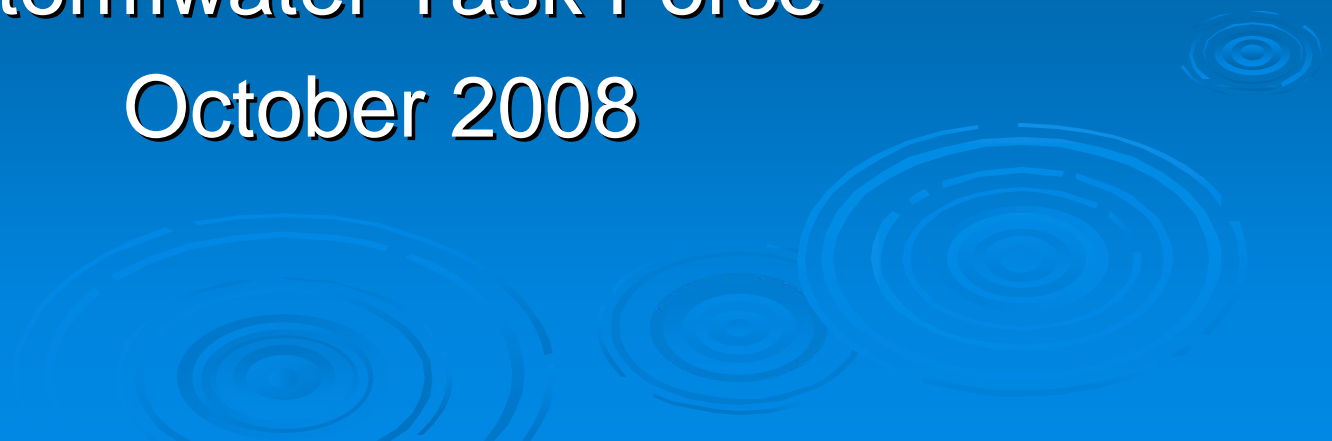


Stormwater in Burlington

Presented by the Mayor's
Stormwater Task Force

October 2008



