

April 5, 2010



Ms. Nancy Sutley, Chair
Council on Environmental Quality
730 Jackson Place, NW
Washington, DC 20503

PNWA comments on Federal Register notice re: “Proposed National Objectives, Principles and Standards for Water and Related Resources Implementation Studies”

Thank you for providing the opportunity to comment on the proposed initiation of revision of the Principles and Guidelines. Our comments are being submitted on behalf of the PNWA membership. PNWA represents Corps partners in and beneficiaries of water and land resources development. Our members include port authorities, towboat companies, steamship operators, shippers of cargo, agricultural producers, forest products manufacturers and other economic development interests in Washington, Oregon, Idaho and northern California. A listing of our member organizations is attached to this document.

We have several concerns that we respectfully urge the Administration to consider prior to moving forward with revisions to the Principles.

National Objectives of Water Resources Planning

The “National Objectives of Water Resources Planning” should recognize that a strong national economy is dependent upon strong regional and local economies. Contributions to regional economic development also contribute to national economic development.

Chapter I – Planning Principles

The Principles direct agencies to select and recommend the plan that provides the greatest net overall contribution to the National Water Resources Planning Objectives considering *both monetary and non-monetary effect* (emphasis added). The Principles do not provide agencies with a tool to weigh monetary and non-monetary effects, nor is there a guideline for selecting among plans that may have varying degrees of both effects. This is a very subjective goal, and one that will inevitably subject studies and eventual projects to undue legal exposure.

Chapter II – Planning Standards

Section 2 – Planning Standards

Subsection A directs that “studies shall seek to protect and restore natural ecosystems and the environment while encouraging *sustainable* economic development” (emphasis added). “Sustainable” economic development is a highly subjective term, and not one that has universal understanding or agreement. This subjective terminology will likely lead to significant challenges to any study or project.

Subsection B directs that studies “shall focus on identifying ecological service and intrinsic natural value changes and the significance of those changes, rather than attempting to assess the value of entire ecosystems”. Before one can value the changes to ecosystem services that may result from a water resources project, it is logical for one to first value the ecosystem service as a whole. Again, this is a goal based on highly subjective assumptions. We provide a method for monetizing environmental benefits in Subsection G (below). However, our proposal is specific to a situation in which costs are based upon actual expenditures on behalf of a species, and would not work in all “ecological service” cases, particularly when attempting to capture “intrinsic natural value”.

Subsection D directs studies to have a watershed perspective. Specifically, it notes that “the study area associated with an inland waterway or port project is likely to include the regional transportation sector, especially alternate modes of transportation, as well as other affected ports”. This leads one to wonder if the availability of rail or highways will be enough to reject a water resources project. What constitutes an “affected” port? Additionally, it bears noting that MARAD joined with the National Waterways Foundation in 2007 to sponsor a study of the relative energy efficiency, emissions, and safety of barging, highways, and rail as modes for freight movement. The study overwhelmingly affirmed that barging is the most energy efficient, lowest emission, safest mode for freight movement. The availability of other, surface modes in a region to move cargo should not be viewed as a disincentive with regard to navigation.

Subsection D on the watershed perspective also prescribes “ecosystem-based management”, which apparently includes “interconnectedness among systems, such as between air, land and sea”. Recognizing that water resources development studies are cost-shared with local sponsors, it is unrealistic to expect large scale studies of air and land systems as well.

The final portion of Subsection D notes that “watershed planning is an interactive and adaptive process and thus preliminary information may need to be updated over the course of an evaluation where appropriate and accompanied by mid-course corrections”. If information and data is in constant flux, when is the appropriate time to call a study complete, and move to the authorization process? While building in

adaptive management elements to accommodate shifting environmental realities may be appropriate for a project, infinite reassessment of data will ultimately lead to projects that are never able to move forward.

Subsection G allows for the monetization of currently non-monetized units. Following is our effort to demonstrate a metric that may be appropriate for monetizing the benefits of barge transport for ESA-listed and hatchery juvenile fish on the Columbia Snake River System.

