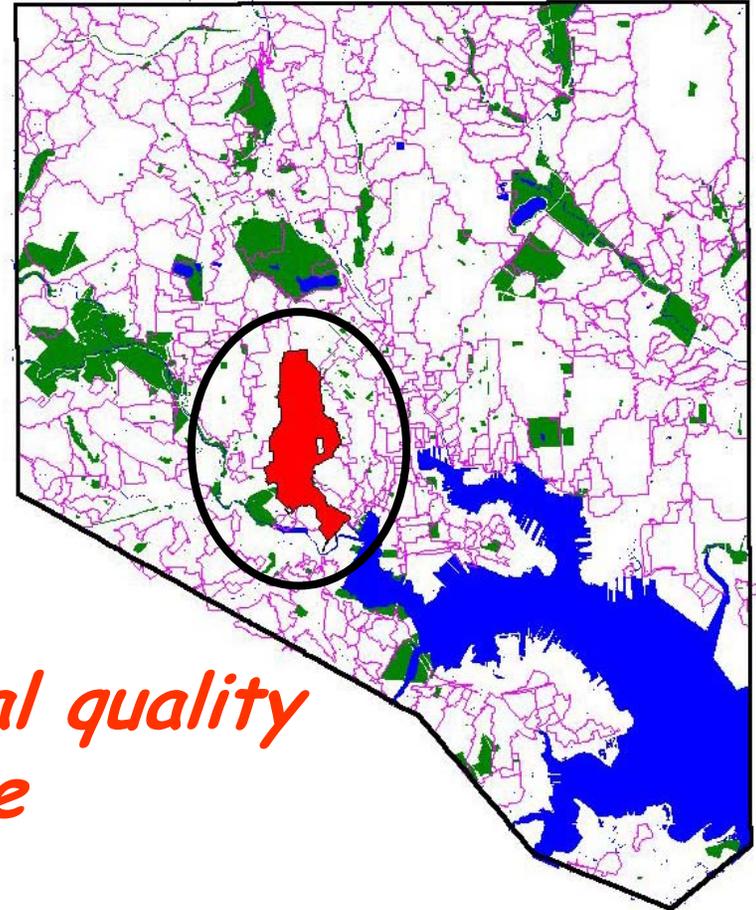


WATERSHED 263

Baltimore Urban Watershed
Restoration Cooperative



*Improving both environmental quality
and community quality of life*

Baltimore's Watersheds & stormsheds



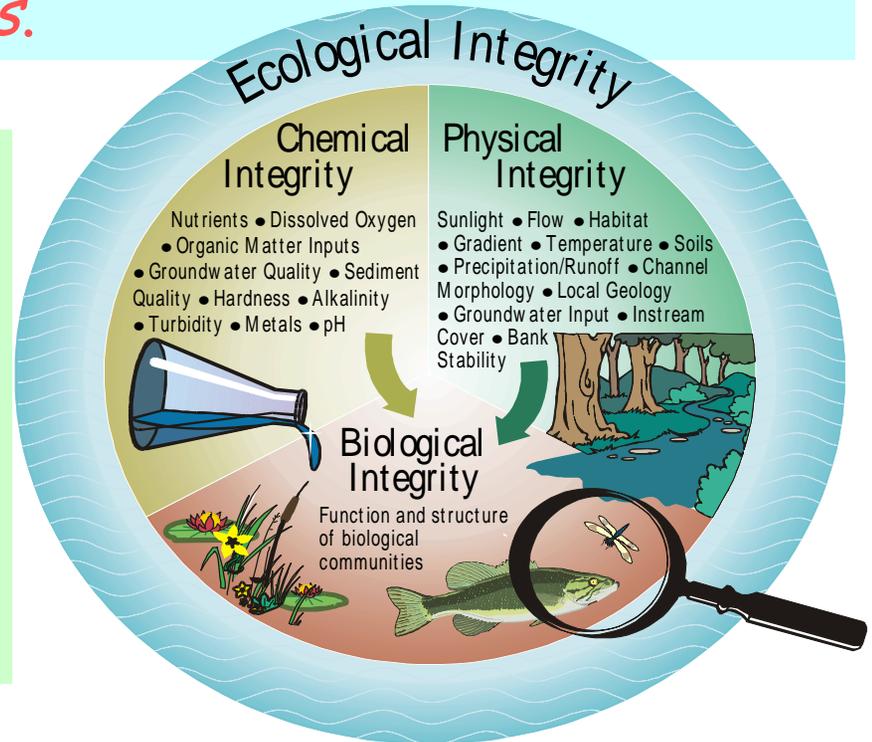
Watershed 263 is one of 355 storm watersheds in the City

