

2023 ANNUAL REPORT

Alaska Pollutant Discharge Elimination System Permit No. AKS-053406

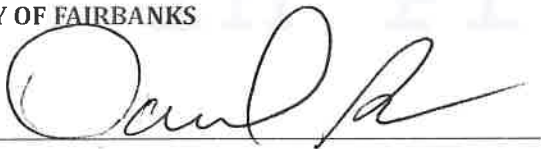


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"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

CITY OF FAIRBANKS



David Pruhs, Mayor

1/31/24

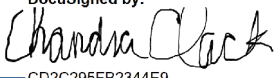
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CITY OF NORTH POLE

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Chandra Clack, Mayor Pro Tem

1/29/2024

Date

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UNIVERSITY OF ALASKA FAIRBANKS

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Kellie Fritze, UAF Associate Vice Chancellor for Facilities Date

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ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES - NORTHERN REGION

DocuSigned by:

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Jason Sakalaskas, Maintenance & Operations Chief

2/5/2024

Date

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Storm Water Permit Overview

1.0 INTRODUCTION

This Annual Report documents the activities undertaken January through December 2023 to comply with the requirements of Alaska Pollutant Discharge Elimination System (APDES) Permit No. AKS-053406 issued by the Alaska Department of Environmental Conservation (ADEC) to the City of Fairbanks, City of North Pole, University of Alaska Fairbanks (UAF), and Alaska Department of Transportation & Public Facilities (ADOT&PF) Northern Region as “co-permittees.” In accordance with Section 1.5.3 of the permit, the co-permittees updated the intergovernmental agreement that describes each organization’s respective roles and responsibilities related to the Permit in 2023. A copy of this document is provided in Appendix D, (D01).

Annual Reports are required to be submitted to the ADEC in accordance with Section 4.3 of the permit. The last report documented activities undertaken January 2022 through December 2022. Annual reports are required to be submitted to the ADEC by February 15.

1.1 PERMIT HISTORY

The co-permittees were originally issued a Phase II National Pollutant Discharge Elimination System (NPDES) Permit from the U.S. Environmental Protection Agency (EPA) on June 1, 2005, for a term of five years. The ADEC later assumed authority over the permit in October 2009 under the APDES Program and provided an administrative extension for the existing permit’s requirements to remain effective and enforceable until a new permit could be developed and issued. The new permit, with new requirements, was issued to the co-permittees in June 2013 with an effective five-year term beginning August 1, 2013, and expiring July 31, 2018. On May 11, 2018, ADEC re-issued a five-year permit with an effective five-year term beginning July 1, 2018, and expiration of June 30, 2023. In response to the expiration of permit of June 30th of this year, instead of re-issuing a new permit ADEC sent a letter stating, “In accordance with 18 AAC 83.155(c) - Continuation of Expired Permit, ADEC is notifying you that the status of your permit is administratively continued, and the conditions of the permit continue in force until the effective date of a new permit is issued.” As of the date of this signed annual report a new permit has not been issued, and the permit issued in 2018 remains in full effect. A copy of the permit can be found at www.fairbanksalaska.us/sites/default/files/fileattachments/engineering/page/921/aks053406-fbks4-ms4-finalpermit_signed-20180511.pdf This annual report documents compliance with the permit under Administrative Continuation that covered the calendar year 2023.

1.2 COVERAGE AREA

The current permit covers all areas within the boundary of the Fairbanks Urbanized Area that are served by the municipal separate storm sewer system (MS4) owned and operated by the co-permittees. Urbanized area boundaries are established by U.S. Census Bureau and defined as the core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. The current boundary of the

Fairbanks Urbanized Area was established using data from the 2010 Census. An interactive Stormwater Permitting map of this boundary can be found at FNSB website <https://fnsb.maps.arcgis.com/apps/webappviewer/index.html?id=9e10ca346d88422888b81b048d562e9b> or downloaded as pdf in the **Fairbanks and City of North Pole Storm Water Program Guide, 5th Edition** at: https://www.fairbanksalaska.us/sites/default/files/fileattachments/engineering/page/881/fbks-np_stormwaterguide_5thedition_060119_finalreduce.pdf. There is a more recent 2020 Census, however a new permit has not been issued using data from the 2020 Census. Once a new permit is issued, it is expected that permit boundaries will change.

1.3 AUTHORIZED DISCHARGE

With some limitations, the permit authorizes the co-permittees to discharge storm water to waters of the U.S. from (1) all portions of the MS4 owned and operated by the City of Fairbanks, City of North Pole, and UAF; and (2) the portions of the MS4 within ADOT&PF rights-of-way located within the boundary of the Fairbanks Urbanized Area. The limitations are outlined in Section 1.4 of the permit and include non-storm water discharges, discharges threatening water quality, snow disposal/dumping to receiving waters, and discharges to water quality impaired receiving waters.

1.4 PERMIT REQUIREMENTS

The permit requires the co-permittees develop and implement a Storm Water Management Plan and meet the following six minimum control measures:

1. Public Education & Outreach
2. Public Involvement & Participation
3. Illicit Discharge Detection & Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management
6. Pollution Prevention & Good Housekeeping

The plan, which was first written by the co-permittees in April 2014, and amended in February 2019, can be found at:

<https://www.fnsb.gov/DocumentCenter/View/793/Fairbanks-and-North-Pole-Storm-Water-Management-Plan-PDF> and in Appendix D, (D02). The plan identifies best management practices (BMPs) and other strategies to meet the requirements of the minimum control measures and reduce the discharge of pollutants from the MS4 to the maximum extent practicable to protect the water quality of receiving waters. Documentation of the activities undertaken in accordance with the plan is included in the following sections of this report and Appendices A through H.

Minimum Control Measures

The following subsections list the individual requirements for each minimum control measure, a description of the activities undertaken by the co-permittees to comply with those requirements, and measurable goals for the next reporting period.

2.0 PUBLIC EDUCATION & OUTREACH

2.1 Permit Requirements

To date, the co-permittees have completed all the requirements under Minimum Control Measure 1 – Public Education & Outreach according to the permit requirements. The following table provides a summary of the individual requirements, compliance dates, and status as of December 2023.

Permit Requirements	Compliance Date	Status
<i>Co-permittees must maintain a public education program to educate the community about the impacts of storm water discharges on water bodies and the steps that citizens and businesses can take to reduce pollutants in storm water runoff. [Section 3.1.1]</i>	Annually	Complete, ongoing
<i>At least annually, the co-permittees must distribute storm water educational materials to target audiences that encourage the public to improve water quality. [Section 3.1.2]</i>	Annually	Complete, ongoing
<i>At least annually, the co-permittees must prepare and distribute appropriate information that encourages the public to improve water quality to local media outlets. [Section 3.1.3]</i>	Annually	Complete, ongoing

2.2 Compliance Activities

The co-permittees and Fairbanks North Star Borough (FNSB), which has a separate but similar APDES permit, have worked together since 2005 to implement a unified public education program on local storm water issues. The program’s education and outreach activities occur in the spring of each year when snowmelt runoff is prevalent, parking lots and streets are flooded, and storm water concerns are easily identifiable to residents of the community. The program is focused on creating awareness and educating the public about the impacts of storm water discharges to the MS4 and local water bodies and provides information on how citizens and businesses can take steps to reduce pollutants in storm water runoff. Program activities completed during the 2023 reporting year included the following:

- Fairbanks Storm Water Management Program Webpage Updates were completed for City of Fairbanks webpage.
- Providing educational presentations on storm water at local schools. The City of Fairbanks and AK DOT&PF presented in-person to twenty-two (22) Fairbanks elementary school classrooms during Spring 2023
- Providing guest presentations on stormwater. This year the DOT&PF did a presentation for the UAF Watershed Planning classroom.
- Educational Material Distribution
- Other Public Education and Outreach Activities

2.2.1 Fairbanks Storm Water Management Program Webpage

The primary Stormwater Management Program website can be viewed at <https://www.fnsb.gov/383/Fairbanks-Storm-Water-Management-Program>. The page combines the programmatic components for both the FNSB MS4 and the Fairbanks MS4 (four agency co-permittees). It provides an overview of storm water and pollutants of concern in the Fairbanks area, program information for each of the six Minimum Control Measures, a list of ways the public can get involved (i.e. attending storm water committee meetings, participating in stream cleanup events, etc.), links to the Cities of Fairbanks and North Pole and FNSB storm water ordinances and corresponding site development plan review requirements, a link to access and view the comprehensive storm drain system GIS map of the entire MS4, links to local publications such as the Green Infrastructure Resource Guide for Fairbanks, the Best Management Practice (BMP) Effectiveness Report for Fairbanks, and how to report illicit discharges and contact information for the storm water coordinators for each of the co-permittees and FNSB. The website also provides viewers links to the ADEC Storm Water Program webpage, ADEC Construction General Permit, ADEC Alaska Storm Water Guide, Cities of Fairbanks and North Pole Storm Water Management Program Guide (5th Edition) that includes a map and storm water plan submittal flowchart for the Fairbanks Urbanized Area and Site Development Plan Review Requirements and Fee Schedule, FNSB BMP Design Guide, the most recent APDES MS4 Permit, FNSB and Fairbanks MS4 Annual Reports, and the new brochures such as “How to Handle the Snow Like a Pro” for the Snow Storage & Disposal for Local Contractors and as well as 10 Ways You Can Prevent Storm Water Runoff Pollution.

