[I1: No, this is this is. And this is like I said, you're the first person that we're meeting with in the region too. So just getting local perspective knowledge from you of like the Co management dynamics like you were starting to describe and some of the the Treaties and the historic management processes and. The current. Status would be really helpful for us as we're, you know, starting this case study.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: Well, I. I can definitely cover that for you. To Make a long, Long story short in 1969 The Bureau of Indian Affairs redid their list of federally recognized tribes. through a clerical error Samish Was dropped off that list. We clearly have signatories in the Treaty of point Elliott. it took until 1992 of fighting in the courts to regain that federal recognition. Was literally as though they said no, you know no longer exist, Samish. Right. And so. Tribal sheriff at the time actually filed Bay for to have Samish declared as an endangered Species to make a point and it was brilliant. And so anyway, regain that federal recognition. 1992. Well, the Boldt decision happened in the late 1970s right. So, Samish said. We'd like our old treaty rights back because the court decision was you should have been recognized this whole time. At which point most of the other tribes said, oh, wait a minute, we're not done with that because we have to give up part of ours for you to have yours, and we're all fighting over a shrinking piece of salmon pie, right? And so that went all the way through the courts and eventually unfortunately was not found in Samish’s favors. So Samish will never have the treaty rights associated with fishing and Shellfishing that a lot of the other most of the other tribes have, there are a few others that don't. But. What I always tell people is. That doesn't mean that salmon and shellfish aren't critically important to the Samish culture, just like any other salmon. And if there's a silver lining? I would never you know I. Never say there's a silver, silver lining to a Samish. But from our perspective, we get to play in that world of let's make sure it's here for seven generations and beyond. And I don't have to then flip over and say, but how much can we take? So there's not that push pull that I experienced that the one other class I worked for in my career. It was a tricky tribe. And so, you know, we're tasked by the Council to, you know, Samish DNRs Mission statement is to protect, enhance and restore all cultural relevant species and their habitats for current future generations. You know this huge Atlas style lift, but. It means that we get to focus on a broad array of. It's not all about salmon, but it certainly is also about salmon and so. And you know by way. Sharing some. Samish View, a member of the J. Pod, Orca family that has family members. So it's kind of hard to wrap your mind around, but it's like, you know, we're not going out there to try and save charismatic megafauna or a top predator, right? Is what are we doing to save? Grandparent a child. A mother. And that's and. Kind of. Know you start to open yourself. I I know people today who trace their ancestry back to members of Jpod that are alive today. You know, so. It's just a sort of a different way of relating to the environment or a different way of knowing that we're used to where When you see your birth certificate, make passes or. So yeah, so that's you know, so. Samish critically concerned about. The state of Salmon, not just because of their cultural identity, but because of how it's impacting family members.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: OK. Is it so I I actually I studied and worked in Friday harbor for back in 2015 and 2016. I think it was the the J pod at that time. Had they had a new calf? And then I think it died. That. They're and so they're very few left, right, it's.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: Yeah, well, there's been some new babies that are still around, which is good. There's a certain lineage. Samish names all the ones that come down, and so we did have a successful naming last year, which is awesome, and that that one's still around. Sejin is the calf or the young one's name. But I've been to way more whale memorials than I have namings, and they're a heck of a lot More fun for sure.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: So. So OK, so aside from you were saying, you know, salmon is not the only focus, obviously orcas as well. What, like specific shellfish are, you know, really critically important? And then other species?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: Yeah. So most of the clam species, you know, cockles. You know, wherever they are heavily utilized by first groups. I always have to catch myself doing past tense and. It's like, no, there's people are still here. The culture still thrives, and so they're still. Critically Important and. A Gentleman in my early career. Late Larry Campbell from Swinomish. He was at a meeting and told the story. That's always stuck with me, where he was at an event. It was a burning for the ancestors. You're celebrating those that have passed on through and, remembering them. And there was a woman eating shellfish and chasing it with an inhaler. It Was so important for her to be part of That cultural Experience that she was willing to risk it even though It could have harmed her health So that's the kind of, you know, perspectives people need to understand when they're working in indigenous country and why it's so important why people are so passionate about these resources. And you know why? It's like, what do you mean every shellfish that is closed for, you know, bacteria. That you know you don't know that. There's really common phrase here that I'm sure you'll hear from other tribal folks when. When the tide is out at the table is set. Really indicative of how it should be here where you can just go down the sea it provides everything you need to to sustain you and your family. You know comfortably. So shellfish, certainly. We've also just recently gotten involved in abalone restoration. So these were these are smaller versions than what you're probably used to from the big California abalone they were critical for food. The shells were used heavily in artwork and stuff. They were basically harvested to near extinction so. This is a partnership with Fish and Wildlife State and. And the PSRF as well is doing this. So there's outplanting sites that are actually now reproducing on Their own. I can't tell you where they are because we'd have to lock you up in a cell, you know, for the rest of your lives because it's top secret. But we have 3 sites that we've adopted and we're actually super proud because they're known by colors. But the three that we have are actually known by the straight Salish name of those colors with the English color in parentheses after it. Which is kind of cool. This is what It's all about. I can't believe that. And so just this past fall, our scientific dive team outplanted more than 800 youngsters out there. And Will. Continued to monitor those three sites and that coordinates well with our kelp research and stuff like that so. So yeah, shelfish. But beyond that, it's it's. Anything that's first food the first medicine, cultural use. For instance, we've got a big Oregon spotted frog restoration site and Oregon spotted frogs are just little guys that are a little bigger than our Pacific Chorus frogs, you know. But they're endangered because of the type Of habitat they Need, which was then, you know, turned into farmland. For the most part, they need those