



Kootenay Lake Summit Break-Out Session Summary

November 9, 2013 at Balfour, B.C.

The purpose of the breakout sessions at the Kootenay Lake Summit were to take the pulse of the Kootenay Lake Community to determine what people feel are the main challenges for the lake and what are potential solutions to these problems. This information will help to guide Friends of Kootenay Lake's programs as well as unveil gaps in our understanding and knowledge of this amazing lake. The following is a summary of responses from the 108 people who attended the Lake Summit.

What are your top concerns for Kootenay Lake?

Boating

- Increased boat traffic including high powered speed boats, jet skis, house boats, jet boats.
- There were a number people who were especially concerned with the increased numbers of jet skis on the lake.
- Noise pollution from high powered speed boats and on-board stereos
- Dumping of sewage into the lake from boats due to lack of pump-out stations
- Need for sewage pump-out stations for boats – how to get info and share it
- Lack of boat wash stations
- Foreshore erosion by increased wave action from increase boating in summer
- Need better fueling stations – gas getting into lake
- Lack of fuel stations for summer tourist boats
- Need more moorage
- Need better signage for existing boat launches

Dams

- Power supplies and renewable energy. Need grant support for alternatives.
- Grohman Narrows dredging – effect on water levels and accretion
- Dam operation concern - Not enough spring flooding, no minimum level, over managed, levels changing too quickly. Does this concern fit within a Columbia River Treaty or a water use type plan?
- Are electricity rates too low south of the boarder?
- Impacts of dams and water levels – this one activity trumps all else for impact to environment

Fish and Wildlife Conservation

- Need more efforts to restore and protect shoreline and riparian ecosystems
- Forestry impacts – clear cuts causing erosion, siltation and habitat loss
- Lack of long-term conservation money, and land trust capacity for acquisition of private land
- Lack of cumulative impacts study
- Need more funding for research of fish and wildlife on Kootenay Lake.
- How many fish will there be in 2017?

- Concerned over conservation on private land

Invasive species concern

- Are invasive species shifting the interactions of the specific food web relationships?
- Need monitoring stations at boat launch sites for invasive species. Different volunteer Societies would support these stations. Educate and inform the public. Monitor and enforce clean, drain, dry program.
- General concern about the threat invasive species pose including the potential introduction of new invasive species.

Lake Governance

- Too many accretion permits are being granted
- Lack of diligence of surveyors contributing to high rate of accretion permits granted
- Flood plain exemptions
- Frustration with politics/regulations including enforcement, indifference and ignorance.
- Noise pollution related to motorcycles, lack of enforcement
- Bylaws for shoreline development need to be better enforced.
- Lack of enforcement especially with trespass issues on foreshore.
- Lack of strategic interventions
- Concern that the Province is not participating more in planning and regulation on the lake.
- Need short-term development planning
- Impacts from The Comprehensive Economic Trade Agreement
- Population increase
- Consistency in monitoring of foreshore development, political problem – slow to respond
- Uneven enforcement rules
- Columbia River Treaty renegotiation - impacts to Kootenay Lake
- Lack of access to the lake for First Nations to practice their traditional uses
- Very little information available to public regarding where they public can access the lake.
- Land use zoning and hazard mapping – sustainable development
- Need balance economic/environmental development
- Not enough common sense for ‘powers that be’ and government employees
- Need for planning based on climate change predictions
- Government employees with overwhelming anti-development attitudes
- Tourism should not get to carrier away with increasing tourist dramatically – the roads and ferries are already overloaded.

Shoreline Development

- Need to focus on quality of development (rather than quantity or increase)
- Anti-development attitudes and the belief that developers don’t care. We need a balanced approach.
- Lack of permitted docks



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- Get rid of some of the illegal docks
- Difficult, confusing, and contradictory regulations or directions for people who want to develop changing rules.
- How much development is enough?
- Lack of support/encouragement for ethical/responsible development
- Need for monitoring new development and rate of development on the shoreline
- Private property owners need to be informed on how to undertake restoration of their private lands (ex groynes, rock walls, hardened surfaces), also what permits are required
- Continued works and past structures are causing impacts to the lake because of legislation not being followed.
- How do we influence seasonal residents who own waterfront property? How do they get educated to prevent negative impact on lake?
- Proportion of permanent residents to seasonal
- Unknown impacts from geothermal development as well as unknown extent of impacts from geothermal installation.
- Rapid increase of shoreline development
- Balancing development with ecology
- Covenants on private property
- Inability to walk along beach below high water mark
- Proliferation of docks disrupts flows
- Loss of natural shoreline habitat
- Lot size on lake shore
- Infill along lake
- Not enough education for shoreline property owners
- Old docks that breakup every spring.
- Styrofoam coming out of old docks
- Landowners not allowed to repair their old docks and they become a hazard
- No mapping and little or no maintenance/management of dykes

