

ATTACHMENT 2
CHEHALIS BASIN LEVEL 1 ASSESSMENT
TECHNICAL WORKSHOP SUMMARY

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WORKSHOP OVERVIEW

The purpose of the workshop was to solicit ideas and agreement from professionals working in the Chehalis basin about the specific direction the Level 1 Watershed Assessment should take for assessing; Water Quantity, Water Quality, and Fish Habitat. A letter was sent to over 30 invited participants and 4 agencies, inviting them to attend or send a representative. The workshop was organized by specific topic, to allow the consultant team to address each topic separately with the appropriate professionals present. The turnout was excellent and the workshop went smoothly. There was ample discussion on some of the more important issues, and where the consultant team required input, there was easy agreement on the assessment approach. The following paragraphs summarize some of the key discussions and agreements reached in each of the topic areas.

WATER QUANTITY

The water quantity portion of the workshop was the most complex, since there are more tasks involved and more steps to each analysis that might be considered for Level 1 or Level 2 Assessment. One of the most important issues discussed was the most useful way to partition the basin. Fifty-four USGS stream flow gages have been in operation at various times in the two WRIA's. Many of these represent short periods of record and there are distinct subbasins that do not have any gages. There are 29 instream flow control points listed in WAC 173-522-020, eight of which do not correspond with the location of stream gage records. The consultant team recommended the basin be partitioned into 29 subbasins based on a combination of the stream gage network and instream flow control points. Most of the 29 subbasins have gaged flows for at least some portion of the basin, however a few subbasins are ungaged. (For example, the East fork and Middle fork Hoquiam do not have any stream gage records at their control points, nor in their basins, but clearly constitute subbasins.) Basin characteristics will be described for all 29 subbasins. Hydrologic statistics will only be summarized for those subbasins where there is both a legally established control point and an established stream gage station. This represents approximately 20 subbasins. A few tasks were identified that require more intensive effort than could reasonably be recommended for all subbasins at a Level 1 Assessment, yet were considered important for either prioritizing direction for Level 2, or evaluating the cost effectiveness of an approach. It was agreed that 5 subbasins will be selected for the establishment of "natural" streamflows and comparison to "instream" flows.

Agreement regarding appropriate ground water tasks for the Level 1 was obtained and included three items: 1) A description of the potential influence of basin geology on groundwater, 2) initial examination of usefulness and spatial coverage of the available well level data, and 3) identification of data gaps. For each of the 29 subbasins, the potential impacts, at a general level, of land use on the surface and ground water resources will be summarized.

The discussion on Water Rights and Water Use was very informative. Participants offered data sources that had not previously been identified and ideas on how to deal with these issues and especially how to handle exempt wells in the assessment. For example, census and parcel data were suggested for identification of exempt wells, since these data are available electronically. The approach to Level 1 presented by the consultant team was generally agreed upon by those present.

Workshop participants also agreed that two issues initially identified as possibly occurring in Level 1 were clearly more appropriate for the Level 2 Assessment. These were: 1) Conducting a monthly water balance for each subbasin, and 2) Estimating water use by exempt wells. The first will be addressed in Level 2 once estimates of natural flows and water use are available for each subbasin. It was also agreed that the exempt well issue should first be addressed as a pilot project in Level 2, and that a recommended approach for this pilot project should be developed as part of the Level 1.

WATER QUALITY

The Chehalis Basin is unique in having a moderately large number of surface water quality studies conducted in many of the subbasins. However, the majority of the information available pertains to the Upper Basin. There are five Ecology ambient monitoring stations for which a host of water quality parameters have been measured for five or more years. These are predominantly on the mainstem, or at the mouths of the more significant tributaries; only one of these is in the Lower Chehalis. Four Total Maximum Daily Loads (TMDLs) have been completed in the Upper Chehalis WRIA; one is in progress in the Lower Chehalis.

Groundwater data is primarily available through the Department of Health public water supply system database. However, Lewis and Thurston County also maintain a database of private well records. Of the parameters that might be most useful to this process, nitrate is the only parameter for which there is a consistent record in these databases. There are also a few groundwater studies that focus on specific known or suspected problem areas, such as landfills, wastewater application to the land surface, dairies, and other contaminated sites. Thus, the groundwater assessment will focus on nitrate and provide a summary of known problems.

