



**Kizell Wetlands, Beaver Pond Wetlands and Beaver Pond
Issues and Stormwater Infrastructure Review**

DRAFT

South March Highlands – Carp River Conservation Inc
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EXECUTIVE SUMMARY

Based on a review of publicly-available documents, a number of issues have been identified which affect development in the South March Highlands (SMH). Development for this area began in the 1980s and has been expanded with the urban boundary with no overall concept plan or coordination as has been done for Kanata West and Fernbank. As a result, piecemeal planning has been done. The SMH area contains Provincially Significant Wetlands (PSWs) and other less significant wetlands and impacts three watersheds. Current plans are piecemealed into separate Environmental Assessments for TFDE and Goulbourn Forced Road, and uncoordinated Plans of Subdivision.

While it is said that much of Ottawa was built on swamp, there is no reason to continue to build on the SMH wetland-intensive area without proper planning or modelling, particularly because planning requirements and models have changed significantly since the 1980s and 1990s, and wetland protection, fish habitat, and species at risk protection are required

Recommendation 1

The SMH Development Area (north of Kanata Avenue) should be planned and modelled to the same extent and standard as other major development areas in the West End, and meet current planning standards and requirements

Of particular concern is the 24 July 2009 flood event which resulted in the flooding of the Beaver Pond, which is part of the Kizell Drain subwatershed. Additional development has occurred and is planned which will increase the flow to this Catchment Area, including diversion of additional water from the Shirley's Brook Subwatershed. Because of the nature of the wetlands and streams, beavers may impact the direction and quantity of flow at any time.

Recommendation 2

The Beaver Pond and the wetlands to the west need to be re-evaluated in light of the flooding which occurred on 24 July, 2009 to determine whether they are capable of performing stormwater management functions in relation to existing development, to KNL's Phase 5 development activity which is currently underway, and to Phase 6 and 9 development which is being planned.

Recommendation 3

A development halt of all of SMH development should be undertaken until this can be determined.

That the Shirley's Brook Watts Creek Subwatershed Study in 1999 only focused on the easterly developed areas which were in the urban boundary for the Shirley's Brook, Watts Creek and Kizell Drain Subwatersheds, is also a concern. In particular, the Kizell Drain Subwatershed was studied from the outlet of the Beaver Pond east to the confluence with Watts Creek, and did not provide detail for the Kizell Drain Wetland Complex (including the Beaver Pond). The Subwatershed Study indicated that the next level of development planning and floodplain mapping was to be done by developers at

the Catchment Area level, yet is being done based on Plans of Subdivision. The Subwatershed Study did not address the requirements for multi-catchment planning or road project planning for the west area.

Recommendation 4

Subwatershed studies and floodplain mapping should be updated for those areas which need to be coordinated which were not studied in detail in previous watershed studies. Because the KNL and Richardson Lands developments cross Catchment Areas KD-1, KD-2, SB-3 and impact the Carp River Watershed, development planning should be done at a level higher than the subwatershed level to ensure impacts on the 3 watersheds can be sufficiently mitigated prior to development proceeding

On the 26 Nov 2008, Ministry of Environment approved the Kanata Lakes Stormwater Management Facility, consisting of the Beaver Cell and Kizell Cell. This certificate approved stormwater facilities being built in protected natural wetlands without being based on a Class EA and without considering the impact on the wetlands or endangered species. Energy dissipaters built to date appear to submerge the storm sewer outlets and may cause surcharge.

Recommendation 5

The MOE Certificate should be revoked, and if a SWMP has to be constructed in the protected area, an appropriate Class EA should be undertaken

The Terry Fox Drive Extension (TFDE) identified the Blanding's Turtle habitat as being located in the SMH wetlands and Kizell Drain, and mitigation measures were planned which included elimination of disruptive stormwater management ponds. The *Blanding's Turtle Avoidance and Mitigation Plan* by Dillon 14 April 2010 stated that MNR had indicated that the "Kizell Drain Wetland Complex is probable habitat for Blanding's Turtle. The Kizell Wetlands (west of Goulbourn Forced Road) had previously been rated at 582 points, close to the 600 required for a PSW. This rating indicated that there were no endangered species.

Recommendation 6

The PSW review recommended by Brunton should be conducted given the MNR statement and the TFDE findings and mitigation plans concerning the Blanding's Turtle.

Recommendation 7

The issue of "natural protected wetlands" versus "stormwater management pond" needs to be reviewed and resolved, and will require stormwater management mitigation to protect the wetland habitat for this endangered species

The land for the Shirley's Brook Realignment appears to have been cleared without the completion of a Class EA or HADD. Subdivision plans in the TFDE documentation indicate that a portion of the south channel may also be affected. Plans to divert over 132 hectares from the SB-3 Catchment Area to the Kizell Wetlands in the KD-1 Catchment Area, will overload the wetlands. This diversion of water also crosses subwatersheds, which is generally discouraged.

Recommendation 8

A Class EA should be undertaken for the Shirley's Brook Realignment and parallel channel and to identify stormwater requirements for further development, considering the impact of the number of Provincially Significant Wetlands upstream and the impact of the TFDE and Goulbourn Forced Road changes. Modelling and floodplain mapping should be done to support decision making

The Goulbourn Forced Road Class EA did not address the stormwater facilities requirements identified in the MOE Certificate of Approval

Recommendation 9

The Goulbourn Forced Road EA needs to be revisited and coordinated with any SWMP outlet structures between the Kizell and Beaver Pond Wetlands, and with the East Shirley's Brook culvert. If the Kizell Cell is to be constructed, additional facility road access will be required from GFR.

It is not known whether MVCA considers the Kizell Drain Wetland Complex and Shirley's Brook tributaries to be of sufficient size to be individually "fill regulated", however, the cumulative effects of placing fill in a network of extensive wetlands, ponds, and tributaries may be considerable, particularly because flooding is known to exist under pre- and partially-developed conditions. There are a number of areas where fill has been placed or is planned which may reduce storage capacity. Much of Marchwood was built on swamp and tributaries without floodplain compensation, and development in Lakeside and the Richardson Lands appears to be taking the same approach.

Recommendation 10

The impact of loss of floodplain and floodplain compensation needs to be studied and addressed in all catchment areas where development is planned