

## Luke's Imperatrice scientific literature review 4.30.22

### Main take home points from RVAS/NPSO letter 12/21/2021:

1. *"RVAS, NPSO... advocated for...public access that is compatible with protection of [bird and plant habitat]"*
  2. *"...the overarching principle...guiding all management, should be the protection of its habitat".*
- Luke Comments:

This letter says two different things. Initially it opens by advocating for a balanced approach to considerations of natural resource management and recreation. Later it expresses a distinctly exclusive single resource management position which is incongruent with community values.

The literature suggests that we can make room for both habitat and humans on Imperatrice. Ashland's unique public lands should always be considered from a balanced and adaptable ecosystem services standpoint. Climate change is making habitat for plant and animal populations highly dynamic. Various studies are already finding species of birds and plants, along with many other organisms seeking their preferred habitat by shifting higher in elevation to mitigate heat and water stress resulting from rising temperatures. There is much uncertainty, but trends suggest plants at lower elevations like those on Imperatrice may see rapid increases in abundance or range expansion. According to the National Academy Sciences (2018), "both range limits and optima shifted upslope faster the lower they were situated historically, and species' abundance increased more for species from lower elevations". This perfectly resonates with the community goal of connecting Imperatrice with Grizzly Peak and the expanded Cascade-Siskiyou National Monument's mission of preserving and promoting biodiversity.

Could captive breeding and release of birds (ORBIC 2) into adjacent areas address the bird concerns? Could seed collection, growing, and field planting of the rare plants (ORBIC 1/2) become a community or school project? If implemented, this would be the perfect community-supported mitigation measure, biodiversity intensifier, and ecosystem service enhancer.

### Issue 1: Grasshopper Sparrow (ORBIC-2)

- Public comment:

*"RVAS, NPSO... advocated for...public access that is compatible with protection of [bird and plant habitat]" (RVAS/NPSO 12/21/21)*

*"...impacts of bikes speeding [cause] disturbance that would likely lead to abandonment of area by [birds]" (RVAS/NPSO 12/21/21)*

- Literature/Sources:

"There are a variety of ways landowners can manage or create habitat on their land that will [grasshopper sparrows] hold on... and most of these strategies are compatible with ongoing agricultural land use.... Minimize grazing during the breeding season (early April – mid July)". (CA Audubon 2012)

"On a landscape level, use livestock grazing and prescribed fire to produce a mosaic of patches. Grazing treatments could be conducted in early spring, prior to the arrival of grasshopper sparrows, or in the fall after the breeding season." (USFS 2004)

“Nesting refuges...should be a contiguous area up to 1/3 of the total pasture area and located ... to minimize disturbance and to reduce the potential for predation and cowbird nest parasitism. If appropriate, some areas may be grazed lightly before the start of the breeding season (approximately May 15th).” (USFS 2004)

“We are not necessarily opposed to grazing on the Imperatrice...[sparrows] will be arriving...second half of April and establishing territories by early May. Grazing during this nesting period would obviously be highly disruptive... grazing above the ditch [could be] consistent with preservation.” (RVAS/SOLC 2020)

- Luke Comment:

Response request: define (1) compatibility, (2) impacts, (3) speeding, (4) likeliness of abandonment.

How is likeliness of abandonment determined? Opinion or research based? Use of the word “likely” means this potential predicted impact can be mitigated away through seasonal restrictions or trail locations.

The literature suggests that with some minor seasonal restrictions the impacts of grazing both above and below the ditch could be mitigated away. The sources provide management recommendations to mitigate impacts and enhance habitat quality while grazing. The same measures could apply to bike trails to mitigate away the impacts.

The 2020 RVAS/SOLC letter suggests that with some minor seasonal restrictions the impacts of grazing both above and below the ditch could be mitigated away. The surveys found more males than females and reported no nests (right?). What facts are being used to conclude that grazing is better for grasshopper sparrows than bike trails?

## **Issue 2: Southern Oregon buttercup- *Ranunculus austro-oreganus* (ORBIC-1)**

- Public comment:

“RVAS, NPSO... advocated for...public access that is compatible with protection of [bird and plant habitat]” (RVAS/NPSO 12/21/21)

- Literature/Sources:

“...the range-limited species [RAAU] [could be] expanding its range” (Persinger 2020)

“...the oak woodlands to the far north...had the greatest concentrations [of RAAU]” (CoA BA, 2017)

“We are not necessarily opposed to grazing on the Imperatrice... grazing above the ditch [could be] consistent with preservation” (RVAS/SOLC 2020)

- Luke comments:

With climate change and hybridization, the RAAU appears to be already genetically and geographically on the move even if no action is taken on the trails proposal.