big connected wetlands that have sort of short natural brush and growth. So they where they’re hanging on. Is actually places where cattle are grazing because it keeps the stuff down low for them and it has to be a certain amount of connectivity to a river or something like that. And it's not, you know, frogs do have a cultural place in Salish culture and Samish culture. Not Necessarily, specifically Oregon, But that whole wetland complex that supports Oregon spotted. Also hosts a ton of traditional weaving materials, first medicines, other first foods. And so. We tend to do our work, we tend to look A little more holistically. About what does this provide. And then another example is, you know stream restoration here. The Pacific NW. There's sort of a standard recipe of trees that you plant. The conservation reserve program. But they literally say it has to be this percentage of conifers, this percentage of this. When converting a field back to riparian zone. Well, we started saying, hey, you know what else would normally be here that are culturally used? We started advocating for including. Other species in there that were important to tribes. And as a result, with our restoration of partners that created demand, And so now there's a native plant nursery up in Bellingham that's propagating a lot of these species because people are adding them. So that and the whole idea being that you know a great grandmother can teach her Great granddaughter how to weave. You know, how do we use the traditional material? And it also we're thinking, you know, for climate change and stuff, the more places that we can get these Materials propagating the more refuges to be accessed in the future. Even that, you know, we have an agreement with State DNR for access behind their gates. And it's not about hunting, per se although that is an activity, but it's also about where we can go to strip cedar to weave. is this. In the higher elevations, going to be where these critical plants are going to end up hanging on. So that they may be accessible even if it's just for an educational purpose, there's so little of it left because the Samish is very conscious about how to harvest things. Sustainable through. And so you know, even if it's just like. Here's this plant This is what it was used for there’s Not enough anymore, but left. I need to continue doing that. Is that traditionally? That's more of a concern. I'd rather have there be plenty.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: So. What are the dynamics between state DNR and it sounds like it's different for Samish because of the Treaty rights, but then for Samish, also for the tribes that have treaty rights.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: Yeah, I mean, either defer to the other tribes, to their specific relationships, but I can say. Samish DNR, and so I should explain. so my title is infrastructure and resources Executive director. So I oversee the planning department and the Natural resources department, I came up through natural resources. I started 16 1/2 years ago as a field tech. Became field supervisor, became director. So that's, that's where most of my knowledge, and probably what's most relevant here, although we're finding really interesting Nexuses now to incorporate, you know like solar and all of our development you know, so we're looking at climate impact. So it's kind of neat in my position where I can now tell my senior directors of planning and DNR to play nice in the same sandbox. So where we used to be much more siloed. But at any rate. Oh, good relationships. Are, and this is from our founding director, who was with us for 20 years, that I came and worked for when I started. The attitude has always been for Samish to show up at a table. Hopefully with some resources and an attitude of how can we help. I don’t Know that that's the case in all tribes. Think there's maybe more confrontation. We have worked really hard to develop relationships with like state DNR, ecology, Fish and Wildlife because we know that our limited resources can't do it by ourselves. But if we can partner and be a force multiplier, we can get more done together than we can apart. And that started with state DNR. We've Cypress Island was a really cultural, significant place. Our current Tribal chair’s family. Came from there. And so they were doing a big restoration project in Secret Harbor and we kind of got. involved doing a bunch of monitoring for them. That was kind of the start then got to the point. that was when we were a department. Of three in natural resources. Got to the point where the council stopped it to buy us our first boat because they wanted us to have more of a presence throughout the territory. So I walked into DNR Aquatics office in Cedar Wood and met with their guys here and said. Got a boat? We got a crew. We got funding. Can we do anything? And that started our marine debris removal program, which crews are out today. This is our 8th year, we've moved more than 1,000,000 lbs of creosote and other marine debris from beaches throughout the Sound. Partnership with DNR, Washington Conservation Corps, and us. As a result of that, our boat operators are so skilled we can Put anyone on any Beach in any anywhere on the islands you know without landing craft and so that got us involved in spill responsive preparedness. And just two summers ago, there was a large fishing vessel that sank off San Juan and was in like 600 feet of water. Really technical diving. Really nasty, nasty stuff. But we put all the shoreline assessment teams on beaches all around there to look for oiled beaches and stuff because we have literally been out there like a month before pulling creosote. Nobody knows these beaches better than us. And well, proud, proud Dad moment. I got a call. The federal coordinator for the Coast Guard. The Shoreline assessment teams are usually a federal, so it's usually a coastie. For the state. Usually the ecology department. Local from there versus thoughts and then someone. Usually. Well, apparently the coasties made comments about how qualified our crew was and how professional and how good they were. And so the coasties are saying. So that you know, we kind of leapfrog and you know as we gained skills to find new relationships. We're heavily involved in oil spill preparedness. We train with the refineries on their worst case scenario drills every year. We all know each other. sometimes we showed up out there. It was in people who knew us and. So it's all about building those partnerships us and. We don't have A reservation. We do have land in federal trust, but we don't have, you know, because of that whole loss of recognition, Samish spread out. And so, you know, 85 plus percent of the population is what we call the 10-county service area, which is the 10 counties in Western Washington. But there are citizens, you know, over in BC and in Victoria, they're all over the country, active service members in Guam. And so we don't have sort of that central location like a like a Yakima or a really large tribe, where all of your were going on that landscape, right. You have to work out in the general world if we wanted accomplish our goals, which means not only Partnerships, but partnerships with private citizens. You know, there may be people who say What do the Indians want on my land, and it’s like, I know it's hard to understand this. But We're spending federal dollars that actually came from your taxes. So we get some of that back. Which is arguably. Rings well out here for a segment of the population. Yeah, we did a 5 year Japanese knotweed control project in the Samish River