Watershed restoration

WHY

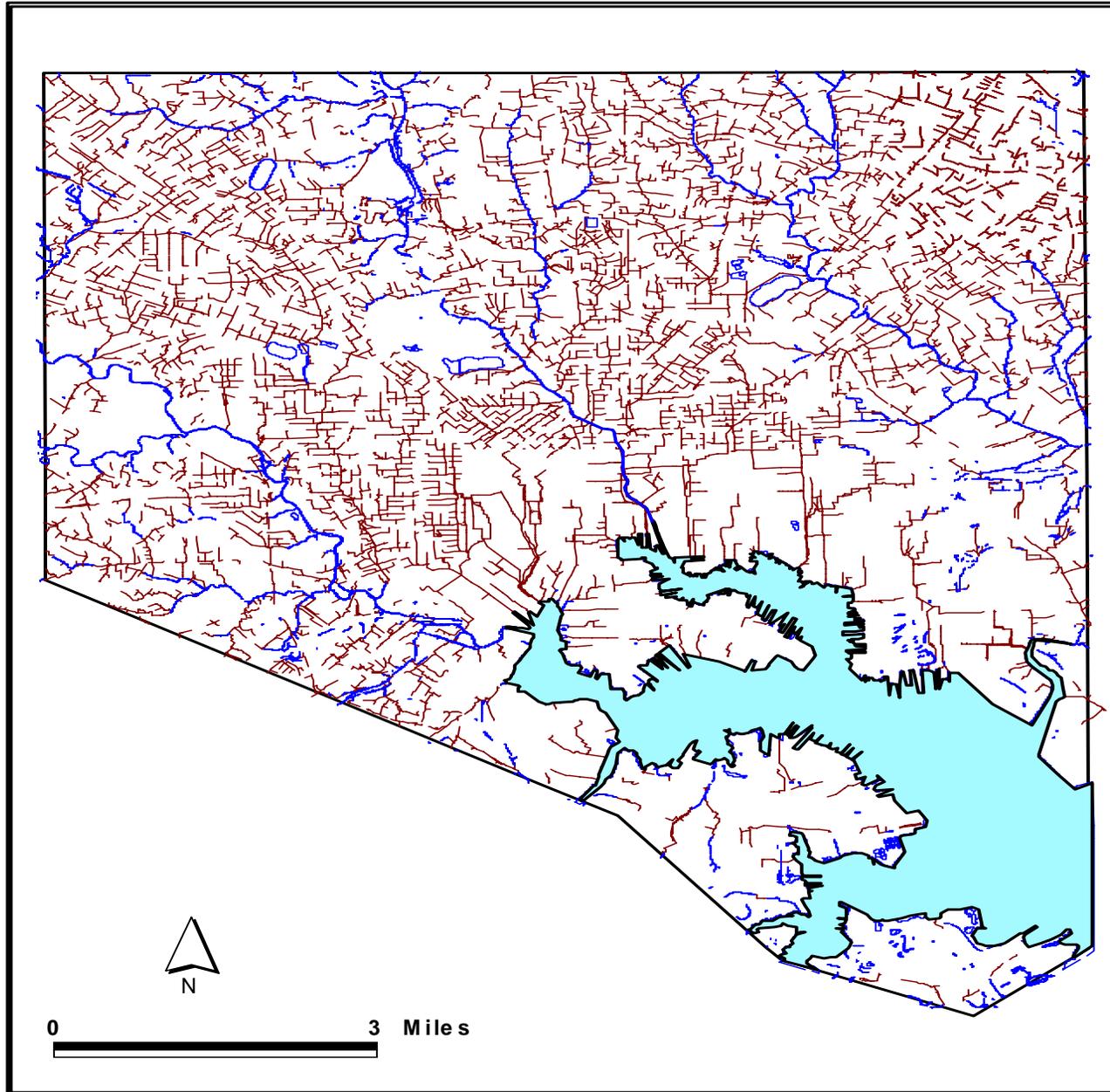
The primary goal of the 1972 Clean Water Act is to *restore and maintain the chemical, physical, and biological integrity of the Nation's waters.*

One of the goals of Chesapeake 2000 is...*achieve and maintain the water quality necessary to support the aquatic living resources of the Bay and its tributaries and to protect human health.*



Working with neighboring jurisdictions, the State, and federal authorities, the City is responsible for addressing these goals.

Baltimore City Storm Drainage Network



SO...

How do we develop a watershed restoration strategy for enclosed streams where the environmental quality and community structure of the watershed are impaired?

