

Outstanding Resource Waters, Chapter 173-201A WAC

Public hearing testimonies

Sept. 12, 2023 – Kalama, WA

Byrne, Jim (Trout Unlimited)

Well, thanks for the opportunity to be able to speak today. My name is Jim Byrne. You have my email address on that sheet. I'm here representing the statewide Washington Council for Trout Unlimited, and we were one of the initial advocates for including the Green River as an outstanding resource water. And I'm pushing for the Tier 3A stance. I think that would be great. As I set out from Trout Unlimited so my testimony will kind of concentrate on fish and fish issues. In addition, I spent 28 years as a fish biologist for the Washington Department of Fish and Wildlife, and the Green River was part of the area that I was assigned. So, I'm pretty familiar with it. I'm hopeful of 44 miles plus the tributaries will be included in the resource area. The river has summer and winter Steelhead, Coho, Fall Chinook, all listed species that also has cutthroat trout, and they all spawn in that area. Most importantly, it's also a wild steelhead gene bank and when we at WDFW were looking for where we wanted to set the gene bank, we used the same kind of criteria that you did. Really clear cold water, old growth timber, not a lot of pollution. And I must say, I don't know why I am up here, really, because Marla did such a great job on her summary. She pretty much covered all the all the points that I wanted to make. If you go downstream where the gene, where the Green River enters the Toutle we have a fish hatchery. Typically, we would raise 400,000 Coho and a million Chinook. So, maintaining water quality for the water that would go into the hatchery is really important. It is cold water, groundwater and with climate change we're having less and less of that. It's really vital and crucial for fish. So, we also support the cascade, Napeequa and Soap Lake decisions. But most of my testimony is focused on the Green River. It's important to the two tribes, the Cowlitz and Yakama, that they support it and there's great recreation there. You got the Green River Trail, the Green River Horse Camp, and the Goat Mountain Trail. So, thank you very much.

Kerr, Laurie

Good afternoon. My name is Laurie Kerr. I reside in Battleground Washington and I have lived here for over 35 years. I am also the leader of the local chapter of the Great Old Broads for Wilderness, a woman led organization whose mission is to advocate, educate and steward wild public lands. I have been the leader for over six years, and we currently have over 100 paid members. Our chapter of the Great Old Broads have hiked many of the trails in Gifford Pinchot National Forest, as well as in and around Mount Saint Helen National Monument, including but not limited to the Hummocks Trail, the Boundary Trail, June Lake, Johnson Ridge, Coldwater Lake, Sisson Creek and others. These hikes offer unique opportunities for recreation among Mount Saint Helens area, as well as opportunities for scientific research during the recovery stages following the eruption. I have seen the changes to the ecosystem over the years and

watched as forests were obliterated. Lupines emerged and then Indian Paintbrush emerge, which attracted the elk. As we hiked along, we have witnessed the Roosevelt Elk feeding down in the valley on our hike. The value of clean drinking water cannot be underestimated for the community of Kelso especially. The Green River is the largest tributary of the North Fork Toutle River in the United States, state of Washington. I have personally spent time in parts of Mexico where clean drinking water is not available. Purchasing bottled water for drinking. I've also gotten sick with giardia from drinking unsafe water and been ill with bouts of stomach cramps and diarrhea for several weeks. The increased demands from population growth and climate change further increases our need for clean water. Now is the time to preserve this precious resource. The Green River is not only a pristine area with a protected area of Mount Saint Helen's monument. It also offers a unique value from the recovery of the eruption and provides high water quality. I support the designation of the Green River as a river of outstanding resource water Tier three at the highest level to protect and maintain the water quality. Thank you for this opportunity to comment.

