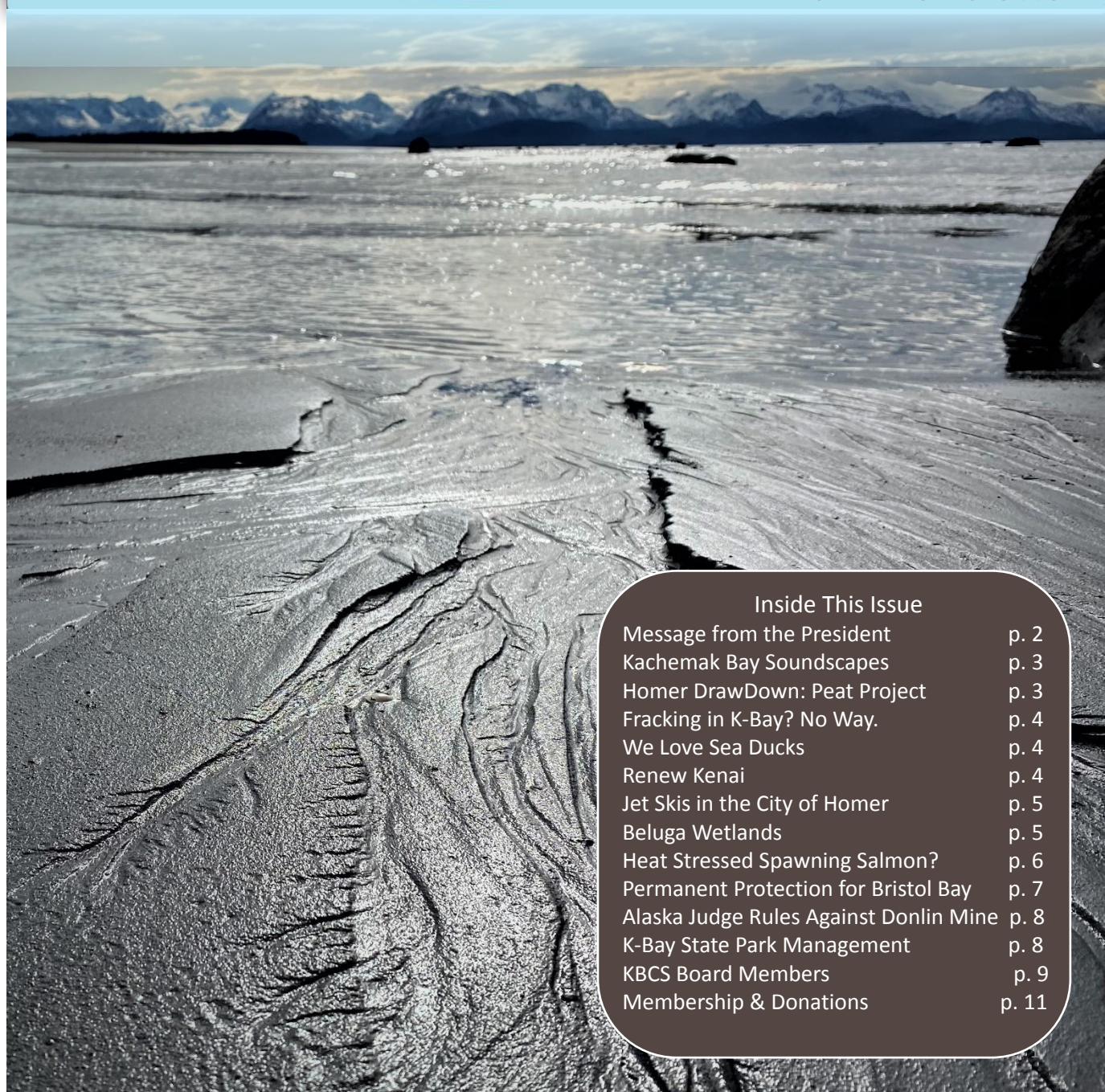




Kachemak Bay Conservation Society

2021 Newsletter



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Happy 51st Earth Day!