THE RESTORATION PLAN

WHAT

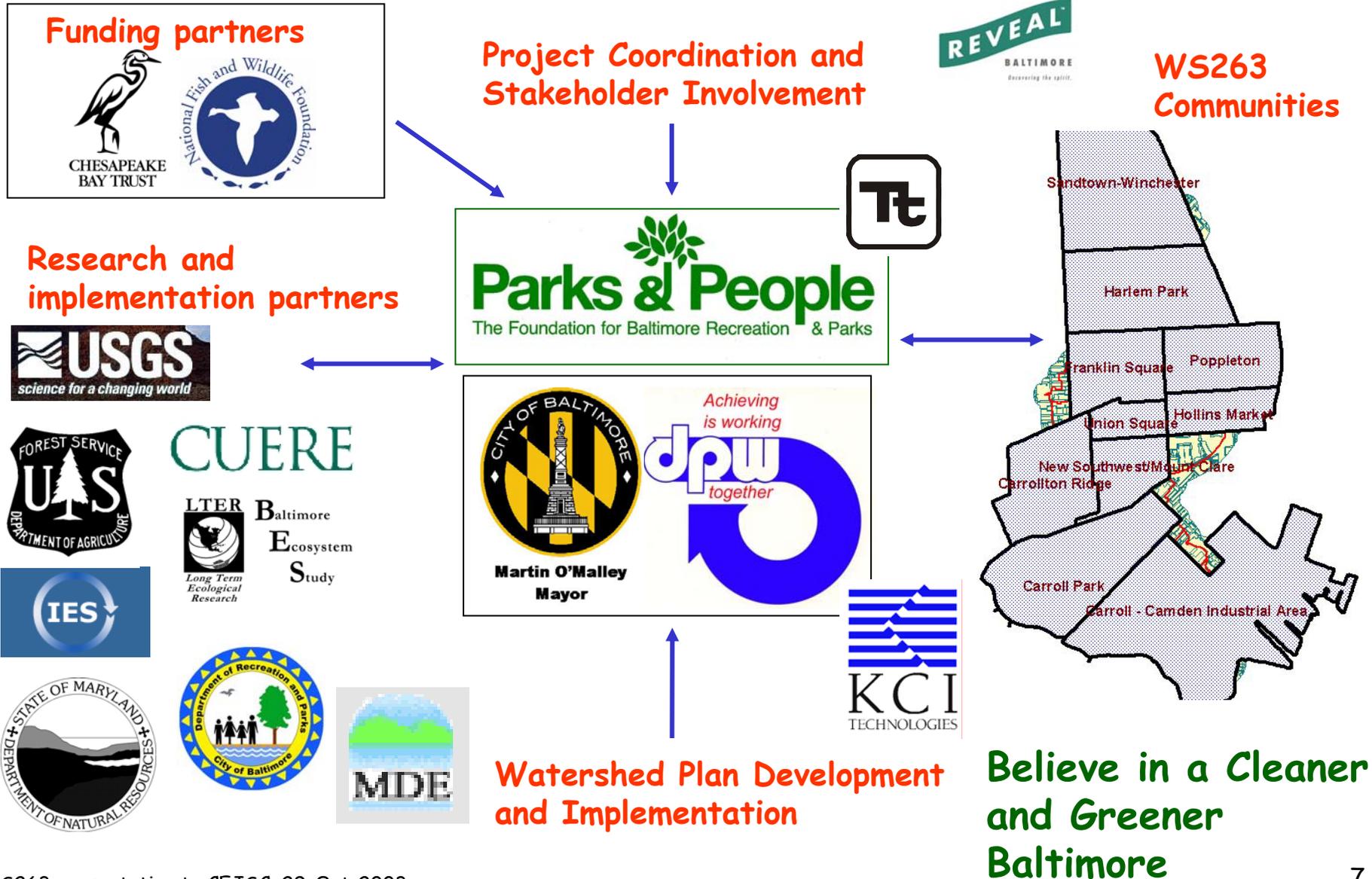
**USE A WATERSHED APPROACH TO
RESTORE, REVITALIZE, & SUSTAIN**

**ENVIRONMENTAL QUALITY &
COMMUNITY QUALITY OF LIFE**



WS263 Project Partners (so far...)

WHO



Environmental restoration plans typically focus on improving the habitat



Our RESTORATION PLAN must...

