Request for Qualifications

spirit mountain
Duluth, Minnesota

Request for Qualifications:
Stormwater engineering and water resources professional services study to provide pre-design and stormwater BMP infrastructure recommendations for the Spirit Mountain Recreation Area

Closing: 4 p.m. Wednesday, September 3, 2025

Spirit Mountain Recreation Area Authority
9500 Spirit Mountain Place
Duluth, MN 55810

Spirit Mountain Contact:
Ryan Abel
General Manager
rabel@spiritmt.com
218-269-7351
Bond Requirements: N/A

Contents

PURPOSE, BACKGROUND, OBJECTIVES, AND SCOPE

Purpose

Spirit Mountain Recreation Area Authority (SMRAA) is seeking qualifications for professional engineering and water resource services to complete a stormwater vulnerability and feasibility analysis of the Spirit Mountain Recreation Area (Spirit) and develop a Stormwater Management Plan. 139 acres of the hillside were converted from forested lands to grassed alpine runs and approximately 13.5 acres converted to impervious parking lots and buildings during the development of Spirt. Snowmelt from the ski runs and stormwater runoff from the impervious surface at the top produce flashy flows without rate checks or water quality Best Management Practices (BMPs). Several creeks, including Knowlton Creek, a designated trout stream, flow through Spirt. The altered hydrograph results in substantial bank erosion and sediment deposition into the St. Louis River Estuary.

Deliverables

Stormwater Management Plan (Plan) with Best Management Practice (BMP) action items to reduce erosion and sedimentation into adjacent receiving waters, including the St. Louis River and Knowlton Creek. The Plan will provide schematic level, affordable and practical design solutions for each of the identified issues, including all impervious and natural features such as buildings, roads, parking, campground, trail and ski runs, creeks, culverts, ditches and the snowmaking/stormwater conveyance treatment system. The Plan will also guide the design of the stormwater BMPs for the new Upper Spirt Chalet and adjacent parking and circulation routes, which are under design development. The building will follow the Minnesota B3 new building construction requirements.

Background

SMRAA, in coordination with the City of Duluth, applied for and received a grant from the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program administered by the Minnesota Department of Homeland Security and Emergency Management (HSEM). Total project funding for this study is $150,000.

Duluth is addressing climate change in all areas of planning, maintenance, and upgrades with an eye to resiliency, especially regarding precipitation and storm intensity. Two primary climate change characteristics that the Duluth area must address are increased heavy rainfall events that increase flood potential and greater variability in temperature and precipitation trends. From 1950 through 2015, the Duluth area experienced increases in annual average

temperature and the number of heavy rain events and a decrease in the number of days below 32 degrees. The pace of change accelerated annually from 1980 to 2010, when the Duluth area experienced an increase in heavy rain events: Annual precipitation increased 11% while heavy precipitation events increased 37%. From June 2007 to June 2017, St. Louis County experienced a 58% increase in storm events. Trends noted on Lake Superior include increasing wind speeds (~ 5% per decade) and climate variability and extremes, as well as more frequent and intense coastal storms.

Precipitation variability is anticipated to increase in Winter and Spring, exacerbating the run-off associated with the snowmelt from Spirit and the ski runs. Several washouts exist at the property complex including at Spirit Mountain Place, parking lots A, B, and C, and Skyline Parkway (see Exhibit A). The significant elevational changes, 750 feet from top to bottom, and the rates of stormwater runoff complicated by the mountain terrain present significant challenges. Further, late average freezing temperatures contribute to higher runoff rates in the spring due to the need to produce more artificial snow early and late in the season. These conditions drive the intent for SMRAA to quickly analyze and address the many snowmelt and stormwater issues on the mountain.

Work to Date

The Knowlton Creek Restoration Project repaired 6,500 feet of degraded stream channel and restored eight (8) acres of wetlands, reduced sediment entering the St. Louis River Estuary, and re-established a naturally reproducing brook trout population. The project implemented a snowmaking/stormwater conveyance treatment system that takes water from the St Louis River Estuary, pumps it uphill and blows it onto the mountain as snow. In the spring the system is reversed, collecting the meltwater and discharging it back to the Estuary. A concurrent project in 2010 removed 53,000 cubic yards of sediment behind Tallas Island, which restored connectivity to the Estuary.

The long-term remediation of Knowlton Creek and the Estuary is dependent upon mitigation of upstream hydrological impairments that restores stream channels and riparian zones. Knowlton Creek and several sources continue to contribute sediment to the Estuary, including the 82nd Avenue West Creek, two tributaries to Knowlton Creek, Gogebic, and Lenroot Creek (see Exhibit B).

