

**Portland Harbor Natural Resource Trustee Council Restoration Committee
Monitoring Report Review and Feedback
(February 23, 2021)**

Project Name: Rinearson Natural Area

Project Contact: Evan Ocheltree, Gary Howard

Year of Monitoring Report: 2020 (Year 2). This report also includes monitoring that was scheduled but not completed in 2019 (Year 1).

Date Submitted to Trustee Council: December 31, 2020

Have all required monitoring elements for the year been evaluated and reported, and are all supporting data provided? If no, please describe what is missing.

Vegetation monitoring observations were not always reported in a way that matched the standards. Despite being metrics in the reporting standards, native species cover, stems/acre, and species richness of woody plants were not calculated or presented in the data and had to be reconstructed from the appendix.

No data was provided to determine whether the following performance measure was achieved:

- ACM acreage will not decrease by more than 10% compared to as-built drawings in Years 1, 3, 5, 7, and 10.
- Benthos monitoring data is not provided or summarized in the report.
- Information on the 2 headcuts previously identified in the channel upstream of the pond should be added to this report.

Does the Trustee Council have any concerns with monitoring methods used or calculations done to arrive at the reported metric values? If yes, please describe.

- Monitoring results should be presented in this report using the metrics and habitat categories used for performance measures in the Habitat Development Plan (HDP) negotiated between the project developer and the Trustee Council. For example, stem counts need to be converted/extrapolated from stems/m² plot to stems/acre, and native species cover and species richness of woody plants need to be calculated and presented.
- The vegetation monitoring described didn't include the number of monitoring plots agreed to in the Habitat Development Plan, and no justifiable reason was provided for that fact. More plots than were agreed to in the HDP are needed as evidenced by the statistical assessment completed by Cardno and provided in this report. The assessment of plot number and statistical strength didn't consider this minimal number of plots sampled in 2020. The Committee and CRG will need to discuss the location and number of additional monitoring plots needed to satisfy the commitments made in the HDP.

- *Buddleja davidii* was incorrectly classified as a native shrub in presented calculation of invasive species cover for Forest Enhancement habitat.
- It is not clear why the numbered photo locations do not include a #1 or #12, or why two photos from #4 are included.
- Per the HDP, bird sampling was to occur three times per month spread out during the peak breeding season, generally from May 15 through the end of June. Based on this report it appears that only one breeding bird sampling event occurred in 2020.
- As discussed previously, seining conducted to detect fish presence should have stopped after the first contact with a listed fish. No further seining should occur at the site.
- Banded killfish is incorrectly identified as a native fish.
- Please provide a description in the report of why the photo monitoring plots used were changed from what was described in the HDP.

Have any monitoring elements not met a performance standard for the year, or do any appear to be on a trajectory such that they will not meet a future performance standard? If yes, please describe.

Revised report should include a table of the performance standards from the HDP compared to the results of the Year 1 and 2 monitoring efforts. Results of Year 1 and 2 monitoring efforts should be presented in metrics and categories consistent with the performance standards (e.g. stem counts/acre, large wood retention above/below pond, etc.).

Fish passage- the report notes a beaver dam at the pond outlet that measures 1.6', exceeding the 6" maximum jump height specified in the HDP. The report also notes that that additional fish passage/hydrology performance standards are not being met, namely discharge at the remnant pond was limited and the channel thalweg downstream of the pond was not sufficiently wet/deep for fish passage.

Vegetation- Based on our calculations using the raw data provided in the appendix, the following vegetation standards are not presently being met:

- Emergent Marsh native species cover (standard is >30%, actual is 24%)
- Forest Enhancement invasive species cover (standard is <30%, actual is 61%)
- Forest Restoration species presence (standard is at least 3 native tree species, actual is 2 native tree species)
- Forest Restoration invasive species cover (standard is <30%, actual is 59%) though additional performance standards need to be added to a revised report, it is clear that the project is not meeting performance standards for invasive species across the vast majority of the project area.

If applicable, does the report provide a satisfactory status update on Adaptive Management actions taken in the past?

The report describes adaptive management actions taken to treat invasive species on the site and to remove erosion control netting, and identifies that no actions will be taken to remove beaver dams.

Do elements requiring Adaptive Management in the past appear to be on a positive/appropriate trajectory toward ultimately achieving Performance Standards?

Prior to the receipt of the Year 1/2 monitoring report, the Trustee Council had identified for Columbia Restoration Group its concern with the excessive amount of invasive vegetation at the site. CRG reported that additional treatment efforts had been made. Invasive vegetation on the site is out of control. Intensified invasive vegetation management is needed in 2021 and beyond to get the project back on track to meeting performance standards.

Please add description of ongoing monitoring of headcuts.

If applicable, does the report identify and describe any issues that may require/have required new Adaptive Management actions?

Roughened channel - To improve fish passage conditions downstream of the pond outlet, the report suggests that some of the boulders in the roughened channel should be moved by hand to the outside extents of the channel and re-configured to create a narrow low-flow thalweg that is not obstructed by stacked rocks (as per Cardno's recommendation). The Committee is generally supportive of this concept, but would like to discuss it with CRG in more detail prior to action being taken. The conclusions of this discussion will need to be described in the Adaptive Management section of the report.

Beaver dam – The Committee would like to discuss options for additional photo monitoring to allow us to better understand the conditions and potential for disruptions in fish passage during different times of year/flow conditions. We agree that the dam should remain in place until we have a better understanding of how fish passage is affected by this dam.

Fish monitoring - Add proposal for new fish monitoring technique (eDNA) to the Adaptive Management section of the report.

Forest habitat - The Forest Restoration habitat is not meeting its performance standard for native tree species diversity. The Committee believes with aggressive invasive species treatment, additional species may be able to establish without planting/intervention. This topic and a potential need for additional Adaptive Management action will be revisited in Year 3.

Emergent marsh – The Emergent Marsh habitat is not meeting its native species cover performance standard. The Committee does not believe planting is warranted at this time, and will reevaluate this issue in Year 3.

Turtle nesting habitat – Additional detail (e.g., timing) on turtle habitat actions proposed need to be described in the Adaptive Management section of the report.

Have the monitoring data associated with this report been entered into the Access Database?

Yes

No

Are there any other comments you would like to share regarding this monitoring report that are not addressed by the questions above?

Although the fish passage monitoring element is identified to be conducted at a specific time for purposes of the monitoring report, the Trustee Council expects this important feature to be monitoring regularly, and for any passage issues to be reported as soon as they are identified.

Is the Monitoring Report accepted by the Trustee Council?

Yes

No

If “No”, what actions need to be taken by the Project Developer for the report to be accepted?

Revise report to address comments provided above and upload all monitoring data to database.
