

MS4 and Stormwater Management in the Mat-Su Borough

Meeting #1 Summary

Date: May 31, 2022; 11:30am-1pm

Attendees: Attendance List Attached

Reporter: Michelle Fehribach, Huddle AK

Location: Virtual via Microsoft Teams & In-Person in the Mat-Su Borough Assembly Chambers

Project: Mat-Su Borough MS4 Coordination

Subject: Stakeholder Working Group Meeting #1

Summary

The Stakeholder Working Group Meeting #1 for MS4 and Stormwater Management in the Matanuska Susitna Borough (MSB) met on Tuesday, May 31, 2022, from 11:30am-1pm, in a hybrid format – some attendees were in-person at the MSB DSJ Building and others attended virtually using Microsoft Teams. The purpose of this meeting was to convene relevant stakeholders from governmental agencies and other partners who will likely be required to obtain an MS4 permit from the Alaska Department of Environmental Conservation (ADEC) if the MSB is classified as an Urbanized Area by the US Census Bureau, sometime later in 2022.

Stakeholder working group members met to learn about what the MS4 permit is, the components of a stormwater management plan, the MS4 application process, and to begin discussions about how the anticipated MS4 permit applicants can work separately or jointly when applying for the permit.

Please see the attached presentation, agenda, and handout for details about the information covered.

Questions, Comments, and Answers

Attendees were able to ask questions verbally or using the chat function, if they attended virtually.

Below is a table of the questions and comments from attendees during the meeting.

| Agency Representative | Question/Comment | Answer |
|-----------------------------|---|--|
| John Moosey, City of Palmer | Does the MS4 permit cover the entire MSB or are the cities responsible for their own MS4 permit? | Ultimately, that will be determined by the permittees and it part of what we will be answering with this process. It could be each entity has their own, it could be joint, or some combination. |
| Joshua James, DOT&PF | Can the presentation be made available after the meeting is over? | Yes, absolutely. |
| Jesse Summer, MSB Assembly | Does washing a car a residential driveway considered illicit discharge? Or what about watering your lawn? | Residential car washing is okay and is considered allowable stormwater discharge. Commercial car washes or group car washes that generate larger volumes of wash water are illicit discharges. Refer to 40 CFR 122 |

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| | | for the limitation and narrative criteria. |
| Renee Goentzel, DOT&PF | Can you talk about what Low Impact Development (LID) is? | It's often discussed in tandem with green infrastructure and it's developing in a way that the stormwater impact to the receiving water is as low as you can make it. For example, designing so that water running off of asphalt runs into a lawn before entering the stormwater system instead of running straight from the asphalt into the system. |
| David Lundin, HDL Engineering | Did you say Stormwater Pollution Prevention Plan (SWPPP) enforcement would become local? | Yes, enforcement becomes local and usually requires a local ordinance. MSB may already have an ordinance that allows for enforcement, or it may be stipulated in the Subdivision Construction Manual. |
| Jesse Summer, MSB Assembly | If we have an area that is fully infiltrating stormwater, will it be required to connect to a MS4 system? | No, the MS4 permit will typically encourage onsite management and infiltration of stormwater. |
| Jake Ciufu, DOT&PF | What are the criteria to be considered an injection well? | An underground injection well depends on the dimension of the facility itself. If it's narrow on top and deep, it will likely be considered an injection well. If it's wider and shallower infiltration, it's likely not considered an injection well. |
| Theodore Eischeid, MSB Planning Department | What's the cost range for implementing and then maintaining an MS4 permit for an entity like the MSB? | That depends on what the permittees decide to do and how/if they want to collaborate. There are a variety of ways to implement the minimum controls and costs will vary, depending on what you choose to do. There are likely some cost savings if all the permittees work together in some capacity. We don't have a comprehensive map of the existing stormwater system either at the moment, which will impact costs as well. |

