Back River Action Group

BRAG About It

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Mission Statement

The Back River Watershed is a valuable resource of Baltimore Maryland. The Mission of the Back River Action Group is to restore the Back River waters to fishable by 2025 and swimmable by 2035.

Goals of BRAG About It

1. Meet fishable and swimmable standards
2. Litter reduction
3. Upgrade and improve nearby wastewater treatment plants
4. Public outreach

Background

- Located in Baltimore County and Baltimore City Maryland
- One of the most impaired tributaries in the Chesapeake Bay area
- Development in the 60's and 70's lead to this watershed becoming 72% urban

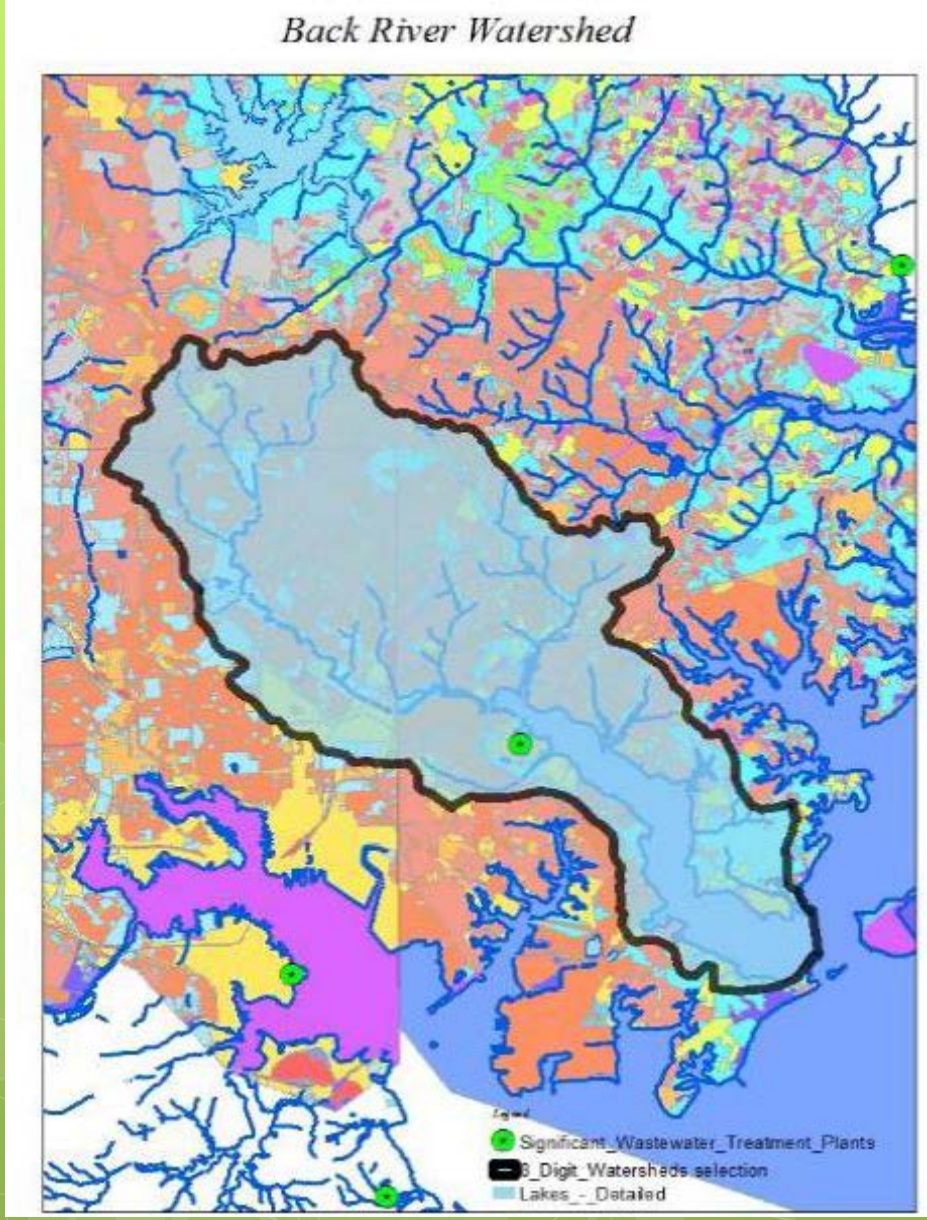
Issues in the Back River Watershed

- Weak enforcement of “no littering” laws
- Highly industrial and urban areas resulting in extremely high runoff rates
- Back River Wastewater Treatment Plant discharge

