5. Mississippi River Water Management Plan
Reach 18
Appleton Wetland

A Presentation by:

Mississippi Valley Field Naturalists

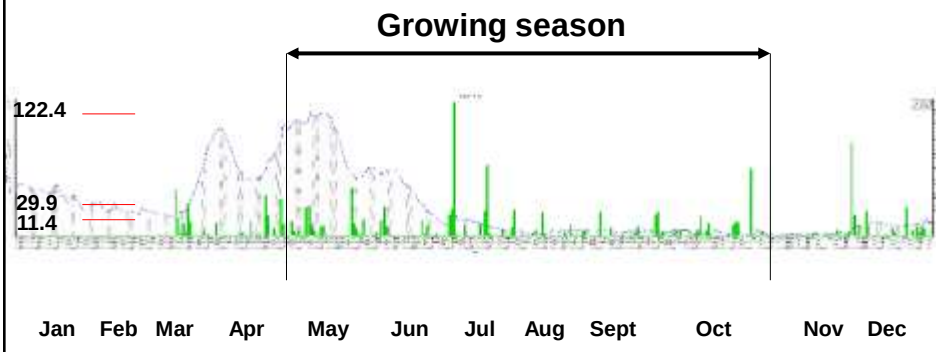
As part of the MRW Information Meeting

April 11 2013

Soft Maple Swamps Background

- They are wetlands subject to seasonal flooding with maple trees growing in them.
- Regardless of how high the spring flood is trees survive if subsequent levels allow the base of the tree and top roots to dry out and breathe.
- Although flood-tolerant, soft maples will die if inundated for 2 years or more.

Appleton Stream Gauge 2011



Stream Data from MVC
Growing season per Toner & Keddy 1996

Precipitation

Gauge reading

Comparable Wetlands

- Innisville and Mud Lake soft maple swamps
  - between Innisville and Ferguson Falls
  - designated a Provincially Significant Wetland
  - in good health
- Lavallee Creek Wetland
  - between Carleton Place and Appleton, adjacent to Glen Isle
  - smaller and not provincially designated
  - in good health

Healthy Lavallee Creek

June 30 2011

June 2 2011

Appleton Wetland Background

- Soft maple swamp
- Designated as an ANSI and Provincially Significant Wetland
- Current status: estimated 60% of trees are dead or dying
- Die-off became noticeable in 2006

Appleton Wetland
MVFN Observation
Station #3 of 6

May 31 2011

Aug 16 2011

Why is the Appleton Wetland Dying?

Cause A: Disease or Insects

- MVC Staff report, dated May 29, 2012 states:

"The MNR Forest Health Specialist did not see any evidence of insect or disease damage which would contribute to the dieback (in Reach 18)."

- Other wetlands upstream and soft maples at higher elevations within the wetland Staff report are not affected

We conclude that disease or insects is not the cause of the dieback.

Why is the Appleton Wetland Dying?

Cause B: Increased water flow in the river

- Higher flows should affect upper reaches too
- The Innisville and Mud Lake wetlands appear to be unaffected
- The nearby Lavallee wetland is also OK

We conclude that increased flow is not the cause of the dieback.

Why is the Appleton Wetland Dying?

Cause C: Flooding due to high flashboards

- Wetland was healthy prior to 2004
- Higher flashboards first used in 2004
- 2004 wetland water level much above normal throughout the summer and autumn
- Tree damage very visible in 2006 after 2 years of continuous flooding
- High water levels continue to present date

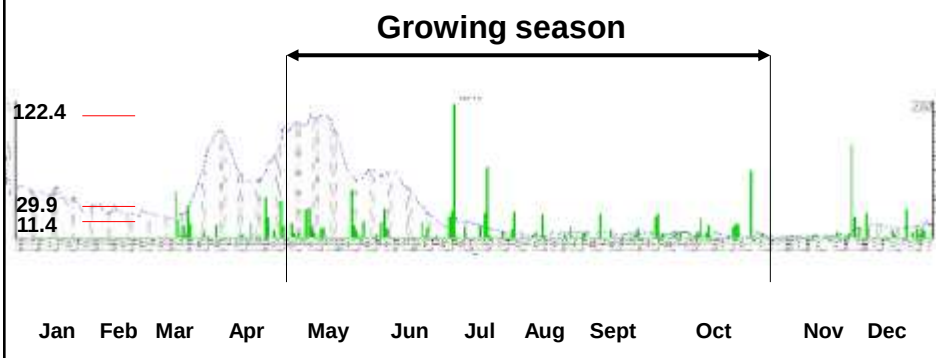
We conclude that the high flashboards are the prime cause of the dieback.

Use of Flashboards In Almonte

June 30 2011

Aug 16 2011

Appleton Stream Gauge 2011

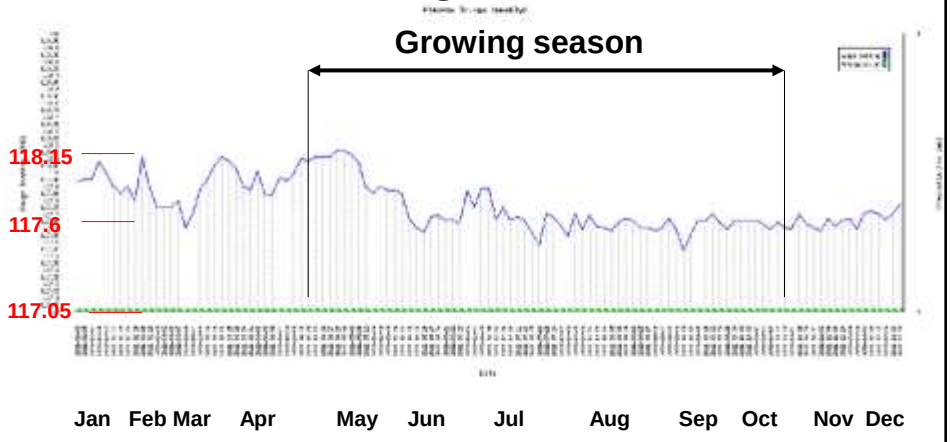


Stream Data from MVC
Growing season per Toner & Keddy 1996

Precipitation

Gauge reading

Almonte Bridge 2011 Weekly Gauge level



Stream Data from MVC
Growing season per Toner & Keddy 1996

Summary

- In setting the operating regime for Reach 18 there appears to have been no recognition in the plan that the resulting continuous higher water levels would damage the Appleton Wetland.
- This was an unfortunate mistake, that needs to be corrected.
- We feel that it is possible to revive the wetland as a soft maple swamp if action is taken now.

Recommendation

Therefore, on behalf of MVFN, and as a sitting member of this committee, I hereby propose:

"that the MRWMP Advisory Committee recommend to the MRWMP Steering Committee that the amending process as detailed in section 10.1, p.120 of the Plan be opened now for consideration".

This recommendation is supported by the Mississippi RiverWatchers group.

Update

MNR has had the file in Kemptville office for 134 days

Hoping to action the file by end of April