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| <p>David Lundin, HDL Engineering</p> | <p>Sounds like a lot of new local requirements, both for developers and for MSB/cities, that will cost someone. Is there funding from the federal government that comes with this regulation?</p> | <p>There is not funding unless you apply for local grants, which is not very common. MSB is doing a lot of work on this and has some of the building blocks already in place. This process will discuss where the gaps are and how we will close them as well as how we want to organize, as permittees.</p> |
| <p>Joshua James, DOT&PF</p> | <p>Considering management of the permit, what direction has been discussed to date? The Municipality of Anchorage (MOA)/Department of Transportation and Public Facilities (DOT&PF) style or the Fairbanks/North Pole/DOT&PF style? Could you highlight the differences?</p> | <p>Discussion around how things will be organized hasn't really happened yet but will happen as part of this process. MSB wants to have conversations with all the permittees to hear their feedback and preferences. Upcoming meetings will explore the structure more in-depth.</p> |
| <p>Adam Bradway, MSB Planning</p> | <p>What's the best way of enforcing illicit discharge violations?</p> | <p>Usually, a local ordinance stipulates what you need to do and the consequences if you don't. For the MSB, the MSB Planning Department is the enforcing agency, not law enforcement. Usually there are warnings to correct the violation, and then a fine if it isn't corrected. The intent is always to correct the violation.</p> |
| <p>Danielle Bischoff, City of Wasilla Public Works</p> | <p>When we as an agency have violations within our boundary, what are the consequences for us if we don't uphold the MS4?</p> | <p>Often the procedure is that you'll be given a report identifying potential items that are not in compliance with the permit. Then there will be a window of time to correct the issues; if they're not corrected, then likely there's a fine. These terms are written into the MS4 permit through the application process.</p> |
| <p>Danielle Bischoff, City of Wasilla Public Works</p> | <p>Do developers need to go back to previous projects and update to be in compliance with the MS4 permit, once it's active? Or does the city bear the costs of updating that?</p> | <p>The MS4 will apply to new development or new redevelopment that starts after the MS4 is in place and active. Previous development projects will be grandfathered in; however, if a new project occurs in that area, the new project will</p> |

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| | | be required to bring the site into compliance. |
| Shannon Bodolay, MSB Assistant City Attorney | Do the MS4 requirements start as soon as the Census Bureau changes the designation to Urbanized Area? | No. It starts after the MS4 permit is set up, which takes about a year. Specific requirements will start after local ordinances are developed and put in place, sometime within 5 years from the start of the first permit. |
| Mike Campfield, MSB Public Works | Is MSB more similar to Fairbanks or Anchorage, in terms of potential MS4 requirements? | Fairbanks is more of an accurate comparison. Anchorage has had these requirements for a lot longer than the rest of Alaska and the Anchorage requirements are more stringent than what will likely be required for the MSB. |
| David Lundin, HDL Engineering | Is there an overlap of this process with the transportation Metropolitan Planning Organization (MPO)? | The process for the MS4 permit is totally separate. However, the trigger is the same for both – the urban designation. There are decisions to be made about what the MPO boundary, MS4 boundary, and core area boundary will all be – they may be the same or they may be different. The minimum MS4 boundary will be set by the Census Bureau based on the census. The MSB could decide to make it larger but not smaller. It might make sense to have the MPO, MS4, core boundaries all be the same, but that decision has yet to be made. |
| Jesse Summer, MSB Assembly | Is current illicit discharge grandfathered in as allowable in the MS4 permit? | No, grandfathering in is specific to development (control #5). Operational illicit discharge is not grandfathered in. |
| Anne Dollard, MSB Public Works Department | MSB Public Works is blended with GIS. We use an operations program already called Cartegraph, that has been used for SM4 inspections, reporting etc. We will discuss this more fully at the appropriate time. | <i>Thank you for this information.</i> |
| Joshua James, DOT&PF | The MOA Code Enforcement handles MS4 permit violations because they have the authority to | If the co-permittees decide to work together, they can decide which entity is responsible for |

