Agency: Commerce, Community and Economic Development

Grant Recipient: Sitka **Federal Tax ID:** 92-0041163

Project Title: **Project Type:** Remodel, Reconstruction and Upgrades

AEA - Sitka Blue Lake Hydroelectric Project Expansion

State Funding Requested: $28,500,000 **House District:** 2 / A
One-Time Need

Brief Project Description:

Project will construct an expansion of the Blue Lake Hydroelectric Project to its maximum energy capacity and secure Sitka's energy base.

Funding Plan:

Total Project Cost:	$100,000,000
Funding Already Secured:	($59,000,000)
FY2012 State Funding Request:	($28,500,000)
Project Deficit:	$12,500,000

Funding Details:

FY 2012 Federal Funding Request $12,500,000

Additional funding Required/Outstanding: $38,500,000 - Municipal

Detailed Project Description and Justification:

This project will expand the Blue Lake Hydroelectric Project and maximize its energy generating capacity. Sitka has exhausted its hydroelectric generation, and is on the verge of being forced to revert to diesel power that would have devastating consequences for the community and Southeast region.

The City & Borough of Sitka requests financial assistance in constructing the expansion of the Blue Lake Hydroelectric Project. Assistance is requested from the State to fund the project with the goal of ultimately financing the project with 50% state funds and 50% local funds, if federal funding is not forthcoming.

The Blue Lake Hydroelectric Project will raise the height of the existing dam by 83 feet to 425 feet; construct a new intake structure, and a new powerhouse. The new project will replace two 3 Megawatt generators with three 5.3 megawatt generators, increasing capacity to 17 megawatt. This will increase Sitka's total hydroelectric energy production by about 32,000 megawatt hours or 29% of system capacity. Sitka is aggressively engaged in the preliminary engineering and licensing the expansion. The goal is to complete the construction and bring this new hydroelectric capacity on line in 2015.

Load studies predict Sitka will need up to 5 million gallons of fuel oil to power diesel generators prior to completion of the Blue Lake expansion. Sitka homes and businesses are moving from the high cost of heating oil to clean, renewable hydroelectric energy. The total energy requirements of Sitka are currently met by about 80% oil and 20% hydroelectric energy resources. Annual kilowatt hours sold in FY'09 increased by 3.36% over FY'08, which follows load increases of 4.5% in FY'08, and 8% in FY'06. Base-case load studies have predicted annual load growth at approximately 1.2 percent, yet the electric system has seen unprecedented growth, averaging 3.8% annually since 1973. The existing hydroelectric generation is now operating at over 96% capacity. It is expected that volatile oil prices will continue the trend of significant

Contact Name: Miles Baker
Contact Number: 465-3873

For use by Co-chair Staff Only:

$28,500,000 Approved

10:27 AM 5/27/2011

system load growth and that any new hydroelectric capacity will be fully utilized to displace oil for space and water heating.

Despite The City & Borough of Sitka actively promoting energy conservation, hydroelectric energy usage is escalating at a rate that will shortly exceed system capacity. Sitka is actively working to complete the project as quickly as possible and is pledging up to 50% of the total project costs. Cost effective hydropower is a necessary for community growth. This project is vital to Sitka's future and is a top regional priority.

Project Timeline:

The goal is to complete the construction and bring this new hydroelectric capacity on line in 2015.

Engineering, Design and Geotechnical; FERC license submittal FY 2010-11.
Material and Equipment Procurement and Construction: FY2012-14. Please see attached for a more detailed breakdown.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

City and Borough of Sitka

Grant Recipient Contact Information:

Name:	Marlene Campbell - City and Borough of Sitka
Title:	Govt. Relations Director
Address:	100 Lincoln St.
	Sitka, Alaska 99835
Phone Number:	(907)747-1855
Email:	campbell@cityofsitka,com

Has this project been through a public review process at the local level and is it a community priority? [X] Yes [ ] No

For use by Co-chair Staff Only:

10:27 AM 5/27/2011

Contact Name: Miles Baker
Contact Number: 465-3873

City and Borough of Sitka
100 Lincoln Street • Sitka, Alaska 99835

May 25, 2011

The Honorable Sean Parnell
Governor, State of Alaska
P.O. Box 110001
Juneau, Alaska 99811-0001

Dear Governor Parnell:

The FY2012 Capital Budget includes funding critical to the City and Borough of Sitka's (CBS) and our community's future. We request your support for these appropriations to partner with CBS to enable Sitka to achieve much needed stability, economic development, and a more secure future.

Sitka's Number One Highest Priority is the Blue Lake Hydroelectric Expansion Project. This $100,000,000 project is key to Sitka's future. FERC relicensing and planning are underway, new turbines ordered, and construction is scheduled for mid-2012. $28,500,000 will complete the State's (49%) partnership with CBS (51%) and permit completion of bonding and construction. See attached project and financing summary for detailed responses to questions posed in Legislative hearings.

