug/kg | 227 | 20.7 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 91-57-6 | |
| Naphthalene | <67.2 | ug/kg | 227 | 67.2 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 91-20-3 | |



Project: Oxboro Lake Sed-Revised Report

81

%.

Pace Project No.: 10523852

p-Terphenyl-d14 (S)

| Sample: BL-06 | Lab ID: | 10523852006 | 6 Collecte | d: 07/07/20 |) 10:27 | Received: 07/ | 07/20 11:54 Ma | atrix: Solid | |
|---------------------------------|-------------------------|----------------|-----------------------------|--------------|---------|--------------------|----------------|--------------|------|
| Results reported on a "dry weig | ht" basis and are | e adjusted for | r percent mo | oisture, sar | nple s | ize and any diluti | ons. | | |
| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
| 8270E MSSV CPAH by SIM | Analytical Pace Anal | Method: EPA | 8270E by SI s - Minneapo | M Preparat | ion Me | ethod: EPA 3550C | | | |
| Phenanthrene | 3410 | ug/kg | 227 | 38.4 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 85-01-8 | |
| Pyrene | 6060 | ug/kg | 227 | 27.0 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 129-00-0 | |
| Quinoline | <54.5 | ug/kg | 227 | 54.5 | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 91-22-5 | |
| Surrogates | | | | | | | | | |
| 2-Fluorobiphenyl (S) | 82 | %. | 42-125 | | 10 | 07/07/20 12:00 | 07/08/20 19:40 | 321-60-8 | D3 |

10

07/07/20 12:00 07/08/20 19:40 1718-51-0

46-125



| Project: | Oxboro Lake Se | d-Revised Report | | | | | | | | | | |
|--------------------|----------------|-------------------|--------------|------------|--------------------|------------|----------|---------------|------------|-----------|-----|------|
| Pace Project No.: | 10523852 | | | | | | | | | | | |
| QC Batch: | 686914 | | Analy | sis Metho | d: E | PA 7470A | | | | | | |
| QC Batch Method: | EPA 7470A | | Analy | sis Descri | ption: 7 | 470A Merc | ury TCl | LP | | | | |
| | | | Labor | ratory: | P | ace Analyt | ical Ser | vices - Minne | eapolis | | | |
| Associated Lab Sar | mples: 105238 | 52001, 1052385200 | 02, 1052385 | 2003, 105 | 23852004, 1 | 052385200 | 05, 105 | 23852006 | | | | |
| METHOD BLANK: | 3673200 | | | Matrix: W | /ater | | | | | | | |
| Associated Lab Sar | mples: 105238 | 52001, 1052385200 | 02, 1052385 | 2003, 105 | 23852004, 1 | 052385200 | 05, 105 | 23852006 | | | | |
| Para | meter | Units | Blan Resi | ık ılt | Reporting Limit | MDI | | Analyze | O h | ualifiers | | |
| Mercury | | ug/L | | <0.24 | 0.60 |) | 0.24 | 07/16/20 14 | 4:18 | | | |
| , | | Ū | | | | | | | | | | |
| METHOD BLANK: | 3671500 | | | Matrix: W | /ater | | | | | | | |
| Associated Lab Sar | mples: 105238 | 52001, 1052385200 | 02, 1052385 | 2003, 105 | 23852004, 1 | 052385200 | 05, 105 | 23852006 | | | | |
| Para | matar | Linite | Blan | ik ilt | Reporting | МП | | Analyza | d 0 | ualifiars | | |
| | | | | | | | - | | | uaimera | | |
| Mercury | | ug/L | | <0.24 | 0.60 |) | 0.24 | 07/10/2018 |).21 | | | |
| METHOD BLANK: | 3672844 | | | Matrix: W | /ater | | | | | | | |
| Associated Lab Sar | mples: 105238 | 52001, 1052385200 | 2, 1052385 | 2003, 105 | 23852004, 1 | 052385200 | 05, 105 | 23852006 | | | | |
| | | | Blan | k | Reporting | | | | | | | |
| Para | meter | Units | Resu | ult | Limit | MDI | | Analyze | d Q | ualifiers | | |
| Mercury | | ug/L | | <0.24 | 0.60 |) | 0.24 | 07/16/20 1 | 5:23 | | | |
| | | 3673201 | | | | | | | | | | |
| | | 0010201 | Spike | LC | S | LCS | % | 6 Rec | | | | |
| Para | meter | Units | Conc. | Res | sult | % Rec | L | imits | Qualifiers | | | |
| Mercury | | ug/L | 1 | 5 | 15.5 | 103 | 3 | 80-120 | | | | |
| MATRIX SPIKE & N | | IPLICATE: 3673 | 202 | | 3673203 | | | | | | | |
| | | | MS | MSD | 007.0200 | | | | | | | |
| | | 10523852003 | Spike | Spike | MS | MSD | MS | MSD | % Rec | | Max | |
| Paramete | r Un | its Result | Conc. | Conc. | Result | Result | % Red | c % Rec | Limits | RPD | RPD | Qual |
| Mercury | ug | /L <0.24 | 15 | 15 | 11.5 | 12.4 | | 76 8 | 3 80-120 | 8 | 20 | M1 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



| Project: | Oxbord | Lake Sed-Revised Rep | ort | | | | |
|--------------------|--------|----------------------|----------------------------------|----------------|-------------------|----------------------|------------|
| Pace Project No.: | 105238 | 352 | | | | | |
| QC Batch: | 6869 | 16 | Analysis Me | thod: E | PA 6010D | | |
| QC Batch Method: | EPA : | 3010A | Analysis De | scription: 6 | 010D TCLP | | |
| | | | Laboratory: | P | ace Analytical Se | rvices - Minneapolis | |
| Associated Lab Sar | mples: | 10523852001, 1052385 | 52002, 10523852003, ⁻ | 10523852004, 1 | 0523852005, 105 | 23852006 | |
| METHOD BLANK: | 367320 |)4 | Matrix | Water | | | |
| Associated Lab Sar | mples: | 10523852001, 1052385 | 52002, 10523852003, [.] | 10523852004, 1 | 0523852005, 105 | 23852006 | |
| | | | Blank | Reporting | | | |
| Parar | neter | Units | Result | Limit | MDL | Analyzed | Qualifiers |
| Arsenic | | mg/L | <0.019 | 0.50 | 0.019 | 07/16/20 09:43 | |
| Barium | | ma/L | < 0.0033 | 1.0 | 0.0033 | 07/16/20 09:43 | |
| Cadmium | | ma/L | < 0.0016 | 0.050 | 0.0016 | 07/16/20 09:43 | |
| Chromium | | ma/L | < 0.0033 | 0.50 | 0.0033 | 07/16/20 09:43 | |
| Copper | | ua/L | 92.9J | 100 | 6.0 | 07/16/20 09:43 | |
| Lead | | mg/L | <0.0098 | 0.50 | 0.0098 | 07/16/20 09:43 | |
| Selenium | | ma/L | < 0.029 | 0.10 | 0.029 | 07/16/20 09:43 | |
| Silver | | mg/L | < 0.0029 | 0.10 | 0.0029 | 07/16/20 09:43 | |
| | | | | | | | |
| METHOD BLANK: | 367150 | 00 | Matrix | : Water | | | |
| Associated Lab Sar | nples: | 10523852001, 1052385 | 52002, 10523852003, [.] | 10523852004, 1 | 0523852005, 105 | 23852006 | |
| | | | Blank | Reporting | | | |
| Parar | neter | Units | Result | Limit | MDL | Analyzed | Qualifiers |
| Arsenic | | mg/L | <0.019 | 0.50 | 0.019 | 07/16/20 09:45 | |
| Barium | | mg/L | < 0.0033 | 1.0 | 0.0033 | 07/16/20 09:45 | |
| Cadmium | | mg/L | <0.0016 | 0.050 | 0.0016 | 07/16/20 09:45 | |
| Chromium | | mg/L | < 0.0033 | 0.50 | 0.0033 | 07/16/20 09:45 | |
| Copper | | ug/L | 88.0J | 100 | 6.0 | 07/16/20 09:45 | |
| Lead | | mg/L | <0.0098 | 0.50 | 0.0098 | 07/16/20 09:45 | |
| Selenium | | mg/L | <0.029 | 0.10 | 0.029 | 07/16/20 09:45 | |
| Silver | | mg/L | <0.0029 | 0.10 | 0.0029 | 07/16/20 09:45 | |
| METHOD BLANK: | 367180 |)2 | Matrix | : Water | | | |
| Associated Lab Sar | mples: | 10523852001, 1052385 | 52002, 10523852003. ⁻ | 10523852004. 1 | 0523852005, 105 | 23852006 | |
| | - | , | Blank | Reporting | , | | |
| Parar | neter | Units | Result | Limit | MDL | Analyzed | Qualifiers |
| Arsenic | | | <u>~</u> | 0.50 | 0.019 | 07/16/20 09:47 | |
| Barium | | ma/l | 0.013 | 1 0 | 0.0033 | 07/16/20 09:47 | |
| Cadmium | | mg/L | <0.00470 | 0.050 | 0.0016 | 07/16/20 09:47 | |
| Chromium | | ma/l | <0.0010 | 0.000 | 0.0010 | 07/16/20 00.47 | |
| Copper | | 111g/L 11/1 | <0.0000 47 Π Ι | 100 | 6.0000 | 07/16/20 00.47 | |
| Lead | | ma/l | 20.17 2010 N~ | 0.50 | | 07/16/20 00.47 | |
| Louu | | iiig/L | ~0.0090 | 0.00 | 0.0030 | 01/10/20 03.41 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

