

# Cedar River Habitat Conservation Plan Oversight Committee

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Re: Five-year comprehensive review of the Cedar River Habitat  
Conservation Plan

The Cedar River Habitat Conservation Plan (HCP) Oversight Committee has conducted the five-year comprehensive review of the HCP to evaluate progress to date on implementation. The scope of the Oversight Committee's review was focused on three issues:

1. Progress toward meeting specific performance and financial commitments;
2. Adaptive management that addresses the results of effectiveness monitoring; and
3. Integration and coordination of program elements.

The Cedar River HCP describes conservation strategies and implementation commitments to conserve listed species under the Endangered Species Act and other species of concern in the Cedar River Watershed or downstream in the Cedar River that may be affected by activities of the City of Seattle related to operation of its municipal water supply and hydroelectric systems or to watershed management. The Cedar River HCP has three principal components: watershed management, instream flows, and mitigation for the Landsburg diversion.

In general, the Oversight Committee finds that in the first five years of the agreement, major elements of the Cedar River HCP have been implemented. The most important among these include:

- Creation and institutionalization of two committees to implement the Instream Flow Agreement and the Landsburg Mitigation package;
- Passage of native, anadromous salmonids including coho, steelhead and chinook above the Landsburg diversion dam since 2003;
- Cessation of all commercial harvest of timber in the Cedar River watershed;
- Significant restoration of upland areas adversely impacted by past logging;

- Minimum instream flows in the Cedar River were provided at all times and supplemental flows were generally in keeping with targets in the HCP; and
- Performance and effectiveness monitoring of restoration actions were initiated to allow evaluation of predicted outcomes.

## **1. Progress on performance and financial commitments**

The Cedar River HCP has many specific performance and financial commitments. Progress toward meeting performance and financial commitments was evaluated separately for each of three HCP components. Most of the financial commitments for the first five years have been achieved. The Oversight Committee has identified some cases where implementation is behind the anticipated schedule of performance commitments and where actual costs differ from projected financial commitments in the HCP. Because formal commitments cover a broad range of activities over the 50-year period of the Cedar River HCP, these cases do not represent failures to achieve formal commitments. Instead, the Oversight Committee recognizes that differences between planning and implementation can be reasonably expected for any long-term project and, in most cases, reflect deliberate decisions that embody adaptive management or situations that are beyond the control of the City of Seattle. In these cases, the Oversight Committee is proposing recommendations to the City of Seattle to assure continued progress in HCP implementation. Overall, the commitments that have not been achieved do not appear to be significant causes of concern. For these reasons, the Oversight Committee recognizes the need for continued flexibility as the City of Seattle implements the Cedar River HCP.

### **1.1. Watershed management**

Major accomplishments with regard to watershed management include:

- no commercial harvest of timber and continued protection of the municipal watershed;
- elimination of problem logging roads through improvements, decommissioning and maintenance;
- stream and riparian restoration;
- upland forest restoration;
- monitoring of bull trout, aquatic invertebrates, marbled murrelet, northern spotted owl, and forest habitats; and
- research on bull trout, biomonitoring, and ecological modeling.

There were five areas where implementation of the Cedar River HCP is behind the anticipated schedule:

- road improvements
- ecological thinning
- riparian underplanting
- culvert replacement and
- some research topics.

The City of Seattle was planning for the improvement, elimination or maintenance of about 35 miles of logging roads in the first five years of the Cedar River HCP but this was accomplished for 22.5 miles. However, this work was more expensive than anticipated: 93% of the budget has been consumed completing 64% of the work. Eliminating problems with logging roads has been

more expensive on a per mile basis than originally estimated in the Cedar River HCP. Road improvements provide incremental benefits that accumulate over the years and keeping on schedule is important to achieve HCP goals. The Oversight Committee recommends that the City of Seattle increase the level of effort dedicated to road work until this performance commitment is achieved, recognizing this will entail higher expenditures for this commitment.

