

Low Impact Hydropower Institute

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LOW IMPACT HYDROPOWER QUESTIONNAIRE

Ashton Hydroelectric Project (FERC No. 2381)

E. LOW IMPACT HYDROPOWER QUESTIONNAIRE

Background Information	
1) Name of the <i>Facility</i> .	Ashton Hydroelectric Development (FERC No. 2381). PacifiCorp is seeking certification for only the Ashton hydroelectric development. PacifiCorp's Ashton and St. Anthony developments are licensed by FERC under FERC No. 2381; however, the St. Anthony development has not operated since 2003, and PacifiCorp seeks only to certify the Ashton portion of the project.
2) Applicant's name, contact information and relationship to the Facility. If the Applicant is not the Facility owner/operator, also provide the name and contact information for the Facility owner and operator.	Randy Landolt, Director, Hydro Resources PacifiCorp Energy 825 NE Multnomah, Suite 1500 Portland, OR 97232 Tel: 503.813.6650 FAX: 503.813.6659 Email: randy.landolt@pacificorp.com
3) Location of Facility by river and state.	Henry's Fork of the Snake River (Henry's Fork), Idaho

PacifiCorp Energy
Ashton Hydropower Development (FERC No. 2381)

4) Installed capacity.	6.85 MW
5) Average annual generation.	Based on the past 30 years (including 2008), the average annual generation of the project is 36.9 GWh.
6) Regulatory status.	The project was relicensed for a 40-year term, effective January 1, 1988, by FERC Orders dated August 3, 1987. The project consists of two developments: Ashton and St. Anthony. The St. Anthony development is not currently operational due to an outage of the generating unit in 2003. PacifiCorp is exploring decommission or sale of the development in consultation with FERC. As noted above, this application seeks certification for only the Ashton development, not the St. Anthony development.
7) Reservoir volume and surface area measured at the high water mark in an average water year.	Ashton reservoir Volume (total storage capacity) = 9,800 acre-feet Surface area = 404 acres
8) Area occupied by non-reservoir facilities (e.g., dam, penstocks, powerhouse).	Ashton non-reservoir facilities (i.e. dam, powerhouse, sheds, residence) occupy approximately 3.5 acres.
9) Number of acres inundated by the Facility.	Approximately 404 acres are inundated by Ashton Reservoir (including the original river channel).
10) Number of acres contained in a 200-foot zone extending around entire impoundment.	Approximately 353.3 acres
11) Please attach a list of contacts in the relevant Resource Agencies and in non-governmental organizations that have been involved in Recommending conditions for your Facility.	Please see Attachment 1.
12) Please attach a description of the Facility, its mode of operation (i.e., peaking/run of river) and a map of the Facility.	Please see Attachment 2.

<p>Questions For “New” Facilities Only: If the Facility you are applying for is “new” i.e., an existing dam that added or increased power generation capacity after August of 1998 please answer the following questions to determine eligibility for the program</p>	<p>N/A</p>
<p>13) When was the dam associated with the Facility completed?</p>	<p>N/A</p>
<p>14) When did the added or increased generation first generate electricity? If the added or increased generation is not yet operational, please answer question 18 as well.</p>	<p>N/A</p>
<p>15) Did the added or increased power generation capacity require or include any new dam or other diversion structure?</p>	<p>N/A</p>
<p>16) Did the added or increased capacity include or require a change in water flow through the facility that worsened conditions for fish, wildlife, or water quality, (for example, did operations change from run-of-river to peaking)?</p>	<p>N/A</p>
<p>17 (a) Was the existing dam recommended for removal or decommissioning by resource agencies, or recommended for removal or decommissioning by a broad representation of interested persons and organizations in the local and/or regional community prior to the added or increased capacity?</p> <p>(b) If you answered “yes” to question 17(a), the Facility is not eligible for certification, unless you</p>	<p>N/A</p>

