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White Pelicans at Farmington Bay by Gary Crandall

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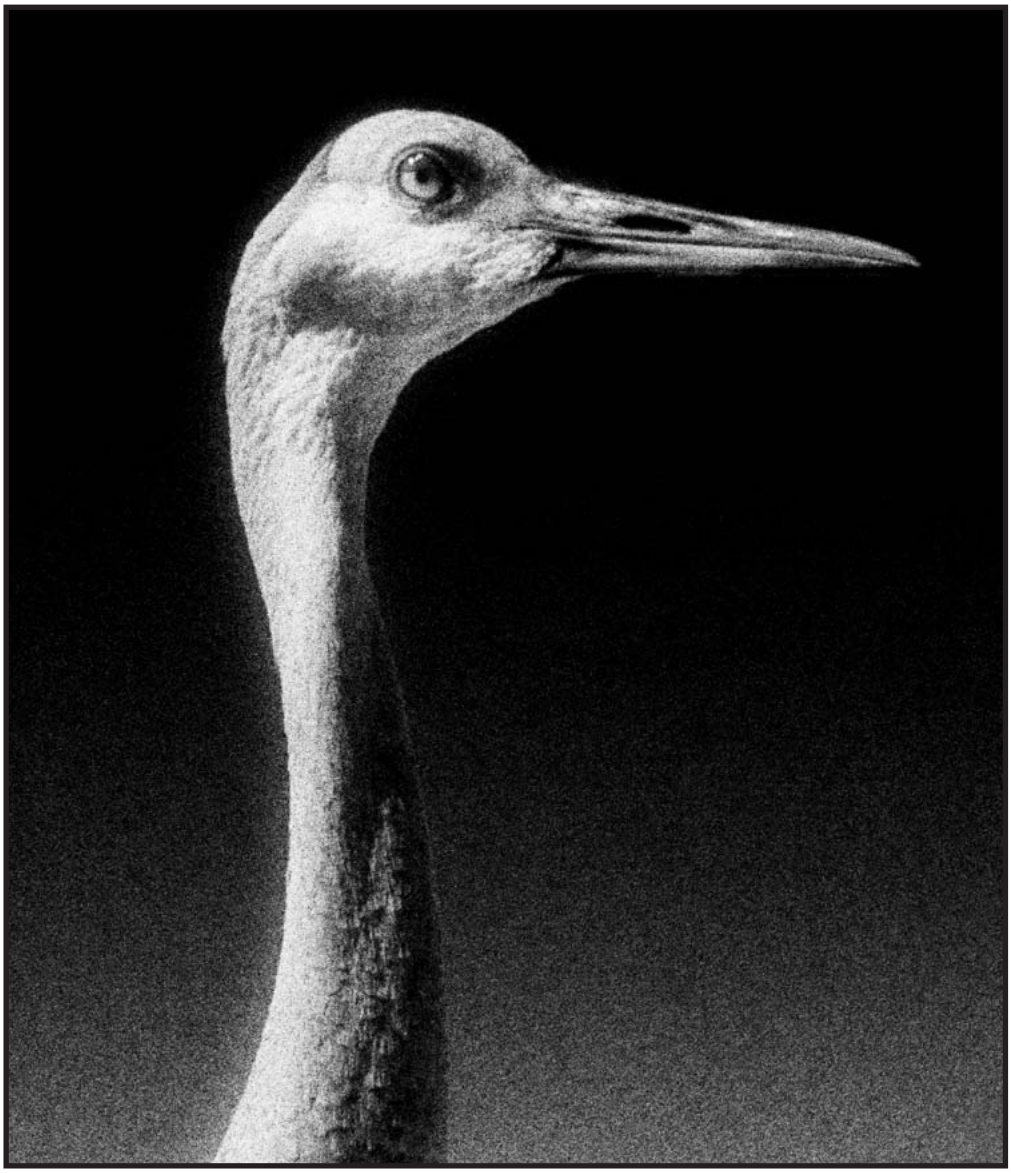

Bird Vogue by Rosalie Winard ©2006

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.

