

Stormwater Utility

City of Rockland, Maine

December 2023

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Agenda

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Other Stormwater Utilities in Maine

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Where Will Updates be Available?

Thank You

Introductions



Ryan Wingard, PE
Stormwater Lead

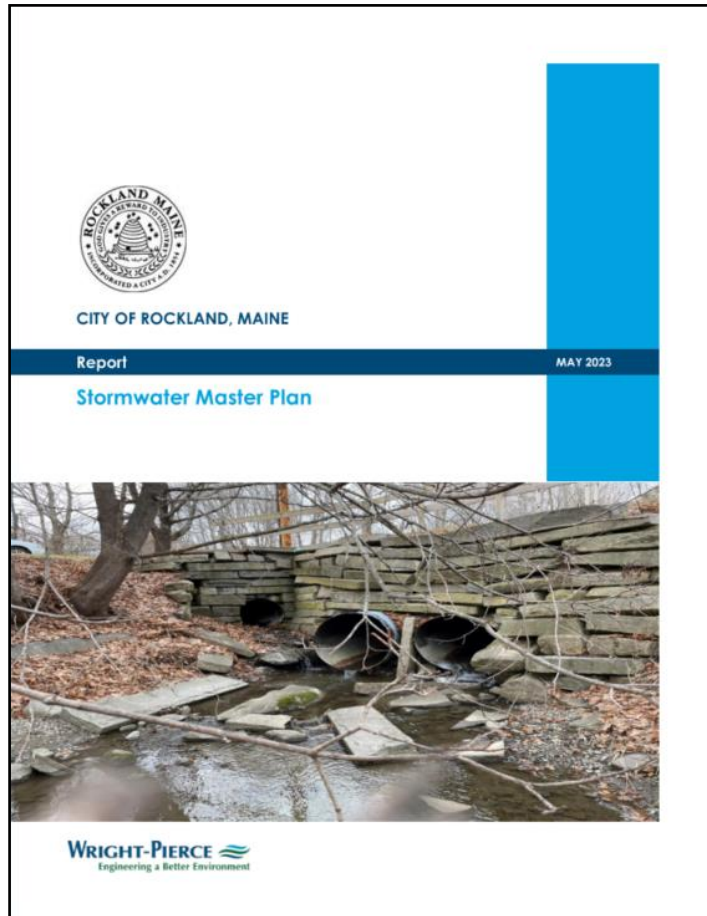


Owen Chaplin, PE
**Lead Project
Engineer**



Jess Richard
**Strategic Funding
Manager**

Stormwater Master Plan Recap



- Phase 2 completed in May of 2023
- Purpose
 - Provide the City with the framework to make educated and informed decisions about future stormwater improvement projects.
- Work completed:
 - Review existing conditions (record drawings, field recon, etc.)
 - Preliminary stormwater modeling (hydrologic & hydraulic)
 - Prioritizing alternatives (decision matrix)
 - Recommended projects
 - Research funding opportunities (grants, loans, SW utilities)

Increasing Flood Risks



- Halloween Storm October 2021
 - >5" rainfall in under 24 hours
 - 27 properties impacted
- Lindsey Brook limited hydraulic capacity



Knox Center (October 2021)



Lincoln Street (October 2021)