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| | levy fines. Does the MSB have a similar entity, and would they have the ability to enforce in the cities of Palmer and Wasilla? | enforcement. The MSB does have a code enforcement authority with the authority to levy fines. |
| Jake Ciufu, DOT&PF | Once the urban designation is announced, does the ADEC provide a draft or starting point for the MS4 permit? | Yes, there are three drafts that the MS4 permit will go through before it's finalized. A preliminary draft is developed based on the MS4 application and the stormwater management plan, which then goes for a 10-day permittee review. That is revised and then released for a 30-day public comment period. Public comments are addressed and a response to comments document is created, and then the proposed final draft is developed, and permittees are given a 5-day comment review. After that, the final permit is developed. |
| Mike Campfield, MSB Public Works | Is it typical for agencies to decide before applying for the MS4 permit how/if they're going to complete a joint permit or do it separately? | Yes, that will need to be decided before the application is submitted. |
| Rick Antonio, MSB Planning | Does Fairbanks or the Fairbanks North Star Borough (FNSB) each have their own MS4 permit? Or is it joint? | The FNSB has a stand-alone permit and the City of Fairbanks, City of North Pole, UAF, and DOT&PF share a permit. |
| Joshua James, DOT&PF | If we are discussing permit management next meeting, will you invite the permit managers from the FNSB or MOA to discuss? | Yes, we are planning to invite people from those agencies. |
| Bruce Wright, Knik Tribe | Great presentation. The Knik Tribe looks forward working on the MS4 permit and working with the Stormwater Working Group. | <i>Thank you for this feedback.</i> |

Attachments

1. Attendance List
2. Presentation

MS₄ & STORMWATER MANAGEMENT IN THE MAT-SU BOROUGH

Stakeholder Meeting #1 – Project Introduction and Overview

Hosted by: The Mat-Su Borough Planning Department

With Assistance From: AWR Engineering, LLC

May 31, 2022

Welcome and Introductions

- **MSB Project Management Team**

- Kim Sollien, Planning Services Manager
- Rick Antonio, Stormwater Program Coordinator
- Maija DiSalvo, Planning Administrator

- **Consultant Team**

- Janie Dusel, PE, MS₄ Specialist | AWR Engineering
- Holly Spoth-Torres, PLA, Public Engagement Specialist | Huddle AK

- **Stakeholder Introductions**

Introduction to the Project

- **Background**

- MSB 2020 Census
- “Urbanized Area” Classification is expected for the Core Area (Palmer & Wasilla)
- Urbanized Area is based on pollution density or number of people in a given area
- US Census Bureau will determine the extents of the Urbanized Area



Neighborhood in Palmer

Introduction to the Project



Expected Urbanized Area

Introduction to the Project

- **Background**

- Urbanized Area triggers the need for a Municipal Separate Storm Sewer System (MS₄) Permit
- Issued by the Alaska Department of Environmental Conservation (ADEC).
- ADEC Approval needed to discharge stormwater water into “Waters of the US”
 - E.g. Creeks, rivers, lakes etc.
- Will apply to operators of stormwater collection systems (MS₄s) throughout the Urbanized Area.



Lake Lucile in Wasilla

Introduction to the Project

- **Purpose and Need**

- Learn about the MS₄ process and permit requirements
- Prepare for the upcoming MS₄ permit

- **Role of this Stakeholder Group**

- Provide input for how impacted agencies want to work together to structure the permit

- **Planned Process**

- Today's Meeting – Introduction to MS₄
- Future Meetings: Six monthly stakeholder meetings
 - Core stakeholders – MSB and Cities
 - Additional attendance based on topic - we value your time!
 - Future meetings will be remote only via Teams



Cottonwood Creek near Wasilla

Introduction to the Project

- **Expected MS4 Timeline**

| Milestone | Approx. Date Range |
|---|-------------------------------------|
| Urbanized Area Designation | June – December 2022 |
| DEC Requests MSB and Partners to Apply for MS4 Permit | 30 Days after UA Designation |
| MSB and Partners - MS4 Application(s) | 6 months from DEC Letter |
| Draft Permits and Review Processes | 5 to 6 months process |
| DEC Issues Draft Permit(s) for Permittee Review/Comment | 2 months after application |
| Permittee Review/Comment | 10 Days |
| Updated Draft Permit(s) and Public Comment | 30 to 60 days |
| Final Draft Permit Based on Public Comments | 30 days |
| Permittee Final Review | 5 days |
| Final Permit Issued | 5 to 6 months after application |
| Permit Activities & Reporting Requirements <i>(Will vary based on detailed permit schedule)</i> | Annually for 5 Years |

