

Columbia-Snake River Irrigators Association Request for Investigation Letter

SENT BY E-MAIL AND REGULAR MAIL

June 2, 2017

Engineer Inspector General Kevin Elliott
Office of the Engineer Inspector General
U.S. Army Corps of Engineers
Kingman Building, Room 1L22
7701 Telegraph Road
Alexandria, Virginia 22315-3863

Inspector General Peggy E. Gustafson
Office of the Inspector General
U.S. Department of Commerce
1401 Constitution Ave. N.W.
Washington, D.C. 20230

SUBJECT: Request for Investigation – *What Happened to the Fish?*

Dear Inspector Generals Elliott and Gustafson:

The Columbia-Snake River Irrigators Association (“CSRIA”) requests that you investigate the decision in 2015 to allow Endangered Species Act-listed salmon and steelhead migrations to remain in the Lower Snake River, during extremely poor in-river conditions, rather than rely on the juvenile fish transportation program. The fish were exposed to adverse river conditions that almost certainly proved fatal.

We believe the evidence is clear: the Northwestern Division, USACE and NOAA Fisheries, which have a shared responsibility for assuring that ESA-listed fish are not jeopardized by river operations, failed in their legal obligations. Their actions (or inactions) are the subject of this request.

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Specifically, we request that your offices seek answers to two questions:

- Why did the Army Corps fail to properly implement the long-standing “spread the risk” orders issued by the U.S. District Court, which among other things called for the Army Corps to use the best available science when deciding when to transport juvenile fish downstream?
- Why did NOAA Fisheries acquiesce to an informal committee of stakeholders called the Fish Passage Advisory Center (“FPAC”) and not request, more forcefully, that the Army Corps begin transport to avoid jeopardizing fish runs?

We explain the events and the importance of this request below.

I. CSRIA’s INTERESTS

ESA litigation in the Columbia and Snake River basins has been pending for more than 20 years in federal district court, in Portland, Oregon (*National Wildlife Federation et al v. National Marine Fisheries Service, U.S. Army Corps of Engineers, et al.*, 3:01-cv-00640-SI and other cases). At issue has been the survival and recovery of 13 groups of ESA-listed salmon and steelhead. The issues raised by this letter focus only on the river operations in the Lower Snake River, where the Army Corps owns and manages four multi-purpose dams.

CSRIA is a defendant-intervenor in the litigation. We write this letter reluctantly, because -- at least in theory -- CSRIA, the Army Corps, and NOAA Fisheries should be working together to thwart attempts by plaintiff environmental groups (and others), who blame “killer dams” for fish mortality and propose “solutions” that diminish the value of the dams and harm the fish. Despite \$17 billion invested in fish recovery programs to date, there are more calls for breaching the Lower Snake River dams. In 2016, the federal district court went so far as to require that the defendant federal agencies examine “dam breaching” as an alternative in an upcoming Environmental Impact Statement on the operations of the river. We have conveyed our concerns to Major General Scott Spellmon, Commander of the Northwestern Division (see Attachment 1).

In the long run, CSRIA believes the only practical alternative is to invoke an exemption process under the ESA statute (commonly called the “God Squad”). We have requested the U.S. Department of Interior to take the first step toward this process (see attachment 2). In the short run, however, we will need to live with the litigation process and make intelligent management

decisions regarding ESA-listed fish. There is no more critical decision to make than when to transport juvenile salmon and when to leave them in the river. Although it is too early to calculate the precise effect of the decisions in 2015, we have attempted to examine preliminary data – and it strongly suggests that the unfortunate decisions in 2015 killed very significant quantities of ESA-listed fish (see attachment 3).

II. THE “SPREAD THE RISK” POLICY

The federal district court has long recognized that there were times when juvenile salmon and steelhead benefit by special barge transport (from the dams on the Snake River to below Bonneville Dam, the furthest downstream structure on the Columbia River).

In a 2005 opinion, U.S. District Court Judge James Redden noted that the Army Corps had developed both spill and transportation operations to facilitate juvenile salmon migration:

“This [approach] increased the chance of survival past the dams to the ocean and the subsequent return of adults to propagate the species. Studies do not establish, with absolute certainty, the relative benefits of spill versus transportation. Therefore, the Corps says it has adopted a “spread the risk” philosophy, using spill and transportation in relatively equal measure.” (Underline in original)

The “spread the risk” policy remains an integral part of the federal court orders on the management of the Columbia and Snake Rivers. If implemented properly, it involves an approximate 50-50 split between transportation and in-river migration, depending on flow and water temperature conditions.¹ The 2014 Biological Opinion (“BiOP”), prepared by the federal agencies, adopted this balanced approach.

III. THE EVENTS OF 2015

Records show that the federal agencies deviated from the long-standing “spread the risk” policy in spring 2015 when they used transportation to move only 13% of juvenile fish during low flow and high temperature conditions, when young fish are generally the most vulnerable to the

¹ The barge transport systems recirculate water and have refrigeration systems to control temperature. www.nww.usace.army.mil/Millions/Fish-Programs

adverse effects of remaining in the river (see Attachment 1). This was the lowest percent transported since records were first kept in 1993.

In addition to failing to meet their legal obligation to “spread the risk” in favor of maximizing spill, the federal agencies overlooked their obligation to create a transparent administrative record showing why they made a particular decision. In this case, records show NOAA Fisheries attempted to obtain agreement for an earlier start date to transportation (*e.g.*, to get the juvenile fish out of the river during adverse conditions), but the other fish managers did not support this effort. For reasons not reflected in the record, the Army Corps apparently felt helpless to act on NOAA Fisheries’ repeated requests.

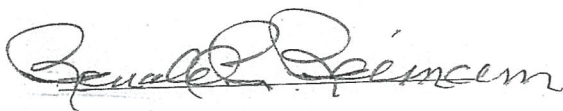
The forum for this discussion was called the Fish Passage Advisory Committee (“FPAC”), which is an *ad hoc* group, primarily of state and tribal entities, formed by the Fish Passage Center, a contractor to the Bonneville Power Administration. www.fpc.org/about_fpc.html The FPAC provides technical advice but has no statutory responsibilities, and yet it apparently served as the “gatekeeper” and squashed further discussion of when to begin transportation. This involved an illegal abdication of federal decision making by the agencies.

IV. CONCLUSION

CSRIA requests that you investigate this matter and answer the two questions posed above. We emphasize that the point of this exercise is to acknowledge how the ESA litigation process has failed the fish and to ensure that the 2015 events are not repeated in the future. Your report can help reform federal management of these important federal projects, and avoid the perhaps inadvertent fueling of a case for removing dams based on declining fish runs. Fish were killed in 2015, but it was mismanagement and illegal conduct that caused needless mortality.

Thank you for considering our request.

Respectfully,



Ron Reimann
CSRIA Board President



Darryll Olsen, Ph.D.
CSRIA Board Representative
DOlsenEcon@AOL.com
509-783-1623

Attachments

Distribution: Mr. Ryan, Zinke, U.S. Sect. Interior
Mr. Scott Cameron, U.S. Asst. Sect. of Interior
Mr. Elliot Mainzer, BPA Administrator
Mr. Dan James, BPA Dep. Administrator
Maj. Gen. Scott Spellmon, NW Div., USACE
Mr. David Ponganis, Programs Dir., NW Div. USACE
Mr. Barry Thom, WC Reg. Adm., NOAA Fisheries
Mr. Kevin Werner, Director, NWFSC, NOAA Fisheries

Other Interested Parties

Attachment 1

Letter to Maj. Gen. Spellmon
And Killing Fish Memorandum

Columbia-Snake River Irrigators Association

March 13, 2017

Maj. Gen. Scott Spellmon
Commander, NW Div., USACE
1201 NE Lloyd Blvd., Ste. 400
Portland, Oregon 97232

cc: Mr. David Ponganis
Dir. of Programs, NW Div. USACE

Maj. Gen. Spellmon:

Perhaps schedules and circumstances did not allow for a few brief moments to speak with you about CSRIA's perception of the Department of Justice's (DOJ) reply brief and oral argument before U.S. Judge Michael Simon, last Thursday (BiOp litigation, injunction motion, Lower Snake River project spill and the cessation of OM&R measures).

Both CSRIA's legal counsel and I are perplexed why your lead attorney (DOJ), and presumably senior managers, essentially excluded discussion of the juvenile fish transportation program, particularly when Judge Simon specifically queried defendants to identify the risks to fish for more project spill. The principal risk should be obvious: the penchant for fish managers (excluding the Corps) to put spill before the sound operation of the fish transport program, and that is exactly what happened in 2015.

