



City of Seattle
Seattle Public Utilities

June 1, 2010

Dear Cedar River HCP Oversight Committee Members:

On behalf of Seattle Public Utilities I want to express my sincere appreciation for the extensive time and effort you expended in this very thorough and valuable comprehensive review of our implementation of the Cedar River Habitat Conservation Plan through its eighth year. SPU relies on the monitoring, evaluation and recommendations of the Oversight Committee for its outside perspectives and viewpoints. We have evaluated your 8-Year Comprehensive Review recommendations and propose the responses and follow-up actions described below.

Watershed Management Component

1. Invasive species control

The initiation of an invasive species control effort for terrestrial plants and European Milfoil is a valuable and cost effective contribution to the long-term conservation goal of the watershed. An ounce of proactive control is worth a ton of damage control. Invasive species have the potential to limit habitat effectiveness and the future ability of species to adapt to changes in climate and flow regimes. We encourage SPU to consider inventories and strategies for a broad range of invasive species, including aquatic invertebrates and algae, forest diseases, and forest pest insects that might have severe and adverse effects on watershed ecosystems. Cost effective control of Knotweed on the watershed is of concern, and we encourage SPU to consider all treatments, including herbicides to provide early containment of this aggressive species.

Response:

Early SPU efforts to document the presence of, map, and reduce populations of selected invasive species (e.g., tansy ragwort) in terrestrial habitats of the Cedar River Municipal Watershed (CRMW) began in the mid 1990s with severely limited budgets and minimal staffing. As the number of invasive species identified increased, the distributions became better documented, and the potential adverse effects on native plant communities became even more evident, the need for a more comprehensive program and more strategic approach became especially obvious. In 2007, with encouragement and support from HCP-OC, SPU developed and implemented a much more comprehensive program for addressing invasives in terrestrial environs, from both regulatory and ecological perspectives (refer to HCP web site).

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Currently, in 2010, the Invasive Species Program is addressing eight "mandatory control" species, as well as 6 other species that have been assessed to be substantial threats to the integrity of native plant communities with the watershed. The species addressed by ongoing efforts include control of tansy ragwort, knotweed, spotted knapweed, dalmation toadflax, policeman's helmet, and 3 species of non-native hawkweed. Significant progress has also been made on the removal of Himalayan and evergreen blackberry, English holly, English ivy, butterfly bush, and deadly nightshade from wetland and riparian habitats. Efforts to remove Eurasian milfoil from Walsh Lake are also proving to be very successful and encouraging.

Efforts are underway to amend a 1989 ordinance that prohibits the use of herbicides in the CRMW in order to allow for the limited application of a single herbicide, Imazapyr, to treat knotweed, which is becoming an increasingly ominous threat to riparian ecosystems. Staff is seeking City Council adoption of this amendment in June or July so that application can begin later this summer during the optimal treatment period. Should the amended ordinance pass Council approval, staff will seek a minor modification of the HCP to allow for application of Imazapyr to treat knotweed.

Many aquatic plants (e.g., Eurasian milfoil, white water-lily, pondweeds), several aquatic invertebrates (e.g., zebra mussels, quagga mussels, Asiatic clam), algae, and certain diatoms (e.g., "didymo") are becoming recognized for their potential to create major ecological and/or operational problems in aquatic ecosystems, and especially in water supply systems such as the Cedar supply system. The SPU Water Quality Laboratory has investigated many of these Aquatic Nuisance Species (ANS) and completed training sessions on selected ones in preparation for evaluating, redefining, and implementing a strategic plan for preventing such species from becoming problems within the CRMW and Cedar Supply System. This effort has produced an extensive draft document describing the ecology of each species and prescribing more stringent decontamination procedures for research equipment, construction equipment, contractors' equipment, vehicles, boats, and personal equipment that will be used directly in water and aquatic systems within all of Seattle's major watersheds. SPU is currently in the process of instituting as many of the described procedures as can be accomplished at this time, training SPU staff that work in the watersheds on ANS identification and decontamination procedures and identifying opportunities for more staff to participate in extensive training provided by both state and federal agencies. Efforts to develop appropriate monitoring programs are being discussed by Watershed and Water Quality staff. Concurrently, efforts to fully implement these strategies will be continuing in 2010 and beyond as more comprehensive information is accumulated.