Technical Discussion

- What is an MS₄?
 - Municipal Separate Storm Sewer System (MS₄)
 - Municipal – local government entity
 - Separate – the collection system is separate from sanitary sewer
 - Storm Sewer System – collects excess stormwater
 - Collection of pipes and ditches that collect excess stormwater and convey it to creeks, rivers, etc.
- What is an MS₄ Permit?
 - Authorization from ADEC to discharge stormwater to waters of the US
- Why does the MSB need a permit for stormwater?

Technical Discussion

- Why is it needed?
 - Community benefit
 - Urban Stormwater is considered a pollutant
 - Stormwater picks up pollutants as it runs across (primarily) impervious surfaces.
 - Without proper handling, pollutants travel directly into our local waters.



Technical Discussion



Image source: Low Impact Development a design guide for urban areas

Technical Discussion



flash flooding

10



water contamination

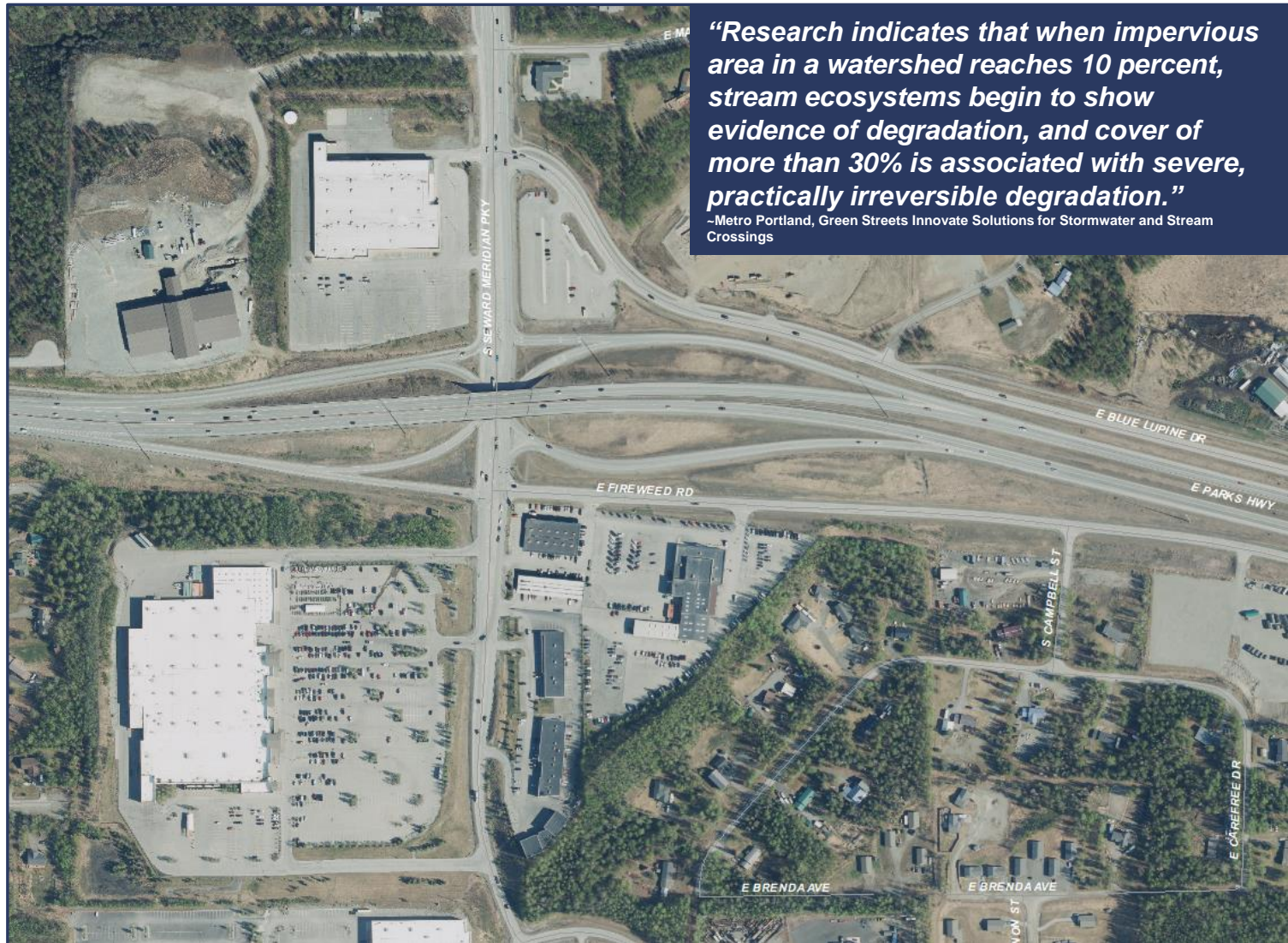


It's not one large impact. It's the accumulation of a lot of small impacts.

stream scouring

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Technical Discussion



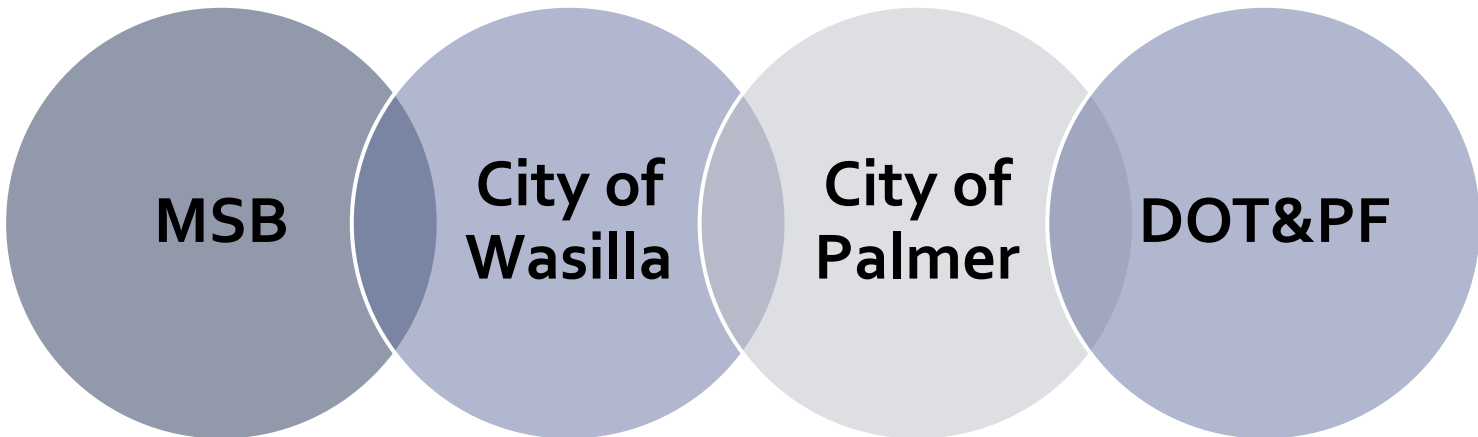
Urban Sprawl - Intersection of Parks Hwy and Seward Meridian Parkway

