

# Lakes Region Weekly

## Pleasant River's troubles prompt new plan

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By John Balentine: [jbaltimore@keepmecurrent.com](mailto:jbaltimore@keepmecurrent.com)



Heather True, above and below, measures the length of a bank collapse along the Pleasant River behind Windham High School. True, a project manager at the Cumberland County Soil & Water Conservation District, has prepared and just published a watershed management plan for the river that describes the steps necessary to upgrade the water quality. (Photo by Rich Obrey)

**WINDHAM and GRAY** – A newly released management plan for the Pleasant River in Windham indicates that, while it is still OK for fishing, the river's water quality is worsening, and intervention is necessary to reverse the trend.

The river, which forms in the Gray Meadows marsh just south of Gray Center and flows into the Presumpscot River in South Windham, is being affected by increased development within its 29-square mile watershed, which has caused heavy erosion on the banks of the river, and farm animals that have direct access to the river. The issues have combined to cause high E. coli bacteria levels and low dissolved oxygen, both of which have put the river on Maine Department of Environmental Protection's list of impaired rivers.

Heather True, a project manager at the Cumberland County Soil & Water Conservation District, based in South Windham, conducted a Pleasant River watershed survey in 2008. In June of this year, the organization completed a river management plan that details action items needed to reverse the decline in the river's health.

Cumberland County Soil & Water has already secured \$60,000 from federal Clean Water Act funding, True said, to help homeowners and farmers in the watershed to shore up riverbanks and install fences and vegetative buffering along the river to cut down on soil erosion and animal access to the river.

"It's considered by the Maine DEP to be an impaired water body, but it's fine to fish," True said. "However, the threat here is that these issues can reduce the fish population."

True has already presented the implementation plan to the Gray Town Council. She plans to meet with Windham officials in the near future. True is also meeting with owners of riverside homes and residents in hopes of educating them about the river's health and ways they can help restore their section of river.

However, with funding tight and the economy sputtering, property owners will likely be short on cash to perform improvements on their own. That's where the federal funding's guidelines come in handy. While there is a 50/50 match required for residents to receive funding, residents can "pay" their share in the form of labor or materials.

"For the top sites, we're working with landowners on a volunteer basis – individual homeowners, agricultural sites – to create buffers to stop run-off," True said. "And for most people, they want to do what's best for the water resource and they appreciate the funding that can brought in to fix their properties. But it is completely voluntary."

### **Trouble sources**

While True said exact sources of E. coli bacteria are hard to pinpoint and would likely include faulty septic systems and animal feces, a potential source of pollution for the Pleasant River is the water treatment facility at Windham High School. Stuart Rose, an environmental specialist with Maine DEP, the state agency that regulates the facility located near the high school football field's concession stand, said past measurements have detected E. coli issues at the facility.

“I inspect the facility and in terms of compliance, they have had some compliance issues,” Rose said. However, Rose added, “these are not new issues.”

The issue is definitely not a new one for local leaders, who have mentioned the contamination source when discussing a possible sewer for the North Windham commercial district. If the sewer is built, it would include an extension to include the school complex, negating the need for the existing water treatment facility.

“It’s been there for decades, and while I’m sure it is contributing some waste loads, the non-attainment status of the Pleasant River is more related to non-point sources such as upstream farming areas that are contributing to the high E. coli counts,” Rose said.

While E. coli in the Pleasant River is more associated with non-point sources such as farming operations, the general health of the river is more tied to erosion and the resulting silt and sand build-up in the river bottom. That erosion finds its source in watershed development, including parking lots, driveways, roads, or any kind of development that “hardens” the landscape and makes run-off more prevalent and efficient, True said.

Throughout the river, True estimates erosion at 1,049 tons a year washing off the banks and depositing itself somewhere downstream. Several sites with a lot of clay soil have lost entire 20-foot-high ledges. As sediment collects in the bottom of the riverbed, the river widens and slows, but when severe rains hit and wash over developed areas upstream, rather than seeping into the groundwater, the river’s velocity increases and cuts away at the riverbanks.

“Anything that happens upstream in terms of development carries downstream. Any time you increase the amount of hard, impervious surfaces in a watershed, the amount of run-off will increase and the amount of pollutants getting into a water body will increase,” True said.

While the Pleasant River remains a favorite with fly fishermen seeking brook trout, True said fish aren’t the only ones impacted by increased sedimentation that sucks the oxygen from the river. Another species feeling the impact is the rare brook floater, a small freshwater mussel that is listed as threatened in Maine and, in southern Maine at least, can only be found in the Pleasant River.

True said the population has dwindled from 125 live brook floaters found in a 2001 on a .75-mile section of river to 17 brook floaters found in the same area in 2009. She said the exact cause of the decline is unknown but likely due to severe sediment build-up. Last year, a study found only six of the floaters, although surveyors noted they had trouble seeing the bottom due to high turbidity from recent rains.

### **Turning course**

Now that they know where the trouble spots area, True said the implementation phase of the Pleasant River Management Plan will take place over the next two years, at which point she expects the river to attain healthy status again.

“Working with towns and landowners, within the next two years, we hope to address the significant sources of surface run-off and erosion,” True said.

Implementation will take many forms and take place throughout the watershed. Methods of reducing erosion include removing excess winter sand on roads along the river, erecting fences to keep cattle away from the water, extending vegetative buffers to 75 feet to prevent erosion, removing or narrowing any pathways leading to the river, lobbying road associations to pave roads to reduce chronic washouts, and installing check dams to reduce water flow in times of heavy rain.

“We’ve had success in implementing projects in the past in area water bodies, and it’s a huge task obviously,” True said. “But over the next two years, we hope to address these major sources of pollution.”