



CLEAN, FLOWING WATERS FOR WASHINGTON

The Center for
Environmental Law & Policy

May 6, 2008

Marcie Mangold
Water Quality Program
Department of Ecology
4601 N. Monroe St.
Spokane, WA 99205

Re: 401 Certification Comments Re Aesthetic Flows

Dear Ms. Mangold:

The Center for Environmental Law & Policy and Sierra Club Upper Columbia River Group submit these comments on the aesthetic flow conditions contained in the draft 401 Certification for Avista Corp.'s Spokane River Project. We plan to submit additional comments on other provisions of the draft 401 document, but wish to get these to you promptly for your consideration.

(1) Flow Request: 500 cfs year round minimum flow at Upper Falls, from 5:00 am to midnight during summer months

Spokane Falls represent a tremendous resource to the Spokane community. Few cities in this country can boast waterfalls in the middle of their downtown areas, particularly in a public park with substantial public access.

As set forth below, Ecology has the legal authority to require waterfalls flows, even if the requirement results in a loss of energy production. This authority is tied to both the aesthetic and recreational benefit of a free-flowing falls. Instream flow requirements for waterfalls have been imposed in a number of dam relicensing proceedings.

Further, the citizens of Spokane value and support higher flows at Upper Spokane Falls that provide a complete aesthetic and recreational experience. The Louis Berger Study, cited in the draft 401 Certification in support of lower flows, was of limited scope and method. Nonetheless, the study participants preferred higher flows. Moreover, the economic impact of requiring higher waterfall flows is insignificant compared to Avista's power generation capability and cost to consumers.

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For all these reasons, as discussed in detail below, we recommend that Ecology amend its proposed condition in the 401 Certification to require Avista to maintain a flow of at least 500 cfs at Upper Spokane Falls, from 5:00 a.m. to midnight, year-round.

On the question of "time of day" limits for waterfall flows, the draft 401 Certification indicates that a native redband trout population spawns at the upper end of Upper Falls reservoir. We are concerned about the impacts to this trout population caused by turning the falls off on a daily basis. We would support a condition that the Upper Spokane Falls flow be required 24 hours per day, seven days per week unless it can be demonstrated that an intermittent flow will not harm these native fish populations.

CELP and Sierra Club would support channel modification with a flow of 200 cfs, but only if: (1) modification is technically and economically feasible; (2) modification is permitted by local, state, and federal agencies; and (3) modification would create the aesthetic value of a 500 cfs flow.¹

(2) Upper Spokane Falls are devalued every summer by current operations.

Spokane may be unique in the United States as a major city that enjoys spectacular waterfalls within its downtown area. The Spokane Falls are the recreational and spiritual center of the City of Spokane. As explained in a November 4, 2004 Spokesman-Review article "water and its landscapes create unique affinities for people." Spokane's waterfalls have extraordinary historic, cultural, and economic significance for the community.

Unfortunately, as illustrated by the photo included below, current operations of the Upper Falls dam often dewater Upper Falls, located in the heart of downtown Spokane. As Spokane grows and redevelops its downtown core, more and more people, local and tourist, come to Riverfront Park to view and experience the falls. Obviously, the experience of a dewatered falls, as illustrated below, has little aesthetic value. Unfortunately, the recommended flow contained in the draft 401 Certification is insufficient to mitigate project impacts on the aesthetics of the falls.

¹ Avista has asserted that channel modifications "would create the desired visual attributes that a release from the diversion works (dam) of 300 to 500 cfs would provide without any modifications." See, e.g., e-mail, Speed Fitzhugh to Marcie Mangold (11-8-07). Avista has never produced data, photos, drawings or plans of any kind that support this statement. It is unknown at this time whether channel modification will re-hydrate the north channel of Upper Spokane Falls, or even whether permits could be obtained to investigate or implement modification.



North Channel of Upper Falls without water.

The beauty of Spokane's waterfalls has been recognized since its very beginnings. On the morning of May 12, 1873, James Glover, the founder of Spokane, awoke on the dirt floor of a roofless log cabin where he had just spent his first night in Spokane. As he rolled out of his blankets, he told himself, "I am going to see the falls." He was soon sitting on "a great rock" overlooking the Spokane River.² Glover later wrote, "I gave myself completely over to admiration and wonder at the beautiful, clear stream that was pouring into the kettle and over the falls." He was so engrossed that he let himself be soaked by the spray: "I sat there, unconscious of anything but the river, gazing and wondering and admiring."

In 1907, the newly created Spokane Park Board hired the nation's premier landscape architects, the Olmsted Brothers, to prepare a detailed, written report with accompanying maps completed in 1908 and published in 1913 by the Board of Park Commissioners.³ The Olmsted Report recognized the extreme value of Spokane's falls to the community stating:

Nothing is so firmly impressed on the mind of the visitor to Spokane, as regards its appearance, as the great gorge into which the river falls near the center of the city. It is a tremendous feature of the landscape and one which is rarer in a large city than river, lake, bay or mountain. Any city should prize and preserve its great landscape features, inasmuch as they give it individuality. Chicago has spent millions for its Lake Shore parks. New York has spent more millions on its great Riverside Park and Drive extending for many miles along the Hudson River. Many instances could be enumerated showing that the wisdom of preserving such landscape features has been

² This account is from J. William T. Youngs, [The Fair and the Falls](http://www.narhist.ewu.edu/fair/fairfalls.html), available online at <http://www.narhist.ewu.edu/fair/fairfalls.html>.

³ Excerpts of the Olmsted Report, including the quotations provided, are available at: <http://www.washington.edu/uwired/outreach/cspn/Website/Resources/Curriculum/Building%20Nature/Documents/58.html>.

recognized and acted upon by making them enjoyably accessible by laying out parks and parkways along them.