system. That was all on private lands and it was us knocking on doors trying to convince people folks like what are you doing, is this about Fish. And we said if you're probably right, we’re just coming to. Get rid of this plant and. Refer you to our partners if you want to replant It with something nice. But you know, it was getting a few customers and then word of mouth spreading. Some people are calling us. And that's what's happening. The agencies now to develop enough relationship. The Pinto abalone thing, they call us because they knew we were developing a scientific dive team. Which other than like Friday Harbor and Shannon Point, and the students come and go every couple Years, right? There's not really a stable other than PSRF down South. You know, there's not a group of scientific divers. So we're filling that gap with our team and so Fish and Wildlife called us and said, hey. We're trying to expand all over the place. Would You be interested in taking on some sites and working on our behalf? Absolutely. So for us it's really about generating and fostering and developing those good partnerships. Pretty proud of the reputation Samish has because all of That hard work. We’re known as a tribe that people can work with and that are valuable partners.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: I think it was you that Jamie was like, start with Todd.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: He's a good guy, I’ve known him For a long time. In a lot of different scenarios, yeah, he was heavily involved in the custom plywood cleanup site down here, which is in our territory and various committees and stuff been involved with him over the years. He’s good people.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah, he's been so helpful. I used to live in Juneau, AK and I went to visit last year, and I had a meeting with 24 hour layover in Seattle. So that was when I first connected with Jamie and we had a meeting and he was like, let's meet at a brewery. So I made this whole Plan. And then I spontaneously decided to bring home a nine-week-old puppy from Juneau and I emailed him and I was like, how do you feel about me having this dog with me? So it was like this kind of meeting, like at a brewery with my new puppy and it was just it was. It was so great.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: You know, speaking to you since this is about biodiversity, one of the things I'm also involved in this I'm on biodiversity action Network. BioActNet. Yeah, which is a cross-border group. Between BC and Washington, and it's under the UN Ocean Decade Declaration. Under those auspices. And so the Whole aspect is about looking, you know, Salish Sea wide, or actually NW Pacific wide, At biodiversity and so in Canada, they've been focused a lot on bioblitzes. Here, but the first node under BioActNet that's really active is the kelp node, right? This is bringing together researchers. I Know a couple of my DNR staff are on that node while I'm on the overarching. Committee, and it's all about trying to combine who's doing the research, bringing in indigenous perspectives and Canada is in a really understanding spot right now where. Court declaration of the tribes in BC had never ceded their lands to the crown. And all of a sudden, BC government's like, Oh my God, we have no jurisdiction in these tribal lands and our, you know, how do we now partner effectively so. My relationship with them started with, you know, hey we’re really trying to do that, how do we talk to tribes? And I’m like, knock on the door and say hi. So Canada is in a really interesting Place where they're actively trying to reach out now and there's suspicion. There's been a lot of news about the mass graves of the schools that are being found up there, and so there's a lot of it's a realization of like, oh wow, we need to take 10 steps back and start operating at The speed of trust, build this relationship it’s not As simple as you're on our committee grades.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah, I checked the box, right?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: It's a really interesting time right now and I think a positive one and. It's I think. The tribes up there are also kind of in a spot that they're asking us to join now, we’re Not having to kick down the door. To be There anymore. That's kind of a. new space as well, so. That's been a really rewarding group as well, and that's again, it's like thinking Salish Sea and you guys know what I mean when I say Salish Sea?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah, initially this case study was Salish Sea and then the first couple meetings we also. We've been talking with some folks at Western Washington University and they were sharing about some of the Transboundary management processes and you know, complex dynamics. So we scaled it down to Puget Sound pretty quickly.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: And when I'm in partnership roles, I have to talk to Puget sound because that political boundary Is a reality. but there's also this sort of like. Yeah, here's what some people in Canada are doing. And there's other places where BC and Washington Coordinate. oil spills is one of them. Everyone on either side of the border speaks the same language for that spill. In San Juan, Canada’s planes provided all the overflights and just had to get a quick permission to fly over. The border for that reason. So there's really, really close coordination because. More than 50% of the traffic that comes into Straits of Juan de Fuca heads north to Vancouver. There's it's not all roses. We are absolutely unhappy about the completion of the oil pipeline from the tar sands and what that represents. The oil traffic and potential here in the San Juan US side. So it's not all yay. Yeah, but, you know, I think it's the same kind of thing. BC is kind of like us in that we don't identify very well with the other Washington and I don't think they identify really well with their federal government. Tree hugging Birkenstock wearing lefty's out here. But yes, it's really an interesting time to be a part of that mix. Kind of been being part of something like that on. the Ground floor. It's been really exciting and. And good for Samish as well. Fostering partnerships.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah, OK, but something just. Remind me so one of the other things that we've been hearing time and time again is that biodiversity itself isn't managed at the federal level. in the US and it happens more to state and local level. Would you agree with that? What are your perspectives on like direct management and biodiversity here in Washington?