

# FRIENDS *of Great Salt Lake*

P.O. Box 2655, Salt Lake City, Utah 84110

(801) 355-5226

Volume 3 Number 1

Fall 1996



## *Contents*

Calendar	2	Citizens Against Chlorine Contamination	11
Elections and Party	3	Proposed Black Rock Harbor Update	12
Coming Attractions	4	FGSL Board and Committees	14
Field Notes	5	Great Salt Lake Surface Elevations	14
Enjoying Islands in Great Salt Lake	6	Volunteer Bulletin Board	14
Great Salt Lake Slide Show Proposal	7	Issues Committee Report	14
Trip Talks	8	Guidelines for Submitting Material	15
Candidate Survey	9	Recycle Aluminum Cans for FGSL	15
Update on Western Transportation Corridor	10	Membership Application	16

The mission of Friends of the Great Salt Lake is to preserve and protect the Great Salt Lake ecosystem and to increase public awareness and appreciation of the Lake through education, research, and advocacy.



# CALENDAR

October						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Board meeting - Salt Lake County Bldg., room S2019 7-9 pm

Palaeolimnology field trip - Meet at Sugarhouse Garden Center 9 am, Kathlyn Collins 355-5226

25<sup>th</sup> - 27<sup>th</sup> Great Salt Lake Dessert Auto Tour No. 1 - Kevin Landis 972-7054 or 328-4561

Deadline for November flier - Lynn LeMaster 294-4517

Potluck, Board elections, and General Meeting - Sugarhouse Garden Center 6:30-9 pm

November						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Salt Lake Island Cruise - Kathlyn 355-5226

9<sup>th</sup> or 10<sup>th</sup> Board retreat

Deadline for December flier - Lynn LeMaster 294-4517

Board meeting - Salt Lake County Bldg., Room S2019 7-9 pm

December						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Board meeting - Salt Lake County Bldg., Room S2019 7-9 pm

Deadline for January Newsletter - Jim and Reda 484-8271

January						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Board meeting - Salt Lake County Bldg., Room S2019 7-9 pm

General meeting - Sugarhouse Garden Center 7-9 pm

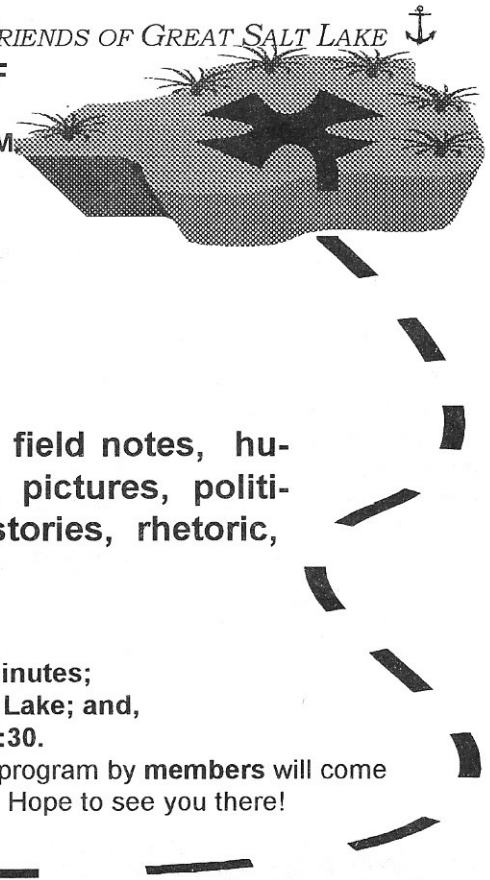
Deadline for February Flier - Lynn LeMaster 294-4517

Cover Photo: Old piers emerge from the sand on the old rail line at the site of the original Saltair resort.  
Photo by Jim Zinanti, Spring 1991



## SHARING FOOD AND YOURSELF

Come to the Annual Meeting  
Tuesday, OCT. 22, 1996, 6:30 to 9:30 P.M.  
Sugarhouse Garden Center



6:30 P.M. **Potluck.**

7:30 P.M. **Annual Meeting** Including Elections.

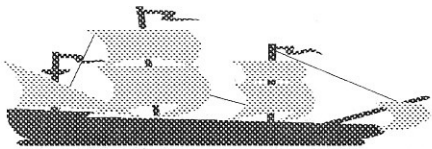
8:00 - 9:30 P.M. **The Program Comes From YOU!!!!**

**SHARE** your art, beatitudes, dance, debate, field notes, humor, ideas, music, observations, pamphlets, pictures, political discourse, poetry, sermon, skit, slides, stories, rhetoric, reminiscences, and/or video.

There are three rules:

1. Each person gets no more than five minutes;
2. Materials must relate to the Great Salt Lake; and,
3. Program will not go any longer than 9:30.

More about the potluck, annual meeting and program by members will come to you in a flyer before the October meeting. Hope to see you there!



## Help the Great Salt Lake Ecosystem?

On **October 22, 1996**, during our regularly scheduled general meeting, we will hold elections for several Board Positions. You may nominate yourself or someone else between now and when the actual balloting takes place at this meeting.

**Thirteen members comprise the Board of Directors:** 4 officers and 9 general Board positions. **Available positions for 1997 include *President Elect, Vice-President, Secretary, and four General Board seats.*** **The Treasurer's officer position, which is not a Board position, is also available.**

Terms of offices begins January 1. Officers are elected for a one-year term and general Board members are elected for two-year terms.

Responsibilities are divided among the Board members based on their position description, talents, interests, and the available time of an individual board member. Generally, the President prepares the Board meeting agendas, presides over the meetings, brings organizational and people skills to the group, and is the official spokesperson.

The **President-Elect** presides over the issues committee and prepares a budget for the following year when

they would take the President's position. The **Vice-President** is in charge of the membership including sending renewal notices and maintaining a current member list. The **Secretary** takes minutes of the meetings and keeps an historic record of the group's activities. The Treasurer maintains the book keeping and reports to the Board each month. The **general Board members** select a committee of their interest and other duties of interest to become involved with.

All Board members are expected to attend eleven regular Board meetings per year schedules 7-9 p.m. the first Thursday of each month in Salt Lake City. An annual one-day fall Board retreat will be held the second weekend in November to review the past year and plan for 1997.

In a note of encouragement for those that might consider a Board position, the Board is a good place to mix our various and unique talents and energies to really make Friends a fun and effective organization for the community, members, and the Board.

We welcome your questions about your possible role as a Board member or volunteer. **Call Kathlyn at 355-5226 or Joel at 485-2394.**

## Coming Attractions

### Field Trip

October 19, Sat

Paleolimnology of Lake Bonneville and Great Salt Lake  
(Paleolimnology is the study of prehistoric lakes.)

When did the ice age end and Great Salt Lake begin? When the glaciers melted, how was the Great Salt Lake affected? How is the Lake and the Great Basin still being affected by the ice that melted long ago? Learn these and other fascinating stories of the landscape we live in from Professor Don Currey on a field trip sponsored by Friends of Great Salt Lake on Saturday, October 19. Professor Currey is the Director of the Limnotechnonics Laboratory in the Department of Geography at the University of Utah. He specializes in geomorphology of lakes and lake basins around the world in

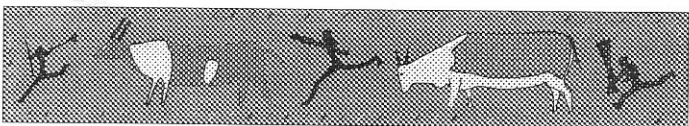
desert, mountain, and arctic environments. Professor Currey will take us on a journey where we can witness these stories displayed on the land for all to see, if they know what to look for. Lakeside is one destination on the tour with many stops on the way.

