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Agenda

Welcome, Overview, and Introductions
- Goal for Meeting #1

Management of Drainage Today
- Challenges in Laramie
- Master Plan – Priorities
- Key Questions for the SFG

Potential Funding Solutions

Expectations and Process

Discussion, Feedback, and Wrap Up

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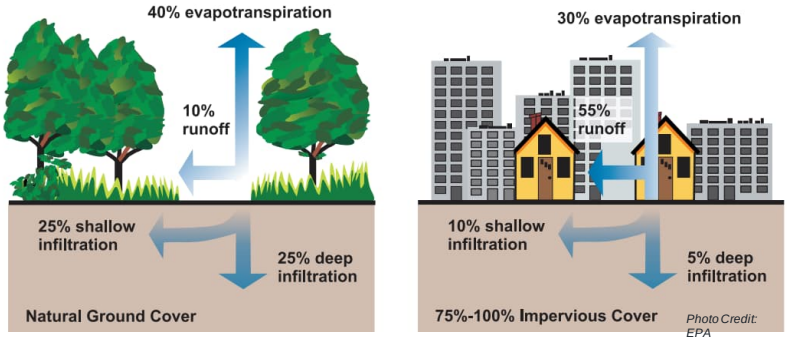
Management of Drainage Today

Pre 1980 – get the runoff into the streams as fast and efficiently as possible

1980-1995 – detain and slow down the rate of movement

1995 – 2005 – reduce the pollution carried by the runoff

2005 – mimic nature and use “green solutions”



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HISTORY OF STORMWATER MANAGEMENT STRATEGIES

Pre-1980 (Local Drainage Control)

- Why? Flooded streets and property
- How? Get runoff away from streets and buildings as fast as possible
- What? Curb & gutter, inlets, pipes, ditches, culverts, & outfalls

1980-1995 (Local Flood Control)

- Why? Flooding from overwhelmed streams and public systems
- How? Store runoff then release it at the pre-development rate
- What? Detention ponds

Dry Detention Basin

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HISTORY OF STORMWATER MANAGEMENT STRATEGIES

Water Quality Control

- Why? Polluted streams, lakes, etc.
- How? Federal and State regulations
- What? National Pollutant Discharge Elimination System (NPDES) Permits
  - 1980's - Industrial dischargers
  - 1990's - Large municipalities and counties > 100,000 population (MS4 permits)
  - 2000's – Small municipalities > 50,000 population (MS4 permits)

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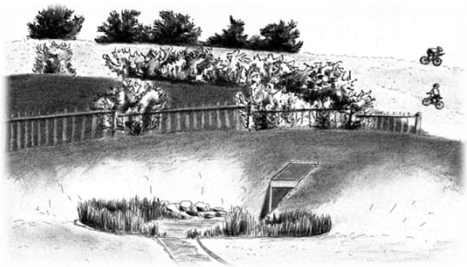
HISTORY OF STORMWATER MANAGEMENT STRATEGIES

1995 – 2005 (Reduce Pollution from Stormwater)

- Capture "First Flush"
- Store and Slowly Release (typically over 40 hours)
- Allow sediment (and other pollutants) to settle out

Original EPA requirements

80% TSS Removal BMPs



Water Quality Pond, Graphic from Mile High Flood District

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SINCE 2005: LOW IMPACT DEVELOPMENT AND GREEN INFRASTRUCTURE

Gray approach:

- Use basins, pipes & ditches to remove pollutants from stormwater before discharge

Green approach:

- Use soil & vegetation to manage rainwater close to where it falls, matching pre-development discharge volume

Source: Tompkins County NY (Bioswale)

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Green Infrastructure Option for Laramie

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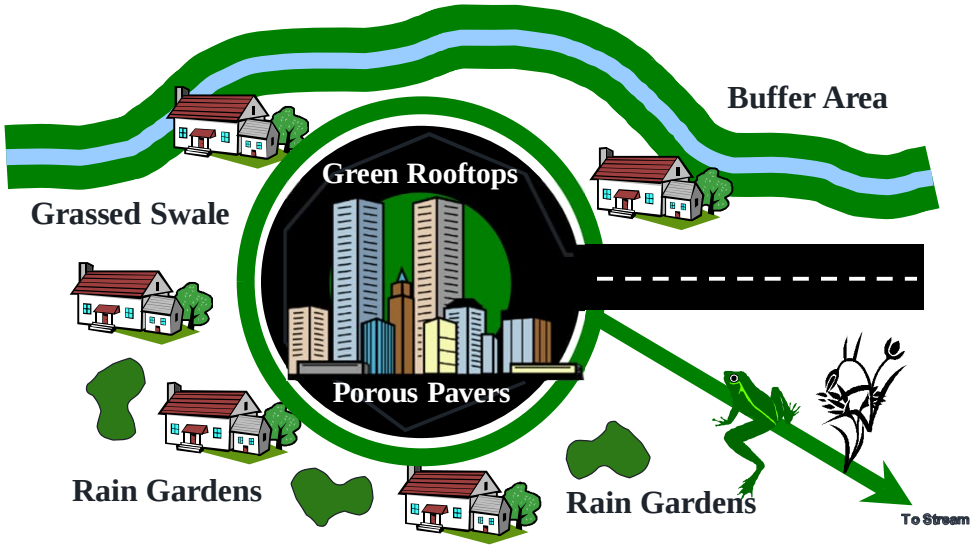
Green Stormwater Infrastructure – Addresses Quantity and Quality