<p>can show that the added or increased capacity resulted in specific measures to improve fish, wildlife, or water quality protection at the existing dam. If such measures were a result, please explain.</p>	
<p>18 (a) If the increased or added generation is not yet operational, has the increased or added generation received regulatory authorization (e.g., approval by the Federal Energy Regulatory Commission)? If not, the facility is not eligible for consideration; and</p> <p>(b) Are there any pending appeals or litigation regarding that authorization? If so, the facility is not eligible for consideration.</p>	<p>N/A</p>

A. Flows	PASS	FAIL	Applicant Answer
<p>1) Is the Facility in <i>Compliance with Resource Agency Recommendations</i> issued after December 31, 1986 regarding flow conditions for fish and wildlife protection, mitigation and enhancement (including in-stream flows, ramping and peaking rate conditions, and seasonal and episodic instream flow variations) for both the reach below the</p>	<p>YES = Pass, Go to B N/A = Go to A2</p>	<p>No = Fail</p>	<p>Yes- PacifiCorp’s Ashton development is in compliance with resource agency recommendations issued after December 31, 1986 regarding flow conditions for fish and wildlife protection. Article 401 of the project license requires PacifiCorp to operate the Ashton development in an “instantaneous run-of-river mode” for the protection of fish and wildlife resources in the Henry’s Fork. PacifiCorp minimizes the fluctuation of the reservoir surface elevation by maintaining a discharge from the development so that flow in the Henry’s Fork downstream from the powerhouse tailrace approximates the sum of inflow to the project reservoir. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and the Idaho Department of Fish and Game (IFG). The project license, which incorporates revisions approved in a FERC Order amending the license issued on November 16, 1993, is provided as</p>

<p>tailrace and all bypassed reaches?</p>			<p>Attachment 3 to this application.</p> <p>Prior to December 31, 1986, the IFG had recommended that ramping rates and minimum flows be established for the Ashton facility. However, operating the project in a run-of-river mode renders these recommendations unnecessary.</p> <p>Drawdowns of the reservoir level in the past year have been necessary for FERC-approved investigations to plan repairs to Ashton Dam. A decision was recently made in consultation with FERC to rebuild a large portion of the upstream face of Ashton Dam. PacifiCorp records of the reservoir elevation levels for 2008 document that the only fluctuations of the reservoir level were FERC sanctioned changes associated with the dam rehabilitation project.</p>
<p>2) If there is no flow condition recommended by any Resource Agency for the Facility, or if the recommendation was issued prior to January 1, 1987, is the Facility in Compliance with a flow release schedule, both below the tailrace and in all bypassed reaches, that at a minimum meets Aquatic Base Flow standards or “good” habitat flow standards calculated using the Montana-Tennant method?</p>	<p>YES = Pass, Go to B NO = Go to A3</p>		<p>N/A</p>
<p>3) If the Facility is unable to meet the flow standards in A.2., has the Applicant demonstrated, and obtained a</p>	<p>YES = Pass, go to B</p>	<p>NO = Fail</p>	<p>N/A</p>

letter from the relevant Resource Agency confirming that demonstration, that the flow conditions at the Facility are appropriately protective of fish, wildlife, and water quality?			
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B. Water Quality	PASS	FAIL	Applicant Answer
1) Is the Facility either: a) In Compliance with all conditions issued pursuant to a Clean Water Act Section 401 water quality certification issued for the Facility after December 31, 1986? Or b) In Compliance with the quantitative water quality standards established by the state that support designated uses pursuant to the federal Clean Water Act in the Facility area and in the downstream reach?	YES = Go to B2	No = Fail	a) N/A-PacifiCorp’s Ashton / St. Anthony Hydroelectric Project received a water quality certification in May, 1985 from the Idaho Department of Health and Welfare. PacifiCorp is in compliance with all the terms of this water quality certification. b) Water quality data for the project area are lacking, though the Ashton development is believed to be in compliance with existing quantitative water quality standards. The Henry’s Fork River, including the reach below Ashton Dam, is a world-class trout fishery. Limited water quality data that do exist (summarized below), suggest that the project has not impaired the designated beneficial uses for the Henry’s Fork of the Snake River. These beneficial uses include: <ul style="list-style-type: none"> • Aquatic Life (Cold Water Communities, Salmonid Spawning) • Recreation (Primary Contact Recreation) • Domestic Water Supply • Special Resource Water. <p>IDEQ considers the Henry’s Fork immediately above and below the Ashton Dam to be a <i>Category 3; a Water of the State With Insufficient Data and Information to Determine if Any Standards are Attained</i>. “Category 3</p>

