



LEAP

Leading Esopus and Ashokan in Preservation

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Outline



Mission statement



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Mission Statement

The plan for **Leading Esopus and Ashokan in Preservation (LEAP)** is to **protect water quality, strengthen ecological health, and build community support** for the Esopus Creek-Ashokan Reservoir watershed in Ulster County, New York. The

main goals for LEAP will be to:



Increase stream
bank cover to 50%



Implement a riparian
buffer of 50 feet to 25%
of unbuffered streams



Form a committee to
increase stakeholder
engagement in
watershed health



All goals set for accomplishment by **February 29, 2040**: four leap years away.

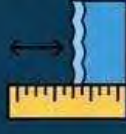
Physical Geography



Soil types: Dry soil conditions



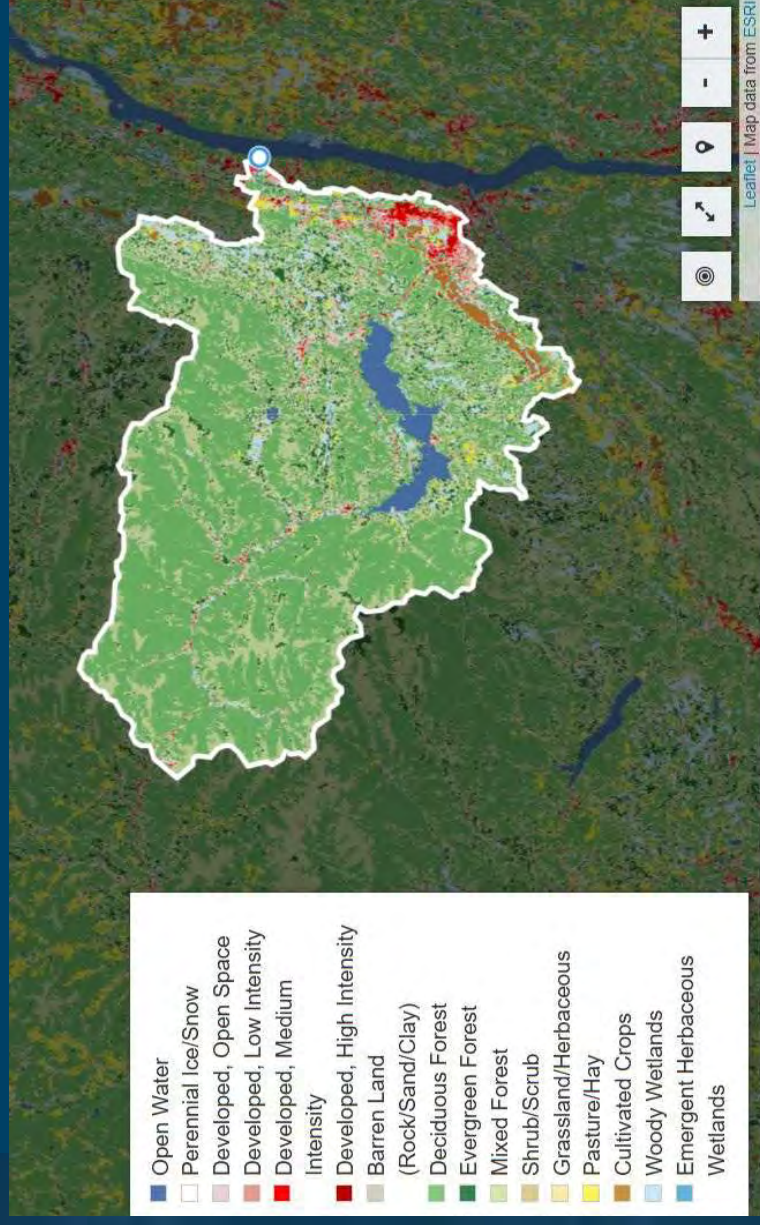
Geology: Limestone, sandstone, and other sedimentary material. Also controlled by regional bedrock geology.



Size: Max depth of 190 ft (p.19), catchment area is 424 sq mi (streamstats)



Climate and precipitation: Catskills receive 62 inches of precipitation a year, resulting in higher streamflow rates. Frequent storm events.



Surrounding land use: <https://modelmywatershed.org/>

Biodiversity

Habitats



Forest



Wetland



Flowering meadow



Cave entrance

Common Birds (p.35)



Louisiana
Waterthrush



Wood
Thrush



Hackberry



Barred
Owl



Bank
Swallow

Key Species & Fishery



Home to the endangered
Indiana bat



Diverse coldwater fishery, over
30 documented species of fish

History



Prior to colonization -
Indigenous peoples utilized stewardship practices closely connected to the natural cycles of the landscape



1915 - Ashokan Reservoir was constructed as an answer to NYC's need to supply water to increasing population



April 1965 -
Ulster County Soil and Water Conservation District (UCSWCD) is formed



2003 - Ashokan Watershed Stream Management Program takes shape as specialized branch of UCSWCD

Policies and Regulations



The Clean
Water Act



New York Environmental
Conservation Law
Article 15



UCSWCD

Challenge 1: Erosion



Threatens infrastructure,
cause of concern for local
property owners



Degrades streamside
habitat



Leads to turbidity

- Affects recreation locally
- Concern for drinking water in the City

Goal 1

G1: Increase bank cover to at least 50% on all streambanks in the watershed by 2040

Recommendation:

- 🌿 Variety of native shrubs, trees, groundcover
- 🌿 Professional assessment - landscapers and conservationists
- 🌿 Start with land closer to development