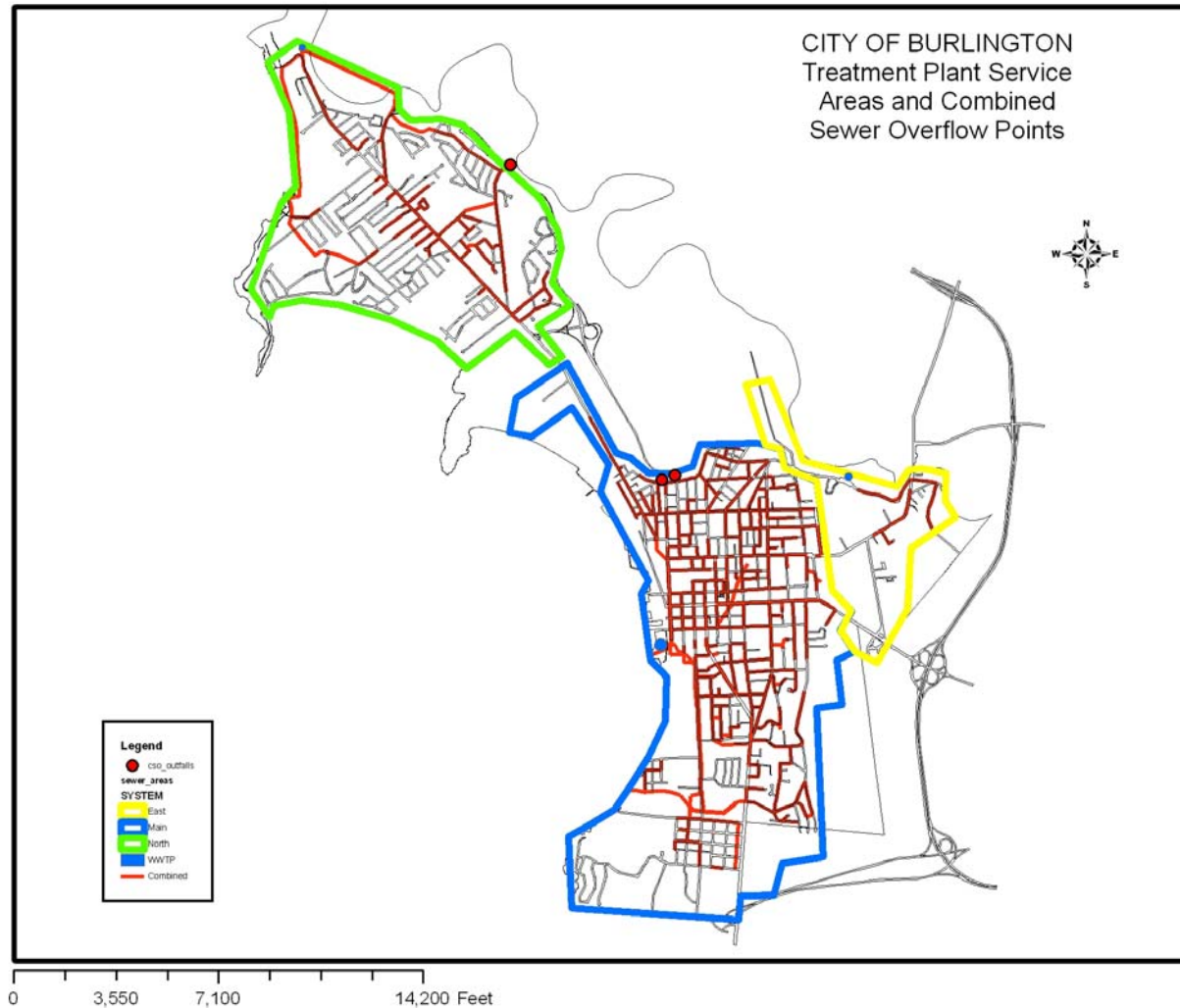
What is Stormwater?



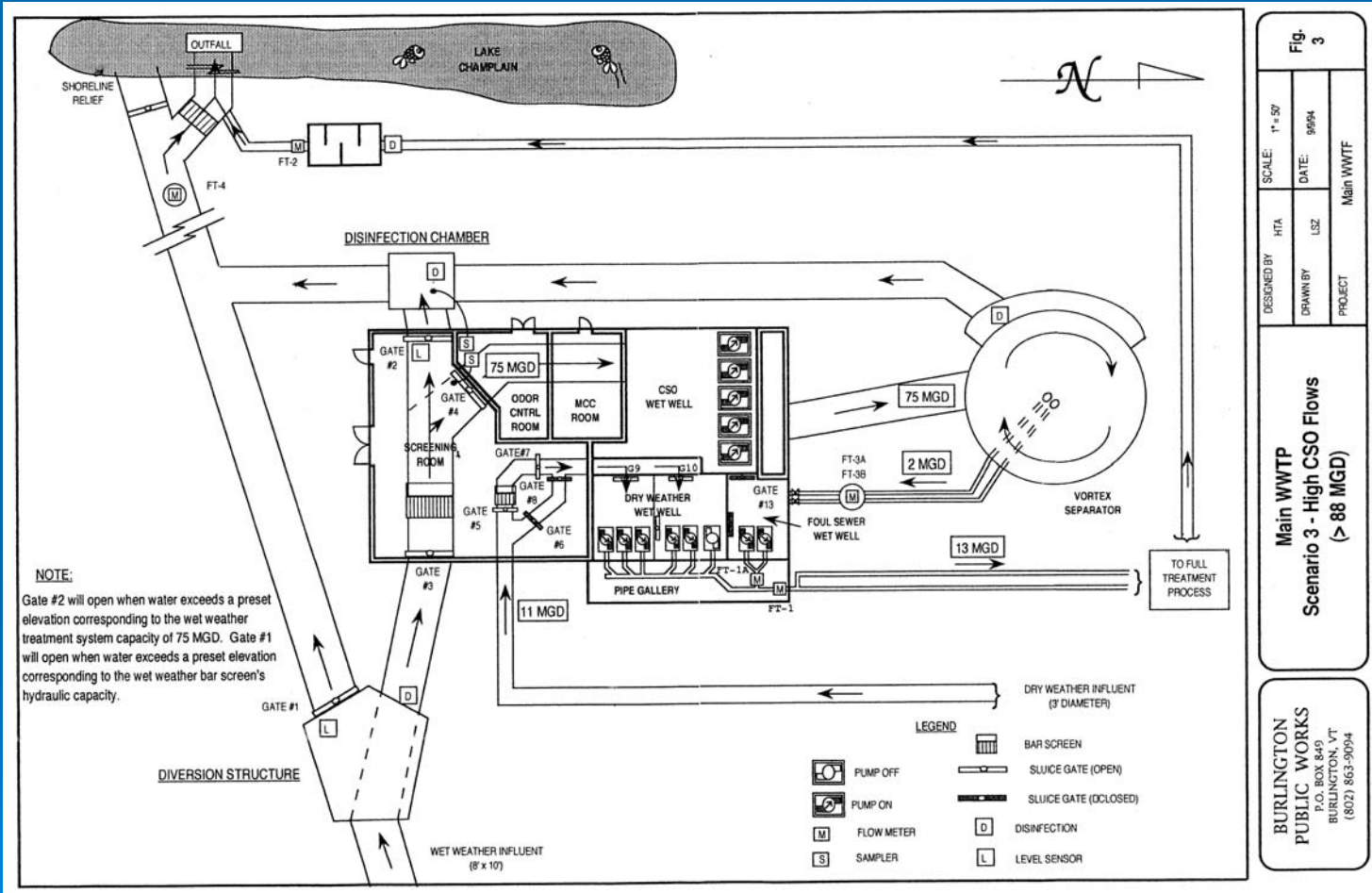
What are the Problems?