0.10

0.10

0.029 07/16/20 09:47

0.0029 07/16/20 09:47

<0.029

<0.0029

mg/L

mg/L

REPORT OF LABORATORY ANALYSIS

Selenium

Silver



Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

LABORATORY CONTROL SAMPLE: 3673205

| | | Spike | LCS | LCS | % Rec | |
|-----------|-------|-------|--------|-------|--------|------------|
| Parameter | Units | Conc. | Result | % Rec | Limits | Qualifiers |
| Arsenic | mg/L | 5 | 5.0 | 101 | 80-120 | |
| Barium | mg/L | 5 | 4.9 | 98 | 80-120 | |
| Cadmium | mg/L | 5 | 5.1 | 101 | 80-120 | |
| Chromium | mg/L | 5 | 4.9 | 99 | 80-120 | |
| Copper | ug/L | 5000 | 5190 | 104 | 80-120 | |
| Lead | mg/L | 5 | 5.0 | 99 | 80-120 | |
| Selenium | mg/L | 5 | 5.2 | 105 | 80-120 | |
| Silver | mg/L | 2.5 | 2.5 | 101 | 80-120 | |
| | | | | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3673206 3673207 MS MSD 10523852003 Spike Spike MS MSD MS MSD % Rec Max Units Parameter Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Arsenic 0.094J 5 5 5.3 5.1 104 100 75-125 3 20 mg/L Barium 5 5 6.8 6.6 99 95 75-125 3 20 mg/L 1.8 0.036J Cadmium mg/L 5 5 5.2 5.0 103 100 75-125 3 20 Chromium 0.017J 5 5 4.9 101 98 75-125 3 20 mg/L 5.1 5000 5000 5100 4950 102 99 3 20 Copper ug/L 12.1J 75-125 98 3 Lead 5 6.8 6.6 94 75-125 20 mg/L 1.9 5 Selenium 5 3 mg/L < 0.029 5 5.4 5.2 107 104 75-125 20 Silver mg/L <0.0029 2.5 2.5 2.6 2.5 104 101 75-125 3 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



| Project: | Oxboro Lake Sed-I | Revised Report | | | | | | | |
|--------------------|-------------------|------------------|-------------------|----------------|----------------|-----------|-------------|------------|--|
| Pace Project No.: | 10523852 | | | | | | | | |
| QC Batch: | 686604 | | Analysis Meth | od: | ASTM D2974 | | | | |
| QC Batch Method: | ASTM D2974 | | Analysis Desc | Dry Weight / % | M by A | STM D2974 | 4 | | |
| | | | Laboratory: | | Pace Analytica | I Servic | es - Minnea | apolis | |
| Associated Lab Sar | nples: 105238520 | 001, 10523852002 | , 10523852003, 10 | 523852004, | 10523852005 | 105238 | 352006 | | |
| SAMPLE DUPLICA | TE: 3671516 | | | | | | | | |
| | | | 10524178002 | Dup | | | Max | | |
| Parar | neter | Units | Result | Result | RPD | | RPD | Qualifiers | |
| Percent Moisture | | % | 20.0 | 21. | 2 | 6 | 30 | 0 N2 | |
| SAMPLE DUPLICA | TE: 3672004 | | | | | | | | |
| | | | 10523852006 | Dup | | | Max | | |
| Parar | neter | Units | Result | Result | RPD | | RPD | Qualifiers | |
| Percent Moisture | | % | 55.9 | 57. | 4 | 3 | 3 | 0 N2 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



| Proiect: | Oxboro Lake Sed-Revised Report |
|----------|--------------------------------|

| Pace Project No.: | 10523852 |
|-------------------|----------|
|-------------------|----------|