Large storm events will result in additional movement of sediments into the Estuary and threaten the remediation completed to date. Exhibit C illustrates the extent of the sediment blooms impacting the Estuary behind Tallas Island. Addressing the issues with the built and natural environments at Spirit will ensure the continuing efforts to delist the St. Louis River

Estuary Area of Concern and promote improved quality of life for residents and terrestrial and aquatic systems.

Workplan

Task 1 of 4: Inventory of stormwater infrastructure issues

Subtask 1a: Study existing aerial imagery and LiDAR contour data from spring 2021 (supplied by City of Duluth). Desktop analysis to identify problem areas.
Timeframe: Sept 2025 – Oct 2025

Subtask 1b: Spring field visit during snowmelt conditions to observe drainage characteristics.
Timeframe: March 2026 – May 2026

Subtask 1c: Field investigation: Site visit after snowmelt to inspect existing stormwater infrastructure and drainage swales. Field-verify desktop analysis from LiDAR/aerial imagery and identify any additional failing areas and needed improvements.
Timeframe: April 2026 – May 2026

Subtask 1d: Develop a matrix for infrastructure improvements, including identification and ranking of the most critical sites and documentation of impacts on Spirit and surrounding down gradient water resources.
Timeframe: June 2026 – July 2026

Task 2 of 4: Feasibility study

Subtask 2a: Modeling for BMPs: A hydrologic/hydraulic study (H&H) of the Spirit site to determine drainage characteristics that will help determine the most efficient and appropriate BMPs, including green or hybrid solutions, that will achieve the goals of the stormwater management plan. City GIS data on existing storm and other utilities at Spirit is limited.
Timeframe: Aug 2026 – Sept 2026

Subtask 2b: Identify other storm infrastructure that needs to be added to the GIS dataset.
Timeframe: Sept 2026 – Oct 2026

Task 3 of 4: Design

Schematic level design solutions for each of the identified areas and corresponding issues with cost estimates. Break solution into two categories: “In-house BMPs” and “Contracted BMPs.” Develop a portfolio of BMPs that can be implemented throughout Spirit. In-House

BMPs will be infrastructure that SMRAA can implement with its in-house resources. Contracted BMPs are any stormwater BMP improvements that exceed the internal resources of SMRAA and likely will require funding from outside sources.
Timeframe: Oct 2026 - Dec 2026

Task 4 of 4: Develop Implementation Plan

Rank and prioritize projects: Rank and prioritize projects based on feasibility, cost benefit analysis, and the immediate need to address runoff issues that are significantly impacting Spirit and surrounding down-gradient water resources.
Timeframe: Jan 2027 – March 2027

Throughout project:

The selected consultant team is expected to assist SMRAA with ensuring the conditions of the FEMA/HSEM grant agreement are met (see attached agreement).

Information pertaining to consultant scope of work:

1. Although the SMRAA will hire and oversee Consultant's work, the City will be closely involved in the project, in particular determining acceptable locations, design approaches, BMP selection, aesthetics and long-term operation and maintenance needs. As such coordination and communication shall occur between the Consultant and the City of Duluth in addition to between Consultant and SMRAA.

2. Existing data: Existing aerial imagery and LiDAR contour data from Spring 2021 will be made available by the City of Duluth. As-built information of the snowmaking and stormwater conveyance system will be made available by SMRAA. Available GIS information on existing storm and other utilities at Spirit is limited. What data we have will be made available by the City of Duluth.

3. SMRAA also has a governing Masterplan that must be considered/referenced during this design process. The SMRAA plan can be found on the City Website. https://duluthmn.gov/media/5745/smra-2017-master-plan-update-adopted-plan.pdf

CONTRACTOR PERSONNEL REQUIREMENTS AND DETERMINATION OF RESPONSIBILITY

1. Consultant team must include at least one Professional Engineer registered in the State of Minnesota. Firm must provide evidence of previous, similar projects.

2. SMRAA may make such investigations as deemed necessary to determine the ability of the proposer to perform the work, and the proposer shall furnish to SMRAA all such information and data for this purpose as SMRAA may request.

PROPOSED BID SCHEDULE

August 20, 2025	Request for Quotes (RFQ) issued
September 3, 2025	Responses due
September 4– 10, 2025	Evaluation and selection of consultant
September 11 – 18, 2025	Negotiate fee with selected consultant
September 23, 2025	Consultant contract to SMRAA Board
September 29, 2022	Execute contract
October 8, 2025	Hold kick-off meeting

INQUIRIES AND INTERPRETATIONS

To be given consideration, a request for interpretation shall be made via email to Ryan Abel rabel@spiritmt.com by **4:00 pm CDT, Tuesday August 26, 2025.**