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Executive Director's Message

Expansion of Great Salt Lake Minerals: – A Healthy Dividend for Great Salt Lake or Just Unhealthy Industrialization?

"The artificial shrinking of the lake only enhances its vulnerability and leaves its continued habitat more prone to fluctuation and less capable of providing needed habitat and recreational opportunity at different lake levels."

Utah Waterfowl Association

The scarcity of water in the West is a fact of life. And for the second most arid state in the nation - on average - Mother Nature only promises the Great State of Utah a scant 15 inches annually to make a go of it. We rely on a bumper crop of winter snow pack in the mountains to quench our thirst and to reconstitute our rivers and inflows into Great Salt Lake.

Last October, the final report issued by Governor Huntsman's Blue Ribbon Advisory Council on Climate Change indicated that greenhouse gas emissions at or above current levels will result in a decline in mountain snowpack and the threat of severe and prolonged droughts. With that as a forecast for thinking hard about sustainability, perhaps it's time to expect more from decision makers. They seem to confuse taking a long view of managing our precious resources with juggling or balancing them. If we're going to be honest in our efforts to implement sustainable management principles for the lake, then we need both the words and deeds to do it.

A sobering story in the Salt Lake Tribune last fall focused on the impacts that farming and drought have had on the Locomotive Springs Waterfowl Management Area located on the northern edge of Gunnison Bay. This remote and crucial oasis used to provide fresh water and lush wetlands for resting and foraging migratory birds - but not anymore. Over the past 40 years because of increased groundwater pumping for agriculture upstream, and reduced precipitation - the springs have dropped 80 percent to a trickle. This has drastically reduced the carrying capacity it once offered to waterfowl and shorebirds. The Snowy Plover is a federally listed species that relies on Great Salt Lake freshwater springs for breeding. The Great Salt Lake population constitutes 55% of the entire breeding population west of the Rocky Mountains. Matt Lindon, assistant State Engineer is hoping that further studies will help determine a sustainable solution for the problem – if it's not already too late.

Last August, Governor Huntsman established the Great Salt Lake Advisory Council, on which FRIENDS serves. The Council has identified key threats to the lake. At the top of the list: water supply/quantity, population growth (development and water demand) and the lack of understanding of what constitutes a "healthy" and sustainable lake system. The Council's imperative became clear: not only must we create an improved and effective management structure for Great Salt Lake but we must also base management decisions for the system on sound science so that we can sustain this hemispherically important ecosystem for generations to come.

Kaysville Mayor Neka Roundy with Davis County Economic Development and Tourism reported to the GSL Advisory Council that the economic value of Great Salt Lake is alive and kicking when it comes to dollars from tourism. Millions of visitors from around the country and the world (and I don't just mean the birds) come to experience the mystery and the magic of our lake. Biking, birding, boating, duck hunting, photography, etc. etc, etc. – the lake is a magnet with an undeniable attraction that has been paying off for the state in millions of dollars and hundreds of jobs. These economic benefits tread lightly on the landscape and encourage repeat visits to this unparalleled part of the West.

So it's difficult to understand why the state is on a crash course to industrialize Great Salt Lake by encouraging the expansion of Great Salt Lake Minerals Corporation (GSLM) in Gunnison and Bear River Bays. Even if you consider the economic dollars that come from the collective industrial interests - industry is not the only game in town and it's not the only attribute the lake has to offer us. Much to the credit of the brine shrimp industry, they implement a sustainable model based on genuine population studies that acknowledges the limits of the resource, while also giving back in the form of research dollars to help us better understand the system.

Great Salt Lake Minerals' manifest destiny of needing to expand on the surface of the lake in order to increase its production of potassium sulfate is disappointing in a era when the merits of innovative thinking rate high on the charts. The company is currently under contract with a Canadian supplier of KCL which is used to supplement their production of potassium sulfate. That contract is soon to expire. The chance of negotiating as sweet a deal as it had in the past is slim so why not just expand the operation on the lake and get it all right from our own backyard? The state favors the idea even though this will require huge amounts of water from the lake and fresh water inflows that include those that feed Bear River Bay and Locomotive Springs.