Suggested mitigation measure: Try planting young oak trees in the higher elevation and grazed areas to mimic this prime habitat in other parts of Imperatrice?

What facts are RVAS/NPSO using to conclude that grazing is better for RAAU than bike trails?

**Issue 3: Round Leaf Filaree-*California macrophylla*** ORBIC-2 according to State of Oregon (the 2017 COA BA called it a level 1):

- Public comment:

*“RVAS, NPSO... advocated for...public access that is compatible with protection of [bird and plant habitat]” (RVAS/NPSO 12/21/21)*

- Literature/Sources:

*“[Preferred habitat]: Open sites, grassland, scrub, vertic clay, occasionally serpentine” (UC Berkeley)*

Thatch and exotic grass cover is inversely related to CAMA cover. (DoE 2017)

*“We are not necessarily opposed to grazing on the Imperatrice ... grazing above the ditch [could be] consistent with preservation” (RVAS/SOLC 2020)*

- Luke comments:

The habitat preferences by CAMA do not seem at odds with bike trails construction. Suggested mitigation measure: Could thatch and grass removal coupled with cultivation and out-planting of CAMA during trail building benefit this rare plant?

What facts are RVAS/NPSO using to conclude that grazing is better for CAMA than bike trails?

**Issue 4: Viewshed/Defining attributes**

Public comment:

*“[the RVMBA proposal would be a]...nightmare...huge...ugly...even if...located below the ditch...[the dual slalom] would completely alter the character...permanently mar the Ashland viewshed” (RVAS/NPSO 12/21/21)*

Luke comments:

These RVAS/NPSO statements are opinions, not facts. The dual slalom area is adjacent to I-5 and Port of Entry so this argument against it fails to consider the dominating attributes of the current character.

Response to viewshed concern: An argument can be made that a destination bike park visible from I-5 at the Port of Entry will provide “free-advertising” between the Ashland exits on Interstate 5, giving the City of Ashland more desirability and visibility thereby increasing potential tourist expenditures in town. What better billboard for Ashland than a grand view of bike races/outdoor events visible from I-5 between freeway exits? The high visibility of the proposal in this area may in fact be a plus from a tourism point of view. Increased parking will be needed for the eventual CSNM connection, as well.

I do like the idea of some solar up there since it was part of a past proposal. Perhaps enough to power the lights at the bathrooms and offset event usage and provide some electric car recharge stations? Similar to the free advertising above, let’s use some prudent solar installations to advertise Ashland as sustainable, climate smart, and contributing to a renewable future.

What facts are RVAS/NPSO using to conclude that grazing is better than bike trails for visual aesthetics?

## Sources:

2019 ORBIC ratings for reference:

<b>Scientific Name Common Name</b>	<b>Ecoregion; Adjacent States Oregon Counties</b>	<b>Heritage Rank</b>	<b>Federal Status</b>	<b>ODA Status</b>	<b>ORBIC List</b>
<i>Ranunculus austro-oreganus</i> L.D. Benson Southern Oregon buttercup	KM, WC Jack	G3 S3	--	C	1
<i>California macrophylla</i> (Hook. & Arn.) J.J. Aidasoro, C. Navarro, P. Vargas, L. Sáez & C. Aedo	KM; CA + Jack	G3 S1	--	--	2
<i>Ammodramus savannarum</i> Grasshopper sparrow (S in CB, KM ecoregions; SC in WV ecoregion only)	BM, BR, CB, KM, WV; CA, ID, NV, WA + Bake, Doug, Gill, Harn, Jack, Lane, Linn, Malh, Morr, Polk, Sher, Umat, Wall, Wasc	G5 S2B	--	SC/S CS	2

<https://inr.oregonstate.edu/sites/inr.oregonstate.edu/files/2019-rte-book.pdf>

RVAS/NPSO letter 12/21/21

RVAS/SOLC letter 3/17/20

National Academy of Sciences- <https://www.pnas.org/doi/10.1073/pnas.1713936115>

Pesigner 2020-

[https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=6651&context=open\\_access\\_etds](https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=6651&context=open_access_etds)

CoA BA 2017-<https://www.ashland.or.us/Files/ImperatriceBioAssessment.pdf>

(UC Berkeley, Jepson Herbarium)-[https://ucjeps.berkeley.edu/eflora/eflora\\_display.php?tid=80427](https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=80427)

DoE (2017) <https://www.osti.gov/servlets/purl/1459150>

CA Audubon-[https://ca.audubon.org/sites/default/files/workinglands\\_grasshopper\\_051012.pdf](https://ca.audubon.org/sites/default/files/workinglands_grasshopper_051012.pdf)

USFS 2004-[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5182057.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5182057.pdf)