The Oldman Watershed Council's Recommendations and Feedback on the Draft Castle Management Plan – April 19th, 2017

This document is intended to supply recommendations to the Draft Castle Management Plan from the Oldman Watershed Council (OWC). As a multi-stakeholder organization, the OWC represents the views and interests of all stakeholders while advocating for the health and integrity of the Oldman watershed. In order to address the Castle Draft Management Plan's Objectives and Strategies, this document compares those items to the Oldman Integrated Watershed Management Plan Headwaters Action Plan (HAP) 2013-14, specifically to the Indicators, Targets and Actions listed in the HAP.

Background of the Oldman Watershed Council's Research into the Castle

The HAP process was initiated in 2012 and involved many steps and a collaborative process to develop a plan reflective of the current priorities in the Oldman headwaters as determined by the multi-stakeholder community. The process involved scientific assessment of headwaters health, public perspectives on headwaters health and stewardship, supporting information from other initiatives related to the headwaters, and engagement and sharing of information and knowledge between the members of the multi-stakeholder Partnership Advisory Network (PAN). The PAN made decisions by consensus about what targets would be set and what community actions and recommendations to decision makers were needed to achieve the targets.

The Headwaters Action Plan

The area of the Castle Provincial Park and Castle Wildland Park are located in the headwaters of the Oldman watershed. In the Headwaters Action Plan (HAP) process (see attached), the areas of the Castle Parks were included in relevant discussions. Indicators, Targets and Actions were developed for the Oldman headwaters and highlighted in the HAP. In addition, the document provided specific recommendations to decision makers including the Government of Alberta.

Indicators and Targets **Please see HAP for full list of Indicators, Targets, Actions and Recommendations**:

1) Presence and Abundance of Fish – especially Native Populations
    - Target 1: Maintain current native fish and naturalized fish population integrity, within the headwaters and explore opportunities to increase native fish pops in their current range
    - Target 2: Restore native fish pops on selected streams in the headwaters
2) Density of Linear Features
    - Target 1: In urban centres and major transportation corridors, no linear thresholds will be set; however, mitigation of the impact of linear features will be actively pursued
    - Target 2: Maintain negligible and low LFD where it currently exists, and ensure no net gain of LF in each sub-watershed
    - Target 3: Decrease density of LF where there is moderate to high pressure rating in headwaters sub-watersheds

3) Aquatic Invasive Species
   Target 1: Keep AIS out of the Oldman Watershed (zebra mussels, quagga mussels and Eurasian watermilfoil)

The Oldman Headwaters Indicator Project

In addition, the Oldman Headwaters Indicator Project, March 14, 2014 (see attached) provided an assessment on the Oldman headwaters broken down in 4th order Strahler watershed boundaries. The Project determined four Criteria for watershed assessment and accessed the data for six indicators – four pressure indicators and two condition indicators.
Criteria:

1) Intact Landscape
2) Road Density, Density of All Linear Features & Riparian Condition
3) Sedimentation/Erosion Potential
4) Stream Flow Regime (Magnitude and Timing)

Pressure Indicators:

1) Intact Landscapes
2) Road Density
3) Density of All Linear Features
4) Sedimentation and Erosion Potential

Condition Indicators:

1) Riparian Condition
2) Stream Flow Indicators

Each 4th order watershed was given a pressure rating based on the current state of each of the four pressure indicators – Negligible Pressure, Low Pressure, Moderate Pressure or High Pressure. The condition indicators were measured on a different spatial scale and ratings for Riparian Condition were out of 100 on a scale from Healthy (80-100% score range), Healthy With Problems (60-79% score range) and Unhealthy (<60% score). Stream Flow was described by measuring the Flow Magnitude and Flow Timing at 15 measuring stations.

Table 1: Thresholds used to differentiate Pressure Indicator Rating Categories

Indicator	Unit	High Risk	Moderate Risk	Low Risk	Negligible Risk
Intact Landscapes	% aerial coverage of watershed with intact habitat patches	<30%	>30 – 50%	>50 – 75%	>75%
Road Density	km/km^2	≥0.87	>0.5 to 0.87	>0.1 to 0.5	0 to 0.10
All Linear Feature Density	km/km^2	>3	>1.2 to 3	>0.6 to 1.2	0 to 0.6
Erosion Risk Indicator	km/km^2	>1.5	>0.6 to 1.5	>0.3 to 0.6	0 to 0.3

