APPENDIX B

Public Comments and Services' Responses

CLEAN, FLOWING WATERS FOR WASHINGTON

The Center for
Environmental Law & Policy

August 1, 2006

Mr. John Stadler
National Marine Fisheries Service
510 Desmond Drive SE
Suite 103
Lacey, WA 98503-1273

Re: Scoping Comments for National Marine Fisheries Service (NMFS) and Fish and Wildlife Service (FWS) preparation of an Environmental Impact Statement related to the City of Kent's application for an Incidental Take Permit (ITP).

Mr. Stadler:

The Center for Environmental Law & Policy (CELP) is a non-profit membership organization working to defend and develop ecologically and socially responsible water laws and policies. CELP speaks for the overall public interest in the public's water; its mission is to leave a legacy of clean, flowing water for Washington. CELP believes responsible water management will lead to increased protection of threatened and endangered species as well as provide sufficient water for Washington's residents to enjoy recreationally, aesthetically, and for everyday necessity. CELP applauds any effort a government or municipality undertakes to fulfill its responsibility to protect both the environment and its residents through proactive and prospective planning. Therefore, the actions taken by the City of Kent to prepare a Habitat Conservation Plan (HCP) should be encouraged. However, while the first step in responsible water management is often the hardest, it by no means alleviates those responsible from continuing to pursue achieving the maximum net benefits regarding water usage. Additionally, because the HCP somewhat limits the liability of the City of Kent, the provisions contained therein must be strong and achievable. The HCP must bind the City of Kent to perform and maintain the protective measures. CELP welcomes the opportunity to provide comments on the City of Kent's HCP Environmental Impact Statement.

Federal Legal Requirements

The purposes of the Endangered Species Act (ESA) are to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved…and to take such steps as may be appropriate to achieve the purposes… of the [section]." 16 U.S.C. § 1531(b). Furthermore, a stated policy of the ESA is that Federal, State, and local agencies must cooperate to "resolve water resource issues in concert with conservation of endangered species." 16 U.S.C. §1531(c)(2). The ESA is triggered when a

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federal agency undertakes a federal action, which is defined to include permitting actions, including issuance of an Incidental Take Permit (ITP). 50 C.F.R. §402.02

Section 9 of the ESA prohibits the taking of an endangered or threatened species. 16 U.S.C. §1532(a)(1)(B). The term take is defined to include, *inter alia*, anything that would "harm" a listed endangered or threatened species. 16 U.S.C. §1532(18). The U.S. Supreme Court has upheld the broad definition given the term "harm" by the United States Fish and Wildlife Service. *Sweet Home Chapter of Communities for a Great Oregon v. Babbitt*, 515 U.S. 687 (1995). This definition includes "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, and sheltering." NMFS' definition 50 CFR 222.102 and FWS' definition 50 CFR 17.3.

Section 10 allows the "taking" of a listed species if it is incidental to a lawful activity and certain requirements are met. 16 U.S.C. 1539(a)(1)(B). In order to get an ITP, the applicant must show the likely impact as a result a the taking, types of mitigation methods in order to reduce take, showing of appropriate funding, alternatives to the proposed actions and reasons why they weren't selected, and other measures the Secretary deems necessary. 16 U.S.C. 1539(a)(2)(A)(i-iv). If, after public comment, the Secretary finds; the take to be incidental to an otherwise lawful activity, the applicant will to the maximum extent practicable, minimize the impacts on the listed species and insure adequate funding, and the taking will not "appreciably reduce" the likelihood of survival, the applicant will be issued an ITP. 16 U.S.C. §1539(a)(2)(B)(i-iv). An ITP may be revoked if it is found the permittee is not complying with the terms of the permit. 16 U.S.C. §1539(a)(2)(C).

Once the permittee has an approved HCP and is implementing it in accordance with the terms of the permit, any change in circumstances not discussed in the permit or any unforeseen circumstances arising after the issuance of the permit, may go unmitigated because the Director cannot require any additional or further mitigation on the part of the permittee. 50 C.F.R. §17.22(B)(5)(ii-iii). This is true even if the listed species that is being taken under the permit continues to decline. Therefore, proper scoping and examination of alternatives becomes the crucial and perhaps most important aspect of the ITP process.

General Comment

The 50-year permit term sought by the City of Kent is too long considering the likely dramatic climatic change Washington is going to experience in the next 50 years. There is widespread consensus that the earth is warming at a rate faster than at any previously recorded time. While many may argue about the causes of the warming, there is little doubt that the climate and our environment in 50 years will be vastly different than it is today. Therefore, the 50-year permit asked for by the permittee should not be granted. CELP requests the term of the ITP exceeds no more than 20 years. CELP-1

Alternatives

The City of Kent's listed alternatives to the proposed action are insufficient. While the "No Action Alternative" is given moderate attention and examination, the other proposed alternative to close the Clark Springs Water Supply Facility is not examined at all. The proposed HCP only provides two paragraphs to this alternative and contains many unsubstantiated assumptions. One assumption is that the Clark Springs Watershed would be sold to developers with the result being increased "roads and other impervious surfaces" and other growth impact problems. Certainly this is not the only viable fate of the watershed if it is sold. A conservation group could acquire the property or it could be sold with environmentally friendly conditions attached to the deed. Additionally, simply because the City of Kent would no longer own this property does not mean it does not have an interest in minimizing environmental impacts in the area, as is claimed in the proposed HCP. CELP-2

To replace the water lost through the sale of the Clark Spring Watershed, the City of Kent could look to other water purveyors and water conservation to meet its water demand need. The money acquired through the sale of the Clark Springs Watershed, coupled with the money projected for use in implementing the HCP could be used for the creation of a fund to purchase water from other purveyors, or to implement more stringent water use efficiency measures. The cost and benefits of these alternatives should be carefully explored and examined. Instead the proposed HCP fails to adequately address meeting water supply needs via water conservation, and it dismissively rejects purchasing-of-water alternatives because they are "uncertain" and contain "unknown" costs. Much about the future of this proposed HCP is either "uncertain" or "unknown", yet is still proposed for inclusion in the ITP. The purpose of the scoping and alternatives process is to research the uncertainties and unknowns in order to make informed decisions. Excluding alternatives because they are uncertain or unknown is insufficient. These alternatives should be examined in order to determine their viability. CELP-3

Issues related to the proposed HCP

HCM-1: This conservation measure relies on near-surface groundwater to be pumped into Rock Creek. There are some potential problems with this method. First, has any consideration been given to the consequences of a pump failure? This is not a remote possibility as it occurred in November 2002, resulting in a significant impairment to fish habitat. Second, there is likely a strong and immediate hydraulic connection between the surface water in Rock Creek and the groundwater that would be pumped from the underlying aquifer. This needs to be examined further in order to determine whether the pumping would actually result in *less* water in Rock Creek than if the pump was not used. Further, the City of Kent needs to more fully explain why the reach from the Parshall flume is the area used to consider compliance. It is not clear in the proposal why this section has been designated for compliance monitoring. CELP-4

HCM-2: CELP supports the City of Kent's efforts to improve fish passage at the mouth of Rock Creek. While this conservation plan is quite good generally, there are additional items that should be addressed. The weirs should be checked far enough in advance of fish

movement in order to detect and correct any problems before fish start moving. Furthermore, the weirs should be checked during the time when fish movement is highest in order to detect and correct any impairment. Also the water pooling behind the weirs should be checked for dissolved oxygen content or the accumulation of other pollutants. The fish passage should be checked regularly enough to insure it remains unblocked and does not allow water to become a reservoir behind the weirs. CELP-5

HCM-3: CELP supports efforts to increase fish habitat along Rock Creek. Allowing fish and water to move between the wetland and the river must be monitored in order to insure no cross-contamination occurs as a result. Monitoring of temperature, turbidity, and other pollutants should occur prior to implanting HCM-3 and should continue throughout the life of the ITP. CELP-6

HCM-4: CELP supports efforts to increase fish habitat along Rock Creek. This is especially true of the wetland-pond complex associated with HCM-4, as it is described as "the only available juvenile rearing habitat of any significance associated with lower Rock Creek." Preliminary Draft HCP 4-39. As such, CELP believes more should be done to protect and enhance this unique area, including not limiting the decision to implement the measure based upon the $69,000 limit set aside for the project. CELP-7

HCM-5: The 10-year time period to implement this conservation measure is too long. The upgrade to the culverts should be completed within 5 years; unless it is determined the current design is a significant barrier to fish passage. If so, then the culverts should be brought up to code within 3 years of issuance of the ITP. CELP-8

HCM-6: CELP supports efforts to increase spawning and rearing habitat. If it is determined the areas discussed are good candidates for placement of large woody debris, then these measures should be implemented as soon as possible. CELP-9

HCM-7: CELP fully supports water efficiency and conservation and encourages the City of Kent to achieve the greatest level of conservation and efficiency possible. Reducing per capita water usage is an excellent measure to keep water in Rock Creek, particularly in consideration of the City of Kent's projected increase in population. However, the commitment "to invest resources and educate its customers about the importance of conserving water" is far too weak and vague to be meaningful. The City of Kent must make a meaningful commitment to water use efficiency, and must provide measurable milestones to achieving conservation goals. Water use efficiency goals should be set via a rigorous public process whereby outside water efficiency experts assess potential conservation and water re-use measures, and sufficient city resources must then be allocated to implement such measures. Water usage must be measured, monitored, and recorded on at least a weekly basis, and if water use efficiency goals are unmet, then immediate actions and adjustments in usage must be implemented to address the over-use. Additionally, the conservation plan must be evaluated and updated at least every two years to assure that the city's water usage reflects achievement of meaningful state-of-the art efficiency. CELP-10

HCM-8: The minutes and meeting notes from the Rock Creek HCP Habitat Fund Committee should be made public with an opportunity to meaningfully comment on any decisions made regarding future HCP Mitigation/Restoration projects.

CELP-11

Conclusion

CELP urges NMFS and FWS to thoughtfully consider the above comments in the preparation of the draft environmental impact statement. The scope of the environmental impact statement will ultimately determine the effectiveness of the HCP. CELP is hopeful that the collaborative process initiated by the City of Kent will result in an agreement that provides definite and lasting protection to listed species in the watershed. Every resident of the state owns the waters of Washington and those charged with managing it are given an enormous responsibility. This responsibility is owed not only to the present population of Washington, but to future generations as well. A carefully crafted and binding HCP would evince progress toward the fundamental goal of leaving a legacy of clean, flowing waters for Washington.

Sincerely,

Patrick Williams
Staff Attorney
pwilliams@celp.org

cc: Mr. Kelly Peterson
Environmental Engineer
City of Kent

Clark Springs Water Supply Habitat Conservation Plan
Response to Comments

Center for Environmental Law and Policy (CELP)

CELP-1
The Services regulations outlining factors to consider when addressing permit duration (50 CFR 17.32 and 222.22) were applied to this HCP review. These factors include the duration of an applicant's proposed activities and the anticipated positive and negative effects of such activities on covered species associated with the proposed ITP term. The Services also consider the extent of scientific and commercial data underlying the proposed HCP, the length of time necessary to implement and achieve the benefits of the HCP, the extent to which the HCP adequately addresses changed circumstances such as climate change, the extent to which the HCP incorporates adaptive management strategies, the extent to which likely biological effects are minimized or mitigated, and the applicant's need for certainty in planning for the future. After considering these factors, the Services believe they have adequately assessed the potential impacts of implementing the proposed HCP and see no conservation benefits to a 20-year term.

CELP-2
This comment is based on the alternatives analysis in the 2006 Draft HCP. The Draft EIS includes an analysis of the No-action alternative performed in accordance with CEQ regulations and NEPA Section 1502.14(d). The No-action Alternative is intended to establish a baseline for comparing the existing conditions and actions with those proposed. This analysis provides a benchmark, enabling decision-makers to compare the magnitude of environmental effects of the action alternative(s).

NEPA Section 1502.14 requires an analysis of all reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them. Regarding closure of the Clark Springs Facility, the Services did not analyze this alternative in detail because it does not meet the purpose and need for the action of issuing an ITP (Subsection 1.2 of the EIS, Purpose and Need for the Proposed Action). Although closure and sale of Clark Springs to a conservation group would likely provide adequate protection of listed species, such an action would require the City to find other water sources to replace Clark Springs, which currently supplies the City with over 60 percent of its water supply. As discussed in Subsection 2.5 of the EIS, Alternatives Considered but not Analyzed in Detail, such sources are currently and for the foreseeable future unavailable.

CELP-3
Subsection 2.5 of the EIS, Alternatives Considered but not Analyzed in Detail, has been edited to provide additional clarification. The City has implemented several water conservation items prior to, and as a result of, a MOA between the TSSP, Ecology, and the DOH, signed in 2001. The City formalized a water conservation program in 1993. Since 1993, the City has expended effort and resources to minimize unaccounted-for water and water losses. These efforts are summarized in Subsection 2.2.3.2 of the EIS, Conservation Potential Assessment, with trends from 1993 to 2008 shown on Figure 2.2-1 where the City's percentage of unaccounted-for water dropped from 12.89 percent (1993) to less than 1.99 percent (2009) and a low of 1.99 percent in 2009. While these

numbers are very efficient from a water transmission standpoint, the City would strive to keep the system as efficient as possible.

CELP-4

The City has considered the potential for pump failure and believes the risk will be low following implementation of the permanent augmentation system which will include any appropriate alarm and backup systems needed to ensure augmentation will be provided as required under HCM-1. The pump failure in November 2002 occurred using the temporary augmentation system. The commenter is correct that a strong hydraulic connection between the surface water in Rock Creek and the groundwater is present, but it is not immediate. Testing by the City has indicated there can be a significant lag time between operational changes at the facility and changes in surface water flows. The augmentation system under HCM-1 provides a more immediate response in surface flows than could otherwise be achieved. Because the augmentation water is drawn from the clear well, the surface water augmentation results in less water available for water supply and an immediate increase in surface flows. The City has been voluntarily providing streamflow augmentation to Rock Creek since 1997. As a result of this voluntary augmentation, there are adequate data to represent the benefits of the proposed HCM-1. The location of the compliance point for HCM-1 was selected because the gage is close to the augmentation source, which reduces the likelihood that other factors beyond the City's control, such as losses and gains to the creek, will confound measurements used to determine compliance. Furthermore Gage 12118400 also has a relatively long record of use by the USGS and City of Kent. It should be noted that because the equipment currently being used by the City for augmentation was originally only for testing purposes, it was designed as a temporary installation. A permanent installation would be planned and implemented with the approval of the HCP and with ITP issuance.

CELP-5

The City would inspect the weirs on at least an annual basis and following flow events of 50 cfs or greater sufficiently in advance of the fall migration and spawning period to provide any needed maintenance and to ensure that the weirs are functioning properly (MEM-4). The City also would conduct spawning surveys (MEM-3) to document access above the weirs by spawning salmon. It is anticipated that water flow behind and between the weirs would provide adequate dissolved oxygen and prevent accumulation of any pollutants. Based upon water quality monitoring at Clark Springs, which would be continued as part of normal operations for the foreseeable future, water quality in Rock Creek is excellent with no to insignificant levels of pollutants. Consequently, the Services do not believe monitoring for dissolved oxygen or pollutants at the weirs would be cost effective.

CELP-6

Projects adhering to BMPs and meeting all applicable regulatory requirements would be designed to limit impacts to temperature and to minimize turbidity once the ITPs are obtained. Activities associated with the HCP would not generate pollutants. During construction, BMPs would be implemented to reduce potential release of pollutants to the environment.

CELP-7
The City is committed to completing HCM-4. If during planning and design it is deemed not feasible to complete the project within the scope described, the City would make the funds for HCM-4 available elsewhere in the watershed for habitat projects.

CELP-8
Fish surveys have shown that fish have successfully passed the Summit-Landsburg Road culvert over the past few years so it is not currently a blockage. Permitting of HCM-5 would require coordination with a number of local, state, and Federal permitting agencies in addition to working with utilities in order to meet their requirements and resolve conflicts. If all permits were obtained sooner, work on the culvert replacement could proceed earlier than stated in the HCP.

CELP-9
Comment noted.

CELP-10
The City would continue a water conservation program regardless of the issuance of the ITPs. Subsection 2.2 of the HCP, Background and Identification of Water Supply Alternatives, outlines water conservation efforts including unaccounted-for water, and Subsection 4.7, HCM-7: Water Conservation Program, identifies the City's continued commitment to water conservation. Given that end users ultimately use the water, the City cannot guarantee specific numbers for water conservation, but the City can guarantee continued water conservation programs to customers.

CELP-11
The Habitat Fund Committee (the Services and the City) would periodically meet to discuss potential projects that may be funded by HCM-8. It is the intent of the Services to solicit input from interested stakeholders to identify potential habitat projects or land acquisitions in the Rock Creek basin that could be funded through HCM-8. In addition, if it is determined that projects identified in other HCMs are not feasible, the City would make the allocated funds available for other projects aimed at improving habitat in the Rock Creek basin. The Services would solicit input from interested stakeholders to identify projects prior to the reallocation of these funds. Stakeholder input could be solicited either through written comments or at public meetings where stakeholders can submit comments in person.

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July 6, 2010

Tim Romanski
U.S. Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, Washington 98503-1263

Re: U.S. Environmental Protection Agency (EPA) comments for the Clark Springs Water Supply System (CSWSS) Habitat Conservation Plan (HCP) Draft Environmental Impact Statement (DEIS). (EPA Project Number: 06-044-FWS)

Dear Mr. Romanski:

This review was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Under our policies and procedures, we evaluate the environmental impact of the proposed action and the adequacy of the impact statement. We have assigned an Environmental Concerns – Insufficient Information (EC – 2) rating to the DEIS. A copy of the EPA rating system is enclosed.

We understand the City of Kent's (City) legal mandate to seek reliable sources of municipal water supply. We agree with the DEIS's overall conclusion that the Proposed Action would result in net benefits to water quality and fish as compared to the No-Action alternative. These benefits would be achieved primarily through the HCP's Habitat Conservation Measures (HCM) – especially flow augmentation (HCM 1). Other less defined but potentially significant benefits would likely be achieved through the City's ongoing vested interest in and stewardship of the Rock Creek Basin (E.g., HCM 8 - Riparian acquisition, easement, and enhancement fund).

While we agree that the HCP would contribute to an overall environmental improvement compared to No-Action, we remain concerned that the HCMs – as written – may not fully protect the environment. Our primary environmental concerns center on the potential risk of instream flow shortfalls. If instream flows consistently fall below the target – even with maximum augmentation - we are concerned about adverse impacts to water quality and fish. We believe the Final EIS and HCP should (i) include additional information on the potential risk of instream flow shortfalls, and, (ii) commit the City and Services to an adaptive management process for dealing with chronic instream flow shortfalls. EPA-1

We are also concerned about risks to fish passage and habitat improvements (HCMs 1-6) and recommend the Final EIS and HCP include additional information on (i) risk to HCMs, and, (ii) the City's requirements to ensure their effectiveness of the course of the 50 year HCP. EPA-2

Finally, we believe the highest level of environmental protection for Rock Creek would likely involve reducing or eliminating water withdrawals at the Clark Springs Water Supply

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Facility. We appreciate the City's substantial efforts to pursue alternative water supplies and water management strategies (HCP, Vol. II, Appendix G) and understand, as stated, that "None of the investigations resulted in the identification of cost-effective, feasible, or reliable alternative water supplies to the Clark Springs Water Supply Facility." (HCP, Vol. I, p. 8-3). We note, however, that alternative water supplies may become more feasible over the course of the 50 year HCP and recommend that the Final EIS and HCP more fully describe the Services' expectations for the City's ongoing efforts to find alternative water supplies. Please consider the potential benefits of a minimum requirement (e.g., percentage of overall revenue) for the City to (i) pursue and/or secure alternative water supplies, and/or, (ii) achieve water conservation.

EPA-3

See our enclosed detailed comments for additional information on the concerns and recommendations summarized above. Thank you for this opportunity to comment and if you have any questions or concerns please contact Erik Peterson of my staff at (206) 553-6382, or by electronic mail at peterson.erik@epa.gov.

Sincerely,

Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Enclosure:
EPA Region 10 Detailed Comments on the Clark Springs Water Supply Facility Draft Environmental Impact Statement
EPA Rating System for Draft Environmental Impact Statements

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EPA REGION 10 DETAILED COMMENTS ON THE CLARK SPRINGS WATER SUPPLY FACILITY DRAFT ENVIRONMENTAL IMPACT STATEMENT

Flow Augmentation Plan during October through December (HCM-1)

We believe the DEIS and HCP do not contain sufficient information about HCM-1 to assess whether or not the environment – especially fish species - would be fully protected. According to the DEIS, "…implementation of the flow augmentation program under the Proposed Action may not always meet the instream flow targets identified in the proposed HCP." (p. 4-18). While not meeting flow targets was mostly "relatively minor" during your analysis period (1986-2004), we believe potential impacts from land use and climate change may increase the frequency and intensity of instream flow shortfalls. If instream flow shortfalls increase, we are concerned that the City's commitment to specific maximum augmentation rates (and not minimum instream flows) could result in adverse impacts to fish.

Recommendations

We recommend that the Final EIS and HCP more sufficiently account for land use (1) and climate changes (2). We also recommend that the Final EIS and HCP more explicitly address potential failures to meet minimum instream flow targets (3).

1. We recommend that the Final EIS and HCP include more information in relevant Land Use and Ownership sections.
   a. Update Figure 3.2-1 "Land uses in the Rock Creek Basin". This Figure does not account for land use changes over the past decade. Consider, for instance, the development northwest of Ravensdale and southwest of SE Kent-Kangley Road.
   b. Account for and analyze updated land use information. The Final EIS's version of DEIS section 4.2 may be the appropriate place for this additional information.
      i. In 1999 there were 250 private wells in the Rock Creek Basin – all of which were exempt from water rights (DEIS, p. 5-3). How many wells are there now? How many are projected over the course of the next 50 years? How might their water withdrawals impact the City's efforts to meet the HCP's requirements – especially Rock Creek Flow Targets?
      ii. Residential and industrial developments generally increase impervious surfaces, which, in turn, may effect both surface and ground water hydrology. Please discuss how projected development over the next 50 years would affect the City's efforts to meet the HCP's requirements.
   c. If current or future land use changes, including wells and other water withdrawals in the Rock Creek Basin, are predicted to substantially increase the frequency and intensity of failures to meet instream flow targets, consider including private wells and/or land use as a "Changed Circumstance" in Section 9 of the Implementation Agreement and Section 2.1.2.3 of the HCP.

EPA-4

EPA-5

EPA-6

EPA-7

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2. We recommend that the Final EIS and HCP account for the state of science on projected climate change impacts.
   a. Discuss the potential implications for the Intergovernmental Panel on Climate Change's conclusion that, "Warming in western mountains is projected to cause decreased snowpack, more winter flooding and reduced summer flows, exacerbating competition for over-allocated water resources."[1] We are especially concerned that lower low flows would increase the rate at which instream flow targets would not be met – even with maximum augmentation. EPA-8
   b. Potentially useful resources:
      i. Preparing for Climate Change: A Guidebook for Local, Regional and State Governments.[2]
      ii. Comprehensive Assessment of Climate Change Impacts on Washington State.[3] See, especially, Chapter 6, "Impacts of Climate Change on Key Aspects of Freshwater Salmon Habitat in Washington State".
      iii. Hydrologic Climate Change Scenarios for the Pacific Northwest Columbia River Basin and Coastal Drainages.[4]
      iv. US EPA Proceedings: First National Expert and Stakeholder Workshop on Water Infrastructure Sustainability and Adaptation to Climate Change.[5]

3. We recommend the Final EIS and HCP describe what rate of failure to meet minimum instream flow targets would trigger an adaptive management process. If a process was triggered, what actions would the City and/or the Services take? It may be appropriate to include this process as an element of Monitoring and Evaluation Measure (MEM-1), "Rock Creek and Augmentation Flow Monitoring". EPA-9

Passage improvements at the mouth of Rock Creek (HCM-2)

We are concerned about risks to HCM-2, such as winter flooding. HCM-2, like HCM-1, is a key component of achieving the HCP's environmental benefits. Without HCM-2, proposed habitat improvements to Rock Creek (HCMs 3, 4, 5 and 6) would achieve less because fish may not be able to pass from the Cedar River to Rock Creek.

