

2019 Watershed Update

Wednesday, February 27, 2019
Municipality of Anchorage
Alaska Department of Transportation and Public Facilities
At the BP Energy Center, Birch Room
900 E. Benson Blvd.

The Municipality of Anchorage and Alaska Department of Transportation and Public Facilities
Invite you to the APDES Watershed Update Highlighting
Anchorage Storm Water Permit Compliance Activities

Welcome Municipality of Anchorage and Alaska Department of Transportation
Refreshments provided starting at 9:00 a.m.

Program

9:30 APDES Storm Water Program

- Agency Updates
- Storm Water Utility Project Update
- Storm Sewer Condition Assessment – Camera Program
- M&O Storm Water Controls
- Stream Setbacks
- DCM Implementation/O&M Agreement
- 2019 Projects

10:45 Poster Session of Projects from 2018

11:15 Storm Monitoring Assessment

Birch Room

Or

Animal Facilities Evaluation

Aspen Room

11:45 Discussion – Project Team Will Be Available To Address Questions

12:00 Adjourn

We're pleased to have you join us for all or a portion of the 2019 Watershed Update

You can find additional information on the stormwater permit at anchoragestormwater.com

2019 Watershed Update

Municipality of Anchorage
Alaska Department of Transportation
and Public Facilities

Alaska
Pollutant
Discharge
Elimination
System

Today's Agenda

APDES Meeting Agenda:

BIRCH Room

9:30 **APDES Storm Water Program – Term III**

- Agency Updates
- SWU Project Update
- Storm Sewer Condition Assessment
- Storm Water Controls
- Stream Setbacks
- DCM Implementation/O&M Agreement
- 2019 Projects

10:45 Poster Session of 2018 Projects

11:15 Storm Sewer Monitoring Assessment

11:45 Discussion – Project Team Available for ?'s

12:00 Adjourn

ASPEN Room

11:15 Animal Facilities Evaluation

APDES Annual Meeting

Municipality of Anchorage
and Alaska Department of Transportation
and Public Facilities

Anchorage Storm Water Permit Compliance

*APDES *MS4 *Phase I *Term III

APDES Annual Meeting

Permit: **Effective August 1, 2015**

Permit Programs

- ✓ Illicit and Industrial Discharge
- ✓ Infrastructure and Street Management
- ✓ Construction
- ✓ New Development
- ✓ Public Education
- ✓ Monitoring

Evaluate Programs

- ✓ Private Snow Disposal Site Controls
- ✓ Sand Storage Shed Assessment
- ✓ Animal Facilities Performance Standards
- ✓ Watershed Plans

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and Public Facilities


Agency Updates and Current Issues

APDES Annual Meeting

Stormwater Utility Project

Presented by:

Jason Bockenstedt
MOA Deputy Chief of Staff




Anchorage Stormwater Utility

2019 APDES Annual Meeting
February 27, 2019

Introduction

How We Got Here	Work to Date	What's Next
-----------------	--------------	-------------

- Stormwater Utility (SWU) concept: across 20+ years and 4 mayors
- Proposal based on best practice research: SWU are a solution to stormwater issues
- Establishing a SWU was unanimously supported by Live.Work.Play. Infrastructure Subcommittee and AEDC leadership




Introduction

How We Got Here	Work to Date	What's Next
-----------------	--------------	-------------

Phase 1: Assembly Request

- Mayor recommended and Assembly approved funding for SWU Implementation Plan
- Development of RFP and Award of Contract to Stantec

Phase 1: Complete 

Introduction

How We Got Here	Work to Date	What's Next
-----------------	--------------	-------------

Phase 2: Findings Report and Recommendations.

- Preliminary conditions assessment of ARDSA stormwater infrastructure
- Financial summary of current level of service
- Legal analysis to develop ordinance creating utility
- Community and partner input

Introduction

How We Got Here	Work to Date	What's Next
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Phase 3: Work will include development of:

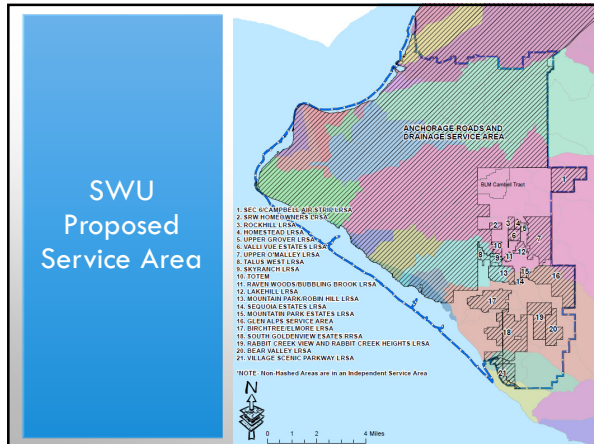
- Expanded Condition Assessment (CCTV);
- Capital Improvement Plan (CIP);
- Establish service level;
- Present rate structure based on rate study.

Condition Assessment Progress

No. AM.521-2018
Meeting Date: August 14, 2018

From: Mayor
Subject: SOLE SOURCE PURCHASE FROM CUES, INC. FOR AN UPGRADE TO THE CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM FOR THE MUNICIPALITY OF ANCHORAGE: MAINTENANCE AND OPERATIONS DEPARTMENT (M&O) (\$198,330.00)



Examples of Current Problems - District 1

- North Park Drive Pipe Failure
- 7th Ave and C Street Manhole with no Bottom
- 4th Ave Structure Failure

District 1: at least 41 known drainage issues that MOA Street Maintenance deals with regularly.

