

PROBLEMS AND STRATEGIES FOR TOMAH MAYFLY MANAGEMENT IN MAINE

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Problem 1: Funding and staff resources are inadequate to accomplish all of the recovery objectives within the approved deadlines. Because of the Tomah mayfly's status as a near-endemic, MDIFW will be primarily responsible for providing and procuring the resources necessary to recover the species.

Strategy 1.1: Pursue outside funding sources (i.e. Section 6, Outdoor Heritage Fund, Land For Maine's Future, ecoregional surveys, etc) to supplement MDIFW's limited annual budget for this threatened species.

Strategy 1.2: Develop partnerships with local civic and user groups, as well as with industrial landowners, to secure support, and, possibly, supplemental funding.

Strategy 1.3: Combine MDIFW funding resources with University of Maine graduate research opportunities and faculty expertise to facilitate meeting some objectives.

Strategy 1.4: Utilize conservation easements, cooperative management agreements, and regulatory tools to provide long-term habitat protection when fee acquisition is not feasible.

Strategy 1.5: Make use of any existing comparable data for similar species to define research strategies.

Strategy 1.6: Secure funding to hire seasonal employees and contract outside expertise to assist with developing and implementing surveys, monitoring programs, habitat and population assessments, outreach plans, and research strategies.

Problem 2: Little is known about the life history, population dynamics, habitat requirements, limiting factors, historic occurrences, and global distribution of the Tomah mayfly. This lack of information may affect the ability to assess habitat quality by the 2007 deadline or maintain existing populations over the long-term.

Strategy 2.1: Optimize opportunities to determine priority life history and limiting factors for the Tomah mayfly through grant work or graduate research partnerships at the University of Maine.

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Strategy 2.2: Apply comparable data for similar or related organisms to develop research and population management strategies, and to assess habitat quality. Where comparable data are lacking, prioritize needs and secure funding.

Problem 3: Habitats supporting the Tomah mayfly are subject to both natural (i.e. flooding by beaver) and human-induced (i.e. impoundments) alterations, which may directly affect populations of the mayfly or its prey species, or degrade habitat quality on a temporary or permanent basis.

Strategy 3.1: Inform landowners and municipalities of the presence and conservation needs of the Tomah mayfly and its habitat. Encourage site monitoring and stewardship.

Strategy 3.2: Provide long-term habitat protection through cooperative management agreements, acquisition, or regulation.

Strategy 3.3: Develop an annual site-monitoring program to verify habitat status and determine management needs.

Problem 4: Management for the Tomah mayfly may conflict with management for other rare species, or with current and future management or land use plans.

Strategy 4.1: Document the habitat management needs of the Tomah mayfly at each site, and prepare or revise site management plans that address potential conflicts with other species and land use priorities.

Strategy 4.2: Work with landowners and user groups to build support for the Tomah mayfly, and to develop cooperative management agreements to ensure long-term habitat protection.

Problem 5: A lack of public awareness and support for rare invertebrates may impede recovery initiatives for the Tomah mayfly.

Strategy 5.1: Develop effective outreach and stewardship programs for the general public, affected municipalities, and landowners.

Strategy 5.2: Develop partnerships with local user and conservation interest groups.