2.2.2 Educational Presentations on Storm Water at Local Schools

Presentations were given to FNSB elementary classrooms (grades 1-6) and middle school classrooms (grades 7-8) in person. The presentation was projected within the classroom and children were able to ask questions and have a dialogue with the presenter. The elementary classrooms were also able to conduct water quality testing using Chena River water, snowmelt water, and tap water. A summary of the educational presentations and the estimated number of students in attendance is included in Appendix A, (A01-A02).

2.2.3 Guest Presentations on Storm Water

The co-permittees were able to provide a presentation to UAF Watershed Planning students on the Fairbanks Storm Water Program, in 2023 Appendix A, (A03).

2.2.4 Educational Material Distribution

2023 Fairbanks Outdoor Show– The Outdoor Show was held at the Carlson Center in Fairbanks, April 21-23. The FSWAC staffed a booth all three days Appendix A, (A04). The Outdoor Show is an annual event held in Fairbanks each spring to kick off summer outdoor recreational activities and includes a wide variety of local vendors showcasing, events, equipment, and services. This year the co-permittees shared a booth with Alaska Department of Transportation and Public Facility (ADOT&PF). Staff distributed stormwater educational materials, including a new public outreach campaign to pick up pet waste that included” Scoop the Poop” brochures and giveaway pet waste bag dispenser, Appendix A, (A05).

2023 Earth Day and Midnight Sun Festival Events – TVWA distribute storm water educational brochures at two public outreach events: Earth Day at Fort Wainwright on April 18th involving public schools and families; and the Midnight Sun Festival on June 24th promoting stormwater education to the greater Fairbanks area community.

Stormwater Contractor Training - This year FNSB staff sent out a post card announcement and contacted local businesses directly to notify businesses of upcoming training and to make them aware of the local storm water plan review and permitting requirements for the City of Fairbanks, City of North Pole, and FNSB.

Public Service Announcements - In the spring of 2023, on social media the co-permittees arranged for a “Don’t Pollute” Spring PSA that reminds people of the function of the storm drain systems and the importance of keeping them clean. PSA announcement provided in Appendix A, (A06).

2.2.5 Other Public Education & Outreach Activities

Additional public education and outreach activities completed during the 2023 reporting year included hosting the Stream Cleanup Day event, the local Adopt-A-Stream (AAS) Program, implementing the storm drain stenciling program, conducting the annual Storm Drain Art contest, convening quarterly storm water advisory committee meetings open to the public, conducting interviews with local radio programs related to these events, and publications available on the Fairbanks Storm Water Management webpage; all of which are later discussed under Minimum Control Measure 2 – Public Involvement & Participation. Documentation of outreach events activities are provided in Appendix A, (A07).

2.3 Staff Responsible for Compliance Activities

The following individuals were responsible for implementing and coordinating the public education and outreach activities during much of 2023:

- City of Fairbanks -John O’Brien, Environmental Manager
- City of North Pole - Robert Wallace, Director of City Services
- UAF – Russ Steiger, Environmental Compliance Officer
- ADOT&PF – Cynthia Nelson, Maintenance & Operations Environmental Impact Analyst
- ADOT&PF - Melissa Riordan, Maintenance & Operations Environmental Impact Analyst

2.4 Measurable Goals

The following table details the measurable goals set forth in the co-permittees' February 2019 (most recent revision) Storm Water Management Plan, whether the goals were achieved during the current reporting period, and lists proposed changes, if any, for the next reporting period.

Measurable Goals	Achieved during the current reporting period?	Proposed changes for next reporting period?
Maintain the Storm Water Management Program website for the duration of the permit term	Yes	Yes*
Annually provide a minimum of 15 educational presentations on storm water at local schools	Yes	No
Annually provide guest presentations on storm water to local interest groups, as requested	Yes	No
Annually distribute storm water educational brochures at a minimum of two local events	Yes	No
Annually distribute educational brochures to landscaping, snow removal, and building contractors	Yes	No
Annually issue at least one PSA to local media outlets for broadcast	Yes	No
*All MS4 website information will be consolidated onto the COF webpage in 2024.		

3.0 PUBLIC INVOLVEMENT & PARTICIPATION

3.1 Permit Requirements

To date, the co-permittees have met all the requirements under Minimum Control Measure 2 – Public Involvement & Participation. The following table provides a summary of the individual requirements, compliance dates, and status as of December 2023.

Permit Requirements	Compliance Date	Status
<i>Co-permittees must comply with applicable state and local public notice requirements when implementing a public involvement/participation program. [Section 3.2.1]</i>	Annually	Complete, ongoing
<i>Co-permittees must continue to make the Storm Water Management Plan and all Annual Reports available to the public through the municipal library system, a co-permittee-maintained website, or other easily accessible location. Public outreach should include location information whenever appropriate. [Section 3.2.2]</i>	Annually	Complete, ongoing
<i>Co-permittees must continue the Storm Water Advisory Committee. The Storm Water Advisory Committee meeting schedule must be made known to the public and ADEC through direct mail or e-mail notification, if possible, and other locally appropriate means. [Section 3.2.3]</i>	Annually	Complete, ongoing
<i>Co-permittees must continue to implement a storm drain stenciling program. [Section 3.2.4]</i>	Annually	Complete, ongoing
<i>At least annually, co-permittees must continue to host a community Stream Cleanup Day. [Section 3.2.5]</i>	Annually	Complete, ongoing
<i>Co-permittees must continue an ongoing volunteer monitoring program and an Adopt-a-Stream program. [Section 3.2.6]</i>	Annually	Complete, ongoing

3.2 Compliance Activities

3.2.1 Public Notices

The co-permittees follow the public notice requirements of the State of Alaska’s Administrative Procedures Act (AS 44.62), including but not limited to the Open Meetings Act (AS 44.62.310), as well as all internal policies of the co-permittees’ respective agencies.

3.2.3 Storm Water Management Program Plan & Annual Reports

Consistent with Section 2.1.1 of the permit, the co-permittees updated their Storm Water Management Program Plan in February 2019. Copies of both the co-permittees’ and FNSB’s APDES permits, Storm Water Management Plans, and most recent Annual Reports submitted to ADEC are made available to the public through the Fairbanks Storm Water Management Program website at <https://ak-fairbanksnorthstarborough.civicplus.com/384/Area-Wide-Program-Information---Reports>. The City of Fairbanks Engineering Department also has an established webpage specific to Storm Water Management

and Compliance within the urbanized area (see: <https://www.fairbanksalaska.us/engineering/page/storm-water-management>).

3.2.4 Fairbanks Storm Water Advisory Committee

In 2003, the co-permittees and FNSB formed the Fairbanks Storm Water Advisory Committee (FSWAC) to coordinate and carry out the development, implementation, and review of the Fairbanks Storm Water Management Program. The FSWAC is comprised of agency representatives from each of the co-permittees' agencies, FNSB, and ADEC, as well as two citizen members from Fairbanks and North Pole serving as representatives of their respective communities. The FSWAC quarterly scheduled meeting is normally held at Fairbanks City Hall on the second Thursday every three months from 11:00 a.m. to 12:00 p.m. This year all meetings were open to in-person attendance and via *MS Teams*. All meetings were open and advertised to the public. The quarterly meeting schedule is posted on the COF website, Fairbanks Storm Water Management Program website, via social media and via email to the FSWAC's email distribution list. Minutes and agendas are drafted and approved by the FSWAC for every meeting held. Copies of the 2023 meeting schedule and meeting minutes for the 2023 reporting period are included in Appendix B, (B01). No public comments were received by the FSWAC in 2023.

3.2.5 Storm Drain Stenciling Program

The co-permittees annually stencil storm drain inlets to bring attention to inlets, educate the public on where storm water drains empty to, and discourage illicit discharges. There is a common misconception that storm drains flow to the City's sewer treatment plant, and the stenciling program helps clear up this misconception. The co-permittees have four types of storm drain stencils – one with an outline of a salmon on it and one with a duck on it with the words “Dump No Waste, Drains to River” for those inlets draining to the Chena River, and another with an outline of an arctic grayling and one with a beaver with the words “Dump No Waste, Drains to Slough” for those inlets draining to Noyes and Chena Sloughs. During the 2023 reporting year, the co-permittees stenciled a total of 107 inlets (55 City of Fairbanks, 30 DOT&PF and 22 University of Alaska), see Appendix B, (B-2).

3.2.6 Storm Drain Art Contest

In coordination with the storm drain stenciling program, the co-permittees held the 10th Annual Storm Drain Art Contest in downtown Fairbanks lead by TVWA, with support from the city of Fairbanks and ADOT&PF. In total, artists painted 5-storm drains on 3rd Avenue Saturday, June 3, 2023. The art was themed to bring awareness to the public that our storm drains empty into the river (i.e., not the wastewater treatment plant). Pictures of the finished artwork, as well as the advertisement flier for the contest, and 2023 TVWA report with additional details are included in Appendix B, (B03, B04 & B08).