| Cabe Batch Method: EPA 3550C Analysis Description: 8270E CPAH by SIM MSSV Laboratory: Pace Analytical Services - Minneapolis Associated Lab Samples: 10523852001, 10523852002, 10523852004, 10523852005, 10523852006 METHOD BLANK: 3665310 Matrix: Solid Associated Lab Samples: 10523852001, 10523852002, 10523852004, 10523852005, 10523852006 Blank Reporting Parameter Units VMethylonaphthalene ug/kg vg/kg <0.69 +Methylonaphthalene ug/kg vg/kg <3.7 1.00 0.708/20 15:30 +14-Dibaroc(c)glachazole ug/kg vg/kg <3.1 10.0 3.1 Venaphthene ug/kg <3.1 10.0 0.708/20 15:30 Venaphthene ug/kg <3.1 10.0 0.708/20 15:30 Venaphthene ug/kg <3.1 10.0 1.3 070/82/0 15:30 Senzo(ah)prene ug/kg <3.2 10.0 0.2 07/08/20 15:30 Senzo(ah)pre | QC Batch: 6 | 85297 | | Analysis Meth | od: EP | A 8270E by SIM | | | | |
|--|------------------------|----------------|----------------|-----------------|---------------|------------------------|-------------------|------------|--|--|
| Laboratory: Pace Analytical Services - Minneapolis Associated Lab Samples: 10523852002, 10523852003, 10523852004, 10523852005, 10523852005 METHOD BLANK: 3665310 Matrix: Solid Associated Lab Samples: 10523852001, 10523852002, 10523852003, 10523852005, 10523852005, 10523852005 Qualifier Parameter Units Reporting MDL Analyzed Qualifier *Methylnaphthalene ug/kg <0.91 10.0 0.91 07/08/20 15:30 Qualifier *Methylnaphthalene ug/kg <1.1 10.0 0.91 07/08/20 15:30 Qualifier *Methylnaphthalene ug/kg <1.1 10.0 0.1 07/08/20 15:30 Qualifier *Methylnaphthalene ug/kg <1.3 10.0 3.1 07/08/20 15:30 Qualifier *Methylnaphthene ug/kg <1.3 10.0 3.1 07/08/20 15:30 Qualifier *Menzo(a)liperine ug/kg <1.2 10.0 1.2 07/08/20 15:30 Qualifier *Prozo(a)liperine ug/kg <1.2 10.0 | QC Batch Method: E | PA 3550C | | Analysis Desc | ription: 82 | 8270E CPAH by SIM MSSV | | | | |
| Associated Lab Samples: 10523852001, 10523852002, 10523852003, 10523852004, 10523852005, 10523852006 METHOD BLANK: 3665310 Matrix: Solid Associated Lab Samples: 10523852001, 10523852002, 10523852003, 10523852004, 10523852005, 10523852006 Qualifier Methylnaphthalene ug/kg <0.91 | | | | Laboratory: | Pa | ce Analytical Ser | vices - Minneapol | is | | |
| METHOD BLANK: 3665310 Matrix: Solid Associated Lab Samples: 10523852001, 10523852002, 10523852003, 10523852005, 10523852006 Blank Reporting Parameter Units Reporting MDL Analyzed Qualifier: *Methylnaphthalene ug/kg <1.1 | Associated Lab Sample | s: 10523852001 | , 10523852002, | 10523852003, 10 | 523852004, 10 | 523852005, 105 | 23852006 | | | |
| Associated Lab Samples: 10523852001, 10523852002, 10523852003, 10523852004, 10523852005, 10523852006 Blank Reporting Parameter Units Reputit MDL Analyzed Qualifier: 2:Methylnaphthalene ug/kg <0.91 | METHOD BLANK: 36 | 65310 | | Matrix: S | Solid | | | | | |
| Blank Parameter Reporting Limit MDL Analyzed Analyzed Qualifier: 2-Methylnaphthalene ug/kg <0.91 | Associated Lab Sample | s: 10523852001 | , 10523852002, | 10523852003, 10 | 523852004, 10 | 523852005, 105 | 23852006 | | | |
| Parameter Units Result Limit MDL Analyzed Qualifier: 2-Methylnaphthalene ug/kg <0.91 | | | | Blank | Reporting | | | | | |
| 2-Methylnaphthalene ug/kg <0.91 10.0 0.91 07/08/20 15:30 3-Methylcholanthrene ug/kg <1.1 | Paramete | r | Units | Result | Limit | MDL | Analyzed | Qualifiers | | |
| A-Methylcholanthrene ug/kg <1.1 10.0 1.1 07/08/20 15:30 5-Methylchrysene ug/kg <0.69 | 2-Methylnaphthalene | | ug/kg | <0.91 | 10.0 | 0.91 | 07/08/20 15:30 | | | |
| 5-Methylchrysene ug/kg <0.69 10.0 0.69 07/08/20 15:30 /12-Dimethylbenz(c,g)carbazole ug/kg <3.7 | 3-Methylcholanthrene | | ug/kg | <1.1 | 10.0 | 1.1 | 07/08/20 15:30 | | | |
| X,12-Dimethylbenz(a)anthracene ug/kg <3.7 | 5-Methylchrysene | | ug/kg | <0.69 | 10.0 | 0.69 | 07/08/20 15:30 | | | |
| TH-Dibenzo(c,g)carbazole ug/kg <1.3 | 7,12-Dimethylbenz(a)ar | nthracene | ug/kg | <3.7 | 10.0 | 3.7 | 07/08/20 15:30 | | | |
| Accenaphthene ug/kg <3.1 10.0 3.1 07/08/20 15:30 Acenaphthylene ug/kg <2.6 | 7H-Dibenzo(c,g)carbazo | ole | ug/kg | <1.3 | 10.0 | 1.3 | 07/08/20 15:30 | | | |
| Acenaphthylene ug/kg <2.6 10.0 2.6 07/08/20 15:30 Anthracene ug/kg <0.76 | Acenaphthene | | ug/kg | <3.1 | 10.0 | 3.1 | 07/08/20 15:30 | | | |
| Anthraceneug/kg<0.7610.00.7607/08/20 15:30Benzo(a)anthraceneug/kg<1.2 | Acenaphthylene | | ug/kg | <2.6 | 10.0 | 2.6 | 07/08/20 15:30 | | | |
| Benzo(a)anthracene ug/kg <1.2 10.0 1.2 07/08/20 15:30 Benzo(a)pyrene ug/kg <0.90 | Anthracene | | ug/kg | <0.76 | 10.0 | 0.76 | 07/08/20 15:30 | | | |
| Banzo(a)pyrene ug/kg <0.90 10.0 0.90 07/08/20 15:30 Banzo(g,h,i)perylene ug/kg <1.3 | Benzo(a)anthracene | | ug/kg | <1.2 | 10.0 | 1.2 | 07/08/20 15:30 | | | |
| Banzo(g,h,i)perylene ug/kg <1.3 10.0 1.3 07/08/20 15.30 Benzofluoranthenes (Total) ug/kg <2.4 | Benzo(a)pyrene | | ug/kg | <0.90 | 10.0 | 0.90 | 07/08/20 15:30 | | | |
| Benzofluoranthenes (Total) ug/kg <2.4 | Benzo(g,h,i)perylene | | ug/kg | <1.3 | 10.0 | 1.3 | 07/08/20 15:30 | | | |
| Chrysene ug/kg <1.4 10.0 1.4 07/08/20 15:30 Dibenz(a,h)acridine ug/kg <3.2 | Benzofluoranthenes (To | otal) | ug/kg | <2.4 | 30.0 | 2.4 | 07/08/20 15:30 | N2 | | |
| Dibenz(a,h)acridine ug/kg <3.2 10.0 3.2 07/08/20 15:30 Dibenz(a,h)anthracene ug/kg <1.2 | Chrysene | | ug/kg | <1.4 | 10.0 | 1.4 | 07/08/20 15:30 | | | |
| Dibenz(a,h)anthraceneug/kg<1.210.01.207/08/20 15:30Dibenzo(a,e)pyreneug/kg<1.3 | Dibenz(a,h)acridine | | ug/kg | <3.2 | 10.0 | 3.2 | 07/08/20 15:30 | | | |
| Dibenzo(a,e)pyreneug/kg<1.310.01.307/08/20 15:30Dibenzo(a,h)pyreneug/kg<2.1 | Dibenz(a,h)anthracene | | ug/kg | <1.2 | 10.0 | 1.2 | 07/08/20 15:30 | | | |
| Dibenzo(a,h)pyreneug/kg<2.110.02.107/08/20 15:30Dibenzo(a,i)pyreneug/kg<2.6 | Dibenzo(a,e)pyrene | | ug/kg | <1.3 | 10.0 | 1.3 | 07/08/20 15:30 | | | |
| Dibenzo(a,i)pyreneug/kg<2.610.02.607/08/20 15:30Dibenzo(a,l)pyreneug/kg<2.3 | Dibenzo(a,h)pyrene | | ug/kg | <2.1 | 10.0 | 2.1 | 07/08/20 15:30 | | | |
| Dibenzo(a,l)pyreneug/kg<2.310.02.307/08/20 15:30Fluorantheneug/kg<0.86 | Dibenzo(a,i)pyrene | | ug/kg | <2.6 | 10.0 | 2.6 | 07/08/20 15:30 | | | |
| Fluoranthene ug/kg <0.86 10.0 0.86 07/08/20 15:30 Fluorene ug/kg <2.1 | Dibenzo(a,l)pyrene | | ug/kg | <2.3 | 10.0 | 2.3 | 07/08/20 15:30 | | | |
| Fluorene ug/kg <2.1 10.0 2.1 07/08/20 15:30 ndeno(1,2,3-cd)pyrene ug/kg <1.1 | Fluoranthene | | ug/kg | <0.86 | 10.0 | 0.86 | 07/08/20 15:30 | | | |
| ndeno(1,2,3-cd)pyreneug/kg<1.110.01.107/08/20 15:30Naphthaleneug/kg<3.0 | Fluorene | | ug/kg | <2.1 | 10.0 | 2.1 | 07/08/20 15:30 | | | |
| Naphthaleneug/kg<3.010.03.007/08/20 15:30Phenanthreneug/kg<1.7 | Indeno(1,2,3-cd)pyrene | | ug/kg | <1.1 | 10.0 | 1.1 | 07/08/20 15:30 | | | |
| Phenanthrene ug/kg <1.7 10.0 1.7 07/08/20 15:30 Pyrene ug/kg <1.2 | Naphthalene | | ug/kg | <3.0 | 10.0 | 3.0 | 07/08/20 15:30 | | | |
| Dyrene ug/kg <1.2 10.0 1.2 07/08/20 15:30 Quinoline ug/kg <2.4 | Phenanthrene | | ug/kg | <1.7 | 10.0 | 1.7 | 07/08/20 15:30 | | | |
| Quinoline ug/kg <2.4 10.0 2.4 07/08/20 15:30 2-Fluorobiphenyl (S) %. 87 42-125 07/08/20 15:30 >-Terphenyl-d14 (S) %. 105 46-125 07/08/20 15:30 | Pyrene | | ug/kg | <1.2 | 10.0 | 1.2 | 07/08/20 15:30 | | | |
| 2-Fluorobiphenyl (S) %. 87 42-125 07/08/20 15:30 p-Terphenyl-d14 (S) %. 105 46-125 07/08/20 15:30 | Quinoline | | ug/kg | <2.4 | 10.0 | 2.4 | 07/08/20 15:30 | | | |
| p-Terphenyl-d14 (S) %. 105 46-125 07/08/20 15:30 | 2-Fluorobiphenyl (S) | | %. | 87 | 42-125 | | 07/08/20 15:30 | | | |
| | p-Terphenyl-d14 (S) | | %. | 105 | 46-125 | | 07/08/20 15:30 | | | |

LABORATORY CONTROL SAMPLE: 3665311

| | | Spike | LCS | LCS | % Rec | |
|--------------------------------|-------|-------|--------|-------|-----------|------------|
| Parameter | Units | Conc. | Result | % Rec | Limits | Qualifiers |
| 2-Methylnaphthalene | ug/kg | 100 | 70.5 | 71 | 39-125 | |
| 3-Methylcholanthrene | ug/kg | 100 | 77.2 | 77 | 31-125 | |
| 5-Methylchrysene | ug/kg | 100 | 87.3 | 87 | 63-125 | |
| 7,12-Dimethylbenz(a)anthracene | ug/kg | 100 | 77.3 | 77 | 30-125 \$ | SS |
| 7H-Dibenzo(c,g)carbazole | ug/kg | 100 | 85.2 | 85 | 59-125 | |
| Acenaphthene | ug/kg | 100 | 75.1 | 75 | 46-125 | |
| Acenaphthylene | ug/kg | 100 | 75.1 | 75 | 42-125 | |