Recognizing the value of this unique feature, the Olmstead Brothers stated, "Spokane should certainly preserve what beauty and grandeur remains of its great river gorge."

The loss of flow in Spokane's falls and the resulting cultural impact has been best characterized by the Native American author, Sherman Alexie, who wrote, "These Falls, which have fallen further, which sit dry and quiet as a graveyard now? These Falls are that place where ghosts of salmon jump, where ghosts of women mourn their children who will never find their way back home."⁴

Restoring flow in the falls provides aesthetic, cultural, and economic benefits to Spokane, its citizens, and its visitors. This value will only increase as Spokane grows and redevelops its downtown core. Riverfront Park attracts large numbers of visitors each year. In addition, various commercial, educational and civic developments above and below the Falls are now in planning, including the Mobius Science Center at Michael Anderson Plaza (which will overlook the Upper Waterfalls), the University District, the Spokane River Gorge Park below the Falls, and development of various residential properties.

(3) Public opinion supports higher flows at Upper Spokane Falls.

The citizens of Spokane wish to have at least 500 cfs running through the Upper Falls north and middle channel during summer months. There is overwhelming public support for restoring a flow that would create a more natural condition at the waterfalls.

Attachment 1 collects the several hundred comments submitted to the Federal Energy Regulatory Commission during the draft Environmental Impact Statement comment period. Hundreds of comments were submitted to FERC asking for 500 cfs at Spokane Falls. Attachment 2 are transcripts of the FERC hearings, tabbed to identify speakers who asked that the draft license require additional water in the waterfalls. More public comments will be forthcoming before the deadline for public comment.

To get the flavor of citizens' concerns, here are a few quotes from comments on the draft Environmental Impact Statement:

Please require Avista to allow enough water to flow over the two downstream Spokane waterfalls to let the falls flow freely, at least from 6am to Midnight. I believe the sights and sounds created by the falls are worth it, even if electric power may cost a few cents more as a result. Demand for more and more electric power will never end due to population growth. Drying up the beautiful falls will not solve this demand. I have personally hiked across these falls in the late summer without even getting my feet wet. The whole area stank of dead fish. This is unacceptable and adversely affects all concerned.

Dick Vogel, Kettle Falls, WA.

⁴ Sherman Alexie, "The Place Where Ghosts of Salmon Jump" from [The Summer of Black Widows](#) (1996). There is a rich body of tribal oral history regarding Spokane's falls. One example regarding the creation of the falls can be found at <http://www.focuswest.org/learn/lands/falls.htm>.

We as a nation suffer from "land amnesia." Over the last two centuries we have incrementally degraded our environment to the point where many no longer recognize what we have lost. Degradation has become the norm. . . . And why is it not in the public interest to allocate some water to ensure the Spokane Fall flows freely throughout the year? It is a key attraction for the city. If aesthetics count for naught, then maybe we should cover over the river creating new building lots and turning the river into a conduit for transporting sewage directly to the down river treatment plant. So much for efficiency.

Richard P. Sutter, Spokane, WA.

Spokane Falls is called that because it is supposed to be a waterfall – not a "wet rock"!

Tyler Blemy, Spokane, WA.

The people of this region want healthy, free flowing water at Upper Spokane Falls. Enough said.

(4) Department of Ecology has authority to require aesthetic flows at the Spokane Falls.

The Department of Ecology possesses ample legal authority to impose flow conditions on the Upper Falls Project to restore and protect the waterfalls as part of the 401 Certification process. Not only is Ecology is authorized to impose such conditions, it is required to impose conditions that fully satisfy water quality standards, including aesthetic flows.

(a) Ecology has authority to impose conditions on federal dam licenses.

Section 401 of the Clean Water Act, 33 U.S.C. § 1341(a)(1), provides the state with powerful authority to mandate conditions for federal power licenses. Federal and state courts have held on numerous occasions that FERC must incorporate 401 certification conditions into federal power licenses. See, for example, *S.D. Warren v. Maine Board of Environmental Protection*, 547 U.S. 370 (2006) (dams raise potential for "discharge of pollutants" and are therefore subject to § 401 certification); *Alabama Rivers Alliance v. F.E.R.C.*, 325 F.3d 290 (C.A.D.C., 2003); *American Rivers, Inc. v. F.E.R.C.*, 129 F.3d 99 (2d Cir., 1997) ("The [Clean Water Act] . . . has diminished the preemptive reach [of the Federal Power Act] by expressly requiring the Commission to incorporate into its licenses state-imposed water-quality conditions").

(b) Ecology's 401 certification authority extends to imposing instream flow conditions on federal power licenses.

State 401 conditioning authority extends to imposing instream flow conditions on "bypass reaches" created by hydropower facilities. The U.S. Supreme Court recently confirmed the authority of the state of Maine's Board of Environmental Protection to impose flow conditions on bypass reaches created by private dam facilities:

[T]he [Clean Water] Act deals with "pollution" generally, see [§ 1251\(b\)](#), which it defines as "the man-made or man-induced alteration of the [water's] chemical, physical, biological, and radiological integrity," [§ 1362\(19\)](#). Because

the alteration of water quality as thus defined is a risk inherent in limiting river flow and releasing water through turbines, changes in the river's flow, movement, and circulation fall within a State's legitimate legislative business. State certifications under § 401 are essential in the scheme to preserve state authority to address the broad range of pollution.

S.D. Warren, supra.

