

# Managing Land and Water on a Watershed Basis

## A submission to the PEI Environmental Advisory Council by the Wright's Creek Watershed Environmental Committee

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Wright's Creek, located in East Royalty, originates from a spring near the Charlottetown Airport and flows south into Andrew's Pond, a privately owned pond crossed by St. Peter's Road. The creek becomes tidal south of the pond and continues downstream another kilometer to Acadian Drive and the Hillsborough River. The watershed includes the eastern portion of Sherwood, parts of Hillsborough Village, the southern portion of the Charlottetown Airport and most of East Royalty. The land area is approximately half residential and commercial development with the rest farmed or awaiting development. Andrew's Pond is the largest body of fresh water in Charlottetown and is an important historic, scenic and recreational asset for the city.

The following information is offered to the PEI Environmental Advisory Council from the perspective of the Wright's Creek Watershed Environmental Committee (WCWEC).

### 1. Priority environmental issues related to the Wright's Creek watershed

#### Siltation from urban development.



Lower Andrew's Pond, Fall, 2005, two days after a rainstorm. A duck can be seen left of centre.



Upper Andrew's Pond after silt has settled from a previous rainstorm. Summer 2005.

In recent years many people have asked:

“Why is the pond red after every rain?”

“Are there any fish in the pond? I never see anyone fishing any more.”

“How deep is the water? I don't remember being able to see the bottom before.”

“Why is all the grass growing around the edges?”

The problem giving rise to each of these questions is **siltation from urban development**. From approximately 1790, when the pond was constructed to power several mills, until the 1970's, Wright's Creek and Andrew's Pond were relatively healthy ecosystems. More fish were caught in the pond on the first day of fishing season than any other pond on the Island. During the 1970's the water flow through the system began to fluctuate as residential and commercial development directed water from rain and melting snow into ditches and storm sewers and subsequently into the watercourse. Instead of soaking into the ground, the water gorged out ditches

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and the streambed and added silt to the pond. Some new sub-divisions in the watershed have been left for years with acres of open clay. With an average heavy rain, Andrew's Pond turns mud red for a week. In addition, aerial photographs from 1935 and 2000 show that the area of open water is now significantly smaller. The shallow water warms easily in summer and the pond has become a very poor habitat for fish.

What can be done? The WCWEC has written a number of letters to and held discussions with the federal Department of Fisheries and Oceans, the provincial Department of the Environment and the Charlottetown Environmental Issues Committee. All are sympathetic but apparently **there is no regulation preventing developers from leaving large areas of open clay exposed to the elements and producing muddy water that enters P.E.I. streams.** There are rules requiring silt fences and barriers in ditches, and some of these are in place, but they do little good. To preclude the creation of muddy water runoff, seeding out open ground must be carried out within a few days of disturbing the soil. Andrew's Pond rarely turned red before urban development in its watershed.

- **The rules preventing siltation need to be improved and enforced.**
- **Open clay should be seeded out immediately.**
- **Erosion control should not be limited to a 10 meter buffer at the bottom of the hill - control must start at the top of the hill.**
- **Erosion control is not only agriculturally related. Residential and commercial development, roadways and commercial operations can cause significant problems.**
- **Wright's Creek has buffers but the creek and ponds are being destroyed from further back.**
- **The catch basins in place already are important but they need to be maintained and seeded out.**

This past summer, siltation coming down Wright's Creek from the airport area has been significantly reduced by adding ditches, grading and surfacing Norwood Road, and by changing the water flow pattern on the airport lands to reduce freshets. During rainstorms, the muddy water mostly comes from developments in Sherwood. A few years ago, the source of the muddy water was the development immediately to the west and north of the pond. Fortunately, the ditches and developed lots were quickly seeded out and the rainwater from these areas is now clear. The assistance of the City, Airport Authority, and the Department of Environment was a great help in making improvements thus far but better regulations are needed for effective erosion control.

By way of comparison with how similar issues are dealt with in other jurisdictions, in Dartmouth NS, in 2005, a multi-million dollar project was stopped after silt entered an adjacent stream and lake. The project was not allowed to continue until the developer constructed catch basins large enough to hold all the runoff water from heavy rainstorms, in order to allow the silt to settle out prior to letting the water run into Lake Micmac.

## **2. Public support for community-led watershed planning and management.**

The WCWEC strongly supports community-led watershed planning and management. The residents of the Wright's Creek watershed need to take ownership of their water resources and to act in ways to insure clean water and a healthy ecosystem. The watercourse itself reminds people that they live in a watershed. The provision of trails and vantage points to view scenic parts of the watershed helps people take ownership of their natural heritage.

## **3. Financial support for watershed planning and management.**

Financial support to allow residents to improve and appreciate their watershed is very important. The following need to be encouraged and enhanced, among others:

- Signs on roads to name watercourses.
- Educational programs for school children and adults.
- The program for hiring summer students to work with watershed groups.
- Funds for trail development to build an infrastructure that allows residents to see their watershed.
- Funds to enhance wildlife and fish habitat in the watershed as a whole.

Financial support from the Wildlife Management Fund, the Wildlife Conservation Fund, the Employment Development Agency, the City of Charlottetown, and the Shell Environmental Fund has allowed the WCWEC to make significant improvements to the watershed. Check dams were constructed, 270 trees were planted, springs were dug out, paths were constructed and trails improved, garbage was removed and pond water depth measurements were made. Our largest project was the construction of a spawning pool for smelts below Andrew's Dam.

#### **4. Funding Sources.**

Government sources should provide base support for watershed groups and their projects. Groups should also be encouraged to take advantage of non-government environmental support programs and resources.

#### **5. Technical Support.**

**Technical and scientific support is very important.** The energy of volunteers needs to be funneled in the right direction. In the case of the Wright's Creek watershed there is a pressing need to understand pond dynamics and related issues, such as:

- What oxygen levels are necessary?
- How deep should the water be for trout?
- What can be done to help arrive at the correct water temperature range?
- Can effective fish passage be built around a dam with an 18-foot head of water?
- What trees should be planted, and where?

#### **6. Structure of watershed groups.**

Each watershed group needs its own identity. Perhaps two or three groups could work together for efficiency reasons but the representatives from each watershed should be clearly identified within the larger group. Signage and public efforts such as newsletters should clearly identify watersheds.

#### **7. Governance on a watershed basis**

Attention should be paid to watershed boundaries. Adjusting present governance processes to reflect watersheds and their needs would be desirable.

Privacy and liability are two important and related areas of concern for landowners along the Wright's Creek watercourse. The area around Wright's Creek was largely farmland from the time when the area was settled in the 1700's until the 1980's. There are now hundreds of residents living within a few minutes walk of the creek and ponds. Although most of the salt marsh and adjacent land is publicly owned and a 50 foot wide strip of land along the west and north borders of the upper pond is also public land, the remainder of the creek and the entire area of Andrew's Ponds are privately owned. Although fishing is allowed in the upper pond and upper half of the lower pond, trespassing on private property is becoming a significant issue. Property owners need to have their privacy respected, especially close to their residences, and they need to know what their liability is should someone come onto their property and be injured or killed. The provincial "Occupiers' Liability Act" appears to provide some protection for owners of *rural* premises, but Wright's Creek is now in the City of Charlottetown and may be classed as urban.

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Thank you for the opportunity to present our views. This submission was prepared by the following members of the Wright's Creek Watershed Environmental Committee:

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