Recommended Projects – Priority List

Table 4-3 Prioritized Project List

Priority	Project Name	Type	Cost
1	Knox Culvert Replacement Project	Culvert Replacement	\$2,407,000.00
2	Crescent Street Outfall Separation Project	Sewer Separation	\$1,379,000.00
3	Summer-Maple Street Culvert Replacement Project	Culvert Replacement	\$2,900,000.00
4	Talbot Avenue West Culvert Replacement Project	Culvert Replacement	\$719,000.00
5	Granite-Grove Street Culvert Replacement Project	Culvert Replacement	\$2,566,000.00
6	Winter Street Outfall Redirection Project	Sewer Separation	\$1,018,000.00
7	Willow Street Culvert Replacement Project	Culvert Replacement	\$344,000.00
8	Broadway Culvert Replacement Project	Culvert Replacement	\$682,000.00
9	Lawn Avenue East Culvert Replacement Project	Culvert Replacement	\$307,000.00
10	Center Street Separation Project	Sewer Separation	\$220,000.00
11	Front Street Outfall Separation Project	Sewer Separation	\$6,897,000.00
12	Winter Street Outfall Separation Project	Sewer Separation	\$1,909,000.00
13	Maverick/Washington Street Storm Drain Re-Route Project	Sewer Separation	\$1,675,000.00
14	Samoset Road/Marie Reed Park Green Infrastructure Project	Green Infrastructure	\$134,000.00
15	School Street Separation Project	Sewer Separation	\$1,300,000.00
16	Grace Street Culvert Replacement Project	Culvert Replacement	\$387,000.00
17	Snow Marine Park Green Infrastructure	Green Infrastructure	\$237,000.00
18	Oak Street / Orient Street Parking Lot Green Infrastructure Project	Green Infrastructure	\$920,000.00
19	Ralph Ulmer Square Green Infrastructure Project	Green Infrastructure	\$153,000.00
20	Johnson Memorial Park Green Infrastructure	Green Infrastructure	\$247,000.00
21	Harbor Park Green Infrastructure Project	Green Infrastructure	\$140,000.00
22	Talbot to Rankin Flood Control Structure	In-stream Flood Control	\$1,620,000.00
23	Gay Street to Broadway Flood Control Structure	In-stream Flood Control	\$1,466,000.00
TOTAL PROJECT COSTS			\$29,731,000.00

