

Boundary Hydroelectric Project (FERC No. 2144)
Addendum to Exhibit A of the License Application

Seattle City Light

March 2010

TABLE OF CONTENTS

1 Introduction to Exhibit A Addendum.....1

2 Revised Sections of Exhibit A1

 2.1. Project Lands (Section 4 of Exhibit A).....1

 2.2. Project Facilities (Section 6 of Exhibit A).....1

 2.3. Lands of the United States (Section 7 of Exhibit A)3

 2.4. Proposed Modifications and Enhancements (Section 8 of Exhibit A)4

3 References.....5

Appendices

 Appendix 1: Summary of Proposed PM&E Measures (Attachment A-1 of Exhibit A)

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1 INTRODUCTION TO EXHIBIT A ADDENDUM

This document is an addendum to Exhibit A of Seattle City Light's (SCL) License Application for the Boundary Hydroelectric Project (FERC No. 2144) that was filed with FERC on September 29, 2009. The inserts on the following pages represent complete replacements of the corresponding sections in Exhibit A, allowing the reviewer to refer to only one document, i.e., either the Exhibit A filed with the License Application or this addendum, for a given section or subsection. Each replacement section below is thoroughly documented so that there is no ambiguity as to what portions of Exhibit A have been replaced.

The organization of the following document parallels that of Exhibit A, i.e., sections are presented in the same order and all revised sections, tables, or figures are numbered or referred to according to the same scheme used in Exhibit A.

2 REVISED SECTIONS OF EXHIBIT A

2.1. Project Lands (Section 4 of Exhibit A)

The following section replaces Section 4, Project Lands.

Total land area within the current Project boundary is 2,684.0 acres. The Federal government owns approximately 34 percent of this total. Management of this land is split between the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM). The USFS manages a total of 606.6 acres (22.6 percent). USFS lands are part of the Colville National Forest, which surrounds the Boundary Reservoir. The BLM manages 314.3 acres (11.7 percent) in the Project boundary, with most of the acreage located along the western shoreline of the reservoir and north of the Town of Metaline. Of the remaining land SCL owns 447.1 acres (16.7 percent), the Washington Department of Natural Resources owns 1,310.5 acres (48.8 percent) and 5.5 acres (0.2 percent) is owned by private, City, and County entities (see Exhibit G of the License Application [as revised March 2010] for the current boundary).

Total land area within the proposed Project boundary as being proposed by SCL for the new license term is 3,218.8 acres. Of these lands, SCL owns 971.3 acres (30.2 percent), the USFS owns 616.2 acres (19.1 percent), the BLM owns 313.3 acres (9.7 percent), the Bonneville Power Administration (BPA) owns 1.9 acres (0.1 percent), the Washington Department of Natural Resources owns 1,311.6 acres (40.8 percent) and the remaining 4.5 acres (0.1 percent) is owned by private, City, and County entities (see Exhibit G [as revised March 2010] for the proposed boundary).

2.2. Project Facilities (Section 6 of Exhibit A)

The following section replaces Section 6.10, Recreation Facilities.

Three SCL-owned and managed recreation areas are within the Project boundary; these include the Forebay Recreation Area, the Tailrace Recreation Area/Machine Hall Visitors' Gallery, and the Vista House. The Forebay Recreation Area is located on the western shoreline of Boundary

Reservoir immediately upstream of the Project dam. Facilities at this site include approximately 20 parking spaces, seven picnic tables, a two-lane concrete boat ramp with an L-shaped boarding dock, a restroom, and 11 campsites.

The Tailrace Recreation Area/Machine Hall Visitors' Gallery is located immediately downstream of the dam on the western bank of the Pend Oreille River. Facilities at this site include an asphalt parking area with approximately 36 single-vehicle spaces, two bus spaces, and six van/vehicle with trailer spaces; three covered picnic tables; and a visitors' gallery inside the machine hall entrance. Also located at this recreation facility is a gravel boat launch providing access to the Pend Oreille River below Boundary Dam; however, this boat launch is generally not used by the public because it is less than 1 mile from the U.S.-Canada border, and boaters are not permitted to cross the border.

The Vista House is located immediately downstream of Boundary Dam on a promontory along the eastern bank of the Pend Oreille River. Together with the Tailrace Recreation Area/Machine Hall Visitors' Gallery, the Vista House offers visitors unique interpretation and education opportunities to learn about the Project and its operation, and vantage points from which to observe Project features.

In the new license term, SCL is proposing improvements to the three existing Project recreation sites as well as to the Metaline Waterfront Park Boat Launch. SCL also proposes to develop a new trailhead at the end of NFS Road 3165-315 (to be extended, as needed), accessible trail, and viewpoint of Peewee Falls, a new accessible trail and trailhead in the vicinity of the Riverside Mine to a viewpoint of the canyon, an Eastside Trail (to USFS standards) that connects the Peewee Falls and Riverside Mine Canyon viewpoints, and a new portage trail and boater access in the vicinity of Metaline Falls, and to make improvements at six designated dispersed shoreline recreation sites. SCL proposes a Project boundary adjustment to include the Metaline Falls Portage Trail and Boater Access facility and will propose boundary adjustments for the other facilities once their locations and designs are finalized. The locations of existing and proposed recreational facilities are shown in Exhibit G, (as revised March 2010). Exhibit E of the License Application (as revised March 2010) provides additional information on the proposed recreational facility improvements and development.

The following section replaces Section 6.11, Boundary Wildlife Preserve.

In 1988, SCL purchased wildlife mitigation lands along the eastern shoreline of the reservoir south of Metaline Falls, meeting the requirements of Article 51 of the current FERC license. The Boundary Wildlife Preserve (BWP) encompasses approximately 149 acres¹ of slough/wetland, riparian, and upland forest habitats. SCL developed a Wildlife Management Plan for the BWP, which was submitted to FERC in 1988. The primary management goal of this plan is to protect the area from development and thereby maintain populations of native terrestrial and aquatic wildlife species and the riparian and wetland communities on the BWP. At the time the BWP was established, the FERC Project boundary was not modified to incorporate the BWP.