Thank you for including the CBS Ultraviolet Disinfection Facility $3,587,500 DEC grant in your Governor's Budget. This is the City's Number Two Highest Legislative Priority. This drinking water treatment must be completed before the Federally mandated deadline of October 1, 2014. The $8,966,000 cost is a huge burden to a small municipality.

CBS is grateful for previous commercial passenger vessel tax funds and requests full funding of $3,000,000 for Centennial Hall Upgrades and Bus and Vendor Staging Improvements, which will permit completion of major cruise ship visitor facilities improvements for Sitka.

The Sitka Cross Trail Multimodal Pathway is a Federally funded STIP project, but a 9.03% match requirement was later added. Sitka Trailworks, Rasmussen Foundation, and CBS committed $43,000 for this match. The State's $41,000 will make this project a reality.

The Blue Lake Hydroelectric Project and the State's full partnership to help fund construction in 2012 is crucial to Sitka's viability. These projects are long-term infrastructure improvements to Sitka. The State's investments will help Sitka achieve much needed family job creation and economic growth, as well as renewable energy self-sufficiency. Thank you for your leadership and service to our State.

Sincerely,

Cheryl Westover, Mayor

Jim Dinley, Municipal Administrator

Cc: Karen Rehfeld, OMB
Sara Fisher-Goad, AEA
Senator Bert Stedman
Representative Peggy Wilson

SITKA BLUE LAKE HYDROELECTRIC EXPANSION PROJECT
City and Borough of Sitka FY2012 Legislative Capital Project Request

Total Project Cost:	**$100,000,000 (100%)**
Municipal funding -- City initial cash:	$5,000,000
City funds presently bonded:	$21,000,000
City funds still required to be bonded:	$25,000,000
TOTAL MUNICIPAL FUNDING:	**$51,000,000 (51%)**
State Funding – already secured FY'09-10:	$20,500,000
FY2012 State funding request:	$28,500,000
TOTAL STATE FUNDING:	**$49,000,000 (49%)**

The Sitka Blue Lake Hydroelectric Project expansion to maximum capacity is the number one highest priority of the City and Borough of Sitka. It has been studied by AEA, Southeast Conference, and the local CBS utility since the 1980's. CBS appreciates State funds already committed to this project and requests $28,500,000 to fully fund the State's interest in the Blue Lake Hydroelectric Expansion Project.

This project is extensively supported as evidenced in public hearings and by the City Assembly, Sitka Tribe of Alaska, Sitka Conservation Society, and the Sitka community. Choosing this project was a public process. The bonding was approved by an 80 percent public vote, and there is 100 percent support to not increase the use of diesel fuel. **The Blue Lake Project has been selected by the Southeast Conference, Alaska Energy Authority, and the Advisory Group to be on the priority list for the Southeast Alaska Integrated Resource Plan. It has been Sitka's #1 priority for several years.**

The scope of the Blue Lake Hydroelectric Project is to raise the height of the existing dam by 83 feet to elevation 425 feet and construct a new intake structure and new section of penstock to supply a new powerhouse to be constructed adjacent to the existing powerhouse. The new powerhouse will replace the existing two 3MW generators with three 5.3MW generators. This will increase installed capacity from 7.5MW to 17MW, with an increase in Sitka's average total annual hydroelectric energy production by about 32,000MWh or 29 percent of system capacity. Sitka is aggressively engaged in the final engineering and license amendment phase of the Blue Lake Project. The goal is to complete construction and bring this new maximum hydroelectric capacity on line in 2015.

Phase of Project: The environmental work, public hearings, preliminary design, and geologic investigations have been completed. The dam design has been approved. The FERC license amendment application was submitted in November, 2010 and was accepted and noticed by FERC on April 8, 2011. Construction is scheduled to begin in summer of 2012 with project completion in late fall, 2014. **The current State funding request would be used, matched by the City's bonding, for the construction phase of the project.**

Entire Funding Plan: The City and Borough of Sitka has about $42,000,000 available to cover the current phase of the project, which pays for studies, engineering, licensing, and the major equipment. This funding is scheduled to last until the beginning of actual construction in midsummer, 2012. The balance of funds will be spent over the construction period ending in December, 2014. There will be about $2,000,000 spent in tune-up and clean-up activities over

2015 and 2016. **This will complete the Blue Lake Project. No other electric projects other than the long-term development of Takatz Lake are planned in the next 10 to 15 years.**

Vetting by Alaska Energy Authority: The present State funding is being administered through the Alaska Energy Authority. The City of Sitka keeps the Energy Authority fully informed on progress of the Blue Lake Expansion Project. The assigned AEA Project Manager has attended critical meetings with FERC and the Board of Consultants and has visited the project site.

