

MS4 and Stormwater Management in the Mat-Su Borough

Stakeholder Meeting #4 Summary

Date: August 29, 2022; 11:30am-1pm

Attendees: Attendance List Attached

Reporter: Michelle Fehribach, Huddle AK

Location: Virtual via Microsoft Teams

Project: Mat-Su Borough MS4 Coordination

Subject: Stakeholder Meeting #4 Summary

Summary

The Stakeholder Meeting #4 for MS4 and Stormwater Management in the Matanuska-Susitna Borough (MSB) met virtually on Monday, August 29, 2022, from 11:30am-1pm using Microsoft Teams. The purpose of this meeting was to convene 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 members met to review the purpose and need of the MS4 permit, to learn about existing resources and permit building blocks, and to discuss other sources of information that may be useful during the MS4 permitting phase.

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

Overview of the Meeting Presentation

1. **Welcome + Introductions**
2. **Quick Review of the Project Purpose**
 - a. Background
 - i. 2020 Census population count triggers an Urbanized Area designation
 - ii. US Census Bureau determines the extent of the Urbanized Area
 - iii. Triggers MS4 permit from ADEC
 1. Approval to discharge stormwater into “waters of the US”
 - b. Responsible Parties
 - i. MSB, City of Wasilla, City of Palmer, DOT&PF
 - c. Purpose and need
 - i. Learn about MS4 process and requirements
 - d. Role of this stakeholder group
 - i. Provide input for how impacted agencies want to work together to structure the permit
 - e. Updated Stakeholder Meetings Plan

- i. September 26: Management Details
- ii. October 31: Wrap Up

3. Technical Discussion

a. Existing Building Blocks

i. *Minimum Control Measure 3 – Illicit Discharge Detection and Elimination*

1. An ordinance will need to be created to prohibit illicit discharge and identify what happens if there are violations. DOT&PF doesn't create ordinances – they operate with State Statutes so today's discussion on this item will focus on the MSB, the City of Wasilla, and the City of Palmer.
2. Ordinance must effectively prohibit non-storm water discharges into their MS4s. Permittees must implement appropriate enforcement procedures and actions.

3. Existing Ordinances

- a. Permittees will eventually be required to develop ordinance(s) using language identified specifically in the permit, however, below is a summary document of existing stormwater focused codes and ordinances that reference illicit discharge:
 - i. Highlighted in blue: City of Palmer
 - ii. Highlighted in tan: City of Wasilla
 - iii. Highlighted in green: MSB
 - iv. MSB non-code subdivision construction manual
- b. EXAMPLE: Fairbanks has one code document (Ordinance No. 6038) that compiles all MS4 required ordinances into one place.

4. Existing Multi-Sector General Permit Data

- a. Keep an inventory of facility name and address, nature of business or activity, and receiving water body
- b. Most of this is already compiled by ADEC:
<https://dec.alaska.gov/Applications/Water/EDMS/nsite/map/health>
 - i. Can filter for industrial storm water and see the permits and download the documents, if desired

5. Existing Mapping Resources

- a. Permittees will be required to have a comprehensive MS4 map of how stormwater gets from where it falls into receiving systems and then into waters of the US:
 - i. EXAMPLE map from Fairbanks:
<https://fnsb.maps.arcgis.com/apps/webappviewer/index.html?id=66d32548f99440b1b864d6e47d80b78e>
- b. Summary of Existing Stormwater Mapping Resources (see attachments)
 - i. Cottonwood Creek Study, Vine Creek Study, and Wasilla Creek Study in GIS on MSB website:
<https://stormwater-msb.hub.arcgis.com/pages/studies>

- ii. Lake Lucile: Lake Management Plan exists in GIS and has attributes, mostly storm drain focused: <https://www.cityofwasilla.gov/home/showdocument?id=23072>
 - iii. Fish Culvert Mapping – Alaska Department of Fish & Game has culvert mapping for anadromous streams in the MSB
 - iv. National Hydraulic Dataset Plus & Environment Water Bodies: NHD mapped creeks and rivers in GIS. FEMA Flood Zones mapping available in GIS as well. MSB wetland layer shows areas of mapped wetlands or likely wetlands.
 - v. ADEC Impaired Water body map: view or download. All waterbodies in the state listed as impaired and what types of impairments they have.
 - vi. DOT&PF has a spatial layer for all its bridges: can be helpful to show connectivity
 - vii. DOT&PF has an as-built database. As-builts are not spatial so you would need to georeference into GIS and manually create layers for relevant info.
 - viii. As-built drawings for the permittees: likely that each has as-builts that are not public facing. Palmer has the COP stormwater network mapped, but it's not public facing.
 - c. Likely there will be field data collection required to complete the mapping; however, it is good to understand what is in place first, and what can be georeferenced from existing “desk” sources.
 - i. Permit requires the map to be kept up to date
 - d. Dry weather screening, training, and annual reporting
 - i. Not a lot of building blocks here because the permittees are not doing this currently
- ii. *Minimum Control Measure 4 – Construction Site Runoff Control*
1. Have to implement the Construction General Permit (CGP) to manage stormwater pollution during construction activities
 2. Moves enforcement of this from state level to local level
 3. Permittees will be required to create an ordinance that includes sanctions to ensure compliance
 4. Existing Ordinances
 - a. City of Palmer and MSB have two relevant codes (listed in the summary document)
 - b. What happens with non-compliance? Existing codes talk about requirements but not specifically requiring compliance with CGP. Need to develop language and incorporate into a new ordinance.
 5. Existing SWPPP BMP Resources
 - a. Alaska Stormwater Guide:

<https://dec.alaska.gov/water/wastewater/stormwater/guidance/>

- i. Includes both temporary and permanent control stormwater practices. Temporary controls is what we are talking about with construction related stormwater.
- ii. The guide has types of BMPs that contractors can utilize.
- iii. Applicable statewide
- b. Anchorage Stormwater Manual, Volume 2: https://www.muni.org/Departments/project_management/Documents/ASM_Volume2_Final_December2017.pdf
- c. CalTrans Construction Site BMP Manual: <https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/csbmp-may-2017-final.pdf>
 - i. This can conflict with local requirements but can be used to create your own BMP guidance
 - ii. User-friendly and includes some of the same BMPS of the Alaska manual

6. Plan Review Processes

- a. MS4 permit will require permittees to review and implement procedures for reviewing all site plans for potential water quality impacts, including erosion and sediment control, control of other wastes, and any other impacts
- b. Responsibility is not at local level currently and did not find existing requirements for SWPPP plan reviews or inspections
- c. SWPPP site inspections, training, and annual reporting – not a local requirement right now so permittees are not currently doing this

iii. *Minimum Control Measure 5 – Post-Construction Stormwater Management in New and Re-development*

1. Requires stormwater treatment incentives and stormwater management on a permanent basis

2. Existing Ordinances

- a. None of the permittees have ordinances that address post-construction stormwater management, and the permit will likely be relatively open-ended on how the permittees do this
- b. See pages 2-4 of Code Summary document. This does not list all ordinances but includes the most applicable

3. Plan Review Processes

- a. MS4 permit will require implementation and enforcement of a program to address post-construction storm water runoff from new development and redevelopment projects that disturb one acre or more
- b. Permittees have various types/levels of existing reviews for

development depending on the type of development and associated permit application

4. Existing Green Infrastructure Incentives/Requirements

- a. Implement a strategy that provides incentives for the increased use of Green Infrastructure/LID techniques or practices in private and public sector development projects
- b. Building block: MSB Subdivision Construction Manual has water quality treatment requirement. This manual is currently only applicable to subdivisions located outside of the Cities.

5. Existing Design Guidance Resources

- a. Local resources on page 18 of the presentation
- b. Alaska Stormwater Guide does have a permanent controls section that is limited but applicable. The guide is from 2011 but has good basics organized by BMP type.

iv. Pollution Prevention and Good Housekeeping

- 1. No building blocks found
- 2. Refers to internal municipal operations and how internal operations are minimizing pollution associated with construction and/or fleet maintenance

v. Monitoring Program Plan

- 1. No building blocks found

Group questions and discussion

Attendees were able to ask questions or provide comments verbally or using the chat function. Below is a table of the questions and comments from attendees during the meeting. Answers provided by attendees are noted with their name and agency in parentheses and the discussion is grouped by topic.

