

# FAIRBANKS & NORTH POLE STORM WATER MANAGEMENT PLAN

*Alaska Pollutant Discharge Elimination System Permit No. AKS-053406*



April 2014



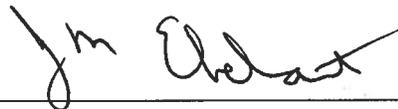
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APRIL 2014

This Storm Water Management Plan presents the implementation strategy to meet the requirements of Alaska Pollutant Discharge Elimination System Permit No. AKS-053406 issued by the Alaska Department of Environmental Conservation to the City of Fairbanks, City of North Pole, University of Alaska Fairbanks, and Alaska Department of Transportation & Public Facilities - Northern Region. By signature below, this plan is hereby approved and certified in accordance with 18 AAC 83.385 by each of the aforementioned permittees.

*"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

  
\_\_\_\_\_  
John Eberhart, Mayor

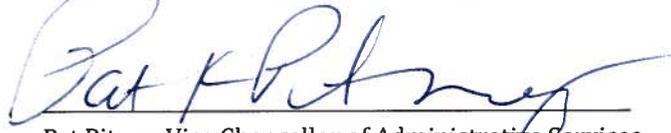
14. April 2014  
Date

## CITY OF NORTH POLE

  
\_\_\_\_\_  
Bryce Ward, Mayor

4/29/14  
Date

## UNIVERSITY OF ALASKA FAIRBANKS

  
\_\_\_\_\_  
Pat Pitney, Vice Chancellor of Administrative Services

19 April 2014  
Date

## ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES - NORTHERN REGION

  
\_\_\_\_\_  
Dave Miller, Maintenance & Operations Director

4-15-14  
Date

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# STORM WATER PERMIT REQUIREMENTS

## 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-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.” Preparation of this plan was required by Section 2.1 of the permit.

### PERMIT OVERVIEW

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. 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 co-permittees in June 2013 with an effective five-year term beginning August 1, 2013. 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 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. A map of this boundary is included in Appendix B.

### 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 to receiving waters, and discharges to water quality impaired receiving waters. See Appendix A for further information on these limitations.

### CO-PERMITTEES RESPONSIBILITIES

The co-permittees entered into an Intergovernmental Agreement on September 27, 2013 for the division of roles and responsibilities under the permit. In general terms, the agreement states that each co-permittee is

# STORM WATER PERMIT REQUIREMENTS

individually responsible for permit compliance for portions of the MS4 owned or operated solely by that co-permittee, and where the permit directs action or inaction by that co-permittee. Co-permittees are further jointly responsible for permit compliance for portions of the MS4 where co-permittees jointly own or operate a portion of the MS4, and for submission of plans, reports, strategies, and assessments required by the permit. For joint responsibilities, the agreement also states that each co-permittees' share of the cost and effort shall be directly related to the percentage of lane miles of roadway they own and operate within the Fairbanks Urbanized Area that discharge to waters of the U.S. A copy of the signed and executed agreement is included in Appendix C.

# MINIMUM CONTROL MEASURES

## Minimum Control Measures

Section 3.0 of the permit requires the co-permittees meet six minimum control measures for:

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

### PUBLIC EDUCATION & OUTREACH

***Section 3.1.1 – 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.***

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 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 <http://co.fairbanks.ak.us/PWorks/StormWaterManagementProgram/>. 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 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 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

# MINIMUM CONTROL MEASURES

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, FNSB BMP Design Guide, and a map and storm water plan submittal flowchart for the Fairbanks Urbanized Area.

In addition to providing a couple guest presentations on storm water to local interest groups each year, the co-permittees and FNSB annually give 15 to 20 educational presentations on storm water at local schools. 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 co-permittees must distribute storm water educational materials to target audiences that encourage the public to improve water quality.***

Over the years, the co-permittees and FNSB 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 are 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 Chena River Summit in May. 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.

Each year the co-permittees also print hundreds of copies of the Green Infrastructure Resource Guide for Fairbanks to give away at each the aforementioned events, as well as to all of the local plant nurseries and home improvement stores in the Fairbanks area to provide to their customers free of charge.

Copies of the brochures and guide are included in Appendix D.