Intent language relating to 50 percent State investment: Total project cost is estimated at $100,000,000. The requested State appropriation of $28,500,000 added to the existing State appropriations of $20,500,000 totals $49,000,000, or 49 percent of the overall current project estimate. The City and Borough of Sitka will fund $51,000,000, the remaining 51 percent.

Expected costs to rate payers on completion of project: Current retail electric rates are approximately 9.5 cents/kWH with very little diesel generation. However, the City of Sitka is at its hydroelectric production limits and is now adding supplemental diesel as needed until the Blue Lake Expansion Project comes on line in 2015. This supplemental diesel between 2011 and 2015 will cost $0.36/kWH, which could raise the rates to $0.20 cents or more. The Blue Lake Expansion Project will displace approximately 2.3 million gallons of diesel per year ($8,500,000 at current cost) as well as provide adequate power to enable economic expansion.

With bonds sold, the debt service on the existing hydroelectric debt has been paid off and the level of debt service to be assumed with the Blue Lake Expansion Project will be comparable. No new personnel will be required to operate the expansion. **The rates in late 2015 after the expansion comes on line will probably be 10 percent or so higher (approximately 12 cents) than the rates paid today, primarily because of inflationary pressures.** This project fits very well into the system expansion without substantial increase in debt service or operational costs. A move to diesel generated power would increase rates to an extent which would discourage any economic development.

Need for the Project: Sitka has exhausted its hydroelectric resources. Load studies predict up to 5 million gallons of fuel oil for the use of supplemental diesel generators will be required prior to completion of the Blue Lake Expansion Project. Sitka homes and businesses are moving from the high cost of heating oil to clean, renewable hydroelectric energy. Although system load growth declined for FY'10 due to milder weather and stable fuel oil costs, annual KWh sold in FY'09 increased by 3.36 percent over FY'08, which follows load increases of 4.5 percent in FY'08, and 8 percent in FY'06. Base-case load studies have predicted annual load growth at approximately 1.2 percent, yet the electric system has seen unprecedented growth, averaging 3.8 percent annually since 2007.

The existing hydroelectric generation is now operating at over 96 percent capacity. It is expected that volatile oil prices will continue the trend of significant system load growth and that any new hydroelectric capacity will be fully utilized to displace oil for space and water heating. **Despite CBS actively promoting energy conservation, hydroelectric energy usage is escalating at a rate that will soon exceed system capacity and limit economic development. Therefore, Sitka is actively working to complete the project as quickly as possible and is pledging up to 51 percent of the total project costs. Cost effective hydropower is necessary for community growth. This project is vital to Sitka's future and is a top regional priority.**

CITY AND BOROUGH OF SITKA

RESOLUTION 2010-32

A RESOLUTION BY THE CITY AND BOROUGH OF SITKA (CBS)
SUBMITTING CBS 2012 STATE LEGISLATIVE PRIORITIES
TO STATE OF ALASKA AND 2011 LEGISLATURE

WHEREAS, the City and Borough of Sitka advocates cooperating and sharing resources with the State of Alaska to maximize public infrastructure and services for the citizens of Alaska in the most efficient, cost effective manner; and

WHEREAS, the State of Alaska has inadequately maintained State owned facilities and passed unfunded mandates on to municipalities; and

WHEREAS, municipalities have suffered major budget impacts from State management of the PERS/TRS system, State harbors, State roads and utilities, and other State responsibilities which should be compensated;

NOW, THEREFORE, BE IT RESOLVED that the Assembly of the City and Borough of Sitka, Alaska, adopts the following FY2012 State Legislative Priorities and urges the Alaska State Legislature to support them to the maximum extent possible:

- **State Revenue Sharing/Local Tax Relief** – The City and Borough of Sitka supports the State Revenue Sharing provided on a sustainable basis to equitably compensate Alaska communities for providing local services.
- **Education** – State funding should be increased to cover escalating transportation expenses, the rising costs of fuel and energy, and reasonable new costs to improve the quality of education.
- **Local Control and Maximum Local Self-Government Guaranteed by the Alaska Constitution** – The Legislature should defeat any legislation that creates new unfunded mandates or takes away existing powers of local governments. The State should fund existing unfunded State mandates.
- **Deferred Maintenance of Harbors** – The State should fully fund the deferred maintenance of State harbors transferred to local governments. In addition, the State should fully fund the 50 percent matching grants legislated by SB 291, the Municipal Harbor Facility Grant Fund, to assist with future harbor upgrades.

