ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE
March 8, 2021
3:35 p.m.

MEMBERS PRESENT

Senator Joshua Revak, Chair
Senator Peter Micciche, Vice Chair
Senator Gary Stevens
Senator Natasha von Imhof
Senator Jesse Kiehl

MEMBERS ABSENT

Senator Click Bishop
Senator Scott Kawasaki

COMMITTEE CALENDAR

PRESENTATION: OCEAN PASTURE RESTORATION INC. - ALASKA

- HEARD

SENATE BILL NO. 29
"An Act relating to the powers of the Alaska Commercial Fisheries Entry Commission; relating to administrative areas for regulation of certain commercial set net entry permits; establishing a buy-back program for certain set net entry permits; providing for the termination of state set net tract leases under the buy-back program; closing certain water to commercial fishing; and providing for an effective date."

- MOVED SB 29 OUT OF COMMITTEE

PREVIOUS COMMITTEE ACTION

BILL: SB 29
SHORT TITLE: COOK INLET: NEW ADMIN AREA; PERMIT BUYBACK
SPONSOR(s): SENATOR(s) MICCICHE

01/22/21	(S)	PREFILE RELEASED 1/8/21
01/22/21	(S)	READ THE FIRST TIME - REFERRALS
01/22/21	(S)	RES, FIN
03/03/21	(S)	RES AT 3:30 PM BUTROVICH 205

03/03/21	(S)	Heard & Held
03/03/21	(S)	MINUTE(RES)
03/08/21	(S)	RES AT 3:30 PM BUTROVICH 205

WITNESS REGISTER

TED CROOKSTON, Advocate
Ocean Pasture Restoration Alaska, Inc.
Kenai, Alaska
POSITION STATEMENT: Provided introductory remarks on Ocean Pasture Restoration Alaska, Inc.

RUSS GEORGE, President
Ocean Pasture Restoration Alaska, Inc.
Kodiak, Alaska
POSITION STATEMENT: Provided an overview of Ocean Pasture Restoration.

ACTION NARRATIVE

3:35:47 PM
CHAIR JOSHUA REVAK called the Senate Resources Standing Committee meeting to order at 3:35 p.m. Present at the call to order were Senators Kiehl, Stevens, Micciche, and Chair Revak. Senator von Imhof arrived during the course of the meeting.

PRESENTATION: OCEAN PASTURE RESTORATION INC. - ALASKA

3:37:11 PM
CHAIR REVAK announced the committee would hear a presentation from Ocean Pasture Restoration (OPR Alaska).

He said the first of the two presenters is Ted Crookston who is a key member of OPR Alaska and serves as a board member for their Alaska Fisheries Advisory Board. Mr. Crookston is the CEO of Tide Chaser Fishery, LLC, and is a fourth-generation Alaskan fisherman based out of the Kenai Peninsula. Mr. Crookston is very active in the Kenai community and is also on the Board of Directors for the Kenai Peninsula Fishermen's Association.

3:39:08 PM
TED CROOKSTON, Advocate, Ocean Pasture Restoration Alaska, Inc., Kenai, Alaska, stated on behalf of OPR Alaska and their team, he expressed his deep appreciation for the committee sharing its time, talents, and intention to do good things for Alaskans. He added his thanks to committee members for opening their minds and hearts to OPR Alaska as well.

3:39:49 PM
[Audio difficulties 3:39:49-3:40:13.]

3:40:13 PM
CHAIR REVAK reconvened the meeting.

MR. CROOKSTON explained that OPR Alaska is not asking the committee to solve their problem, provide money, or craft complex legislation. OPR Alaska, as stewards over the resources of Alaska, is extending an invitation to officially step forward and join in an alliance to set the standard for ocean stewardship to become advocates for OPR Alaska's vision to restore the ocean pastures of the Gulf of Alaska to historical levels of health, vitality, productivity, and ocean life abundance.

He introduced Russ George who is recognized internationally as a pioneer of sustainable, ocean restoration work, has dedicated more than 20 years to the field of ocean restoration, and has had a long career in environmental management and sustainable development.

3:43:21 PM
RUSS GEORGE, President, Ocean Pasture Restoration Alaska, Inc., Kodiak, Alaska, stated he has been passionately involved with ocean restoration for more than 20 years.

