

ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE

April 15, 2019

3:31 p.m.

MEMBERS PRESENT

Senator Chris Birch, Chair
Senator John Coghill, Vice Chair
Senator Cathy Giessel
Senator Lora Reinbold
Senator Click Bishop
Senator Scott Kawasaki
Senator Jesse Kiehl

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

SENATE BILL NO. 91

"An Act relating to the development and operation of a hydroelectric site at the Nuyakuk River Falls; providing for the amendment of the management plan for the Wood-Tikchik State Park; and providing for an effective date."

- HEARD & HELD

PREVIOUS COMMITTEE ACTION

BILL: SB 91

SHORT TITLE: NUYAKUK RIVER: HYDROELECTRIC SITE

SPONSOR(s): SENATOR(s) HOFFMAN

03/15/19	(S)	READ THE FIRST TIME - REFERRALS
03/15/19	(S)	RES, FIN
04/05/19	(S)	RES AT 3:30 PM BUTROVICH 205
04/05/19	(S)	<Bill Hearing Canceled>
04/15/19	(S)	RES AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

TIM GRUSSENDORF, Staff
Senator Lyman Hoffman
Alaska State Legislature

Juneau, Alaska

POSITION STATEMENT: Provided a sectional analysis of SB 91.

BOB ARMSTRONG, Electric Operations Manager

Nushagak Cooperative

Dillingham, Alaska

POSITION STATEMENT: During the hearing on SB 91, provided an overview of the Nuyakuk River Falls hydroelectric project for the Bristol Bay region.

CHRISTINE O'CONNOR, Executive Director

Alaska Telecom Association

Anchorage, Alaska

POSITION STATEMENT: Testified in support of SB 91.

ROBERT HIMSCHOOT, CEO

Nushagak Cooperative

Dillingham, Alaska

POSITION STATEMENT: Testified in support of SB 91.

CORY WARNOCK, Senior Regulatory and Natural Resources Consultant

McMillen Jacobs Associates

Ferndale, Washington

POSITION STATEMENT: Testified in support of SB 91.

MARK LISAC, representing self

Dillingham, Alaska

POSITION STATEMENT: Testified in support of SB 91.

PAUL LIEDBERG, representing self

Dillingham, Alaska

POSITION STATEMENT: Testified in support of SB 91.

GARY CLINE, representing self

Dillingham, Alaska

POSITION STATEMENT: Testified in support of SB 91.

WANDA WAHL, representing self

Dillingham, Alaska

POSITION STATEMENT: Testified in support of SB 91.

ALANNAH HURLEY, Executive Director

United Tribes of Bristol Bay

Dillingham, Alaska

POSITION STATEMENT: Testified in opposition of SB 91.

ACTION NARRATIVE

[3:31:42 PM](#)

CHAIR CHRIS BIRCH called the Senate Resources Standing Committee meeting to order at 3:31 p.m. Present at the call to order were Senators Kiehl, Coghill, Bishop, Kawasaki, Giessel, and Chair Birch.

SB 91-NUYAKUK RIVER: HYDROELECTRIC SITE

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CHAIR BIRCH announced the consideration of Senate Bill 91 (SB 91).

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TIM GRUSSENDORF, Staff, Senator Hoffman, Alaska State Legislature, Juneau, Alaska, explained that SB 91 is straight forward and detailed the intent with a sectional analysis as follows:

- **Section 1:**
Adds "or the Nuyakuk River Falls" to AS 41.21.167(c) to include it on a list of sites that are not considered an incompatible use of the Wood-Tikchik State Park.
- **Section 2:**
Instructs the Wood-Tikchik State Management Council along with the Department of Natural Resources to amend the Wood-Tikchik Management Plan to conform with the change made in Section 1.

He noted that the Wood-Tikchik State Park currently has two areas that are on the statute list and the Nuyakuk River Falls will be the third listing.