Monetizing Environmental Benefits

In recent years, a project's Benefit/Cost (B/C) Ratio has become an increasingly important factor in determining whether a project is funded and, if so, at what level. Under the current Principles and Guidelines, only economic benefits are quantified in the B/C ratio. Environmental benefits are merely an asterisk on the spreadsheet. Project priorities are set by the economic benefit-cost ratio, and not by the combined economic and environmental benefits. This needs to change. Over the last two years, PNWA has argued that the P&Gs should be revised to provide direction on how to incorporate surrogate monetized environmental benefits in calculating B/C ratios and in setting priorities.

CEQ is now proposing that environmental benefits be monetized. Although it is not explicitly stated this way, our reading is that "balancing economic and environmental benefits" in the draft assumes that economic and environmental benefits are mutually exclusive. The draft appears to assume that projects that provide an economic benefit will have an environmental cost and vice versa. That is not always the case. Water resources projects in the Pacific Northwest often have complementary, positive economic and environmental benefits. What follows is a simplified example of how the environmental and Endangered Species Act (ESA) benefits for Columbia and Snake River navigation projects could be monetized.

Monetizing Benefits of Barge Transportation of ESA-Listed Salmon and Steelhead for Columbia and Snake River Inland Navigation Projects

Both routine annual maintenance and periodic major maintenance is needed on the navigation locks at Bonneville, The Dalles, John Day and McNary Dams on the Columbia River and Ice Harbor, Lower Monumental, Little Goose and Lower Granite Dams on the Snake River. The navigation locks at these eight dams provide for the annual movement of 10 million tons of cargo, valued at \$2 billion, on the inland Columbia Snake River System.

In addition to this economic benefit, the navigation locks also provide environmental benefits. Thirteen runs of Columbia Basin salmon and steelhead are listed as threatened or endangered under the Endangered Species Act. The barge transportation

of juvenile salmon and steelhead through the navigation locks on the Columbia and Snake Rivers is a key component of the Federal Columbia River Power System (FCRPS) Biological Opinion to prevent extinction and increase population levels for four of the 13 listed fish runs. In the absence of sufficient funding for these projects, the locks are at risk of catastrophic failure. If a lock gate were to fail, the river system would be shut down for a full year while a new lock gate is designed, fabricated and installed, assuming that repair is funded immediately. That would shut down both cargo movement and the fish transportation program, and it would potentially jeopardize the continued existence of four runs of ESA-listed fish.

For the Columbia and Snake River projects, environmental benefits are complementary with, and should be additive to, the economic benefits of navigation on the Columbia and Snake Rivers. Therefore, we strongly urge that the revised Principles and Guidelines include both monetized environmental and economic benefits. The environmental benefits, ESA benefits in the case of the Columbia and Snake Rivers, need to be added to the NED benefits for the transportation of cargo through the locks when calculating the B/C ratios for the eight navigation projects at the dams on the FCRPS. It is these combined and complementary economic and environmental benefits that should be used in prioritizing funding for the eight navigation locks on the Columbia and Snake Rivers.

A Columbia Snake River System Navigation Example

Fish transportation by barge provides measurable ESA benefits in terms of increased returns of ESA-listed adult fish to spawning grounds and hatcheries. Parameters that could be used to estimate ESA benefits and the associated monetized value of fish barge transportation benefits vary from lock to lock (as the number of barged fish through each lock varies), fish stock to fish stock (as the relative benefit varies by stock), and year to year (as conditions change). Thus, monetizing the ESA benefits of fish barging on the Columbia and Snake Rivers is subject to a more complex set of calculations than is presented in this example. Recognizing that, the following is presented as an example of how annual ESA benefits could be monetized for the FCRPS navigation locks. This example considers only two of four stocks that pass the Columbia and Snake River dams. Similar calculations would be needed for the other stocks.

Calculating Fish Benefits

The logic is this. If we were to lose navigation, including the option of fish transportation, how much would be spent on other measures to gain the same biological benefit? This provides a surrogate monetized environmental benefit; we are not trying to claim that the value of each ESA-listed fish can actually be stated. For example, if \$100 is spent for an action that will increase adult fish returns by 100, the surrogate monetized benefit

of an additional returning adult fish is at least \$1. It has to be at least that much because that is what was actually spent to get that additional adult.