He said OPR Alaska invites committee members to take a lead role in participating with their work over the next number of years as OPR Alaska brings the oceans of Alaska back to their historic level of health and abundance.

MR. GEORGE referenced a slide in his presentation showing President Biden issuing an executive order on January 27, 2021 regarding the environment—especially about climate change and fisheries. President Biden called for the delivery of working solutions to his office to save fisheries and restore the climate within 60 days. He said OPR Alaska thinks it has one of those solutions with the hope that the committee might recommend OPR Alaska to President Biden.

3:46:51 PM
MR. GEORGE detailed slide 3, Absolute Proof OPR Works and Brings Back the Fish. He detailed in 2013 the fisheries harvest forecast for the State of Alaska was 50 million pink salmon—those forecasts are usually quite accurate. However, the harvest

stopped after 225 million pink salmon due to filled ashore capacity.

MR. GEORGE referenced the Alaska Fish and Game Report 2020 graph on slide 3 and pointed out 2012, the year OPR Alaska did its ocean restoration in the Gulf of Alaska. He noted the four tall bar-graph peaks the years following 2012—the orange lines represent pink salmon. In 2014, one year following OPR Alaska's work—given that pink salmon have a two-year lifecycle—that is the largest run of pink salmon in all of history, and two years later the second largest catch in all of history occurred. He stated the restoration simply worked.

MR. GEORGE noted slide 4, "Location, Location, Location." He explained OPR Alaska defines "ocean pastures" as large, slow-moving eddies. He noted the satellite photo pictured on the slide shows the many large circular eddies in the Gulf of Alaska. In 2012, OPR Alaska worked in the Haida Eddy—named after the Haida people from Old Massett who worked with OPR Alaska. He added OPR Alaska is currently based in Kodiak.

He said OPR Alaska is quite certain the young salmon leaving their streams need to get offshore as soon as possible because the shoreline waters are full of predators. The streaky current that passes closer to shore is a fast-moving river of water that will sweep the salmon to the western side of the Pacific.

3:49:04 PM
MR. GEORGE turned to slide 5, How Ocean Pasture Restoration (OPR) Works. He explained the restoration method is simple. The OPR Alaska ship used in the summer of 2012 carried 100 tons of mineral dust. The best product is hematite iron ore. OPR Alaska sprinkled this natural product across the large Haida Eddy "plowing the field" with a stream trail of muddy red water. The tiny amount of hematite ore amounts to a few pounds per square mile. The challenge OPR Alaska had was diluting the hematite ore enough when putting it into the water.

MR. GEORGE pointed out a photo on the right side of the slide that showed both the clear blue water before treatment and the green ocean after treatment, which is the healthier of the two and what the fish need to live in.

3:51:00 PM
MR. GEORGE explained slide 6, OPR Mimics Nature, Replenishes Her Missing Dust, shows the natural effects that mineral dust has on the ocean. The slide shows the Aleutian Island volcano,

Kasatochi. It erupted in 2008 and spewed out ash for weeks, probably a million tons of ash landed in the Gulf of Alaska.

MR. GEORGE noted the volcanic ash turned the Gulf of Alaska green, but nobody was looking at the water at the time, there are no satellite records that caught the event because the weather was too cloudy. Also, there were no ships studying the Kasatochi region, so no one saw the plankton bloom. However, what was seen was two year later, the sockeye salmon swam home to British Columbia that resulted in the largest sockeye salmon run in its history; OPR Alaska knows that volcanos do this, especially volcanos in the Gulf of Alaska.

He pointed out the bottom picture in slide 6 shows an iceberg from Greenland. The snow with the icebergs collects dust for centuries. When an iceberg calves off of Greenland or Antarctica and drifts free into the ocean, the natural dust in the icebergs turns the ocean a nurturing green.

MR. GEORGE noted the photo on the upper right of the slide shows a dust storm from several years ago that blew from Australia to New Zealand. The dust landed in the Hobart Sea and promptly turned the water green. The following year the Hobart Sea had the largest catches of fish in all of history.

