



FAIRBANKS NORTH STAR BOROUGH STORM WATER MANAGEMENT PLAN



January 2022

Alaska Pollutant Discharge Elimination System Permit No. AKS-053414

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This Storm Water Management Plan presents the implementation strategy to meet the requirements of Alaska Pollutant Discharge Elimination System Permit No. AKS-053414 issued by the Alaska Department of Environmental Conservation to the Fairbanks North Star Borough. By signature below, this plan is hereby approved and certified in accordance with 18 AAC 83.385.

“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.”


Name	Title	Signature	Date
Janet Smith	Deputy Director Fairbanks North Star Borough, Department of Public Works		01/20/2022

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STORM WATER PERMIT REQUIREMENTS

INTRODUCTION

This Storm Water Management Plan presents the implementation strategy to meet the requirements of Alaska Pollutant Discharge Elimination System (APDES) Permit No. AKS-053414 issued by the Alaska Department of Environmental Conservation (ADEC) to the Fairbanks North Star Borough (FNSB). Preparation of this plan was required by Section 2.1 of the permit.

PERMIT OVERVIEW

The FNSB was originally issued a 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. Prior to its expiration, the ADEC assumed authority over the permit in October 2009 under the newly created APDES Program. The ADEC 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 FNSB in June 2013 with an effective five-year term beginning August 1, 2013. A second permit was issued effective July 1, 2018 with an expiration date of June 30, 2023. A copy of the permit is included in Appendix A.

COVERAGE AREA

The 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 FNSB. 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. A map of this boundary is included in Appendix B.

AUTHORIZED DISCHARGE

With some limitations, the permit authorizes the FNSB to discharge storm water to waters of the U.S. from all portions of the MS4 owned and operated by the FNSB. The limitations are outlined in Section 1.4 of the permit and include non-storm water discharges, discharges threatening water quality, snow disposal to receiving waters, and discharges to water quality impaired receiving waters. See Appendix A for further information on these limitations.

MINIMUM CONTROL MEASURES

Section 3.0 of the permit requires the FNSB meet six minimum control measures for:

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

The following subsections list the individual requirements of each minimum control measure, followed by a description of the FNSB implementation strategy to meet those requirements.

PUBLIC EDUCATION AND OUTREACH

Section 3.1.1 – The permittee 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.

The City of Fairbanks, City of North Pole, University of Alaska Fairbanks, and Alaska Department of Transportation & Public Facilities – Northern Region (Fairbanks permittees) have a separate but similar APDES permit (Fairbanks permit) to the FSNB. The FNSB and the Fairbanks permittees have worked together since 2005 to implement a unified Public Education Program on local storm water issues. The program’s education and outreach activities are focused in the month of April 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.

- Updating and Maintaining an Informative Storm Water Management Program Website
- Providing Educational Presentations on Storm Water to Classes at Local Schools
- Providing Guest Presentations on Storm Water to Local Interest Groups
- Distributing Educational Material at Local Events and by Mail






The website can be viewed at: <https://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 each 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 FNSB, City of Fairbanks, and City of North Pole storm water ordinances and 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 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, FNSB BMP Design Guide, and a map and storm water plan submittal flowchart for the Fairbanks Urbanized Area.

In addition to providing guest presentations on storm water to local interest groups each year, the FNSB and Fairbanks permittees annually give 15 to 20 educational presentations on storm water at local schools. (This program was suspended in 2020 and modified in 2021 due to COVID 19). In mid-March each year, an invitation for educational presentations is sent to every elementary and middle school in the FNSB School District. Interested teachers then sign up for a presentation for their class anytime during the month of April. The presentation consists of a 30-minute slide show on the types of pollutants carried in storm water, how those pollutants reach area water bodies, and what can be done to limit the effects, followed by a 20-minute watershed model demonstration using the EnviroScape® Nonpoint Source Model. The model helps children make the visual connection between what they learned during the slide show and what happens in their local watershed. The children watch storm water pick up pollutants (i.e. colored drink mixes) in a suburban area and carry them to a lake. After each presentation, promotional items such as bracelets, magnets, pencils, and education materials are also given out.