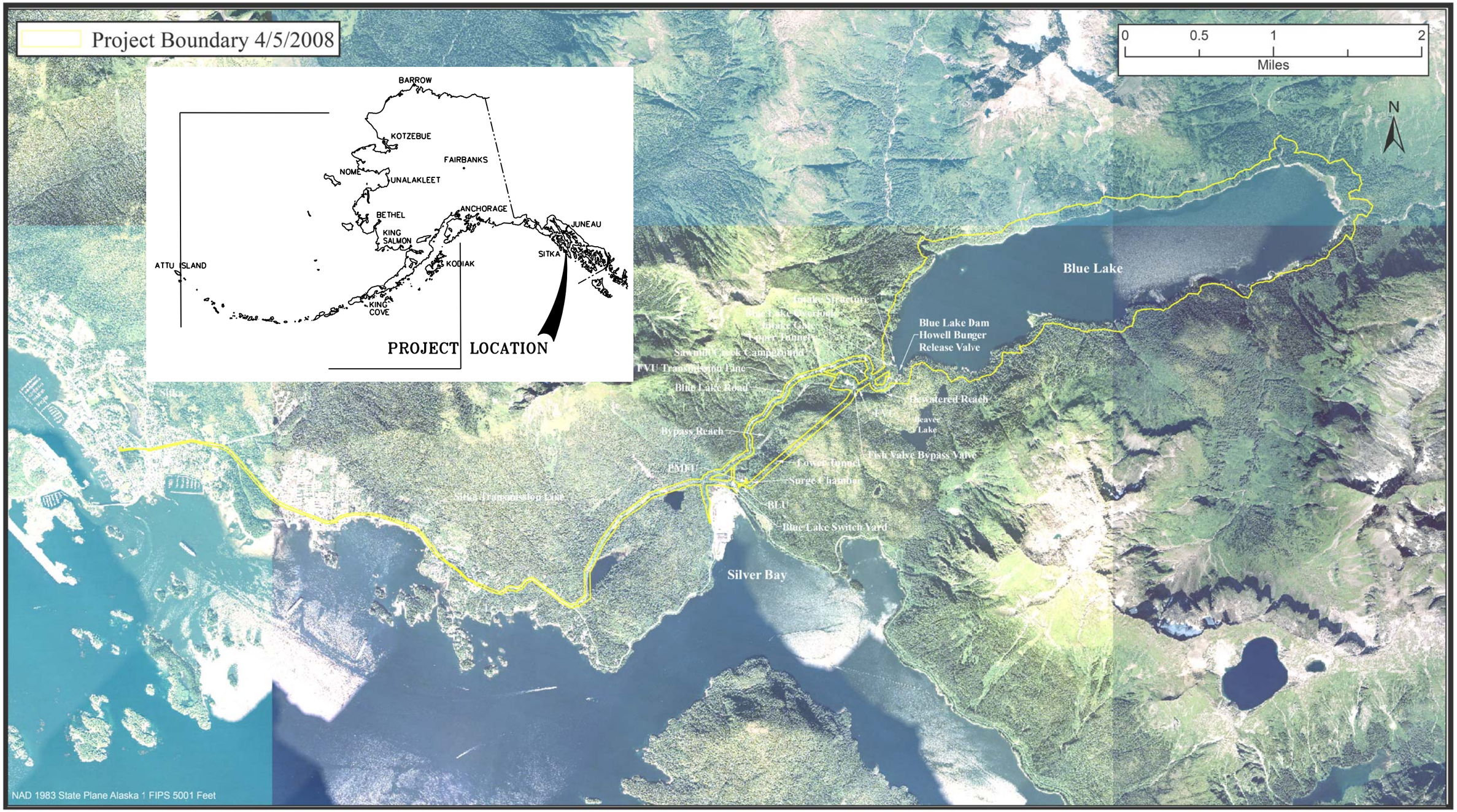
NOW FURTHER BE IT RESOLVED that the Assembly submits the enclosed FY2012 City and Borough of Sitka Legislative Priorities, CBS Legislative Capital Project Requests and CBS Requests for State Funding for State Facilities in priority order to the 2011 Session of the Alaska State Legislature and State of Alaska.

PASSED, APPROVED, AND ADOPTED by the Assembly of the City and Borough of Sitka, Alaska, on this 30th day of November, 2010.

