

# FRIENDS OF GREAT SALT LAKE

P.O. Box 2655, Salt Lake City, Utah 84110  
Volume 3 Number 4

FOGSL@xmission.com

(801) 485-2394  
Summer 1997



## *Contents*

Calendar	2	Update on Brine Shrimp Research	9
President's Message	3	Trip Talks - GSL Circumspection 1997	10
Map	3	Recycle Aluminum Cans for FGSL	14
Coming Attractions	4	FOGSL T-shirts	14
Citizens Against Chlorine Contamination	5	Good Friends and Members	15
Antelope Island Workshop	8	Membership Application	16

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The mission of Friends of 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

July						
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		

Startup meeting for 1998 Issues Forum  
Howard Gross  
486-4565

Deadline for August flier  
Lynn LeMaster  
294-4517

August						
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						

Birding Trip Farmington Bay Waterfowl Management Area with Justin Dolling  
call Kathlyn  
355-5226

August General Meeting with speaker at Sugar House Park Garden Center

Deadline for September flier Lynn LeMaster  
294-4517

September						
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				

6 Hour Lake Cruise - call Kathlyn 355-5226

Great Basin Symposium on Glacial and Post Glacial Drainage - Univ. Utah  
call Kathlyn  
355-5226 for FOGSL rate

Adopt-A-Highway Cleanup Day at Saltair  
Margie 487-4383

Deadline for October Newsletter  
Reda and Jim  
484-5799

General Meeting with speaker  
Sugar House Park Garden Center 7 pm

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	

Paleolimnology Field Trip  
Dr. Don Currey

General Meeting with Annual Elections and Speaker  
Come and support FOGSL  
Sugar House Park Garden Center - 7 pm

General Meetings are held at the Sugarhouse Garden Center, Located in Sugarhouse Park next to Highland High School. Board meetings are held at the Salt Lake County complex on 2100 S. State St. room S2019 (South Bldg.)

Cover: October 1996 On Great Salt Lake Desert Auto Tour No. 01, trip led by Kevin Landis, Photo by Jim Zinanti



# President's Message

by Joel Peterson

This is the time of year when our community hosts a significant international event--the staging of migratory shorebirds at the Great Salt Lake. By the time you read this, Mark Stackhouse will have presented his perspective on this international connection at our general meeting on June 24<sup>th</sup>, I hope you were able to attend and enjoyed the slides. An opportunity to experience the migratory shorebirds first-hand awaits August 2nd on our outing to Farmington Bay Waterfowl Management Area (see the Coming Attractions).

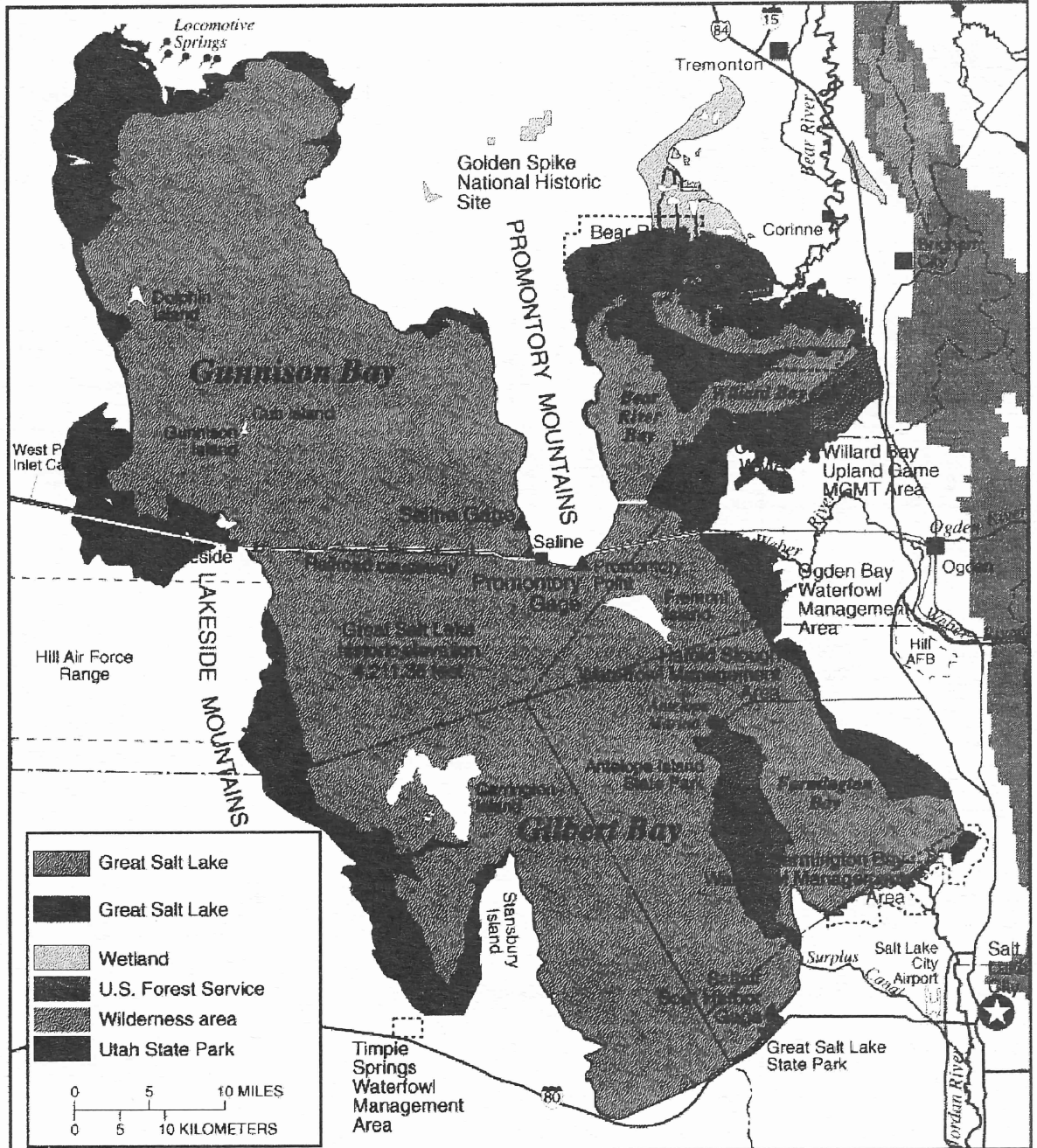
Thanks to all of the volunteers who came out to the lake near Saltair for our I-80 UDOT highway cleanup project. Your dedication to positive human-lake interactions will not go unrewarded. Perhaps you got a tan!

