

Big Bald Lake Wetland Investigations

(June 2012)

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Introduction and Method

This wetland investigation was carried out to assess the wetlands on Big Bald Lake. The work was carried out on June 20, 2012.

Several very small wetlands associated with small streams were noted while carrying out stream investigations in 2011. These small wetlands are located along the north shoreline. Most of these small stream associated wetlands were looked at again on June 20, 2012.

There is an extensive wetland on the east end of Big Bald Lake. It is an evaluated Provincially Significant Wetland and is called the Big Bald Lake East Wetland. During the 2011 investigation an additional portion of wetland was identified next the Big Bald Lake East Wetland. This portion of wetland is hydrologically connected to the evaluated wetland being separated only by a beaver dam. The identified portion of wetland is shown on Map 1.

The shoreline of a large portion of Big Bald Lake was canoed on June 20, 2012. A GPS was used to track movements and record locations of different features and then the tracks and waypoints were viewed in Google Earth and translated onto air photos located on the Peterborough County GIS system. A photographic record of each wetland was taken.

Wetland communities were identified, defined and mapped in the method of the Ontario Wetland Evaluation System.

The wetlands associated with some of the streams are inland wetlands and although the wetlands are small the full extent of the wetlands were not determined. However the extent of the wetlands along the important shoreline area was determined and are shown on Map 1.

Results

Wetlands investigated on June 20, 2012 are M1, M2, M3, M4, M5, M7, St 1sw, St 3&4 sw, St 6 sw, St 7 sw (Map 1).

Wetlands M1, M2, M6 and M7 are open water marsh habitat wetlands. M3 has two communities an open water marsh habitat as well as a fen community. Wetland M4 has an open water marsh habitat as well as a marsh habitat dominated by cattails. Wetland M5 has an open water marsh community as well as a treed swamp community. Wetland St 1 sw is a tall shrub dominated swamp. St 3&4 sw St 6 sw St 7 sw, St 8 sw are all treed swamp dominated tree swamp.

The seven marsh wetlands are shown on Map 1. In addition a more accurate mapping is provided on air photos. Photographs are provided of most of these wetlands.

These seven wetlands are lacustrine (lake origin) and the wetlands do not appear to extend inland. It is common for marsh lacustrine wetlands to extend inland however because Big Bald Lake is located in a stony basin with distinct elevated shorelines the

wetlands stop at the shoreline. Most of the wetlands were identified as marsh habitat. However wetland M3 contained a large portion of fen habitat. Fens are peatlands characterized by surface layers of poorly decomposed peat and generally dominated by sedges. Wetland M5 has a swamp component dominated by tall shrubs

While investigating wetlands attention was paid to species at risk. Butternut were identified and are shown on Map 1. Butternut trees are an endangered species. The identified butternut were seriously infected with the butternut canker the cause of their precipitous decline. A number of barn swallows were seen at the entrance to wetland M3. A barn swallow was seen leaving the boathouse at lot 1582. It is believed that this boathouse may be the site of one or probably more barn swallow nests. Barn swallows are a newly provincially listed threatened species.

Big Bald Lake was searched for basking turtles. On June 20, 2012 only one turtle was seen. This turtle was the common painted turtle. In 2011 a snapping turtle was seen crossing Irwin Road and this species is a species of special concern.

Wetland Data

Map Code	Vegetation Forms *	Dominant Species
Wetland M1		
M 1	su f	su curly white crowfoot <i>Ranunculus longirostris</i> f <i>Nuphar variegatum</i>
Wetland M2		
M2	su f	su coontail <i>Ceratophyllum demersum</i> f yellow pond lily <i>Nuphar variegatum</i>
Wetland M3		
F1	ne be	ne wire sedge <i>Carex lasiocarpa</i> be buckbean <i>Menyanthes trifoliata</i> marsh fern <i>Thelypteris</i> <i>palustris</i>
M1	f su	f yellow pond lily <i>Nuphar variegatum</i> su common bladderwort <i>Utricularia vulgaris</i>
Wetland M4		
M1	su f	su coontail <i>Ceratophyllum demersum</i> f yellow pond lily <i>Nuphar variegatum</i>
M2	re ne f su ff	re common cattail <i>Typha latifolia</i> ne sedges <i>Carex</i> spp. and spikerush <i>Eleocharis</i> spp.f yellow pond lily <i>Nuphar variegatum</i> su Potamogeton spp. ff lesser duckweed <i>Lemna minor</i>
Wetland M5		
M1	f su	f yellow pond lily <i>Nuphar variegatum</i> su fern pondweed <i>Potamogeton robbinsii</i> coontail <i>Ceratophyllum demersum</i> chara <i>chara</i> spp.
S1	ts ne f	ts black spruce <i>Picea mariana</i> black ash <i>fraxinus nigra</i> ne grasses and sedges f yellow pond lily <i>Nuphar variegatum</i> su <i>Potamogeton</i> spp.
Wetland M6		
M1	su f	
Wetland M7		
M1	su f be	su curly white crowfoot <i>Ranunculus longirostris</i> f yellow pond lily <i>Nuphar variegatum</i> be water horsetail <i>Equisetum fluviatile</i>

- The first listed vegetation form is the dominant form and the first listed species is considered the dominant species.