Sept. 14, 2023 – Mt. Vernon, WA

Bray, Martha

Hi, can you hear me ok? Um, I think I can't say things nearly as eloquently as other people have already, and I support everyone's statements, I'm very much in support of this proposed designation. I do have some experience in watershed planning decades ago, and in non-point source pollution planning, as well as more recently, at least within the past couple of decades, working on conservation in the Cascade River as well, and I guess the first thing I want to say that perhaps no one else has said, I've seen firsthand the cost of restoration versus the cost of protection. There is no comparison. We have an opportunity here to prevent the type of degradation here that in so many other places, in this watershed, we're trying so hard to repair. It's pennies to dollars to do it up front, I think an extra layer of protection is warranted, I used to go up the Cascade to recreate a lot, I love that place, but the crowds are pretty stunning anymore. People were asking questions earlier how this might affect recreation and I understand that it's not a direct link with this designation. However, as time goes on, that pressure will demand more development. Parking lots, restrooms, campgrounds, you know, working on the campgrounds, and all of that needs to be done soundly and I think that this proposal will really help with anticipating the crowds and the pressure on that watershed. That seems to me the biggest impact, really, of the designation. And I would echo the importance of the water quality in the Cascade compared to a lot of the rest of the watershed, I mean, it's the last of the best and that's so important for all the thing that we all care about and love and that support this community. So, you know, it's really important, so thank you.

Cunningham, Brenda

Thank you, my name is Brenda Cunningham, I'm also a resident of Mt. Vernon. I wanted to speak on behalf of myself and others in Indivisible Skagit in support of this proposal. I, as I said, am a long time resident of Mt. Vernon, and as the previous speaker mentioned, we are drawing

some of our drinking water from the Skagit River, but of course Anacortes and Oak Harbor rely on the Skagit River for drinking water as well. So, as a customer of PUD, the room we're sitting in here, I'm reassured by the idea of more and more protection on these reaches, especially on the public lands of the upper Skagit River and its tributaries. It would give me a great deal of comfort knowing that more of drinking water is in a protected state. There's a lot going on below this designated area along the Skagit, in terms of development and pollution sources, so any bit we can protect in these federal properties would be appreciated. In addition to that, as a taxpayer, we've all been spending a lot of money on salmon habitat protection and we are concerned about orcas, so this is just a logical protection to protect some of that investment we've already made. Thank you very much.

Day, John

I'm John Day, from Sedro-Wolley, Washington, and I too want to add my voice in support for this designation and thank the Department of Ecology for bringing it forward. I also very much want to state my support for the previous statements that have been made. I came into the Upper Cascade drainage by way of the peaks and glaciers back in the early 70s and I have a deep and abiding love for that whole area. I lived in Marblemount, or above Marblemount for about 20 years in the 80s and 90s and during that time, I also participated in water quality related activities, specifically sampling macroinvertebrates, small mostly insect larvae that are key indicators of water quality. In the Cascade drainage, other drainages in the area. So, I have some great appreciation for the quality of the habitat and how important it is to give it the highest level, this highest level of protection. One aspect of this protection I want to highlight that hasn't been mentioned previously is the impact that climate change is having on the glaciers of the North Cascades and how important that is to the quality of the water for the uses that we make of it, recreational, farming, drinking water, as well as, of course, fish. The glaciers are disappearing, they may be gone by the end of the century, and that just makes it all the more critical to give the greatest level of protection that we can to this incredibly valuable, beautiful place.

Faxon, Bee

So, I'm Bee Faxon, and I live in Burlington, Washington. When I moved here in 1979 to the Skagit, I lived within walking distance of the Skagit river, not far from the point where the Cascade River joins it. And I can remember one winter afternoon counting at least 30 bald eagles, flying overhead, flying over the river, congregating there. And what I'm contemplating today is how lucky we are all these decades later that we still have this relatively pure river water and that we still have this place that is abundant for wildlife and for people as well, and we still have this resource. I'm thinking how lucky we are that we can even have this conversation about protecting this river. It just seems that we're very fortunate to be in this place, because we can no longer take this for granted. And for this one, I notice what a beautiful blue sky September day it is, but we know the thin line between this and the day when the air is full of haze and full of smoke. We can't take clean air for granted anymore, we can't take clean water for granted

anymore, and I'm very grateful for this proposal and for the possibility to protect this watershed to a greater extent. Thank you.

