



PROJECT 6-2: GIS Inventory of Streams Sensitive to Ash Loss

Background: Black ash makes up a major forest type that provides riparian shade to NE MN cold water trout streams.

Problem Statement: Stream water temperature is a limiting factor for trout survival in NE MN streams. Ground water inputs are very limited and usually a minor component of base flow. Cold water is maintained in our region by virtue of climate. Riparian shade is an essential component in keeping stream temperature cool enough to support trout. Black ash is a major riparian shade producer. We face a future threat of regional ash loss from emerald ash borer (EAB). The future impact on stream water temperature from ash and resultant shade loss will be devastating to systems where ash is a major riparian component. We have a window of opportunity to establish replacement trees in critical areas now composed of ash. EAB arrival should be delayed by implementing preventative measures which are currently underway or being developed. Suitable replacement trees should have time to reach shade generation size before loss occurs. Inaction will likely result in ash replacement by reed canary grass and cattails. Priority streams that have significant riparian ash stands need to be identified and the spatial extent of the ash component located.

Goals:

1. Prioritize 5 streams and conduct GIS riparian ash inventories.
2. Prioritize each stream system riparian ash into zones of high to low impact areas.
3. Work with forest specialists to identify suitable replacement tree species for high priority sites taking into account climate shift and species identification for assisted migration. (White Cedar may not be the right replacement).
4. Secure suitable plant materials and establishment in high priority areas.

Priority: Medium

Task Duration: 5 to 10 years

Potential Mechanism: GLRI, LSOHC, EQIP (private land)

Partnering Organization(s): MNFRC, USFS, USFWS, NRRI, EPA

Estimated Cost: \$100,000

Comments:

Special Considerations:

Accomplishments:

Measure(s) of Success:

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Vision Statement: Maintain, protect, and restore healthy cold water ecosystems with relatively stable flows and a diversity of habitat for fish and wildlife to enhance our quality of life.

For project information: www.lrcd.org/links/lsc_projects.htm