			<p>water bodies meet two criteria: 1. No Tier I data that indicate an impairment of beneficial uses. 2. Not enough data existed at the time of assessment to make a determination that standards have been attained.” The Henry’s Fork is not on IDEQ’s published 303(d) list and schedule for TMDL assessments.</p> <p>With the exception of limited USGS data, water quality data collected for project relicensing in the early 1980s constitutes the bulk of available water quality data in the Project area. The following is a summary of existing information.</p> <p>The Ashton development is run-of-river with a short retention time (1.6 to 4.5 days¹); thus project operations have little capability to affect water temperature. The current IDEQ water temperature standard includes a spawning criterion of 13 °C (Maximum Daily Maximum Temperature, MDMT) and a 22 °C non-spawning criterion (coldwater) MDMT. Instantaneous data, although not directly comparable to these standards, provide a general indication of river temperatures downstream of the Ashton development. Water temperature in July 1981 reported in the Project license Exhibit E for Henry’s Fork at St. Anthony (USGS Gage 13050500) was 13 °C. More recently, instantaneous summer readings (July or August) at USGS Gage 13046000 (Henry’s Fork near Ashton, 0.8 mi. downstream of the powerhouse) ranged from 16-19 °C (total of five readings in 1994, 1996, 1997, and 1998).</p> <p>Reservoir surface temperatures increase 1-3 °C from inflow to the dam, a distance of approximately four miles.¹ Profile data collected for project relicensing (temperature, dissolved oxygen (DO), pH, and conductance from near surface to near bottom in June, and from surface to bottom in August,</p>
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¹ Maiolie, Melo A. August 1987. “Ashton Reservoir Fishery Enhancement Evaluation.” Idaho Department of Fish and Game.

			<p>1986) were within ranges suitable for salmonids. Summer intake temperatures near the dam were approximately 16-17 °C. The approximately 12-m deep Ashton Reservoir does not stratify, and DO remained above 6 mg/l from surface to bottom throughout the summer period. These measurements meet the current IDEQ requirement that waters designated for cold water aquatic life exceed six (6) mg/l DO at all times.</p> <p>The Henry’s Fork River, including reaches downstream of the dam, continues to support a destination wild trout fishery given abundant and diverse hatches of aquatic insects. This is a strong indication that water quality and beneficial uses are not impaired by the Ashton development.</p>
2) Is the Facility area or the downstream reach currently identified by the state as not meeting water quality standards (including narrative and numeric criteria and designated uses) pursuant to Section 303(d) of the Clean Water Act?	YES = Go to B3 NO = Pass		<p>No- The Henry’s Fork of the Snake River within the Lower and Upper Henry’s subbasins are not identified as not meeting state water quality standards (the Ashton dam marks the boundary between the subbasins). Attachment 4 presents the IDEQ’s list of the water quality limited water bodies (the 303(d) list) in the Lower and Upper Henry’s subbasins.</p>
3) If the answer to question B.2 is yes, has there been a determination that the Facility is not a cause of that violation?	YES = Pass	NO = Fail	Answer not required.