# MINIMUM CONTROL MEASURES

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

The co-permittees and FNSB 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 would like to remind you to pay attention to the location of storm drains and ditches during this year's spring cleanup. Storm water can carry harmful pollutants such as excess fertilizers, grass clippings, motor oil, car wash detergents, pet waste, loose soil, and litter to Alaska's rivers, lakes and streams – which are important to fish and wildlife. Your help is needed to keep these pollutants OUT of local storm drains and ditches, and ultimately out of Alaska's waterways. For more information on storm water and how it affects you please visit the Fairbanks Storm Water Management Program website by Googling "Fairbanks Storm Water."*

## MEASUREABLE GOALS FOR "PUBLIC EDUCATION & OUTREACH"

Permit Term: August 1, 2013 – July 31, 2018

- **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 & PARTICIPATION

***Section 3.2.1 – Co-permittees must comply with applicable state and local public notice requirements when implementing a public involvement/participation program.***

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.

***Section 3.2.2 – Co-permittees must continue to make the SWMP 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.***

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

<http://www.co.fairbanks.ak.us/pworks/stormwatermanagementprogram/programinformation.htm>.

# MINIMUM CONTROL MEASURES

***Section 3.2.3 – Co-permittees must continue the Storm Water Advisory Committee. The Storm Water Advisory Committee meeting schedule must be made known to the public and DEC through direct mail or e-mail notification, if possible, and other locally appropriate means.***

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 meets at Fairbanks City Hall on the second Thursday of each month from 10:30am to noon. All meetings are open and advertised to the public. The meeting schedule is posted on the Fairbanks Storm Water Management Program website, in the local newspaper at least one week in advance of each meeting, 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 co-permittees' and FNSB's Annual Reports.

***Section 3.2.4 – Co-permittees must continue to implement a storm drain stenciling program.***

The co-permittees and FNSB instituted a Storm Drain Stenciling Program in 2006, and has stenciled an average of 90 inlets per year since then. The purpose of the stenciling program is to bring attention to storm drain 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 and FNSB 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, co-permittees must continue to host a community Stream Cleanup Day.***

The co-permittees and FNSB, with help from a variety of local organizations, have held an Annual Stream Cleanup Day event every year since 2005. The water body chosen for the event has changed year to year from the Chena River to Noyes Slough to Chena Slough, but more events have focused on Noyes Slough than any other water body. Litter is more persistent in this water body since it has 11 beaver dams that inhibit its flow. Regardless of the water body, each year the event has 30 to 40 volunteers that remove at least 1,000 pounds of litter every single year. Volunteers include residents who live or work along the water bodies, as well as a number of other citizens and community groups that see or hear the advertisements for the event.

***Section 3.2.6 – Co-permittees must continue an ongoing volunteer monitoring program and an Adopt-a-Stream program.***

The co-permittees entered into a Memorandum of Agreement (MOA) with the Tanana Valley Watershed Association (TVWA) in 2008 to implement the Volunteer Water Quality Monitoring and Adopt-a-Stream (AAS) Program on behalf of the co-permittees. Under the terms of the MOA, the TVWA agreed to administer the program contingent on funding support and additional, in-kind assistance from the co-permittees. Elements of the program include water quality monitoring, bio-assessment studies, additional litter cleanup activities, stream bank restoration and maintenance, and management of flow restrictions. Through

# MINIMUM CONTROL MEASURES

implementation of these activities, the co-permittees and TVWA raise community awareness about water quality issues, improve local water quality, and develop a strong volunteer base by giving members of the community a sense of ownership in local water quality issues. A copy of the MOA is included in Appendix E.

## *Section 3.2.7 – Co-permittees must continue public knowledge and attitude survey work related to storm water management in the greater Fairbanks Urbanized Area.*

In 2008 the FSWAC developed and distributed a community survey on public knowledge, behaviors, and attitudes related to storm water management in the Fairbanks area. The results of the survey were summarized and published at the end of that year. More recently, in January 2014, the FSWAC has made modifications to the original survey to redistribute this year. The purpose of redistributing the survey is to see if there are any measurable changes in public knowledge, behaviors, and attitudes towards storm water since the inception of the co-permittees' and FNSB's Public Education Program.