In the landmark case involving the Dosewallips River on the Olympic Peninsula, the U.S. Supreme Court held that the Department of Ecology could impose flow conditions in order to protect beneficial uses of a river as identified in state water quality standards. *PUD No. 1 of Jefferson County v. Department of Ecology*, 511 U.S. 700 (1994). In that case, the protectable use was salmon migration and spawning, but the fundamental issue was the same, that is, Ecology is authorized to impose instream flow conditions on a hydropower license in order to protect water quality.

This authority was again approved by the Washington Supreme Court in a case involving Sullivan Creek, when it held that "a water quality certification under § 401 of the Clean Water Act may be conditioned on maintenance of bypass flows in order to meet state and federal water quality standards ensuring that waters will not be degraded so as to interfere with or injure existing beneficial uses." *PUD No. 1 of Pend Oreille County v. Department of Ecology*, 146 Wn.2d 778, 821 (2002).

Finally, of course, Ecology's authority to impose flow conditions has been explicitly acknowledged by the Washington State Legislature. RCW 90.44.422(1). That statute specifically preserved Ecology's authority to impose instream flow conditions on federal power licenses through the 401 certification process.

(c) Instream flow conditions include protection of aesthetic flows.

With respect to Upper Falls Dam, Ecology's authority extends to protection of the aesthetic values of the Spokane River, uses that are explicitly protected under state water quality standards. WAC 173-201A-602 (Table – WRIA 57). Likewise, Ecology's Guidance Manual states that "[a]esthetic impairment can include results of placing river flows through turbines and can include other structural, operational, and indirect effects of dams on the senses." Guidance Manual at 54.

(d) The basis of Ecology's legal authority for 401 certifications includes "other appropriate requirements of state law," which includes the Water Resources Act of 1971, RCW Ch. 90.54.

In addition to providing for compliance with state water quality standards, Section 401 authorizes states to utilize "other appropriate requirements of state law" in order to protect state waters. 33 U.S.C. 1344(d).

This authority implicates a lesser known aspect of the Jefferson County case: the Washington Supreme Court decision (not appealed and therefore not addressed by the U.S. Supreme Court) which approved Ecology's imposition of a flow condition. *Department of Ecology v. PUD No. 1 of Jefferson County*, 121 Wash.2d 179, 189-93, 849 P.2d 646 (1993). The Washington Supreme Court decision discusses the 401 provision that authorizes the certification to include conditions to meet "any other appropriate requirement of state law."

The Court found this to encompass broad authority:

We also hold that a section 401 water quality certificate may include conditions to enforce all state water quality-related statutes and rules, including, but not limited to, state water quality standards. Inasmuch as issues regarding water quality are not separable from issues regarding water quantity and base flows, we further hold that RCW 90.54.020(3)(a) qualifies as an "appropriate requirement of State law" for purposes of section 401(d), and therefore that Ecology's base flow limitation in the 401 certificate was an appropriate measure to assure compliance with RCW 90.54.020(3)(a) as well as the water quality standards.

The statute cited by the Court, Chapter 90.54 RCW (the Water Resources Act of 1971), mandates the protection of scenic and aesthetic values. The provision cited by the Washington Supreme Court provides:

(3) The quality of the natural environment shall be protected and, where possible, enhanced as follows:

(a) Perennial rivers and streams of the state shall be retained with base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values. Lakes and ponds shall be retained substantially in their natural condition. Withdrawals of water which would conflict therewith shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served.

RCW 90.54.020(3) (emphasis added). This statute provides independent authority, over and above state water quality standards, to establish a scenic/aesthetic flow for the Spokane River. Of note, Ecology has previously exercised this authority to impose an instream flow on PSE's Snoqualmie waterfalls project in western Washington (although that particular provision was not challenged).

The U.S. Supreme Court recently discussed the history and significance of the "other requirements" element of Section 401 of the Clean Water Act:

State certifications under § 401 are essential in the scheme to preserve state authority to address the broad range of pollution, as Senator Muskie explained on the floor when what is now § 401 was first proposed:

"No polluter will be able to hide behind a Federal license or permit as an excuse for a violation of water quality standard[s]. No polluter will be able to make major investments in facilities under a Federal license or permit without providing assurance that the facility will comply with water quality standards. No State water pollution control agency will be confronted with a fait accompli by an industry that has built a plant without consideration of water quality requirements." 116 Cong. Rec. 8984 (1970).

These are the very reasons that Congress provided the States with power to enforce "any other appropriate requirement of State law," 33

U.S.C. § 1341(d), by imposing conditions on federal licenses for activities that may result in a discharge . . .

S.D. Warren, supra.

We urge Ecology to exercise its legal authority to the fullest in order to protect and restore Spokane's Upper Falls.

(e) Ecology is required to protect aesthetic flows at Upper Spokane Falls.

It is not optional for Washington state to protect water quality standards, including the scenic values of the Spokane River. Rather, state law requires such action. See *Skokomish Indian Tribe v. Fitzsimmons*, 97 Wn.App. 84, 92-95 (1999) (Ecology refusal to object to federally licensed project that it acknowledges to be in violation of state law is arbitrary and capricious). Clearly the FERC license and 401 certification provide the opportunity to address this issue in a comprehensive and coordinated fashion. However, as Ecology takes action to address this issue, a compromise of uses is neither appropriate nor legal.

Ecology's 401 Certification Guidance Manual calls for stringent protection of uses:

Narrative criteria rely on the analysis of impacts to uses such as . . . aesthetics. Narrative criteria are implemented on a case-by-case basis to protect water quality and beneficial uses from the effects of water pollution. Narrative criteria are used where numeric standards are not sufficient to protect a sensitive beneficial use.

