STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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June 30, 2020

Columbia River Gorge Commission
PO Box 730
White Salmon, WA 98672

Re: Draft 2020 Management Plan for the Columbia River Gorge National Scenic Area

Dear Columbia River Gorge Commission (CRGC) members:

Thank you for providing the Washington Department of Ecology's (Ecology) with the opportunity to comment on the draft 2020 Management Plan for the Columbia River Gorge National Scenic Area (Gorge management plan). Our review focused upon aspects of the plan that address managing nonpoint source pollution for water quality protection.

Ecology supports the expansion of buffers from 100ft to 200ft for new proposed land use activities along the eight identified streams in the general management area (GMA) in order to help protect cold water refugia (CWR). We recognize that CWR are crucial for supporting salmonid populations in the Columbia River and its tributaries. We note that in many cases, CWR in streams are associated with groundwater discharges to stream channels. Emerging science indicates that upland land use management outside of riparian zones as well climate change influences groundwater quality, including water temperatures[1,2,3,4,5,6,7]. Therefore, we encourage the CRGC to work with partners to identify potential areas upon the landscape where current land use, or land use changes, may affect groundwater temperatures. These areas may need enhanced management measures in order to fully protect groundwater temperatures, and therefore surface water temperatures in management areas.

Ecology supports the Gorge management plan's provisions for protecting water quality, in particular the guidelines for riparian buffers, however we have two concerns:

1. First is that the plan seems to focus on best management practices (BMPs) associated with newly proposed land uses, but we believe that the plan should address in more detail the BMPs needed for current land uses (particularly agriculture and forestry) in order to adequately protect the water quality.

Washington State's 2012 Water Quality Assessment and 303(d) List indicates that three stream segments within the Gorge management area have been found to meet water temperature criteria and sixteen (includes nine segments of the Columbia River which are included in a temperature TMDL recently completed by EPA) have been found to not be meeting temperature criteria[9]. The latter count also includes one segment that has a temperature TMDL (url for the TMDL document: https://fortress.wa.gov/ecy/publications/summarypages/0210029.html). We encourage the CRGC to review Washington State's current water quality assessment because it also indicates that there are additional water quality concerns within the Gorge management area that have not been summarized here for the sake of brevity. We request that the updated management plan should incorporate considerations of these water quality issues. Please note that we do not have data for all streams within the Washington portion of the management area.

Given that there are water bodies in the management area that are currently known to have water quality degradation associated with existing land uses, we suggest that an additional goal for the plan should be for the CRGC to work with appropriate stakeholders to develop a collaborative water quality protection program for the management area. A major aim of this program should be to identify the types, amounts, and specific locations of BMPs needed to address water quality degradation associated with existing land uses and then subsequently work to implement and maintain those BMPs. The draft plan does include language about working with partners to encourage water quality BMPs, but we would like to see a more formalized and coordinated effort to achieve specific water quality goals and objectives. We suggest that such a program should include partnerships with municipalities to address water quality impacts in urban areas, which are exempt from the Gorge management plan.

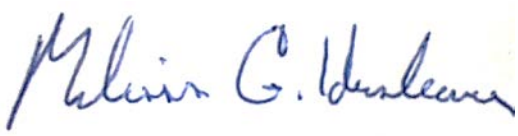
2. The second main concern that we have is regarding the riparian buffer width guidelines for the GMA and Special Management Areas (SMAs). The draft plan currently calls for a 50ft riparian buffer on each side of intermittent, non-fish bearing streams in both SMAs and the GMA. We believe that this buffer width may be under-protective of water quality in some scenarios. We note that in many cases these streams are headwaters channels whose water quality tends to be more sensitive to upland land use than downstream waters, and that water in these streams can significantly influence downstream water quality[10]. For example, there is evidence that subsurface flow in intermittent streams may have result formation of CWR in receiving waters[11]. Therefore, riparian buffers that provide adequate shading to the channel bed of intermittent streams may be important. We stress that the body of scientific literature on riparian buffers does not support the conclusion that narrower riparian buffers on headwater streams, including intermittent streams, provide an equivalent level of protection to wider buffers implemented along perennial streams, non-headwater, and/or fish-bearing streams. The body of science indicates that depending on environmental and land use conditions, buffers wider than 50ft are often needed to prevent non-point source pollutant delivery (including sediment,

phosphorus, pesticides, pathogens, nitrogen, and heat from solar radiation) to any given stream.

Given the special federal designation of this management area and its emphasis on enhanced natural resource protections, we recommend that the CRGC riparian buffer guidelines for newly proposed land use be designed to provide a greater level of probability that water quality will be protected. If the management approach is to employ fixed-width buffers, and 200ft has been deemed appropriate for protecting CWR, then it seems appropriate to apply this as a minimum buffer width throughout stream networks in the SMAs and GMA identified as harboring CWR. We also propose that the CRGC consider a 100ft minimum buffer throughout the remaining stream networks within the GMA, unless site specific information indicates that a wider buffer is appropriate. We suggest that the same buffer widths noted above would be an appropriate objective for existing land uses.

Again we thank you for the opportunity to be involved in updating the 2020 Gorge management plan. Ecology commends the CRGC on its proactive approach to updating the water quality protection guidelines within the Columbia River Gorge National Scenic Area. We encourage the CRGC to engage our water quality staff in its ongoing efforts to develop and implement the Gorge management plan. Our main contact for coordinating water quality efforts in this area is Andrew Kolosseus, Section Manager, Water Quality Program Southwest Regional Office, who may be reached at andrew.kolosseus@ecy.wa.gov or (360) 407-6271.

Sincerely,



Melissa Gildersleeve, Section Manager
Water Quality Program

cc: Andrew Kolosseus, Section Manager, Water Quality Program Southwest Regional Office

Citations

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3. Henriksen, A. and Kirkhusmo, L. A. 2000. Effects of clear-cutting of forest on the chemistry of a shallow groundwater aquifer in southern Norway. Hydrol. Earth. Syst. Sci., 4, 323–331.

4. Kurylyk, B. L., MacQuarrie, K. T. B., Linnansaari, T., Cunjak, R. A., and Curry, R. A. 2015b. Preserving, augmenting, and creating coldwater thermal refugia in rivers: concepts derived from research on the Miramichi River, New Brunswick (Canada). Ecohydrology. Vol 8, Iss. 6.

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7. Steeves, M. D. 2004. Pre- and post-harvest groundwater temperatures, and levels, in upland forest catchments in northern New Brunswick, MSc Thesis, University of New Brunswick, Fredericton, NB, Canada, 222 pp.

8. Internet url for Ecology's searchable database for the current EPA approved water quality assessment and 303(d) list: https://apps.ecology.wa.gov/ApprovedWQA/UIApprovedSearch/ApprovedSearch.aspx

9. Internet url for Ecology's Water Quality Atlas, custom filtered to display water temperature listings in the vicinity of the Columbia River Gorge National Scenic Area: https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx?CustomMap=y%26BBox=-13633274,5650634,-13410231,5792654%26Layers=23,27,29%26Opacity=0.9%26Basemap=ecyTerrain%26RT=0%26Filters=y,n,n,n,n,n%26F1.1=1%26F1.2=Temperature%26F2.2=0%26SelectPoly=-13620031.251622278,5704730.498527899,-

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