



## RAPID RIVER/POND IN THE RIVER FACT SHEET

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### Background

- The Rapid River is 3.2 miles long and forms the outlet of the Rangeley Chain of Lakes, which have long been noted for their outstanding brook trout and landlocked salmon fisheries. The Rapid River is famed for its large (>4 pound) native brook trout, and for small but abundant landlocked salmon, which were introduced late in the 19<sup>th</sup> century. The Rapid River supports very high fishing pressure, despite difficult access.
- Pond in the River, 512 acres in size, divides the Rapid River into two distinct segments. Pond in the River provides important habitat for certain life stages of Rapid River trout. Both waters drain to 7,850-acre Umbagog Lake, which then forms the Androscoggin River in New Hampshire. A USFW National Wildlife Refuge encompasses a portion of Umbagog Lake.
- The upper Androscoggin River drainage provides water storage and minimum flows to many downstream industrial and municipal interests. There are several large dams on the Rangeley Lakes, all currently owned and operated by FPL Energy.
- The Rapid River fishery supports two sporting camps: Lakewood Camps, located on Richardson Lake, and Forest Lodge, located near Lower Dam. The latter is situated in the former home of Louise Dickinson Rich, a Maine author who wrote several popular books about her life on the Rapid River.

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### The Problem

- Smallmouth bass were illegally introduced into the New Hampshire portion of Umbagog Lake, probably during the mid-1980's. They quickly established themselves there, and by the late 1990's had expanded their range to other accessible waters in the drainage, including the Rapid River and Pond in the River. Both waters provide ideal habitat for smallmouth bass and, as expected, we have observed a dramatic increase in their numbers.
- Smallmouth bass are severe competitors and predators on brook trout. Wild brook trout production is expected to decline during the next several years. Landlocked salmon are far more tolerant of bass, and we expect this naturalized population to persist.



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- Bass are prevented from accessing (on their own) other large lakes in the Rangeley Chain because the dams are impassable to fish. However, we anticipate additional illegal stockings to occur from this new local “reservoir” of bass.

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### **Department Actions Taken to Date**

- Intensive sport fishery surveys of the Rapid River have been ongoing since 1994.
- Habitat surveys of the Rapid River and Pond in the River, including preliminary suitability studies for smallmouth bass, have been completed.
- Growth and age structure characteristics have been described for all major predator fishes, including smallmouth bass (ongoing).
- A “no size or bag limit” rule for bass was promulgated in 2000.
- An existing barrier dam at B Pond in Upton (tributary to Umbagog Lake) was repaired in 2001.
- Radio telemetry studies to determine seasonal movements and habitat use of adult brook trout were initiated in 2002. A similar study of landlocked salmon and smallmouth bass movements was initiated in 2003 (ongoing).
- A preliminary assessment of juvenile brook trout and landlocked salmon habitat use, and their interactions with young bass in nursery areas, was initiated in 2003 (ongoing).
- A comprehensive regulatory package was promulgated for the 2004 fishing season. The regulations are designed to provide maximum protection to trout during vulnerable periods (as determined by telemetry studies) and to reduce competition from landlocked salmon.
- Surveys of existing natural “bass barriers” and the feasibility of establishing additional barriers to vulnerable trout waters were initiated in 2003. We are currently emphasizing protection of Umbagog Lake and Richardson Lake tributary ponds, but we anticipate extending this project to other waters further upstream (ongoing).
- Genetic studies of the Rapid River brook trout population have been initiated and opportunities for establishing a broodline of this strain are being explored (ongoing).



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- A food habits study was initiated for all life stages of smallmouth bass collected from the Rapid River, Pond in the River, and Umbagog Lake (ongoing).
- A comprehensive review of the professional fisheries literature pertinent to this problem was initiated, and personal contacts were established with university researchers specializing in smallmouth bass and brook trout interactions (ongoing).
- A significant effort has been made to elicit support and assistance from a variety of local and statewide angler groups, including local sporting camp operators and anglers, the Rangeley Guides and Sportsman's Association, and Trout Unlimited (ongoing).

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### Immediate Work Priorities (see footnotes for volunteer assistance)

- **Aggressively seek funding and initiate bass barrier project for upstream waters<sup>1</sup>.**
- **Complete ongoing telemetry, genetics, and bass food habits studies<sup>2</sup>.**
- **Establish a broodline of the Rapid River trout strain if warranted by genetics study<sup>3</sup>. This may require additional hatchery resources, and we may need to locate and reclaim a suitable site to hold brood fish in the wild<sup>4</sup> -- *if natural reproduction fails due to bass predation and competition, replacing lost juvenile production with Rapid River-strain hatchery fish may be the most effective, realistic means of mitigating the presence of bass.***
- **Seek funding and support to expand juvenile trout habitat surveys and evaluate the efficacy of controlling bass in these critical areas. The Department recommends that this work be contracted to a university graduate student or consulting firm.**

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<sup>1</sup> Barrier dams or exclusion devices require frequent (at least annually) inspection and occasional maintenance; this is best handled by local volunteers.

<sup>2</sup> Voluntary submission of bass stomachs from this drainage would facilitate a large expansion of this part of the project.

<sup>3</sup> Volunteers could assist in acquiring brood stock, initially and for future production.

<sup>4</sup> Volunteer assistance may be required to construct and maintain outlet barrier to broodfish pond.



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- **Collaborate with FPL Energy and Settlement Team to reassess the Rapid River's flow regime. Studies should be initiated to determine flow regimes most favorable to trout life stages and least favorable to smallmouth bass and landlocked salmon.**
- **Continue reviews of the scientific literature pertinent to this issue, and maintain contacts with other professionals involved in this work. The Department is currently seeking assistance from an independent contractor to facilitate a detailed review of the literature. This contract will include provisions for submitting summary reports for professional workers as well as for the general public.**
- **Continue sport fishery surveys and maintain current biological information for Rapid River salmonids<sup>5</sup>. Design study plan to effectively monitor effects of new fishing regulations and possible flow regime changes.**

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December 2003

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<sup>5</sup> Volunteers could assist Department staff in obtaining growth, condition, and age structure data (angling samples).