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BOB ARMSTRONG, Electric Operations Manager, Nushagak Cooperative, Dillingham, Alaska, provided an overview of the Nuyakuk River Falls Hydroelectric Project and addressed "Logical Natural Location" from his presentation as follows:

- Glacial moraine defines Wood-Tikchik lake system:
 - The glacial moraine creates a natural dam.
 - The lake acts as a natural sediment deposition site.
 - Nuyakuk Falls acts as a natural spillway.

He addressed "Power Production Location and Potential" from his presentation as follows:

- Location: Nuyakuk Falls:
 - 2.5 miles inside Wood-Tikchik State Park.
- Flow monitored by U.S. Geological Survey since 1953.
- Initial modeling diverts less than 25 percent flow at 4.5 to greater than 10 megawatts.
- Enough production for regional distribution.
- Production potential matches seasonal demand.

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SENATOR REINBOLD joined the committee meeting.

CHAIR BIRCH asked Mr. Armstrong to explain why Nushagak Cooperatives electricity usage is lower in the winter than in the summer.

MR. ARMSTRONG answered that fish processing is the main industry in Dillingham and that makes electricity loads extremely high in the summer.

He addressed "Power Plant" from his presentation for the initial design as follows:

- Nuyakuk Falls occurs at an oxbow in the river.
- An intake will be located above the falls.
- Short forebay, approximately 2,500 feet.
- Short power channel, approximately 1,500 feet.
- Affected water flow 3,000 feet from the top of the falls to the bottom.

He detailed that final engineering will occur after project studies are done. He summarized the hydroelectric concept as follows:

- River is tapped on the upriver side of the falls.
- Diverted water runs through a pipeline called a penstock.
- Penstock leads down to the turbines.
- Water runs through the turbines and dumps back into the river.
- Water diversion is approximately 1,500 feet:
 - Water temperatures are not going to change much in 1,500 feet.

- o Nitrogen levels typically increase when water runs through turbines, but the nitrogen levels are already up due to the natural turbulence caused by the falls so the water will match up.

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CHAIR BIRCH asked Mr. Armstrong if Nushagak Cooperative anticipates any fish being impacted.

MR. ARMSTRONG said no; they think that the hydroelectric project can be done without significant impact on fish. He said not to impact fish is the reason that Nushagak Cooperative is just tapping the river instead of putting up a dam. The natural flow of the river will still be the same as it always was and the natural pathway for the smolt going down and adults coming up will be the same as it has always been.

SENATOR BISHOP asked what the diameter of penstock pipeline will be.

MR. ARMSTRONG answered that it will have to be determined. He opined that the diameter will have to be approximately 25 feet to get the amount of water needed for the hydroelectric project. He added that because there is not a lot of drop for the penstock, then a lot of water is required.

SENATOR BISHOP surmised that the penstock will require greater volume.

MR. ARMSTRONG answered correct. He reiterated that volume is necessary if you don't have drop. He noted that the added volume also helps with the fish. The proposed project is a low-head turbine with lower pressures in front and behind the turbines. Higher pressure turbines generally cause greater harm to fish. The pressure difference has the greatest effect on fish. The fish survivability rate for a fish that happens to go through a system with a low-head turbine is approximately 98 percent.

SENATOR BISHOP observed that a fish going through the system would be inadvertent.

MR. ARMSTRONG agreed and explained that the intake will have a guard with its placement based on a study to pull in the least amount of fish if there are any at all. He added that there are a lot of different things that can be done to mitigate fish intake by guiding them, especially with the smolt coming out. He

said adults coming up will not be a big issue because they will swim by the intake and keep going.

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SENATOR KAWASAKI asked if the Wood-Tikchik State Park current management plan prevents hydroelectric power.

MR. ARMSTRONG answered that the management plan has two sites designated for hydroelectric development, but Nuyakuk Falls was not included in the initial plan.