Agency Representative	Question/Comment	Answer
Minimum Control Measure #3		
Peggy Horton, MSB Planning	MSB has a non-code Subdivision Construction Manual. It has content related to roads in subdivision and might be applicable.	We will check to see if requirements related to illicit discharge are included in this manual.
Alex Strawn, MSB Planning	MSB has many sections of code that may need to require stormwater review. Flood damage prevention might rise to the level of this list so there may need to be some changes in 17.29.	Thank you for providing that feedback.
Adam Bradway, MSB Planning	MSB Stormwater Management Plan is part of code in Title 15. It has more broad policy statements, but any new ordinances should align with this management plan.	We did find that document but nothing specific in

		terms of direction about illicit discharge.
Mike Campfield, MSB Public Works	On the GIS map for the creek studies, the GIS department developed attributes for the data. Our work was modeled on how Anchorage was doing mapping at the time and trying to be consistent across Southcentral.	Thank you for providing that feedback.
Clint Adler, DOT&PF	DOT&PF has a Right-Of-Way (ROW) research website that might be helpful. Website: https://gis.dot.soa.alaska.gov/portal/apps/sites/#/home	Thank you for providing that feedback.
Anne Dollard, MSB GIS	We use Cartegraph, which is an operations and road maintenance asset management system. We have been mapping culverts as they are fixed. We can find a way to share that info.	Thank you for providing that feedback.
Kenneth Kleewein, MSB GIS	Both cities have GIS data, but many resources are static pdfs. If there is CAD data, it isn't public. Likely each entity has the data but we need to start sharing it. Even across the studies you shared, each of those have different fields or different names that are used. We need to have a standardization of how we are managing data that is consistent across the permittees.	It is helpful to have a standard so that when you send out people to gather new data, the same information is being collected. The project team is planning focus groups specific to mapping, intergovernmental, and code. We'll be inviting people to participate in those groups to talk specifically about those topics and create a standard. (Rick Antonio, MSB Planning)
Mike Campfield, MSB Public Works	We developed a manual with DOWL that was a standardization for the stormwater data. The two studies DOWL did followed that manual. The Vine Creek Study may not have followed it because it was done by a different firm. We can share that standardization manual with the project team. The cities of Wasilla and Palmer have quite a bit of mapping done, so most of the existing data will be theirs.	Even between those two studies there are differences in how they managed the data, even just how they named fields or attributes. We will need collaboration between all the

		entities. (Kenneth, Klewein, MSB GIS)
Minimum Control Measure #4		
Adam Bradway, MSB Planning	Title 17 of MSB code, there are quite a few conditional use requirements for runoff and/or pollution. Earth materials extraction, waste incinerators, and a few other portions of Title 17 have language about runoff.	We have reviewed however it is unclear if these codes are helpful building blocks because they're very specific. We will take a deeper look into this.
Renee Goentzel, DOT&PF	Anchorage has good language for this type of ordinance too.	Thank you for providing that feedback.
Renee Goentzel, DOT&PF	DOT&PF has an extensive SWPPP review process. We review SWPPPs a lot and require them even for projects under 1 acre. DOT&PF has a construction stormwater specialist that reviews the SWPPP and independent reviews of SWPPPs and inspections are done by Stantec.	Thank you for providing that feedback.
Alex Strawn, MSB Planning	MSB may look at SWPPPs. The core area conditional use permit (17.61) states that any use that contaminates water runoff or other discharge meets that permit threshold. For our multi-family development permits, we may or may not receive SWPPPs. We don't require a full SWPPP, but it may be required by the state, and we review it.	Thank you for providing that feedback.
Renee Goentzel, DOT&PF	DOT&PF started to use SWPPPTrack, which is a program to review and submit all SWPPP paperwork. It works really well.	Thank you for providing that feedback.
Mike Campfield, MSB Public Works	There are two types of projects: public and private. The MSB does some review of SWPPPs for its own public projects. MSB doesn't review SWPPPs for private development - we just make sure they have a SWPPP - we don't review it. The Subdivision Construction Manual doesn't reference SWPPPs.	Thank you for providing that feedback.
Jamie Taylor, MSB Public Works	For subdivisions, MSB doesn't review developer SWPPPs. I just make sure they have a SWPPP and are following NOI when needed.	Thank you for providing that feedback.
Joshua James, DOT&PF	Central Region is using SWPPPTrack as a pilot program. Stantec does the plan review process because DOT&PF doesn't have capacity, and most of it is focused on meeting CGP requirements.	Thank you for providing that feedback.
Minimum Control Measure #5		
Peggy Horton, MSB Planning	MSB only has certain types of permits, so that is what gets reviewed. If there is a project outside the core area	That's our understanding of it.

	that has stormwater impacts, would we need another type of review? Need another review, and not another type of permit?	Although if there isn't an incentive from the development community, why would they submit for a plan review without a required permit?
Adam Bradway, MSB Planning	The permits that MSB does have require some sort of review but right now a lot of development doesn't need a permit. MSB Assembly has asked the Planning Department to bring back a mandatory land use permit that applies to any building over 480 square feet that is a checklist to make sure it complies with code. The Assembly will discuss bringing that permit back soon, but it would need to be modified to include impacts to the MS4. The intent is to prevent developers not complying with code.	Thank you for providing that feedback.
Mike Campfield, MSB Public Works	MSB does not have anything outside the subdivision process that requires an engineering review or any kind of storm drain review. There's a requirement in the Subdivision Construction Manual but it occurs late in the process and developers are sometimes building before the review is done and this doesn't apply to anyone outside of the subdivision requirement. Someone might own a piece of land and 20 years later decide to develop it, and right now they are not required to do a permit or review on those types of developments. That will need to be addressed.	Thank you for providing that feedback.
Rick Antonio, MSB Planning	Can you talk about what Anchorage has in place for a storm water permit?	Anchorage has a permit requirement for any type of development, on a much smaller site scale than what the permittees would need to do. The MSB, City of Palmer and City of Wasilla acreage requirement is greater than or equal to one acre. Fairbanks has code that says what someone needs to do if they fall into different size thresholds. Some

		smaller projects likely wouldn't meet the requirement, but larger projects would likely trigger it.
Mike Campfield, MSB Planning	Palmer & Wasilla have site development permits. We can use those as reference.	Thank you for providing that feedback.
Alex Strawn, MSB Planning	The Subdivision Construction Manual doesn't apply within the cities. Only the subdivision code applies in the cities.	Thank you for providing that feedback.
Jamie Taylor, MSB Public Works	The City of Houston uses the borough's Subdivision Construction Manual.	Thank you for providing that feedback.
Mike Campfield, MSB Public Works	Ten years ago, MSB did start drafting a Design Criteria Manual. We got pretty far on the drainage chapter (we called it Chapter 2), and there were a lot of developers and borough staff involved. It was never adopted. I can share that document if it's helpful. The idea is to get it formally adopted into code for MSB facilities. School sites, libraries, parks, roads, and other facilities will need to have some sort of guidance, and we're actively working on that.	Thank you for providing that feedback.
Rick Antonio, MSB Planning	MSB used to have a rain garden program that might provide the green infrastructure incentive. Is MSB able to bring it back for larger development?	Fairbanks and Anchorage have done a rain garden incentive program on different scales. Usually, the permittees have to fund the rain garden or fund a portion of it. MSB may need additional incentives.
General Discussion		
Clint Adler, DOT&PF	DOT&PF does have a research library with stormwater material available. The library is available on the DOT&PF research website. Website: https://dot.alaska.gov/stwddes/research/	Thank you for providing that feedback.
Peggy Horton, MSB Planning	When a subdivision comes in or a permit comes in, most of the time they're required to provide us a drainage plan. Drainage plans in code must be created by an engineer and has certain requirements. On the subdivision side and on the permit side, most of what	No. You would eventually require them to treat just a portion before it comes into the ditch,

	we receive is drainage arrows showing natural or proposed drainage and it normally goes to ditches along roads. Does this mean that eventually we will require them to not drain into the ditches? And require them to keep everything on site?	for some threshold of rainfall. That's not dictated in the permit. The Subdivision Construction Manual just requires 0.5" of rain to be treated.
Joshua James, DOT&PF	When looking at LID, essentially, there has to be some type of threshold on that. We'll need to determine what criteria are economically reasonable and applies to both public and private development.	The Fairbanks threshold is one acre of disturbance. Permittees can determine how to set that up for their permit.