The Oregon and Washington Fish and Wildlife Departments' Joint Staff Report of February 2, 2010 presents data that shows the following average return of adult fish past Lower Granite Dam on the Snake River for the three years from 2005-06, 2006-07, and 2007-08:

13,800 wild (ESA-listed) summer steelhead
139,019 hatchery summer steelhead
11,382 wild (ESA-listed) spring/summer Chinook
33,540 (est.) hatchery spring/summer Chinook

NOAA Fisheries' Northwest Fisheries Science Center published an Analysis of Juvenile Chinook and Steelhead Transport from Lower Granite and Little Goose Dams in January 2010. NOAA found that, for 2006-2008, the average increase in adult returns for fish transported compared to those who migrated in-river was:

7% from wild (ESA-listed) steelhead
22% for hatchery steelhead
3% for wild (ESA-listed) Chinook
11% for hatchery Chinook

The percentage of juveniles that are transported in fish barges varies by run and year, but it is roughly 50%, which is used for this example. Multiplying the percentage increase in adult returns due to fish barging by 50% of the returning adults for each stock yields the benefit of fish barging in terms of numbers of additional returning adults:

483 additional wild (ESA-listed) summer steelhead
15,292 additional hatchery summer steelhead
170 additional wild (ESA-listed) spring/summer Chinook
1,844 additional (est.) hatchery spring/summer Chinook

Monetizing the Fish Benefits

The premise of this calculation is that it is reasonable to consider that the monetized environmental benefit is at least as high as the amount of money that is actually spent to achieve an equal benefit. There are roughly 200 actions that are implemented under the Reasonable and Prudent Alternative (RPA) in the FCRPS BiOp. For many, the costs and fish benefits, measured in terms of the number of additional returning adults, are known or have been modeled and estimated. For those actions, the cost per additional adult fish can be estimated.

One example received a considerable amount of analysis. For the spring of 2004, spilling water over Columbia and Snake River dams to aid migrating fish rather than running the water through the turbines to produce hydropower was being argued in the U.S. District Court of Oregon. On January 24, 2004, staff from the Bonneville Power

Administration, Corps of Engineers and NOAA Fisheries presented a “Summer Spill Update and Analysis” to the Northwest Power and Conservation Council. They estimated that summer spill would cost BPA ratepayers \$77 million in increased energy costs and would provide for an additional return of 24 wild (ESA-listed) returning adults and 19,000 additional (non-ESA-listed) returning adults. The following year, the U.S. District Court of Oregon ordered the agencies to implement summer spill.

By applying the cost of the court-ordered action to the estimated adult returns, a surrogate value for each ESA-listed fish can be calculated. In this case, the region spent roughly \$3 million for each returning wild, ESA-listed adult.

Multiplying that \$3 million per fish by the additional number of wild (ESA-listed) summer steelhead and spring/summer Chinook that result from fish barging yields an annual monetized value of the fish barging program for these navigation locks:

\$1.45 billion annually for wild summer steelhead

\$510 million annually for wild spring/summer Chinook

Add those numbers to similar calculations for the other two Snake River fish runs that are barged on the Columbia and Snake Rivers to produce the annual monetized ESA-related fish benefits of the eight navigation projects and the fish transportation program.

Monetized environmental benefits should also include greenhouse gas benefits derived by maintaining barge navigation and keeping 700,000 trucks off the highways of the Pacific Northwest.

Finally, add the monetized ESA and other environmental benefits to the NED cargo benefits to determine the overall B/C ratio for the eight navigation projects associated with the dams on the FCRPS. It is these combined and complementary economic and environmental benefits that should be used in prioritizing funding for the Columbia and Snake River navigation projects.

Section 3 – Overview of the Planning Process

Subsection I directs agencies to capture “willingness-to-pay” in the monetary effects category as they evaluate the potential effects of alternatives. Though this subsection encourages agencies to rely on revealed preference data over stated preference data, it should be obvious that for many potential water resource projects and the ecosystems in which they are envisioned, revealed preference data will not be available. This leaves agencies to consider highly subjective, stated preference data that is not based on actual experiences of interviewees, but rather imagined experiences. There is the potential to vastly overstate the “willingness-to-pay” for particular ecosystem outcomes when one is relying on stated preference data, and thus skew the eventual plan that is selected.