Section 3.1.2 – At least annually, the permittee must distribute storm water educational materials to target audiences that encourage the public to improve water quality.

Over the years, the FSNB and the Fairbanks permittees have developed a variety of educational brochures, including:

-  10 Ways You can Prevent Storm Water Runoff Pollution (trifold)
-  Green Infrastructure: Put Rainwater to Work for You (rack card)
-  Water Pollution Solutions for Commercial Landscapers & Lawn Care Professionals (trifold)
-  Snow Storage & Disposal Practices for Local Contractors (trifold)
-  Erosion & Sediment Control Practices for Small Construction Sites (trifold)

Each of the brochures has a different target audience and is distributed annually at local events and by mail. The three primary events where these brochures are handed out from booths are the Northern Living Home Show in March, Fort Wainwright Earth Day Fair in April, and the Midnight Sun Festival in June. (Occurance of these events in 2020-2022 are subject to change due to COVID 19). The two brochures from the top of list have also been included in mass mailings to Fairbanks area residents and the three brochures from the bottom of the list are mailed annually to all locally-licensed landscaping contractors, snow removal contractors, and building contractors.

Copies of the brochures are included in Appendix C.

Section 3.1.3 – At least annually, the permittee must prepare and distribute appropriate information that encourages the public to improve water quality to local media outlets.

The FNSB and Fairbanks permittees developed a spring public service announcement (PSA) that is annually disseminated for broadcast to all local television news and radio stations, as well as the local newspaper. The PSA is generally broadcast during the first week of May each year, and reads as follows:

The Fairbanks Storm Water Advisory Committee wants to remind the public to take special note of our local storm drains and ditches during this year's spring cleanup! Storm water can carry pollutants like lawn chemicals, grass clippings, soap suds from washing vehicles, motor oil, sediments, pet waste, and litter to our rivers, lakes, and streams. We need your help to keep these pollutants OUT of our storm drains and ditches, which ultimately drain to our waterways. For more information on storm water and how it affects you, please visit the Fairbanks Storm Water Management website by visiting the FNSB website and enter "How to Get Involved".

MEASUREABLE GOALS FOR "PUBLIC EDUCATION & OUTREACH"

Permit Term: July 1, 2018 – June 30, 2023

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- Maintain the Storm Water Management Program website for the duration of the permit term

 - Annually provide a minimum of 15 educational presentations on storm water at local schools

 - Annually provide guest presentations on storm water to local interest groups, as requested

 - Annually distribute storm water educational brochures at a minimum of two local events

 - Annually mail educational brochures to landscaping, snow removal, and building contractors

 - Annually issue at least one PSA to local media outlets for broadcast

PUBLIC INVOLVEMENT AND PARTICIPATION

Section 3.2.1 – The permittee must comply with applicable state and local public notice requirements when implementing a public involvement/participation program.

The FNSB follows 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.

Section 3.2.2 – The permittee must continue to make the SWMP and all Annual Reports available to the public through the municipal library system, a permittee-maintained website, or other easily accessible location. Public outreach should include location information whenever appropriate.

Copies of both the FNSB's and the Fairbanks permittees' 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://www.fnsb.gov/383/Fairbanks-Storm-Water-Management-Program> .

Section 3.2.3 – At least quarterly, the permittee must continue to convene a volunteer citizen committee to advise the Borough on storm water program activities and accomplish the goals of the SWMP. The permittee may comply with this requirement by both participating in and promoting Fairbanks North Star Borough (FNSB) citizen participation in any other locally organized municipal storm water management committee(s). The meeting schedule must be made known to the public, and DEC through direct mail or e-mail notification, if possible, and/or other locally appropriate means.