Another dedicated group, Citizens Against Chlorine Contamination (CACC), reports to us about their progress toward achieving the proper oversight and regulation of chlorine (and other) emissions from MagCorp. This is an issue of importance not only for protection of our natural setting, but also for our own health and that of our children.

Also inside this issue of the Friends of Great Salt Lake Newsletter, we strive to keep you up-to-date with articles about brine shrimp research, meetings and activities. So pull out the calendar of our activities, put it

under that refrigerator magnet, and I'll see you there!

PS Got a yen for putting pen to paper? We are looking for someone to fill our Secretary position on the Board. You would take meeting minutes, mail them to the Board, and help with some correspondence. We need someone to finish the current term and have an interest in being re-elected in October for next year.



## *Coming Attractions*

**Sat. Aug. 2 (8-noon) Birding Great Salt Lake Migrations** Join Friends of Great Salt Lake at the Farmington Bay Waterfowl Management Area headquarters near Centerville for a driving tour to look at thousands of migratory shorebirds and waterfowl. This is a unique time of the year when the birds concentrate on the lake to feed and gather their strength for long flights to as far away as central South America. Justin Dolling, manager of the Farmington Bay Waterfowl Management Area, will lead the tour to the western dikes to show us large numbers of birds such as phalaropes, black necked stilts, marbled godwits, willets, white face ibis and snowy egrets. Bring sun protection, drinking water, and insect repellent. Also bring binoculars, spotting scopes, and field guides if you have them. Come early for free bagels and hot coffee before we begin! Take the Centerville Exit 322 and travel approximately 4 miles northward on the Frontage Road that is on the East side of the interstate. Turn West on Glovers Lane (925 S.) and travel for approximately one mile and turn left on 1325 W. Follow that road until you reach the headquarters buildings. For more information, call Kathlyn at 355-5226.

**Fri./Sat. Sept. 5-6 Sandhill Crane Days '97** Come celebrate the Autumn migration of Utah's Sandhill Cranes through Cache Valley sponsored by Spirit of Utah Wilderness, Utah Wildlife Manifesto, Bridgerland and Great Salt Lake Audubon.

Friday evening: special guest, Kent Clegg, whose documentary featured an airlight flight to escort a band of crane from Idaho to New Mexico was featured on NBC's program, Coast to Coast,

Saturday AM: Guided Canoe or bus trips through Cache Valley's crane marshes and fields.

Saturday afternoon: Special, private tour to discover the birds of the Bear River National Migratory bird refuge with DWR resources Avian biologist Frank Howe.

Saturday evening: dutch oven dinner in the canyons. Limited space. Contact 801-245-6747 or 523-6225.

**Sat. Sept. 13. All day lake cruise with Salt Island Adventures.** Friends of Great Salt Lake will charter "The Islander" for a 6 hour Great Salt Lake cruise. Look for more information in upcoming fliers.

**Wed.-Sat., Sept 17 to 20. The Great Basin Symposium on Glacial and Post Glacial Drainage** sponsored by the Smithsonian Institution, University of Utah, Utah Geologic Survey, and the Utah Museum of Natural History. Call Kathlyn at 355-5226 for information on discounts for FOGSL members.

**Sat. Sept. 27 UDOT Adopt-a-Highway cleanup.** This is a great opportunity to help keep our Lake clean, meet other Friends, and help our community. Look for details in upcoming fliers.

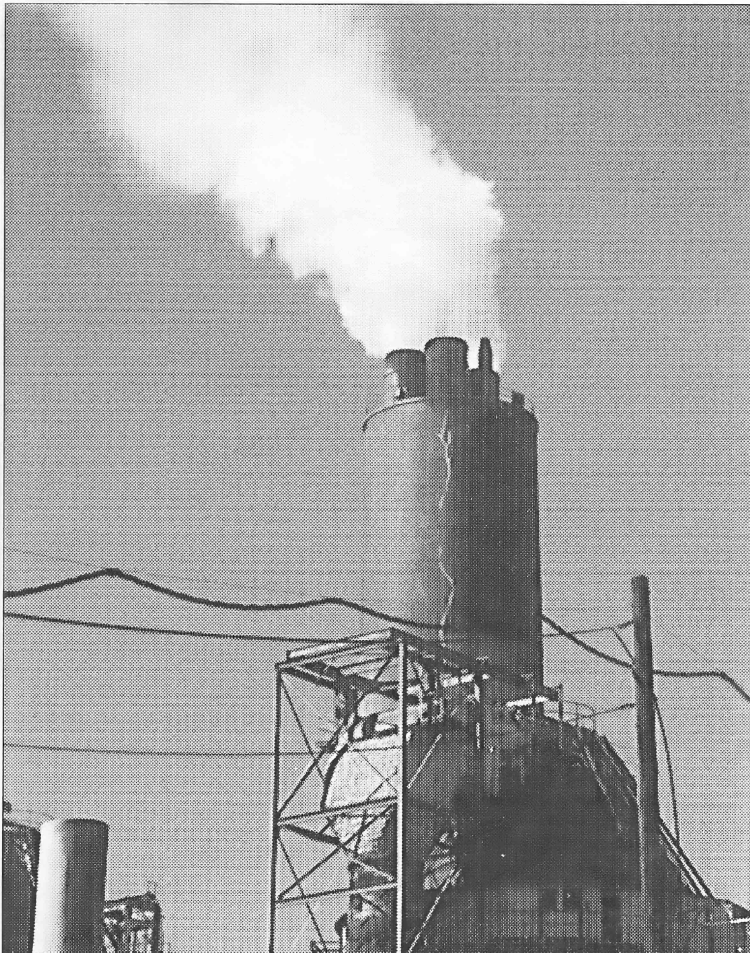
**Sat. Oct. 4 Paleolimnology Field Trip with Don Currey.** Learn from an expert about the prehistory of Great Salt Lake. Look for details in upcoming fliers.