- ✓ Have realistic goals
- ✓ be community based & driven
- ✓ focus on both structural & non-structural ("greening") measures
- ✓ **target both environmental quality & quality of life goals.**



Prioritize restoration strategies that will have the greatest impact on the goals identified by the community and partnering organizations (stakeholders) and selected by consensus and commitment

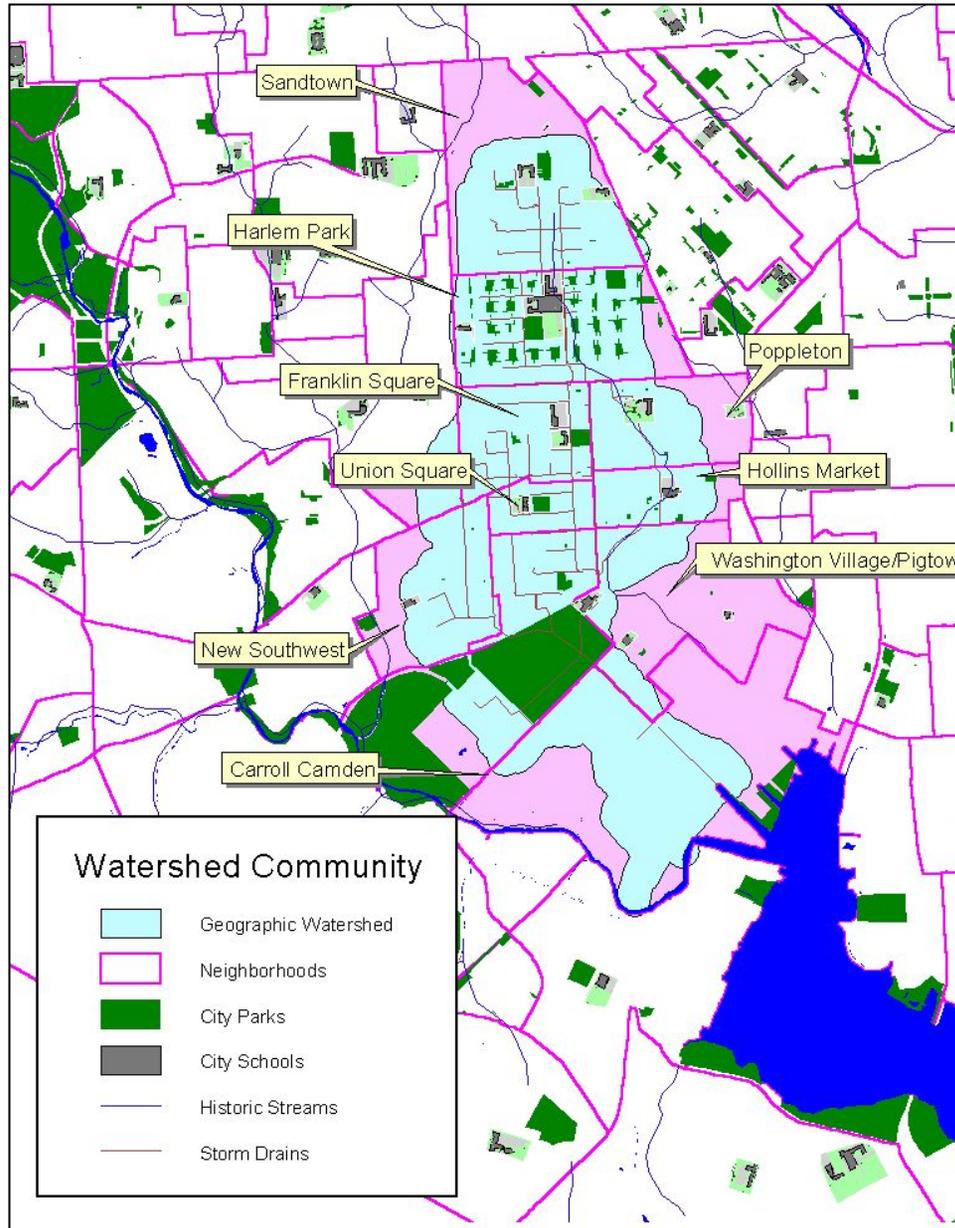


We screened dozens of watersheds using GIS

- ✓ Watershed 263 is an area where there is already a high level of
 - **community readiness &**
 - **potential for sustainability...**

- 
- ✓ Potential for greening and removing impervious cover
 - ✓ Existing community-based greening and environmental stewardship efforts
 - ✓ Potential for quality-of-life improvements
 - ✓ Available resources from partnering organizations
 - ✓ Community readiness...many of the communities are organized and have already identified goals
 - ✓ Several allied organizations and programs active in the watershed

WATERSHED 263



- ✓ 900-acre area containing part of 12 City neighborhoods
- ✓ Many minority and economically disadvantaged communities
- ✓ High impervious surface (75%) and small area in ground cover (19%) and tree canopy (5.5%) — No longer any surface streams
- ✓ Home to 30,000 people
- ✓ Entirely urbanized with mixed industrial, institutional, and residential land uses
- ✓ Significant but dispersed public parks and private open space (about 30%)

Fuzzy Watershed Area



**WS 263 MANAGEMENT PLAN
NEIGHBORHOOD MAP**

Next...three things happening at once (where we are now)