¹ Due to parcel delineation updates, this summation has been changed from the previously cited value of 155 acres.

In 1994, after consultation with the USFS and Washington Department of Fish and Wildlife (WDFW), SCL purchased 89 acres² of land adjacent to the BWP in an effort to protect the existing resources on the BWP. This purchase was made as a planned mitigation measure for the new license. The 89-acre parcel was slated to be logged, and SCL was concerned about impacts to its holdings potentially resulting from the logging activity.

SCL proposes to incorporate the BWP and the additional 89 acres of adjacent land into the Project boundary and manage these lands for biodiversity goals (see Exhibit G [as revised March 2010], Figure G-8 for location).

In addition, portions of three other SCL-owned parcels that currently reside outside of the Project boundary will be brought into the boundary and be subject to management prescriptions as part of a comprehensive mitigation and enhancement package related to terrestrial resources in the Project area: Tailrace East (86.9 acres), Everett Creek (82.7 acres), and Sullivan Creek (17.7 acres). SCL has also agreed to purchase an additional parcel to be managed for the protection and enhancement of wildlife habitat values, with a target area of approximately 158 acres and approximately 13,022 lineal feet of land immediately adjacent to water.

The following section replaces Section 6.12, Upstream Fish Passage Trap-and-Haul Facility.

Because it is not equipped with any fish passage facilities, Boundary Dam prevents upstream movement of fish. During the new license term, SCL will install, operate, maintain, and monitor a single upstream trap-and haul fishway facility in the Project tailrace. The fishway will include a fixed entrance(s) and a release location(s) at least one mile upstream of the Boundary Dam. SCL will undertake a research and development phase of up to 12 years to evaluate the fishway entrance design, entrance location, and attraction flow volumes that will achieve the purposes of the facility. Within 12 years of license issuance (2 planning years, 8 research years, and 2 design years), SCL will file with FERC for approval, a plan to install, operate, and maintain an upstream trap-and-haul fishway. SCL will complete construction of the upstream fishway within two years of receiving FERC approval and will monitor fishway operations for the term of the license and any annual licenses issued for the Project. Exhibits E of the License Application (as revised March 2010) provides additional information on the upstream fish passage measure proposed for the Project.

2.3. Lands of the United States (Section 7 of Exhibit A)

The following section replaces Section 7, Lands of the United States.

Lands of the U.S. Government under use by the Project as shown on the Exhibit G Project boundary drawings are tabulated below (Table A.7-1).

² The size of the adjoining SCL-owned parcels is 89 acres, not 88 acres as previously reported.

The following table replaces Table A.7-1, Tabulation of federal lands within the existing and proposed Project boundaries, by township, range, and section, in Exhibit A of the License Application.

Table A.7-1. Tabulation of federal lands within the existing and proposed Project boundaries, by township, range, and section.

Location	Owner / Agency	Current Acreage	Proposed Acreage	Exhibit G Figure No.
T40N, R43E, Section 2	USFS	--	0.01	G-1
T40N, R43E, Section 3	USFS	25.92	25.92	G-1
T40N, R43E, Section 10	BPA	--	1.87	G-1
T40N, R43E, Section 10	USFS	104.51	110.39	G-1
T40N, R43E, Section 11	USFS	109.86	115.04	G-1
T40N, R43E, Section 14	BLM	17.82	17.64	G-2
T40N, R43E, Section 14	USFS	58.20	53.16	G-1 and G-2
T40N, R43E, Section 23	BLM	85.90	83.80	G-2 and G-3
T40N, R43E, Section 23	USFS	81.35	85.02	G-2 and G-3
T40N, R43E, Section 26	BLM	37.83	40.75	G-3
T40N, R43E, Section 26	USFS	49.59	46.45	G-3
T40N, R43E, Section 35	BLM	45.59	42.08	G-3 and G-4
T40N, R43E, Section 35	USFS	69.55	74.94	G-3 and G-4
T40N, R43E, Section 36	USFS	--	2.73	G-4
T39N, R43E, Section 2	BLM	29.25	31.83	G-4
T39N, R43E, Section 2	USFS	37.29	32.69	G-4
T39N, R43E, Section 3	BLM	8.94	9.76	G-4
T39N, R43E, Section 3	USFS	0.73	0.73	G-4
T39N, R43E, Section 10	BLM	27.59	28.10	G-4 and G-5
T39N, R43E, Section 10	USFS	40.78	39.65	G-4 and G-5
T39N, R43E, Section 11	USFS	0.35	0.47	G-4
T39N, R43E, Section 15	BLM	19.43	18.90	G-5
T39N, R43E, Section 15	USFS	27.59	28.13	G-5
T39N, R43E, Section 16	BLM	26.39	25.26	G-5
T39N, R43E, Section 21	BLM	11.10	10.95	G-5 and G-6
T39N, R43E, Section 22	BLM	4.44	4.22	G-5
T39N, R43E, Section 22	USFS	0.87	0.87	G-5
	Total Acreages:	920.87	931.36	

2.4. Proposed Modifications and Enhancements (Section 8 of Exhibit A)

The following section replaces Section 8, Proposed Modifications and Enhancements

Descriptions of proposed modifications and enhancements to Project facilities are included with the description of the existing Project in Sections 6.1 through 6.12 of this Exhibit. Details regarding proposed modification to Project operations under the new license are provided in Exhibits B and E of this License Application. A full summary of all measures being proposed by

SCL as part of the Boundary Hydroelectric Project Relicensing Settlement Agreement for a new license is provided in Appendix 1.

3 REFERENCES

There are no new references in this addendum that were not already cited in Exhibit A of the License Application.