The following wetlands are wetlands associated with streams entering Big Bald Lake. These wetlands are swamps dominated by trees or tall shrubs.

Wetland St 1 sw		tall shrub swamp palustrine site type
Wetland St 3 &4 sw		
S1	c h	c white cedar <i>Thuja occidentalis</i> black spruce <i>Picea mariana</i> tamarack <i>Larix laricina</i> h white birch <i>Betula papyrifera</i>
Wetland St 6 sw		
S1	c h ts	c black spruce <i>Picea mariana</i> white cedar <i>Thuja occidentalis</i> h black ash <i>Fraxinus nigra</i> ts balsam fir <i>Abies balsamea</i>
Wetland St 7 sw		Treed swamp
Wetland St 8 sw		
S1	c h re	c white cedar <i>Thuja occidentalis</i> h white birch <i>Betula papyrifera</i> white elm <i>Ulmus Americana</i> re <i>typha latifolia</i>

PSW Potential

This bay is a deep open water marsh. At the narrow constriction a beaver dam elevates the water on the Big Bald Lake East Wetland side. The Big Bald Lake East Wetland is hydrologically connected to this section of wetland and is separated by the beaver dam. To include or exclude a portion of wetland can be somewhat subjective and is up to the evaluators of the wetland and the Ministry of Natural Resources.

Vegetation form definitions

su submerged plants, **f** floating plants, **ne** narrow-leaved emergents, **be** broad-leaved emergents, **re** robust emergents, **ff** free-floating plants, **ts** tall shrubs, **c** coniferous trees, **h** deciduous trees

Species of Flora and Fauna Identified June 20, 2012

Wetland M1

Curly white crowfoot *Ranunculus longirostris*, yellow pond lily *Nuphar variegatum*, watershield *Brasenia scheberi*, curly-leaf pondweed *Potamogeton crispus*, floating leaved pondweed *Potamogeton natans*, Richardsons pondweed *Potamogeton richardsoni*, sago pondweed *Potamogeton pectinatus*, chara chara spp.

Wetland M2

Coontail *Ceratophyllum demersum*, yellow pond lily *Nuphar variegatum*, common cattail *Typha latifolia*, yellow crowfoot *Ranunculus gmelinii*, watershield *Brasenia scheberi*, Canada waterweed *Elodea Canadensis*, sago pondweed *Potamogeton pectinatus*, chara chara spp., bracted water milfoil *Myriophyllum verticillatum*, pickerelweed *Pontederia cordata*, fern pondweed *Potamogeton robbinsii*, Richardsons pondweed *Potamogeton richardsoni*, wild celery *Vallisneria americana*, yellow iris *Iris pseudoacurus*, marsh fern *Thelypteris palustris*, fragrant white waterlily *Nymphaea odorata*, floating leaved pondweed *Potamogeton natans*.
green frogs *Rana clamitans* calling

Wetland M3

Wire sedge *Carex lasiocarpa*, bog buckbean *Menyanthes trifoliata*, marsh fern *Thelypteris palustris*, yellow pond lily *Nuphar variegatum*, fragrant white waterlily *Nymphaea odorata*, flat-stemmed pondweed *Potamogeton zosteriformis*, common bladderwort *Utricularia vulgaris*, common cattail *Typha latifolia*, narrow-leaved cattail *Typha angustifolia*, marsh cinquefoil *Potentilla palustris*, common bladderwort *Utricularia vulgaris*, small bedstraw *Galium trifidum*, large cranberry *Vaccinium macrocarpum*, swamp milkweed *Asclepias incarnate*, sweet gale *Myrica gale*
Infected butternut tree seen on shore
Leopard frog seen
Barn swallows - several seen believed nesting in boat house
Wood duck nest box seen

Wetland M4

Coontail *Ceratophyllum demersum*, yellow pond lily *Nuphar variegatum* common cattail *Typha latifolia* sedges *Carex* spp. spikerush *Eleocharis* spp., *Potamogeton* spp., lesser duckweed *Lemna minor*, sweet gale *Myrica gale*, white cedar *Thuja occidentalis*, common cattail *Typha latifolia*, marsh cinquefoil *Potentilla palustris*, pickerelweed *Pontederia cordata*, marsh fern *Thelypteris palustris*, swamp milkweed *Asclepias incarnate*, yellow iris *Iris pseudoacurus*, sago pondweed *Potamogeton pectinatus*, curly white crowfoot *Ranunculus longirostris*, fern pondweed *Potamogeton robbinsii*, large-leaved pondweed *Potamogeton amplifolius*, chara chara spp.,
Coopers hawk seen, yellow throated warbler seen