Keller, Donna

Hi, I just want to thank everybody that has spoken, in support of protection of this river, and also give my utmost gratitude for all the organizations and people and Department of Ecology for making this happen, um, I am from Bellingham, my father purchased land on the Cascade River just one mile up from Marblemount 50 years ago, and I have fallen in love with that place. His ethic was one of stewardship and protecting the land and being aware of the broader ecology and community of that place. We're so fortunate that through the Skagit Land Trust it's protected, but also knowing that there is this extra protection in play that will happen so that future generations can enjoy that river and that land, is so crucial. So, I'm speaking in support of this initiative, just more from a personal standpoint. I do want to mention that I also appreciated some questions that were looking at more of the details of it, and so I understand too all that will be going into that, and appreciation for all the work. My dad had a saying that said, when he went from his home in Bellingham to the place on our Cascade River, it was not rejection of industry or rejection of urban values, it was contrast. So, to have a contrast of this wild and scenic river having extra protection, again, I think it's so important. I am also a faculty member at Skagit Valley College, and I teach Fresh: The Global Politics of Water, and we always start by looking at what is happening in our own backyards. I take them on field trips going up the river. The last thing I wanted to share, is not from me, and I don't have any right to speak on behalf on any of the native nations, but I'm reading just a few sentences from an interview from an interview that my father, Bob Keller, did of Vi Hilbert, Upper Skagit Nation. And, it says, it's about the river, she said, "had you asked me 10 years ago about my hopes for the great great (unclear), I would have painted a very bleak picture. But you know, I have a little hope that more and more sincere people are looking at the damage that has been done and are becoming thoughtfully aware of what can be done to reverse things at this point. With cooperative effort by all people, we can indeed make things a little heavier. I doubt I will ever drink the Skagit River, as a child like nectar from the river, but I think we can certainly make it better for the present and the future." The very last thing I'll say, in terms of the broader ecology and humankind, the river itself, the water itself, deserves life.

Kirshenbaum, Michael (Skagit Land Trust)

Hello, good afternoon everyone, I'm Michael Kirschenbaum, the conservation director of Skagit Land Trust. Skagit Land Trust is a non-profit, community-based organization based here in Skagit County. We have over 1000 members and families that support protecting natural habitat, clean air and water, and working resource lands, open space for now and future generations. The Land Trust on the Cascade River protects over 2 miles of shoreline through in-fee ownership and conservation easements in over 250 acres. The Cascade River has been identified in the Land Trust conservation strategy, which was both a scientific and community planning effort to identify the most important places in Skagit County for conservation. The

Cascade River is very high on that list of conservation targets for the Land Trust, as identified not just by the Land Trust and its members, but also by partners such as Tribal Comanagers of the fisheries resources of the state, by Skagit County and its designations for open space and other kinds of land by the state of Washington through its prioritization of salmon habitat and other key habitats for wildlife species and water quality. The Trust strongly supports this designation, ORW designation for the Cascade River. With the headwaters of the Cascade River flowing from the Steve Mather Resource and N. Cascades National Park and the Glacier Peak Wilderness, the Mt. Baker/Snoqualmie National Forest, with Chinook, as was mentioned before, spawning in the waters that would be protected by this designation that then feed our endangered orcas. With the cultural history of the upper Skagit and other Coast Salish peoples who used that area for time immemorial. If this isn't an ORW in Washington, I don't know what is. It's vital to protect all of those resources and this seems like a very common-sense designation for the Cascade River. It's been noted several times that there is federal protection for this. We all know federal designation and laws can certainly change, as can any the state of Washington weighing in from a water quality standard which truly encompasses all kinds of measures and different land uses that the state of Washington is also saying that the Cascade River is an outstanding area, is worthy of the highest level of protection, seems very wise and the system that Ecology has to try and implement their rules, that they aren't overly burdensome, it sets a standard that we all can try to meet. So we strongly support this designation, and thanks for the time!