Message From The President, Roberta Highland

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Well Now – There went a very strange, chaotic year and then it just continued.

At least January 20th improved many things, but Alaska is still on a negative environmental projectile. KBCS continues to do all we can to battle the continued onslaught of industry and lawmakers.

We are going to hold our annual Earth Day membership Meeting via Zoom. There will be entertainment with the help of Jonny B and Bjorn Olson, a short recap of the past years work and election of board members. The nominating committee forwarded the following candidates for the 2021 board election:

- Jim Stearns
- Martie Krohn
- Anna Liljedahl
- Katie Gavenus

Biographies can be found in this newsletter.

I want to THANK EVERY ONE OF THE BOARD MEMBERS for their continued enthusiasm and willingness to share their specific special expertise to the organization, the community, Alaska and the world. It is an honor to work with them.

Let's celebrate the great progress being made by our Drawdown Peat Project as well as all the good work of the Kenai Peninsula Borough Resilience and Security Advisory Commission !

KBCS has been busy, as you will recognize from the articles in this newsletter. With that said, any financial donation would be greatly appreciated for us to be able to continue this vital work. We have contract people, since there is too much work for the volunteer board.

We must all acknowledge how lucky we are to live in the Kachemak Bay Area, especially during the COVID-19 pandemic. As always, we hope you continue to assist us in our ongoing efforts to protect the beautiful environment on and around Kachemak Bay and greater Alaska. Together we can and do make a difference.

*Thank You
Roberta Highland, President*



KBCS is part of organizing the Homer DrawDown effort. Here is the first meeting in early 2020, before COVID became part of our daily lives. More on Homer Draw Down on page 3.

Soundscapes & Peat Project

By Josh Wisniewski and Katie Gavenus

Kachemak Bay Soundscape Project

KBCS is so excited to collaborate with the Kachemak Bay Soundscape Project! The project is an emerging effort to explore, celebrate, record and inventory the wild natural sounds around the Bay. Sound is a part of almost every issue KBCS works on, but it is often ignored. This project will help us think what is at the heart of issues.

We may not immediately think about it as we look out upon the stunningly wild scenery of Kachemak Bay, but the sounds, or lack thereof, are an essential aspect of the environment. As we live in or visit wild country, the sound of the incoming tide, a loon calling in a remote bay, a whale breathing, or the return of the varied thrush, are central to how we experience the natural world. All too often we forget that what makes wilderness wild is not just a relatively undisturbed physical environment, but one that is also free of the auditory impact of human activity. As more people travel to visit Alaska and Kachemak Bay it is important to preserve that aspect of wildness, the ability not just to see, but to hear the natural world all its splendor.

The field of soundscape ecology is increasingly identifying the critical role that sound has in maintaining a healthy ecosystem, where animals can communicate, hunt, hear predators, and countless other benefits. The Kachemak Bay Soundscape Project seeks to record the wild sounds of the Kachemak Bay area in order to create an audio library of natural sounds and to increase our awareness and understanding of the value of the natural soundscape in wilderness and how we experience the Kachemak Bay country. This project will assist in advocating for the consideration of the natural soundscape in the management of Kachemak Bay and our State Park.



Homer Drawdown: Peat Project

Homer Drawdown is a local climate solutions community initiative organized by KBCS and Cook Inletkeeper. Using the book *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*, we identified meaningful and well researched solutions that may work for Homer and that don't just stabilize levels of greenhouse gasses in the atmosphere, but that actually draw emissions back down. The Drawdown series is centered in the belief that the most impactful solutions are community led. After nine months of brainstorming the Homer Drawdown community democratically selected its focus on peatlands!