SENATOR KAWASAKI asked what would prevent studies from continuing if SB 91 is not passed.

MR. ARMSTRONG replied that Nushagak Cooperative currently has a Federal Energy Regulatory Commission (FERC) permit that locks the project up for only Nushagak Cooperative. They have three years to get studies done to show progress on the project. There is a possibility of a two-year extension through FERC. June 2019 will be the first-year anniversary for Nushagak Cooperative putting in for the FERC preliminary permit, which was significant because the permit locked the project for Nushagak Cooperative.

He said if SB 91 passes, Nushagak Cooperative will still have to get a permit from the Wood-Tikchik State Park, which will have to be put up for comment and that will add two months to the project. He said the hope is to get work started in August 2019 before winter sets in. He pointed out that passing the bill in 2020 would mean there are three years of studies to get done in one season and two months without getting an extension.

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SENATOR KAWASAKI asked if the 21 studies being undertaken for the project can happen concurrently without SB 91, or if the bill needs to pass to proceed to the next step.

MR. ARMSTRONG answered that due to the current Wood-Tikchik State Park management plan, the only way to finish the studies is with the passage of SB 91.

SENATOR KAWASAKI asked at what point the cooperative would say that the project does not work due to information from the studies.

MR. ARMSTRONG replied they will pull out of the project if studies show that it is not viable. He noted that they pulled

out of two other projects when the sites were determined not viable. He added that \$4 million was returned to the grant agency as well.

SENATOR KAWASAKI asked him to confirm that Grant Lake and Lake Elva are not in operation but were studied.

MR. ARMSTRONG answered correct. He reiterated that the two sites were studied and found not to be viable.

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SENATOR KIEHL asked if the power line to Aleknagik will travel through the park.

MR. ARMSTRONG answered no; the top of the ridge of the glacial moraine is outside the park and that is where the power lines will travel. He pointed out that power lines on top of ridges are more conducive because there are less creek and river crossings, more stable soils, and a better place for power infrastructure.

SENATOR KIEHL asked if the project will be able to supply power to Levelock.

MR. ARMSTRONG answered yes; the power loads are small, less than a megawatt between the four upriver villages. He said Levelock is considering putting in a fish processing operation and supplying additional power will not be a problem.

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SENATOR KIEHL referenced a letter from United Tribes of Bristol Bay that asks for more consultation. He asked what the state of consultation is with the tribes and what the expectation is going forward.

MR. ARMSTRONG replied that Nushagak Cooperative does not have any news regarding United Tribes of Bristol Bay. He noted that the United Tribes of Bristol Bay required a year to think if there was a different way to get into the park. He said Nushagak Cooperative has been working with the Division of Parks and Outdoor Recreation and the Department of Natural Resources for over a year and they were told that the only way forward to do the studies is to pass the legislation.

SENATOR REINBOLD noted that she has worked with the Division of Parks and Outdoor Recreation for five years and was on eight boards and committees dealing with access plans, trails plans,

and management plans. She remarked that it was frustrating. She opined that park plans are just general plans that need to be modified as needs develop. She pointed out that "categorical exclusion" is a key word in government lingo that is used to evade the process. She extended good wishes for the hydroelectric project.

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SENATOR BISHOP asked how many tons of carbon the hydroelectric project will take out of the atmosphere.

MR. ARMSTRONG answered that he does not have the statistics on the upriver villages, but it will be significant. Nushagak Cooperative is looking at about 1.5 million gallons of diesel a year coming out.

SENATOR BISHOP asked him to follow up with the information.

MR. ARMSTRONG agreed to do so.

SENATOR COGHILL asked what the drop is from one end of the river to the other.

MR. ARMSTRONG replied they have not completed the underwater survey but they guess the drop will be between 30 and 40 feet.

SENATOR COGHILL asked what type of soil and bedrock is in the project area.

MR. ARMSTRONG answered that it looks like solid rock. Core samples need to be taken to identify the type of rock.

