

**MDOT Reconstruction Project:
Route 4, Phillips (PIN 9205.00)
Preliminary Wetland Compensation Site Search Summary**

September 2004

I. Preliminary Compensation Site Search

MDOT staff conducted a preliminary search for potential wetland compensation opportunities and evaluated their suitability to compensate for impacts associated with the proposed project in accordance with Chapter 310 of the MDEP Wetland Protection. Areas along Route 4 in the Sandy River watershed were screened first. In addition, MDOT conducted a cursory site search of the project vicinity to identify and briefly characterize any potential off-site compensation opportunities in the towns of Phillips, Madrid, Farmington, Sandy River Plantation, Rangeley Plantation, and Township D.

Potential compensation sites were identified and evaluated for feasibility using USGS 7.5 minute topographic maps, the SCS Soil Survey for Franklin County, NWI maps, aerial photographs, the project plans and cross-sections; contacting agency personnel that may have knowledge of potential sites in this area, and conducting a windshield survey of selected roads in the area. A brief field reconnaissance of some sites were made, however, no detailed on-site field investigations were conducted.

The criteria used to evaluate the feasibility of potential sites included:

- **Compensation Type:** restoration of filled or drained wetlands or degraded stream corridors was preferred, followed by enhancement, preservation, and creation.
- **Size:** potential to provide 3.05 acres of compensation within a single contiguous site under a restoration, enhancement, or creation option. Potential to provide 24.5 acres of compensation under a preservation option.
- **Soils:** for restoration, enhancement, and creation options, sites with level, poorly or very poorly drained soils (i.e. hydric conditions) were preferred. Sites on slopes with coarse textured or stony soils, or in areas of shallow ledge were avoided.
- **Hydrology:** landscape position that provides suitable hydrology for a site.

- **Existing Vegetation:** for restoration, enhancement, and creation options unvegetated, poorly vegetated or cleared sites were preferred over areas of intact mature forest. Preservation areas with significant ecological values and that could be tied into existing local, state or regional conservation efforts were preferred.
- **Existing Land Use:** sites adjacent to or currently used for residential, commercial or recreational purposes were avoided.
- **Functional Equivalency:** potential of a site to replace the wetland functions lost because of the proposed project. Primary functions include: nutrient removal, sediment/toxicant retention, and wildlife habitat.
- **Construction Access:** restoration, enhancement, and creation options required suitable access for construction equipment.

II. Preliminary Site Search Results and Discussion

Seven sites were identified and evaluated for their potential to provide compensation for the proposed impacts. The characteristics and the feasibility of the sites are briefly described below.

The proposed project largely follows the existing horizontal alignment except for the S-curve section in Township E where a new alignment will be built. On this section of discontinued Route 4, the asphalt will be removed and loamed and seeded, to be used for passive recreational purposes. This is being done in cooperation with the Rangeley Lakes Scenic Byway Corridor Committee and Corridor Management Plan. There are no wetland restoration/enhancement opportunities along this old alignment section.

Two abandoned gravel pits were investigated in the Sandy River watershed but were found to not be suitable. One had been reclaimed and lacked a sufficient source of hydrology. The other was eliminated because of an uninterested property owner. One restoration project was considered on Long Pond Stream, but was not considered because of uninterested property owners.

Bemis Stream Restoration – Bemis Stream is located in Township E within the Mooselookmeguntic Lake watershed. Bemis Stream, like many of the channel systems in the area, has been degraded by a history of disruptive land management activities. The site where restoration is proposed is in the vicinity of the Appalachian Trail crossing. The stream in this area is highly stressed and unstable. Evidence of this is reflected in the large bar deposits comprising of cobbles, numerous debris jams and several side channels. Channel width varies through the site, and bank erosion predominates. Restoration work would consist of narrowing the channel to concentrate the flows, and building in riffle-pool sequences to provide better flood storage and improved aquatic habitat. Stream bank stabilization with indigenous plantings would help reduce erosion and sedimentation, and provide nutrient/toxicant filtering.

South Bog Stream Restoration - South Bog Stream is located in Rangeley Plantation in the Rangeley Lake watershed. South Bog Stream is the largest of 5 tributaries that exists in the watershed, and is the most important with regards to trout spawning habitat. The watershed of South Bog is owned by Wagner Forest Management, Ltd. and has an extensive history of timber harvesting. Restoration work would concentrate in a reach where the South Shore Road crosses the stream. Some direct channel alteration is warranted to reduce the channel width to improve the conveyance of sediment under the bridge. This would include the removal of a mid-channel bar above the bridge, and some local re-alignment and channel narrowing. In stream structures such as rock deflectors and rock vanes would be installed to encourage the development of deep pools for brook trout habitat. Indigenous vegetation would be installed along the stream banks for stabilization and nutrient removal, as well as thermal relief. MDIF&W is coordinating this restoration effort, and has received funding from Rangeley Region Guides and Sportsmen Association, Trout and Salmon Foundation, and Trout Unlimited. Functions derived from this restoration work would be: sediment/toxicant retention, nutrient filtering and aquatic habitat improvements.

South Bog Watershed Preservation – The Rangeley Lakes Heritage Trust (RLHT), a local non-profit land trust, is proposing to purchase an 1170 acre parcel that abuts Rangeley Lake State Park. This parcel encompasses most of the lower watershed of South Bog Stream and includes some of the highest value wetland on Rangeley Lake. One fifth of the parcel is designated as critical inland wading bird – waterfowl habitat, and two thirds of the parcel is an important deer

wintering area that it shares with the State Park land. The parcel contains one active bald eagle nest that reared two hatchlings this year. The total area of this parcel in combination with the State Park is approximately 2000 acres and provides critical wildlife habitat connectivity to this region. This property is owned by Wagner Forest Management, Ltd. and several land developers have shown interest in subdividing for residential/vacation home development. Wagner has given RLHT an option to purchase until December 17, 2004.

Sandy River Pismo Bar, Farmington – This site consists of a Sandy River cut bank that has been eroding into the Cushman Drive subdivision. Two homes are currently threatened by this erosion, with the rate of loss being approximately 5 feet/year. There are several restoration options being considered for this site by the resource agencies. One proposed restoration diverts the channel back into a pre-existing channel and moves a debris island to the toe of the eroding slope, using heavy riprap toed into the stream bank as a foundation. Bioengineering using indigenous stoloniferous vegetation would be planted on the slope to stabilize the site. Functions derived from this project would be soil stabilization, toxicant filtering, and water quality improvements. MDEP is scheduling a follow-up meeting to investigate the restoration options and decide the best course of action.

III. References

IF&W, 2002. Fishery Interim Summary Report Series No. 02-3 Biological Survey of South Bog Stream, February 2002. Maine Department of Inland Fisheries and Wildlife, Regional Office, Strong, Maine. 33 pp.

MDOT, 2004. Phillips, Route 4 – Functional Assessment Report, June 2004. Maine Department of Transportation, Environmental Office. Augusta, Maine. 25 pp.

Parish Geomorphic Ltd., 2001. South Bog Stream and Bemis Stream – Fluvial Geomorphological Assessment, November 27, 2001. Parish Geomorphic Ltd., Georgetown, Ontario. 10 pp.

Appendix B. Parish Draft Conceptual Report