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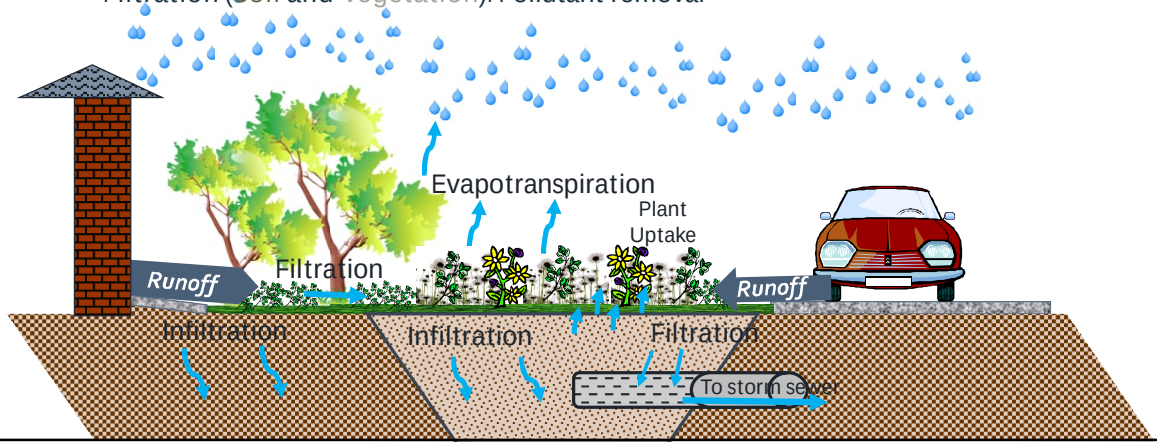
Green Infrastructure Mechanisms

Infiltration (Soil): Volume reduction & pollutant removal

Evapotranspiration (Vegetation): Volume reduction

Plant Uptake (Vegetation): Volume reduction and pollutant removal

Filtration (Soil and Vegetation): Pollutant removal



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Green Infrastructure Examples





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Green Infrastructure Examples




Photo Credit: Georgia SWM

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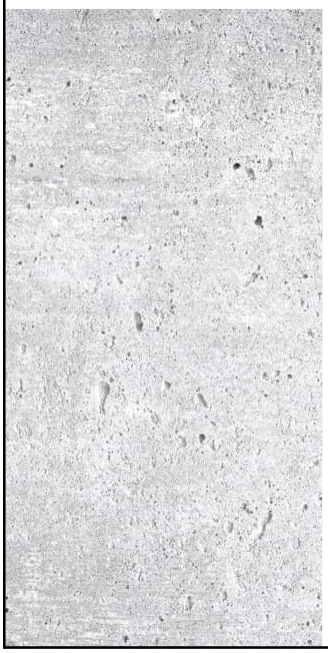

Key Questions for the Focus Group

Think about these topics as we discuss program assessment in Phase 1.

1. **What concerns, issues, challenges do you encounter when it rains?**
2. **What are the expectations of the community for City management of the drainage system?**
   a) 1. Key targets and goals for public infrastructure?
   b) 2. Developer responsibilities?
   c) 3. Flood reduction or mitigation?
   d) 4. Water quality improvements and protection?