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**APPENDIX 1: SUMMARY OF PROPOSED PM&E MEASURES (ATTACHMENT A-1
OF EXHIBIT A)**

Summary of Proposed PM&E Measures

Proposed PM&E	Anticipated Timeframe
GENERAL	
<ul style="list-style-type: none"> • Convene the Boundary Resource Coordinating Committee (BRCC): <ul style="list-style-type: none"> ○ Develop and meet on an annual integrated 3-year rolling work plan 	<p>Within 90 Days of License Issuance</p> <p>Annually Throughout the Life of the License</p>
PROJECT OPERATIONAL MEASURES	
<ul style="list-style-type: none"> • Modify Boundary Reservoir operations according to the following constraints: <ul style="list-style-type: none"> ○ Formalize the voluntary measure of restricting forebay water surface elevations during the summer recreation season ○ Formalize the voluntary measure to operate Units 55 and 56 above 125 MW and sequence their startup and shutdown so that they are the last units to be brought on line and the first units to be shut down in order to reduce total dissolved gas (TDG) under normal, non-spill operations ¹ 	<p>Implement Starting Year 2 Following License Issuance</p>

¹ When the proposed upgrades of Units 55 and 56 are completed, SCL will re-evaluate the need for the unit sequencing and adjust the approach to, or eliminate, the sequencing restrictions as appropriate.

Proposed PM&E	Anticipated Timeframe
GEOLOGY AND SOILS	
<ul style="list-style-type: none"> • Implement a Terrestrial Resources Management Plan (TRMP). Programs included under the plan include: <ul style="list-style-type: none"> ○ Programs included under the plan include: <ul style="list-style-type: none"> ▪ Erosion Program ▪ Habitat Management, Enhancement and Protection Program ▪ Integrated Weed Management Program ▪ Rare, Threatened and Endangered (RTE) Plant Species Program ▪ Wildlife Program ▪ Shoreline Management Program ○ Reporting and consultation with the Terrestrial Resources Work Group (TRWG) 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Annually Throughout the Life of the License</p>
<ul style="list-style-type: none"> • Implement an Erosion Program (a component of the TRMP): <ul style="list-style-type: none"> ○ Implement erosion control measures at three specified sites: the Forebay Recreation Area, Bureau of Land Management (BLM) Boundary Recreation Area, and the Dispersed Recreation Day Use/Overnight Campsite on BLM-Managed Land ○ Monitor erosion control measures at three specified sites ○ Long-term erosion monitoring for lands adjacent to the Project reservoir ○ Track shoreline erosion at all existing and any new sites along the reservoir shoreline to determine need for additional mitigation 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Implement Consistent with Schedule and Design of Recreation Improvements at Each Site (see Recreation Resources below, i.e., Complete by Year 7)</p> <p>Annually for 3 Years Following Implementation and Every 10 Years Thereafter</p> <p>Starting Year 2 Following License Issuance and Every 10 Years Thereafter</p> <p>Starting Year 2 Following License Issuance and Every 10 Years Thereafter</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Provide off-site mitigation for continuing erosion effects and management for biodiversity (through incorporation of the BWP Addition [89 acres²], portions of three SCL-owned parcels that current reside outside the Project boundary [Tailrace East (86.9 acres), Everett Creek (82.7 acres), and Sullivan Creek (17.7 acres)], and additional property, to be acquired with a target area of approximately 158 acres and approximately 13,022 lineal feet of land immediately adjacent to water, that SCL will purchase) (also identified under Botanical Resources and Wildlife Resources) 	<p>Implement Starting Year 1 Following License Issuance</p>
WATER RESOURCES	
<ul style="list-style-type: none"> • Acquire flood easements from private landowners in Metaline and Metaline Falls to compensate for Project-related contributions to flooding upstream of Metaline Falls and restrict future development in easement areas³ 	<p>Complete Within 5 Years of License Issuance</p>
<ul style="list-style-type: none"> • Implement a Total Dissolved Gas (TDG) Attainment Plan. Components under the plan include: <ul style="list-style-type: none"> ○ Study, develop engineering designs, and prototype some combination of throttling sluice gates, roughening sluice flow and installing a spillway splitter(s)/aerator(s) to develop structural and operational modifications to improve TDG performance ○ Conduct biological sampling using boat electrofishing in the Project tailrace area ○ Reporting and consultation with the Washington Department of Ecology, Water Quality Work Group (WQWG), and Fish and Aquatics Work Group (FAWG) 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 10 Years of License Issuance</p> <p>Annually Following Installation of a New TDG Improvement Measure</p> <p>Annually Throughout the Life of the License</p>
<ul style="list-style-type: none"> • Implement a Dissolved Oxygen (DO) Attainment Plan. Components under the plan include: <ul style="list-style-type: none"> ○ Develop a Quality Assurances Project Plan (QAPP) ○ DO and pH monitoring from June 15 through September 15 at the Box Canyon Tailrace (Project River Mile [PRM] 34.3), Metaline Old (PRM 28.1), Everett Creek Island (PRM 20.4), Boundary Forebay (PRM 17.6), and Boundary Tailrace (PRM 16.7) stations ○ Reporting and consultation with the Washington Department of Ecology 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 6 Months of License Issuance</p> <p>Annually Years 1 Through 5 Following License Issuance</p> <p>Annually Years 1 Through 5 Following License Issuance</p>

² The size of the adjoining SCL-owned parcels is 89 acres, not 88 acres as previously reported.

³ Because these easements are unnecessary for normal Project operations, SCL does not propose to include any provisions relating to these easements in the new License.