In January 2009, the Army Corps of Engineers (ACOE) approved a 404 permit under the Clean Water Act for GSLM to relocate, extend and deepen an existing inlet canal in Clyman Bay. The canal transports water from the north arm of Gunnison Bay to a solar evaporation pond complex on the west side of the lake. The permit allows 22 acres of seasonally inundated Great Salt Lake playa lakebed to be directly impacted with dredge and fill. The canal would be extended by almost 2 miles north of its current location, widened to 50-60 feet and dredged to 11feet in depth. The rational for this project is to ensure that brine can be pumped from Gunnison Bay into evaporation ponds for potassium of sulfate and continued mineral extraction during the years of low lake elevations.

The US Environmental Protection Agency recommended denial of the project as proposed because "it could result in substantial and unacceptable adverse impacts on aquatic resources of national importance and on waters of the U.S."

It's a well known fact that Great Salt Lake provides a valuable habitat for over 250 bird species including the Snowy Plover and the White Pelican. Gunnison Island is home to one of three of the largest breeding colonies of White Pelicans in North America. Although Gunnison Island is located 5 miles east of the existing pond complex in Clyman Bay, it's likely that the extended inlet canal will act as a land bridge for foxes, coyotes and other animals to the island- a key threat to these populations.

We expressed concerns about how lengthening and deepening the canal would have the unprecedented effect of lowering lake levels. The lake level would be dropped to 4,188 ft. - approximately three feet lower than the lowest level recorded since 1851. Thus, enormous amounts of water could be funneled out of a lake already stressed by low water levels. Impacts of a continued low lake level have not been fully explored. Numerous questions need to be addressed before a final decision is made on this application.

According to Don Paul, former avian biologist for the Division of Wildlife Resources – "The key to Great Salt Lake viability at this time is water. Water from several points of need and concern. Water quantity, quality, time of availability, and points of discharge are critical concerns relating to the maintenance of the ecosystem. Continued interest in modifying shorelines and the lake bottom are issues that threaten the system's capacity to cycle through its natural dynamics that is an essential need in preferred lake ecology."

FRIENDS, conservation and community interests urged the ACOE to connect the actions of this project into one Environmental Impact Statement (EIS) already in progress. That EIS is addressing the proposed 33, 000 acre expansion already approved by the Utah Division of Forestry, Fire and State Lands in 2007. (See Wtr/Spring 2007 at www.fogsl.org). But the ACOE chose not to combine the actions.

In its Record of Decision on the inlet canal, the ACOE stated that "Sufficient information is not available to determine the potential effects that lower lake levels resulting from pumping would have on the perimeter of the lake. Impacts to the shoreline due to this decline are believed to be minimal. "

The inlet canal proposal is currently before the State RDCC (Resource Development Coordinating Committee). Public comments are due April 9th. Meanwhile, another agreement between GSLM and the state last December is coming down the pike. This time, the company wants an additional 37,088 acres near Dolphin Island. Put that acreage together – 113,000 acres, and it's larger than Salt Lake City- all of it dedicated to evaporation. The ACOE is required to go back to square one with the EIS process.

If you care about the future of Great Salt Lake – now is the time to get involved.

"If we don't change directions, we're going to end up where we're heading." - Rebecca Adamson – First Nations Development Institute

In saline,
Lynn de Freitas

What you can do – Visit www.fogsl.org - to find out.

FRIENDS ORGANIZATIONAL STATEMENT

FRIENDS of Great Salt Lake was founded in 1994. The mission of FRIENDS 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. The long-term vision of FRIENDS is to achieve comprehensive watershed-based restoration and protection for the Great Salt Lake Ecosystem.

FRIENDS has a very active Board of Directors and an Advisory Board consisting of professionals in the scientific, political, literary, education, and broadcast communities. The organization sponsors an array of programs, activities, and materials in pursuit of its mission.