Next Meeting

The next Stakeholder Meeting will be held virtually on Monday, September 26, 2022, from 11:30am-1pm using Microsoft Teams. A meeting invite will be distributed to attendees by MSB staff.

Attachments

1. Attendance List
2. Summary Document of Existing Resources
3. Presentation

**MS4 and Stormwater Management in the Mat-Su Borough
Stakeholder Meeting #4 Attendance List**

Name, Organization/Agency	Role
Rick Antonio, MSB Planning	Project Management Team
Carla Goers, MSB GIS	Stakeholder Group Member
Heidi Whipple, MSB GIS	Stakeholder Group Member
Kenneth Kleewein, MSB GIS	Stakeholder Group Member
Anne Dollard, MSB GIS	Stakeholder Group Member
Mike Campfield, MSB Public Works	Stakeholder Group Member
Gerrit Verbeek, MSB Planning	Stakeholder Group Member
Adam Bradway, MSB Planning	Stakeholder Group Member
Taunnie Boothby, MSB Planning	Stakeholder Group Member
Kelsey Anderson, MSB Planning	Stakeholder Group Member
Peggy Horton, MSB Planning	Stakeholder Group Member
Alex Strawn, MSB Planning	Stakeholder Group Member
Shannon Bodolay, MSB Attorney	Stakeholder Group Member
Fred Wagner, MSB Planning	Stakeholder Group Member
Jamie Taylor, MSB Public Works	Stakeholder Group Member
John Linnell, DOT&PF	Stakeholder Group Member
Erik Norberg, DOT&PF	Stakeholder Group Member
Burrell Nickeson, DOT&PF	Stakeholder Group Member
Joshua James, DOT&PF	Stakeholder Group Member
Renee Goentzel, DOT&PF	Stakeholder Group Member
Kirk Warren, DOT&PF	Stakeholder Group Member
Ronald Searcy, DOT&PF	Stakeholder Group Member
Clint Adler, DOT&PF	Stakeholder Group Member
Bruce Wright, Knik Tribe	Stakeholder Group Member
Bob Charles, Knik Tribe	Stakeholder Group Member
Sam Kito, ADEC	Stakeholder Group Member
Janie Dusel, AWR Engineering	Consultant
Holly Spoth-Torres, Huddle AK	Consultant
Michelle Fehribach, Huddle AK	Consultant

MS4 and Stormwater Management in the Mat-Su Borough - Meeting #4
Summary of Existing Stormwater-Focused Codes and Ordinances

Entity	Number	Title	Chapter	Section	Code	Notes	Applicability
City of Palmer	7.90.090	Airport Regulations	Aircraft Operation	Aircraft deicing	The airport does not have a dedicated deicing pad nor a stormwater collection system that allows for separation of deicing chemicals prior to discharge. Therefore: A. All aircraft deicing must take place on tenant's lease lots; and B. The tenant is responsible for securing all necessary permits, inclusive of city approval, and making all necessary improvements to prevent the discharge of deicing chemicals.	Applies to airport.	3. Illicit Discharge
City of Palmer	7.120.060	Airport Regulations	Safety and Sanitation	Hazardous substance release	A. A person who releases a hazardous substance on the airport shall immediately contain and clean up the release, using methods that ensure that contamination does not enter or spread on or in airport land or water or in an airport stormwater drainage system.	Applies to airport.	3. Illicit Discharge
City of Palmer	8.36.060	Health and Safety	Nuisances	Dumping debris prohibited – Blocking ditch prohibited	No person shall dump or deposit any clinkers, ashes, concrete or any other debris or foreign material on any street or alley or in any gutter or drainage ditch, and no person shall create any obstruction in any ditch, drain or gutter that may hinder the passage of water therein.		3. Illicit Discharge
City of Wasilla	8.16.020	Health and Safety	Animal Solid Waste Disposal	Definitions	"Proper disposal" means placement in a waste receptacle, or other suitable container, and discarded in a refuse container which is regularly emptied by the municipality or some other refuse collector; or disposal into a system designed to convey domestic sewage for proper treatment and disposal. Disposal into a waterway, storm drain, or stormwater system is strictly prohibited.		3. Illicit Discharge
City of Wasilla	13.20.290	Public Services	Wasilla Municipal Airport	Waste disposal	No petroleum product shall be permitted to enter storm or sanitary sewers, or disposed of on airport property.	Applies to airport.	3. Illicit Discharge
Matanuska-Susitna Borough	1.10.270	General Provisions	Borough Powers	Water pollution control	The borough may exercise the power to regulate and control water pollution and quality in the area outside of cities as provided under A.S. 29.35.210(a)(6).		3. Illicit Discharge
Matanuska-Susitna Borough	8.25.030	Health and Welfare	Water Pollution Control	Sewage disposal	(A) A person may not discharge or dispose, from facilities under the person's control, sewage or other wastes so sewage or other wastes shall gain access to any surface or subsurface waters of the state within the borough unless the sewage or wastes are first treated through a collective or individual sewage disposal system adequate to prevent water pollution.		3. Illicit Discharge
Matanuska-Susitna Borough	8.25.050	Health and Welfare	Water Pollution Control	Pollution Prohibited	A person may not pollute or add to the pollution of any lake, stream or other body of water.		3. Illicit Discharge
City of Palmer	12.12.070	Streets, Sidewalks and Public Places	Street Improvements	Erosion and sedimentation plan	In the event that any developer shall intend to denude or recontour any land proposed to be subdivided, by means of grading, excavation or the removal of or destruction of the natural topsoil, trees, or other vegetative covering thereof, a plan for erosion and sedimentation control shall be submitted to the city manager for approval prior to any recontouring or denudation being done unless there has been prior determination by the platting authority that such a plan is not necessary. - See code for more.	Applies to subdivisions and public facilities.	4. Construction Site Runoff Control
Matanuska-Susitna Borough	43.55.010	Subdivisions	Subdivision Agreements	Subdivision agreements required	(B) Application. Application for a subdivision agreement shall be made to the platting division. The application shall include a tentative schedule of all proposed construction of public improvements and the subdivider's estimate of the cost of each required public improvement, itemized materials list, plans, specifications, descriptions of work, the limits of the work area, the methods to be employed, storm water pollution prevention plans, and any other pertinent data and information necessary for the platting division to evaluate the proposed installation. The borough may require a showing of the subdivider's financial responsibility.		4. Construction Site Runoff Control

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Summary of Existing Stormwater-Focused Codes and Ordinances