Because HCM-2 provides important benefits, we are concerned about the City's limited reconstruction liability. According to the HCP, "Weirs constructed to improve passage at the mouth of Rock Creek will be reconstructed as needed, with up to the equivalent of one complete reconstruction effort funded over the term of the HCP." (HCP Vol. 1, p. 5-13). We are unsure how this limitation is fully protective of the environment because there does not appear to be a guarantee that HCM-2 will be functional over the course of the HCP. EPA-10

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[1] http://www.ipcc.ch/publications_and_data/ar4/syr/en/spms3.html
[2] http://cses.washington.edu/db/pdf/snoveretalgb574.pdf
[3] http://www.ecy.wa.gov/climatechange/ipa_resources.htm
[4] http://www.hydro.washington.edu/2860/
[5] http://www.epa.gov/nrmrl/wswrd/wqm/wrap/workshop.html

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Recommendations

In order to ensure that the predicted benefits of HCM 2 (as well as HCMs 3, 4, 5, and 6) occur over the full course of the 50 year HCP, we recommend that they (i) be designed to withstand projected disturbances, and/or, (ii) include adequate requirements to ensure that HCMs are reconstructed when the need arises. EPA-11 For HCM-2, please either include additional information on how "one complete reconstruction effort" is adequate in light of projected potential disturbances or increase this requirement. Address whether or not projected climate change impacts - such as increased winter flooding – are relevant to the design of HCMs or the HCP's adaptive management (e.g., HCM reconstruction requirements). EPA-12

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U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

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Clark Springs Water Supply Habitat Conservation Plan
Response to EIS Comments

Environmental Protection Agency (EPA)

EPA-1
i) Risk of instream flow shortfalls: As discussed in comment responses EPA-5 and EPA-6, below, water withdrawals from exempt wells and increases in impervious surfaces in the upper watershed would not result in an increased risk of instream flow shortfalls. ii) Adaptive management for addressing shortfalls: If the City is providing the maximum augmentation flows as shown in Table 4-2 of the HCP, and the streamflow target is not being met, the City would still be in compliance with conditions of the HCP and adaptive management would not be applicable. Although possible, it is a situation that the Services do not expect to occur. For additional detail, see response to comment EPA 9.

EPA-2
The City would maintain HCM-1-6 as described in the HCP consistent with permitting requirements for individual HCMs for the duration of the HCP. For additional information, see responses to comments EPA-9 EPA-10, EPA-11, and EPA-12.

EPA-3
As discussed in Subsection 2.1.2.3 of the HCP, Changed Circumstances, the City would continue to update its Water System Plan as required by the DOH. As part of that process, the City would regularly review other potential sources of water to meet future water demands.

EPA-4
Figure 3.2-1 in the EIS has been updated.

EPA-5
In 1999, the number of domestic wells was estimated to be 250, based on zoning and property development, which was predominantly rural; these wells are typically operated under a water right exemption. There has been little change in the rural nature, zoning, or development of most of the catchment, so in 2010 there are likely to be at most a handful more wells. Over the next 50 years, the number is unlikely to significantly increase, again due to the rural zoning. Exempt domestic wells consume a relatively small quantity of groundwater from the aquifer, on the order of 300 gallons per day. Their net effect on the groundwater resources of the relatively abundant upper Rock Creek aquifer system is minimal, especially when taking into consideration the rural zoning, which will continue to apply to much of the catchment.

EPA-6
The impact to the hydrology of the Rock Creek catchment from future development is expected to be minimal over the next 50 years due to the rural Comprehensive Plan designation, the effect of new stormwater management regulations, and the presence of glacial outwash deposits. Increased runoff from future urbanization will be treated and infiltrated into the outwash deposits either by flow dispersion, infiltration facilities, or infiltration losses via the conveyance channels. The net result would be a slight increase in the quantity of recharge to the aquifer due to a reduction in evapotranspiration in the developed areas.

EPA-7
The impact to the hydrology of the Rock Creek catchment from future development that includes new wells or other water withdrawals is expected to be minimal over the next 50 years due to the rural Comprehensive Plan designation, the current level of rural development, and the presence of highly

permeable glacial outwash deposits. Increased runoff from future urbanization will be infiltrated into the outwash deposits either by flow dispersion, infiltration facilities, or infiltration losses via the conveyance channels. The City is committed to a flow augmentation program to benefit fish from October 1 through December 31.

EPA-8

The Climate Change Technical Committee for the regional water planning process identified climate change as a likely significant impact upon municipal water resources for snowpack-driven systems in the *Final Report of Climate Change Technical Committee, December 2007* (Regional Water Supply Planning Process). Clark Springs, however, is not a snowpack-driven system but a system dependent on localized rain fall within the Rock Creek Watershed. Section 4.1 of the HCP HCM-1: Rock Creek Flow Augmentation describes how stream flow augmentation will be adaptively managed based upon the timing of the Chinook salmon spawning in the Cedar River Basin, which could potentially be one effect of climate change. On a five year interval, the City and Services will evaluate whether a significant shift in Chinook salmon spawn timing has occurred, potentially a result of climate change. If significant shift has occurred, the beginning of augmentation each year may occur as early as September 17 or as late as October 15. If extended droughts occur (e.g., as a result of climate change), the HCP includes a planned response as part of changed circumstances that would result in the development of special mitigation measures in collaboration with the Services.

EPA-9

The streamflow augmentation target is the goal of HCM-1. Subsection 4.1 of the HCP, Rock Creek Flow Augmentation, describes the City's commitment to augment flows up to the streamflow target based on the seasonal water year type, adjusted twice a month based on the two-month antecedent precipitation period. The analysis of historic withdrawal and streamflow records described in Subsection 4.6.1.2 of the EIS, Alternative B: Proposed Action suggests that the potential risk of not meeting target flows would likely be less than 3.5 percent of potential days when augmentation is triggered. If climate change negatively impacts future baseflows, the City is committed to providing maximum augmentation as identified in the Table-4-2 of the HCP. Section 4.1 of the HCP HCM-1: Rock Creek Flow Augmentation, describes how stream flow augmentation will be adaptively managed based upon changes in the timing of the Chinook salmon spawning in the Cedar River Basin. On a five year interval, the City and Services will evaluate whether a significant shift in Chinook salmon spawn timing has occurred, potentially a result of climate change. If significant shift has occurred, the beginning of the augmentation each year may occur as early as September 17 or as late as October 15. Furthermore, movement of the augmentation outfall is anticipated to provide more certainty that targets can be met because some losses of augmentation flows to groundwater would be avoided. If extended droughts occur (e.g., as a result of climate change), the HCP includes a planned response as part of changed circumstances that would result in the development of special mitigation measures in collaboration with the Services.

EPA-10

The City would conduct annual inspections to assess stability and condition of improvement structures prior to the fall spawning season and when flows exceed 50 cfs. Weirs constructed at the mouth or Rock Creek will be reconstructed as needed to maintain HCM-2 and the City would commit to one complete reconstruction if the structure is destroyed over the course of the 50-year permit. The initial project would be designed to withstand a 100-year event.

EPA-11
Subsection 5.4 of the HCP, Monitoring and Evaluation Measure MEM-4, has been revised to include visual inspection of HCM-2 improvements when flows exceed 50 cfs at USGS Gage 12118400 (Kent-Kangley Road) to identify any needed maintenance to help ensure that the fish passage structure is sustained through the term of the HCP. The City would maintain HCM-2 and would commit to reconstruction if the structure is destroyed over the course of the 50-year permit. The initial project would be designed to withstand a 100-year event. The proposed project would not impact this HCM once constructed.

EPA-12
HCM-2 is currently a conceptual design. The project would be designed to withstand a 100-year event and would take into consideration potential impacts from high flows in the Cedar River as a result of a similar-sized event. During the term of the ITPs, the City would propose to reconstruct the structure in the event high flows have an impact. The Climate Change Technical Committee for the regional water planning process identified climate change as a likely significant impact upon municipal water resources for snowpack-driven systems in the *Final Report of Climate Change Technical Committee, December 2007* (Regional Water Supply Planning Process). Clarks Spring, however, is not dependent on snowpack. Furthermore, the Climate Change Technical Committee noted that current climate models are not consistent with anticipated impacts to precipitation in the Puget Sound Lowlands. Some models are showing a potential increase in summer precipitation and winter precipitation. The Rock Creek Watershed may experience a substantial range of flows in any given year as a result of weather patterns. This large range in flows would be taken into account in the design of HCM-2.

July 6, 2010

Tim Romanski
US Fish and Wildlife Service
510 Desmond Drive, Suite 102
Lacey, WA 98503-1273

John Stadler
National Marien Fisheries Service
5120 Desmond Drive, Suite 101
Lacey, WA 98503-1273

RE: Clark Springs Water Supply System Draft Habitat Conservation Plan
Draft Environmental Impact Statement: Clark Springs Water Supply System Habitat Conservation Plan

Dear Mr. Romanski and Mr. Stadler:

On behalf of the Friends of Rock Creek Valley, a community group located within the Rock Creek Valley, which includes the Clark Springs Water Supply system, I am submitting the following comments.

As members of the Friends of Rock Creek Valley (FRCV) read through the three volumes that make up the Draft Habitat Conservation Plan and the Draft EIS, we recognized that elements of the three documents contained valuable information. However, all three volumes struck us as being similar to an explorer looking through a telescope: only a portion of the vast habitat could be seen because of the limitations inherent in looking through a small looking glass. Without a clear vision of the habitat and area as a whole it will be harder to succeed with mitigation. FRCV-1

The City of Kent has a long history of not working with the community around Clark Springs. The Friends of Rock Creek Valley are use to working with all different types of jurisdictions and Non-Government Organizations and have found the City of Kent to be the least willing to work with the community of any of the other groups. As a result, our trust that the habitat enhancements proposed by the city will be able to be implemented is limited. For example, when we received the material Kent staff did not appear to know that one of the property owners for their top priority project had passed away three years ago and his wife is extremely uncomfortable with any projects happening near her property. The City of Kent does not have the "on the ground" knowledge of the conditions of the community that will enhance or detract from their successfully implementing their HCP. FRCV-2

The Friends of Rock Creek Valley are not opposed to Kent's being one of the water systems on Rock Creek; nor are we asking that the system "go away." We understand that the City of Kent will be a long-term neighbor in our neighborhood. Looking forward to partnering with the City FRCV-3

of Kent as co-stewards of our watershed the two primary comments we have concerning the proposed HCP and the Draft Environmental Impact Statement are:

1. Because one of the primary limiting factors to listed (or potentially listed) species is water quantity we ask that the top priority action be to purchase the remaining unprotected ~500 acres of forest land on Ravensdale Ridge in Section 6 from Weyerhaeuser. This area is the headwaters of Rock Creek. FRCV-4
2. Because the water used by the City of Kent comes from the watershed above Clark Springs and because the City of Kent has historically failed to work cooperatively with the other groups who are actively monitoring and working to conserve the upper watershed we ask that a committee is formed that includes stakeholders in the watershed to help guide future adaptive management decisions related to the HCP. FRCV-5

The Friends of Rock Creek Valley have three primary areas of concern:

1. The HCP and DEIS fail to address the potential impact of the water rights decision before the Washington State Supreme Court. (burlingame v. Washington Department of Ecology) There is a potential that the decision could significantly reduce the amount of water available to the city. We ask that the Agencies ask the City of Kent to address potential impacts of this case (or to address the impacts if the court rules soon). FRCV-6
2. Alternative A is not status quo. Both alternatives propose significant changes from the current practices. We ask that the Agencies strike the allowance of winter storage from Alternative A: otherwise there is no alternative that is proposing no changes. FRCV-7
3. Besides the City of Kent failing to recognize that they do have the ability to control what happens outside of their current, small 300 acre watershed we would like to request that the Agencies direct the City of Kent to focus on protecting more of the watershed through fee simple purchase or conservation easement. We ask that the Agencies require the City of Kent to help protect the forested lands upstream of its watershed as low flows seem to be the biggest limiting factor. FRCV-8

The Friends of Rock Creek Valley support Alternative B: Proposed Action as long as the three primary request above are address and following listed specific concerns are integrated into Alternative B.

1. (DEIS 2.4.1.1 line 31) We found it disconcerting that the City of Kent proposed to withdraw more water in the winter even under the "No Action" Alternative. We feel that further study is needed to determine the anticipated impacts of the increased water withdrawals. The stretch of Rock Creek immediately below Clark Springs is a "loosing reach:" water enters into the glacial till at that point so the flows in the creek are reduced. The wells in that area, including many on my street (immediately to the north of Clark Springs) have been drying up over the last ten years. At least one home on SE 262nd Street has to truck in water during portions of the year. FRCV-9
2. (DEIS 2.4.2.2 line 34) We do not understand the need to move the current augmentation discharge point downstream from its current location unless it is to facilitate an expansion of the facilities at Clark Springs. FRCV-10
3. (DEIS 2.4.2.3 line 18 page 2-18) While improved fish passage may, at least temporarily make up for the low-flow condition caused by the City of Kent's water withdrawal

FRCV-11

(which blocks listed species use of Rock Creek) two critical elements of this action would be to a) purchase the parcel on the east side of the channel to increase buffer along the reach and b) provide ongoing funding to "fix" the fish passage every time the flood waters of the Cedar River destroy the passage. The flow of the Cedar River is likely to change over time with Global Warming and maintenance funds should be guaranteed.

4. (DEIS 2.4.2.3 line 27 page 2-18) The Friends of Rock Creek Valley were peripherally involved in a stream enhancement project with this same description in this same location was completed about ten years ago. We saw nothing in the DEIS that indicated how this proposed project would succeed where the earlier one failed due to siltation. What has changed that Kent's project would succeed while King County's project did not fully succeed? FRCV-12

5. (DEIS 2.4.2.3 line 11 on page 2-19) The replacement of the culverts under Summit Landsburg Road may need to be scheduled earlier in the ten year period as the existing culverts have rusted out holes running horizontal along the culverts. The old culverts are likely to fail. When the old culverts are replaced we hope that the City of Kent will learn from the City of Seattle when they replaced a culvert further down Rock Creek. Please use a box culvert (or other replacement) that accommodates Pacific Giant Salamanders. FRCV-13 FRCV-14

6. (DEIS 2.4.2.3 line 16 page 2-19) The representation of Reaches 10 and 12 of Rock Creek as being "upper segments" is very misleading. Rock Creek is almost nine miles long. The proposed LWD placement is at best in the middle reaches of Rock Creek. Fish species travel at least two more miles up stream from that location. FRCV-15

7. (DEIS 2.4.2.3 line 24-29 page 2-19) Who would determine the use of the habitat fund? The Friends of Rock Creek Valley would like to see some outside representatives on that committee to make sure that the proposed expenditure of the habitat funds actually benefits the fish. For example, in Volume 2 of 2 of the Draft HCP, on page 13 of the Final Identification and Evaluation of Habitat Enhancement Opportunities for Rock Creek June 2005 Prepared by R2 Resource Consultants) proposes fencing the watershed for a cost of $10,000 to $20,000. When the culverts are replaced at the location where Summit Landsburg Road crosses Rock Creek some perimeter fencing may reduce the trash. A fence around the entire western of the watershed will significantly hinder the use of the land by wildlife and would be unnecessary and a waste of habitat funds. A fence that runs between Kent Kangley and then to the northern bank of Rock Creek where it crosses under Summit Landsburg may be appropriate because of the Fred Meyer being built to the southwest of Clark Springs. The portion of Clark Springs that borders the private properties on SE 262 and connects to the Danville Georgetown Open Space does not need to be fenced. It would be beneficial to have someone who actually lives in the area and knows what goes on to provide feedback as to what may be a beneficial use of habitat funds. FRCV-16 FRCV-17

8. (DEIS 2.5.2.3) The FRCV feel that the City of Kent should consider additional storage facilities to be used, when the conditions are right, as part of the overall solution to address insufficient rainfall. FRCV-18

9. (DEIS 2.5.4 Reuse of Water) The FRCV feel that the City of Kent should consider water reuse as one of the solutions to reduce water withdrawals. FRCV-19

10. (DEIS 2.5.4.2 line 13). The FRCV feel that this sentence would be more accurate if it stated "The lack of a storage facility and infrastructure to transport storm water to a facility also makes the alternative ~~unreliable~~ economically challenging at this point." FRCV-20

11. (DEIS 3.7.3 line 3 page 3-34) Tansy ragwort is found throughout the upper basin – not just along the BPA transmission lines. FRCV-21
12. (DEIS 3.7.3 lines 9-15 page 3-34) Evergreen and Himalayan blackberry are located through the watershed – not just in Clark Springs. Reed canary grass is established in several locations *in* Rock Creek upstream of Clark Springs. Probably one of the worst locations is in Cemetery Reach (above Clark Springs) as Rock Creek runs through Rock Creek Ranch subdivision. During the harvesting of the trees in the Cemetery Reach to clear the way for the subdivision the heavy equipment operators purposefully filled in the creek bed as they cleared the brush that remained after the harvesting. Prior to that time Rock Creek would flow above ground for much of the year. Since then that stretch of Rock Creek has been unable to flow above ground as its river channel was filled. Restoration of this channel would be a good mitigation project. FRCV-22 FRCV-23
13. (DEIS 3.8) While this section specifically addresses fish, Pacific Giant Salamanders are present throughout the entire length of Rock Creek. FRCV-24
14. (DEIS 3.8.3.2 line 33-41 page 3-57) Since the City of Kent has increased its water withdrawals (and during one February day actually dewater much of the lower portion of the creek) it has been hard to chinook to use the creek. However, Rock Creek is very important for young salmon to use as a refuge during high water events in the Cedar River. FRCV-25
15. (DEIS 3.9.2 line 12+ page 3-64) As of last year there were so many reports of a pack of three to four wolves (weighing approx 80-100 pounds each) that King County posted warnings at the trailheads in the vicinity of Clark Springs. This pack ranges from the Enumclaw/Buckley area to Fall City. One of the wolves was shot by a farmer as it attacked his calves. Afraid of being prosecuted the farmer buried the wolf carcass instead of turning it over to any agency. Two dogs were taken (and killed) by the wolves from their owners last summer during the summer of 2009. FRCV-26
16. (DEIS 3.9.3 line 4 page 3-65) The statement does not list which "two of the mammal species do not occur in Washington." It would be nice to know which two mammals Johnson and O'Neil did not list. We are assuming that one might be the wolverine that sometimes comes out of the Tacoma Watershed down McDonald Mountain but we are not sure which the other mammal might be. FRCV-27
17. (DEIS 4.3.2.2 lines 13-16 page 4-3) The FRCV suspect that placement of LWD and moving the augmentation point would cause a different erosion hazard than the No-action Alternative so we do not find this statement accurate. FRCV-28
18. (DEIS 4.5.1 lines 19-22 page 4-5) Earlier in the report (2.4.1.1 lines 33-36 page 2-15) the DEIS talks about a potential change in how the City withdraws water so the statement in DESI 4.5.1 seems to be in conflict with an earlier statement. FRCV-29
19. (DEIS 4.6.1.1 line 26 page 4-6) The City's statement that their withdrawals may reduce flood stage is questionable. Because so much of the basin remains in forest (and will remain in forest because of the conservation efforts of the FRVC, King County, and Cascade Land Conservancy) lower Rock Creek seldom floods. The reaches that are most likely to flood are the ones located two to three miles above Clark Springs (above the "pinch point"). The DEIS has so little information of the upper portion of the watershed; the portion from which its water withdrawal originates, that the overall content of the DEIS is skewed. There is almost yearly flooding of Georgetown Creek (confluence above FRCV-30

Clark Springs) and along the portion of the creek that runs through the Ravensdale Retreat Natural Area.

20 **(DEIS 4.6.1.2 line 6-21 page 4-15) Since water quantity is one of the biggest factors of decline for listed species in Rock Creek the FRCV feel that the HCP should include more than one action that improves (or at minimum, stabilizes) water quantity. There is approximately 500 acres of the headwaters of Rock Creek currently on the market for sale and development. This acreage is located in Section 6 on Ravensdale Ridge. Protecting the headwaters from development would have both short term and long term benefit to water quantity. The FRCV feel strongly that purchasing Section 6 should be the highest and first priority of the HCP. If the City of Kent does not want to hold the fee simple ownership of the acreage they should discuss the situation with King County, Cascade Land Conservancy, or the State of Washington. All three own land adjacent to Section 6.** FRCV-31

21. (DEIS 4.8.1.2 lines7-24 page 4-41) When the subdivision Rock Creek Ranch went in the stream channel was purposefully filled in by the company that did the basic logging and some of the initial excavation. If that stream channel were to be re-established there is plenty of water flow for fish to utilize at least two more miles of habitat. The entire length of the creek that was illegally filled in belongs to King County DNRP so working with the ownership should not be an issue. FRCV-32

22. (DEIS Table 4.12-1 page 4-75) Wildlife. We are concerned about the proposal to install a fence around the remaining unfenced portion of the watershed. The trees in the watershed are very mature and segregating the watershed into two fenced in portions will not benefit many of the wildlife that live in the mature woods. FRCV-33

23. (DEIS 5.4.5 page 5-9 lines 1-7) The forest lands currently not protected by actions taken by the Friends of Rock Creek Valley and King County are likely to go to large lot development. The City of Kent has the ability to have a significant impact on the conservation of the remaining, unprotected forest lands in the basin. The problem is that they do not acknowledge this ability nor do they choose to take this action. FRCV-34

24 (DEIS 5.4.5 page 5-9 lines 7-8) We disagree with this statement. Because of actions and encouragement taken by various community groups, one of the largest parcels of land available for development in the basin (Sugarloaf West) the ~124 home being built on the 640 acres will be on public water. (This was requirement is part of the hearing examiner's ruling made in 2009.) If members of the community could influence the development in this manner the City of Kent should also be able to have such influence. FRCV-35

25 (DEIS 5.4.7 page 5-10 lines 21-36) Since the City of Kent has done so little to protect the quantity of water available above their watershed they may be able to improve flows in the creek below Clark Springs if they were to also provide water conservation education for people living up aquifer of Clark Springs and/or purchase Covington Water District's water rights from the Ravensdale Well and dedicate that water to the stream. FRCV-36

26. (DEIS 5.4.5 page 5-11 lines 20-25) The City of Kent fails to address potential impact on the system if burlingame prevails in any portion of burlingame v. Washington Department of Ecology. FRCV-37

27. (DEIS 5.4.8 pages 5-11 through 5-14) We are not quite sure how fixing the public road that travels through the watershed is counted toward money spent for fish recovery or mitigation. This list seems to be a wish list that is trying to expand what may be counted under the "mitigation" elements for take of fish. We would rather see this money on FRCV-38

mitigation spent on protecting the portions of forest not protected at this point – notably Section 6.