Meet at the Sugarhouse Park Garden Center at 9:00 am. We will car pool in a van if possible. We will return by 4:00 pm. Bring lunch, water, a hat, appropriate clothing, and walking shoes for short hikes. For more information, call Kathlyn at 355-5226.

### Field Trip

October 25-27 Fri-Sun

Great Salt Lake Desert Auto Tour No. 1



Enclosed with this newsletter is a sign-up form for our fall trip, October 25-27, 1996. On this trip we will enjoy the desolate beauty of the Great Salt Lake Desert and learn a little about the early travelers and explorers of this region. Several stops on this trip will include readings from "Exploration of the Valley of the Great Salt Lake" by Howard Stansbury. A reprint of this report is available from Smithsonian Institution Press, PO Box 960, Herndon VA 20172-0960, phone 800-782-4612,

FAX 703-689-0660. Single copy price is \$24.95 plus \$3.25 shipping. Other books of interest include "The Great Salt Lake" by Dale Morgan and "Salt Desert Trails" by Charles Kelly. Several copies of these books are available through the local libraries. Volunteers are needed to bring firewood, prepare dutch oven dessert, lead Saturday night entertainment, and bring portable toilets. If you can help with any of these please contact me at the numbers listed on the sign-up form. The sign-up deadline is 17 October 1996.

Thank You  
**Kevin Landis**

### Salt Lake Island Cruise

November 2 Sat

Join Friends of Great Salt Lake for a lake cruise Saturday, November 2, from 10 a.m. to 4 p.m. We are chartering the **Island Serenade**, a 65-foot luxury cruise liner, of Salt Island Adventures operated by Steve Ingram. During this leisurely six hour cruise, we will visit five islands in the south end of the lake, share information about the lake, and look for some good bird watching opportunities. The midday meal will be potluck inside the cabin, so bring your favorite food dish and eating utensils. A cash bar is available for drinks or bring your own. The cost of the cruise is \$10 for members (and others in their households) and \$30 for non-members

which includes a years membership in FGSL. The cruise has been generously sponsored by Terra Diamond of Salt Lake City. We have room to accommodate 60 people. Children are welcomed. To reserve your space, send in your money to be received by October 30 to Friends of Great Salt Lake, P.O. Box 2655, Salt Lake City, UT 84110. This is a first come, first serve basis. Bring binoculars, sun protection, and a warm jacket or windbreaker. Be at the Antelope Island Marina by 9:30 a.m. For more information, call Kathlyn at 355-5226.

## Field Notes -- *Tufa Love, Tufa Luck*

Joel Peterson

My attention was immediately focused upon tufa as my sailboat keel slammed to a halt against a tufa reef. I was in rough weather and each breaking wave pushed the boat further into the shallow reef waters.

I tossed my anchor overboard to hold my position while I retracted the keel. With the keel shortened, I could sail off of the reef and into deeper water. With this done, I attempted to pull the anchor free, but I found I was stuck.

I slowly pulled in the anchor line, foot by foot, while I belayed the rope around the deck cleat and paused for each buck of the boat as another rolling wave swept under the bow. This would normally dislodge the anchor when the boat is pulled directly over it, but each heave of the boat against the bar-tight rope affirmed the anchor was not moving from the reef.

In spite of my predicament, I can say I love tufa. It decorates the lake in interesting ways, it's relatively easy to find in various forms, and although tufa formations occur in many places in Utah and in the world, it is characteristic of the Great Salt Lake's environment.

Generally, tufa is a mass of calcium carbonate mineral deposit that has been precipitated and accumulates into what becomes a rock or cements existing rocks together. It can be a smooth deposit or rough like cinder blocks. I have seen the deposits white, yellowish, gray and brown in color.

It looks like cement and actually is very similar, chemically speaking.

Tufa deposits develop when the balance of calcium and bicarbonate ions, which are in solution, is disrupted as a result of carbon dioxide being liberated from the lake water. With the amount of CO<sub>2</sub> reduced in solution, calcium carbonate is formed and precipitates out of solution. The sources of the elements of tufa are our lakes, streams, and springs that flow into the lake. This formula is somewhat oversimplified and doesn't account for many other ions and chemical interactions in the lake but it serves the purpose of explanation. (Magnesium carbonate is another tufa forming precipitate, for example, and the reaction can go both ways -- calcium carbonate dissolving back into solution.)

The precipitation of calcium carbonate is enhanced with photosynthesis by algae, from bacterial action, or by physical agitation of the water such as wave splashing. All of these processes liberate CO<sub>2</sub>.

Go out to the lake shores and do some investigating. You can find tufa in several different contexts. If you investigate the old lake terraces on Stansbury Island, tufa deposits are obvious at the Provo level. The Bonneville, Provo, and Stansbury lake levels that circle around each of us in the

Salt Lake Valley all have ancient beaches and wave splash areas frozen in time, as it were, by the tufa deposits that fringe their edges. The north arm of the lake has particularly well defined tufa deposits around Rozel Point and Lone Rock, where waves splash up into the rocks. Cyanobacteria is believed to enhance this process by using up some of the CO<sub>2</sub> in the water and beginning the reactive process.

Springs with the right chemical components will also precipitate tufa. You may find crevices in rocks during your wanderings that once had ancient springs flowing from them but now only show the tufa coated openings. A monument of large rocks on the south side of the highway to Tooele appears to be covered by tufa. (By the way, I was told that Midway's city hall is constructed out of tufa that was deposited in springs near there which exhibit the same chemical process as the Great Salt Lake.)

As you wade into the Great Salt Lake, in some areas you may notice that bottom sands have been cemented together like concrete by calcium carbonate.

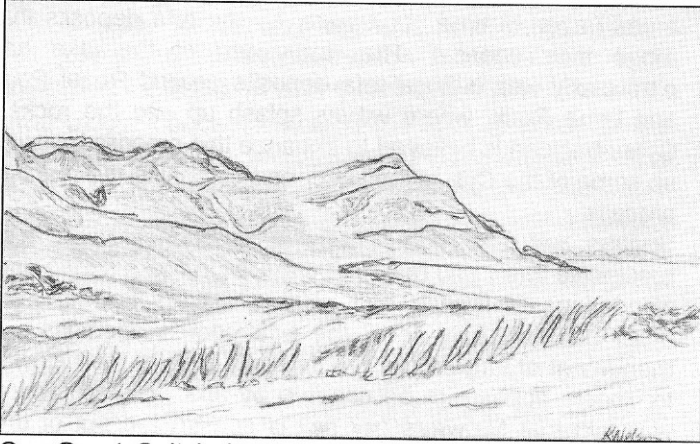
Great Salt Lake reefs are not like Caribbean reefs -- alive with fish, brightly colored coral, and sensitive to an anchor. However, they can be alive. One interesting formation of tufa that is "alive" is called an algal bioherm or biostrome. These are circular tufa masses measuring from inches to many feet in diameter, and look like sublacustrine cow pies, or pizzas, if you prefer. Their origin begins with a living algal mat growing on the bottom of the lake. The algae uses CO<sub>2</sub> in its photosynthesis, causing the precipitation of calcium and magnesium carbonates. The precipitate is not alive, of course, but the algae can grow in the interstitial spaces, and "fluff" the tufa from the CO<sub>2</sub> gas bubbles it creates. Algal bioherms occur in shallow areas of the lake up to about 12 feet deep. Hat and Egg Islands are skirted by reefs of this tufa.