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement a Temperature Attainment Plan. Components under the plan include: <ul style="list-style-type: none"> ○ Develop a QAPP ○ Collect continuous temperature data from June through September at the following four locations: Metaline Pool (PRM 28.4), Slate Creek Pool (PRM 22.5), Boundary Dam Forebay (PRM 17.0), and the Boundary Dam (PRM 16.1) ○ Implement and monitor various aquatic habitat improvement projects in the Pend Oreille River system to help meet temperature improvement goals: <ul style="list-style-type: none"> ▪ Tributary aquatic habitat improvements, including riparian plantings, stream channel modifications, large woody debris (LWD) supplementation, bank improvements, and culvert replacements ▪ Mainstem habitat measures, including erosion control measures/riparian plantings ▪ Temperature monitoring in the deltas of Sullivan, Sweet, and Linton creeks ○ Reporting and consultation with the Washington Department of Ecology 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 6 Months of License Issuance</p> <p>Annually for the Life of the License</p> <p><u>Aquatic Habitat Enhancement Measures:</u> See Fish and Aquatics Resources below</p> <p><u>Erosion Control Measures:</u> See Geology and Soils above</p> <p>Annually Throughout the Life of the License</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement an Aquatic Invasive Species Control and Prevention Plan (AISCPP). Components under the plan include: <ul style="list-style-type: none"> ○ Develop a QAPP ○ Install and replace bottom barriers for macrophyte suppression at the following four locations: Everett Island side channel (PRM 19.4), Metaline Pool, across from the Town of Metaline (PRM 28.7), Fish Stranding and Trapping Region 9 (PRM 28.8), and Fish Stranding and Trapping Region 11 (PRM 30.3) ○ Implement appropriate suppression measures (initially bottom barriers) at up to three additional locations in the Project area ○ Monitor effectiveness of bottom barriers ○ Monitor Forebay Recreation Area and Metaline Waterfront Park boat launches for macrophyte growth ○ Implement appropriate suppression measures at Forebay Recreation Area and Metaline Waterfront Park boat launches, if needed ○ Monitor for invasive aquatic species: <ul style="list-style-type: none"> ▪ Substrate sampling for zebra/quagga mussels and New Zealand mudsnails ▪ Plankton tow net sampling for zebra/quagga mussel veligers ○ Conduct lab analysis if invasive aquatic species found ○ Implement an Interpretation and Education (I&E) Program (a component of the Recreation Resources Management Plan [RRMP]) ○ Reporting and consultation with the Washington Department of Ecology, WQWG and FAWG 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 6 Months of License Issuance</p> <p>Starting Year 1 Following License Issuance and Every 5 Years Thereafter</p> <p>TBD by the WQWG and FAWG</p> <p>Monthly Throughout the Life of the License</p> <p>Annually Starting Year Three Following the Completion of Boat Launch Modifications at These Sites (see Recreation Resources below, i.e., Complete by Year 5)</p> <p>As Needed</p> <p>Annually Starting First April Following Approval of QAPP; substrate sampling to occur monthly; tow samples to be collected monthly in June, July, and August</p> <p>As Needed</p> <p>See Recreation Resources Below</p> <p>Annually Throughout the Life of the License</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement a Fish Tissue Sampling Plan. Components under the plan include: <ul style="list-style-type: none"> ○ Develop a QAPP ○ Collect and analyze fish tissue samples for lead and zinc concentrations at the following four sites: Boundary Dam forebay, near Everett Island in the Canyon Reach, near Metaline Falls, and just downstream of the Box Canyon Dam tailrace ○ Reporting and consultation with the Washington Department of Ecology and the Washington Department of Health 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 6 Months of License Issuance</p> <p>Once During First Summer Following Approval of QAPP</p> <p>Within 90 Days of Receiving Final Results from the Laboratory</p>
FISH AND AQUATICS RESOURCES	
<ul style="list-style-type: none"> • Implement a Fish and Aquatics Management Plan that encompasses all fish and aquatics-related PM&E measures: <ul style="list-style-type: none"> ○ Reporting and consultation with the FAWG, including Passage Advisory Committee (PAC) and Technical Advisory Committee (TAC) ○ Develop a Tributary Management Plan and implementation schedule 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Every Other Month Through Year 2; Quarterly For Years 3 Through 5 Following License Issuance; and Annually Starting Year 6 for the Life of the License</p> <p>Complete Within 12 Months of License Issuance; Update Plan Every 10 Years for the Life of the License</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Develop and implement an upstream fish passage program: <ul style="list-style-type: none"> ○ Fishway design research ○ Fishway design ○ Fishway construction ○ Fishway operation 	<p>Complete Between Years 3 and 10 Following License Issuance</p> <p>Complete Between Years 10 and 12 Following License Issuance</p> <p>Complete Between Years 1 and 2 Following FERC Fishway Design Approval</p> <p>Starting Within 2 Years Following FERC Fishway Design Approval</p>
<ul style="list-style-type: none"> • Develop and implement an entrainment reduction program: <ul style="list-style-type: none"> ○ Research and monitoring ○ Calculate dam survival ○ Hydraulic evaluations and conceptual facility design and decision about entrainment reduction measure ○ Implement non-operational measures OR design, build, operate, monitor and modify facilities ○ Re-evaluate project entrainment ○ Implement non-operational measures OR construct new facility, expand existing facility, or implement operational measures 	<p>Complete Between Years 3 and 15 Following License Issuance</p> <p>Complete Between Years 16 and 18 Following License Issuance</p> <p>Complete Between Years 16 and 18 Following License Issuance</p> <p>Complete Between Years 19 and 33 Following License Issuance</p> <p>Complete Year 34 Following License Issuance</p> <p>In the Years 34 and Through the Life of the License Thereafter</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement gravel augmentation below Box Canyon Dam: <ul style="list-style-type: none"> ○ Post-treatment physical monitoring ○ Pre-replenishment physical monitoring ○ Biological monitoring 	<p><u>Initial Placement:</u> Complete Within 10 Years of License Issuance (up to 4 sites) and Year 10 Following License Issuance (remaining sites)</p> <p><u>Replenishment:</u> Starting Year 10 Following Initial Placement and Every 5 Years Thereafter, As Needed</p> <p>In Years 5, 6, 7 and 11, 12, 13 Following License Issuance</p> <p>In Years 9 and 14 Following License Issuance and Every 5 Years Thereafter</p> <p>In Years 4, 5, 6, 10, 11, 12, 15, 20 and 25 Following License Issuance</p>
<ul style="list-style-type: none"> • Implement channel modifications for mainstem trapping pools at Project river mile (PRM) 30.3: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Physical monitoring 	<p><u>Initial:</u> Complete Within 5 Years of License Issuance</p> <p><u>Repairs:</u> Starting Year 15 Following License Issuance and Every 10 Years Thereafter, As Needed</p> <p>In Year 6 Following License Issuance</p> <p>Starting Year 14 Following License Issuance and Every 10 Years Thereafter, and Following Flows Exceeding a 25-year Recurrence Interval</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement mainstem large woody debris (LWD) placement at tributary deltas: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Initial Placement:</u> Complete Within 10 Years of License Issuance (Except for Sullivan Creek, Which May Occur Following Year 10)</p> <p><u>Replenishment:</u> Starting Year 10 Following Initial Placement and Every 10 Years Thereafter, As Needed</p> <p>Within 1 Year Following Construction or Replenishment of LWD Structures</p> <p><u>Physical:</u> Starting Year 9 Following Implementation and Every 10 Years Thereafter; and Following Flows Exceeding a 25-year Recurrence Interval Following</p> <p><u>Biological:</u> 3 Consecutive Years Between Initial Construction and First Scheduled Repair/Replenishment, and Then Concurrent with Physical Effectiveness Monitoring</p>
<ul style="list-style-type: none"> • Boundary Reservoir fish community monitoring 	<p>Starting Year 5 Following License Issuance and Every 5 Years Thereafter</p>
<ul style="list-style-type: none"> • Evaluation of salmonid predation at select tributary deltas 	<p>Complete in Years 4 and 15 Following License Issuance</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement tributary non-native trout suppression and eradication measures: <ul style="list-style-type: none"> ○ Eradication effectiveness monitoring 	<p><u>Initial:</u> Exact Timing TBD; Implementation Schedule to be Developed Within 1 Year of License Issuance</p> <p><u>Sullivan Creek and Tributaries and Sweet Creek:</u> Complete Between Years 1 and 10 Following License Issuance</p> <p><u>Slate Creek, Uncas Gulch, and Flume Creek:</u> Complete Between Years 11 and 15 Following License Issuance</p> <p><u>Peewee Creek, Lime Creek, Lake Lucerne, and Sand Creek:</u> Complete Between Years 16 and 20 Following License Issuance</p> <p>Complete Within 1 Year Following Treatment Activities</p>
<ul style="list-style-type: none"> • Implement riparian improvement and stream channel enhancements in Sullivan Creek river mile (RM) 0.30 to RM 0.54: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Initial:</u> Complete Within 10 Years of License Issuance</p> <p><u>Repairs:</u> Every 8 Years Thereafter, As Needed</p> <p>Complete Within 1 Year Following Implementation</p> <p>Starting Year 8 Following Implementation and Every 8 Years Thereafter</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement stream and riparian improvements in Sullivan Creek RM 2.30 to RM 3.00 and North Fork Sullivan Creek: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Initial:</u> Complete Within 10 Years of License Issuance (Exact Timing TBD; Implementation Schedule to be Developed Within 1 Year of License Issuance)</p> <p><u>Repairs:</u> Every 8 Years Thereafter, As Needed</p> <p>Complete Within 1 Year Following Implementation or Repairs</p> <p>Starting Year 8 Following Implementation and Every 8 Years Thereafter</p>
<ul style="list-style-type: none"> • Implement LWD placement and road improvements in Sullivan Creek and selected tributaries upstream of the confluence with Outlet Creek: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Initial:</u> Complete Within 10 Years of License Issuance (Exact Timing TBD; Implementation Schedule to be Developed Within 1 Year of License Issuance)</p> <p><u>Repairs:</u> Every 8 Years Thereafter, As Needed</p> <p>Complete Within 1 Year Following Implementation or Repairs</p> <p>Starting Year 8 Following Implementation and Every 8 Years Thereafter</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement culvert replacements and LWD placement in tributaries to Boundary Reservoir: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Initial:</u> Exact Timing TBD; Implementation Schedule to be Developed Within 1 Year of License Issuance</p> <p><u>Lime, Slumber, Styx, Flume and Sand Creeks:</u> Complete Between Years 11 and 15 Following License Issuance</p> <p><u>Pocohontas Creek:</u> Complete Between Years 16 and 20 Following License Issuance</p> <p><u>Repairs:</u> Every 8 Years Thereafter, As Needed</p> <p>Complete Within 1 Year Following Implementation or Repairs</p> <p>Starting Year 8 Following Implementation and Every 8 Years Thereafter</p>
<ul style="list-style-type: none"> • Implement riparian planting, culvert replacement and channel reconstruction in Linton Creek RM 0.00 to RM 0.24: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Initial:</u> Complete Between Years 16 and 20 Following License Issuance (Exact Timing TBD; Implementation Schedule to be Developed Within 1 Year of License Issuance)</p> <p><u>Repairs:</u> Every 8 Years Thereafter, As Needed</p> <p>Complete Within 1 Year Following Implementation or Repairs</p> <p>Starting Year 8 Following Implementation and Every 8 Years Thereafter</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement riparian and channel improvements in Sweet Creek RM 0.00 to RM 0.60: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Initial:</u> Complete Between Years 1 and 10 Following License Issuance (Exact Timing TBD; Implementation Schedule to be Developed Within 1 Year of License Issuance)</p> <p><u>Repairs:</u> Every 8 Years Thereafter, As Needed</p> <p>Complete Within 1 Year Following Implementation or Repairs</p> <p>Starting Year 8 Following Implementation and Every 8 Years Thereafter</p>
<ul style="list-style-type: none"> • Implement habitat improvements in Tier-2 tributaries to Boundary Reservoir: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p><u>Watershed Assessment:</u> Complete Within 20 Years of License Issuance</p> <p><u>On-ground Habitat Improvements</u></p> <p><u>Activities:</u> Complete Between Years 21 and 25 Following License Issuance</p> <p><u>Repairs:</u> Every 8 Years Thereafter, As Needed</p> <p>Complete Within 1 Year Following Implementation or Repairs</p> <p>Starting Year 8 Following Implementation and Every 8 Years Thereafter</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Closure and restoration of Sullivan Creek dispersed recreation sites 	<p>Within 10 Years of License Issuance (or as Otherwise Agreed to with the USFS)</p>
<ul style="list-style-type: none"> • Mill Pond Dam site monitoring and maintenance: <ul style="list-style-type: none"> ○ Compliance monitoring ○ Effectiveness monitoring 	<p>Complete Within 1 Year Following FERC determination that POPUD has Satisfied Surrender Conditions</p> <p>In the Years 2, 4, 6, and 10 Following FERC Determination that POPUD has Satisfied Surrender Conditions and Every 8 Years Thereafter</p>
<ul style="list-style-type: none"> • Develop and implement a Native Salmonid Conservation Program <ul style="list-style-type: none"> ○ Monitoring 	<p>Complete Within 6 Years of License Issuance</p> <p>Annually Starting Year 6 Following License Issuance</p>
<ul style="list-style-type: none"> • Develop and implement a Recreational Fish Stocking Program <ul style="list-style-type: none"> ○ Compliance monitoring 	<p>Annually Starting Year 2 Following License Issuance</p> <p>Annually Starting Year 1 Following Implementation</p>
<ul style="list-style-type: none"> • Establish Sullivan Lake Upper Tributary Fund 	<p>Within 1 Year of License Issuance</p>
BOTANICAL RESOURCES	
<ul style="list-style-type: none"> • Incorporate into the Project boundary the BWP Addition (89 acres), portions of three SCL-owned parcels that currently reside outside the Project boundary (Tailrace East [86.9 acres], Everett Creek [82.7 acres], and Sullivan Creek [17.7 acres]), and additional property, to be acquired with a target area of approximately 158 acres and approximately 13,022 lineal feet of land immediately adjacent to water, and manage for the benefit of botanical resources(also identified under Geology/Soils and Wildlife Resources) 	<p>Implement Starting Year 1 Following License Issuance</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement an Integrated Weed Management Program (a component of the TRMP): <ul style="list-style-type: none"> ○ Initial inventory to document the location and extent of weed populations ○ Periodic inventories to identify any new infestations of noxious weeds and monitoring of new infestations, as needed ○ Develop and implement an integrated program to minimize the establishment of noxious weeds in the Project area and along roads and at recreation areas ○ Control and effectiveness monitoring of Class A and Class B-designate weed species on SCL lands within the Project boundary and along roads and at recreation areas, and on federal lands within the reservoir fluctuation zone 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 1 Year of License Issuance</p> <p>Starting Year 4 of License Issuance and Every 3 Years Thereafter</p> <p><u>Develop Program:</u> Complete Within 3 Years of License Issuance</p> <p><u>Implement Program:</u> Annually Throughout Life of License</p> <p><u>Develop Plan:</u> Complete Within 2 Years of License Issuance</p> <p><u>Implement Control Measures:</u> Complete Within 3 Years of License Issuance</p>
<ul style="list-style-type: none"> • Implement RTE Plant Species Program (a component of the TRMP): <ul style="list-style-type: none"> ○ Qualitative periodic surveys to evaluate RTE species distribution and population trends for widespread species in the Project area ○ Conduct a census to evaluate distribution and population trends for RTE plant species with limited distribution in the Project area ○ Update the Project GIS database following each survey or census and coordinate with the TRWG to ensure that RTE plant data are current ○ Conduct comprehensive RTE plant survey if a catastrophic event occurs in the Project area 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Starting Year 2 Following License Issuance and Every 6 Years Thereafter</p> <p>Starting Year 2 Following License Issuance and Every 3 Years Thereafter</p> <p>Starting Year 2 Following License Issuance and Every 3 Years Thereafter (Coincident With Surveys and Censuses)</p> <p>As Needed</p>