- Significant source of pollution, including phosphorous
- Sediment and debris clogs infrastructure
- Inadequate infrastructure maintenance
- Disjointed, ad hoc approach to stormwater management – no central authority
- No dedicated funding or staffing
- EPA & ANR permit compliance

City Stormwater Infrastructure



Main Wastewater Plant



DESIGNED BY	HTA	SCALE:	1" = 50'	Fig. 3
DRAWN BY	LSZ	DATE:	9904	
PROJECT	Main WWTF			
Main WWTP				
Scenario 3 - High CSO Flows				
(> 88 MGD)				
BURLINGTON PUBLIC WORKS				
P.O. BOX 649 BURLINGTON, VT (802) 863-5004				

Three Remaining CSO Points



Volume & Intensity of Rain Matter



Stormwater Outfalls



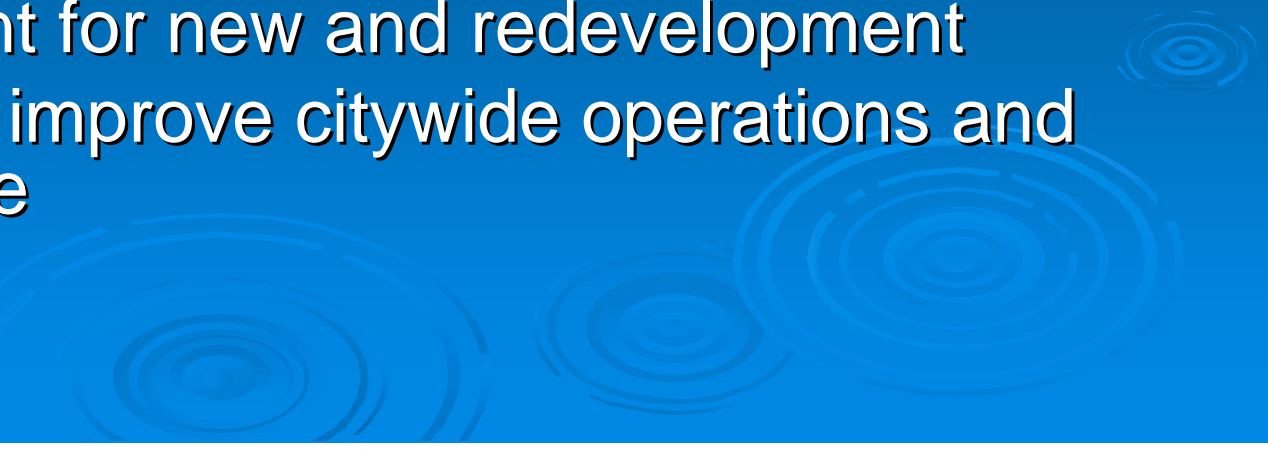
EPA & ANR Permits

- National Pollutant Discharge Elimination System (NPDES)
- EPA, Clean Water Act
- Combined sewer system permit (CS)
- Separate storm system permit (MS4)
- 5 year permit cycle, new cycle started this year, bar has been raised
- Compliance is NOT optional

CS & MS4

- Combined System Permit (CS)
 - Applies to combined sewer/stormwater system
 - Serves 60% of City
- Separate Storm System Permit (MS4)
 - Applies to stormwater only system
 - Serves 40% of City
 - 1st Issued in 2003, renewed in 2008
 - 6 Required Minimum Control Measures


Separate Storm System Permit (MS4) six minimum control measures

1. Establish public education and outreach program