Cheryl Westover, Mayor

ATTEST:

Colleen Ingman, MMC
Municipal Clerk



Project Boundary 4/5/2008
0
0.5
1
2
Miles
N
BARROW
KOTZEBUE
FAIRBANKS
NOME
UNALAKLEET
BETHEL
ANCHORAGE
JUNEAU
KING SALMON
SITKA
ATTU ISLAND
KODIAK
KING COVE
PROJECT LOCATION
Blue Lake
Blue Lake Dam
Howell Bunger
Release Valve
Sawmill Creek Campground
FVU Transmission Line
Blue Lake Road
Dewatered Reach
Beaver Lake
Bypass Reach
Fish Valve Bypass Valve
Lower Tunnel
Surge Chamber
PMFU
BLU
Blue Lake Switch Yard
Silver Bay
Sitka
NAD 1983 State Plane Alaska 1 FIPS 5001 Feet

SITKA BLUE LAKE HYDROELECTRIC EXPANSION

Project Description:

The Blue Lake Hydroelectric Project will raise the height of the existing dam by 83 feet to 425 feet; construct a new intake structure and a new section of power tunnel to a new powerhouse. The new powerhouse will replace the existing two 4 MW generators with three 6 MW generators. This will increase installed capacity from 8 MW to 18 MW, with an increase in Sitka's average total annual hydroelectric energy production by about 35,400 MW hours or 29 percent of system capacity. Sitka is aggressively engaged in the preliminary engineering and licensing phase of this expansion of its hydroelectric capability at Blue Lake. The goal is to complete the construction and bring this new hydroelectric capacity on line in 2015.

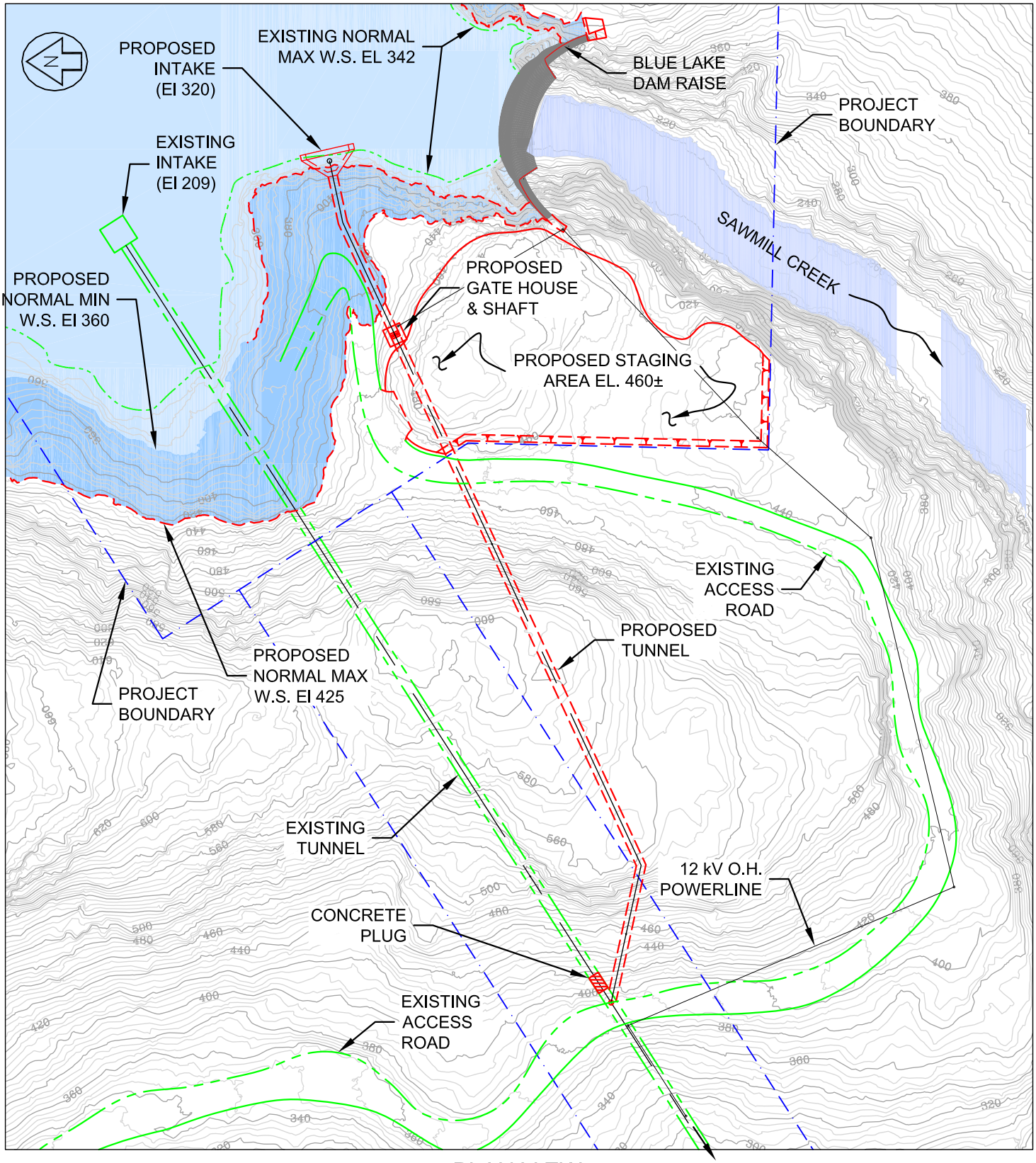
How will the funds be spent?

