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April 24, 2003

TO: LIHI Governing Board

cc: LIHI Advisory Panels
Stillwater Sciences

FROM: Lydia T. Grimm
Executive Director

SUBJECT: Recommendation regarding the application for certification of the Skagit River Hydroelectric Project, Skagit River, Washington

ISSUES

Should the Governing Board certify the three facilities of the Skagit River Hydroelectric project (690 MW total) as Low Impact facilities?

RECOMMENDATIONS

The Governing Board should certify the Skagit project comprised of the Gorge, Diablo, and Ross facilities as Low Impact. The project raised issues in three criteria areas: flows, fish passage, and threatened and endangered species. The most difficult issue posed was in regards to fish passage at Gorge Dam. Did salmon or steelhead migrate above this dam historically? And, if so, was one of the reasons resource agencies did not seek to require fish passage at the dam because of the creation of Gorge Lake which inundated the mainstem Skagit above the dam?

The record presented here is far from clear. However, from the standpoint of the mission of the Low Impact program and the goal and intent of the fish passage criterion as I understand them, I believe the answers are “probably no” and that certification is the correct decision.

DISCUSSION

I have reviewed the application, supporting materials, the additional materials provided by the Applicant in response to the Application Reviewer’s inquiry, and the draft report by Stillwater Sciences (Application Reviewer). (The final report will not be available until after I depart LIHI). In their draft report, Stillwater Sciences concludes that the Gorge Facility does not meet the fish passage criteria and that such a result is compelled by the plain language of C2. I

disagree for the reasons discussed below. I will discuss the fish passage criteria issues first, and then I will summarize compliance with the remaining criteria.

Background

The Skagit Project is a 690 MW project comprised of three facilities (dam/powerhouse/reservoir combination). From upstream to down, these are the Ross, Diablo, and Gorge facilities. These are three large-scale facilities that are operated in a peaking mode. The Skagit Project was relicensed recently (1995) based on several comprehensive settlement agreements negotiated with state, federal, and tribal resource agencies in 1991 which were described by FERC at the time as the “most comprehensive set of Settlement Agreements for the public good ever submitted to FERC.” (SCL application, page 5).

Among other things, Seattle City Light has significantly increased the amount of flows released from the project into the downstream reaches of the Skagit River, which are home to numerous salmon species, including the recently listed chinook salmon. The increased flows and related flow mitigation measures have been successful in improving habitat conditions and salmon populations in the Skagit River, and the resource agencies appear very pleased with the results.

Under the LIHI certification program, each individual facility, even if operated together as a unit, must meet the Low Impact criteria. Seattle City Light submitted the application (and I accepted it) as a consolidated application without express differentiation between the 3 facilities since the facilities are operated as a unit, licensed as unit, and evaluated as unit for purposes of the various settlement agreements. However, each individual dam/powerhouse/reservoir combination must be evaluated and meet the criteria.

Fish Passage Criterion

Turning to fish passage, the LIHI fish passage criteria are “designed to ensure that, where necessary, the facility provides effective fish passage for riverine, anadromous and catadromous fish” (See Part I, Section III.3 of the certification program).¹ There is no definition of “where necessary.”

The fish passage criteria themselves set forth a series of questions relating to the presence or absence of migratory fish species and, to a certain degree, the response of the resource agencies to their presence or absence:

¹ Riverine fish are locally migratory; anadromous fish and catadromous fish are ocean-going migrants—anadromous fish (like salmon) live in the ocean and spawn in freshwater. Catadromous fish (like eels) live in freshwater and spawn in the ocean.