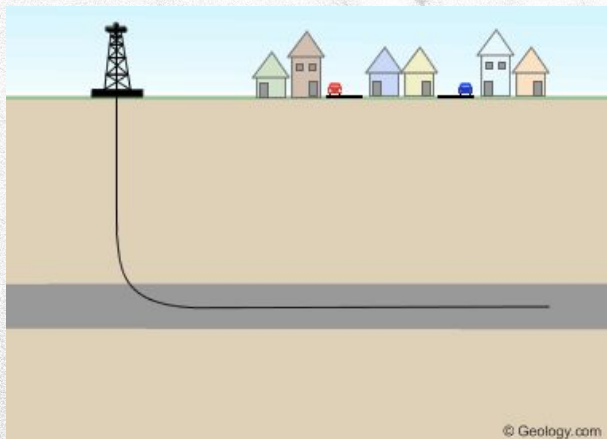
Putting peatlands on the map of policy decisions is a core goal of the peatland project. Teams of Drawdown volunteers will be conducting peatland surveys this summer, and we are working with the Kachemak Bay National Estuarine Research Reserve so that datasheets, protocols, and equipment can be checked out to volunteers who want to conduct peat surveys on their own land or public lands. We will be hosting community peatland survey days that combine data collection with fun opportunities to learn in the peatlands! We are also collaborating with one of Bunnell's artists in residence, and are working on a mural project. Peatlands are going to be part of Coastal Studies education program now...and more!

If this project excites you, we welcome your collaboration and energy. You can find out more about any of these opportunities on our brand new website! www.homerdrawdown.info

Fracking in K-Bay? No way.

By Penelope Haas

Fracking In K-bay? No Way.



Kachemak Bay was closed to oil and gas exploration and development in 1976, with local area fishermen leading the way. [HB 82](#) is a sneaky way to try to get around this very clear legal prohibition through horizontal drilling and fracking under the Critical Habitat Area.

If HB 82 advances in the Alaska legislature, lateral drilling technology could open up vast portions of Kachemak Bay. DNR is blunt about the larger plan - they want to fundamentally change the way Alaska treats areas closed to drilling by going underground into the closed areas.

While our society is dependent on fossil fuels now, we cannot continue down this road. The extraction and burning of fossil fuels threatens our way of life – they are not the future. Our region needs renewable, sustainable energy like [tidal](#), [hydro](#), [geothermal](#), and [wind](#).

We have a [petition online](#) [opposing HB 82](#). Please take a minute to sign it and we'll send it on to the legislature. Better yet, call Sarah Vance and tell her No Way!

We Love Sea Ducks



Did you know some sea ducks can dive up to 180 feet? Did you know that they have a high degree of site fidelity and come back to the same place year after year? Did you know our K-Bay sea ducks nest in Northern AK?

Kachemak Bay Conservation Society is working with a coalition of citizens to ensure that, as hunting pressure continues to increase in K-Bay, and in the context of highly uncertain population data, we do not over-harvest these much-loved birds. Local observations, accurate harvest reports, outreach and education are all part of this effort. KBCS participated in the first annual citizen science sea duck survey this year, and we are already looking forward to next year's survey!



Renew Kenai

As the Biden Administration promises large scale investment in renewable energy, KBCS sees an important opportunity for big renewable developments on the Kenai Peninsula. There are some exciting projects in the works to keep your eye on: research on tidal power in the Cook Inlet will resume this summer. The Division of Oil and Gas recently issued a permit authorizing exploration for geothermal resources underlying Mt. Spurr. There has been state and federal interest in a pumped hydro project near Eklutna Lake, which could change the energy mix for the entire Railbelt.

Email us to join our ongoing bi-monthly Renew Kenai meetings, where we are brainstorming with smart and dynamic folks from across the peninsula on how to move renewable energy forward.

Local Local Local

By Penelope Haas

Jet Skis In The City Of Homer

KBBCS has been working long and hard to fight ADF&G's sudden and unjustified rule change to allow Jet Skis into Kachemak Bay.