In these locations, the tufa on the lake floor causes an irregular, hard surface which can either be held by a boat anchor or cause the anchor to skip right along the bottom; and my anchor seemed to have inextricably wedged itself into this material.

The heavy surf in the shallow water was nearly pulling the bow of my boat apart. My last decision was to cut the anchor free. Severing the umbilicus to the lake bottom gave me a narrow opportunity to sail off the reef of tufa into deeper water, just escaping being swept further into the shallows. I let the lake have the anchor; my tough luck. But she returned my boat so that I can return to meet the reef on better terms and with better care. (If I manage to escape the reef twice, does that mean I'm tufa two?) See you at the lake!

## Enjoying Islands in Great Salt Lake

by Karen Nelson



Our Great Salt Lake is a special place. Its chemical composition, microscopic community and geologic topography are always changing. If you knew it yesterday, you might not know it today.

With a change in lake level a peninsula becomes an island, or an island becomes accessible by foot via a sand bar. Many of the islands are available for us to explore. Drive one hundred and seventy five miles through northern ghost towns by Monument Point, an island during the completion of the railroad in 1869. Travel south past Crocodile Mountain on the western shore. A four mile hike across salt flats will take you to Dolphin Island.

Rent a tandem sea kayak and take a four day excursion along Stansbury to Badger, then on to the northern tip of Carrington Island. (Notes on sea kayaking follow.) Carrington reaches five hundred feet above the level of the lake where you get a good look at Hat Island, five miles to the North. Hat (also called Bird Island) is an established rookery for California Gulls, a home to a pair of ravens, some Great Blue Heron, and some years a small colony of Caspian Terns. This island and other lovely places in Great Salt Lake are off limits to humans. We are limited by nesting bird populations such as these, as well as ranching and industrial interests. Antelope Island, however, is wonderfully accessible by car, and opportunities to enjoy it increase each year.

Antelope Island - (I-15, exit 335, west through Syracuse, use of causeway \$6.00/day) The new visitors center is open, including educational books, gift shop, art gallery, spectacular view of the lake, and interpretive information. (The newest interpretive displays will be in place in three months) A dedication ceremony of the Visitors center celebrating the 151st anniversary of John Fremont's exploration of the island is coming up on October 12th. Ella Sorensen will read from her new book, on the lake (to be released in 1997) and slides of photos by

John George will accompany her reading as part of the celebration.

Interpretive tours of Fielding Garr Ranch and some sites on the South end will be open to the public one more weekend this year, October 12<sup>th</sup> and 13<sup>th</sup>. It is possible to get glimpses of bison, pronghorn, coyote, porcupine, deer, great horned owl, bald eagle, marsh hawk, and lots more!

The fall roundup of the island's herd of 700 bison is scheduled for October 26th and 27th. The public is invited to view this incredible event. All the animals are rounded up the old fashioned way with cowboys (and helicopters); each is given a medical checkup.

A productive six week long archeological study by the Museum of Natural History took place this year. Six thousand year old news...Evidence of the ancient culture and the more recent Fremont culture were found.

Sightseeing cruises by Salt Island Adventures depart from the Marina Wednesday through Sunday all year! With boating, hiking, swimming (plus hot showers), mountain biking, outdoor dining, camping, or just a lazy auto tour, Antelope Island is a must for beautiful views of the lake.

Stansbury Island Currently a peninsula easily reached by I-80 (Exit 84). The Federal Bureau of Land Management manages much of the island. There are some private landowners who have been harassed in the past including serious vandalism from shootings. Tooele county relinquished the rights of the roads to the owners.

The owners lock the gates approximately four miles up on each side. Much of the island is still accessible by foot, mountain bike, and by boat. An expert mountain bike trail was built by the BLM which includes nine miles of beautiful views traveling along the Provo lake level. The BLM has a pamphlet with a map of this trail. One can purchase a hikers map from the BLM, Utah Natural Resources bookstore, or other hiker's outlets. The islands peaks are all legally accessible. You are limited by how much fresh water you can carry to explore most it's 22,000 acres. The highest peak reaches 6645 feet above sea level. A boat can be landed legally on the east side of the northern tip (3 miles).

Fremont Island (eight miles North of Antelope) Fremont is privately owned and inaccessible at this time. It is leased to a brine shrimp company and used as an emergency landing field for small planes. The owners asked not to be contacted.

Carrington Island (seven miles north of Stansbury) The top northeast corner is legal to explore, including Lam-bourne's Rock. Stay off the mud flats.

Gunnison Island in the northern arm of the lake is legally protected as are the cub's (two small islands North of Gunnison). State laws protect the colonies of birds from human disturbance. We must not come to within one mile of Gunnison.

Dolphin Island (northern arm - four miles of Salt flats connects it to the western shore) Dolphin includes sixty acres but is only seventy five feet above lake level. All is legal to explore, take fresh water.

Hat (Bird) Island (five miles north of Carrington) Hat is totally protected as a nesting island for birds. You may not come within one mile.

Badger Island (four and one half miles north of Stansbury - connected to Stansbury by a privately owned commercial dike - stay off) Badger is currently connected to Carrington with mud flats (not to be tread on) This island is only six acres and currently twenty five feet above the lake. Not much is out there but sand and pickleweed

Cub I and Cub II As small islands north of Gunnison, they are included in the one mile rule that protects bird

populations. The birds may enjoy them, and we may not.

Egg Island. As a gull rookery this island, just off Bridger Bay Beach on Antelope Island, is protected from March through July. In August you may wade out to it from the beach. Wear your goggles.

White Rock in White Rock Bay off the west side of Antelope is reached by boat. It's birds are also protected from March through July.

Black Rock can be reached from Saltair

Monument Point (Inspiration Point) east of Locomotive Springs. This point is seen as an island in historic photos at the time of the completion of the railroad in 1869, then also called Monument Rock.

Strong's Knob (just north of the railroad causeway near Lakeside) Stansbury found a large cave on this mountain used by deer and antelope. Access is currently off limits.

*(Karen is currently working on a children's book about Great Salt Lake.)*

## Great Salt Lake Slide Show Proposal

FGSL is currently seeking funding for a proposal we have written which describes the need and our plan for implementation of an expanded educational program. This program would allow **FGSL to reach thousands of Utah citizens**. Great Salt Lake is globally unique and important, yet our understanding of its resources and ecology is limited. While record levels of growth are occurring along the Wasatch Front, the general public has a limited understanding of the threats facing the Great Salt Lake ecosystem and the millions of resident and migratory birds which depend on it every year. The public needs to know that if we are not cautious, we will lose aquatic resources of global importance.