## MEASUREABLE GOALS FOR "PUBLIC INVOLVEMENT & PARTICIPATION"

Permit Term: August 1, 2013 – July 31, 2018

- **Continue holding monthly FSWAC meetings for the duration of the permit term**
- **Annually stencil a minimum of 75 storm drain inlets**
- **Annually host a Stream Cleanup Day event**
- **Annually fund the AAS Program**
- **Redistribute the community survey on storm water to the public April to September 2014**

## ILLCIT DISCHARGE DETECTION & ELIMINATION

### *Section 3.3.1 – 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.*

The co-permittees' primary and ongoing efforts to detect and eliminate illicit discharges include annual employee training on illicit discharges to maintain a continued surveillance of storm water conveyance systems when in the field, dry-weather screening of outfalls detect and eliminate unpermitted non-storm water discharges, and enforcement of municipal Illicit Discharge Ordinances. Every illicit discharge detected is entered 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 is submitted to ADEC each year in the Annual Report.

# MINIMUM CONTROL MEASURES

***Section 3.3.2 – No later than three years from the effective date of this permit, 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) AKR050000, 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 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.***

The co-permittees do not currently have an inventory or map of industrial facilities and activities that are covered by the APDES MSGP in the Fairbanks area, but will ensure the inventory and map are developed no later than three years from the effective date of the permit.

***Section 3.3.3 – No later than four years from the effective date of this permit, all 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.***

The Cities of Fairbanks and North Pole are the only entities of the four 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 followed suit by adopting a similar Illicit Discharge 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 are included in Appendix F. The Cities of Fairbanks and North Pole will review and revise these ordinances, as necessary, no later than four years from the effective date of the permit.

***Section 3.3.4 – 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 DEC 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.***

The existing Illicit Discharge Ordinances of the Cities of Fairbanks and North Pole address non-storm water flows within their “Discharge Prohibitions” subsections. 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 co-permittees 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 include (1) maintaining the Fairbanks Storm Water Management Program website, which includes procedure for reporting illicit discharges to the co-permittees and FNSB; (2) incorporating information about the types

## MINIMUM CONTROL MEASURES

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 local landscaping, snow removal, and building contractors which in part apprises them of the local illicit discharge ordinances.

The co-permittees also conduct 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. 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 are submitted to ADEC each year in the Annual Reports.

***Section 3.3.6 No later than three years from the effective date of this permit, the co-permittees must update, as necessary, the comprehensive MS4 map developed during the previous permit cycle. 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 co-permittees and FNSB combined their individual MS4 maps into a single comprehensive map 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 <http://www.co.fairbanks.ak.us/pworks/stormwatermanagementprogram/stormdrainmap.htm>. The map contains all jurisdictional boundaries, storm drain inlets and outfalls, outfall receiving waters, and FNSB and co-permittee owned and operated facilities, including snow disposal sites. Since 2008, however, 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. The co-permittees and FNSB will work together over the next couple years to update the map with information on the unmapped and new features. Effort will also be made to map the privately operated snow disposal sites, which are not currently shown on the map.

# MINIMUM CONTROL MEASURES

*Section 3.3.7 – 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.*

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 will again screen every outfall owned and operated by the co-permittees prior to the end of the permit’s term in 2018.

## MEASUREABLE GOALS FOR “ILLICIT DISCHARGE DETECTION & ELIMINATION”

Permit Term: August 1, 2013 – July 31, 2018

- **Develop an inventory of map of MSGP-covered facilities and activities by August 1, 2016**
- **Review and revise, as necessary, the illicit Discharge Ordinances by August 1, 2017**
- **Annually provide employee training on illicit discharges to the MS4**
- **Review and update the comprehensive MS4 map by August 1, 2016**
- **Screen 100% of the outfalls owned and operated by the co-permittees by August 1, 2018**

## CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

*Section 3.4.1 – The co-permittees must annually review and revise the development, implementation, and enforcement of 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 #: AKR100000 (Alaska Construction General Permit or ACGP). The co-permittees must discuss revisions, planned improvements, and schedule in the Annual Report.*

The co-permittees’s existing efforts to control construction site storm water runoff include a municipal plan review and site inspection program, published local BMP design guide, and biennial training/workshops for local developers, engineers, and contractors. The co-permittees will annually discuss revisions, planned improvements, and schedule for these efforts in the Annual Report to ADEC.

# MINIMUM CONTROL MEASURES

***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 co-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 co-permittees must maintain and update as necessary, an ordinance or other regulatory mechanism to be consistent with this Permit and with the current version of the ACGP. This ordinance or regulatory mechanism must include sanctions to ensure compliance.***

The Cities of Fairbanks and North Pole are the only entities of the four 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 followed suit by drafting and adopting a similar Construction Site Storm Water Runoff 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. Copies of the ordinances are included in Appendix F. The Cities of Fairbanks and North Pole will review and revise these ordinances, as necessary, before the end the new permit term.