Examples of Current Problems - District 4

- Communication Ave Pipe Failure
- C Street Pipe Failure

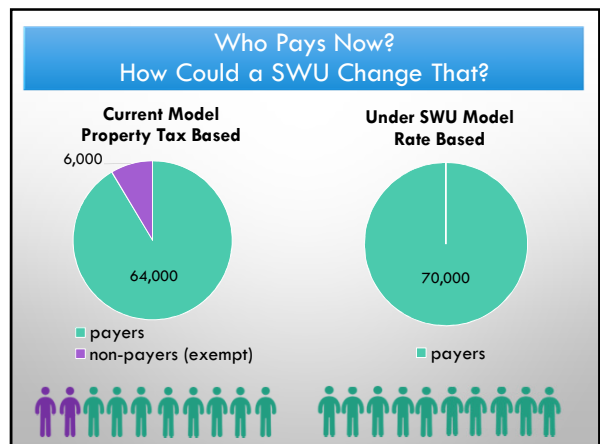
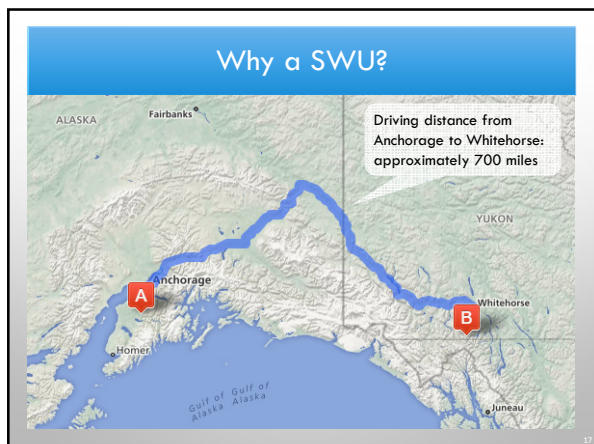
District 4: At least 49 known drainage issues that MOA Street Maintenance deals with regularly.

Examples of Current Problems - District 6

- Devonshire Circle Pipe Failure
- Porcupine Drive Roadway Damage
- 140th and Buffalo Flooding

District 6: Street Maintenance regularly responds to 14 known issues, but other maintenance groups are dealing with MANY more.

A significant portion of District 6 is outside of ARDSA.



Thank you!

Questions, Comments, Concerns? Contact us:

Jason Bockenstedt

907-343-7105

BockenstedtJr@muni.org



APDES Annual Meeting

Storm Sewer Condition Assessment

Presented by:

Terry Gryting
AWR Engineering

Storm Drain Condition Assessment and CCTV Camera Program

2019 Watershed Update
Terry Gryting, AWR Engineering
February 27, 2019

Purpose



Process
Overview
(Ongoing)

1. Collect data and create GIS map
2. Estimate pipe condition: failing/moderate/good
3. Use CCTV to confirm pipe condition (or not...)
4. Update condition (in GIS) based on results, and apply condition to similar nearby pipes
5. Repeat

Data
Collection –
Pipes

• Obtained from as-builts



Overview of Anchorage Data Collected (to date) - Age/Material

(Note: Ongoing Data Collection)

- 1950s – Concrete/Reinforced Concrete Pipe (RCP)
- 1960s and 1970s – Concrete/RCP and Corrugated Metal Pipe (CMP)
 - Steel
 - Aluminum
- 1980s, 1990s, 2000s, 2010s – CMP and Plastics:
 - Corrugated Polyethylene (CPEP)
 - High-Density Polyethylene (HDPE)
 - Polyvinyl Chloride (PVC)

Overview of Anchorage Data Collected (to date) – Pipe Material

- 2500 Pipes (so far)
 - ~50% CMP
 - ~25% Plastic
 - ~5% Concrete
 - ~15% Unknown

The Camera Program

- Closed-Circuit Television (CCTV)
 - Truck
 - Digital Universal Camera (DUC)

The CCTV Process – Obtaining Video

- 10" diameter or greater
- Straight pipe
- Watch "live" from truck
- GraniteNet software

The CCTV Process – Reviewing Video

- Flat Image
- Multi Flat Image
- Still
- Freeze

How the CCTV Results are Used (Iterative)


1. Estimate Pipe Condition
2. CCTV Inspection
3. View Images/Make Assessment
4. Revise/Apply to Similar Pipes

Future Steps


- Complete the pipe condition assessment process for one watershed (Chester Creek)
- Model the storm drain system to evaluate its performance (SWMM)
 - Rainfall events
 - Identify areas of weakness (capacity)
- Continue the process for other watersheds in the Municipality

End Goal

- To collect information to be able to develop a Stormwater Master Plan



Questions?



APDES Annual Meeting

Storm Water Controls


Presented by:

Kristi Bischofberger &
Kyle Cunningham
MOA WMS

APDES Annual Meeting

Street Sweeping

- 2018 Sweeping Effectiveness
 - Arterial: 99% removal
 - Residential: 96% removal
- Maintain a “visually clean” standard
- Low removal efficiency for Summer Sweep
 - Arterial ~70% removal
 - Spot sweep to maintain “visually clean” standard and respond to complaints

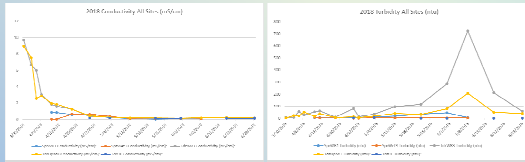


APDES Annual Meeting

Snow Storage Site Monitoring Assessment

- Assessment Goals
 - Assess site control BMP's and retrofits
 - Relate findings to previous studies (1998, 2000, 2001, & 2013)
 - Ensure snow storage locations are adequately treating snow melt runoff and are not impacting downstream water quality
- 2017 & 2018 Monitoring
 - Monitor Spruce Street and Tudor Road sites @ least weekly during melt period
 - Sample for turbidity and conductivity (surrogate for chloride concentration) at multiple locations at each site

Snow Storage Site Monitoring Assessment



- **Conclusions:**
 - Chloride concentration peaks very early in melt
 - Turbidity peaks towards the end of melt, before flows diminish significantly
 - No downstream WQ impacts (No discharge from Tudor, all 2018 Spruce samples below SOA WQ standards for water supply/drinking water <250mg/L)
 - Site SWPPP annual inspections and maintenance will ensure BMP's and runoff treatment are maintained in the future

Salt Management and Sand Storage



SUMMARY Total Chloride Applied – All Methods

	ADOT – Anchorage kg	ADOT – Birchwood kg	ADOT – Glenwood kg	MOA – Anchorage kg	MOA – Eagle River kg
2000	480,946	247,591	156,269	264,773	
2005	883,812	720,076	443,555	15,981	308,940
2015	220,127	0*	82,548	15,436	18,707
2017	220,127	0*	82,548	18,219	5,949
% salt reduction	67.3%	incl. NA*	100-27.5 72.5%	100-52.8 87.2%	100-4.15 95.9%

ADOT Birchwood salt was incorporated into ADOT Anchorage data. Shaded areas represent the start of covered storage. The average of covered storage data divided by the average of uncovered storage data provides the total reduction of salt for each service area.