Proposed PM&E	Anticipated Timeframe
WILDLIFE RESOURCES	
<ul style="list-style-type: none"> • Implement Wildlife Program (a component of the TRMP): <ul style="list-style-type: none"> ○ Monitor bald eagle nest use and productivity within the Project boundary ○ Develop and implement management plans for bald eagle nest sites documented within the Project boundary ○ Monitor RTE wildlife species, specifically for the peregrine falcon and bank swallow ○ Develop a database for tracking wildlife observations in the Project area and coordinate with the USFS and WDFW to update lists of RTE species 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Annually Throughout the Life of the License</p> <p><u>Develop Plan:</u> Complete Within 3 Years of License Issuance</p> <p><u>Implement Plan:</u> Annually Throughout Life of License</p> <p>Annually Throughout the Life of the License (See the TRMP Implementation Schedule [TRMP Appendix 2] for specific details)</p> <p><u>Develop Database:</u> Complete Within 2 Years of License Issuance</p> <p><u>Implement Database:</u> Annually Starting Within 3 Years of License Issuance</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement Habitat Management, Enhancement and Protection Program (a component of the TRMP): <ul style="list-style-type: none"> ○ Motorized vehicle access control ○ Assess, identify, implement and monitor (as needed) various wetland/riparian, riparian and upland habitat protection and enhancement measures on SCL-owned Project Habitat Lands in the Project boundary (includes the incorporation into the Project boundary of the BWP Addition [89 acres], portions of three SCL-owned parcels that currently reside outside the Project boundary [Tailrace East (86.9 acres), Everett Creek (82.7 acres), and Sullivan Creek (17.7 acres)], and additional property, to be acquired with a target area of approximately 158 acres and approximately 13,022 lineal feet of land immediately adjacent to water ; also identified under Geology/Soils and Botanical Resources) ○ Island and shoreline access control, to include measures to protect Canada goose nests on Metaline Island and Rat Island from human disturbance and limit recreational use at other sites along the reservoir to protect ecological values 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Starting Year 1 Following License Issuance (See the TRMP Implementation Schedule [TRMP Appendix 2] for specific details)</p> <p>Starting Year 1 Following License Issuance (See the TRMP Implementation Schedule [TRMP Appendix 2] for specific details)</p> <p>Starting Year 1 Following License Issuance</p>
THREATENED AND ENDANGERED SPECIES	
<ul style="list-style-type: none"> • Addressed by Wildlife and Fish and Aquatics measures 	See Wildlife Resources and Fish and Aquatics Resources Above
AESTHETICS/VISUAL RESOURCES	
<ul style="list-style-type: none"> • Implement aesthetic/visual resource management guidelines for future Project recreation facilities (to be included in the RRMP) 	See Recreation Resources Below
CULTURAL RESOURCES	
<ul style="list-style-type: none"> • Implement an Historic Properties Management Plan (HPMP): <ul style="list-style-type: none"> ○ Reporting and consultation with Cultural Resources Work Group (CRWG) 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Annually Throughout the Life of the License</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> Appointment and training of a staff HPMP Coordinator in historic properties management and current regulations to direct the implementation of this plan during the term of the new license; training by the Coordinator of Project employees; training of River Ranger 	<p><u>Coordinator Appointment/Training:</u> Complete Within 1 Year of License Issuance and Every 5 Years Thereafter</p> <p><u>Employee Training:</u> Annually Throughout the Life of the License</p> <p><u>River Ranger:</u> Complete Within 1 Year of License Issuance and Every 5 Years Thereafter</p>
<ul style="list-style-type: none"> Historic properties treatment of three National Register of Historic Places (NRHP)-eligible properties (the Josephine Mine Historic Mining District, the Pend Oreille Mines and Metals Company [POMMC] Powerhouse Historic District and the Carl Harvey Homestead) through the integrated I&E Program (a component of the RRMP) 	See Recreation Resources Below
<ul style="list-style-type: none"> HABS/HAER documentation of POMMC Powerhouse 	Complete Within 5 Years of License Issuance
<ul style="list-style-type: none"> If Project effects associated with activities proposed during the term of the new license are anticipated to extend beyond the current Area of Potential Effect (APE) as defined in the HPMP, SCL will consult with the CRWG to amend the definition of the APE, and will initiate appropriate measures to inventory, assess, and evaluate cultural resources within the modified APE 	As Needed
<ul style="list-style-type: none"> Monitoring of the historic archeological sites identified above and two prehistoric archaeological sites (45PO581 and 45PO583) 	<p>By Archaeologist: Starting Year 1 Following License Issuance and Every 5 Years Thereafter</p> <p><u>By River Ranger:</u> Starting Year 1 Following License Issuance, Twice a Year, at the Start and End of Each Season</p>
<ul style="list-style-type: none"> Monitoring following extreme high-water events if erosion is known to occur in the vicinity of the pre-historic sites (depends on flow conditions and the Cultural Resources Work Group decisions following license issuance) 	TBD by the CRWG
<ul style="list-style-type: none"> Evaluate the Project for National Register of Historic Places (NRHP) eligibility when 50 years old (i.e., 2016) 	Complete in 2017