Use protection is the bottom line of the standards. Even if numeric criteria are attained, if studies show the uses in the water body are being harmed by the activities to be permitted, the narrative criteria may be invoked to further restrict the activities.

Guidance Manual at 28 (emphasis added).

For the foregoing reasons, we respectfully assert that it is within Ecology's authority, and legally mandated, to impose an instream flow condition on Upper Spokane Falls sufficient to preserve aesthetic values, as required by Washington's water quality standards. For reasons set forth below, that flow appears to be at least 500 cfs, year round.

(5) The waterfalls merit protection to fulfill recreational water quality standards.

In addition to aesthetic uses, a 401 condition to maintain flows in Upper Spokane Falls will also protect recreational uses of the River. Recreational use may be defined in two ways. First, recreational uses include aesthetic enjoyment of a waterway. See Ecology Guidance Manual at p. 25. In addition, the Spokane Falls provide a direct recreational benefit to citizens of and visitors to the City of Spokane, because of the location of the falls inside the City's Riverfront Park. The Park includes three bridges and several overlooks specifically designed to provide waterfall viewing opportunities. (In addition, Post Falls Bridge will be closed to car traffic in the future to provide additional access to view the falls).

Clean Water Act explicitly calls out the protection of recreation. Congress enacted the Clean Water Act to “restore and maintain the chemical, physical, and biological integrity of the Nation's waters,” 33 U.S.C. § 1251(a), the “national goal” being to achieve “water quality [providing] for the protection and propagation of fish ... and ... for recreation,” § 1251(a)(2).

We urge the Department of Ecology to include protection of recreational uses as a basis for requiring flows for Upper Spokane Falls.

(6) The studies that are cited as the basis for quantifying an aesthetic flow at Upper Spokane Falls do not support a 300 cfs flow.

The draft 401 identifies two documents as the basis for finding that 300 cfs is an appropriate flow for Upper Spokane Falls: the Louis Berger study conducted by Avista for the Alternative Licensing Process (ALP), and the WRIA 55-57 Watershed Plan. Reliance on these two documents is misplaced, as discussed below.

(a) The Louis Berger Study provides an inadequate basis for determining aesthetic flows.

(i) Introduction

Ecology's 401 Guidance Manual suggests that “[a] user-based survey provides an excellent means to get qualitative responses from the user community regarding river conditions.” Guidance Manual at p. 54. We agree. Ideally, a comprehensive and credible user survey would exist for the Upper Spokane Falls. Unfortunately, the survey prepared by Louis Berger for the Alternative Licensing Process was not particularly well-executed.

CELP and Sierra Club had concerns about the study methods and findings set forth in the Louis Berger study from the time it was published. We therefore retained Confluence Research & Consulting, a nationally respected firm with expertise in determining recreation and aesthetic flows, to critique the Louis Berger study. See Attachment 3: “Review of Waterfall Aesthetics Issues, Spokane River Project (FERC No. 2545) (Confluence Consulting, Feb. 2007). (One of the Confluence Consulting co-authors, Bo Shelby, is well-known in this state, he is cited in Ecology's Guidance Manual discussion about establishing recreational and instream flows.)

Confluence Consulting made two distinct conclusions: First, that the methods used in the study were insufficient to fully assess public opinion about flows at Upper Spokane Falls, but, second, the information that was gathered in the Louis Berger study actually supported a recommendation for higher flows and not the conclusions drawn from the study as cited in the Avista relicensing negotiations.

(ii) Louis Berger Study flaws

Drs. Whittaker and Shelby identify the flaws in the Louis Berger study as follows:

(1) Ranking data were not designed to determine relative opinions among the flows.

(2) Use of “most pleasing/least pleasing attributes” is not a valid way to assess aesthetic acceptability.

(3) Respondents did not represent the diversity of people who use and enjoy the downtown Spokane Falls.

(4) The Louis Berger study did not contain adequate discussion of how aesthetic flows are linked to diverse park user groups.

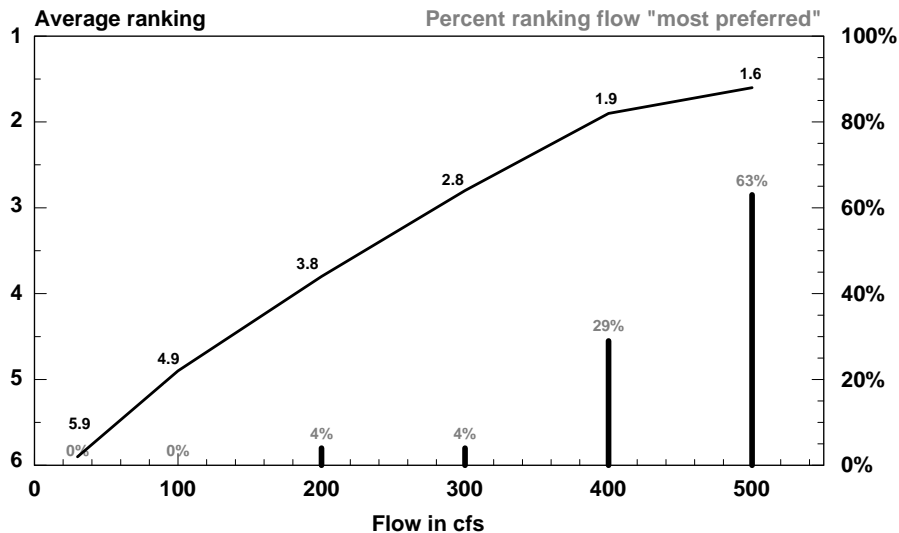
(5) The Louis Berger study failed to examine costs and benefits of aesthetic flows

See Attachment 3 at pp. 3-4 for detailed discussion of these findings. There are a number of other critiques, including that Louis Berger study participants were not offered the opportunity to examine flows higher than 500 cfs. This is important, because 500 cfs was ranked as the preferred flow. It is possible that a higher flow would have garnered even more support.