One aspect of this effort is to ensure that the City of Homer takes a broad approach to management of its tidelands. The city owns the tidelands and is responsible for protecting them: According to City of Homer Code 18.28.200, "it is unlawful for any person to commit waste or other injury upon City-owned tideland and contiguous submerged land."

We support an ordinance that would provide a no-wake zone for all city tidelands to all motorized watercraft, with some language allowing for safe exit from the harbor. High speed jet propulsion over our tidelands will destroy them.

The sensitive tidelands and submerged lands owned by the City of Homer are critical habitat for shorebirds, salmon, marine mammals, and shellfish and we need comprehensive rules to protect these areas. In the spirit of the City of Homer Comprehensive Plan, we believe that "growth will need to be guided to meet Homer's concerns about protecting community character and the quality of the environment."

Additionally, as jet skis have a very high rate of accidents, in comparison with other boats, personal watercraft users should be required to complete a boating safety course, as offered through the State of Alaska, Department of Natural Resources, Water Wise Program.

Many cities and counties have comprehensive rules for the use of nearshore waters that are more restrictive than state rules, and we have no reason to believe that our city cannot do the same. [More info here.](#)

The city has an ordinance before it that would limit the launching and landing of PWC to the Homer Harbor: Ordinance 21-23. Submit comments supporting this ordinance to the city council at clerk@cityofhomer-ak.gov by April 26, 2021.

November 27th 2020 afternoon
Freezing temp
Light snow dusting
calm + clearing



Beluga Wetlands

Beluga Wetlands

KBBCS and partners are keeping a close eye on some new proposals for industrial development in and around the Beluga Wetlands Complex. It is clear that developing the Beluga Wetlands will involve some big tradeoffs. This area is habitat that is [critical to moose survival](#) on big snow years, like this year. It is a quiet refuge for stressed moose that are on the edge of survival. Loss of this habitat will hurt the Kenai Peninsula moose populations. Filling this area also creates the potential for flooding of properties and the road downstream. As the City of Homer's [Green Infrastructure Project](#) found, it can be cheaper to leave green spaces and wetlands alone rather than pay for expensive water infrastructure. Lastly, as our DrawDown Peat Project indicates, peatlands lock in enormous amounts of carbon and that carbon is released into the atmosphere when it is filled and dried out.

Please join us as we work to facilitate a public conversation about the wisdom of industrial zoning in this important eco-zone.

Heat Stressed Salmon?



"OUR FAMILY HAS BEEN
STEWARDS OF SALMON
HABITAT AS LONG AS
WE'VE BEEN ON THE LAND."

-Clark Fair

Kenai River homesteaders since 1961.

The Kenai Peninsula
has salmon
because we take care
of habitat.

OUR BOROUGH SALMON HABITAT PROTECTION
CODE 21.18 IS WORKING FOR ALL OF US.

Salmon Stewards & Borough Buffers. As our climate on the peninsula warms, we are keeping an eye on our salmon streams. We are working on a series of images (see one above) to engage with folks across the peninsula as the borough assembly considers revisions to our Borough Habitat Protection Code 21.18.

Keeping Cool?

Is heat stress influencing the success of sub-Arctic spawning Chinook salmon in Alaska?

By Madeline Lee

Alaska is no longer the last frontier for salmon and the same challenges in the lower 48 are present on the Kenai Peninsula. With pressures of urbanization and climate change driving a rapid increase in wildfires, invasive species, and drought, the Kenai is a model system to explore whether Alaska's salmon will adapt to these obstacles. Salmon are an integral part of the culture for all people in Alaska and there is a strong urgency to study the influences of climatic warming on this keystone species.