SPU staff are currently leveraging information from the USFS/WA DNR Forest Health Program annual aerial surveys and planning to do limited field verification of aerial survey data to confirm the presence and extent of non-native invasive insects in the watershed. SPU staff have initiated discussions with these agencies about what field-based monitoring and response strategies might be warranted, and have started assessing potential costs and effectiveness of monitoring for invasive forest insects.

2. Restoration thinning program

Implementation of restoration programs to date has been excellent. Reconstruction of watershed condition has allowed detailed project planning using the best available science. Strategic planning has developed a logical set of guidelines and recommendations for implementation of the restoration programs. The set of expectations sets a high standard for planning and analysis. The benefit of these activities for the future stand condition is not at dispute, considering the scale at which analysis is

conducted. Look at alternatives to lower per area cost and subsequently expand the program to forests that could long serve as habitat and carbon stores, and more aggressively integrate restoration planting for tree species diversity with the thinning program.

Response:

Restoration planting is being incorporated into the upland restoration thinning program as of 2009. Trees are being planted to increase species diversity and to address habitat objectives, as well as to increase forest resistance and resilience to projected climate change impacts. Objectives of the integrated planting program include increasing the variety of coniferous tree species, increasing the deciduous tree and shrub cover and, in anticipation of climate change, planting tree species that are more resistant to increased drought stress.

The upland restoration thinning program is currently ahead of the performance commitment by more than 500 acres. The per acre cost has generally been lower than originally projected in the HCP, wherein the estimated cost was \$250/acre. The actual average cost has been approximately \$230/acre. The primary exception has been the two years that slash treatment was conducted, which doubled the cost of thinning. In the beginning of HCP implementation (2001-2004), the restoration thinning program treated large units with relatively simple spacing prescriptions and created within and between stand uniformity. During these years, implementation costs approximated \$155/acre. Since 2005, watershed staff have been increasing the complexity of the restoration thinning prescriptions in order to manage for vigorous young forests that also retain structural heterogeneity and increase species diversity. Planning has focused on smaller units with more complex prescriptions that include skips, gaps, and variable spacing. In 2009, the most complex and site specific prescriptions were implemented with an approximate cost of \$200/acre. Now that the restoration thinning project planning team has worked with these more complex prescriptions, planning and implementation efficiencies will continue to improve in the next several years of the program. Program managers have identified the remaining pool of candidate forest stands in need of restoration thinning, and are currently evaluating treating 2000 acres more than the HCP performance target (10,480 acres). SPU will continue to update the HCP OC regarding the cost and implementation efficiencies that are realized in the restoration thinning program.

3. Climate change and planning

Recently completed Strategic planning for watershed management activities charts a course that will serve the implementation of watershed management for decades. All the plans contain the intent to incorporate new information through an adaptive management process. Climate change creates unique challenges to forest management. Given the potential consequences of climate change on forest growth and species, the Oversight Committee requests a summary of adaptive strategies that can be incorporated into the restoration philosophy landscape template. We would like SPU to report on current and future efforts to consider increasing the adaptability of watersheds to climate change.

Response:

SPU Water Management staff has already developed adaptive strategies for future water supply management relative to projected climate change effects of increased temperature and altered precipitation and stream flow patterns (please see "Assessing future performance based on trends in climate and water use" in the Instream Flow section below). In addition, SPU staff are concerned about the potential impacts of climate change on watershed ecosystems and the continued provision of ecosystem services to customers, in particular water supply and a resilient watershed landscape. Staff are evaluating what elements would be included in a watershed climate change

response program. Elements of such a program may include identification of potential impacts to watershed ecosystem services resulting from climate change, monitoring efforts to detect impacts, and adaptive strategies to reduce vulnerabilities and increase resilience in forest and aquatic systems. The program would address knowledge gaps through collaboration with research institutions, other land management agencies, and stakeholders.