**FGSL is proposing to hire an Education Director** who, in 1997, would write and produce a **Great Salt Lake slide show** and present it to groups and communities in the counties which border the lake. The slide show would introduce the viewer to Great Salt Lake and its environs, and emphasize the following themes: the lake's food web and ecological uniqueness; the diversity of species which utilize the lake's many unique habitats; and society's use of lake resources and how we have altered the lake ecosystem. The slide show would discuss issues pertaining to the lake, and it would be flexible enough to include new issues as they arose and omit old issues as they were resolved. We would suggest to the audience avenues for action, whether it be writing a letter, attending and/or speaking at a public meeting,

assisting with a habitat rehabilitation project, or just getting out and visiting the lake. The slide show would also be used to educate the public about FGSL and, hopefully, increase the size and geographic distribution of our membership and the effectiveness and self-sufficiency of our organization.

This educational program could also function as a stepping stone toward helping FGSL reach our long-term goal of hiring a full-time Director to work on education and advocacy issues pertaining to the Great Salt Lake ecosystem. Hopefully, the proposed educational program would be an avenue through which we could increase the size and geographic distribution of our membership, and also the effectiveness and self-sufficiency of our organization.

**The total cost of the educational program is \$19,900.** We are investigating several avenues of funding, mainly from Utah-based charitable foundations. Thus far, we have received a \$4,000 grant from the Utah Wetlands Foundation. In addition, we are prepared to allocate \$4,000 of our own funds for this project, if necessary. Our proposal is currently being considered by six other foundations.

**If anyone is interested in reading the proposal, or has suggestions for entities to whom the proposal could be submitted, please contact Howard Gross at 486-4565**

## Trip Talks

### Stansbury Island Hike

by Ed Stimpson

Nine FGSL members gathered for a hike up the south end of Stansbury Island on Sunday, the 8<sup>th</sup> of September. We were to meet at the Sugarhouse Garden Center at 8 am to car pool or meet further west at exit 84 on I-80. Karen and I were the only ones who showed up at the Center. It didn't look like there was going to be much of a turnout, but we headed west to our second meeting point where the road to the island joins I-80. By about 9:15, four other vehicles and seven more people arrived and we headed for the eastern end of the gravel pit workings on the south end of the island. The weather was perfect, clear skies and not too hot to hike.

By 9:45 all nine of us were on the "trail", straight up the slope to the north, to reach the crest of the first low ridge on that end of the island. We hiked through dense, calf-deep, dry grass up most of the slope, but we went slowly enough for the slowest to keep up. We reached the ridge an hour late and turned on flatter ground toward the east to the rocky backbone of the island. From there we had a spectacular view of the lake. We could clearly see Antelope & Fremont Islands and Promontory Point to the north and east as well as the salt evaporation ponds of Morton Salt to the South. Directly below our perch on the rocks lay Broad Canyon, a popular hiking locale, but now inaccessible because of the private land

closure on most of the island. From the spot we had reached, one could not see the MAGCorp stack and its polluting chlorine plume to the northwest. Fortunately, the wind did not blow the plume our way either.

We broke out our lunches and shared a few munchies and stories. The highlight of the trip came when Lin read us a moving, personal poem she had written about a full, but eclipsed, moon-lit night on the island many years ago. Very good, Lin: it was the perfect place to share it.

Three of the group decided to head back early, while a couple of us extended the hike further north along a deep notch in the ridge to the next high spot. We returned, joined the rest of the group, headed back to our cars, and were off the island by early in the afternoon.

Postscript: A week later, lightning ignited that tinder-dry grass and our hiking route was reduced to a sea of ashes. But, no need to shed a tear; Stansbury has been burned before, it will recover and be as charming as ever

Hikers: Ed Stimpson (leader), Karen Nelson, Kevin Landis, Mike Sanchez, David and son David, Joel Peterson, Margie Paul-Hus, and Lin Ostler.

### Around They Went!- The Great Salt Lake Circumspection

Elise Peterson

The Great Salt Lake Circumspection on June 1 and 2 was a great success! Twenty three people attempted the journey but, due to the flu, 4 people had to turn back. Other than this, there were no problems of any kind- no flat tires and no overheated cars.

We began our journey at the marina on the south shore. Some of our stops on the first day included: Brigham city (the last stop for gas and other passengers), Golden Spike National Monument, Rozel Point and the Spiral Jetty, Monument Point, Locomotive Springs, and Kelton. We camped on the west shore and had an incredible full moon rise. We feasted on Libby Hunter's dutch oven cakes and sang songs around the campfire with the moon overhead. One by one, the weary travelers drifted off to their tents, anxious for what awaited the next day.

Sunrise came early on Sunday but Kevin had the troops gathered and ready to depart by 8:30. We headed south along the Hogup Mountains down to The Threshold where we could see the Newfoundland Mountains and the Pilot Range (both calling out for a future expedition!) We checked on the infamous "pumps" there still there, waiting for the next big flood!. At lunch we stopped off at the booming town of Lakeside and saw the breach in the causeway to the North Arm. From there it was straight south with signs on either side of the road indicating that we were on Hill Air Force Base Testing Grounds "Do Not Leave the Road". Back on I-80 the trip came full circle and it was time to breakup. However everyone was anxious for the next expedition and encouraged Kevin to do this again. So if you missed the first Great Salt Lake Circumspection, don't be disappointed, this was such a success, I'm sure we can talk Kevin into leading us again. **Thanks Kevin!**

## CANDIDATE SURVEY

Friends of Great Sale Lake submitted a list of questions to a number of candidates running for public office this year. The following candidates were surveyed: (running for Governor of Utah) James Bradley and Mike Leavitt, (running for US Representative from Utah district 1) Greg Sanders, James Hansen (running for US Representative from Utah district 2) Ross Anderson, Merill Cook (running for US Representative from Utah district 3) William Orton, Chris Cannon. The following is excerpted from the letter sent to each candidate:

**“As part of the mission to educate the public, we are polling the principal candidates who are running for election this fall with respect to their views on a number of issues related to Great Salt Lake and general environmental quality along the Wasatch Front. We are sure you would agree than an informed electorate is the cornerstone of representative government and we hope you will take advantage of this opportunity to outline your position on these issues for the citizens you wish to represent.”**

Responses were received from **James Bradley, Ross Anderson, and Merill Cook.**

**(1) In your opinion, what is the most critical environmental issue that the citizens of Utah face today?**

**Bradley:** In my opinion, land use planning is the most critical environmental issue that citizens of Utah face today because most negative environmental impacts occur due to our planning. I believe in the value of land use planning at all levels of government. Government should use zoning and building codes to help balance development needs with environmental needs. As Chairman of the Salt Lake County Commission, we used zoning to protect open space. Specifically, we down-zoned the Foothills to protect them from development.

**Anderson:** Citizens of Utah and the American people overwhelmingly want a clean and healthy environment for themselves and their families and want to protect our heritage for later generations. I am concerned primarily with protecting clean air and water, the impact of pollution on our health, and about the preservation of our public lands and wilderness.

**Cook:** Air quality is one of the most critical issues facing the citizens of Utah today. Because of rapid growth, we are in danger of reversing all of the progress made over the last 20 years.