Non-glacial fed stream temperatures in Alaska's Kenai Peninsula region are now commonly reaching and exceeding the thermal tolerance threshold of 18°C for migrating Pacific salmon (Mauger et al. 2016, Von Biela et al. 2020). The consistent warming of freshwater temperatures, surpassing salmon thermal limits (>18°C), is contributing to *en route* mortality in adult migrating salmon before spawning (prespawn mortality) and weakened reproductive success (Von Biela et al. 2020, Hinch et al. 2012, Minke-Martin et al. 2017). Recent work has revealed the heat shock protein 70 (HSP70) as a tool to assess thermal stress in Pacific salmon (Basu et al. 2020). Heightened HSP70 in response to warmer water temperatures can be detected in fishes' muscle tissue within hours of exposure and can remain elevated for up to ten days (Chadwick and McCormick 2017).

Permanent Protection for Bristol Bay

By Bjorn Olsen

Cont. from previous page: Heat stress biomarkers are often predictive of premature death because they offer a limited amount of protection from high temperatures. Prevalent heat stress (>50%) was just recently confirmed for a remote, subarctic population of Chinook salmon for the first time (Von Biela et al. 2020). My graduate research will expand upon this recent finding by considering a more urban watershed with greater opportunity for additional stressors (e.g. angling and development) and quantifying the link between heat stress presence and spawning success in the subarctic, which has never been examined before.

In partnership with Kachemak Bay Conservation Society, Woodwell Climate Research Center, United States Geological Survey, Alaska Department of Fish and Game and University of Alaska Fairbanks, we have begun sampling the Ninilchik River and Crooked Creek for the presence of heat stress in wild and hatchery Chinook salmon by collecting live muscle biopsies during the 2020 salmon run. We are in collaboration with ADFG to understand how warming water temperatures could be interacting with the hatchery program and the wild salmon populations. In addition, we are also conducting carcass surveys on the Ninilchik to figure out whether prespawn mortality is a concern on these streams. We have secured additional funding for the 2021 field season to perform telemetry and temperature logger tagging, so we can find carcasses easier and collect the thermal experience of migrating salmon.

My research will contribute more evidence to the scientific community and inform the Alaskan people about the implications of a warming climate on migrating Pacific salmon. With more information as to how Alaska's anadromous fish species are adjusting to climatic warming, our communities can better prepare for a rapidly changing planet. I want my work to be a critical bridge between advancing scientific literature on climate change and informing the public through easily accessible and relatable platforms. Educating people on the global and local pressures of a warming world is critical to promote decisive action towards curbing the effects of climate change.



Permanent Protections for Bristol Bay

Last November, Alaskans received some cheery news! The United States Army Corps of Engineers denied Pebble Mine's permit. However, the threat of Pebble will never go away until permanent protections for the watershed are enacted. Tribal and business leaders from the region have proposed a two-pronged approach to protection, and their efforts need our support.

Step 1: *The EPA Must Immediately Veto Pebble Mine*

Now is the time for the Environmental Protection Agency to use section 404c of the Clean Water Act to veto the Pebble Mine to create an immediate safety net for those who depend on Bristol Bay. The U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the Environmental Protection Agency have concluded that Pebble Mine will damage Bristol Bay forever – yet they have allowed the project to continue. The EPA must start its veto process immediately.

Step 2: *Congress Must Act to Establish the Bristol Bay National Fisheries Area*

It is time for our elected leaders to introduce and pass the Bristol Bay National Fisheries Area Act to will protect the waters of Bristol Bay in perpetuity.

This legislation would permanently ban any toxic mine waste from any large scale mining projects that would harm Bristol Bay's rivers, lakes and wetlands. The protected area would be called the Jay and Bella Hammond National Fisheries Area in honor of Alaska Governor Jay Hammond and his wife Bella, whose mother was Yupik.