Manns, Tim (Skagit Audubon Society)

My name is Tim Manns, I live here in Mt. Vernon, and I'm speaking as the conservation chair for the Skagit Audubon Society. Our chapter of national Audubon has 476 members, most of whom live in Skagit County. I appreciate the opportunity to testify in support of designating the non-native portion of the Cascade River as an Outstanding Resource Water. Skagit Audubon's members share an interest in birds and wildlife and their habitat. From many years of observing birds in and around the county, we know that the Cascade River is important for harlequin ducks, common mergansers, American dippers, and many other species. And we know what important habitat it is for salmonids, including ones federally listed. I hope you've all seen harlequin ducks. They're a stunningly beautiful bird that spends most of its life in marine waters, a sea duck, and they're unusual in migrating eastward rather than northward. Harlequins are one of those striking species that remind us that this world is not ours alone. Harlequins fly eastward to breed inland on whitewater rivers, I've watched them on the Cascade. After breeding, the females find secluded spots along quiet tributaries where they can raise their young without disturbance before following the river down to the sea. It's significant for this species that the outstanding resource water designation would protect the tributaries of the Cascade as well as the river itself, because small tributaries are an essential element of Harlequin habitat. Harlequins are threatened by marine pollution, by degradation of their food sources in that environment, and by human disturbance. This species has endured because rivers such as the Cascade provide its necessary breeding habitat. The Cascade and the Harlequin duck need all the protection we can provide. We support the proposed designation of the Cascade for other reasons, too. As a major tributary of the Skagit River, the Cascade helps ensure that the Skagit will continue to provide essential

salmon habitat that makes it the most important fish producing river in the Puget Sound region. Mt. Vernon, where I live, draws drinking water from the Skagit, so as a resident here, I want tributaries such as the Cascade to have every possible protection from degradation. On behalf of all the members of Skagit Audubon, I urge you to support the designation of the Cascade River as an Outstanding Resource Water. Thank you.

Margulies, Mimi

I'm Mimi Margulies, and as a resident of Bellingham and an outdoor enthusiast I have a deep and abiding love of the North Cascades and its watersheds. I'm here to urge the Department of Ecology to continue our state's record of leadership and environmental stewardship by designating the Cascade River as one of our first Outstanding Resource Waters. Other western states, including Oregon, Colorado, New Mexico, and Arizona have already taken advantage of this opportunity under the Clean Water Act to protect priority waters. Unimpaired headwaters are imperative to the health of our rivers and all that is downstream of them. For instance, clean and healthy water is necessary for the long-term sustainability of the Skagit Valley food systems. Not to mention the salmonids and other flora and fauna that have been mentioned earlier. The Cascade River is most deserving of the protection provided by the OWR designation because of its extraordinary water quality, and unique ecological and recreational values. It clearly meets all the criteria for such designation, and I want to thank Ecology for bringing this process to the citizens and thank you for the opportunity to weigh in on it.

Mueller, Mark

My name is Mark Mueller, I'm a resident of Mt. Vernon. I've lived in Washington state for probably going on 9 years now, and I've been a resident of the Skagit Valley for probably about 3 years. And I guess, just to lend a little bit of context to a few of the points that I'd like to cover here, my background is in brewing, beer brewing specifically, my wife's background is as a fish biologist and so I think it's pretty clear to say that we are no strangers to the concept and importance of water quality, certainly speaking from my own experience and I think it's already been covered the importance of drinking water quality, but also in the industry that I work in, the water quality is absolutely critical to beer production and success there. And I think, you know, when I really reflect on what's important to me where I live and why I love Washington state so much, it's really because of the value and importance of and protections that we have been giving to a lot of the wild spaces in the state, and which is why I support this designation here, and myself being an expectant father, kind of starts to change your perspective about what you really value, and for me, it's really important to support measures and designations that protect the wild spaces that I enjoy as a recreationalist and make sure that they still exist for my children and my children's children, and was very aptly pointed out, it's a lot easier at this stage to protect those already those areas that are already in good condition rather than try to reconstruct them. And yeah, I'm a hiker, I'm a rafter, I'm a paddler, whatever you want to call me, and I've certainly enjoyed recreating in a lot of these spaces. And I hope that all of our children can as well. Thank you.