In addition to the freshwater system, there is also a large volume of information available for the estuary. Ecology maintains four long term ambient monitoring sites in the estuary for which physical parameters have been recorded. There are also numerable reports available on sediment contaminants, bacteria, dredging impacts, shellfish, etc.

The workshop discussions for water quality approach focused primarily on the parameters that should be assessed, with some discussion on analysis approach and how to address estuary issues. A laundry list of possible parameters were mentioned during the workshop. These included; all of the nutrients, turbidity, suspended solids, temperature, dissolved oxygen, and even aquatic macroinvertebrates. There was no opportunity to prioritize this list during the workshop. The concern, of course, is that analysis of all of the data would not be overly useful to the Partnership for decision making, and would preclude more critical analyses that might be

identified for the Level 2 Assessment. In discussions after the workshop, it was decided that the analysis approach should focus on those parameters that were most closely correlated with the intent of 2514 (water quantity and fish habitat). This approach was discussed and approved at a meeting with the TAC.

Another issue that arose during the workshop was how the estuary should be handled in the Level 1 Assessment. The Chehalis Basin is unique among WRIA's because the WRIA boundary was drawn to include the estuary. As with the selection of parameters described in the previous paragraph, the choices made at this stage will directly impact the funds available for tasks that will be prioritized for Level 2. If we select to do an assessment of the estuary data, we are by default selecting not to carry on tasks that will be identified later. Due to these concerns the consultant team recommended that the estuary assessment be quite limited, and that the need for more detailed assessment should be left to Level 2 when this need can be weighed against other priorities. This too was discussed at the TAC meeting. TAC members agreed with this recommendation and further refined our approach to recommend that the soon to be released fecal coliform bacteria TMDL be the emphasis of this portion of the assessment. Level 1 Assessment should provide a brief narrative discussion of the water quality in the estuary, noting problems including the TMDL for fecal coliform (scheduled to be completed by January), and qualitative estimates of the impacts of the mainstem on the estuary quality.

FISH HABITAT

The Chehalis Basin is in the enviable position of being "data rich" in terms of fish habitat information. There is excellent data base information collected as part of fisheries management (for example spawning surveys, or hatchery outplant records). For most of the Upper Chehalis WRIA, and for much of the Lower Chehalis WRIA upstream of the Wynoochee River, results of an extensive habitat survey, including summary reports and maps, are available. The most important data gap is information to assess instream flow needs. Although instream flows have been set for certain points in the basin, these were based on hydrologic statistics and not fish needs. Another deficiency is information on channel habitat features (e.g. pool, riffle, glide areas). Although this can to some extent be indirectly estimated with the large woody debris and from land use history. Last, the survey information has focused on salmonid species managed for sport or commercial fisheries (for example, coho, steelhead, chinook, cutthroat trout). Much less information is available on distribution of Bull Trout. Given the recent "threatened" listing of Bull trout under the Endangered Species Act (ESA), this may be a critical data gap.

Some of the additional options discussed for completing the Level 1 Assessment included; selecting a pilot project sub-basin and analyzing existing Instream Flow Incremental Methodology (IFIM) studies and instream flows, and completing a "limiting factors analysis" (LFA) for one of the sub-basins prioritized by the 2496 TAG. There was agreement by the fish habitat group that the Level 1 Assessment should consist of a general summary of fish habitat as it is already documented in the many reports and maps available. The group also agreed that the main focus of the effort should be integrating with the findings from the water quantity and water quality assessments and relating the information to land use. None of the optional assessment steps were considered to be important for completion at this time. However, it was also acknowledged that instream flow needs (as determined by fish) will be an important component

of future efforts and that the Level 1 assessment must provide direction and priorities to meet this need.

Using the feedback from the workshop the consulting team developed a detailed approach for completing the Level 1 Assessment. The TAC recommended that this approach would best be shown through development of an annotated Table of Contents for the Level 1 Assessment. This is contained in the following pages.