3.2.7 2023 Annual Stream Cleanup Day Event

The co-permittees and FNSB held the 19th Annual Stream Cleanup Day event in Fairbanks on June 10, 2023. Volunteers were assigned to clean up the various sections of the Chena River from Ft. Wainwright Recreation Center to the University Avenue Bridge, and a section of Noyes Slough above the Lion Club Park on Danby Street, and at the Minnie Street Outfall. Less of Noyes Slough was done this year due to

construction occurring on the Aurora Street bridge located downstream of the Lion's Club Park. In total, 45 people volunteered for the event and removed over 1,440 pounds of trash (including litter, bags, tires, vehicle parts, shopping cart and various other items) out of the waterways. Volunteers included members of Fairbanks Paddler's Association, Fort Wainwright soldiers & Eielson AFB airmen, the Lion's Club volunteers, as well as community residents who responded to the advertisements. Copies of the 2023 Stream Cleanup Day advertisements, participants list, and other details in the TVWA Annual Report are included in Appendix B, (B05-B08).

3.2.8 Fairbanks Storm Water Management Program Website

The FNSB maintains and hosts the Fairbanks Storm Water Management Program website. As described in the previous sections the website can be viewed at: <https://www.fnsb.gov/383/Fairbanks-Storm-Water-Management-Program> It provides an overview of storm water and pollutants of concern in the Fairbanks area, program information for the six Minimum Control Measures, and a list of ways the public can get involved (i.e., attending storm water committee meetings, participating in stream cleanup events, etc.). Additionally, it includes links to the FNSB, City of Fairbanks, and City of North Pole storm water ordinances, corresponding site development plan review requirements, a link to access and view the comprehensive storm drain system map of the entire FNSB, links to local publications such as the Green Infrastructure Resource Guide for Fairbanks and Best Management Practice (BMP) Effectiveness Report for Fairbanks, directions on how to report illicit discharges, and contact information for the storm water coordinators for each of the Fairbanks Permittees and FNSB. The website also provides viewer's links to the ADEC Storm Water Guide, and a Fairbanks Urbanized Area map and storm water submittal flowchart for the Area. The website address is printed on educational brochures distributed at local events and through the mail.

3.2.9 Volunteer Water Quality Monitoring & AAS Programs

The co-permittees entered into a Memorandum of Agreement (MOA) with the TVWA in 2008 to implement the Volunteer Water Quality Monitoring and AAS Programs on behalf of the co-permittees. Under the terms of the MOA, the TVWA agreed to administer the programs contingent on funding support and additional, in-kind assistance from the co-permittees. Elements of the programs include water quality monitoring, bio-assessment studies, additional litter cleanup activities, and stream bank restoration and maintenance. In January 2019, the co-permittees increased program funding and re-signed the MOA with improved language to describe the arrangement more accurately between the co-permittees and TVWA, and to set a term for the MOA to follow the term of the permit. A copy of the current MOA is included in Appendix B, (B09).

The co-permittees provided \$14,000 in program funding to the TVWA in 2023. A copy of TVWA's 2023 Annual Report of program activities is included in Appendix B, (B08). TVWA provided in-person trainings for volunteers (aka "Citizen Scientists") in 2023 on May 7th, 2023. During the months of May-September AAS volunteers and TVWA staff performed water quality sampling at 16 areas along the Chena River and surrounding waterways. All the data collected was uploaded to the EPA's Water Quality Exchange (WQX) database which replaces the Storage & Retrieval Data Warehouse (STORET) database. Water quality sampling information from 2023 can be obtained through EPA's Water Quality Portal at

<https://www.epa.gov/waterdata/water-quality-data-download#portal>, which is accessible by agencies and the public to look up the analytical details of each sample taken.

3.2.10 Public Comments Log

In addition to all the activities listed above, the co-permittees maintain a log of public comments related to storm water. Comments are accepted via telephone, electronic mail, postal mail, and in person; and directed to appropriate staff to be addressed. No public comments were received by the FSWAC for the current reporting period.

3.3 Staff Responsible for Compliance Activities

The following individuals were responsible for implementing and coordinating the public involvement and participation activities during the 2023 reporting period:

- City of Fairbanks -John O'Brien, Environmental Manager
- City of North Pole - Robert Wallace, Director of City Services
- UAF – Russ Steiger, Environmental Compliance Officer
- ADOT&PF – Cynthia Nelson, Maintenance & Operations Environmental Impact Analyst
- ADOT&PF - Melissa Riordan, Maintenance & Operations Environmental Impact Analyst

3.4 Measurable Goals

The following table details the Measurable goals set forth in the co-permittees' February 2019 Storm Water Management Plan, whether goals were achieved during the current reporting period, and lists proposed changes, if any, for the next reporting period. At the October 11, 2022 FSWAC meeting, a motion was made and approved to move FSWAC meetings from a monthly to a quarterly schedule. This shift is intended to increase public participation and complies with the permit as stated in in Section 3.2.3.

Measurable Goals	Achieved during the current reporting period?	Proposed changes for next reporting period?
Schedule Quarterly FSWAC meetings for the duration of the permit term	Yes	No
Annually stencil a minimum of 75 storm drain inlets	Yes	Yes*
Annually host a Stream Cleanup Day event	Yes	No
Annually fund the AAS Program	Yes	No

*Targeted number of inlets to be reassessed in 2024		
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4.0 ILLICIT DISCHARGE DETECTION & ELIMINATION

4.1 Permit Requirements

To date, the co-permittees have met all the requirements under Minimum Control Measure 3 – Illicit Discharge Detection & Elimination. The following table provides a summary of the individual requirements, compliance dates, and status as of December 2023.

Permit Requirements	Compliance Date	Status
<i>The co-permittees shall review and revise as necessary, the program to detect and eliminate illicit discharges. The co-permittees must, as part of this activity, maintain an information management system to track illicit discharges. [Section 3.3.1]</i>	Annually	Complete, ongoing
<i>The co-permittees must review and update an inventory and map of industrial facilities and activities that are covered by the APDES Multi-Sector General Permit (MSGP) AKR060000 and that discharge directly to their MS4. At a minimum, the inventory must include the facility name and address, the nature of the business or activity, Standard Industrial Classification code(s) or the newer North American Industry Classification System code(s) that best reflect the facility product or service, the receiving water body, and type of pollutants that may be discharged by the facility or activity. [Section 3.3.2]</i>	Annually	Complete, ongoing
<i>Co-permittees must review the effectiveness and revise, as necessary, ordinances or procedures that effectively prohibit non-storm water discharges into their MS4s. Co-permittees must implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders. [Section 3.3.3]</i>	Annually	Complete, ongoing
<i>Co-permittees must prohibit any of the non-storm water flows listed in Part 1.4.1.3 through ordinance if such flows are identified by ADEC or the co-permittees as a source of pollutants to the MS4. Co-permittees must document any existing local controls or conditions placed on such discharges. [Section 3.3.4]</i>	August 1, 2017	Complete, ongoing

<p><i>The co-permittees must inform users of the MS4, and the public of hazards associated with illegal discharges and improper disposal of waste. [Section 3.3.5]</i></p>	<p>Annually</p>	<p>Complete, ongoing</p>
<p><i>Co-permittees must review and revise the comprehensive MS4 map. At a minimum, the map must show jurisdictional boundaries, the location of all inlets and outfalls, names and locations of all waters that receive discharges from those outfalls, and locations of all municipally owned and operated facilities, including public snow disposal sites. If available, locations of all privately operated snow disposal sites must also be indicated on the comprehensive map. A copy of the completed map must be submitted to ADEC as part of the Annual Report. [Section 3.3.6]</i></p>	<p>Annually</p>	<p>Complete, updated.</p>
<p><i>Co-permittees must continue dry weather field screening for non-storm water flows from all outfalls. By no later than the expiration date of this permit, all of the co-permittees' outfalls within the permit area must be screened for dry weather flows. The screening should include field tests of selected chemical parameters as indicators of discharge sources where sufficient flow is found at an outfall to allow for monitoring. Screening level tests may utilize less expensive "field test kits" using test methods not approved by EPA under 40 CFR Part 136 (adopted by reference at 18 AAC 83.010), provided the manufacturer's published detection ranges are adequate for the illicit discharge detection purposes. The co-permittees must investigate any illicit discharge within 15 days of its detection and must take action to eliminate the source of the discharge within 45 days of its detection. Raw data and narrative review of screening and mapping shall be included in the following year's Annual Report from the year the data was collected. [Section 3.3.7]</i></p>	<p>July 28, 2023</p>	<p>Complete, ongoing</p>

4.2 Compliance Activities

4.2.1 Illicit Discharge Investigations

Illicit discharge investigations are initiated when one of the co-permittees has been notified a discharge occurred. Most notifications come from either the public or co-permittee public works and maintenance staff working in the field that observe a discharge actively occurring and/or evidence a discharge recently occurred. Commonly the discharge is observed at its source and the responsible party is readily apparent; however, other discharges are detected at the outfall with dry-weather, non-storm water flows and/or an abnormal color or odor to the water. These discharges are tracked "up-pipe" back to their source using the co-permittees' comprehensive MS4 map and through manhole observations until a manhole junction is reached that shows no evidence of discharge, indicating that the discharge originated down-pipe that manhole junction. The responsible party is then determined by examining and investigating nearby

facilities based on the type of discharge/pollutant observed, land and building use, and history of public complaints and/or previously confirmed illicit discharges.

Every illicit discharge detected is compiled into the co-permittee's jointly maintained Illicit Discharge Log, which records the date, location, and nature of the discharge, as well as a written description of the follow-up investigations and resolutions. A copy of the log for the 2023 reporting year is included in Appendix C (C01).