(iii) The conclusions of the Louis Berger Study actually support higher aesthetic flows.

The Louis Berger study is frequently cited as the basis for a finding that 200-300 cfs is the preferred flow among study respondents. This is incorrect and in fact, Table 2.14 (p. 32) in the Louis Berger study sets forth the results of the survey showing that the highest flow viewed by respondents – 500 cfs – is the preferred flow. That table shows the average ranking of flows from a scale of 1 to 6 (1 being the most preferred flow and 6 the least preferred). See Attachment 4 (Louis Berger study excerpt). Flows at 500 cfs were ranked at 1.63 and all lower flows received higher rankings (ie, rankings that they were less preferred).

The Confluence Consulting Report provides an easier to read chart of the results of these rankings.



Upper Spokane Falls average rankings and percent ranking flow "most preferred." (See Att. 3, p. 6).

Despite its shortcomings, the Louis Berger study found an obvious preference for higher flows (500 cfs) in the falls, stating:

[T]he participants had many features and attributes that they liked at Flow F, the highest flow, 500 cfs, shown at Upper Falls. Participants enjoyed seeing the moving water, contrasting color of the splashing falls, and the sound and mist created by the higher flows. Most participants ranked Flow F as their most preferred flow.

...

At Upper Falls, the participants almost consistently enjoyed the flow in the south channel; the area causing the most concern was the north channel. At the lowest flows, the north channel presented a view of a barren, dry riverbed that most participants stated was least pleasing to them. As the flows increased over the course of the study, the participants began to notice flow in the north channel at Flow C (200 cfs), and the aesthetic quality of the flow appeared to be at least acceptable to most of the participants at flows D (300 cfs), E (400 cfs), and F (500 cfs). Most participants ranked Flow F [500 cfs] as their most preferred flow.⁵

The draft 401 Certification acknowledges that the Louis Berger study participants preferred the highest flow presented to them, but does not explain why Ecology selected a lesser flow of 300 cfs. In determining appropriate aesthetic flows, we respectfully suggest that Ecology needs to consider and accept public opinion and preferences. Respondents to the Louis Berger study preferred 500 cfs, and that is an appropriate flow, necessary to fully restore the beneficial use of aesthetic values of Upper Spokane Falls, and achieve water quality standards.

(iv) The Louis Berger study attempts to downplay the conclusion that most study participants preferred higher flows.

Drs. Whittaker and Shelby found that the Louis Berger study attempted to downplay the preference for 500 cfs flows.

For the Upper Falls (Figure 1, next page), results show that the two highest study flows (400 and 500 cfs) are ranked highest. With the exception of two people, all the respondents ranked 400 or 500 cfs as most preferred, and nearly two-thirds ranked 500 cfs best. It is possible that higher flows would have been ranked even higher.

The aesthetics study report notes that 500 cfs was, on average, the flow most often preferred by the panel, but downplays the finding by searching for "points of transition" at flows lower than 500 cfs. It appears that consultants assumed (for unspecified reasons) that aesthetic flows would be set at "acceptable" rather than "optimal" levels, so they went looking for information that would help with a lower threshold. As discussed above, however, they do not have the metric to help identify that threshold.

In their discussion, consultants focus on flows where attributes (e.g., first water in the north channel, increase in sound, presence of mist) "started to appear" or "noticeably increase." However, this qualitative information is insufficient evidence, and the report appears to be speculating with

⁵ See Att. 4 (Louis Berger study at 51-53).

statements such as "At Flow C [200 cfs] and higher, the participants seem to be less mindful of attributes that are least pleasing to them."

Att. 3 at p.4. Ecology should reconsider its reliance on the Louis Berger study as a source of support for finding that 300 cfs is an appropriate aesthetic flow. Close review of the study indicates that is not a conclusion that can be credibly drawn from the study.

(v) There was no consensus on the 200 cfs "parking lot" recommendation that emerged from the failed relicensing negotiations.

Despite the Louis Berger study findings that higher flows were preferred, Avista's Recreation-Land Use-Aesthetics (RLUA) work group drafted a proposal calling for Upper Falls flows of 200 cfs from noon to sunset on Fridays through Sundays during summer months. CELP and Sierra Club objected to this and similar proposals offered during the ALP meetings.

The flow recommendation that emerged from the RLUA work group was placed into the PM&E "parking lot" where it was to be finally considered when the negotiations concluded and all PM&Es could be considered together for cost and consistency (an event that did not occur). Sierra Club continued to object to the proposal and asked to attach a dissent – but this was disallowed by the facilitators. Statements that the RLUA recommendation is a "consensus" recommendation are incorrect. Instead, it appears that Avista and its consultants attempted to hide the fact that there was disagreement in the community about the aesthetic flow for Upper Spokane Falls. That disagreement continues to exist.

The ALP process ultimately failed and the re-licensing has converted to the standard FERC process. Avista's license application included the 200 cfs proposal, and the Final EIS adopts that proposal – again, based on a flawed interpretation of the Louis Berger study. FERC ignored the substantial public input it received in response to the draft EIS, asking for higher flows, as discussed in the "public opinion" section above, and in Attachments 1 and 2.

Some members of the RLUA work group are vested in the non-consensus recommendations of that group. We appreciate the hard work that citizens (particularly volunteers) gave to the ALP effort and it is unfortunate that the process was unable to achieve a final settlement. However, this does not alter the fact that the Louis Berger study does not provide an adequate basis for Ecology's finding that 300 cfs is the appropriate aesthetic flow for Upper Spokane Falls.