In 2003 the FNSB and the Fairbanks permittees 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 Fairbanks permittee agencies, FNSB, and ADEC, as well as one citizen member from each of Fairbanks and North Pole serving as representatives of their respective communities. The FSWAC meets at Fairbanks City Hall (currently via Zoom due to COVID 19) on the second Thursday of each month from 11:00 am to 12:30 pm. All meetings are open and advertised to the public. The meeting schedule is posted on the Fairbanks Storm Water Management Program website, on the City of Fairbanks website, and via email to the FSWAC's email distribution list. Minutes are drafted and approved by the FSWAC for every meeting held and submitted to ADEC each year in the FNSB's and Fairbanks permittees' Annual Reports.

Section 3.2.4 – The permittee must continue to implement a storm drain stenciling program.

The FNSB and Fairbanks permittees instituted a Storm Drain Stenciling Program in 2006. The purpose of the stenciling program is to bring attention to storm drain inlets, educate the public on where storm water drains discharge, and discourage illicit discharges. There is a common

misconception that storm drains flow to a sewer treatment plant, and the stenciling program helps clear up this misconception. The FNSB and Fairbanks permittees have two types of storm drain stencils – one with an outline of a salmon 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 with the words “Dump No Waste, Drains to Slough” for those inlets draining to Noyes and Chena Sloughs.

Section 3.2.5 – At least annually, the permittee must continue to host a community Stream Cleanup Day.

The FNSB and Fairbanks permittees, with help from a variety of local organizations, have held an Annual Stream Cleanup Day event every year since 2005. The water bodies chosen for the event include the Chena River, the Noyes Slough, and the Chena Slough, but most events have focused on Noyes Slough. Litter is more persistent in that sloughy since it has beaver dams that inhibit its flow. Regardless of the water body, each year the event has 30 to 40 volunteers that remove 500-750 pounds of litter. Volunteers include residents who live or work along the water bodies, Fort Wainwright soldiers and staff, as well as a number of other citizens and community groups that care about water quality.

Section 3.2.6 – The permittee must maintain the means of providing relevant storm water information to, and accepting input from, the public; this requirement can be accomplished through providing the public with internet access via a website, a telephone hotline, and/or other appropriate means. The availability of this education and communication tool must be advertised to the public through the permittee’s ongoing public education efforts.

The FNSB maintains and hosts the Fairbanks Storm Water Management Program website. As described in 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 each 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 FNSB, City of Fairbanks, and City of North Pole storm water ordinances and 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 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, FNSB BMP Design Guide, and a map and storm water plan submittal flowchart for the Fairbanks Urbanized Area. The website address is printed on educational brochures distributed at local events and through the mail.

MEASUREABLE GOALS FOR “PUBLIC INVOLVEMENT & PARTICIPATION”

Permit Term: July 1,2018 – June 30,2023

- Continue attending monthly FSWAC meetings for the duration of the permit term
- Annually stencil FNSB storm drain inlets as needed
- Annually host a Stream Cleanup Day event
- Maintain the Storm Water Management Program website for the duration of the permit term

ILLICIT DISCHARGE DETECTION AND ELIMINATION

Section 3.3.1 – The permittee shall review and revise, as necessary, the program to detect and eliminate illicit discharges. The permittee must, as part of this activity, maintain an information management system to track illicit discharges.

FNSB has 103 Road Service Areas. Each area was established through an election process by area specific residents to provide road powers to FNSB for area specific roads. The FNSB Rural Services Division supports and provides training to the Road Service Area Commissioners, who were granted road maintenance responsibilities through the aforementioned election process. Fifty-one of these service areas are located within the Fairbanks Urbanized Area. The storm water conveyance systems within these 51 service areas make up the FNSB MS4.

Road Service Area Commissioners are asked to notify the Department of Public Works if an illicit discharge is identified with the understanding that identifying and eliminating illicit discharges can lower yearly maintenance costs. Additionally, the Storm Water Management Program Website has a link to allow residents to send a message to Public Works on potential illicit discharges, specifically citing dirty or oily water, foam, or dumping activities. When an illicit discharge is reported, it is logged and investigated. A plan for elimination is developed and includes consideration of jurisdiction, ownership, and enforcement provisions.