4.2.2 Industrial Facilities Map

In June 2016 the FNSB updated the MS4 map to include the locations of all industrial facilities and activities covered by the APDES MSGP in the Fairbanks area. In February 2017 the FNSB published an updated online MS4 map of industrial activity stormwater permits. Subsequently the City of Fairbanks published its own GIS layers, in coordination with UAF and DOT&PF co-permittees, which includes the required inventory and mapping of Industrial facilities. GIS mapping layers are found here:

<https://fbx.maps.arcgis.com/apps/instant/sidebar/index.htmlappid=c589f62ca7b74fb4833f8d4db0fe68a3>

4.2.3 Illicit Discharge Ordinances

The Cities of Fairbanks and North Pole are the only co-permittees that have municipal authority to adopt and enforce ordinances. The City of Fairbanks approved and adopted an Illicit Discharge Ordinance (No. 07-5703) in July 2007, and the City of North Pole adopted a similar ordinance (No. 08-21) in November 2008. The two ordinances are nearly identical in content, which provides users of the MS4 a clear understanding of the type of discharges and acts prohibited throughout the Fairbanks Urbanized Area, regardless of the separate jurisdictions of the municipal authorities. Copies of the ordinances can be found at:

<https://www.fairbanksalaska.us/ordinances/ord-6038-amending-fgc-chapter-82-revised-wastewater-treatment-regspdf>.

and

<https://www.codepublishing.com/AK/NorthPole/#!/NorthPole12/NorthPole1224.html#12.24>

The Cities of Fairbanks and North Pole adopted updates to storm water codes, in January and June 2017 respectively, in accordance with the requirement set forth in the permit.

- Ordinance No. 6038 an Ordinance Amending Fairbanks General Code Chapter 82 and Adopting Revised Wastewater Treatment Regulations
- Ordinance No. 17-13 an Ordinance to Amend Codes Associated with the City of North Pole's Storm Water Management Ordinances Chapter 12.24 Illicit Discharge Detection and Elimination; Chapter 15.66 Construction Site Storm Water Runoff; and Chapter 15.74 Post-Construction Storm Water Management

4.2.4 Enforcement Policy & Jurisdiction

As stated in the codified ordinances, whenever the City of Fairbanks or North Pole finds that a person, business, or public entity has violated a prohibition of the ordinances, compliance will be ordered by verbal or written notice of the violation to the responsible party. The notice may require the performance of monitoring, analyses, and reporting; elimination of illicit connections, discharges, practices, or operations; abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property; payment of a fine to cover administrative and remediation costs; and implementation of source control or treatment BMPs. If the abatement of a violation and/or restoration of affected property are required, the notice will provide a deadline for completion of the remediation or restoration. The notice will also advise that, should the violator fail to remediate or restore affected property within the established deadline, the work will be performed by the City of Fairbanks or North Pole, or a designated contractor, and the expense thereof will be charged to the violator. In such cases where the investigation indicates the illicit discharge originated outside the City of Fairbanks' or North Pole's jurisdiction, the co-permittees will notify the appropriate agency which has jurisdiction, namely the FNSB or ADEC. The City of Fairbanks' and North Pole's jurisdiction to enforce the ordinance applies to the MS4, in its entirety, within the Fairbanks Urbanized Area inside the City Limits of Fairbanks and North Pole; including the portions of the MS4 with State of Alaska ROWs located within the Fairbanks Urbanized Area inside the City Limits of Fairbanks and North Pole which are owned or operated by ADOT&PF. The FNSB has jurisdiction over the portion of MS4 owned and operated by UAF and ADOT&PF within the Fairbanks Urbanized Area outside the City Limits of Fairbanks and North Pole.

4.2.5 Non-storm Water Discharges

The existing ordinances address non-storm water flows within their "Discharge Prohibitions" subsections. Certain non-storm water flows listed in the permit (i.e., water line flushing, landscape irrigation, dechlorinated swimming pool discharges, firefighting activities, etc.) are allowed to discharge to the MS4; however, none of these flows are allowed to contain any pollutants prohibited to be discharged to waters of the U.S. under the federal Clean Water Act (CWA).

4.2.6 Public Awareness Efforts

As discussed under the "Public Education & Outreach" and "Public Involvement & Participation" subsections, efforts are made annually to inform the public about illicit discharges and improper disposal of waste. Efforts include (1) maintaining the Fairbanks Storm Water Management Program website, which outlines procedures for reporting illicit discharges to the co-permittees and FNSB; (2) incorporating information about the types and causes of illicit discharges into the educational/guest presentations on storm water; (3) implementing the Storm Drain Stenciling Program, which creates public awareness about where storm water goes after it enters a storm drain inlet; and (4) produced brochures for local landscaping and snow removal contractors, which informs them of the local illicit discharge ordinances. Public awareness Efforts are documented for the 2023 are included in Appendices A and B.

4.2.7 Annual Employee Training

The co-permittees conduct annual employee training(s) using three storm water training DVD kits from Excal Visual. One training is titled “Storm Water Pollution Prevention for MS4 Operations” and includes a 30-minute employee training DVD, training acknowledgement forms, pocket guides, and quizzes covering the topics of good housekeeping and spill prevention/control/response, vehicle and equipment fueling/maintenance/washing, waste and materials management, facility maintenance, parking lot and street sweeping, storm drain cleaning, landscaping and grounds maintenance, and working over or near surface waters. The second training is titled “Illicit Discharge Detection & Elimination for MS4 Employees” and similarly includes a 15-minute employee training DVD and amenities covering the topics of spotting illicit discharges at their source and outfalls, as well as the employees’ role in illicit discharge detection and elimination. The third training is titled, “Spills and Skills, Non-Emergency HazMat Spill Response” and includes a 19-minute video training designed to help train non-HAZWOPER employees on dealing with a hazardous material (or hazardous waste) spill, leak or release. Every April the co-permittees gather up their public works/maintenance/parks employees and have them watch the DVDs and are thereafter requested to maintain a continued surveillance of storm water conveyance systems when in the field. Training acknowledgement forms for each of the co-permittees’ respective agencies for the 2023 reporting year are included in Appendix C, (C03-C06).

4.2.8 Comprehensive MS4 Map Update

In 2008 the co-permittees and FNSB combined their individual MS4 maps into a single comprehensive map showing all storm water conveyance systems within the Fairbanks Urbanized Area. Beginning 2019 and continuing through 2023, the City of Fairbanks has been improving the locational and attribute data of stormwater infrastructure layers in GIS, originally developed in 2008. The updated 2023 City Stormwater GIS map has also added digital stormwater layers provided by the UAF Facilities and AK DOT&PF, and is available to the public at:

<https://fbx.maps.arcgis.com/apps/instant/sidebar/index.htmlappid=c589f62ca7b74fb4833f8d4db0fe68a3>

4.2.9 Dry-weather Outfall Screening

The co-permittees began conducting dry-weather screening outfalls in 2007. The co-permittees screened approximately one-third of the outfalls each summer in 2007, 2008, and 2009 until every outfall had been screened. A second, larger effort to screen outfalls was also completed in 2011 where every outfall was screened in a single summer. In accordance with the requirements of the new permit, the co-permittees screened all outfalls between Hamilton Acres and Aurora Power Plant. In September of 2020 dry-weather outfall sampling was completed at all outfalls between Hamilton Acres and the FNSB Administrative Facility/Aurora Power Plant. In 2023, dry-weather outfall screening was conducted on July 28th, at 47 out of 61 (77%) of the outfalls were revisited within the Fairbanks urban area.

4.3 Staff Responsible for Compliance Activities

The following individuals were responsible for implementing and coordinating the illicit discharge detection and elimination activities during the 2023 reporting period:

- City of Fairbanks -John O'Brien, Environmental Manager
- City of North Pole - Robert Wallace, Director of City Services
- UAF – Russ Steiger, Environmental Compliance Officer
- ADOT&PF – Cynthia Nelson, Maintenance & Operations Environmental Impact Analyst
- ADOT&PF - Melissa Riordan, Maintenance & Operations Environmental Impact Analyst

4.4 Measurable Goals

The following table details the Measurable goals set forth in the co-permittees' February 2019 Storm Water Management Plan, whether the goals were achieved during the current reporting period, and lists proposed changes, if any, for the next reporting period.

Measurable Goals	Achieved during the current reporting period?	Proposed changes for next reporting period?
Annually review and revise an inventory and map of MSGP-covered facilities and activities.	Yes	No
Annually review Illicit Discharge and associated ordinances and procedures.	Yes	No
Annually provide employee training on illicit discharges to the MS4.	Yes	No
Annually review and revise the comprehensive MS4 map.	Yes	No
Screen 100% of the outfalls owned and operated by the co-permittees by June 30, 2023.	Yes	No

5.0 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

5.1 Permit Requirements

To date, the co-permittees have met the requirements under Minimum Control Measure 4 – Construction Site Storm Water Runoff Control. The public has several options to submit information regarding construction site storm water runoff control concerns: telephone, and email. All other provisions were developed and implemented by the end of the last permit term – August 1, 2018, and are available on the new City of Fairbanks Storm Water Management website (<https://www.fairbanksalaska.us/engineering/page/storm-water-management>). The following table provides a summary of the individual requirements, compliance dates, and status as of December 2023.

