

Town of McCandless – Pollutant Reduction Plan (PRP)

For the 2018-2023
Permit Cycle



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Agenda

- Introductions
- What is a PRP?
- General MS4 Information (Origin of PRPs)
- PRP Development Process
- Potential BMPs
- Additional Measures
- Q&A



What is a PRP

- 5-year plan to reduce pollution entering impaired streams as identified by DEP
 - Sediment = 10% Reduction
 - Phosphorus = 5% reduction
 - DEP assumes the 5% phosphorus reduction is obtained through 10% sediment reduction measures
- Impaired streams determined by DEP
 - Little Pine Creek
 - Girty's Run
 - Lowries Run
 - Pine Creek – North Park Lake



General MS4 (Municipal Separate Storm Sewer System)

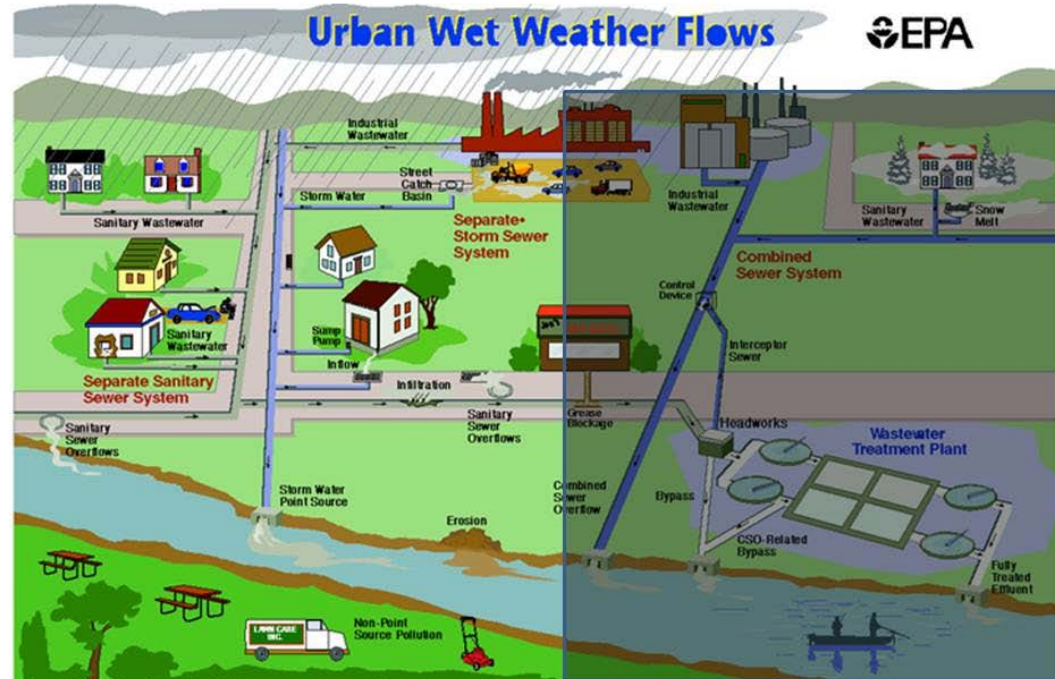
- Mandated federal program delegated to the state started in 2003
 - Requires municipalities to develop programs to promote stormwater management
 - Comprised of 6 Minimum Control Measures (MCMs)
 - Public Education and Outreach
 - Public Involvement and Participation
 - Illicit Discharge Detection and Elimination
 - Construction Site Stormwater Runoff Control
 - Post Construction Stormwater Runoff Control
 - Good Housekeeping and Pollution Prevention



General MS4 (Municipal Separate Storm Sewer System)

- Permit cycles last 5 years with periodic/annual reporting requirements
- Each cycle results in higher levels of effort required to comply
- New 5 year cycle starting in March of 2018 focuses on water quality in addition to continued emphasis on stormwater management

An MS4 is a separate sewer system, meaning there is both a storm sewer system as well as a sanitary sewer system.



PRP Development Process

- Introduction to PRPs – 2018 MS4 permit cycle (Expansion of MS4 requirements)
- Review/update storm sewer mapping
- Determine existing loadings
 - Simplified method – general DEP approved percentages
 - Mapshed method – DEP approved software based on land use data which utilizes daily weather conditions to model runoff and sediment and nutrient loadings
 - Takes into account existing BMPs and parsed areas
- Parsing
 - Process for excluding areas from model
 - Parsed areas cannot be used for potential BMPs
 - Existing BMPs on parsed areas cannot be accounted for
 - Ordinarily parsed areas are those for which other agencies are responsible
- Select potential BMPs to achieve 10% sediment reduction from existing loads

Potential BMPs

- Required to meet reductions over next 5-year permit cycle period
- Streambank stabilization/restoration
- Inlet filters
- Additional development and associated stormwater management



Potential BMPs

- Locations prone to sediment inflow and flooding
- Portions of watershed without stormwater management
- Cost benefit analysis performed (\$/lbs of sediment removed)



Cost Benefit Analysis Table

**TOWN OF McCANDLESS
POTENTIAL BMP's 2018-2023
ESTIMATED REMOVAL RATES**

PROPOSED BMP	EFFECTIVENESS	GENERAL REMOVAL RATE (lbs/acre/year)	ESTIMATED COST		ESTIMATED REMOVAL COSTS (\$/lb)
Permeable Paving	55%	1011	\$ 276,000.00	per acre	\$ 273.00
Wet Ponds / Extended Duration / Wetlands	60%	631	\$ 4,000.00	per acre	\$ 6.34
Raingardens	55%	579	\$ 10,000.00	per acre	\$ 17.27
Rainbarrels / Reuse	---	0.9	\$ 250.00	Each	\$ 277.78
Bioswale / Pipe Removal	80%	841	\$ 16,000.00	per acre	\$ 19.02
Infiltration Practices	95%	999	\$ 17,400.00	per acre	\$ 17.42
Inlet Sediment Filter Bags	80%	626	\$ 700.00	Each	\$ 1.12
Hydrodynamic Structures	10%	105	\$ 42,000.00	per acre	\$ 400.00
Filtering Practices	80%	841	\$ 21,000.00	Each	\$ 24.97
Stream Restoration (Prevent Channel and/or Bank Erosion)	115 lbs/ft/yr	11,500 lbs/100 ft/yr	\$ 30,000.00	(\$300/l.f.)	\$ 2.61

NOTES:

1. All numbers except Stream Restoration are based on a 1 acre drainage area with a 50% impervious and 50% pervious breakdown. Sites with more impervious will have more removal.

2. Stream restoration used 100 feet as that is a typical distance used when maintaining existing obstructions that would not require additional permitting.

Additional Town Measures

- Ordinance beyond PADEP requirements
- Future Low Impact Development ordinance
- Potential BMPs from additional land development
- Environmental Advisory Committee (green space inventory, stream clean up programs)
- On-going stormwater BMP maintenance program
- Collaboration through North Hills Council of Governments



Closing

- PRPs are required for next MS4 permit cycle (2018-2023)
- Focused on reduction of sediment and phosphorus
- 5-year timeframe to achieve required reductions
 - 10% sediment reduction
 - 5% nutrient reduction (assumed by DEP with 10% sediment reduction)
- Town accounted for existing BMPs and parsing
- Plan to be submitted to DEP by September 16th, 2017 along with application for 2018 MS4 permit