C. Fish Passage and Protection	PASS	FAIL	Applicant Answer
1) Is the Facility in Compliance with <i>Mandatory Fish Passage Prescriptions</i> 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	N/A – There are no fish passage prescriptions required for the Ashton development.
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 (<i>e.g.</i> , because passage is blocked at a downstream dam or the fish run is extinct)?	YES = Go to C2a NO = Go to C3		No- There are no known historic records of anadromous and/or catadromous fish movement through the facility area. Historically, anadromous salmon were impeded from migrating to the area by the Shoshone Falls on the Snake River (located downstream of the confluence of the Henry’s Fork with the Snake River).
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?	YES = Go to C2b N/A = Go to C2b	NO = Fail	Answer not required.

<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 C5 N/A = Go to C3</p>	<p>NO = Fail</p>	<p>Answer not required.</p>
<p>3) If, since December 31, 1986: 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 b) The Resource Agencies declined to issue a Mandatory Fish Passage</p>	<p>NO = Go to C5 N/A = Go to C4</p>	<p>YES = Fail</p>	<p>No – The reason that agencies declined to issue a mandatory fish passage prescription for anadromous and/or catadromous fish was because anadromous and catadromous fish were not historically present in the project area.</p>

<p>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 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?</p>			
<p>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?</p>	<p>YES = Go to C5</p>	<p>NO = Fail</p>	<p>Answer not required.</p>

<p>Or</p> <p>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?</p>			
<p>5) Is the Facility in Compliance with Mandatory Fish Passage Prescriptions for upstream and/or downstream passage of <i>Riverine</i> fish?</p>	<p>YES = Go to C6 N/A = Go to C6</p>	<p>NO = Fail</p>	<p>N/A- There were no mandatory riverine fish passage prescriptions issued for the Ashton facility. Fish passage recommendations discussed in the license and Environmental Assessment are exclusively in regard to the St. Anthony development, which is not a part of this application for certification.</p>

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	N/A- There have not been any resource agency recommendations regarding fish entrainment protection at the Ashton facility.
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D. Watershed Protection	PASS	FAIL	Applicant Answer
1) Is there a buffer zone dedicated for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low-impact recreation) extending 200 feet from the high water mark in an average water year around 50 - 100% of the impoundment, and for all of the undeveloped shoreline	YES = Pass, go to E and receive 3 extra years of certification	NO = go to D2	No. However, see Section D.4 for information on the facility's Wildlife Enhancement Plan which contains riparian enhancement measures to protect fish and wildlife habitat.
2) Has the facility owner/operator established an approved watershed enhancement fund that: 1) could achieve within the project's watershed the ecological and recreational equivalent of land protection in D.1.,and 2) has the agreement of appropriate	YES = Pass, go to E and receive 3 extra years of certification	NO = go to D3	No

<p>stakeholders and state and federal resource agencies?</p>			
<p>3) Has the facility owner/operator established through a settlement agreement with appropriate stakeholders and that has state and federal resource agencies agreement an appropriate shoreland buffer or equivalent watershed land protection plan for conservation purposes (to protect fish and wildlife habitat, water quality, aesthetics and/or low impact recreation)</p>	<p>YES = Pass, go to E</p>	<p>NO = go to D4</p>	<p>No</p>
<p>4) Is the facility in compliance with both state and federal resource agencies recommendations in a license approved shoreland management plan regarding protection, mitigation or enhancement of shorelands surrounding the project.</p>	<p>YES = Pass, go to E</p>	<p>NO = Fail</p>	<p>Yes- There were no agency recommendations for developing a shoreline management plan during relicensing. However, in consultation with the United States Fish and Wildlife Service (USFWS) and the IFG pursuant to Article 405 of the project license, PacifiCorp developed a Wildlife Enhancement Plan that serves to protect and enhance riparian habitat and shorelines. The Plan was originally developed and approved in 1990. PacifiCorp revised the Wildlife Enhancement Plan in 1995. In approving the revised Plan, the FERC Orders dated September 10, 1996 (see Attachment 5) state: “The revised plan is the result of extensive negotiations among the licensee, IFG, and the USFWS. The IFG and USFWS agreed to the plan by separate letters dated November 30, 1995.”</p>

