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Sent via electronic mail to: [info@chehalisbasinstrategy.com](mailto:info@chehalisbasinstrategy.com)

RE: Comments on Draft Programmatic Environmental Impact Statement for the  
Chehalis Basin Strategy

Dear Mr. White and Ms. Bailey:

American Whitewater provides these comments on the Draft Programmatic Environmental Impact Statement for the Chehalis Basin Strategy (EIS). American Whitewater is strongly opposed to construction of a new dam on the Chehalis River. We consider both the Flood Retention Only (FRO) and Flood Retention Flow Augmentation (FRFA) dam alternatives to be unacceptable for the future of the free-flowing Chehalis River. We support further investigation and development of the Restorative Flood Protection alternative that would provide tangible habitat benefits and enhance natural flood storage capacity through restoring riparian function and reconnecting the river to its floodplain. In addition, we support investment in structural flood protection projects that do not include the flood retention facility options. These include Airport Levee improvements, I-5 projects, and Aberdeen/Hoquiam North Shore Levee. Finally, we fully support Local-Scale Flood Reduction Actions and Aquatic Species Habitat Actions. Collectively, the actions we support will best meet the Purpose and Need to substantially reduce flood damage and restore aquatic species habitat in a cost-effective and ecologically sustainable manner.

We encourage the Governor's Chehalis Basin Workgroup to terminate planning for a new dam on the Chehalis River. Instead we encourage the State to invest resources in the next biennium in fully developing the Restorative Flood Protection alternative, begin project-level environmental analysis and investment in structural flood protection that does not include construction of a dam, and expand the scope and investment in Local-Scale Flood Reduction and Aquatic Species Habitat Actions.

## **I. Interest of American Whitewater**

American Whitewater is a national non-profit 501(c)(3) river conservation organization founded in 1954. American Whitewater's mission is to conserve and restore America's whitewater resources and to enhance opportunities to enjoy them safely. We have over 5,800 individual members and over 100 local-based affiliate clubs, representing thousands of whitewater paddlers across the nation. In Washington State, we represent an enthusiastic paddling population of approximately 3,000 paddlers through our individual members and local affiliate clubs. As an organization that represents recreational river runners on issues related to both conservation and public access to waterways, American Whitewater has an interest in the Chehalis River. A significant percentage of our members reside in Washington State—a short driving distance from this river for recreation.

## **II. Opposition to New Dams on the Free-Flowing Chehalis River**

American Whitewater is strongly opposed to any new dam on the Chehalis River. Both the FRO and FRFA alternatives run counter to the stated Purpose and Need for a comprehensive response that integrates reducing flood damage and restoring aquatic species habitat within the Chehalis Basin. According to the EIS, flood damage would be minimally reduced under these options. It states, "along the Chehalis River in the Chehalis-Centralia area, the flood level could be reduced up to 1.8 feet during a 100-year flood."<sup>1</sup> With respect to fishery resources, the EIS plainly states that "both the FRO and FRFA facility types would create a significant adverse impact on fish survival"<sup>2</sup> resulting from "loss of habitat function and reduced survival or access to spawning grounds."<sup>3</sup>

The Chehalis River is currently characterized by extensive floodplains with diverse in-channel and off-channel habitat. This habitat complexity supports amphibian diversity and relatively healthy and robust salmon runs. A notable characteristic of the river is the absence of Endangered Species Act (ESA)-listed salmonids. Despite this, habitat degradation has occurred and a need exists to reverse this trend. A new dam would not address the degradation of salmon habitat in the basin; it would only compound the challenges fishery resources face. Negative impacts would include but not be limited to inundation of spawning habitat, fragmentation of habitat with reduced floodplain connectivity and complexity, precluded opportunities to restore health to the riparian forest, new fish passage challenges, and severe disruption of sediment transport essential to maintenance of fish habitat.

The EIS makes the statement that "[i]t is important to evaluate the impacts of the proposed dams in context with historical impacts of existing dams throughout the Pacific

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<sup>1</sup> Chehalis Basin Strategy Draft Programmatic Environmental Impact Statement. 2016. Department of Ecology State of Washington. p. 244. ("EIS") Available at: <http://chehalisbasinstrategy.com/eis-library/>

<sup>2</sup> EIS at p. 282.

<sup>3</sup> EIS at p. 283.