 2. Improve public involvement and participation
 3. Improve illicit discharge detection and elimination thereof
 4. Delineate construction site stormwater runoff controls
 5. Enhance post-construction stormwater management for new and redevelopment
 6. Assess and improve citywide operations and maintenance
- 

Infrastructure Issues

- Increase Catch basin cleaning & repair damaged catch basins
- Reducing CSO's at Main Wastewater Plant
- Need for post-construction stormwater system inspections of private systems
- Aging Collection system
- Future stormwater treatment requirements

How Do We Improve?

- Comprehensive Stormwater Regulation
 - Dedicated staff & funding
 - Improved and centralized operations and maintenance
 - Capital investment
- 

Comprehensive Stormwater Regulation

- Administration
- Illicit discharges and connections
- Construction site management
- Post-construction inspections and maintenance
- Enforcement
- All of the rules, roles, and responsibilities in one place

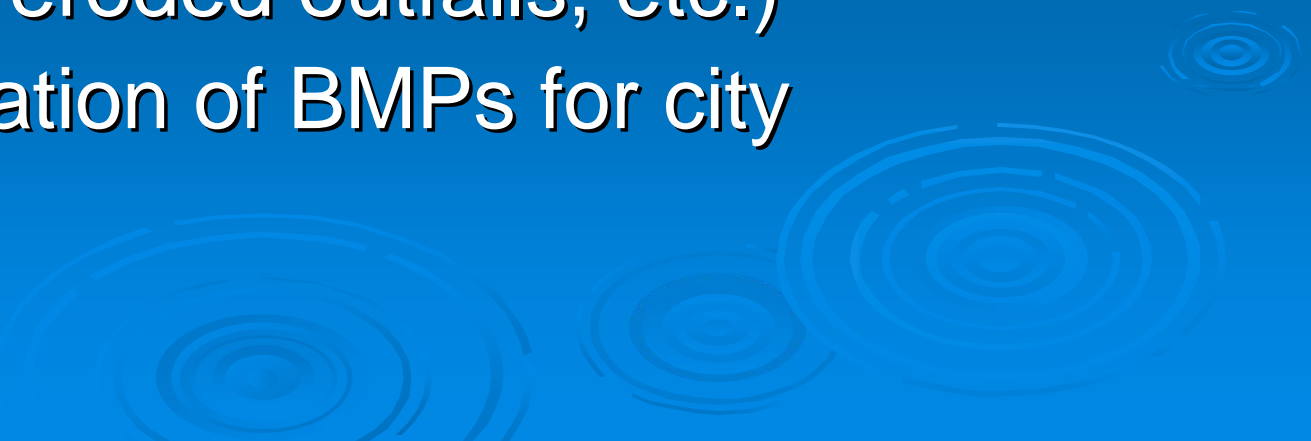
Onsite Inspections



Dedicated Staff

- Establish stormwater program in Public Works to deal with:
 - Project review
 - Onsite inspections
 - Enforcement
 - EPA & ANR permit compliance
 - Infrastructure operations and maintenance
 - Public education and outreach
 - Staff training
- Stormwater Staff (Engineer & Techs)