1. Identify water/environmental quality goals, such as reducing runoff pollutants (nitrogen, salt, sediment, lead, etc.)

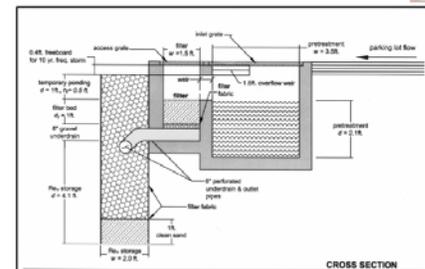


2. Develop community quality of life goals, such as

- ✓ Reducing summer temperatures
- ✓ Reducing trash, rodent & pests, & soil contamination
- ✓ Beautifying neighborhoods



3. Develop universe of environmental restoration opportunities that will reduce volume/quantity and improve quality of stormwater (initially prioritize based on cost-effectiveness, ease of maintenance, and multiple benefits)



Our initial community participation goals...

- ✓ Strengthen community-based partnerships to sustain watershed restoration efforts
- ✓ Build community capacity to participate in planning and implementation
- ✓ Train community and education leaders about watershed restoration practices to foster sustainability and improve the effective use of volunteers
- ✓ **Build consensus** among stakeholders along every step of the restoration plan process.



We asked residents, *What are the critical issues affecting the quality of life in your community?*

- ✓ Trash
- ✓ Open-air drug markets
- ✓ Vacant housing
- ✓ Lack of street trees
- ✓ Irresponsible and unresponsive landlords
- ✓ Apathy

- ✓ Lack of education
- ✓ Crime
- ✓ Poor playgrounds
- ✓ Prejudices against the neighborhood
- ✓ Poor health (addiction, rodents, etc.)
- ✓ Graffiti

We then asked, *How do you think the Watershed 263 project can help with these issues?*