Potential Stormwater Funding



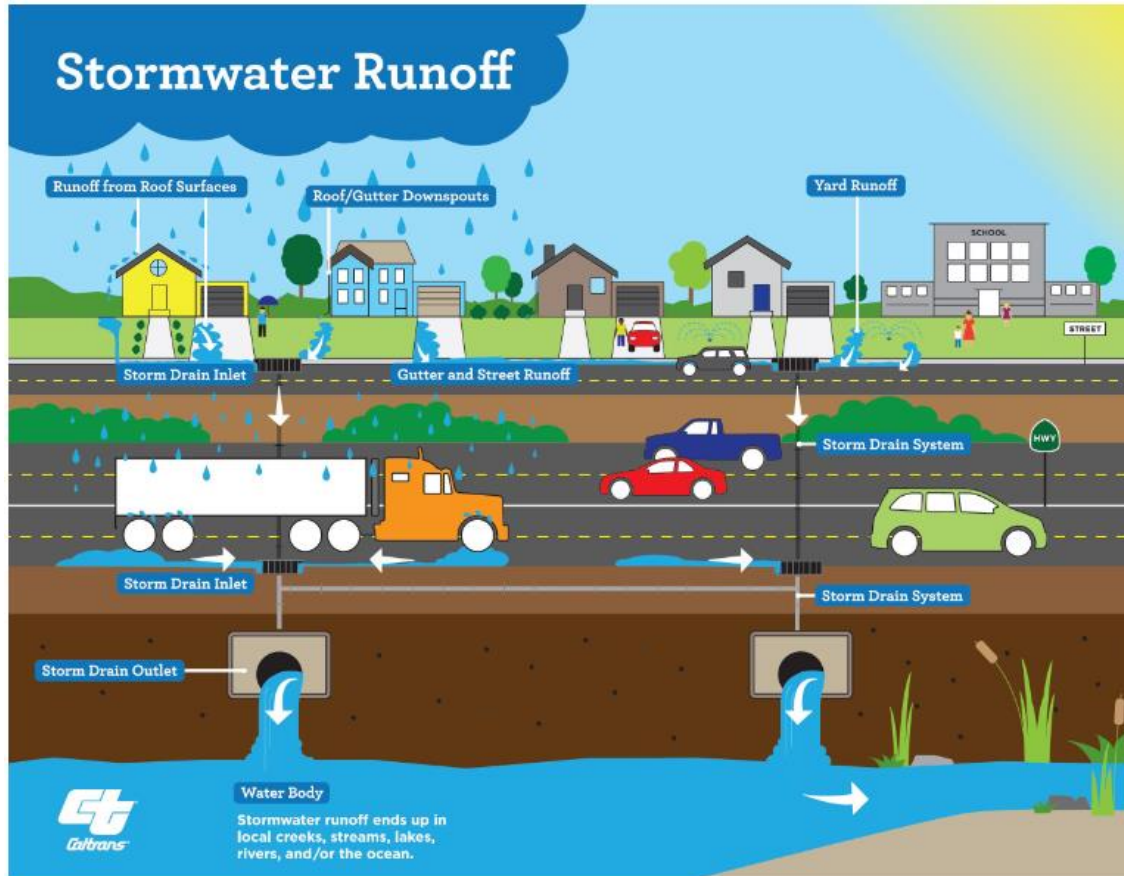
- **Potential Funding Sources**

- Capital Funds
- Bonds
- Grants
- Low-Interest Loans
- **Stormwater Utility**

- **Generates funding through user fees based on impervious areas**
- **Similar to dedicated municipal funds for public water and sewer**
- **Does it make sense in Rockland?**
 - **Workshops required with stakeholders**
 - **Need to understand stormwater needs and future costs**
 - **“Compelling Case” needed to identify pros and cons**
 - **Education and outreach needed**
 - **Rate & Billing analysis needed to identify data gaps**



What is a Stormwater Utility?



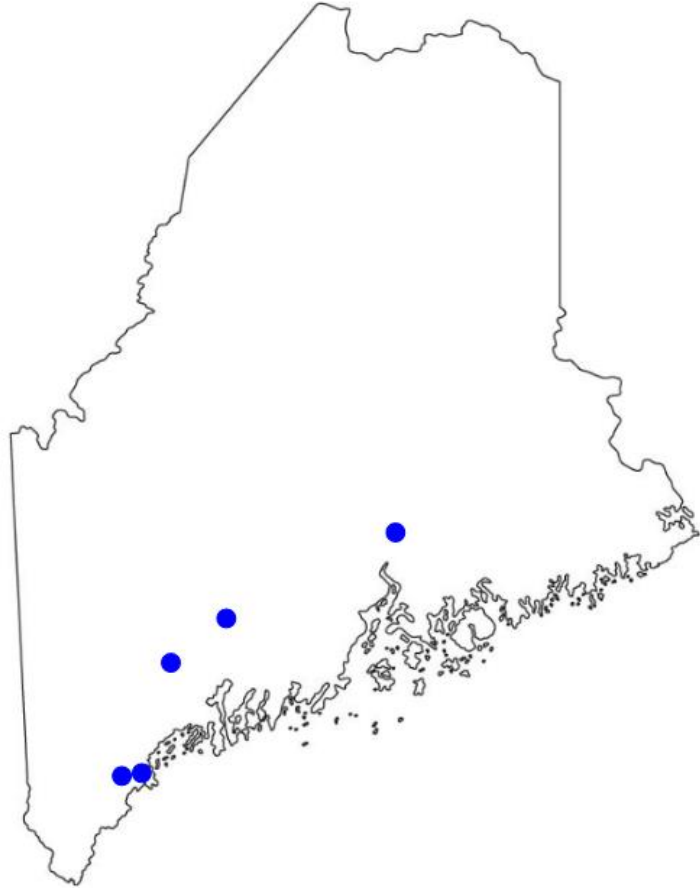
- A stormwater utility is a charge imposed on real estate owners for stormwater runoff generation, based on impervious area, to establish a stable funding source for stormwater management.
 - Credits potentially offered for mitigation
- These funds are used to help cover a variety of costs necessary for stormwater management throughout the City:
 - Regulatory compliance
 - Planning
 - Maintenance
 - Capital improvements
 - Repair or replacement of infrastructure

What is a Stormwater Utility?



- **Benefits of stormwater utility:**
 - **Stable Revenue**
 - **Address Existing Stormwater Issues**
 - **Improve Water Quality**
 - **Reduce secondary treatment at the City's Pollution Control Facility (PCF)**

Other Stormwater Utilities in Maine



- **Greater Augusta Utility District**
- **City of Bangor**
- **City of Lewiston**
- **City of Portland**
- **Long Creek Watershed Management District (LCWMD)**

Scope of Work



Workshops/public engagement



GIS Data Analysis



Billing unit data analysis



Revenue requirements



Rate Structure Development



Credit Development



Feasibility Report

Workshops/Public Engagement

Proactively educate interested parties about the need for improved stormwater management and funding and, importantly, for residents and business owners to educate stormwater utility proponents about their concerns.