		<p>Major components of the Plan include:</p> <ul style="list-style-type: none"> • Ashton Reservoir Riparian Enhancements- PacifiCorp has installed and maintained 3.7-miles of cattle fencing along the shoreline of Ashton Reservoir. The fencing confines grazing to selected riparian and upland areas, thereby allowing vegetation to grow for the enhancement of wildlife habitat. Twenty acres of land have also been planted with native trees and shrubs to speed the growth of vegetation. A 5.7-acre area adjacent to the reservoir is planted annually with alfalfa-bluegrass to provide goose forage. • Wetland Preservation –PacifiCorp has protected 250-acres of an upland/wetland complex by acquiring conservation easements or ownership of the properties, located about 1 mile southeast of Ashton Reservoir. The easements prohibit changes to these lands that would diminish their current value for wildlife. PacifiCorp has also acquired grazing rights to control cattle grazing on a total of 176-acres of land within and adjacent to the above 250-acre area. The conservation easements and grazing rights together enable PacifiCorp to manage the above lands for wildlife purposes. • Sand Creek Wildlife Management Area- PacifiCorp has also installed two miles of cattle fencing at the Sand Creek Wildlife Management Area owned by IFG, located about ten miles northwest of Ashton Reservoir. The fencing controls grazing and allows riparian and upland areas to be restored. • Nesting and Perch Structures- PacifiCorp has constructed and maintained 15 raptor perches, ten osprey nesting platforms, and one bald eagle nesting platform around the shoreline of Ashton Reservoir. PacifiCorp is also maintaining ten goose nesting platforms that have been installed at the Sand Creek Wildlife Management Area. <p>In accordance with the approved reporting schedule, PacifiCorp submits summary reports on implementation of the Wildlife Enhancement Plan to FERC, IFG, and the USFWS every five years. FERC approved the most recent</p>
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			report, covering the 2000-2005 period, in Orders dated April 18, 2006 (Attachment 6).
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E. Threatened and Endangered Species Protection	PASS	FAIL	Applicant Answer
1) Are threatened or endangered species listed under state or federal Endangered Species Acts present in the Facility area and/or downstream reach?	YES = Go to E2 NO = Pass, go to F		No- There are no known federally listed fish or botanical species in the facility area or downstream reach. The Environmental Assessment for the project found that bald eagle (<i>Haliaeetus leucocephalus</i>) and peregrine falcons (<i>Falco peregrines</i>) migrate through the area. However, both bald eagle and peregrine falcon have been removed from the federal threatened and endangered species list. Idaho does not have a state Endangered Species Act.
2) If a recovery plan has been adopted for the threatened or endangered species pursuant to Section 4(f) of the Endangered Species Act or similar state provision, is the Facility in Compliance with all recommendations in the plan relevant to the Facility?	YES = Go to E3 N/A = Go to E3	NO = Fail	Answer not required.
3) If the Facility has received authority to incidentally <i>Take</i> a listed species through: (i) Having a relevant agency complete consultation pursuant to ESA Section 7 resulting in a biological opinion, a habitat recovery	YES = Go to E4 N/A = Go to E5	NO = Fail	Answer not required.