You can support these efforts to protect Bristol Bay from Pebble Mine by adding your name to this letter:

<https://www.utbb.org/public-comment>

By Bjørn Olson & Penelope Haas

Alaska Judge Rules Against Donlin Mine

In a 78-page decision, handed down on April 12, 2021, Alaska Administrative Law Judge Z. Kent Sullivan issued notice of his findings in favor of Orutsararmiut Native Council that Alaska Department of Environmental Conservation was wrong to issue a Clean Water Act Section 401 Certificate to Donlin Gold because the project would not meet the State of Alaska's water quality standards. Judge Sullivan's findings are a recommended ruling. DEC Commissioner Jason Brune will have 45 days to decide whether to adopt the ruling.

"Sovereign Tribal governments have a responsibility for the health and welfare of their citizens, lands, and self-governance," said Orutsararmiut Native Council Executive Director Mark Springer. "There is nothing more important to Kuskokwim communities and their people than maintaining the subsistence way of life that has sustained them through millennia. This way of life depends integrally upon the salmon and smelt of the Kuskokwim River and its tributaries. The Donlin prospect, which is located upstream from these communities, if developed, would be a direct threat to water quality, to the many fish that traverse these waters, and to the Kuskokwim way of life."

KBCS applauds the Orutsararmiut Native Council for their dedicated work on this important issue, and hope that Commissioner Brune will adopt Judge Sullivan's findings.



K-Bay State Park Management Plan

We are waiting with baited breath to see what the State Park/DNR does with regard to jet skis and what will come of lawsuits filed against DNR for announcing that the park will be closing its lands and waters to commercial hatcheries 10 years from now.

This year KBCS teamed up again with the Friends of Kachemak Bay State Park to submit comments on a draft Management Plan for K-Bay State Park. We advocated for a clear prohibition of jet skis in park waters and supported DNR's decision to close commercial hatchery operations in 10 years time, amounts other things. You can see our full comments [here](#).

According to Alaska Statute, Kachemak Bay State Park is a "Scenic Park," which are "relatively spacious areas of outstanding natural significance, where major values are in their natural geological, faunal or floral characteristics, the purpose of which is directed primarily toward the preservation of its outstanding natural features and where development is minimal and only for the purpose of making the areas available for public enjoyment in a manner consistent with the preservation of the natural values such as camping, picnicking, sightseeing, nature study, hiking, riding and related activities which involve no major modification of the land, forests or waters, and without extensive introduction of artificial features or forms of recreational development that are primarily of urban character..." (Alaska Statute 41.21.990).



KBCS Board Members



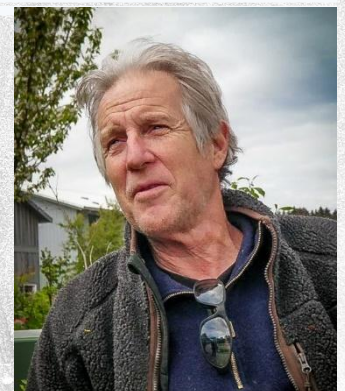
Roberta Highland, President, and long time Board Member is now serving on the Issues and Comment Committee with Penelope Haas. Roberta was presented with the prestigious Celia Hunter Award for Outstanding Volunteer Contributions in 2013. She has been involved in conservation since 1986. Roberta has served on many boards since then — the longest being The Kachemak Bay Conservation Society. Roberta has worked on significant issues that have required statewide coordination for success. She believes we can all be a force for the change we want to see in the world. Her indomitable spirit is nourished by the belief that everything is connected and that protecting the earth and the life it sustains is the worthiest of causes.