The City of Seattle was planning for about 500 acres of ecological thinning of overstocked, previously harvested forest stands in the first eight years of the Cedar River HCP, but only 157 acres of ecological thinning was accomplished through year 5. Ecological thinning has been delayed by both public concerns and cost and lack of interest by contractors. These legitimate reasons for postponing projects have prompted revisions of project designs. The HCP has 3 more years scheduled for completing this goal, and the City indicates that a second project was initiated in 2006 in which approximately 338 acres is scheduled to be thinned in 2006 and 2007.

The City of Seattle was planning for about 115 acres of riparian under-planting in the first eight years of the Cedar River HCP but only 21 acres have been completed. The HCP has three more years scheduled for completing this goal, so the City of Seattle can achieve this commitment if it redoubles its effort. As with road improvements, the financial commitment to riparian under-planting has been consumed by the work to date, so this activity has been more expensive than initially expected. The City of Seattle has indicated that the experience gained from progress to date and the material resources (nursery stock) it has built for under-planting will reduce the cost per acre of finishing this work. However, City staff are evaluating whether the target acreages in the HCP is appropriate now given what has been learned. City staff will consult with the HCP Oversight Committee if staff find that the acreage targets in the HCP appear too high with respect to areas in need of planting with conifers, and may recommend an amendment to the HCP.

The City of Seattle was planning to replace about 134 stream crossings to improve passage of peak stream flows and provide for fish passage in the first eight years; however, only 45 crossings have been replaced. As with road improvements and riparian under-planting, expenses are on-track to meet the financial commitment for stream crossing though in terms of meeting a projected target, performance has somewhat lagged. However, some of the most difficult projects are now complete and ways to improve the long-term effectiveness of future projects have been learned. For example, the City of Seattle has found that steel bridges are more effective for passing fish, and, in some cases, peak flows, result in less disturbance during construction, and require less long-term maintenance than culverts. Steel bridges are somewhat less expensive to install than the very large culverts needed for fish passage, but the cost of both large culverts and bridges has been much higher than originally estimated. This is a notable example of using adaptive management to achieve a more effective project. The Oversight Committee recommends that City of Seattle continue to use bridges instead of culverts and increase its financial commitment to this activity. The City of Seattle may also want to request an extension in the period of performance for this commitment from the other parties to the Cedar River HCP.

A number of monitoring and research projects (e.g., aquatic restoration monitoring, bull trout surveys, marbled murrelet surveys) have been implemented but expenditures have been less than financial commitments. In follow-up conversations with staff from the City of Seattle, it appears that these activities are less expensive than originally anticipated or have been paid for, in part, by capital projects when charges were capitalizable.

## **1.2. Landsburg mitigation**

Major accomplishments have occurred at the Landsburg diversion dam, which previously was a fish passage barrier. These include:

- construction and operation of a fish ladder for the safe passage of adult salmonids (except sockeye) migrating upstream
- screens on the diversion intakes to allow safe passage of juvenile salmonids moving downstream
- progress on permitting and legal proceedings to establish a permanent sockeye hatchery
- operation of the interim Sockeye Hatchery at Landsburg
- monitoring of fish passage at Landsburg
- evaluation of intake screens
- water quality monitoring and
- applied research for managing sockeye production.

The fish passage facilities were constructed ahead of schedule, but two commitments related to Landsburg mitigation are behind schedule: construction of the new sockeye hatchery and downstream habitat protection. The hatchery construction schedule has been delayed primarily due to legal challenges that are beyond the control of the City of Seattle. The City of Seattle has developed a new timeline and revised the budget for the new hatchery. Currently the hatchery is projected to be completed by 2009 with an approximately 9 percent increase in construction costs (to \$8.4 million).

The Cedar River HCP had a financial commitment of \$5.8 million (inflated to 2006 dollars) for land acquisitions that would protect downstream habitat during the first four years. The City of Seattle was unable to develop a collaborative relationship with King County on land acquisition and stewardship, which prevented acquisition in the first five years of the Cedar River HCP. The City has reached an agreement on how land will be acquired and managed with the Cascade Land Conservancy. Moreover, the City has obtained additional funding for land acquisition through grants in addition to existing financial commitments. Although rising property values reduce the amount of real property that can be acquired by a set financial commitment, ultimately the objective should be acquisition of properties with high ecological value rather than maximizing the cumulative area of acquired lands. Moreover, the City of Seattle is limited to acquiring properties that are available for purchase. The Oversight Committee understands that the City has identified properties of interest and wants to be sure that funds are available so that the City is prepared to purchase those properties if it has the opportunity.