Entity	Number	Title	Chapter	Section	Code	Notes	Applicability
City of Palmer	12.12.050	Streets, Sidewalks and Public Places	Street Improvements	Drainage	An adequate drainage system, which may include necessary storm drainage facilities, drain inlets, manholes, culverts, bridges, and other appurtenances, shall be required in all subdivisions. This system shall take into consideration the preservation of designated high-quality wetlands critical to the water table levels and wildlife habitat.	Applies to subdivisions and public facilities.	5. Post-Construction SW Management
City of Palmer	15.16.R401.3	Buildings and Construction	Residential Code Amendments	Drainage	Delete the section and the exception and replace with the following: Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall be sloped a minimum of two percent within the first 10 feet. It shall be the responsibility of the owner or contactor to assure that discharge of roof and surface runoff is disposed of without affecting the adjacent property. Surface drainage across lot lines is prohibited.		5. Post-Construction SW Management
City of Palmer	16.16.130	Subdivisions	Final Plat	Additional required improvements	In addition to other improvements provided for in this chapter, prior to the acceptance and approval of the final plat by the council, the subdivider shall contract to install the improvements required by this section but such improvements shall not be completed prior to final approval: E. Culverts, bridges, drainage ditches, and such other improvements shall be contracted for, and installed, in the same manner as street improvements.		5. Post-Construction SW Management
City of Palmer	17.32.025	Zoning	C-G General Commercial District	Standards for a large retail establishment permit	5. All landscaping structural requirements (e.g., drainage, grading, concrete, rock or keystone bed structures, sidewalks) must be met at occupancy.		5. Post-Construction SW Management
City of Palmer	17.36.110	Zoning	I Industrial District	Buffer fencing and/or landscaping	All landscaping structural requirements (e.g., drainage, grading, concrete, rock or keystone bed structures, sidewalks) must be met at occupancy.		5. Post-Construction SW Management
City of Palmer	17.62.010	Zoning	Site Plan Requirements and Access Control	Site plan requirements	D. Site plans and technical drawings shall be submitted by the appropriate professional discipline for construction, relocation, expansion, or categorical change in use of a regulated structure, building, use, or activity on a lot. Drawings shall be submitted at a scale reasonable for review of the depiction but no smaller than one inch equals 100 feet for site plans and shall include at a minimum applicable as required by use: 4. Major topographic features including but not limited to water bodies, drainage patterns, slope elevations and designated special flood hazard areas; special attention shall be given to proper site drainage so that the removal of surface waters will not adversely affect neighboring properties or the public road system; storm water shall be collected at intervals so that it will not obstruct the flow of vehicular or pedestrian traffic;	Applies to all construction in all zones other than R-1, R-1E, and AG; and in PUDs.	5. Post-Construction SW Management
City of Palmer	17.72.030	Zoning	Conditional Use Permits	Site plan	A detailed site plan showing the proposed location of all buildings and structures on the site, access points, drainage, vehicular and pedestrian circulation patterns, parking areas and the specific location of the use or uses to be made of the development shall be submitted with the application, together with other information as may be required to comply with the standards for a conditional use listed in this title and in other pertinent sections of this title.		5. Post-Construction SW Management
City of Palmer	17.84.100	Zoning	Planned Unit Development (PUD)	Final plan	B. The final site plan shall include all the following information: 4. Locations of utility services (with sizes), noting which will remain and which are to be removed, including storm drainage, sanitary/storm sewer, fire hydrants, and any public or private easements. 5. Detailed description and location of stormwater management system including pre- and post-site development run-off calculations used for determination of stormwater management. 7. A site grading plan with existing and proposed topography at a minimum of two-foot contour intervals and with topography extending a minimum of 50 feet beyond the site in all directions and further where required to indicate stormwater run-off into an approved drain or detention/retention pond.	Applies to PUDs.	5. Post-Construction SW Management
City of Wasilla	12.12.040	Streets, Sidewalks and Public Places	Driveway Apron Construction	Design specifications	E. Drainage. Driveway aprons shall be constructed so that all runoff is directed to the ditch line (and not across the public thoroughfare), and shall not cause erosion of the public right-of-way or deposition of soils onto the public thoroughfare. In the event that a driveway apron increases drainage to the roadway ditch, the city may require that the applicant provide a means of accommodating the additional drainage. F. Culverts. Culverts shall be installed when required by the city. Culverts are to be laid to the flow line grade of the existing roadside ditch. Culverts shall extend a minimum of two feet beyond both edges of the slope of the driveway apron or install manufactured end sections where it crosses the ditch line. In areas of major drainage the city may require a steam thaw pipe to be installed in the culvert.		5. Post-Construction SW Management

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Summary of Existing Stormwater-Focused Codes and Ordinances

Entity	Number	Title	Chapter	Section	Code	Notes	Applicability
City of Wasilla	16.16.050	Land Development Code	Planning Commission Approvals	General approval criteria.	A. An administrative approval, use permit, elevated administrative approval, elevated use permit or conditional use may be granted if the following general approval criteria and any applicable specific approval criteria of WMC 16.16.060 are complied with. 11. Drainage. The proposed use shall provide for the control of runoff during and after construction. All roads and parking areas shall be designed to alleviate runoff into public streets, adjoining lots and protect rivers, lakes and streams from pollution. Uses may be required to provide for the conservation of natural features such as drainage basins, watersheds, and land stability.		5. Post-Construction SW Management
City of Wasilla	16.20.030	Land Development Code	Zoning Districts	Planned unit development overlay district	E. Submission Requirements. In addition to any other information required under this title, a PUD overlay district application shall contain the following elements: i. Existing and proposed utility systems including sewers, storm drains, water, electric, gas and communication lines;		5. Post-Construction SW Management
City of Wasilla	16.20.040	Land Development Code	Zoning Districts	Downtown overlay district	3. Consideration. In evaluating an application, the planning commission may consider any of the following alternatives to offset a design deficiency, if they find that the proposed alternative will serve the purpose of this section: f. Additional or alternative storm water design solutions such as bio swales, rain gardens and cisterns.		5. Post-Construction SW Management
City of Wasilla	16.24.040	Land Development Code	Density and Dimensional Requirements	Parking	b. A snow storage area of 25 square feet for each parking space shall be provided for any use except single-family and duplex. Snow storage areas must be designed to minimize drainage and runoff problems and not overload or impair the city storm drainage system. The required snow storage area may be reduced by the planner in consultation with the engineer.		5. Post-Construction SW Management
City of Wasilla	16.28.070	Land Development Code	Nonconforming Lots, Buildings and Uses	Public improvements	B. The engineer shall maintain a public construction standards manual of approved standards. The design, criteria, specifications and standard details in this manual are minimum standards for the design of improvements, kind and use of materials, and methods of construction of roadways and appurtenances, alleys, drainage and other improvements unless the requirements of the borough or other government agency are greater. C. It is the policy of the city to adhere to these standards and specifications; however, if the design standards cannot be followed due to unusual terrain, soil characteristics or drainage, the engineer may consider alternate solutions and may approve changes when substantiated by a design analysis prepared and certified by an engineer to be equal in performance and safety to the standards in this manual or may require changes if the standards are inadequate to address a specific situation.		5. Post-Construction SW Management
City of Wasilla	16.28.080	Land Development Code	Nonconforming Lots, Buildings and Uses	Improvement construction	No person may begin construction of any community water system, community sewer system, or drainage facilities until the developer has complied with WMC Chapters 13.04, 13.08 and 13.12.		5. Post-Construction SW Management
City of Wasilla	16.33.010	Land Development Code	Landscaping Standards	Purpose	The purpose of the landscaping standards in this chapter is to ensure that new landscaping and the retention of existing vegetation, where appropriate, is an integral part of all development. These standards are intended to: I. Provide for erosion control, runoff reduction, and pollutant mitigation;		5. Post-Construction SW Management
City of Wasilla	16.33.040	Land Development Code	Landscaping Standards	Landscape plan	B. Plan Components. Where a landscape plan is required, the plan shall include the following. Design must take into consideration existing trees and incorporate existing trees and vegetation where practical to minimize adverse impacts of development. 12. Areas of vegetation to be used for on-site retention/detention of storm water and drainage features including swales, drainage basins, snow storage, storm drain inlets, bioswales, and other similar features, unless shown on civil drawings.	Applies to all development except the exemptions listed in 16.33.030	5. Post-Construction SW Management
Matanuska-Susitna Borough	17.36.310	Zoning	Residential Planned Unit Development	Final development plan	(B) The following data and information is required in addition to the material submitted under the concept plan: (2) a final development plan or plans shall be drawn to the same scale as the site conditions map, showing: (h) utility service plan, where utilities are involved, showing: (ii) the disposition of sanitary wastewater and stormwater, and snow removal;		5. Post-Construction SW Management
Matanuska-Susitna Borough	17.55.020	Zoning	Setbacks and Screening Easements	Setbacks for shorelands	(A) Except as provided in subsection (B) of this section, no structure or footing shall be located closer than 75 feet from the ordinary high water mark of a body of water. Except as provided otherwise, eaves may project three feet into the required setback area.		5. Post-Construction SW Management
Matanuska-Susitna Borough	17.60.120	Zoning	Conditional Uses	Standards for correctional community residential centers	(14) Landscaping must meet the following criteria: (d) Surface water, storm water, and other runoff must be managed to avoid pollution and damage in accordance with an approved plan.		5. Post-Construction SW Management
Matanuska-Susitna Borough	17.61.060	Zoning	Core Area	Conditions for approval	(A) In granting approval of a conditional use permit, the commission, may impose conditions and safeguards, which may include, but are not limited to: (8) Providing for additional control of runoff from the facility to ensure water quality is maintained in lakes, streams, wetlands, and groundwater.		5. Post-Construction SW Management