In addition, Watershed staff are assessing how managing for resilient watershed resources in the face of climate change, within the context of the HCP, would necessitate modifications to the current approaches in the restoration strategic plans, including the Landscape Synthesis Plan. The restoration interdisciplinary teams are evaluating how conceptual models and prioritization criteria may change to better incorporate resilience to climate change. In the near term, these evaluations will be documented with brevity. When the strategic plans undergo a comprehensive review, these changes will be fully incorporated into the plans.

4. Coordinated wildlife management

The Settlement Agreement (SA) with the Muckleshoot Tribe includes provisions that relate to upland management in the watershed that could have long term implications to the HCP. The SA commits the City and Tribe to develop a cooperative plan for management of wildlife in the watershed in order to assure the Tribe's ability to exercise its treaty reserved rights for ceremonial and subsistence hunting and gathering. According to the SA, the tribe may authorize ceremonial, subsistence and management hunting by Tribal members. The Tribe will also undertake a deer, elk and cougar research program in the watershed, funded by the City (\$250,000 per year for 10 years), to better inform the parties in managing wildlife. The Tribe also will continue habitat improvement work, supplemented with City funding (\$50,000 per year for 10 years). The agreement provisions specify that activities conducted to support tribal hunting must be consistent with the HCP. This additional commitment of resources should be a welcome addition to other HCP efforts if there is good coordination between HCP and SA activities. The Oversight Committee recommends that the City ensure that the HCP and SA are coordinated and that the City include a report on the progress of the wildlife management efforts undertaken through the SA in its annual HCP reviews.

Response:

The City appreciates the recommendation of the Oversight Committee and agrees that good coordination between HCP and SA activities is necessary. The City does not agree that the SA involves the City in the management of wildlife in the watershed, nor that the Cooperative Plan required by the SA is "for management of wildlife." The City's role under both the SA and the HCP is to manage and steward habitat. The objective of the Cooperative Plan is to "facilitate" the Tribe's exercise of its hunting and gathering rights, while remaining consistent with the HCP as well as obligations the City has under federal drinking water regulations and its customer contracts. The pertinent parts of the SA are included with our response.

We will of course share any data on species populations that we get and will inform the Oversight Committee on activities, whether related to the SA or not, that affect the goals and objectives of the HCP.

To fully appreciate this response, we have outlined here the conditions and focus of the HCP and the federal court approved Settlement Agreement between the City and the Muckleshoot Tribe.

The City implements its Habitat Conservation Plan in exchange for the assurances it receives from the Federal Services that our water supply operations are allowable under the provisions

of the Endangered Species Act. The HCP takes a management approach that focuses on protection, restoration, and enhancement of habitat(s), and the maintenance and restoration of natural environmental processes, specifically intended to benefit listed and/or sensitive fish and wildlife species that are particularly dependent on late-successional and old-growth plant communities, inclusive of all associated aquatic communities.

The City's court approved Settlement Agreement (SA) with the Muckleshoot Indian Tribe (MIT) has these major elements – settlement of past damages, an extension of the commitment to the instream flow provisions of the HCP from 50 years to perpetuity, additional caps on the City's withdrawals of water from the Cedar River, and specific understandings and protocols for access to the Cedar River Watershed in order for Tribal members to exercise treaty rights including, but not limited to, subsistence, ceremonial, and management hunts of a variety of species (e.g., deer, bear, elk, etc.). SPU cooperates/coordinates with MIT to provide access for tribal members to exercise their tribal treaty rights in the Watershed as granted under the SA and per notification by MIT, while at the same time ensuring the safety of all staff and other persons working in the Watershed at these times. SPU does not set harvest guidelines, establish hunting regulations, or set harvest limits for MIT relative to MIT hunting activities in the Watershed. We do collect selected species data in cooperation with the MIT and other agencies, and we share that information whenever requested.

In terms of specific habitat management activities related to the HCP, SPU plans, designs, and implements all habitat management restoration/enhancement projects in the Cedar River Watershed per the objectives of the HCP. In the City's cooperation with the MIT, it reviews occasional MIT proposals for habitat management that might better promote sustainability of species of interest to the MIT. The City cannot and does not, however, permit actions that would contravene the HCP goals and objectives. Furthermore, the MIT agreement acknowledges that bottom line fact and need. Thus, the City carefully assesses all proposed actions whether from the Tribe, staff or other stakeholders, for consistency with the goals, objectives, and principles of the HCP, and as required under the MIT Settlement Agreement, prior to implementation. These interests are spelled out in the section of the SA (attached) addressing the Cooperative Plan, which is being worked out between the City and the MIT.