Section 3.3.2 – Annually, the permittee shall review and revise an inventory and map of industrial facilities and activities that are covered by the 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, nature of the business or activity, Standard Industrial Classification code(s) or the newer North American Industry Classification System 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.

The inventory and map of industrial facilities were incorporated into the Fairbanks Storm Drain System Map available on the Storm Water website at: <https://fnsb.gov/393/Storm-Drain-System-Map>.

Section 3.3.3 – Annually, the permittee must review the effectiveness and revise ordinances that effectively prohibit non-storm water discharges into their MS4. The permittee must implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders.

On June 12, 2008, FNSB adopted Ordinance 2008-22 establishing Title 21 of the FNSB Code of Ordinances. In 2016, the Title 21 was recodified into Title 13. Chapter 13.12 prohibits illicit discharges to the MS4 through storm water, direct dumping, or snow clearance operations and requires immediate notification upon identifying a violation. The FNSB illicit discharge enforcement policy is regulated in Title 1 by the fine schedule. The schedule was revised as part of Ordinance 2008-22 to include fines on an escalation basis for illicit discharges and failure to notify authorities of illicit discharges. The FNSB will review and revise these ordinances, as necessary, on an annual basis.

Section 3.3.4 – The permittee must prohibit any of the non-storm water flows listed in Part 1.4.1.3 through ordinance if such flows are identified by DEC or the permittee as a source of pollutants to the MS4. The permittee must document any existing local controls or conditions placed on such discharges.

The existing Illicit Discharge Ordinances of the FNSB address non-storm water flows within their “Prohibited discharges or acts” subsection. Certain non-storm water flows (i.e. water line flushing, landscape irrigation, dechlorinated swimming pool discharges, firefighting activities, etc.) listed 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).

Section 3.3.5 – Annually the permittee must inform users of the MS4 and the general public of hazards associated with illegal discharges and improper disposal of waste.

As discussed under “Public Education & Outreach” and “Public Involvement & Participation,” efforts are made annually to inform the public about illicit discharges and improper disposal of waste. Effort includes (1) maintaining the Fairbanks Storm Water Management Program website, which includes procedures for reporting illicit discharges to the Fairbanks 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) mailing brochures to homeowners residing by water body, local landscaping, snow removal, and building contractors which in part apprises them of the local illicit discharge ordinances.

Section 3.3.6 Annually, the permittee must update 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 DEC as part of the Annual Report.

In 2008 the Fairbanks permittees and FNSB combined their individual MS4 maps into a single comprehensive map of all storm water conveyance systems within the Fairbanks Urbanized Area. The map currently resides within the FNSB’s Geographical Information System database, and can be accessed by the public at: <https://fnsb.gov/393/Storm-Drain-System-Map>. The map contains all jurisdictional boundaries, storm drain inlets and outfalls, outfall receiving waters, and FNSB and Fairbanks permittees owned and operated facilities, including snow disposal sites. Since 2008, some unmapped features have been discovered in the field such as inlets and segments of pipe not show on the map. There have also been a number of road construction projects in the Fairbanks area since 2008 that have replaced, moved, and expanded some of the conveyance system components. There is an ongoing effort by the Fairbanks permittees and FNSB to update the map with current and new features. Privately operated snow disposal sites have been added to the map and are updated annually.

Section 3.3.7 – The permittee 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 permittee’s 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 permittee 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.

The FNSB began conducting dry-weather screening of outfalls in 2008. The FNSB has screened all known MS4 outfalls. FNSB has not detected flow at any of the outfalls; therefore, testing for pollutant types has not been conducted. FNSB will monitor the known outfalls prior to the end of the permit’s term in 2023.