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REPORT OF LABORATORY ANALYSIS

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Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

LABORATORY CONTROL SAMPLE: 3665311

| | | Spike | LCS | LCS | % Rec | |
|----------------------------|-------|-------|--------|-------|--------|------------|
| Parameter | Units | Conc. | Result | % Rec | Limits | Qualifiers |
| Anthracene | ug/kg | 100 | 93.9 | 94 | 56-125 | |
| Benzo(a)anthracene | ug/kg | 100 | 86.6 | 87 | 61-125 | |
| Benzo(a)pyrene | ug/kg | 100 | 87.1 | 87 | 60-125 | |
| Benzo(g,h,i)perylene | ug/kg | 100 | 73.8 | 74 | 48-125 | |
| Benzofluoranthenes (Total) | ug/kg | 300 | 272 | 91 | 62-125 | N2 |
| Chrysene | ug/kg | 100 | 91.1 | 91 | 64-125 | |
| Dibenz(a,h)acridine | ug/kg | 100 | 88.8 | 89 | 60-125 | |
| Dibenz(a,h)anthracene | ug/kg | 100 | 91.4 | 91 | 58-125 | |
| Dibenzo(a,e)pyrene | ug/kg | 100 | 82.0 | 82 | 56-125 | |
| Dibenzo(a,h)pyrene | ug/kg | 100 | 89.4 | 89 | 56-125 | |
| Dibenzo(a,i)pyrene | ug/kg | 100 | 85.7 | 86 | 53-125 | |
| Dibenzo(a,I)pyrene | ug/kg | 100 | 71.7 | 72 | 30-125 | |
| Fluoranthene | ug/kg | 100 | 92.5 | 92 | 61-125 | |
| Fluorene | ug/kg | 100 | 81.7 | 82 | 52-125 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | 100 | 90.7 | 91 | 58-125 | |
| Naphthalene | ug/kg | 100 | 66.8 | 67 | 37-125 | |
| Phenanthrene | ug/kg | 100 | 88.0 | 88 | 61-125 | |
| Pyrene | ug/kg | 100 | 88.7 | 89 | 61-125 | |
| Quinoline | ug/kg | 100 | 77.3 | 77 | 30-133 | |
| 2-Fluorobiphenyl (S) | %. | | | 73 | 42-125 | |
| p-Terphenyl-d14 (S) | %. | | | 91 | 46-125 | |

| MATRIX SPIKE & MATRIX SP | _ICATE: 3665 | E: 3665312 | | | 3665313 | | | | | | | |
|------------------------------------|--------------|-------------|-------|-------|---------|--------|-------|-------|--------|-----|-----|------|
| | | | MS | MSD | | | | | | | | |
| | | 10523852001 | Spike | Spike | MS | MSD | MS | MSD | % Rec | | Max | |
| Parameter | Units | Result | Conc. | Conc. | Result | Result | % Rec | % Rec | Limits | RPD | RPD | Qual |
| 2-Methylnaphthalene | ug/kg | <3.5 | 379 | 379 | 261 | 259 | 69 | 68 | 39-125 | 1 | 30 | |
| 3-Methylcholanthrene | ug/kg | <4.2 | 379 | 379 | 245 | 252 | 64 | 66 | 30-134 | 3 | 30 | |
| 5-Methylchrysene | ug/kg | <2.6 | 379 | 379 | 266 | 259 | 70 | 68 | 30-145 | 3 | 30 | |
| 7,12- Dimethylbenz(a)anthracene | ug/kg | <13.9 | 379 | 379 | 332 | 329 | 87 | 87 | 30-150 | 1 | 30 | SS |
| 7H-Dibenzo(c,g)carbazole | ug/kg | <5.0 | 379 | 379 | 231 | 223 | 61 | 59 | 30-140 | 3 | 30 | |
| Acenaphthene | ug/kg | <11.9 | 379 | 379 | 287 | 277 | 75 | 72 | 37-125 | 4 | 30 | |
| Acenaphthylene | ug/kg | <9.8 | 379 | 379 | 280 | 277 | 73 | 72 | 40-125 | 1 | 30 | |
| Anthracene | ug/kg | 14.1J | 379 | 379 | 316 | 302 | 79 | 76 | 47-125 | 4 | 30 | |
| Benzo(a)anthracene | ug/kg | 126 | 379 | 379 | 323 | 302 | 52 | 46 | 30-135 | 7 | 30 | |
| Benzo(a)pyrene | ug/kg | 95.8 | 379 | 379 | 336 | 310 | 63 | 57 | 30-136 | 8 | 30 | |
| Benzo(g,h,i)perylene | ug/kg | 11.0J | 379 | 379 | 140 | 135 | 34 | 33 | 30-127 | 4 | 30 | |
| Benzofluoranthenes (Total) | ug/kg | 269 | 1140 | 1140 | 1050 | 987 | 68 | 63 | 34-125 | 6 | 30 | N2 |
| Chrysene | ug/kg | 163 | 379 | 379 | 382 | 343 | 58 | 48 | 30-142 | 11 | 30 | |
| Dibenz(a,h)acridine | ug/kg | <12.3 | 379 | 379 | 240 | 237 | 63 | 63 | 30-148 | 1 | 30 | |
| Dibenz(a,h)anthracene | ug/kg | <4.6 | 379 | 379 | 251 | 247 | 66 | 65 | 42-125 | 1 | 30 | |
| Dibenzo(a,e)pyrene | ug/kg | 31.7J | 379 | 379 | 171 | 163 | 37 | 35 | 30-131 | 5 | 30 | |
| Dibenzo(a,h)pyrene | ug/kg | 12.9J | 379 | 379 | 122 | 128 | 29 | 30 | 30-141 | 5 | 30 | M1 |
| Dibenzo(a,i)pyrene | ug/kg | <9.8 | 379 | 379 | 86.9 | 89.7 | 22 | 23 | 30-131 | 3 | 30 | M1 |

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REPORT OF LABORATORY ANALYSIS

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Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

| VATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3665312 3665313 | | | | | | | | | | | | |
|--|-------|-----------------------|----------------------|-----------------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
| Parameter | Units | 10523852001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
| Dibenzo(a,I)pyrene | ug/kg | <8.7 | 379 | 379 | 63.9 | 69.6 | 17 | 18 | 30-131 | 9 | 30 | M1 |
| Fluoranthene | ug/kg | 266 | 379 | 379 | 484 | 411 | 57 | 38 | 30-149 | 16 | 30 | |
| Fluorene | ug/kg | <8.0 | 379 | 379 | 302 | 291 | 78 | 75 | 39-150 | 4 | 30 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | 68.4 | 379 | 379 | 282 | 262 | 56 | 51 | 30-134 | 8 | 30 | |
| Naphthalene | ug/kg | <11.2 | 379 | 379 | 239 | 243 | 63 | 64 | 37-125 | 2 | 30 | |
| Phenanthrene | ug/kg | 50.8 | 379 | 379 | 349 | 321 | 79 | 71 | 30-150 | 8 | 30 | |
| Pyrene | ug/kg | 204 | 379 | 379 | 414 | 367 | 55 | 43 | 30-150 | 12 | 30 | |
| Quinoline | ug/kg | <9.1 | 379 | 379 | 310 | 310 | 82 | 82 | 30-133 | 0 | 30 | |
| 2-Fluorobiphenyl (S) | %. | | | | | | 74 | 63 | 42-125 | | | |
| p-Terphenyl-d14 (S) | %. | | | | | | 72 | 54 | 46-125 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 10523852

[1] Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice.