Permit Requirements	Compliance Date	Status
<i>The co-permittees must annually review and implement their existing program that reduces pollutants in any storm water runoff to the MS4 from construction activities consistent with this permit and the current version of the APDES General Permit for Storm Water Discharges from Large and Small Construction Activities in Alaska Permit # AKR10000 (Construction General Permit or CGP). The co-permittees must discuss revisions, planned improvements, and schedule in the Annual Report. [Section 3.4.1]</i>	Annually	Complete, ongoing
<i>If ADEC waives the permit requirements for storm water discharges associated with a specific small construction activity (i.e., a single project) in accordance with 40 CFR §122.26(b)(15)(i)(A) or (B), the co-permittee is not required to develop, implement, or enforce the program to reduce pollutant discharges from that site. [Section 3.4.2]</i>	Annually	Complete, ongoing
<i>The co-permittees must maintain an ordinance or other regulatory mechanism to be consistent with this Permit and with the current version of the CGP. This ordinance or regulatory mechanism must include sanctions to ensure compliance. [Section 3.4.3]</i>	Annually	Complete, ongoing
<i>Co-permittees must continue to publish and distribute requirements for construction site operators to implement appropriate erosion and sediment control BMPs and to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. Availability of published materials can be verified via a permittee-maintained website or other easily accessible location. [Section 3.4.4]</i>	Annually	Complete, ongoing

<p><i>Co-permittees must review and implement procedures for reviewing all site plans as required in Part 3.4.1 for potential water quality impacts, including erosion and sediment control, control of other wastes, and any other impacts that must be examined according to the requirements of the law, ordinance, or other enforceable mechanism of Part 3.4.3. These procedures must include provisions for receipt and consideration of information submitted by the public. [Section 3.4.5]</i></p>	<p>Annually</p>	<p>Complete, ongoing</p>
<p><i>Co-permittees must review and implement procedures for site inspection and enforcement of control measures established as required in Parts 3.4.3 and 3.4.4, including enforcement escalation procedures for recalcitrant or repeat offenders. The co-permittees shall inspect all construction activities as required in Part 3.4.1 in their jurisdictions for appropriate erosion, sediment, and waste control at least once per year. [Section 3.4.6]</i></p>	<p>Annually</p>	<p>Complete, ongoing</p>
<p><i>Co-permittees must conduct a biennial training session for the local construction, design, and engineering audiences related to the construction ordinance and BMP requirements referenced in Parts 3.4.3 and 3.4.4. [Section 3.4.7]</i></p>	<p>Biennially</p>	<p>Complete, ongoing</p>

5.2 Compliance Activities

The co-permittees' efforts to control construction site storm water runoff include codified ordinances, publication of a local BMP design guide, a municipal plan review and site inspection program, and biennial trainings for local developers, engineers, and contractors. The co-permittees annually review and update these program elements for their appropriateness and consistency with permit requirements and the ACGP.

5.2.1 Construction Site Storm Water Runoff Control Ordinances

The Cities of Fairbanks and North Pole are the only co-permittees that have municipal authority to adopt and enforce ordinances. The City of Fairbanks originally approved and adopted a Construction Site Storm Water Runoff Ordinance (No. 07-5702) in July 2007, but later amended it with a new ordinance (No. 08-5751) in May 2008 to streamline its content and requirements. The City of North Pole adopted a similar ordinance (No. 08-14) to that of the amended City of Fairbanks ordinance in June 2008. Similarity in these ordinances provides users of the MS4 a clear understanding of the storm water plan review and inspection requirements throughout the Fairbanks Urbanized Area, regardless of the separate jurisdictions of the municipal authorities. In January 2017 the City of Fairbanks and City of North Pole adopted updated ordinances related to Construction Storm Water Runoff Control.

- Ordinance No. 6038 an Ordinance Amending Fairbanks General Code Chapter 82 and Adopting Revised Wastewater Treatment Regulations
https://www.fairbanksalaska.us/sites/default/files/fileattachments/ordinance/22151/ord_6038_amending_fgc_chapter_82_revised_wastewater_treatment_regs.pdf

- Ordinance No. 17-13 an Ordinance to Amend Codes Associated with the City of North Pole's Storm Water Management Ordinances Chapter 12.24 Illicit Discharge Detection and Elimination; Chapter 15.66 Construction Site Storm Water Runoff; and Chapter 15.74 Post-Construction Storm Water Management. City of North Pole Ordinances are found at the following link: <https://www.codepublishing.com/AK/NorthPole/>

5.2.2 BMP Design Guide

The Cities of Fairbanks and North Pole published an update (5th Edition) to Fairbanks & North Pole Storm Water Management Program Guide in April 2019. The guide provides an overview of both construction and post-construction storm water management design and construction requirements for new development and redevelopment projects within the Fairbanks Urbanized Area with updated references to the code revisions. Additionally, the guide provides more accurate maps of the MS4 area and jurisdictions. The focus of the guide is to educate developers, engineers, contractors, and the public on local storm water pollution control laws and provide resources for effective structural and non-structural BMPs for the Fairbanks area. Included in the manual is a brief overview of the local storm water management program, agency review requirements, general design considerations, and list of effective BMPs for the Fairbanks area, including a discussion of the design and construction requirements for snow disposal sites, septic systems, and parking lots. A two-page handout was also created for local developers, engineers, and contractors which covers the different agencies' jurisdictions and plan submittal requirements for storm water within the Fairbanks Urbanized Area. Both the guide and handout are posted on the City of Fairbanks Storm Water Management website page at <https://www.fairbanksalaska.us/engineering/page/storm-water-management>.

5.2.3 Plan Reviews & Site Inspections

The construction site storm water runoff plan review and inspection program has been added to the Residential & Commercial Building Permit application process at the Cities of Fairbanks and North Pole, which directs all contractors/owners applying for a permit to submit storm water plans in accordance with the requirements of the ordinances and all applicable review fees before a permit will be issued. At the City of Fairbanks, plans must be submitted for all projects resulting in a ground disturbance of 10,000 square feet or greater, and at the City of North Pole for all projects resulting in a ground disturbance of one acre or greater. The program also apprises contractors/owners that their construction site(s) will be inspected at least once per year for proper erosion and sediment controls. Inspections involve a tour of the entire construction site, close inspection of each BMP installed, and a secondary review of the storm water plan, which must be maintained onsite. All BMP and/or storm water plan components needing corrective action are documented on an inspection checklist and signed by both the site inspector and onsite contact. Corrective action items may be resolved by verbal agreement, written agreement, re-inspection, and/or fines or temporary stop-work orders. If any person holding a permit pursuant to these ordinances violates the terms of the permit, the Cities of Fairbanks and North Pole may issue a notice of violation, suspend, or revoke the permit. The procedures are reviewed, updated, and made public via the publication of the Fairbanks and North Pole Storm Water Management Program Guide. The publication is in its 5th Edition and was last updated April 2019. The construction plan review and inspection process is made available in the Program Guide, which is published on the Storm Water webpage, and discussed during contractor trainings

every other year. The procedures currently do not have provisions for receipt and consideration of information submitted by the public; however, such provisions will be developed and added to the procedures before the end of the new permit term – June 30, 2023. In total, nine plan reviews and site inspections were conducted during the 2023 reporting period.

5.2.4 Training for Local Developers/Engineers/Contractors

The Cities of Fairbanks and North Pole, FNSB, and ADEC jointly conduct a three-hour storm water training biennially to educate developers, engineers, and contractors about the local construction site storm water runoff and post-construction storm water management requirements within the Fairbanks Urbanized Area. This training was completed April 18, 2023, from 9:30-11:00am to meet the biennial training requirement of the permit, Appendix D, (D03).

All responsible parties listed in 5.3 below are AK-CESCL certified, and all the AK-CESCL trainings held in Fairbanks during the 2023 can be found on the AK_CESCL training website: <https://www.ak-cescl.com/certified.php>

5.3 Staff Responsible for Compliance Activities

The following individuals were responsible for implementing and coordinating the construction site storm water runoff control activities during the 2023 reporting period:

- City of Fairbanks -John O’Brien, Environmental Manager (late 2023)
- City of North Pole - Robert Wallace, Director of City Services
- UAF – Russ Steiger, Environmental Compliance Officer
- ADOT&PF – Cynthia Nelson, Maintenance & Operations Environmental Impact Analyst
- ADOT&PF - Melissa Riordan, Maintenance & Operations Environmental Impact Analyst

5.4 Measurable Goals

The following table details the Measurable Goals set forth in the co-permittees’ February 2019 Storm Water Management Plan, whether the goals were achieved during the current reporting period, and lists proposed changes, if any, for the next reporting period.

Measurable Goals	Achieved during the current reporting period?	Proposed changes for next reporting period?
Incorporate provisions for receipt and consideration of information submitted by the public into the plan review process.	Yes	No
Conduct a training/workshop for local developers, engineers, and contractors in April 2019, April 2021, and April 2023.	Yes	No

6.0 POST-CONSTRUCTION STORM WATER MANAGEMENT

6.1 Permit Requirements

To date, the co-permittees have met all of the requirements under Minimum Control Measure 5 – Post-Construction Storm Water Management. The following table provides a summary of the individual requirements, compliance dates, and status as of December 2023.