Technical Discussion

| Pollutant | Example Causes/Sources | Effects |
|--|--|---|
| Sedimentation | Erosion from construction sites and exposed soils, street runoff, streambank runoff | Stream turbidity, habitat changes, recreation & aesthetic loss, contaminant transport, filling in lakes and ditches, clogs storm drains and pipes |
| Reduced Oxygen in Streams | Decomposition of organic matter | Fish kills, stream life can weaken and die, release of pollutants from deposited sediments |
| Organic Matter | Leaves, grass clippings, pet waste, sanitary sewer leakage, septic tank leaching | Odors, fish kills, dissolved oxygen depletion |
| Nutrient Enrichment—Nitrate, Nitrite, Ammonia, Organic Nitrogen, Phosphate, Total Phosphorus | Animal wastes, sewer overflows and leaks, septic tank seepage, detergents, wash off-of fertilizers and vegetative litter, dry and wet fallout of materials in the atmosphere | Algae blooms, weed growth, recreation/aesthetic loss, ammonia and nitrate toxicity, dissolved oxygen depletion, contaminated groundwater |
| Microbial Contamination—Total and Fecal Coliforms, Fecal Streptococci Viruses, E.Coli, | Sewer overflows, septic tanks, unmanaged pet waste, urban wildlife | Ear/intestinal infections, recreation/aesthetic loss, increase the cost of treating drinking water |
| Hydrocarbons—Oils, Greases, Gasoline | Road and parking lot runoff, spills at fueling stations, restaurant grease traps, improper disposal of motor oil | Cancers, tumors, and mutations in fish, drinking water impacts, recreation and aesthetic loss |
| Other Toxic Materials—Heavy Metals (cadmium, copper, lead, zinc), Pesticides/Herbicides | Vehicles, machinery, urban surfaces, landfills, hazardous waste sites, industrial and commercial wastes | Human & aquatic toxicity, drinking water impacts, bioaccumulation in the food chain |
| Trash and Debris | Runoff from urban areas | Recreation/aesthetic loss, hazard to wildlife |

Technical Discussion

- Who are the Responsible Parties?
 - Any entity that operates an MS₄ system inside the Urbanized Area
 - Expected to include:



Technical Discussion

- **How do the responsible parties work together?**
- **How will permit activities/management be funded?**
 - These are key questions to be answered as part of this project.
 - Responsible parties may want to learn more about MS4 requirements to help answer these questions.
- A few permit structure options
 - Combined permits (one permit for all responsible parties)
 - Separate permits (each entity has their own permit)
 - Some combined/some separate

Technical Discussion

- How do the responsible parties work together?
- Examples:

| Alaska Region | Permit Structure |
|------------------------------------|---|
| Anchorage (Entire Municipality) | <u>Shared Permit</u> Municipality of Anchorage DOT&PF <u>Standalone Permit</u> Port of Alaska |
| Fairbanks (Urbanized Area only) | <u>Standalone Permit:</u> The Fairbanks North Star Borough <u>Shared Permit:</u> City of Fairbanks City of North Pole University of Alaska Fairbanks DOT&PF |
| Military Bases | Fort Wainwright (Standalone) JBER (Standalone) |

Technical Discussion

- How do the responsible parties work together?
- Pros and Cons of Each
 - To understand pros and cons, we need to first understand what the MS₄ permit(s) will likely require.
 - Will dive into this deeper in a future meeting



Technical Discussion

- What other stakeholders are involved?
 - Permitting Agency
 - ADEC – Division of Water
 - Adjacent Agencies
 - City of Houston
 - Chickaloon Village Tribal Council
 - Knik Tribal Council
 - Boards and Commissions
 - Planning Commission
 - Platting Board
 - Assembly
 - Community
 - Developers
 - Engineers
 - Planners