**(2) If elected, do you plan to sponsor any legislation related to environmental issues and/or the Great Salt Lake? If so, please outline the provisions of your proposed bill.**

**Bradley:** Not applicable.

**Anderson:** As a member of Congress I will fight for the renewal of Congressional support for, and full funding for enforcement of, the Environmental Protection Act, the Clean Air Act, the Clean Water Act and the Endangered Species Act. I would vote against measures that would weaken regulations necessary to protect and clean up our environment from the effects of air and water pollution and hazardous waste. Also, I would support legislation aimed at reducing global warming and the reduction of carbon dioxide emissions. Finally, I would vigorously support legislation aimed at the preservation of the ozone layer and enforcement of the ban on CFCs.

**Cook:** I plan to work hard for a commuter rail line between Ogden and Provo. I believe that this will have a greater impact on air quality than any other public transit proposal currently circulating.

**(3) With respect to wetland protection and preservation, do you support section 404 of the Clean Water Act? Would you support strengthening section 404 as part of the upcoming re-authorization of the Clean Water Act?**

**Bradley:** I support the strengthening of wetland protection.

**Anderson:** I fully support Section 404 of the Clean Water Act and would actively work to strengthen its provisions to protect critical populations of animals and plants in our wetland areas. I would also work to strengthen the wetlands assessment criteria so that existing wetlands could not be "degraded" and judged by the Corps of Engineers as open to development. Wetlands are important not only as habitat for fish and waterfowl but also as part of our watershed and flood control concerns. I will work to protect and preserve our irreplaceable wetlands.

**Cook:** I understand the need to protect wetlands, and I will work to protect Great Salt Lake wetlands, and all wetlands in the best way possible. Taking into consideration environmental, social, and private property concerns.

**(4) What specific policies do you support or would attempt to enact to improve the air quality along the Wasatch front?**

**Bradley:** Air pollution, both from vehicle emissions and industry, is a serious concern along the Wasatch Front. Increased growth has exacerbated our pollution problem. We need to be friendly to industry, but we cannot sacrifice a healthy environment to do so. I support programs, such as Utah County's alternative program developed and implemented on a local level, to control carbon monoxide levels. The Utah County plan includes several important improvements on vehicle emissions testing. It calls for: re-testing to make sure that if vehicle repairs were completed by the same station that initially tested the vehicle, the repairs were done correctly; aggressive investigation of illegal registrations; improvement of technician training to boost repair effectiveness; and adoption of a remote sensing program ordinance to identify and repair dirty vehicles.

**Anderson:** I fully support a federal commitment to reduce carbon dioxide emissions by 20% -- or more if possible -- by the year 2000. I have always supported an integrated mass transit system along the Wasatch Front that would reduce automobile miles traveled and improve our air quality. I also favor car and van pooling, requiring greater fuel efficiency of our cars and funding development of alterna-



tives to fossil fuels as energy sources that are not carbon dioxide emitting. I support full funding for EPA enforcement and support regulatory requirements that insure protections against air and water pollution and hazardous waste.

**Cook:** Please refer to my responses in questions one and two.

**(5) How would you ensure the protection of Great Salt Lake wetland resources from impacts associated with transportation projects currently being considered in Salt Lake, Davis, and Weber Counties?**

**Bradley:** I do not support transportation projects, such as the proposed Legacy Highway, which would negatively impact Great Salt Lake wetland resources. Any western transportation corridor's effects to wetland should be quantified, minimized and avoided if possible.

**Anderson:** Transportation projects currently being considered in Salt Lake, Davis and Weber Counties, including the Western Transportation Corridor, are a potential disaster for wetland resources along the Great Salt Lake. These projects have once again allowed short-term needs to outweigh our long-term best interests. The hemispheric importance of our Great Salt Lake wetlands as habitat and their regional importance as watershed and flood control sites needs to be weighed along with transportation needs of the Wasatch Front which, with better, more integrated planning, could mitigate our critical transportation needs and our critical environmental concerns. Moreover, the financial feasibility of these projects has not been taken into account. Not only would the environmental cost be high as our wetlands are adversely impacted, but a huge financial burden could be incurred that would further strain already tight budgets.

**Cook:** I support the Governor Leavitt's Legacy Highway project, and the proposal to relocate railway tracks out of down town Salt Lake.

**(6) (for gubernatorial candidates) How will you protect and manage Utah's sovereign lands, specifically those of the Great Salt Lake?**

**Bradley:** As governor, I would direct the Division of Forestry, Fire and State Lands to protect this as a public trust to preserve and protect for the enjoyment of future generations.

### Update on Western Transportation Corridor

By Cullen Battle, Farmington Bay Advocates

September 18, 1996

The Western Transportation Corridor Steering Committee, a group organized by the Wasatch Front Regional Council, has been meeting to decide on a "preferred" route for the West Davis Highway, or "Legacy Highway" as it is now known. The Steering Committee will pass along its selection to the Utah Transportation Commission, who will make the final decision on the route. The Utah Transportation Commission has close ties to UDOT.

There are four main areas of concern regarding the project's impacts on the wetlands of the Great Salt Lake:

1. a newly identified portion of the route which travels through the Farmington Bay Waterfowl Management Area west of the Bountiful landfill and sewage treatment plant;
2. a section near Woods Cross which is located next to the Jordan River and well out into the GSL flood plain;
3. a portion of the route which goes north and west of the Salt Lake International Airport and ties in directly to 5600 West; and
4. the probability of future rail line construction west of the new highway.

Parsons Brinkerhoff, the consulting firm on the project, has identified a feasible route which travels east of the Bountiful landfill and which ties into I-215 near the Redwood Road interchange. This route would have minimal impacts on the wetlands of Farmington Bay and nearby private duck clubs. It would not displace any existing residents. Common sense dictates that this is the best alternative, and the Steering Committee appears to be leaning in that direction, despite political pressure from certain constituencies to push the highway further west.

Farmington Bay Advocates' objective is to persuade the Steering Committee and ultimately the Utah Transportation Commission to select the route which is least damaging to wetlands. We believe it is critical for wetlands groups and duck clubs to speak with one voice in urging that result. **To that end, we ask everyone to submit written comments on the proposal as soon as possible to the following address:**

Larry Becknell  
WTC Project Manager  
Parsons Brinkerhoff  
488 E. Winchester St., Suite 400  
Murray, UT 84107

## Citizens Against Chlorine Contamination

Citizens Against Chlorine Contamination Submits Comments to Utah Division of Air Quality on MagCorp Approval Order; CACC and UDAQ to Meet to Discuss Concerns

As you may remember from an insert in your July FGSL newsletter, an alliance of citizens, including activists, scientists, and attorneys, formed in June to pressure state and federal environmental agencies to more closely monitor and regulate one of Utah's largest polluters, the Magnesium Corporation of America (MagCorp). MagCorp is consistently the nation's largest chlorine polluter, annually emitting more than 50 million pounds of chlorine to the atmosphere. The Utah Division of Air Quality (UDAQ) announced in June their intent to modify an Approval Order (AO) to allow MagCorp to increase its magnesium production capacity and its emissions of chlorine.

