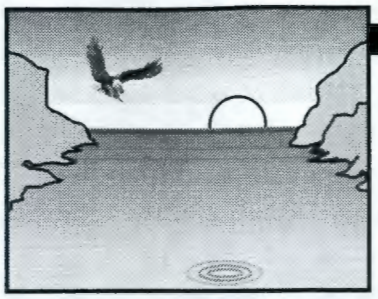


HANFORD SITE

Columbia River Comprehensive Impact Assessment *Fact Sheet–April 1997*

This fact sheet provides background on the Columbia River Comprehensive Impact Assessment (CRCIA), current status of the project, and information about upcoming public meetings and opportunities to comment on the Screening Assessment and Requirements for a Comprehensive Assessment document.

The Columbia River is an ecological treasure and resource that is part of the fabric of life and symbolic of the Pacific Northwest. This river flows through the Hanford Site and is a major receptor of contaminants that leave the site. The Columbia River has been subject to previous studies which have not satisfied the concerns of interested peoples of the Northwest regarding the ecological health and human impacts from contamination in the river.

In an effort to determine tribal and stakeholder expectations for an assessment of Columbia River risk, the Tri-Party Agreement agencies -- the U.S. Department of Energy, U.S. Environmental Protection Agency, and the Washington State Department of Ecology -- teamed with the Confederated Tribes of the Umatilla Indian Reservation, Hanford Advisory Board, Nez Perce Tribe, Oregon Office of Energy, and the Yakama Indian Nation (CRCIA Team). For 19 months the CRCIA Team has struggled with and identified many of the concerns with traditional risk assessments. This CRCIA Team also has pioneered an innovative approach for involvement of tribal nations and stakeholders in Hanford projects.

The project has been designed into phases. The first phase consists of both a screening assessment of risk from Hanford contaminants to the river and its users, and the development of requirements for a comprehensive assessment of the river. The requirements for a comprehensive assessment were written by tribal and stakeholder representatives on the CRCIA Team. These requirements define what would be acceptable to the CRCIA Team's participants as a comprehensive assessment for work done in the next phases.

Your comments are invited on how the screening assessment evaluated the river and its users, and how a more comprehensive assessment could be done in the next phases.

Public Comments on the draft *Screening Assessment and Requirements for a Comprehensive Assessment* document will be accepted from May 1 through June 17, 1997.

Information Meetings will begin at 6:00pm and be held at the following locations:

May 15	Richland, WA – Shilo Inn
May 20	Hood River, OR – Hood River Inn
May 21	Portland, OR – State Office Building
May 22	Seattle, WA – The Mountaineers Building

Screening Assessment of Risk

Objective

The screening assessment identifies areas where the greatest potential exists in the Columbia River for adverse effects on humans or the environment from Hanford-derived contaminants.

The value of conducting a screening assessment is that the assumptions, uncertainties, and limitations are applied consistently across the study area resulting in useful information relative to the areas thought to be of greatest concern. The screening assessment addressed current conditions between the Priest Rapids Dam (just upstream of Hanford) and McNary Dam (first dam downstream of Hanford). The scope of the screening assessment included data collected during the 1990s for 28 contaminants, 52 species, and 12 human exposure scenarios.

Scope

The CRCIA Team was involved with the establishment of indicators to judge the degree of hazard posed by Hanford-derived contaminants in the Columbia River and the adjacent banks of the river (the riparian zone). The screening assessment identified Hanford-derived contaminants most likely to pose the greatest risk. The final list of 28 contaminants was based on an initial screening of 560 different radionuclides and chemicals. The assessment used data from samples of Columbia River water, water flowing from the river banks, groundwater, external radiation, sediment, riparian soils, aquatic and riparian biota (e.g., fish and plants).

The screening assessment evaluated risk to human health and the environment. The ecological risk assessment defined a set of indicator species for which comparisons against toxicological benchmarks were made. The selection of species used in the screening assessment was based on an evaluation of 368 species within the study area and input from the CRCIA Team. The species evaluated in the screening assessment included aquatic and terrestrial plants, aquatic invertebrates, amphibians, reptiles, fish, birds, and mammals. For the human risk assessment, a suite of 12 human exposure scenarios was prepared to assess possible risk to humans, assumptions about the life styles of those who might be affected by contaminants from the Columbia River. The human exposure scenarios were evaluated for toxicity and carcinogenicity (potential cancer). The human scenarios assessed include industrial and fish hatchery workers, rangers, casual and avid recreationists, residents, agricultural residents, and five different scenarios for Native Americans.

What Have We Learned from the Screening Assessment?

The screening assessment posed this question:

> *Do levels of Hanford-derived contaminants in Columbia River water, sediment, and riparian zone materials pose a current threat to ecological resources, or a threat to humans who might be exposed to them?*

The answer to this question is yes, when considering the assumptions, uncertainties and limitations of the screening assessment. Environmental levels of some contaminants do appear to be elevated as a result of Hanford operations as well as from other human activities upstream of the Hanford Site. Species of the highest risk were those which reside in sediment in areas of upwelling groundwater. The predominant risk to people is from drinking Hanford Site groundwater or water from the riverbank along the Hanford Site and eating large quantities of food from the river and the riparian zone. In general, the exposure to people today is low because of restricted access to the Hanford Site.

The screening assessment provides information to support cleanup decisions, to help guide ongoing environmental surveillance programs, and to focus a subsequent and more comprehensive assessment.