# *Citizens Against Chlorine Contamination*

## **CACC Update**

by Howard Gross



### **PRESSURES MOUNT ON MAGCORP TO CLEAN UP THEIR ACT**

The Magnesium Corporation of America (MagCorp) facility in Rowley, Utah produces magnesium from magnesium chloride brine they take from Great Salt Lake. One of the by-products of their production process is chlorine...a lot of chlorine. In 1995, MagCorp was the source of 88% of all point source chlorine emissions in the United States, emitting nearly 30,000 tons, or 60 million pounds, to the atmosphere. CACC is concerned about the health effects these emissions have on the residents of northern Utah and on the Great Salt Lake ecosystem.

On June 4, 1997, representatives of MagCorp appeared before the Utah Air Quality Board (Board) requesting a variance in their Approval Order (AO) so that they can take their Chlorine Reduction Burner (CRB) off-line this summer for six weeks to perform maintenance. In the process of doing so, they would emit 3000-3500 additional tons of chlorine to the atmosphere. This amount alone would be more than any other chlorine polluter in the nation emits annually, and represents a two-thirds increase in the 4800 tons MagCorp is already permitted

to emit annually from the CRB, and would increase MagCorp's total annual chlorine emissions by about 10%.

Scott Endicott and I represented CACC at the Board meeting. The following are excerpts from our comments:

"Emissions of chlorine from MagCorp are increasing, not decreasing, and this concerns us. CACC provided to the Utah Division of Air Quality (UDAQ) in August 1996 peer-reviewed literature references showing that atmospheric chlorine may be a precursor to ozone production. We also have documented the likelihood that MagCorp's production process is emitting chlorinated hydrocarbons, such as dioxins and furans, to the atmosphere. These substances have been linked to a wide range of adverse environmental and health impacts, including cancer, birth defects, and other reproductive and immune system illnesses. The CRB not only controls chlorine emissions, but we believe it probably also controls to some extent, through incineration, the emissions of chlorinated hydrocarbons. Therefore, we expect that citizens and the environment will be exposed to extra emissions of chlorinated hydrocarbons during the CRB maintenance period."

"CACC is also concerned that UDAQ has allowed MagCorp to go for long periods of time in violation of their Approval Order. As an example, MagCorp is currently out of compliance with condition 9 of their September 1996 approval order, which in essence says that MagCorp shall submit a "Notice Of Intent" addressing the CRB/melt reactor stack emission limit. This AO condition has roots in the 1992 AO which says that if results of compliance testing indicate lower emission limits are achievable on a consistent basis, the emission limits specified in the AO shall be adjusted to reflect these lower limits. According to compliance testing conducted in 1995, the CRB melt/reactor stack emitted less than 21 lb./hr of Cl<sub>2</sub>, while the AO limit is 400 lb./hr. Clearly, the emission limits for the CRB melt/reactor stack need to be adjusted downward, and this is why UDAQ is requiring MagCorp to submit the NOI. According to the Sept. 1996 AO, UDAQ gave MagCorp until November 1996 to comply with condition 9. Well, it's seven months past November, and as far as we know, the NOI has not been submitted. CACC urges the Air Quality Board not to approve any variance for MagCorp until they are in compliance with condition 9 of their current AO."

"The CRB has a 4800 ton/yr. emission limit, yet at 21 lb./hr, it could emit less than 100 tons/year. With this excessive limit, why can't MagCorp perform its maintenance and stay within the permitted limits? We find it inconsistent for the UDAQ to grant such a large yearly limit and then allow substantial additional emissions by variance. It is time for MagCorp's operations to come under closer control by the Board and UDAQ."



"CACC would also like to make another recommendation to the Air Quality Board. We suggest that MagCorp build a second CRB to operate when the first CRB is off-line. A strict schedule of maintenance could then be prescribed and nearly all excess melt/reactor emissions would be eliminated."

"Allow me to provide some background information. MagCorp's production process is operational 24 hours per day. This is because shutting down their electrolytic cells causes molten magnesium chloride to freeze in the cells, thus requiring the cells to be rebuilt at an unacceptable cost. While MagCorp has invested in equipment redundancy and maintenance to ensure that the cells are supplied with molten magnesium chloride and do not freeze, they have not invested in the same redundancy when it comes to pollution control. This board should require that MagCorp's level of investment in pollution control equipment be sufficient enough so that as long as they are continually producing magnesium, they are also continually controlling chlorine emissions."

"We estimate that a second CRB in 1997 could eliminate at least 5,200 tons of chlorine emissions. This figure comes from 3,500 tons of chlorine which MagCorp would emit during the six-week downtime they currently are seeking a variance for, plus assuming that downtime during the remainder of the year would allow 1,700 additional tons to be emitted, as was the case in 1996. Several UDAQ employees have told us that UDAQ uses a figure of \$3000-\$5000/ton as an amount for determining whether a Baseline Achievable Control Technology (BACT) is feasible. Multiplying this figure by 5,200 tons, gives us a price range of 15.6-26 million dollars as reasonable for a second CRB. We suspect the cost of a 2nd CRB would be much less. Remember that research and design costs were incurred for the 1st CRB and would be greatly reduced for a 2nd CRB. We urge the Air Quality Board to make a 2nd CRB a condition of the current variance request."

"In conclusion, we believe that MagCorp should be able to perform this maintenance within the current CRB limits, and thus do not believe that a variance is necessary. Should the Board grant a variance, we urge that the Board include as part of the variance two conditions: (1) that MagCorp build a 2nd CRB, and (2) that MagCorp be required to comply with AO condition 9 before the maintenance occurs."