We have read the FCRPS agencies' *ESA 2016 Comprehensive Evaluation* (January, 2017), and the "nothing is wrong here" explanation for 2015 operations (Section 1, page 19). But the story of 2015 is better told within the forensic management review prepared by Columbia Research Corp., at the request of CSRIA (see attached). Unfortunately, things did go wrong, including ignoring: the actual, lethal in-river conditions for fish; the 2014 BiOp requirements for "share the risk" operations for juvenile transport; and the specific recommendations/requests by NOAA Fisheries' scientists to engage the fish transport program. To be succinct, the scientists (and likely the Corps managers) were overruled by the Fish Passage Center, et al. So much for the Court's presumed faith in "adaptive management" for the spill program.

We are no strangers to this process, and the federal defendants, no doubt, have convinced themselves that extensive "collaboration" with the fish parties/plaintiffs, and respectfully conveying this deferent behavior before the Court, will yield a positive result—along with a few billion dollars from BPA. But the Court, last Thursday, should have jarred some reality into this graceful notion.

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If the federal defendants have any doubt about whether Judge Simon holds any bias while reviewing this legal proceeding, the Judge should have fully dispelled such during the first five minutes of the injunction hearing. As the regional press correctly reported, Judge Simon scolded the Corps (federal defendants) for holding EIS scoping meetings that did not allow for meaningful public input on the dam breaching alternatives, because he (his chamber) had received phone call complaints from “the public.” Judicial ethics aside, Judge Simon could have had his staff go to a scoping meeting or review the EIS comments website—and that would have squelched the phone static. But obviously, he preferred to “share his concerns” with the, presumably, noncompliant defendants.

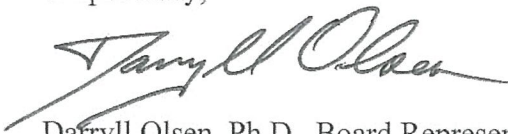
More to the point, Judge Simon’s statements make clear that he views the EIS process (and injunction motion) as the path toward breaching the Lower Snake River dams. It is no coincidence that his predecessor, Judge Redden, acknowledged, in an April 2012 interview, that “we need to take those dams down” (Idahoptv.org Outdoor Idaho website). Clairvoyance is not required to perceive Judge Simon’s objective.

The above should bring a sobering fact into full view: the 25-years of Columbia-Snake River BiOp litigation have failed. It has failed competent agency resource management, by the Corps and others; it has failed reasonable judicial prudence from the Oregon U.S. District; it has failed interagency collaboration and adaptive management; it has failed the fish.

It should now be manifest to the federal defendants, particularly the Corps, that they should be rethinking past tactics and strategy. Perhaps it is time for some seasoned thinking about initiating the ESA-Committee (God Squad) process. For CSRIA, there is no other means toward making sustainable decisions for Columbia-Snake River fish mitigation, and ending the triumph of judicial inequity.

As you see fit, CSRIA (defendant-intervener) is available for appropriate discussion.

Respectfully,



Dafryll Olsen, Ph.D., Board Representative
Columbia-Snake River Irrigators Association

Letter Distribution: CSRIA Board/Members

Attachments
(Management Memorandum Distributed to Interested Parties).

Columbia-Snake River Irrigators Association

Media/Press Release—For March 9, 2017

More Information: 509-783-1623

Killing Fish--Columbia River ESA Litigation and 2015 Fish Operations

One tragic scene from the Vietnam War came from a U.S. Army Officer who conveyed that “to save the village, they would have to destroy it.” The Columbia-Snake River Endangered Species Act (ESA) litigation, now belaboring for twice as many years as the Vietnam Era, induced a similarly destructive image in 2015, when state/federal fish managers engaged in lethal, in-river juvenile fish passage actions instead of relying on the Lower Snake River fish transportation program. Today, an injunction motion was heard in U. S. District (Oregon) Judge Michael Simon’s Court to perpetuate killing fish, and the ESA fish survival objective is being turned around backward by environmental groups and the state of Oregon.

The long years of Columbia-Snake River Biological Opinion (BiOp) legal wrangling have cost the region billions-of-dollars, and nourished some fanatics within the “salmon recover industry” who seek solely to breach the Lower Snake River dams rather than acknowledge the projects’ substantial benefits; including operation of a well-developed juvenile fish transportation system that can protect fish in years when low water and high temperature conditions prevail--a year like 2015.

CSRIA’s legal counsel methodically described the legal and operational management principles that should have guided fisheries operations in 2015, but were either overlooked or deliberately altered. Citing a forensic management review prepared by Seattle-based Columbia Research Corp., it was apparent that important warning signs and protocols were ignored:

- The 2015 in-river conditions were the worst since 2001, and low water flows were forecast well before the start of the fish migration period. The early spring water temperatures were high.
- At a minimum, state and federal fish managers should have been following a BiOp (Court) mandated fish passage policy known as “spread the risk,” where roughly equal numbers of juvenile fish are diverted by spillway passage or placed in water temperature controlled transport barges.
- But the fish passage managers, some unyielding supporters of project passage fish spill, delayed the start of the juvenile fish transportation program.
- Not everyone agreed with delaying fish transport, and twice, NOAA Fisheries’ key scientists called for immediate fish transport operations. They were rebuffed by the on-site fish passage managers.
- In a year when juvenile fish transport should have been maximized (and called for under the BiOp), fish transport numbers were reduced to an all-time low, with only 13% transport. River water flows and temperatures were comparable to 2001, where the documented fish survival benefits from the transport program totally overshadowed in-river fish passage survival.
- Fish managers had to have known the danger. The 2015 fish passage operations will contribute significantly to impaired adult salmon/steelhead returns to the Columbia-Snake River system in 2017 and 2018.

The 2015 fish operations stand as a testament to CSRIA’s call for invoking the Endangered Species Act Committee (God Squad) to settle, with reasoned judgment, the required fish protection measures for the Columbia-Snake River system. The 25-years of BiOp litigation have failed the fish.

Columbia Research Corp.
Columbia-Snake River 2015
Management/Operations Review

MEMORANDUM

To: Dr. Darryll Olsen, Columbia-Snake River Irrigators Association
From: Daniel Seligman, Attorney at Law, Columbia Research Corp.
Date: March 2, 2017
SUBJECT: The “spread the risk” policy for transporting juvenile fish and the extreme river conditions of spring 2015

QUESTIONS ASKED

You asked me to answer the following questions based on a review of legal documents and available public records:

- Is the “spread the risk” policy for transporting juvenile fish on the Columbia and Snake Rivers still valid?
- Did the federal agencies¹ with a role in river management correctly implement this policy when they allowed only 13% of juvenile fish to be transported on the Snake River during extreme low flow and high temperature conditions in spring 2015?
- Were these actions consistent with the 2014 Supplemental Biological Opinion (“Supplemental BiOp”) prepared by NOAA Fisheries?

ANSWERS

- Yes, the “spread the risk” policy is still valid and should guide federal agencies in deciding whether and when to transport juvenile fish rather than let them remain in the river. The policy, as adopted the federal court, recognizes that both transport and in-river migration may benefit young fish at certain times of year and under certain water conditions, or, conversely, may cause unintended mortality. The policy is supposed to rest on science, not a rigid formula that is applied no matter what. The policy contemplates that federal agencies will generally leave about half the fish in the river and transport the other half.

The policy was first approved by U.S. District Court Judge James Redden in 2005. Plaintiffs in the case (environmental groups and others) asserted that federal agencies had violated the Endangered Species Act (“ESA”) by not protecting threatened and endangered salmon and steelhead runs on the Snake River.

In his opinion, Judge Redden noted that the U.S. Army Corps of Engineers (“Corps”) had developed both spill and transportation operations as early as 1992 to facilitate juvenile salmon migration:

This [dual approach] increased the chance of survival past the dams to the ocean and the subsequent return of adults to propagate the species. Studies do not establish, with absolute certainty, the relative benefits of spill versus transportation. Therefore, the Corps says it has adopted a “spread the risk” philosophy, using spill and transportation in relatively equal measure.”² (Underline in original)

Judge Redden invalidated an all-transport approach for late spring because it contained no provisions for in-river passage (spill) and constituted a radical departure from the “spread the risk” policy.³ But he upheld the proposal for early spring spill and transport because it “effectuates a reasonably balanced spread-the-risk approach consistent with past operations” and “is based on the best available science.”⁴

The “spread the risk” policy remains – at least on paper – an integral part of the federal court orders on the management of the Columbia and Snake Rivers. If implemented properly, it would involve an approximate 50-50 split between transportation and in-river migration, depending on water and weather conditions and other factors.