Every two years, FRIENDS hosts the Great Salt Lake Issues Forum to provide a focused discussion about the Lake for policy makers, researchers, planners, industry and other stakeholders. The goal of each Forum is to encourage constructive dialogue about the future of the lake's ecosystem and its resources, and to illuminate the complexities involved in research, management and planning for the lake.

The Friend of the Lake Award, given at each forum, acknowledges a citizen, business or organization working to promote GSL awareness in the community.

In 1997, Bruce Thompson was hired as Education Director to initiate a major regional education project designed to enhance both the knowledge about and care for the future of Great Salt Lake. Bruce wrote and produced a live-narrative slideshow program "The Lake Affect: Living Together Along the Shores of Something Great." The program is now available on DVD.

In 2000, Project SLICE, a 4th grade curriculum using Great Salt Lake as a system of study was initiated. It consists of 7 units of study, a Speakers Network, Teacher Training Workshop, and Lakeside Learning Field Trips. Currently work is being done to expand the curriculum into other grades.

In 2005, FRIENDS hired Katie Pearce as Assistant Director, who is working to refine the Project SLICE curriculum and expand education outreach into the Great Salt Lake community.

In 2002, the Doyle W. Stephens Scholarship Award was established. The scholarship provides support to undergraduate and graduate students engaged in new or ongoing research that focuses on Great Salt Lake.

In 2006, FRIENDS was the recipient of the Calvin K. Sudweeks Award by the Utah Water Quality Board for outstanding contributions in the water quality field.

In 2002, President Lynn de Freitas, was awarded the outstanding volunteer educator award by the Utah Society for Environmental Education.

In 1998, FRIENDS was awarded the Conservation Achievement Award by the Utah Chapter of the Wildlife Society.

On the Cover

Bird Vogue by Rosalie Winard, ©2006

As hard as I try, I can't get a bird to pose in the way I could get people to pose when I worked as a photojournalist. I shoot birds in black & white because I think it encourages one to see more, see more details, be abstract, to be inspired, to make a story… For me, there's an essence that begins to portray what I feel about the birds. Beauty is my tool to wake people up to the world of birds we live in...This image will be the premiere cover of BIRD VOGUE.

More of my images can be seen in my book Wild Birds of the American Wetlands
http://welcomebooks.com/wildbirds/press.html

Rosalie Winard • http://birdfactory.org • 212 924-2502

American Bald Eagle Vogue by Gary Crandall

Brine Shrimp

A Sustainability Model for the Great Salt Lake

The formation of the Great Salt Lake Advisory Council ("Council") by Governor Jon Huntsman has focused increased attention on the Great Salt Lake. The Council is considering a long-term strategy to preserve and protect the Great Salt Lake ("GSL") ecosystem. Numerous groups and individuals have briefed the Council on the many uses of the lake and their respective needs and impacts. Deliberations have included possible approaches or models to assure sustainability of GSL resources

As the Great Salt Lake Advisory Council considers sustainability models for the protection of the Great Salt Lake and its ecosystem, it need look no further than the model developed and implemented by the Great Salt Lake brine shrimp industry and the Utah Division of Wildlife Resources over the past thirteen years.

That management model has successfully preserved and protected the GSL brine shrimp resource, while allowing competing uses of that resource (the brine shrimp egg harvesting industry, as well as the birds that feed on brine shrimp or brine shrimp eggs) to survive and even thrive.

What are the key elements of this successful sustainability model?

In summary, the Great Salt Lake (GSL) brine shrimp industry and Utah Division of Wildlife Resources (DWR) worked together to fund, design and implement the management model. Establishing that successful sustainability model included the following key elements: 1) establishing a common objective (or mission statement) that focused upon the long-term health of the resource; 2) obtaining quality data and relying upon good science to design and implement a model to govern the management, preservation and use of the resource; 3) securing adequate long-term funding, especially for research, data collection and analysis; 4) creating a quantifiable model that is focused upon the long-term sustainability of the resource.

How did this sustainable resource management model come about? It was not by chance and would not have happened without the initiative of the brine shrimp industry and the willingness and commitment of state officials to address a difficult challenge.