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Stormwater Management Current Services

Key Program Activities

- System design and construction oversight
- Engineering - System Inspection
- Master planning and future needs assessment
- Disaster recovery and incident management
- General operation and maintenance of the drainage network
- Long-range planning
- Customer service
- Administration and finance

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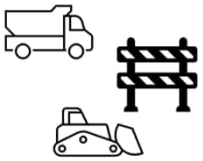
Organizational Roles



Public Works - Streets Division

- Streets personnel provides routine maintenance such as:
  - Street Sweeping
  - Cleaning and inspection of inlets
  - Cleaning of lateral and main lines
  - Flushing system components on problem areas
  - Gutter bin installation and maintenance

Parks

- Maintenance and operation of stormwater systems in the Parks

Engineering Division

- Technical support in planning, design, and implementation of studies and projects
- Floodplain administration
- Field inspection of reported issues/failures

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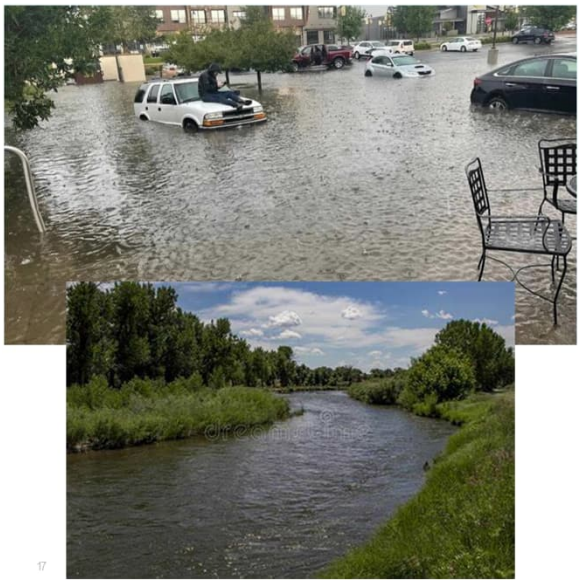
Flooding and Stormwater Issues



- Water Quantity - Increased Flooding
  - Rainfall Volumes & Frequency
  - Urbanization
  - Older Developments
  - Unpaved Streets
- Water Quality - Increased Pollutant Discharges
  - Cleaner Streams and Rivers
  - Impairment of streams may trigger mandates on Laramie (i.e. Town of Jackson)

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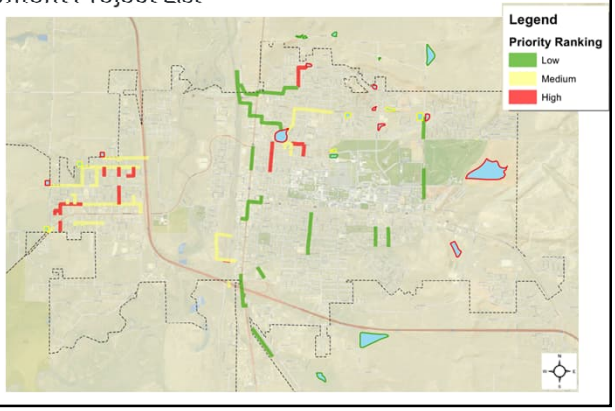
Citywide Master Plan

1) Combined Three Previous Master Plans (West, North, South) into Single Document
2) Created City-Wide Map of Stormwater System
3) Created City-Wide Model of Stormwater System
4) Developed Prioritized Capital Improvement Project List

Master Plan	Year Completed	Study Area (acres)	Total Cost of Proposed Projects (Adjusted to 2022 dollars)
West Laramie	2010	903	$18.9M
North Laramie	2013	2,560	$48.3M
South Laramie	2017	39,000	$68.3M
Total			**$135.5M**



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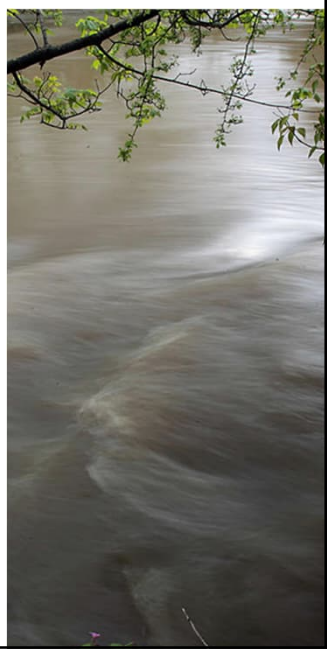
Future Services

Development of Levels of Service (LOS) Options 3 Strategies

Each level provides a variable option and selected LOS can vary across the service areas.

Assumptions are documented for each option within each service.

