



Highlights: Updated Nose Creek Watershed Water Management Plan

November 2018

KEY MESSAGES

The update of the Nose Creek Watershed Water Management Plan (NCWWMP) was undertaken to:

- Reflect advancements in knowledge
- Reflect changes in provincial and municipal policies
- Address challenges with Plan implementation
- Address new issues in watershed management

While there have been some substantial changes to the format and some recommendations in the original Plan, the intended outcomes are the same. Many of the recommendations are similar, or modified for added clarity. Recommendations were developed to align with current regulatory and policy frameworks, and to respond to stakeholder concerns.

The Nose Creek Watershed Partnership (NCWP) provided stakeholders with opportunities to give input into the updated Plan at key stages in the planning process. Summaries of the discussions held with stakeholders during three Stakeholder Engagement Sessions can be found on the NCWP website (www.ncwp.ca).

Table of major updates to the original Nose Creek Plan

Original Plan	Updated Plan
General	
NCWP goal statement	Stakeholders questioned why stormwater was important to the Plan when the goal was focused on protecting riparian areas and improving water quality. The goal statement was revised to reflect water quantity
Policy statements developed to enable municipal support	Policy statements were revised into clear objectives and desired outcomes
Communication with stakeholders was limited following the planning phase of the Nose Creek Plan	Stakeholders identified the need for greater communication with stakeholder groups, so there is greater involvement in planning and implementation. Recommendation 6.1.1 g tasks the Partnership with hosting focus group sessions to further discuss Plan implementation
Direction was limited regarding watershed monitoring and reporting	Stakeholders raised the concern regarding a lack of watershed condition reporting to support implementation. Recommendation 6.1.1 m calls for a periodic report to stakeholders and the community
Discussion was limited on roles and responsibilities	Roles and responsibilities are highlighted in the introductory section
Implementation tables were included in the main body of the Plan	Implementation tables were removed from main plan and included in a supplementary document titled NCWWMP Implementation Guide

Original Plan	Updated Plan
Water Quantity and Stormwater Management	
Water Conservation Objectives and Integrated Stormwater Management were placed in separate chapters	The two chapters were combined under a new theme: Water Quantity and Stormwater Management
Tools that Partners can use to measure and predict changes in watershed hydrology were not identified	6.2.2 a Recommended that a watershed scale, predictive model be developed to understand consequences of alternative management actions hydrological/hydraulic, ecological, economic and social systems
Need for water monitoring and erosion monitoring were identified	6.2.2 b, c Water monitoring and erosion monitoring continue to be recommended
Water Conservation Objectives were specified	Minor edits to improve clarification were made to the original WCOs recommendations in response to feedback from AEP 6.2.2 f Review current low-flow recommendation when model tool complete
Maximum Allowable Release Rate	Recommendation not changed
3 c. Staged implementation of Runoff Volume Control Targets	6.2.3 b - Updated to reflect stakeholder concerns regarding the ability to meet 2013 runoff volume control targets 6.2.3 c - Clarifies at what planning stage the runoff volume control targets are applied (when land use is designated) 6.2.3 d - Recommends an annual review of progress toward improving tools to support 2017 runoff volume control target implementation Stakeholders were concerned about the need for relaxations of targets as part of the development approval process 6.2.3 e - Recommends that Partners evaluate options to eliminate, reduce or mitigate the need for relaxations
Did not address redevelopment areas	A section was included in the updated Plan to address redevelopment areas 6.2.3 f - Strategies should be developed to retain open space/green space 6.2.3 g - Evaluate options needed to manage stormwater for redevelopment 6.2.3 h - Establish water quantity and quality objectives 6.2.3 i - Areas proposed for redevelopment should strive to reduce the effects of impervious surface area 6.2.3 k - Community-scale retrofits for existing stormwater infrastructure
4 a. and 4 b. No discharge from Internal Drainage Areas (IDAs) permitted to the creeks, except during extreme events	In 2015, the NCWP commissioned MPE Engineering to study IDAs; the results of that study were used to clarify IDA recommendations 6.2.3 l - Incorporates IDA Policy into the Nose Creek Plan 6.2.3 m - Integrate stormwater and wetland management in urbanizing areas
Initial recommendations pertaining to Low Impact Development (LID) as a new and promising stormwater management tool	Expands on initial LID recommendations and responds to stakeholder concerns 6.2.3 q - Promote wider adoption of LID 6.2.3 r - Work to improve timeliness and reduce uncertainty of the approval process 6.2.3 s - Performance monitoring should accompany implementation
Surface Water Quality	
Water Quality Protection and Protection of Natural Features	Water Quality Protection and Protection of Natural Features were combined under section Surface Water Quality; Source Water Protection was moved to Groundwater section
Provincial water quality guidelines and Bow River Basin Council (BRBC) objectives were not specified in the Plan	Stakeholders sought clarity regarding Plan goals and objectives 6.3.2 a-c – Existing water quality guidelines and objectives included in Plan
Stormwater quality was not considered	6.3.2 d, e and f – Stormwater quality recommendations put forward