The grassroots alliance, called Citizens Against Chlorine Contamination (CACC), requested a public meeting about the AO, which was held on July 15 and attended by approximately 40 people. Thanks to those of you who attended to learn and/or express your concerns. The day after the meeting, due to public request, UDAQ extended the comment period on the AO by 30 days.

CACC has mobilized scientific and legal expertise to review and submit comments on the AO. CACC held a public meeting on August 13 at the Patagonia Outlet to present some of their concerns to the public. Thanks to Patagonia for their sponsorship of this meeting. In the 50-page comment package submitted on August 19, CACC raised the following technical and legal concerns.

- (1) The projected increase in the AO of chlorine emissions of 6 tons/year appears to be unsupported by the publicly-available information. CACC's calculations indicate that the actual increase may reasonably be estimated to be 57 tons/year or more. CACC requested a recalculation of the estimated chlorine emissions.
- (2) The emissions of chlorinated hydrocarbons from the MagCorp facility are not addressed in the AO. There is extensive literature indicating that chlorinated hydrocarbons, including dioxin and other substances linked with a wide range of adverse environmental and health impacts, are produced under conditions similar to those believed to exist at the MagCorp production facility. There is no publicly-available information regarding the emissions of chlorinated hydrocarbons from MagCorp. CACC requested a full study of the potential for chlorinated hydrocarbon emissions prior to the approval of any production increase. CACC also cited Utah administrative code which gives UDAQ legal authority to require MagCorp to test for chlorinated hydrocarbons in their emissions before UDAQ issues approval of the AO modification.
- (3) CACC identified areas where the AO lacks the enforceable provisions needed to insure that the chlorine and hydrochloric acid emissions from the MagCorp facility remain at or below

projected levels. CACC requested that more detailed control over the operation of and emissions reductions from the facility be included in the AO.

- (4) CACC summarized scientific literature which indicated that atmospheric chlorine may increase ozone levels. Based on these findings, CACC requested that UDAQ utilize available modeling techniques to study reactions which can take place when a chlorine-containing plume mixes with other contaminated air. Such modeling, coupled with other site-specific studies, are needed if policy and regulatory decisions are to be based on sound science. CACC referenced UDAQ's legal authority to require MagCorp to prove that its chlorine emissions do not increase ozone levels. In addition, CACC requested that UDAQ gather more information about the fate of chlorine and hydrochloric acid emissions from the MagCorp plant, and study the surrounding ecosystem for evidence of an added burden from chlorinated hydrocarbons.
- (5) CACC noted that according to the Clean Air Act, a major source of hazardous air pollutants may not be modified in the absence of maximum achievable control technology (MACT) standards. No MACT has been set for MagCorp by the state or the EPA, so CACC requested that UDAQ defer approval of MagCorp's AO until a determination of MACT for MagCorp is performed.
- (6) CACC asserted that most, if not all, MagCorp plant processes that currently emit pollutants will emit pollutants in greater amounts due to the proposed production increase. Utah air pollution regulations require that the best available control technology (BACT) be installed at each emission point where proposed production increases will likely cause a net emissions increase. Despite this requirement, the public record does not reflect that UDAQ conducted BACT analysis for each affected emissions point. CACC requested that UDAQ conduct such analysis and require BACT compliance before acting on MagCorp's AO.
- (7) CACC cited administrative code which gives UDAQ the legal authority to require MagCorp to perform additional monitoring of their emissions. Only through more accurate and more consistent emissions monitoring, contends CACC, can UDAQ assure that the MagCorp facility is complying with its operating permit.
- (8) CACC requested that the AO modification include language limiting down time, due to malfunction, of MagCorp's pollution controls to only 5% of the time.

CACC's comments were co-signed by the Utah Chapter of the Sierra Club, Wasatch Clean Air Coalition, Friends of Great Salt Lake, West Desert HEAL, and Great Salt Lake Audubon. CACC and UDAQ are scheduled to meet to discuss these comments on September 19. Anyone with questions about this issue should call Scott Endicott (596-1325) or Howard Gross (486-4565) with CACC.

## Proposed Black Rock Harbor Update

The Corps of Engineers (Corps) Public Notice for the proposed commercial harbor from Sunset Beach to Black Rock has hit the streets. The comment period will likely be over before you see this newsletter, but we were granted a 10 day extension by the Corps from September 25 deadline until October 5, 1996.

Some of our concerns include the lack of study of the economic feasibility an alternative to building a new harbor. The brine shrimp companies are going to make a significant investment in the construction of a harbor and will likely have to provide money to State Parks and Recreation to hire additional staff to patrol the new facility.

The existing south shore harbor is precluded from commercial activity because federal dollars were spent in its construction. However, commercial use of the harbor at Antelope Island was enabled by buying out the federally funded portion. It has not been demonstrated that the same cannot be done at the south shore.

In the past, when brine shrimp boats had harbored their boats at the south shore harbor, conflicts between recreational interests and commercial activities at the existing south shore harbor were negligible.

The existing south shore harbor is far superior in design to that which is being proposed.

It would be a win for the lake and a win for commercial entities if an additional amount of money is spent to make the south shore harbor compatible with commercial activity.

Bird nesting habitat will be destroyed and there will be a loss of wetland quality from the project. There is no mention of mitigation for these losses in the project.

One of the stated needs of another harbor is that it will provide a single harbor for brine shrimp boats in the south arm to minimize damage from everyone building their own harbor. This is a good concept if additional damage from its implementation can be minimized. However, there are unanswered questions:

1) It is not known how permanently organized the consortium of brine shrimp companies who will use the harbor will be. Not all brine shrimp companies are participating.

2) There have been harbors dredged in the past by individual brine shrimp companies around the lake and after-the-fact permits for dredging were then granted by the Corps. There are no written assurances that the State will not continue granting right of entry permits for access to sovereign lands for the purpose of additional harbors and that the Corps will not continue granting more Section 404 (dredge and fill) permits if they are requested for additional harbors.

This proposed harbor plan includes the possibility of future expansion. However, at this time, there is a moratorium by the state Division of Wildlife on the number of

brine shrimp fishing vessels is allowed on the lake. Currently there are ongoing studies to look at the possibility that brine shrimp are a resource that can be over-harvested. There will not be an increase in the number of boats allowed to harvest brine shrimp in the next three harvest seasons.

After looking at public information in the Corps office, it was discovered that one design configuration not mentioned in the Public Notice is the installation of six 36 inch culverts along the dike to allow water levels to equilibrate on either side of the dike. Although this is approaching the problem of diking salt water from fresh water, this spaces culverts over 600 feet apart. By impounding this area's fresh water springs behind a dike and reducing the amount of mixing from salt water entering the bay, the habitat will be altered. One example is phragmites that can aggressively overtake areas that are freshened. This is another quarter mile of shoreline of Great Salt Lake's characteristic saltwater/freshwater interface habitat that will experience interference. The dike and pilings are permanent structures.

The Division of Forestry, Fire, and State Lands is the management authority for sovereign lands, and may exchange, sell, or lease sovereign lands but only in the quantities and for the purposes as serve the public interest and do not interfere with the public trust.

Concerns have been raised about losing the scenic qualities of one of the most visited areas of the lake. These comments are also relevant in the discussion about the project.

Friends of Great Salt Lake has written a comment letter to the Corps of Engineers which addresses these issues.