Appropriated funds will be utilized for project material purchase and project construction. Initial cost estimates from the Comprehensive Design Development Report are as follows:

Project Phase	**Estimated Cost**
Preparatory Work	$8,320,000
Arch Dam Raise	$8,900,000
Intake Tunnel & Gate Shift Excavation	$3,730,000
Surge Chamber Excavation	$4,060,000
Intake Civil Works and Equipment	$1,530,000
Tunnel Refurbishment	$1,950,000
New Penstock	$3,750,000
Powerhouse Civil and Access Road	$7,646,000
Powerhouse Mechanical Equipment	$8,938,000
Powerhouse Electrical Equipment	$8,500,000
Switchyard Upgrade	$1,732,000
Escalation during Construction	$ 780,000
Contingency	$14,604,000
Engineering and Administration	$9,350,000
Interest During Construction	$4,170,000
Escalation (January 2012 Bid)	$5,380,000
Reserve Account	$3,650,000
Cost of Debt Issuance	$3,010,000
TOTAL PROJECT COST:	**$100,000,000**

How many jobs will be created through this project?

To date, approximately 35 jobs have been created through this project, including 10 local positions. Various field studies and surveying work is being completed utilizing local resources. During the construction phase, up to 100 jobs will be created for the 2l.4 year period of project construction.



PLAN VIEW

SCALE: 1" = 150'