He said Mother Nature depositing dust all the time is a very natural process. OPR Alaska does not claim to be as good as Mother Nature, but OPR Alaska is smarter by knowing exactly when and where to deposit the dust as well as the most ideal form of dust. Instead of using random forms of dust, OPR Alaska knows what the ocean is missing most, iron. OPR Alaska uses red hematite iron ore rock dust, a very natural product that works just fine.

3:54:02 PM
MR. GEORGE addressed slide 7, OPR 2012 In Gulf of Alaska Aboard. The slide shows photos of OPR Alaska's work. OPR Alaska used the fishing vessel Ocean Pearl out of British Columbia—the largest fishing boat in British Columbia—and placed 100 tons of dust onboard. The slide shows the Haida village crew from Old Masset mixing 50-pound bags of dust with seawater.

MR. GEORGE pointed out the photo on the bottom of the slide that shows a trickle of muddy red water behind the boat. That is all OPR Alaska does to disperse the mineral but they must study the water with scientific gear after dispersal. The top right photo shows a $300,000 plankton net that carries instrument packages

to take samples and study the chemistry of the ocean at various depths.

MR. GEORGE noted the photo on the bottom right shows a pair of torpedo-like objects known as Slocum Gliders. They are state of the art ocean robotics that carry 15 instruments and autonomously swim hundreds of miles for up to 30 days. OPR Alaska does an intensely scientific program to prove that the dust is safe, sustainable, and effective.

3:57:03 PM
MR. GEORGE referenced slide 8, OPR 2002 Aboard Schooner Ragland near Hawaii. It shows the schooner used to disperse a few tons of dust in the ocean. The Journal Nature wrote an article on the successful first experiment in 2003.

He addressed slide 9, "OPR 1990-2009 Institutions plus approximately $300 million in public funds." He noted there is more experience in ocean restoration. The international community of ocean science has studied ocean restoration since the 1980s with experiments like OPR Alaska did with iron mineral dust conducted since the early 1990s. However, the international science community's experiments were always small and never more than two or three tons of dust.

MR. GEORGE noted the international ocean science community conducted 11 experiments at a cost of $300 million in public funds, primarily due to the use of the German icebreaker Polar Star. OPR Alaska did the same work in 2012 at a lower cost. The experiments always resulted in ocean blooms, but OPR Alaska looked in places where the fish would come back. The ocean science community's experiments were pure academic work and OPR Alaska's work was purely about bringing fish back.

3:59:40 PM
MR. GEORGE noted slide 10, OPR's Many Miracles. He said OPR Alaska certainly brings the fish back but bringing back the fish means bringing back ocean life: plankton, seabirds, seals, and whales. During the OPR Alaska experiment in 2012, they saw hundreds of whales and albacore tuna schools come into the plankton bloom. Thousands of Canada geese flew 300 miles offshore to feed in the plankton bloom, which was a true oasis of life. As the plankton grows, it takes carbon dioxide out of the air, performs photosynthesis and converts carbon dioxide into new ocean life. In doing so, the plankton reduces ocean acidification into life instead.

MR. GEORGE said another thing the plankton bloom does is scrub and remove mercury from the ocean surface, because it accumulates in fish. Mercury naturally sticks to the plankton and sinks to the bottom; the process literally scrubs the ocean surface clean. He noted mercury arrives from coal burning power plants.

MR. GEORGE explained plankton blooms release chemicals that restore cloud cover and rain. Utility companies from western states contacted OPR Alaska to inquire about ocean pasture restoration improving rainfall for filling their reservoirs to create hydroelectric power.

He stated OPR Alaska thinks ocean pasture restoration is the world's best hope to mitigate the lion's share of humanity's airborne carbon dioxide and in the bargain get paid off in fish and healthy oceans.

4:03:33 PM
MR. GEORGE addressed OPR Alaska Inc. 3-Year Business Steps. He explained OPR Alaska has a simple business plan and is hoping the Senate Resources Committee can help. OPR Alaska wants to deploy the ocean pasture restoration via a three-year commercial-scale series of tests restoring one large ocean eddy, similar to the Haida Eddy, but south of Kodiak.