Beautification -
physical improvements

Tearing down
vacant housing

City involvement &
accountability

Cleaning-up
trash

Engaging
residents

Redevelopment
projects

Greening

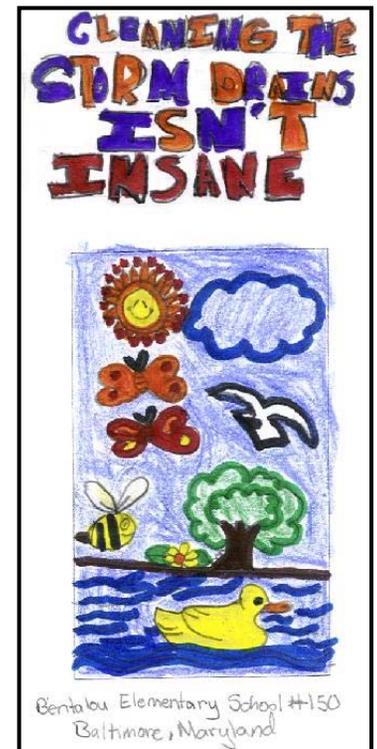
Environmental
education

WATERSHED

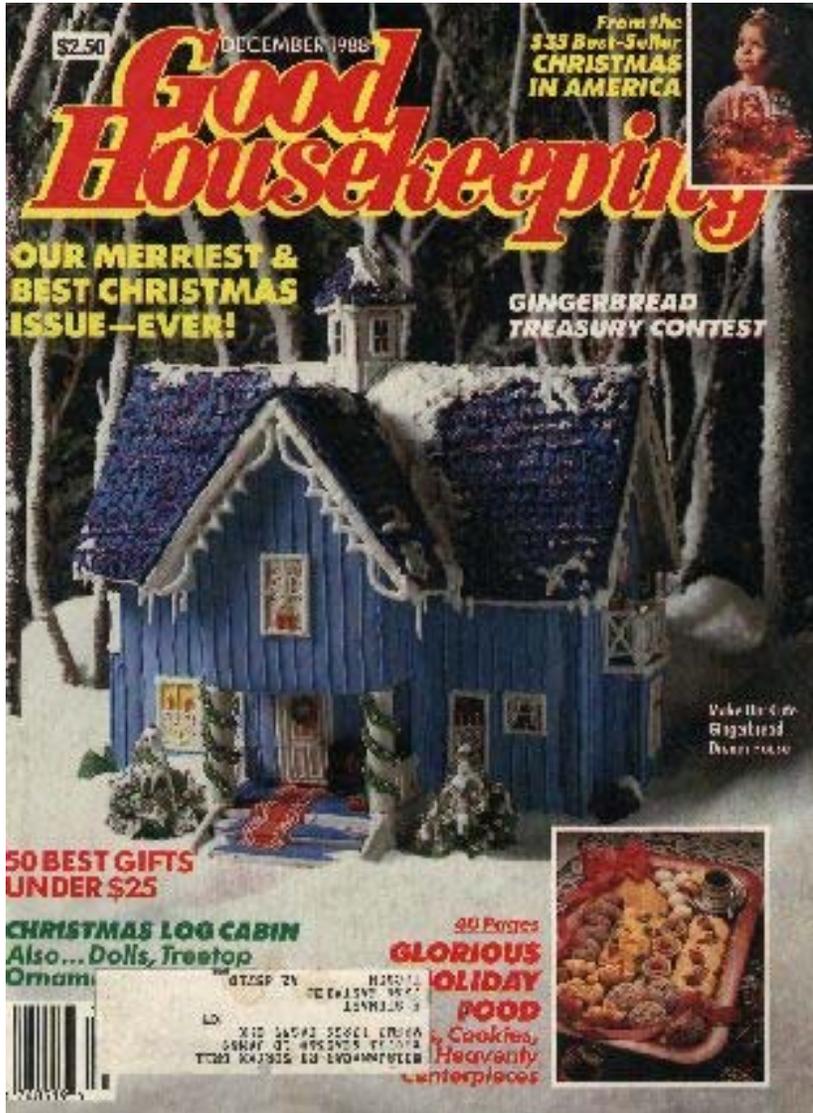
RESTORATION PLAN



Informational Outreach- Education



Housekeeping Practices