MEASUREABLE GOALS FOR “ILLICIT DISCHARGE DETECTION & ELIMINATION”

Permit Term: July 1, 2018 – June 30, 2023

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- Maintain an inventory and map of MSGP-covered facilities and activities

 - Review and revise, as necessary, the illicit Discharge Ordinances

 - Review and update the comprehensive MS4 map as necessary

 - Screen 100% of the outfalls owned and operated by the FNSB by June 30, 2023

CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Section 3.4.1 – Annually, the permittee must review and implement its existing program that reduces pollutants in any storm water runoff to the MS4 from construction activities 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 #: AKR100000 (Alaska Construction General Permit or ACGP). The permittee must discuss revisions, planned improvements, and schedule in the Annual Report.

The FNSB's existing efforts to control construction site storm water runoff include a plan review and site inspection program, published local BMP design guide, and biennial training/workshops for local developers, engineers, and contractors. The FNSB will annually review and update the plan review/inspection program and will document any changes in the Annual Report to ADEC.

Section 3.4.2 – If DEC 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 permittee is not required to develop, implement, or enforce the program to reduce pollutant discharges from that particular site.

Small construction activities as defined by ADEC include projects that result in a ground disturbance of greater than or equal to one acre but less than five acres. The ADEC may waive the Alaska CGP requirements for these projects where:

- The "R" value, or rainfall erosivity factor, is less than five during the period of construction activity [40 CFR §122.26(b)(15)(i)(A)]; and/or
- Storm water controls are not needed based on a Total Daily Maximum Load (TMDL) approved or established by the U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety [40 CFR §122.26(b)(15)(i)(B)].

Section 3.4.3 – The permittee 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.

On June 12, 2008 FNSB adopted Ordinance 2008-22 establishing Title 21 of the FNSB Code of Ordinances. In 2016, Title 21 was recodified to Title 13. Chapter 13.16 addresses construction site storm water runoff control by establishing a permit process for all regulated construction sites. Through this process, FNSB will review storm water management plans and conduct site inspections for each site. Regulated construction sites may not operate prior to issuance of a FNSB permit and must follow appropriate permit closure procedures prior to facility occupancy. Copies of the ordinances are included in Appendix D. The FNSB will review and revise these ordinances, as necessary, before the end the new permit term.

Section 3.4.4 – The permittee 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 via a permittee-maintained website or other easily accessible location.

The FNSB, in coordination with the City of Fairbanks and the City of North Pole, has prepared a BMP Design Guide. 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 to 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 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 that 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 Fairbanks Storm Water Management Program website for download. A copy of the guide and handout are included in Appendix E. In addition to reviewing and revising the aforementioned ordinances, the FNSB will review and revise the guide, as necessary, before the end the new permit term.

Section 3.4.5 – Annually, the permittee 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.

The site development plan review and inspection program is part of FNSB Planning and Construction Permitting, which directs all contractors/owners to submit storm water plans in accordance with the requirements of the ordinances and all applicable review fees before a permit will be issued. The program also apprises contractors/owners their construction site(s) will be inspected at least once per year for proper erosion and sediment controls. In the event that any person holding a permit pursuant to these ordinances violates the terms of the permit, the FNSB may issue a notice of violation, suspend, or revoke the permit.

The FNSB maintains a log of public comments related to storm water. Public comments can be in the form of a question, concern, or general observation and can be provided in person, via telephone, or through email to the Department of Public Works. Phone calls or email received by other departments are forward directly to Public Works by the recipients. Once Public Works receives a comment, the comment is logged and if necessary, investigated. Jurisdictional authority is established and remedies are recommended or completed by Public Works as appropriate.

Section 3.4.6 – Annually, the permittee 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 permittee shall inspect all construction activities as required in Part 3.4.1 in its jurisdictions for appropriate erosion, sediment, and waste control at least once per year.

Pursuant to the requirements set forth in the Storm Water Discharge Ordinances, every permitted construction site that results in a ground disturbance greater than or equal to one acre will be inspected at least once per year for proper erosion and sediment controls. Each inspection involves 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.