Water Quality

- Threats to maintaining Kootenay Lake as a clean and pristine drinking water supply are septic leaking into the lake, pollution, lack of pump-out stations, increasing amount of motorized recreation.
- No raw sewage upstream of drinking water intakes
- Leaching of sewage into the lake from old septic systems (especially at high water)
- Pollution in lake from
 - Pharmaceuticals in water (not only just birth control)
 - Water treatment chemicals used in sewage treatments can degrade quality of drinking water
 - Effluent contaminant from chemicals at industrial plants such as pulp mills, smelter and other industrial operations



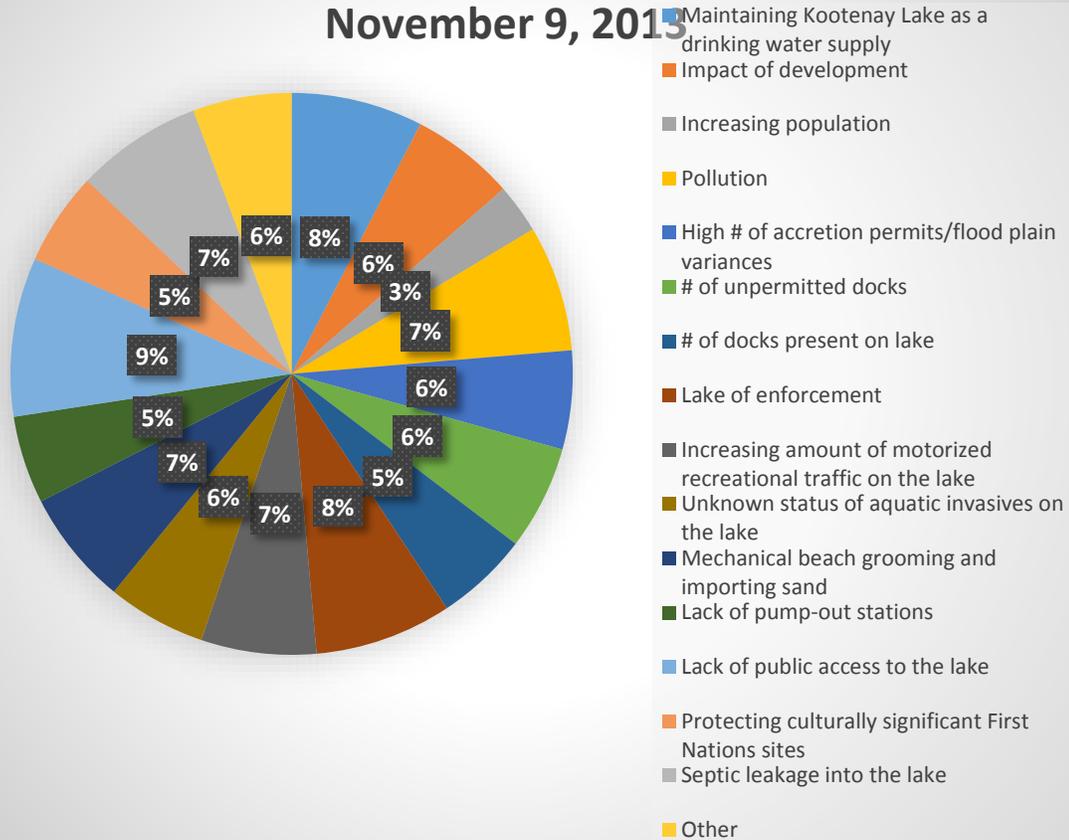
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- Threat of train derailment into lake and tributaries. We need an effective communication system for trains including knowledge of what is being transported and what to do if there was a spill of harmful substances into the lake?
- Increase of open cell foam from old docks
- Sewage treatment plant by Nelson – e. coli, chemicals used in water treatment (ex. flocculents), and pharmaceuticals.
- We don't know enough about the potential negative impacts of lake fertilization and as a population we would have no idea of what might be a negative indicator.