Original Plan	Updated Plan
No reference to point source water quality concerns	6.3.2 g – Recommendation regarding Crossfield’s treated wastewater effluent
Develop and initiate a long-term water monitoring strategy	6.3.2 h - Review, update, and implement the long-term water monitoring strategy to include continuous monitoring
Recommendations to protect natural features – stream channel morphology, sediment, erosion and soils, escarpments and restoration	Reiterated in the updated Plan – Section 6.3.3 6.3.3 h – Recommends adhering to the Procedure for Topsoil Statutory Declaration and Development Permit processes for soil quality disposal requirements to manage soil quality and preserve agricultural lands
Riparian Protection	
Riparian health assessment scores were not specified in the Plan	Stakeholders sought clarity regarding Plan goals and objectives 6.4.2 a – Improve riparian condition when scores fall below the threshold rating of 70, where practical, using a priority approach for restoration
Riparian setbacks recommended (10 a), and permitted activity in setback specified (11 c)	Riparian setbacks were updated to reflect new provincial guidance, and municipal policies (The City of Calgary and Rocky View County) 6.4.3 a - Determine riparian setbacks for permanent watercourses on a site specific basis as the greater of the minimum setback (e.g., 30 m or 60 m) and the 1:100 year floodplain width. Additional steep slope setbacks may apply 6.4.3 c – future alignment of all setbacks among municipalities desired 6.4.3 f – Maintain public access in a manner that will not compromise riparian function or water quality 6.4.3 g - Prescribe BMPs during detailed design, and use routinely when working in and around riparian areas
Ephemeral and intermittent watercourses were not identified, other than to maintain natural hydrology in the watershed (6 a and 6 b)	Ephemeral and intermittent watercourses were identified as important features to maintain for flood/drought mitigation, and water quality 6.4.3 i - Strategically locate buildings, roads and structures to preserve the natural hydrology of ephemeral and intermittent watercourses 6.4.3 j – Preserve in new developments, where possible, to moderate runoff volume and quality 6.4.3 k – Width of riparian setbacks should not be less than 6 m 6.4.3 l – Specifies permitted activity in setback and in 4 m buffer
There was limited discussion regarding wetland retention as a valued natural feature (8 a and 8 b), and in agricultural areas (12 b and 12 c)	Recommendations were updated to reflect stakeholder concerns about: the ability to retain wetlands in urbanizing areas; new wetland policies 6.4.4 a - Update wetland inventory 6.4.4 b - Apply setbacks to wetlands 6.4.4 c - Effort to prevent loss of high-valued wetlands 6.4.4 d - Integrate wetland management into urban planning 6.4.4 e - Urban planning to identify wetlands as natural infrastructure 6.4.4 f - Adopt recommended strategies to prevent wetland loss 6.4.4 g - Where loss is unavoidable, wetland impacts should be mitigated, or wetlands should be restored, and/or created as part of water management infrastructure, provided that the criteria for wetland integration is met 6.4.4 h - Track wetland decisions to better understand design modifications to wetlands that lead to successful impact avoidance 6.4.4 i - Identify opportunities to retain wetlands 6.4.4 j – Develop a guide for integrating wetlands in new developments

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Groundwater	
<p>Source Water Protection recommendations highlighted (section 8.6.2)</p>	<p>The chapter about Source Water Protection was changed to theme: Groundwater; minor updates reflected the need for research and monitoring</p> <p>6.5.2 a - Develop a comprehensive source water protection plan focused on the groundwater resource</p> <p>6.5.2 b - Identify and properly decommission abandoned water wells</p> <p>6.5.2 c - Apply appropriate BMPs to protect groundwater (e.g., proper use of pesticides and fertilizers)</p> <p>6.5.2 d - Increase understanding of springs and seeps</p> <p>6.5.2 e - Increase understanding regarding role of groundwater in water balance</p> <p>6.5.2 f - Continue community-based monitoring programs</p>
Biodiversity	
<p>Biodiversity was not considered at length in the original plan</p>	<p>Included to reflect new information about Brown Trout spawning in West Nose Creek, and new invasive species threats (e.g., crayfish, Prussian Carp)</p> <p>6.6.2 a - Update the Restricted Activity Period for West Nose Creek, relevant to Brown Trout spawning</p> <p>6.6.2 c - Protect and maintain spawning and rearing areas for Brown Trout in West Nose Creek</p> <p>6.6.2 e - Consider wildlife habitat sensitivities in future land use plans</p> <p>6.6.2 f - Document the occurrence of invasive species in the watershed (e.g., Prussian carp, crayfish)</p> <p>6.6.2 h - Develop and disseminate educational resources for public users that highlight the threat of aquatic invasive species</p> <p>6.6.2 j - Continue annual effort to control and monitor invasive species with due care to native plants and water resources</p>
<p>Chapter: Mitigation, Compensation, Restoration</p>	<p>Chapter removed; Mitigation and restoration measures were included in theme: Riparian Protection</p>
<p>Chapter: Cumulative Effects</p>	<p>Chapter removed. The concept of minimizing cumulative effects was included throughout the updated Plan.</p>

This summary document was prepared by Palliser Environmental Services Ltd.



Palliser Environmental Services Ltd.