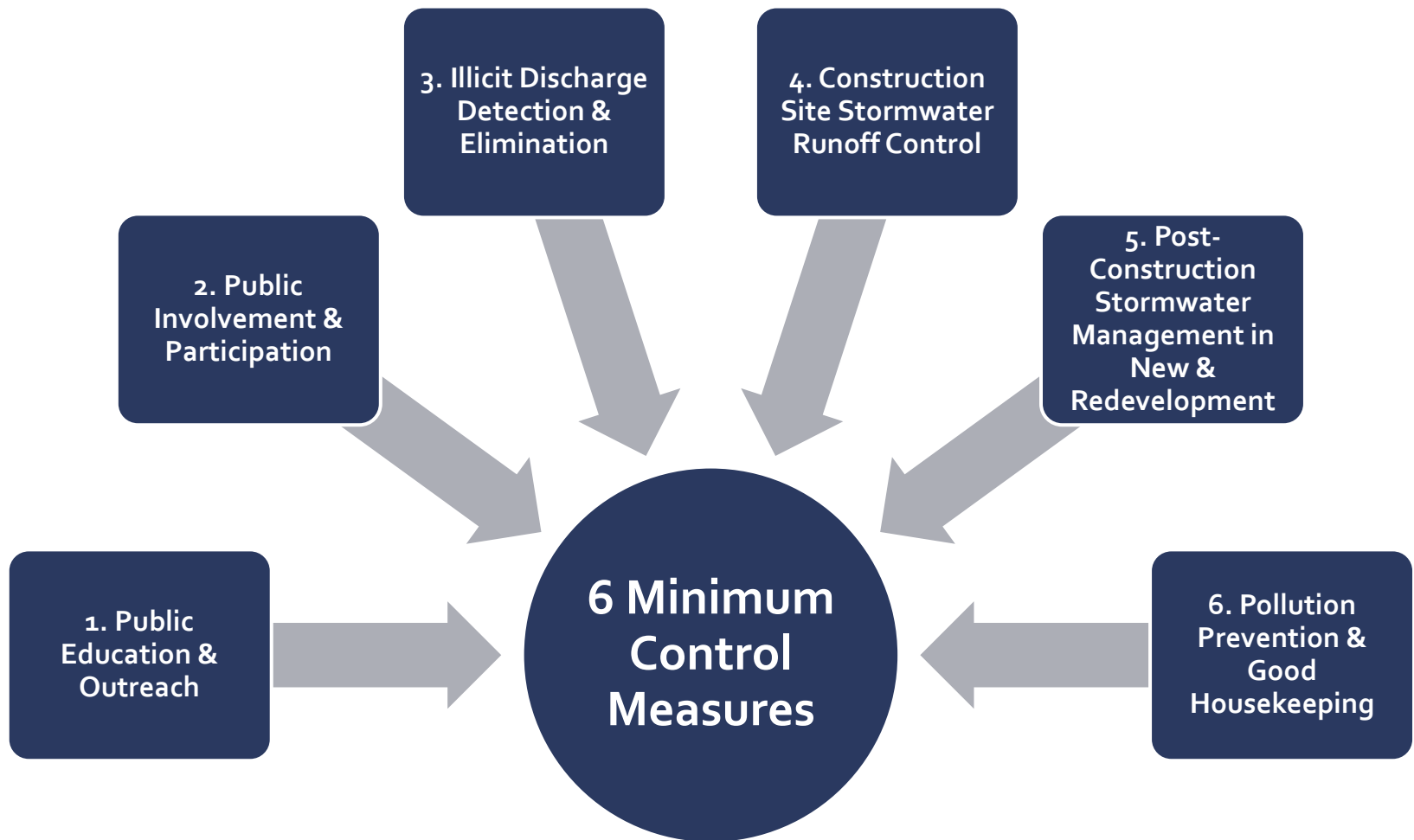
Stormwater treatment pond in Wasilla

Technical Discussion

- What will the MS₄ permit(s) require?
 - Development and Implementation of a **Stormwater Management Program (SWMP)** to address six Minimum Control Measures (MCM)
 - Development of a Map of the MS₄ system(s)
 - Pipes, ditches, outfalls, etc.
 - Monitoring and Reporting
 - Tracking program effectiveness
 - Annual reports documenting activities
 - Record keeping for audits from ADEC and/or EPA

Technical Discussion

- What will the MS₄ permit(s) require?



Technical Discussion

- What will the MS₄ permit(s) require?

- Six Minimum Control Measures

1. Public Education and Outreach

- Sharing with the community why stormwater management is important
- Helping them understand what stormwater is, where it goes, and why it matters
- MANY ways to do this & MANY examples
 - Fliers
 - Websites
 - Social Media
 - Public meetings/presentations
 - Public artwork
 - Signs and boards
 - So many others!



*Inlet Artwork in Fairbanks. Image source:
<https://www.fairbanksalaska.us/engineering/page/storm-water-management>*



Annual Public Meeting on MS₄ Activities in Anchorage

Technical Discussion

- What will the MS₄ permit(s) require?