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CHAIR BIRCH opened public testimony.

[3:52:51 PM](#)

CHRISTINE O'CONNOR, Executive Director, Alaska Telecom Association, Anchorage, Alaska, testified in support of SB 91. She noted that she is a former board member of Nushagak Cooperative and lived in Dillingham for 24 years. She said the hydroelectric project is exciting to her both personally and professionally.

MS. O'CONNOR said the cost of energy in rural Alaska is a continual drag on the economy and quality of life. The potential for this project to lower energy costs is transformational.

She added that another struggle in rural Alaska is connectivity. She opined that by placing the proposed infrastructure, Nushagak Cooperative, which is also a telephone cooperative, will be able to place fiber broadband service in the region which will be as transformational as lower energy costs.

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ROBERT HIMSCHOOT, CEO, Nushagak Cooperative, Dillingham, Alaska, testified in support of SB 91. He emphasized that the board is committed to approach the hydroelectric project with the same diligence taken to assess the Grant Lake and Lake Elva sites. Nushagak Cooperative knew going into the project that the location was critical. He added that the hydroelectric project will have both regional potential and regional impact. He emphasized that the cooperative knew that a social license within the region would be critical in moving the project forward.

He remarked that the recent quasi-opposition by the United Tribes of Bristol Bay is misguided. He said their recent letter favors continued study of the project but opposes the bill. He disclosed that the cooperative has reached out to United Tribes of Bristol Bay several times but has not been able to sit down and meet with them. He opined that the misunderstanding comes from a belief that the cooperative has other options to get into the park. However, a statutory change in the park management plan is needed to advance the studies for the project.

He said with the necessary social licensing for the project, the board passed a "fish first" policy to safeguard the region's industry heartbeat.

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SENATOR REINBOLD asked for an invitation in June to possibly view the project site.

MR. HIMSCHOOT replied that the cooperative would be happy to take her to the remote site.

CHAIR BIRCH asked if the cooperative has plans for funding the hydroelectric project.

MR. HIMSCHOOT answered that they have a couple of potentials. He noted that the cooperative put in a capital request with the state understanding the current budget situation. He said the cooperative has received support on the federal level from

various departments. He concluded that for the cooperative to find money, it needs access to the park.

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CORY WARNOCK, Senior Regulatory and Natural Resources Consultant, McMillen Jacobs Associates, Ferndale, Washington, testified in support of SB 91. He disclosed that he has been working for Nushagak Cooperative for the past year on the licensing process. He detailed that he provides additional context to the regulatory process as well as clearing up any misconceptions on what SB 91 will or will not allow.

He opined that there is a bit of concern among the public that SB 91 might exempt the project from going through the more expansive FERC regulatory process where the design, construction, and operational process will be expedited in advance of what is normally dictated. He emphasized that is by no means the case. The hydroelectric project will be required to go through a very rigorous and onerous regulatory process which will involve feasibility studies for a number of years.

He referenced a previous question about ceasing if the project didn't appear to be feasible and explained that if at some point during the regulatory process the feasibility of the project appears in question, they would be required to cease. The project could not move forward.

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MARK LISAC, representing self, Dillingham, Alaska, testified in support of SB 91. He said he did not support the previous two sites that were considered because they required a dam. He supports the Nuyakuk Falls location because no dam is required. He highlighted that the modern penstock design reduces the impact on fish.

MR. LISAC summarized that the bill will allow the cooperative to get the DNR permits to operate within the park to get the baseline data necessary to assess the hydroelectric project for viability and allow for the FERC process to proceed.

SENATOR KAWASAKI asked why consideration of the Lake Elva and Grant Lake locations was discontinued.

MR. LISAC answered that they did not have the potential to produce enough power.