## **1.3. Instream flows**

The two major components of instream flows for the Cedar River downstream of Landsburg have been achieved:

- the City of Seattle has been compliant with minimum stream flows at all times
- supplemental flows were generally provided in years that were targeted in the Cedar River HCP except for spring supplemental flows
- smolt outmigrant passage flumes have been constructed and are successfully operating at the Ballard Locks

There were four areas where HCP commitments have not been met:

- the engineering study for “Dead Storage” project
- improvements to the Ballard locks and
- research on flow accretion and switching criteria.

Although downramping operations have satisfied the conditions set forth in the Instream Flow Agreement, there were incidents when downramping rates were exceeded.

The “Permanent Dead Storage” environmental analysis is proceeding, but the engineering study has been postponed at the request of the City and with concurrence of the Instream Flow Commission (IFC). If there is not a need for dead storage water to meet firm demand nor significant conservation benefits of permanent dead storage, the Oversight Committee recommends that the City request that the IFC evaluate whether or not to proceed with the Permanent Dead Storage studies, and make a recommendation to the City. If the IFC recommends not proceeding with the Studies, there were different approaches suggested by HCP Oversight Committee members regarding whether or not to amend the HCP, which would need to be resolved in future discussions.

Streamflow down ramping rates in the Cedar River have been exceeded on occasion, though the events were small in magnitude and duration. The Oversight Committee requests that City staff provide annual briefings on these events. Briefings could include descriptions of specific causes of each event (i.e. equipment failure or operations failure) and explanation of City efforts to avoid such events in the future when possible. (This information is provided to the Oversight Committee annually in the Instream Flow Compliance Report, an appendix to the HCP Annual Accomplishments Report.) In general, the City’s reconstruction or reconfiguration of control valves and dam operations has created a new need for operational protocols. Several of the ramping rate violations are the result of new operations.

Funding commitments to Ballard Lock improvements for smolt passage were not achieved because of a lack of federal funding. A lack of future federal funding could also affect the Freshwater Conservation project. Commitments to two research topics (flow accretion study, switching criteria study) have not been achieved to date. Data collection for the flow accretion study is underway. Switching criteria are in place and being successfully implemented. The switching criteria study has been postponed given current reservoir operations, but criteria are needed to establish how the water supply and hydropower systems will be managed in future years. The Oversight Committee recommends that the IFC consider whether the switching criteria study is still needed, and, if not, whether the funds could be re-programmed to another use.

## **2. Adaptive management**

The City of Seattle has been developing a formal adaptive management system and using adaptive management as it implements the Cedar River HCP. Adaptive management depends on an ability to evaluate the consequences of management actions in terms of an objective and, then, to modify management to improve progress toward meeting that objective. Although a formal review of adaptive management was beyond the scope of this Oversight Committee review, adaptive management is integral to continued implementation of the Cedar River HCP. To this end, the Oversight Committee finds that it is essential for the City of Seattle to clearly establish a

limited set of metrics and associated benchmarks that will be used to monitor effectiveness of HCP activities. Because of uncertainties in species-habitat relations and the influence of factors external to the Cedar River HCP on the populations of species of concern, the metrics should be directly related to the species use of habitat in the Cedar River and the Cedar River watershed.

In particular, effectiveness monitoring should be informing specific questions about management. As the City of Seattle develops its formal adaptive management program, it should reflect on three questions:

- Is monitoring in place to determine how watershed management is improving conditions for northern spotted owl, marbled murrelet, and bull trout?
- Is monitoring in place to determine whether minimum flows and discretionary blocks are effective at improving conditions for Chinook salmon?
- Has the baseline data been developed to evaluate how hatchery operations will affect Chinook salmon utilization of mainstem habitats?

