

PRESENTATION TO THE RAT-MARSH RIVERS INTEGRATED WATERSHED MANAGEMENT PLAN

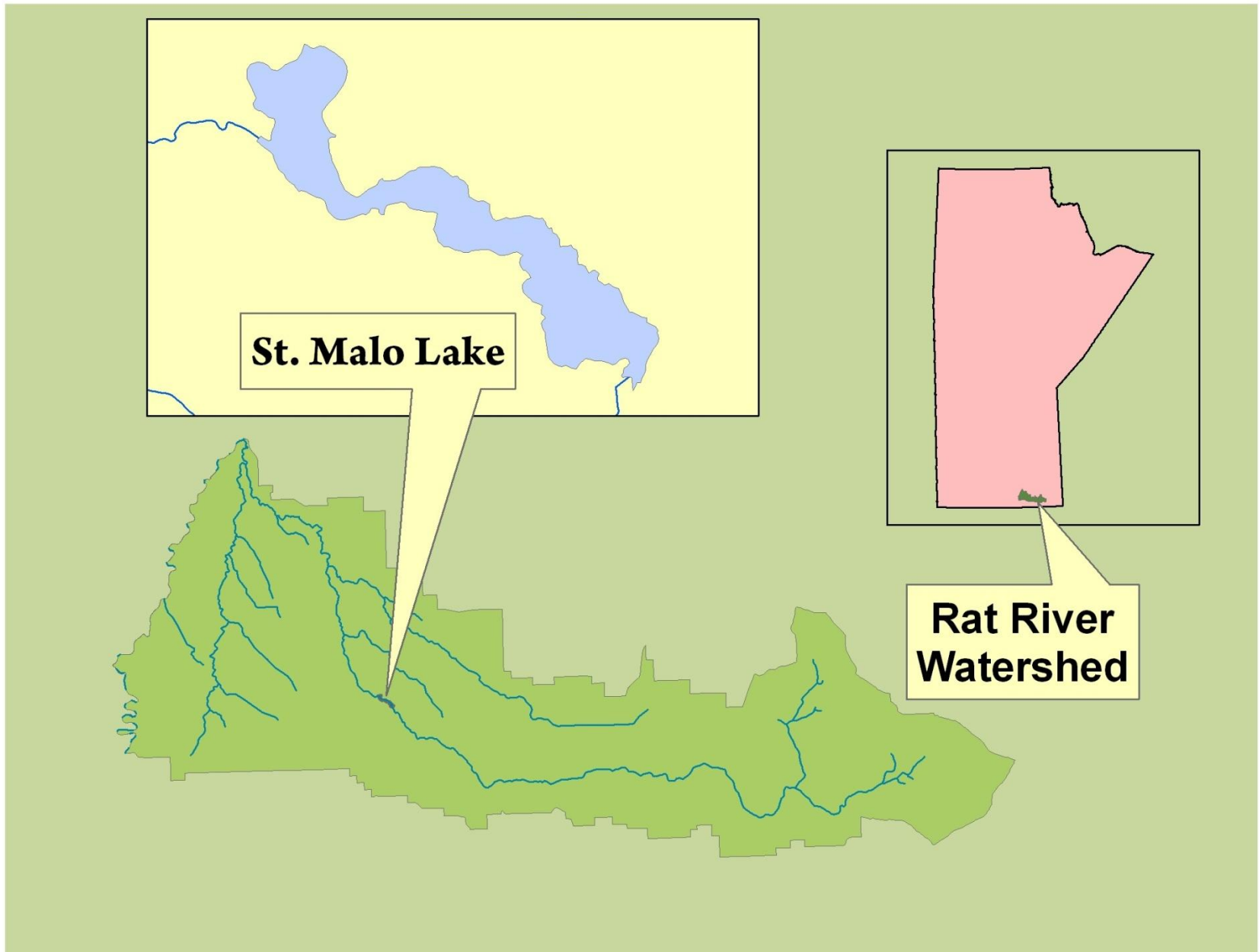
BY THE
ST-MALO LAKE STEWARDSHIP COMMITTEE

