

**ALASKA STATE LEGISLATURE**  
**SENATE COMMUNITY AND REGIONAL AFFAIRS STANDING COMMITTEE**

March 3, 2015

3:31 p.m.

**MEMBERS PRESENT**

Senator Click Bishop, Chair  
Senator Lyman Hoffman  
Senator Anna MacKinnon  
Senator Dennis Egan

**MEMBERS ABSENT**

Senator Bert Stedman, Vice Chair

**COMMITTEE CALENDAR**

PRESENTATION: "FROM MENACE TO MEALS" THE BIOMASS PROJECT IN TOK,  
ALASKA

- HEARD

PRESENTATION: "YOUNG'S TIMBER PROJECT," HOW TO UTILIZE TIMBER AS  
A VALUE-ADDED PRODUCT FOR TOTAL UTILIZATION

- HEARD

**PREVIOUS COMMITTEE ACTION**

No previous action to record

**WITNESS REGISTER**

DAVE STANCLIFF, Vice President  
Tok Chamber of Commerce  
Tok, Alaska

**POSITION STATEMENT:** Provided an overview of Tok's use of timber  
biomass to generate heat, electricity, and grow food.

JOE YOUNG, owner  
Young's Timber, Inc.  
Tok, Alaska

**POSITION STATEMENT:** Provided an overview of his value-added  
timber business.

## **ACTION NARRATIVE**

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**CHAIR CLICK BISHOP** called the Senate Community and Regional Affairs Standing Committee meeting to order at 3:31 p.m. Present at the call to order were Senators Egan, MacKinnon, and Chair Bishop.

### **PRESENTATION: "FROM MENACE TO MEALS" THE BIOMASS PROJECT IN TOK, ALASKA**

CHAIR BISHOP announced the first order of business would be a presentation by Dave Stancliff.

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DAVE STANCLIFF, Vice President, Tok Chamber of Commerce, Tok, Alaska, stated that his report pertains to a tremendous resource in Interior Alaska. He revealed that he had worked in the Legislature at the same time the 1.8 million acre Tanana Valley State Forest (TVSF) was created in 1983. TVSF was created to address the area's economy to utilize the forest to create jobs.

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MR. STANCLIFF revealed that the people of Tok, with the help of the area forester, has turned "fire into food." He disclosed that Tok has been evacuated 6 times in the last 20 years due to forest fires and the state has spent over \$100 million to fight the fires. He explained that Jeffrey Hermanns, Tok Area Forester, was instrumental in advocating Tok's usable resource from trees without commercial value.

He revealed that one acre of noncommercial trees contained 65 tons of forest-fuel. A ton of forest-fuel equals approximately 100 gallons of fuel oil. He said very little grows on the floor of TVSF due to canopy with very little habitat for wildlife. He disclosed that TVSF is a 100-year climactic forest and noted that on certain days in the summer there will be 1,000 lightning strikes within TVSF. He opined that either Mother Nature burns the TVSF habitat and causes pollution, endangers Tok, and costs the state millions of dollars, or Tok finds a way to harvest TVSF acreage.

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SENATOR HOFFMAN joined the committee.

MR. STANCLIFF explained that Tok thins noncommercial trees from TVSF. He noted that Tok school children have assisted in the thinning process. He detailed that thinning removes lighter-fuels that cause fires to start and allows sunlight to shine on the forest floor. He pointed out that every bit of the noncommercial harvest is put to use at Tok's school. He said involving young people in the transformation from "Menace to Meals" is exciting.

He said in the Tok area, the Division of Forestry engineered a 25 year contract for people wanting a long term source of fuel. There is 33,000 acres of identified hazardous fuel that needs to be removed to make Tok fire-wise. Tok's forester used training for the firefighting crews to clear around elders' and seniors' homes and to basically fire-wise Tok. He detailed that a checkboard-effect strategy is used during the cut process which results in wildlife corridors as well as fire-breaks for safe firefighter deployment and escape routes for residents.