0 150 300 450

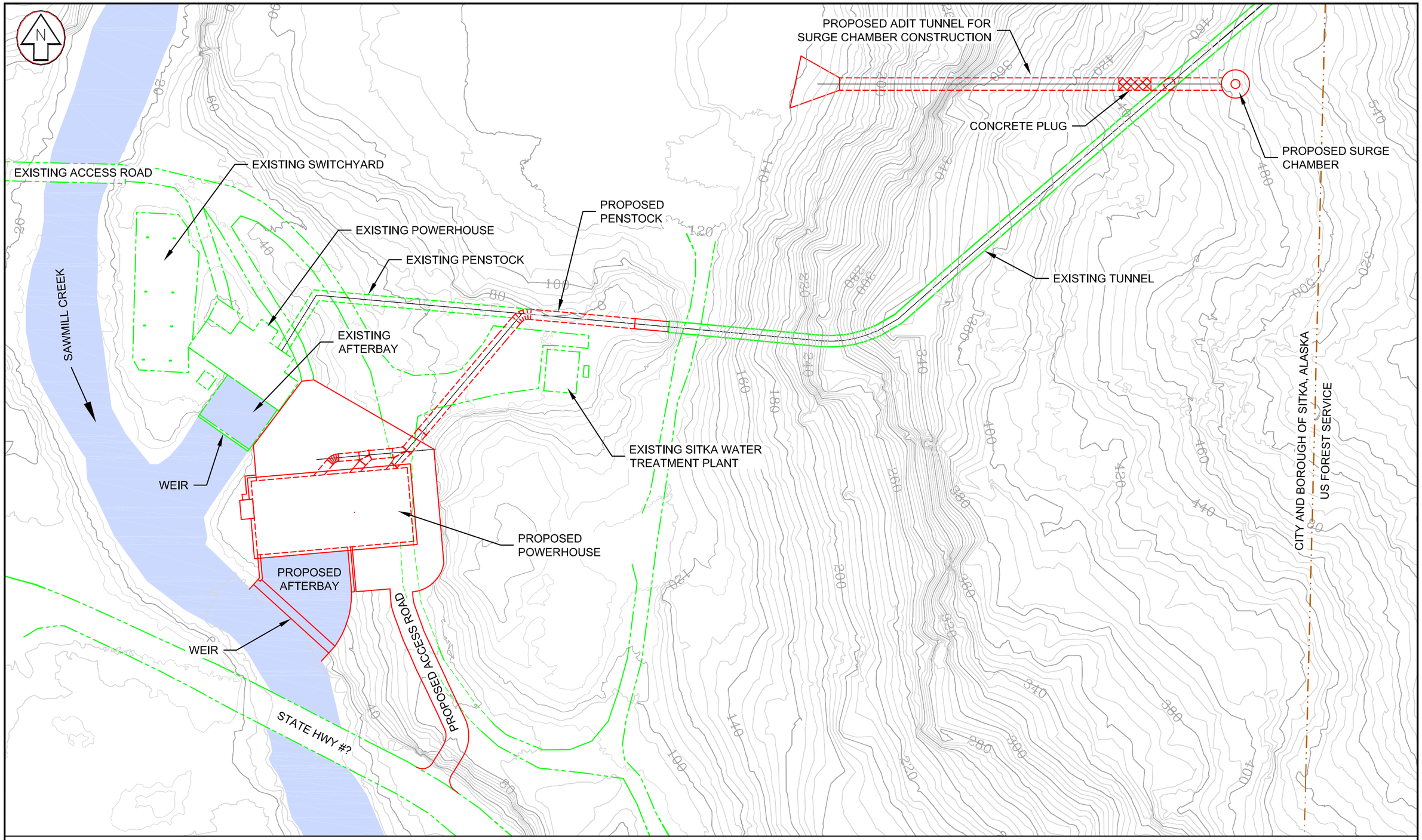
Dam Intake Area Plan

BLUE LAKE EXPANSION PROJECT

CITY AND BOROUGH OF SITKA, ALASKA

FIGURE XX

HATCH ACRES



PLAN VIEW

SCALE: 1" = 40'

0 40 80 120

Powerhouse Site Plan

BLUE LAKE EXPANSION PROJECT

CITY AND BOROUGH OF SITKA, ALASKA

FIGURE XX

HATCH ACRES

Resolution No. 2011-01

Advisory Work Group for the Southeast Alaska Integrated Resource Plan

Whereas: The Alaska Energy Authority is conducting a Southeast Integrated Resource Plan as directed by the 26th Alaska State Legislature.

Whereas: The Southeast Integrated Resource Plan will not be completed until January 2012.

Whereas: Many citizens and businesses in the Southeast are suffering severe economic impact from the high cost of oil contributing to very high electricity and space heating costs.

Whereas: The following list of projects will help alleviate the impacts of the high cost of oil on citizens and businesses in the Southeast.

Whereas: The following list of projects have been under development for many years, have completed or nearly completed exhaustive FERC licensing or similar process, and have broad public support.

NOW THEREFORE BE IT RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that AEA accelerate consideration of the below listed projects and that they not be delayed as AEA conducts the SE Integrated Resource Plan project.

NOW THEREFORE BE IT FURTHER RESOLVED THAT The Advisory Work Group for the Southeast Alaska Integrated Resource Plan unanimously requests that the 27th Alaska State Legislature provide funding for the continued development of the following projects in alphabetical order to provide relief to the citizens and businesses in Southeast Alaska from the high cost of electricity and space heating.

- Blue Lake Hydro
- Kake to Petersburg Intertie
- Metlakatla to Ketchikan Intertie
- Reynolds Creek Hydro
- Thayer Creek Hydro
- Whitman Lake Hydro

By: _____ Date: March 21, 2011

Rick Harris, Executive Vice President, Sealaska Corporation
Chairman, Southeast Alaska Integrated Resource Plan Advisory Work Group

Welcome Legislators!

Thank you all for your continued leadership and hard work on behalf of our region. Southeast has made great strides in many areas – but especially on the energy front. The establishment of the renewable energy grant fund and subsequent funding has seen unprecedented investment in many projects and the creation of HB 306 and SB 220 (with the southeast energy fund) will help the region achieve its quest toward energy security and diesel-independence.

This year's main task will be the development of the Southeast Integrated Resource Plan (IRP). This IRP will be one of the most important documents produced for the region since our 1997 Intertie System Plan (and subsequent updates in 2003/2005) and will provide guidance to communities, utilities – and the State of Alaska as energy infrastructure gets planned for and constructed in our region.

But while we wait for the conclusions of the IRP, there are a number of projects that have been recognized throughout the region that need funding now. The following list of energy projects are offered for your consideration (listed in alphabetical order):

- Blue Lake Hydro - The scope of this project is to raise the height of the existing dam by 83 feet construct a new intake gate and a new section of power tunnel to supply a new powerhouse to be constructed adjacent to the existing powerhouse.

- Kake to Petersburg Intertie – This project has entered the NEPA phase and is funded through the environmental process. The community of Kake is seeking funding so that the project can begin construction as soon as the intertie is designed and permitted (estimated spring 2012).

- Metlakatla to Ketchikan Intertie – The combined hydros at Chester Lake and Purple Lake generate surplus power that could be dispatched to Ketchikan or to Kake via the Southeast Alaska Power Agency (SEAPA) intertie system if extended to Metlakatla. This project is under construction but needs funding for the segment between Annette Island and Ketchikan.

- Reynolds Creek Hydro – This project is officially in the construction phase. Good progress has been made in the creation of a project management team that is now updating costs and performing "value-engineering" tasks. It is anticipated that gap funding will be sought to cover construction-inflation costs that have increased since the project began.