24 MARCH, 2011

WHO WE ARE

- Members: RM Council; S-MFW, Chamber, cottager, SRRCD staff, & MB WS.
- Purpose: Identify projects to improve water quality, enhance ecosystem, & ensure integrity of infrastructure.
- Area: Approx 6.5 km upstream (ESE) of St-Malo Lake to #59 crossing of Rat R downstream (W) of Lake.
- Concerns about 50yr old reservoir: water quality, sedimentation, weeds.
- Committee began work in early 2009 to feed into IWMP.
- Committee met 9 times + sub-group meetings & field work.
- Work continuing.

St. Malo Lake in the Rat River Watershed



Saint Malo Lake

Bank stabilization is a growing concern
at many points around the lake.

● Bank Erosion Concerns (Generalized)

Vegetative growth

Sediment deposition &
vegetative growth
are increasing at the South
end of the lake especially.

SRRCD © 2011

OUR ISSUES, PROJECTS, ACTIVITIES

- Step 1 – Priority: High: Lake bottom, vegetation, & water levels; River/Lake water quality & shoreline stability.
Low: Dam infrastructure, fish ladder, public access.
- Step 2 – Set components per issue.
- Step 3 - Collect & review literature, data, & information.
Expert presentations on water quality, vegetation, agriculture, infrastructure, & fish. Start water testing.
- Step 4 – Resident survey. Inform/empower with brochures.
- Step 5 – List findings with attributes of strength & source.
- Step 6 – Set possible cause-effect possibilities, try to eliminate with additional information. Iterative.

OUR FINDINGS – EROSION/SEDIMENT

- A few Lake banks eroding, as well as certain “outside-turn” upstream banks. Need study & load guidelines.
- Indications of erosion in Can-Mart & River Mill Drains, & Charlie’s Creek all upstream from Lake. Possible design and/or construction problems.
- Bottom of River mouth & south-end of Lake changing. Evidence of either sedimentation or inflow sculpting. Hope to test sediments this winter.
- Evidence of higher flows from 1990’s carrying greater sediment load. Proceeding with retention pond, need to study other possible water retention possibilities.

OUR FINDINGS – WEEDS

- Have choked south-end & certain shores since 1990's. Mostly comprised of four weeds, none invasive.
- Lake is shallow, warm, allowing good light penetration. 2-day Lake water turnover when high flows.
- No evidence of nutrient feeding from water tests. Testing possibility that fall die-off provides nutrients.
- Testing sediment increase & composition of sediment.
- Need ongoing monitoring/study of sedimentation & nutrient inflows.
- Need to study possible targeted channeling for access.
- Need to study targeted weed harvesting.

OUR FINDINGS – WATER REGIME

- Dam has a gated culvert that is not used.
- Do not know if gate works & condition of dam & dikes.
- Could gate be used to flow-through sediment? To freeze-out weeds? To reduce upstream or downstream flooding?

OUR FINDINGS – POLLUTION

- Many eyewitness accounts of pollution:
 - Agricultural overflows especially during floods.
 - Some households pumping holding & septic tanks onto land.
 - Piles of junk left on ice by fishers.
 - Fuel spills on ice.
- Need ag. & resident sewage inspections by Province.
- Advertised “turn-in polluters” program might help.

OUR FINDINGS – LAKE BIOLOGY

- Had MB Fisheries do a fish count. Await results.
- Indicate sport fish mostly perch, rock bass, & pike.
- Overall biological health & capacity of Lake & adjacent River not known. Needs study.

OUR FINDINGS – DATA & INFO

- Found it difficult to find historic & recent information.
- Still searching for certain items that should be in files, especially regarding drains & dam.
- Recommend a central location or registry for watershed.
- Will be giving IWMP a package of written documents re: terms-of-reference, issues, findings, sources, & our resolutions to the IWMP.