Permit Requirements	Compliance Date	Status
<i>Co-permittees must review and continue the implementation and enforcement of a program to address post-construction storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that disturb one acre or more, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts. [Section 3.5.1]</i>	Annually	Complete, ongoing
<i>Co-permittees must review the effectiveness and revise, as necessary, ordinances or other regulatory mechanisms to the extent allowable under state or local law to address post-construction runoff from new development and redevelopment projects. Co-permittees must implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders. [Section 3.5.2]</i>	Annually	Complete, ongoing
<i>Co-permittees must review and revise the publishing and distribution of a BMP design manual for post-construction storm water management, which includes a list of strategies reflecting a combination of structural and non-structural BMPs appropriate to the MS4s. [Section 3.5.3]</i>	Annually	Complete, ongoing
<i>Co-permittees must ensure proper long-term operation and maintenance of post-construction BMPs. [Section 3.5.4]</i>	Annually	Complete, ongoing
<i>Co-permittees must continue to conduct biennial training for local construction, design, and engineering audiences. [Section 3.5.5]</i>	Biennially	Complete, ongoing
<i>Green Infrastructure/Low Impact Development (LID) Incentive Strategy and Pilot Project. [Section 3.5.6]</i>	August 1, 2017	Pilot project complete, GI panel boards

		complete; pilot project evaluation complete
<i>Snow Disposal Sites. Within one year of the permit effective date, the permittee must inventory and map locations of all permittee-owned and privately owned snow disposal sites that discharge directly to the MS4 or to receiving waters. The snow disposal site inventory and map must be updated annually thereafter. [Section3.5.7]</i>	Annually	Complete, ongoing
<i>The permittee must evaluate whether to further protect water quality by explicitly regulating the operation of private snow disposal sites within the boundaries of the MS4 through ordinance or other regulatory mechanism. [Section3.5.7.1]</i>	June 30, 2023	Complete, ongoing

6.2 Compliance Activities

The co-permittees' existing efforts to manage post-construction storm water include codified ordinances; a municipal plan review program for permanent storm water controls for sites disturbing greater than or equal to one acre; publication of a local BMP design guide; biennial training/workshops for local developers, engineers, and contractors; publication of a green infrastructure application guide; mapping priority areas for green infrastructure in Fairbanks; and construction of a green infrastructure/LID pilot project. The co-permittees annually review and update these program elements for their appropriateness and consistency with permit requirements.

6.2.1 Post-Construction Storm Water Management Ordinances

The Cities of Fairbanks and North Pole are the only co-permittees that have municipal authority to adopt and enforce ordinances. The City of Fairbanks originally approved and adopted a Post-Construction Storm Water Management Ordinance (No. 07-5704) in July 2007, but later amended it with a new ordinance (No. 09-5780) in August 2009 to streamline its content and requirements. The City of North Pole adopted a similar ordinance (No. 09-10) to that of the amended City of Fairbanks ordinance in September 2009. Similarity in these ordinances provides users of the MS4 a clear understanding of the post-construction storm water management requirements throughout the Fairbanks Urbanized Area, regardless of the separate jurisdictions of the municipal authorities. Copies of the ordinances can be found at <https://www.fnsb.gov/401/Storm-Water-Ordinances>. Post-construction Storm Water division updates were made with COF Ordinance No. 6038 and CNP No. 17-13 in January and June 2017.

- Ordinance No. 6038 an Ordinance Amending Fairbanks General Code Chapter 82 and Adopting Revised Wastewater Treatment Regulations.
- Ordinance No. 17-13 an Ordinance to Amend Codes Associated with the City of North Pole's Storm Water Management Ordinances Chapter 12.24 Illicit Discharge Detection and Elimination: Chapter

15.66 Construction Site Storm Water Runoff; and Chapter 15.74 Post-Construction Storm Water Management.

Long-term Operation & Maintenance of BMPs – In accordance with the requirements set forth in the ordinances, developers are required to submit a Permanent Storm Water Control Plan (PSWCP) to the cities of Fairbanks and North Pole for review and approval prior to being granted a Residential or Commercial Building Permit. Included in the PSWCP, a signed statement must be submitted stating the owner of the site will operate, maintain, and/or schedule all permanent BMP(s) in accordance with the PSWCP. The PSWCP must also be developed by a Certified Professional in Erosion and Sediment Control, or a Professional Engineer registered in the State of Alaska.

6.2.2 BMP Design Guide

As stated previously, the Cities of Fairbanks and North Pole published an update (5th Edition) to Fairbanks & North Pole Storm Water Management Program Guide in June 2019. The guide provides an overview of both construction and post-construction storm water management design and construction requirements for new development and redevelopment projects within the Fairbanks Urbanized Area. The focus of the guide is to educate developers, engineers, contractors, and the general public on local storm water pollution control laws and provide resources for effective structural and non-structural BMPs for the Fairbanks area. Included in the manual is a brief overview of the local storm water management program, agency review requirements, general design considerations, and list of effective BMPs for the Fairbanks area, including a discussion of the design and construction requirements for snow disposal sites, septic systems, and parking lots. The 5th Edition of the guide is posted on the Fairbanks Storm Water Management Program website at <https://www.fnsb.gov/391/Storm-Water-Management-and-Permitting-Re>. The Cities of Fairbanks and North Pole will review and revise the guide, as necessary.

Design Criteria & Performance Goals – The design criteria and performance goals for post-construction (permanent) BMPs are outlined in Section 4.3 of the guide and in both City of Fairbanks' and North Pole's ordinances. For runoff volume, post-construction peak runoff is required to be limited to 5% over pre-construction peak runoff using the 10-year, 1-hour duration storm event. For runoff quality, the initial 1/2-inch of runoff must be treated, and after this first flush, treatment must be provided at a minimum rate of 0.005 inches per minute. These design criteria and performance goals were developed by the City of Fairbanks and FNSB engineers in close coordination with ADEC and in consideration of Fairbanks's rainfall intensity data and design standards used by the Municipality of Anchorage.

6.2.4 Training for Local Developers/Engineers/Contractors

The Cities of Fairbanks and North Pole, FNSB, and ADEC jointly conduct a three-hour storm water training biennially to educate developers, engineers, and contractors about the local construction site storm water runoff and post-construction storm water management requirements within the Fairbanks Urbanized Area. This training was completed in April 2023 to meet the biennial training requirement of the permit.

6.2.5 Green Infrastructure Application Guide

In late 2009, the City of Fairbanks partnered with the Cold Climate Housing Research Center, GeoWatersheds Scientific, and FSWCD, and successfully applied for a grant from the Alaska Department of Natural Resources to develop a local Green Infrastructure Resource Guide for Fairbanks. The project was kicked off by having each of the project partners compile their personal collections of research data and publications related to green infrastructure in Alaska and other cold-climate regions to assist in the selection of 10 green infrastructure applications appropriate for use in the Fairbanks area. The applications ultimately included the rain barrel, rain garden, tree pit, infiltration planter, vegetated swale/retention grading, dry well, riparian buffer, green roofs, permeable pavers, and grass car park. For each of these applications, design drawings were drafted, local and stock photographs acquired, and text written discussing the step-by-step installation process, materials and tools needed, cost and time estimates for installation, maintenance requirements, and pros and cons of each application. The final guide, titled Green Infrastructure Resource Guide for Fairbanks, was published in November 2010, and posted to the Cold Climate Housing Research Center's website for homeowners to download at http://cchrc.org/media/GI_Manual_April-2012.pdf. In addition to being made available online, each year the co-permittees give away guides at a variety of local public outreach events, as well as to all the local plant nurseries and home improvement stores in the Fairbanks area to provide to their customers free of charge. A copy of the guide can be found at <http://www.fairbanksigig.com/benefits/>. In 2018, co-permittees worked with partners at ADEC, TVWA, and DNR to draft a new version of the local Green Infrastructure brochure that highlights local examples of green infrastructure installations. This was finalized in May of 2019. A copy can be found in Appendix E, (E01).

6.2.6 Green Infrastructure Priority Area Maps

In late 2011, the City of Fairbanks also completed a mapping project to identify which subdivisions in the Fairbanks area are in the greatest need of Green Infrastructure applications (i.e., permanent/post-construction BMPs). The effort produced three new maps showing what portion of the Fairbanks area was served by a piped storm drain system, land use types (residential, commercial/public exempt, and industrial) within this area, and a five-tier ranking scheme to categorize each subdivision by their level of need for permanent/post-construction BMPs to help improve storm water quality and reduce the quantity of runoff to the piped storm drain system. The ranking scheme included factors such as storm water discharge location, percent of impervious land cover, amount of area served by a pipe storm drain system, and number of roads with curb and gutter as opposed to ditches and/or swales. Copies of the maps produced by this effort were included in the 2014 Annual Report. In 2017, the City of Fairbanks collaborated with TVWA to solicit nominations for Green Infrastructure projects within the Urbanized Area. The results were also compiled and made into an interactive Google map: <https://drive.google.com/open?id=1Sy15ATv8TKIJYvtHa5i3QqKIGZU&usp=sharing>. Some of the photos that were collected around town in 2017 by the GIG were used to highlight poorly drained areas.

6.2.7 LID Incentive Strategy

Public Sector Development Projects – In 2017 the City of Fairbanks worked with the Fairbanks Metropolitan Area Transportation System (FMATS) Office to adopt a new “Green Streets Policy.” The policy aims to have

transportation projects minimize environmental impacts by retaining and treating, or even eliminating, runoff at the source using green infrastructure applications. FMATS is allocated state and federal money each year for local transportation projects, and they developed the policy for the projects they fund. When projects are nominated to FMATS, having green-street elements included in their scope will help projects score better. The City of North Pole, City of Fairbanks, and FNSB passed Resolutions of Support for the policy on October 3, October 10, and November 10, respectively. In May 2017 the City of Fairbanks and TVWA developed Green Streets informational panel boards that are now displayed at City Hall and copies have been used by TVWA at public outreach events. Copies of the Green Streets brochure about adopted policy and Resolutions of Support are included in Appendix E, (E02). FMATS became FAST Planning in 2019 when it transitioned to a non-profit organization.