Uniak, Tom (Washington Wild)

My name is Tom Muniak, I'm the executive director for Washington Wild, I wanted to make sure that we're a statewide organization that protects wild lands and waters and I wanted to make sure that all the local voices had a chance to be heard, I have a lot of respect for local voices on natural resource issues. My organization is one of the organizations that put forward the proposal for the three rivers that Marla was talking about, and to speak to that, I think a number of speakers hit one of the main issues here, which is that this is an area that has a lot of protections, and the OWR designation is a "protect what you have" designation. There are other things, but it's really kind of like preventative medicine and any healthcare folks out there know that you gotta have an emergency room and preventative medicine, you gotta do both. If you only have one, it doesn't work so great. So, this was definitely in that category. I think that all of the efforts that local cities, counties, tribes, state, federal government put into salmon protection, restoring areas farther down in the watershed, huge amount of effort, this is hard work, this is uncertain work, this is important work, and it's really expensive work. At the same time, protecting an area like the Cascade does have high water quality that is intact, I think makes a lot of sense. I've been at Washington Wild for 20 years, I view our organization as an organization that is pragmatic and collaborative, it kind of defines a lot of what we do. Early on, even before the nomination was set, we made a point to kind of try to get some feedback up here from local Skagit County folks, we met with the commissioners, some elected officials, other organizations, and really listened. In 20 years, I've learned that's hard to do and important to do. And what we heard, as I think Marla alluded to, was that there's a lot of values that we all care about, and as an organization that worked for years with a coalition to stop the mining threat in British Columbia, the Skagit headwaters, was a four year campaign, it was really one of the highlights of my career, I never thought a statewide group was going to head an international campaign, but there I was. You know, we just have a huge amount of support for the downstream benefits, I mean, drinking water has been mentioned, salmon, orca, the Cascade is a major tributary to the Skagit, the Skagit provides 30 percent of the freshwater for Puget Sound, drinking water, as has been mentioned, and I think that one of the things that was really incredible in Skagit County was that nearly every governmental organization wrote a letter in support of protecting or opposing that mining threat as part of that campaign, and my understanding is that we have to go back to Magic Skagit days, some of you will know what that means, for that to occur. That ultimately ended up in a positive situation where those mining threats were relinquished, and that threat from frankly from another country to this Skagit is not in front of us. Last thing I want to say, and then I'll let folks go unless others want to speak, going back to that listening, you know, what we heard was that there are support for this but there's also uncertainty and concerns, especially about private and state lands, particularly timber, a lot of private landowners have 10 acre, 20 acre plots that are important economically to them as they retire. DNR's working forest land that support trust beneficiaries through logging, so those were important things, so that is why you see this designation start at the federal boundary, and that was done early on before the nomination, so we were really serious about listening to that. So, I think I also appreciate a lot of the questions that were asked, it's great that there was a Q&A session, I think that it was really

helpful, I think all those questions were really good ones. With that, I'll end, if other people want to talk, you'll give them a chance.

Sept. 20, 2023 – Leavenworth, WA

Shon Smith

Hello Shon Smith, Chelan County Commissioner district 2, my comment is about the Napeequa being included in the ORW protection status that's being proposed in Chapter 173-201A, and my concern is the fact that that river is already in the glacier wilderness peak area, and since this does not protect anything against human causes of pollution, including air pollution, there's no need to designate that river as one of the rivers, and I think that uh, there's other places that this energy can be directed at, since this is already in a protected zone, with no human development and very limited access, of course in a wilderness, no motorized use, and that it's not necessary and just another layer of regulation that we don't need as local officials to have to deal with. Thank you very much.