MS4 and Stormwater Management in the Mat-Su Borough - Meeting #4
Summary of Existing Stormwater-Focused Codes and Ordinances

Entity	Number	Title	Chapter	Section	Code	Notes	Applicability
Matanuska-Susitna Borough	43.05.015	Subdivisions	General Provisions	Purpose and scope	(B) The following list of documents are to be incorporated within this title as if fully set forth in this title: (3) 2022 Subdivision Construction Manual.		5. Post-Construction SW Management
Matanuska-Susitna Borough	43.55.010	Subdivisions	Subdivision Agreements	Subdivision agreements required	(B) Application. Application for a subdivision agreement shall be made to the platting division. The application shall include a tentative schedule of all proposed construction of public improvements and the subdivider's estimate of the cost of each required public improvement, itemized materials list, plans, specifications, descriptions of work, the limits of the work area, the methods to be employed, storm water pollution prevention plans, and any other pertinent data and information necessary for the platting division to evaluate the proposed installation. The borough may require a showing of the subdivider's financial responsibility.		5. Post-Construction SW Management

Draft

MS4 and Stormwater Management in the Mat-Su Borough - Meeting #4
 Summary of Existing Stormwater-Focused Codes and Ordinances

Entity	Number	Title	Chapter	Section	Code	Notes	Applicability
City of Palmer	13.12.030	Public Utilities	Wastewater Collection and Treatment	Definitions	36. "Stormwater" means any flow occurring during or following any form of natural precipitation and resulting therefrom.	Applies to POTWs.	General
City of Wasilla	13.08.010	Public Services	Sewer Service System	Definitions	"Natural outlet" means any outlet, including storm sewers and combined sewer overflows, into a watercourse, pond, ditch, lake or other body of surface or ground water. "Storm drain" (or "storm sewer") means a drain or sewer for conveying water, ground water, subsurface water, or unpolluted water from any source.		General
City of Wasilla	13.12.010	Public Services	Wastewater Pretreatment Requirements	Definitions	"Storm water" means any flow occurring during or following any form of natural precipitation and resulting therefrom.		General
City of Wasilla	13.16.010	Land Development Code	Underground Utility Facilities	Definitions	"Utility" means a person, corporation or other entity which furnished service through, or a person who operates or owns a conduit pipe, tile, wire, cable or line for the following purposes: 7. Storm sewer		General
Matanuska-Susitna Borough	2.44.020	Administration and Personnel	Public Works Department	Functions	(A) The functions of the public works department shall include: (1) designing of projects associated with the construction, upgrade, maintenance and operation of public facilities and infrastructure including but not limited to buildings, roads, paved pathways, landfills, sewage, water and septage systems, and storm water drainage systems. (B) In addition to the requirements in subsection (A) of this section, all activity shall be conducted in compliance with state or federal regulations governing the items listed below. Written documentation of compliance with these regulations is not required. Complaints received by the borough of violations of requirements within this section will be forwarded to the appropriate agency for enforcement. (2) Water quality. (a) EPA or ADEC regulations controlling spills, spill reporting, storage and disposal of oil, anti-freeze and hydrocarbons.		General
Matanuska-Susitna Borough	15.24.030	Planning	Assembly; Zoning	Comprehensive Plan and Purposes	(B) The comprehensive plan consists of the following elements, which are incorporated in this chapter by reference. If elements of the comprehensive plan conflict, the element most recently adopted shall govern. (35) Matanuska-Susitna Borough Stormwater Management Plan;	A copy of this plan is saved in the references folder	General
Matanuska-Susitna Borough	17.125.010	Zoning	Definitions	Definitions	"Pervious hard surface" means any material that permits full or partial absorption of storm water into a previously unimproved land. "Bioswales" means open channels that usually possess a dense cover of grasses and other herbaceous plants through which runoff is directed during storm events. Bioswales allow runoff to infiltrate. "Stream" means a body of flowing water, where the water flows in a natural channel as opposed to a canal. "Stream corridor" means the corridor defined by the top of the stream's channel bank, plus the adjacent land areas that contain vegetation, habitats, and ecosystems associated with bodies of water or dependent on the flow of water in the stream. Biologists often refer to the adjacent land area, which will vary in width depending on the particular stream, as a "riparian ecosystem." In braided channels, the stream corridor shall include the entire stream feature. "Water bodies" means permanent or temporary areas of standing or flowing water. Water depth is such that water, and not air, is the principal medium in which organisms live. Water bodies include, but are not limited to: lakes, ponds, streams, rivers, sloughs, and all salt water bodies.		General
Matanuska-Susitna Borough	43.05.005	Subdivisions	General Provisions	Definition of terms	"Drainage easement" means an easement for the containment, construction, repair, or maintenance of storm or melt water drainage normally adjoining a public right-of-way and dedicated to the borough.		General

Links:

<https://palmer.municipal.codes/PMC>

<https://wasilla.municipal.codes/>

<https://www.codepublishing.com/AK/MatanuskaSusitnaBorough/>

MS4 and Stormwater Management in the Mat-Su Borough - Meeting #4
Summary of Existing Stormwater Mapping Resources (Publicly Available)

Item No.	Name	Date	Author	Owner	Description	Limitations	Link	Type	
1	MSB Stormwater Studies	Varies- See Sub-list						https://stormwater-msb.hub.arcgis.com/pages/studies	MS4 System Components
	A. Wasilla Creek Stormwater Analysis	May 2019	DOWL	MSB	Creek Outfalls, Manholes, Detention Areas, Culverts, Pipes, and Ditches	Not Comprehensive - Focused on Main Channel	https://matsugov.us/docs/plans/13970/WasillaCreek_Stormwater_Analysis.pdf	MS4 System Components	
	B. Cottonwood Creek Stormwater Analysis	June 2017	DOWL	MSB	Creek Outfalls, Manholes, Detention Areas, Culverts, Pipes, and Ditches	Not Comprehensive - Focused on Main Channel	https://matsugov.us/docs/plans/13970/20170630_cottonwood-ck-stormwater-analysis.pdf	MS4 System Components	
	C. Vine Creek Drainage Study	August 2017	HDL	MSB	GIS Database with Culverts and Ditches	Not Comprehensive - Focused on Main Channel	https://matsugov.us/docs/plans/13970/preliminary-vine-creek-drainage-memo_final.pdf	MS4 System Components	
2	Lake Lucile Management Plan	June 2020	AWR	COW	Strom Drain Mapping	Not Comprehensive - Focused on Strom Drain in areas of interest	https://www.cityofwasilla.gov/home/showdocument?id=23072	MS4 System Components	
3	Fish Culvert Mapping	2016	F&G	F&G	Fish Culvert Mapping	Only includes culverts on streams identified as fish bearing	https://gis.adfg.alaska.gov/mapping/rest/services/sf_public/Culverts/MapServer/0	MS4 System Components	
4	NHD Plus	2018	USGS	USGS	Stream/Lake Mapping		https://hydro.nationalmap.gov/arcgis/rest/services/NHDPlus_HR/MapServer	Existing Water Bodies	
5	Environment Waterbodies	July 2016	MSB	MSB	Stream/Lake Mapping		https://data1-msb.opendata.arcgis.com/datasets/MSB::environment-waterbodies-	Existing Water Bodies	
6	Alaska DEC Impaired Waters	May 2018	DEC	DEC	Provides location, status, and database information on water quality assessments in Alaska.		https://www.arcgis.com/home/item.html?id=f30de7b6ac1d4568be6456d2052237e3	Existing Water Bodies	
7	Bridges	October 2016	DOT&PF	DOT&PF	DOT owned bridges		https://dot.alaska.gov/stwddes/gis/shapefiles.shtml	General connectivity	
8	As-Builts	-	DOT&PF	DOT&PF	DOT As-builts that may contain drainage infrastructure information		https://dot.alaska.gov/edocs_code/searches/combined_asbuilt_search.cfm	MS4 System Components	
9	COW As-Builts/Design Drawings							MS4 System Components	
10	COP As-Builts/Design Drawings							MS4 System Components	
11	MSB As-Builts/Design Drawings							MS4 System Components	