28. (HCP Vol. 1) General statement: The document does not accurately reflect the volume of flows a mile or more above Clark Springs. The surface flows at the Brathovde property upstream of Clark Springs is substantial (near the volumes seen at Clark Springs) and have a continuous flow from November – June. As such, there is a lot more habitat in the upper basin than the report seems to give credit for. The Brathovdes' always salvage 100 or more fish from the culvert pond every year; many of these fish are cut throats. FRCV-39

29. (HCP Vol. 1 page 1-18 7th bullet) The Rock Creek Protection and Enhancement Fund should include both the upper and lower reaches of Rock Creek. FRCV-40

30. (HCP Vol. 1 pages 1-19 through 1-20) Since trout make it all the way from the Cedar River to Lake 12 we would hope that the changing of the location of the augmentation discharge point does not impede their movement up to Lake 12. FRCV-41

31. (HCP 2.5 page 2-13) This document does not discuss the potential change in total volume that depends on the outcome of burlingame v. Washington Department of Ecology. One of the things that burlingame v. Washington Department of Ecology challenged was the pumps and pipes modification made around 2003 versus the older measurement method of just pumps. FRCV-42

32. (HCP Vol. 1 page 2-14 second bullet. Again, we express concern about the potential blockage that might be created for fish wanting to travel further up Rock Creek with the change in the location of the facilities at Clark Springs. FRCV-43

33 (HCP Vol. 1 page 3-12 3.1.3.1) Discussion about wetlands and coolness. The wetlands located near the mouth of Rock Creek and proposed as part of the mitigation activity in this HCP have fairly long periods of exposure to the sun. One of the wetlands is bordered by a gravel road. The property immediately to the east of the wetland (on the other side of the narrow road) has cleared all of the trees and put in a sacrifice area for horses. By farm best management practices a sacrifice area is a heavily used area with high concentrations of manure and no or limited vegetation. The other wetland is associated with a fairly large open body of water that has the Cedar River Trail on the west side (and thus, limited tree coverage). If having the water available from subsurface provides the cooling water needed, then protecting some of the currently unprotected wetlands upstream of Clark Springs may be a better outcome. FRCV-44

34. (HCP Vol. 1 page 3-14 and 3-15 3.1.3.2 Dissolved Oxygen) Some reaches just above Clark Springs have a very heavy instream infestation of blackberry. If DO is potentially an issue, it may be a good action to remove blackberries from RC channel. We recommend the portion of Rock Creek immediately above Clark Springs to just above Gracie Hansen Park. This would also improve fish passage to the upper portions of Rock Creek. FRCV-45

35. (HCP Vol. 1 page 3-19 second paragraph) The 1993 USGS report is wrong. Ravensdale is lucky enough to have members of two of the original homesteading families still living in the area. The generation that is now in their eighties report how Rock Creek used to flow through what is now Gracie Hansen and how they would play and swim in the pools in the creek where Gracie Hansen is now located. FRCV-46

36. (HCP Vol. 1 page 3-19 Hidden Lake) Does Hidden Lake really dry up (seasonal)? None of us can remember it drying up and some of us have been here for four decades. FRCV-47

37. (HCP Vol. 1 3.1.4.2 page 3-24 third paragraph) The majority of the creek above Clark Springs is not dry most of the year. We would like to see their data and the measurement locations. FRCV-48
38. (HCP Vol. 1 page 3-29) We would be interested in seeing how the 5% was determined for total impervious. That would mean that around 400 acres would be impervious surface. FRCV-49
39. (HCP Vol. 1 page 3-36 Over Pumping). This statement especially concerns joan burlingame whose property is immediately north of Clark Springs. joan's well currently goes dry in November and December. Some of joan's neighbors have to have water tanked in because their wells go so dry that they do not recover in a day. Any additional pressure on the aquifer during those months will only make the situation worse. FRCV-50
40. (HCP 3.2.6.3 page 3-29) This statement and concern is all the more reason for the City of Kent to help purchase either the fee simple or conservation easement in Section 6. A mature forest helps retain the water in the aquifer for a longer period of time. FRCV-51
41. (HCP Vol. 1 page 3-43 City of Auburn) The statement in this document about "may be called back in 2006) shows how significantly dated this document is. This statement calls into question how up-to-date the other technical and scientific material might be. FRCV-52
42. (HCP Vol. 1 section3.4.2.1 Transportation) Since this rail line is a major route for BNSF Clark Springs is at high risk if there is a spill in Section 25. FRCV-53
43. (HCP Vol. 1 page 3-74) Again, this data shows how dated some of the material in this document is. The calculations would be different now that Landsburg has been opened up. And, of course Rock Creek cannot contribute very much because of the amount of water being withdrawn by the City of Kent. Between the low flows and the current gravel bar at the mouth of Rock Creek fish have a very hard time with passage. If you look carefully at the restoration and protection scenarios, Rock Creek does not score very high because it is already in good shape habitat wise. If mitigation were to be implemented there would not be as a significant change in how fish use it because it is already so healthy. Rock Creek has been one of the creeks used by the University of Washington School of Fisheries as a benchmark stream because it is so healthy. FRCV-54
44. (HCP Vol. 1 page 4-2 through 4-3)
    a. HCM-1 We believe that this mitigation is already required of the City as a condition of a previous permit by the Department of Ecology. If they are proposing additional protection then something that was already required as previous mitigation should not be included in this plan. FRCV-55
    b. HCM-2 We support this project. FRCV-56
    c. HCM-3 We question the strength of benefit of this – although we do not oppose it. Issues related to exposure to sun and previous attempts to influence the movement of ground water v. surface water have not always been successful in this area. Look at the previous King County "restoration" project in the area listed as HCM-4. FRCV-57
    d. HCM-4 We question the strength of this benefit – although we do not oppose it. FRCV-58
    e. HCM-5 We support the culvert replacement and hope that it gets done before the culverts totally fail. Please make sure that the replacement bridge or box culverts also work for Pacific Giant Salamanders. FRCV-59
    f. HCM-6 LWD Placement. We feel that this money would be better spend permanenelty protecting the forest upstream of Clark Springs. FRCV-60

g. HCM-7 Water Conservation Program. This program should also be extended to people who live in the Rock Creek basin. FRCV-61

h. HCM-8 Why is this the last one? This should probably be #2 (with the fix at the mouth being #1). FRCV-62

i. There is another list of projects in Volume 2 in Table 1 in the habitat Enhancement opportunities for Rock Creek that adds additional "mitigation" that includes things like fencing in the watershed (R9-1). We are assuming that this list in Volume 2 is not the "final" list so we will not comment on it at this time. FRCV-63

j. In the report noted in 44.i. page 14 second full paragraph states: "However, no design concepts were developed for those sites because the City of Kent cannot ensure that such project would be implemented as part of the HCP. This calls to question Kent's ability to perform as required by the HCP. Last time we talked with King County an agreement had not been reached to participate in the proposed projects. Just because the land is held by a government entity it does not mean that the mitigation project will be allowed. FRCV-64

45. (HCP Vol. 1 page 4-3 section 4.1) What happens if burlingame v. Washington Department of Ecology does not go in the favor of the water districts? FRCV-65

46. (HCP Vol. 1 pages 4-4 through 4-5) Again, our concern about the potential impact on cut throat with the change of location of the augmentation. FRCV-66

47. (HCP Vol. 1 page 4-28) Summary. This shows Clarks Springs impact to salmon habitat is around 25% - a large number that is not made up by previous discussions earlier in this chapter or in the HCP. FRCV-67

48. (HCP Vol. 1 page 4-34) Construction of a series of weirs. What happens when the floods on the Cedar River damage the weirs? Who is responsible for fixing them? FRCV-68

49. (HCP Vol. 1 page 4-40 and 4-41) It is not clear how dated this section of the HCP is. The culverts were identified as partially crushed and having horizontal rust holes over ten years ago. If the "current" ten year window of time is implemented as being something "timely" we are likely to have a catastrophic failure of the culvert with resulting damage to spawning habitat (let alone a significant impact on traffic!). FRCV-69

50. (HCP Vol. 1 HCM-6) The money would be better spent protecting the forested areas upstream of Clark Springs. The forest in Clark Springs is a mixture of tree species and ages. Normal volunteer LWD will be able to show up at various locations without any of our help. FRCV-70

51. (HCP Vol. 1 HCM-8) Again, this is very dated material. The numbers presented should already be adjusted for 2010 (instead of 2005). FRCV-71

52. (HCP Vol. 1 page 5-2 MEM-1) Street maintenance of public roads within the city's jurisdiction (as Clark Springs is) is already the responsibility of the city and should not be counted toward mitigation funds. FRCV-72

53. (HCP Vol. 1 page 5-4 first full paragraph) Kent should also provide copies to community organizations such as the Friends of Rock Creek Valley. FRCV-73

54. (HCP Vol. 1 pages 5-5 through 5-6) Again, we are concerned that a change in the augmentation might negatively impact fish passage above Clark Springs. FRCV-74

55. (HCP Vol. 1 page 5-9 MEM-3) Please include some kind of monitoring above Clark Springs. If Clark Springs causes a total barrier to fish passage above its facility this plan clearly has not addressed that. Nor does this plan provide good evidence of fish usage above Clark Springs so it is not really addressing that whole element of 'take.' FRCV-75

56. (HCP Vol. 1 MEM-5 page 5-15) It would be better to also include a "control" off channel site a bit above these two proposed by Kent (but not necessarily supported by the FRCV) to see any changes in existing sites. Measurement without controls is not real helpful. FRCV-76
57. (HCP Vol. 1 page 6-33 6.2.2) Again, we have concerns that the scientific information presented has not been updated – sometimes being more than five years old. This section (6.2.2) talks about the barriers to fish passage at the Seattle Pipeline culvert but that culvert was replaced at least three years ago. It would have been better if this proposed HCP was based on current creek conditions and not historic creek conditions. Making a long-term commitment to "mitigate" when the baseline presented in the HCP is so dated is of concern and may impact the actual outcome – missing some of the best benefits for the money spent. FRCV-77
58. (HCP Vol. 1 page 7-2 Estimated Costs) This statement does not take into consideration potential outcomes of the Washington State Supreme Court decision on burlingame v. Washington Department of Ecology. FRCV-78
59. (HCP Vol. 1 7.4 Proposed Funding) Since this document is already so old and since it is not clear that the amounts will be determined in current dollars (inclusion) this HCP is already under funded for any project that is limited by the phrase "up to." FRCV-79
60. (HCP Vol. 1 page 8-1 second paragraph) We disagree that in-basin mitigation opportunities are limited. There is still around 1,000 acres of forested land upstream of Clark Springs that could be protected through fee simple or conservation purchase. There are also a couple of miles of creek above Clark Springs that would benefit from being improved for fish passage. FRCV-80

Thank you for the opportunity to provide comment.

joan burlingame
Friends of Rock Creek Valley Steering Committee
25119 SE 262 Street
Ravensdale, WA 98051
206-852-2318

Clark Springs Water Supply Habitat Conservation Plan
Response to Comments

Friends of Rock Creek Valley (FRCV)

FRCV-1
Comment noted.

FRCV-2
It is the intent of the Services to work with any interested stakeholders to identify potential habitat projects or land acquisitions in the Rock Creek basin that could be potentially funded through HCM-8. In addition, it has been the experience of the Services that approved HCPs and ITPs help facilitate coordination with the ITP holder, interested stakeholders, and the Services.

FRCV-3
Comment noted.

FRCV-4
The HCP includes protection of instream flows during the critical low flow through a streamflow augmentation plan (HCM-1) during the low-flow period as described in Subsection 4.1 of the HCP, HCM-1: Rock Creek Flow Augmentation. The HCP also includes a habitat mitigation fund (HCM-8) to fund as-yet unidentified projects that may include additional property acquisition in locations throughout the Rock Creek Watershed.

FRCV-5
The Habitat Fund Committee (Services and the City) would periodically meet to discuss potential projects that may be funded through HCM-8. Project ideas may be proposed in writing to the Habitat Fund Committee for consideration. Potential projects may be provided to stakeholders for comment. Final recommendations on proposed projects would be presented by the City to the Services for their review.

FRCV-6
The potential outcome of the *Burlingame v. Washington Department of Ecology* at this juncture is unknown. This is a legal issue at the state level. Provided the City continues to operate as described in the HCP, the Services believe this case would not have an impact on the issuance of the ITPs.

FRCV-7
Alternative A describes the City's current practices and planning for the authorized use of the Clark Springs Facility without the proposed HCP. The City is not currently restricted from using winter water for storage under its existing water rights.

FRCV-8
The City does not have regulatory authority in the Rock Creek Watershed outside of the Clark Springs property. Land use regulatory authority lies with King County and the City of Maple Valley. The City does closely track permit actions that affect the watershed and the City's water supply, and frequently comments on such actions. The HCP also includes a habitat mitigation fund (HCM-8) to fund as-yet unidentified projects that may include additional property acquisition in locations throughout the Rock Creek Watershed.

FRCV-9
Alternative A describes the City's current practices and planning for the authorized use of the Clark Springs Facility without the proposed HCP. Subsection 1.3.3 of the HCP, City of Kent's Water Supply Operations, describes future operations at the Clark Springs Facility per its existing water right.

FRCV-10
Subsection 4.1 of the HCP, HCM-1: Rock Creek Flow Augmentation, states, "The City is proposing to move the current location of the augmentation outfall to a location closer to USGS gage 12118400 in order to minimize augmentation flow losses to the groundwater that occurs in the reach adjacent to the water supply facility." Moving the augmentation outfall would better enable the City to show compliance with HCM-1.

FRCV-11
The HCP includes a habitat mitigation fund (HCM-8) to fund as-yet unidentified projects that may include additional property acquisition in locations throughout the Rock Creek Watershed. HCM-2 would be constructed to withstand significant flows (greater than a 100-year event) from both the Cedar River and Rock Creek. The City has also committed to maintain HCM-2 and to reconstruct at least once, if necessary.

FRCV-12
HCM-4 is currently a conceptual design. During the design phase of the project, if it is determined that siltation would be an issue and the project is deemed not feasible, funds dedicated for the implementation of HCM-4 would be used for other habitat improvements within the Rock Creek basin.

FRCV-13
The HCMs in the HCP are scheduled to accommodate coordination with a number of local, state, and Federal permitting agencies in addition to working with utilities and landowners. This requires coordination with all permitting agencies. Design, permitting, and funding of the HCMs would not commence until the HCP has been approved and the ITPs have been issued by the Services. If all permits were obtained sooner, work on the culvert replacement could proceed earlier than stated in the HCP.

FRCV-14
When the culvert at Summit-Landsburg Road is replaced, the City would construct the project consistent with WDFW requirements in place at the time the project is permitted to allow for upstream and downstream migration of juvenile and adult fish.

FRCV-15
Comment noted.

FRCV-16
The Habitat Fund Committee (Services and the City) would periodically meet to discuss potential projects that may be funded by HCM-8. Project ideas may be proposed in writing to the Habitat Fund Committee for consideration. Potential projects may be provided to interested stakeholders for comment. Final recommendations on proposed projects would be presented by the City to the Services for their review.

FRCV-17
Fencing is not proposed as mitigation. However, fencing would continue to be used to protect the water supply and Rock Creek within the Clark Springs Facility. Potential impacts caused by additional fencing have been added to EIS Subsections 4.9, Wildlife, and 5.4.8, Cumulative Effects, Wildlife.

FRCV-18
The City, as a matter of its water system planning requirements, would continue to evaluate options for increased water supply and storage in its planning process. Subsection 2.5 of the EIS, Alternatives Considered but not Analyzed in Detail, has been updated.

FRCV-19
See response to FRCV-18.

FRCV-20
The lack of a storage facility, infrastructure to convey stormwater to such a facility, and the unreliability of stormwater referenced previously make this alternative both impracticable as well as unreliable.

FRCV-21
Comment noted.

FRCV-22
Comment noted.

FRCV-23
Any construction activity that occurred in the cemetery reach of Rock Creek as a part of a subdivision process falls under the jurisdiction of King County. Any mitigation potential in this reach may be considered as a part of HCM-8.

FRCV-24
Pacific giant salamanders are listed in Appendix A of the EIS, which provides a complete list of common wildlife found throughout the Rock Creek basin.

FRCV-25
The Services anticipate that the implementation of the HCP would improve habitat conditions in Rock Creek for all covered species.

FRCV-26
Comment noted.

FRCV-27
The two mammal species identified by the Friends of Rock Creek as occurring in the Rock Creek basin that, according to Johnson and O'Neil, do not occur in Washington State are pacific shrew and red tree vole.

FRCV-28
Any activity associated with the Proposed Alternative would implement BMPs as described in Subsection 4.3.2.2 of the EIS, Soils. The placement of LWD would result in the temporary erosion

impacts as discussed in Subsection 4.3, Geology and Soils. Changing the location of the augmentation point is not anticipated to cause erosion or sedimentation during installation and operation.

FRCV-29
See response to FRCV-7.

FRCV-30
As stated under the No-action Alternative, it is anticipated that upstream flows would remain unaffected because of the geology at the pinch point near the eastern boundary of the Clark Springs Facility.

FRCV-31
The HCP includes a habitat mitigation fund (HCM-8) to fund as-yet unidentified projects that may include additional property acquisition in locations throughout the Rock Creek Watershed.

FRCV-32
The City does not have regulatory authority in the Rock Creek Watershed outside of the Clark Springs property. Land use regulatory authority lies with King County and the City of Maple Valley. The HCP does include a habitat mitigation fund (HCM-8) to fund as-yet unidentified projects that may include additional property acquisition in locations throughout the Rock Creek Watershed.

FRCV-33
See response to FRCV-17.

FRCV-34
See response to FRCV-32.

FRCV-35
It is noted that the section (640 acres) development noted in the comment was recently annexed into the service area of Covington Water District.

FRCV-36
Most of the Rock Creek basin falls within the service area of the Covington Water District, which is a member of the Cascade Water Alliance, and not within the City's service area.

FRCV-37
See response to FRCV-6.

FRCV-38
Subsection 5.4.8 of the EIS is a section on Wildlife. It is assumed the comment intended to reference Subsection 5.4.10 of the EIS, Social and Economic Conditions, within the larger Subsection 5.4, Analysis of Cumulative Effects by Resource Topic. The list of projects within Subsection 5.4.10, Social and Economic Conditions, is not a list of mitigation projects; rather these are foreseeable capital improvement projects that would, individually or collectively, require a water rate increase. Habitat mitigation projects are described in Chapter 4 of the HCP.

FRCV-39
The Services agree that depending upon the time of year and weather conditions, water flows in portions of Rock Creek upstream of Clark Springs. However, as the comment notes, flows do not

occur throughout the year. When water is present and accessible, fish may use this ephemeral habitat, but may also be stranded during the dry season.

FRCV-40
Funds for HCM-8 would be used for other habitat improvements within the Rock Creek basin, which includes both upper and lower portions of the watershed.

FRCV-41
Streamflow is present year round from the current augmentation location to the proposed downstream augmentation location. This is not anticipated to impede fish passage in Rock Creek.

FRCV-42
See response to FRCV-6.

FRCV-43
See response to FRCV-41.

FRCV-44
HCM-3 and HCM-4 are currently conceptual. As designs for these HCMs are developed, if any aspect deems these projects not feasible, funds that have been identified for HCM-3 or HCM-4 would be used for other habitat improvements within the Rock Creek basin. Re-vegetation projects adjacent to other wetlands in the watershed may be considered as projects under HCM-8. Stakeholders are invited to submit project ideas when the HCP is approved.

FRCV-45
This project may be considered as a part of HCM-8.

FRCV-46
Comment noted.

FRCV-47
The Services agree that Hidden Lake does not completely dry up each year, but the amount of lacustrine habitat versus wetland habitat varies widely on a seasonal basis. A USGS aerial photo from July 1998 shows standing water about 1.5 acres in size, while Google Maps (photo date unknown) shows standing water on the order of 17 acres in size. The HCP has been revised to clarify this point.

FRCV-48
Flow data for the upper basin is extremely limited. However, all of the available information suggests the creek is intermittent and ephemeral upstream of its perennial source near Clark Springs. Because the extent and duration of areas that are dry is uncertain and likely varies from year to year, this sentence has been revised.

FRCV-49
This information should be available in the Simmonds et al. (2004) report referenced in the HCP.

FRCV-50
This section is not referring to Clark Springs Wells. This section falls under the operational constraints and is referring to deep wells outside the Rock Creek basin.

FRCV-51
This suggested acquisition may be considered as a part of HCM-8.

FRCV-52
The City of Auburn continues to supply water to King County Water District #111 and Covington Water District. Auburn still cannot be considered a potential supply source.

FRCV-53
Comment noted.

FRCV-54
Comment noted.

FRCV-55
Instream flow requirements are required only when the City is pumping the wells at Clark Springs as described in Subsection 3.2.4 of the HCP, Clark Springs Wells, and Subsection 2.3 of the EIS, Existing Clark Springs Water Supply Facilities.

FRCV-56
Comment noted.

FRCV-57
See response to comment FRCV-44.

FRCV-58
See response to comment FRCV-44.

FRCV-59
When the culvert at Summit-Landsburg Road is replaced, the project would allow upstream and downstream migration of juvenile and adult fish and would be designed in accordance with the most current WDFW standards. The HCMs in the HCP are scheduled to accommodate coordination with a number of local, state, and Federal permitting agencies in addition to working with utilities and landowners. This requires coordination with all permitting agencies. Design, permitting, and funding of the HCMs would not commence pending a decision by the Services to issue the ITPs.

FRCV-60
As designs for this HCM are developed, if any aspect deems the project not feasible, funds identified for HCM-6 would be used for other habitat improvements within the Rock Creek basin. Direct benefits of HCM-6 include creating and improving habitat for covered salmonids that inhabit Reaches 10 and 12.

FRCV-61
See response to FRCV-36.

FRCV-62
The HCMs were not listed in order of priority, and the Services anticipate that the City would implement all HCMs as specified in Chapter 4 of the HCP, Habitat Conservation Measures to be Implemented Under the HCP.

FRCV-63
Fencing the watershed is not a proposed mitigation project. The HCMs are described in Chapter 4 of the HCP, Habitat Conservation Measures to be Implemented Under the HCP.

FRCV-64
The passage quoted in the comment refers to projects considered to have a low certainty of being implemented and were thus not included in the HCP. The projects included in the HCP as conservation measures were considered to have a high level of certainty and conceptual designs were prepared.

FRCV-65
See response to FRCV-6.

FRCV-66
See response to FRCV-41.

FRCV-67
The summary discussion in Subsection 4.1 of the HCP, HCM-1: Rock Creek Flow Augmentation, describes the substantial benefits of implementing HCM-1 over baseline conditions, not the impacts of Clark Springs withdrawals.

FRCV-68
Under the HCP, the City would periodically inspect and maintain HCM-2 and would commit to reconstruction one time over the course of the 50-year permit. The project would be designed to withstand a 100-year event.

FRCV-69
The HCMs in the HCP are scheduled to accommodate coordination with a number of local, state, and Federal permitting agencies in addition to working with utilities and landowners. This requires coordination with all permitting agencies. Design, permitting, and funding of the HCMs would not commence until the HCP has been approved and the ITPs have been issued by the Services.

FRCV-70
See response to comment FRCV- 60.

FRCV-71
The habitat fund identified in HCM-8 would be adjusted 3 percent annually from the date the HCP is approved as described in Subsection 4.8 of the HCP, HCM-8: Riparian Acquisition, Easement, and Enhancement Fund in Rock Creek Watershed.

FRCV-72
Road maintenance is not proposed for mitigation.

FRCV-73
The HCP has been revised to include non-governmental organizations for distribution of annual reports.

FRCV-74
See response to FRCV-41.

FRCV-75
Implementation of the HCP would not create any fish barriers on the Clark Springs property. The HCMs identified in Chapter 4 of the HCP, Habitat Conservation Measures to be Implemented Under the HCP, are designed to improve fish habitat and passage within the Rock Creek basin.

FRCV-76
MEM-5 in the HCP and EIS has been revised to include snorkeling of the mainstem of Rock Creek. The intention of MEM-5 is to confirm some level of fish use of the treated wetland sites, not to provide quantitative fish abundance or productivity. If no fish are observed in the treated wetlands, then a technical discussion would be led by the City with relevant fisheries groups and the Services.

FRCV-77
The HCP has been revised to update information regarding the culvert at the City of Seattle's water supply pipeline crossing.

FRCV-78
See response to comment FRCV-6.

FRCV-79
With the approval of the HCP, and issuance of the ITPs, the City is committed to implementing the projects identified in Chapter 4 of the HCP, Habitat Conservation Measures to be Implemented Under the HCP.

FRCV-80
It is the intent of the Services to work with any interested stakeholders to identify potential habitat projects or land acquisitions in the Rock Creek basin that could be funded through HCM-8. In addition, if it is determined that projects identified in other HCMs are not feasible, the City would make the allocated funds available for other projects aimed at improving habitat in the Rock Creek basin.

King County
Department of Natural Resources and Parks
Wastewater Treatment Division
Community Services and Environmental Planning
King Street Center, KSC-NR-0505
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July 6, 2010

Tim Romanski
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John Stadler
National Marine Fisheries Service
510 Desmond Drive SE, Suite 103
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RE: City of Kent Clark Springs February 2010 Water Supply Plan Draft Habitat Conservation Plan and accompanying February 2010 Draft Environmental Impact Statement

Dear Mr. Romanski and Mr. Stadler:

Thank you for the opportunity to comment on the above two documents, and the proposed issuance to the City of Kent by the US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) (collectively the "Services") of Incidental Take Permits (ITP's) under Section 10(a)(2)(B) of the Endangered Species Act (ESA) for three fish species already listed as "threatened" under the ESA, and six additional fish species.

King County has made substantial direct and indirect investments in the Rock Creek basin in order to preserve the habitat and the biological functions provided by this near-pristine area. Continuing to preserve and protect Rock Creek and the surrounding area is a high priority for the County and its partners. As you know, there is now a Puget Sound Chinook salmon recovery plan, approved by NMFS in 2007 under the ESA, that was developed at the local/regional level, and whose progress is being steered and monitored by both watershed and regional groups. King County and its partners, including the City of Kent, are continuing to work towards recovery of the three ESA-listed species, and protecting habitat for those that do not yet have ESA coverage. Inasmuch as withdrawals by the City from the Clark Springs site are identified as a limiting factor for recovery of Chinook salmon in the WRIA 8 Limiting Factors report, we are pleased that the City is actively pursuing options to minimize its impacts, as required under the ESA, and enhance ongoing recovery efforts.

We appreciate the investment of time and effort by the City of Kent in technical and other studies, and their active engagement of stakeholders (including King County), prior to

CREATING RESOURCES FROM WASTEWATER

production of the City's draft Habitat Conservation Plan (HCP) in 2005. In August 2006, in response to the Services' request for comments on scoping for their draft Environmental Impact Statement (EIS) and for the draft HCP, King County provided a set of comments on the draft HCP that addressed, among other items, hydrology, fish biology, land use, and water use within the basin, and also suggested alternatives to the actions proposed in the draft HCP. Those County comments, along with those from other commenters, were summarized in a draft "Scoping Report," published in December 2006 by the Services, a copy of which we received within the past few weeks. There was no response document prepared for that set of comments that would allow tracking of the comments with any changes to the draft HCP, or with the analysis done in the draft EIS.

KC-1

We very much support proposed measures in the draft HCP that would provide additional habitat in the Rock Creek system. The draft HCP proposes doing four of the eight habitat projects recommended in the WRIA 8 Plan for Rock Creek, which would be good projects and should increase juvenile Chinook rearing habitat in Rock Creek. The feasibility study for additional restoration measures and the $1.6 million fund are also very positive steps (though, as we note below, we would appreciate a discussion as to whether the $1.6 million is the "maximum practicable" level under the proposed 50 years coverage; this equates to $32,000 per year in today's dollars). We would also support the provisions for monitoring the effectiveness of the actions, although we believe that the analysis should be done in conjunction with and be shared with other groups that are actively or formally engaged in recovery work for listed species (see below).