- The federal agencies deviated from this long-standing policy in spring 2015 when they used transportation to move only 13% of juvenile fish during low flow and high temperature conditions, when young fish are generally the most vulnerable to the adverse effects of remaining in the river. This is the lowest percent transported since records were first kept in 1993.⁵ Although there is no fixed formula for determining if the “spread the risk” policy is properly designed or implemented, the federal agencies have an obligation to create a transparent administrative record showing why they made a particular decision. In this case, records show NOAA Fisheries attempted to obtain agreement for an earlier start date to transportation (e.g., to get the juvenile fish out of the river during adverse conditions) but other agencies and entities did not support this effort. From the records in the public domain it is not possible to say more about the federal decision-making process: we do not know who made (or acquiesced) to the decision to allow for significantly-reduced transport under these extreme river conditions.
- The actions of the federal agencies do not appear consistent with the 2014 Supplemental BiOp, which (among other things) called for starting transport of juvenile steelhead on April 21 and spring Chinook on May 1, subject to changes reflecting conditions on the ground. As it turned out, more than half the fish had already migrated when transport began.

LEGAL DEVELOPMENTS

The issue of transport versus in-river migration is now before U.S. District Court Judge Michael H. Simon, who took over the long-standing proceedings from Judge Redden. On May 6, 2016, Judge Simon found that the 2014 Supplemental BiOp, prepared by NOAA Fisheries, was inadequate and ordered the Corps and other federal agencies to prepare a new BiOp and accompanying Environmental Impact Statement on river operations.

Judge Simon directed the agencies to address a host of alternatives for protecting the ESA-listed fish runs. Meanwhile, Judge Simon held that the existing 2014 Supplemental BiOp remained in place.

Then, on January 9, 2017, plaintiffs State of Oregon and National Wildlife Federation asked the Court to order more spill at the four Lower Snake River dams for fish passage.⁶ The request has taken the form of a proposed injunction in which they ask the Court to direct the defendant federal agencies to follow a formulaic approach, spilling a specified amount of water (measured in cubic feet per second) at each dam.

There are two problems with this request.

First, the existing Supplemental BiOp does not call for rigid spill requirements, as Oregon requests. Oregon's request, for example, would double the spill at Lower Granite Dam on the Snake River (subject to a cap on total dissolved gas). Its motion to support the requested injunction contains no analysis of the long-standing "spread the risk" policy. In contrast, the 2014 BiOp confirms the policy and calls for an annual review and other technical analysis to adjust the start date of transportation to respond to conditions in the river.

Second, Oregon asked the Court to delegate power away from the federal agencies and give it to the "salmon managers" of the Fish Passage Advisory Committee ("FPAC"), an adjunct group of the Fish Passage Center ("FPC"). The FPC retains no legal authority to make Columbia River operations decisions.

Nonetheless, Section II, Spill (3) of Oregon's proposed order states:

The Corps may shift spill patterns or reduce spill below spill cap levels based on biological constraints if there are no objections to the proposed shift or reduction by the salmon managers of the Fish Passage Advisory Committee.

If adopted by the Court, this provision would further delegate and diffuse authority away from the federal officials with a statutory duty to ensure ESA compliance and comply with the Court's orders based on the best available science.

In prior years, NOAA Fisheries scientists (Northwest Fisheries Science Center in Seattle) found that juvenile salmon and steelhead are generally better off with transport in low flow, high-temperature conditions. See declaration of Dr. Darryll Olsen of CSRIA ("Olsen Declaration") filed with the Court on February 9, 2017. In his declaration, Dr. Olsen cited a 2010 NOAA Low Flow Transport Operations Proposal, previously filed with this Court on March 31, 2010. Dr. Olsen highlighted the evidence that in previous low-flow years, like 2001, "transport survival benefits totally overwhelm the in-river survival estimates."⁷

Despite NOAA's findings and concerns, here are the facts surrounding the 2015 spring operations:

1. The Supplemental BiOp, filed with the Court in January 2014, confirmed the long-standing policy of "spreading the risk" between transportation and in-river migration for juvenile fish. It concluded that "data indicates transport returned more adult steelhead and spring Chinook" for all years with the exception of 2006.⁸ It noted that spring Chinook often show no benefit to transport prior to May but steelhead, in contrast, appeared to do better using a start date in April. "A challenge to managing the transport program is to select a period when it is clearly beneficial to both species."⁹

2. The BiOp therefore adopted an April 21 start date for steelhead transportation, subject to adjustments from an inter-agency committee, Technical Management Team (“TMT”) – the most important of the regional technical and operational review committees.¹⁰
3. According to the 2014 Supplemental BiOp, the TMT would review studies and provide for an annual recommendation for how to achieve the goal of transporting about 50% of juvenile steelhead. Thus, the planning dates for transporting steelhead were tentatively set to start at Lower Granite between April 21 and April 25 unless the Corps adopted a later date recommended by the TMT but no later than May 1. These dates were intended to be flexible. The BiOp made clear the Corps could select an “alternative start date” if it determined, in conjunction with NOAA Fisheries, that the change was warranted.¹¹
4. In February 2014, only a month after the BiOp was submitted to this Court, the Fish Passage Center advocated for a later date for transportation. In a memo to the Fish Passage Advisory Committee, FPC data analyst Jerry McCann disputed a key assertion in the BiOp and objected to the April 21 start date.¹²
5. In March 2014, FPC manager Michele DeHart wrote to the Oregon Department of Fish and Wildlife (“ODFW”) arguing against an essential part of the just-adopted BiOp.

“There is no biological basis for assuming a 50/50 split [between in-river and transportation], and the earlier transportation date [April 21, adopted in the BiOp] is not supported by the most recent survival analysis,” DeHart wrote.¹³

She concluded: “Current data does not support a transportation goal of 50% steelhead, so BiOp requirements for transportation dates should be redefined.”¹⁴
6. Then, in April 2014, ODFW representative Erick VanDyke wrote NOAA on behalf of the state, federal and Tribal fishery agencies – the same “salmon managers” that Oregon would like to empower in its proposed order. VanDyke urged NOAA to abandon the April 21 start date for collecting juvenile fish on Snake River. The technical data do not support April 21, he concluded.¹⁵
7. The Army Corps’ Fish Operations Plan (“FOP”), dated March 2015, apparently reflected those views. It adopted a **May 1** start date for juvenile steelhead transportation assuming average runoff conditions.¹⁶
8. By early April 2015, however, the federal agencies knew the snowpack was low.¹⁷ They also knew that rising temperatures would threaten juvenile fish. The April 1 water temperatures in Little Goose reservoir were higher than in the previous seven years. See **Attachment A** for a summary of the spring 2015 operating conditions and related technical management information prepared by Dr. Darryll Olsen of CSRIA.
9. Even then, the federal agencies did not change (move up) the May 1 start date for transport.

10. The federal agencies, however, had the freedom to do so. The Corps had the discretion to start the barge transports earlier and thus avoid leaving the fish to migrate through warm reservoirs.¹⁸ The FOP, for example, allowed the Corps and other entities that are members of the TMT to recommend changes in the juvenile transportation program.¹⁹

Changes in spill levels when flow conditions are higher or lower than anticipated will be coordinated through the TMT. This could include potential issues and adjustments to the juvenile fish transportation program.

11. But the TMT minutes for spring 2015 show that changes were not even discussed much less implemented. Instead, it was the FPAC that appeared to slam the door shut on earlier transport. On April 14 and again on April 21, scientists from NOAA Fisheries proposed starting the transport program early. But the NOAA proposal received no support from other entities on the FPAC and was apparently not submitted to the TMT.²⁰
12. Nor does the TMT's Year End Review shed light on what happened in the spring of 2015 and how the federal agencies will likely respond in the future to similar events. Among the questions raised was whether the agencies "are using transportation as effectively" as they could, particularly in dry years. "Should we increase transportation in low flow years? Start transporting earlier than May 1?" But those are the types of questions that the 2014 Supplemental BiOp and prior BiOps had already attempted to answer.²¹
13. The default date of May 1 remained in place, a decision that was consistent with the views of the FPAC and the salmon managers who sought to adopt a later start date for transportation even in low flow and high temperature conditions.
14. But the fish migrated early that year. By May 1, when collection for transport began at Lower Granite and Little Goose, and by May 2, when collection began at Lower Monumental Dam, more than 58% of wild yearling Chinook and hatchery fish had already passed in the river. As for steelhead, about 48% had already passed Lower Granite, according to a NOAA memorandum prepared by Northwest Science Center, senior scientist Richard Zabel ("Zabel Memo").²²
15. In the end, only 13% of fish were transported – the lowest percentage since records were first kept in 1993.²³
16. What conditions did the fish face instream? In general, "the combination of conditions in the Snake River during the 2015 migration was unlike any year in our time series," the Zabel Memo said. "Water temperatures and spill percentages reached record highs while flow was near record low."²⁴
17. What effect will this have on returning spring Chinook and steelhead? We do not know precisely but if the past is any record, we can expect to see diminished returning runs (compared to what would likely have occurred if more transport had been used selectively during this period). See analysis in CSRIA's response to the motion for injunction. PACER docket #2141.
18. Despite those facts, Oregon now comes before this Court and asks that it to grant the salmon managers of the Advisory Committee of the Fish Passage Center more authority – a *de facto* veto over the Corps and NOAA Fisheries scientists.