He explained OPR Alaska wants to study its ocean pasture restoration intensively to prove safety, sustainability, and utility. OPR Alaska is certain its ocean pasture restoration will bring back hundreds of millions of additional fish into nets and on to the plates of Alaskans and the rest of the world who are happy to eat wild Alaskan salmon.

MR. GEORGE noted the ocean pasture restoration will employ a few people within the company, crews on their boats, scientists in their research labs, and people in their business offices. Also, OPR Alaska will grow a lot of fish that will employ thousands of Alaskans in the fishing industry.

MR. GEORGE said one of the great values of ocean pasture restoration is the process qualifies as a mitigation activity under the Paris Agreement. It expressly states that doing ecological restoration—especially nature-based ecological restoration in the ocean to remove carbon dioxide—produces "Blue Carbon." He explained blue carbon is a bankable and tradable commodity in the Paris Agreement. OPR Alaska thinks this will

become one of Alaska's largest natural resources in the very near future.

MR. GEORGE explained OPR Alaska is an investor-based company that wants to prove commercial viability to its investors that ocean pasture restoration is safe, sustainable, and that the fish really come back. OPR Alaska anticipates seeing sockeye salmon, chum salmon, and king salmon the following year, and pink salmon two years later. OPR Alaska is certain it can target specific ocean pastures for each salmon species.

MR. GEORGE said OPR Alaska's plan does not end after its three-year project; that is just the beginning of a stewardship business and lifestyle of the ocean pastures. Just like humanity learned to take care of the pastures on land 10,000 years ago, ocean restoration knowledge will finally allow for taking care of pastures in the ocean. Restoration will become a stable business in Alaska because ocean restoration must occur every year from now until the rest of time.

4:07:15 PM
MR. GEORGE noted OPR Alaska always gets asked questions about ocean pasture restoration such as whether restoration will work for more than pink salmon, especially for king and sockeye salmon. OPR Alaska is certain restoration works on other salmon species, and they have the data to prove it.

MR. GEORGE said OPR Alaska receives questions regarding the safety of ocean restoration. People have historically studied natural dust events landing on the ocean. Charles Darwin noted a dust storm on the Atlantic between Africa and South America 150 years ago. In all the years of studying natural dust events, no one has seen negative effects in the deep oceans.

MR. GEORGE explained OPR Alaska is only able to work in the deep ocean because the water close to the Alaska shore has perhaps 10,000 times more minerals in it. The deep ocean water is safe and even if the dust were to come to shore, it could not possibly harm Alaskan waters. OPR Alaska chooses the eddies and pasture locations. OPR Alaska chooses the long, slow moving, long living eddies tracked via satellite. They simply do not come ashore.

4:09:39 PM
MR. GEORGE noted OPR Alaska receives questions regarding ocean acidification. OPR Alaska thinks ocean pasture restoration is the cure for ocean acidification.

MR. GEORGE said people ask OPR Alaska about the legality of ocean pasture restoration. The National Academies of Sciences, Engineering, and Medicine recently started holding a series of meetings on ocean carbon. The institution assigned a lawyer from Columbia Law School who opined ocean pasture restoration is not against the law. There has not been any legislation directed at ocean pasture restoration whatsoever and that gives OPR Alaska an opportunity to talk with a group like the Senate Resources Committee regarding a legal vacuum.

He stated OPR Alaska thinks the legal opinions say they have every right to do ocean pasture restoration, as long as they are only doing work that is beneficial to the ocean. Ocean pasture restoration is a perfectly lawful and legal activity. OPR Alaska is hoping a group like the Senate Resources Committee will take the lead because no one at the state or federal government level has written any legislation, rules, or regulations about ocean pasture restoration.

4:12:13 PM
SENATOR STEVENS noted the discussion was fascinating and he would appreciate learning more. He asked who their investors are and what are their returns.

MR. GEORGE answered the investors are entirely private and he is not at liberty to publicly identify them. The investors have promised to provide OPR Alaska with the money to begin the project.

He specified OPR Alaska wants to enter into a working relationship with the State of Alaska and the committee meeting is its first meeting to begin that working relationship. Investors have asked OPR Alaska to get the company up and running, and then to engage the government of Alaska. OPR Alaska has met its investors' milestone by engaging the government of Alaska, telling its story, and answering questions.