C. Fish Passage and Protection	PASS	FAIL
1) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and downstream passage of anadromous and catadromous fish issued by Resource Agencies after December 31, 1986?	YES = Go to C5 N/A = Go to C2	NO = Fail
<p>2) Are there historic records of anadromous and/or catadromous fish movement through the Facility area, but anadromous and/or catadromous fish do not presently move through the Facility area (e.g., because passage is blocked at a downstream dam or the fish run is extinct)?</p> <p>a) If the fish are extinct or extirpated from the Facility area or downstream reach, has the Applicant demonstrated that the extinction or extirpation was not due in whole or part to the Facility?</p> <p>b) If a Resource Agency Recommended adoption of upstream and/or downstream fish passage measures at a specific future date, or when a triggering event occurs (such as completion of passage through a downstream obstruction or the completion of a specified process), has the Facility owner/operator made a legally enforceable commitment to provide such passage?</p>	<p>YES = Go to C2a NO = Go to C3</p> <p>YES = Go to C2b N/A = Go to C2b</p> <p>YES = Go to C5 N/A = Go to C3</p>	<p>NO = Fail</p> <p>NO = Fail</p>
<p>3) If, since December 31, 1986:</p> <p>a) Resource Agencies have had the opportunity to issue, and considered issuing, a Mandatory Fish Passage Prescription for upstream and/or downstream passage of anadromous or catadromous fish (including delayed installation as described in C2a above), and</p> <p>b) The Resource Agencies declined to issue a Mandatory Fish Passage Prescription,</p> <p>c) Was a reason for the Resource Agencies' declining to issue a Mandatory Fish Passage Prescription one of the following: (1) the technological infeasibility of passage, (2) the</p>	<p>NO = Go to C5 N/A = Go to C4</p>	<p>YES = Fail</p>

absence of habitat upstream of the Facility due at least in part to inundation by the Facility impoundment, or (3) the anadromous or catadromous fish are no longer present in the Facility area and/or downstream reach due in whole or part to the presence of the Facility?		
4) If C3 was not applicable: a) Are upstream and downstream fish passage survival rates for anadromous and catadromous fish at the dam each documented at greater than 95% over 80% of the run using a generally accepted monitoring methodology? Or b) If the Facility is unable to meet the fish passage standards in 4.a., has the Applicant demonstrated, and obtained a letter from the US Fish and Wildlife Service or National Marine Fisheries Service confirming that demonstration, that the upstream and downstream fish passage measures (if any) at the Facility are appropriately protective of the fishery resource?	YES = Go to C5	NO = Fail
5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of Riverine fish?	YES = Go to C6 N/A = Go to C6	NO = Fail
6) Is the Facility in Compliance with Resource Agency Recommendations for Riverine, anadromous and catadromous fish entrainment protection, such as tailrace barriers?	YES = Pass, go to D N/A = Pass, go to D	NO = Fail

SCL answered “N/A” to C1, “No” to C2, and “No” to C3. Stillwater and I agree that the answer to C1 for all three facilities is “not applicable”: none of the resource agencies sought fish passage at any of the three dams. We also agree that the correct answer to C2 for Ross and Diablo is “no” because there are no historic records of anadromous (ocean-going) fish moving through those facility areas because there were natural barriers (falls and rapids). Where we disagree is whether or not the answers for the Gorge Facility are “No” for C2 and “No” for C3.

