

Call number: 01-74-02

Name and place: SYMPOSIUM ON ALASKA EARTHQUAKE 1964

Date of the recording: August 1964

Summary created by: Varpu Lotvonen

Date of summary's creation: 06/03/2016

Notes: Original on ? inch reel.

The recording begins mid-sentence with a man's voice talking about the earthquake's effects on transportation in Alaska. The transportation system in Alaska was put together to meet defense requirements, and so that alternative ports could be used in emergencies. Port of Anchorage resumed operations almost immediately after the quake and there was no decline in movement of freight – it was merely redistributed to existing ports, such as Anchorage.

1:51 Reallocation of business can be seen among other distributive industries. Looking at business failures, it could be seen that there was some surplus that contributed to the rate of failure. Earthquake could be listed as a business failure due to act of God rather than due to bad business judgment.

There are two consulting firms working on elegant models “of this” [business failure]. They won't be too far off from what the speaker will present about employment statistics.

3:02 When they look at employment statistics of Alaska, they can see 1% decline that was caused by stoppage for the month of April, greater efficiency in newly consolidated transportation system, and in declined tourist industry.

When looking at basic industry, one can notice substantial increase in employment which has lowered the unemployment rates in Alaska and especially in Anchorage. The commodity producing industry, such as construction, has declined, but is continuing on higher level than previous year.

The present economy is based on government input. Natural resources are a minor thing at present. Given the structure of the economy, the disaster has been beneficial when taken coldly on overall basis and disregarding individual tragedies.

Rebuilding has temporarily offset the trend of decreasing construction work that has been a result of military personnel being withdrawn from Alaska.

5:49 The speaker wants to convey that that is not an accurate assessment on the effects of the disaster. The conclusions from the analysis would be incomplete if taken by themselves.

Alaska's population has grown but below the level that has been experienced by United States as a whole. Also wealth and employment have fallen below the level of other parts of the United States.

The speaker doesn't want to contradict people who say that Alaska's economy has grown since statehood, but mentions that when looking at longer context, they can see that in 1958, their state economy suffered from business recession and that since statehood, it has recovered.

7:48 Alaskans are aware that they need to shift focus from government spending to developing their natural resources. Statehood was one tool that has made a contribution towards those ends.

They need to think what impact the earthquake had on the economy and Alaskans and upon individuals since now all the laymen are as aware of the earthquake hazards as technicians have been.

Social scientists have to study the effects of the earthquake on people's willingness to live in Alaska and invest in Alaska. It has affected tourists' willingness to come to Alaska already.

9:40 Non-Native population in Alaska is highly mobile and their mobility might be increased by destruction of their property. Property loss has impact on individual Alaskans. For many, their hope for the future is the only thing keeping them in Alaska.

11:17 Now the speaker will talk about State Government's functions. 1964 legislature was in the final stages of writing the most critical budget since statehood when the earthquake struck. The speaker says that they were facing a budget situation – belt tightening – when the quake hit and despite of the tight fiscal situation, they were required to help with the emergency programs. Federal government is helping them, but still there's cost to the state while their sources of income have dwindled. They will have to raise taxes.

He won't start talking about bonding, but says that they have to assume added responsibilities and are, as a state, unable to help further economic development.

13:23 They are still dependent on federal subsidies, which threatens them as a state. [More talking about financial dependence.] Federal reconstruction and development commission for Alaska has a responsibility to aid developing coordinated actions for federal reconstruction and economic development programs in Alaska that are to be carried on by state and federal agencies.

[Talking about Alaska's need to show leadership and willingness to finance a part of the reconstruction so that they won't merely revert to territorialism “in disguised form”.]

[End of speech, applause.]

The chairperson asks that all questions are asked directly from Dr. Rogers.

[Break in the recording.]

16:24 Recording continues mid-sentence. The chairperson introduces following short paper that precedes their final paper and presents partial results from market potential for Alaskan clay products, and it's read by Kenneth K. Martin.

Martin says something unclear about getting it out of the way. Mineral Research Department made a larger study from which the present paper is abstracted. The purpose of the larger study was to research market potential for Alaskan clay products, like building materials.

18:00 They made surveys of Anchorage and Fairbanks property owners' attitudes toward home construction materials. [About survey methods – questionnaire.]

20:29 Respondents were given 6 options when asking for their preferred construction materials: wood frame, concrete block, stucco, brick, brick and wood combination and log. Wooden frame accounted for 60% of the responses [gives other percentages].

Results differed in two cities: Log construction was 25% in Fairbanks area and only 5 % in Anchorage. They were also asked about why they preferred a certain type of material. [Results.]

22:31 Question about effects of the earthquake on construction materials included preferences. 87% of the respondents indicated that the earthquake did affect their preferences, and their place of residence affected the responses. In Anchorage, 94% of people were effected as opposed to 79% in Fairbanks, leading people to think that concrete, brick and stucco are least favorable. This was also seen in interviews with dealers of building materials who reported a decrease in demand for concrete block.

1/3rd of respondents from Anchorage would have bought a brick house if one had been available.

24:11 More intense data will be available in the final report of the project. It should be said that the aim of the survey wasn't to promote selected building materials but to determine consumer attitudes that might affect market potential of building products. [Applause.]