Martie Krohn, Treasurer, is a resident of Homer since 1984. Martie has been involved in many civic and environmental endeavors through teaching and 4-H. She taught at The Learning Place, a parent's cooperative educational venture prior to starting Smoky Bay School which operated from 1986 to 2006. Martie brings an extensive background in accounting to the position of treasurer through self-employment, working as a bookkeeper for Kachemak Port Services and serving as treasurer for the Kenai Peninsula Fair Board between stints as president. Martie is also a founding member and treasurer of Arts, Recreation, Conservation, Humanities, Education and Science Alaska (ARCHES Alaska), the nonprofit behind Salmonfest Alaska



Penelope Haas, Board Member, has worked in Alaska's commercial salmon fisheries as a deckhand in the Prince William Sound and Bristol Bay and as a technician for ADF&G in Prince William Sound, Haines, and on the Alaska Peninsula. She has also participated in research with ADF&G and the Prince William Sound Science Center, collecting data on straying of hatchery salmon and genetic impacts of hatchery pink salmon to wild stocks. Her work with KBCS is focused on local conservation issues, including local climate change education and promotion of alternative energy solutions; good planning and management of Kenai Peninsula, Kachemak Bay and Cook Inlet to ensure protection of fish, wildlife and their habitat.

Jim Stearns, Board Member, is president of the Kenai Peninsula Fair Board, a member of the Homer Little League Board and is the producer of Salmonfest. Prior to moving to Alaska 7 years ago, Jim was involved in producing many fundraisers and brought his restaurant and catering experience to Hurricane Katrina and, with a revolving team, served 75,000 meals to evacuees over 2 months. He was also a founding member and leader of Friends of the River in California, founding member and board president of the Central Sierra Watershed Coalition, and past board president of the Mother Lode Women's Center. Jim also serves as a founding member and president of ARCHES Alaska.



KBCS Board Members



Bjørn Olson, Board Member, is a life-long Alaskan, adventurer, photographer, videographer and storyteller. Bjørn attempts to educate and advocate for leaving Alaska better than when he came into it — a task more formidable than climbing Denali, kayaking to Kodiak or cycling a 1,100-mile snow trail above the Arctic Circle.



Madeline Lee, Board Member, is currently pursuing environmental advocacy with her role at Kachemak Geospatial, a Homer-based firm using cartographic story-telling and geospatial support for environmental monitoring and research. As a KBCS board member, Maddy will educate her community on the urgency of climate change and empower people to take action now.

Anna Liljedahl, Secretary.

Originally from a small farm in northern Sweden, Anna came to Alaska 17 years ago as a UAF exchange student. She bought her dreamland beyond the end of East End Rd last summer, off-grid and high speed. Anna researches the flow and storage of water at the watershed-scale and it's linkages to climate, permafrost, and glaciers at Woodwell Climate Research Center and she's now ready to go beyond identifying evidence of climate change.



Katie Aspen Gavenus, Board Member, grew up in Homer, Alaska. She is an environmental educator and program director for the Center for Alaskan Coastal Studies. Other work over the years has included leading wilderness trips and deckhanding on a salmon tender in Cook Inlet. She recently completed a master's program in science education through IslandWood and the University of Washington and is committed to transforming science education - and education more broadly - to be locally relevant, culturally sustaining, meaningful, and inspiring. She believes education, science, and conservation should all be collaborative efforts.



KBCS is taking on some big issues.

We hope you will tell your friends about the work we are doing and invite them to become members.

Membership & Donations

Please renew your annual membership! Do it online at www.kbayconservation.org or send in the form below.

We are a little organization with a big heart, and we need your support to continue to work on local issues.

Yes! I'll support the
Kachemak Bay Conservation Society!

1. Membership

_____ New Member
_____ Renewal
_____ Gift Contribution

2. Support Level:

_____ \$20 Individual
_____ \$35 Couple/Family
_____ \$50 Supporting
_____ \$100 Business
_____ Other

3. Tell Us About Yourself

Name

Address

City/State/Zip

Phone

Email

(check which items you would like to receive)

_____ Email newsletter
_____ Snail mail newsletter
_____ Email Announcements and Action Alerts

Enclose check or money order. Mail your payment and form to:



Kachemak Bay
Conservation Society
3734 Ben Walters Ln
Homer, AK 99603

If you have any questions or for more information email kbayconservation@gmail.com or call 907. 235.8214.