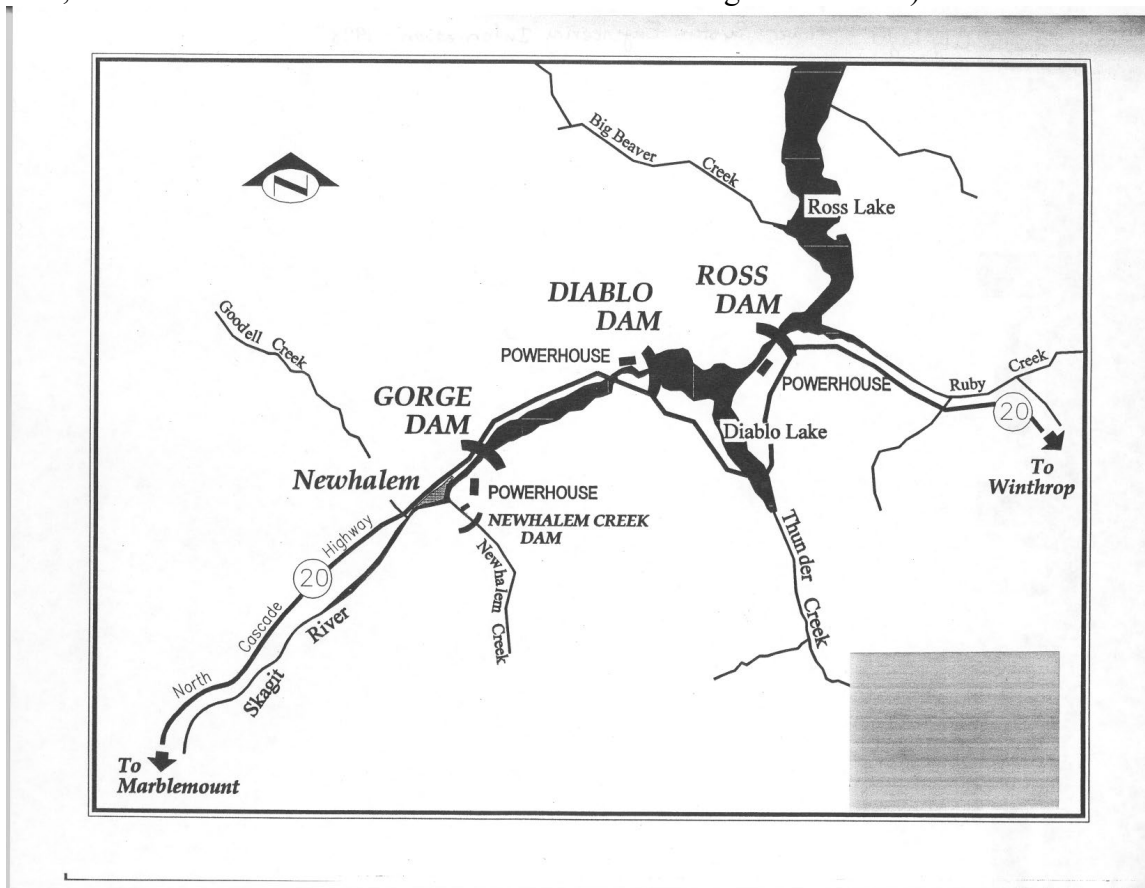
Are there historic records of anadromous fish movement through the Gorge facility area?

Prior to the construction of the three dams, the Skagit River from approximately Ruby Creek, just upstream of where Ross Dam is now to Gorge Creek downstream of the current Gorge Dam,

was (and is) a canyon like area with steep sloped sides. The river itself had numerous rapids and falls particularly in the lower section from just above the town of Newhalem to the area above Gorge Dam. These river sections are now inundated by the Gorge reservoir.

Salmonids, as rule, can manage incredible swimming feats, but they have difficulty negotiating falls (the heights vary depending on the species and characteristics of the pool including “plunge pool depths” at the base of a fall and the velocity of the water coming through the fall). In addition, they generally prefer to spawn in gravel areas without swift moving currents.

There appears to be little dispute that most salmon species that are otherwise abundant in the lower Skagit River below the Skagit project never managed to get past the initial rapids and falls of the Gorge Reach above Newhalem (about half a mile above where the Gorge powerhouse is now, and about one and half miles below where the Gorge dam is now).



However, the picture is murkier for steelhead. Steelhead are an ocean-going or anadromous version of the rainbow trout, and steelhead are the most vigorous swimmers of the salmonid species found in the Skagit River. There appears to be little dispute that *resident* rainbow trout (not ocean-going) were (and remain) abundant in the upper river where the Skagit project is currently located. Whether or not steelhead were able to migrate up past the rapids and falls above Newhalem appears to me to be the key issue.