ANALYTE QUALIFIERS

- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
- S5 Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).
- SS This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Oxboro Lake Sed-Revised Report

Pace Project No.: 10523852

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|---------------------|
| 10523852001 | BL-01 | EPA 3010A | 686916 | EPA 6010D | 687082 |
| 10523852002 | BL-02 | EPA 3010A | 686916 | EPA 6010D | 687082 |
| 10523852003 | BL-03 | EPA 3010A | 686916 | EPA 6010D | 687082 |
| 10523852004 | BL-04 | EPA 3010A | 686916 | EPA 6010D | 687082 |
| 10523852005 | BL-05 | EPA 3010A | 686916 | EPA 6010D | 687082 |
| 10523852006 | BL-06 | EPA 3010A | 686916 | EPA 6010D | 687082 |
| 10523852001 | BL-01 | EPA 7470A | 686914 | EPA 7470A | 687070 |
| 10523852002 | BL-02 | EPA 7470A | 686914 | EPA 7470A | 687070 |
| 10523852003 | BL-03 | EPA 7470A | 686914 | EPA 7470A | 687070 |
| 10523852004 | BL-04 | EPA 7470A | 686914 | EPA 7470A | 687070 |
| 10523852005 | BL-05 | EPA 7470A | 686914 | EPA 7470A | 687070 |
| 10523852006 | BL-06 | EPA 7470A | 686914 | EPA 7470A | 687070 |
| 10523852001 | BL-01 | ASTM D2974 | 686604 | | |
| 10523852002 | BL-02 | ASTM D2974 | 686604 | | |
| 10523852003 | BL-03 | ASTM D2974 | 686604 | | |
| 10523852004 | BL-04 | ASTM D2974 | 686604 | | |
| 10523852005 | BL-05 | ASTM D2974 | 686604 | | |
| 10523852006 | BL-06 | ASTM D2974 | 686604 | | |
| 10523852001 | BL-01 | EPA 3550C | 685297 | EPA 8270E by SIM | 685595 |
| 10523852002 | BL-02 | EPA 3550C | 685297 | EPA 8270E by SIM | 685595 |
| 10523852003 | BL-03 | EPA 3550C | 685297 | EPA 8270E by SIM | 685595 |
| 10523852004 | BL-04 | EPA 3550C | 685297 | EPA 8270E by SIM | 685595 |
| 10523852005 | BL-05 | EPA 3550C | 685297 | EPA 8270E by SIM | 685595 |
| 10523852006 | BL-06 | EPA 3550C | 685297 | EPA 8270E by SIM | 685595 |

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Face Analytical "

| Page: of | 241 | REGULATORY AGENCY | NPDES GROUND WATER DRINKING WATER | UST RCRA OTHER | ふ So M Site Location | STATE: | Requested Analysis Filtered (Y/N) | MO#: 10523852 MO#: 10523852 | C D Pace Project No./ Lab I.D. | X X | X 2 00 2 | x x | X × × 00 4 | XX 00 S | 9 C0 | | | AFFLIATION DATE TIME SAMPLE CONDITIONS | ~ phile 2/2 11.59 11.3 y N (y | | | A) Provide the state of the st | //,() () () () () () () () () () () () () (|
|--|----------------------|--------------------|-----------------------------------|---------------------------------|----------------------------|-----------------------------|-----------------------------------|--|---|--------------|----------------|-----------|------------|--------------------|-------|---|---|--|-------------------------------|---------------------|---|--|--|
| Section C Invoice Information: | Attention: Oar O'We | Company Name: No B | Address: | Pace Quote Reference: | A Pace Project Jared O.24. | Pace Profile #: | | LE TEMP AT COLLECTION | ME SAMP 4 OF 1 A2 2 AAP 4 A2 2 AAP 1 A2 2 AAP 1 A2 1 A2 | Sc ℃ × | | | | :Yè | | 2 | | | | | | SIGNATURE | SAMPLER: Uar ON Qr |
| ction B quired Project Information: | out Toi Dan O'Mer'II | ay To: | | chase Order No.: | ject Name: OXLoro Lake S & | iject Number: | | | A A BATE TIME DATE TI | 17-7-4 | | | | | | | | RELINQUISHED BY / AFFILIATION | Ver Ciner 14. | | | SAMPLER NAME AND S | PRINT Name of S |
| ction A turred Client Information: | npany: WS B Repo | 1028 9th Sté COO | >+ Pul mr 55101 | al To: Aone, 110 Words Con Pure | 12- Joo-538 Fax: n/a Proje | quested Due Date/TAT: Proje | | Required Client Information <u>MATRIX</u> <u>COI</u> Required Client Information MATRIX <u>COI</u> NATER DW WATER DW | MƏTI | 1 RIST BL-OI | 2 - 8128 BL-62 | 3 a Ri-03 | 121-64 | ε <u>αι</u> - σς Ι | 50-06 | 8 | 9 | 42 L ADDITIONAL COMMENTS | hot of Amin Plimy | epure to MUL Filted | • | age : | 26 |

| | $\mathbf{\Omega}$ | | Doc | ument l | Name: | | Doc | ument | Revised: 27Ma | ar2020 | |
|----------------------------|---|--------------|-------------------|---------------|--------------------|-------------|---------------------------------|----------------------|--|--------------------|----------|
| | Pace Analytical [®] S | ample Co | ondition | n Upon R | leceipt (S | CUR) - 1 | MN | I | Page 1 of 1 | | |
| | | | Do | ocument | No.: | | P | ace Ar | nalytical Service | es - | |
| | | EN | IV-FRM | -MIN4-0 | 150 Rev. | 00 | | N | Ainneapolis | | |
| | | | | | F | | | - | | | |
| Sample Co Upon R | eccipt Client Name: $\ // < R$ | | | Pro | oject #: | MC |)#:1 | 05 | 23852 |) 8 | |
| Courier: | | | SPS | Mai | ient | PM: | JDD | D | ue Date: 07 | 7/21/20 | |
| Tracking | Pace SpeeDe | e 🗌 Co | ommerci | al See Exc | ceptions | CLIE | :NI: W3D | | | | Ĵ |
| Custody S | ieal on Cooler/Box Present? | XNo | Sea | L | 」 ∟ ? □Yes | | o Biolo | gical Ti | ssue Frozen? |]Yes ∏No ¥ | |
| Packing N | faterial: Bubble Wrap Bubble B | ∼ Bags [∑ | None | Oth | er: | <i>7</i> ~ | | с т | emp Blank? | Yes 🕅 | Ňo |
| Thermom | eter: |)) | Type of I | lce: 🍹 | WVet [| Blue | None | □D | ry 🗌 Melted | | |
| Did Sample | es Originate in West Virginia? []Yes | We | re All Co | ntainer 1 | emps Tak | en? 🗌 Ye | es ∐No Š | N /A | | | · |
| Temp should | be above freezing to 6°C Cooler Temp R | ead w/ten | np blank | : | | | °C | Avera | age Corrected Te | emp | entions |
| Correction | Factor: <u>+ / · · Cooler</u> Temp Correct | ed w/tem | p blank | i <u></u> | | | °C | (110 | <u>//,3_</u> °c | 1 Conta | iner |
| USDA Regu | Ilated Soil: (🗌 N/A, water sample/Other: | |) | | Date/In | itials of | Person Exar | nining | Contents: <u>77</u> | 1772 | <u>e</u> |
| ID. LA. MS. I | s originate in a quarantine zone within the Un NC, NM, NY, OK, OR, SC, TN, TX or VA (check r | nans)? | : AL, AR, □Vos | CA, FL, GA | A, Did sa Hawai | mples ori | iginate from a | foreign | source (internatio | nally, including | , |
| ,, . | If Yes to either question, fill out a | Regulated | d Soil Ch | ecklist (F | -MN-Q-33 | 8) and ir | nclude with | SCUR/0 | COC paperwork. | | |
| | | | | <u> </u> | T | · | | COM | AENTS: | | |
| Chain of Cus | tody Present and Filled Out? | Nyes | No | | 1. | | | | | | |
| Chain of Cus | tody Relinquished? | | | - | 2. | | | | | | |
| Sampler Nan | ne and/or Signature on COC? | Kes | No | | 3. | | | | 744 | | |
| Samples Arri | ved within Hold Time? | Ves | | | 4. | | | | | | |
| Short Hold T | ime Analysis (<72 hr)? | ∕ ∐Yes | 500 | | 5. □Fe □Tu | cal Colifor | rm []]HPC []T]Nitrate []Nit | otal Coli rite ∏O | form/E coli 🔲 BOD/ rthophos 🗌 Other | /cBOD Hex Cl | nrome |
| Rush Turn A | round Time Requested? | Yes | 15 AO | | 6. | | · | | | .6A | |
| Sufficient Vo | lume? | Yes | ÚN0 | | 7. | | | | | | |
| Correct Cont | ainers Used? | D Qes | □No | | 8. | | | | | | |
| -Pace Con | tainers Used? | Des | No_ | | | | | | | | |
| Containers In | itact? | res | □No | | 9. | | | | | | |
| Field Filtered | Volume Received for Dissolved Tests? | Yes | □No | ∑ hî/a | 10. Is s | ediment | visible in the | dissolv | ed container? 🗌 | Yes 🗌 No | |
| Is sufficient in | nformation available to reconcile the samples | | | ~ | 11. If no, | write ID/ | Date/Time on | Contain | er Below: | See Ex | ception |
| to the COC? | | D Gs | □No | | | | | | | Ľ | |
| Matrix: W | ater 🎝 Soil 🗌 Oil 🗌 Other | , | | | | | | | | | |
| All containers checked? | s needing acid/base preservation have been | □Yes | □No | M N/A | 12. Samp | le # | | | | | |
| All containers | s needing preservation are found to be in | Yes | □No | DKN/A | | NaOH | Пни | lO₃ | ⊟H₂SO₄ | Zinc Acet | ate |
| (HNO, H-SO | vitn EPA recommendation? 、<2nH NaOH >9 Sulfide NaOH>12 Overside》 | | | , | - | | | | | | |
| (11103, 112502 | , zpri, Naori / Sunice, Naori/12 Cyanice) | | | , | Positive fr | or Res [| | | | See Ex | cention |
| Exceptions: V | 'OA, Coliform, TOC/DOC Oil and Grease, | Yes | No | XN/A | Chlorine? | | | pH Pap | er Lot# |] | |
| DRO/8015 (w | vater) and Dioxin/PFAS | | | • | Res. Chlor | rine | 0-6 Roll | <u> </u> | 0-6 Strip | 0-14 Strip | |
| Frates 1.1.1 | | | | - Al | צו רור | <u>、</u> | | | | | |
| Extra labels p | resent on soil VOA or WIDRO containers? | | | | 13. | | | | | See Ex | ception |
| Trip Blank Pre | esent? | | | | 14 | | | | | | <u> </u> |
| Trip Blank Cu | stody Seals Present? | | | | Pace | e Trip Bla | ank Lot # (if p | urchase | ed): | | |
| CL | IENT NOTIFICATION/RESOLUTION | | | | | | Fiel | d Data | Required? | ∕es □No | |
| Commonte/ | acted: | | | | Date/Ti | me: | | | | | |
| comments/F | | 1 | | | | | | | | | |
| Pro | piect Manager Review: | 12 | <u> </u> | | | Date | | 7/7/ | 20 | · | |
| Note: Whenev | er there is a discrepancy affecting North Carolin | a compliand | e sample | s, a copy o | of this form | will be se | nt to the Nort | h Caroli | na DEHNR Certifica | ation Office (i e | e out of |
| hold, incorrect | preservative, out of temp, incorrect containers) | | | , | | | | | | | |