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: I think that's partially true. I mean, NOAA tends to get myopic on, you know, species by species rather than looking at that whole connectivity, piece, I think. Tribes in general look at things much more holistically. Or indigenous communities in general look at things much more holistically. So I think the way governments are set up to manage species, it's a little hindering and it's kind of. A rigid process. It's yes or no. Yes or no. Yes, or. There's no maybe involved, right? And I think you know there's been, you know, all the examples of let's release this moth to kill this and oh wait a minute. What do we do with all moths? So yeah, so I think it's again a matter of perspective and a way of how you view the world, we tend to talk about, you know, put all our resources on saving the rockfish because it's a listed species. Well, it's like, OK, juvenile rock fish. Utilize kelp for, you know, their rearing habitat. So if you're not addressing the decline in kelp, you're hindering progress. On this right? Oh, by the way, you know kelp was used, you know, as a, you know, an important cultural resource for tribes. And it also was utilized for how you. Drape your cedar Nets because the kelp bed would funnel the fish on one side 'cause they kind of slam along the edge and your net would catch more for your family. So it's knowing these areas or knowing that you know you're on a canoe and the weather's coming up, you can get into a kelp bed and be stable. And catch food. Now you can harvest rainwater. You could survive there, probably indefinitely. In your canoe. There's more and more archaeology of evidence now that says people didn't wait till the glaciers receded. to hike down this way. You know, they followed the kelp highway in their canoe, yeah. And you're an indigenous person talking about that. And they're like, well, yeah, why the heck would we freeze our feet off? And you know, you know, we didn't always run after mammoths. There's so many times where I've heard tribal elders be like, Oh yeah. I read this paper. Thanks for catching up Western science. Really good example of from Alaska area. I never met the student or anybody, but it was somebody from UW who apparently was doing a PHD study on one particular genetic variant of salmon and. Found that you know, they only came from this river. Did all this work and went up there and presented it to the tribe out there and at the end they were very appreciative. Applauded them and an elder raised their hands and. You do understand. Our name for that particular fish is “the salmon that only come from this river.” Come talk to the people who know. And then after laughter is like, but it's always good to get on the same page. And prove that this guy is actually doing it right. So there's so many examples of that kind of stuff. Sort of innate knowledge passed down through the variations in Indian country and. You know, the scientist comes and proves it.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: What are the, like, regulatory rights or jurisdictions of the some of the other tribes I know obviously like aside from the reservations and the, you know, terrestrial component in terms of like coastal and marine dynamics?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: So in Washington it is a bit unique because of the Boldt decision. And so the 19 Treaty tribes that are under Boldt Share Co management responsibility of the resource with the state. Now I don't know all the intricacies because I haven't been playing in that world. But essentially my understanding is you know, they put out all the smolt traps and count all the outgoing smolt. Then they run that through some really complex population biology model, you know. The dash of eye of Newt and something to determine how many fish are coming back in three years. And then of those fish coming back, here's the part we want to make upstream to spawn again, right. The remainder is the harvestable fish. Right. Half of the harvestable amount goes to the treaty tribes. Half goes to non tribal commercial and recreational fishers. Then the 19 tribes get together and sort of in their usual and accustomed areas, which is a very legal term. Sort of argue over what's their share versus another tribes’. And so you get Swinomish at the mouth of the Skagit fighting with the Upper Skagit for Part of the river, you know. And apparently that can get quite contentious. Times as well. And so then throughout the season, Fish and Wildlife and the tribes do test fisheries. So they'll do net floats down the rivers and stuff, and count the number of fish, and that's their way of then you know, throwing that into the alchemy to say, where are we tracking on what we estimated was returning? And so, for instance, if more is returning than they thought they may extend the fisheries both for tribal and for non-tribal fisheries. That data goes in. Combined. But if it's coming back less, they may curtail the season to Try and make sure that that group gets upstream to spawn. That's sort of the layman's understanding. A treaty tribe. You know that if you're talking to a fisheries person at a treaty tribe. Don't go quoting my stuff. And so that's the Co management piece. I know there's forums by which you know Fish and Wildlife and the treaty drives get together and talk about processes, procedures and stuff like that. We’re Not participants because we don't have that responsibility. Right. OK. So beyond that, like where? Does Samish come into play? It's much more sort of on that government-to-government relationship and. Commenting and so the initial kelp recovery plan. Was an appendix to the Rockfish Recovery plan. So rockfish was declared an endangered species and needed a recovery plan. There was a realization that kelp was a critical part of that so kelp was part of this. We were at the meeting With the state agencies, with nonprofits, with northwest straits, we were. at the formulation of that that kelp document and I continue to sit on the board that guides the implementation of that, that a big. Big meeting just after COVID just got everything kind of released after COVID. My in laws both have it in Boston right now, but. They're fine. Yeah. So that you know that but that's. That document started out with identifying where are the data gaps, and then who's gonna fill them. And that was part of our drive to start a scientific dive team. So we can start to recheck surveys and stuff. So you know that's become an implementation document which is really cool because. We’ve made real progress So that's kind of where we end up. And so I'm actually just. I just got in getting approved by the Council, finally getting an environmental policy analyst position is gonna report to me. My DNR staff is too busy out collecting scientific data to attend Growth Management Act updates. Shoreline Management act updates and those things, we need to be at those tables so that tribal concerns are Voiced and incorporated in these plans as members of the community. It's a mix of again, there's a lot of. Clamoring to have tribes at the table from a DEI perspective. the state tribes are sort of the low hanging fruit. I'm always the first to say, but there are other communities that you need to work harder doing to meaningfully partner with. tribes, we're used to kicking down the door it You open it for us we're going to walk through. But we're also gonna try to help other people break down the door. So yes, there's a lot of demand and we just don't have the Capacity. So I'm getting someone who's gonna be devoted to going to those kind of meetings and then coming back and talking to council about what are our concerns. So for instance Opalco, which is the power company that serves the San Juans, wants to put in and they actually got big federal funding for a test case to put in a big tidal energy Generator. From a green power perspective, we're totally down. These things are the size of 747 jets floating on the waterway, with turbines that have blades as big as school buses whipping around and where they want to put it. We Know there’s a kelp bed there, it's right along shore because it's perfect for the currents and we can hook it into this convenient wire that's right here. What does it do for fish migration? What does it do for orca passage? So there's that again, that holistic piece. And so we put together a whole white paper. List of you know. Hey, we're down with green energy, but you fed the green energy thing before. Everybody looks at the Pac northwest and says, oh, you're all on hydropower, that's green. Talk to an indigenous person about their historic village where their grandparents grew up is now underwater. Talk to an indigenous Person about what the dams have done to salmon. Not, you know, it's, it's and. There's this push right now that you know of offshore wind, tidal energy. Again, it's the tribes and Samish in particular wants to be part of the climate change solution, but not at the expense of the other resources. And so it's, you know, nothing's ever Black and white. And so, you know, I need someone who can be tracking on that kind of stuff, gathering information. Here's the pros here’s the cons. Where does Samish stand on this so that when we're at tables, we can say this is Samish stance on this issue?