(vi) The WRIA 55-57 Watershed Plan calls for more flow.

The 401 Certification cites to the WRIA 55-57 Watershed Plan as a basis for finding that 300 cfs is the appropriate aesthetic flow for Upper Spokane Falls. The WRIA plan contains two references to aesthetic flows at Upper Spokane Falls. At page 40, the plan provides a narrative description of the goal:

For aesthetic purposes the criteria for the Spokane River is to have total flow adequate to provide water to wet the majority of the north channel through Riverfront Park. The total flow should also provide for maintaining the current daytime flow of 200 cfs over the Monroe Street spillway. (emphasis added)

And at p. 64, the plan provides a quantitative description:

II.B.01.a Support a consensus based agreement within the Avista Recreation, Land Use, and Aesthetics Work Group of at least 300 cfs in the north channel of the Spokane River through Riverfront Park as the basis for aesthetic flows.

See Attachment 5 (WRIA 55-57 Watershed Plan excerpts).

As discussed above, no “consensus based agreement” came out of the Avista RLUA work group. The non-consensus recommendation was that 200 cfs be split between the north and middle channels. That is not what the Watershed Plan calls for. There appears to be confusion at best about what the Watershed Planning Unit intended.

(vii) WRIA plans do not control the content of 401 Certifications.

Watershed plans are created under RCW Ch. 90.82, which authorizes watershed planning groups to recommend (but not mandate) instream flows for rulemaking under RCW Chs. 90.54 and 90.22. The statute explicitly excludes from its ambit Ecology’s authority to set instream flow recommendations for Section 401 Certifications:

(4) Nothing in this chapter either: (a) Affects the department's authority to establish flow requirements or other conditions under RCW [90.48.260](#) or the federal clean water act (33 U.S.C. Sec. 1251 et seq.) for the licensing or relicensing of a hydroelectric power project under the federal power act (16 U.S.C. Sec. 791 et seq.) . . .

RCW 90.82.080(4). The draft 401 Certification muddles the applicability of this statute with Ecology’s water quality certification authority.

(viii) WRIA plans may not serve as a basis to destroy beneficial uses of rivers.

Eventually the Spokane River Watershed Planning Units (WRIAs 54, 55 and 57) will offer instream flow recommendations to the Department of Ecology for rulemaking. At that time, Ecology will be required to exercise its independent judgment to determine whether the plans comport with all requirements of state law. RCW 90.82.085 notes that:

Planning units and state agencies assessing and setting or amending instream flows must, as a minimum, consider the goals and methodologies addressed in the nonproject environmental impact statement. A planning unit or state agency may assess, set, or amend instream flows in a manner that varies from the final nonproject environmental impact statement if consistent with applicable instream flow laws.

The Spokane River Watershed Plans cannot override state water quality laws. Watershed plans cannot be utilized to destroy existing uses in rivers. Watershed plans cannot alter the requirements of state water quality standards. Ecology should not rely on the WRIA 55-57 Watershed Plan as a mandatory basis for instream flow conditions for the Avista 401 Certification for any part of the Spokane River, including Upper Spokane Falls. The statement that the Watershed Plan recommendations constitute “an expression of the public interest” is a misinterpretation of the statute (“public interest” is a term of art under the

water code, RCW Ch. 90.03, which is not applicable here.) While Ecology may certainly consider the WRIA 55-57 Watershed Plan as one of many pieces of information, it is not a binding document and deserves no more consideration than any other document discussing aesthetic flows.

That said, it appears the intent of the WRIA 55-57 watershed planning unit was to recommend a flow of 300 cfs in the "north channel" that would be sufficient to keep the riverbed wetted. The draft 401 certification translation of this recommendation to the proposed 300 cfs split between the north and middle channels is incorrect.

(ix) Confluence Consulting recommendations

Drs. Whittaker and Shelby of Confluence Consulting make several recommendations for development of appropriate aesthetic flows. See Att. 4 at p. 8. Ecology could require a new survey or process for determining appropriate flows, although we do not recommend such a condition. What we do recommend is that Ecology ensure that the exceptional public values associated with aesthetic and recreational use of the Upper Spokane Falls be protected in this Section 401 Certification.

To the extent Ecology is implicitly considering the economic impact of requiring a higher aesthetic flow at Upper Spokane Falls, we urge you to bring that issue into public discussion. As set forth below, the value of the power being generated at Upper Falls powerhouse is small. The value of the waterfalls to the community, both intrinsically and as a recreational attraction that brings tourist dollars into Spokane could be quite large – although it has never been studied. As noted in the Confluence Consulting recommendation, if economics is entering into the equation, there needs to be an "honest conversation" about the specific costs vs. benefits and to whom those accrue." Att. 4, p.8.

(7) A year-round aesthetic flow is needed for Upper Spokane Falls.

The draft 401 condition calls for an aesthetic flow "from Memorial Day weekend through September 30 each year." Unfortunately, during some years the falls are de-watered beyond September 30. An aesthetic flow condition is needed to protect flows in Upper Spokane Falls during anytime of the year when the falls are de-watered by Upper Falls dam operations. A year-round flow is the most efficient way to achieve this goal.

Further, it is not clear why the requirement for aesthetic flows are year-round at Monroe Street dam, but have a seasonal limitation at Upper Falls. See draft 401 Certification at p. 36. The Upper Spokane Falls are more accessible to the public being located in the heart of Riverfront Park. Upper Falls is bordered by retail space, the Centennial Trail, two pedestrian bridges, viewing from the YMCA, offices, restaurants, and residences, and are in close vicinity to Spokane's arena, convention space, and downtown businesses. We strongly support year-round flows, as recommended for Monroe Street dam.