Section 3.4.7 – The permittee 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.

The Cities of Fairbanks and North Pole, FNSB, and ADEC conducted a joint three-hour storm water workshop in April 2010 to educate local developers, engineers, and contractors about the new construction site storm water runoff and post-construction storm water management requirements within the Fairbanks Urbanized Area. This workshop was conducted in April 2019, April 2021 (via Zoom), and is scheduled for April 2023 to meet the biennial training session requirement of the new permit.

MEASUREABLE GOALS FOR “CONSTRUCTION SITE STORM WATER RUNOFF CONTROL”

Permit Term: July 1, 2018 – June 30, 2023

- Review and revise, as necessary, the Storm Water Discharge Ordinances by June 30, 2023
- Review and revise, as necessary, the Storm Water BMP Design Guide by June 30, 2023
- Conduct a training/workshop for local developers, engineers, and contractors in April 2019, April 2021, and April 2023.

POST CONSTRUCTION STORM WATER MANAGEMENT

Section 3.5.1 – Annually, the permittee 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.

The FNSB's existing efforts to manage post-construction storm water include a plan review program for permanent storm water controls for sites disturbing greater than or equal to one acre, published BMP design guide, green infrastructure application guide, and biennial training/workshops for local developers, engineers, and contractors. All of these efforts are described in greater detail in the following subsections.

Section 3.5.2 – Annually, the permittee must review the effectiveness and revise 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. The permittee must implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders.

On July 16, 2009 FNSB adopted Ordinance 2009-27 adding a new chapter to FNSB Code of Ordinances Title 21. In 2016, Title 21 was recodified to Title 13. Chapter 13.20 addresses post-construction storm water management by establishing a submittal process for Permanent Storm Water Control Plans (PSWCP) for regulated sites. The FNSB post-construction storm water management policy is regulated in Title 1 by the fine schedule. The FNSB will review and revise these ordinances, as necessary, before the end of the new permit term.

Section 3.5.3 – Annually, the permittee 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 MS4.

As stated previously, the FNSB published the Storm Water BMP Design Guide. 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 discussion of the design and construction requirements for snow disposal sites, septic systems, and parking lots. A copy of the guide is included in Appendix E. The guide is reviewed annually and typically updated at the beginning of each year.

Section 3.5.4 – The permittee must ensure proper long-term operation and maintenance of post-construction BMPs.

In accordance with the requirements set forth in the Storm Water Discharge Ordinances, developers are required to submit a Permanent Storm Water Control Plan (PSWCP) for review and approval prior to being granted a Site Development 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. Site development permits cannot be issued for construction on regulated sites prior to acceptance of a PSWCP and no person or entity may occupy, utilize, or operate a constructed facility or site without submittal of an as-built plan and execution of a maintenance agreement.

Section 3.5.5 – The permittee must continue to conduct biennial training for local construction, design, and engineering audiences.

As stated previously, the Cities of Fairbanks and North Pole, FNSB, and ADEC conducted a joint three-hour storm water workshop in April 2010 to educate local developers, engineers, and contractors about the new construction site storm water runoff and post-construction storm water management requirements within the Fairbanks Urbanized Area. This workshop was conducted in April 2019, April 2021 (via Zoom), and is scheduled for April 2023 to meet the biennial training session requirement of the new permit.

Section 3.5.6 – Green Infrastructure/Low Impact Development (LID)

Section 3.5.6.1 – The permittee shall incorporate into their education materials information about green infrastructure strategies, such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells, and permeable pavement that mimic natural processes and direct storm water to areas where it can be infiltrated, evapotranspired, or reused. The information must discuss the benefits and costs of such strategies and provide guidance to the public on how to implement them.

The FNSB coordinates with the Fairbanks Area Green Infrastructure group that developed the Green Infrastructure Resource Guide for Fairbanks, AK. A link to this guide is available on the Fairbanks Storm Water Management Program website which is hosted by FNSB.

