Speaking notes for
YCS Wetlands Reclamation presentation
For Delivery to the Yukon Water Board – Placer Mining in Wetlands
October 27th 2020

SLIDE 1: Place keeper-no words

SLIDE 2, YCS SLIDE:
Thank you very much for inviting me. My name is Sebastian Jones. I was born in England and I was fortunate enough to move to Tr'ondëk Hwëch'in territory in 1979, when I was still a teenager. I am very grateful to have been able to live and grow here ever since.
I turned 22 during a winter I spent caretaking the Indian River Hay farm; the Indian River valley is a very special place to me- it helped form the person I am now
Sadly, the valley is a very different place now.
I am here representing the Yukon Conservation Society, where I am the Fish, Wildlife and Habitat Analyst. YCS is one of our oldest environmental organizations. YCS pursues eco-system wellbeing through the Yukon and beyond, recognizing that human well-being is ultimately dependent on fully functioning and healthy ecosystems.
YCS has been engaged with the issues around wetlands in general and wetlands and placer mining for several years.
In this presentation, I shall list our concerns and suggestions for a way forward out of this morass, so to speak.
CLICK

SLIDE 3: "WHY IS YCS CONCERNED?
Most wetlands around the world are gone, altered or disturbed.
This is no different in Canada.
CLICK
Most wetlands in the Yukon are still intact, at least they are in places away from development.

One form of development that usually takes place in wetlands is placer mining.
CLICK
The image in this slide is a placer mine in the Indian River Wetlands, near the mouth of Quartz Creek.
Wetlands in the Yukon have had no special status, and no protection despite the valuable roles they play.
In recent years, bodies such as YCS, and First Nations such as the Tr'ondëk Hwëch'in have raised concerns about the wholesale loss of ancient wetlands in the Indian river valley, one of the largest wetlands complexes in Beringia.
The Yukon is currently working on a Wetlands Policy which will set some boundaries around what activities can take place in wetlands and set aside some wetlands as being of Special Importance.
The YWB has made considerable effort towards requiring placer miners to produce work plans for avoiding wetlands or minimizing effects on wetlands.
Currently, Yukon is assessing wetlands reclamation plans unilaterally.
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YCS is extremely concerned with the current state of affairs, where affected First Nations, mandated Boards and Committees and other stakeholders have little or no input to reclamation plans.
It must be noted that not only has the YWB been declining to approve disturbing the Indian river wetlands without a proven reclamation plan, but YESAB has been recommending against further disturbance, degradation and destruction of these wetlands, as have First Nations and conservation groups such as ourselves and DUC. In fact the only people who seem to think that mining in the remaining wetlands in the Indian is a good idea are placer miners.
YCS is pleased to have this opportunity to suggest items for inclusion in a YWB guideline.

YCS sincerely hopes that this hearing rapidly expedites the resumption of the proper role of the YWB in considering and approving wetlands reclamation plans.

There have been efforts to cooperatively arrive at an interim policy to guide placer mining in the Indian river watershed, however YG delivered an interim policy without the signatures of First Nations.

YCS, and many others, have concerns with the YG interim guidelines; it is not a good example of a wetland policy and should not form the basis for a YWB set of guidelines.

The guidelines have two main goals: to minimize the effects of placer mining in wetland areas and provide more effective licensing of placer mining.

YCS believes the policy is designed primarily to facilitate development and does not prioritize wetland conservation and will thus struggle to minimize wetland impacts, resulting in continued objections and interventions such as we have been seeing from First Nations and conservation groups, ultimately resulting in continued delays and reduced certainty.

YCS is particularly concerned that wetlands protection is not addressed holistically- the guidelines assume without evidence that up to 60% of a fen can be lost without affecting the remaining portion and that the water table will not retreat, transforming supposedly protected bogs into uplands. The guidelines appear to assume that that impacts to wetlands will stop at the edge of mine cuts.
will continue.