In the early 1990's, increased harvest pressure caused many in the GSL brine shrimp egg harvesting industry to become concerned about the long-term health and viability (i.e. sustainability) of the brine shrimp in the lake. Initial meetings revealed that, at that time, there was: 1) no separate state program to manage the brine shrimp resource, and 2) no significant state research program focused on the brine shrimp resource. A state biologist stated that the reason for the lack of research and management was because the brine shrimp resource was deemed "inexhaustible." He explained that conclusion was due to the nature and cycle of the brine shrimp resource -- the huge numbers of brine shrimp that populate the lake all die off in the winter, but leave behind eggs that, after remaining dormant throughout the winter, hatch in the spring to re-populate the lake.

The unofficial state policy that the brine shrimp in the lake were "inexhaustible" resulted in no limit on the number of harvesters allowed on the lake and no limit on the quantity of brine shrimp eggs that the industry could harvest each season. Despite this open door to the resource, the brine shrimp industry did not believe that the GSL brine shrimp resource was "inexhaustible."

The industry's response was to form a coalition (the Utah Artemia Association) to seek sustainable management of the brine shrimp resource. First, the industry adopted its guiding objective to: "Preserve and Protect the Great Salt Lake Ecosystem and its Brine Shrimp Resource." In pursuing that objective, the industry also adopted a motto by which it would determine its support for proposed management policies: "If in doubt, err on the side of conservation."

Then, the industry advocated that brine shrimp resource management decisions must be based upon good science. To achieve that objective, the industry recommended that DWR establish a scientific peer-review panel to provide technical review of the state's GSL brine shrimp research.

Recognizing that good science requires adequate, on-going funding, the industry agreed to support

an increase in its own harvest fees from $3,000 to $10,000 per license (Certificate of Registration), provided that the bulk of that increase would be allocated to fund research (with some of the increase also directed to enforcement activities).

Armed with these objectives and recommendations, the industry approached DWR officials. Fortunately, the then-recently appointed Director of DWR, Bob Valentine, quickly came to the same conclusions. With the strong support of almost every brine shrimp company, Director Valentine set into motion a process that resulted in the current GSL brine shrimp resource management system.

Specifically, Valentine established the Great Salt Lake Ecosystem Program ("GSLEP" to oversee the research and to manage the resource. He also established a Technical Advisory Group ("TAG"), the science peer review committee that was recommended by the industry. He leveraged the research funding provided from the increased industry fees, by entering into joint research programs with U.S.G.S., Utah State University, and others.

In brief, with the limited baseline data that was available and with the strong support and recommendations of the brine shrimp industry, DWR established a sustainable management model. First, DWR determined the number of brine shrimp eggs that must be left in the lake at the end of each brine shrimp harvest season to assure that the brine shrimp population would re-emerge each spring. That equation takes into account such factors as winter cyst survival, avian requirements, egg hatchability, etc. Then, in keeping with the industry motto ("to err on the side of conservation"), DWR added an extra measure of protection (i.e. increased the number of eggs to be preserved) to its equation, to assure that over consumption (by birds) or over-harvesting (by industry) would not occur.

The result is a sustainable brine shrimp resource that supplies both the avian populations and the industry with vital brine shrimp eggs, while preserving a natural population of brine shrimp in the lake. While brine shrimp populations vary significantly from year to year, they are natural variations caused by "mother nature" and are not seriously impacted by either avian consumption or industry harvests.

Since it was implemented in the mid-1990's, the DWR management model has successfully preserved and protected the brine shrimp species, while providing a reasonable quantity for commercial harvest and for migratory and other bird species whose diets include brine shrimp and brine shrimp eggs.

So, what can we learn from the foresight and partnership of the brine shrimp industry and the Utah Division of Wildlife Resources? Varying interests competing for resources can work together to design and implement a sustainable management model. The key elements of such a model should: 1) include a common objective (or mission statement) that focuses upon the long-term health of the resource; 2) be based upon quality data and rely upon good science to establish policies to govern the management, preservation and use of the resource; 3) assure adequate long-term funding, especially for research, data gathering and analysis; and 4) include quantifiable goals or targets that will secure the long-term sustainability of the resource.