- Review and refine the program design by soliciting stakeholder feedback.**
- Develop innovative and collaborative solutions.**
- Understand the balance between costs and services that fee payers can support.**
- Access local knowledge and expertise.**
- Create support for a consensus-based solution.**

GIS Data Analysis

The screenshot displays a GIS application interface. On the left, a dark sidebar contains a 'Workspace' panel with the following sections:

- Feature Layers:** Includes 'Polygon 1'.
- Data Layers:** Includes 'AI LAYERS'.
- AI LAYERS:** Includes 'Building' (checked), 'Surface Permeability' (expanded), and 'Surfaces' (expanded).

The 'Surface Permeability' section includes:

- Hard Surface
- Natural Pervious Surface

The 'Surfaces' section includes:

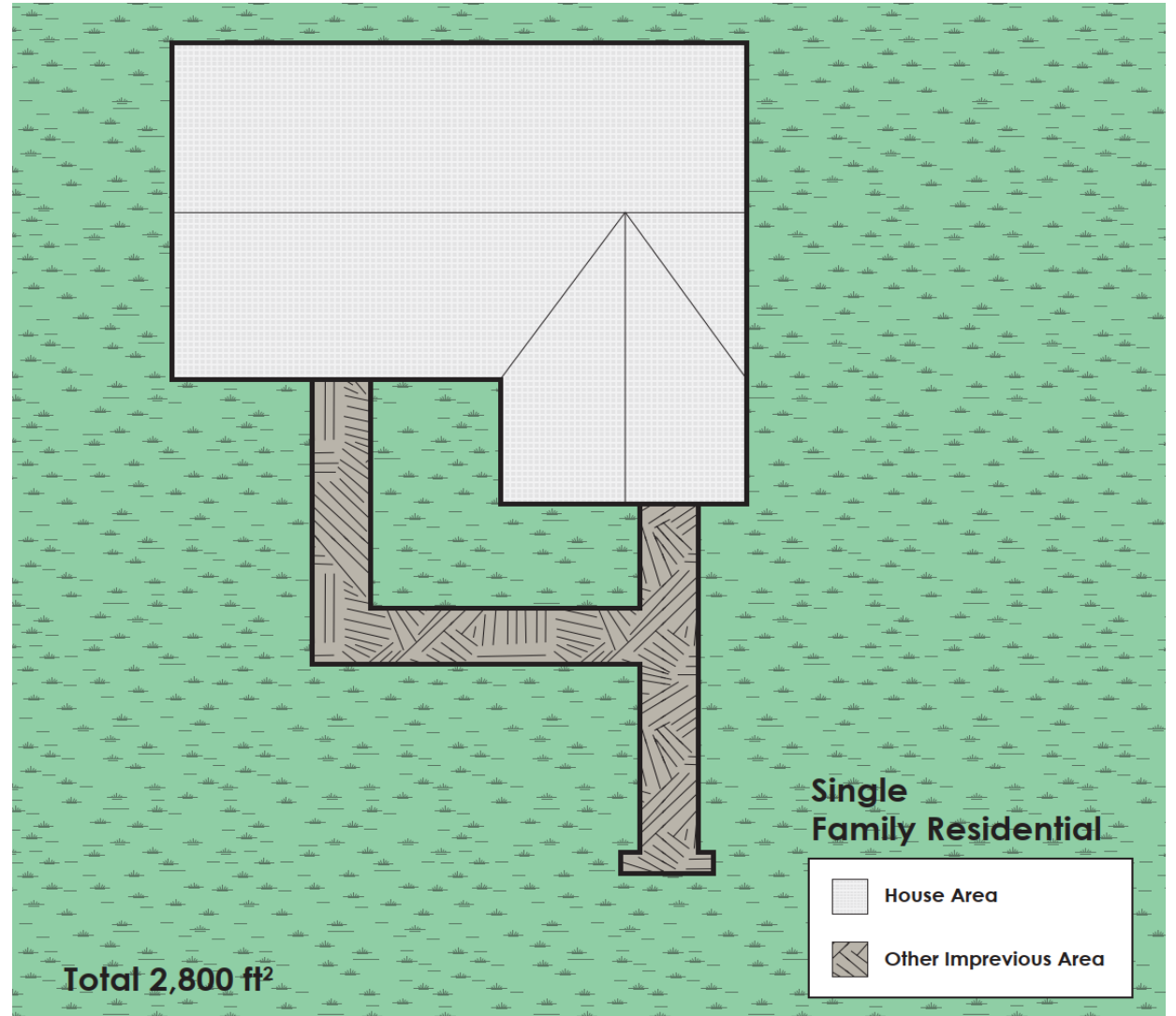
- Asphalt
- Concrete Slab
- Lawn Grass

The main map area shows an aerial view of a residential neighborhood. Buildings are highlighted in blue, and streets are highlighted in orange. The streets are labeled 'Spruce St', 'Pine St', and 'Cedar St'. A search bar and various tool icons are visible at the top of the map area.

Billing Unit Determination

An accurate analysis of impervious cover and a GIS database are important in developing the ERUs for each parcel.

- The median impervious area for single-family residential (SFR) parcels in City is used as the base ERU. This value is based each parcel's impervious cover using GIS data showing parcel boundaries, impervious area, and assessor's data including parcel areas and land use codes that identify residential, commercial, industrial, .
- The total ERUs for non-residential properties are calculated by dividing the impervious area by the ERU of a single-family residential parcel on each parcel's impervious cover using GIS data showing parcel boundaries, impervious area, and assessor's data,



Stormwater Revenue Requirement

1. **Administration** - Staff time for general stormwater program management, administrative support, public education, and emergency/disaster management.
2. **Engineering & Planning** - Stormwater Management Planning to the requirements that are incorporated into the MS4 permit.
3. **Operations & Maintenance** - Labor and materials for storm drain and culvert maintenance, minor repair and replacement, catch basin cleaning, street sweeping, and detention system maintenance.
4. **Regulation/Enforcement** - Stormwater permit administration and monitoring/inspection.