6.2.8 Green Infrastructure/LID Pilot Project

The co-permittees completed construction of the Green Infrastructure/LID pilot project in August 2013. The project was located at Shoreway Park on the north bank of the Chena River directly across from downtown Fairbanks. The park has a large, 21,000-square-foot parking area for residents and visitors alike to park, have a picnic lunch, and access downtown on foot via a pedestrian bridge over the river. There were two problems with the park that needed attention. One problem was that the rainwater runoff, which collects pollutants such as leaking vehicle fluids and litter from the parking lot, drained directly into the river via a concrete chute without any form of treatment. The other problem was that there was a missing segment of pedestrian pathway between the park and the pedestrian bridge. Both problems were fixed in 2013 through a collaborative effort by the City of Fairbanks Public Works Department, ADOT&PF Maintenance Division, TVWA, Student Conservation Association, U.S. Fish & Wildlife Service, Wounded Warrior Project, and FSWCD Youth Corps crew. First, the concrete chute was removed from the riverbank and a catch basin for the runoff was installed. Then, approximately 125 feet of new concrete pathway was poured, and 40 feet of riparian area was rehabilitated with topsoil, grass seed, and 70 willows that were hand-dug and replanted along the riverbank. The catch basin is intended to capture sediment and litter from the parking lot runoff, while the flow leaving the catch basin trickles down the newly vegetated banks to help filter out some of the other pollutants such as vehicle fluids before they reach the river. Copies of the project design plans and before and after photographs of the construction were included in the 2014 Annual Report.

The effectiveness of this project in reducing the amount of pollutants reaching the river has been evaluated based on the square feet of impervious surface that was removed and the installation of curbs and a storm drain sediment trap catch basin. Co-permittees utilized the EPA National Stormwater Calculator (SWC) Desktop ver. 1.2.0.2 to analyze the effects of the improvements. The Calculator estimates the annual amount of rainwater and frequency of runoff from a specific site. Estimates are based on local soil conditions, land cover, and historic rainfall records.

The SWC accesses several national databases that provide soil, topography, rainfall, and evaporation information for a chosen site. The user supplies information about the site's land cover and selects low impact development (LID) controls they would like to use. The LID controls include seven green

infrastructure practices. The 2019 evaluation for the Shoreway Park LID pilot project is included in Appendix E, (E03).

6.2.9 Snow Disposal Sites

Snow disposal sites have been inventoried, mapped, and evaluated over the years with annual updates and improvements. In 2006, the co-permittees evaluated their snow disposal sites for siting, maintenance, and use of BMPs. In 2018, the co-permittees began work on a comprehensive GIS mapping of public and private snow disposal sites in the urbanized area. The GIS mapping also includes an attribute table with details about each site. In 2020, a snow storage evaluation report reviewing existing land use regulations and policies was submitted to ADEC, Appendix F, (F01). In 2023, snow disposal site locations were updated and are available at:

<https://fbx.maps.arcgis.com/apps/instant/sidebar/index.html?appid=c589f62ca7b74fb4833f8d4db0fe68a3>

Additionally, in 2023 FNSB and FSWAC created a snow removal brochure “Handle the Snow Like a Pro” (sent out to contractors) with helpful resource links and BMPs when handling snow, Appendix A, (A06). These snow disposal site updates and evaluations are on-going to minimize and reduce the potential discharge of pollutants from snow disposal sites into MS4 waterbodies.

6.3 Staff Responsible for Compliance Activities

The following individuals were responsible for implementing and coordinating the post-construction storm water management activities during the 2023 reporting period:

- City of Fairbanks -John O’Brien, Environmental Manager
- City of North Pole - Robert Wallace, Director of City Services
- UAF – Russ Steiger - Environmental Compliance Officer
- ADOT&PF – Cynthia Nelson, Maintenance & Operations Environmental Impact Analyst
- ADOT&PF - Melissa Riordan, Maintenance & Operations Environmental Impact Analyst

6.4 Measurable Goals

The following table details the measurable goals set forth in the co-permittees’ amended February 2019 Storm Water Management Plan, whether the goals were achieved during the current reporting period, and lists proposed changes, if any, for the next reporting period.

Measurable Goals	Achieved during the current reporting period?	Proposed changes for next reporting period?
Annually review effectiveness of Post-construction Storm Water Management Ordinances and regulatory mechanisms.	Yes	No

Annually Review and revise, as necessary, the Fairbanks & North Pole Storm Water Management Program Guide.	Yes	No
Conduct a training/workshop for local developers, engineers, and contractors in April 2019, April 2021 and April 2023.	Yes	No
Annually promote and distribute copies of the Green Infrastructure Resource Guide for Fairbanks at local events, nurseries, and home improvement stores.	Yes	No
Develop an LID Incentive Strategy for private and public sector development projects by August 1, 2018	Yes	No
Evaluate the effectiveness of the Green Infrastructure/LID pilot project (constructed in August 2013) by February 15, 2019.	Yes	No
Review and implement strategy that provides incentives for the increased use of GI/LID techniques or practices by July 1, 2019.	Yes	No
Revise Green Infrastructure Resource Guide for Fairbanks, AK using recommendations obtained through the LID demonstration pilot project by July 1, 2020	Yes	No
Inventory and map locations of snow disposal sites that discharge to MS4 by July 1, 2019. Update annually.	Yes, ongoing	No
Create evaluation report to determine if additional regulation of snow disposal sites is warranted by July 1, 2020.	Yes	No
Revise all applicable requirements in accordance with evaluation report by July 1, 2021.	Yes	No

7.0 POLLUTION PREVENTION & GOOD HOUSEKEEPING

7.1 Permit Requirements

To date, the co-permittees have met all the requirements under Minimum Control Measure 6 – Pollution Prevention & Good Housekeeping. The following table provides a summary of the individual requirements, compliance dates, and status as of December 2023.

Permit Requirements	Compliance Date	Status
<i>Co-permittees must continue to maintain and implement an operation and maintenance program intended to prevent or reduce pollutant runoff from municipal activities. [Section 3.6.1]</i>	Annually	Complete, ongoing
<i>Annually, co-permittees must continue appropriate training for municipal personnel related to optimum maintenance practices for the protection of water quality. [Section 3.6.2]</i>	Annually	Complete, ongoing
<i>Co-permittees must continue to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices. [Section 3.6.3]</i>	Annually	Complete, ongoing

7.2 Compliance Activities

7.2.1 Operation & Maintenance Program

Within their respective rights-of-way, each co-permittee is responsible for snow removal and street sanding operations during the winter months and street sweeping and storm drain cleaning operations during the summer months. Beginning in 2006, the co-permittees instituted tracking systems for these activities that documents road maintenance actions designed to reduce the discharge of pollutants, including sediment, to the MS4.

Winter Operation & Maintenance Activities – Comparatively, the ADOT&PF maintains major and minor arterials while the Cities of Fairbanks and North Pole maintain major and minor collectors and local streets. Snow plowing, street sanding, and snow removal is primarily focused on routes to the local hospital, area schools, primary business districts, and core downtown areas of the Cities of Fairbanks and North Pole; followed by local streets within residential neighborhoods. University of Alaska Fairbanks (UAF) Facilities Services, maintains wintertime roads and parking lots throughout campus. Services include tasks such as sanding, and snow removal performed on a rotating schedule. The co-permittees utilize designated snow storage sites that are generally suitable for onsite containment of accumulated sediment and miscellaneous debris. Snow removal and storage operations areas are inventoried and monitored to ensure BMPs are in place. Debris is collected following spring break-up and disposed of at the FNSB Solid Waste Landfill. Copies of the co-permittees’ snow removal street and sanding logs are included in Appendix F (F02-F05).

Summer Operation & Maintenance Activities – During spring break-up, which typically commences in early to mid-April, the co-permittees focus on ensuring the MS4 is operating effectively. Steam is often used to open frozen storm drains and culverts, and pumps are used to transfer water from areas of ponding, to maintain flow in the MS4 and minimize damage to residential, commercial, and public property. Street

sweeping operations generally commence after spring break-up in late April through early May, and continue until all arterials, collectors, and local streets are clean of aggregate. Street sweeping operations are tracked and documented. During the summer months, the co-permittees also clean and maintain the MS4 using a vacuum truck to flush, and pump accumulated sediment and debris from catch basins, lateral lines, manholes, sedimentation collection devices, and culverts. All storm drain cleaning operations are tracked by date. Copies of the co-permittees' street sweeping, and storm drain cleaning logs are included in Appendix F, (F01-F04).