Comparing the most recent (February 2010) draft HCP with the earlier (2005) draft of the HCP, our staff have not been able to discern any significant changes in the new document. The mitigation measures proposed by the City of Kent in its "proposed action" in both drafts appear to be the same. The draft EIS tracks the draft HCP in its particulars, and does include or evaluate any alternatives other than the City of Kent's "proposed action" and a "no action" alternative. In particular, the draft EIS does not evaluate as an alternative, as suggested by King County in 2006, the potential use by the City of reclaimed water as a substitute for some of the non-potable uses for which it currently supplies potable water.

KC-2

In our recent discussions with the City of Kent, we have been told that the comments received in 2006 were reviewed and responded to appropriately for these latest two documents. Those 2006 comments reflected a thorough review by County staff of the earlier draft HCP. Because the proposed action, and its set of mitigation measures, has not changed in the latest draft HCP, we are resubmitting those comments as part of this submittal, and look forward to seeing a detailed response document.

We also have the following additional comments. They reflect, to a large extent, the changed circumstances since the initial draft HCP was produced in 2005. We would ask the Services to consider and incorporate those changed circumstances as it reviews the draft HCP and proposed action.

(1) The management of the Chinook salmon recovery process for the watershed in which Rock Creek is located is largely in the hands of regional/local groups. In particular, the job of developing, prioritizing, funding, and implementing recovery measures have become the responsibility of WRIA 8 Salmon Recovery Council and the Puget Sound Salmon Recovery Council (the successor to the Shared Strategy group that developed the Puget Sound salmon recovery plan). Accordingly, there needs to be an express linkage between the City of Kent's actions and those groups/processes. In particular, reporting, adaptive management, and potential changes to the management elements that would be done under an HCP would need to include these groups.

KC-3

(2) The technical analyses should reflect new technical information developed since 2005. These would include impacts of climate change on Puget lowland streams (done as part of regional water planning), and growth forecasts completed by the Puget Sound Regional Council (PSRC). KC-4

(3) Other analyses--particularly the alternatives analysi--needs to incorporate new information, particularly in regard to reclaimed water as a substitute source. In particular, King County is now approximately two years into a planning process that will focus on if, how, when, where and by what funding mechanisms the County should expand its existing reclaimed water program. The process has developed extensive countywide information regarding potential uses of reclaimed water, and potential strategies for delivering water to those uses. Those strategies include a set of environmental enhancement uses authorized under state law including flow augmentation, groundwater recharge, and wetlands enhancement. One draft strategy would supply reclaimed water to the South King County area, which could include the City of Kent. As we noted in our 2006 comments, the reclaimed water could, but would not need to be, used to augment flows in Rock Creek. It could be used for non-potable purposes for which the City currently supplies potable water from Clark Springs, thereby reducing the demand for water from that source. The Water Supply Forum's "Outlook 2009" report, which provided regional forecasts for both demand and supply out to the year 2060, included an analysis, including costs, for a potential reclaimed water supply project in the Kent area. All this information is available and should be used by the Services in evaluating alternatives to the proposed action. KC-5 In general, the alternatives analysis also needs to be clearer, and should allow for combinations of sources to be aggregated to meet Kent's future needs, or a significant portion of those needs, so that the necessity to continue withdrawals from Clark Springs at existing amounts could be mitigated. KC-6

(4) The draft EIS does not analyze alternatives that were proposed during the public scoping period, evidently based in part of the City's forecasted demand and the inadequacy of these alternative supplies to allow the City to meet its forecasted demand. However, the region's major utilities (such as the City of Seattle and the Cascade Water Alliance) are currently experiencing significant declines in demand, and have or will soon revise their forecasted future demands to lower levels. Do the underlying assumptions in the draft EIS reflect this new reality, and how would lower demands affect conclusions regarding the feasibility of alternative approaches to meeting demand? KC-7

The analytical approach, and the requirements under the ESA for the analysis required and the proposed issuance of an ITP, are not clear in the documents. We would appreciate clarification of some of those, as follows:

(5) The "baseline" identified in the documents does not include those activities currently being done by the City (e.g., the existing flow augmentation program). The "no action" alternative is intended to include only those actions that the City is required to perform, irrespective of the potential consequences (e.g., fully using the City's water rights, and potentially dewatering Rock Creek). We would appreciate the documents providing a more complete description of those, and the underlying basis for the conclusion that some of the existing activities, and some of the proposed mitigation measures, are not currently required. For instance: KC-8

- State law enacted in 2003 (RCW 70.119A.180) requires that municipal water suppliers develop and describe, in each six-year water system plan, the utility's water use efficiency goals, and the specific measures that will be used to meet those goals. For water utilities that intend to use any "inchoate" (unused) portion of their water rights (as the City says it might), they must describe in their water system plans whether there are any cost-effective water conservation measures that could be used before using additional water rights, and must implement them (RCW 90.03.386(3)). The City of

Kent produced its most recent water system plan in September 2008. One of the County's comments on the draft plan (sent to the City in October 2008) noted that there did not appear to be a discussion of cost-effectiveness of potential conservation measures. The draft documents here describe the water conservation measures as being part of both the "no action" and "proposed action" alternatives. This is confusing. The draft HCP and EIS should describe the conservation measures that would be part of the "proposed action," whether and to what extent the proposed conservation measures in the draft HCP would exceed those required by state law. KC-9

- The HCP and EIS presume that the City of Kent would be able to fully use all of its existing water rights at the Clark Springs Source, including any "inchoate" water. It would be helpful for the Services to solicit the Department of Ecology's comments on this assumption. Of particular note is that the provision in state law that characterizes municipal water supply "inchoate" water rights as rights "in good standing" has been challenged in state court. The initial, Superior Court ruling in June 2008 agreed that some portions of that law are unconstitutional, and that some appear to be constitutional. That case is now at the Supreme Court, where oral arguments were held early this year, and the parties are awaiting a decision. The draft documents should explain the effect, if any, of the Superior Court decision on their assumptions, and the potential effect of an adverse Supreme Court decision on the assumption under the No Action alternative that the City would be able to fully use its water rights. KC-10

- The City's existing water rights require that the City maintain a minimum flow of varying levels at different times of year, and at least 2 cfs, in Rock Creek. The draft HCP proposes, in HCM-1 (see Table 4-2) that under the proposed action the City would be required to provide flow augmentation not to exceed 2.5 cfs in wet years, and 1.5 cfs in drought years, in order to achieve target flows of 3.5 cfs and 2.5 cfs, respectively. Under the "no action" alternative, would the City be required to provide some of this flow augmentation in order to achieve the minimum 2.0 cfs required by its existing water rights? And does the "proposed action" alternative include flow augmentation that should be included in the baseline? KC-11

(6) The draft EIS states that any ITP issued must include a decision that the applicant will, "to the maximum extent practicable," minimize and mitigate the impacts of any taking of a listed species. This standard is not defined in the glossary. Please explain how this standard is defined and applied (e.g., are there cost criteria? If so, what is their basis? Are costs discounted for the proposed 50-year period of the ITP?). KC-12

(7) The draft EIS states (in Section 2.5) that although five alternatives were suggested during the public scoping process, none were analyzed because "they are not considered reliable water sources with enough excess capacity to augment or replace withdrawals at the Clark Springs Facility to a level that would meet the City's current and future water demand needs, and therefore do not meet the purpose and need." The "purpose" of the proposed action (in Section 1.2) is to allow the City "to continue its water supply activities at the Clark Springs Facility while complying with the ESA." Please explain the terms "reliable," "excess capacity," and "augment or replace." Please explain the rationale underlying the conclusion not to evaluate these options. KC-13 Does the phrase "continue its water supply activities" mean that the City would be allowed to continue withdrawals at the same rate and time as it currently does, or more simply that it be allowed to continue using Clark Springs as a water supply facility, but with some modifications to its "water supply activities" (perhaps "augmentation" from one or more of the proposed alternative sources)? KC-14 Was each alternative required to supply a certain quantity of water on its own in order to be considered worth evaluating as either augmenting or replacing some of the Clark Springs supply? If so, what was that quantity of water, and the basis for choosing that quantity? Did the analysis include an alternative that would have KC-15

aggregated more than one of these five individual alternatives into a larger quantity that might have merited further analysis? If not, should that be an alternative to be considered? Would use of several of these alternatives, collectively, fall within the ESA's requirement that the set of actions for an ITP minimize to the maximum extent practicable the effects on listed species? Given that the City is requesting 50-year coverage under the proposed ITP and draft HCP, would periodic reevaluation of these alternatives be an appropriate condition attached to the issuance of an ITP? It seems likely that the City will be periodically reevaluating its sources irrespective of the ESA requirements, since the City has stated in the documents that it does not currently have sufficient supplies to meet forecasted demand for the proposed 50-year life of the ITP. Water utilities typically are required to do so by the Washington Department of Health in their periodic (six-year) water system plan updates, under WAC 246-290-100. The Services could consider, as a condition of the proposed ITP, requiring that the evaluation of alternatives for ESA purposes be considered and reported to the Services as part of such an evaluation. KC-16

The County has several comments with regard to the possible implementation of the ITP:

(8) Given the proposed length of the HCP (50 years), any agreement should contain robust provisions for incorporating new information, changed conditions, and new strategies particularly those developed as part of overall WRIA 8 or Puget Sound region recovery plans (including PSP) over the length of the agreement. The Services' approach should be to err on the side of caution, and on recovery of listed species. KC-17

(9) The length of commitments should likewise reflect the both the life of the ITP (50 years) and the anticipated duration of the recovery plan for listed species. For example, spawner surveys should go beyond the proposed four years (which represents only one life cycle), and the commitment to reconfigure/repair the outlet of Rock Creek should be more than initial construction/one repair during the life of the ITP. KC-18

(10) There are several elements of the HCP where the technical basis for specific actions have not been tested, and where there would be more confidence if there were additional studies required as part of adaptive management or monitoring (similar to a number of studies required of the City of Seattle as part of the Cedar River HCP). For instance, the assumption that there is a delay of 70 to 100 days between groundwater pumping and effects on Rock Creek, which is fundamental to the City's proposed flow augmentation mitigation, could be verified by some field tests, particularly at times of year when flows are critical for species to be covered by the proposed ITP. In addition, the Services could consider requiring "backcasting" from both observed precipitation data and flow data to see the historical correlation (see Comment 13 below), or if this work has been done, highlight its results. KC-19 KC-20

We have the following technical comments with regard to the value of the Rock Creek watershed and habitat, and potential impact of ongoing use of the Clark Springs source for water supply purposes. To some extent they repeat comments made in 2006:

(11) The draft HCP provides no quantification of effects, benefits and/or take, associated with the action. We believe that HCP guidelines recommend or require quantification of take as part of the planning process. In that vein, the peer-reviewed Appendix E of the Lower Cedar Basin Plan (1995) evaluated benefits of flow restoration for Rock Creek (see project TR-13 in Appendix E). The net increase in annual potential production from flow restoration was estimated as 2,936 chinook smolts, 11,710 coho smolts, 296 steelhead smolts, 4,394 cutthroat trout smolts and 1,137,623 sockeye fry. These estimates are based on area-based productivity estimates from published literature for potential spawning and rearing and estimates of increased habitat area and use from increased flows. To provide a quantification of net benefits and/or take of the proposed action, the HCP should use these numbers or provide a rational alternative quantification method for estimating salmonid productivity gains or losses. KC-21

(12) It is not clear from the documents the extent to which the water supply withdrawals affect flows in Rock Creek. As we noted in our 2006 comments, the technical analysis does not provide recent or current figures on production from the Clark Springs facility. It does not appear to provide information on weekly or monthly production, but only provides annual production figures. The draft EIS notes (section 2.3) that the City's water rights provide for instantaneous withdrawals of 5400 gallons per minute (gpm), and annual withdrawals of 8710 acre-feet. At any time that the City fully uses its instantaneous water rights of 5400 gpm, it is using the equivalent of approximately 12 cfs that would otherwise flow to Rock Creek, which is in hydraulic continuity with the City's supply facilities. Assuming that there could be a 70 to 100 day delay in timing of these impacts that the Services propose in the draft EIS, then the critical flow periods (September through December for Chinook spawning) are most affected by withdrawals/production from Clark Springs roughly three months earlier June through September, which tend to be the months when water utilities experience peak demand (due largely to outdoor irrigation). The Services should evaluate the significance of the existing and planned water supply production relative to the target flows of between 2.5 and 3.5 cfs in Rock Creek, and whether alternative measures to reduce production and demand during those peak periods would fall within the "maximum practicable" standard for approving an ITP, particularly for "dry" or "drought" years (for instance, mandatory restrictions on outdoor watering). KC-22

(13) The analysis for the Rock Creek flow augmentation measure (section 4.1 of the draft HCP) with regard to potential take of existing species, and the proposed mitigation by flow augmentation, is difficult to understand. The City's ongoing water withdrawals could delay fall aquifer recharge and instream flows by three weeks in some years, particularly those (dry or drought) where the water is likely to be more critical. KC-23 The modeling done by the City's consultants appears to conclude that useable habitat for multiple species continues to increase as flows increase, generally up to at least 20 to 25 cfs. However, the maximum flow target, even in "wet" years, is 3.5 cfs. This target appears to have been chosen because of the City's need to continue meeting its water supply demands, and because there are limitations to the flow augmentation proposal due to physical limitations on groundwater recharge. In addition, the modeling, and the flow augmentation plan, appear to be based on the assumption that current year precipitation will accurately forecast flows in Rock Creek some 70 to 100 days after the precipitation. This should be fairly easy to check by "backcasting" in recent wet, normal, dry and drought years e.g., reviewing the historic precipitation records for these categories, and correlating them with observed flows in Rock Creek (after accounting for the City's production at Clark Springs). Please explain the analysis that that connects the modeling with the target flows, and productivity of the habitat. We would also appreciate a clear description of the science with regard to improved and sufficient access to Rock Creek for covered species that would result from the combination of physical reconfiguration of the creek's outlet and upstream flow augmentation. KC-24

(14) According to the draft EIS (section 1.2.3), one of the decisions to be made by the Services is to determine that the issuance of the ITP "will not appreciably reduce the likelihood of survival and recovery of the species in the wild." Please explain how the Services' decision on this proposed ITP will be connected with the approved recovery plan for Chinook salmon, the adaptive management strategy within that plan, and the impending five-year review by NMFS of progress made under that plan. KC-25

Thank you for providing the opportunity to comment. As we have discussed electronically, we would appreciate the further opportunity to have King County staff meet with you, and the City of Kent, to discuss these issues in the near future.

Sincerely,

David Monthie

Regional Water Policy Analyst

Enclosure

cc: Steven W. Landino, Washington State Director for Habitat Conservation, National Marine Fisheries Service
Ken S. Berg, Manager, Western Washington Fish and Wildlife Office, U. S. Fish and Wildlife Service
Bob Burns, Interim Director, King County Department of Natural Resources and Parks
Jacque Klug, Northwest Regional Manager, Water Resources Program, Washington State Department of Ecology
Bob Everitt, Regional Director, Washington Department of Fish and Wildlife
Tim LaPorte, P.E., Director of Public Works, City of Kent
Mike Mactutis, Public Works, City of Kent
Rachael Paschal Osborn, Executive Director, Center for Environmental Law and Policy
Eric Peterson, U. S. Environmental Protection Agency
Kelly Peterson, Public Works, City of Kent
Joe Ryan, Ecosystem Recovery/Local Implementation Director, Puget Sound Partnership
Megan Smith, Environmental Policy Advisor, King County Executive
Barry Thom, Acting Regional Administrator, National Marine Fisheries Service
Robyn Thorson, Regional Director, U.S. Fish and Wildlife Service
Isabel Tinoco, Natural Resource Director, Muckleshoot Indian Tribe

King County
Department of
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Director's Office
King Street Center
201 South Jackson Street, Suite 700
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August 3, 2006

Tim Romanski, Project Manager
Western Washington Field Office
US Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, WA 98503-1263

Dear Mr. Romanski:

I am writing to provide formal comments from the King County Department of Natural Resources and Parks in response to the Notice of Intent to Conduct Public Scoping and to Prepare an Environmental Impact Statement (EIS) Related to the City of Kent, Washington, Clark Springs Water Supply System Habitat Conservation Plan (HCP) (71 FR 35286, June 19, 2006).

King County, working as the local jurisdiction with the most land area in the Rock Creek basin and in conjunction with the residents of the basin, continues to be active in and committed to the conservation of the natural resources of the basin. We appreciate the opportunity to help craft an EIS that explores constructive and creative actions that will meet Kent's ESA compliance and conservation objectives, accurately assesses the probable results of those actions, and ultimately supports a final HCP that contributes to the long term health of the basin.

I offer the attached detailed comments in support of such an analysis. The comments are based in large part on a review of the May 2006 Preliminary Draft HCP (Draft HCP) and therefore in many cases reference specific text sections in the Draft HCP. To be most useful in EIS scoping, comments that reference Draft HCP text primarily address the substance of the text rather than issues of form. To aid in the incorporation of the comments into the development of alternatives and the analysis, the comments are grouped under the appropriate topic area headings suggested by the National Marine Fisheries Service (NMFS) in the Federal Register notice. Although there are portions of the Draft HCP to which improvements could be made, the City of Kent should be commended for preparing an informative and thought-provoking foundation for the eventual final HCP and for future collaboration between King County and the City of Kent to achieve shared objectives in the basin.

Please note my appreciation of the City of Kent's interest in addressing the impacts of its ongoing water supply operation in the Rock Creek basin and in supporting the ecological integrity of the basin. I also appreciate the city's efforts to keep King County and other

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stakeholders apprised of their planning efforts during the development of the Draft HCP. King County looks forward to continuing to work with the city as the HCP moves toward finalization and as complementary efforts, like the King County Regional Water Supply Plan and the WRIA 8 Chinook habitat plan, also move forward.

Thank you for the opportunity to provide input into the EIS process. Please feel free to contact me at, 206-296-8003 if you have any questions regarding the attached comments.

Sincerely,

David St. John
Water Resources Special Projects Manager
King County Department of Natural Resources and Parks

Enclosures

cc: Larry Blanchard, Director of Public Works, City of Kent
John Stadler, National Marine Fisheries Service
Isabel Tinoco, Natural Resources Director, Muckleshoot Indian Tribe
Carl Samuelson, Washington Department of Fish and Wildlife
Dan Swenson, Washington Department of Ecology
Chip Nevins, King County Conservation Director, Cascade Land Conservancy
Rebecca Phelps, Center for Environmental Law and Policy
Pam Bissonnette, Director, King County Department of Natural Resources and Parks

Attachment A
EIS Scoping Comments
City of Kent Clark Springs Habitat Conservation Plan

1. **Direct, indirect, and cumulative impacts that implementation of the proposed HCP or other alternatives could have on endangered and threatened and other covered species, and their communities and habitats.**

- The final HCP should note impact of potential land use changes in the area, pursuant to current land use plans (i.e., use of exempt wells to provide water supplies to five-acre parcels, increases in impervious area, etc.). KC-26
- Should note the current and projected population growth rate within Kent's service area, and whether this will result in increase in Qa or Qi. KC-27
- Ranges of withdrawal values are specified in terms of monthly averages. Given their documented more immediate hydraulic connection of withdrawals, evaluations should be detailed in daily increments and not monthly. Other analyses are based on older data (e.g. 1986-1998). It would be prudent to update the analyses to include up to present day effects. KC-28
- Proposed limitation of flow augmentation would appear to relieve Kent of need to maintain streamflow, even if reduced flows are caused primarily by Kent's withdrawals. Why is this? KC-29
- Draft Habitat Conservation Plan (DHCP), p. 6-15 – Figure 6-4 may have some error in it. The pumping cycles don't match up with the drops in the stream flow rates. KC-30

2. **Other possible alternatives that meet the purpose and need of the proposed HCP.**

- Use reclaimed water to meet demand for non-potable uses of water: Developing a source of reclaimed water served by the Renton Treatment Plan and running south through the Kent Valley was identified in or around 2000 as one of the optional pilot projects for an initial reclaimed water facility in King County. Such an option would allow the substitution of reclaimed water for nonpotable purposes (e.g., outdoor irrigation; process water; cooling). A number of purveyors, including the City of Kent, have recently met with King County to express their interest in bringing reclaimed water into South King County. If that were to occur, it would ultimately reduce the demand on the Clark Springs supply for potable uses. Kent's most recent water system plan does not discuss the use of reclaimed water from this source for this purpose. KC-31
- Construct storage: Kent has at various times considered developing large storage facilities, but has not done so. This would allow storing water during high (winter) KC-32

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stakeholders apprised of their planning efforts during the development of the Draft HCP. King County looks forward to continuing to work with the city as the HCP moves toward finalization and as complementary efforts, like the King County Regional Water Supply Plan and the WRIA 8 Chinook habitat plan, also move forward.

Thank you for the opportunity to provide input into the EIS process. Please feel free to contact me at, 206-296-8003 if you have any questions regarding the attached comments.

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flows, and reduce the Qi withdrawn from the Clark Springs supply during low flow/high irrigation months.

- Implement stronger demand management: Kent proposes as a mitigation measure an improved conservation program that "meets or exceeds" state requirements. It is not clear that Kent has already evaluated an array of conservaton measures for their cost-effectiveness, and implemented all those that are cost-effective. State law enacted in 2003 allows each utility to set its own water use efficiency "goal," and develop its own measures to achieve the goal. Kent should consider, at a minimum, implementing all cost-effective conservation measures (perhaps do a conservation potential assessment), and should also consider implementing an aggressive conservation program similar to that developed by the City of Seattle in order to maximize opportunities to reduce use. The impending Department of Health's rules on water use efficiency will require utilities to develop programs that take into account characteristics of their sources of supply; Kent should include in its baseline evaluation this state-imposed requirement to adopt a program that accounts for the effects on Rock Creek. Any HCP mitigation should be on top of this state requirement. KC-33

- Acquire potable water from other sources of supply: In addition to the water it is entitled to from the Tacoma Second Supply Project, Kent has access to other potential sources of supply (e.g., Covington, Seattle) on an interim basis that it could consider using when streamflows are stressed in Rock Creek. KC-34

3. Potential adaptive management and/or monitoring provisions.

- DHCP p. 5-2 – It is advisable to conduct effectiveness monitoring for these projects in addition to basic compliance (performance) monitoring. KC-35
- DHCP p. 5-3 – Bi-annual reviews of monitoring results would provide more assurance that adaptive actions are timely and effective. KC-36
- MEM-1 –
  - More clarification is needed on exactly how the monitoring of flow augmentation will occur. If not, some mechanism of adapting the current monitoring and reporting scheme should be allowed with a joint advisory group comprised of local, state, and federal agencies. KC-37
  - Include late September in flow augmentation monitoring timeframe. KC-38
- MEM-2 –
  - The approach to defining watershed conditions for determining wet—drought conditions is good. However, the City should include a stream flow or aquifer levels component. It's possible that a single storm event may skew interpretation of actual conditions when defining instream flow targets. KC-39
- MEM-3 –

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- Spawning surveys should be coordinated with other agencies that are also interested in obtaining that data. Potential cost savings from efficiencies could be redirected to other priorities. KC-40
- Spawning surveys should be done annually to ensure the full picture of effects on salmonid species (population/cohort) of interest. If there is poor survival of a particular brood you won't be able to detect the difference by monitoring every fourth year; and coho are on a three year cycle in this system so you wouldn't capture their trends at all. KC-41
- The conclusion that spawner surveys alone cannot show the cumulative effectiveness of conservation actions, due to confounding factors such as ocean survival and commercial harvest, is logical. This conclusion is consistent with the monitoring plan outlined in the WRIA 8 Chinook habitat plan. A more thorough evaluation of cumulative effects of habitat actions on salmonid populations should include outmigrant surveys using smolt and/or fry traps at the mouth of Rock Creek. This would allow the City to separate the effects of habitat actions from the effects of out-of-basin conditions and actions KC-42
- Surveys should include steelhead. KC-43

- MEM-4 – KC-44
  - Project functionality should be monitored at least seasonally, especially at times of high/low flow conditions.
  - Monitoring the success of the project should include monitoring fish use above the passage improvement. KC-45

- MEM-5 –
  - Surveys are a great idea; program should include monitoring reaches of the creek mainstem for comparisons. The value of local fish use data to gauge effectiveness would be increased if combined with outmigrant surveys that evaluate total production in the system. KC-46
  - Specify which species of fish and what time of year for monitoring. KC-47

4. <u>Existing environmental conditions in the plan area.</u>

- Recognizing the significant effort the City of Kent put toward improving the understanding of fish presence and use of Rock Creek, there remain key uncertainties about the these topics. The City of Kent, NMFS and USFWS should document the key uncertainties regarding fish presence within and use of the habitat in the project area and indicate how the uncertainties would influence the evaluation of each alternative. This would provide a more complete basis for understanding the benefits of mitigation and protection measures. KC-48

- Further analysis and document revision or development should note that the Rock Creek basin is closed to further appropriations per Department of Ecology (DOE) instream flow rule (WAC 173-508). It should also note that the City of Kent's water rights were established prior to the setting of instream flow rules for Rock Creek and the Cedar KC-49

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River. In addition, stakeholders would benefit greatly by the inclusion of information showing how the City of Kent's withdrawals have increased or decreased over time as a portion of its entire right.