(8) Modification of the Upper Falls channel is a speculative proposal.

The draft 401 certification discusses the potential for channel modification as a strategy for achieving the aesthetic equivalent of 300 cfs while using less water. No specific information regarding this proposal has ever been offered by Avista, including: (1) whether it can be feasibly implemented; (2) whether Avista could obtain necessary regulatory permits from local, state, and federal agencies; and (3) whether such modifications would create the

appropriate aesthetic equivalent. No plans, documents or drawings have ever been offered in support of this proposal.

Drs. Whittaker and Shelby examined this proposal finding:

Channel modifications may hold promise for improving waterfall aesthetics with less water at the Upper Falls project. The existing channels have been substantially modified, so spreading the water more equally between the two channels and across the face of each falls could be effective. Moreover, this concept has been used in other locations, most notably at Niagara Falls (where underwater weirs and other channel structures ensure a "curtain" of water is provided at all three named falls (American, Bridal Veil, and Horseshoe/Canadian)). However, such efforts are rarely simple or inexpensive, and they would probably require state and federal permits (and further environmental review). There is insufficient discussion in the license application or DEIS about the range of issues associated with developing the channel modification concept, conducting the feasibility study, or considering alternative mitigation (e.g., higher flows) if modifications are infeasible or ineffective.

Att. 4, at p.6.

CELP and Sierra Club do not object to the channel modification proposal, but the revision of the flow requirement must be tied to achieving an aesthetic flow of 500 cfs (or better) and should be subject to public review and comment.

(9) The proposed 500 cfs aesthetic flow would result in a 56 cent (\$0.56) increase in ratepayers' annual bills.

Economics are an implicit element of the discussion regarding aesthetic flows at Upper Spokane Falls. We think this conversation needs to "come out of the closet" and all parties and regulators should recognize and address the cost-benefit question.

Avista states that it needs at least 500 cfs flowing in the south (forebay) channel to operate the Upper Falls powerhouse. Currently, there are years when flows fall to a level that would require Avista to shut off the power to maintain 500 cfs in the north-middle waterfall channels. It is expected that summer low flows will improve due to a proposed increased minimum flow at Post Falls Dam, so it is possible that good water years would allow both a waterfall flow of 500 cfs and power production at Upper Falls powerhouse.

But, realistically, there will be years when Upper Falls powerhouse will be shut down to maintain waterfall flows. (Whether Avista could modify the powerhouse turbines to operate with lower flows has not been explored to our knowledge.) As discussed below, FERC has directly approved such a condition at Shoshone Falls. It is an acceptable outcome for Ecology to require aesthetic flows that will cause Avista to shut down the powerhouse. The costs of such a measure are discussed below.

The foregone hydropower associated with higher flows in the waterfalls is minimal. The Upper Falls power house is rated at 10 megawatts when the Spokane River is feeding the maximum flow of 2500 cfs into the forebay. In July, as flows drop below 2500 cfs, power production decreases accordingly. Ultimately, when flows fall below 1,000 cfs, Avista is

producing 2-3 megawatts at Upper Falls. This constitutes less than 1% of Avista's overall power production.

Avista made assertions about the value of this power in its license application to FERC, information that was included in the draft Environmental Impact Statement. Because we believed that Avista's projected foregone power costs were inflated, we retained Rocky Mountain Econometrics (RME) to evaluate Avista's assertions. A copy of the RME reports are attached. See Attachments 6 and 7. Of interest, Avista's response to our first report contained substantive errors. RME prepared a reply, and ultimately Avista agreed with our analysis regarding the value of the hydropower to ratepayers. See Attachment 8.

What did RME conclude? That the cost of providing increased flows would be barely noticeable to Avista or its ratepayers. Att. 6 at p.4. In fact, RME found that the cost of foregone power associated with even 24 hours of 500 cfs aesthetic flows was relatively small, particularly in light of the more than \$18 million in net benefits derived from the Spokane River dams. *Id.* at 15. RME notes that Avista "gives away" substantially more (\$1.3 million in 2005) than the relatively small cost of additional aesthetic flows. *Id.* at 7. Utilizing the economic information provided in the DEIS, the RME Analysis found:

To accommodate the \$65,400 cost of FERC's 200 cfs proposal, a typical residential monthly energy bill will increase by about \$0.01 a month. Over the course of an entire year, typical ratepayer charges would increase by about 11 cents. To accommodate the \$130,800 cost of 200 cfs from 5 a.m. to midnight, a typical ratepayer monthly bill would increase by about \$0.02 a month. Over the course of an entire year, typical ratepayer charges would increase by about 22 cents. To accommodate the Sierra Club's proposal of 500 cfs from 5 a.m. to midnight, a typical ratepayer monthly bill would increase by **three cents per month (\$0.03) and thirty-three cents (\$0.33) over the course of an entire year.** Round the clock aesthetic flows of 500 cfs would increase monthly charges by slightly more than \$0.03 and annual charges by \$0.41.

Economic benefits of Upper Falls to the community include direct benefits (e.g., tourism revenues) and non-economic benefits such as public enjoyment. Neither FERC nor Avista has presented data to determine the level of public support for additional costs. Although Avista conducted a study of the waterfalls, it failed to determine the public's "willingness to pay" for maintaining flows over the falls.

Id. (emphasis in original).