- Six Minimum Control Measures

2. Public Involvement and Participation

- Getting the public involved in the MS₄ program
- MANY way to do this
 - Host clean-up days
 - Solicit input on MS₄ activities
 - Volunteer monitoring
 - Stormwater Advisory Committees
 - Assist with Public Education
 - Campaigns like “scoop the poop”
 - So many others!



Fairbanks Stream Cleanup Day. Photo from <https://www.fairbanksalaska.us/engineering/page/community-involvement-engineering-department>



Anchorage Creek Cleanup Day. Photo from <https://www.anchoragecreeks.org/projecto-3>

Technical Discussion

- What will the MS₄ permit(s) require?
 - Six Minimum Control Measures

3. Illicit Discharge Detection and Elimination

- Illicit Discharge = a non-stormwater discharge that isn't allowed per the permit
- Examples of Illicit Discharge
 - Sewage connections, car wash fluids, fish processing fluids, spent grain wash from breweries, etc.
- Identify them –
 - Dry weather screening, options for public reporting, etc.
- Eliminate them –
 - Requires a local ordinance with enforceable consequences



*Brewhouse in Anchorage
Wet, spent grains flowing to the storm drain*



*RV Rental place in Anchorage
washing outside of the garage*

Technical Discussion

- What will the MS₄ permit(s) require?
 - Six Minimum Control Measures

4. Construction Site Stormwater Runoff Control

- Controlling pollutants resulting from construction sites
- Sediment, fluids, etc.
- Program is well laid out in the AK Construction General Permit
- Must be locally enforced
- Requires a local ordinance with enforceable consequences
- Plan review requirement
- Training requirement
- Public reporting mechanism
- MANY great examples both in AK and Nationwide



Chester Creek in Anchorage

Technical Discussion

- What will the MS₄ permit(s) require?
 - Six Minimum Control Measures
- 5. **Post-Construction Stormwater Management in New and Redevelopment**
 - Minimizing pollutant discharge from developed areas
 - Pollutant removal practices for runoff from impervious surfaces
 - Green Infrastructure
 - Must be locally enforced
 - Requires a local ordinance with enforceable consequences
 - May require provisions for longevity even if property changes hands
 - Plan review requirement
 - Training requirement
 - MANY great examples both in AK and Nationwide



*Top: Taku Lake Rain Garden in Anchorage
Bottom: Stormwater pond in a parking lot in Anchorage.*

Technical Discussion

- What will the MS₄ permit(s) require?
- Six Minimum Control Measures

6. Pollution Prevention/Good House Keeping Measures for Municipal Operations

- Minimizing pollutant discharge from Municipal activities
- E.g. handling of snow, road salts/deicers, pesticides/fertilizers, vehicular fluids, roadside trash, organic debris, etc.
- Demonstrate safe handling
- Demonstrate minimizing opportunity for pollutant discharge to waterways
- Training for Municipal employees



Waste storage near inlets creating the opportunity for pollution

Group Questions and Discussion



Next Meeting/Closing

- Meeting Schedule

| Item | Date |
|------------------------|--|
| Stakeholder Meeting #1 | Today |
| Stakeholder Meeting #2 | June 27 th @ 11:30 am via Teams |
| Stakeholder Meeting #3 | July 25 th @11:30 am via Teams |
| Stakeholder Meeting #4 | Aug 29 th @ 11:30 am via Teams |
| Stakeholder Meeting #5 | Sept 26 th @ 11:30 am via Teams |
| Stakeholder Meeting #6 | Oct 31 st @ 11:30 am via Teams |

Next Meeting/Closing

- Next Meeting is June 27th – All Remote via Teams
- MSB will send invitations
- Planned Topic:
 - Breaking down permit structure options and permittee roles
 - Discussing responsible parties and working together
- Core Group for Attendance
 - MSB
 - City of Wasilla
 - City of Palmer
 - ADOT&PF
 - ADEC
 - Subject Matter Experts TBD (e.g. Law, FNSB representatives, etc.)