- Fish passage at culverts in the system is a known gap in the information about environmental conditions in the basin and is a limitation on assessing the value of actions intended to increase fish use in the system. KC-50

- DHCP p. 1-4 – The following excerpt misrepresents the groundwater - surface water interaction:
  "During extended periods of low precipitation, which generally occur in late-summer and early fall, streamflow becomes "perched" above the aquifer, and groundwater levels lower and the infiltration gallery captures groundwater that would remain in the aquifer and flow under the creek and out of the basin." KC-51

  This misrepresentation is also shown in the Conceptual Model (Fig 3-7) on p. 3-25. There is no data to demonstrate a low permeability zone under Rock Creek in the vicinity of Clark Springs. The figure is taken from a stock figure regarding the "River" boundary condition in MODFLOW documentation.

- DHCP p. 3-6 to 3-7 (also mentioned on p. 3-23) – The following excerpted text, while generally correct, is somewhat misleading because the modeling admits that the conclusions cannot be so certain or precise:
  "Less than 8.0 percent of the groundwater flow is believed to flow through the Landsburg channel based upon groundwater modeling while 44.2 to 49.4 percent flows through the Rock Creek channel and 43.8 to 47.8 percent flows through the Ravensdale channel (Appendix D)." KC-52

  P. 36 (Section 7.1.4) of the Modeling Report (Appendix D) notes that the "uncertainty associated with these discharge outlets is the percentage of flow directed down each aquifer channel." This section discusses some of the factors that cause this uncertainly, and Section 7.2.3 suggests studies that could reduce this uncertainty.

- DHCP p. 3-23 – The presence and influence of a "pinch point", suggested in a number of places, are hypotheses and should be noted as such. The HG report (i.e., Appendix C, p. 40) says "there is some indication of a shallow bedrock ledge or a till-mantled saddle present". The effect of the "pinch point" hypothesis is to say that withdrawals at Clark Springs have no effect in the upper catchment. Appendix C even uses the analogy of a weir, and says that it "prevent[s] the effect of downstream withdrawals from propagating upstream." This is unlikely in a groundwater system – it goes against the basic governing equations for groundwater flow – and should be demonstrated empirically if it is to be relied upon so substantively. KC-53

- DHCP p. 3-33 – The statement
  "... seasonal (summer) declines in the static water level of the source aquifer level, which Kent believes may involve development impacts upon the local recharge area, exempt wells, and upland degradation of riparian habitat" KC-54

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is probably true, but is not substantiated in any data that is presented with the Draft HCP.

- DHCP p. 3-34 – Rock Creek's B-IBI scores are the highest in the region, this despite the impression given by the long list of impacts from urban and residential development provided on p. 62. KC-55
- DHCP p. 3-46 – More recent spawner survey reports than 1995 are available. KC-56
- DHCP p. 3-46 – Discussion of impacts from land use practices should also include recommendations from the WRIA 8 Chinook habitat plan (chapter 4 page 20) regarding the protection of adequate flows to maintain pre-spawning migrant life stage in Rock Creek. KC-57
- DHCP p. 3-59 – The quality of habitat in Rock Creek serves an important role in "mitigating" the effects of harvest and hatcheries on population conditions. KC-58
- DHCP p. 3-66 – The citation for the information presented in the first paragraph should be: Berge, HB, Hammer, ML, and S Foley. 2006. Timing, abundance, and population characteristics of spawning Chinook salmon in the Cedar/Sammamish Watershed. King County Department of Natural Resources and Parks, Water and Land Resources Division. Seattle, WA. KC-59
- DHCP p. 3-66 – The catch and release fishery on the Cedar River opened beginning in 2004, not 2005. KC-60
- DHCP p. 3-71 – True that Rock is considered to have episodic use relative to other areas of WRIA 8, but this section should include the full Tier 2 definition form the WRIA 8 Chinook habitat plan: Tier 2 areas include "episodic production areas that contain limited favorable habitat for Chinook salmon but which could be productive for this species in the future given an overall greater population abundance and protection of the higher watershed condition". The WRIA 8 Chinook habitat plan emphasizes that current Chinook use is not necessarily indicative of the conservation potential that exists in Rock Creek. KC-61
- DHCP, p. 3-72-74 – Conclusions about the merit of restoration or protection actions on Rock Creek based on comparisons of total habitat productivity (capacity plus quality) with the mainstem Cedar River are not defensible. The mainstem Cedar River is without question the main supporter of Chinook productivity in the Cedar River system, even when compared to all of the tributaries combined. Such a simplistic comparison, however, overlooks the important role the larger, more in tact tributaries like Rock Creek play in offering spawning and rearing habitat. Notwithstanding the growing sense that the EDT model would benefit from validation of its assumptions and "accounting" mechanisms, Rock Creek is the highest EDT-rated tributary of the Cedar for protection and restoration. The EDT analysis shows that Lower Rock Creek has the KC-62

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most potential for protection and restoration of any of the Cedar River tributary areas for Chinook and coho.

- DHCP p. 3-74, Discussion of Restoration Activities – This mixes funding sources with project proponents, leading to the impression that the King Conservation District (KCD) and Salmon Recovery Funding Board (SRFB) are sponsors of the projects. Most of the projects discussed are King County-sponsored projects, with funding provided by a number of sources including SRFB, KCD, Conservation Futures, King County CIP, and others. A summary of recent King County property acquisitions in the Rock Creek basin is attached (Attachment A), and restoration activities of varying scales are planned or possible in each of these areas. Please also note that assumptions about the implementation of habitat projects with KCD funds should reflect that the availability those funds is in question until a new agreement about their allocation is reached. KC-63

- DHCP p. 6-16 – Figure 6-5 shows information from May 2001 and July 2004 operations tests. The 2001 test is discussed in Appendix C, but (according to Appendix E) the 2004 test is reported only in a memo report (Reference 12) that is not included in the Draft HCP documentation. This also relates to the stream "perching" conditions and is supposed to demonstrate that curtailment of withdrawals is an inefficient methodology for restoring flows in Rock Creek. Although the data and analyses of the tests are not presented, it appears that the reduced and delayed depletion can be more easily explained by the lesser amount of stream- and groundwater flow available to refill the aquifer, rather than by a "perching" mechanism. KC-64

- DHCP section 3.1.3.1 indicates that all measured stream temperatures were [at or] below 16.0°C. Measurements taken between 1997 and 2001 were monthly spot measurements. While it is the case that over a much longer period of record monthly spot measure will more closely characterize variable water temperature conditions, 5 years of monthly data is not sufficient to determine the current conditions or evaluate potential effects of increasing water withdrawals within the limits of the City's existing right. While the authors note that stream temperature effects to the river are localized only, they also note that temperature measurements show an increase from an upstream gage (12118400) to a downstream gage (12118500). Given the fact riparian shade between those two locations is high, increasing stream temperatures supports the conclusion that groundwater does not reach the lower reaches of the stream during some or all of the summer and fall months. To better characterize conditions, it would be necessary to compare the 2004 observations to historical. Given the lack of long-term continuous water temperature observations, it would be valid to compare long term air temperatures to 2004. This would provide insight on 2004 water temperatures and how they may relate to historical conditions. KC-65

- Typical streams in Puget Sound Lowlands have relatively higher gradient and more energy such that dissolved oxygen (DO) is usually near saturation levels. Given that Rock Creek is a groundwater dominant system, DO levels in the hyporheic zone where redds are located may show levels of DO below what would be expected in the surface KC-66

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turbulence associated to stream flows. Measurements of DO should include measurements of taken in the gravels of the redds.

- A specific list of the constituents for which the City sampled, per section 3.1.3.5, should be provided. The Sampling and Analysis plan for that monitoring should be included as an appendix. The information provided should include the Lab's Method Detection Limits and Reporting Detection Limits for the various parameters, as well as any qualifiers on the data and other context for interpreting the information. KC-67

- Low flow analysis of stream gauge records was based on older data (1946 ~ 1973). As mentioned in the Draft HCP, USGS 12118500 was restarted in 2001. There are enough years and a few droughts since 2001 such that including those in the analysis would improve the characterization of current climatic trends and current water withdrawal/augmentation practices. KC-68

- Land cover estimates in the Draft HCP are over 10-years old. It would be prudent to update analyses with more recent available data. KC-69

- The Draft HCP stipulates that under "natural" conditions Chinook spawning occur during flows ranging from 7-12 cfs. Those conditions are not natural, i.e., pre-development. There multiple anthropogenic influences in the system which would be deviations from natural conditions. KC-70

5. **Other plans or projects that might be relevant to this proposed project.**

- The Puget Sound Chinook Recovery Plan, in particular the WRIA 8 Chinook habitat plan, the portions of the Puget Sound harvest plan related to WRIA 8 Chinook populations, and the Hatchery Genetic Management Plan elements covering the hatchery operations in WRIA 8 and surrounding WRIAs (from which strays into the Cedar River/Rock Creek systems could originate) offer key context for conservation efforts for local Chinook stocks and affording ESA coverage for incidental take of Chinook. KC-71

- The King County Regional Water Supply Plan, currently in development, is helping define the future demand for water and the alternative sources of supply that could be used to meet that demand. This Plan will help clarify the conditions that will influence actions of purveyors of potable and non-potable water to meet current and future demand and to manage and mitigate the effects of their actions. This Plan will also incorporate the most complete assessment of the probable effects of climate change on local scale water supply operations and instream flow conditions. KC-72

- The Lower Cedar River Basin Plan describes conditions in the Lower Cedar River and its major tributary basins and identifies a prioritized list of habitat protection and restoration measures intended to benefit native aquatic species including species for which the City of Kent is seeking coverage under the final HCP. KC-73

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6. <u>Minimization and mitigation efforts.</u>

- DHCP, p 3-33 By including the following statement
  "... seasonal (summer) declines in the static water level of the source aquifer level, which Kent believes may involve development impacts upon the local recharge area, exempt wells, and upland degradation of riparian habitat"

  the authors raise the specter of attributing the cause of low flows to actions by other agencies active in the basin. If there is fundamental interest or concern in understanding the potential for such impacts on the aquifer, as part of the HCP process the City of Kent should engage land use authorities and other purveyors in the basin to explore the issues and identify collaborative habitat conservation measures to reverse or reduce any on-going impacts to recharge. KC-74

- HCMs appear to be well thought out from a fish and habitat perspective; descriptions of fish use are accurate. KC-75

- The expected delay in implementing some of the proposed mitigation measures should be explained. KC-76

- The extent of actions required under the final HCP is governed by a standard that Kent minimize and mitigate "to the maximum extent practicable." NMFS should provide a definition of this standard, including identification of trigger points (e.g., % of water utility revenue? % of city budget? Impact on water rates?) that if reached would cause a minimization or mitigation measure to be not practicable. KC-77

- HCM-1 –
  - The proposal to move gage 12118400 would allow augmentation flows to be reduced even more than the quantity that is otherwise proposed to be supplied to Rock Creek. It demonstrates that losses from Rock Creek to groundwater reduce the effect of the flow augmentation and make this a less effective Conservation Measure than would appear at first impression. Note that the losses would still occur beyond the flume no matter where the water is added, so moving the augmentation discharge would be inconsequential. KC-78
  - Where is the assumed point of compliance for instream flows? There is not much documentation supporting the current proposed location. Kent originally placed the augmentation of flows some distance upstream of USGS gauge 12118400, between where the flows are added and the stream gauge flows were recharging back into the shallow groundwater. As a result, gauge flows were significantly less than expected given the augmentation. Their solution was to place the augmentation closer to the gauge. The location for where augmentation should be located should be based on where is it most needed and will best benefit the stream It is not clear how the priorities of flow augmentation compare to supplying consumptive use. What conditions would Kent cease augmenting flows? KC-79

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- The project description should also address the impacts of flow augmentation on upstream habitat conditions KC-80

- HCM-2 –
  - This is a good mitigation measure for the system. The stipulations on longevity and capital outlay (funds for maintenance equal to the cost of the original implantation for the duration of the 50-year HCP), however, are discouraging. The mitigation will be designed to withstand up to a 25-year flood. The assumed associated flow rate should be specified. Cursory statistical analysis shows this project has a greater than 50-percent chance of failure within 25 years, and a 34-percent chance of experiencing a 10-year (or greater) event in the next 25 years. Are the capital limitations adjusted for inflation? Given all these issues and the likelihood that some type of annual or triennium maintenance will be necessary, there is high probability that this mitigation will reach a failure point well short of the 50 year life of the HCP. KC-81
  - The City should include an analysis of upstream habitat availability and quality under the low flow scenario. That is, if passage is improved when Rock Creek flows are less than 4 cfs (and the Cedar River flow is below 200 cfs), will salmonids be stranded upstream, and is there sufficient habitat available at likely flow conditions for spawning and/or holding? KC-82
  - The weir should be checked more frequently than annually to ensure that passage is not obstructed and is functioning properly. Consider annual check augmented by inspections after rainfall events of a certain threshold. This suggestion is also relevant to MEM 4 in Chapter 5. KC-83
  - Given that construction of the weir would have impacts on land King County owns at the mouth of the creek, King County should be involved early in the design and permitting stages to help ensure smooth implementation of a project that meets mitigation obligations. KC-84
  - Who will maintain work done at Rock Creek outlet? KC-85

- HCM-3 –
  - Pre-project monitoring should include amphibian usage since some native species can not co-exist with fish. In addition, the presence of bull frogs should be determined because of their detrimental affect on juvenile salmon and native amphibians. If present, control and monitoring should be part of this action. KC-86
  - By using the term wetland complex, they are suggesting it is hydrological connected with another wetland. Information should be collected on the geomorphology of the wetland complex and the potential to maintain separation between the wetlands to provide greater habitat complexity. Edge complexity should be maintained if present or created if appropriate. KC-87
  - Scoping should evaluate whether connecting wetland to channel would negatively impact amphibian species. Ideally, fish and amphibians could use the habitat. Depending on what the wetland complex is or looks like and amphibian presence it may be possible to provide for both fish and amphibian usage by habitat enhancement beyond just stream connectivity etc. KC-88

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- The text suggests that existing pond habitat will be used, but then says LWD will be placed in the excavated pond. It's unclear whether the wetland is currently an excavated pond or will be excavated. If it is already excavated then this is not an issue. If it will be excavated, appropriate design guidelines should be used to ensure suitable structure and morphometry (depths, perimeter configuration, backwater areas, etc.) that optimize for salmon usage. KC-89

- HCM-4 -
  - Information is needed on the wetland's geomorphological classification to know whether this type of excavation would be altering the hydrology and potentially creating an atypical wetland (i.e. depressional when it is a riverine). In addition, soil porosity should be examined to determine whether the excavated wetland will hold water. If project is to move forward, wetland design should mimic naturally occurring wetlands in surrounding riverine corridors and avoid creating upland depressional wetlands that are unlikely to provide the habitat and species benefits sought. KC-90
  - Pre-project monitoring should include amphibian usage and whether bull frogs are present. If present, control and monitoring should be performed because of their detrimental affect on juvenile salmon and native amphibians. KC-91
  - By using the term wetland complex, they are suggesting it is hydrological connected with another wetland. Information should be collected on the geomorphology of the wetland complex and the potential to maintain separation between the wetlands to provide greater habitat complexity. Edge complexity should be maintained if present or created if appropriate. KC-92

- HCM-7 –
  - This section could be enhanced by including a discussion of how the City's rate structure supports conservation objectives, as well as documenting the impacts of existing conservation efforts and potential impacts of proposed measures. Also, evaluation of the relative effect of each of the proposed conservation actions on summer flows for salmon would be helpful in demonstrating that the conservation actions are prioritized and strategic. For example, faucet aerators may result in greater total reductions over a calendar year, but measures focused on irrigation and landscaping may have a greater impact on summer low flows. Also, just as the City has demonstrated connections between habitat restoration projects and regional WRIA priorities, there may be an opportunity here to realize efficiencies by linking water conservation actions to regional efforts such as the Saving Water Partnership. KC-93
  - How do the conservation measures Kent has estimated compare to other water purveyor estimates? Is there more room for improvement or are consumers tapped out of possible water saving measures? KC-94

- HCM-8 -
  - We appreciate the use of the WRIA 8 Chinook habitat plan priorities in identifying projects in this section. We would encourage the City of Kent to work with King KC-95

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County and the City of Seattle to ensure that acquisition funds are spent efficiently and build on existing landowner outreach efforts in this area.

- EIS scope should further elaborate on how the City of Kent is defining "an efficient and effective use of the specified funds." The project selection process and project criteria should be clearly defined. KC-96
- EIS scoping should expanded mitigation area to include restoration projects and acquisition lands along the Cedar River as well as upstream of survey reaches. Analysis should evaluate how their protection and or restoration could mitigate for groundwater withdrawal impacts. KC Greenprint Program has identified many parcels for acquisition that would protect the forestry and ecological values of these areas. In addition, some parcels are already protected through the Black Diamond agreement. KC-97
- Potential acquisitions identified by KC Greenprint Program were with Reaches 1 to 3. These lands are considered priorities because of their high ecological values and their connectivity with other protected lands. Approximately 19 parcels were identified totaling 29 acres. KC-98

- Other projects to consider as HCMs for during EIS analysis:
  - Bank stabilization and riparian plantings within Reach 8.
  - Channel stabilization and rehabilitation upstream (parcel #3622069134) of the City of Kent's Watershed and the identified reaches (currently WRIA 8 CIP ref#27).
  - Given the concerns reflected in the Draft HCP about the influence of other land use and other water withdrawal activities in the basin, it is advisable to include a HCM that calls for engaging the agencies in the basin with those authorities to understand potential impacts from those activities. Such an HCM could address topics like providing water supplies that promote recharge, exempt wells for irrigation and potable uses, and land uses that influence recharge of groundwater. KC-99

- Any type of vegetation mitigation documentation in the Draft HCP lacks specifications on survival rates and durations. Example: if 10-percent of the plantings die within a year(s) will Kent replace with live specimens again? How much money is allotted for this? KC-100

Attachment B
EIS Scoping Comments
City of Kent Clark Springs Habitat Conservation Plan
King County Property Acquisitions – Rock Creek Basin

KC Case PID	DNRP Plan Classification	Universal Name	Sub Name	Recording Num Orig	Recording Num	KCA PIN Orig	KCA PIN	Acres from GIS Calculated	In Date	IT Name	AQT Name	FS Name	Acquistion PID	Acres
3349	Ecological	Cemetery Reach Natural Area	Access Easement to Maple Ridge Highlands	20000912000815	20000912000815	3622069093	3622069093	0.055524579	9/12/2000	Easement	Donation	Donated or Dedicated	939	0.06
3350	Ecological	Cemetery Reach Natural Area	Access Easement to Maple Ridge Highlands	20000912000815	20000912000815	3622069094	3622069094	0.150967943	9/12/2000	Easement	Donation	Donated or Dedicated	939	0.15
1569	Ecological	Cemetery Reach Natural Area	McCann BLA SW Strip	20000912900014	20000912900014	3622069133	3622069133	17.99618828	9/12/2000	Owned in Fee			498	18.00
1568	Ecological	Cemetery Reach Natural Area	McCann BLA NE Strip	20000912900014	20000912900014	3622069134	3622069134	3.35901659	9/12/2000	Owned in Fee			498	3.36
1568	Ecological	Cemetery Reach Natural Area	McCann BLA NE Strip	20000912900014	20000912900014	3622069134	3622069134	3.990849966	9/12/2000	Owned in Fee			498	3.99
1568	Ecological	Cemetery Reach Natural Area	McCann BLA NE Strip	20000912900014	20000912900014	3622069134	3622069134	6.413760219	9/12/2000	Owned in Fee			498	6.41
2919	Ecological	Cemetery Reach Natural Area	Jack McCann Co	20020308002405	20020308002405	3622069127	3622069127	3.930719982	3/8/2002	Owned in Fee	Purchase	Open Space Non-bond, Conservation Futures	547	3.93
2920	Ecological	Cemetery Reach Natural Area	Jack McCann Co	20020308002405	20020308002405	3622069128	3622069128	3.013506486	3/8/2002	Owned in Fee	Purchase	Open Space Non-bond, Conservation Futures	547	3.01
2921	Ecological	Cemetery Reach Natural Area	Jack McCann Co	20020308002405	20020308002405	3622069130	3622069130	4.142976881	3/8/2002	Owned in Fee	Purchase	Open Space Non-bond, Conservation Futures	547	4.14
2951	Ecological	Cemetery Reach Natural Area	Jack McCann Co BLA L02L0021	20020419001697	20020419001697	3622069129	3622069129	3.020156267	4/19/2002	Owned in Fee	Purchase	Open Space Non-bond, Conservation Futures	437	3.02
3103	Ecological	Crow Marsh Natural Area	Protected Property	20021217001016	20021217001016	0621079003	0621079023	29.38838344	12/17/2002	Easement	Purchase	CFT	846	29.39
3102	Ecological	Crow Marsh Natural Area	Protected Property	20021217001016	20021217001016	0721079003	0721079049	67.86087847	12/17/2002	Easement	Purchase	CFT	846	67.86
3132	Ecological	Crow Marsh Natural Area	Lake 12	20030429000933	20030429000933	0721079008	0721079008	15.15654768	4/29/2003	Owned in Fee	Purchase	CFT, SRFB	873	15.16

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KC Case PID	DNRP Plan Classification	Universal Name	Sub Name	Recording Num Orig	Recording Num	KCA PIN Orig	KCA PIN	Acres from GIS Calculated	In Date	IT Name	AQT Name	FS Name	Acquistion PID	Acres
3134	Ecological	Crow Marsh Natural Area	Lake 12	20030429000933	20030429000933	0721079034	0721079034	0.566900274	4/29/2003	Owned in Fee	Purchase	CFT, SRFB	873	0.57
3133	Ecological	Crow Marsh Natural Area	Lake 12	20030429000933	20030429000933	0721079045	0721079045	5.200812203	4/29/2003	Owned in Fee	Purchase	CFT, SRFB	873	5.20
3076	Ecological	Ravensdale Retreat Natural Area	none	20021227001875	20021227001875	3122079005	3122079005	20.50079594	12/27/2002	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	838	20.50
3077	Ecological	Ravensdale Retreat Natural Area	none	20021227001875	20021227001875	3122079010	3122079010	20.90355204	12/27/2002	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	838	20.90
3077	Ecological	Ravensdale Retreat Natural Area	none	20021227001875	20021227001875	3122079010	3122079010	20.90355204	12/27/2002	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	838	20.90
3078	Ecological	Ravensdale Retreat Natural Area	none	20021227001875	20021227001875	3122079015	3122079015	20.69832897	12/27/2002	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	838	20.70
3079	Ecological	Ravensdale Retreat Natural Area	none	20021227001875	20021227001875	3122079020	3122079020	20.81394103	12/27/2002	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	838	20.81
3080	Ecological	Ravensdale Retreat Natural Area	none	20021227001875	20021227001875	3122079025	3122079025	21.19688126	12/27/2002	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	838	21.20
3135	Ecological	Ravensdale Retreat Natural Area	none	20030630005541	20030630005541	3122079030	3122079030	21.40522098	6/30/2003	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	874	21.41
3136	Ecological	Ravensdale Retreat Natural Area	none	20030630005541	20030630005541	3622069001	3622069137	3.026786252	6/30/2003	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	874	3.03
3137	Ecological	Ravensdale Retreat Natural Area	none	20030630005541	20030630005541	3622069063	3622069063	9.421100306	6/30/2003	Owned in Fee	Purchase	REET, SRFB, ESA, NFWF	874	9.42
924	Ecological	Rock Creek Natural Area	CEDAR RIVER GREENWAY	9501050399	9501050399	2322069021	2322069021	1.174884343	1/1/1995	Owned in Fee			659	1.17
924	Ecological	Rock Creek Natural Area	CEDAR RIVER GREENWAY	9501050399	9501050399	2322069021	2322069021	4.998029478	1/1/1995	Owned in Fee			659	5.00

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KC Case PID	DNRP Plan Classification	Universal Name	Sub Name	Recording Num Orig	Recording Num	KCA PIN Orig	KCA PIN	Acres from GIS Calculated	In Date	IT Name	AQT Name	FS Name	Acquistion PID	Acres
924	Ecological	Rock Creek Natural Area	CEDAR RIVER GREENWAY	9501050399	9501050399	2322069021	2322069021	50.76008014	1/1/1995	Owned in Fee			659	50.76
908	Ecological	Rock Creek Natural Area	WATERWAYS 2000-CEDAR RIVE	9503241294	9503241294	2222069018	2222069018	40.99844755	3/1/1995	Owned in Fee			663	41.00
908	Ecological	Rock Creek Natural Area	WATERWAYS 2000-CEDAR RIVE	9503241294	9503241294	2222069018	2222069018	0.125075308	3/1/1995	Owned in Fee			663	0.13
995	Ecological	Rock Creek Natural Area	CEDAR RIVER LEGACY	9606280761	9606280761	2622069001	2622069001	37.86628726	6/1/1996	Owned in Fee			715	37.87
910	Ecological	Rock Creek Natural Area	Malek	9608302189	9608302189	2222069036	2222069036	1.87695367	8/30/1996	Owned in Fee	Unknown	Unknown	718	1.88
905	Ecological	Rock Creek Natural Area	Tavenner - CEDAR RIVER LEGACY	9801201757	9801201757	2222069006	2222069006	1.428196671	1/1/1998	Owned in Fee	Unknown	Unknown	781	1.43
996	Ecological	Rock Creek Natural Area	Logg	9806021208	9806021208	2622069027	2622069027	3.963182214	6/1/1998	Owned in Fee	Purchase	Unknown	443	3.96

Clark Springs Water Supply Habitat Conservation Plan
Response to Comments

King County (KC)

KC-1
Comment noted.