24:49 Chairman says that Frank Belluscio wasn't able to attend so Fred Thorstenson, who is supervisor of pink salmon investigations for the Bureau of Commercial Fisheries Laboratory and also leads the Olson Bay research station. He says that he is going to talk about the biological consequences of the earthquake.

The earthquake changed spawning habitat of salmon that homed into streams of northwestern Prince William Sound area. The total impact can't be measured until the spring of 1965, when survival eggs

that are deposited in streams of the affected area could be determined. Thorstenson will talk about the biology of the streams prior to the earthquake and talk about future abundance of salmon in Prince William Sound in light of recent changes in land elevation.

26:55 Studies of spawning in Olson Bay field station provide basis for evaluating changes. [Location of the station that is in area that was uplifted about 5 feet.] Their research has been based on a theory that the fish that utilize the intertidal zone form a discreet population. [Talks about the evidence that the fish are intertidal.]

28:42 [First slide is shown.] Thorstenson talks about how they arbitrarily chose parameters for the intertidal and freshwater spawners. At 3 foot mark, stream bed is under salt water about 80% of the time, and decreasingly up the stream so that at 12 foot mark, it's less than 5% of the time. Changes in temperature, salinity, and oxygen are greater in duration and magnitude in lower areas of intertidal zone than at the upper elevation.

[Next slide:] At 7 foot mark, temperature changes as much as 6 degrees have been recorded. [Talking about slide that shows temperatures on high tide and after it.]

30:46 Thorstenson wants to explain the term "reb." It means the nest to which salmon rise and deposit their eggs.

[Next slide talks about changes in salinity.] At 7 foot tide level, a change of 8 parts per 1,000 has been recorded. As the tide reaches the 7 foot mark, salinity jumps up rapidly. [More about salinity at different spots.]

[Following slide is about changes in oxygen as the tide rises. Records findings on 7 foot mark on high tide.] Particles wash downstream and affect the quality of spawning bed. Talking about rate of permeability that influences levels of oxygen that is available for the embryos.

34:12 [Last slide is about the research methods with which they determine productivity of different elevations of stream bed. Sampling method is described.]

Pink salmon spawn heavily in the middle of the intertidal area and less heavily on the upper areas, and sporadically on the lower area. Chum salmon are found from mid-intertidal zone and on upper zone, but rarely ever in lower intertidal zone.

35:59 Survival of eggs follows a different pattern in that it is greatest on upper intertidal zone and progressively less downstream.

After the short presentation of spawning on intertidal zone, they can consider the earthquake and its implications: The potential impact of the earthquake can be appraised by considering the fraction of the runs that normally spawn on streams that are affected. There are approximately 350 streams that border Prince William Sound and 27 of them are located on areas that subsided 2–6 feet and obtain about 12% of the total pink salmon escapement and 25% of chum salmon.

There are 199 streams in uplifted area. [Gives fish escapement percentages.]

Potential effect of the earthquake is brought into clear perspective by considering that 226 intertidal streams have been altered. They represent spawning habitat of 56% of the total spawning population of even numbered years and 1/3rd of that on odd numbered years.

38:22 Earthquake produced immediate and long-term adverse effects on salmon runs. Immediate effects happened to the fry that were already in streams at the time of the earthquake and seismic wave which deposited muck and silt over streams and there was also gravel shifts that produced losses. Effects of other stressors affecting the fish are unknown. Total fry losses are also unknown.

If Olson Creek is representative of affected streams where there was uplifting but no wave damage, fry losses were insignificant. They sampled the intertidal stream bed in March for an estimate of the total fry population and again in April, some 10 days after the earthquake and they found that the fry population was unchanged. They didn't see dead or deformed fry that could be attributed to the earthquake.

40:23 Long term damages are more intangible and depend on the ability of salmon to adapt to new situations. At the time, Thorstenson can only list some critical questions but answers will not be in for a couple of years. [Poses a couple of questions relating to changed areas and conditions that might affect the salmon spawning and survival.]

44:54 On a plus side, the earthquake has created an unparalleled experimental situation and they hope to either prove or disprove the hypotheses of discreteness of intertidal population and to learn the degree of salmon population's adaptability to sudden environmental change.

[Thorstenson closes his speech, applause.]

45:29 Questions are welcomed from the audience. [Unclear question.] Thorstenson says that the damage of the earthquake "there" might be less than in other areas since it was only uplifted 5 feet.

He neglected to mention that when certain conditions are met in the uplifted areas, the more stream might actually be beneficial [for salmon population?].

[Another unclear question about fry loss, and an answer.]

47:27 [A man asks if someone wants to compare Olson Creek with general results.] Thorstenson explains that scholars expect some 235,000 adult salmon less in 1965 because of the earthquake but that is insignificant figure considering the total run. Most of their material was derived from streams along the Prince William] sound, including Olson Bay where no damage occurred.

Another man asks an unclear question. Thorstenson pardons his hearing and says that they don't know what happens to fry in new intertidal zones. There have been losses, but he doesn't know how much.

[Question about their resources, and an answer.]

[Unclear question again.]

[A man announces changes of place for business meeting.]

[End of the recording.]