Street Sweeping - Inlet Cleaning



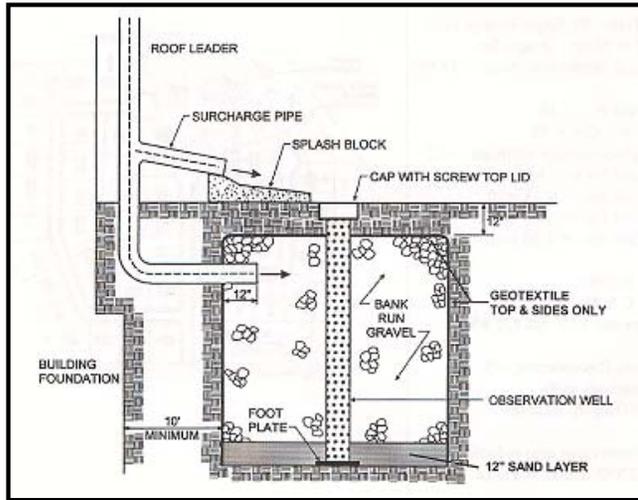
Municipalities can hire professional plumbing services to remove trapped sediment and debris from storm drains with periodical flushing (Source: Drain Patrol, no date)



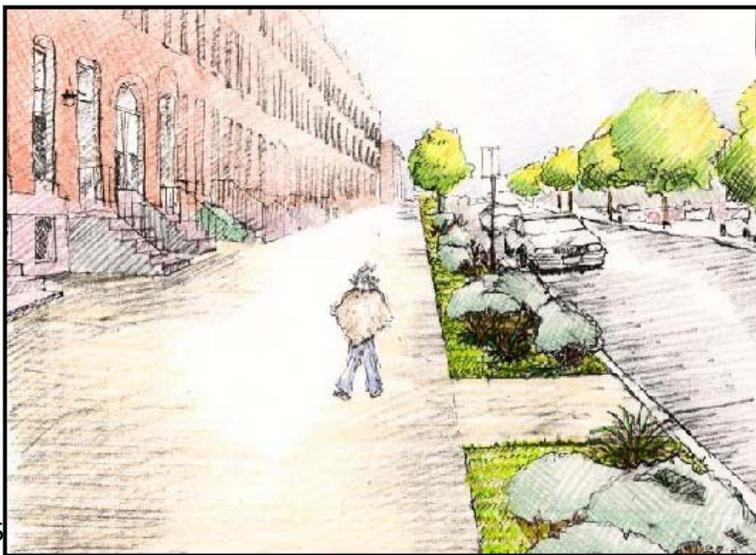
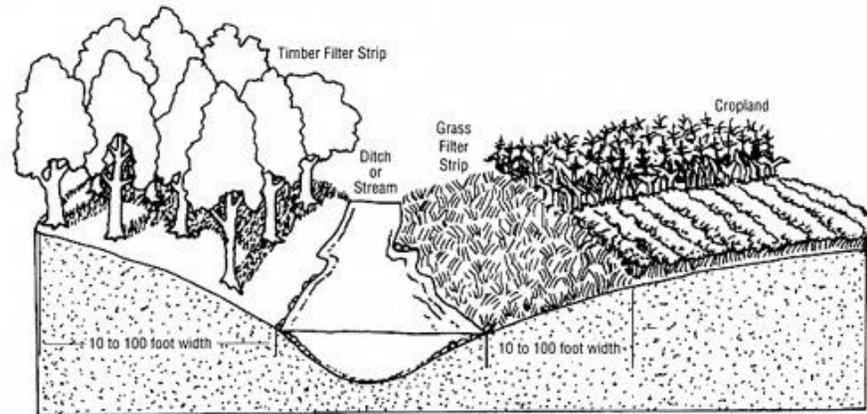
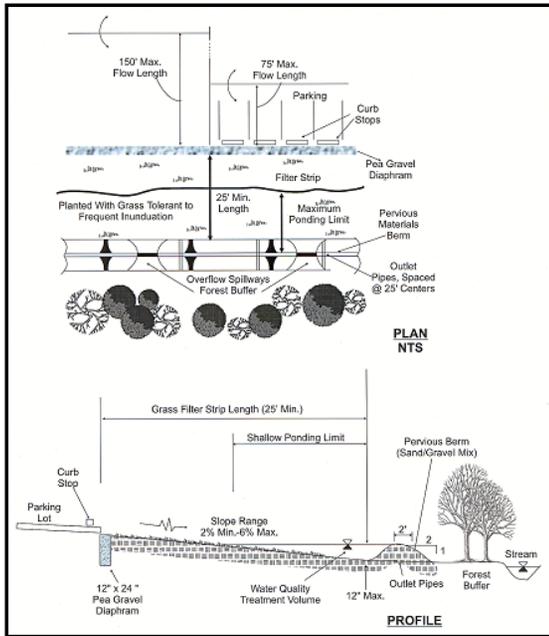
Low Impact Redevelopment