KC-2
The proposed HCMs have not changed since the preliminary draft was distributed for comment in 2006. Reclaimed water is addressed in Subsection 2.5 of the EIS, Alternatives Considered but not Analyzed in Detail. The Services consider alternative water supplies, including reclaimed water, as part of the City's water system planning process and such efforts would occur with or without the HCP in effect.

KC-3
While the commenter may prefer the City to be more involved in fostering Chinook salmon recovery in Rock Creek, the best available scientific information supports the NMFS view that there is low to no potential of Chinook salmon having ever been established in Rock Creek. Therefore, the proposed HCP is commensurate with the City's role to generally support salmon recovery in the Cedar River and there is no biological need to add conservation measures to the HCP to foster Chinook salmon recovery. The City would continue to work within the WRIA 8 Salmon Recovery Council to protect City lands within Rock Creek that support watershed health for the Cedar River. The complete set of HCMs proposed by the City in the HCP is intended to benefit all salmonids that inhabit Rock Creek.

KC-4
The Climate Change Technical Committee for the regional water planning process identified climate change as a likely significant impact upon municipal water resources for snowpack-driven systems in the *Final Report of Climate Change Technical Committee, December 2007* (Regional Water Supply Planning Process). Clark Springs, however, is not dependent on snowpack. Furthermore, the Climate Change Technical Committee noted that current climate models are not consistent with anticipated impacts to precipitation in the Puget Sound Lowlands. Some models are showing a potential increase in summer precipitation.

KC-5
See response to KC-2.

KC-6
As a part of its water planning process, the City would continue to evaluate water sources in future water system plans. Subsection 2.5 of the EIS, Alternatives Considered but not Analyzed in Detail, and Appendix G of the HCP describe operational constraints.

KC-7
As noted in Subsection 2.2.3 of the EIS, Existing Water Conservation and Demand Management Programs, regardless of whether the HCP is approved, the City would continue the water conservation program aimed at increasing the efficiency of the utility and promoting efficient use of water. Demand and supply forecasting is done as part of the City's water system planning process.

KC-8
The augmentation program provided by the City in recent years is voluntary. Instream flow requirements are described in Subsection 3.2.4 of the HCP, Clark Springs Wells, and the augmentation infrastructure is described as voluntary in Subsection 3.2.5 of the HCP, Flow Augmentation System.

KC-9
The City is expected to continue to implement a water conservation program and to meet all requirements of state law whether or not the HCP is approved.

KC-10
The potential outcome of the *Burlingame v. Washington Department of Ecology* at this juncture is unknown. This is a legal issue at the state level. The proposed issuance of the ITPs is an action at the Federal level. Provided the City continues to operate as described in the HCP, this case would not have an impact on the issuance of the ITPs.

KC-11
Under the No-action Alternative, the City would be required to maintain streamflows in Rock Creek consistent with water rights as applicable and described in Subsection 3.2.4 of the HCP, Clark Springs Wells. The baseline does not include the augmentation program the City has voluntarily implemented the past several years.

KC-12
Under Section 10(a) (2) (B) of the ESA, the Services are required to determine that an applicant for an ITP would, "to the maximum extent practicable, minimize and mitigate the impacts of [the incidental] taking." Minimization and mitigation address only the impacts of incidental take on the covered species that would be authorized under Section 10, and not a percentage of the City's water revenues or budget. Prior to making individual determinations on whether to issue ITPs for the proposed HCP, the Services would analyze whether the Section 10 permit issuance criteria are met in their respective ESA findings documents. The permit issuance criteria analyses and determination are addressed in the ESA findings documents, and not in the NEPA review; therefore, the criteria are not defined in the NEPA glossary.

The Services regulations outlining factors to consider when addressing effects over the permit duration (50 CFR 17.32 and 222.22) were applied to this HCP review. These factors include the duration of the applicant's proposed activities and the anticipated positive and negative effects of these activities on covered species associated with the proposed ITP term. The Services also consider the extent of scientific and commercial data underlying the proposed HCP, the length of time necessary to implement and achieve the benefits of the HCP, the extent to which the HCP adequately addresses changed circumstances such as climate change, the extent to which the HCP incorporates adaptive management strategies (if necessary), the extent to which likely biological effects are minimized or mitigated, and the applicant's need for certainty in planning for the future. After considering these factors, the Services believe they have adequately assessed the potential impacts of implementing the proposed HCP.

In regard to cost discounting, there are no cost criteria for determining whether to issue an ITP. The Services base their permit-issuance decisions on the regulatory factors described above, which do not include economic analyses.

KC-13
As stated in Subsection 2.5 of the EIS, Alternatives Considered but not Analyzed in Detail, the five alternatives mentioned in the commenter's letter do not meet the purpose and need of the project. Additional rationale has been added to this section to more fully describe why the alternatives were considered but not fully analyzed.

KC-14
The City would continue to operate at Clark Springs consistent with its water rights.

KC-15
To consider scenarios as potential alternatives for full analysis, they must meet the purpose and need statement in Section 1.0 of the EIS, Purpose and Need for the Proposed Action.

KC-16
As discussed in Subsection 2.1.2.3 of the HCP, Changed Circumstances, the City would continue to update its Water System Plan as required by the DOH.

KC-17
See response to KC-3.

KC-18
See response to KC-3.

KC-19
As described in HCM-1, the City is committing to a flow augmentation program to benefit fish from October 1 to December 31, irrespective of rates of groundwater flow. Therefore, studying the rate of groundwater flow is not necessary.

KC-20
Based upon surface and groundwater hydrological modeling conducted for the HCP, the Services do not believe that Rock Creek flow can be accurately predicted based solely on short-term antecedent precipitation. The HCP uses antecedent precipitation as a metric for triggering flow targets and augmentation levels; it is not intended as a predictor of flow in Rock Creek. The HCP and EIS include an analysis somewhat analogous to that proposed in the comment. In the EIS this analysis is described in Subsection 4.6.1.2, Alternative B: Proposed Action. The Draft EIS included data from 1986 to 2004, and the Final EIS has been updated to include data from 2005 to 2009. The analysis does not predict flow, but it does estimate how often and what level of augmentation would have been needed to meet target flows under historical precipitation and flow conditions.

KC-21
Under Section 10 of the ESA, the applicant is required to develop an HCP that specifies the impacts of the taking, the steps the applicant would take to minimize and mitigate such impacts, the alternative actions to such taking the applicant considered, the reasons why such alternatives are not being utilized, and the other measures the Secretaries of Interior and Commerce may require as part of the plan. Although the Services provide technical assistance during the development of the HCP, the HCP is the applicant's document, and the applicant decides the content of the document, including how take is described and quantified. The completed conservation plan does not necessarily have to be the most biologically productive plan or provide the highest potential restoration for covered species.

However, for any HCP, the Services are required to analyze the effects of the action of issuing ITPs for any take that may occur as a result of implementing the HCMs on all listed species and designated critical habitat that may be affected by the proposed HCP, as well as all unlisted species requested for inclusion by the Section 10 applicant. This analysis is done after NEPA is completed and is independent of any analysis conducted by the applicant for inclusion in its HCP. The Services have the ultimate responsibility of determining the anticipated taking that would be expected under an HCP. The completed analyses of ESA take by the Services would be available to the public at the time of ITP issuance.

Regarding flow restoration in Rock Creek, the Services would consider the City's proposed action to maintain current levels of water supplementation in Rock Creek in their biological opinions. The Services would not analyze the flow restoration described by the commenter because that is not proposed by the City, and it does not meet the purpose and need for the proposed action.

KC-22
Subsection 6.1 of the HCP, Effects of Water Withdrawal and Habitat Conservation Measures on Hydrology, describes simple withdrawal curtailment as an inefficient method of managing streamflows during the low-flow periods because the streamflow response is too slow and is complicated by the perched stream condition during the low-flow condition. The augmentation proposal in the HCP is more predictable and provides more certainty to achieve streamflow targets identified in Subsection 4.1 of the HCP, HCM-1: Rock Creek Flow Augmentation.

KC-23
HCM-1 would commit the City to provide flow augmentation with a streamflow target of 2.75 cfs in dry years and 2.5 cfs in drought years which, in most instances, would be higher than under the No-action Alternative.

KC-24
See response to KC-21. The City is not obligated to provide water to Rock Creek that fully satisfies all life requisites for all covered fish species. Because assurance of optimum habitat productivity is not the aim of the HCP, there is no need to provide the rigorous validation of hydrologic analysis of Rock Creek flows sought by the commenter.

KC-25
The approved Puget Sound Chinook salmon recovery plan would inform the NMFS analyses of potential effects of the City's HCP as NMFS is considering its permit issuance decision. The NMFS findings document would incorporate relevant information about the approved recovery plan. Regarding the proposed ITP's connection to the recovery plan's adaptive management component and the planned 5-year review of the ESA listings for salmon and steelhead, it is not clear how or if there is any connection with the HCP. The latter two efforts are still being developed, and their broad scales may not match with the local scale of the HCP.

KC-26
Figure 3.2.1 of EIS, depicting current land cover in the Rock Creek Basin, has been updated. The impact to the hydrology of the Rock Creek Catchment from future development that includes new wells or other water withdrawals is expected to be minimal over the next 50-years due to the rural Comprehensive Plan designation, the current level of rural development, and the presence of highly permeable glacial outwash deposits. Increased runoff from future urbanization will be infiltrated into

the outwash deposit either by flow dispersion, infiltration facilities, or infiltration losses via the conveyance channels.

Increased withdrawals from the aquifer due to the construction of private (exempt) wells are also expected to be minimal over the next 50-years. This is due to the continued rural land use designated by the County Comprehensive Plan. Private wells are typically associated with rural residential development where a significant portion of the water is returned to the aquifer through recharge from on-site septic systems. Exempt domestic wells mostly consume a relatively small quantity of groundwater from the aquifer, estimated to be around 0.3 cfs, or around 1% of the estimated annual average water budget (30 cfs) for the upper Rock Creek catchment. Consequently, the amount of groundwater flow lost from the aquifer due to future wells is not expected to be significant.

KC-27
The City would continue a water conservation program regardless of the issuance of the ITP. Subsection 2.2 of the EIS, Background and Identification of Water Supply Alternatives, outlines water conservation efforts including unaccounted-for water, and Subsection 4.7 of the HCP, HCM-7: Water Conservation Program, identifies the City's continued commitment to water conservation. Given that end users ultimately use the water, the City cannot guarantee specific numbers for water conservation, but the City can guarantee continued water conservation programs to customers.

KC-28
Average monthly withdrawal levels during the baseline period (1986 to 1998) were based upon daily withdrawal data. Daily withdrawal rates are generally consistent with relatively low variability. For example, the average monthly standard deviation of withdrawal levels during the baseline period was 0.78 cfs, with a range from 0.15 to 3.16. Variability is generally higher during winter months, December through April, when flows in Rock Creek are also generally high. Given the relatively low variability in withdrawal levels over most of the year, the Services believe that average monthly withdrawal levels depicted in the HCP are a reasonable representation of withdrawals at Clark Springs, particularly during summer and fall. Withdrawal levels in more recent years are not substantially different from the baseline period. Analysis of HCM-1 described in Subsection 4.6.1.2 of the EIS utilized historical daily values of water withdrawals.

KC-29
As described in the HCP and the EIS, the City has a responsibility to provide commercial and domestic water supply within its service area. The City has proposed a maximum level of augmentation that would allow it to meet this responsibility.

KC-30
The Services believe there are no errors in the figure. The fact that pumping rates do not match changes in surface flow rates is depicted in the figure. As explained in the text associated with the figure, a cycle of 7.5 cfs withdrawals for 12 hours followed by no withdrawals for 12 hours results in only a 5.9 cfs increase in surface flows within Rock Creek at the end of the 12-hour period. The lag time between changes in water withdrawals using the infiltration system and changes in surface flow at Rock Creek is the reason the City has chosen to use augmentation rather than curtailment of withdrawals as mitigation.

KC-31
See responses to KC-2 and KC-5.

KC-32
The City, as a matter of its water system planning requirements, would continue to evaluate options for increased water supply and storage in its planning process. Subsection 2.5 of the EIS, Alternatives Considered but not Analyzed in Detail, has been updated. The lack of a storage facility, infrastructure to convey stormwater to such a facility, and the unreliability of stormwater referenced previously make this alternative both impracticable as well as unreliable.

KC-33
The Services believe the City already has a well-developed water conservation program.

KC-34
Subsection 3.2.6 of the HCP, Operational Constraints, describes why acquiring potable water from other sources of supply is not a feasible alternative. The reasons for why acquiring potable water from other sources of supply is not feasible are further described in Appendix G of the HCP, DRAFT – Rock Creek HCP – Operational Constraints White Paper.

KC-35
The habitat improvement measures would be considered effective if they meet the physical design criteria developed during implementation planning. Conservation measures addressing fish passage would be monitored to ensure that fish of all life-history stages can freely pass back and forth over the structure.

KC-36
Monitoring scheduled for MEM-3, MEM-4, and MEM-5 would occur no more than once per year, while monitoring for MEM-1 and MEM-2 would occur over a 3-to-4-month period. Design and construction of effective fish-passage structures in relatively small channels like Rock Creek are well understood and have a high likelihood of success. Consequently, production and review of monitoring results more than once per year would be unnecessary.

KC-37
Compliance monitoring of flows under MEM-1 is straightforward and the expected accurate flow reporting indicates that the suggested joint advisory group is not necessary.

KC-38
Compliance monitoring for flows would include late September. The potential effects of not augmenting flows in late September would be analyzed in the Services' biological opinions.

KC-39
It is acknowledged that the proposed approach for determining the water year type and streamflow target under HCM-1 may be skewed by a single precipitation event. However, that single event may not result in a measureable aquifer level or streamflow increase, but may result in increased streamflow targets and augmentation flows.

KC-40
Comment noted.

KC-41
The spawning surveys are not intended to provide a full picture of effects or estimate survival of the anadromous species utilizing Rock Creek for spawning. As described in Subsection 5.3.1 of the HCP,

Objective, the spawning surveys are intended to document salmon spawning utilization and to track broad population trends. The Services believe that spawning population and outmigrant monitoring conducted by WDFW, King County, and the Seattle Water Department in the Cedar River provide detailed trend and survival information for Cedar River salmon populations.

KC-42
The Services believe the level of effort required to separate the effects of habitat actions within Rock Creek from out-of-basin conditions and actions would be extremely high and not commensurate with the magnitude of the habitat measures to be implemented under the HCP. The City anticipates that spawning surveys to be conducted in Rock Creek would be coordinated with regional efforts to monitor Cedar River salmon populations.

KC-43
Flows are typically high and turbid during periods when steelhead migrate and spawn, generally resulting in information of poor quality. Passage to the upper Cedar River is currently monitored at Landsburg Dam and few steelhead have been observed. Consequently, the Services believe surveys for steelhead in Rock Creek would be unnecessary.

KC-44
Subsection 5.4 of the HCP, Monitoring and Evaluation Measure-4, has been revised to include visual inspection of HCM-2, when flows exceed 50 cfs at USGS Gage 12118400 (Kent-Kangley Road), to identify any needed maintenance to help ensure the fish-passage structure is sustained through the term of the HCP.

KC-45
One of the objectives of the spawning surveys (MEM-3) is to demonstrate spawner utilization upstream of passage improvements.

KC-46
MEM-5 in the HCP has been revised to include snorkeling of the mainstem of Rock Creek if no salmonids are observed in the wetlands improved under HCM-3 and HCM-4. Fish utilization of the Rock Creek mainstem, but no utilization of the wetlands, may be indicative of access problems and would be discussed with fish habitat managers, including the Services.

KC-47
MEM-5 would require that monitoring be conducted during the spring with all fish observed, identified, and counted.

KC-48
The Services are unaware of any "key uncertainties" that would substantially influence the outcome of the evaluation of the two alternatives. If the commenter has specific examples he or she could provide, such information could be incorporated into the Services' findings.

KC-49
Withdrawals by the City have always been consistent with water rights as identified in Subsection 3.2 of the HCP, Structural and Operational Setting.

KC-50
The Services agree there is a data gap about passage at culverts upstream of Clark Springs. Any passage improvements at upstream culverts (when water is present) would increase the benefits from HCMs implemented under the Clark Springs HCP. However, operations or facilities at Clark Springs have no effect on the capacity of upstream culverts to pass fish. Improving passage at upstream culverts, if identified, are potential projects that could be implemented under HCM-8 (Habitat Fund).

KC-51
Subsection 4.2.4 of the HCP, Hydrogeologic Conditions, of Appendix C, The Hydrogeology of Rock Creek, cites a study prepared by Robertson and Anderson in 1957 that describes glacial till recorded at shallow depths below the channel floor near the Clark Springs Water Supply System. This glacial till layer is further described in Subsection 3.1.4.3 of the HCP, Groundwater-Surface Water Interactions.

KC-52
The current understanding of groundwater flows described in the HCP is sufficient to support the HCP and analyses of potential effects on covered species.

KC-53
The concept and hydrogeologic effect of the "pinch point" in the Rock Creek channel is more than a hypothesis; it represents a direct inference from the geologic evidence presented in the EIS and supporting documents, which is supported by various hydrogeologic characteristics of the Rock Creek system:

- The "pinch point" is consistent with the presence of spring and seep discharges that form the headwaters of perennial lower Rock Creek in Reach 12 (HCP Figure 1-5).
- It is supported by older borings and exploration logs that show shallow depths to till and/or bedrock east of the Clark Springs Facility (Appendix C).
- Streamflow measurements upstream of the facility during testing in 2001 confirm very limited effects propagating upstream (see EIS page 4-13 and Figure 4.6-5).

Its broader hydraulic effects were confirmed through groundwater modeling, which inherently includes the application of groundwater flow equations that are modified to take account of variable site geology, bedrock geometry, and site-specific hydrology to form a quasi-three-dimensional representation of groundwater flow and discharge to surface water occurring through the pinch point.

KC-54
Seasonal flow in Rock Creek is controlled by a number of factors, in addition to the dominant role of seasonal variation in precipitation and recharge. This has been demonstrated through the HSPF modeling (HCP Appendix E), which includes such variables as development impacts upon the local recharge area, exempt wells, and upland degradation of riparian habitat in the development of hydrologic flow matching for the continuous simulation of Rock Creek hydrology (HCP Appendix E).

KC-55
Comment noted.

KC-56
Subsection 3.8 of the EIS, Fish and Aquatic Habitat, provides Chinook salmon escapement information for the Cedar River from 1964 to 2006 (Figure 3.8-2). The Chinook salmon, coho salmon, chum salmon, sockeye salmon, and steelhead spawner information for Rock Creek available from the WDFW is provided in Table 3.8-1. Additional spawner survey information available from Rock Creek after 2001 from a variety of other sources is also provided in Subsection 3.8 of the EIS, Fish and Aquatic Habitat.

KC-57
Habitat requirements for pre-spawning migrants are discussed in Subsection 6.2.1 of the HCP, Chinook Upstream Migration. In addition, NMFS has developed a better understanding of potential use by Chinook salmon in Rock Creek. The best available scientific information is that "habitat for Chinook salmon is not present within Rock Creek, nor would it be present in the absence of withdrawals at Clark Springs." The Services believe that Chinook salmon habitats occur solely in the Cedar River.

KC-58
See response to KC-57. Rock Creek does contribute to the populations of other salmonids in the Cedar River basin.

KC-59
This comment was pertinent to the Preliminary Draft HCP released to stakeholders in May 2006. The citation was corrected in the February 2010 Draft HCP.

KC-60
This comment was pertinent to the Preliminary Draft HCP released to stakeholders in May 2006. The citation was corrected in the February 2010 Draft HCP.

KC-61
See response to KC-58.

KC-62
See response to KC-58. EDT is only useful for relative comparisons and has not been validated for assessing absolute salmon productivity. The Services believe the Clark Springs HCP makes a substantial contribution toward achieving the goals and objectives of the WRIA 8 Chinook Salmon Conservation Plan.

KC-63
This comment was pertinent to the Preliminary Draft HCP released to stakeholders in May 2006. Subsection 3.4.4 of the HCP, Restoration Activities (parties other than the City of Kent), was revised to address this comment and clearly states that there are three funding sources and that King County is a major proponent (sponsor) of projects in the basin.

KC-64
See response to KC-52.

KC-65
The Services agree that during the late summer and fall surface water flow derived from Clark Springs may not be substantially supplemented by other groundwater seeps downstream of Clark Springs and that water generally warms as it flows toward the mouth of the creek. Regardless of whether 2004 was

warmer, cooler, or similar to historical conditions, flow augmentation under HCM-1 is expected to benefit water temperatures relative to baseline conditions when augmentation occurs.

KC-66
The Services disagree that measurement of dissolved oxygen in the gravels of redds would be helpful in determining the effects of the Clark Springs HCP upon covered species. Water flow through redds can derive from groundwater upwelling or down-welling from surface waters. The available information suggests the Clark Springs Facility has no effect on dissolved oxygen levels in groundwater and little to no effect on surface water dissolved oxygen levels in Rock Creek, especially during spawning periods when water temperatures are relatively cool and flows relatively high compared to the summer period. Consequently, measurement of dissolved oxygen in gravels of redds would not contribute any additional pertinent information.

KC-67
Subsection 3.1.3.5 of the HCP, Metals and Toxics, identifies a list of parameters monitored.

KC-68
Analysis of flow records from USGS gage 12118500 from May 2001 through September 2010 indicate the mean annual 7-day low flow for the period was 1.6 cfs (median 1.5 cfs), which is similar to the statistics reported in Subsection 3.1.4.1 of the HCP, Surface Water. The HCP would be updated to reflect the addition of these flow records.

KC-69
Figure 3.2.1 of EIS, depicting current land cover in the Rock Creek Basin, has been updated. The impact to the hydrology of the Rock Creek Catchment from future development that includes new wells or other water withdrawals is expected to be minimal over the next 50-years due to the rural Comprehensive Plan designation, the current level of rural development, and the presence of highly permeable glacial outwash deposits. Increased runoff from future urbanization will be infiltrated into the outwash deposit either by flow dispersion, infiltration facilities, or infiltration losses via the conveyance channels.

Increased withdrawals from the aquifer due to the construction of private (exempt) wells are also expected to be minimal over the next 50-years. This is due to the continued rural land use designated by the County Comprehensive Plan. Private wells are typically associated with rural residential development where a significant portion of the water is returned to the aquifer through recharge from on-site septic systems. Exempt domestic wells mostly consume a relatively small quantity of groundwater from the aquifer, estimated to be around 0.3 cfs, or around 1% of the estimated annual average water budget (30 cfs) for the upper Rock Creek catchment. Consequently, the amount of groundwater flow lost from the aquifer due to future wells is not expected to be significant.

KC-70
This comment was pertinent to the Preliminary Draft HCP released to stakeholders in May 2006. The Draft HCP was revised to address this comment.

KC-71
NMFS agrees that the Puget Sound Chinook salmon plans mentioned by the commenter provide context for analyses of ESA take and conservation efforts in WRIA 8. In addition to those plans, NMFS would also use relevant biological information from other sources. See also response to KC-58.

KC-72
The Climate Change Technical Committee for the regional water planning process identified climate change as a likely significant impact upon municipal water resources for snowpack-driven systems in the *Final Report of Climate Change Technical Committee, December 2007* (Regional Water Supply Planning Process). Clark Springs, however, is not dependent on snowpack. Furthermore, the Climate Change Technical Committee noted that current climate models are not consistent with anticipated impacts to precipitation in the Puget Sound Lowlands. Some models are showing a potential increase in summer precipitation. As a part of Water System Planning, water purveyors are required to predict future demands and analyze supplies to meet those demands.

KC-73
Comment noted.

KC-74
The City does not have regulatory control over land use outside the Clark Springs Facility. Activities beyond those conducted by the City are not a part of this HCP and thus any mitigation needed for those activities are not the responsibility of the City. The City provides comments on land use proposals within the Rock Creek Watershed and is willing to work collaboratively outside the parameters of the HCP with any interested party to address impacts to the Rock Creek aquifer. Stakeholders may provide ideas for habitat mitigation projects specific to HCM-8 for consideration by the Services.

KC-75
Comment noted.