Services	Basic	Medium	High
Asset Management	X		
Planning and Engineering		X	
Operations and Maintenance			X
Capital Improvements		X	
Administration	X		



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Future Services

Level of Service (LOS) Analysis – 3 Options

Basic

- Increase maintenance capacity
  - Two PW Street Workers
  - New Vac equipment
  - Transferred CCTV from utilities
- Target system cleaning and repair
- Maintain capital investment to address Master Plan over initial 5-to-10-year period
- Utilize engineering contracts for CIP

Median

- Increase maintenance capacity
  - Four PW Street Workers
  - PW Crew Leader
  - Equipment
- Increase engineering capacity
  - Engr. Tech
- Dedicate part-time support for financial management
- Increase CIP investments over 5-to-10-year period and evaluate progress on the Master Plan implementation

High

- Increase maintenance capacity
  - Six PW Street Workers
  - PW Crew Leader
- Increase engineering capacity
  - SW Engineer
  - SW Engr. Tech
- Dedicate part-time support for financial management
- Increase CIP investments over 5-to-10-year period and evaluate progress on the Master Plan implementation

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Future Services

LOS Summary – Cost Projection

Level of Service	FY22 Baseline	Future Cost Projection
Basic	$915,754	$2,536,329
Medium	$915,754	$6,692,029
High	$915,754	$12,924,469

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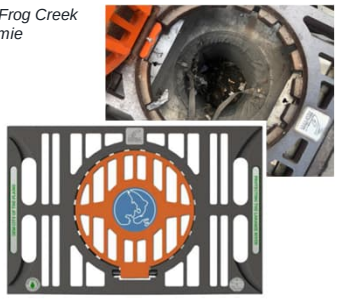
Phase I – Recommended Improvements

- Implementation of Master Plan capital projects
- Pipe rehabilitation – continued effort through lining pipes
- New system installation for underserved areas of the City
- Improve water quality of runoff – reduce sediment loading into the system
- Expand use of Gutter Bins
- Add staff resources in engineering and maintenance

Gutter Bins, Photos from Frog Creek Partners and City of Laramie



22nd & Nighthawk Pond Retro-fit for Extended Dry Detention

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Funding Options

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How can drainage services be funded?

- Real Property Tax based on property value
- Special Sales Tax
- Stormwater Drainage Fee
- Special Assessment on benefiting properties
- Grants
- Development fees

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Drainage Fees

What is a drainage fee?

- Both a fee and program for services, much in the same way that one pays for water or sewer service.
- Fees are placed in an enterprise fund and can only be used for stormwater purposes.
- Based on demand for a public drainage system, measured by impervious surface.

Wyoming legislation authorizes drainage fees for stormwater management in Title 15.

Cody adopted in 2022.

Jackson evaluating in 2023/24

Laramie – Phase I completed in 2022

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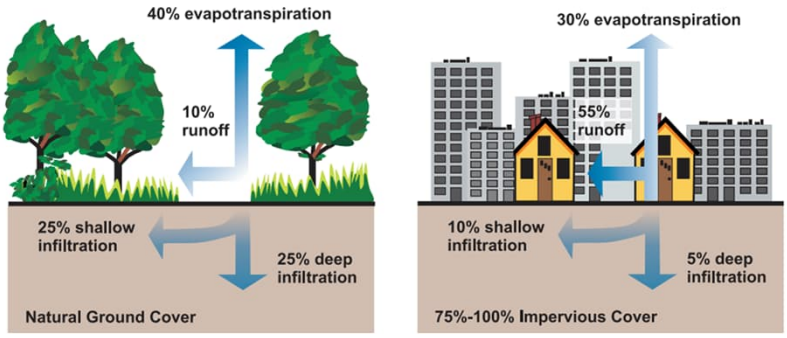
Impervious Area is the Standard Meter in Stormwater User Fees



Impervious area, such as buildings, sidewalks, driveways, parking, and travel ways, increases the demand for a publicly owned, operated and maintained drainage system. Protects property, life, safe travel, and the natural environment – benefiting all within the community.

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Steps for Generation of Revenue

- Establish local authority to distribute costs to property owners
- Integrate a charge per property as a drainage fee
- Track revenue and adjust charges
- Communicate progress/achievements

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Stormwater Focus Group Expectations and Engagement Process

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Role of the Focus Group

Provide advice on the direction of the City's drainage program and potential funding options– including a drainage fee.

Review background developed by the consultant and provide feedback.

Represent a diverse range of interests.

Provide a critical link back to the community.

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Accomplishing Your Mission

- Speak your mind and participate actively.
- Listen carefully and be willing to be persuaded.
- Spend the time needed to provide constructive input.
- Consensus is great, but disagreement is fine if we do it agreeably. All points of view will be captured.
- Consider the City's overall needs as well as the needs of the group you represent.

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Behind the Scenes – Next Steps

- Staff Interviews
  - Confirm Phase I information
- Analysis of Geographic Information System (GIS)
  - Evaluate new data to support drainage fee based on impervious surface area
- Analysis of Potential Billing Systems
- Finalize program, costs, drainage fee operations
- Develop ordinance to adopt fee structure

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Discussion and Feedback

1. What concerns, issues, challenges do you encounter when it rains?
2. What are the expectations of the community for City management of the drainage system?
3. What are your suggestions about the Focus Group process?

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Thank you

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