### **3. Integration**

The components of the Cedar River HCP do not stand alone. One of the most important challenges for the City of Seattle is to integrate the components of the HCP and to integrate HCP activities with other efforts addressing conservation and recovery of listed species in the region. As implementation of HCP components continues, it will become increasingly important to understand the interactions of activities in Lake Washington, the lower Cedar River, and the Cedar River watershed. An understanding of how the components of the HCP interact will be crucial for evaluating the most effective management actions in the future.

The Cedar River is prominent in regional salmon conservation and recovery efforts that have a much broader scope and purpose than the Cedar River HCP. As a result, it will be important for the City of Seattle to maintain open communication about its activities under the Cedar River HCP and coordinate to the extent possible with salmon recovery efforts in WRIA 8.

### **Summary of proposed recommendations**

After reviewing progress toward implementing the Cedar River HCP, the Oversight Committee proposes 12 recommendations to the City of Seattle. Those recommendations are:

1. Increase the level of effort dedicated to road improvement until this performance commitment is back on schedule, recognizing this will entail higher expenditures for this commitment;
2. Increase riparian under-planting if appropriate, or negotiate a more appropriate level of planting and/or another use of funds;
3. Continue to use bridges instead of culverts, where appropriate, and increase its financial commitment to this activity;

4. Request an extension in the period of performance for replacing stream crossings from the other parties to the Cedar River HCP;
5. Be prepared to fund and purchase properties with high ecological value downstream of Landsburg if it has the opportunity, and work with HCP Parties to extend the period of performance and continue to track the committed dollars;
6. Continue to report incidents of exceeding downramping rates in the Annual Flow Compliance Report, and identify the specific causes of each event (eg. equipment failure or operations failure) when down ramping rates were exceeded to see if there are any recurring causes that could be avoided in the future; brief the Oversight Committee annually on these efforts at one of its two regular meetings;
7. Provide information to the Oversight Committee on the fate of woody debris removed at Landsburg Dam;
8. The HCP Implementation Agreement provides as follows:

7.5 Transfers of funds between Cost Categories. The parties recognize that in order to effectively achieve the overall conservation objectives of the HCP, there may be situations in which transfers of funds between Cost Categories will be appropriate. Such transfers shall be accomplished through amendment of the HCP, as provided in part 12.0, after consultation with the Oversight Committee.

Therefore, the Oversight Committee recommends that the City evaluate the appropriateness of starting implementation of, or continuing to implement, the following HCP activities given new information and changed circumstances; and then present evaluation results to the Oversight Committee so that the Committee may provide recommendations to the City regarding continued implementation or re-programming cost commitments to other existing or new HCP activities:

- a. Request that the Instream Flow Commission decide whether to implement the Cedar Dead Storage Engineering Feasibility Study (if permanent dead storage is not needed to meet firm demand nor to provide significant conservation benefits of permanent dead storage), and recommend where the funds could be reprogrammed to another use;
- b. Request that the Instream Flow Commission evaluate whether the switching criteria study is still needed, and, if not, recommend where the funds could be re-programmed to another use;
- c. Request that the Services evaluate whether funds for the riparian under-planting program might better be re-programmed based on current data indicating that the acreage targets may be higher than warranted by riparian conditions.;

The Oversight Committee expressly recommends dedicating significant time at future meetings for the following purpose. In the event that the HCP Parties agree that it is no longer appropriate to fund certain HCP activities, the Oversight Committee wishes to make recommendations to the City (and to the HCP Parties) regarding what HCP

conservation activities reprogrammed funds should be transferred to. Reserve time on upcoming Oversight Committee meeting agendas and facilitate a process for the Oversight Committee to develop a prioritized list of HCP conservation activities to receive transferred funds to recommend to the City.

9. Extend the completion year for the Downstream Habitat activities (both under the Instream Flows and Landsburg Mitigation components of the HCP) to 2010;
10. Identify a set metrics and associated benchmarks directly related to listed species that will be monitored in future years to assess the effectiveness of the HCP, and provide funding for this monitoring;
11. Work toward integrating HCP components internally and with other conservation and recovery efforts in the region such that resources can be allocated most efficiently and effectively; and
12. When possible pursue grant funding to supplement HCP cost and performance commitments.

On behalf of the HCP Oversight Committee, sincerely,

Cyndy Holtz, Chair  
HCP Oversight Committee