Other

- Disregard of public when using public access areas for example garbage, human waste, and lack of courtesy of property owners.
- Lack of knowledge of compliance, need for more education with residents owning lakeshore as to what is allowed, how to remove old docks.
- Foreshore dewatering, impacts of dams
- Climate Change impacts
 - floods, hydrological impacts, how will it affect our communities?
 - How can we prepare?
 - Need to manage at a watershed level (ex. forestry) “not a fish tank”
 - Lack of response measures
- Number of tourism operators that are making money from lake but are not reinvesting a portion of profits in maintaining a healthy lake.
- Lack of public access to lake and foreshore development impeding public access to foreshore (ex. groynes and docks)
- Social tensions with permanent versus seasonal residents stemming from a dichotomy of values with development and ecology.
- Permanent residents versus seasonal residents
- Lack of communication and coordination among small groups.
- Lack of strategy for public education
- Garbage on shoreline
- Loosing public access to the lakefront – need to maintain places close to Nelson like Red Sands, Bealby Point, St Johns Walk and old CPR land.
- Need better emergency and health services
- How to change public perception that everyone is entitled develop the foreshore area like they own it rather than then respect it as the crown land it is designated.
- Impact of lake on economic health of the Kootenay Lake community
- Effects of logging on creeks feeding into lake.
- Don't want Kootenay Lake to become as crowded and overused as lakes like the Shuswap
- Pollution education in regards to what one can do towards maintaining and protecting our natural resources (maybe this can go alongside the marketing that is done to promote the area).

Top Concerns for Kootenay Lake - Survey responses from 44 people at Lake Summit- November 9, 2013



Ideas for stewardship projects to address concerns?

Boating

- Create boat wash stations at key points on lake. Include info on clean, drain, dry program and details on aquatic invasive
- Have volunteers monitor boat launches for invasive species including providing info about the clean, drain, dry program
- Pump-out Station demo project

Education

- Develop strategy for public education
- Letters, flyers, regular education in newspapers
- Promote low impact tourism and ethical boating practices



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- Target second homeowners (seasonal residents) possibly through surveys
- Develop educational resources for key lake issues like shoreline development
- Pesticide use near shoreline. Educate on bylaws and best practices.
- Educate lake users “code of ethics”
- Build appreciation for wildlife and other biological treasure of Kootenay Lake
- Create resources for homeowners to know what is allowed and Best Management Practices
- Create a lakeshore education packet at tourism office, include info on building permits.
- Provide outreach to developers, contractors, realtors to get them to appreciate why people want to live here.
- Provide info on what impacts groynes have to fish and wildlife.
- New shoreline property owners to receive educational information on care of shoreline
- Create a historical overview of Ktunaxa history that can be shared to improve the understanding of Ktunaxa history and existence.
- Learning how to talk with others who do not understand the values and necessity of stewardship. These concerns need to be held more in the mainstream and political community. Get beyond the converted, get beyond the short-term thinking
- Interpretive centre talking about this area history, resources, kokanee, pictographs, storytelling
- Offer more historical tours
- Need cultural awareness – shift from consumer values to understanding inter-connectivity and the commons

Fish and Wildlife Conservation

- Work with Teck on shoreline restoration and reclamation
- Land acquisition/protection for conservation
- Disseminate and interpretate Foreshore Inventory Mapping and Shoreline Habitat Inventory Mapping
- Conduct shoreline and riparian restoration projects
- Collaborate with BC Hydro, CCRIFIC to develop a kokanee shoreline spawning restoration strategy. Include education to shoreline homeowners.
- Prioritize what is having the biggest ecological impacts (e.g. lake level changing dramatically overnight vs and old unregistered dock)
- Use wildlife tree reporter tools on biodiversityatlas.org to map wildlife trees by lake

Lake Governance

- Inclusive, collaborative approach with all stakeholders. Build alliances, not enemies.
- Create a Lake Management Plan that includes community values.
- Separate meeting following Lake Summit to synthesize ideas into an action plan. This would be an opportunity to discuss and prioritize the topics brainstormed at the Lake Summit.
- There is currently a process for shoreline development through Front Counter BC in Cranbrook that works. Unlike other areas like the Okanagan. FOKL should try not to change this, maybe try

supporting and promoting existing process instead of creating anything new, or making it more cumbersome than it already is.