SPU also works cooperatively in a wide range of capacities with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), and both WDFW and MIT to establish and maintain functional and efficient working relationships in order to best serve implementation of the HCP and addressing requirements of the SA. This includes sharing of research/monitoring data, reports, and publications (e.g., HCP web site) with both regulatory agencies and MIT (included in SA).

City HCP staff will keep the Oversight Committee regularly informed of habitat management activities and their consistency with the objectives of the HCP.

Instream flow component

A. Accessibility of implementation information

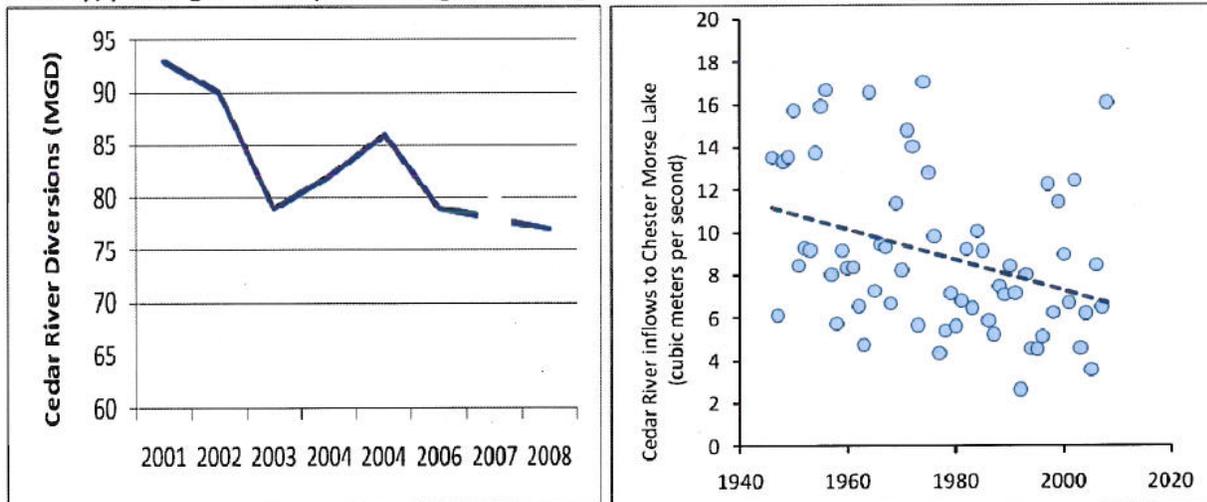
“We encourage SPU to continue to develop this website and increase the level of integration between components. For example, streamflow metrics such as those used in the annual instream flow compliance report (e.g., % of days that spring supplemental flows were provided) could be added as another topic to the list of fish, bird, mammal, amphibian, and riparian habitat metrics....”

Response:

Thank you for the suggested example to expand and clarify Instream Flow Management performance measurement and reporting. SPU staff will work to develop clear and concise graphical portrayals of key instream flow compliance metrics recorded in the annual compliance reports submitted each year to the Cedar River Instream Flow Commission (IFC). Once developed we will plan to incorporate new metrics into the HCP website.

1. Assessing future performance based on trends in climate and water use

“Future prospects for achieving the Cedar River HCP instream flow targets will depend on trends in diversions and inflows in concert with adaptive strategies and operations to maintain system reliability. Diversions have been trending downward since 2001 (Figures below) and, as a result, the City will likely continue to achieve instream flow targets in the next decade - not withstanding unanticipated (i.e., unlikely) prolonged or frequent drought or changes in usable reservoir storage capacity.



Over the longer term, trends in climate and the population in the SPU service area impact the reliability of supplemental flows. There has been a long-term decreasing trend for inflow to Chester Morse Lake particularly due to a reduction in late spring-early summer (~0.8 cfs/year for May-July period since 1945). It is not certain that this trend will persist, but it is worth examining the implications of such a trend.”