Proposed PM&E	Anticipated Timeframe
RECREATION RESOURCES AND LAND USE	
<ul style="list-style-type: none"> • Implement a RRMP: <ul style="list-style-type: none"> ○ Reporting and consultation with the Recreation Resources Work Group (RRWG) 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Annually Throughout the Life of the License</p>
<ul style="list-style-type: none"> • Improve recreational facilities at developed recreation sites. Proposed measures include: <ul style="list-style-type: none"> ○ <u>Boundary Forebay Recreation Area</u> – Enhance campground facilities and day-use picnic areas, extend an existing boat ramp lane, provide additional I&E signage, and provide ADA-accessible facilities ○ <u>Boundary Vista House Recreation Area</u> – Add I&E signage, provide ADA-accessible facilities ○ <u>Boundary Tailrace Recreation Area/Machine Hall Visitors’ Gallery</u> – Update I&E signage and displays at the Machine Hall Visitors Gallery to the extent consistent with the level of anticipated use and security restrictions and provide ADA-accessible facilities ○ <u>Metaline Waterfront Park Boat Launch</u> – Replace the existing boat launch, extend a boat ramp lane, provide adequate gravel roadway access to the boat ramp, improve parking, provide an accessible dual vault restroom in the vicinity of the boat launch parking area and provide ADA-accessible facilities 	<p>Complete Between Years 3 and 5 Following License Issuance</p> <p>Complete Between Years 8 and 10 Years Following License Issuance</p> <p>Complete Between Years 8 and 10 Following License Issuance</p> <p>Complete Between Years 3 and 5 Following License Issuance</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Development of new recreation sites. Proposed measures include: <ul style="list-style-type: none"> ○ <u>Peewee Falls Viewpoint and Trail</u> –Extend existing NFS road 3165-315, as needed, and develop a new trailhead at the end of the road, a trail, and a view point of Peewee Falls (the trailhead, trail, and viewpoint will be ADA-accessible), and develop appropriate support facilities, including ADA-accessible parking, vault toilet, and signage ○ <u>Metaline Falls Portage Trail and Boaters Access</u> – Develop a new portage trail in the vicinity of Metaline Falls, provide I&E signage, and construct a non-motorized boat access at the northern terminus of the portage trail, to include parking, appropriate signage, and restrooms ○ <u>Riverside Mine Canyon Viewpoint and Trail</u> -- Develop a new trail and trailhead in the vicinity of the Riverside Mine to a viewpoint of the canyon (trail alignment to take advantage of the existing NFS road network in this area, specifically NFS Road 3100-172, and trailhead, trail, and viewpoint will be ADA-accessible), and develop appropriate support facilities, including ADA-accessible parking, vault toilet, and signage ○ <u>Eastside Trail</u> – Construct a trail (to USFS standards) that connects the Peewee Falls and Riverside Mine Canyon viewpoints (to be designed and managed to meet semi-primitive non-motorized standards and take advantage of trailhead facilities at both the Peewee Falls and Riverside Mine Canyon trailheads) ○ <u>Designated Dispersed Shoreline Recreation Sites</u> – Enhance six shoreline recreation sites (3 BLM and 3 USFS) to accommodate boat-in camping and day use 	<p>Complete Between Years 6 and 7 Following License Issuance</p> <p>Complete Between Years 6 and 7 Following License Issuance</p> <p>Complete Between Years 6 and 7 Following License Issuance</p> <p>Complete Between Years 8 and 10 Following License Issuance</p> <p>Complete Between Years 6 and 7 Following License Issuance</p>
<ul style="list-style-type: none"> • Over the term of the license, replace and/or significantly repair various recreation site facilities, infrastructure, and amenities, based on periodic monitoring 	<p>As Needed Between 30 to 50 Years from License Issuance</p>
<ul style="list-style-type: none"> • Implement a Shoreline Dispersed Recreation Management Program (a component of the RRMP) 	<p>See New Recreation Sites above and Operations and Maintenance Program below</p>
<ul style="list-style-type: none"> • Implement an Operations and Maintenance Program (a component of the RRMP): <ul style="list-style-type: none"> ○ Covering all SCL-managed recreation sites and use areas (developed and dispersed) ○ Providing annual maintenance at the boat launch at Metaline Waterfront Park ○ Periodically re-assessing the public access and security policies and needs at the Tailrace Recreation Area and Machine Halls Visitors Gallery 	<p>Annually Throughout the Life of the License</p>
<ul style="list-style-type: none"> • Implement a Recreation Monitoring Program (a component of the RRMP), to include seasonal (Memorial Day through Labor Day) River Ranger to help monitor site and resource conditions at the 16 designated shoreline sites 	<p>Annually or Every 6 Years Throughout the Life of the License (depending on the monitoring indicator)</p>