In their application, Seattle City Light (SCL) relies on a report done by a consultant to assess the historical habitat for salmon in the project area (Envirosphere 1988). The relevant excerpt from this report is posted on the LIHI website. In a nutshell, the authors of that report concluded: that a “small number” of steelhead trout “probably” returned to the Reflector and Cedar Bar areas and to lower Stetattle Creek and that “possibly” a “very small number” of spring chinook salmon returned to the Cedar/Reflector Bar areas. See the Envirosphere report at 4-18. The Cedar/Reflector Bar area and Stetattle Creek are just below where the Diablo Dam is today and well above where Gorge Dam is located.

Our Application Reviewers, Stillwater Sciences, sought clarification from Seattle City Light regarding this information, since SCL had answered “No” to question C2 which asks if there are historic records of anadromous fish movement through the Facility area but they don’t move through today. In response, SCL said their answer remains “no” to C2 because they believe there is no *reliable* historical documentation that salmon and steelhead successfully migrated through the Gorge Reach, and in any case, fish passage at Gorge was not an issue for the agencies for this project. See SCL’s additional information response (also posted on the LIHI website).

This is a difficult call, and I encourage all of you to review the documentation on the LIHI website. But, to summarize: a pre-dam biological survey conducted by the University of Washington in 1921 concluded that no salmon or steelhead moved through where the Gorge facility is now due to the multiple rapids and falls (the portion of this survey describing the Skagit is on the LIHI website). There are otherwise conflicting reports from area residents and people who worked along the upper portion of the river as to whether or not salmon and particularly steelhead moved through this area: some think they did, others think they did not. (It’s worth noting that ocean-going steelhead and locally migratory rainbow trout can be difficult to distinguish, and there is no dispute that there were rainbow trout in this area).

In addition, in 1936 after dam construction, the Washington Department of Fisheries wrote to City Light requesting that the City build a fish hatchery and rearing ponds to address fishery impacts of the project. The primary focus was on the impacts from the extreme flow fluctuations affecting the downstream river, but also were required because of “[T]he runs of steelhead into Stetattle Creek and into the dam area have been destroyed.” (See page 4-15 of the 1988 Envirosphere report). The City disputed this conclusion at the time, indicating there was no evidence to support it. The Envirosphere authors suggest that the state’s conclusions were possibly a negotiating tactic to get more funding for a hatchery and other mitigation.

Unfortunately, the line-by-line instructions for answering C2 do not provide any information about how to determine whether there are “historical records” of anadromous fish movement. Because the language provides no qualifiers, Stillwater’s view is that so long as there is any historical record of fish movement through the Facility area, a plain reading of the language of C2 compels a “Yes” answer. There are indeed “historical records” of anadromous fish movement through through the area, e.g., the WDF letter and some area resident reports, and so Stillwater concludes the answer to C2 must be “Yes.” If the C2 criteria said, “[are] there *reliable or consistent* historical records...” or “[are] there historic records of *significant* anadromous

and/or catadromous fish movement through the Facility area..." then Stillwater might respond differently.

I understand Stillwater's position, but I think it is an overly literal reading of the criteria. What we have here are "historical records" of anadromous fish movement through the area and "historical records" of no anadromous fish movement through the area. I don't believe the intent of the criteria were to automatically reject any records suggesting no fish were there just because there are also records that there were fish there. This could lead to one fisherman's statement of having caught salmon trumping a research survey showing no possibility of such species being present. I think LIHI must try and weigh the records it gets, or it must clarify the criteria with the kinds of qualifiers described above.

On just the information presented, I lean slightly towards the "no fish" conclusion because like SCL, I tend to think that a pre-dam biological survey carries more weight, particularly given the difficulty in distinguishing between steelhead and rainbow trout. Still, I'm troubled by the historical claim by WDF of impacts to steelhead, as I would generally give deference to agency views. There is little to discern about resource agency views today on this issue, other than they clearly weren't focusing on passage as an issue.