Stream Setback Ordinance

Presented by:

Jeffrey Urbanus
MOA Watershed Hydrologist

Stream Setback

In 2018, WMS completed an update to the MOA Stream Setback Ordinance (Title 21)

- Changes adopted by Anchorage Assembly in October and became effective on that date
- Increase in setback size on larger streams
- Various clarifications and cleanup of miscellaneous provisions

Stream Setback

WHY DID WE MAKE CHANGES?

The prior version of the code contained language directing the MOA to revisit the issue of stream setbacks and to:

- A.) To provide wider stream protection setbacks; and
- B.) to provide relief for property that would be impacted or rendered nonconforming by such wider setbacks.

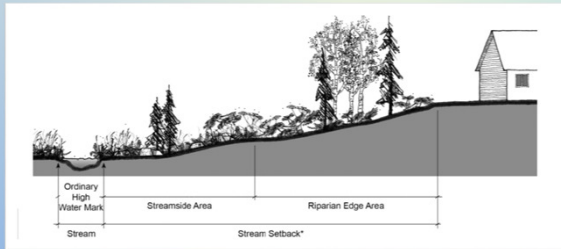
Stream Setback

LARGER SETBACKS

- Stream setbacks are no longer uniform but are based on stream size, stream characteristics, and the pattern of adjacent development
 - Large, undeveloped stream= large setback
- A two-zone setback
 - 25 foot Streamside Zone
 - Variable (25 or 75 foot) Riparian Edge Zone

Stream Setback

Streamside Zone and Riparian Edge Zone



Stream Setback

- Streamside Zone
 - First 25 feet from ordinary high water
 - Essentially a non-disturbance zone
 - Exceptions for trail, road, and utility crossings
 - Expressly allows things like stream gages, monitoring equipment, fish platforms, etc.
 - Essentially the same as the existing 25-foot setback

Stream Setback

- Riparian Edge Zone
 - Starts at the outer edge of the streamside zone and extends out an additional 25 or 75 feet (in some areas only the streamside zone applies)
 - An area reserved for natural stream functions, with some allowance for temporary and/or pervious uses, up to ½ of riparian edge zone area
 - Paved trails
 - Decks
 - Accessory structures 150 square feet or less on non-permanent foundations
 - SOME allowances for lawns

Stream Setback

WHAT STAYS THE SAME?

- EXISTING USES BECOME GRANDFATHERED
- Small streams and tributaries stay at 25 feet (i.e. streamside zone ONLY)
- Channelized streams with encroaching urbanization stay at 25 feet
- Lots less than 10,000 square feet stay at 25 feet
- Hillside is largely unchanged, except for some allowances for smaller lots

Stream Setback

MORE INFORMATION

Anchoragestormwater.com/maps
Stream Setbacks within the MOA

- Map of ALL streams within the Muni WITH setback info
- Links to relevant documents, codes, etc.

APDES Annual Meeting

DCM Implementation /
O&M Agreement

Presented by:
Kristi Bischofberger

APDES Annual Meeting

RECORD IN THE ANCHORAGE RECORDING DISTRICT, THIRD JUDICIAL DISTRICT, STATE OF ALASKA
After Recording Return to:
MOA Development Services, Private Development
P.O. Box 196150
4700 Glacier Road
Anchorage, AK 99519-6650

STORMWATER FACILITY OPERATION AND MAINTENANCE AGREEMENT

The Municipality of Anchorage (hereinafter the "Municipality") and _____ (hereinafter the "Owner(s)"), enter into the following AGREEMENT TO OPERATE AND MAINTAIN STORMWATER FACILITIES (hereinafter "this Agreement") which shall become effective on the date the Agreement is fully executed.

The Owner(s) is/are: _____ and _____, _____ (hereinafter the "Owner(s)"), in the capacity of _____, _____ and warrant(s) he/she/they has/have authority to execute this Agreement on behalf of the Owner(s).

The Owner(s) own(s) a parcel of real property (hereinafter "the Property") described as _____ per plat _____ located in the Anchorage Recording District, Third Judicial District, State of Alaska.
Page 1 of _____

EXAMPLE ATTACHMENT A: Site Stormwater Operations & Maintenance Manual

ACME Shopping Center
1234 Any Road, Block 1 Lot 1 Some Subdivision
Anchorage, AK

Prepared for: John Doe
907.555.5555
12345 Main Street
john_doe@acme.com
Prepared by: ABC Engineering, LLC
February, 2015

EXAMPLE DOCUMENT-DO NOT RECORD THIS PAGE

APDES Annual Meeting



Municipality of Anchorage
and Alaska Department of Transportation
and Public Facilities



2019 Projects

- Industrial/Commercial storm water discharge management
- SOP for treatment and disposal of catch basin cleaning waste

*Propose next permit

APDES Annual Meeting

Poster Session

- Wet Weather Monitoring
- Dry Weather Monitoring
- Pesticide Monitoring
- LID Project Monitoring
- WMS Mapping
- Construction Erosion & Sediment Control
- Snow Site Design

Return at 11:15

1000 Survey
Annual Meeting, February 27, 2019

We appreciate your feedback. Please take a moment and let us know how we can improve.