19. The “spread the risk” approach, as noted above, has been federal policy since Judge Redden approved it in a 2005 opinion, and it remained in effect for the 2014 Supplemental BiOp.
20. The plaintiffs’ proposed injunction would in effect eliminate or permanently weaken the policy. A key portion of the 2014 Supplemental BiOp would become invalid.

CONCLUSION

Under this Court’s May 6, 2016 order, the 2014 Supplemental BiOp remains in place until a new BiOp is prepared. The existing BiOp reiterates long-standing policy to “spread the risk” between transport and in-river passage. Unfortunately, the available documents do not explain why federal agencies did not respond more quickly and forcefully to extreme low flow and high temperature conditions in spring 2015 and begin transport earlier than scheduled. Granting the plaintiffs’ request for an injunction will likely tie the hands of the agencies in the future and make flexible, adaptive management more difficult to implement. A repeat of 2015 seems likely.

ENDNOTES

¹ There are four federal agencies with a role in river management and ESA compliance on the Columbia and Snake Rivers:

- U.S. Bureau of Reclamation;
- Bonneville Power Administration (“BPA”);
- U.S. Army Corps of Engineers (“Corps”); and
- National Oceanic and Atmospheric Administration Fisheries (“NOAA Fisheries”).

The Army Corps owns the four federal dams on the lower Snake River and therefore plays an essential role in river management there. Under the ESA, the “action agencies” are required to consult with a variety of entities, including states and Tribes. The consultation process has resulted in the significant delegation and sharing of duties. For purposes of this memorandum, however, we focus on the actions of the federal agencies that have specific obligations under the ESA and the Biological Opinion (“BiOp”).

² *National Wildlife Federation et al. National Marine Fisheries Service, et al.*, case no 3:01-CV-00640 (“*NWF litigation*”), order from Judge James Redden, December 29, 2005, page 6, PACER docket #1221.

³ *Id.* at 6-7.

⁴ *Id.* at 6-7.

⁵ See page 21 of CSRIA’s response to the motion for injunction for two charts showing historic transportation percentages of spring Chinook salmon and steelhead. PACER docket #2141.

⁶ *NWF litigation*, PACER dockets #2112 and #2114.

⁷ *NWF litigation*, PACER docket #2147 at page 12 for declaration of Dr. Darryll Olsen (“Olsen Declaration”). The NOAA study was originally filed with this court in 2010, PACER docket #1752-5.

⁸ See 2014 Supplemental Biological Opinion (“2014 BiOp”), January 17, 2014 at page 369.

⁹ *Id.* at page 369.

¹⁰ *Id.* at page 370. See revised Reasonable and Prudent Alternative (“RPA”) 30 at page 375.

¹¹ *Id.* at pages 369-370.

¹² See McCann memo dated February 18, 2014 in the FPAC minutes, available at www.fpc.org/documents/fpac_minutes/fpac_minutes_currentyear.html

¹³ See DeHart memo to Ed Bowles at ODFW, March 25, 2014, page 4, and as recorded in the FPC’s Advisory Committee minutes, available at www.fpc.org/documents/fpac_minutes/fpac_minutes_currentyear.html

¹⁴ *Id.* at page 5.

¹⁵ See VanDyke memo, available at www.fpc.org/documents/fpac_minutes/fpac_minutes_currentyear.html

¹⁶ See Army Corps, Fish Operations Plan, March 2015, page 8.

¹⁷ See Fish Passage Advisory Committee memorandum, April 6, 2015, page 2, available at www.fpc.org/documents/fpac_minutes/fpac_minutes_currentyear.html

¹⁸ *Id.*, page 1.

¹⁹ *Id.*, page 16.

²⁰ See “Action Notes” from the FPAC meetings on April 14, 2015, page 2, and April 21, 2015, page 2. NOAA advocated possible alternative every other day transport beginning on April 25.

²¹ Technical Management Team, Year End Review, Minutes of December 2, 2015 meeting, page 28.

²² See memorandum from NOAA scientist Richard W. Zabel (“2015 Zabel Memo”)(page 6), dated September 10, 2015, and attached as Exhibit 3 to the Olsen Declaration, PACER #2147.

²³ See minutes from the Technical Management Team, year-end review, December 2, 2015, page 20. See, also, memorandum from Richard W. Zabel (2016 Zabel Memo”)(page 21), dated September 26, 2016, and attached as Exhibit 4 to the Olsen Declaration, PACER #2147.

²⁴ 2015 Zabel Memo, page 5.

ATTACHMENT A:
CSRIA Columbia-Snake River 2015
Operations Summary
(NOAA Fisheries Data, 2015, 2016)

2015 Lower Snake River Temperature-Flow-Spill And Juvenile Fish Transportation and In-River Survival

Water Temperature Conditions (Little Goose Dam):

- The initial April 1, daily water temperatures were higher than the previous 7-year tracking period; and the temperature was about 25% higher than the tracking period (2008-2015) mean temperature.
- The April 1-15 temperatures remained higher than the tracking period mean temperatures, then approximately coincided with the mean on about April 15.
- The April 15-30 temperatures consistently exceeded the tracking period mean temperatures by about 12-15%.
- After April 30, temperatures exceeded the tracking period mean by 15-30% (or more).

Flows (Little Goose Dam):

- The April 1-15 flows decreased relative to the tracking period mean by about 40-45%.
- The April 15-30 flows remained below the tracking period mean by about 40%.
- After April 30, the flows continued to decrease below the tracking period mean by >40%.

Spill Program (Mean Spill at LGR, LGO, LMN):

- During April 1-30, the project spill program ranged from about 35-40% of flow, with spill at about 50% of flow on April 15.
- During April 30-May 30, the project spill program ranged from about 30-40% of flow.

Fish Passage (Lower Granite Dam):

- Peak Yearling Chinook fish passage occurred between April 15-30 and April 30-May 15. The same peak passage periods occurred for Steelhead.

Transportation TIRs Under Low Flow Conditions:

- The NOAA Fisheries estimates for transport vs in-river passage survival display higher juvenile fish survival for transport versus in-river passage for lower flow water years—2001, 2005, and 2010. This applies to both Yearling Chinook and Steelhead.

In-river Passage Survival Estimates, 2015:

- The 2015 in-river passage survival, between LGR and McN) for Yearling Chinook (68%) and Steelhead (63%) is among the lowest survival rates for low flow/high temperature conditions. In 2001, Yearling Chinook survival was about 56% and Steelhead survival at about 17%.

Conclusion:

- Hindsight provides “20-20 vision,” but there were clear indicators in the early spring of 2015 that water temperatures and low flows would prevail during the juvenile fish migration period. Given that the fish managers were well aware of previous years’ impacts on low flow-high temperature conditions, the project(s) spill program should have been substantially decreased, or curtailed, and all efforts made to optimized the juvenile fish transportation program. Oversight was lacking.