MS4 and Stormwater Management in the Mat-Su Borough - Meeting #4
Summary of Existing Stormwater Mapping Resources (Publicly Available)

12	Wetlands	2016	MSB		This file represents an attempt to map every polygon that could be considered a wetland using the criteria outlined in the 2007 supplement to the 1987 Army Corps Delineation Manual (Environmental Laboratory. (1987). "Corps of Engineers Wetland Delineation Manual", Technical Report Y-87-1, US Army Engineer Waterways Experiment Station. Vicksburg, MS)	Map is approximate and subject to site-specific verification and user interpretation.	https://data1-msb.opendata.arcgis.com/datasets/MSB::environment-wetlands-cookinlet/explore?location=61.281096%2C-150.509216%2C12.16	Wetlands (Reference Only)
13	Wetlands		USWS		The Wetlands mapper is designed to deliver easy-to-use, map-like views of America's Wetland resources. It integrates digital map data along with other resource information to produce current information on the status, extent, characteristics and functions of wetlands, riparian , and deepwater habitats.		https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/	Wetlands (Reference Only)
14	National Flood Hazard Layer		FEMA		The National Flood Hazard Layer (NFHL) is a geospatial database that contains current effective flood hazard data. FEMA provides the flood hazard data to support the National Flood Insurance Program.		https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd	Flood Hazard Areas (Reference Only)

MS₄ & STORMWATER MANAGEMENT IN THE MAT-SU BOROUGH

Stakeholder Meeting #4 – Existing Building Blocks

Hosted by: The Mat-Su Borough Planning Department

With Assistance From: AWR Engineering, LLC

August 29, 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**

Quick Review of Project Background & Purpose

- “Urbanized Area” Classification is expected for the Core Area (Palmer & Wasilla) following the results of the 2020 Census
 - Based on pollution density
 - US Census Bureau will determine the extents of the Urbanized Area
- 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”
- Will apply to operators of stormwater collection systems (MS₄s) throughout the Urbanized Area.

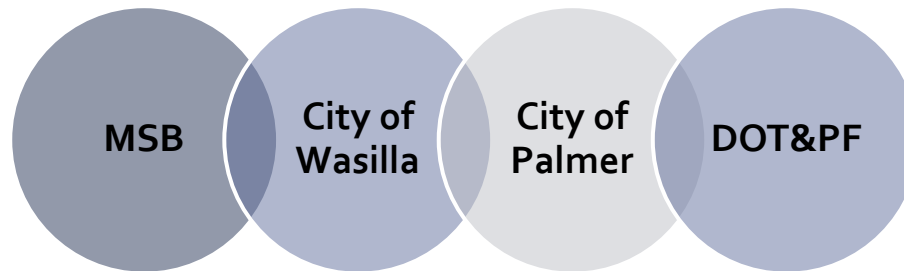


Lake Lucile in Wasilla

Quick Review of Project Background & Purpose

- **Responsible Parties:**

- Any entity that operates an MS₄ system inside the Urbanized Area
- Expected to include:



- **Purpose and Need**

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

- **Role of this Stakeholder Group**

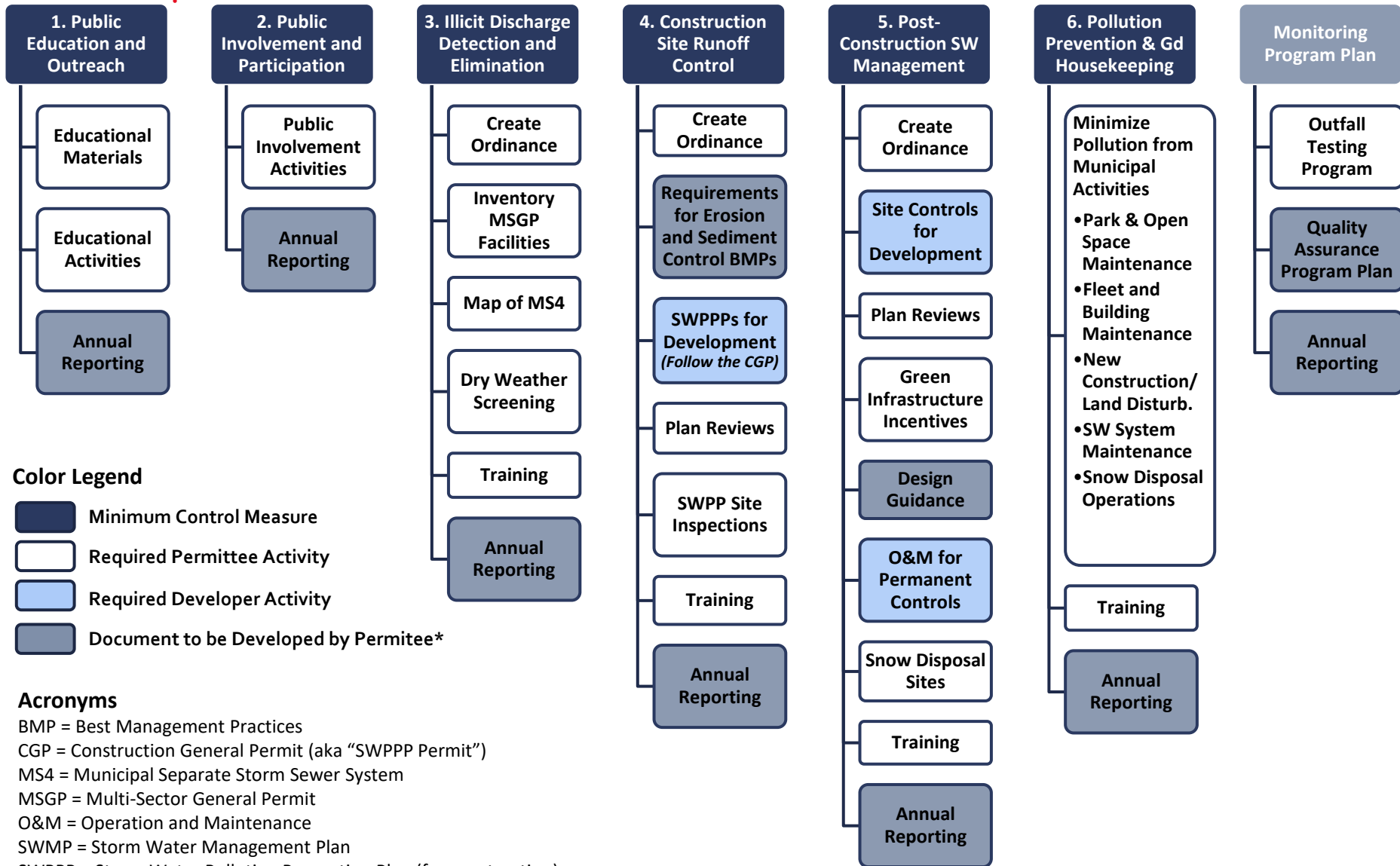
- Provide input for how impacted agencies want to work together to structure the permit