Section 3.5.6.2 – The permittee shall implement strategies which include a combination of structural and/or non-structural BMPs appropriate for projects within their community for all new development and redevelopment that will reduce the discharge of pollutants and the volume and velocity of storm water flow to the maximum extent practical.

The FNSB has been implementing BMP's that reduce the discharge of pollutants, and the volume and velocity of storm water for several years. Many Borough facilities utilize dry wells to dispose of roof runoff. The Borough Solid Waste Facility employs infiltration planters, bioswales, dry wells, and detention basins to manage storm water. FNSB projects will continue to be evaluated for implementing these types of BMP's.

Section 3.5.7 – Snow Disposal Sites

Section 3.5.7 – 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.

The FNSB currently has no permittee-owned or privately owned snow disposal sites within its jurisdiction that discharge directly to the MS4 or to receiving waters. The Borough will annually determine if any snow disposal sites have been added to locations within FNSB jurisdiction that discharge directly to the MS4 or receiving waters and will map the sites as necessary.

Section 3.5.7.1 – Within two years, the permittee must evaluate whether to further protect water quality by explicitly regulating the operation of private snow disposal sites.

The FNSB currently has no permittee-owned or privately owned snow disposal sites within its jurisdiction that discharge directly to the MS4 or to receiving waters.

MEASUREABLE GOALS FOR “POST-CONSTRUCTION STORM WATER MANAGEMENT”

Permit Term: July 1, 2018 – June 30, 2023

- Review and revise, as necessary, the Post-construction Storm Water Management Ordinances by June 30, 2023
- Review and revise, as necessary, the Storm Water BMP Design Guide by June 30, 2023
- Conduct a training/workshop for local developers, engineers, and contractors in April 2019, April 2021, and April 2023
- Distribute Green Strategies and Low Impact Development Strategies information by June 30, 2023.
- Annually state status of regulated disposal sites in Annual Report and add new regulated sites to the map if necessary.

POLLUTION PREVENTION & GOOD HOUSEKEEPING

Section 3.6.1 – The permittee must continue to maintain and implement an operation and maintenance program intended to prevent or reduce pollutant runoff from municipal activities.

As previously noted, the FNSB MS4 is defined as the storm drain pipes, ditches, and other conveyances located within the 51 Road Service Areas in the Fairbanks Urbanized Area. The MS4 is maintained by various Road Service Area contractors. The FNSB Rural Services Division has developed a set of standard specifications for maintenance. The specifications include standards for replacing or repairing damaged culverts, furnishing and placing ditch lining material, cleaning and restoring the capacity of the ditches, cleaning culverts and catch basins, thawing frozen culverts and catch basins, and snow removal. Each Road Service Area is responsible for maintenance schedules and inspection of controls.

In addition, appropriate controls for reducing the discharge of pollutants are addressed on a per-department or division basis. The following table identifies specific controls being utilized.

Department/Division	Operation	Control
Transportation	Fueling station	<ul style="list-style-type: none"> Indoor, concrete lined facility w/ contained drainage. Triennial inspection. Shut-off valves clearly marked and visible. Spill response protocols in place.
	Vehicle maintenance	<ul style="list-style-type: none"> Scheduled inspections. Indoor facility w/ designated parts cleaning area and contained drainage. Fluid disposal at HHW facility or by certified vendor. Spill response protocols in place.
	Vehicle washing	<ul style="list-style-type: none"> Self-contained, automated drive-through facility. Wash water is recycled.
Parks and Recreation	Stockpiles	<ul style="list-style-type: none"> Aggregate stored in bins. Compost/soil stored away from water bodies.
	Chemicals	<ul style="list-style-type: none"> Pesticides are not used. Fertilizers stored indoors; application records kept. Herbicides stored in secured isolated containers; use limited to ball facilities (under bleachers/at backstops)
	Watering	<ul style="list-style-type: none"> Sprinklers equipped with automatic shut-off. Winterization program in place.
	Trash management	<ul style="list-style-type: none"> Scheduled volume checks w/ removal as appropriate. Consolidated at central facility for disposal.
	Tool/equipment maintenance and storage	<ul style="list-style-type: none"> Indoor facilities with contained drainage.
	Snow management	<ul style="list-style-type: none"> Clearing conducted w/in 48 to 72 hrs of snowfall. All snow kept on site. Recreational snow ramps into sloughs/river utilize clean snow inspected and approved by the USACE.