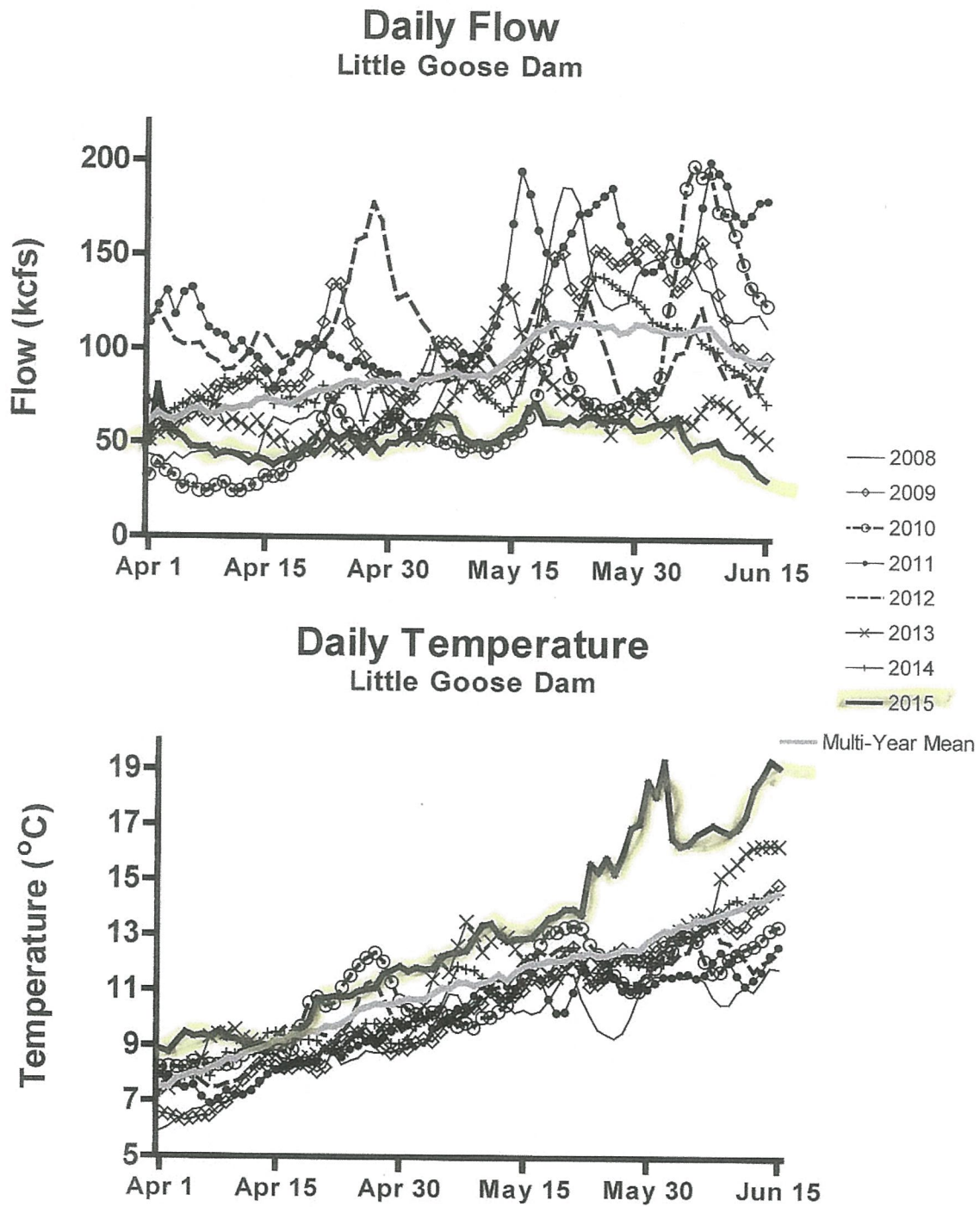


Figure 4. Snake River flow (kcfs; top panel) and water temperature (°C; bottom panel) measured at Little Goose Dam during April and May, 2008-2015, including daily long-term means (1993-2015).

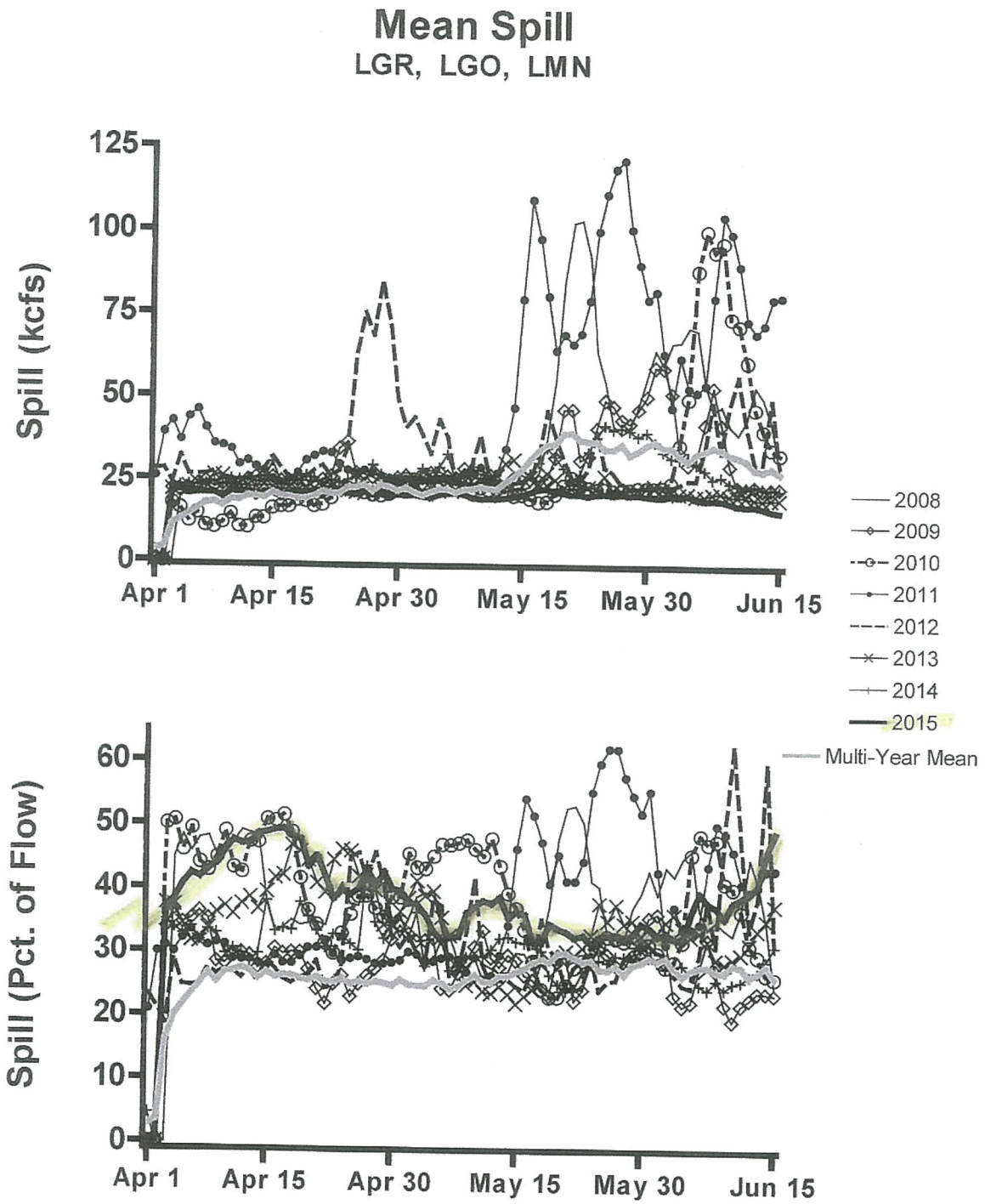


Figure 5. Mean spill (top panel shows kcfs; bottom panel shows percentage of total flow) at Snake River dams during April and May, 2008-2015, including daily long-term means (1993-2015).