Wetland M5

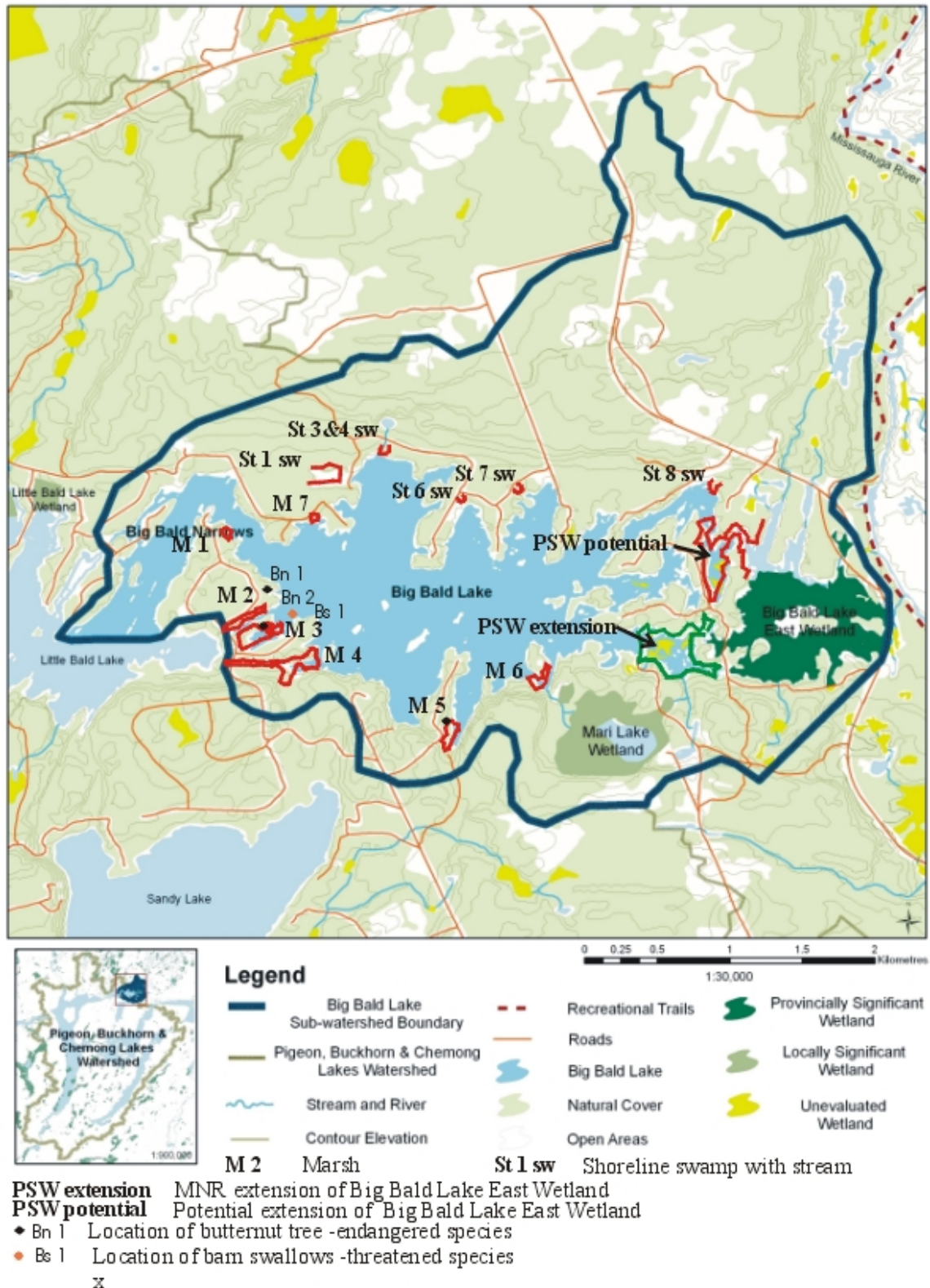
Yellow pond lily *Nuphar variegatum*, fern pondweed *Potamogeton robbinsii*, coontail *Ceratophyllum demersum*, chara *chara spp.*, black spruce *Picea mariana*, black ash *fraxinus nigra*, *Potamogeton spp.*

One painted turtle seen

Wetland M7

Curly white crowfoot *Ranunculus longirostris*, yellow pond lily *Nuphar variegatum*, curly-leaf pondweed *Potamogeton crispus*, water horsetail *Equisetum fluviatile*, royal fern *Osmunda regalis*, yellow iris *Iris pseudoacurus*, pickerelweed *Pontederia cordata*

Map 1. Big Bald Lake Wetland Assessment - June 2012



Wetland M1



Wetland M2



Wetland M3



Wetland M4



Wetland M5



Wetland M6



Marsh M7



Inland swamp at stream 1



Inland swamp at streams 3 and 4



Inland swamp at stream 6



Inland swamp at stream 7



Inland swamp at stream 8



PSW potential wetland



Wetland M1



Wetland M2



Wetland 3- Entrance to wetland. Marsh M1 community



Wetland M3

Fen habitat - F1



Wetland M3
Eastern segment - Marsh M1 habitat



Wetland M4
Marsh M1 habitat



Wetland M4
Marsh M2 habitat



Wetland M5
Marsh M1 habitat



Wetland M6