"Lastly, I'd like to emphasize that CACC will not go away on these issues. We intend to provide citizen input on the Maximum Achievable Control Technology (MACT) determination for MagCorp, and we'd like to see MagCorp convert all of their IG Farben cells to sealed cells. We welcome the opportunity to discuss and explain these issues with UDAQ, the Air Quality Board, and MagCorp."

Several of the Board members were receptive to our idea of a second CRB. In fact, the idea was raised by Diane Neilsen, the Director of the Utah Division of Environmental Quality, before I even made the above comments. While several of the Board members appeared

to be in favor of a second CRB, some tried to tie the need for a second CRB to data collected by UDAQ's chlorine monitor located in Grantsville.

The problems with tying the need for a second CRB to data from the Grantsville monitor are numerous. First, the effects of chlorine and potential dioxin emissions by MagCorp are most likely affecting more than the citizens of Grantsville (e.g. elevated ozone levels on the Wasatch Front, effects on the Great Salt Lake ecosystem). Second, the citizens of Grantsville are "human chlorine monitors," and they have repeatedly described their discomfort during MagCorp upset conditions to State health officials. Janet Cook of Grantsville described to the Air Quality Board Grantsville residents' suffering this past May due to MagCorp's emissions when the CRB was shut down. Chlorine levels in Grantsville could not be measured during this period because UDAQ's chlorine monitor was broken in April and May of this year. CACC strongly empathizes with the Grantsville residents' suffering. Third, we do not know how far and where to MagCorp's pollution travels, exactly what is in their plume, what chemical changes it undergoes as it travels over Great Salt Lake or surrounding land, or what receptors in the environment are affected. Most scientists believe that the chlorine becomes hydrochloric acid, but does that happen in all conditions? What other compounds, such as dioxins, are present? CACC has asked UDAQ to study of the "fate" of MagCorp's air emissions.

In the end, the Board voted to force MagCorp to control their emissions from the melt/reactor stack while the CRB is down. They granted the variance request, but attached a condition to it stating that MagCorp must (a) build a second CRB or implement an alternative technology to control emissions from the melt/reactor stack when the first CRB is off-line for maintenance or repairs, or (b) show that it would not be economically feasible to do so. Based on UDAQ guidelines, CACC feels that MagCorp will not be able to do the latter successfully. We are hopeful that the Air Quality Board's action on June 4 is the beginning of tougher regulation of MagCorp and will result in the construction of a second CRB.

### **Plans for Chlorinated Hydrocarbon Testing at MagCorp Moves Along**

As a result of comments received pertaining to MagCorp's request to increase production last summer, UDAQ is moving forward with plans to test MagCorp's facility for production of chlorinated hydrocarbons (CHCs). CHCs include dioxins and furans, which, as stated earlier, pose substantial health and environmental risks. In February 1997, CACC provided input to UDAQ concerning this testing plan. Our input was based on the advice of several chemists. UDAQ personnel assured CACC that our input would be considered and we would be invited to review this testing plan once it was finalized. However, in May, CACC received a copy of the testing plan through a GRAMA request. Apparently, UDAQ had finalized a draft of the testing plan in March, but did not send us a copy to review. The plan UDAQ developed largely ignored CACC's in-



put. After reviewing the current plan, we feel the protocol proposed by UDAQ would test the wrong waste stream, sample in the wrong place, use the wrong test method, and worst of all, not detect dioxin if it is there. CACC protested this in May to Ursula Trueman, the Director of UDAQ, and as a result, UDAQ and UDEQ will meet with CACC to discuss the testing plan in late June.

### **CACC Prepares for MagCorp MACT Determination, Enlists Legal Help**

The U.S. Environmental Protection Agency (EPA) is scheduled to promulgate a Maximum Achievable Control Technology (MACT) for MagCorp by the year 2000. In its simplest terms, the EPA promulgates MACT (Maximum Achievable Control Technology) determinations for an industry by reviewing the pollution control technology employed by the cleanest companies in that industry. This technology is adopted as MACT, and the rest of the industry must implement this technology within a given time period. The MACT determination for MagCorp presents an important opportunity to get MagCorp to control their emissions. However, because MagCorp operates what is basically a one-of-a-kind fa-

cility in the U.S., our use of the MACT determination process as a vehicle for reducing MagCorp's emissions will present some unique challenges. Thus, CACC has entered into a retainer agreement with Ecological Consultants for the Public Interest (ECPI), a non-profit law firm from Boulder, Colorado. In addition to assisting us with the MACT determination process, ECPI will also advise CACC on other matters and represent us if we feel it is necessary to litigate to achieve our goals.