Our colleagues at Ducks Unlimited have observed that the impact on natural open water and marsh wetlands is not adequately addressed; the guidelines do not maximize productive waterfowl habitat.

We are concerned that the current guidelines do not consider broader effects on hydrology, and do not provide for the maintenance of permafrost or the flow of water over and through adjacent land.

YCS has been submitting interventions on water licence applications which articulate our concerns with the guidelines.

CLICK

SLIDE 4: WHAT SHOULD WETLANDS RECLAMATION PLANS INCLUDE?

In general, YCS believes that reclamation plans should include three main themes:

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Reclamation is a significant undertaking and restoring disturbed wetlands is a highly technical and expensive undertaking. Therefore, it is the opinion of YCS that whenever a wetlands reclamation plan is approved, the YWB should require adequate security to perform the approved reclamation plan should something happen to the proponent.

CLICK

Reclamation should be progressive in nature and any wetlands permitted to be disturbed must be fully reclaimed before the expiration of the water licence.

CLICK

YCS is an advocate for an ecosystem approach, where the goal of reclamation plans is the restoration of the original ecosystem rather than the recreation of a particular wetland

The following slides cover the broad strokes of our presentation; the items that YCS considers should be included in Wetlands Reclamation Plans.

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SLIDE 5, BASE LINE CONDITIONS
Effective, meaningful reclamation requires that we fully understand what existed prior to disturbance.
At a minimum we have to know the nature of, and the amount of wetlands:
CLICK
Wetlands quantum
CLICK
We need to know the exact number of hectares of each wetland type in the licence area.
CLICK
We need to know how much of each type is undisturbed, and how much has already been disturbed. We also need to know the exact amount of each wetland type that will be disturbed.
Please calculate the exact amount of each wetland type that will be disturbed.
CLICK
And of course we shall need to know the exact amount of each wetland type that will remain once mining and reclamation is complete.

CLICK

Slide 6, Climate Impacts
Most of the wetlands in the Indian river valley are permafrost wetlands. As the climate heats up, permafrost becomes more and more vulnerable, however the peatlands of the Indian are well insulated by

the accumulation of deep beds of peatmoss, accumulated over thousands of years.
Once this peat is disturbed it will dry up, and oxidize, releasing its stored carbon and contributing to additional global heating.
The impermeable permafrost will melt back, and in most places vanish, never to return.
The water table, kept high by permafrost will fall and many wetlands will dry out and become uplands.
To properly calculate the climate impacts of disturbing wetlands, we need to know several things:
CLICK
The exact amount of carbon stored in each wetland type in the area.
CLICK
The rate at which of each wetland type in the area uptakes and stores carbon.
CLICK
The amount of carbon that will be released upon disturbance
CLICK
We also need to know how much carbon will be released from nearby wetlands that may be dewatered as a result of changes to the hydrology.
CLICK
A well-designed reclaimed wetland might be able to resume storing carboN -what will be the carbon sequestration rate of any reclaimed wetlands?
CLICK
Ideally, the carbon balance of the disturbed wetlands will be restored, we need to know when.
CLICK
If the reclamation plan does not restore the carbon balance, what additional actions will be taken to reduce the climate impact?

CLICK

SLIDE 7 Disturbance
In addition to details of how much wetland will be disturbed, we need to know how much wetlands the applicant has already disturbed.
It is important to know this because the hydrology of the wetlands will be changed, potentially so much that additional wetlands will be lost.
CLICK
We will need to know the nature of the disturbance of all unmined wetlands, and a rationale for why they should be considered previously disturbed. And the nature of the disturbance for all wetlands proposed to be disturbed.
CLICK
What will be the effects of disturbing wetlands on the hydrology of the area, including the impact on nearby wetlands that may not be inside the perimeter of the application area?
CLICK
Please describe how connectivity between wetlands will be maintained
CLICK
How will any changes to water table level; ground water or hyporheic flow be restored?
CLICK
Finally, we shall need a description of anticipated changes to the ability of the undisturbed wetlands to:
Filter water
Regulate water flow
Sustain water flow
Sustain water quality

SLIDE 8 RECLAMATION
The reason we need reclamation plans is so that the applicant has goals for reclamation and that wetlands will continue to exist on the landscape.