INSTRUCTIONS FOR PROPOSAL, COMPLIANCE WITH RFQ, AND DEADLINE

1. Responses to this RFQ must be submitted as an electronic PDF sent to persons listed below no later than 4:00 PM CDT, Tuesday, September 4, 2025.
   Ryan Abel rabel@spiritmt.com
   Jim Shoberg jshoberg@DuluthMN.gov

2. You may modify your submittal by email at any time prior to the response deadline.

AMBIGUITY, CONFLICT, OR ERRORS IN RFQ

Proposers are encouraged to promptly notify SMRAA, in writing, of any apparent major inconsistencies, problems, or ambiguities in the scope of work. Notifications should be sent via email to Ryan Abel rabel@spiritmt.com

If revisions to the RFQ are necessary, a written response will be provided to RFQ recipients via email. See Inquiries and Interpretations section for further requirements.

RFQ AND PRESENTATION COSTS

SMRAA is not responsible for any costs incurred by any proposer's preparation of a response to this request for qualifications or for any costs incurred in presenting this RFQ.

QUALIFICATIONS RESPONSE FORMAT

The consultant's qualifications submittal shall be presented in the following format. Submittals should not exceed ten (10) pages, excluding coversheet and cover letter.

A. Cover letter
B. Overview of project and planned approach to successfully complete the project
C. Examples of previous similar projects completed by the Consultant
D. Summary of the project team (key personnel) with key strengths and qualifications
E. Proposed project milestones and schedule

EVALUATION OF SUBMITTALS AND AWARD

All responses will be reviewed by an appointed evaluation committee consisting of SMRAA and City staff. Interviews may be included at the discretion of the evaluation committee. Submittals will be evaluated on the following criteria:

A. Qualifications of consultant company and team members: 30 points
B. Similar project experience delivering designs that met project objectives: 25 points
C. Proposed project milestones, schedule and corporate capacity that demonstrate the ability to meet the project schedule: 20 points
D. Planned approach that demonstrates understanding of the project: 15 points
E. Innovation of project approach: 10 points

AGREEMENT DEVELOPMENT

During consultant selection and contract development process SMRAA reserves the right to negotiate with one or more consultants.

TEAM PROPOSALS AND SUBCONTRACTORS

It is permissible for multiple consultants to team on a response to this RFQ. If submitting a team response, specify the lead consultant (prime contractor) and assisting consultant (sub-contractor). In the event a consultant team is selected, the lead consultant will be the party to contract with SMRAA. The lead consultant will be responsible for the performance of the assisting consultant. There is no limit on the number of consultants that comprises a team.

REJECTION OF PROPOSALS

SMRAA reserves the right to reject any or all proposals submitted when deemed to be in the best interest of SMRAA.