What is your professional background?

Community Member - Unaffiliated
 Engineering Professional
 Environmental Professional
 Manager/Policy Officer
 Other

How would you describe the amount of information received?

Much too much
 Right amount
 Not enough
 Not sure

Overall, how satisfied are you with the meeting(s)?

1 2 3 4 5 6 7 8 9 10
Satisfied

www.AnchorageStormwater.com

Watershed Management

WELCOME
Our Watershed
Stormwater and Water Quality

Please Fill out Survey

2019 Watershed Update

Municipality of Anchorage
Alaska Department of Transportation
and Public Facilities

A.laska
P.ollutant
E.limination
S.ystem

Illicit Discharge

AMC 21.07.040 – Regulates Discharges to MOA storm drains

- Defines specific prohibited discharges, but also defines "illicit discharge" as "pollutants or any materials other than storm water".
- Streets drain to creeks - #1 public outreach message
- All drains are not equal - Storm drain flows DO NOT go to the sewage treatment plant



www.shutterstock.com - 343202888

Illicit Discharge



Hole chipped in ice to access MS4 manhole for illicit discharge

Illicit Discharge

Free Disposal for Household Hazardous Waste



Not sure what to do with that leftover household hazardous waste?

The Anchorage Regional Landfill and the Central Transfer Station accept up to 5 gallons (40 pounds) of household hazardous waste, paint, turpentine, aerosols, poisons, antifreeze, oil, etc. for **FREE!!!**

Anchorage Regional Landfill
Glenn Highway & Hilland Road Interchange
Tues – Sat 8 am – 5 pm
428-1742

Central Transfer Station
Old Seward & E. 54th Avenue
Tues, Thurs, Sat 8 am – 5 pm
343-6262

Provided by the Municipal Watershed Management Program

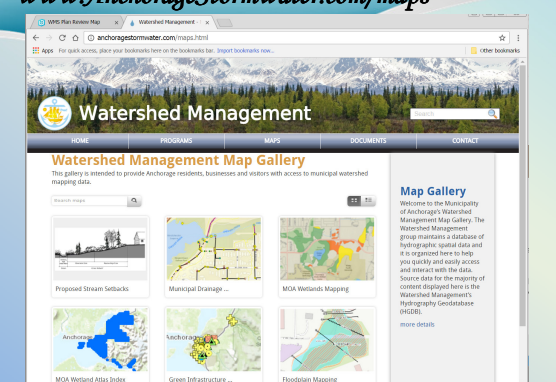
Spill Cleanup



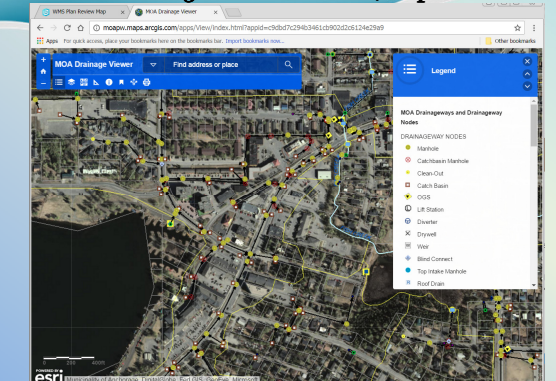
www.AnchorageStormwater.com



www.AnchorageStormwater.com/maps

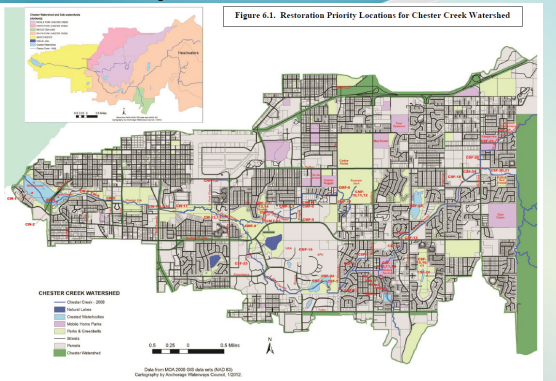


www.AnchorageStormwater.com/maps



Chester Creek Restoration Priorities

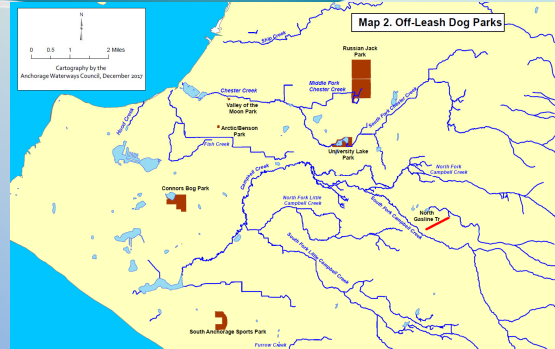
Figure 6.1. Restoration Priority Locations for Chester Creek Watershed



Chester Creek Restoration Priorities



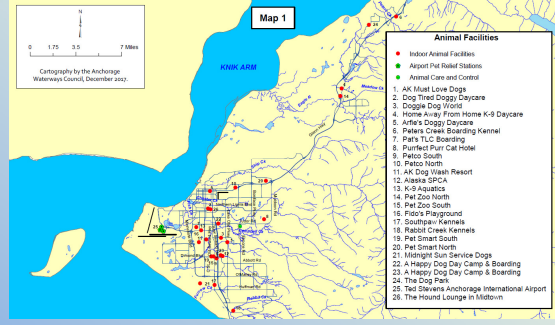
Dog Parks



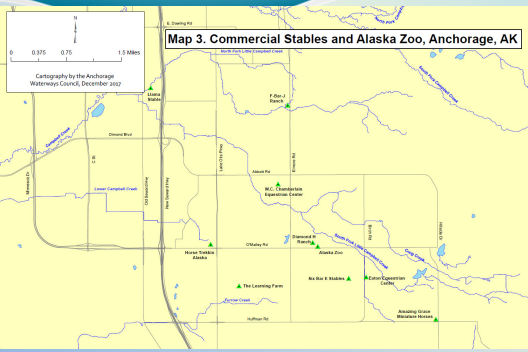
Dog Parks



Animal Facilities



Commercial Stables and Alaska Zoo



Scoop the Poop!