<p>plan, and/or (if needed) an incidental Take statement; (ii) Obtaining an incidental Take permit pursuant to ESA Section 10; or (iii) For species listed by a state and not by the federal government, obtaining authority pursuant to similar state procedures; is the Facility in Compliance with conditions pursuant to that authority?</p>			
<p>4) If a biological opinion applicable to the Facility for the threatened or endangered species has been issued, can the Applicant demonstrate that:</p> <p>a) The biological opinion was accompanied by a FERC license or exemption or a habitat conservation plan? Or</p> <p>b) The biological opinion was issued pursuant to or consistent with a recovery plan for the endangered or threatened species? Or</p> <p>c) There is no recovery plan</p>	<p>YES = Pass, go to F</p>	<p>NO = Fail</p>	<p>Answer not required.</p>

<p>for the threatened or endangered species under active development by the relevant Resource Agency? Or</p> <p>d) The recovery plan under active development will have no material effect on the Facility's operations?</p>			
<p>5) If E.2. and E.3. are not applicable, has the Applicant demonstrated that the Facility and Facility operations do not negatively affect listed species?</p>	<p>YES = Pass, go to F</p>	<p>NO = Fail</p>	<p>Answer not required.</p>

<p>F. Cultural Resource Protection</p>	<p>PASS</p>	<p>FAIL</p>	<p>Applicant Answer</p>
<p>1) If FERC-regulated, is the Facility in Compliance with all requirements regarding Cultural Resource protection, mitigation or enhancement included in the FERC license or exemption?</p>	<p>YES = Pass, go to G N/A go to F2</p>	<p>NO = Fail</p>	<p>Yes- Article 408 of the project license stipulates that a cultural resources plan should be implemented to mitigate any impacts to a historic turbine (Unit No. 1) that was proposed for removal in the license application. Article 408 also requires submittal of a report regarding the turbine's historic significance and plans for its removal. However, in an Order dated February 2, 1990, FERC amended the license in response to PacifiCorp's plans to upgrade, rather than remove, the historic turbine. On December 30, 1991, PacifiCorp submitted appropriate documentation of the turbine in accordance with Article 408. FERC</p>

			stated that this submittal fulfilled the requirements of Article 408 in Orders dated February 28, 1992 (Attachment 7).
2) If not FERC-regulated, does the Facility owner/operator have in place (and is in Compliance with) a plan for the protection, mitigation or enhancement of impacts to Cultural Resources approved by the relevant state or federal agency or <i>Native American Tribe</i> , or a letter from a senior officer of the relevant agency or Tribe that no plan is needed because Cultural Resources are not negatively affected by the Facility.	YES = Pass, go to G	NO = Fail	Answer not required.

G. Recreation	PASS	FAIL	
1) If FERC-regulated, is the Facility in Compliance with the recreational access, accommodation (including recreational flow releases) and facilities conditions in its FERC license or exemption?	YES = Go to G3	No = Fail	Yes- At the time of relicensing, the project recreational facilities were limited to one concrete boat ramp. Article 406 of the project license required the development and upgrade of several recreational facilities. This included adding a new picnic area and parking lot, repairing boating facilities, and installing an accessible ramp at the fishing-observation pier. Recreational enhancements have been implemented in accordance with the license. In the coming year, PacifiCorp plans to replace a couple of barbeque grills that were removed due to vandalism. The license also required easements or titles to be obtained for

			privately owned lands that were proposed for use as recreational sites in the license application. PacifiCorp has acquired easements or ownership of these lands. Attachment 8 includes the recreation improvement map from the Exhibit E of the license application that shows the conceptual layout and required elements, as well as a FERC Recreation Report for 2008 that documents the current facilities.
2) If not FERC-regulated, does the Facility provide recreational access, accommodation (including recreational flow releases) and facilities, as Recommended by Resource Agencies or other agencies responsible for recreation?	Yes = Go to G3	No = Fail	Answer not required.
3) Does the Facility allow access to the reservoir and downstream reaches without fees or charges?	YES = Pass, go to H	No = Fail	Yes- PacifiCorp provides free access to designated boat launch areas and tailwater fishing facilities.
H. Facilities Recommended for Removal	PASS	FAIL	Applicant Answer
1) Is there a Resource Agency Recommendation for removal of the dam associated with the Facility?	NO = Pass, Facility is Low Impact	YES = Fail	No- The resource agencies have not recommended removal of the dam.