Response:

SPU staff have noted a similar trend of decreasing inflow into Chester Morse Lake. The impact of this trend on annual reservoir refill and subsequent provision of summer supplemental flows is relatively small however. As noted by the Oversight Committee, the impacts to the fall supplemental flow period are less clear. This period is also known as “waiting for the fall rains to return” and with good reason. July, August and early September are generally the time of highest diversion and lowest rainfall resulting in normal minimum water levels in CML. There have been serious changes in usable reservoir storage capacity due to the infilling of the channel between the CML and Masonry Pool. A trend of declining inflows during this late summer early fall period will tend to exacerbate the lack of storage capacity. Alternative actions with appropriate risk analyses to better define risks and limits to the system are under consideration.

Another key issue is the impact of climate change on the CML inflows and resulting operations. SPU has conducted analyses of a range of climate change forecasts on system hydrology and performance. The results of these analyses and a summary of suggested current adaptive strategies are contained in the attached document, *“Analysis of Climate Change Impacts on Future Water Supply Availability and Municipal Water Demands”*. This report lists a variety of adaptive strategies for dealing with the potential impacts of climate change including access to water at lower elevations in Chester Morse Lake.

“The impact on summer and fall supplemental flows may be less certain. Currently, the downward trend in inflows is unlikely to threaten summer or fall supplemental flows because of the concurrent downward trend in diversions. The Oversight Committee does recommend that the City verify that climate forecasts used for water supply planning are consistent with 1) an updated current (circa 2008) baseline for May-July inflows from the Cedar River to Chester Morse Lake of about 6.7 cms and 2) projections of the current downward trend in inflows from the Cedar River to Chester Morse Lake of about -0.72 cms/decade.

Response:

The climate change analyses mentioned above employed meteorologic and hydrologic records created by the University of Washington Climate Impacts Group (UW-CIG). The UW-CIG applied downscaling techniques to create three 77-year climate scenarios from the coupled results of three different Global Circulation Models with two different emissions scenarios. The output from these three simulated data sets was then input to SPU’s Conjunctive Use Evaluation model (CUE) to assess the potential effects of each scenario (“warm” “warmer” and “warmest”) on future water supply. SPU staff would be happy to work with the Oversight Committee or a sub-group to explore the details of the modeling inputs, including estimated inflows to Chester Morse Lake.

“Furthermore, the Oversight Committee requests confirmation of climate change scenarios incorporate inter-annual flow variability including the expression of low flow years and the impact of these projects on the frequency that summer, early fall, and fall high normal supplemental flow blocks are provided.”

Response:

Because the analyses discussed above used a baseline of the past 77-years of meteorologic data, we believe the analyses reflect a broad range of annual hydrologic variability from very wet to very dry conditions. For all three climate scenarios, model inputs specified that all supplemental flows be met at the frequencies specified by the Instream Flow Agreement for the Cedar River (IFA).

“Given the potential for unanticipated hydrologic consequences of climate change or prolonged periods of drought, the Oversight Committee requests a summary of adaptive strategies and operating policies that the City believes will adequately insure that targets for each of the supplemental block (spring, summer, early fall, and fall high normal) continue to be achieved.”

Response:

The modeling platforms used in SPU’s climate change analyses, discussed above, prescribe that Cedar River supplemental instream flows be met at the frequencies described by the IFA. Simulated shortfalls in water availability are portrayed as deficits in municipal water supply. Assuming that the current reductions in usable Chester Morse Lake reservoir storage capacity will be resolved, the combined analyses suggest that, by applying the Tier 1 adaptive strategies listed in the report, SPU can meet supplemental flow prescriptions and municipal water demands through approximately 2050 (see Figure 4 on page 5 of the report). After 2050, additional strategies beyond Tier 1 may be needed.