Smolt Passage at Lower Granite Dam

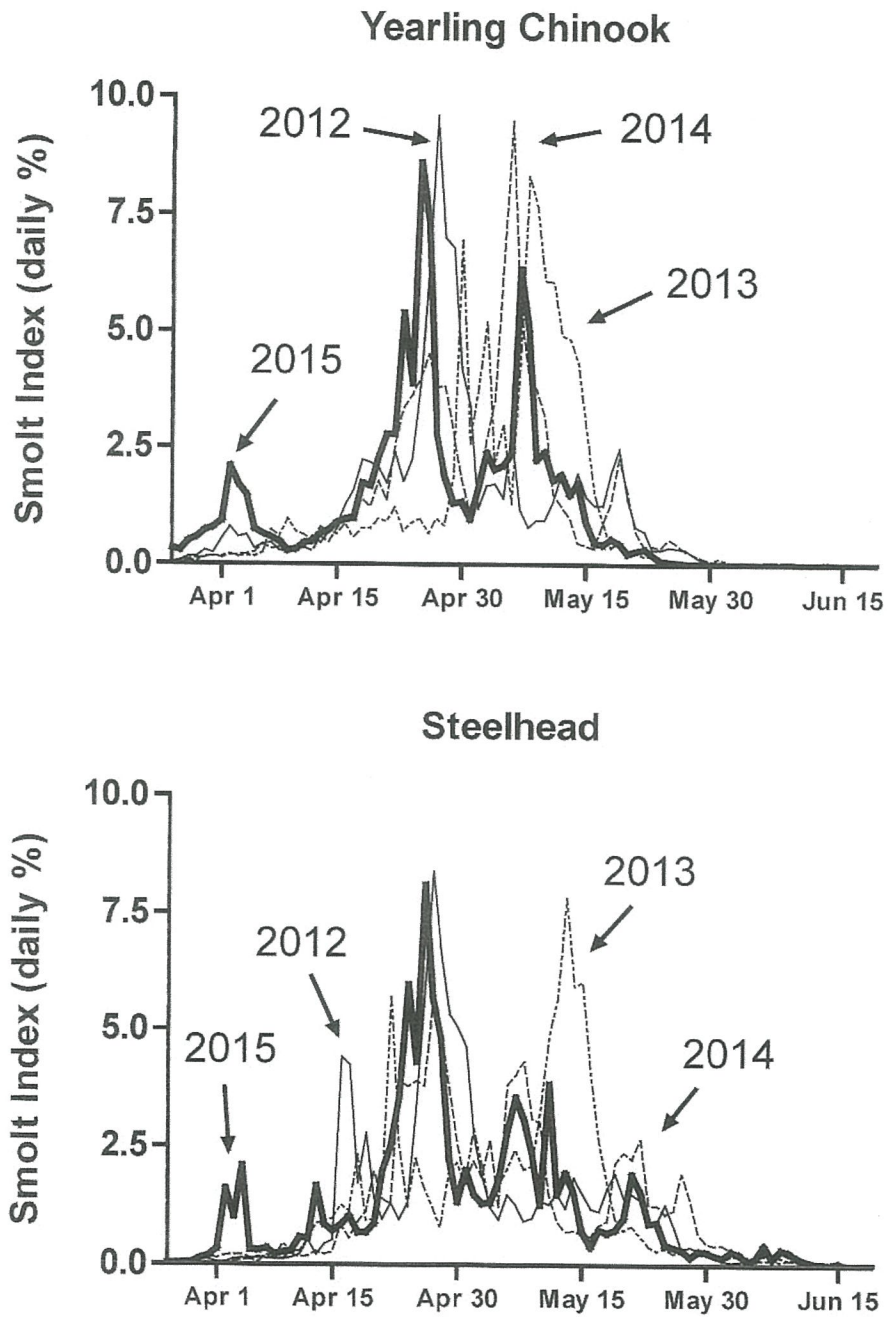


Figure 6. Smolt index as daily percentage of total passage at Lower Granite Dam 2012-2015 for hatchery and wild combined yearling Chinook and steelhead.

transportation:⁶

<u>Migration Year</u>	<u>Wild Chinook TIR</u>	<u>Wild steelhead TIR</u>
1999	1.14	2.28
2000	0.60	1.45
2001	8.96	37.00
2002	0.65	4.25
2003	1.05	4.41
2004	1.09	14.30
2005	2.14	4.88
2006	0.78	0.85
2007	1.27	2.89
2008	1.19	1.16
2009	1.11	1.31
2010	1.21	1.45
2011	0.68	1.18
2012	0.71	0.88
2013	1.42	2.15

(Adapted from Tables A.44 & A.54 in the CSS 2016 Final Report. (Olsen Decl. Ex. 5).)

Adult returns from 2014, 2015 and 2016 are not yet complete to calculate final TIRs; as explained below, 2015 in particular is expected to show a significantly-higher TIR.

Because the TIR is almost always greater than one, a science-based approach to fish management will nearly always minimize spill and maximize transportation.

Because TIRs vary during a migration season (with benefits rising over time as water temperatures rise and in-river conditions deteriorate), actual decisions about transportation—and spill—should of course take account of in-river conditions. Court

⁶ These calculations are biased against transportation by comparing transported fish to what is in most years a minority group of fish with the best in-river survival, non-detected fish. (McKern Decl. ¶¶ 36-38.) NMFS has previously advised the Court that in making a decision whether or not to transport fish, it is appropriate to evaluate the performance of transport groups against the entire in-river group, not just the non-detected fish. (See NMFS, *Analyses of Juvenile Chinook Salmon and Steelhead Transport from Lower Granite and Little Goose Dams*, filed March 31, 2010, at 4 [Docket No. 1752-3].)

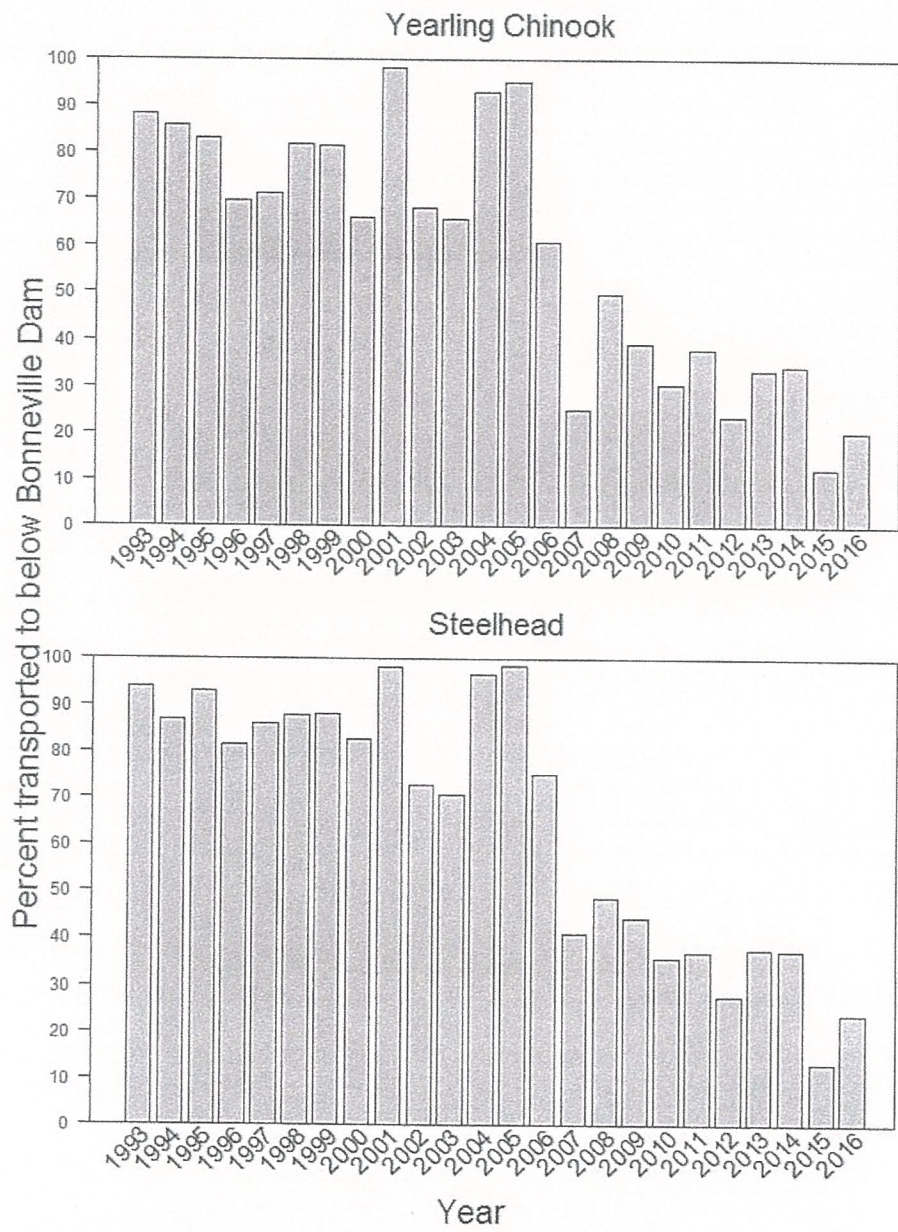


Figure 7. Estimated percent of yearling Chinook salmon and steelhead (hatchery and wild combined) transported to below Bonneville Dam by year (1993-2016).

Attachment 2
Implementing God Squad

Implementing God Squad

The Legal/Administrative Steps for ESA Committee Action To End Twenty-Five Years of Columbia-Snake River ESA Litigation

The Endangered Species Act (ESA) contains direct authorization to bring closure to federal agency actions designated as the final mitigation measures, to be adopted for a specific ESA-listed species. This authorization is exercised through the Endangered Species Committee (God Squad Committee), that establishes which set of mitigation actions will be deemed adequate for federal agency projects, programs, or operations. The Committee confers an exemption on agency actions from further mitigation measures, or “risk of extinction” jeopardy review, and the exemption is upheld by the federal ESA statute.

The God Squad process is the administrative tool for dealing with the twenty-five-year litigation saga underlying the acceptance of a Federal Columbia-Snake River hydro project operations biological opinion—the set of “reasonable and prudent alternatives” (RPAs) determined by the federal hydro operators to avoid further harm to river system salmon and steelhead. Despite the expenditure of billions-of-dollars, significant federal agency collaboration with multiple public and private parties, and demonstrable improvements to the fish runs, litigation actions have been relentlessly levied against the federal agencies’ biological opinion, with federal judges ordering more and more “mitigation” measures (see attached “Life without God Squad figure).

Many regional entities question the underlying competence and motives for continued BiOp litigation. Therefore, the invocation of the God Squad process, to suppress the litigative addiction surrounding hydro project BiOp operations, is the legitimate and most rational action to be taken. The current circumstances testify to the statutory design for the God Squad process within the ESA.