Creek Cleanup

Fishing Line Recycling by AWC

Monofilament Recycling Bins in the Municipality

Fish Waste

Fish Waste Handling & Disposal

August 2016

Division of Environmental Health
Solid Waste Program

Anchorage Office:
555 Cordova St.
Anchorage, AK 99501
DN7269-7802
Fax (907) 769-7510

Fairbanks Office:
416 University Ave.
Fairbanks, AK 99709
DN7461-2106
Fax (907) 451-2188

Juneau Office:
416 Wainwright Ave.
Juneau, AK 99801
DN7465-5318
Fax (907) 465-5362

Personal Use & Sport Fish Waste
Even for sport and personal use fishing, disposing of fish waste on public or private land is illegal and can result in fines. The Alaska Department of Fish & Game recommends that you clean fish remains or in ports, chop fish carcasses into numerous pieces, and throw them into deep or fast-moving water or use a provided fish grinder. Anglers who remove fish from the fishing site and list or process them must also dispose of fish waste in a safe manner.

- Fish waste should be taken directly to a permitted landfill that will accept it.
 - The Central Peninsula Landfill in Soldotna accepts fish waste free of charge during the fishing season.
 - Anchorage Regional Landfill, the Central Transfer Station, and the Gridwood Transfer Station accept residential fish waste.
 - Matanuska-Susitna Borough takes hogger residential fish waste at the Palmer Central Landfill and the Big Lakes, Butte, and Sutton transfer stations.
- If you have local trash pickup, freeze the fish waste to eliminate odors and then put it out on the morning of your trash pickup day. Do not place waste out the night before or put it in commercial dumpsters.

Commercial Fish Waste
ADEC Solid Waste Program allows three methods for managing commercial fish waste on land:

- Landfill (Special): Commercial fish waste may be disposed in a permitted landfill willing to accept it.

Improper disposal of fish waste creates a dangerous bear attraction.

- Chop the fish carcass up and throw it into fast-moving water.
- Take it directly to the landfill, or
- Put it in YOUR truck the morning of pickup.

APDES Annual Meeting

BIRCH ROOM

Storm Sewer Monitoring Assessment

Presented by:
Cindy Helmericks & Alena Gerlek
HDR

2018 Stormwater Monitoring Programs

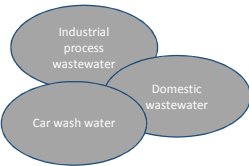
APDES Annual Meeting
February 27, 2019

Dry Weather Screening

APDES Annual Meeting
February 27, 2019

Program Objective

Detect and reduce illicit discharges to the MS4
 Illicit discharge = any discharge not entirely composed of stormwater



Screening Methods

Water samples collected from outfalls during periods of dry weather
 7 parameters screened for concentrations above those expected in clean stormwater

	Parameter	Reporting Range	Threshold
Field tested	pH	0 - 14 STD	≤ 4 or ≥ 9 STD
	Total Chlorine	0.1 - 6.0 mg/L	≥ 1.0 mg/L
	Detergents	0.05 - 5.0 mg/L	≥ 1.0 mg/L
	Total Copper	0.05 - 4.0 mg/L	≥ 1.0 mg/L
	Total Phenols	0.1 - 1 mg/L	≥ 0.5 mg/L
	Turbidity	0.1 - 1,000 NTU	≥ 250 NTU
Lab analyzed	Fecal Coliform	1 colony/100 mL - too numerous to count	≥ 400 colonies/100 mL

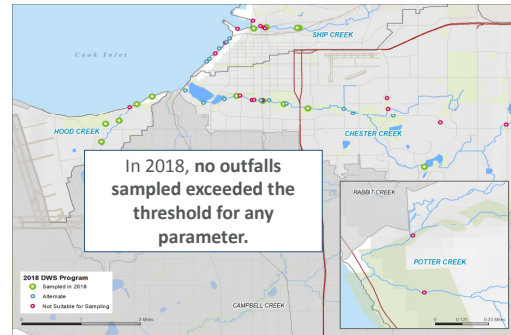
Sampling

- 3 watersheds investigated each year
- 15 outfalls sampled (5 per watershed)
- 30 alternates identified



Results

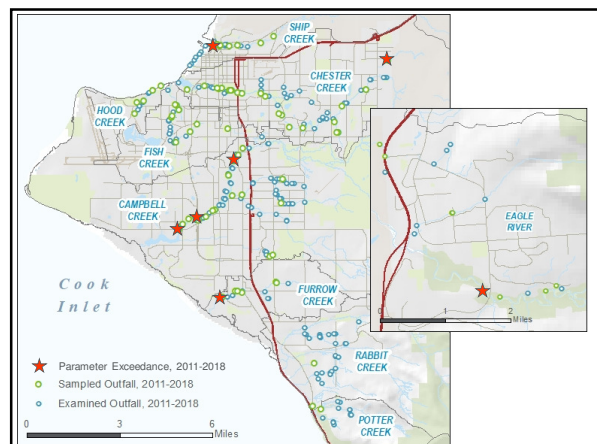
In 2018, no outfalls sampled exceeded the threshold for any parameter.



Results

Between 2011 and 2018, 7 outfalls sampled exceeded the threshold for measured parameters. Following an exceedance, the connected network is examined for potential sources of illicit discharge.