I think too from a general policy standpoint, LIHI has to consider whether by asking this question, it's looking for whether or not one or two fish ever made it up this far, or whether it's asking about biologically significant movement, i.e., regular returning runs for spawning. I think the record we're presented with is that this area was, at the very best, marginal habitat for some steelhead that could sometimes migrate up to the Stetattle Creek to spawn. This was not an area that provided habitat for multiple salmon or steelheads runs.

If you think that salmon or steelhead did *not* move through the facility area historically, then the answer to C2 is "No" and you must turn to question C3.² C3 essentially asks if fish were present there historically and aren't there now, and agencies have not sought fish passage, the reasons for agencies not seeking passage become important. If the agencies didn't seek passage because the habitat was inundated, because fish are no longer present in the Facility area or downstream reach due in whole or in part to the Facility, or due to technological infeasibility of passage, then the project fails. If the agencies didn't seek passage for some other reason or reasons, the project passes. Here are the line-by-line instructions:

Question C.3. – Question C.3. applies only if: (a) no Mandatory Fish Passage Prescription has been issued since December 31, 1986; (b) no Resource Agency Recommendation for future fish passage has been issued; and (c) Resource Agencies have had the opportunity to issue a Mandatory Fish Passage Prescription since December 31, 1986 but declined to do so. In this

² In my view, this secondary question should not be required. The initial part of question C2 should be divided into two parts. Are there historic records of anadromous/catadromous fish moving through the facility area? If the answer is "NO" (resolving the issue of conflicting records) that should send the applicant directly on to question C5. If the answer to the first part of C2 is "yes" THEN the applicant should proceed through the second half of C2, then C2a etc. As it is now, though, an answer of "NO" to the initial part of C2 still leads to C3 which should be unnecessary if the fish were never there historically.

circumstance, the reasons for the Resource Agencies declining to require fish passage become important. If there has been no opportunity for the Resource Agency to issue a fish passage prescription since December 31, 1986, the correct response is “N/A” and the Applicant should proceed to C.4.

Question C.3.c. – Question C.3.c. outlines three reasons for a Resource Agency decision not to require fish passage that will cause a Facility to fail the fish passage criterion. In each case, the reasons relate to the physical nature of the Facility or the environmental impacts that the Facility has caused. The first reason, technological infeasibility of fish passage, is expected to apply primarily to dams which are too high for effective fish passage. However, it may also apply in other situations, such as when a migratory fish species (*e.g.*, sturgeon) is not capable of successfully using fish passage. The second reason is that the Facility has destroyed upstream habitat for the migratory fish, and thus there is no reason to pass fish. The third reason is that the fish are no longer present (*e.g.*, extirpated from the river or extinct), in whole or part as a result of the Facility. In each of these three cases, the Facility cannot be considered to be Low Impact because the Facility has had a direct adverse impact on the migratory fish. Documentation should include evidence of the rationale for the Resource Agency’s decision not to recommend fish passage. The Applicant should seek to obtain a letter from the Resource Agency official authorized to make recommendations for the Resource Agency in other comparable circumstances, such as in FERC proceedings. The letter should confirm the reasons for declining to issue a Mandatory Fish Passage Prescription for the Facility. Please see the general instructions above for more guidance regarding this letter.

It’s very clear from the record that the resource agencies had no interest in seeking passage for anadromous fish at the Gorge dam. Indeed, most of the focus was on the downstream reach of the river, below the Gorge powerhouse where there are numerous runs of salmon species, and a clear desire to improve flow conditions to protect and enhance that habitat and those important populations. It’s also very telling that the agencies didn’t even seek to reserve their authority to require passage in the future. That is unusual on a salmon-bearing river unless there is no expectation of needing or wanting passage in the future.

The problem is, it’s not entirely clear why agencies weren’t interested in passage. Did they concur with SCL’s view that there weren’t any fish there historically? Did they not seek passage because the upper river reaches are for the most part inundated? Or because there was little habitat in the mainstem or tributaries to begin with? It’s very hard to discern from the record before us. SCL’s recollection of the settlement negotiations was that fish passage was not an issue, and that inundation of the Gorge Reach was simply not a factor. According to Stillwater’s conversations with one resource agency person, inundation was a factor in not seeking passage (though not a primary one).