Date: 12/12/2020

0 500 1,000 2,000 Feet

Spirit Mountain Recreation Area

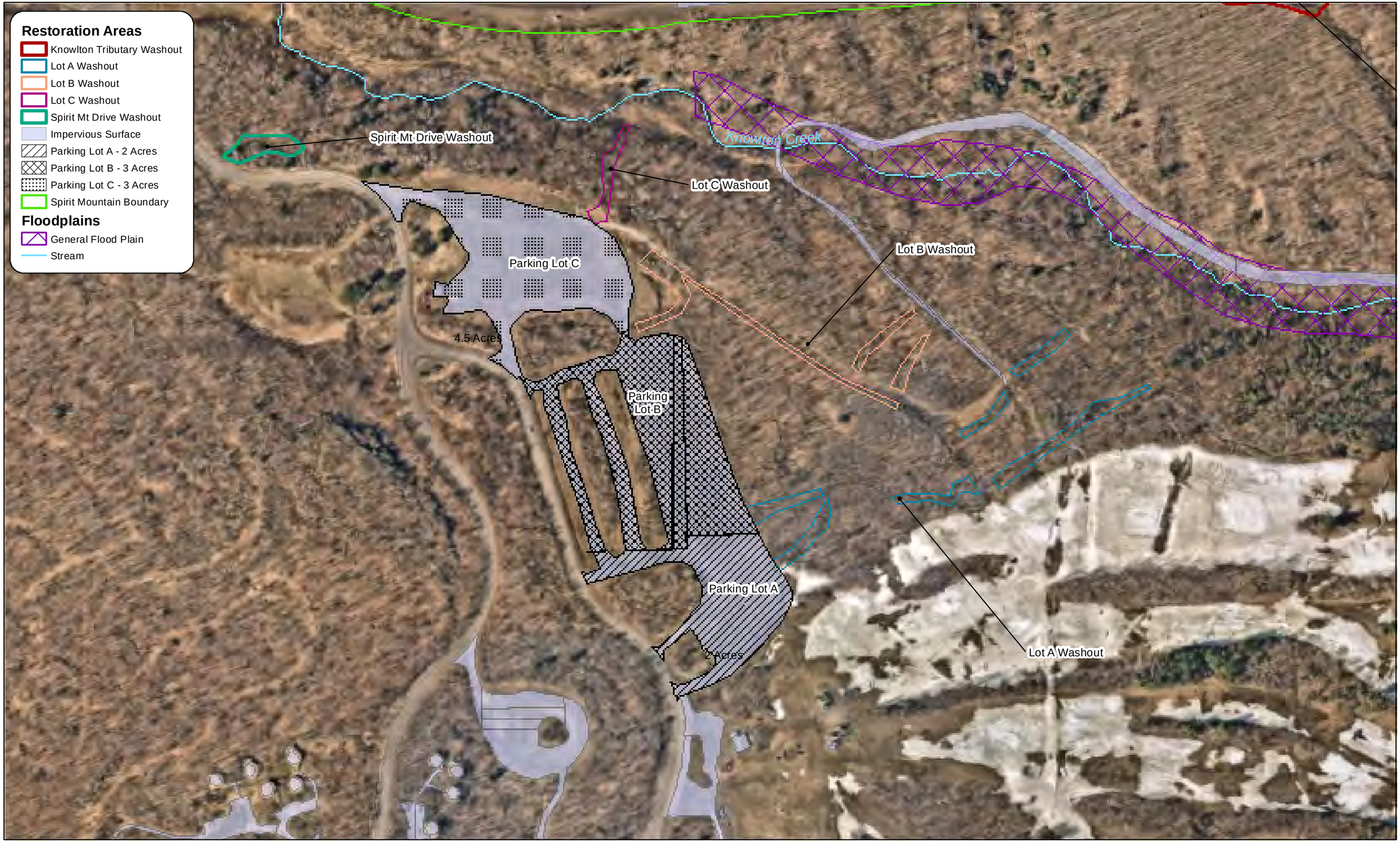
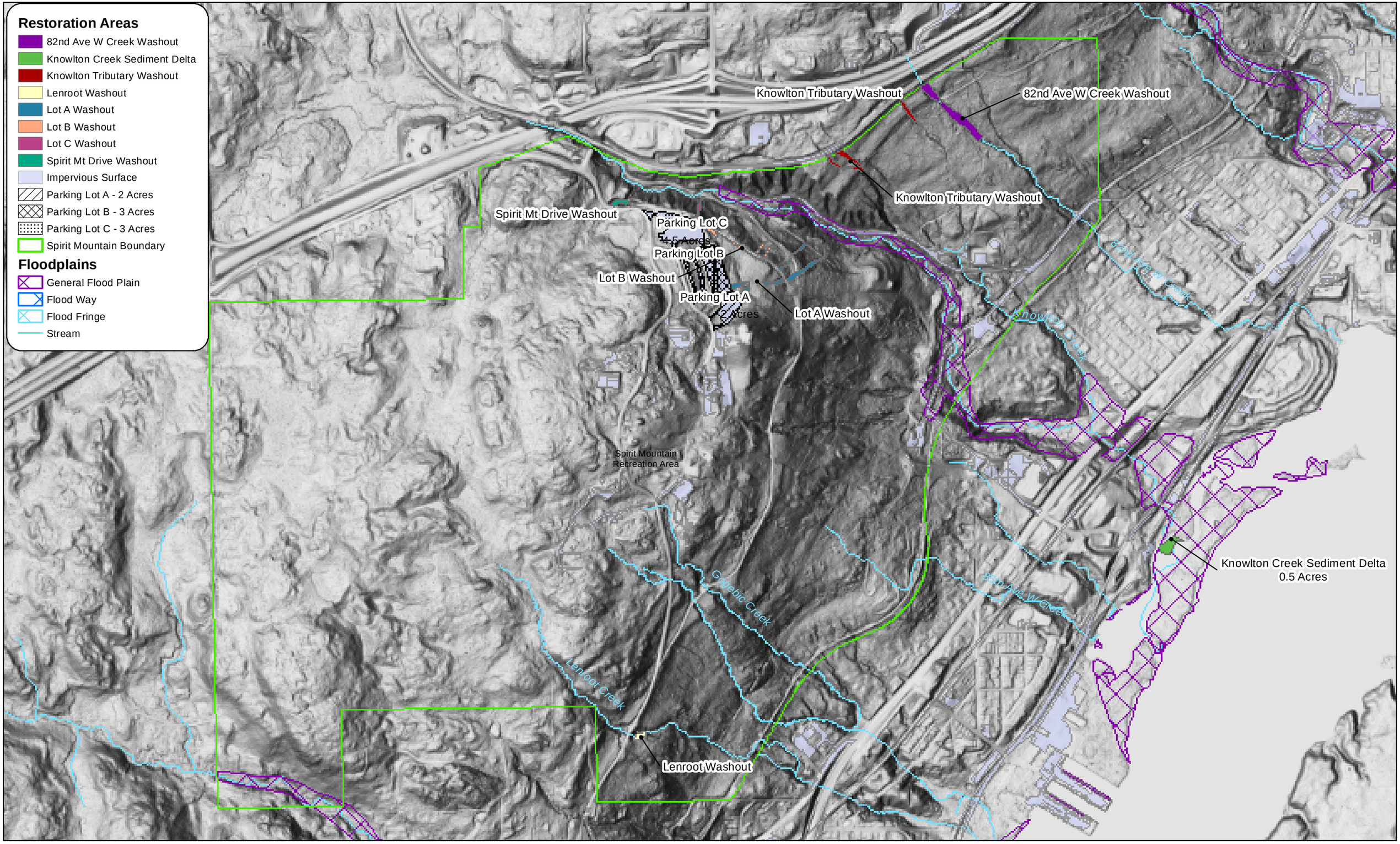