Subsection I also directs agencies to consider regional economic monetary effects. We applaud the inclusion of regional economic development benefits when considering alternatives.

Subsection J describes how agencies are to compare and screen alternatives for selection. This subsection implies that the final preferred alternative will be selected from among those presented in the array. It seems logical that the ultimate preferred alternative could be one that combines elements of two or more of the alternatives in the array.

Subsection J also prescribes that “as a minimum, the final array shall include the No Action alternative, the primarily nonstructural alternative, and the environmentally preferable alternative”. Though the section recognizes that “the No Action and environmentally preferable alternatives may be the same”, it does not recognize that “in some cases, a technically and environmentally viable, primarily non-structural alternative might not exist”. This recognition *is* included in Section 3H (“Formulate Alternatives”), and bears repeating in this section on comparison and screening of alternatives. At a minimum, the final array should also include the most economically preferable alternative.

PNWA and its members are available to work with you and the Corps of Engineers in addressing any of the comments presented here. Please let me know if you have any questions or if we can be of service to you as you continue in this process.

Sincerely,



Glenn Vanselow
Executive Director

Attachment: PNWA membership listing



Allan Rumbaugh
Alaska Assoc. of Port Managers & Harbormasters
Anderson-Perry & Associates, Inc.
Ball Janik LLP
Bell Buoy Crab Co.
Benton County PUD #1
BergerABAM
Bernert Barge Lines
BST Associates
Central Washington Grain Growers, Inc.
CH2M Hill
Clark Public Utilities
Clearwater Paper
Columbia Basin Development League
Columbia River Bar Pilots
Columbia River Pilots
Columbia River Steamship Operators Assoc.
Cooperative Agricultural Producers
Cowlitz County Board of Commissioners
Dutra Group
East Columbia Basin Irrigation District
EGT Development, LLC
Foss Maritime Company
Franklin PUD
Office of Peter Friedmann
Gordon Thomas Honeywell Gov't. Affairs
Great Lakes Dredge & Dock
Wally Hickerson
ID Wheat Commission
International Longshore and Warehouse Union
Jan T. Fancher, CPA, PLLC
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Kleinfelder, Inc.
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Longview Fibre Company
Manson Construction
Maul Foster & Alongi, Inc.
McGregor Company
Moffatt & Nichol
Northwest Grain Growers, Inc.
Northwest Public Power Association (NWPPA)
Northern Star Natural Gas
Oregon Business Development Department
Oregon Int'l Port of Coos Bay
OR Wheat Growers League
Pacific Northwest Farmers Cooperative
Parametrix
PB Ports & Marine, Inc.
PNGC Power
Pomeroy Grain Growers
Port of Anacortes
Port of Astoria
Port of Benton
Port of Camas-Washougal
Port of Cascade Locks
Port of Chelan County
Port of Chinook
Port of Clarkston

Port of Columbia County
Port of Garibaldi
Port of Hood River
Port of Humboldt Bay
Port of Ilwaco
Port of Kalama
Port of Klickitat
Port of Lewiston
Port of Longview
Port of Mattawa
Port of Morrow
Port of Newport
Port of Pasco
Port of Port Angeles
Port of Portland
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Port of St. Helens
Port of Sunnyside
Port of Tacoma
Port of Toledo
Port of Umatilla
Port of Umpqua
Port of Vancouver
Port of Walla Walla
Port of Whitman County
Port of Woodland
Schwabe, Williamson & Wyatt
Seattle Public Utilities
Shaver Transportation Company
Stoel Rives LLP
Strategies 360
Teevin Brothers
Tidewater Barge Lines
USA Dry Pea & Lentil Council
WA Association of Wheat Growers
WA Public Ports Association
WA State Department of Commerce
WA State Potato Commission
WA Wheat Commission
Weyerhaeuser Company
Wildlands, Inc.

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