Based on the information before us, including the conversations between the Application Reviewer and the agencies, I’d say the agencies were not sure either whether steelhead ever got up there, but it was clear that they felt that the important issue wasn’t passage at Gorge or getting

fish in that area, but was rather in improving the flow conditions to help the much more important occupied habitats downstream. It is not entirely clear that the inundation of the upstream reach was not at least one factor, however slight, in their calculations not to pursue any passage.

With an inconclusive record and interpretations that can go either way as to whether the project does, or does not, meet the criteria, in my mind it comes down to purposes of the program. The mission of the Low Impact Hydropower Institute is to encourage reduction in the impacts of hydropower generation through a credible and accepted certification system. The goal of the fish passage criterion is to require passage for fish where necessary. The program does not define “where necessary” and who decides it. Typically, we look to resource agencies, but the structure of the fish passage criteria set forth a slightly different path. In at least two places C2a, and C3(c)(2) and C3(c)(3), if the Facility is a factor in the removal of anadromous fish from an area, it will fail the criteria, regardless of what the agencies think or do about passage.

I don’t think there is any question that Seattle City Light has significantly reduced the impacts of its Skagit project after implementing the comprehensive settlement agreements. The Gorge facility may or may not have blocked the passage of some steelhead into poor original habitat historically, but no one is seeking or suggesting that passage is necessary, let alone desirable at the dam now. This is not a mainstem dam blocking access to miles of upstream habitat and tributary habitat. In addition, the Gorge facility has significantly increased its flow releases (and is managing the pattern of those releases) in such a way to improve conditions for all salmon species downstream to the applause of the resource agencies and tribes. Is that not precisely the kind of behavior that the certification was designed to encourage?

If you fail the Gorge facility based on this record, you would fail the facility because it *may* have blocked the passage of *some* steelhead into the uppermost range of habitat on this river, habitat that was poor under pre-dam conditions. You would fail the facility because it didn’t provide passage despite the lack of any agency request for passage or even reservation of authority to do so. You would fail the facility despite its reductions in impacts to multiple salmon species downstream and continued good health of those populations downstream due in part to the project’s new operations. The message would be: no matter how minimal or uncertain the existence or original impact to anadromous fish, we will assume that fish were there, and any uncorrected blockage (even if agencies are not seeking correction) is unacceptable, no matter how extraordinary and successful the efforts to mitigate impacts to anadromous fish otherwise.

To some, that may be the difficult but correct result, but I can’t agree. This is not the no impact hydropower certification program; it is the low impact program. If asked whether the Skagit project is having minimal impacts on salmon or steelhead populations, to me, the answer is “yes”—even if you assume that it did block some steelhead from reaching the area of Stetattle Creek.

In sum, the issue of fish passage at Gorge is a difficult one. However, I believe, and recommend that you conclude that the Gorge facility meets the Low Impact criteria. The record can go either way as to whether or not steelhead ever reached this area, and I tend to think they did not. But it is clear that even if they had, it was the uppermost range of habitat and marginal at best and that

no resource agency is interested in seeking passage. Given the extraordinary efforts and improvements in the downstream flows for Gorge that have produced very good results for salmon, certification here meets the goals of the LIHI program to encourage reductions in the impacts of hydropower generation such as demonstrated by the Skagit facility.

River Flows Criterion

The first question asked in our river flows criteria (A.1) is whether or not the facility is in compliance with resource agency recommendations regarding flow conditions for fish and wildlife protection, mitigation, and enhancement for both the reach below the tailrace and all bypassed reaches? If there has been no relevant resource agency recommendation, the answer is “Not applicable” and the applicant must comply with either A2 or A3.