Sept 19, 2023 – Soap Lake WA

Gorman, Judith (Soap Lake Conservancy)

Thank you, especially all of you for coming and cluing some things up for me and helping me to discern that, my contact has been Marla, and my connection with Marla, I'm just so impressed, she's a good learner. But I didn't know quite how to present, except for today, when she presented the conductivity note, I've heard a lot about that. It's really important that the Leo Bodensteiner article and that the lake.org has oodles of rabbit holes to go down for studies and information, and there's a lot of research that's already been done over the years, especially the last, probably, 30 years. The Leo Bodensteiner article that was published in 2010 is key, and it's basically the last complete research project, except for some collections that have been done in more recent years, I'd say the last 5 or 6 years, that are still in process – University of Montana, Montana State. The Leo Bodensteiner article back in 20...the data he collected is 2002, published in 2010, indicated that the lake is out of equilibrium, it is no longer in equilibrium. And that's based on studies of previous years that were done by...Oh, blacking on his name right now, it was the guy who saved Green Lake and Lake Washington from the Seattle area. So what does it mean to be out of equilibrium? It means that the layers in it are no longer really strongly layered. The chemocline, which is the middle layer, has shrunk from about 2 feet down to maybe 8 inches. The chemocline, and, before I go into what the chemocline does, the top layer has basically been freshened greatly. It's so much freshened that, and primarily, I don't mean to blame the Bureau, they do a great job for feeding all of us, but initially they kept the city from flooding by doing top layer pumping. The top layer was pumped. And that freshened it. They learned. It was a lesson. The chemocline keeps the lake from turning over. Minerals are heavy. Salts are heavy. They sink to the bottom, and of course the mud holds a lot of those heavy minerals. So, when conductivity is used, it provides really good information. Everybody I talked to at the Bureau, Roger here tonight reinforced it again, conductivity is the best, quick variety

of...it's a study of the oxygenation and certain elements. I would like to see, because this lake is out of equilibrium, I would like to see added, that to this general, we're past the general, we need specific data because the lake is out of equilibrium, that will tell us what the specific elements are, and how they have been depleted. There's a lot of research on thelake.org that will provide basic, back to 1900, maybe, when it was begun to be studied, to now. So, another variable is the volume in the lake. So, we have the lake out of equilibrium, the chemocline shrunk drastically, conductivity having been there, volume diminished. And what does volume play? Volume is important for this lake so that it does not turn over. There needs to be a certain amount of weight at the bottom. And mineralization, I don't know if it's going to come up to the top layer or not. I'd like to see the DOE add the data, the mineralization, and find some funding for this to be done so that it can be carried forward. The Conservancy's been doing it. And we're a nonprofit. Maybe we can get a grant, but we have not been successful. But I am eager to work with the DOE. And my hope is that this goes through so that our great grandchildren will be able to have the same lake here in spite of what's been going on with the global warming that's happening. And that's my opinion.