Implementing God Squad Review:

Specific to the Columbia-Snake River federal project operations, the following administrative/legal steps would be conducted to initiate and complete the ESA Committee (God Squad) review process:

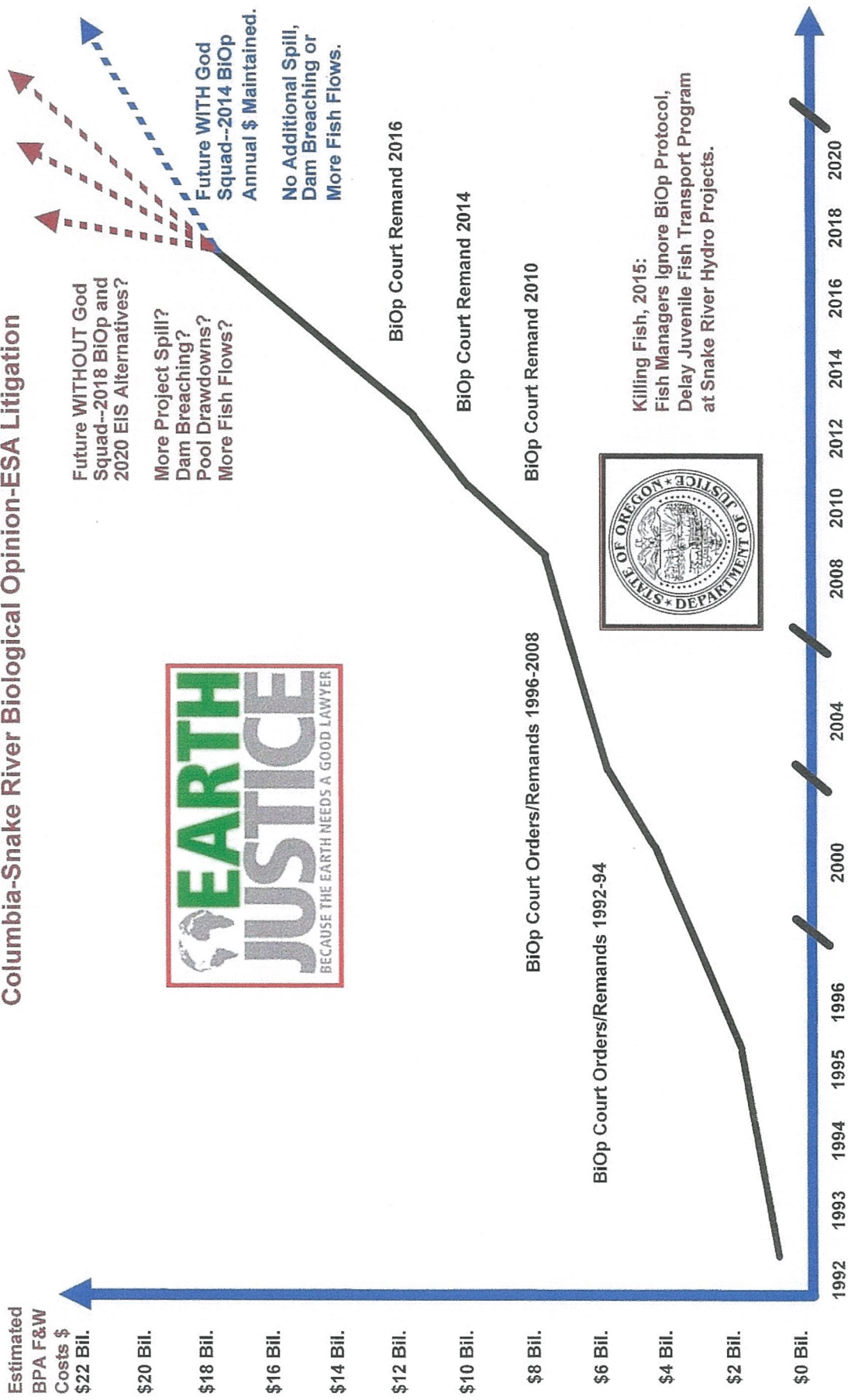
- ✓ As the head of one of the Columbia-Snake River hydropower agencies (USBR-Interior) the Sect. of Interior would direct the submittal of an application to Interior for an exemption, for hydro project operations. The application would be prepared by USBR-Interior staff.¹
- ✓ The Sect. of Interior would call for ESA Committee formation, represented by the Sect. of Agriculture, Sect. of the Army, the Chairman of the Council of Economic Advisors, the EPA Administrator, the NOAA Fisheries Administrator, and representatives from the Northwest Governors’ offices.

¹ Application preparation could be coordinated with BPA-Dept. of Energy, NOAA Fisheries and USACE.

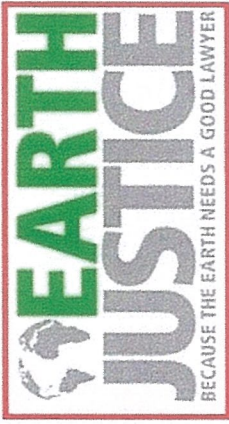
- ✓ The Sect. of Interior would publish notice of receipt of the exemption application in the Federal Register, summarizing key application details.
- ✓ The initial review, and acceptance, of the exemption application would be made by the Sect. of Interior. The application would:
 - Specifically identify the consultation process conducted by the Sect. of Interior (Interior) with the other action agencies to prepare the 2014 BiOp—the 2014 BiOp being the product of agency consultation. The 2014 BiOp being determined to consider adequate RPAs, to avoid a “risk of extinction” jeopardy standard.
 - Specifically identify U.S. Judge Michael Simon’s 2016 order remanding the 2014 BiOp, determining that the federal agencies’ RPAs did not meet the “risk of extinction” jeopardy standard (as so interpreted by the Judge).
 - Specifically reference all previous biological assessments contained within the 2014 BiOp, and all previous environmental reviews associated with the 2014 BiOp.
- ✓ The Sect. of Interior would approve acceptance of the exemption application and convene the ESA Committee to hold a public hearing on the application. A hearing location like the Tri-Cities, WA, would be most appropriate given the location of the hydro projects and several key stakeholders.
- ✓ The Sect. of Interior would submit a Report to the ESA Committee, including two key items:
 - A statement of evidence why the federal hydro project operations are in the public/regional interest.
 - A determination of acceptable RPAs to the agencies actions (the 2014 BiOp RPAs), and any other appropriate mitigation actions such as continued funding of state/tribal habitat projects (at 2014 BiOp annual funding levels).
- ✓ The ESA Committee would convene and vote on approval for the exemption (five members approving) based on:
 - The Sect.’s Committee Report; and acknowledging Judge Simon’s previous remand of the 2014 BiOp RPAs—this is Judge Simon’s determination.
 - The approval by the Committee of reasonable mitigation and enhancement measures, specifically those in the 2014 BiOp. These measures now become the action agencies’ Mitigation Plan for hydro project operations.
- ✓ Exemption application approval is now the agencies’ final action under the ESA. The Mitigation Plan is not subject to further jeopardy standard review.

THE PATH TOWARD GOD SQUAD

Columbia-Snake River Biological Opinion-ESA Litigation



Future WITHOUT God Squad--2018 BiOp and 2020 EIS Alternatives?
 More Project Spill? Dam Breaching? Pool Drawdowns? More Fish Flows?



Future WITH God Squad--2014 BiOp Annual \$ Maintained.
 No Additional Spill, Dam Breaching or More Fish Flows.

Killing Fish, 2015: Fish Managers Ignore BiOp Protocol, Delay Juvenile Fish Transport Program at Snake River Hydro Projects.

Columbia-Snake River Irrigators Association

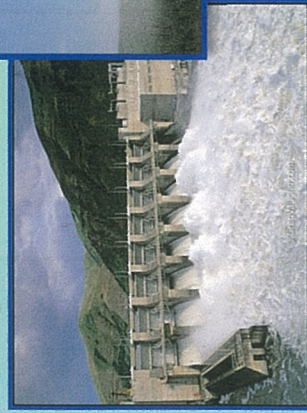
Ending Columbia-Snake River ESA Litigation

Life with God Squad

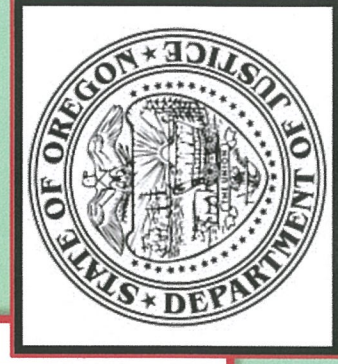
- ✓ ESA Statute and Administrative Protection—Section 1536.
- ✓ Hydro Projects' Exemption and Mitigation Plan in Place.
- ✓ Subject to Judicial Review—But Much Different Standard than BiOp RPAs.

Life without God Squad

- ✓ Governed by BiOp Litigation and Judge Michael Simon, Along with Earth Justice and Oregon.
- ✓ ESA Legislative Relief? Really?
- ✓ Political Agreement? Really?
- ✓ 2018-2020:
 - More Project Spill.
 - Reservoir Drawdowns.
 - More BPA \$\$.