Figure 1: Pressure Indicator – Intact Landscapes

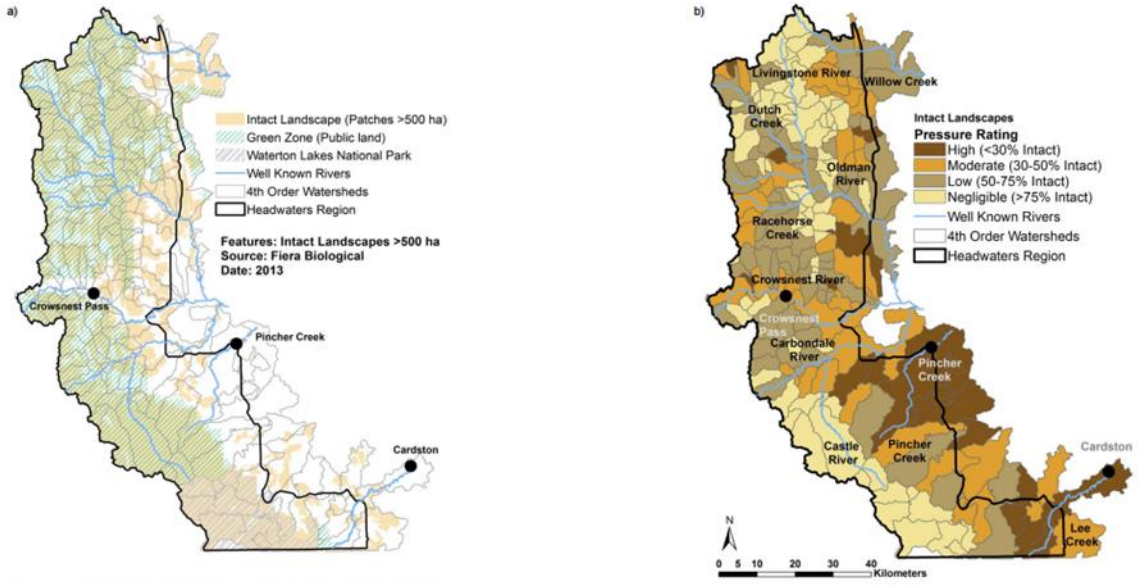


Figure 2: Pressure Indicator - Road Density

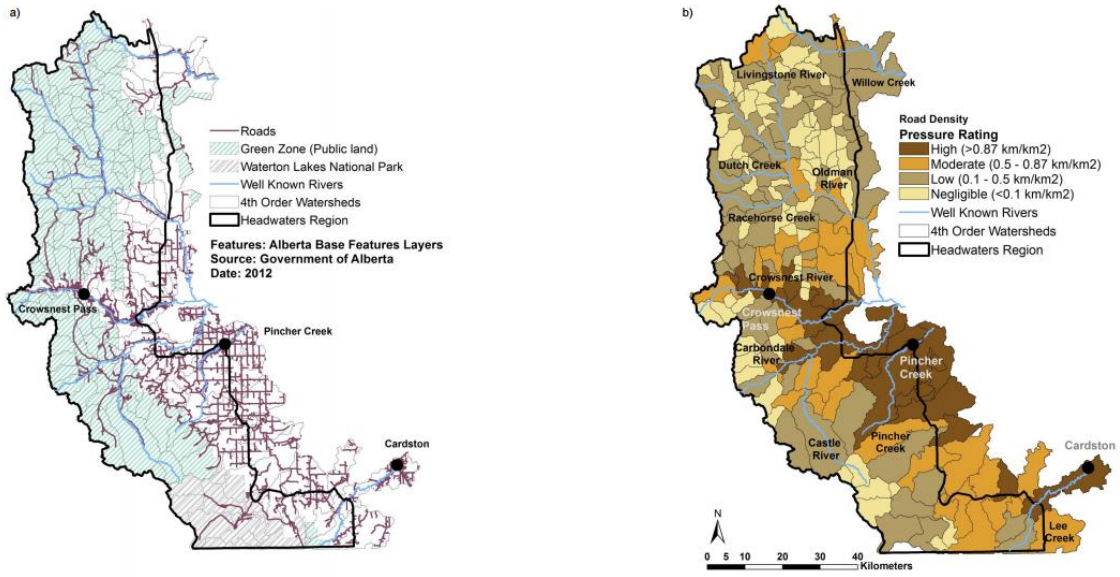