The following is from the permit application to construct the proposed boat harbor:

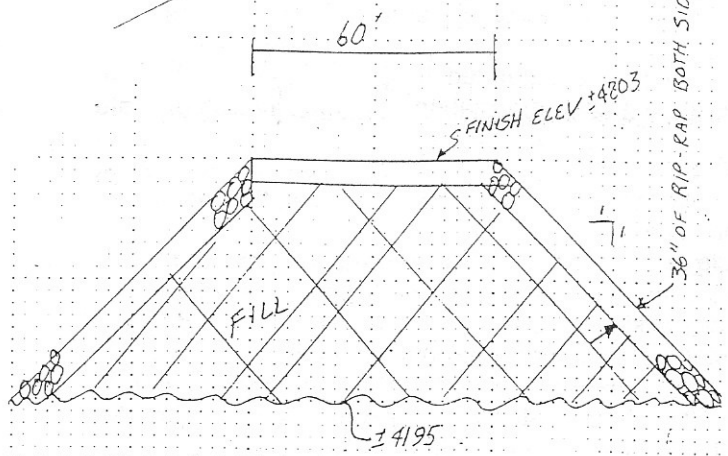
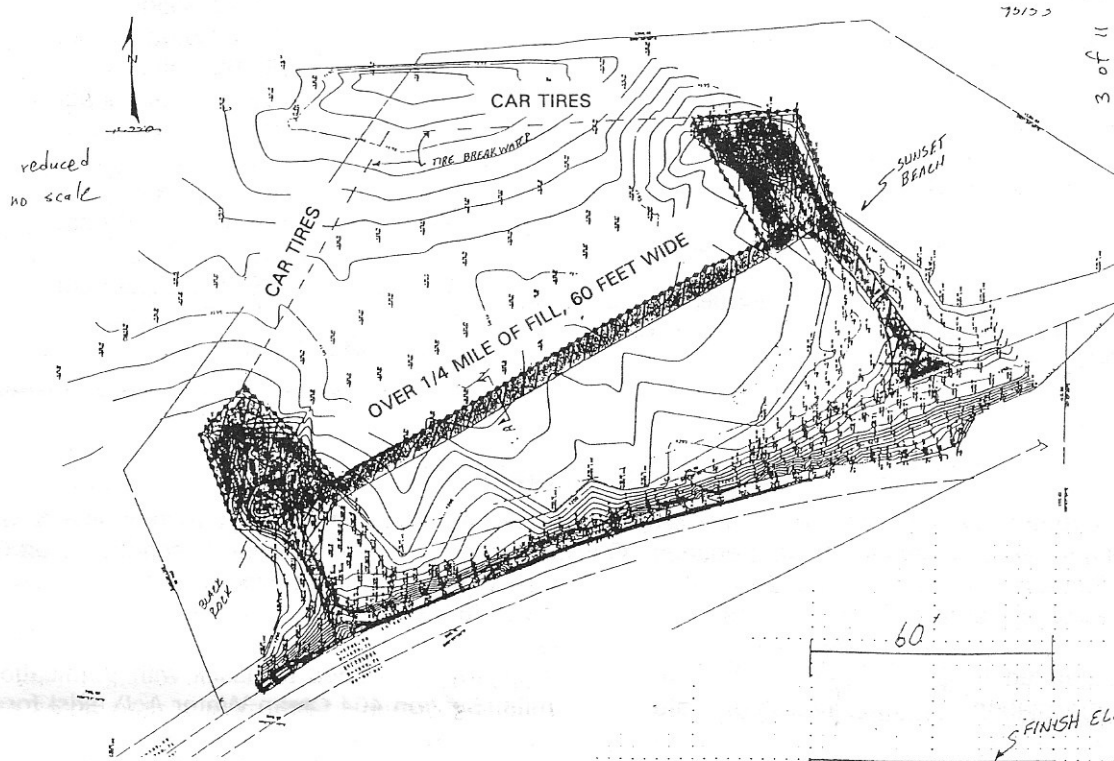
**Activity:** Construct a steel piling with a wood lagging wall for a marina. Steel "H" piles will be driven approximately 30 feet apart and 30' X 8" X 16" wood planking will be placed between the piles. The bottom of the lake will be dredged to an elevation of approximately 4194 feet and the dredged material will be placed behind the wood lagging. This will be a phased project, the total length when complete will be approximately 3720 feet and approximately 10 feet high and 60 feet wide. A rubber tire wave barrier will be constructed to protect the marina.

**Purpose:** This marina will be used by several commercial brine shrimp fishermen. The harvest will be brought into the marina and off loaded onto trucks. It is not anticipated that any permanent structures will be constructed. Construction will begin in the summer of 1996 and based on need will be completed by 2006.

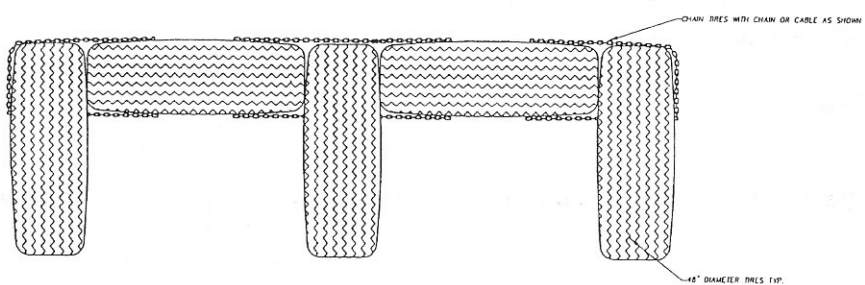
**Discharge of Dredged or Fill Material:** Rock or slag material will be brought by trucks for fill over the top portion to provide a drivable surface, approximately 35,000 cu. yds.

(Please see diagrams on following page.)

### PROPOSED BLACK ROCK HARBOR



LENGTH = 1390 FEET  
 TOTAL CU. YDS. = 28,000



BREAKWATER

**FOGSL Board and committees**

President	355-5226	Kathlyn Collins	
Pres. Elect	485-2394	Joel Peterson	Issues
Vice President	363-4867	Patrick Leary	Membership
Treasurer	486-4565	Howard Gross	
Secretary	486-8427	Debbie Roberts	
Board Member	261-8183	Christine Allred	Hospitality
Board Member	277-3750	Robin Hooton	
Board Member	295-4395	Doug Howard	Education
Board Member	272-7384	Sandy Zircus	Education
Board Member	355-8110	Wayne Martinson	
Board Member	328-9512	Margie Nackowski	
Board Member	485-2394	Elise Peterson	
Board Member	596-2619	Betsy Price	Fund Raising
	294-4517	Lynn LeMaster	Newsletter: Monthly Update
	484-8271	James Zinanti	Newsletter: Quarterly
	484-8271	Reda Herriott	Newsletter

**Great Salt Lake Surface Elevations**

(Source: U.S. Geological Survey)

Jul 01:	4200.50 Boat Harbor
	4197.70 Saline*
Jul 15:	4200.20 Boat Harbor
	4197.60 Saline*
Aug 01:	4199.90 Boat Harbor
	4197.50 Saline*
Aug 15:	4199.60 Boat Harbor
	4197.40 Saline*
Sep 01:	4199.30 Boat Harbor
	4197.10 Saline*
Sep 15:	4199.00 Boat Harbor
	4197.0 Saline*

\* Northwest arm of Lake

**Volunteer Bulletin Board**

If you would like to coordinate volunteers on various projects or have a project on which you would like to work, please attend one of our regularly scheduled planning meetings. Our next planning/board meeting is scheduled on October 3rd at 7:00 p.m. at the Salt Lake County Building, 2001 South State Street, South Building, Room 2019. If you are interested in any of the listed volunteer projects, please contact Joel Peterson at 485-2394.