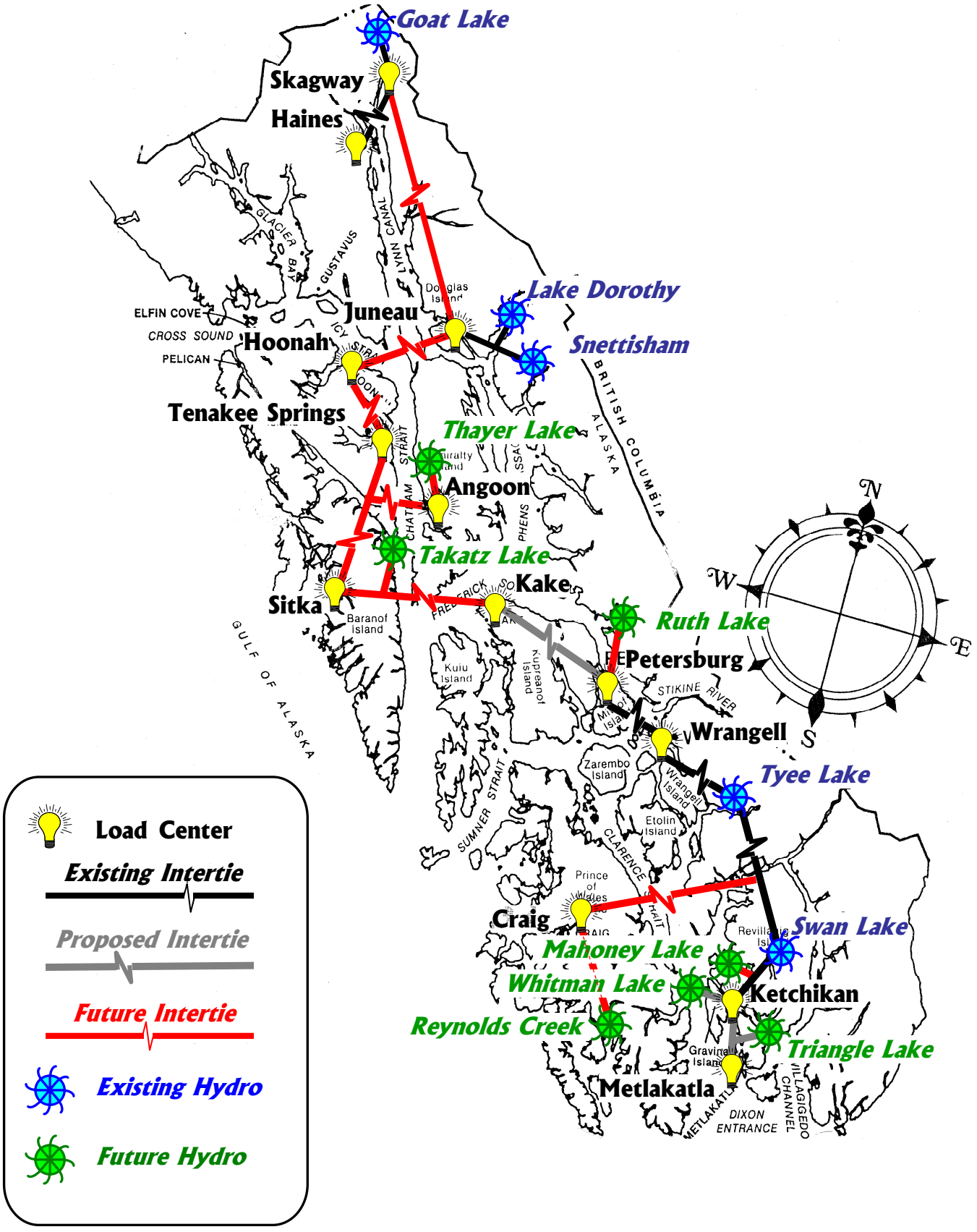
- Thayer Creek Hydro – This hydro is the known solution to Angoon's need for renewable energy development. The Forest Service signed the EIS Record of Decision for the Thayer Creek Hydroelectric Project in May 2009. Kootznoowoo has the rights to develop the project, and IPEC is the certificated and regulated electric provider for Angoon.

- Whitman Lake Hydro - Development of the Whitman Lake Hydroelectric Project is critical to Ketchikan's continued economic sustainability as it provides the community with a source of reliable and reasonably priced hydroelectric power. The project will operate in cooperation with the Whitman Lake Hatchery (owned by Southern Southeast Regional Aquaculture Association).

For more information, contact the communities directly or Southeast Conference Energy Coordinator Robert Venables at energy@seconference.org.

P.O. Box 21989 612 W. Willoughby Avenue, Suite B, Juneau Alaska 99802
(907) 523-4353 (907) 463-5670 Fax info@seconference.org
www.seconference.org

SOUTHEAST ALASKA ELECTRICAL INTERTIE



- Load Center
- *Existing Intertie*
- *Proposed Intertie*
- *Future Intertie*
- *Existing Hydro*
- *Future Hydro*