Northwest; however, because of the unique design of the FRO and FRFA dams and flood control operations being proposed, it is equally important to evaluate the impacts of each dam type on fish independent from the known effects of other dams."<sup>4</sup> This statement implies that the "unique design" of these dams would result in impacts to fish independent of known effects of dams on fishery resources. This conclusion is not supported by information in the EIS or the peer-reviewed literature on dams.<sup>5</sup> In fact, the EIS states, "anticipated adverse impacts of the Flood Retention Facility on fish would be significant for fish populations in the Chehalis Basin"<sup>6</sup> due to loss of habitat function in the inundation zone, new passage impediments, reduction in fish survival, and changes to geomorphology that impact fish-habitat forming processes. The EIS clearly states that many species "would be adversely affected by inundation, whether temporary or permanent."<sup>7</sup>

In addition to the direct impact on aquatic habitat, the adjoining riparian zone would be adversely impacted. Riparian zones are important for overall biodiversity and ecological function of rivers.<sup>8</sup> Riparian vegetation would be removed throughout the inundation zone and the negative impact on aquatic species habitat is clearly noted in the EIS: "loss of habitat function would occur due to removal of trees with either the FRO or FRFA facility."<sup>9</sup> Negative impacts on habitat would extend downstream due to reductions in habitat-forming processes that are driven by high flows. In fact, the EIS explicitly states that flood-control "would translate to reductions in habitat-forming processes, especially those that are driven by major floods."<sup>10</sup>

In addition to the aquatic habitat impacts, the location of the dam limits its effectiveness for reducing flood damage. While the dam would provide flood reduction services for rain events in the Upper Chehalis watershed, it would not provide any flood control benefit for localized rain events in the South Fork Chehalis, Newaukum, or Skookumchuck watersheds.

The long-term sustainability of this alternative is also highly questionable given the significant operations and maintenance costs associated with this facility that are not adequately presented in the EIS. In fact, no plan for agency oversight and management is presented. The EIS fails to address the fundamental question of who would own and operate the facility.

### **III. Restorative Floodplain Option**

The Restorative Flood Option option would best meet the Purpose and Need of integrating flood damage reduction and aquatic species habitat restoration within the

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<sup>4</sup> *Id.* at p. 282.

<sup>5</sup> Dynesius, M. and Nilsson, C., 1994. Fragmentation and Flow Regulation of River Systems in. *Science*, 266, p.4.

<sup>6</sup> EIS at p. 281.

<sup>7</sup> *Id.* at p. 283.

<sup>8</sup> Naiman, R. J., Decamps, H. and Pollock, M. (1993), The Role of Riparian Corridors in Maintaining Regional Biodiversity. *Ecological Applications*, 3: 209–212.

<sup>9</sup> EIS at p. 283.

<sup>10</sup> *Id.* at p. 302.

Chehalis Basin. It would reconnect the river to its floodplain, resulting in greater natural floodplain storage. It also directly recognizes and addresses the primary aquatic habitat issue outlined by the EIS: the "most common freshwater habitat impairments include a lack of channel complexity."<sup>11</sup> This lack of channel complexity and natural floodplain storage is attributable to the fact that "much of the Chehalis River channel network in the assessment area is incised, meaning that the channel is larger and deeper than under undisturbed conditions."<sup>12</sup> By addressing this condition and reconnecting the currently incised channel with the floodplain, this alternative would increase wetland habitat, improve the health and ecological function of riparian vegetation communities, address bank erosion, and improve floodplain connectivity. Collectively, these things will benefit aquatic species habitat while enhancing natural floodplain storage.

In contrast to the dam alternatives, the Restorative Floodplain Option was modeled to have a significant positive impact on all salmonid species with "population increases, ranging from about 26% for fall-run Chinook salmon to 473% for spring-run Chinook salmon."<sup>13</sup> Of the alternatives considered in the EIS, the Restorative Floodplain Option most directly meets the Purpose and Need to restore aquatic habitat and is the most ecologically and financially sustainable. As noted in the EIS, "this action element would be self-sustaining and would not require routine maintenance or upkeep"<sup>14</sup> thereby avoiding the operations and maintenance costs associated with either of the dam alternatives.