On-lot Treatments



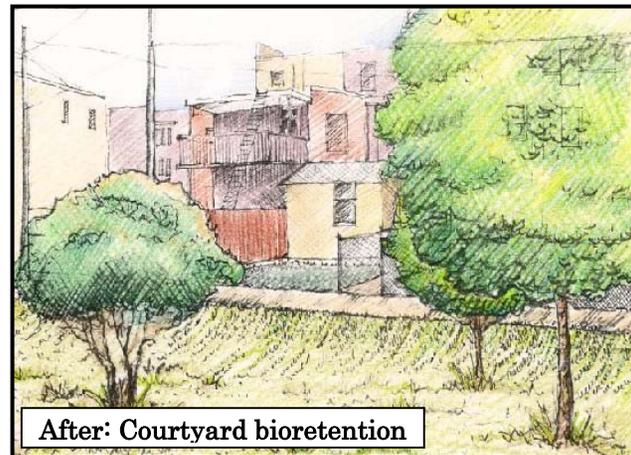
Vegetative Filter Practices



Tree Plantings



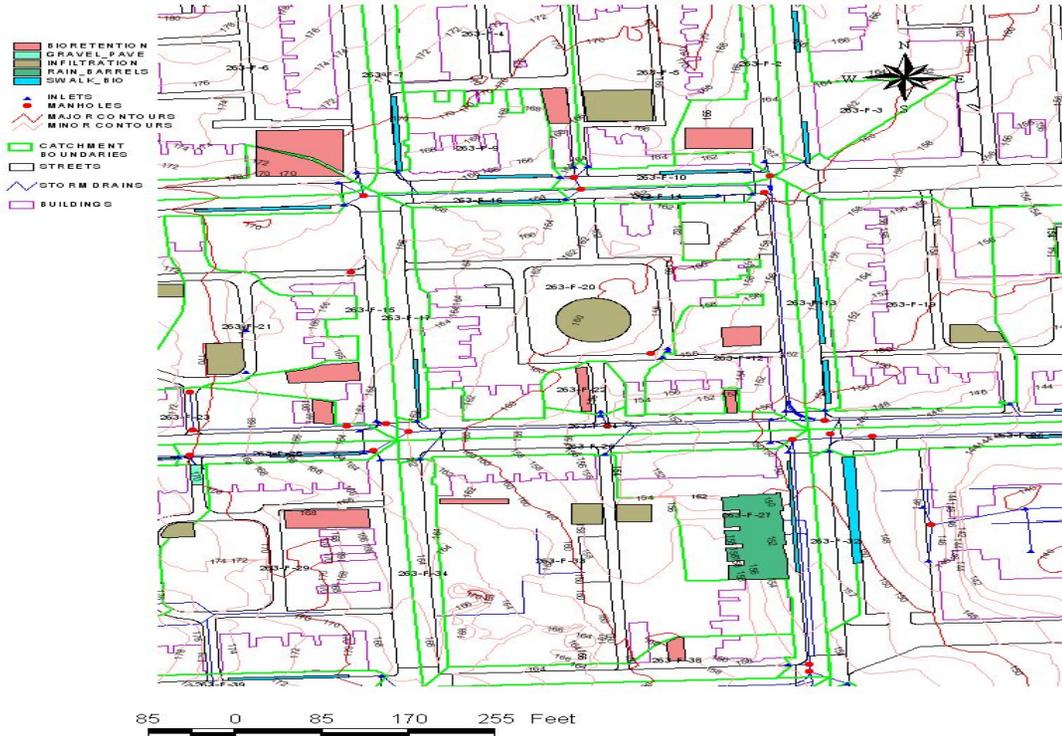
Stormwater Filtering Systems



Infiltration Systems



Neighborhood scale management plans

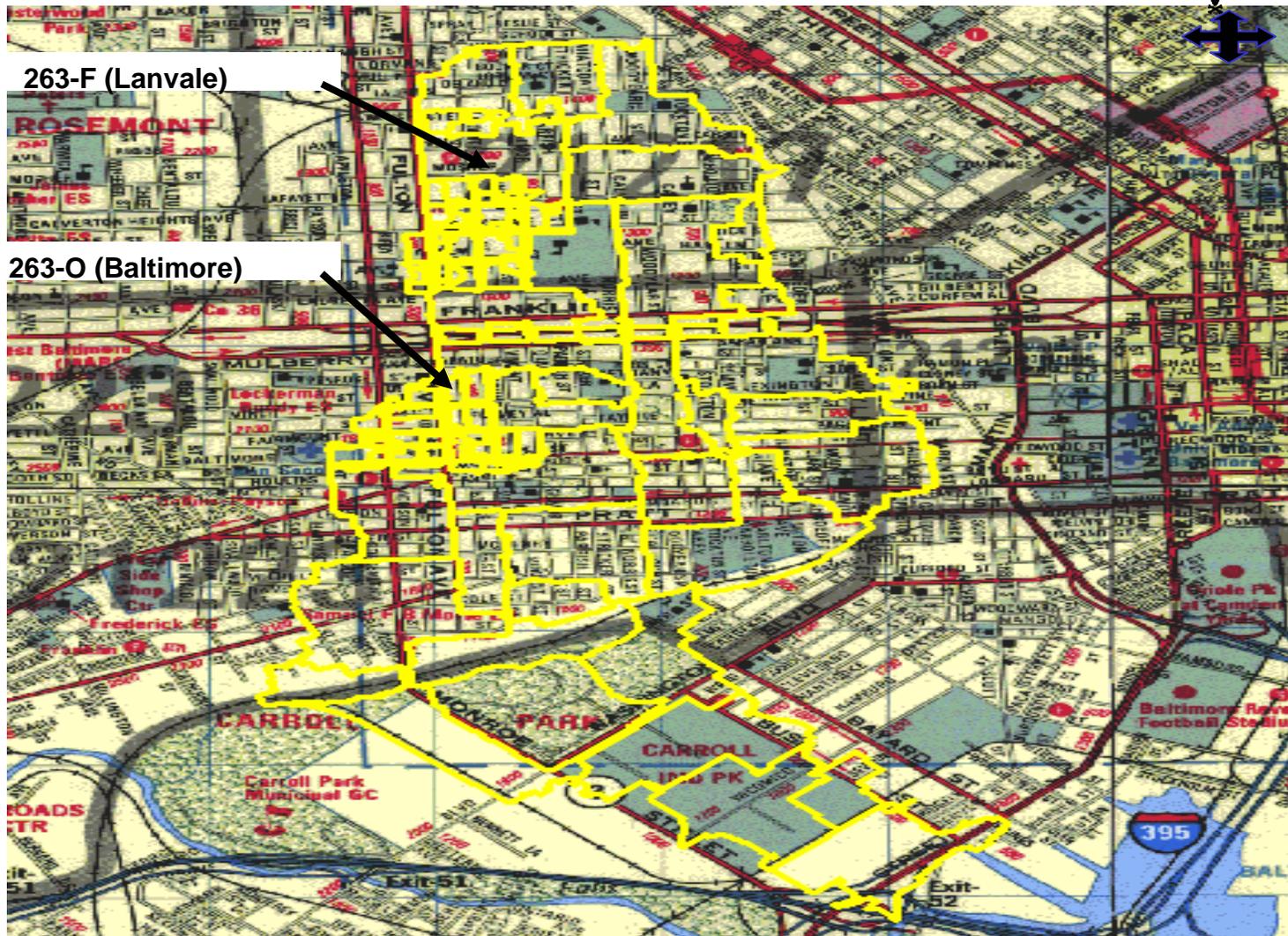


POTENTIAL BMP'S

1 IN = 1,200 FT

**WS 263 MANAGEMENT PLAN
RANDOMLY SELECTED BLOCKS**

Paired watershed monitoring



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1 IN = 1,400 FT

WS 263 MANAGEMENT PLAN SUBCATCHMENT BOUNDARIES