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Develop and implement a multi-resource I&E Program (a component of the RRMP) ⁴ 	<p><u>Develop Program:</u> Complete Within 3 Years of License Issuance</p> <p><u>Implement Program:</u> Complete Between Years 4 and 10 Following License Issuance</p>
<ul style="list-style-type: none"> • Participate in the development of regional water trail program on the Pend Oreille River 	<p>As Needed</p>
<ul style="list-style-type: none"> • Implement Shoreline Management Program (a component of the TRMP): <ul style="list-style-type: none"> ○ Define and map Project shoreline land use designations, allowed uses, and required approvals; and apply these designations to Project lands and waters ○ Develop, implement and monitor use of guidelines for private shoreline facilities along the Boundary Reservoir shoreline ○ Periodically remove shoreline debris ○ Develop and implement a Project public safety and education program 	<p>Implement Starting Year 1 of License Issuance</p> <p><u>Develop Designations:</u> Complete Within 1 Year of License Issuance</p> <p><u>Implement Designations:</u> Annually Starting Within 2 Years of License Issuance</p> <p><u>Develop Guidelines:</u> Complete Within 2 Years of License Issuance</p> <p><u>Implement Guidelines:</u> Annually Starting Within 3 Years of License Issuance</p> <p>TBD (Develop Schedule Within 1 Year of License Issuance)</p> <p><u>Develop Program:</u> Complete Within 2 Years of License Issuance</p> <p><u>Implement Program:</u> Annually Starting Within 3 Years of License Issuance</p>

