

Minutes from the November 8, 2007 Natural Resources Sub-committee of the Vital Indicators
Technical Committee --- Columbia River Gorge Commission

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I. Introductions

II. Agenda:

- a. Sub-committee membership. Will seek input from Yakama Nation and US Fish & Wildlife Service
- b. Scope: Columbia Gorge Commission
- c. Tasks
- d. Next Meeting

III. Scope

A. Habitats versus Species approach.

Committee decided to use a coarse filter for habitat, a finer filter for species.

B. Habitat emphasis:

- a. Area of habitat
- b. Condition of habitat
- c. Prioritization of habitats
- d. Habitats unique to the Columbia River Gorge
- e. Species richness
- f. Habitat mapping

C. Additions to Columbia River Gorge Natural Resources indicators:

- a. Soil Productivity
- b. Invasive Species

D. Species emphasis:

- a. Threatened, Endangered, and Sensitive
- b. Species of Great Conservation Concern (non-listed priority species)

E. Habitats List:

General

*Forest, deciduous, conifer, mixed conifer

*Grasslands

*Seeps

*Bogs

*Streams

*Ponds

Priority Habitats

- *Talus/cliff/cave
- *Old growth conifer
- *Oregon white oak woodlands
- *Shrub-steppe
- *Snag-rich
- *Aspen groves
- *Juniper stands
- *Big game winter range
- *Wetlands

F. What are we measuring?

- a. Loss due to development including fragmentation
- b. Loss of natural processes, i.e. fire

G. Habitat Maps

- *OSU has 30m pixel maps considered 70% adequate
- *USFS has vegetation habitat maps, plant associations “on their way.”

H. Aquatic Systems Indicators

- *Floodplain
- *Water quality
 - a. riparian conditions
 - b. loss of vegetation
 - c. impact of septic systems

Natural Resource sub-committee meeting minutes

Indexes – IBI – macro-invertebrates, native fish

- *Water quantity
 - a. water rights
- *Temperature
- *Toxics
- *Aquatic fragmentation
 - a. roads/road density (USFS has this information)
 - b. culverts/fish passage
 - c. peak flows
 - d. sedimentation

I. Species as benchmarks

1. TES listing is political
2. TES and at-risk species does not necessary equate to species protection
3. Are more species at risk within the CRG National Scenic Area now as compared with 1986?

Potential solution is to use a broader definition of at-risk species than federally or state listed species, or species defined as "sensitive" by the two state's Fish and Wildlife Agencies. In particular, both state's agencies are moving away from the concept of "sensitive" species, and to "species of greatest conservation concern" or "strategy species", although data for measuring the status of many of this is not possible.

Measuring: Summarize relative health of an occurrence of all species of concern. Use the NatureServe state and global imperilment ranking, as less political, including all species that occur in the scenic area, that are ranked as G1, G2, G3, S1 or S2. Potentially the relative health of the populations could be measured by looking at the sum or average of the element occurrence ranks of the at-risk species found in the gorge.

III. Next steps

1. Place Natural Resource sub-committee meeting minutes on the net and WICKI system as initial indicators.
2. Jimmy Kagan will review, and add his comments
3. Natural Resource sub-committee members will review Jimmy Kagan's comments
4. Convene second Natural Resource sub-committee

Needs: Habitat map data

Group must further stratify, quantify habitat conditions

Natural Resources Indicators

Three indicators were initially identified at the natural resource meeting. These, and remaining questions about these, are described below. The group did not have a chance to address the question, are these three indicators sufficient to describe how natural resources are doing in the Gorge. However, indicators in some of the other SNECR areas may also be relevant. This question perhaps can be reviewed after the initial lists of high-level indicators are identified for each area.

Indicator 1. The abundance and quality of habitats in the Columbia River Gorge Scenic Area.

Data and Attributes:

1. Map of the plant communities of the Columbia River Gorge. New polygon map is apparently almost completed. It maps the forested vegetation, to a plant community level. The map focuses on vegetation, and may need to be augmented with important, non-vegetated habitats, such as cliffs, talus slopes, vernal pools, and wetlands.

The group felt that the greatest threat to these was development, and this was also the threat that the Gorge Commission had the most influence over.