2. Verifying the ecological benefits from a managed streamflow regime

“Through the Cedar River HCP, the agreement with the Muckleshoot Tribe, and the Instream Flow Commission, the City has flexibility in how instream flows are managed while still providing a reliable water supply. The City should continue to evaluate how instream flows are providing expected ecological benefits, for example, in terms of spawning and rearing success of salmon, but also evaluate whether there are alternatives which could provide greater ecological benefits without sacrificing either the benefits from the current flow regime or system reliability.”

Response:

Several metrics measuring some of the ecological effects of instream flow management are currently provided on the HCP website. These include a) assessment of salmonid incubation conditions through measurements of sockeye and Chinook egg to emigrant survival rates; b) monitoring Chinook and steelhead redd dewatering; and c) reporting of the proportion of days during the spawning season that stream flows meet or exceed the flows required to provide Maximum Weighted Usable Area for Chinook and sockeye spawning. In addition, data has been collected that could support other metrics related to the effects of stream flow on salmon including: a) links between late winter/spring stream flow and the relative proportion of the two primary Chinook salmon early life history patterns (river-reared vs. lake-reared) expressed by each brood year; b) the relative rate at which each of these two early life history patterns contributes to subsequent adult returns; c) possible relationships between late winter/spring stream flow and egg to emigrant survival rates for sockeye and Chinook salmon; and d) linkage between stream flow and the temporal and spatial distribution of Chinook spawning activity in the mainstem Cedar River. SPU staff will conduct analyses that attempt to uncover potential relationships between these additional biological parameters and stream flows. They will summarize these analyses and provide suggested summary graphical representations for possible posting on the HCP website.

Last fall, SPU and United States Geological Survey (USGS), under the guidance of the Cedar River IFC, launched a set of investigations designed to explore the effects of peak flow magnitude and duration on stream and flood plain structure and function. It is hoped that the study will identify key geomorphic features and processes, establish

hypotheses linking these features and processes to peak flow characteristics, then establish a monitoring program designed to test these hypotheses. This project can potentially provide measurements of the effects of peak flows on features such as stream channel width and sinuosity, residual pool depth, areal extent of exposed gravel bars and areal extent and connection of off-channel areas. In addition, this work is expected to reexamine and potentially refine our understanding of the relationship between peak flows and salmon redd scour. As the work evolves, SPU expects to develop new metrics that display trends in stream habitat characteristics and the relationships between these characteristics and the magnitude, duration and frequency of peak stream flows.

Landsburg Fish Passage Facilities

1. Continued research funding

The anadromous fish monitoring and research track record has been impressive. Studies like predation by piscivores in the lower river and Lake Washington, genetics studies on the Steelhead/O. mykiss and Coho and Chinook above Landsburg, and other cooperative research has shown a commitment to continuous improvement to the scientific basis on the conservation strategy effectiveness. To the best of your ability, remain diligent to ensure continued funding valuable research and monitoring into the future. Keep the OC updated about research funding and how the OC can best serve as advocates promote future research funding.

Response:

With the new sockeye hatchery about to begin construction, we are implementing the Adaptive Management Plan (AMP). This will increase our monitoring and evaluation efforts associated with the hatchery. In 2010 our current efforts in evaluating recolonization of Chinook and coho above Landsburg Dam will be concluded. Because of the successful collection and analysis of this information, we would like to continue to collect this information. In an effort to continue this line of research we have submitted applications for a couple of grants. Lacking new funding in 2010-11, we are considering continuing to collect biological samples from Chinook salmon at Landsburg Dam, while we are operating in the sorting mode in 2010. Future sampling will be considered contingent upon available funding. Without new funding we plan to operate fish passage in the passive mode once the sockeye run is complete. This would mean during most of the coho return we would be in passive mode and those fish would not be available to sample. With only a portion of the coho run available during the sorting mode, we do not believe it would be useful to collect unrepresentative samples. We will continue to look for opportunities to continue the recolonization study, through grants and partnerships.

Recently a new funding shortage has been identified associated with the operation of the PIT tag detectors. We are investigating potential funding sources to keep the PIT tag detectors in operation. We are continuing to collect information on the number of fish using the fish ladder, when we are in the passive operating mode.