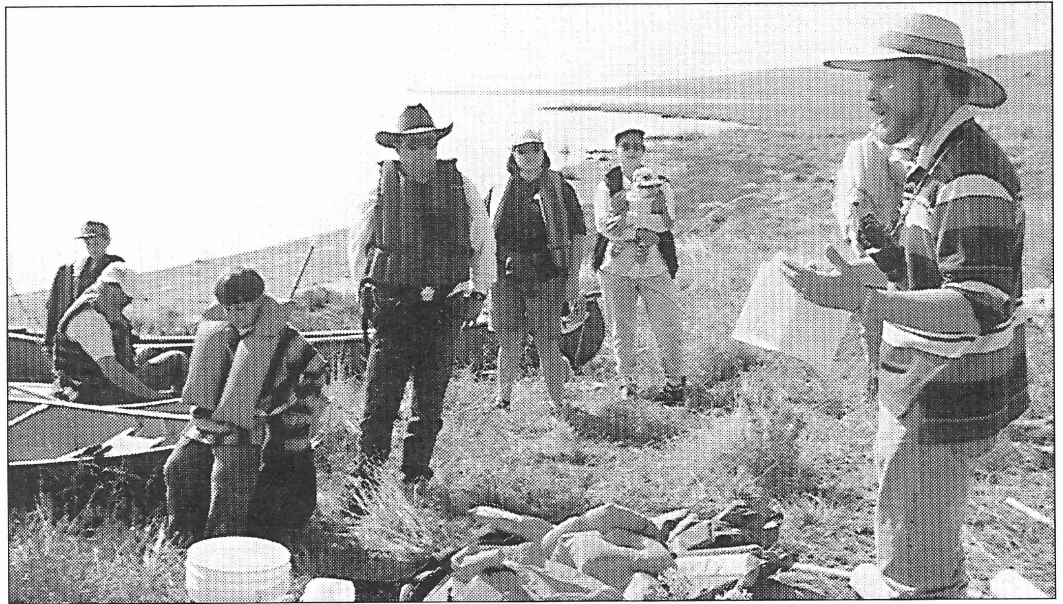
CACC has obtained a limited amount of funding from some generous sources to retain ECPI's services (which are very reasonably priced). However, we will need more funding as we move forward in dealing with issues related to MagCorp. Your support in any amount would be appreciated. You can send it to: **CACC, 845 E. Emerson Ave., Salt Lake City, UT 84105**. Make tax-deductible checks payable to the "Sierra Club Foundation," and write "Utah Chapter/CACC" in the memo field of the check. If you have any questions about these issues or can provide any assistance (such as being or knowing an expert witness on air quality or toxicology issues), please contact **Scott Endicott (596-1325)** or **Howard Gross (586-4565)**.



## 1997 ANTELOPE ISLAND WORKSHOP AND CAMPOUT A BIG SUCCESS

The third annual Antelope Island Workshop and Camp Out on May 2 to 5 was another great success.

The 70-plus participants enjoyed a variety of Saturday workshop classes under beautiful spring skies. The Saturday classes this year included Dr. Sue Fairbanks relating the results of her studies about the ecological relationship between the bison and antelope and tracking the newly introduced bighorn sheep; investigating plant biogeography with Chuck Wullstein; exploring the lake ecosystem from a small flotilla of canoes led by Joel Peterson; taking the popular canyon naturalist hike with Park Manager Tim Smith; van touring around the Howard Slough wetlands with Don Paul who explained the complex interrelationship between fresh and salt water wetlands and wildlife of the lake; and participating in very successful bird watching tours with Terry Sadler (66 species were sited during the day). Some participants came on Friday to take advantage of the opportunity to camp an extra night at the remote historic Garr Fielding Ranch. And, many stayed Saturday evening joined by the Cache Valley Audubon group, to share a potluck, listen to live bluegrass pickin', and enjoy the campfire. Several helped the next morning



with planting wildlife browse in a nearby canyon as a service project for the Park. FOGSL would like to thank Antelope Island State Park and all the instructors for their support for another successful spring workshop year.



## UPDATE ON BRINE SHRIMP RESEARCH ON GREAT SALT LAKE

Doyle Stephens, USGS, Salt Lake City, Utah

The rapid expansion of the brine shrimp industry on Great Salt Lake in the last few years has necessitated research into the population dynamics of shrimp in the lake and factors affecting the structure and density of the population. In 1994, the Division of Wildlife Resources, in cooperation with Dr. Wayne Wurtsbaugh at Utah State University began a multi-year study to determine the extent and fluctuation of the shrimp population and the environmental factors that drive the fluctuations. In 1995 the lake monitoring was conducted by the USGS and Dr. Gary Belovsky of Utah State University initiated the development of a population model that could ultimately be used in the management of the resource.

The USGS study, led by Dr. Doyle Stephens, developed and implemented a depth-stratified randomized design sampling plan for brine shrimp and environmental variables on the south basin of the lake in August 1995. Shrimp samples are collected at least monthly and population structure determined. Environmental data collected coincident with shrimp sampling consists of water temperature, salinity, solar radiation, and concentrations of the nutrients nitrogen and phosphorus. The structure of the phytoplankton community and chlorophyll concentrations are determined periodically to identify and quantify the food base available to the shrimp. The sampling protocol for shrimp consists of triplicate net hauls from lake bottom through the water surface and collection of shrimp samples from discrete depths. As of 1997, seventeen sites are monitored at 2 to 4 week intervals throughout the year.

From August through November 1995, average numbers of adult shrimp ranged from about 1,500 to 350 individuals per cubic meter. The commercial harvest of shrimp cysts began in October and continued to the end of February, 1996. About 15,000,000 pounds of raw

product were taken of which only about half is marketable cysts. Live adults were not present in shrimp samples collected in February or March and were uncommon in samples until late April 1996. The number of shrimp cysts available to start the shrimp population cycle in February 1996 was about 12,000 per cubic meter with a 95 % confidence interval of plus or minus 4,600. The first appearance of nauplii was early February and nauplii increased to a mean concentration of about 5,800 per cubic meter by early April. Diatoms were the dominant phytoplankton during spring and early summer which contrasts with previous years when the green alga, *Dunaliella viridis* was dominant. The environmental factors responsible for the shift in algal populations is not currently known. A summary of observations for 1996 is being prepared and the USGS expects to enlarge their local boat fleet for the 1997 season with the addition of a 23 foot craft that previously cruised the bayous of Louisiana.

If you would like more information on brine shrimp or on other aspects of the Great Salt Lake, visit the newly completed USGS web site. Your comments to the webmaster are welcome.

<http://www.dutslc.wr.usgs.gov/greatsaltlake/saltlake.html>

Learn all about the Great Salt Lake: salinity, ecology, water-surface elevations.

email: [stephens@usgs.gov](mailto:stephens@usgs.gov)

[odoyle@worldnet.att.net](mailto:odoyle@worldnet.att.net)

FAX: 801-975-3424

Wednesday, May 8 –

Several horned frogs were found to-day running upon the shores. The sand which forms the beach in this vicinity is worthy of remark. Under a magnifier it is found to consist of rounded globules, chiefly of calcareous rock, worn doubtless by attrition into their present form, not an angular particle being found among them. It is variegated by different and brilliant colors, and reminded me of the sand I had once seen which was brought from the Great Desert of Zahara. Its conformation makes it very fatiguing to walk in, presenting no firm resistance to the foot, but yielding at every step. A piece of bitumen was found buried in the sand, which had adhered to it when softened by the sun, and completely frosted it over, so that it very much resembled one of the small chocolate lozenges of the shops, covered with miniature sugarplums.