KC-76
Some of the HCMs in the HCP are scheduled to accommodate coordination with a number of local, state, and Federal permitting agencies in addition to working with utilities and landowners. This requires coordination with all permitting agencies. Design, permitting, and funding of the HCMs would not commence until the HCP has been approved and the ITPs have been issued by the Services.

KC-77
Under Section 10(a) (2) (B) of the ESA, the Services are required to determine that an applicant for an ITP would, "to the maximum extent practicable, minimize and mitigate the impacts of [the incidental] taking." Minimization and mitigation address only the impacts of incidental take on the covered species that would be authorized under Section 10, and not a percentage of the City's water revenues or budget. Prior to making individual determinations on whether to issue ITPs for the proposed HCP, the Services would analyze whether the Section 10 permit issuance criteria are met in their respective ESA findings documents. The permit issuance criteria analyses and determination are addressed in the ESA findings documents, and not in the NEPA review.

KC-78
Movement of the augmentation location approximately 540 feet downstream would reduce the amount of augmentation water lost to groundwater and reduce the risk that flow targets could not be met. The City agrees that some amount of flow could be lost downstream of USGS gage 12118400, but such losses are anticipated to be much less than would occur near the Clark Springs Facility. The Services believe that moving the augmentation location is important for meeting the objectives of HCM-1.

KC-79
USGS gage 12118400 is the compliance point for HCM-1.

KC-80
HCM-1 is not expected to affect upstream habitat conditions because the facility has a rapidly declining effect on upstream surface flows. Operation tests and well measurements approximately 500 feet upstream of the facility suggested Clark Springs operations have insignificant effect on upstream flows beyond a relatively short distance (i.e., less than 1,000 feet) from the facility. Furthermore, augmentation will effectively decrease the amount of water available for water supply, but is not anticipated to substantially affect the total amount of groundwater withdrawn.

KC-81
The City would maintain HCM-2 and would commit to reconstruction if the structure were destroyed over the course of the 50-year permit. The initial project would be designed to withstand a 100-year event.

KC-82
The proposed analysis in the comment does not have any merit. Fish that can ascend the creek during a low-flow period should be able to descend as well, particularly because of flow targets under HCM-1. The HCP and EIS include an analysis of habitat availability at flows of 3.0 cfs, which is the target flow under a normal precipitation year-type condition.

KC-83
Subsection 5.4 of the HCP, Monitoring and Evaluation Measure MEM-4, has been revised to include visual inspection of HCM-2 when flows exceed 50 cfs at USGS Gage 12118400 (Kent-Kangley Road) to identify any needed maintenance to help ensure the fish-passage structure is sustained through the term of the HCP. The City would maintain HCM-2 and would commit to reconstruction if the structure were destroyed over the course of the 50-year permit. The initial project would be designed to withstand a 100-year event. The proposed project would not impact the HCM once constructed.

KC-84
The City intends to contact King County early in the process to implement HCM-2.

KC-85
The City intends to provide maintenance for HCM-2, HCM-3, and HCM-4 over the life of the HCP.

KC-86
Comment noted.

KC-87
This comment was pertinent to the Preliminary Draft HCP released to stakeholders in May 2006. The term "wetland complex" is no longer used in the HCP or the EIS.

KC-88
Comment noted.

KC-89
The HCP includes conceptual plans. Additional planning and design would occur during implementation of the HCP. Because HCM-3 would occur on King County land and would also require permitting from King County, it is anticipated that significant cooperation between the City and

King County would be needed during future design and permitting phases to implement the conservation measure.

KC-90
The HCP includes conceptual plans. Additional planning and design would occur during implementation of the HCP. Because HCM-4 would occur on King County land and would also require permitting from King County, it is anticipated that significant cooperation between the City and King County would be needed during future design and permitting phases to implement the conservation measure.

KC-91
See response to KC-90.

KC-92
This comment was pertinent to the Preliminary Draft HCP released to stakeholders in May 2006. The term "wetland complex" is no longer used in the HCP.

KC-93
Comment noted.

KC-94
Identifying water conservation estimates in terms of volume is difficult at best. The City is a partner to the TSSP, DOH, and Ecology, MOA, which committed the City to reduce water use. The City has met its obligation under the MOA and will continue its water conservation program. The City's water conservation program is described in Subsections 2.2.3.1 of the EIS, City of Kent Water Conservation Program, and 2.2.3.2, Conservation Potential Assessment. The City has reduced unaccounted-for water from 12.89 percent in 1993 to 1.99 percent in 2009. While the City has had success in encouraging customers to conserve water, the City will continue to implement a water conservation program regardless of issuance of the ITPs.

KC-95
Comment noted.

KC-96
It is the intent of the Services to work with any interested stakeholders to identify potential habitat projects or land acquisitions in the Rock Creek basin that could be funded through HCM-8. In addition, if it is determined that projects identified in other HCMs are not feasible the City would make the allocated funds available for other projects aimed at improving habitat in the Rock Creek basin.

KC-97
The Services believe projects located in the Rock Creek Watershed should have priority for implementation under HCM-8, but have not excluded the possibility of implementing projects outside of the watershed.

KC-98
The Services are open to considering acquisitions identified in the King County Greenprint Program as part of HCM-8.

KC-99
The Services are open to considering these and other projects as part of HCM-8.

KC-100
The Services agree that survival rates for vegetation mitigation would be needed during implementation of the HCMs. These survival rates would be determined as part of the design and permitting phases of implementation.

MUCKLESHOOT INDIAN TRIBE
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July 6, 2010

Ms. Robyn Thorson, Regional Director
U.S. Fish and Wildlife Service
911 NE 11th Avenue
Portland, OR 97232

Mr. Will Stelle, Regional Administrator
National Marine Fisheries Service
7600 Sand Point Way NE
Seattle, WA 98115-0070

RE: City of Kent Clark Springs Water Supply System Draft Habitat Conservation Plan (HCP)

Dear Ms. Thorson and Mr. Stelle:

Thank you for the opportunity to comment on the proposed HCP for the Clark Springs Water System. This water system affects Muckleshoot Tribal fisheries resources in Rock Creek, a tributary to the Cedar River. Rock Creek provides relatively high quality habitat for sockeye, coho, and Chinook salmon, and steelhead and resident trout, and contributes cold water that provides increasingly important thermal refuge for Chinook and other salmon at its Cedar River confluence during summer and early fall.

We recognize the important role that Clark Springs serves in providing municipal water supply for the City of Kent, yet the City's Clark Springs operations continue to affect the abundance of treaty fisheries resources of the Tribe. Comments provided in this letter address the proposed HCP and are not intended to address any potential past or future damages to the Tribe from lost fish production as a result of the City's water supply operations at Clark Springs. The City's water withdrawal significantly reduces instream habitat available to salmonids in Rock Creek. The City withdraws 6.2 cfs on a mean monthly basis. During the peak Chinook and sockeye spawning period in the Cedar River, median Rock Creek stream flows are approximately 5 cfs, but can recede to 2 cfs or less in dry years. Without the City's withdrawals, summer-fall stream flows in Rock Creek would often be more than double the existing flows. Since 1998, the City voluntarily has augmented flows by pumping 1 cfs of aerated groundwater into the creek when needed to maintain 2 cfs or more in the creek.

While we believe that the HCP draft and Appendices could be revised to reflect more recent or additional information, the following comments focus primarily on the proposed draft Habitat

Conservation Measures (HCMs) and Monitoring and Evaluation Measures (MEMs).

Habitat Conservation Measures (HCMs)

Habitat Conservation Measure 1 – Rock Creek Flow Augmentation

The draft HCP states that future withdrawals from Clark Springs under the HCP are expected to be similar to those during the 1986-1997 baseline period, given hydrogeology and other constraints. Therefore, the City's withdrawals are expected to continue to average about 6.2 cfs between June and December each year, while withdrawals at other times may increase up to 12 cfs as allowed by the City's water rights. In this HCM, the City proposes to augment Rock Creek flows by a maximum of 1.5 to 2.5 cfs to meet an instream flow target rate of 2.5 to 3.5 cfs during the months of October through December. Selection of the flow target and augmentation rate would be based on the 2-month antecedent precipitation at Landsburg. The flow target would be measured at USGS gage 12118400 near Clark Springs. PHABSIM modeling information in the HCP suggest that the proposed flow targets provide only a fraction of the usable habitat area that is provided at higher flows, including those likely to occur in the absence of the City's withdrawals. Further, given that these are target flows, the HCM would not provide a guaranteed minimum instream flow for Rock Creek. In effect, the proposed HCM would essentially continue the City's current augmentation and withdrawal practices during summer and fall, resulting in streamflow conditions that are similar to those of the past 12 years if weather and basin land/water use conditions were the same.

We recommend that the final HCP clarify the technical basis in selection of the target flows, including a comparison of potential fry and smolt production with different levels of flow restoration, and provide an analysis of how climate and basin land use may affect Rock Creek base flows and success in meeting the target flows over the 50 year term of the HCP.

MIT-1

September is a biologically important period for spawning, migration and juvenile rearing for a number of the covered species. We strongly recommend that the City's augmentation begin in mid September instead of October 1. Peak Chinook redd counts in the Cedar River occur in late September to mid October, with appreciable Chinook migration beginning early September. Nearly a third to one half of the Chinook redds in the Cedar River were observed by October 2 in recent years (see *e.g.* Burton, K. et al. 2009. Cedar River Chinook Salmon (*O.tshawytscha*) Redd and Carcass Surveys: Annual Report 2008). Flow augmentation in September would improve conditions for adult Chinook and sockeye migrants into Rock Creek that may utilize the proposed low flow passage improvements at the creek mouth (HCM-2), and would incrementally increase thermal refuge for Chinook within the Cedar River. Coho salmon and sockeye migration also begin in September, as does sockeye spawning. The lowest annual streamflow frequently occurs in September, limiting available rearing habitat for steelhead, coho, and resident trout juveniles. Numerous smolt trapping and other studies have reported increased coho and steelhead smolt production as a result of higher

summer-fall streamflows.

We believe that this HCM, as currently proposed, does not sufficiently mitigate extreme low summer-fall conditions in Rock Creek that are exacerbated or caused by the City's water withdrawals. We believe that, at a minimum, this HCM should be modified to address low flow conditions during the biologically important month of September for the covered species, and insure a guaranteed minimum instream flow for Rock Creek for the annual low flow period. MIT-2

The draft HCP reports the City believes that development and exempt wells may have contributed to declines in aquifer levels at the Clark Springs facility. We agree, and believe that these factors impact the base flows of Rock Creek as well. We encourage the City to take actions to protect aquifer recharge to the maximum extent possible, and to explore options to limit the proliferation of exempt wells in the Rock Creek basin to protect both water supply and fish resources. For example, the Covington Water District and the Cedar River Water and Sewer District (or King County) may be willing to require that any new homes located within water district service area boundaries are served by a water district rather than drilling an exempt well. The Covington Water District has sponsored a bill to limit exempt well drilling inside existing municipal water service area boundaries in the last two legislative sessions, an effort which the Tribe has supported. We encourage the City of Kent to actively support this or similar efforts. MIT-3

The most recent available land cover study by King County indicates that Rock Creek basin is at the threshold of imperviousness at which negative effects on hydrologic regime and biological integrity are observed. We recommend that, if it is not already doing so, the City monitor land use proposals in the Rock Creek basin to promote low impact development practices and to seek permit provisions to avoid/minimize/mitigate development effects on wetlands, stream channels, aquifer levels and flow regime. The final HCP should clarify what steps the City is committed to taking regarding land use and exempt wells in the creek basin to insure the long-term effectiveness of the proposed conservation measures. MIT-4

HCM-2 Passage Improvement at Mouth of Rock Creek -Reach 1

This HCM proposes to complete permitting, design and construction of a project to improve upstream fish passage into the creek at low flows using boulders or wood. We recognize that the mouth of Rock Creek is perched and may pose a low-flow impediment to fish passage, and that if so, the impediment should be addressed. However, we recommend that the project design for this HCM be carefully reviewed and consider alternative design approaches that benefit from experience with similar projects in other river systems. We have concerns about using the rock weirs shown in the draft HCP as a potential design for this project. MIT-5

It is highly likely that the perched channel is an artifact of local incision of the main stem Cedar River due to the reduced supply of instream wood. Therefore, an alternative to placing a series of structures

in Rock Creek is to build the bed elevation of the Cedar River. This could be accomplished by one or more engineered log jams (ELJs) placed in the Cedar River immediately downstream of the confluence with Rock Creek. Placing wood in a channel lacking roughness can retain sediment and elevate the streambed (Cederholm et al. 1997). This may better provide a long-term solution to facilitate juvenile and adult fish access into Rock Creek under all flow conditions. A short-term solution, and one with less certainty, is to construct steps into the channel of Rock Creek. This is best achieved using spanning logs that form weir-like structures that spill water vertically. Flows could be concentrated to the center of the log with a broad v-notch (e.g. 5:1) to maintain attractive and navigable flows for fish. This dissipates stream energy, often creates a pool on the downstream side, and enables juvenile fish to pass by leaping over the step from the pool below. As noted in Bates et al. (2003), the resulting vertical drop of the step should be no more than 0.8 ft to provide fish passage at all life stages. Wood weirs are preferred over rock ones because wood will continue to provide habitat benefits even if deformed by high flows or other means of reconfiguration. Rock weirs often deform into configurations that pass flows horizontally through constrictions between the rock, which can pose difficult water velocities for fish to pass upstream. In contrast, wood structures are better able to maintain flows over them, dissipating stream energy into a plunge pool and hence creating more passable conditions. In review of the proposed rock weir structures (Morello et al. 2010), the low-flow slot will constrict flows and will accelerate water velocities horizontally, which is typically more difficult for juvenile salmonids to pass upstream than a short, vertical drop. Further, there would be less of a tendency for a pool to form on the downstream side of each weir, and these structures are likely to deform as described above during a high flow, and cease to function in a favorable manner. MIT-6

Concerning the proposed $55,000 budget estimate to complete the project, we note that this is an estimate and should not be considered a cap on expenditures to accomplish the project purpose. MIT-7

HCM-3 Wetland Improvement and Juvenile Salmonid Enhancement - Reach 1

This project is intended to create or restore a surface water connection to a 0.3 acre wetland for off-channel rearing and flood refuge for juvenile salmonids. While this project may be very beneficial, too little detail is provided in the draft HCP which states that project details are to be worked out with King County within 5 years after an Incidental Take Permit (ITP) is issued. A more detailed description should be included in the final HCP for this project. For example, was this wetland historically connected to the creek or to the Cedar River? Why is it disconnected now? Is this a different wetland site (wetland 79) where the County completed a restoration project several years ago to create a connected wetland to the Cedar River? MIT-8
(http://www.kingcounty.gov/environment/animalsAndPlants/restoration-projects/wetland-79.aspx). If this wetland is the same, the final HCP should discuss any implications for this Cedar River basin plan project and any mitigation associated with this past work.

HCM-4 Wetland Improvement and Juvenile Salmonid Habitat Enhancement Reach 2

This HCM proposes to modify an existing wetland or pond site by excavating organic material, creating an island with vegetation to increase shade levels, and placing LWD in the excavated pond in order to provide improved off-channel habitat totaling 0.25 acres for juvenile salmonids. The draft HCP does not provide sufficient detail about the project or the location. The parcel number given for the site did not appear to be correct, so we are unable to assess the HCM with confidence. MIT-9

HCM-5. Summit-Landsburg Road Culvert Replacement (Reach 8/9)

This HCM proposes to replace a culvert at the Summit-Landsburg Road crossing within 10 years of ITP issuance. We request that this HCM be modified with language to insure that the new culvert or stream crossing design will actually facilitate passage of both juveniles and adults, as just meeting the WDFW criteria (e.g. WAC 220-110-070) often will not fully achieve this goal. This problem was discussed at length in the recent legal proceedings involving culverts on state lands. For example, a drop of 9.6 inches can be too high for juveniles, depending on whether the jump pool below it is adequately deep. We recommend instead that the HCM specify that the culvert be replaced with a "stream simulation culvert" (WDFW 2003), a bridge, or otherwise state that the design will be selected so that it is highly certain to provide long-term access for juvenile fish at a wide range of flows. MIT-10

HCM-6. Large Woody Debris Placement – Reach 10 and 12

This HCM proposes that the City will sponsor and fund a project to increase habitat quantity and quality in upper Rock Creek by selective placement of up to 12 pieces of LWD. Specifically, this project is intended to increase the scour of fine sediments to create pools and improve spawning habitat in two areas of Reach 10 and 12 where field surveys have indicated relatively uniform conditions and high levels of fine sediments. Otherwise, these reaches have abundant LWD according to the surveys. While the HCM would appear to have benefits, the draft HCP does not include enough information to fully assess this HCM. The final HCP should include enough detail and information for us to assess the potential for increased natural wood recruitment on the placed wood after this HCM is constructed, and to what degree the City's water system infrastructure, roads, and maintenance activities impose limits on natural wood recruitment in the upper reaches of Rock Creek. We further note that wood could be added throughout lower Rock Creek. Although it is not as depleted in wood as most streams in King County, it is still lacking in comparison to reference streams of the same width (Fox and Bolton, 2007). MIT-11

HCM-7. Water Conservation Program

This HCM addresses continuation of the City's existing water conservation programs and practices that typically exceed state requirements. We note that the City's water demand levels affect not only

their Clark Springs source but also their supplies from the Green and Cedar river sources as well. We support this HCM and encourage the City to maximize its efforts to reduce peak water demands, promote increased drought tolerant landscaping practices, and to make full use of metering and meaningful price signals in rate design to control growth in water demand. MIT-12

HCM-8. Riparian Acquisition, Easement, and Enhancement Fund in Rock Creek Watershed

In this HCM, the City would establish a $1.6 M Habitat Fund for various types of projects including land acquisition, conservation easements, and water rights purchases aimed at protecting water quality and habitat integrity. The USFWS and NMFS would make the final determination on projects and fund expenditures. We request that the Services consult with the Tribe to obtain input before final determinations on project selection are made. MIT-13

Monitoring and Evaluation Measures (MEMs)

MEM-1. Rock Creek and Augmentation Flow Monitoring

In addition to the proposed measures, we recommend continued funding for the USGS gage 12118500 downstream in Rock Creek. MIT-14 During some dry periods, this gage has recorded lower flows than the upstream compliance gage. Monitoring at both sites will provide a better understanding of the flow regime and instream habitat conditions in Rock Creek. The City may want to consider the addition of monitoring wells to more fully evaluate the ground water and surface water interactions in the vicinity of the Clark Springs Facility and the success of the augmentation flow program. MIT-15

MEM-2. Precipitation Data at Landsburg

This MEM is intended to provide data to support seasonal water year classifications in the City's flow augmentation proposal. We recommend that the City continue to use the Landsburg gage along with the local USGS gage, or install additional gage(s) in the basin to obtain increased accuracy of precipitation amounts and patterns within the basin contributing to Rock Creek flows. MIT-16

MEM-3. Spawning Surveys

In this MEM, the City proposes to conduct weekly spawning surveys for salmon and trout from September 21 through Feb 30 within selected index reaches every 4th year to help document fish utilization before and after project construction, and to assess overall population trends in Rock Creek. The final HCP should clarify that the surveys begin September 21, as the MEM currently specifies both October 1 and September 1 as starting dates. MIT-17

The HCP should include an MEM that addresses pre- and post construction fish use monitoring for the instream habitat enhancement construction for a reasonable time frame (5 years post construction) or over the life of the ITP, as appropriate. This would include monitoring of juvenile fish passage effectiveness in HCM-1, and juvenile use of the off channel wetlands. MIT-18

We request that the Services provide the Muckleshoot Indian Tribe Fisheries Division with electronic or paper copies of all compliance and monitoring reports as a matter of routine. MIT-19

Thank you for your consideration of our comments and requests. We look forward to reviewing the final HCP for Clark Springs Water Supply System. If you have any questions or would like to discuss these comments, please call Holly Coccoli, Fisheries Biologist, at 253-876-3360.

Sincerely,

Glen St Amant
Habitat Program Manager

Cc: John Stadler, NMFS
Tim Romanski, USFWS
Kelly Peterson, City of Kent Public Works

References:

Bates, K, Barnard, B., Heiner, B., Klavas, J.P., Powers, P. 2003. Design of road culverts for fish passage. Washington Department of Fish and Wildlife, Olympia, Washington.

Cederholm, C. J., L. G. Dominguez, and T. W. Bumstead. 1997. Rehabilitating Stream Channels and Fish Habitat Using Large Woody Debris. pp 8-1 to 8-28 In Slaney, P. A. and D. Zaldokas (editors). Fish Habitat Procedures. Watershed Restoration Technical Circular No. 9. British Columbia Watershed Restoration Program. Vancouver, British Columbia.

Fox, Martin and Susan Bolton. 2007. A Regional and Geomorphic Reference for Quantities and Volumes of Instream Wood in Unmanaged Forested Basins of Washington State. North American Journal of Fisheries Management 27:342–359

Morello, C., A. Olson, and D. Reiser. 2010. City of Kent- Clark Springs water supply system draft habitat conservation plan. Vol. 2 of 2. R2 Resources.

Clark Springs Water Supply Habitat Conservation Plan
Response to Comments

Muckleshoot Indian Tribe (MIT)

MIT-1
The mitigation identified in the HCP must meet the purpose and need as described in Section 1.0 of the EIS, Purpose and Need for the Proposed Action. Implementation of the HCP, including the HCMs, would improve flow conditions during the spawning periods for fall spawning species. As described in Subsection 4.8 of the EIS, Fish and Aquatic Habitat, Chapter 6 of the HCP, Effects of City of Kent Water Withdrawal and Conservation Measures, and Appendix F of the HCP, PHABSIM/HSPF Linked Operations Analysis Tool, modeling suggested that for most covered species and life stages higher flows equate to greater amounts of habitat, even beyond the flows normally observed in the stream during the period proposed for augmentation. Target flows were based upon the levels the City could achieve through augmentation while meeting its need for supplying water in the service area. The Services believe the PHABSIM modeling conducted during preparation of the HCP provides an adequate metric for discerning the benefits of HCM-1 to covered species. Development of fry and smolt production estimates are unlikely to substantially change the overall conclusions regarding these benefits. The Climate Change Technical Committee for the regional water planning process identified climate change as a likely significant impact upon municipal water resources for snowpack-driven systems in the *Final Report of Climate Change Technical Committee, December 2007* (Regional Water Supply Planning Process). Clark Springs, however, is not dependent on snowpack. Furthermore, the Climate Change Technical Committee noted that current climate models are not consistent with anticipated impacts to precipitation in the Puget Sound Lowlands. Some models are showing a potential increase in summer precipitation.

MIT-2
While there are general biological benefits to starting flow augmentation in September, it is not necessary for temperature control because Rock Creek naturally maintains cool waters during summer and autumn. Sockeye-spawning capacity may be slightly improved by starting flow augmentation earlier than October 1, but that species is not limited by spawning capacity in the Cedar River, including Rock Creek. Other covered species of fish migrate or spawn in different seasons and would not necessarily benefit from earlier flow augmentation.

MIT-3
The City has a Wellhead Protection Program and desires aquifer recharge to the maximum extent practicable. The City does not have regulatory authority over installation of exempt wells in the Rock Creek Watershed. However, the City is following exempt well issues throughout the region and supports reduced exempt wells in the Rock Creek Watershed.

MIT-4
Comment noted.

MIT-5
Comment noted.

MIT-6
Under the HCP, the City is committed to modifying the mouth of Rock Creek where it enters the Cedar River to improve fish passage (HCM-2). Passage improvements would consist of channel reconfiguration to concentrate flows using boulders and/or LWD.

MIT-7
The City is committed to designing and implementing all the HCMs in the final HCP. If additional data collection or access issues deems this project not feasible or not beneficial to species covered by the ITPs, the City would make these funds available to other projects in the basin aimed at improving habitat in the Rock Creek Watershed.

MIT-8
This HCM is currently conceptual and would require additional data collection to determine the feasibility of the project. It is unknown if the wetland previously connected to Rock Creek, or how past geomorphic/anthropogenic process(es) formed it. However, if additional data collection or access issues deems this project not feasible or not beneficial to species covered by the ITPs, the City would make funds identified in Chapter 4 of the HCP, Habitat Conservation Measures to be Implemented Under the HCP, available to other projects in the basin aimed at improving habitat in the Rock Creek Watershed.

MIT-9
Please note the correct parcel number for is 2222069006.

MIT-10
The culvert replacement would be designed to provide for upstream and downstream passage for adults and juvenile fish. The culvert would be designed to standards in place at the time application is made to appropriate regulatory agencies.

MIT-11
The reach of stream where HCM-6 is proposed has the opportunity for natural LWD recruitment from the left bank on the south side of the stream. However, the right bank on the north side of the stream has limited LWD recruitment due to the presence of BPA power lines in close proximity to Rock Creek, and to the vegetation management requirement associated with high voltage power lines. Vegetation management associated with the power lines is conducted by BPA. The City staff has worked with BPA to ensure application of herbicides is not used on the Clark Springs property.

MIT-12
Comment noted.

