Fostering Coalitions for a Cleaner Big Lake

Final Report
Friends of Mat-Su
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Project Summary: This project targeted residents and recreational users in the Big Lake area of the Mat-Su Borough, an impaired lake due to pollution from petroleum hydrocarbons. Friends of Mat-Su (FoMS) recruited the Big Lake Chamber of Commerce, local community organizations, and individuals to help with the project and educated residents about ways to restore the water quality of Big Lake. Landowners were surveyed and provided with information about protecting watersheds during a series of open houses. FoMS partnered with the Wasilla Soil and Water Conservation District and school children from Midnight Sun Charter School to participate in a vegetation restoration project. Survey results were analyzed and evaluated for future projects.

Project Description: Big Lake is located about 15 miles west of Wasilla, Alaska and the related watershed drains about ninety square miles. Big Lake itself encompasses 131.9 square miles of land and 12.9 square miles of water with a maximum depth of 90 feet. There are permanent residences and recreational cabins that surround the lake, with two marinas and one restaurant. Big Lake is a popular year round recreational area, especially for motorized boaters and snow machine users because of its proximity to major population centers. The Big Lake watershed contains a diversity of habitats and wildlife species, and is host to all five species of Pacific salmon. These wildlife species depend on a healthy pollutant free watershed for existence.

Over the last several years this area has experienced increased development and population growth. DEC designated Big Lake as a priority water body on Alaska's Clean Water Actions list because of the lake's pollution level. The pollutants of concern include; nutrients, fecal coliform bacteria, and petroleum hydrocarbons from the heavy use of motorboats and jet skis. More specifically, Big Lake does not meet the Petroleum Hydrocarbon water quality standards and is considered an impaired waterbody.

FoMS has been addressing the issue of development and water quality for several years and successfully completed the Mat-Su Landowner Watershed Education Project in 2007. This project recruited student canvassers to go door-to-door to personally hand out information about watershed protection to landowners in the Lake Lucille and Cottonwood Creek areas.

FoMS decided a different approach to educating residents in Big Lake was necessary due to the high number of seasonal homes and recreational activity; this situation makes door-to-door canvassing inefficient. Therefore, we conducted a series of informational open houses, supported by local organizations, and helped organize a youth shoreline restoration project. This project was designed to change behavior towards lands along Big Lake and activity on the water, while also creating public awareness to improve the health of the Big Lake watershed.

With the commitment of support from the Mat-Su Borough, the Wasilla Soil and Water conservation District, Wal-Mart, The Fred Meyer Foundation, and the Royal Bank of Canada, Friends of Mat-Su was granted funding in 2008 through the Coastal Program of the U.S. Fish and Wildlife Service.

Goals and Objectives

The goal of this project was to provide educational materials to landowners and recreational users of the Big Lake area through a series of open houses. A secondary goal was to recruit local school children to participate in a shoreline restoration project in partnership with the Wasilla Soil and Water Conservation District. Finally, the last goal was to ascertain current knowledge and practices of the users of Big Lake that may influence watershed health. An indirect goal of the project was to provide valuable skills to school children in watershed education and basic skills in restoration work. Project success was to be measured by completion of the following activities:

1) Identifying Members for Steering Committee
2) Steering Committee Workshop
3) Watershed Open Houses
4) Identifying Shoreline Restoration Project Location
5) Recruit Students for Shoreline Restoration Workshop
6) Shoreline Restoration Workshop
7) Inventory and Evaluation

Methods and Accomplishments

1) Identifying Members for Steering Committee– FoMS contacted members of the Big Lake Chamber of Commerce, Big Lake Community Council, and the Alaska Sailing Club and invited them to participate in working on the project. Several community members agreed to become involved and attended subsequent meetings and workshops.

2) Steering Committee Workshop – FoMS facilitated one evening meeting to discuss the project and the reason why it is needed. About 50 people attended this initial meeting. Laura Eldred from DEC was invited to present information about Big Lake's impairment status. She also discussed the various ways that Big Lake could be removed from the impairment status. Meeting attendees initially were angered by the idea that Big Lake is impaired and questioned the

validity of the water quality testing and attendees believed that FoMS intended to pass land use regulations. However, by the close of the meeting community members realized that FoMS' role was simply to provide education for residents to better take care of the lake and most thought this was a good idea. At this point in time, no community members expressed interest in taking leadership positions to be spokespeople for the education project.