Watershed	Outfall ID	Year	Exceedance Parameter
Campbell Creek	17-1	2011	Turbidity
Ship Creek	71-1	2012	Fecal coliform
Campbell Creek	556-1	2013	Fecal coliform
Chester Creek	115-1	2015	Fecal coliform
Campbell Creek	105-1	2016	Fecal coliform
Furrow Creek	5-1	2017	Fecal coliform
Eagle River	1335-1	2017	Fecal coliform



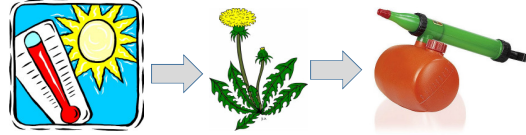
Results

Following detectable amounts of 2,4-D in Lake Otis and Hideaway Lake in 2013, all results have been below detection limits.

Year	Little Campbell Lake		Lake Otis		Hideaway Lake	
	2,4-D (µg/L)	Carbaryl (µg/L)	2,4-D (µg/L)	Carbaryl (µg/L)	2,4-D (µg/L)	Carbaryl (µg/L)
2011	ND	ND	ND	ND	ND	ND
2013	ND	ND	0.60	ND	1.1	ND
2013 - confirmation	-	-	0.22	-	0.26	-
2016	ND	ND	ND	ND	ND	ND
2018	ND	ND	ND	ND	ND	ND

ND = Not detected

2013 Detection



An education campaign began in 2013 to educate homeowners about responsible pesticide application

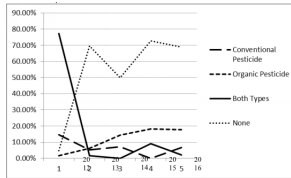
Education is Key!

How to Live With a Lake

The Municipality of Anchorage is about 2,000 sq. mi. and has over 275 lakes and ponds. These waterbodies are a vital part of Anchorage's scenic beauty. Fishing and other recreational uses are important to many of them. This handbook provides information on good practices for those who live near or recreate on lakes.



Pamphlet sent to over 700 Anchorage residents in 2013-2014



Anchorage Pesticide Choice, 2012-2016

Annual surveys tracking pesticide use trends in Anchorage (Source: Anchorage Waterways Council)

Education aimed at reducing yard chemicals provided at garden shows in Anchorage (Source: Anchorage Waterways Council)

Stormwater Outfall Monitoring



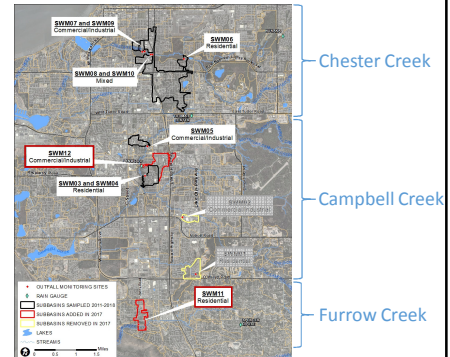
APDES Annual Meeting February 27, 2019

Program Objective

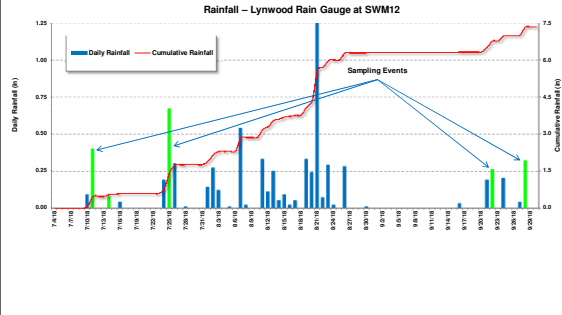
- Characterize stormwater discharges from the MS4
- Evaluate the effectiveness of selected stormwater management practices
- Broadly estimate the annual pollutant loading for fecal coliform and petroleum hydrocarbons



Ten Outfalls Monitored



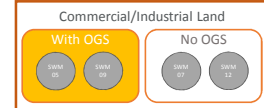
During Four Storm Events



For 11 Parameters

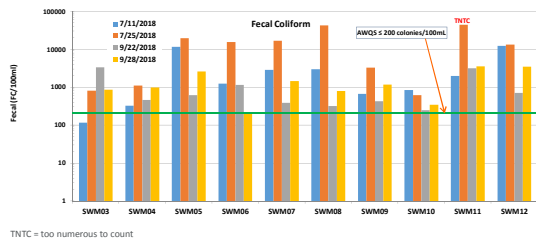
Parameters screened are dependent on surrounding land use and presence or absence of oil and grit separator devices

In Situ	Laboratory Analysis	
Flow (gal/min)	Dissolved copper (µg/L)	Added to permit in 2015
Dissolved oxygen (DO; mg/L)	Biological oxygen demand (5 Day) (BOD; mg/L)	
pH	Fecal coliform (colonies/100mL)	
Turbidity (NTU)	Total suspended solids (TSS; mg/L)	
Temperature (°C)	Total aromatic hydrocarbons (TAH; µg/L)	
	Total aqueous hydrocarbons (TAQH; µg/L)	

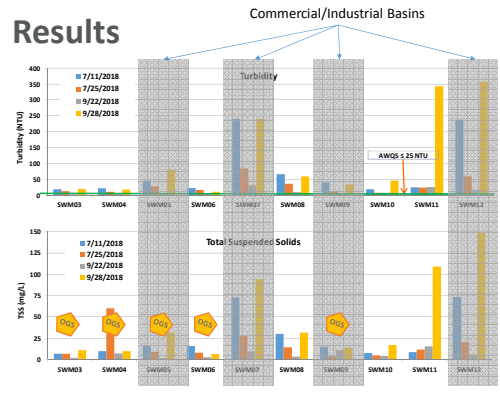


Results

- 2018 results were consistent with previous years' results.
- Fecal coliform levels exceeded Alaska Water Quality Standards at all 10 locations in 2018.