| | \sim |
|----|---------------|
| TN | Page 27 of 28 |

Labeled by:

| Pace Analytical [®] | Document Name: Sample Condition Upon Receipt (SCUR) Exception Form | Document Revised: 04Jun2020 Page 1 of 1 |
|------------------------------|---|--|
| | Document No.: ENV-ERM-MIN4-0142 Rev 01 | Pace Analytical Services - Minneapolic |

SCUR Exceptions:

Workorder #:

| Out of Temp Sample IDs | Container Type | # of Containers | | PM Notified? Yes | No |
|------------------------|-------------------|--------------------|--------------------------|--|--------------------------|
| | | | lf yes, inc | licate who was contact If no, indicate reason v | ed/date/time. vhy. |
| | | | Mult If you | iple Cooler Project? | Yes No n to the left. |
| | ···· | | | No Temp Blank | |
| | | | Read Temp | Corrected Temp | Average Temp |
| | | | <u> </u> | 1 | 11.3 |
| | | | - 8.1 - 15.5 - 7.2 | 1 (ne | |
| | | n | Issue Type: | Co | ntainer # of |

| | issue rype. |
|-----------------------------|-------------|
| Tracking Number/Temperature | Sample IC |
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pH Adjustment Log for Preserved Samples

| Sample ID | Type of Preserv. | pH Upon Receipt | Date Adjusted | Time Adjusted | Amoun t Added (mL) | Lot # Added | pH After | In Compliance after addition? | Initials |
|-----------|---------------------|-----------------------|------------------|------------------|--------------------------|----------------|-------------|--|----------|
| | | | | | | | | Yes No | |
| | | | | | | | | | |
| | | | | | | | | Yes No | |
| | | | | | | | | | |
| | | | | | | | | Yes No | |
| | | | | | | | | | |
| | | | | | | | | Yes No | |
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Comments:

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Containers

Туре

APPENDIX C

Agency Coordination

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Conservation Act Notice of Decision

| Local Government Unit: City of Bloomington County: Hennepin |
|---|
| Applicant Name: Brian Clemens Applicant Representative: |
| Project Name: East Side Syndicate Site LGU Project No. (if any): 20-08 |
| Date Complete Application Received by LGU: 12/15/2020 |
| Date of LGU Decision: 1/5/2021 |
| Date this Notice was Sent: 1/5/2021 |
| WCA Decision Type - check all that apply |
| 🖾 Wetland Boundary/Type 🛛 Sequencing 🖓 Replacement Plan 🔅 🖓 Bank Plan (not credit purchase) |
| □ No-Loss (8420.0415) □ Exemption (8420.0420) |
| Part: A B C D E F G H Subpart: 2 3 4 5 6 7 8 9 |
| Replacement Plan Impacts (replacement plan decisions only) |
| Total WCA Wetland Impact Area: |
| Wetland Replacement Type: Project Specific Credits: |
| □ Bank Credits: |
| Bank Account Number(s): |
| Technical Evaluation Panel Findings and Recommendations (attach if any) |
| Approve Approve w/Conditions Deny No TEP Recommendation |
| LGU Decision |
| □ Approved with Conditions (specify below) ¹ ⊠ Approved ¹ □ Denied List Conditions: |
| Decision-Maker for this Application: 🛛 Staff 🛛 Governing Board/Council 🗆 Other: |
| Decision is valid for: \boxtimes 5 years (default) \square Other (specify): |
| ¹ <u>Wetland Replacement Plan</u> approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project- |
| specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid. |
| LGU Findings – Attach document(s) and/or insert narrative providing the basis for the LGU decision ¹ . |
| □ Attachment(s) (specify): |

Summary: The delineation done at the East Side Syndicate Site determined no wetland to be present within the project boundaries, as shown in the wetland delineation report. A wetland was delineated just outside of the project area, on City property surrounding Oxboro Pond.

¹ Findings must consider any TEP recommendations.

Attached Project Documents

Appeals of LGU Decisions

If you wish to <u>appeal</u> this decision, you must provide a written request <u>within 30 calendar days of the date you</u> <u>received the notice</u>. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for \$500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator Minnesota Board of Water & Soils Resources 520 Lafayette Road North St. Paul, MN 55155 travis.germundson@state.mn.us

Does the LGU have a local appeal process applicable to this decision?

☑ Yes¹
 □ No
 ¹If yes, all appeals must first be considered via the local appeals process.

Local Appeals Submittal Requirements (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

Send petition to: Bloomington Council; 1800 W Old Shakopee Rd; Bloomington, MN 55431

Notice Distribution (include name)

Required on all notices:

SWCD TEP Member: Stacey Lijewski BWSR TEP Member: Ben Carlson

☐ LGU TEP Member (if different than LGU contact): Julie Long, City Engineer

⊠ DNR Representative: Melissa Collins & Lucas Youngsma

🛛 Watershed District or Watershed Mgmt. Org.: Randy Anhorn & Karen Wold, Nine Mile Creek Watershed

Applicant: Brian Clemens

🛛 Agent/Consultant: Adam Cameron, Kjolhaug Environmental

Optional or As Applicable:

| ⊠ Corps of Engineers: USACE_Requests_MN@usace.army.mil | | | | | | |
|---|----------|--|--|--|--|--|
| BWSR Wetland Mitigation Coordinator (required for bank plan applications only): | | | | | | |
| □ Members of the Public (notice only): | □ Other: | | | | | |

| Signature: | Date: | 1/5/21 |
|------------|-------|--------|
| | | |

This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.



DEPARTMENT OF THE ARMY ST. PAUL DISTRICT, CORPS OF ENGINEERS 180 FIFTH STREET EAST, SUITE 700 ST. PAUL, MN 55101-1678

April 23, 2021

Regulatory File No. MVP-2021-00291-BBY

City of Bloomington c/o Steve Gurney 1700 West 98th Street Bloomington, Minnesota 55431

Dear Steve Gurney:

This letter regards an approved jurisdictional determination for the Oxboro Lake site in Bloomington, Minnesota. The project site is in Section 10, Township 27 North, Range 24 West, Hennepin County, Minnesota. The review area for our jurisdictional determination consists of Oxboro Lake on the enclosed figure labeled MVP-2021-00291-BBY Page 2 of 2.