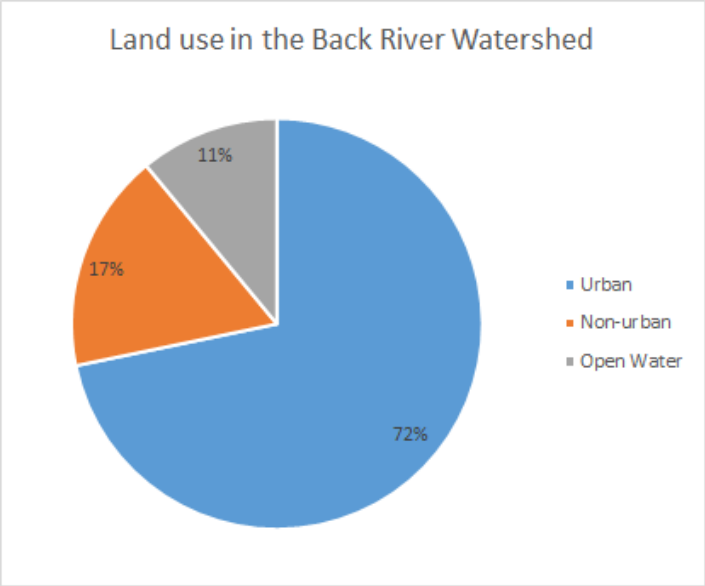
Key Characteristics

Drainage Area	• 27, 716.7 acres (43.3 mi^2)	
Stream length	• 139.0 miles	
Land Use	• Low-Density residential (8.5%) • Med-Density Residential (26.5%) • High-Density Residential (20.4%) • Commercial (9.9%)	• Industrial (6.5%) • Institutional (8.0%) • Open Urban (6.2%) • Forest (11.5%)
Current Impervious Cover	• 30.7% of watershed	
Jurisdictions as Percent of Subwatershed	• Baltimore City (44.5%) • Baltimore County (55.5%)	
Soils	• A Soils – 0.0% • B Soils – 17.9%	• C Soils – 33.2% • D Soils – 46.7%

(Baltimore County Department of Environmental Protection and Resource Management, 2008)



Landuse Map of Watershed



Landuse Graph

"The dominant land uses in the watershed are urban (28,037 acres or 71.7%) and non-urban which is comprised of mixed agriculture and forest and other herbaceous (6,753 acres or 17.7%) and open water (4,295 acres or 11%)

(United States EPA Region 3 Office Of Standards, Assessment And TMDL's, 2005).

Regulations

- Clean Water Act
  - Impaired Streams List
- Executive Order
  - Chesapeake Bay TMDL
    - 30% reduction in nitrogen and a 50% reduction in phosphorus are needed
  - Back River TMDL
    - Reduction to 22% from Wastewater Treatment Plant
    - Reduction of 15% of Runoff

Agencies Affecting the Back River Watershed

- Maryland Environmental Service
- Maryland Department of the Environment
- Save Back River (BRRC) Foundation

Problem 1

- Litter from Baltimore City and Baltimore County all ends up in the Back River

Image of Trash Boom (Chesapeake Bay Program)

Solution 1

- Stricter enforcement of litter laws
- More Trash Booms
  - Current trash boom removed 350,000 lbs of trash

Problem 2

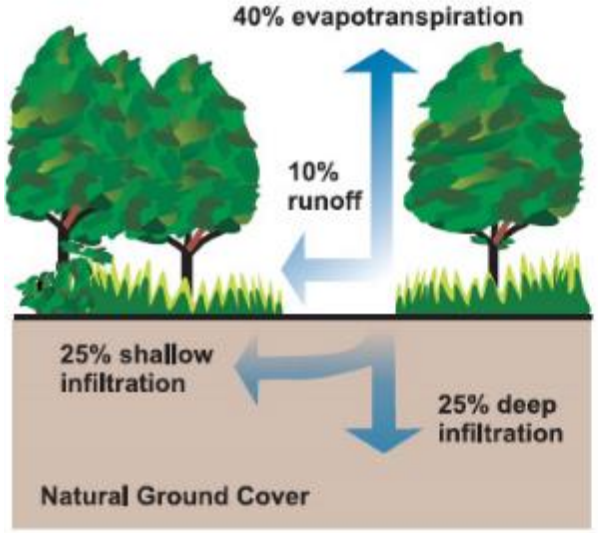
- Wastewater from plant discharges into the Back River
- Input of contaminants and nutrients into the watershed

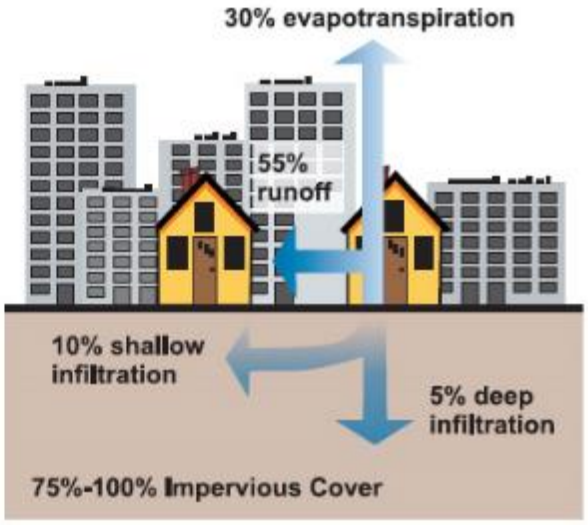
Solution 2

- Chemical and biological treatment of plant effluent.
- Biological-Chemical Phosphorus and Nitrogen Removal (BCFS) processes and BioActiflo® processes.

Problem 3: Stormwater runoff

- Highly industrial and urban areas which result in high runoff rates
- Excessive nutrient and sediment loads





Solution 3: Stormwater Management

- Infiltration basins
- Green technologies
  - Bioretention cells
  - Riparian and vegetative buffers

Conclusions

Problem	Goal	Solution
Litter	G2.Reduce the amount of litter being brought into this watershed through nearby streams as well as storm water drainages. G4.Inform and reach out to the public and neighboring communities.	S1: Trash Booms and further legislation
Wastewater Discharge	G3. Upgrade and improve nearby wastewater treatment plants.	S2. Chemical and biological treatment of plant effluent.
Stormwater Runoff	G1: Meet Fishable and Swimmable standards	S3: Stormwater management techniques

References

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- Chesapeake Bay Program. (2012, July 25). Retrieved from http://www.chesapeakebay.net/blog/post/watershed_wednesday_back_river_restoration_committee_essex_md
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