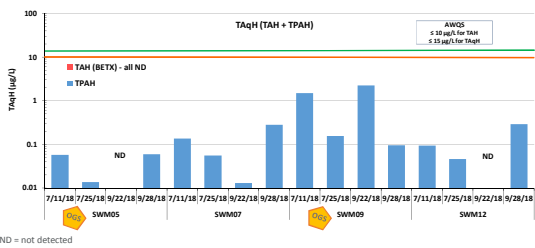


Results



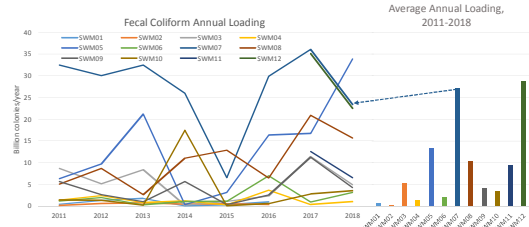
Results

- Hydrocarbon concentrations and loading were below AWQS at all four sites. No clear pattern was noted between the two outfalls that contain OGS units and the two that do not.



Trends

- Other than the expected correlation between TSS and turbidity, between 2011 and 2018 no clear patterns have emerged of corresponding fluctuations between parameters or across land use types.
- Significant follow up investigations conducted in 2017 and 2018 in the subbasin draining to SWM07, which has consistently had the highest fecal coliform loading rates.



ASPEN ROOM

Animal Facilities Evaluation

Presented by:

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Executive Director
Anchorage Waterways Council

Evaluate Anchorage's Animal Facilities

Thom Eley, Ph.D.
Anchorage Waterways Council

February 27, 2019

In the 2015-2020 Municipality of Anchorage's 2015 ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM (APDES) Permit, there was a requirement by 2018 to evaluate commercial animal facilities, which include:

- kennels,
- pens,
- recreational facilities,
- stables,
- urban farms
- show facilities,
- dog parks,
- and the Alaska Zoo.

This was accomplished by site visits and interviews.

Anchorage Animal Care and Control (AACC) and AMC Title 17

Although other Anchorage Municipal Codes contain regulations that affect domestic pets, most are contained in Title 17.

Officer Bradley Larson of AACC was interviewed and provided good insight into the code as well as problems and issues faced by AACC.

We discussed:

- Facilities and the different types of licenses
 - Mushing kennels
 - Home kennels
 - Commercial licenses (stores, boarding kennels, and stables)
- Rules, standards, and inspections for licensed facilities
- Typical complaints
- Animal waste

Anchorage Water and Wastewater Utility (AWWU)

Chris Koskinski of AWWU was interviewed as well.

AWWU does not specifically address animal facilities with standards for discharge, other than the applicable prohibited discharge standards, such as:

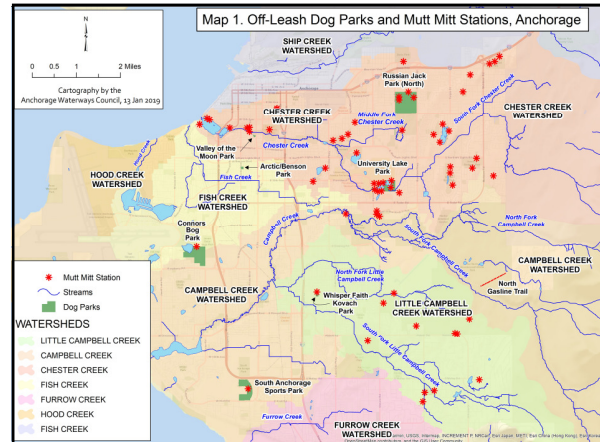
- Any solid or viscous substance, or liquid that can become viscous when cooled, that could interfere with the proper operation of the sewerage system, such as:
 - fat,
 - grease,
 - uncomminuted garbage (garbage that has not been pulverized),
 - animal guts, tissues, hair, hide, fleshings or entrails
- No special treatment requirements, unless discharges could cause blockages, in which case pretreatment is necessary to prevent sewer blockages, such as
 - disposing of animal hair to solid waste or installing floor drains.

Active AACC Facilities Licenses as of 12/1/2018 (n=212)

License Type	Number (%)
Mushing 4-10 dogs	9 (4.2%)
Mushing 11+ dogs	13 (6.1%)
Commercial License (stores, boarding kennels, & puppies)	32 (15%)
Commercial License (stables)	12 (5.8%)
Home Kennel 4-10 dogs	125 (58.9%)
Home Kennel 11+ dogs	21 (10%)

Facilities and Venues Were to be Visited and Mapped in Regard to Their Potential Impact to Waterbodies from Stormwater Runoff

- Off-Leash dog areas:
 - Seven are parks
 - One is a trail
 - All are in Anchorage. Eagle River is considering one.
- Animal event venues:
 - Mushing and horse events, dog agility trials, etc.
- Animal services facilities:
 - AACC, Alaska SPCA, Bird TLC, and the Alaska Zoo
- Stables and an urban farm
- Indoor and outdoor animal facilities:
 - Boarding and doggy daycare
 - Groomers, veterinarians, and pet stores
- No licensed facilities in private homes were visited.

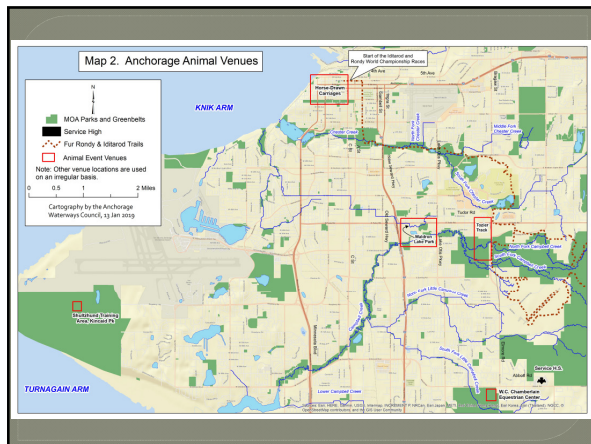


Off-Leash Dog Areas

- High usage by and concentration of dogs
- Much of the pet waste is not cleaned up
- Pet owners:
 - Not observing the leash law between car and off-leash area – *a large amount of dog poop is typically found adjacent to parking areas*
 - Socializing with other pet owners and not watching dogs
 - Focusing on their phones and not their dogs
 - Placing poop in bags and leaving it hanging in trees and bushes or along the trail
 - Not using designated off-leash areas
- Solutions:
 - Education
 - Peer pressure
 - Enforcement of pet waste violations (\$250 first offense) – need more AACC officers