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He detailed the biomass harvesting and processing process fuels Tok's school boiler. He noted that the boiler was designed specifically for the biomass produced from TVSF. He revealed that the boiler's emissions are 13 parts per million and is cleaner than fuel oil, propane, or gas-fired furnaces. He revealed that the school's biomass system displaces approximately \$250,000 of fossil fuel per year with a system payoff of 12 or 13 years. He disclosed that the energy savings has allowed the school to hire a music teacher and a guidance counselor.

He revealed that the boiler's turbine also produces 45 kilowatts (KW) of electricity and takes care of approximately 40 percent of the school's electric load. He revealed that Tok's school at its size is the only school in the world that produces both electricity and heat from wood chips. He noted that the school recently hosted an open-house where people from Alaska and the Lower 48 watched the boiler system in action.

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He revealed that the payoff on the heat side is in excess of \$200,000 with electricity adding an additional \$50,000. He disclosed that the Legislature provided funds for a greenhouse that is also heated by the school's boiler. He said Tok's children work with a cooperative extension service to learn how to plant, harvest, and ship food. He divulged that Tok's greenhouse supplies fresh vegetables to six schools in their

school district. He stated that kids have learned that there is more to trees than just heat for the school. He pointed out that the greenhouse is very efficient and noted that the Department of Transportation (DOT) donated surplus guardrails that were used to contain soil within the greenhouse.

MR. STANCLIFF said Tok's school campus is striving to be the first net-zero energy school in the state. He revealed that Tok's school generates excess heat and a request was made three years prior from the Alaska Energy Authority (AEA) to obtain \$175,000 in funding to extend heating to other buildings.

He thanked the Legislature for its support of Tok's vision. He summarized that using biomass saves money on education, stimulates the local economy, and reduces the fire hazard in Tok.

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SENATOR HOFFMAN asked what type of fertilizer is used in Tok's greenhouse. He noted that salmon carcasses are used as an all-natural fertilizer in the Kuskokwim River region.

MR. STANCLIFF answered that the Tok greenhouse uses all natural compost when possible and noted that the Tok area is a little short of salmon.

CHAIR BISHOP asked to verify that Tok has requested \$175,000 from AEA.

MR. STANCLIFF answered yes.

CHAIR BISHOP asked if the \$175,000 is to be used for a connecting three school district buildings.

MR. STANCLIFF answered yes.

CHAIR BISHOP asked if the Tok boiler heating system would be at capacity if the three school district buildings are connected.

MR. STANCLIFF answered that the system would be nowhere near capacity. He detailed that the boiler system would not be at capacity if the DOT building, clinic, fire department, and Senior Center were also connected. He noted that connecting additional buildings would allow the boiler to increase electricity production to 75 KW.

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CHAIR BISHOP asked if a cost-benefit study had been done in hooking up to the DOT building.

MR. STANCLIFF revealed that the DOT building consumes 39,000 gallons of fossil fuel per year. He asserted that the school boiler has the capacity to take care of the DOT building. He noted that a survey had been done on the possibility of a heat-loop in the community.

CHAIR BISHOP calculated that the DOT building spends approximately \$160,000 for its fuel.

MR. STANCLIFF answered yes.

CHAIR BISHOP asked how many years are taken into account for the \$100 million spent on TVSF firefighting.

MR. STANCLIFF answered the last 15 to 20 years.

CHAIR BISHOP noted that he was involved with fighting Tok's forest fire in 1989.

MR. STANCLIFF revealed that he has been evacuated three times from his home in Tok. He explained that most of the fires that threaten Tok are man-caused. He revealed that the community may be destroyed if a fire is not caught within 15 minutes. He said the Division of Forestry is Tok's first responder and noted that the division patrols the community during the summer.

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CHAIR BISHOP announced that the committee will stand at ease.