We know that channel incision and clearing forests within the floodplain has reduced floodplain connectivity and capacity for flood storage, as well as influence the timing and extent of floods. These are likely factors that impact the magnitude and timing of floods in the Chehalis Basin. The extent of these changes and corresponding impacts on flooding have not been sufficiently modeled, however we know that "reduction in flood elevations of 0.4 foot for the 100-year floodplain along the Chehalis River in the Chehalis-Centralia area, and 1.1 foot at the Newaukum River confluence"<sup>15</sup> are possible. In contrast to the two dam alternatives, the Restorative Floodplain Option offers a truly basin-wide approach to providing flood control benefits that include actions in the Upper Chehalis, South Fork Chehalis, and Newaukum River sub watersheds. Given that "more detailed, site-scale analysis would be required to determine the areal coverage over which Restorative Flood Protection actions would be necessary to achieve the most substantial downstream flood damage reduction,"<sup>16</sup> we support the additional modeling required to determine how to most effectively implement this option. Additionally, we recommend further investigation of the effects of forest practices on peak flows in the Chehalis Basin.

An additional benefit of this option is that it is compatible and synergistic with the Aquatic Species Habitat Actions.<sup>17</sup> Specifically, the Restorative Floodplain Option will

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<sup>11</sup> *Id.* at p. 148.

<sup>12</sup> *Id.* at p. 38.

<sup>13</sup> *Id.* at p. 344.

<sup>14</sup> *Id.* at p. 245.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at p. 39.

<sup>17</sup> *Id.* at p. 57.

restore riparian and off-channel habitat, address bank erosion, reconnect the currently incised river channel with the floodplain, and restore wetland habitat.

#### **IV. Recreational Impacts of a Dam and Support for an Alternative Vision**

The EIS states that the “Flood Retention Facility [the dam] would permanently foreclose use of this reach of the Chehalis River for whitewater rafters for health and safety reasons,”<sup>18</sup> and also notes that “this reach of the river is generally not used for kayaking because of access limitations.”<sup>19</sup> The implication is that the project would not impact whitewater recreation due to current low use numbers that result from access limitations. Our vision for the future is a river that is open and accessible and not lost permanently under the slackwater of a reservoir. We encourage the state to work with private forest land owners to enhance recreational opportunities on rivers that flow through commercial timberlands. Outdoor recreation is important to our quality of life in the Pacific Northwest. We should be seeking ways to improve opportunities to enjoy outdoor recreation and access to our waterways and not further limit them.

American Whitewater is cited in the EIS as providing the information that the “reach is generally not used for kayaking”<sup>20</sup> and “the area is not used heavily by rafters.”<sup>21</sup> This is an inaccurate reference to an email exchange between Jessica Conquest and Thomas O’Keefe in February 2016. In response to a query about use of the reach for recreation, American Whitewater suggested a site visit focused on recreation, but was informed that the budget for developing the EIS did not support this. This was disappointing given the fact that we know fieldwork was done for other elements of the document. The regional paddling community has enjoyed this reach for many years and it is known as an extremely high quality resource. In recent years, access has been challenging due to Weyerhaeuser’s current management practices. We request that the relevant section of the EIS be modified to accurately represent the fact that the reach has been popular for both whitewater kayaking and rafting in the past but has been less accessible in recent years due to current access policies of the private forest land manager that favor hunting over other dispersed recreation uses. The statement that the “reach is generally not used for kayaking” is not accurate and should not be attributed to our organization.

The assessment of whitewater recreation in the EIS is inadequate. Should this project proceed and require that a project-level environmental analysis be developed, it will be necessary to investigate the impacts to whitewater recreation, and will require a field component. Methodology is available from the National Park Service Rivers and Trails Conservation Assistance program.<sup>22</sup>

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<sup>18</sup> *Id.* at p. 323.

<sup>19</sup> *Id.* at p. 209.

<sup>20</sup> *Id.*

<sup>21</sup> *Id.* at p. 323.

<sup>22</sup> Whittaker, D. B. Shelby, and J. Gangemi, 2005. Flows and Recreation: A Guide to Studies for River Professionals. Hydropower Reform Coalition and National Park Service – Hydropower Recreation Assistance. Available at: <https://www.nps.gov/ncrc/programs/hydro/flowrec.htm>

Should the dam move forward, we find the approach to mitigating the impacts to river based recreation outlined in the EIS unacceptable. It states, "[n]o mitigation is available for the long-term impacts from changes to in-water recreation and reduction of recreation opportunities within the reservoir area."<sup>23</sup> Permanent loss of a river for whitewater recreation in the Chehalis Basin is a significant impact, and is one of the few impacts highlighted in the entire EIS document for which no mitigation is proposed.