2. Maintain reporting on Fish passage at Landsburg

The city should be proud of the prompt construction and effective operation of the Landsburg fish passage facilities and has reported timely counts of all species and provided detailed information of species, sex and marked percentages for Chinook and Coho during sorting. Keep the Oversight

Committee informed on fish passage trends and continue to ensure new information is has maximum benefit in all areas of HCP implementation. The decline of steelhead in Lake WA and Puget Sound that triggered ESA-listing is of concern and recognizably the product of events at a scale beyond what the HCP can report. Additional steelhead recovery actions beyond the HCP within the Lake WA watershed deserve discussions by many parties. We encourage SPU to contribute to those discussions as possible.

Response:

We are working to improve the availability of the fish passage information on the Cedar River HCP web site. In the future look for the annual fish passage reports and inseason reporting on the web site.

Summary of proposed recommendations

- Consider ways to provide access to Oversight Committee briefings to create a more enduring record of business. This is a complicated and multifaceted HCP and the staff at SPU has done an excellent job updating the Oversight Committee at their biannual meetings. Because the volume of activity and the diversity of subjects covered by the SPU staff briefings are at times difficult to track, the Oversight Committee would like to encourage SPU to consider ways to provide increased accessibility to materials from previous Oversight Committee meetings.

Response:

Staff will create a page on the HCP web site that is dedicated to the HCP Oversight Committee. The page will provide past meeting minutes and materials, meeting schedules, and other documents related to HCP implementation decisions and modifications. We will work to launch this page by the end of 2010.

- Maintain and continue the website. The development and posting of the new website is a major accomplishment and staff should be commended. Continue to develop new metrics to measure progress toward goals and increase the visibility of research and monitoring conducted on the watershed.

Response:

Staff agrees that the value of the web site is dependent, in part, on how current the information provided is. We have developed a management system to ensure that information is current and relevant and welcome the Oversight Committee's continued review and recommendations about improvements.

- Consider climate change impacts within your strategic planning efforts. We believe there would be benefits to more extensive consideration of the implications of possible climate change on, for example, vegetation structure and how watershed activities integrate such as effects on net instream flow.

Response:

See response to climate change impacts recommendations in the Watershed Management and Instream Flows sections above.

- Consider increasing opportunities for all types of restoration thinning. Explore additional opportunities. Keep the Oversight Committee informed on efforts to expand and impediments to implement active stand restoration.

Response:

June 1, 2010

Page 11

Response to Cedar River HCP Oversight Committee Comprehensive 8-year Review

See response to Watershed Management Recommendation #2 above.

- Explore all options for early invasive species control; early control saves future expenditures and ecological degradation. Consider a broad range of invasive species monitoring.

Response:

See response to Watershed Management Recommendation #1 above.

- Explore ways of verifying the ecological benefits from a managed streamflow regime.

Response:

See response to **Verifying the ecological benefits from a managed streamflow regime** in the Instream Flows section above.

- Assess risks of instream performance targets given trends in climate and water use.

Response:

See response to **"Assessing future performance based on trends in climate and water use"** in the Instream Flows section above.

- Keep the Oversight Committee informed concerning continued funding opportunities for research that relates to conservation efficiency (such as the metrics used to measure strategy progress) and other priority information needs, so that we can better support these efforts in a competitive funding environment.

Response:

Staff will routinely inform the Oversight Committee about challenges we confront to secure funding for research and monitoring efforts that would benefit management decisions for implementing HCP activities. SPU appreciates the Committee's interest in advocating for funding on its behalf.

- This review identified a number of areas in which the Oversight Committee would like to be kept informed. These include efforts to control invasive species, conduct restoration thinning, coordinated wildlife management, contribution to other regional conservation efforts, fish passage at Landsburg, and instream flows. Planning concerning climate change is of particular interest. New developments related to climate forecasts and scenarios, ideas of mitigation and adaption, trends in water use are all of interest.

Response:

SPU HCP staff will focus future Oversight Committee meetings on how SPU is addressing these topics relative to HCP implementation and values the Committee's advice to inform future HCP management decisions. Additionally, we invite the Committee to appoint a subcommittee to advise and provide insight to SPU in addressing climate change in Watershed Management HCP activities.

Sincerely,



Ray Hoffman, Director
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