MIT-13
It is the intent of the Services to work with the Muckleshoot Indian Tribe and other interested stakeholders to identify potential habitat projects or land acquisitions in the Rock Creek basin that could be funded through HCM-8. In addition, if it is determined that projects identified in other HCMs are not feasible the City would make the allocated funds available for other projects aimed at improving habitat in the Rock Creek basin. The Services would work with the tribe and other interested stakeholders to identify projects prior to the reallocation of these funds.

MIT-14
Retaining USGS Gage 12118500 is not proposed as a part of the HCP.

MIT-15
Comment noted.

MIT-16
The City would continue to collect precipitation data at Landsburg through the ITP term of the HCP, along with data from the USGS gage on the Clark Springs property.

MIT-17
The HCP has been revised to indicate that spawning surveys would begin during the week of September 21. The intent of MEM-3 is that at least one spawning survey be conducted prior to October 1.

MIT-18
The City proposes post construction monitoring of HCM-3 and HCM-4. As noted in Subsection 5.5 of the HCP, Monitoring and Evaluation Measure Mem-5: Presence/Absence of Fish Utilization, this would be conducted for 3 years following construction. HCM-1 would be constructed to allow for juvenile outmigration. Juvenile fish passage effectiveness for HCM-1 is not a part of this HCP.

MIT-19
Comment noted.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

June 28, 2010

RECEIVED
U.S. Department of Commerce
JUN 30 2010
NOAA - NMFS
Lacey, WA

John Stadler
National Marine Fisheries Service
510 Desmond Drive SE
Suite 103
Lacey, WA 98503

RE: Comments on your Draft Environmental Impact Statement and Habitat Conservation Plan

Dear Mr. Stadler:

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) and Habitat Conservation Plan (HCP) for the City of Kent Clark Springs Water Supply. The Department of Ecology is pleased that the City of Kent has proactively applied for a permit under the Endangered Species Act for their project.

Clark Springs is an important and interesting example of the complex interactions between surface water hydrology, groundwater and fish habitat biology. The data collected for inclusion within these two documents will provide a valuable source of information for our program's work. For that we are thankful to the City of Kent, their consultants, and other agencies who participated in the creation of these two documents.

The Water Resources Program of the Washington State Department of Ecology principal task is the management of surface and groundwater resources in order to provide for the environmental, public health, and economic needs of the state.

Our review was purposely limited to those parts of the two documents dealing with hydrology and hydrogeology. Our comments are provided in the two page enclosed document.

John Stadler
June 28, 2010
Page 2 of 2

Thank you again for the opportunity to review the DEIS and HCP for the City of Kent Clark Springs Water Supply. Please contact me at (425) 649-7077 or at Doug.Wood@ecy.wa.gov if you have questions regarding this review or need additional information.

Sincerely,

Douglas H. Wood, MS, LHG
Water Resource Program

dw/mc

Enclosure: Comments on the City of Kent Draft EIS and HCP

Page 1 of 2 – City of Kent Draft EIS and HCP comments from Dept. of Ecology Water Resource Program

Review Comments for Clark Springs Draft EIS

Section 1.5 (Page 1-9)

- No mention of the exercise of water rights as a permitting issue. Water rights issued for Clark springs include minimum instream flow established in 1969 through issuance of Ground Water Right 7660 (G1-*10006C) and metering for all surface and groundwater sources at Clark Springs.

DOE-1

Section 2.3 (Page 2-13)

- Ecology records indicate that Kent has one surface water right and two groundwater rights for the Clark Springs location.

Water Right	Priority Date	Qi	Qa	Relationship
SW Cert. 7232	Oct. 1931	5 CFS (2244 gpm)	Not Determined	Primary
GW Cert. 3107	Feb. 1957	2,250 gpm	1,350 AFY	Qi and Qa Supplemental to 7232
GW Cert. 7660*	Feb. 1969	5,400 gpm	8,710 AFY	Qi & Qa are max for all WRs at source
Total		**5,400 gpm**	**8,710 AFY**	

* GW Cert 7660 has minimum instream flows and stream augmentation requirements.

- The surface water right does not from the description of the source appear to be in use. A surface water right may not be exercised through an infiltration gallery.

DOE-2

  - The infiltration gallery is the approved structure for exercise of GW Cert. 3107, which was issued in 1957 as an alternative to the use of the surface water diversion (approved through SW Cert. 7232).
    - In essence GW Cert. 3107 is a replacement source for SW Cert. 7232 rather than an additional water right. SW Cert 7232 retains the older priority date, but GW Cert 3107 does not allow greater water use.
  - The report of examination for GW Cert. 3107 shows the infiltration gallery extending below the creek.

- The minimum flows restrict Kent to 2,250 gpm unless the flows are met. The minimum flows are 15 cfs Nov 1 to Apr 30; 15 cfs arithmetically reduced from May 1 to June 30 to 2 cfs; 2 cfs from July 1 to Oct 31. Exercise of 5,400 gpm requires minimum flow met by either natural channel flow or by augmentation by Kent at gage located at the intersection of Rock Creek and Kent-Kangley Road.

DOE-3

- Figure 2.3-1 should have the well locations in addition to the infiltration galleries.

DOE-4

Section 2.4.1

- Augmentation is a requirement when flows in Rock Creek do not meet the minimum flows required by GW Cert 7660 and city wished to withdraw greater than 2,250 gpm. The quantity of augmentation is determined by maintenance of the minimum flow level. It would only be considered voluntary if the minimum flows were being met and/or wells (GW Cert 7660) were not being used.

DOE-5

Page 2 of 2 – City of Kent Draft EIS and HCP comments from Dept. of Ecology Water Resource Program

- In Subsection 2.4.1.1 please note that the maximum Qi is equivalent to 10 cfs ***NOT 12 cfs*** if minimum flows are maintained. GW Certificate 3107 was issued supplemental (non-additive) to SW Certificate 7232 with respect to both Qi and Qa, with the maximum Qi set at 2,250 gpm through exercise of both rights. Exercise of all three water rights provides a maximum Qi of 5,400 gpm. DOE-6

Section 3.3.1 (Page 3-6)

- In the last paragraph on page 3-6 unconsolidated gravels are characterized as being Holocene glacial deposits. They are in fact Pleistocene aged glacial outwash deposits. These deposits are believed to have been deposited by the receding Puget Lobe of the Cordilleran Ice Sheet near the end of the last Ice age (approximately 13,000 years before present). Alpine glaciers originating in the Cascade ranges also likely contributed material to these deposits. Holocene, the geological age used to in the EIS, refers to the period between the end of the last glaciation and the present. DOE-7
- In the first paragraph on page 3-7 the authors refer to the "Puget Lobe of the Vashon Glacier". The Vashon name is misused here. The "Vashon Stade" is a period of ice advance that occurred during the Fraser Glaciation between 15,000 and 13,000 years before present. The correct terminology in this paragraph should be the "Puget Lobe of the Cordilleran Ice Sheet". DOE-8

Section 3.6.1 (Pages 3-11 to 3-16)

- Altogether a very good explanation of a complex surface water and groundwater system. DOE-9

Review Comments for Clark Springs Draft HCP – Volume 1

Section 1 (Page 1-2)

- Map appears to show wetlands as the same pattern as open water bodies. DOE-10

Section 1 (Page 1-3)

- Figure 1-2 should have the well locations in addition to the infiltration galleries. SW diversion mentioned in text on page 1-1 is not shown. DOE-11

Section 1.3.1 (Page 1-12)

- Term "Vashon Glacier" is not correct. The "Vashon Stade" is a time period of ice advance and retreat that occurred during the Fraser Glaciation between 15,000 and 13,000 years before present. The correct terminology in this paragraph should be as follows: DOE-12

  "Much of the upper portion of the watershed is underlain by glacial outwash deposited during the retreat of the Puget Lobe of the Cordilleran Ice Sheet about 13,000 years ago(Hart Crowser, 2003; Ecology, Pers.Comm., 2010)(Appendix C)."

- I note that this terminology is also used in the EIS and originated with the Hart Crowser 2003 report and that it has been properly referenced. Retaining it in the final EIS and HCP reports, while not correct from a geological perspective, will not in any meaningful way detract from the biological or hydraulic conclusions of these reports. DOE-13

Clark Springs Water Supply Habitat Conservation Plan
Response to Comments

Department of Ecology Comments

DOE-1
The Services agree that Ecology is the oversight agency for compliance with minimum flow and metering conditions.

DOE-2
According to the City, Surface Water Certificate (SWC) 7232 is a primary water right source that has been continually exercised since construction of the diversion facility in 1958 and that remains in active use. The beneficial use of the surface water appropriation authorized by SWC 7232 occurs by means of a diversion of infiltrated surface water that enters a perforated pipeline located 8 to 10 feet below the Rock Creek streambed. Captured/diverted surface water is directed to the Clark Springs Water System clear well.

DOE-3
The Services do not have authority regarding the issuance, interpretation, and/or regulation of state-issued water rights. For the purposes of this project, the environmental analysis conducted as part of the HCP identifies mitigation measures sufficient to protect covered listed/candidate/potential ESA species from adverse environmental impacts resulting from the exercise of water rights as described by the City. The City has determined that the minimum flow conditions cited in the permit, certificate, and report of examination for Ground Water Certificate (GWC) 7660 pertain only to the withdrawal of water from the three wells authorized by this water right and do not apply to and/or limit the exercise of SWC 7232 and GWC 3107. Flow restrictions to the Clark Springs water rights are outlined in Subsection 1.3.3 of the HCP, City of Kent's Water Supply Operations.

DOE-4
Comment noted.

DOE-5
See response to DOE-3. Subsection 3.2.4 of the HCP, Clark Springs Wells, describes the minimum instream flows required in Rock Creek when wells authorized under GWC 7660 are in operation. Therefore, under the No-action Alternative, any augmentation to Rock Creek is voluntary unless it is being done to maintain instream flows when the wells authorized under GWC 7660 are being used.

DOE-6
The HCP clarifies that GWC 7660 provides for a total Clark Springs Water Supply System Qi of 12 cfs, which is equal to 5,400 gpm, when the minimum flows prescribed in GWC 7660 are being met.

DOE-7
Subsection 3.3.1 of the EIS, Geology, has been modified to note the Pleistocene rather than the Holocene Series of the Quaternary Period.

DOE-8
Subsection 3.3.1 of the EIS, Geology, has been modified to note the "Puget Lobe of the Cordilleran Ice Sheet."

DOE-9
Comment noted.

DOE-10
Figure 1-1 of the HCP is a vicinity map showing the location of the Clark Springs Facility, the Rock Creek Watershed, and the City in relation to surrounding jurisdictions and the Cedar River. Hydrology on this figure is for illustrative purposes only. Wetland features are not identified on this map.

DOE-11
Comment noted. Well locations have been added to Figure 1-2 of the HCP and Figure 2.3-1 of the EIS. The surface-water diversion location is described in Subsection 2.3 of the EIS, Existing Clark Springs Water Supply Facilities. On Figure 1-2, the surface-water diversion location is the 12-inch perforated pipe at the southeastern end of the infiltration gallery. This is the valved portion of the infiltration gallery that diverts infiltrated surface water from beneath the streambed of Rock Creek.

DOE-12
Comment noted.

DOE-13
Comment noted.

State of Washington
DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N • Olympia, WA 98501-1091 • (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building • 1111 Washington Street SE • Olympia, WA

June 3, 2010 - DRAFT

Tim Romanski
U.S. Fish and Wildlife Service
510 Desmond Drive SE, Suite 102
Lacey, WA 98503

John Stadler
National Marine Fisheries Service
510 Desmond Drive SE, Suite 103
Lacey, WA 98503

RE: City of Kent Clark Springs Water Supply Habitat Conservation Plan

Dear Mr. Romanski and Mr. Stadler:

Thank you for the opportunity to review the Draft Environmental Impact Statement for the City of Kent's Clark Springs Water Supply Habitat Conservation Plan (HCP). The Washington Department of Fish and Wildlife is the State of Washington agency responsible for management and protection of the state's fish and wildlife (RCW 77.04.012: "Wildlife, fish, and shellfish are the property of the state. The commission, director, and the department shall preserve, protect, perpetuate, and manage the wildlife and food fish, game fish, and shellfish in state waters and offshore waters.") and shares this interest with your agencies and with tribes that are co-managers of these natural resources. Thus we have a strong interest in the proposed HCP.

The proposal appears reasonable. To mitigate for Kent's continued withdrawal from Rock Creek, a Cedar River tributary, based on existing water rights, Kent will augment flow somewhat during October, November, and December when needed, according to criteria set in the document. Kent will also make a number of habitat restoration or enhancement measures in the Rock Creek watershed.

Flow augmentation is proposed for the season when lowest flows occur if fall rains do not arrive promptly. Flow augmentation would be up to a target flow so it would not be needed if fall rains arrived. Flow augmentation would be a fixed maximum, so in severe drought it might not achieve the target flow. Flow augmentation would be determined by month and by year-to-date precipitation – less in a drought than in a normal year. Although the reduced obligation in drought may seem counterintuitive for fish, it is compatible with the normative flow paradigm of

natural hydrological variation, which is the current leading concept in stream habitat conservation.

The purpose for flow augmentation during fall is primarily to facilitate passage of migratory adult salmon from the Cedar River into lower Rock Creek. Spawning habitat benefits/mitigation of the flow augmentation would be modest, but they are calculated in the form of WUA (weighted usable area, the index of habitat generated by the Instream Flow Incremental Method [IFIM] Physical HABitat SIMulation – in units of weighted square feet of usable habitat per 1000 feet of channel – where weighting can be from 0.00 [unusable] to 1.00 [preferred habitat conditions]). The augmentation benefits do not fully mitigate for the impact of water withdrawal. Although WUA effects of Rock Creek operation are not directly compensated by flow augmentation, the City of Kent has a senior water right under state water law; Kent's responsibilities are under the federal Endangered Species Act. WDFW-1

No flow augmentation is proposed for July-September, which can also be relatively low flow months in the Puget Sound lowlands. This again appears counterintuitive for fish, given the warmer temperatures and higher metabolic demands of fish during these months. The rationale for precluding flow augmentation in the summer appears to be based on presumed (and fairly well validated) hydrogeology and capacity to augment while maintaining Kent's primary obligation to serve its citizens by supplying water (subject to conservation measures discussed in the appendices). Several of the target fish species (Chinook, sockeye, and chum salmon) have minimal freshwater rearing and would be unlikely to benefit from summer augmentation. The remaining target salmonids (steelhead/rainbow, cutthroat, bull trout, and coho salmon) rear year-round in streams, but proposed summer mitigation is in the form of habitat enhancements or restoration, rather than flow augmentation. WDFW-2

The values of flow to fish can be for habitat (living or spawning or incubating space), for migration, for maintenance of water quality, and for channel maintenance, as well as transport of food. The Clark Springs water withdrawals affect habitat and migration primarily, and these are what the mitigation and/or enhancement/restoration measures address. Several migration or fish passage measures, including at the confluence of Rock Creek and the Cedar River, address specific impediments to passage by adult salmon. Several other measures increase or connect habitat for rearing and adult holding.

We have the following specific comments.

Volume 1, p. 2-8 – 2.1.2.3 – Changed Circumstances – Extended Drought – A typographical error incorrectly lists the state administrative rule governing drought declaration as WAC 17-166; the correct citation of the Washington Administrative Code (WAC) is WAC 173-166. The same typographical error is repeated on p. 2-9. WDFW-3

Volume 1, p. 2-13 – 2.5 Water Rights – In addition to Chapter 90.42 RCW, surface water rights are addressed under Chapters 90.03, 90.14, 90.44 and other chapters of Title 90 RCW. WDFW-4

Volume 1, p. 3-65 – 3.4.2.4 Consumptive Water Use – Domestic wells generally are exempt from water rights permitting process, but they otherwise are subject to state water laws and constitute water rights (see RCW 90.44.050). WDFW-5

Volume 1, p. 4-17-19 (153-5/289) – Coho Salmon – Discussion of juvenile coho salmon habitat is based on WUA, but WDFW work has shown that WUA does not match survival and WDFW-6

productivity of coho smolts. Although juvenile coho WUA typically is greatest at very low flows, actual survival to smolting is greater at greater flows. Thus, the concluding discussion of increased WUA at lower flows (i.e., with diversion) is an important point with reference to the actual effects on fish. Flow augmentation (HCM-1) would probably benefit juvenile coho salmon in October and perhaps in November and December.

Volume 1, p. 4-22-24 (158-160/289) – Steelhead Trout – HCM-1 benefits to steelhead rearing are expected to be greater in October and less in December as water cools to where juvenile steelhead are less active and less territorial. The WUA numbers are only part of the fish habitat story without considering temperature. WDFW-7

Volume 1, p. 4-26-27 (162-3/289) – Cutthroat Trout – See comments about juvenile steelhead (above). WDFW-8

Volume 1, p. 4-28 (164/289) – Rainbow Trout – See comments about juvenile steelhead (above). WDFW-9

Volume 1, p. 4-37 (173/289) – Figure 4-15 (HCM-3) – Diagram shows connections between Rock Creek and pond as culverts. To some degree fish are reported to avoid dark tunnels and culverts. Day-lighting the connections with a bridge may increase the value of the pond and connections for fish. Appendix I (see below) indicates that bridges, rather than culverts, will be used. WDFW-10

Volume 1, p. 4-38-40 (174-6/289) – HCM-4 – Some long-term maintenance may be required to keep the pond and wetland functioning, given that excavation is needed at the outset. However, it is possible that no maintenance (re-excavation) would be needed before the expiration of the HCP (50 years), but presence of trees will contribute material that fills the pond. WDFW-11

Volume 1, p. 4-40 (176/289) – 4.5 HCM-5 – The commitment to meet WDFW culvert fish passage standards cites WDFW 2003 standards. It is possible that WDFW might revise culvert fish passage standards before the 5 year completion date. Will Kent commit to meet the most current WDFW culvert fish passage standards at the time of design? WDFW-12

Volume 1, p. 4-43-45 (179-181/289) – 4.7 HCM-7 – Water use conservation measures are to be commended. Are there any provisions for mandatory curtailment of certain uses (e.g., car washing, lawn watering) under critical low flows? If so, what are thresholds for such curtailment? WDFW-13

Volume 1, p. 5-4-5 (188-9/289) – Adaptive management and monitoring are briefly discussed in the introduction to Chapter 5. Monitoring results are not always conclusive and are subject to different interpretations. It is desirable to agree on decision criteria, perhaps using statistics, in advance so that when monitoring results are presented the path forward is a foregone conclusion, rather than a source of prolonged debate. WDFW-14

Volume 1, p. 5-9 (193/289) – MEM-3 – Spawning surveys are proposed every 4 years, with the rationale that this corresponds to the life cycle of sockeye and coho salmon. However, coho salmon normally have a three year life cycle, so that the 4 year survey results may not provide the most informative data for coho salmon. WDFW-15

Volume 1, p. 5-10 (194/289) – Table 5-2 – Table is unclear. "Compliance" in this table seems to mean that a spawning survey would be conducted. WDFW-16

Volume 1, p. 5-12 (196/289) – 5.4 (MEM-4) – Monitoring of condition of passage improvement at mouth of Rock Creek should include inspection after recession of peak floods. Any Cedar River flood with a 5-year recurrence interval at the nearest Cedar River gage should trigger inspection of the passage improvement as soon as flow drops below the long-term median flow of the highest flow month. Such inspection should be structural and will not be for measurement of depths and velocities in the area for improved passage. Complete monitoring with depth and velocity measurement should occur no later than June 1 to allow any repairs before the fall migration season. WDFW-17

Volume 1, p. 6-9 (209/289) – Table 6-1 – Monitoring wells for water quality impacts from the Landsburg Mine is shown as having potential minor adverse effects counteracted by Best Management Practices. If monitoring and detecting water quality impacts lead to amelioration of those effects to groundwater, Rock Creek water and fish could benefit. WDFW-18

Volume 1, p. 6-21 (221/289) – Key sentences explaining the augmentation (HCM-1) should probably be accompanied by a table. This explanation had been unclear throughout the document to this point: "When instream flows met or exceeded the target flows at the Parshall Flume during October, November, and December, then no augmentation occurred. When instream flows were below the target flows, water up to the maximum augmentation amount would be allocated to increase instream flows to the target flow." WDFW-19

Volume 2, Appendix C – Hart Crowser hydrogeology report (I read Executive Summary only) – During base flow (late summer-fall), groundwater is separated from stream channel so that groundwater pumping has minimal effect on streamflow and flow augmentation of Rock Creek stays in the creek instead of seeping quickly back to the aquifer. This is the first actual test and analysis of "pump-and-dump" that I have seen. It indicates actual promise as a mitigation measure where hydrogeology is compatible. WDFW-20

WDFW-21

Volume 2, Appendix I – Identification and Evaluation of Habitat Enhancement Opportunities for Rock Creek – 4.2 R1.2 Connection/Enhancement of Reach 1 Wetland Complex – pp. 18-20 (409-411/482) – Although the diagram (also in the text) shows culverts, the text recommends bridges over the connections between Rock Creek and the wetland complex, which would be preferable to culverts.

In conclusion, I believe that implementation of the HCP with consideration of our comments will result in reasonable mitigation of the effects of City of Kent's water withdrawal from Rock Creek. Habitat for salmonids (salmon, trout, and charr), as well as non-salmonid fishes, in Rock Creek will be better under the proposed HCP than without the HCP measures. WDFW-22

Sincerely,

Hal A. Beecher

Hal A. Beecher
Instream Flow Biologist

Cc: Larry Fisher
David Brock

Steve Boessow

Clark Springs Water Supply Habitat Conservation Plan
Response to Comments

Washington Department of Fish and Wildlife Comments

WDFW-1
The Services recognize the City cannot fully mitigate for the impact of water withdrawals through augmentation without significantly affecting its ability to supply water to its residents, which is why the HCP includes seven additional conservation measures and is requesting an ITPs from the Services.

WDFW-2
Comment noted.

WDFW-3
The HCP text has been revised.

WDFW-4
The paragraph in the HCP has been revised to more broadly refer to RCW Title 90.

WDFW-5
The paragraph in the HCP has been revised to clarify the description of exempt wells.

WDFW-6
The HCP includes a reference to Seiler (2005) and Smoker (1953) that demonstrates a correlation between higher flows and higher coho production.

WDFW-7
The Services agree the benefits to juvenile salmonids from HCM-1 are highest in October and typically decrease in November and December. The decrease in benefits occurs in part because of the decreased need for augmentation in most years when flows in Rock Creek increase from precipitation. The WDFW correctly points out that declining water temperatures and changes in behavior also affect how juvenile salmonids may use the available habitat. The HCP has been modified to clarify the benefits of HCM-1 between October and December. Because the surface flows in Rock Creek are derived primarily from precipitation and groundwater, and anadromous fish in the system are found below an elevation of 600 feet in a maritime climate, water temperatures lower than 41°F (5°C) are uncommon and not considered a limiting factor to rearing salmon and trout in the creek.

WDFW-8
See response to comment WDFW- 7.

WDFW-9
See response to comment WDFW- 7.

WDFW-10
The drawings for HCM-3 are conceptual in nature. As the project is designed, items such as this would be taken into consideration.

WDFW-11
HCM-4 would be designed to minimize the need for additional excavation. Permits would likely require maintenance, monitoring, and plantings to restore any disturbed native vegetation. Presence of trees would contribute material to the stream and enhance the mitigation project as designed.

WDFW-12
The City would be required to obtain permits from all applicable regulatory agencies, including the WDFW. The City would follow all applicable regulations and guidelines in place at the time the project is permitted.

WDFW-13
Kent City Code Chapter 7.13, Water Shortage Emergency Regulations, provides provisions to address water shortages due to a lack of supply. This code section requires an emergency ordinance be passed by the City Council that may include mandatory curtailment of car washing, lawn and garden watering, recreational use, and any other water use that may limit the availability of water for human consumption, sanitation, or fire protection.

WDFW-14
Subsection 4.1 of the HCP, HCM-1: Rock Creek Flow Augmentation, has been revised to include additional adaptive management language. The Services believe the monitoring and adaptive management program proposed in the HCP is adequate for achieving the desired benefits of the HCP's mitigation measures.

WDFW-15
The spawning surveys are not intended to provide a full picture of effects or to estimate survival of the anadromous species utilizing Rock Creek for spawning. The spawning surveys are intended to document salmon-spawning utilization and to track broad population trends (MEM-3). The Services believe that monitoring of spawning populations and emigrants conducted by the City, WDFW, King County, and the Seattle Water Department in the Cedar River provide detailed trend and survival information for Cedar River salmon populations.

WDFW-16
Table 5-2 has been revised to clarify that the activity would be spawning surveys.

WDFW-17
MEM-4 has been revised to include visual inspection of HCM-2 when flows exceed 50 cfs at USGS Gage 12118400 (Kent-Kangley Road) to identify any needed maintenance to help ensure the fish passage structure is functional through the term of the HCP.

WDFW-18
Comment noted.

WDFW-19
HCM-1 has been revised to clarify the level of augmentation.

WDFW-20
Comment noted.

WDFW-21
See response to comment WDFW-10.

WDFW-22
Comment noted.