2. Condition of the plant communities is critical. Currently, no data exists gorge-wide on condition, but new LIDAR data is or will be available shortly that will provide some information on forest conditions, particularly the age and size of forests. Other habitat quality conditions for forests that are of interest include:
 - a. Disturbance from adjacent development, or from fragmentation. Oregon has a new statewide development polygon layer, but this data may not exist for Washington.
 - b. Presence of snags (available at the 30 meter pixel level through USFS GNN mapping).
 - c. Basal area (available at the 30 meter pixel level through USFS GNN. This could/should be replaced by 1 or 2 meter pixel data from LIDAR when LIDAR is available and analyzed).
 - d. Forest height (available at the 30 meter pixel level through USFS GNN. This could/should be replaced by 1 or 2 meter pixel data from LIDAR when LIDAR is available and analyzed). This may be too similar to basal area.
 - e. Fire condition (fire risk condition class, available from LandFire)
 - f. Native species composition (% weeds/exotics). This would be best measured as part of this indicator, but it may not be possible. Presence of noxious weeds in the gorge may be a separate indicator that is measurable. The existing USFS map may not include sufficient information to look at changes in exotic species composition. The cover of cheatgrass, medusahead, Japanese knotweed, and other noxious weeds perhaps could be addressed separately, or used as a specific indicator of condition of the habitats in which they occur (i.e. riparian habitats for knotweed, and shrub-steppe and grasslands for cheatgrass and medusahead).

Questions still needing to be addressed related to this indicator are:

1. What classification of habitat should be used, and how general does it need to be? Choices include: Ecological Systems (GAP & LandFire Classification), IVC (International Vegetation Classification, FGDC standard for the US, using Plant Associations, NW-ReGAP Wildlife Habitat Classification, NWHI Wildlife Habitat Classification, Oregon Progress Board Habitat Benchmark classification.
2. Is the “new” USFS – Columbia Gorge vegetation map close enough to completion for it to be used, and can it be attributed to the classification chosen for the indicator? If non-vegetated and shrub-steppe classes are lacking, are resources and information available to address them.
3. Which of the condition variables are most important?
4. Is there a way to combine the most important condition variables into a single measure which could be meaningful and explained to the public and the Gorge Commission?

Indicator 2. The health of at-risk species in the Columbia River Gorge Scenic Area.

Data and Attributes:

1. The Oregon Natural Heritage Information Center of OSU, and the Washington Natural Heritage Program of WADNR both track the status and distribution of at-risk species throughout their states.

The group felt strongly that the habitat measures were better than the species measures, because they were less political, a better indicator of overall natural resources health, and addressed a greater number of species. Using different definitions of “sensitive or at-risk” provide the opportunity to avoid some of the political nature of state and federal endangered species listing. There was an interest in attempting to use the “species of greatest conservation concern” as identified in the Oregon and Washington Comprehensive Wildlife Conservation Strategies. There was a strong, although perhaps not articulated well, interest in limiting species benchmarks, and so the plant species and wildlife species indicators initially included were combined here.

Questions still needing to be addressed related to this indicator are:

1. What should be included in those species characterized as at-risk, and included in measures for this indicator? Choices include: 1) State and Federally Listed species (the group says no to this); 2) species considered as at-risk by the heritage programs; or 3) species included in the conservation strategies for each state.
2. How is “at-risk species health” going to be addressed? If either 1 or 2 above (listed or heritage at-risk) species are chosen for the indicator, the commission can use the “element occurrence status” field, an A – D ranking of the health of each population of at-risk species in the gorge. Presumably, this could be averaged for all populations of at-risk species in the gorge, or averaged for all populations of each species in the gorge, and then these averaged, depending on what seems most important to the group and commission. If 2 (strategy species) are chosen, no data exists for many of these, and so data will need to be generated for the indicator. Both WDFW and ODFW are working on monitoring strategies for these taxa statewide, but neither have the resources to provide meaningful data for an indicator in the gorge at this time. The commission or the Columbia Gorge Ranger District could choose to collect this information.

Indicator 3. The quality of the water in the Columbia River Gorge Scenic Area.

Data and Attributes:

1. Water quality data is collected by many agencies in Oregon and Washington, but both states participate in the Pacific Northwest Water Quality Exchange Network. So all water quality specific data is available online for traditional water quality information.

The group wanted both traditional water quality measures, such as temperature, turbidity, and pollution included along with aquatic habitat measures, such as riparian vegetation, stream or riparian condition (wood or boulders in streams, natural flows, the presence of native invertebrates (an IBI or index of biologic integrity)).

Questions still needing to be addressed related to this indicator are:

1. Should the Columbia River been included in this indicator? The group felt that the commission and area could not influence this at all, and perhaps the indicator should only address the other streams, springs and rivers. Regardless, what water is to be included needs to be decided.
2. In general, water chemistry measures and biological measures are important but often independent. Is there a way or a need to merge these into a single water quality health measure?
3. Many felt that water availability was as important to aquatic species health as the temperature, chemistry or species composition, and the need for a separate water quantity measure, at least for streams in the gorge, was discussed. Is there information available to address this, and could this be combined with water quality measures to address the indicator as written.