***Section 3.4.4 – 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.***

The Cities of Fairbanks and North Pole published the Fairbanks & North Pole Storm Water Management Program Guide in September 2009. 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

# MINIMUM CONTROL MEASURES

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 G. In addition to reviewing and revising the aforementioned ordinances, the Cities of Fairbanks and North Pole will review and revise the guide, as necessary, before the end the new permit term.

***Section 3.4.5 – Co-permittees must review, and revise as necessary 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 construction site storm water runoff plan review and inspection program was added to the Residential and 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. 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 Cities of Fairbanks and North Pole may issue a notice of violation, suspend, or revoke the permit.

These 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 the new permit term.

***Section 3.4.6 – Co-permittees must review and revise as necessary, 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.***

Pursuant to the requirements set forth in the Construction Site Storm Water Runoff 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

# MINIMUM CONTROL MEASURES

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 – 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.*

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 is scheduled to be offered again in April 2015 and April 2017 to meet the biennial training session requirement of the new permit.

## MEASUREABLE GOALS FOR “CONSTRUCTION SITE STORM WATER RUNOFF CONTROL”

Permit Term: August 1, 2013 – July 31, 2018

- **Review and revise, as necessary, the Construction Site Storm Water Runoff Control Ordinances by August 1, 2018**
- **Review and revise, as necessary, the Fairbanks & North Pole Storm Water Management Program Guide by August 1, 2018**
- **Incorporate provisions for receipt and consideration of information submitted by the public into the plan review process by August 1, 2018**
- **Conduct a training/workshop for local developers, engineers, and contractors in April 2015 and April 2017**

## POST CONSTRUCTION STORM WATER MANAGEMENT

*Section 3.5.1 – Co-permittees must 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 co-permittees’s existing efforts to manage post-construction storm water include a municipal 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.

# MINIMUM CONTROL MEASURES

***Section 3.5.2 – 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.***

The Cities of Fairbanks and North Pole are the only entities of the four 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 CONP followed suit by drafting and adopting a similar Post-Construction Storm Water Management 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 are included in Appendix F. The Cities of Fairbanks and North Pole will review and revise these ordinances, as necessary, before the end the new permit term.

***Section 3.5.3 – Co-permittees must review and revise, as necessary, 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.***

As stated previously, the Cities of Fairbanks and North Pole published the Fairbanks & North Pole Storm Water Management Program Guide in September 2009. 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 G. The Cities of Fairbanks and North Pole will review and revise the guide, as necessary, before the end the new permit term.

***Section 3.5.4 – Co-permittees must ensure proper long-term operation and maintenance of post-construction BMPs.***

In accordance with the requirements set forth in the Cities of Fairbanks and North Pole Post-Construction Storm Water Management 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.

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## ***Section 3.5.5 – Co-permittees 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 is scheduled to be offered again in April 2015 and April 2017 to meet the biennial training session requirement of the new permit.

## ***Section 3.5.6 – Green Infrastructure/Low Impact Development (LID) Incentive Strategy and Pilot Project***

### ***Section 3.5.6.1 – Co-permittees 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.***

In late 2009 the City of Fairbanks partnered with the Cold Climate Housing Research Center, GeoWatersheds Scientific, and Fairbanks Soil & Water Conservation District, 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 selected included the rain barrel, rain garden, tree pit, infiltration planter, vegetated swale/retention grading, dry well, riparian buffer, green roof, 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://www.cchrc.org/green-infrastructure>. In addition to being made available online, each year the co-permittees print hundreds of copies of the guide to give away at a variety of local events, as well as to all of 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 is included in Appendix D.

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

## MINIMUM CONTROL MEASURES

water discharge location, percent of impervious land cover, amount of area served by a pipe storm drain system, and amount of roads with curb and gutter as opposed to ditches and/or swales. Copies of the maps produced by this effort are included in Appendix D.