Department/Division	Operation	Control
Public Works	Building and road construction	<ul style="list-style-type: none"> All project managers and engineers are AK-CESCLs. Standard specifications require ESCPs for projects under 1 acre/CGP compliance for projects over 1 acre. All SWPPPs must be developed by PE or CPESC. All inspections must be performed by PE, CPESC, or AK-CESCL.
	Permitting	<ul style="list-style-type: none"> All right-of-way and driveway permits require the use of appropriate BMPs.
Public Works - Facilities Maintenance	Materials storage	<ul style="list-style-type: none"> Materials stored in drums or gallon size containers with clear labels in indoor facilities. All floor drains connected to sanitary sewer system. MSDSs for all substances kept on file. Spill response protocols in place.
	Pool drainage	<ul style="list-style-type: none"> All pools drained to the sanitary sewer system.
Public Works - Solid Waste	Transfer sites	<ul style="list-style-type: none"> Certified contractor maintains general site. Certified contractor empties/transport general waste. FNSB staff maintains re-use areas/all HHW areas. FNSB staff transfers all HHW materials.
	Landfill facility	<ul style="list-style-type: none"> Operates under the MSGP.

Section 3.6.2 – Annually, the permittee must continue appropriate training for municipal personnel related to optimum maintenance practices for the protection of water quality.

The FNSB conducts annual employee trainings using two 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. Annually, the FNSB will present the DVDs to the appropriate public works/transportation/parks and recreation employees in order to meet the annual employee training requirements of the permit. Training acknowledgement forms for each of the FNSB respective departments will be submitted to ADEC each year in the Annual Reports. (Training was limited in 2020 and 2021 due to COVID 19.)

Section 3.6.3 – The permittee 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.

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 or not 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, U.S. Fish & Wildlife Service, 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.

MEASUREABLE GOALS FOR "POLLUTION PREVENTION & GOOD HOUSEKEEPING"

Permit Term: July 31, 2018 – June 30, 2023

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- Continue current operation and maintenance efforts intended to prevent and reduce pollutant runoff from municipal activities for the duration of the permit term
 - Annually provide employee training on storm water pollution prevention for MS4 operations
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MONITORING, EVALUATION & REPORTING

MONITORING AND EVALUATION OF OVERALL PROGRAM EFFECTIVENESS

The FNSB does not conduct water quality monitoring. Each year the FNSB will evaluate their compliance with the permit requirements and progress toward achieving the measurable goals for each of the minimum control measures. Based on the results of the evaluation, the FNSB will then develop and implement a plan to address needed improvements/modifications and document that plan in the Annual Reports to ADEC.

If there becomes a need for water quality monitoring, the Fairbanks Permittees and the FNSB drafted a Quality Assurance Project Plan (QAPP) in January 2018 and updated the document in 2022 to meet the requirements of the permit. A copy of the QAPP is included in Appendix F.

ANNUAL REPORTS

By February 15 of each year, the FNSB will submit an Annual Report to ADEC detailing the activities undertaken to comply with the requirements of the permit. The Annual Reports will additionally be made available to the public through the Fairbanks Storm Water Management Program website at: <https://fnsb.gov/DocumentCenter/View/799/Annual-Report-of-Program-Activities-PDF>.

RECORD KEEPING

The FNSB will retain records and copies of all information used in the development and implementation of the Storm Water Management Program (including all permit application materials, monitoring data, calibration/maintenance records, and reports required by the permit) for a period of at least five years from the date of the application, sample, measurement, or report.