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah, I went to a meeting in DC for the National Academy of Science last year, and it was for offshore wind impacts on recreational fishing, and someone, I think it was the Macaw tribe was someone was there from that, and they were, you know, describing the parallels Between offshore wind and dams, historically and. It was really.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: Especially Macaw, you know, whaling tribe. You know that struggles to maintain that traditional perspective and now these things out where the whales are that's going to potentially have an impact and their connection with that species and that activity you know it's not. And you know, we're always careful. Samish doesn't want to be. Raising the NIMBY fist, right. It's usually more nuanced. You know, I can. I can tell the other tribes if it's gonna block access to traditional treaty fishing areas, that's gonna be a problem. And we see it, I mean. Lummi successfully stopped the big expansion at the refineries up there, and I forget that it was either natural gas, but they successfully blocked it because it was going to impact their access to treaty fishing grounds. And the treaties are a lot of lands. So that's you know. A recent example of where tribes live and utilize that to say we're not having this. You know all this like for shipping and all the dangerous explosions on our territory and stuff so. OK. But you know it's a constant sort of effort to track on it. You know, there's so many issues. You know, now you know an Natural Resources Department is now up to 10, but that's still not enough to track on everything that's important to the tribe. Not even close. And so another really common phrase is you always tell people, look, you know, you're sending me emails asking for us To comment. not hearing back from me means I have nothing significant to say and it means I have a lack of capacity to respond to every e-mail. Not that I'm not interested. Right. But The way the systems work. But. You can either be something like for forest practice applications for logging. You can either be in or out of the notifications, which means I get every notification for a logging operation in Skamania County and I don't even know where Skamania County is in this state. I think its someplace south of I-83. But I have to skim through it enough to know it's not in our area. I'm going to defer to that local tribe and then pick out the things that are important to us, and so I can't reply to all of those things. Saying Samish has no comment. Our Tribal Historic preservation officer gets every development thing from a cultural resource concern and has to cheat through all that. It's dizzying. The amount of stuff that comes in. I would not be at all surprised if by the time we're done with this meeting, I've got 60 new emails. It's hundreds a day. Most of its instant delete, but I still gotta read enough of it. Yeah, it's, it's dizzying. And I just recently had a meeting with someone at the governor's office. All the funding that's come through was called the Heal Act, which is state funding. And it's going to a lot of really good projects and also the Climate Commitment Act. Funding as well, You know it's state generated funding that's going out beyond the Heal act side to increase diversity and inclusion. And the CCA decided to do work that helps possibly impact climate Change in this area, right? And there was a writer in there which I think had the best of intentions that said, you have to notify the local tribe of any project so that they can, and I think the intent was that they can offer, you know, input and assistance. What it means is in the San Juan Islands, there are 14 tribes that have either usual and accustomed fishing rights or cultural ties to that area. That someone who's replanting 500 feet of stream now has to notify in writing. I have to receive all those or my Natural Resource director. Has to receive all those we decide if it's something we need to weigh in on or not. And so I'm like the unintended consequence here is you just put a huge administrative burden on the tribes. So they're looking at ways to try and streamline it. And. Unfortunately, it's also with all these new folks. You know, just little groups like little salmon enhancement groups Are somehow interpreting that we must get a response from all those tribes. And so now it's weekly e-mail saying, hey, did you get this? Did you get this and us having to explain? If you don't hear from us, right? And so it's this a whole level of, is This is my 3rd email from the one thing or this is a different project? what is this? And this unintended consequence was Mainly done because no tribes were at the table when they. Came up with this great idea. So I think there's a lot of positive. I mean, I think you know, it's the state saying, hey, we need to Have more partners. Drive right? It's just how do you go about it? Right way, you know.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Right. OK. OK. So you've already touched on this a bit, but. So what would you say are the like top or key concerns for the Samish? I know you've been talking to offer wind about some of the oil spills and those dynamics like what are some other key stressors and concerns?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: It's a tough one because you can make arguments for anything that's impacting you know, Samish culture just. Our right. You know, salmon certainly rises very high to the top, especially with the leakage not just to Samish culture and other coastal culture, but also to the plight of of the resident northern pods. Land use development without the foresight of sea level rise. Getting involved in a project now, so the state got state of the big funding. One of those big landscape millograms I forget the title of it. We got a small piece of it with a group called Friends with San Juan's where we're actually going to be doing analysis of undeveloped shorelines and trying to determine what are the places where that beach. And migrate with sea level rise because it's not backed by development that has reserved those key areas so that shellfish can hang on rather than having them be developed. And then there's huge pressure to put more and more sea walls. Up into that zone. Investment, right? Social. Management and you know, I would say it's just recent. Like this round of shoreline development, updates and stuff, where they're finally considering climate change and sea roll rise around. The last updates which were, you know, they're supposed to happen one every five years, but it takes forever. I remember sitting here and going. What about sea level rise? Like Oh yeah, that's. Difficult. We don't. They're probably so we're not doing that this time. It's like. So we're gonna be reactionary, right? We always are. So we're trying to trying to shift that narrative that paradigm a little bit with some projects that we'll say, you know, look, these are the areas because it's so much easier to. To protect than it is to restore. So that you know, just develop in. We know we're going to be under continued population stress up here this. Northwest is definitely already been sort of named as a climate refugia, so more and more Californians, more and more Westerners, you know, as those areas become more difficult to sustain. This. A place where you know. Although I must say the last week of 80° temperatures way above my 68 to 72 comfort range. So.