Figure 3: Pressure Indicator - Density of All Linear Features

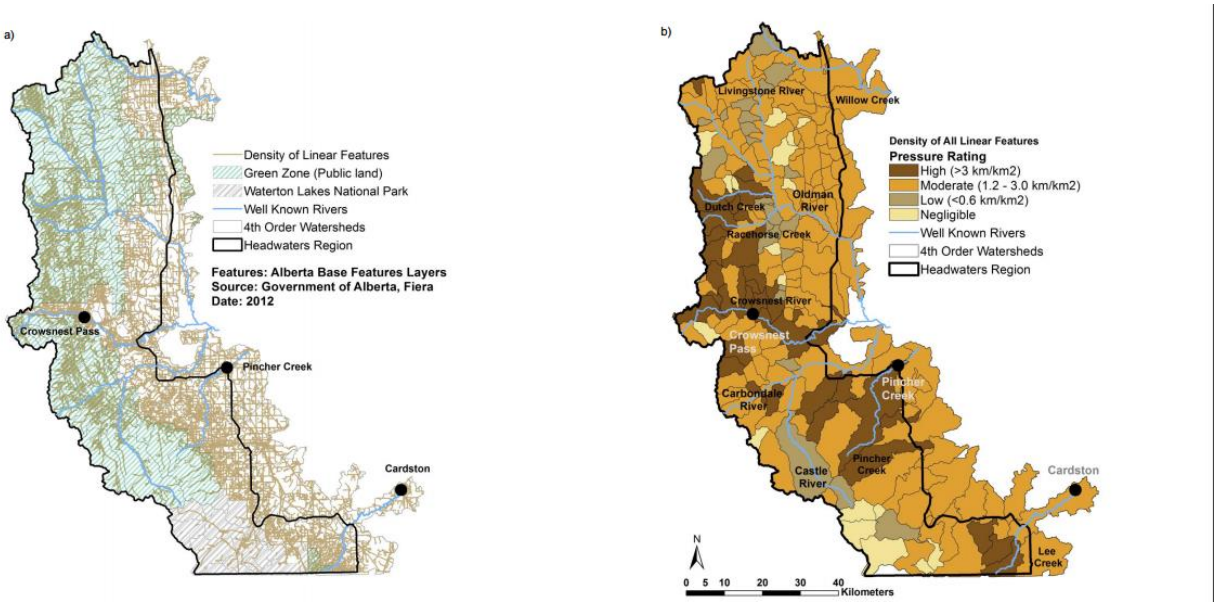
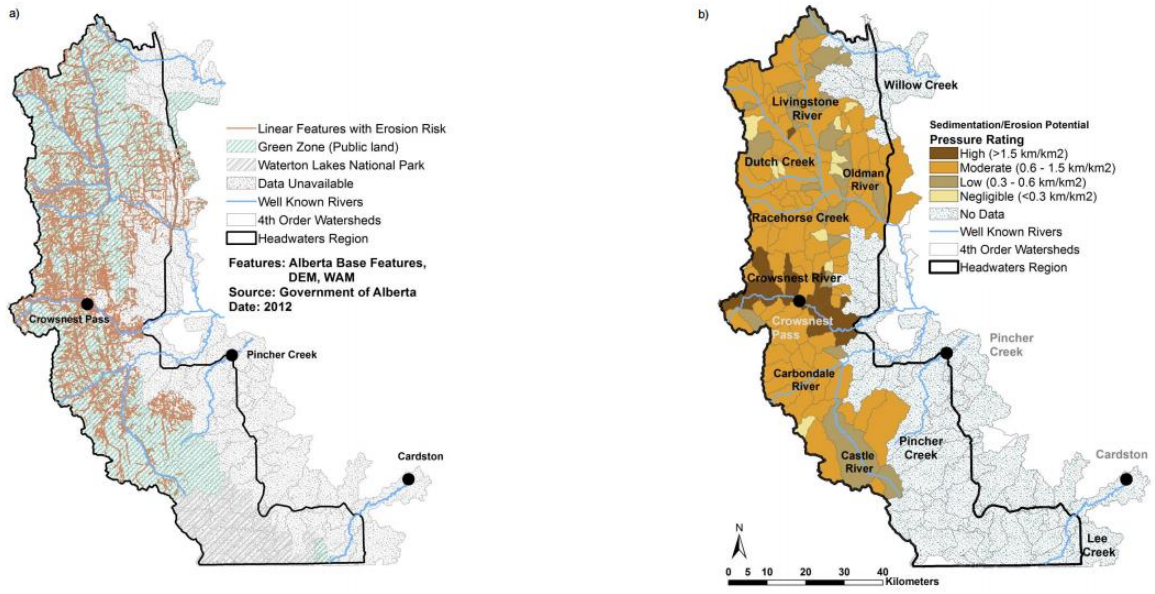