Native Tree: Red Maple



Native Shrub: Silky Dogwood



Native Shrub: Highbush Cranberry



Native Groundcover: Ferns

Challenge 2: Flooding



Flooding poses a concern to homeowners near the creek



Directly related to the problem of erosion

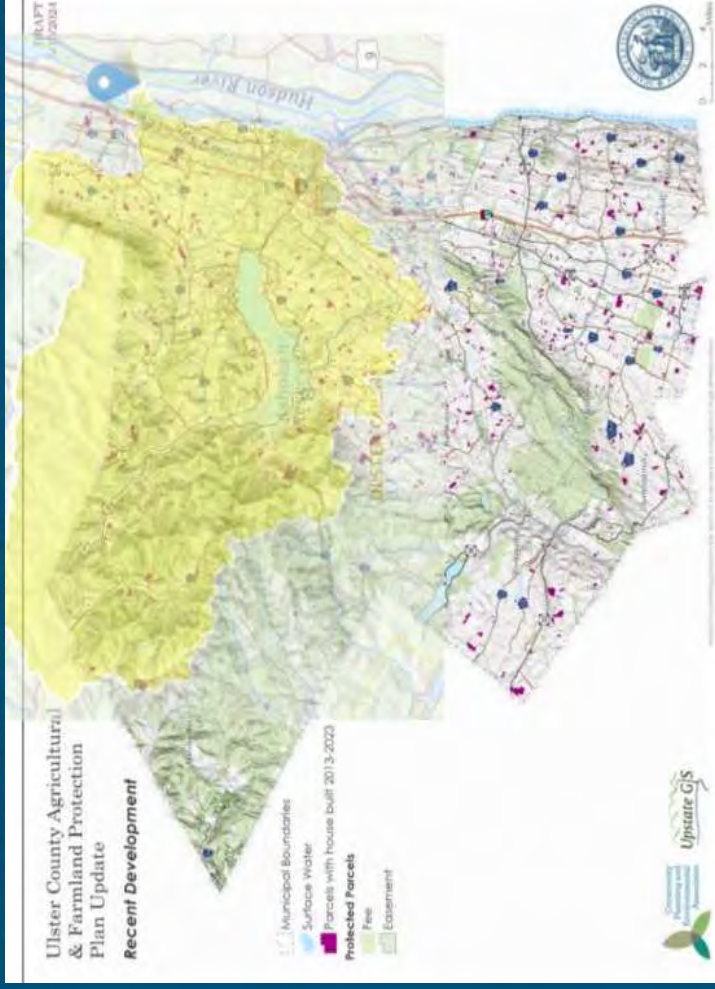


More frequent, intense storms and resulting channel adjustments have increased the vulnerability of some stream segments.



Goal 2

G2: Implement riparian buffers of at least 50 feet for 25% of unbuffered streams



Recommendation



GIS tools to identify sites of interest



Professionals to design survey standards



Volunteer training



Annual “stream health” updates for both G1 and G2

Challenge 3: Community Engagement



Educating local landowners and stakeholders will help to maintain and improve the health of the watershed.



Opportunities for education exist through local parks



state public schools lack a standard curriculum teaching the importance of watershed health



Goal 3



G3: Form a diverse committee of stakeholders to
increase community engagement

Recommendation



Communicate direct impact
on quality of life



Property damage



Drinking water quality



Aesthetic appeal



Recreation space

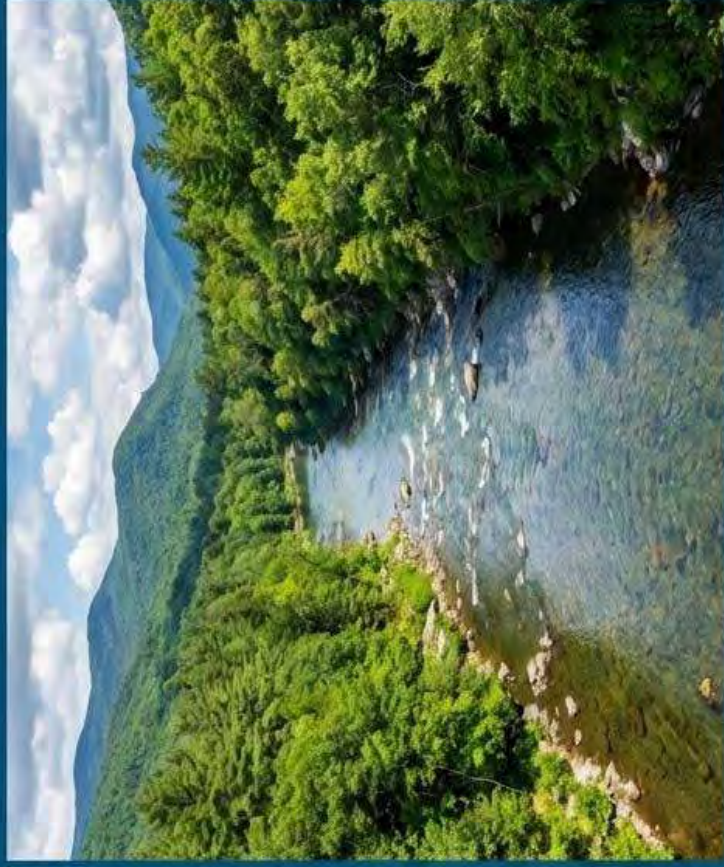


Education programs for
schools and local parks



Develop curriculum materials
Host interactive workshops

Conclusion



The Esopus-Ashokan watershed is an environmentally significant and valuable natural resource that must be carefully managed and protected.

Key players in achieving goals by 2040:



local
governments



environmental
organizations



Indigenous
communities



watershed
residents

Methods:



monitoring



restoration



education



stakeholder
engagement



Questions?



Sources

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-  <https://dep.wv.gov/WWE/getinvolved/sos/Pages/RiparianMagic.aspx>

Thank you

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