Exhibit B Facility washouts

Spirit Mountain Recreation Area

Date: 1/11/2023

0 120 240 480 Feet



Date: 1/11/2023

Exhibit B Facility washouts

Spirit Mountain Recreation Area

0 500 1,000 2,000 Feet

Restoration Areas
- Knowlton Tributary Washout
- Lot A Washout
- Lot B Washout
- Lot C Washout
- Spirit Mt Drive Washout
- Impervious Surface
- Parking Lot A - 2 Acres
- Parking Lot B - 3 Acres
- Parking Lot C - 3 Acres
- Spirit Mountain Boundary

Floodplains
- General Flood Plain
- Stream

Spirit Mt Drive Washout
Lot C Washout
Knowlton Creek
Lot B Washout
Parking Lot C
4.5 Acres
Parking Lot B
Parking Lot A
2 Acres
Lot A Washout

Exhibit B Facility washouts

Spirit Mountain Recreation Area

Date: 1/11/2023

0 120 240 480 Feet

Restoration Areas
- 82nd Ave W Creek Washout
- Knowlton Tributary Washout
- Impervious Surface
- Spirit Mountain Boundary

Floodplains
- General Flood Plain
- Stream

Knowlton Tributary Washout

82nd Ave W Creek Washout

82nd Ave W Creek

Knowlton Tributary Washout

Knowlton Creek

Exhibit B: Stream point sources.
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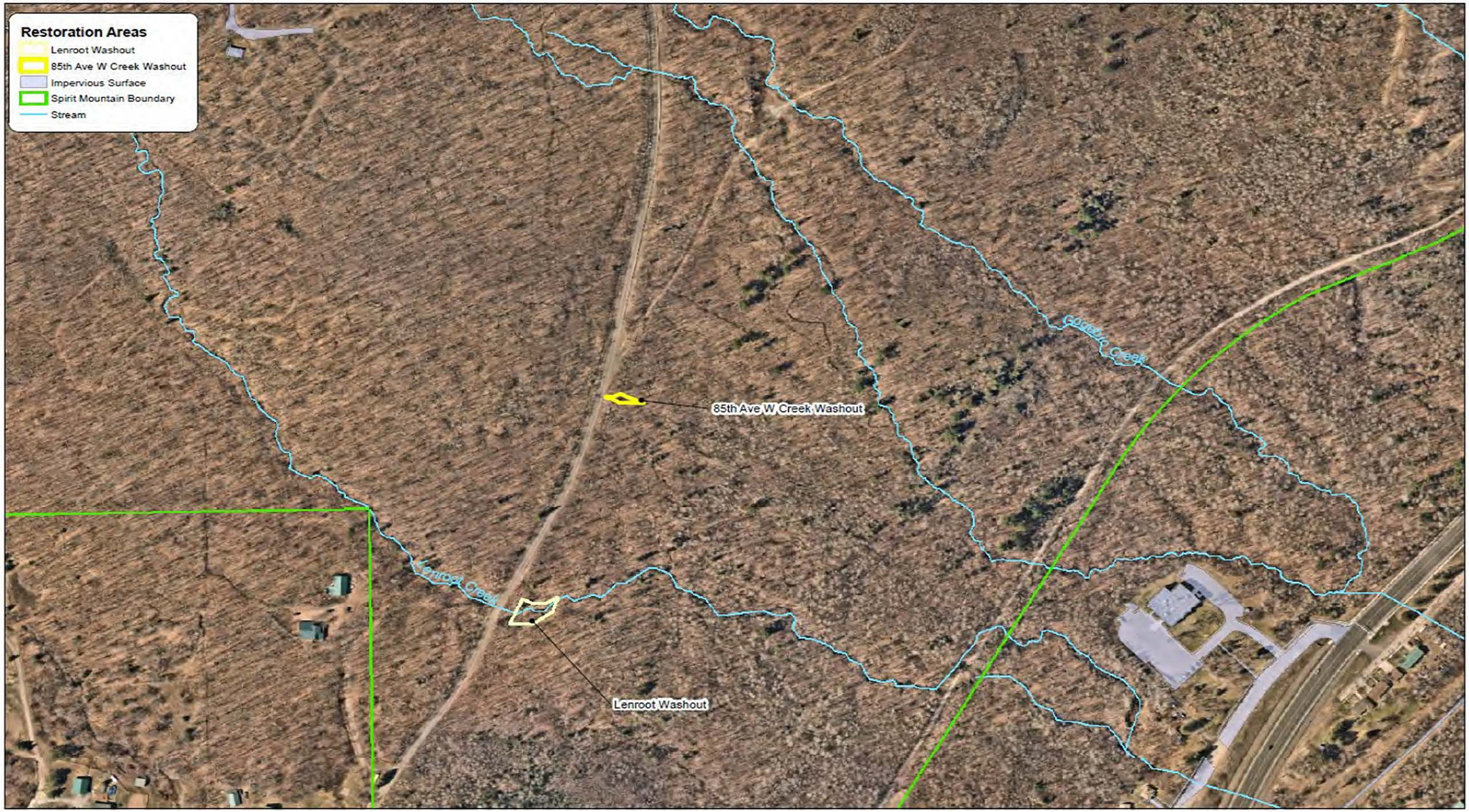
Spirit Mountain Recreation Area

