

## **ECOSYSTEM RESTORATION: Is it working? We say no.**

Tags: ecological restoration, important ungulate winter range, snow interception cover, johnstone creek, connectivity, wildlife corridor

In recent years a number of Ecosystem Restoration (Ecological Restoration) projects have been undertaken in the Boundary area, closely following the examples of projects in the Kootenay Trench area where projects have a 12 year or more record.

The effectiveness and “success” of these projects is questionable. It is apparent from reports, “reading between the lines of reports” and talking to land managers, that planned objectives are rarely met, and that the old stories of cattle and wildlife competition (in the Kootenays) are unresolved. In the Boundary our observations of various projects are that excessive thinning and removal of forest have detrimentally affected wildlife habitat in a variety of ways.

The following pictorial example focuses on the Johnstone Creek Watershed but our concerns relate to all projects.

Funding for these projects has drawn on various public funded sources with significant contributions from the Habitat Conservation Fund which is largely funded by hunter/fisher contributions. In our view the extent to which projects have detrimentally affected wildlife habitat has not yet been recognized by those interested in protecting and enhancing wildlife habitat. We are working on it.



Newly logged area in Johnstone Creek Park. Remaining trees offer no effective snow interception cover, thermal cover or security cover in an area designated as Important Winter Range. Remaining trees, largely pine of no commercial value, do not host the tree lichens that are important winter food for ungulates. The JC area, a vital and well used wildlife corridor was the only well treed north/south wildlife corridor west to Osoyoos, North to Westbridge and East to Greenwood.

Plan appears to ignore expected precipitation changes due to global warming, possible heavier winter snow and dryer summers. Opening area to this extent dries area earlier in year extending fire season.

## Update on so-called Ecosystem Restoration at Johnstone Creek Park.

**PART 1:** pictures of Johnstone Creek Park before and during logging.

We remain concerned that the extent of logging has effectively removed Snow Interception cover, Thermal Cover and Security Cover and created various conditions detrimental to wildlife, while purporting to be all for the benefit of wildlife.

Pictures and their captions record snow depths on March 10<sup>th</sup> 2018 some 10 days after the last significant snowfall and therefore somewhat understate maximum snow depths.

The recorded depths far exceed guidelines for suitable ungulate habitat.

Similar logging took place a few years just north of the Park with similar detrimental effects to habitat. Some additional info on that project, which was largely prompted by a grazing tenure holder, was also publicly sold as a project to benefit wildlife. See our article on the Boundary Alliance website:

[www.boundaryalliance.org/award.pdf](http://www.boundaryalliance.org/award.pdf)

In **PART 2** a copy of our concerns sent out in December 2017



Image 1 The Johnstone Creek Spring Pasture just North of Johnstone Creek Park.

Earlier logging reduced snow interception cover to a theoretical 20-25%. Snow depths in most of this area 26-32" on March 12<sup>th</sup>.

Image 2 that follows shows this area just north of highway above Johnstone Creek Park.



Image 2 just across highway north of Johnstone Creek Park. Snow depths in predominating open areas 28". Very close to larger trees 18-20" indicating that snow interception cover is not effective in this area.

Image 3 and 4: Johnstone Creek Park prior to logging showing that tree density and snow interception cover is already at or below recommendations for SIC in an area designated as Important Ungulate Winter range



Image 3 West end of Johnstone Creek Park. See image 5 for the change.



Image 4. Prior to logging, not a dense stand, SIC already at low end. Highway atop left.



Image 5 After logging, in area seen in Image 3. This tree density offers no effective SIC at all and has removed security cover and thermal cover.



Image 6. Google view over Park prior to logging, the area below the highway. Area top left is the result of the earlier “ecosystem restoration” referred to in Images 1 and 2.

Park tree density pre-logging is not high. Shadows create the impression that tree densities are higher than actual.

**PART 2.** Our earlier complaint

Our comments on the JC Park Project also include in part, the JC Ecosystem Restoration Project carried out previously north of the highway and touch on Restoration Projects in general. The present project is essentially an extension of the former project. While we are aware that various Ministries involved in management of Public Lands prefer to discuss concerns as site specific, we take the broader landscape scale view as well as site specific, to better identify trends in management that show the shortcomings of such management, projects, and outcomes.

We had the opportunity to address some of our concerns over Ecosystem Restoration Projects in general, and the earlier JC Project, at Lisa Tedesco's Meeting, May 15 2017.

While we acknowledged the potential value of some thinning, brushing, prescribed fire to address forest in-growth and expansion, prescriptions routinely exaggerate the "problem" of natural forest growth and the supposed benefits to wildlife, of treatments. The extent to which treatments reduce fire risks is also exaggerated as prescribed fire rarely removes much forest floor debris volume, nor does it necessarily reduce the intensity of subsequent fires. It is also being belatedly recognized by land managers that burning of degraded, weedy grasslands can result in increased weeds, something the consultants who designed the JC Project were apparently unaware of.

It is our observation that treatments have overreached desirable levels of intervention. That the overreach is not a small difference of degree but one that has resulted in various detrimental effects on habitat.

Prescriptions routinely claim that:

1. "historic" grasslands and open-forest will be "restored"
2. Wildlife habitat will be enhanced or restored.
3. Connectivity made or improved.
4. Fire risk will be reduced.