Holt-Morehouse, Bonnie

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I am resident of Soap Lake. I was born here, raised here. I was raised in Soap Lake; I was born here in 1944. I went to school here through the brand-new elementary school and then the brand-new high school. And so, I experienced a lot of things from the 40's on, but I missed out on the beginning of Soap Lake, and the beginning of soap Lake was, I'd like to talk about all the things that are so good about the water, so keep me pulled back to that, if you would. The water was a really big deal, even when we were little kids. We would go down and play in it, it would be so strong that they had a little kiddie pool on the west beach. And we could go into it and rinse off and I would spend most of my time there because I didn't like the really strong water of the lake. But there were people mainly using Soap Lake for healing, and that was why they started coming here in 1900, they had the first grocery store by 1905, and Soap Lake became a mecca for healing. That meant tents all over the beach, outdoor toilets, dirt streets, wooden sidewalks, and people in all stages of infirmity being hauled into town, put into the sanitariums, the better, healthier people stayed in the tents. But the town was heal-, the town and the workers in it were all involved with healing these people. Jobs were being nurses, doctors, attendants, people hauling water to the sanitariums, people making electricity with generators during that period of time. And it was, the healing water was working. It was healing lots of people. And the continual comments about it still go on to this day. From the stories of the past because of it. Soap Lake had strong minerals, about 24 different ones. They combine to make compounds, and each of these compounds – like one of the is the formula for Epsom salts for example – but all these compounds are antibacterial. And so the lake water continued to be antibacterial and is to today. There's been several times even today when the water's been polluted by sewer leaks, and over a period of time the bacteria count was down. We started doing Healthy Lakes studies in 2020 to keep track of some situations. In addition to doing mineral water count. So there's two different kinds of testing that need to go on for the lake. Soap Lake is, has a natural ability with the saving

waters to cause a chemical reaction to the shale, and the shale is broken down into individually charged minerals, which then bond together with the like mineral that will take it – the positive needs a negative for them to connect – and that makes a certain type of compound. And because there were so many different minerals that come out of the shale, that water was able to create all of the different compounds that have been studied as far back as 1920 by the Bennett studies, and they have lists even then of the compiling of that information. And the water and healing and the muds, because the muds have the minerals in it, people could put the mud on their skin and that, plus the sunshine, and the fresh air and the heat, form a form of poultice that kills the bacteria that's growing under the scabs for the psoriasis and heals their skin. It was treated, starting treating it for Buerger's, and actually the Buerger's problem started because of the lake being able to form a poultice sucking action and increase the circulation to skin that was otherwise decomposing because of atherosclerosis caused by smoking and by mustard gas and issues of poor nutrition. And it's still a problem today, but medical techniques are handling Buerger's, and you don't really hear about people with Buerger's coming here, though I mentioned they could still. The lake has been a mecca for everybody who goes into the, every spring they wait for the water to start warming up so they can go soak in the sun. And the beaches, especially the West Beach is packed full of Ukrainians who started coming here because of the radiation poisoning that they got from the Chernobyl blowing up. The East Beach is more shallow, but they collect a lot of mud and do their soaking here. The water diluted a lot caused by pumping water directly out of the lake, taking the minerals with it, and underground waters would come in because of the hydrology of the lowered lake allowing the pressure to push water back up. The water would rise again and be diluted. So, from 1952 when the irrigation go started, that was the cause of the dilution to begin. They would pump all summer from the wells and the canals for irrigation, and so the lake would recede down. But then in the winter when it would start rising again, the Bureau would pump directly out of the water for that three years to keep the level at 1076, even though the normal level of the lake was 1081, would come up to 1st avenue as a constant lake before the time of the Bureau. And that's when the receding to 1076 and they poured the retaining walls, and when the water came up to the retaining walls, they started pumping it to prevent buildings that they allowed to build down into the floodplain to become, the basements started allowing water to seep into them from the underground seepage of the water. This whole area has 200 feet straight down of permeable gravel. And that was actually why they were going to put the canal straight through the middle of Soap Lake because that was the best siphon, position for the siphon. To get that siphon action. The lake is a beautiful place for the birds, the migratory birds. It's number 45 on the WA birding map for the Grand Coulee Corridor. Some of the beautiful birds you can see in the early springtime when they come here to nest, are just unbelievable, are so exotic, and pretty. They live in the wetlands, and the wetlands are being depleted by the reduced water levels and by people wanting to build down into the floodplain. The healing stories go on and on, to this day. There's one lady in town that treats psoriasis patients and does testing for them. It's ongoing. So, I think Soap Lake is well qualified for being unique. Thank you.