Hazardous Wastes – In coordination and compliance with EPA Hazardous Waste Regulations, each of the co-permittees also control discharges of hazardous wastes and other pollutants to the MS4 from their respective facilities and rights-of-way such as streets, parking lots, maintenance yards, storage yards, waste transfer stations, maintenance shops, sand and gravel storage locations, and snow storage sites. Permanent controls include oil recycling, glycol recycling, sand and gravel recycling, designated vehicle wash down areas, sumps and oil/water separators in vehicle storage buildings, wash racks that drain to the sanitary sewer, and containment and retention BMPs at sand/gravel and snow storage sites. Day-to-day operations and the use of heavy equipment therein, also generate small quantities of non-recyclable oils and fuels, non-recyclable hydraulic fluid, solvents and degreasers, petroleum-contaminated pads, and empty petroleum product containers. All hazardous wastes generated are properly stored and later transferred and released to a licensed Hazardous Waste Contractor for processing and offsite disposal.

Transportation Facilities – The co-permittees do not own or operate any transport facilities that discharge to the MS4.

7.2.2 Annual Employee Training

As stated previously, the co-permittees conduct annual employee training using three storm water training DVD kits from Excal Visual. One training is titled “Storm Water Pollution Prevention for MS4 Operations” and includes a 30-minute employee training DVD, training acknowledgement forms, pocket guides, and quizzes covering the topics of good housekeeping and spill prevention/control/response, vehicle and equipment fueling/maintenance/washing, waste and materials management, facility maintenance, parking lot and street sweeping, storm drain cleaning, landscaping and grounds maintenance, and working over or near surface waters. A second training is titled “Illicit Discharge Detection & Elimination for MS4 Employees” and similarly includes a 15-minute employee training DVD and amenities covering the topics of spotting illicit discharges at their source and outfalls, as well as the employees' role in illicit discharge detection and elimination. The third training is new and titled, “Spill & Skills: Non-Emergency HazMat Spill Response” and includes a 19-minute employee training video on BMPs for non-emergency spills. Every April the co-permittees gather up their public works/maintenance/parks employees and have them watch the DVDs to meet the annual employee training requirements of the permit. Training acknowledgement forms for each of the co-permittees' respective agencies for the 2023 reporting year are included in Appendix C, (C03-C06).

7.2.3 Flood Management Projects

Assessment of flood management projects for impacts on water quality do not fall under the purview of the co-permittees unless the projects meet the criteria for plan review under one of the Cities of Fairbanks' or North Pole's Construction Site Storm Water Runoff or Post-Construction Storm Water Management Ordinances. This would be a rare case, however, since the Cities of Fairbanks and North Pole only have jurisdiction over privately funded projects occurring on private property. It is presumed that most or all flood management projects would be publicly funded occurring on public property. In addition, all flood management projects require federal, state, and FNSB authorization, often in the form of a permit.

Flood management projects generally result in dredge or fill in wetlands and other water bodies, which fall under the purview of the U.S. Army Corps of Engineers (USACE) and ADEC. The USACE requires a Department of the Army Permit for all dredge and fill activities regulated under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. The ADEC also requires a Certificate of Reasonable Assurance be issued for the project(s) in accordance with Section 401 of the CWA before the Department of the Army Permit can be issued. The Certificate of Reasonable Assurance is the state's proclamation the project(s) will meet Alaska Water Quality Standards and the requirements of the CWA; and retains conditioning authority therein, under the Federal Power Act, to require implementation of erosion and sediment control BMPs to ensure the project(s) will not violate Alaska Water Quality Standards or the CWA.

All flood management projects within the Fairbanks Urbanized Area, regardless of whether they result in dredge or fill in wetlands and other water bodies, additionally require a Title 15 Floodplain Permit from the FNSB. The Floodplain Permit is required for any new or substantially improved structure, alteration of a watercourse, or other development within the flood hazard area, Flood Zone A, inundated by the 100-year flood event. The goal of this permitting process is to ensure the cumulative effect of the proposed development would not create an obstruction in the floodplain, increase water surface elevation of the base flood more than one foot at any point within the Fairbanks area, or increase flood heights or velocities.

For smaller flood management projects within the Fairbanks area, such as bank stabilization projects, a multi-agency permitting process has also been established to streamline the permit application process. The permit application is collectively reviewed by the USACE, ADEC, Alaska Department of Fish & Game, Alaska Department of Natural Resources, USFWS, U.S. Department of Agriculture Natural Resources Conservation Service, and FNSB; and subsequently approved by the Alaska Department of Fish & Game in accordance with prevention of stream bank erosion, protection of fish and wildlife habitats, and adherence to Alaska Water Quality Standards and the CWA.

7.3 Staff Responsible for Compliance Activities

The following individuals were responsible for implementing and coordinating the pollution prevention and good housekeeping activities during the 2023 reporting period:

- City of Fairbanks -John O'Brien, Environmental Manager
- City of North Pole - Robert Wallace, Director of City Services
- UAF – Russ Steiger, Environmental Compliance Officer

- ADOT&PF – Cynthia Nelson, Maintenance & Operations Environmental Impact Analyst
- ADOT&PF - Melissa Riordan, Maintenance & Operations Environmental Impact Analyst

7.4 Measurable Goals

The following table details the Measurable goals set forth in the co-permittees' February 2019 Storm Water Management Plan, whether the goals were achieved during the current reporting period, and lists proposed changes, if any, for the next reporting period.

Measurable Goals	Achieved during the current reporting period?	Proposed changes for next reporting period?
Continue current operation and maintenance efforts intended to prevent and reduce pollutant runoff from state and municipal activities for the duration of the permit term	Yes	No
Annually provide employee training on storm water pollution prevention for MS4 operations	Yes	No

8.0 MONITORING PROGRAM PLAN

8.1 Permit Requirements

The co-permittees are required by the permit to monitor the water discharging from the MS4 outfalls to local water bodies at least two times per year – once during the spring when snowmelt runoff is prevalent, and once in late summer when Fairbanks typically receives its largest rain events.

8.2 Compliance Activities

8.2.1 Outfall Monitoring

The permit does not specify how many outfalls are required to be monitored; however, monitoring efforts are planned to target 12 outfalls per monitoring event, which equates to 10 percent of the total number of outfalls owned and operated by the co-permittees. Additionally, effort is made during every monitoring event to monitor at least one outfall owned by each co-permittee, monitor at least one outfall for each impaired water body (Chena River, Noyes Slough, & Chena Slough), and repeat monitoring locations year to year whenever possible, so the data sets can be compared. The parameters monitored include dissolved oxygen, pH, temperature, turbidity, flow, conductivity, total suspended solids, chloride, oil, and grease, and BTEX. ADOT&PF purchased a new pH instrument and flow meter in 2023 to assist with the monitoring effort. The permit also requires the co-permittees conduct monthly visual screening for petroleum sheens on Noyes Slough during the summer months.

The co-permittees have been annually monitoring outfalls since 2006 but drafted a new Quality Assurance Project Plan (QAPP) in December 2018 to reflect the above monitoring plan in coordination with the requirements of the new permit. In 2023 updates were made to the QAPP to reflect changes in personnel and no longer references the FNSB MS4 permit as it is not applicable to Fairbanks MS4 permit as this time. A copy of the new QAPP is included in Appendix G (G01). During the 2023 reporting period, the co-permittees conducted the following monitoring efforts:

- Spring Outfall Monitoring – 12 outfalls sampled in May, and
- Fall Outfall Monitoring – 12 outfalls sampled in September.
- Monthly Visual Screenings for Petroleum Sheens on Noyes Slough – completed May, July, August, and September.
- Dry-weather screening of observed outfalls within the six-mile urban stretch of the Chena River.

Copies of the Outfall Discharge Monitoring Reports for the spring and fall monitoring efforts, as well as a summary of the analytical results and Noyes Slough Visual Screening sheets are included in Appendix G (G02-G06).

9.0 EVALUATION OF OVERALL PROGRAM EFFECTIVENESS SUMMARY

9.1 Summary

Each year the co-permittees are required to evaluate the program's effectiveness and address any needed improvements/modifications. Overall, the co-permittees believe the program has been very effective in reducing the discharge of pollutants from the MS4 through implementation of the compliance activities under each minimum control measure. This is evidenced by the water quality data collected by the co-permittees and ADEC since the original permit was issued in 2005. Over time the data has shown improvement in water quality in both the Chena River and Chena Slough – the two primary water bodies in Fairbanks and North Pole to which the MS4 discharges. Both water bodies were previously listed as impaired by petroleum products and sediment from urban runoff. In 2010 the ADEC determined both water bodies met state water quality standards for petroleum products. In December 2013 ADEC announced the Chena River, Chena Slough, and Noyes Slough also met state water quality standards for sediment. ADEC delisted the sediment impairment on all three water bodies in the 2014/16 Integrated Water Quality Monitoring and Assessment Report and was approved by the U.S. Environmental Protection Agency. Noyes Slough is still impaired for petroleum and debris (litter), and Total Maximum Daily Load (TMDLs) have been set for both of those pollutants at zero discharge.

To improve the program's effectiveness, snow disposal sites are inventoried and mapped. In 2006 the co-permittees evaluated their snow disposal sites for siting, maintenance, and use of BMPs. In 2018, the co-permittees began work on a comprehensive mapping and inventory of public and private snow disposal sites in the urbanized area. In 2020, a snow storage evaluation report was submitted to ADEC. Additionally, in 2023 the FSWAC revised their Snow Storage brochure (sent out annually to contractors) to include links to more information on site selection and permanent storm water control measures and BMPs, as well as

the regulations surrounding snow storage. During 2023, we visited multiple snow disposal sites to assess appropriate vegetative buffers and BMPs. This monitoring and evaluation work is on-going and will help reduce discharge of pollutants to MS4 waterbodies.