Improved O & M

- More frequent cleaning of:
 - Catch basins
 - Wastewater treatment plants
 - Streets
 - Inspections, repair, and maintenance of stormwater infrastructure (pipes, detention structures, eroded outfalls, etc.)
 - Implementation of BMPs for city operations
- 

Capital Investment

- The city's stormwater infrastructure is aging and in declining condition
- Lines in need of repair and replacement
- Additional stormwater capacity may be needed at Main Wastewater Treatment plant



Wastewater Permitting

- Presently done by the State
- City would obtain delegation
- One-stop-shopping for applicants
- Wastewater tied to stormwater within combined system service area
- Self-sustaining program administration
 - \$0.25 per gallon; \$105 minimum fee
 - ~ \$10K per year permit fees

What Will It Cost?

- About \$1 Million Annually
 - Catch Basin Maintenance
 - Storm Line/Outfall Repair
 - Public Education/Outreach
 - Engineering
 - Sweeping/Cleaning Basins
 - Equipment Costs
 - Capital Replacement & Improvement
 - Administration & Enforcement

Funding Options

- General Fund Tax
- Permit Fees
- Existing User Fees – Wastewater
- New User Fee – Stormwater

Preferred Option

- Stormwater user fee
- Based on impervious surface area
- Ties costs to service
- Broad based, applies to all properties with impervious surface (tax exempt or not)
- Small monthly fee spread across the city
- Legally dedicated, stable revenue source

Proposed User Fee Structure

- Monthly fee based on impervious surface
- Impervious surface unit (ISU) = 1,000 sf
- Flat fees for single family homes, duplexes, & triplexes
- ISU per property for all other uses
- Fee billed with water/sewer bill

User Fee Credits

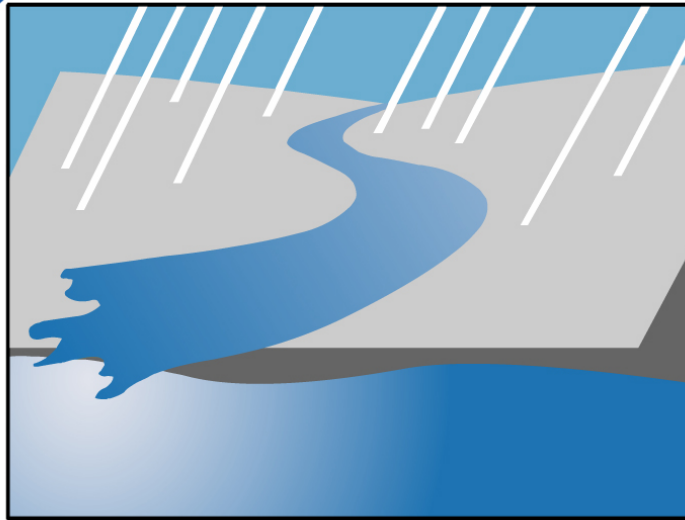
- Credits available for non-flat fee properties
- Separate non-traditional MS4 system
 - Handle most stormwater separate from city
 - Up to 50% credit
- Onsite stormwater management
 - Low Impact Design
 - Provide onsite detention and treatment
 - Up to 50% credit

Billing & Database Management

- Billed monthly with water/wastewater bills
- Impervious surface information updated by “live” connection to AMANDA permit system
- ISU fees adjusted accordingly

Questions?

SMART
Water **WAYS**



Add Up to Cleaner Water