In this case, resource agency recommendations are contained in the comprehensive settlement agreements. Under those agreements, the only recommended “flow” releases are from the Gorge facility—specific flows for release below the Gorge powerhouse to help maintain and restore habitat in the mainstem Skagit River downstream of the project. The upper two facilities, Diablo and Ross have no extant functioning river reaches, they have reservoirs---the Gorge Dam creates a reservoir that backs up to the Diablo Dam, and the Diablo Dam creates a reservoir that backs up to Ross Dam (and Ross Dam itself creates the very large Ross Lake). Does this mean there are no “flow recommendations” per our criteria for the Diablo and Ross facilities such that A.1 does not apply?

I think the answer is “no” because there are no “flows” to address at the upper two facilities. Rather, the water-based issue for these two facilities is management of the reservoir levels and how those will be used to both protect habitats at the lakes, and provide the storage flows needed to maintain the new increased flows below the Gorge powerhouse. Thus, the Diablo and Ross are meeting the “flow” recommendations of the agencies per the settlement agreements as relevant to the two facilities, even if they aren’t about tailrace or bypassed reaches (which don’t exist at these facilities).

Another issue raised in regards to flows is at the Gorge facility, and specifically the Gorge bypassed reach. Water in the Gorge reservoir is diverted at Gorge Dam into penstocks which bypass 2.7 miles of the natural Skagit River channel. As a part of the comprehensive settlement agreements, the agencies agreed not to require Seattle City Light to provide minimum flows in that bypassed reach, but rather to focus efforts on providing environmental flows downstream of Gorge powerhouse. As a result, the flows into the bypassed reach still fluctuate and there are times when the reach is dewatered, making it uninhabitable by salmon. (As discussed above, the upper end of salmon habitat historically--other than perhaps for steelhead--would be an area in the lowest half mile of this bypassed reach). As noted by our Application Reviewers, the potential salmon habitat in the bypassed reach was foregone in order to obtain additional flows downstream and to provide more funds for habitat improvement and mitigation projects. The issue then is, can a recommendation not to provide instream flows in a bypassed reach but to instead provide them below the powerhouse be a flow recommendation we recognize under A.1?

I think here the answer is “yes.” The Low Impact program does not require that all bypassed reaches have minimum instream flows (though I think all of us would conclude that is generally desirable). Rather, it requires that where there are agency recommendations for flows, including bypassed reach flows, the applicant must be meeting the most stringent of them in order to be certified. Here, the agencies consciously chose not to require minimum instream flows in the bypass reach in exchange for flows downstream to achieve more significant biological gains. This was clearly a compromise and one that the criteria support, and one that I don’t think the program allows LIHI to second guess. I think it would be different matter if we were presented with an application with no minimum instream flows in a bypassed reach and no evidence that the resource agencies had concurred in this in order to reach other flow-related objectives in the Facility area.

Water Quality

The Skagit project did not receive a section 401 water quality certification from the State of Washington, it was waived. According to correspondence from the State, they were ready and prepared to issue a 401 certification when other priorities intervened. Since they would not be able to issue the certification as needed by Seattle City Light in time, they waived certification and indicated in the letter that they supported the settlement agreements (see December 13, 1991 letter).

Seattle City Light provided information about the state water quality standards and evidence of compliance with them. There do not appear to be any water quality issues at the project. The State did grant a special waiver of the temperature standards for the Gorge bypassed reach: temperatures in that reach, which are still dewatered on occasion, can go up to 21 degrees centigrade instead of the regular state standard of 16 degrees. In consultations with Stillwater, the State indicated this was part of the compromise to allow Seattle City Light to not provide instream flows in this bypassed reach in order to obtain higher flows in the downstream reach. Since this is a state-sanctioned temperature level, the facility meets the Low Impact criterion.