***Section 3.5.6.2 – No later than three years from the effective date of this permit, the co-permittees must develop a strategy to provide incentives for the increased use of LID techniques in private and public sector development projects. The strategy must reference methods of evaluating at least one Green Infrastructure/LID pilot project as described below. Co-permittees must implement the Green Infrastructure/LID incentive strategy, and complete an effectiveness evaluation of at least one pilot project, prior to the expiration date of this Permit.***

*LID Incentive Strategy* – The co-permittees have not yet developed a strategy to provide incentives for the increased use of LID techniques in private and public sector development projects, but will ensure the strategy is developed no later than three years from the effective date of the permit.

*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 of these 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 Fairbanks Soil & Water Conservation District Youth Corps crew. First, the concrete chute was removed from the river bank 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. The effectiveness of this project in reducing the amount of pollutants reaching the river will be monitored and evaluated year to year until the end of the new permit term.

### MEASUREABLE GOALS FOR “POST-CONSTRUCTION STORM WATER MANAGEMENT”

Permit Term: August 1, 2013 – July 31, 2018

- **Review and revise, as necessary, the Post-construction Storm Water Management Ordinances by August 1, 2018**
- **Review and revise, as necessary, the Fairbanks & North Pole Storm Water Management Program Guide by August 1, 2018**

# MINIMUM CONTROL MEASURES

- **Conduct a training/workshop for local developers, engineers, and contractors in April 2015 and April 2017**

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- **Annually promote and distribute copies of the Green Infrastructure Resource Guide for Fairbanks at local events, nurseries, and home improvement stores**

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- **Develop an LID Incentive Strategy for private and public sector development projects by August 1, 2016**

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- **Evaluate the effectiveness of the Green Infrastructure/LID pilot project (constructed in August 2013) by August 1, 2018**

## POLLUTION PREVENTION & GOOD HOUSEKEEPING

### *Section 3.6.1 – Co-permittees must continue to maintain and implement an operation and maintenance program intended to prevent or reduce pollutant runoff from municipal activities.*

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 an information tracking system for these activities to assist with reducing the discharge of pollutants, including sediment, to the MS4.

*Winter 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 Cities of Fairbanks and North Pole; followed by local streets within residential neighborhoods. 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 are tracked by date of operation, area and subarea, number of loads and cubic yards hauled, haul time, and snow storage site used. Debris is collected following spring break-up and disposed at the FNSB Solid Waste Landfill. Street sanding operations are similarly scheduled by area of priority depending on street surface conditions, and tracked by date of operation, area, and number of loads, cubic yards, and tonnage spread.

*Summer 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, in an attempt 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 by date of operation, broom number, area and subarea, street location, number of loads and cubic yards hauled, haul time, and storage site used. 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. Storm drain cleaning operations are tracked by date of operation, equipment number/type, area and subarea, street location,

# MINIMUM CONTROL MEASURES

number of loads hauled, haul time, and storage site used, and gallons of liquid and cubic yards of solids collected.

In coordination and compliance with EPA Hazardous Waste Regulations, each of the co-permittees 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 generates 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.

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

As stated previously, the co-permittees conduct 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. 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 are submitted to ADEC each year in the Annual Reports.

***Section 3.6.3 – 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.***

Assessment of flood management projects for impacts on water quality would 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 and North Pole Construction Site Storm Water Runoff and 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.

# MINIMUM CONTROL MEASURES

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: August 1, 2013 – July 31, 2018

- **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**
- **Annually provide employee training on storm water pollution prevention for MS4 operations**

# MONITORING, EVALUATION, & REPORTING

## Monitoring, Evaluation, & Reporting

### MONITORING PROGRAM PLAN

The co-permittees are required by the permit to monitor the water discharging from 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. 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 will be 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 that will be monitored include dissolved oxygen, pH, temperature, turbidity, flow, conductivity, total suspended solids, chloride, oil and grease, and BTEX.

The co-permittees have been annually monitoring outfalls since 2006, but recently drafted a new Quality Assurance Project Plan (QAPP) in January 2014 to reflect the above monitoring plan in coordination with the requirements of the new permit. A copy of the QAPP is included in Appendix H.

### EVALUATION OF OVERALL PROGRAM EFFECTIVENESS

Each year the co-permittees 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 co-permittees will then develop and implement a plan to address needed improvements/modifications, and document that plan in the Annual Reports to ADEC.

### ANNUAL REPORTS

By February 1 of each year, the co-permittees 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 <http://www.co.fairbanks.ak.us/pworks/stormwatermanagementprogram/programinformation.htm>.

### RECORD KEEPING

The co-permittees 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.