The review area consists of Oxboro Lake which is not a water of the United States subject to Corps of Engineers (Corps) jurisdiction. Therefore, you are not required to obtain Department of the Army authorization to discharge dredged or fill material within this area. The rationale for this determination is provided in the enclosed Approved Jurisdictional Determination form. This determination is only valid for the review area described as Oxboro Lake.

If you object to this approved jurisdictional determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Mississippi Valley Division Office at the address shown on the form.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the enclosed NAP. It is not necessary to submit an RFA form to the division office if you do not object to the determination in this letter

This approved jurisdictional determination may be relied upon for five years from the date of this letter. However, the Corps reserves the right to review and revise the boundary in response to changing site conditions, information that was not considered during our initial review, or offsite activities that could indirectly alter the extent of wetlands and other resources on-site. This determination may be renewed at the end of the five year period provided you submit a written request and our staff are able to verify that the limits established during the original determination are still accurate. Regulatory Branch (File No. MVP-2021-00291-BBY)

If you have any questions, please contact me in our St. Paul office at (651) 290-5975 or Brian.b.Yagle@usace.army.mil. In any correspondence or inquiries, please refer to the Regulatory file number shown above.

Sincerely,

Bi Juli

Brian Yagle Lead Project Manager

Enclosures

CC:

Lucas Youngsma, MNDNR Lauren Foley, Nine Mile Creek Anna Hotz - MPCA








U.S. ARMY CORPS OF ENGINEERS REGULATORY PROGRAM APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM) NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 4/23/2021 ORM Number: MVP-2021-00291-BBY Associated JDs: N/A Review Area Location¹: State/Territory: MN City: Bloomington County/Parish/Borough: Hennepin Center Coordinates of Review Area: Latitude 44.833843 Longitude -93.282487

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- □ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A
- □ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- □ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)²

| § 10 Name | § 10 Size |) | § 10 Criteria | Rationale for § 10 Determination | |
|-----------|-----------|-----|---------------|----------------------------------|--|
| N/A. | N/A. | N/A | N/A. | N/A. | |

C. Clean Water Act Section 404

| Territorial Seas and Traditional Navigable Waters ((a)(1) waters): ³ | | | | | |
|---|-------------------------|------|-----------------|------------------------------------|--|
| (a)(1) Name | (a)(1) Name (a)(1) Size | | (a)(1) Criteria | Rationale for (a)(1) Determination | |
| N/A. | N/A. | N/A. | N/A. | N/A. | |

| Tributaries ((a)(2) waters): | | | | | | | |
|------------------------------|----------|------|-----------------|------------------------------------|--|--|--|
| (a)(2) Name | (a)(2) S | lize | (a)(2) Criteria | Rationale for (a)(2) Determination | | | |
| N/A. | N/A. | N/A. | N/A. | N/A. | | | |

| Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters): | | | | | | |
|---|----------------|------|-----------------|------------------------------------|--|--|
| (a)(3) Name | me (a)(3) Size | | (a)(3) Criteria | Rationale for (a)(3) Determination | | |
| N/A. N/A. N/A. | | N/A. | N/A. | | | |

| Adjacent wetlands ((a)(4) waters): | | | | | | | |
|------------------------------------|------|-----------------|------------------------------------|------|--|--|--|
| (a)(4) Name (a)(4) Size | | (a)(4) Criteria | Rationale for (a)(4) Determination | | | | |
| N/A. | N/A. | N/A. | N/A. | N/A. | | | |

¹ Map(s)/figure(s) are attached to the AJD provided to the requestor.

² If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.

³ A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.



U.S. ARMY CORPS OF ENGINEERS REGULATORY PROGRAM APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM) NAVIGABLE WATERS PROTECTION RULE

D. Excluded Waters or Features

| Excluded waters ((b)(1) – (b)(12)):4 | | | | | | | |
|--------------------------------------|-----------|---------|--|--|--|--|--|
| Exclusion Name | Exclusion | Size | Exclusion ⁵ | Rationale for Exclusion Determination | | | |
| Oxboro Lake | 19.5 | acre(s) | (b)(1) Lake/pond or impoundment that does not contribute surface water flow directly or indirectly to an (a)(1) water and is not inundated by flooding from an (a)(1)-(a)(3) water in a typical year. | Oxboro Lake is a depressional basin that is bordered on all sides by upland areas which consist of residential developments, commercial developments, and Syndicate Avenue to the west. Oxboro Lake is not a traditional navigable water (TNW) (see Section III.C). The "Cover Letter Oxboro" submitted by the City of Bloomington states that early topographic maps shows that the lake is a depressional basin with no identified outlets. The letter goes on the state that the lake was connected to the city's storm sewer system in 1957. The Corps confirmed that no surface water channel exits the lake by reviewing topographic maps and historic aerial imagery. Oxboro Lake is not an a(1)-a(3) water and has no surface water connection to an a(1)- a(3) water. Oxboro Lake does not contribute surface water flow directly or indirectly to an a(1) water and is not inundated by flooding from an a(1)-a(3) water in a typical year. Therefore, Oxboro Lake is not considered a water of the U.S. under the Navigable Waters Protection Rule. | | | |

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

Information submitted by, or on behalf of, the applicant/consultant: This information included the Minnesota Joint Application and a document entitled "Cover Letter Oxboro" submitted by the Civil Engineer from the City of Bloomington.

This information is not sufficient for purposes of this AJD. Rationale: N/A

Data sheets prepared by the Corps: Title(s) and/or date(s).

Photographs: Aerial: MHAPO 1937 and 1956. Google Earth Imagery 1985, 1991, 2003-2006, 2008-2020.

- □ Corps site visit(s) conducted on: Date(s).
- Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).
- Antecedent Precipitation Tool: provide detailed discussion in Section III.B.
- USDA NRCS Soil Survey: Title(s) and/or date(s).
- USFWS NWI maps: Title(s) and/or date(s).

⁴ Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.

⁵ Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.



U.S. ARMY CORPS OF ENGINEERS REGULATORY PROGRAM APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM) NAVIGABLE WATERS PROTECTION RULE

USGS topographic maps: Minneapolis MN 1896, Saint Paul MN 1953, and Bloomington MN 2019

| Data Source (select) | Name and/or date and other relevant information |
|----------------------------|---|
| USGS Sources | N/A. |
| USDA Sources | N/A. |
| NOAA Sources | N/A. |
| USACE Sources | N/A. |
| State/Local/Tribal Sources | N/A. |
| Other Sources | N/A. |

Other data sources used to aid in this determination:

B. Typical year assessment(s): N/A

C. Additional comments to support AJD: The review area for this AJD consists Oxboro Lake. Oxboro Lake is not eligible for consideration as a case-specific TNW. The Corps found no evidence that supported the possibility that Oxboro Lake was susceptible to use in interstate or foreign commerce. Oxboro lake is approximately 20 acres in size and surrounded by upland areas which consist of residential developments, commercial developments, and Syndicate Avenue to the west. Aerial imagery shows that the lake has no public or private docks and provided no evidence indicating the lake was being utilized for recreation-based commerce. The lake was connected to the city's storm sewer system in 1957 which is greatly impacted the quality of lake, it is estimated that there is 100,000 cubic yards of accumulated sediment within the ~20-acre lake. Given this information, it is highly unlikely that the lake provides quality fish habitat.