Updated Stakeholder Meetings Plan

Meeting #	Date	Topic
1	May 31 (past)	Introduction to the Project
2	June 27	Permit Breakdown, Part 1 <ul style="list-style-type: none">✓ Applicability✓ SWMP Requirements✓ Minimum Control Measures 1, 2, and 3
3	July 25	Permit Breakdown, Part 2 <ul style="list-style-type: none">✓ Minimum Control Measures 4, 5, and 6✓ Monitoring, Evaluation, Reporting, and Record Keeping
4	Today	Existing Building Blocks <ul style="list-style-type: none">✓ Current resources, data, pans, etc.✓ Required ordinances✓ Data gaps and how to fill them
5	Sept 26	Management Details <ul style="list-style-type: none">✓ Intergovernmental agreement types/structures✓ Program costs and staffing✓ Funding source options
6	Oct 31	Wrap Up <ul style="list-style-type: none">✓ Summarize, review, and debrief✓ Discuss permittee thoughts/preferences

Summary of Primary MS4 Permit Components

Storm Water Management Program (SWMP) Document



Color Legend

- Minimum Control Measure
- Required Permittee Activity
- Required Developer Activity
- Document to be Developed by Permittee*

Acronyms

- BMP = Best Management Practices
- CGP = Construction General Permit (aka "SWPPP Permit")
- MS4 = Municipal Separate Storm Sewer System
- MSGP = Multi-Sector General Permit
- O&M = Operation and Maintenance
- SWMP = Storm Water Management Plan
- SWPPP = Storm Water Pollution Prevention Plan (for construction)

* Some documents can be adopted from existing resources

Technical Discussion – Existing Building Blocks

3. Illicit Discharge Detection and Elimination

Create
Ordinance

Inventory
MSGP
Facilities

Map of MS4

Dry Weather
Screening

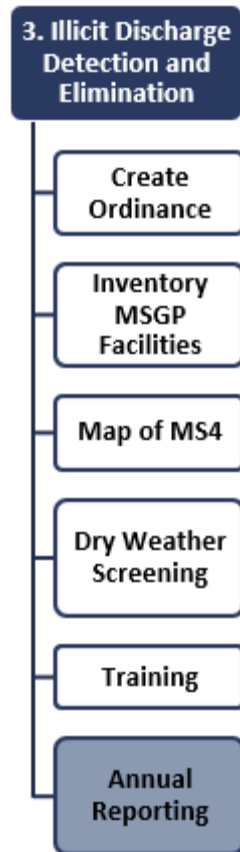
Training

Annual
Reporting



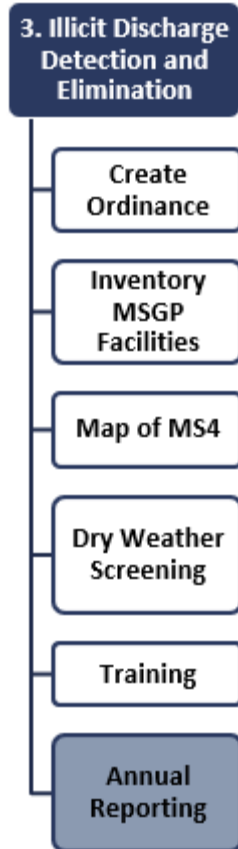
- Ordinance discussions today focus on the MSB, the City of Wasilla, and the City of Palmer. DOT&PF does not create Ordinances.
- *Ordinance must effectively prohibit non-storm water discharges into their MS4s. Permittees must implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders.*
- None of the Permittees have ordinances that specifically address this, but there are several that are related to this topic.
- See attached list.
- Others?

Technical Discussion – Existing Building Blocks



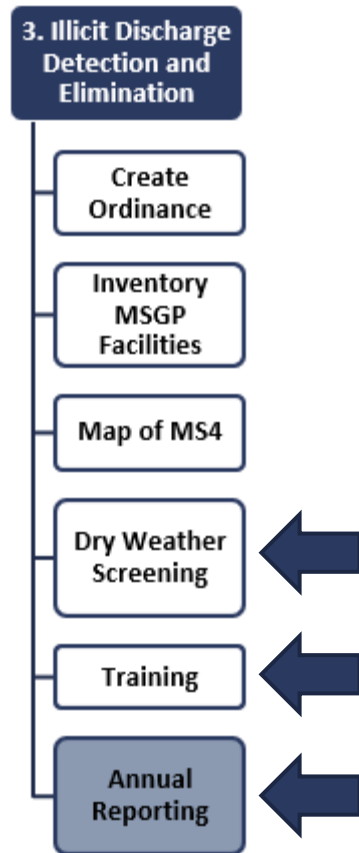
- *Inventory and map industrial facilities and activities that are covered by the APDES Multi–Sector General Permit (MSGP) AKRo60000, and that discharge directly to their MS4.*
- *The inventory must include*
 - *Facility name and address*
 - *Nature of the business or activity*
 - *Standard Industrial Classification code(s) or the newer North American Industry Classification System code(s)*
 - *Receiving water body,*
 - *Type of pollutants that may be discharged by the facility or activity.*
- *Most baseline data is available from ADEC*
 - <https://dec.alaska.gov/Applications/Water/EDMS/nsite/map/results>

Technical Discussion – Existing Building Blocks



- *Create a 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*
 - *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 included*
- Example Map from Fairbanks:
 - <https://fnsb.maps.arcgis.com/apps/webappviewer/index.html?id=66d32548f99440b1b864d6e47d80b78e>
- Existing MS₄ Mapping Resources: See attached List
- Likely to require a desktop + field data collection to complete
- Others? Or data not public-facing?

Technical Discussion – Existing Building Blocks



- Future Needs:
 - Dry weather screening program
 - Illicit Discharge Training)
 - Annual Reporting

Technical Discussion – Existing Building Blocks

4. Construction Site Runoff Control

Create Ordinance



Requirements for Erosion and Sediment Control BMPs

SWPPPs for Development
(Follow the CGP)

Plan Reviews

SWPP Site Inspections

Training

Annual Reporting

- Create 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.
- Related existing ordinances/codes: See attached List.
- Others?

Technical Discussion – Existing Building Blocks

4. Construction Site Runoff Control

Create Ordinance

Requirements for Erosion and Sediment Control BMPs

SWPPPs for Development
(Follow the CGP)

Plan Reviews

SWPP Site Inspections

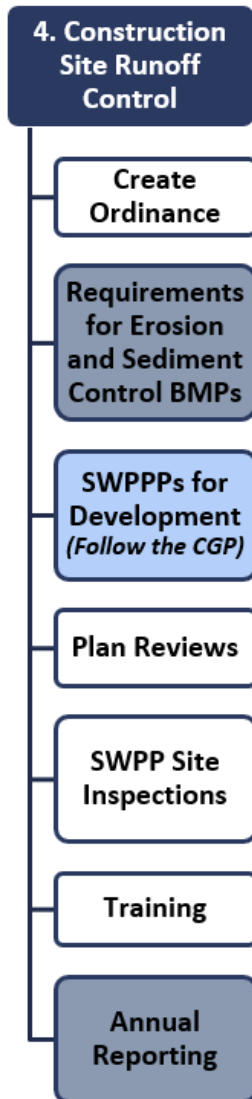
Training

Annual Reporting



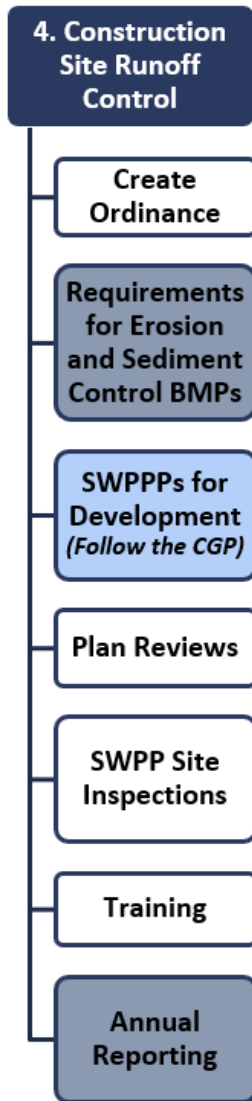
- Existing Resources (Not permittee-specific)
 - Alaska Storm Water Guide
 - <https://dec.alaska.gov/water/wastewater/stormwater/guidance/>
 - Anchorage Stormwater Manual – Volume 2
 - https://www.muni.org/Departments/project_management/Pages/DesignCriteriaManual.aspx
 - Cal-Trans BMP Manual
 - <https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks>
 - MANY others available online.