- Need to streamline development process – better coordination
- Water Use Plan options – look at the plans for the Columbia and Duncan – what’s changed?
- Create a liquid waste management plan
- Get Columbia River Treaty money to Kootenay Lake, keep the lake in the discussion.
- Engage lakeside members in the Columbia River Treaty discussion. FOKL should continue to participate in the CRT Sounding Board.
- Create riparian protection zones where no development is allowed
- No jet-ski bylaw and horsepower limitations
- Improve accretion process. Need an independent review of survey reports and make info available to public.
- Get rid of accretion as it now exists.
- Change government
- Inventory and plan development and protection to public access points
- Public and First Nations support for Provincial enforcement (ex. Haida Gwaii, watchmen)
- Put turbines on Duncan Dam with money going towards restoration and conservation.
- Zoning, especially for shoreline
- Establishing aquatic lake protection zones
- Build support and participation of the Kootenay Lake Partnership to unify regulations across jurisdictions.
- Train safety – what is on the trains and is there a plan in place if there were an incident (Bev Cauldwell, contacts for CPR Creston). Explore Federal Legislation that is in the works. Ensure there is an emergency response plan in place for Kootenay Lake train derailment.
- Land-use planning to help with community values piece on foreshore planning.
- Control lakeside and “ribbon development” along roads and work towards more concentrated development (easier and cheaper to service, less impact on the environment).
- Enforce laws with regard to zoning and shoreline development
- Provide opportunity for public and First Nations to support the province in compliance and enforcement.

Science/Research

- Water sampling to identify pharmaceuticals in water
- Continue with existing WQM program
- Create more opportunities to participate in research (especially with students)
- Develop research project to determine flow and current trends
- Conduct cumulative effects study
- Invasive species – inventory, map, trends.
- Study impacts of geothermal (including cumulative effects)
- Study dam impacts on shoreline
- Sandpiper Study
- Beaver study



- Determine what percentage of properties are second homes.
- Hazard mapping and risk assessment of alluvial and housing developments.
- Aerial mapping and monitoring of shoreline changes.
- Determine if there are any effects of herbicide spraying by CPR (KLR) railway lines on the lake.
- Study downstream effect of farming in Creston
- Determine effects of agricultural on lake (ex. herbicides, pesticides, animal waste)
- Determine effects of forest practices and natural resource extraction (x. selenium from coal mines) on lake.
- Build recreational opportunity by building a Kootenay Lake trail with interpretive signage.

Shoreline Development

- Help lakeshore landowners feel less persecuted
- Host shoreline remediation/restoration workshops, including incentives (ex. lower taxes for waterfront owners).
- Need more balance approach to development that looks at true environmental cost. Learn from other successful lake communities that have faced similar issues.
- Responsible foreshore management for private land owners, public foreshore users, and local government staff and elected officials.
- Styrofoam monitoring/clean-up possibly through a youth action project
- Assist property owners with shoreline restoration including specific recommendations, guidelines, plans, and brochures. Needs to be community driven.
- Beautiful shoreline contest
- Create list of recommended contractors, surveyors, and Qualified Environmental Professionals.
- Restore impacted crown land
- Shifting mentality about 'success', how it looks around your lakefront property, make it cool to be eco, to care about the lake, to come up with amazing ideas to respect the natural ecosystem on private property and beyond. Use video clips, post cards, tourism marketing about values of pristine natural environment.
- Well facilitated and designed forums that have people identify and grapple with real, and sometimes controversial challenges related to shoreline development and policy
- Neighborhood natural landscape plans
- Lakefront landscaping – suggest ways to accommodate humans and fish on lakefront

Other

- Create interpretive walk or a green-belt on part of lake
- Build on/continue FOKL's Lake Watcher Program
- Management of invasive species including removal, inventory, and signage.
- Shoreline mapping of accretion and trespass
- Map public access points of lake.
- Make Friends of Kootenay Lake website a portal/hub
- Get funding for coordination and communications.



- Set up a publically run/public input Steering Committee like with the Slocan Lake Stewardship Society. This will provide continuity and interest to be continually channeled through other organizations like FOKL and the Kootenay Lake Partnership.
- Need for FOKL to become an organization under the BC Lake Stewardship Society
- Shoreline Cleanup – annual/seasonal program.
 - Youth summer project to remove garbage from shoreline
- Signage to show public access to waterfront
- Limit use of chemicals on lawns and parking lots next to lake
- Need to host workshop to determine community values. Look into how our attitudes and ideas shape our landscape.

Learning Needs - What are the current gaps in our understanding and knowledge of Kootenay Lake? What are you interested in learning more about?