Howard Stansbury, 1850



## Trip Talks

June 14-15 1997

### Sesquicentennial Circumspection around Great Salt Lake

Leader: Kevin "Fremont" Landis

#### Wagons/handcarts/walkers

Robert Turner, Linda Guresterl, Noel deNevers, Klancy deNevers, children; Robert, Stephanie, Wayne Wurtsbaugh, Linda L'Ai, Bryce and Doug Wurtsbaugh, Cara McCarthy, Spencer Martin, Jeff Yorgason, Mark Doman, Jane Allen, children; Christine & Jenny, Tom Pratt, Jo Pratt, Margie Tucker, Libby Hunter, Scott Endicott, Penny Ciak, Paula Evershed, Gary Evershed, Mark Spinti, Jennifer Spinti, Keith Johnson, Michele Davis, Andy White, Leslie White, Jim Zinanti and Reda Herriott.

**Livestock:** four legged canine variety: Zane, Kiska, Copper, Koda, and Moqui.

**Wildlife:** Toads, lizards, snake skin,

**Birds:** Nighthawks, Short Eared Owls, Golden Eagles, Swainsons Hawk, Burroughing Owls, Red Tailed Hawks, Avocets, Black Necked Stilts, Yellow Headed Black-birds:

**Flowers:** Blazing Star, Prince's Plume, Rush Pink, Salt Heliotrope, Evening Primrose and the Moth Eating Catcher Plant

Leader Landis prepared and mailed a **12 page brochure/itinerary** of the trip. The detail of directions, time in minutes, points, UTM coordinates, miles from previous/miles total along with notes is a true testament to his engineering skills, knowledge of the lake and just plain hours of advance preparation. Our leader stated we could easily spend several weeks on this adventure we were undertaking in 2 days.

We started our journey at 8:30 am in Centerville. We made sure our wagons were loaded properly and said a "Howdy do" to the folks in the other wagons. There was a great variety of wagons from imported ones to small ones to large ones, even to ones that had trailers (Pratts "chuck wagon") some old, some new... But our Wagonmaster carried extra hay 'n' oats, water and rations, even a cell... ummmm a few pigeons for emergency communication with civilization.

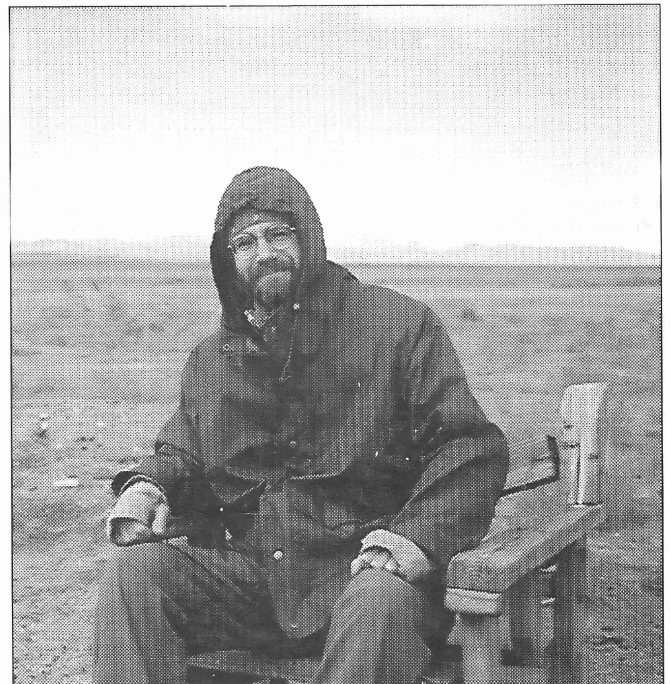
Heading West after 6.5 miles we got out of our wagons for a short rest stop at Farmington Bay Waterfowl Management Area. Built in 1935, it now includes more than 12,000 acres of managed waterfowl habitat. (see coming attractions for upcoming tour) It was at this stop, we realized we had some famous and knowledgeable birders along. Penny Ciak, president of Great Salt Lake Audubon, and former president Andy White. We enjoyed watching a wonderful flotilla of Pelicans, Herons, Cormorants, Canada Geese and the elusive Blue Throated Square Beak.

Back in the wagons and onto the Layton Wetlands Preserve! Owned by The Nature Conservancy and managed by Utah Division of Wildlife, this would be a wonderful place to spend all day looking for a glimpse of the Blue Throat. Points of interest as we headed toward Corinne were the Ogden Bay Waterfowl Management area, Harold S. Crane Waterfowl Management Area and the Bear River Migratory Bird Refuge: All deserving of more investigation, support and patronage

We forded the Bear River and look warily for any signs of its' namesake.. In 1818 trapper Michel Bourdon named the river for the large number of black, brown and grizzly bears in the area.

At mile marker 60.0 we reach the city of Corinne, "The Gentile City", established in 1869. Originally Corinne was a freight transfer point for supplies heading to Idaho, and Montana by wagon, and a port for steam ships hauling ore and passengers from Lakepoint at the south end of the Lake. At one time there were 1500 permanent residents, 28 saloons, 16 liquor stores, large freight warehouses, several banks, meat packing plants, Epsom salt factory, 5 newspapers, 2 theaters, opera house, sawmill, brickyard, cigar factory, flour mills, ore smelter, and several hotels and no temperance offices. Wagonmaster Landis, informs us this is the last change to feed our oxen, mules and other animals for 180 miles.