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I2: I'm here from mobile AL. This is the. This is amazing weather for me.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah. No. Yeah, we're doing really well.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: My colleagues, my natural resources manager, was just down there to the old world or for the transplant games. the US transplant games. He's yeah. He's it's basically the Olympia Olympics for recipients and donors. And he's a heart transplant recipient. And there was one the year that Michael Phelps won all of his medals. Won three more than Michael. So we had a guy who was really good at Photoshop and took that Sports Illustrated cover and put Matt space. If three more could win more medals on. So that he was just he was just down there for the US version. He's competed in like Buenos Aires. Spain and UK, Australia. Yeah. Map of missile, castle. But yeah, he. It was really warm and really humid. Is that where you’re from originally or? No, I'm from upstate New York. Originally. Yeah. And then went to Boston for college. And then Steven got a new job at South Alabama.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[OK. So you followed. To go to the Gulf Coast. Interesting time down. I mean the recovery stuff. Oh yeah. I I've done a lot of work with restore America's estuaries, mainly on the conference and also with their funding that they have to distribute on a couple board. And I presented a lot there and mostly about starting out, you know, engaging with drives and now moving into this whole partnership idea and. There are some really interesting projects, especially outside New Orleans, with some of the indigenous communities there, where they're kind of restoring the bayous to get rid of the canals that the oil industry just cut in. But they're doing it with an eye towards protecting and enhancing. Culturally significant sites, in addition to just environmental sites. So that's a really, really cool group of partners down there, and that's mostly from, you know, Gulf Coast side type funding response. Disaster there.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Well, I know that we're almost out of. So you mentioned you said something really important earlier about that. There are other communities aside from the tribes that it's, you know, really important and meaningful to engage with what like, what are some of those other communities that we should be thinking about?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: I think you know any. Overburdened population and folks, you know, underserved over. You know, it's unfortunately folks. Lower an economic status which you know. Also, historically you know equates to non white communities are living in areas that are seeing the most impact from environmental and then you know. Be spewing smoke factories, whether it be you know, in places that you know. Down from the city streets or whatever happened all the time, whether it be communities that are going to be highly impacted by sea level rise and erosion etcetera. These are places that you have to. You have to start by engaging and communicating with in order to partner with. These are folks that. Are far more concerned with how they're going to feed my kids today. That something as big as the environment and so it's how do you how do you find the Champions in that world and then meet those? Where they're at. To make sure that they're included in the solution. 'Cause again it the mode is you know, here it comes, the scientists tell. Us what we have to do right? And you know. Anybody who's lived there forever knows that that ain't gonna work there. And I've seen it too. Early in my career. I worked for the Upper Skagit tribe up in Cedar Woolley. And we were. We were fixing a perch culvert and putting a bridge. And there was also a way that the water was diverted out of that stream to their chum hatchery to feed that. They were the eggs and the small before they were released, and it was sort of this. They called it an infiltration gallery. It's like this burrito wrapped in filters fabric that the water would drop into and then pipe down. They put all these rocks in to weight the fabric. And they called them habitat. So when the sand would come up, they'd have riffles and pools, and I looked at I said, you know, we get big storms this, this stream runs turbid. And then this looks like a giant sediment trap to me. And the scientists like. No, no, we've done all the. It's fine and I was new in my career and I'm like, OK. Firstarmo was in there in full waders with a shovel, trying to clear the sediment from these rocks we removed half. To make the water flow, it almost dammed up the entire bridge and we almost lost the whole first one. So yeah, it's like it's, you know, it's sometimes it's like, hey, a little bit of local knowledge goes a really long way. So. Yeah, it's the same thing with our, you know, putting the \*\*\*\* teams on board. You know the one of the things that coaches said was like, Oh my God, you got a crew member up there. And hey, Matt, remember, there's that giant. Right over here from last time. Yeah, go little laughing about. They know what's under the water. So. So it's, you know, that local knowledge is really important. Know it's. How do you? How do you meet those folks with their head? You know that's. New meetings. That's echoes for Indian country, too. Can't you know there's cherries out there if you're hungry. I want to make sure. You know I'm. I don't think I'm gonna let me just check my calendar. I don't think I'm on a huge crunch until noon. So we've got some extra time. But I wanna make sure that I haven't rambled. And if you have specific questions. That I can expand on or try and help with.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: I actually I think that that that was amazing and I think that really covered you answered a lot of my questions when you were answering other questions. I think unless you can think of anything else that I'm forgetting, Sarah.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I2: No. OK. I mean, do you want me To talk through this? If you've got a couple minutes, OK. So while you've been talking, I created what is essentially. Spaghetti model. Of what you said for the last hour.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: Oh, my God, that's terrifying.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I2: I've had to zoom out a lot. But this is a mental model of everything you've said and it's. Of your. Physical representation of the system and so all these concepts connect to each other and either increase or like positively impact, which is the blue or decrease or negatively impact others which is the horn. So. Talk through this if you want to look at. I just want to make sure that this all makes sense to you. Have you seen anything like this before?