Dams

- Understand the impacts from dams
- More info about what the lake water supported pre-dams to now.
- Need to operate dams to facilitate kokanee shoreline spawners by ensuring the water is held high enough, long enough to allow the eggs to hatch. May need to use community pressure to ensure that this happens.
- Effect of further dredging of Grohman Narrows

Fish and Wildlife/Ecology

- Dissemination of Foreshore Inventory Mapping
- Succinct ecological history – where we're going (touchstones?)
- Invertebrates? Fish are not the only indicator species. Disseminate the Aquatic Habitat Inventory and Shoreline Habitat Inventory Mapping.
- Inventory the garbage on the shoreline.
- Invasive species – inventory, map, trends.
- What activities are having the greatest impacts, need to prioritize.
- What can be done to restore the spawning creeks
 - Which creeks supported in the past and don't now and how to restore
- Why are there fewer bats and fewer mosquitos recently?
- The diminishing cottonwood stands and their relationship to fish and wildlife.
- Effects on biota (all levels on food chain) of pharmaceuticals, pesticides, and industrial effluent (smelters and 2 pulp mills).
- What is the important of protected areas/natural habitat?
- Do we know enough about the health of the shorelines, riparian ecosystems, alluvial plains, aquatic species, and migratory species?



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- Basic lake ecology. Want to know about Kootenay Lake ecosystem (ex. species of fish, their food, their predators), lake life.
- Impacts on on-shore activities

Lake Governance

- Clear vision for Kootenay Lake? FOKL to help derive/describe? Should be a broad, inclusive process.
- Tools/process for inclusive conversations that build alliances.
- Emergency response plans?
- Is it possible to use zoning to ensure green space?
- Columbia River Treaty
- What are the noise bylaws for boaters?
- Water use plan
- Need more info on regulations, who to call if I see something?
- Groynes

Shoreline Development

- Development trends
- How to disseminate, support, and implement BMP's
- How does shoreline modification impact fish and wildlife?
- Legislative requirements for landowners
- Need a presentation by the Natural Resource Officers re: property and shoreline management
- Effects of shoreline development on habitat and aquatic species
- Do's and don'ts of living by the water.
- Local people are generally unaware of the regulations which require public access to the water when subdivision are proposed.
- Development/maintenance standards and laws

Water

- What is in our water? Who and what impacts water? Solutions?
- What is the impact of pharmaceuticals on the water?
- Want more info on flow and currents in Kootenay Lake, including seasonal variation
- Want to know where the actual boundaries are especially related to high water, alluvial fans, and floodplains.
- Cumulative effects on water quality and drinking water quality including septic leakage into lake.
- Impacts of agriculture and forestry to Kootenay Lake in terms of toxins, nutrients loading, spraying on railway corridors.
- Kootenay Lake shoreline processes (physical)
- What is the lake turnover time/flushing rate?
- What impact is the chlorination of small community water systems having n the lake, if any?



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- More info about the chemicals being used in the lake. Does it affect our drinking water (organic vs inorganic).
- Want to find out what the results are from FOKL's water quality monitoring program.
- Raw sewage dumping
- What is in the liquid fertilizer added to lake? Want specifics. Is there an effect on drinking water? Can we improve on the fertilizers we are adding?
- Long-term studies of other areas with artificial lake fertilization
- Private water users and what they are doing to "purify their water" due to interior health enforcing users to chlorinate.

Other

- Cultural history including connection to fish
- Understanding of history and dynamics of the lake
- More info about First Nations and cultural values and claims. Want to know about culture and to hear traditional stories of the First Nations that used this lake.
- Lack of understanding of Cultural history of lake, especially with Ktunaxa
- Best Practices and lessons learned from other lakes and with different management schemes. What are models from other communities who are living sustainably by their water.
- Case studies from other lakes
- Compile and promote proactive, positive info/action
- Impacts on climate change on Kootenay Lake. Would like to know projections and ideas on how we can become more resilient.
- Need information on what trains are carrying.
- Need to understand our relationship to the lake as individuals
- How to motivate citizens to engage with scientific information and the importance of that to their ability to be stewards or informed citizens.
- User friendly online library including articles that are not overly scientific
- What are the recreation trends?
- Info to Real Estate Agents
 - Connect info through welcome wagon
- Knowledge about public lake access and development variances
- Learn more about possible removal of land from ALR and how it may impact lake
- Education to residents regarding the lake, regulation, threats, and impacts.
- Changing population demographics around lake (i.e. age, income)
- Lakeshore property owners pay extreme taxes – asking for more is not fair. RDCK seems to have lots of tax money to work with. No more taxation.
- Effects of climate change on lake – planning for it.
- What events/activities are most impacting the lake (ex. dam impacted water levels vs old docks)
- Inclusive, proactive, collaborative activities, events, info, and communication that are equitable, sustainable, practical and evidence-based.
- What are the effects of agriculture, mining, and forestry on Kootenay Lake
- Is there a regional growth strategy?



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- Determine the effects of local extreme weather events on Kootenay Lake
- Foreshore access and rights for public access.