Twenty plus miles and we stop for lunch at the Golden Spike N.H.S. In the middle of the desert the transcontinental railroad was joined at this spot, supposedly with a golden spike which seems to have been misplaced. For a small fee, you can enjoy the re-enactment complete with lengthy political speeches.



Wagonmaster: Kevin Landis (Oct. 1996)



Pioneers at the  
"Hogup" Cave.



Back in the dusty, hard-seated wagons and on to Monument Point, a raised rocky mound the size of an office building, originally a rail siding which served the Deseret Salt Works along with a steam boat port. Everyone jumps from their wagons and climbs to the top, unfortunately dislodging a short eared owl, who flies out on the salt flats and waits for us to get off her rock.

Southwest about 5 miles we note with interest the Bar M

Spring, Locomotive Springs, so named by Baker and Reed in 1888 as the water gushing from the springs sounded like rushing locomotives. We were unable to hear as they picked the limestone deposits from the outlet in order to increase the water flow ,

On to Seco Station founded in 1873 by the Central Pacific - transcontinental railroad. A townsite for Chinese railroad workers According to legend there is a large



Pioneers in  
the Hogup  
Cave look-  
ing South.



amount of money, gold, gems hidden in the low hills near hear by the notorious Jim Polk's gang.

All along the journey. the many wonderful wildflowers are identified and shared by Jo and Tom Pratt. Avid wildflowerites, they have donated a photo collection of Wildflowers of Antelope Island to the visitor center on the island which is available for review,

On past Elinor Siding, 1902-1907, Central Pacific - transcontinental railroad and into the once bustling town of 200 people in Kelton (Indian Creek). The town boasted a railroad depot, turntable, stagecoach line, post office, hotels, saloons, stores and homes. Less than a mile down the road is the Kelton Cemetery. A well worn white chunk of marble, perhaps a lamb, marks a child's grave reminds us of the tenuous life and death in this once vibrant town on the lake. The town was greatly damaged in 1934 by an earthquake and abandoned.

We now head our wagons towards the Hogup Mountains. A clever twist of name designated by the Stansbury party of 1850 as a contrast to the geologic term "hogback". A few miles down the road is a beautiful stone arch which surely witnessed many a weary traveler and pioneer.

We see the crocodile mountain toward the East. Yes, it looks like a huge single Croc 15 miles long with 10 miles of jaw and mouth.

At mile 151.5 the wagonmaster give the order to circle our wagons and set up camp for the night. Camp is filled with a flurry of activity as we pioneers search our wagons for the lightest, best designed, latest, in new technology camping gear. Several dutch ovens are set up for community sampling. Jim's famous Wild Grouse Pot Pie, created from the birds of the day, while Libby and Margie prepare some cakes and cobblers for late night snacks. During dusk the air is filled with Night-hawks flying a few feet above the ground, mouths open for bugs. From the campfire come the melodious tunes of Jeff's guitar, while in the background we can hear the steady snoring of a tired camper already retired in his paper thin tent. Wonderful conversation flows as Keith tells of his father working on installing the trestles for the famous Lucin cutoff, while full circle, Paula relates the current and continued use of this redwood into her company's recycled birdhouses, chairs, and practical things.

Soon the camp is quiet and before we know it, up pops the sun...A most beautiful place for sunsets and rising...No structures and human made noise to block the experience of the beginning and ending of another day, with vast vistas of landscape 360 degrees.

Sunday morning and a breakfast of hardtack. The wagon master makes his rounds and urges us to "gi-di-up." We continue to the South West with a wonderful view of Gunnison Island to the E.S.E, Strong's Knob and Lakeside Mts. to the S.S.E.. Mile 173.4 we arrive at Hogup cave. We leave our mud-caked wagons and hike up to the cave. This archeological rich site was occupied intermittently by prehistoric peoples from 8400 years ago to about 1470 AD, Standing in the cave and looking South over the lake we see shades of blue sky, blue-green of the lake and creams, green and red of the desert landscape. We were relieved to find only the skin of a snake and not its owner.

Seventeen miles and we view the Lucin cutoff and contemplate its rich history. The cut-off was constructed from 1902-1904 The purpose was to shorten the railroad line between Ogden and Lucin by 43.77 miles and to eliminate 3,919 degrees of curvature and 1.515 feet of grade. The actual cutoff is composed of 12 miles of trestle, twenty miles of "fill", and over the desert flats, one hundred and two miles in all. To handle this huge undertaking. Several thousand men were hired to work on the construction. Their wage was from two dollars a day for the unskilled labor of the gravel-pits and dump-trains to four and four and a half for the skilled mechanics, carpenters, bridge workers and engineers. This undertaking is worthy of another article. Of particular note is what entertainment they found stranded in boarding housed built on platforms out in the desert. They worked in ten-hour shifts, day and night, Sundays and holidays..

A few miles from here is the "infamous" Bangerter Pump Station, constructed at a cost of \$60 million to help protect developments along the shores of the Great Salt Lake from the rising water level. The station included three pumps with 10 ft. diameter impellers to lift water 15 ft at a rate of 1.6 million gallons per minute.

Sadly, we interrupt our circumspections due to closure of previously used public access. (See article by wagon master). Therefore, we backtrack towards Kelton and connect with Utah Highway 30 towards Snowville, East on Utah 42 and too soon back to I-84. It was a sad parting of all wagon train participants, A wonderful trek with great stories and experiences of our own to match those of all the pioneers and prehistoric folks who passed this way. A huge **"Thank you"** to Kevin Landis for putting this together, perhaps we can talk him into doing it again in the fall and to all the courageous and hardy pioneers who dared make the journey. **"Thank you."**



# Friends of Great Salt Lake 1997

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## Submitting Material for Publication

1. **What To Submit:** original articles (historical, geological, geographical, biological, political, fiction, poetry, etc.) which pertain to Great Salt Lake or art work including sketches, photographs, etc.
2. **Submitting Material:** Mail or deliver to **2656 S. Chadwick St. SLC, UT 84106-3506**. Or e-mail to **jzinanti@wasatch.com** or **RedaHZ@wasatch.com**
3. Please phone **484-8271** or **484-5799** to confirm receipt of e-mail, or with any other questions, suggestions, comments, or ideas
4. **Deadlines:** The deadlines are Sept. 16 (Fall), Dec. 16 (Winter), Mar 16 (Spring), and June 16 (Summer).