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: That's interesting. Not. With sort of the linkage to positive and negative. So it at first glance it's like, OK, we've got a lot of our stuff interconnected in a way that supports each other and that's pretty cool. Yeah. And the stuff that we can't control, like climate change and sea level rise, we can only adapt to.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I2: Right. And then there's also. So this is a semi quantitative method that we use. One of the limitations is that you can't incorporate time. So when you were starting to talk about green energy and how, yeah, that's a good, definitely a good thing. Helps mitigate climate change, but we don't know what the impacts on salmon or resident orcas are. So this just has to become an unknown. So like, we don't know what happens in that system.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: Yeah, that's. You know, that's our meetings with Opalco now is like you know, we've seen all kinds of studies that say this is the perfect spot because of the currents and stuff. You done a biological impact assessment yet? No. Don't put a thing in the water that's. Just don't know. Yeah, trying to determine what it is we don't know. And kind of the piece and there's just such a push from the federal side to get these things rolling and I get that. I get that. There's a real fear that that money will somehow get clawed back if we don't do something with it. Yeah. Yeah. And I don't know. For me it's like. We have so much impermeable surface that you could build solar on, but the storage pieces is tough, you know. At least with time the power you have fluxes at night that can supply the grid. When solar does and. There's so much interesting stuff going on with battery storage now, whether it be I read a story about a company in California who's putting up solar panels above parking lots, so you get to park underneath it. You need your car doesn't get so hot, right? And then to address the battery thing, what they're doing is apparently. Priuses and stuff trade in there. They replace their battery when it's lost about 1/3. Of their power because they don't like how the Rangers decree, but they're still 2/3 of the life left in that battery. So this company is buying those up instead of trying to recycle them for the small amount of minerals you'd be able to or toss them and they're putting them in containers all linked to provide the storage for the rest. It's sort of that. Use it to its maximum before you decide to do something else. It so. Like. That's pretty interesting. That's going on. I mean for me. Often get asked. You know, how is it you, you know, you're working on climate change. Adaptive adaptations of how is it that you don't just get so frustrated and scared and you know, just want to put a bullet in your head or something? And it's like because there's people that are having these amazing ideas, you know, it took some College kid from Denmark to figure out how to deal with the Pacific garbage patch. And it's gonna be gone in like 5 years. Know even my son and his partner for his undergrad, they did this poster presentation. With all these carbon chains and all these grass. Beautiful. It's a whole lot of work, but now you get me in an elevator and I didn't understand anything. And just said. Yeah. What did you guys determine? What did you guys figure out? And after I got the eye rolled down, how could you not have understood my perfectly crappy presentation? You thought for me? Doesn't you think we may have figured out how to have jet fuel burn 80% cleaner? I'm like that. I understand. Yeah, all the patents you got, his name really small. A document so. But you know. It's young people like yourselves. That are gonna be the ones that get us out of the mess that me and my parents have left. But. I've never seen young people so engaged on an issue as they are today, so. Yeah. That's really interesting and it's, I'll tell you right now, it represents a very small. There's so many other projects that Samish DNR. Involved in but it all links to that preservation of cultural well, culture. Period. You know, whether it's a cultural use plant, a food, traditional food, traditional medicine. And so for the people that I work for, it's that's, that's the overarching thing, right and. I've heard the tribal cherub it Lumi, and also. The gentleman from swim Larry Campbell that I mentioned before, you know, it's like you know, you understand mean salmon is are we're the salmon people. The folks say the people are the salmon people, the salmon gone our people are gone. And you know. As a western person. First thought was what do you mean you'll still be? Kids will still be here. Won't be. There's like no way there's a different layer of meaning there. How you identify as a person, as a culture, as who's your family is your extended. Your legal. And if that's tied to a speed, you know, how can you have a first down ceremony if there's no Santa Claus? Yeah. You'll hear a lot of folks say that the ancestors don't. Modern foods. So if you're doing something, don't want to the ancestors, you have to have those traditional foods to do it right. Right. So. So how do you do that if those, you know? And that whole idea of we are the recipients of what, 7 generations before, what the decision they made were responsible for what 7 generations from now we're gonna get even. Hard on a scale, but that's five grades in front of my grandkids. That's a long you know when you're faced with today's corporate age of what are our shareholders going to make this year, right. Or the six months? So it's it's really interesting when you start to work with or partner with indigenous communities that. Kind of. If you're open to it kind of blow that. Sort of be allowed. We just opened our first housing project. Think I mentioned that earlier. I. Our first housing project, it's 14 cottages that are for Samish elders or people with disabilities. I landed funding to put solar on everyone of them. Was fighting five years ago to have someone incorporated in the design, but the current that planner and I wasn't sitting above him at that time. \*\*\*\*\*\*\*. So anyway, we're going to retrofit them all. But you know, here I am in my sort of Western base thinking, oh, we're providing social services for elders. You know, we're helping. People on fixed. Yeah. At the ribbon cutting, my tribal chair gets up and says this is the first village on this island for sandwich. Are more than 150 years. So I'm thinking you know. Today, how we all just people in the game. This is this is our people coming home that haven't had a community here since villages were destroyed. 150 years. Reeducated over some fellows will call in and. A good one. We did a when I was in our schedule, we did an overlook. The summer youth. Somebody's program we built. Overlook over a wetland and I've been there talking about how you know port. It is to preserve what? Is it? Sorry for shaking up your valuable. So. Well, this is. I'd be. So what's the end product of All of this? To be some giant paper that you guys have to write or?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yes. And then also. I think like one of the core goals is to provide some sort of decisions. Or they call it a tool, but I don't know what. What that really will mean in the case of this project. I have something in terms of like the managers that we're working with, if there's. That we can use this data and this Community knowledge that we're gathering for more of an applied sense of actually helping inform decision making to some extent I would say and.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: So through this Smithsonian to other federal agencies, or?