4:13:27 PM
SENATOR STEVENS asked what the investors are getting from their investment.

MR. GEORGE explained the investors' return is that the project will produce—under the Paris Agreement—the "Blue Carbon" credit. The Paris Agreement provides that when anyone tries to mitigate climate change via methods to stop fossil fuel emissions or remove carbon dioxide from the atmosphere, receives carbon

credits. No one to date has delivered the Blue Carbon credits provided under the Paris Agreement. He noted the trading system only began in January 2020.

He likened OPR Alaska to an oil company that knows the oil is there and has done the seismic surveys, but must do the development work for production. OPR Alaska must do the ocean pasture restorations, make all the definitive measurements, and meet the Paris Agreement requirements for having accurate measurements for verification and certification. He noted the State of Alaska has the unique privilege to certify those credits. OPR Alaska is ready to drill for anti-oil, Blue Carbon, which will relieve the carbon footprint of oil.

4:15:45 PM
SENATOR KIEHL noted he talked about mercury, phytoplankton accumulating mercury, and removing mercury from the process and asked if the mercury is in some way removed or if it is being "sent to the tables."

MR. GEORGE reiterated that mercury in the ocean comes primarily from powerplants that burn coal. The mercury is in the form of an aerosol dust or vapor that lands on the ocean. The process he described is called biofiltering of wastes (similar to polluted water passing through a wetland or marsh) where pollutants are captured by organic molecules in the water. During the plankton bloom, mercury on the surface of the ocean sticks to the plankton and sinks to the bottom sediment.

4:18:18 PM
SENATOR KIEHL noted he correlated OPR Alaska's fertilizer and the pink salmon runs and asked what the lasting effect is if the committee were to take his chart as proof.

MR. GEORGE referenced the bar graph on slide 3 regarding larger pink and chum salmon returns. He noted OPR Alaska received letters in 2013 from many Native village councils that reported never seeing as many spawning pink salmon in their streams. The repeated high numbers shown on the bar graph indicate pink salmon spawning success; however, the fish require feeding.

He noted the vessel used for the restoration in 2012 returned to the Gulf of Alaska the following winter for black cod fishing. The captain of the boat reported catching a far superior catch with a higher weight and fat concentration. He added a vast school of albacore tuna came into the Gulf of Alaska bloom that OPR Alaska caught and tested. After a few weeks, the tuna added

one percent of their total body weight per day that resulted in the tuna turning from "utility grade" to "sashimi grade."

MR. GEORGE said OPR Alaska knows that the fattened tuna does not stay fat. The bloom lasted about six months and then it was gone, and the food was gone. He explained like any pasture on land, a good livestock herd requires taking care of the pasture.

4:23:19 PM
CHAIR REVAK remarked that it almost sounds too good to be true. asked what OPR Alaska is specifically looking for from the committee.

MR. GEORGE answered OPR Alaska hopes to enter into some form of public-private partnership with the State of Alaska because OPR Alaska needs oversight. The core of the Paris Agreement is for transparent projects with informed stakeholders. OPR Alaska is achieving the principal milestones of the Paris Agreement by meeting with the Senate Resources Committee; this begins their transparency, and they are ready to tell committee members everything it can. OPR Alaska keeps a few business things private in public forums, but they are happy to reveal much more in private.

MR. GEORGE said OPR Alaska is hoping the State of Alaska will simply say ocean restoration is a good idea that worked once, has worked many times with volcanoes, and considered for trial; OPR Alaska really does not need more than that. OPR Alaska simply needs the State of Alaska as its friend and ally on the ocean restoration project.

He noted there were three spectacular, historic events where Aleutian volcanoes erupted and the dust landed in the Gulf of Alaska in the summer months that, based on fish records, resulted in the largest runs in history of fish coming back. However, volcanic eruptions are few and far between. There was the Kasatochi Volcano in 2008, one in the 1950s, and another one in the 1910s. No one can rely on volcanic eruptions because they do not dust the ocean often enough or at the right time to get the effects.