Date: 1/11/2023

0 120 240 480 Feet



Date: 12/12/2023

0 145 290 580 Feet

Exhibit B: Stream point sources.
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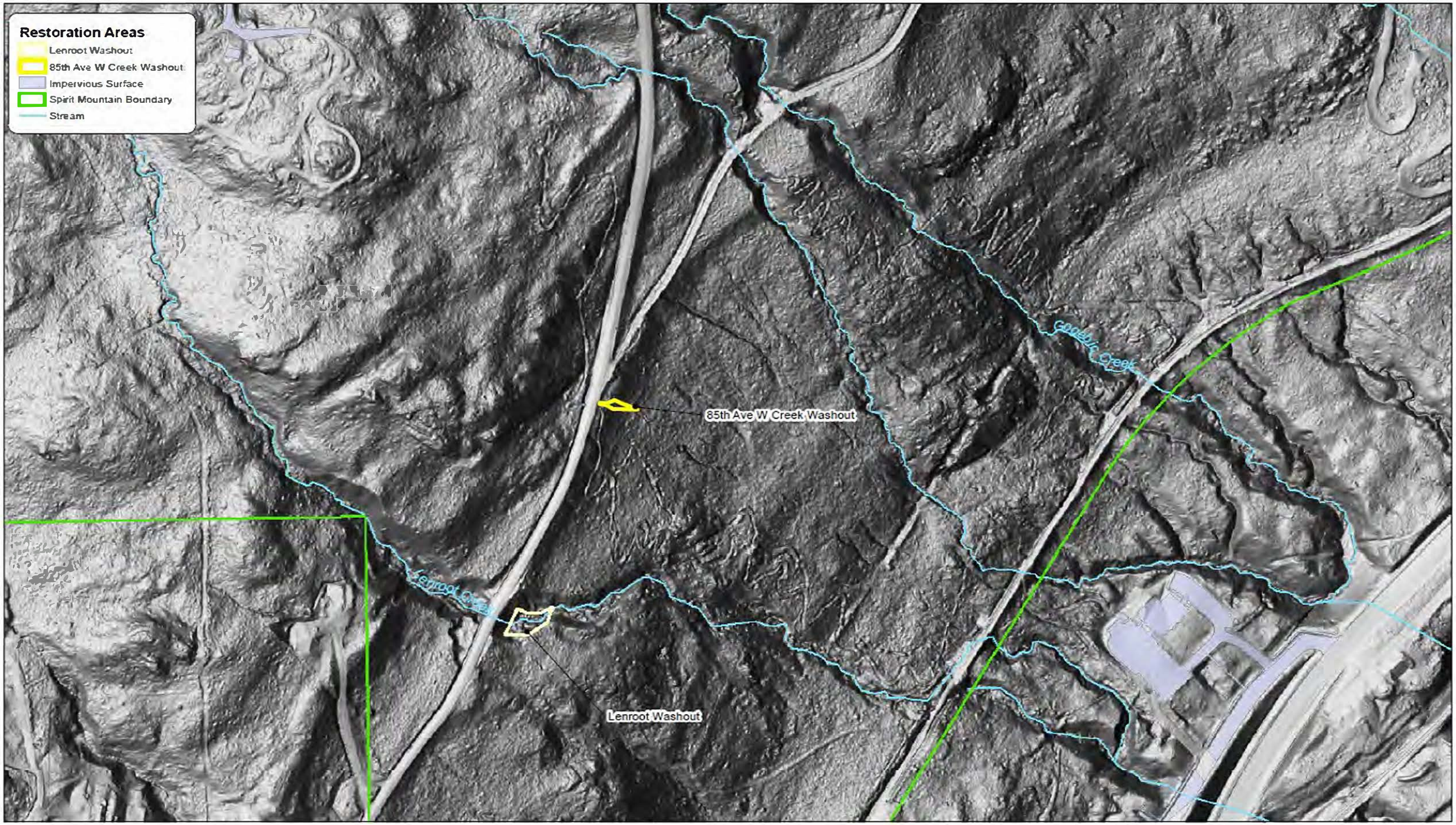
Spirit Mountain Recreation Area