Figure 4: Pressure Indicator - Sedimentation



It was found that the most Northern part of the Castle, where the proposed Provincial Park lies, contained the highest densities of linear features, marking mainly highest risk/pressure (>3.0 km/km^2) and moderate risk/pressure (1.2-3.0 km/km^2) in the northern sub-watersheds. The lowest pressure/risk (<0.6 km/km^2) was found in sub-watersheds the southwest portion of the Castle, or in the proposed Wildland Park. Following the results of the *Oldman Headwaters Indicator Project,* there was a multi-stakeholder based recommendation to reduce the density of all linear features in sub-watersheds rated above 0.6 km/km^2 (high to moderate risk/pressure), and to maintain densities in sub-watersheds that recorded <0.6 km/km^2 (low to negligible risk/pressure) thereby targeting a maximum density of 0.6 km/km^2 in the entire Castle area.

The Headwaters Action Plan, the Oldman Headwaters Indicator Project and the Castle Parks Draft Management Plan

In this section, direct reference to the Objectives and Strategies found in the Castle Parks Draft Management Plan are made. These are the Objectives and Strategies that the Oldman Watershed Council can support as they are directly related to the goals of the Headwaters Action Plan.

Indicator 1: Presence and Abundance of Fish – especially Native Populations

- Objective 2.2.1: Develop thresholds and targets to manage biodiversity values across the landscape.
- Objectives 2.2.3: Identify and protect rare and globally significant ecosystems, rare and globally significant plant species and areas of special ecological concern.
    - Protect, maintain or enhance natural habitat for species of concern.

    - Protect current and future species at risk identified through the federal SARA and the AB Wildlife Act.
- Objectives 2.4.3: Enhanced conservation and management of native grasslands will be achieved through range management practices that support the overall conservation intent for both Castle Provincial Park and Castle Wildland Provincial Park.
    - Apply Best Management Practices to minimize impacts of livestock grazing in sensitive sites (eg. Riparian areas and Alpine sites). Initial priorities for implementation will be in critical habitat areas for WSCT, bull trout and harlequin ducks.
- Objectives 5.4: Conduct outreach activities to educate, inform and promote.
- Objective 6.6: Assess, maintain and enhance opportunities for water-based recreation activities.
    - Take actions to minimize risks and impacts, or restrict access to areas that are environmentally sensitive, contain rare or at-risk species, or pose a high risk for the introduction of AIS
- Objectives 6.9: Maintain sport fishing opportunities in the Castle Parks
    - In collaboration with AE&Ps' fish and wildlife biologists, develop strategies to improve sport fishing opportunities that are consistent with fisheries management and park objectives referencing existing species management and recovery plans where available (eg. WSCT, bull trout)
    - In collaboration with AE&Ps' fish and wildlife biologists, implement recovery initiatives within the Castle Park to support recovery of WSCT and bull trout as per existing species management and recovery plans.

Indicator 2: Density of Linear Features

- Objective 2.2.2: Ensure connectivity corridors are identified and maintained.
- Objectives 2.3: Protect and enhance the integrity of riparian and wetland ecosystems.
- Objectives 2.5: Evaluate and strategically manage connectivity of habitat, LD and recreation use to provide climate refugia for species (minimize fragmentation to allow species movement as climate changes).
- Objectives 6.3: Manage the impact of trail development and types of use to be consistent with biodiversity thresholds.
- Objectives 6.10: Defragment habitats and landscapes that have been disturbed by OHV and industrial use.

Indicator 3: Aquatic Invasive Species

- Objective 2.4.1: Manage and monitor invasive species, insect and pathogen infestations according to GoA policies, legislation and best practices.
- Objectives 5.4: Conduct outreach activities to educate, inform and promote.
- Objective 6.6: Assess, maintain and enhance opportunities for water-based recreation activities.

- Take actions to minimize risks and impacts, or restrict access to areas that are environmentally sensitive, contain rare or at-risk species, or pose a high risk for the introduction of AIS.**

In addition to these Objectives supported by the OWC through the Headwaters Action Plan, the recommendations to the Government are as follows:

1) Adopt the linear features density targets as determined in the Headwaters Action Plan 2013-14 into the South Saskatchewan Regional Plan. *

Linear features density targets are:
1. No net increase in linear features density in each sub-watershed of the Oldman headwaters
2. Set linear disturbance threshold of .15 - 0.2 km/km2 in sub-watersheds where Bull Trout and Westslope Cutthroat Trout currently exist
3. Maintain negligible-low linear feature pressure/ risk rating in sub-watersheds where it currently exists
4. Lower density of linear features in high priority 4th order watersheds by one pressure/risk rating (e.g. high pressure/risk to moderate pressure/risk rating).
(Reference: Oldman Headwaters Indicators Project, 2014.1).
*This recommendation is applicable to the Castle as the OWC cannot support nor disagree with the ban on OHVs. The OWC supports that a threshold for Linear Features Density be adopted in Alberta, including the Castle Parks. Eliminating the use of one user, in this case OHVs, may not ensure that the threshold will be met. With the recommendations put forth in this letter, it may still be possible to have all types of user recreation while addressing the necessary environmental thresholds.