3) Watershed Open Houses – FoMS organized two educational open houses targeted at residents and recreational users of Big Lake.

a) The first open house, A Cleaner Big Lake, was held in September 2008. About 30 people attended this forum. FoMS provided an agenda with a list of speakers and other participants. The purpose of this initial open house was to do a broad education about the ecological structure of big lake and identify the major threats to this habitat. For this reason, speakers from several government entities with expertise and knowledge were invited to speak.

The speakers included Bill Rice, from the USF&WS provided information about the fish habitat of Big Lake; Laura Eldred, from the Department of Environmental Conservation addressed the water quality of Big Lake highlighting the impairment status of the lake; and Dean Hughes from the Alaska Department of Fish and Game discussed the important benefits of shoreline restoration projects, including ADF&G's restoration program.

As part of this open house, we also included an educational fair that highlighted other important components of watershed protection. Fair participants included Oran Woolley, Water Division with the DEC who provided information about septic systems; representatives from the Alaska Rural Water Association gave a presentation about drinking water protection, Catherine Inman from the Wasilla Soil and Water conservation District displayed a three dimensional watershed water flow model, and Matt Lacroix from the EPA described how to protect fish habitat.

Left: Big Lake Community Members participate in the fair portion of the open house. Top Right: Big Lake Residents view one of several maps and educational posters provided as part of the event. Bottom Right: Laura Eldred, DEC, speaks to the residents about potential causes and solutions to Big Lake's impairment status.

b) The second educational open house, Big Lake Watershed Stewardship Workshop, was held in May 2009. About 10 people attended this workshop. Again, FoMS provided an agenda with the speakers as well as handouts on maintaining septic systems and tips for better boating practices. The purpose of this second workshop was to promote watershed stewardship on Big Lake. Our target audience was homeowners. We chose this audience because homeowners around Big Lake have the greatest investment in the Lake's future, as well as having a very direct impact on what flows in to the lake from their properties. Keeping this audience in mind we chose speakers who could identify potential solutions and preventative techniques to watershed degradation.

The speakers at this event included Amber Bethe form Alaska Department of Fish and Game who spoke about the importance of shoreline restoration; Fred Sorenson, University of Alaska Cooperative Extension Service, who discussed the intricacies of hydrologic systems and the potential harm of polluting the water tables through broken septic systems; Arlene Stoelting, Alpine Septic Pumping, who talked about proper septic maintenance in Alaska; and Pamela Miller, Alaska Community Action on Toxics, addressed the importance of reducing pesticide application on lawns.

Top Left: We handed out educational materials as well as surveys on the tables for participants to take. Above: Fred Sorenson, from UAF Extension Services prepares his septic tank model. Left: Margaret Adsit, FoMS, opens the presentation to residents of Big Lake.

4) Identifying Shoreline Restoration Project Location – FoMS worked with the Alaska Sailing Club and originally identified a parcel at the Club Headquarters for the project. However, due to land ownership issues this location did not work. We were able to work with the Wasilla Soil and Water Conservation District (WSWCD) to identify a past restoration project at the mouth of Fish Creek, that needed some more work.

5) Recruit Students to Participate in Shoreline Restoration Project- In partnership with WSWCD we recruited about 20 students from the Midnight Sun Charter School to participate in this project.

6) Shoreline Restoration Project- On May 6, 2009 in partnership with WSWCD and the students and teachers at Midnight Sun Charter School we helped conduct a small restoration project where Fish Creek drains out of Big Lake. FoMS provided the materials necessary for the project including, coconut mats, grass seed, wild flower seeds, and native flowers. We also supplied snacks for the students and adults to keep everyone energized for the project. The restoration included placing coconut matting on a hillside and planting grass to prevent erosion into the creek. We also planted a variety of other vegetation to

enhance this well used area. The project was a success and the students learned about shoreline ecology and vegetation.

Previous Page: Students worked speedily over a few short hours, planting, establishing trail lines, putting down seed and coconut mats. The day's restoration project provided many opportunities for hands-on education in ecological restoration and the importance of protecting riparian habitats.