[4:06:49 PM](#)

PAUL LIEBERG, representing self, Dillingham, Alaska, testified in support of SB 91. He said the proposed change to the park designation should not be taken lightly. He opined that consideration should be given to whether the impacts in developing the project within the park is a fair exchange for the expected impacts. He said he believes that conducting the necessary baseline studies to assess the project would not materially conflict with the intent of the enabling legislation. He stated that his ultimate support of the project will depend on the results of the studies.

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GARY CLINE, representing self, Dillingham, Alaska, testified in support of SB 91. He disclosed that he is an Aleknagik tribal member. He said he is a commercial fisherman and is concerned about the impact the hydroelectric project can have on salmon, but he is also concerned about the area communities' sustainability which includes the concerns about energy security and climate change. He said he views the hydroelectric project as part of the climate change solution to reduce carbon emissions. He said his support for the project will depend on the results of the studies. He noted that he had spoken to the Aleknagik Traditional Council and they have not taken a stance on the project until more information is available.

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WANDA WAHL, representing self, Dillingham, Alaska, testified in support of SB 91. She noted that she volunteers on the Nushagak Cooperative Board of Directors.

She said she would like the management plan for the Wood-Tikchik State Park to add the Nuyakuk River Falls as a site. It is not incompatible with the Wood-Tikchik State Park management plan.

MS. WAHL stated that she is in favor of the bill because Nushagak Cooperative has the best interest of the residents of the region at heart. The plan has a fish-first policy, the project is not a dam, a feasible project will bring power stability to the region, reduced air pollution, and there is a lot of local support to explore the possibilities.

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ALANNAH HURLEY, Executive Director, United Tribes of Bristol Bay (UTBB), Dillingham, Alaska, testified in opposition of SB 91. She explained that UTBB is a tribal consortium representing 15 tribal governments in Bristol Bay and over 80 percent of the population of the region.

She explained that their opposition to SB 91 is not due to the feasibility studies being conducted by Nushagak Cooperative. She noted that UTBB has not taken a position on the feasibility studies and neither have many of the individual tribes. She pointed out that many of the support resolutions and letters on the record are in support of the feasibility studies, not the bill. It is an important distinction.

She said Mr. Himschoot's earlier statement that UTBB's opposition is a misunderstanding of the options is not correct. She pointed out that Nushagak Cooperative presentations have been broad and lacking in specific details, and there never has been an outline of the bill. UTBB communities and leadership have viewed the project exploration as extremely problematic.

She specified that UTBB's tribal leadership has concerns with the unnecessarily broad language in the bill which changes the overall designation of appropriate uses of the falls within the state park, language that will permanently open the falls. The UTBB board's responsibility is to its communities and the board feels that a more cautious and specific approach to removing more protective designations to any area in the park is critical when considering any type of development. UTBB does not know if the Nushagak Cooperative project will move forward or not and SB 91 does not take that fact into account.

She said UTBB feels that any language changes that would put appropriate parameters or sunset language for a more cautious and deliberate approach to predesignating acceptable uses of the falls would make SB 91 much more palatable to a region that continuously strives to be very thorough and deliberate in considerations of any types of development. For those reasons UTBB's letter of opposition outlines the need for further discussion and local consultation with local stakeholders.

MS. HURLEY said she also wanted to correct the record about the statement that the tribe needed a year to think it over. She said there has been no direct effort to facilitate dialog or solutions to UTBB's concerns. She reiterated that a deliberate and cautious approach is in the best interest of the UTBB people.

CHAIR BIRCH asked Ms. Hurley to confirm that UTBB's last letter of record is dated: March 28, 2019.

MS. HURLEY answered correct. She reiterated that UTBB asks for a withdraw of support for SB 91 at this time.

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CHAIR BIRCH closed public testimony.

[4:18:26 PM](#)

CHAIR BIRCH held SB 91 in committee.

[4:19:00 PM](#)

There being no further business to come before the committee, Chair Birch adjourned the Senate Resources Standing Committee meeting at 4:19 p.m.