**Re Item 1.** When invoking some 'desirable' point in time to recreate, plan authors need to not only document the period and the specifics, but consider the intervention on a landscape scale, recognizing adjacent and area changes that have occurred over the same period. Forest removal by agriculture, forest removal for commercial use, mostly clear-cuts, except for localized woodlot treatments, forest removal by wildfire. After recognizing these changes, planners might better "see" the value of a forested area like the JC area. The JC area is the only well treed north/south wildlife corridor west to Osoyoos, North to Westbridge, and East to near Greenwood.

**Re item 2.** While the prescription acknowledges the area as important ungulate winter range (UWR) a variety of actions proposed will detrimentally affect the UWR.

Treatment on JC North and the new plan will substantially reduce snow interception cover, thermal cover and security cover. It appears that "reclassifications" of this area as "open forest" have been made to accommodate restoration plans without recognizing current values. While there has been recognition in the JC area of the desirability of SIC at slightly higher elevations of 50-60% SIC (a low limit

recommendation) the critical JC project areas should be required to maintain similar (minimum) SIC requirements. While the project areas do not always see snow depths that pose problems for ungulates, SIC is intended to help under exceptional conditions. You are no doubt aware that snow depths of 18" occurred during the first phase of the JC North project. Deer movement, depending on snow depths, generally increases in the lower JC areas in December and January as they move from higher elevations. Prescriptions to mostly leave pine may well be motivated by current lack of commercial interest. Removal of fir/larch results in substantial removal of tree lichens which are an essential ungulate winter food, and a preferred food in all seasons.

Reduction of tree lichens making area less desirable for flying squirrels and their beneficial effects on fir forests and mycorrhizal fungi.

Reduction of browse by removal or damage.

Snow Interception Cover in the Park area is already at a maximum of 40% pre-treatment. Interventions proposed substantially reduce SIC well below recommendations. The plan proposed and the reality of UWR needs are incompatible.

"Restoration" projects usually result in a reduction of the variety and volume of desirable feed which might well be avoided by less aggressive vegetation removal.

Less aggressive vegetation removal would result in less soil disturbance, Soil disturbance promotes weed spread and growth, frequently requiring undesirable chemical treatment over extended periods.

Thinning increases likelihood of further tree loss from increased exposure to windthrow.

**Item 3.** The plans intent to "improve habitat connectivity" might suggest to the uninformed that this forest is too thick for passage by wildlife. Air views show an area already below SIC minimal suggestions, with much spacing and open ground between trees.

The stated objective is completely misleading as most of the interventions mentioned above will reduce connectivity values. We would add that bear, moose and no doubt other wildlife use this corridor in its present state.

**Item 4.** Fire risk. Because of the variables involved in wildfire no worthwhile evaluation or claim of risk reduction is possible. The claim of risk reduction recurs in prescriptions mostly to provide assurances to the public that "something is being done" to reduce fire risk. It is also a useful claim for funding sources. The absence of any evaluation of carbon impacts of slash burning, prescribed burning, effects on mycorrhizae etc are the norm

## **Other Issues.**

In no particular order, we comment on some broader issues:

More detail on our objection to the current Eco Restoration practices can be found at:

[www.boundaryalliance.org/award.pdf](http://www.boundaryalliance.org/award.pdf)

A new photo essay will be published soon at the boundaryalliance.org website detailing the loss of cryptogamic soils due to cattle grazing. Where they still exist in areas ungrazed by cattle. How annual regrowth of desirable vegetation is significantly inhibited by soil compaction, overgrazing, poor grazing timing, or some combination of same.

That we were advised at the beginning of the JC North project that the Parks portion North of the highway would be fenced to prevent cattle access and possibly reduce the resultant E.coli contamination of the stream recorded in the JC Campsite over the years. Some upstream watering sources were provided during that Restoration however they were not used in the first two years. In 2017 two waterers were used, neither supplied by a pump which was part of this elaborate publicly funded project. In both cases the water sources lacking effective flow-through did not get much used by cows who preferred their usual creek source. The fencing did not happen but may well not have prevented the contamination that continues instream in JC Park.

We have advised various officials including Park staff of the contamination that exists in JC and suggested at a minimum that campers be advised of the danger of using water from what appears to be a pristine creek. The public water pump source in the Campsite has been labeled as needing to be boiled which could prompt unwary public use of the stream. Perhaps we need to put up our own sign detailing the reasons for the stream contamination.

### **What are the current drivers behind Eco Restorations, given the lack of effectiveness ?**

We know that the JC North project was driven by grazing tenure holders wishes and that consultants prioritized the plan for range benefits, with wildlife well down the list.

We can suppose that the significant tree/vegetation removal is driven by need to have sufficient merchantable timber to entice logging contractors.

Others driven by contractor/consultant work prospects?

### **Our suggestions.**

Take a fresh new look at the efficacy of projects, evaluate whether the degradation agents will be removed, determine the costs and benefits (which might require objective outsiders) and meanwhile substantially decrease vegetation removal so as to minimize the disruption to wildlife and habitat.

We were slightly encouraged by acknowledgements at the May 2017 meeting by reps from Boundary and Kootenays, that there have been some disappointing results from projects.

The thought was mentioned that it might be more productive, (not to mention a better use of public funds) to direct efforts towards access issues, road rehabilitation, recontouring, replanting.

We encourage that possible change of focus.

Upcoming [boundaryalliance.org](http://boundaryalliance.org) articles will expand on concerns, public cost and the failure of most eco-restoration projects to resolve the cattle/wildlife issues with a focus on the JC Project, the Rixin Project and the efforts in the Kootenays.