Many thanks are extended to Cindy Stafford who volunteered to gather information from the Division of State History. The information she collected will be used to learn about existing historical sites around the Great Salt Lake and the procedure for nominating additional historic sites.

People are needed to look at information provided to the public about the Great Salt Lake - postcards, gift shops, tour bus talks, signs, etc. and to analyze the validity and completeness of the information. Report on what you find, record the top questions asked and myths perpetuated. Collect the material or trinkets. Take a tour. Be creative. This is a project that could be a lot of fun for children and families, and educational for all.

A couple of people are needed to photocopy agency reports and reference material about the Great Salt Lake. Material will be on very short term loans which would require scheduling about 1 or 2 evenings per week for photocopying. Duration of task: fall and winter, as you are available. This is part of a larger project so participants can continue if they choose.

A person is needed to assist with verification that permits (Section 404 Clean Water Act) exist for wetland fill activities around the Great Salt Lake. The process includes travel to the lake to document where these activities are occurring and visit the Corps of Engineers permitting office. Availability during weekday business hours is desirable. Duration of task: a couple of days for initial check, or permanent tracking of project if desired.

Help is needed to staff an information table, distribute materials, sell FGSL T-shirts, and spread the word about the internationally significant ecosystem! Time and duration are flexible.

FGSL also needs a Public Relations officer. This involves responding to inquires about FGSL: positions on issues, information about the Lake, and information about FGSL. In addition, information releases for the news media and management agencies may be prepared. Please call Kathlyn Collins (355-5226).

**Issues Committee**

The issues committee is reviewing and commenting on the following activities:

- Proposed Black Rock Harbor
- South Antelope Island Causeway Study
- Western Transportation Corridor
- Davis County Wetlands Plan

Please contact Joel Peterson at 485-2394 if you would like to participate on the issues committee with these and other upcoming issues.

## Guidelines for Submitting Material for Publication

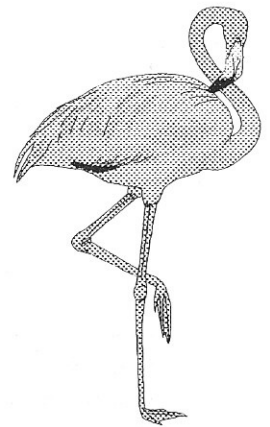
Hi! We'd like to introduce ourselves. We are **Reda Herriott** and **Jim Zinanti**. We are the new editors for the FOGSL Newsletter. We want to share information to make it easy to submit material to be published.

1. **What To Submit:** We welcome original articles (historical, geological, geographical, biological, political, fiction, poetry, etc.) which pertain to Great Salt Lake. We also welcome art work including sketches, photographs, etc. (Consider how they will look in black and white though.)
2. **Getting Material to Us:** We live at 2656 S. Chadwick St. SLC, UT 84106-3506. You can mail to us our drop off material in the silver colored milk box on our front porch. Or you can e-mail it to us: at [jzinanti@wasatch.com](mailto:jzinanti@wasatch.com) or [RedaHZ@aol.com](mailto:RedaHZ@aol.com)  
Please phone us (484-8271) to confirm receipt of e-mail, or with any other questions, suggestions, comments, or ideas.
3. **Form of Material:** We use Microsoft Word® 7.0 to prepare material. We can read PC formatted diskettes created by most any program. Please label diskettes with your name and phone number, and most importantly, the name of the files to be published, and include a printed copy in case we cannot read the diskette. It is also okay to submit material in typed or (neatly) handwritten form.

When we finish with it, we will leave it in our milk box for you to pick up, or mail it back if you include a stamped, addressed envelope.

4. **Deadlines:** They are real. We have to do the production work (editing, layout), get it to the printer who has to queue it up with many other jobs, get the printed copies, collate it, label it, sort it according to postal rules, and get it to the postal service in time. The deadlines are Sept. 16 (Fall), Dec. 16 (Winter), Mar 16 (Spring), and June 16 (Summer).
5. **Formatting:** It is the editors job to put all articles in a similar style for the newsletter. Please do not worry about formatting, just give articles a title, a by-line, and a sequence of paragraphs. The Enter key should only be used at the end of a paragraph, title, or by-line. Also, please avoid using the tab character unless absolutely necessary.

We thank you in advance for cooperation. We look forward to a fun and productive year.



*Pink Floyd*

## Recycle Aluminum Cans.



Please consider donating them to Friends. Can donations will be accepted at 1149 E. Browning Avenue Saturdays between 9 a.m. and 2 p.m. All proceeds will go to the FGSL general fund. Cans must be contained in plastic garbage bags. If you have cans to donate, but can't transport them, please call Margie Paul-Hus and arrange-

ments will be made for a pick-up. If you don't recycle aluminum. Please consider starting!! This will greatly benefit the Friends. Volunteers are needed for accepting aluminum cans in your neighborhood and/or taking cans to the recycling center.

Questions, please call **Margie Paul-Hus at 487-4383**.

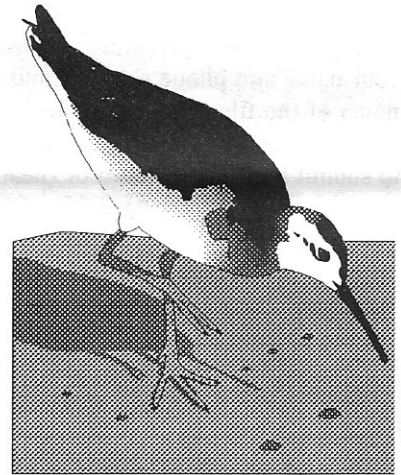


FRIENDS of Great Salt Lake  
P.O. Box 2655  
Salt Lake City, UT 84110

Non-Profit Organization  
U.S. Postage Paid  
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Permit No. 6707

Yes! I want to join *FRIENDS OF GREAT SALT LAKE*. Here are my dues in the amount of (check one):

- Regular Membership
  - Student Membership
  - Senior Membership
  - Sustaining Membership
- Student** must be at least half time. **Senior** is 62 years or older. **Sustaining** is any corporation, institute, organization, or individual interested in financially supporting activities of *FRIENDS OF GREAT SALT LAKE*



In addition to my dues, I would like to make a tax-deductible contribution in the amount of

- \$10
- \$25
- \$50
- \$100
- \$250
- other \_\_\_\_\_

Please make check payable to  
*FRIENDS OF GREAT SALT LAKE*

Mail To  
*FRIENDS OF GREAT SALT LAKE*  
P.O. Box 2655  
Salt Lake City, UT 84110-2655

NAME:

ADDRESS:

CITY/STATE/ZIP:

PHONE:

MY SPECIAL INTEREST IN THE LAKE IS