| | NOTIFICATION OF ADMINIS R | STRATIVE APPEAL OPTIONS AND EOUEST FOR APPEAL | PROCESS A | ND | | |
|-------------------|--|--|---|---|--|--|
| Ap A | oplicant: City of Bloomington uthority – Steve Gurney | File No.: MVP-2021-00291-BBY | Date: Apr | il 23, 2021 | | |
| At | tached is: | | | See Section below | | |
| | INITIAL PROFFERED PERMIT (Standard Pe | | A | | | |
| | PROFFERED PERMIT (Standard Permit or L | etter of permission) | | В | | |
| | PERMIT DENIAL | | | С | | |
| | X APPROVED JURISDICTIONAL DETERMIN | NATION | | D | | |
| | PRELIMINARY JURISDICTIONAL DETER | MINATION | | E | | |
| SE inf A: | CTION I - The following identifies your rights and o <u>ormation may be found at http://usace.army.mil/inet/</u> INITIAL PROFFERED PERMIT: You may accept | ptions regarding an administrative appea functions/cw/cecwo/reg or Corps regulat or object to the permit. | l of the above ions at 33 CFF | decision. Additional Part 331. | | |
| • | ACCEPT: If you received a Standard Permit, you rauthorization. If you received a Letter of Permissic on the Standard Permit or acceptance of the LOP m permit, including its terms and conditions, and appr | may sign the permit document and return on (LOP), you may accept the LOP and y leans that you accept the permit in its ent roved jurisdictional determinations associ | it to the distriction our work is aution irety, and waive inted with the p | ct engineer for final thorized. Your signature re all rights to appeal the permit. | | |
| • | OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections, or (c) not modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below. | | | | | |
| B: | PROFFERED PERMIT: You may accept or appeal | the permit | | | | |
| • | ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit. | | | | | |
| • | APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice. | | | | | |
| C: cor wit | PERMIT DENIAL: You may appeal the denial of a npleting Section II of this form and sending the form thin 60 days of the date of this notice. | a permit under the Corps of Engineers Act to the division engineer. This form mus | lministrative A t be received b | ppeal Process by y the division engineer | | |
| D: | APPROVED JURISDICTIONAL DETERMINATION | ON: You may accept or appeal the appro | oved JD or pro | vide new information. | | |
| • | ACCEPT: You do not need to notify the Corps to a of this notice, means that you accept the approved . | accept an approved JD. Failure to notify JD in its entirety, and waive all rights to a | the Corps with appeal the app | in 60 days of the date roved JD. | | |
| • | APPEAL: If you disagree with the approved JD, yo Appeal Process by completing Section II of this for by the division engineer within 60 days of the date of | ou may appeal the approved JD under the m and sending the form to the division er of this notice. | Corps of Eng | ineers Administrative form must be received | | |
| E: The dist | PRELIMINARY JURISDICTIONAL DETERMINA e Preliminary JD is not appealable. If you wish, you trict for further instruction. Also you may provide ne | TION: You do not need to respond to the may request an approved JD (which may ew information for further consideration be | ne Corps regard be appealed), by the Corps to | ding the preliminary JD. by contacting the Corps preevaluate the JD. | | |

| SECTION II - REQUEST FO | R APPEAL or | OBJECTIONS TO | AN INITIAL | PROFFERED PERMIT |
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REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

| ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record |
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| The second |
| of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the |
| administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may |
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| provide additional information to clarify the location of information that is already in the administrative record |
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| DOINT OF CONTACT FOR OUTCOME OF RECOVERED LATION |

| POINT OF CONTACT FOR QUESTIONS OR INFORMATION: | extension of the state of the state of the | | |
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| If you have questions regarding this decision and/or the appeal process you may contact: | If you only have questions regarding the appeal process you may also contact the Division Engineer through: | | |
| Brian Yagle Regulatory Project Manager U.S. Army Corps of Engineers, St. Paul District 180 5 th Street East, Suite 700 St. Paul, MN 55101 651-290-5975 | Administrative Appeals Review Officer Mississippi Valley Division P.O. Box 80 (1400 Walnut Street) Vicksburg, MS 39181-0080 601-634-5820 FAX: 601-634-5816 | | |
| RIGHT OF ENTRY: Your signature below grants the right of entry to conduct investigations of the project site during the course of the investigation, and will have the opportunity to participate in all site | v to Corps of Engineers personnel, appeal process. You will be provi investigations. | and any government consultants, ded a 15 day notice of any site | |
| | Date: | Telephone number: | |

| Signature of appellant or agent. | |
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United States Department of the Interior

FISH AND WILDLIFE SERVICE Minnesota-Wisconsin Ecological Services Field Office 4101 American Blvd E Bloomington, MN 55425-1665 Phone: (952) 252-0092 Fax: (952) 646-2873 http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

IPaC Record Locator: 858-103137860

June 18, 2021

Subject: Consistency letter for the 'Oxboro Lake Maintenance Project' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Alison Harwood:

The U.S. Fish and Wildlife Service (Service) received on June 18, 2021 your effects determination for the 'Oxboro Lake Maintenance Project' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Oxboro Lake Maintenance Project

2. Description

The following description was provided for the project 'Oxboro Lake Maintenance Project':

Accumulated sediment removal and culvert replacement.

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/</u> <u>maps/@44.83379340000005,-93.28323453126643,14z</u>



Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on May 15, 2017. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully Take northern long-eared bats?

No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered
No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern longeared bat roost trees and hibernacula is available at <u>www.fws.gov/midwest/endangered/</u> <u>mammals/nleb/nhisites.html.</u>

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

Yes

- 7. Will the action only remove hazardous trees for the protection of human life or property? *No*
- 8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0.25

2. If known, estimated acres of forest conversion from April 1 to October 31

0.25

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

LOCAL

MnDOT gets \$60 million federal grant to upgrade I-494 in Bloomington

By Tim Harlow (https://www.startribune.com/tim-harlow/6370615/) Star Tribune

JULY 11, 2021 - 3:55PM

As four years of construction on Interstate 35W in south Minneapolis come to a close — the project between downtown Minneapolis and the Crosstown will be done Sept. 10 — the Minnesota Department of Transportation is prepping for the metro's next major freeway upgrade: Interstate 494 through Eden Prairie, Bloomington and Richfield.

The "I-494: Airport to Hwy. 169" project got a big boost July 1 when the U.S. Department of Transportation awarded MnDOT a \$60 million Infrastructure for Rebuilding America (INFRA) grant to improve traffic flow on the freeway between Hwy. 169 and the Minneapolis-St. Paul International Airport.

"The grant is great news for the project," said MnDOT's David Aeikens. "It will help make I-494 safer, less congested, last longer and provide new and improved ways for walkers and bicyclists to cross the freeway."

The grant will cover part of the \$304 million MnDOT will spend to build a MnPass lane in both directions between Hwy. 100 and I-35W, construct a new interchange at Portland Avenue, remove ramps and replace bridges at 12th and Nicollet avenues and put in new bridges and trails for bicyclists and pedestrians at Chicago, Portland and France avenues.

And it will offset the cost of the big-ticket item: rebuilding the interchange at I-35W and I-494, which annually appears on lists of the nation's worst freight bottlenecks. Plans call for a flyover ramp to carry drivers from northbound I-35W to westbound I-494 to help alleviate conflicts that lane weaving and merging cause.

"This is the highest priority for a roadway project in the region," said Steve Peterson, manager of highway planning for the Metropolitan Council, which co-authored MnDOT's application for the INFRA grant.

Trucks transport \$16.4 billion of freight along the "Bloomington Strip" annually, according to MnDOT. With congestion present up to 10 hours a day, many of the 6,000 to 8,500 trucks using the freeway each day are stuck in traffic. The east-west corridor is a key route for commuters and for the 34,000 drivers from outside the metro area who use it daily to get to places like the airport and Mall of America, Peterson said.

"It has incredible reach," he said. The improvements "will be a benefit to the whole state and Upper Midwest. It will be great for the economy and travelers."

The project aims to improve safety, too. The corridor experiences a high crash rate, with more than 700 property damage crashes and four resulting in serious injury or death between 2018 and 2020, according to the Met Council.

Improving mobility along the 9¹/₂-mile segment is just one impetus for the ambitious project, which, like the work on 35W, will happen in four stages. It will start in 2023 with work on the flyover bridge and MnPass lanes and wrap up by the end of the 2026 construction season. By then, MnDOT hopes to extend the MnPass lanes east from 35W to Cedar Avenue.

The project will also involve rehabilitating some of the metro's oldest pavement, improving drainage systems to reduce flooding and runoff and preserving existing bridges, Aeikens said.

Ramps closing in Minneapolis



GLEN STUBBE, STAR TRIBUNE

The state has been awarded a \$60 million grant to improve traffic flow on the Interstate 494 between Hwy. 169 and the Minneapolis-St. Heads up, drivers: Two key ramps in downtown Minneapolis will close starting Monday. The ramp from eastbound I-94 to northbound I-35W will be shut down through Friday. The ramp from 5th Avenue to northbound I-35W will be closed until Sept. 10.

Follow news about traffic and commuting at The Drive on startribune.com. Got traffic or transportation questions, or story ideas? E-mail drive@startribune.com, tweet @stribdrive or call Tim Harlow at 612-673-7768.

Tim Harlow covers traffic and transportation issues in the Minneapolis-St. Paul area, and likes to get out of the office, even during rush hour. He also covers the suburbs in northern Hennepin and all of Anoka counties, plus breaking news and weather.

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