Technical Discussion – Existing Building Blocks



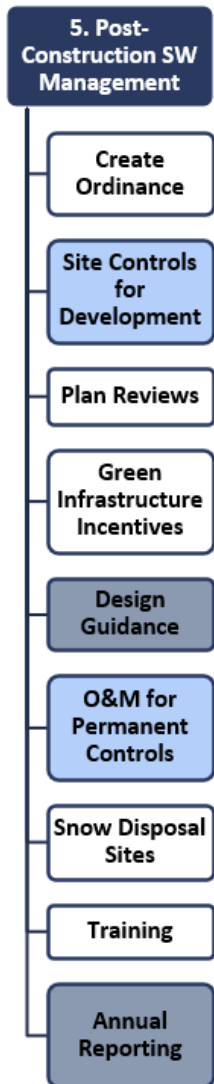
- *Review and implement procedures for reviewing all site plans as required in Part 3.4.1 for potential water quality impacts, including erosion and sediment control, control of other wastes, and any other impacts that must be examined according to the requirements of the law, ordinance, or other enforceable mechanism of Part 3.4.3.*
- Existing Plan Review Processes
 - Did not find existing requirements for plan reviews for Stormwater Pollution Prevention Plans (SWPPP) or SWPPP inspections.
 - Group discussion/input

Technical Discussion – Existing Building Blocks



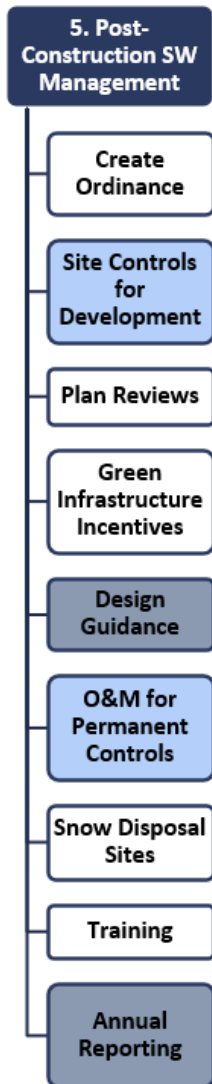
- Future Needs
 - Plan review process and support staff
 - SWPPP site inspection schedule, procedures, and support staff
 - Construction Site SW Runoff Training
 - Annual Reporting

Technical Discussion – Existing Building Blocks



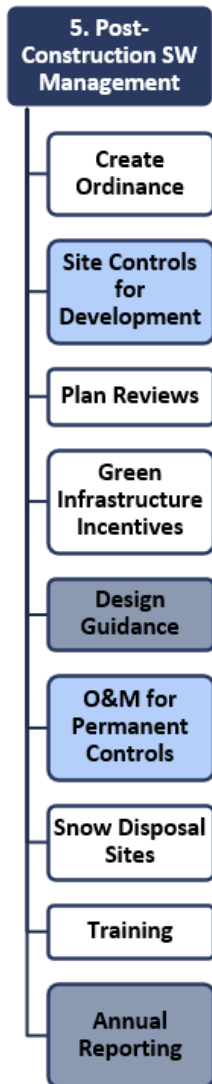
- *Create ordinances or other regulatory mechanisms to the extent allowable under state or local law to address postconstruction runoff from new development and redevelopment projects. Permittees must implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders.*
- None of the Permittees have ordinances that specifically address this, but there are many codes related to post-construction stormwater management.
- See attached list.
- Others?

Technical Discussion – Existing Building Blocks



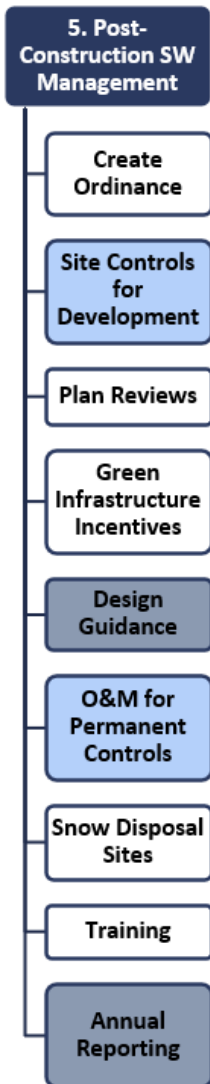
- *Implementation and enforcement of a program to address post-construction storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that disturb 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.*
- Permittees have various types/levels of existing reviews for development
- **Group Discussion** – existing plan review procedures
 - What types of permits / project thresholds trigger a review? Can you add this to your existing procedures?
 - MSB
 - City of Palmer
 - City of Wasilla

Technical Discussion – Existing Building Blocks



- *Implement a strategy that provides incentives for the increased use of Green Infrastructure/LID technique(s) or practice(s) in private and public sector development projects.*
- **Existing Permittee Resources:**
 - MSB Subdivision Construction Manual
 - <https://matsugov.us/document/2020-subdivision-construction-manual>
 - Could meet requirements with minor modifications/additions.
- Discussion
 - Does this manual apply to projects within the Cities?
 - What about projects that are not subdivisions?

Technical Discussion – Existing Building Blocks



- **Local Resources (not permittee-specific):**

- Anchorage Design Criteria Manual – Volume 1

- https://www.muni.org/Departments/project_management/Pages/DesignCriteriaManual.aspx

- FAST Planning Green Streets Plan

- <https://fastplanning.us/docs/plans/>

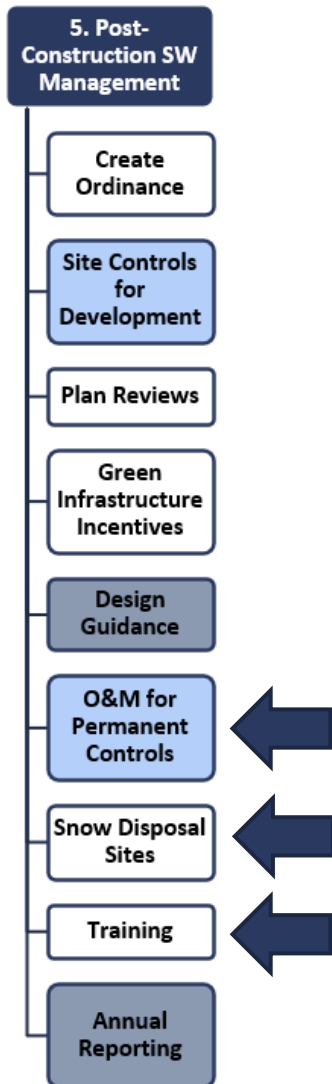
- Fairbanks Green Infrastructure Project Guide

- <https://www.fairbankssoilwater.org/resources-green-infrastructure.htm>

- Alaska Storm Water Guide

- <https://dec.alaska.gov/water/wastewater/stormwater/guidance/>

Technical Discussion – Existing Building Blocks



- Future Needs:
 - Post-construction stormwater management design guidance
 - MANY available resources for references
 - Require O&M for Permanent Controls
 - Consider pollutants from Snow Disposal Sites
 - Post-construction stormwater management training

Technical Discussion – Existing Building Blocks

6. Pollution Prevention & Gd Housekeeping

Minimize Pollution from Municipal Activities

- Park & Open Space Maintenance
- Fleet and Building Maintenance
- New Construction/ Land Disturb.
- SW System Maintenance
- Snow Disposal Operations

Training

Annual Reporting

- Future Needs – Develop and implement the program

Technical Discussion – Existing Building Blocks



- Future Needs – Develop and implement the plan.

Group Questions and Discussion



Next Meeting/Closing

- Next Meeting is September 26th via Teams
- MSB will send invitations