## *Recycle Aluminum Cans.*


Please consider donating aluminum cans 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 FOGSL 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 arrangements will be made for a pick-up.

If you don't recycle aluminum. Please consider starting!! This will greatly benefit 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 T-shirts For Sale*

Want to know a great way to show your support for Great Salt Lake and help FOGSL raise funds? Buy FOGSL T-shirts for yourself and friends. The T-shirt boasts the logo shown below, silk-screened in a five color design. Joel Peterson recommends you use this 100% cotton shirt to keep warm when making your way through ankle-high saltgrass during an exotic August dusk trying to spot Long-billed Curlews. Your mud-mucking partner will be irrepressibly impressed! Available in the following colors & sizes: olive green (XL, L), blue (XL, L, S), light blue (child's M), tan (XL, L, S, child's M), white (XXL, XL, L). Use the order form below and specify 1<sup>st</sup> and 2<sup>nd</sup> color choices because some color and size combinations are limited. Use the order form below.

Mail this FOGSL T-shirt order form to: FGSL, P.O. Box 2655, SLC, UT 84110-2655					
Name _____					
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City _____ State _____					
Phone number (eve) _____ (day) _____					
					
# of shirts	Size	1 <sup>st</sup> color choice	2 <sup>nd</sup> color choice	price (members \$12/ea., non-members \$14/ea.)	price
Shipping costs (\$2.50 for first shirt, \$1.00 for each additional)					
Grand Total (check payable to Friends of Great Salt Lake, please do not send cash)					



## *Good Friends and Members*

**Paula Volpin Evershed** came to Utah originally from Southern California via Price Utah. While on a sabbatical from her studies for a doctorate in Anthropology she visited friends in Price. She felt she needed balance in her life between the academic and the practical. Her friends introduced her to the Eversheds who were looking for an office manager for their tool business. Having no experience, she tackled the job and learned the business

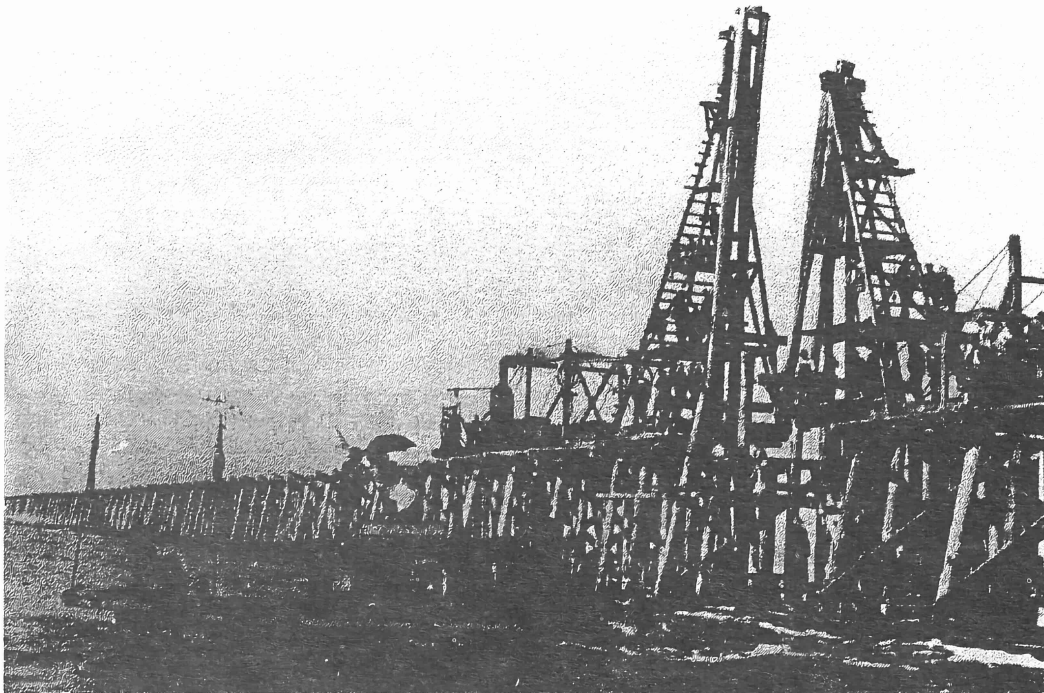
Meeting Paula for the first time, it's easy to understand how she can accomplish anything she decides to do. Her inquisitive yet open personality is obvious to first introduction, business contacts and good friends.

In time, Paula and **Gary Evershed** (originally from Salt Lake) married and moved to Salt Lake. Times were tight, but construction was the field they felt most comfortable pursuing. Paula, Gary and a third (former) partner formed Lowell Construction Company. Specializing in restoration and use of recycled wood, stone, or glass, their business has grown and is highly respected.

Some examples of their projects are the Ogden Nature Center and Fuggle's Brewery.

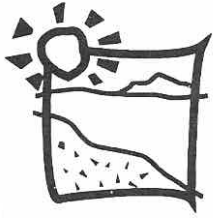
The lakeside was Gary's playground growing up near Farmington Bay. The history and beauty of the lake were well known to him before he discovered the trestles used in the Lucin cutoff were for sale. The wood, "old growth redwood" (*Sequoia sempervirens*) spent fifty-five years in salt water and laced with railroad spikes. Then it was stored in Idaho until 1993. Paula and Gary purchased the bulk of the wood. They combined their historical research of the trestle, love of the natural and constant vision of recycling and created the Trestlewood Furniture signature brand (1904-1959—Authentic," with an image of a train on the trestle).

You can find Trestlewood furniture at Phillips Gallery, Ogden Nature Center and the Utah State Historical Society book store.



Constructing the Lucin Cutoff Trestle - courtesy Utah State Historical Society





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