This image is of what mining consultants have described as “passive reclamation”, a euphemism for walking away and letting natural processes reclaim what nature originally created over thousands of years.
The reclamation plan must describe in detail how each type of wetland will be reclaimed, including at a minimum:
CLICK
To which class each disturbed wetland will be reclaimed.
CLICK
What the water table will be, post reclamation compared to pre disturbance.
CLICK
The changes in biodiversity, post reclamation compared to pre disturbance.
CLICK
How these changes will be achieved.
CLICK
How will reclaimed wetlands remain reclaimed? In other words, we need to know that after all the work and expense to restore functioning wetlands, they will not be disturbed again.
CLICK

SLIDE 9 CONCLUSION
Thank you to the YWB for hearing us and for acknowledging that wetlands are a really important component of the Yukon’s ecological processes, and that we cannot continue to degrade, alter and destroy the Yukon’s wetlands.
YCS commends the YWB for considering the long-term health of water, of wetlands as well as short term economic interests and for convening this hearing in the public interest.

YCS is firmly of the opinion that whenever the light of day is shone onto contentious issues such as this, whenever all the costs and benefits of

decisions are laid out plainly for all to consider, the land, the water and the long-term health of its peoples benefit.

THANK YOU VERY MUCH

Wetlands quantum details, not to be raised unless under direct questioning.

Please include the exact number of hectares of each wetland type in the licence area.
Please calculate how much of each type is undisturbed, and how much has already been disturbed.
Please calculate the exact amount of each wetland type that will be disturbed.
Please calculate the exact amount of each wetland type that will remain once mining and reclamation is complete.
Disturbance
Please describe the nature of the disturbance of all unmined wetlands, and provide a rationale for why they should be considered previously disturbed.
Please describe the nature of the disturbance for all wetlands proposed to be disturbed.
Hydrology
Please describe the effects of disturbing wetlands on the hydrology of the area, including the impact on nearby wetlands that may not be inside the perimeter of the application area.
Please describe how connectivity between wetlands will be maintained
Please describe how any changes to water table level; ground water or hyporheic flow will be restored.
Please describe anticipated changes to the ability of the undisturbed wetlands to:
Filter water
Regulate water flow
Sustain water flow
Sustain water quality
Climate impacts
Please calculate the exact amount of carbon stored in each wetland type in the area.
Please calculate the carbon sequestration rate of each wetland type in the area.
Please calculate the amount of carbon that will be released upon disturbance

Please include in this calculation carbon released from nearby wetlands that may be dewatered as a result of changes to the hydrology.
Please calculate the carbon sequestration rate of any reclaimed wetlands
Please calculate the date at which the carbon balance will be restored.
Please include any actions planned to offset any climate impacts.
Reclamation
Please describe in detail how each type of wetland will be reclaimed, including at a minimum:
To which class each disturbed wetland will be reclaimed.
What the water table will be, post reclamation compared to pre disturbance.
The changes in biodiversity, post reclamation compared to pre disturbance.
How these changes will be achieved.
Post Reclamation
Please describe how reclaimed wetlands will remain reclaimed, in other words, we need to know that after all the work and expense to restore functioning wetlands, they will not be disturbed again.

Slide 5: Conclusion
Thank you to YWB for hearing us and for acknowledging that wetlands are a really important component of the Yukon's ecological processes, and, if not always explicitly, that we cannot continue to degrade, alter and destroy the Yukon's wetlands.
YCS commends the YWB for placing the long term health of water, of wetlands ahead of short term narrowly focused economic interests and for convening this hearing in the public interest.
YCS is firmly of the opinion that whenever the light of day is shone onto contentious issues such as this, whenever all the costs and benefits of decisions are laid out plainly for all to consider, the land, the water and the long term health of its peoples benefit.