He said OPR Alaska is smarter than a volcano because they put a small amount of the right material, in the right place, at the right time to support the young fish. A lot of smolt head out to sea and OPR Alaska provides food for them. He referenced a documentary on Atlantic salmon where the Atlantic Salmon Federation stated that a lot of smolt go out to sea but do not

come back because they mostly starve to death. If OPR Alaska targets the pastures that feed the baby fish when they are most dependent and get them a good start in life, they will thrive and come back in vast numbers.

4:27:01 PM
SENATOR MICCICHE noted Alaska's hatcheries grow a fraction of the pink salmon that are grown in hatcheries in Russia and Japan. He asked if Russia and Japan are considering employing pasture restoration technology to increase their yields because they are obviously facing the same challenges.

MR. GEORGE answered yes, they are considering the very same technology. OPR Alaska has been in touch with leaders from countries all over the world, especially island nations that are desperate to see fish come back. OPR Alaska knows that the Russians involved with salmon are confident that ocean restoration will work, but they have not yet made the decision to do it. However, OPR Alaska does not think it is far off.

CHAIR REVAK asked if OPR Alaska has plans to go out the summer of 2021 or anytime soon.

MR. GEORGE replied if OPR Alaska can get the State of Alaska's blessing to do the ocean restoration, they might make this summer, but preparation and gearing up takes time. The end of July is sort of the drop-dead date. Kasatochi Volcano erupted in August 2008, but OPR Alaska would like to get the dust in the water much earlier than that. If OPR Alaska did, then Alaska could expect a couple of hundred million extra fish next year.

4:29:40 PM
SENATOR VON IMHOF referenced President Biden's executive order and asked if there is federal financial support for fisheries restoration, especially due to its effect on climate change, and if mainstream media will start reporting on it.

MR. GEORGE replied he thinks the federal government is committed to spending vast sums of money on projects that are like ocean restoration. However, OPR Alaska is a private venture capital, for profit firm that is not looking for state or federal funds. OPR Alaska has lots of investors who think ocean restoration is a fabulous idea if they can make the milestones of engaging the proper government agencies. However, there is no legislation, permit structure, or process review in any state or federal government agency that OPR Alaska can apply for. Ocean

restoration is simply beneficial research with a commercial side effect.

MR. GEORGE said the best outcome for OPR Alaska is if the Senate Resources Committee was to write President Biden in support of the ocean pasture restoration idea because it meets his executive order decree by bringing the fish back and helping meet climate change commitments in one project. He added he thinks there would be talk about OPR Alaska when the federal government shows interest and probably chips in a lot of their resources.

MR. GEORGE noted the Canadian Space Agency loved the Haida Project and offered access to the international ocean observing satellite fleet for instrument access in the Haida Eddy. The National Oceanic and Atmospheric Administration (NOAA) loved the Haida Project and offered ARGOS satellite buoys for ocean measurement transmission at no charge. The National Research Council Canada loved the Haida Project and said if OPR Alaska hired young scientists they would pay 50 percent of their salaries and benefits. He said those were existing programs that OPR Alaska did not need but allowed for engaging those groups.

MR. GEORGE noted Export Development Canada (EDC) signed an agreement with OPR Alaska regarding product guarantee for the export of their Blue Carbon. He explained if OPR Alaska produced Blue Carbon and sold it to a foreign country—like the United States—EDC wrote OPR Alaska a product guarantee worth 85 percent of the face value of the Blue Carbon. OPR Alaska expects to have a lot of government and research agencies in the United States to offer their help.

He said that is sort of OPR Alaska's business plan to not go "hat and hand" to government and research agencies with a desperate need for money; however, OPR Alaska will certainly have an open hand after informing them what they are doing and would then welcome their participation.

4:36:19 PM
SENATOR VON IMHOF noted he said at this point there is no permitting requirement either from the State or federal government to do the ocean restoration work—not even the U.S. Department of Environmental Protection Agency. Essentially, OPR Alaska could deposit mineral-rich iron dust in the ocean with no permit or permission from the State or federal government.

SENATOR VON IMHOF asked what would stop her from going out in her boat and dumping whatever she wanted in the ocean, and what is it that he needs from the committee because there is nothing to stop him.