EARTH JUSTICE
BECAUSE THE EARTH NEEDS A GOOD LAWYER



Attachment 3

2015 Impacts to 2017 Fish Returns

May 30, 2017, Status

Columbia-Snake River Irrigators Association Technical Memorandum

Date: May 30, 2017

Subject: *What Happened to the Fish?* Five Empirical Variables to Measure the Impacts to the 2015 Snake River Spring Chinook Out-Migration.

Dam	End Date	Spring Chinook Adult - CurYear	Spring Chinook Jack - CurYear	Spring Chinook Adult - LastYear	Spring Chinook Jack - LastYear	Spring Chinook Adult - Ten-year Avg	Spring Chinook Jack - Ten-year Avg	Summer Chinook Adult - CurYear	Summer Chinook Jack - CurYear	Summer Chinook Adult - LastYear	Summer Chinook Jack - LastYear	Summer Chinook Adult - Ten-year Avg	Summer Chinook Jack - Ten-year Avg
BON	05/28	77612	16866	133230	10705	145681	24433	0	0	0	0	0	0
TDA	05/28	48111	10113	97799	9196	110601	20009	0	0	0	0	0	0
JDA	05/28	35989	9297	84337	7294	94211	18025	0	0	0	0	0	0
MCN	05/25	17611	2105	72279	5776	79116	12565	0	0	0	0	0	0
IHR	05/28	16774	2873	57638	3975	57938	8385	0	0	0	0	0	0
LMN	05/28	14089	2155	55893	4836	55647	7245	0	0	0	0	0	0
LGS	05/28	7420	1422	51461	4770	49346	7456	0	0	0	0	0	0
LGR	05/28	6113	773	49008	3770	46441	7442	0	0	0	0	0	0
PRD	05/27	2112	49	11753	637	13425	1096	0	0	0	0	0	0
WAN	05/27	1766	64	12268	465	13327	1119	0	0	0	0	0	0
RIS	05/27	1440	22	11540	412	12155	1239	0	0	0	0	0	0
RRH	05/27	873	2	4674	221	4716	480	0	0	0	0	0	0
WEL	05/27	465	16	3346	313	3198	410	0	0	0	0	0	0
WFA	05/23	9987	478	14354	583	19540	553	0	0	0	0	0	0

1. In-River 2015 Survival Rates for Non-Transported Fish.

- The in-river passage survival from the Lewiston Trap to Bonneville Dam tailrace was about 39%; the second lowest survival rate since 2001 (another low flow, high water temperature year). River conditions were poor.

2. Total 2017 Returning Adult Run Size, Wild and Hatchery Fish (as of May 29, 2017).

- The returning adult run size over Ice Harbor dam is about 29% of the previous ten-year average, about 16,774 fish.
- The returning adult run size for Lower Granite Dam is about 13% of the previous ten-year average.

3. Ocean Conditions—Controlling for Ocean Conditions.

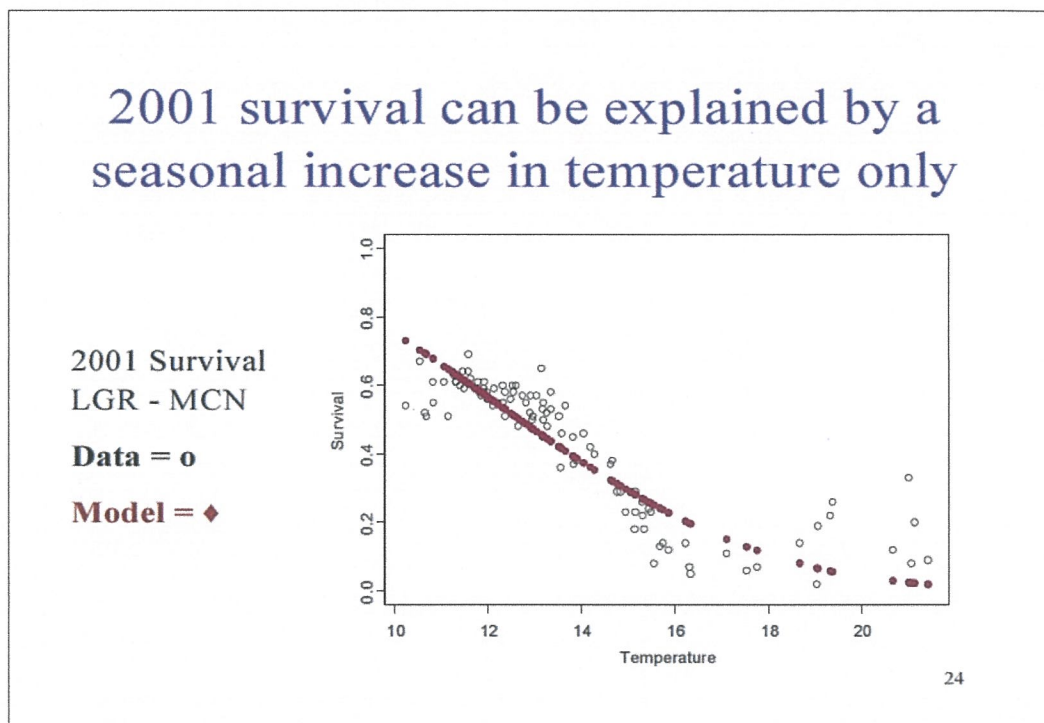
- Ocean conditions were poor (higher water temperatures, other factors) for the 2015-2016 outmigration fish. All Columbia-Snake River origin fish suffered.
- “Controlling” for ocean conditions can be estimated by comparing Lower Granite Dam to McNary Dam adult fish passage (ten-year average) to current conditions (May 29, 2017).

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- LG to McNary adult returns (ten-year average): 57% Survival.
 - LG to McNary adult returns (to date estimates): 35% Survival.
 - With current time delay to LG, 2017 difference: 39% Less Survival.
- The current data, noting the McNary-Lower Granite time delay, suggests that when ocean conditions are controlled for Snake River Spring Chinook impacts, the mortality to Snake River fish is greater than Mid-Columbia fish by about 39% (per to date estimates).
 - The major factor that could account for this mortality was in-river fish passage in 2015, where 87% of the fish were left in-river instead of being transported through the system. Not transporting more fish ignored actual in-river conditions (low flows and high temperatures) and it violated the 2014 BiOp protocol requiring “spread the risk.”

4. Water Temperature Impacts—Lower Snake River Passage.

- The initial, 2015, in-river water temperatures for fish passage were about 25% higher than the previous 8-year tracking period; by the April 15 to end of May period, temperatures ramped-up to about 30% of the previous tracking period. The 2015 flows and river temperatures approached the poor water-year conditions that occurred in 2001.
- The figure below is from the Columbia Basin Research Office, UW (Anderson 2004) using NOAA Fisheries, 2001 data. The driving in-river survival factor was temperature, not flow; and flow was not controlling temperature.



5. Transportation to In-River Survival Ratios.

- For the focus here, the key measurement variable for explaining fish survival is the transport to in-river passage ratio—for each smolt to adult survival group. The TIRs can be measured in different ways, but it basically conveys whether the fish transport program improved downriver fish survival as compared to in-river passage conditions. A transportation to in-river (or river passage) survival ratio greater than 1.0 means that the transportation program improved fish passage survival.
- It should come as no surprise to observe TIR values greater than 1.0, when in-river flows are low and river temperatures are higher than normal (or average).
- In 2001, the TIR was about 9.0 for wild chinook salmon and much higher for steelhead. In 2005 (another relatively low flow-high river temperature year), the TIR was about 2.1 for salmon.
- Given the water-year conditions and down-river survival rates for 2015, it is very likely that the transported fish survived at a much higher rate than the in-river passage fish. The NOAA Fisheries scientists will evaluate the 2015 returning adult fish numbers—transported and non-transported fish—and will be able to report the results by late fall (2017).
- If calculated, high TIR values would mean that fish managers increased fish mortality by not diverting more fish into the transportation program, instead of relying on project spill.

Sources: Northwest Fisheries Science Center, NOAA, *Survival Estimates for the Passage of Spring-Migrating Juvenile Salmonids through Snake and Columbia River Dams and Reservoirs, 2016*, Seattle, WA, April 2017 (and 2015 and 2016 Technical Memorandums; with flow estimates and water temperature conditions for 2008-2016, and annual transport program summaries); Anderson, J., Columbia Basin Research Office, UW, 2004 (temperature-flow-survival modeling using NOAA Fisheries, data sets); annual research reports on project spill effectiveness to the Northwest Conservation and Power Planning Council (TIR values and other data); Fish Passage Center, Portland, Oregon (web site) data for Table included above, as published May 29, 2017.