Parks, Trails, and School Yards (On-Leash Areas)

- Pet owners:
 - Many continue to ignore leash laws
 - Many contend that their dogs are under “Voice Control” and the owners let the dogs run, even out of sight—often it is obvious that owners can’t control their dogs when the dogs are right beside the owner
 - Many just don’t clean up after their pets
 - Certain activities, such as mushing, horseback riding, skiing, x-country skiing, jogging, and biking, don’t lend themselves well to cleaning up after their pets
- Solutions:
 - Education
 - Enforcement of pet waste violations (\$250 first offense) – need more AACC officers



Iditarod Ceremonial Start – Chester Creek Trail
At 20th and New Seward, March 6, 2016

1,120 fc/100/ml

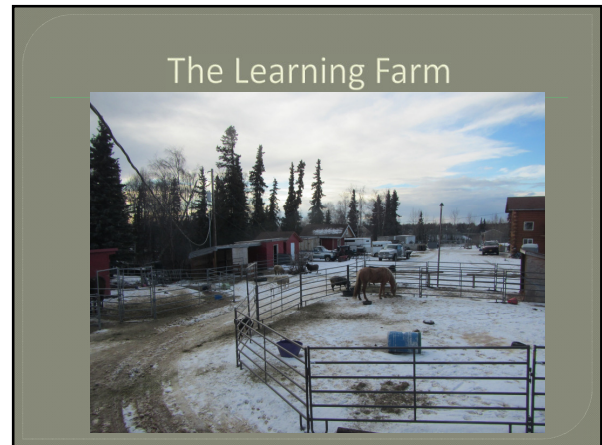
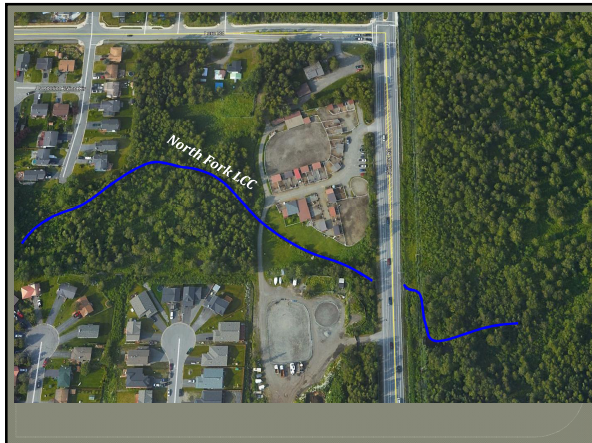
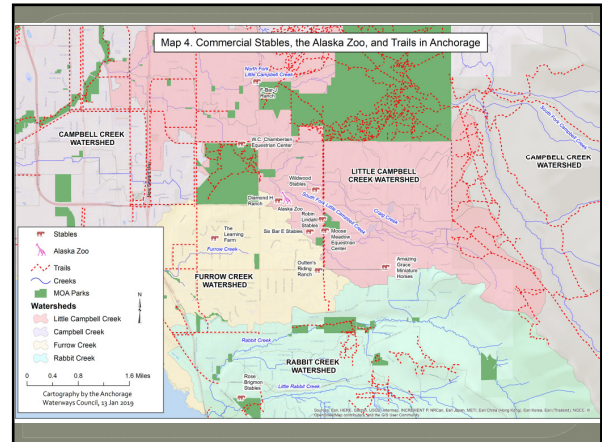
40 fc/100/ml

Horse Stables and the Urban Farm

- There are 10 licensed commercial stables in Anchorage and one in Chugiak.
 - Seven stables are in the Little Campbell Creek watershed
 - One stable and the Learning Farm are in the Furrow Creek watershed
 - One stable is in the Rabbit Creek watershed
- There are many others that are not being counted, because they aren't licensed.
 - They have 3 animals or less, or
 - They have more than 3 animals but "haven't registered" for a commercial stable license

Title 17 states about cleanup:

A complete manure management system involves collection, storage (temporary or long-term), and disposal or utilization.



Recommendations for Ordinance Changes

Title 17 has most of the rules that are necessary for dealing with animals and pet waste.

The obvious problem is the lack of staff to enforce the regulations.

With over 200 parks, miles of trails, and almost 100 school yards—this is not practical.

Having officers focus on off-leash areas could be a good start because of the concentration of pet owners in one area. Word of mouth and observation of citations can be powerful.

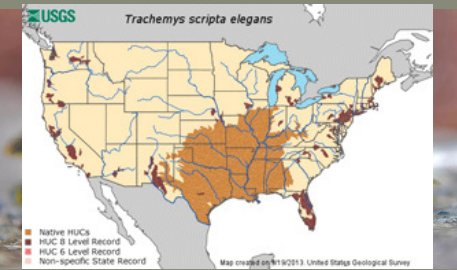
Recommendations for Ordinance Changes

Add an ordinance to make it illegal to feed aquatic birds in Anchorage lakes and creeks. Cuddy Park being the poster child!



Recommendations for Ordinance Changes

An ordinance is needed to make it illegal to dump fish, other aquatic organisms, and aquatic plants into Anchorage lakes and creeks.



Recommendations

- Hire more animal control officers and enforce ordinances on the books.
- Perform fecal coliform testing above and below stables that are adjacent to waterways to ensure there are no problems.
- Perform fecal coliform testing above and below the Alaska Zoo to ensure there are no problems.
- Perform fecal coliform testing above and below any boarding or doggy daycare facilities adjacent to waterways to ensure there are no problems.

Q & A Discussion

Anchorage MS4 Permit

ARDIS Watershed Update

Wednesday February 27, 2019
 At the BP Energy Center
 900 E. Benson Blvd.

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You can find additional information on the stormwater permit at anchoragestormwater.com