**PRESENTATION: "YOUNG'S TIMBER PROJECT" HOW TO UTILIZE TIMBER AS  
A VALUE-ADDED PRODUCT FOR TOTAL UTILIZATION**

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CHAIR BISHOP called that the committee back to order and welcomed Joe Young from Tok.

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JOE YOUNG, owner, Young's Timber, Inc. (YTI), Tok, Alaska, disclosed that he has owned his business for 23 years and created a lot of new sustainable jobs. He stated that he has an extensive background in the timber industry. He said he sees biomass as a driving force for the Upper Tanana Valley. He

asserted that timber is the region's renewable resource that will sustain jobs for a long period of time.

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MR. YOUNG explained that his timber business operates on a 300 acre site. He revealed that he was involved in obtaining \$230,000 in funding in 1997 to start putting up timber sales in Tok and the first timber sale occurred in 2008. He explained that in 2009 he signed his first contract under AS 38.05.118(c), Negotiated Timber Sale Contract. He said his timber contract allowed for \$500,000 in funding for value-added sawmill equipment. In 2014 he signed his second contract that allowed for an additional \$400,000 in equipment funding from the Small Business Administration. He stated that in 2015 his business signed a Tok Timber Salvage Contract in Moon Lake for 2,000 acres of fire-killed and wind-blown timber. He summarized that timber contracts are very critical for stimulating Alaska's timber economy and specifically for allowing his business to obtain nearly \$1 million in funding.

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He explained his sawmill operation and noted that his business annually sells approximately 10,000 pieces of 4x4 lumber to the North Slope that is used for hauling pipe.

CHAIR BISHOP asked to verify that Mr. Young's business sells 10,000 pieces of 4x4's for pipe-skids.

MR. YOUNG answered yes. He explained that trucks use the 4x4's to repackage and haul pipes to the North Slope that arrive in Fairbanks by rail.

He pointed out that funding from banks require three questions to be answered: where is the timber, how much timber is available, and how long the contract is.

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He explained that the fire-killed trees that are harvested are converted into logs that are used to build log houses throughout Alaska. He summarized that YTI does the following:

- Long term wood fiber contracts that are in place.
- Large site facility that is ready to go.
- Harvesting equipment in place.
- Experienced, versatile, and loyal crew.
- Value-added facility that is operating.

- Assemble log homes throughout Alaska.

MR. YOUNG explained that an issue developed as to how to utilize YTI's sawdust and other byproducts in order to produce a value-added product for total timber utilization. He asserted that his family business practices eco-system management and pointed out their concern in only using a third of a cut tree.

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He explained that after four years, his family formed Young's Fuel Logs & Pellets, LLC. He explained that the first step was acquiring a biomass burner that burnt dirty, low quality chips in order to dry high quality chips for pellets and fuel logs. The second step was working out an agreement with Alaska Power & Telephone (AP&T) to purchase interrupted-power at a lower, industrial rate. He said the next step is building a pellet and fuel log plant with the assistance of a company with locations in Washington and Idaho.

He explained that he delivered fire-killed white spruce to Idaho for production testing as well as pellet and fuel log equipment inspection. He explained that fuel log production will be a natural process. He noted that even after 23 years there is enough lignin in the fire-killed white spruce to naturally bind the fuel logs.

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CHAIR BISHOP asked what "lignin" is.

MR. YOUNG answered that lignin is a liquid in the timber's cells that is squeezed out and heated to form the fuel logs.

CHAIR BISHOP asked to verify that lignin acts as a natural binder.

MR. YOUNG answered yes.

SENATOR EGAN asked to verify that "natural binder" means no glue is used.

MR. YOUNG answered that the fuel log is all natural with no glue or wax used.

SENATOR HOFFMAN asked how the fuel logs compare to the logs that a person buys in a store.

MR. YOUNG answered that the fuel logs purchased in stores use wax and binders.