MR. GEORGE answered OPR Alaska is not saying nothing is going to stop them because they know somebody is going to write legislation around the ocean restoration work. What OPR Alaska wants to do is carry on a carefully planned and executed three-year pilot project at commercial scale to gather intensive data that proves ocean restoration work is safe and sustainable; OPR Alaska thinks that will result in legislation that will define the ocean restoration work.

He explained OPR Alaska cannot dump anything, they are putting rock dust into the ocean in tiny amounts—100 tons across 10,000 square miles, a vast area of ocean dilution. OPR Alaska knows mineral concentration levels are at least 10,000 times higher near shore and their intent is to place mineral dust into deep water far offshore, beyond the continental shelf because that is where the ocean is starving for minerals.

4:39:12 PM
SENATOR KIEHL addressed the scale of ocean restoration as a meaningful carbon solution to submit to the White House—OPR Alaska's 100 ton experiment versus Kasatochi Volcano blowing up and releasing millions of tons. He noted OPR Alaska's estimated algae growth attracted one-sixty-five-hundredth of the carbon that the burning of fossil fuels puts into the air each year.

MR. GEORGE replied he spoke with the chief scientist for the largest experiment ever done in the academic world via the Polar Star, and experiment that four times the amount of iron into the Southern Ocean than OPR Alaska. The chief scientist explained the ratio between the iron put in versus carbon out of the atmosphere is one to one million; one ton of iron captures one million tons of carbon dioxide. The academic debate continues because no one has ever done the ocean restoration process at the kind of scale OPR Alaska is proposing. A little bit of iron goes a long way for phytoplankton and zooplankton growth which is a dynamic biological recycling system.

He explained OPR Alaska's purpose is to actually do the measurements that nobody has done. OPR Alaska wants to do the measurements three-years running to get the data and let the data speak about what the realities are for ocean restoration.

4:43:08 PM
SENATOR KIEHL said he will be eager to see what the data from OPR Alaska looks like when they produce it.

CHAIR REVAK stated the committee appreciates OPR Alaska's presentation. He thanked him for his interest in making the oceans a better place and increasing fish populations. The committee will review the information and talk to OPR Alaska in the future.

MR. GEORGE said ocean pasture restoration is a real story of hope.

SB 29-COOK INLET: NEW ADMIN AREA; PERMIT BUYBACK

4:44:38 PM
CHAIR REVAK announced the consideration of SENATE BILL NO. 29 "An Act relating to the powers of the Alaska Commercial Fisheries Entry Commission; relating to administrative areas for regulation of certain commercial set net entry permits; establishing a buy-back program for certain set net entry permits; providing for the termination of state set net tract leases under the buy-back program; closing certain water to commercial fishing; and providing for an effective date."

He noted the committee first heard SB 29 on March 3, 2021 and completed public testimony. He said the committee would like to hear again from the sponsor and gauge the will of the committee for the legislation.

CHAIR REVAK pointed out during public testimony the committee heard from 25 testifiers who supported the bill. Most if not all testifiers were setnetters or family members of setnetters.

He said the committee has received three additional letters of support that were distributed to committee members. He added the committee has not received any communication in opposition to SB 29, which certainly was not the case during the previous session and is likely an indication of the unfortunate times and complications that Alaska's fishing industry has faced.

4:45:41 PM
SENATOR MICCICHE, speaking as sponsor of SB 29, said the bill goes on to the Senate Finance Committee and he looks forward to that discussion.

SENATOR MICCICHE summarized that SB 29 has no state dollars associated with it. The legislation gives setnetters the opportunity to either retrain or reinvest in another fishery. He said the east side of the Cook Inlet fishery has struggled with this issue for 40 years and he believes SB 29 is the best path forward.

CHAIR REVAK found no questions or comments and solicited a motion.

4:46:43 PM
SENATOR MICCICHE moved to report SB 29, work order 32-LS0279\A, from committee with individual recommendations and attached fiscal note(s).

CHAIR REVAK announced that without objection, SB 29 was reported from the Senate Resources Standing Committee.

4:47:10 PM
At ease

4:48:49 PM
CHAIR REVAK called the committee back to order and announced the agenda for upcoming committee meetings.

4:49:11 PM
There being no further business to come before the committee, Chair Revak adjourned the Senate Resources Standing Committee meeting at 4:49 p.m.