Watershed Protection

There were no unusual technical or policy issues in relation to watershed protection. It is worth noting, however, that as a part of the settlement agreements, Seattle City Light has taken extra efforts to mitigate for the original impacts of the Skagit project, particularly in terms of land acquisition and management in the Basin, as well as long-term monitoring and research. This includes the purchase and protection of over 8,200 acres of land to serve as riparian areas and corridors, wetlands, and mature (old growth) forests. The lands were selected to complement and link other parcels reserved for wildlife such as areas owned by the state and the Nature Conservancy. A summary of the wildlife land purchases to date are included in the application starting at page 24.

Seattle City Light also provides \$50,000 each year for wildlife and environmental research and studies as determined by a five member Wildlife Research Advisory Committee. Nine projects have been funded to date, including projects relating to grizzly bears, lynx, and macroinvertebrates. Seattle City Light is also providing \$20,000 each year to support long-term

monitoring of wildlife and environmental resources in the North Cascades National Park, adjacent to the project area. In addition, \$20,000 is provided every year for the North Cascades Environmental Education

Threatened and Endangered Species

Two species of fish found in the Skagit River—the chinook salmon (Puget Sound Evolutionarily Significant Unit) and the bull trout—were listed as threatened species under the federal Endangered Species Act after the completion of the Skagit project settlement agreements and after issuance of the new FERC license (they were listed throughout their ranges in the west, not just in the Skagit River). One issue then is whether or not the Skagit facilities create impacts to these newly listed species that are not being addressed by the mitigation measures adopted prior to their listing. Based on the record, the answer is at least so far “No”—the resource agencies appear to be satisfied that the Skagit facilities are not adversely affecting either newly listed species. The new flow regime is helping with salmon, including listed chinook, in the Skagit River. Indeed, since the implementation of the new flows in 1991, chinook salmon in the Skagit River have maintained or increased their numbers, while chinook populations in other Washington state rivers have declined.

As for bull trout, healthy populations exist in all of the project reservoirs, and particularly Ross Lake. As determined by Stillwater, on-going studies supporting the recovery planning for bull trout may indicate a need for additional spawning habitat for populations in the Gorge and Diablo reservoirs, or passage between them to improve population mixing, but there are no such requirements or recommendations from agencies now. No agency is seeking to re-initiate section 7 consultation with FERC over the Skagit project at this time to address either chinook or bull trout.

These are matters that should be flagged for examination at certification renewal: are there new mitigation measures requested by resource agencies for either chinook salmon or bull trout (or any other species listed subsequently), and are the Skagit facilities in compliance with them?

Cultural Resource Protection

As a part of its new FERC license and based on the settlement agreements, Seattle City Light is providing a range of mitigation for cultural resource impacts. This includes a number of projects developed in coordination with area tribes, including the Upper Skagit Tribe, the Sauk-Suiattle Tribe, and the Swinomish Indian Tribal Community. The Tribes and other resource agencies all expressed satisfaction with the Applicant’s efforts. However, at least two resource agency commenters mentioned or expressed concern that Seattle City Light’s fiscal circumstances and cutbacks could result in cutbacks to maintenance and protection of both cultural and recreation facilities. This is an issue that should be flagged for follow-up at renewal.

Recreation

The Skagit Project provides significant recreation opportunities, particularly at Ross Lake for boating, but there are numerous other recreation sites and developments scattered throughout the

project area. The settlement agreements that led to relicensing of the project include a Recreation Plan that specifies the additional improvements and other efforts (providing accessibility, repair and rehabilitation) as well as new projects (raft sites, picnic sites, trails etc) that Seattle City Light must perform. A summary list of these projects is contained in the application beginning on page 35. All indications are that Seattle City Light is in full compliance with these agreements and that the agencies are satisfied (notwithstanding worries about how budget cutbacks may affect resources in the future).

Dam Removal

No agencies have sought removal of any of the 3 dams in the Skagit project.

Public comments & appeal period

Somewhat surprisingly, no public comments, pro or con, were received in response to the Skagit application. This is the largest project (both in terms of scale and capacity) that LIHI is likely to encounter, and I expected some public response. Nonetheless, in the absence of public comments on the application, your decision, unless appealed by Seattle City Light, is final.