7) Inventory and Evaluation – One of the most difficult challenges we faced was collecting data regarding knowledge and practices of the users of Big Lake that may influence watershed health. The final questionnaire that was developed outlined the following key areas: a)determining the individuals relationship with the lake b)establishing seasonal (winter and spring) habitual use of the lake c)asking value based focus questions about the individuals thoughts and opinions about Big Lake. Below you will see the skeleton questionnaire:

Final Survey Questionnaire:
Q1 Name:
Q2 How are you affiliated with the lake?
Seasonal Resident: Y N How many months of the Year do you use the lake:
Recreational User: Y N How many months of the Year do you use the lake:
-Where is your primary residence?
Year-Round Resident: Y N How many months of the Year do you use the lake:

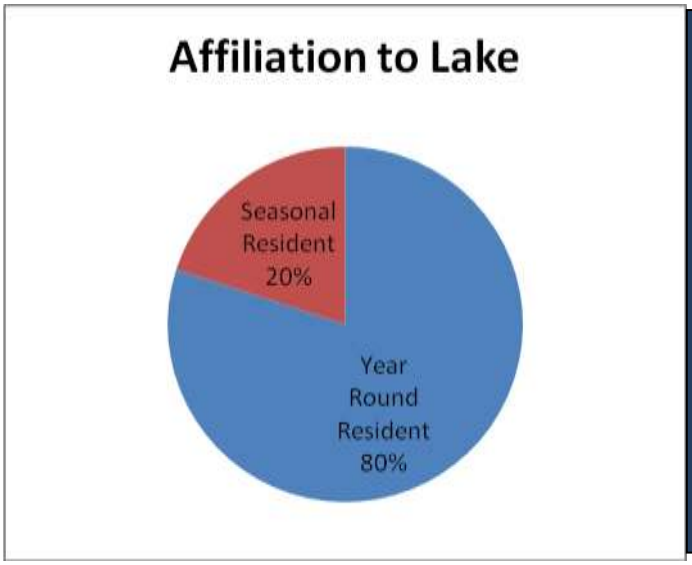
Q3: What Activities do you participate in throughout the year?
Open Water Activities
Boat: Y N
Swim: Y N
Fish: Y N
Jet Ski: Y N
Float Plane: Y N
Closed Water Activities
Snow Machines: Y N
Dog Teams: Y N
Skiing: Y N
Ice fishing: Y N
Ice Skating: Y N
Any other uses of the lake not mentioned above?
Q4:How many years have you been living/visiting Big Lake?
Q5:What has been your favorite part about the lake?

Q6:Also, during this period of time have you had any concerns about the lake?

Would you like us to contact you with more information about watershed stewardship in the future?
What is the best way to contact you?
Name:
Address:
Phone Number:
E-mail:

Data Collection: We only collected 14 surveys regarding the use of Big Lake. Our surveys were conducted during the open houses and steering committee meeting.

Results: Although no significant statistical information can be drawn from the limited number of surveys, there is a good baseline of information regarding some uses of the lake. The results are as follows:



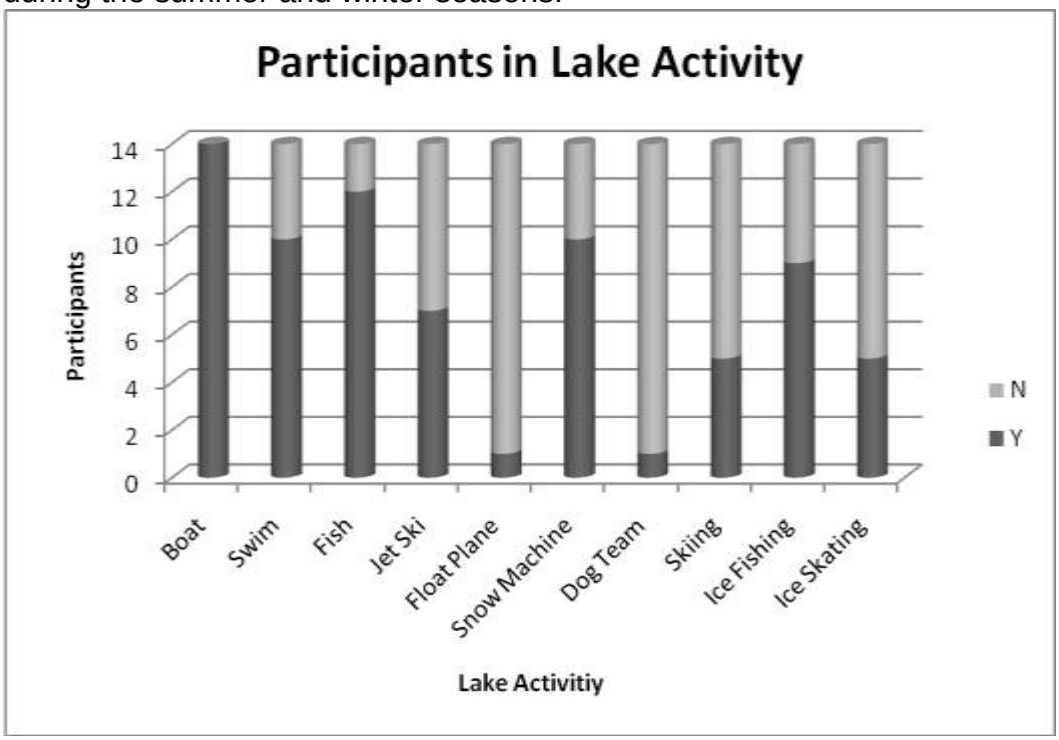
Profile of Lake Users

-Seasonal Residents median time spent on the lake was 6.25 months/year, whereas year round resident's median time spent on Big Lake was 12 months.

-The median time interviewees (both resident and non-resident) had spent in and around Big Lake was 21 years.

-Of the 14 Surveys conducted, 8 interviewees identified themselves as recreational users of the lake with median time spent on the lake of 12 months/year recreating.

Despite only 8 surveys identifying recreational activity as part of the use of Big Lake, all 14 surveys completed provided information regarding lake use both during the summer and winter seasons.



When asked to Qualify the value of Big Lake, individuals had the following repsonses:

Qualities of the Lake that People Enjoyed
No Rule's On lake
Water, Wildlife, not many large developments
Self-explanatory

Close to Anchorage, waterskiing
Boating/Canoes
Scenery, quiet (when it is quiet), bird watching, wildlife
Beauty and amenities
Life
Peace and quiet on weekdays
Recreational Activities
Provided Great Fishing and Hunting until Recent Years
That there are "Shoulder seasons", when no people are on the lake

When asked to address problems with Big Lake, people had the following responses:

Concerns About Big Lake
1)No new laws or restrictions 2) Open a bar on the lake
1)no fires on lake 2) no fireworks on lake 3)no ocean boats 4) no house boats
Rebuild Call of the Wild
Better GCI Cell phone reception
Set Backs
Restricting 2 stroke motors, enforce no waste zone and enlarge 80 to 200 ft. from shoreline
Loud noise boats
Remove Jet skis and Jet Boats
Zoning
Concern about fish and wildlife depletion, perhaps through chemicals
Concerned about gravel pit within 450 feet of the N. Shore

Evaluation

From these surveys we can glean some interesting points about the profile of Big Lake beyond its watershed system. When specifically looking at users of Big Lake, it is important to note the length of time, mean 21 years that people have spent, recreating or living on the lake. It is also important to note the main recreational activities (those of 8 or more yes responses) are in boating, fishing, swimming, snow machining and ice fishing on the lakes. This length of time and recreational preferences can be interpreted as a)that these users have a strong investment in the lake b)that these users may be resistant to outside intrusion about use of their lake, especially concerning motorized vehicle use c)there is a strong commitment to a fishing culture on the lakes. These recreational activity preferences are again reflected in peoples values and concerns about the lake i.e. people don't like the noise of the boats, or are concerned about the water quality, yet some individuals are against any regulation. From these survey results, plus anecdotal information gathered during the forums and steering committee, FoMS has identified that Big Lake is a conflicted community about the best course of action as to what to do with the lake. For our part, FoMS

believes that continued watershed stewardship is the best course of action to take in the community.

For this reason, FoMS also created a website for the users of Big Lake that provides useful information on watershed stewardship. www.biglakewater.com. Because no strong community leadership became apparent during the course of our year's work in the community, the website, with continual updates as the season's change from summer use to winter use, will serve as the community's education gateway to access information directly regarding ongoing and updated information about their Lake!

Acknowledgements
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