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Well, so I think so. So the our the PI in this project. Emmett Duffy, who's my supervisor So he was on the white. Just they just put out a national biodiversity strategy how to manage biodiversity itself and so. Right now, Lenfest is working with folks at the White House and the federal level to incorporate local community knowledge from this project and think about how to implement the national biodiversity strategy. And I think like we were talking earlier about federal versus state management like and you were talking about some of the conflict of like how the federal government handles things like that. One thing that we're trying to explore maybe next is like is a national biodiversity strategy, like how do local community members feel about that? And is that actually going to?](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: OK, cool. And I think you know it's I think the caveat right is you know, OK. Yes, maybe the federal agencies have to go species by species yet. But if you think about what's happened since Rockfish were listed and now there's just a huge focus on kelp forests and the biodiversity, so it does ripple out from that initial oomph and. None of you know. Put better mix but. Most of our reliable funding that is of an amount where we can plan for the future is all coming. National Historic program. Very. And you know, can there be tribal, whether it be something else? And so, you know, that we could not do any of this without that continued support. What is exciting to me is there seems to be more talk about the federal side saying tribes. You know what's important. Here's some. Here's the wide bumpers, and we want to get out of your way. And that's that's, you know, when you look at a tribe like Samo, she was just gone through his 14th year with 0 findings in their audit, which is unheard of anywhere, you know, trival or not. It's sort of a validation of, you know, what was before like this money. We're. You know, you got to report quarterly. Got to do this. And that that's something that happened in the formulation of the partnership here, all that money to start coming in. And the partnership pretty quickly recognized because of state agencies. We couldn't do our job of regulation on water quality or any of these issues without the tribes collecting the data we've been, you know, cut budget, cut, budget, cut, budget cut. Don't have fuel personnel anymore. Allow. Tribes to get the data that we used to manage. And so you've got to take some of this money. Right off the top and it's got to go right to the tribes. And that was a start. And that was the first time for us, you know, as a department of three where it was like, Oh my God, we can plan for, like, the next five years. Reliable funding rather than you have this project and in three years it's funded by three separate organizations on one year grant cycles, right? And that's how we jumped into it. A part of 6 now to partner 10 is because it was a funding amount that was commensurate with the need of the project. Length of time that we could say, OK, now I can hire someone and say, you know, I've got you three years, London rather than trying. You know, especially when. Think about wanting to start a scientific dive team. If you're starting someone new, it takes a year to get your AAUS certification. And I let him go after. I just spent all this money, bought all this gear and now we don't get to utilize. So, so that federal input and that reliable federal input. Is. Hugely important to the tribes. In biodiversity, and I think, I think for most people. Folks, you pretty quickly get to the point where, oh, you're saying we're saying biodiversity, but we really mean cultural preservation. And that's just one the same people out here, identified by their connection to the network. What when you just when you said that it's really interesting 'cause. One of the things we we heard early on is that like the term biodiversity itself means widely different things to different people. And so trying to come up with some sort of. Definition or way to incorporate this different perspectives on for informing this national biodiversity strategy is really important, yeah. Listen to be a trainer. Makes it critical. Because I think you're. I mean, you know, when this project probably started, people are biodiversity. How many species? First unit area there's. Much more. And I'm not sure I would have realized how much more if I hadn't started working through the drive.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah, yeah, yeah. And then so that's kind of the long term then more of a short term goal goal with using this. Actual model that we built with you is we'll use this, that workshop I mentioned in the e-mail that we're running in October. What we do is we bring all these different, you know, community members and groups together, managers, researchers and community members, and we use this to do collaborative modeling. But basically we're trying to build a big model like this that incorporates all these different perspectives. And one thing that's cool, because these arrows we have the positive and negative relationships. We can look at trade-offs of different management approaches and try to understand how an intervention would impact. Different community members in different ways. Like I don't know what the concepts are, so I'm going to trust you. But while you're looking at that one thing I'll say is you use the use the term unintended consequences that has been like a big buzzword that's come out of this project and one of the. In our previous workshops that we've been seeing is. That some management actions you look with the off for win. Like you. Certain agencies aren't considering or don't know what those unintended consequences. So that's why it's so important to bring all these groups together to understand that.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I2: So this is relatively simple, but I simulated an increase in kelp restoration. We do more management than you would have some sort of increase in more cultural. Resource protection and then also an increase in rockfish populations.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: And the individual scenarios aren't usually that interesting because it's like one person's perspective. Yeah, right. But that's. It's important to do you know, to have the collaborative piece and run these workshops and bring people together to look at those unintended consequences.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: I think the one thing to keep in mind is don't let that limit it though, because that also has positive impact up into abalone. Has positive impact on a host of different fish species critical of food. Yeah, you know. There's been claims that it helps with carbon sequestration, but the science is saying not so much because it dies back so much each year unless you harvest it and then. It in the deep ocean. But yeah, that there's a lot more. You know kelp forest. Yeah, huge community, just like terrestrial forests. Ornell grass, steel, grass, Meadow. You know those new things? Yeah, that's that's cool. I can call things out like that. Excellent. Well, I. Definitely be interested in anything you guys feel comfortable sharing.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[I1: Yeah. Oh, yeah, absolutely, yeah.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)

[BD063: And if you guys have follow up questions. You can reach me.](https://onedrive.live.com?cid=35262dc0995d5aad&id=35262DC0995D5AAD!s4d015ad94d554461b21c3148bf913e82)