He revealed that pellet and fuel log testing was done to assure that the fire-killed firewood would work. He said the fire-killed firewood produced a high quality fuel log. He explained that one ton of fuel logs is equivalent to two cords of firewood. He pointed out that cut-and-split firewood in Fairbanks sells for \$300 per cord, \$600 for two cords. A ton of fuel logs will sell for approximately \$450. He noted that each fuel log has 68,000 BTU and will burn from 8 to 10 hours.

He detailed that the new pellet and fuel log operation will create approximately 3 fulltime and 24 seasonal jobs. He revealed that pellets and fuel logs will be produced during the summer due to winter temperature restrictions. He explained that a dryer's efficiency drops 35 to 40 percent at zero degrees Fahrenheit.

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CHAIR BISHOP asked if double-shifts will be used during the summer months.

MR. YOUNG answered yes. He said the plan is for a day shift and a night shift with a person working 3-1/2 days on and 3-1/2 days off.

CHAIR BISHOP stated that Mr. Young knows from experience what fits well with the village schedule.

MR. YOUNG answered correct. He explained that village and Tok employees want to hunt, gather, fish, and go to potlatches during the summer months.

He explained that the Tanana River Basin's ecosystem is unique due to its elevation, extreme cold, and being surrounded by mountains. He summarized that amazing things can be done when local knowledge and science work together.

CHAIR BISHOP asked who Mr. Young contracts his 4x4 business with.

MR. YOUNG answered Alaska West.

CHAIR BISHOP asked how many fulltime employees Mr. Young has.

MR. YOUNG answered eight fulltime employees that increases to 20 employees during the summer.

CHAIR BISHOP he asked to verify that an additional 27 employees will be working when the pellet mill opens.

MR. YOUNG answered correct.

CHAIR BISHOP asked to verify that YTI's total employment will be approximately 50 employees.

MR. YOUNG answered correct.

CHAIR BISHOP asked what businesses have been lost in Tok over the past 10 years.

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MR. STANCLIFF explained that Tok is in an economic death-spiral. Tok's tourism is mainly affiliated with airlines and cruise ships, not with the highway. He revealed that Tok's current tourist numbers are the same as 1992 levels. He detailed that Tok's LORAN navigation station closed, school enrollment has dropped, and power rates for businesses is \$0.51 per KW/hour. He noted that Tok's grocery store pays \$39,000 per month for electricity. He stated that high energy costs makes it difficult for businesses in Tok.

He set forth that harvesting biomass supports the marriage between utility and business. He said Mr. Young's business receives heat and power whereas a utility receives quality fuel over a 25 year term. He specified that a line is set up to carry 1.5 megawatts of electricity to Mr. Young's plant, electricity that Tok is in need of. He noted that Tok may seem a long ways away from markets, but pointed out that Tok is fairly close to Whitehorse, Valdez, and is closer to Anchorage than Fairbanks' pellet mill. He asserted that support from the Division of Forestry is necessary for the program to expand into rural Alaska. He stated that Tok produces a great deal of revenue for the Division of Forestry. He said Tok is pleading with the Legislature to allow revenue to continue flowing through stumpage and contract receipts. He hoped that the Legislature does not choke off the very places that are producing revenue and makes an economy go away.

CHAIR BISHOP thanked the presenters. He noted that the "Menace to Meals" program pioneered by Tok is being looked at by other school districts.

SENATOR EGAN asked if Mr. Stancliff worked for AP&T as well.

MR. STANCLIFF answered yes.

SENATOR EGAN asked if Mr. Young has a good working relationship with AP&T.

MR. YOUNG answered yes.

SENATOR EGAN asked if Mr. Young has a good working relationship when his electrical rate is \$0.51 per KW-hour.

MR. YOUNG answered that his new business was able to negotiate a lower rate.

SENATOR EGAN asked to verify that the rate is an interruptible rate.

MR. YOUNG answered yes.

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There being no further business to come before the committee, Chair Bishop adjourned the Senate Community & Regional Affairs Standing Committee hearing at 4:20 p.m.