5. **Project Management** - Costs associated with planning for and implementing Stormwater Management Capital Projects.
6. **Stormwater Capital Projects** – Capital costs associated with major stormwater projects.

Rate Structure Development

Flat Fee	Equivalent Dwelling Unit	Impervious Cover
No geospatial database	Database with regular upkeep	GIS database
Equitable runoff accounting	Advanced runoff accounting	Accurately accounts for runoff
Simple	Moderate	Complex

Stormwater Credit Development



- Credits can be provided for onsite stormwater management with low-impact development (LID) and other types of “green” infrastructure and sustainable design. Stormwater Enterprise Fund credits typically run between 25% and 75% of the stormwater assessment when a credit is applied.
- Examples of practices used by stormwater utilities that qualify for credits include:
 - Dry Wells.
 - Infiltration Chambers.
 - Detention Ponds.
 - Bioretention.
- Credits are generally not given for sump pumps, rain barrels, or water filtration systems. “green” infrastructure types

Schedule

- **Task 1: Project Kickoff & Public Outreach – Ongoing**
- **Task 2: GIS Data Analysis – 1 month**
- **Task 3: Stormwater Billing Unit Data Analysis – 1 month**
- **Task 4: Stormwater Revenue Requirements – 2 months**
- **Task 5: Stormwater Rate Structure Development – 1 month**
- **Task 6: Stormwater Credit Development – 2 months**
- **Task 7: Stormwater Utility Feasibility Report – 2 months**
- **Anticipated Completion date – November 2024**

Following Feasibility Study

If stormwater utility is determined to be a feasible option, what are the next steps?

Ordinance Proceedings and Adoption

4 – 6 months

Where Will Updates be Available?

City of Rockland website:

<https://rocklandmaine.gov/stormwater-utility/>



The screenshot shows the City of Rockland website's "Stormwater Utility" page. The header includes the "Rockland" logo, a search icon, and navigation links for "43F", "November 26th, 2023", "Report It, Fix It", "Alerts & Announcements 6", and "Doing Business". A "My Rockland" button and another search icon are also present. The main content area features the title "Stormwater Utility" and a breadcrumb trail "Home / Stormwater Utility". The page text states: "This page will contain information about the City's exploration of the creation of a stormwater utility for Rockland. More information coming soon. For now, here is the City's [Stormwater Master Plan](#)."

THANK YOU