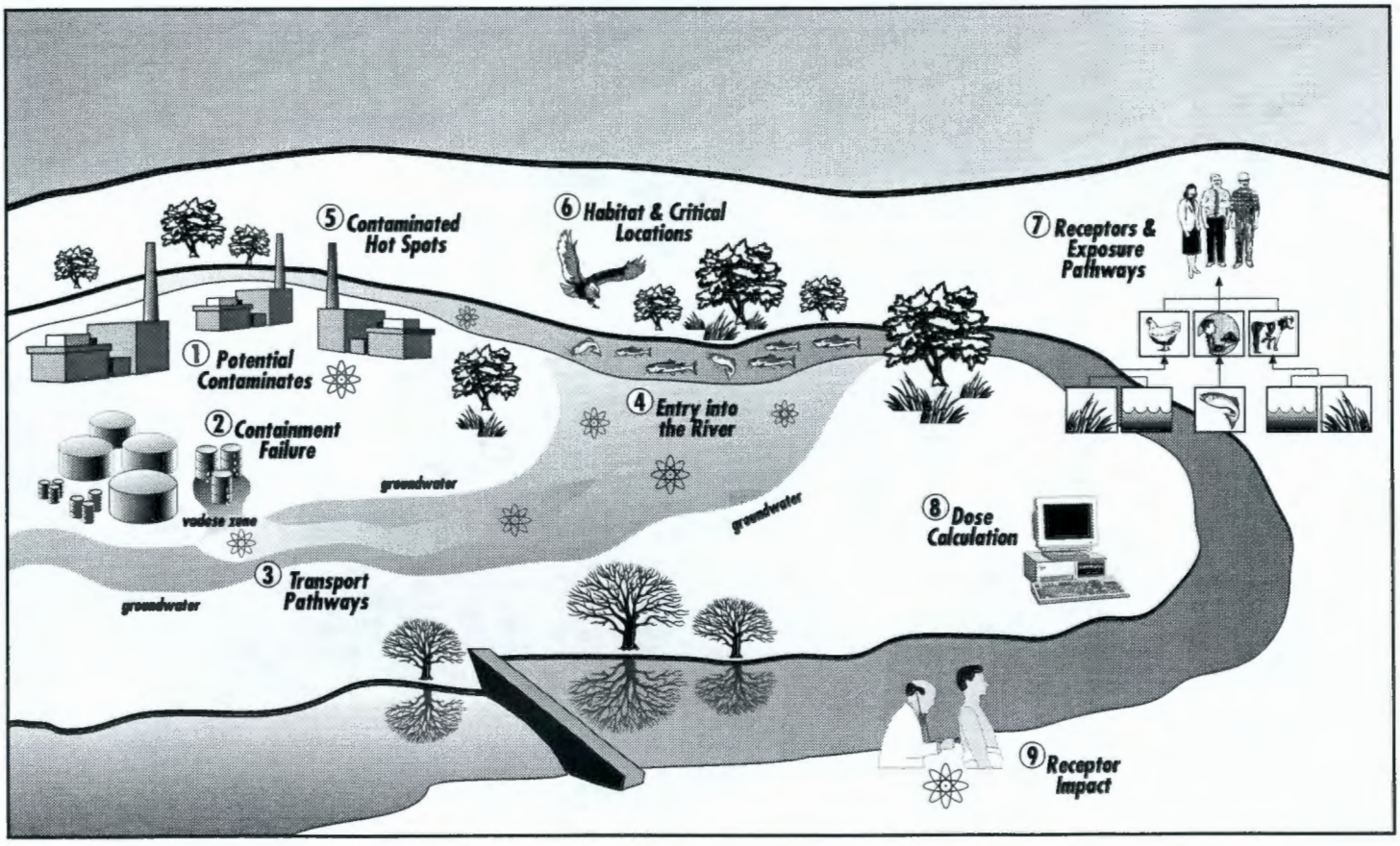
Results of the screening assessment are discussed in more detail in the document and will be discussed more extensively at the information meetings.

Requirements for a Comprehensive Assessment

The requirements section describes what a comprehensive assessment should be and how it should be conducted to address the interests and values of the affected peoples of the Pacific Northwest. The conceptual model for "Part II, Requirements for a Comprehensive Assessment" is illustrated in the figure below.

The premise for the comprehensive assessment is that the Columbia River is the major receptor for contaminants migrating from the Hanford Site now and in the future. The ecological resources of the river and humans exposed to river borne contaminants may be at risk in the future as contaminants migrate into the river. Follow-on assessment work done according to the requirements section will expand on the results of the screening assessment by including future impacts to the Columbia River and will be a valuable tool to evaluate the effectiveness of Hanford cleanup activities. The comprehensive assessment would assess the effects of Hanford-derived materials and contaminants on the Columbia River environment, river-dependent life, and users of river resources. It would also:

- assess human health and ecological health for the time period that Hanford materials and contaminants remain hazardous;
- evaluate the sustainability of the river ecosystem, interrelated cultural quality of life, and viability of socio-economic entities for the time period that Hanford materials and contaminants remain hazardous;
- provide results that are useful for decision making on Hanford waste management, environmental restoration, and remediation.



The requirements for a comprehensive assessment are subdivided into the nine modules shown in the figure.

HANFORD CLEANUP TOLL-FREE LINE: 1-800-321-2008

How Can You Be Involved?

For further information or to submit comments on the document, please contact:

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The document may be reviewed at the public information repositories listed below. Copies of the document may be requested from one of the contacts, or you can call the **Hanford Cleanup Toll-free Line at 1-800- 321-2008**. The document is approximately 600 pages and has ten diskettes. To save on paper, the entire document is also available electronically on the Internet at the following address:
http://www.hanford.gov/crcia/crcia.html

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