Date: 12/12/2023

0 145 290 580 Feet

Exhibit B: Stream point sources.
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Spirit Mountain Recreation Area

Exhibit B: Stream point sources.
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Spirit Mountain Recreation Area

Date: 1/11/2023

0 120 240 480 Feet

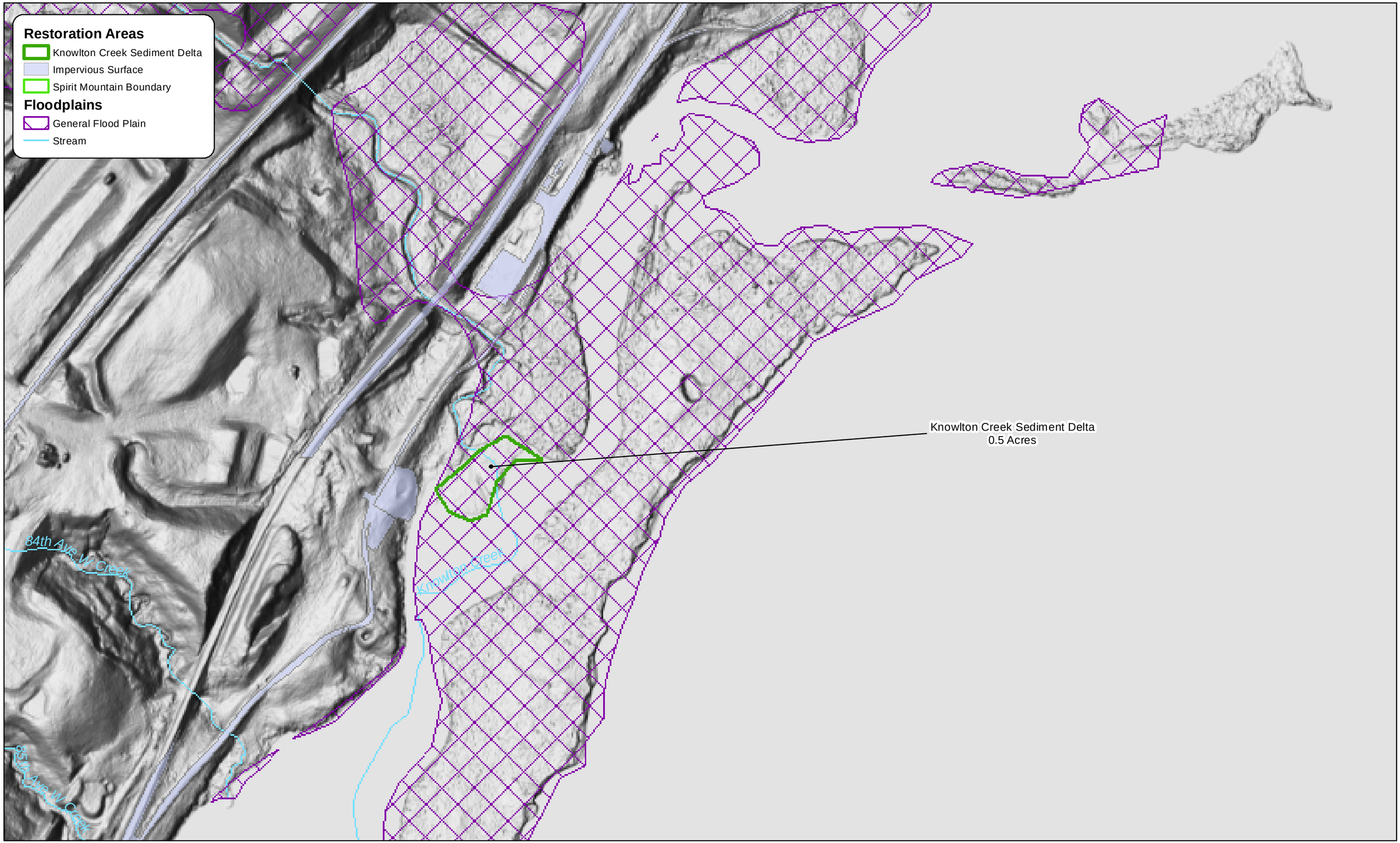

Exhibit B: Stream point sources.
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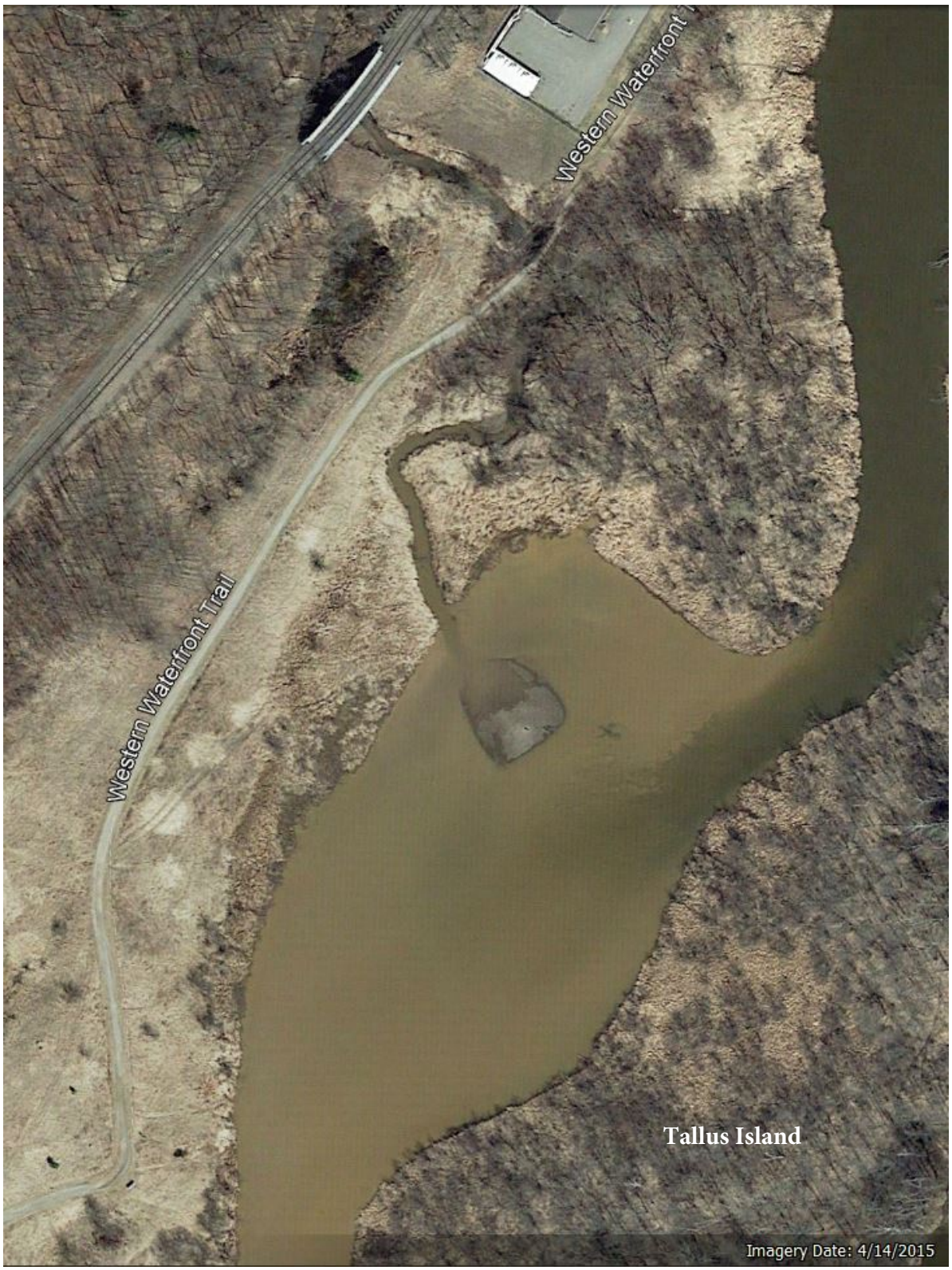
Spirit Mountain Recreation Area

Date: 1/11/2023

0 120 240 480 Feet

April 2009 - Before Restoration

April 2015 Sediment bloom and delta



May 2023 delta