

Wetland Restoration in Nova Scotia

Continuing to Work Towards Effective Implementation



McCallum Environmental Ltd.

Wetland Restoration in NS Pre-2011

- Wetland Policy 2011; restoration pre-dates the policy, but challenges relating to compensation projects existed.
- Pre-2011 Challenges:
 - Where to restore? Same watershed or adjacent watershed
 - Cost of restoration, especially in urban watersheds where the majority of impacts were occurring
 - Size of opportunities- small opportunities within urban watersheds
 - NSE was requesting Like vs. like requirements
 - Rules were not always clear
- Pre-2011 Successes: 10+ wetland compensation projects were delivered on the Nova Scotia landscape

Wetland Restoration in NS 2011

- Wetland Policy 2011; brought in changes to wetland compensation which streamlined process and allowed for better implementation of compensation projects.
- More flexibility in options for wetland compensation
- Like for like in all situations was recognized to be ecologically and financially challenging, and perhaps not always the best approach
- Urban wetland restoration was identified as a key goal, but understood that more work is required to implement these urban opportunities

Wetland Restoration 2011-2014

- 20-30 wetland restoration projects have been implemented in NS
- Mostly rural wetland restoration for urban restoration losses
- Not always within watershed or adjacent watershed
- Not always supporting watershed health initiatives where alteration occurred
- Not often like for like restoration

There is an opportunity to strengthen the compensation program, now that it is implemented and working

Wetland Compensation Implementation – moving forward from 2014

- Through consultation/discussion with other industry practitioners, we've identified several general categories relating to improved implementation of wetland compensation :
 - Ecological
 - Technical
 - Administrative
 - Regulatory
 - Financial

Ecological Challenges

- tracking wetland functions- WESP?
- WESP- is this the right tool for tracking functions, and can the procedure be fine tuned to NS? Who will do this?
- Same or adjacent watershed- spacially linking wetland losses to wetland restoration
- On-site vs. off-site restoration- working towards on-site compensation when possible
- The urban toolbox
- Like for like restoration- when should this be an ecological goal?



Technical Challenges

- Site Identification
 - Historical knowledge of watersheds/surface water limited
 - Topographic data limited (LIDAR)
 - Historical aerial photography limited
 - Watershed study/evaluation
 - Reference data from unaltered wetland sites
- Access and landowner value
- Knowledgeable and quality local contractors



Administrative Challenges

- NSE office responsibility- central vs. local offices
- list of approved alterations – in order to coordinate salvage of wetland materials
- NSE process of determining acceptable restoration sites; improve clarity for provincial priorities of site selection.
- Streamlining restoration project requirements (standardization and transparency for all parties)



Regulatory Challenges

- Consistency of approach at permitting stage re: compensation
 - LOU at time of approval limits onsite planning, and creative compensation planning.
 - LOUs are not being implemented (proponent \$) until alteration occurs- signing at permit not always effective
 - Incorporate monitoring components (baseline) worked into permitting requirements
- Wetland program – how to integrate into broader regulatory context- surface water, watercourses, watershed health
- Wetland Compensation - EGSPA requirements- no net loss of area and function
- Need to focus on developing the Urban Toolbox for wetland compensation

Financial Challenges

- Ecological value of a project
- Cost of delivery of projects (planning, landowners, consultation, and implementation) in urban settings
- Creation projects with high ecological value in quarries/pits but not cost effective due to compensation ratio 4:1



Conclusions

- Wetland alteration permitting process is working reasonably well
- There have been successes in wetland compensation – 20-30 projects have been delivered on the ground
- Wetland compensation planning during alteration permitting benefits from more flexibility in order to provide the best opportunity for ecologically beneficial projects on the landscape
- Implementation of effective compensation projects in Nova Scotia is currently faced with multiple challenges, some easier to solve than others.
- There is an opportunity for industry and government together to strengthen the wetland compensation program

Moving Forward...

- Integration of additional comments and perspectives is welcome and encouraged– please come find me and let me know your thoughts!

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- We encourage NSE to set up a stakeholder meeting to work together with industry and wetland practitioners to strengthen the implementation of the Wetland Program and its associated compensation program. We are here to help!