⁴ This program addresses I&E needs for recreation resources, aesthetics/visual resources, geology and soils, engineering, fish and aquatics resources, cultural resources, botanical resources and wildlife resources.

Proposed PM&E	Anticipated Timeframe
<ul style="list-style-type: none"> • Implement Travel and Public Access Management Program (a component of the RRMP): <ul style="list-style-type: none"> ○ Develop a Project Road Maintenance Plan ○ Provide adequate operational access to Project hydroelectric facilities and operations areas ○ Restrict and manage public access at or near certain Project facilities and hazardous operational areas for security and safety reasons ○ Provide adequate public access to Project recreation facilities and use areas 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 3 Years of License Issuance</p> <p>Annually Throughout the Life of the License</p> <p>Annually Throughout the Life of the License</p> <p>Annually Starting Year 3 Following License Issuance</p>
<ul style="list-style-type: none"> • Implement ongoing road maintenance 	<p>Annually Starting Year 1 Following License Issuance</p>
<ul style="list-style-type: none"> • Implement a Monitoring Well and Road Decommissioning Plan: <ul style="list-style-type: none"> ○ Decommission well heads and associated roads ○ Monitor to ensure adequate vegetation recovery 	<p>Implement Starting Year 1 Following License Issuance</p> <p>Complete Within 2 Years of License Issuance</p> <p>Annually Years 3 and 4 Following License Issuance</p>
<ul style="list-style-type: none"> • Adjustments to the current FERC Project boundary to include Project-related facilities, lands and roads that are currently outside of the Project boundary (changes are detailed in Exhibit G) 	<p>Implement Starting Year 1 Following License Issuance</p>
<ul style="list-style-type: none"> • Re-establish the Public Land Survey System Corners, or establish witness corners governing National Forest System property boundaries within and adjacent to the Project area, survey, mark and post to USDA Forest Service standards and specifications those National Forest System lands adjacent to the Project and post Project Boundary signs at all public access points at the Project boundary, informing the public of the location of the boundary 	<p>Complete Within 3 Years of License Issuance</p>
SOCIOECONOMICS RESOURCES	
<ul style="list-style-type: none"> • Addressed by measures of other resource areas 	<p>See above</p>
TRIBAL RESOURCES	
<ul style="list-style-type: none"> • Addressed by measures of other resource areas 	<p>See above</p>