The Restorative Floodplain Option will have impacts on river-based recreation due to logjams that create hazards to navigation.<sup>24</sup> Wood hazards are a common feature on naturally-functioning rivers in the region. We support the compensatory mitigation practices outlined in the EIS, which includes identifying hazards and public safety communications. This approach has been successfully implemented on dozens of other river systems throughout the region where restoration work has been done. In addition, American Whitewater has published technical guidance on how projects can be designed in a manner that meets recreational objectives as well as primary engineering or habitat objectives.<sup>25</sup> In short, there will be impacts, but they can be mitigated. This is in contrast to the dam alternatives where the best whitewater recreational opportunities on the Chehalis River will be completely eliminated.

Our organization is inaccurately referenced throughout the document as "American Whitewater Association."<sup>26</sup> The full legal name of our organization is American Whitewater.

## **V. Other Structural Flood Protection Projects and Local-Scale Flood Reduction Actions**

American Whitewater supports further development of structural flood protection projects that do not include the flood retention facility. These include the Airport Levee improvements, I-5 projects, and Aberdeen/Hoquiam North Shore Levee. These projects meet the Purpose and Need of reducing flood damage while resulting in relatively minimal negative impacts on aquatic species habitat. Additional analysis should be conducted as part of a project level environmental analysis, but these projects are sufficiently consistent with the Purpose and Need and we support them moving forward.

American Whitewater also strongly supports immediate implementation and additional investment in Local-scale Flood Damage Reduction Actions. As noted in the EIS, these actions "have fewer significant adverse impacts on many elements of the natural and built environment than the Large-scale Flood Damage Reduction Actions."<sup>27</sup> They are consistent with the Purpose and Need and unlike the large-scale actions, implementation can commence on a much faster and efficient timescale. We urge the Governor's Work Group to prioritize funding these actions.

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<sup>23</sup> EIS at p. 323.

<sup>24</sup> *Id.* at p. 358.

<sup>25</sup> Colburn, K. 2012. Integrating Recreational Boating Considerations Into Stream Channel Modification & Design Projects. American Whitewater. Available at: <http://www.americanwhitewater.org/content/Document/view/documentid/1006>

<sup>26</sup> See e.g. EIS at p. 204.

<sup>27</sup> *Id.* at p. 408.

## **VI. Aquatic Species Habitat Actions**

We strongly support implementation of the Aquatic Species Habitat Actions outlined in the EIS. These actions are consistent with the Purpose and Need and implementation can begin immediately with investment in early phase actions. In our view, these actions can be coordinated with the Restorative Floodplain Option. While further development of the Restorative Floodplain Option is necessary, Aquatic Species Habitat actions can begin immediately that will complement a basin-scale approach to restoring floodplain function. For this reason we believe it is appropriate for the Governor's Work Group to prioritize Aquatic Species Habitat Actions for implementation and funding. American Whitewater recommends that the Final EIS include additional detail about specific actions and projects that will be part of the Aquatic Species Habitat Action, including provisions to ensure that no future development will occur in the floodplain.

## **VII. Conclusion**

Thank you for the opportunity to comment on the Draft Programmatic Environmental Impact Statement for the Chehalis Basin Strategy. We are strongly opposed to a new flood retention facility (a dam) in the Chehalis River basin as considered under Alternative 1. Both the FRO and FRFA dam alternatives are inconsistent with the Purpose and Need, would result in significant impacts to aquatic habitat and whitewater recreation that would not be mitigated, and would place native fish at greater risk. We support additional development and investment in Alternative 4, the Restorative Floodplain Option, to optimize natural flood storage. We also support the projects in Alternative 2 that include both large-scale and local-scale flood reduction actions that could be implemented and integrated with Alternative 4. We support the Aquatic Species Habitat Actions proposed across all alternatives. Developing these actions consistently with the actions and goals of the Restorative Floodplain Option will ensure that they are optimized to benefit aquatic species. We support immediate investment in early phase actions within Alternatives 2 and 4.

Sincerely,



Thomas O'Keefe, PhD  
Pacific Northwest Stewardship Director