After pointing out errors in both its assumptions and its math, (Att. 7), Avista responded to the second RME report, acknowledging that the annualized cost of a year-round 500 cfs flow (from 5:00 a.m. to midnight) was \$303,000. See Att. 8. This figure is identical to the one derived by RME and formed the basis for the conclusion that impacts to ratepayers would equate to an incremental bill increase of \$0.56 per year. (Avista did note a one-time gate maintenance cost of \$66,885 that RME did not consider.)

Finally, it should also be noted that the increased minimum flow from Post Falls dam will increase available water for aesthetic flows downstream, and Avista is expected to generate more power (and revenue) as a result of the new federal power license requirements. Regardless, CELP, Sierra Club and business entities in Spokane have offered to work with

Avista to replace the foregone 2-3 megawatts of hydropower with renewable energy sources.

(10) 401 Certification aesthetic flow conditions for waterfalls elsewhere in the Northwest indicate that foregone energy production is appropriate to preserve aesthetic benefits.

Upper Spokane Falls is not the only waterfall in the region in which power companies are required to forego energy production in order to maintain aesthetic flows.

As noted above, Ecology has imposed flow conditions in the 401 certification for Snoqualmie Falls. Of interest, in FERC's Order on Rehearing for the Snoqualmie Falls Hydroelectric Project, the agency found that increased flow in the falls at the cost of \$458,000 was an appropriate balance of competing interests stating:

The cost of the 1,000 cfs minimum flows (daytime and nighttime) throughout May and June decreases the net annual benefit of the Snoqualmie Project by \$458,000 and, together with a separate corrected cost (\$85,000) added in this order, 30 reduces the total positive net annual benefit of the project, as relicensed, from \$10,953,000 to \$10,410,000, a fairly small effect on the total net annual benefit. Given the size of the project (54.4 MW), the relatively small effect on net annual benefit, and the importance of the mist at this site to the Snoqualmie Tribe, raising the flows to ensure 1,000 cfs throughout the months of May and June appropriately balances competing interests.

Puget Sound Energy, Inc., Project No. 2493-016, Order on Rehearing and Dismissing Stay Request (March 1, 2005) at 9-10. It is important to note that the Commission estimates a net benefit of the Spokane River dams of \$8 million more than Snoqualmie Falls.

While power production is important, FERC has required aesthetic flows that may result in zero water being diverted to the powerhouse and all flow being dedicated to a falls. In the Shoshone Falls proceeding, FERC ordered Idaho Power committed to provide "a minimum flow of 300 cubic feet per second, *or inflow to the project reservoir if less*, over Shoshone Falls." *Idaho Power Company*, Project No. 2778-005, Order Issuing New License (August 4, 2004) at 17. This license article requires that all river flow would be dedicated to the falls with no water being diverted to the powerhouse during certain flow conditions.

(11) Fisheries Entrainment Concerns

The draft 401 Certification indicates that native redband trout and mountain whitefish spawn in the headwaters of the Upper Falls reservoir. See draft 401 Certification, p. 9. Redband trout populations are in steep decline in the Spokane River and we are concerned about the potential for entrainment of these fish in the waterfalls under the current strategy proposed by Ecology, i.e., to turn the falls off every day.

The Department of Fish & Wildlife has previously noted this concern. In a December 16, 2004 letter to Avista, the WDFW discussed the impacts to fish from Avista's proposal to "turn on and off" the falls each day stating, "This daily operation has the potential to entrain fish into the bypass reach. Entrainment into the bypass reach is not necessarily a problem, except that the flows are cut-off after sunset. If fish are entrained, there is the potential of

fish becoming stranded somewhere in this reach in an environment where they may not survive." See Attachment 9.

Because of this, we support the proposal to study the impact of on-and-off waterfall flows on native fish populations and would support a condition that the Upper Spokane Falls flow be required 24 hours per day, seven days per week unless it can be demonstrated that an intermittent flow will not harm these native fish populations.

Conclusion

Thank you for the opportunity to provide these comments on the draft Avista 401 Certification. We look forward to a final certification that fully protects the interests of the people of the City of Spokane and Washington State in a beautiful free-flowing Upper Spokane Falls.

Yours very truly,



Rachael Paschal Osborn
Executive Director
Center for Environmental Law & Policy

Attachments:

Number	Document
1	Federal Energy Regulatory Commission, Avista Spokane Project, Final Environmental Impact Statement, Public Comments from Responsiveness Summary
2	Federal Energy Regulatory Commission, Avista Spokane Project, Final Environmental Impact Statement, Transcripts (February 8, 2007, 9:00 a.m. and 6:00 p.m.)
3	Confluence Research & Consulting, Review of Waterfall Aesthetics Issues, Spokane River Project (FERC No. 2545) (February 2007)
4	Louis Berger Group, Aesthetic Study Report, Spokane River Project, FERC No. 2545, excerpt (November 2003)
5	Little Spokane River/Middle Spokane River Planning Unit, Watershed Management Plan, excerpts (Draft 03, adopted January 31, 2006)
6	Rocky Mountain Econometrics, Analysis of FERC Aesthetic Flow Cost and Benefit Calculations for the Upper Falls of the Spokane River (February 2007)
7	Rocky Mountain Econometrics, Review of Avista Letter to FERC on March 28, 2007 Regarding Costs of Aesthetic Flows at Spokane Falls Upper Falls (April 10, 2007)
8	Avista Utilities, Letter to John Blair, Federal Energy Regulatory Commission, Revised Upper Falls aesthetic flow levelized annual energy and gate maintenance costs, Spokane River Project No. 2545-091 (April 20, 2007)
9	Washington Department of Fish & Wildlife, Letter to Speed Fitzhugh, Avista, Corp., WDFW Comments on Aesthetic Flows PM&E (12-16-04)