2) Develop Access Management Plans for the headwaters that will:*

- focus on watershed health as the first priority
- clearly designate acceptable uses
- manage the intensity/volume of use
- recommend setting linear disturbance threshold .15 - 0.2 km/km2 in sub-watersheds with where Bull Trout and Westslope Cutthroat Trout exist and level of linear disturbance is higher than this threshold value
- for user groups, address displaced activities and recommend alternative locations that are not in high impact/sensitive areas.**

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**It is important to note that much of the Castle area is sensitive. All users have an impact on the area and ecological thresholds must be addressed. Identifying all user groups and ensuring accurate knowledge of the impacts is necessary. A balance with all users must be established and centred on the science, but the amount of restrictions must also be balanced socially and scientifically (see Objective 6.6).

3) **Increase enforcement of existing laws and policies related to recreational use in the headwaters.***

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4) **Develop a Recreation Management Framework and Plans for the Eastern Slopes (including the Oldman headwaters) and particularly the Porcupine Hills and the Livingstone. The plans would include (but is not limited by):*, *****

- retaining negligible-low linear feature risk rating in key sub-watersheds, including the South Castle and other headwaters sub-watersheds
- development of motorized and non-motorized trail staging areas
- monitoring and controlling intensity of use
- limiting linear features to maintain and protect 'last of the best' watershed integrity values
- referring to a current, successful access plan as an example for developing the recreation plan (e.g. Kananaskis Country)
- meet recreation needs of Albertans.

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***In addition, this plan should include an education plan on proper and unlawful OHV use, watershed health and integrity and overall user effects on the watershed. Cumulative effects should be a main topic in all education and outreach. A managed OHV trail system in these areas needs to be a priority for GoA planners and needs to be implemented efficiently, taking into account the best available science and implying the thresholds recommended. A user-funded and properly managed and enforced trail system in ecologically appropriate areas of the Oldman Watershed is recommended and supported by the OWC.

5) **The Government of Alberta will work diligently to ensure effective decision-making and regulatory action for watershed health.**

6) **Harmful stream channelization in watercourses is avoided; current harmful channelization is removed or remediated.**

7) **Complete a fine scale analysis of linear disturbance in the Upper Oldman and Carbondale sub-watersheds, including criteria to establish a restoration plan to reduce linear disturbance to a lower pressure/risk rating (e.g. high to moderate, or moderate to low)**

(Reference: density of linear features pressure/ risk ratings: Oldman Headwaters Indicators Project, 2014.1).

8) **Angling regulations are amended to prevent stress or harm to native fish.**

(Regulatory changes may include closure of key reaches or sub-watersheds to angling; control of invasive species harmful to native fish.)

9) **Restore native fish in prioritized streams where:**
   1. populations have been extirpated
   2. habitat values for native fish are sufficient and/or have been restored
   3. the threat of invasive species to native fish populations has been addressed.

10) **Develop policy to ensure there will be no net increase in density of linear features in the Oldman headwaters sub-watersheds. *, ****

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****The Plan needs to include clear restoration objectives of current trails in order to lower the current Linear Features Density in the Castle Parks. Bringing the entire area down to Negligible-Low Pressure Ratings and densities of 0.15-0.2km/km^2 in areas where Westslope Cutthroat Trout Critical and Bull Trout currently exist is also recommended by the OWC.

11) **Permits for construction of roads or other linear disturbance should include timeframe for active use and date for decommission and reclamation.**

Attachments:

Headwaters Indicator Project (2014)

https://static1.squarespace.com/static/55775efbe4b02c5614691727/t/55ba6084e4b08db54f561f24/1438277764498/HeadwatersIndicatorsProject.pdf

Headwaters Action Plan (2013-14)

https://static1.squarespace.com/static/55775efbe4b02c5614691727/t/559cab54e4b08185b1947a75/1436330836141/HAPsummary.pdf