Hopefully, the outcome of the Governor's Great Salt Lake Advisory Council will not interfere with the model that is preserving and protecting the brine shrimp resource, but will learn from that success as it seeks to establish other sustainability models for the Great Salt Lake.

Don Leonard is President of the Utah Artemia Association, a coalition of the companies that harvest brine shrimp eggs from the Great Salt Lake, and Chairman of the Great Salt Lake Brine Shrimp Cooperative, an organization improving efficiency in operations of brine shrimp companies.

Why a Spring Hunt?

Managing White Geese in Utah and the Pacific Flyway

White Geese courtesy Utah Division of Wildlife Resources

On August 28, 2008, the Utah Wildlife Board approved Utah's first "spring" white goose hunt proposed by the Utah Division of Wildlife Resources. Not since 1904, prior to the Migratory Bird Treaty Act, has a waterfowl hunting season extended into late February and early March in Utah.

The easiest way to understand the rationale for this hunt is to look to the central region of the US and Canada and observe the ecological impacts of the now over abundant mid-continent population of white geese. This is the modern day Kaibab Forest deer story of the waterfowl world where populations exceeded the carrying capacity of their habitat.

Mid-continent white geese are composed of several populations, including Ross' geese, snow geese, and blue geese (a dark phase of snow geese). These populations have increased from about one million geese in 1970 to over three million in the late 1990's. Normally we view growing wildlife populations in the management world as great successes, but there are exceptions. In this case, the shear numbers of adult geese and their offspring have damaged sensitive habitats in staging and brood rearing areas in Canada. In some areas the intense grazing and grubbing have caused irreversible habitat damage. This not only reduces the future value and capacity of these areas to geese, but also negatively impacts a host of other wildlife that depends

on the same areas. Over abundant populations also increase disease risks and create agricultural depredation and nuisance problems.

There are a number of reasons for the exploding mid-continent goose population. Historically, food resources on wintering areas limited most populations. The expansion of cereal grain agriculture during the 20th century, and geese adapting to feed on waste grain resources, essentially removed this limitation. Creation of sanctuaries, declining hunter numbers and harvest pressure, as well as more favorable climatic conditions in arctic breeding areas, also favored population growth.

In the late 1990's, the management community responded with a plan to reduce mid- continent white geese through a host of measures focused on increasing harvest. Unplugged shotguns, electronic calls, increased bag limits and extended hunting seasons were implemented. Consideration also was given to non-hunting methods such as mass capture and commercial slaughter programs, but these methods were deemed socially unacceptable. Although the harvest measures did increase harvest, they were not effective enough to produce a population decline. As a consequence, the health and welfare of these goose populations and their habitats still remain tenuous.

Many biologists agree that part of our collective failure to control the growing population was due in part to our inherently conservative and often slow implementation of control measures.

In the Pacific Flyway, similar biological signals are now occurring in white goose populations. The goose population wintering in the West is composed mostly of snow geese from Wrangle Island, Russia and the Western Canadian Arctic, and Ross' geese from the Central Canadian Arctic. Survey indices for this mixed population increased dramatically over the past 10 years and hit an all-time high in the fall of 2007 of over one million geese. All white goose populations in the Pacific Flyway are above management objectives, with some more than six times their objective in the North American Waterfowl Management Plan and Pacific Flyway Management Plan. Although no damage to natural habitats has been documented yet in the west, the recent growth rate gives us cause for concern. And learning from our experience in the mid-continent region, reacting before irreversible damage occurs seems to be the prudent approach.

In the summer of 2008, the Pacific Flyway Council and the USFWS extended the white goose hunting season in many western states to the 10th of March (latest date allowed under the Migratory Bird Treaty Act) and increased bag limits to 10 a day.

Few white geese stop in Utah during fall migration so harvest opportunity under current season dates is severely limited. In late winter, however, an estimated 50,000 geese stop in Millard and Box Elder counties on their return trip north. Geese begin arriving in Utah in early to mid February and stay through the end of March. In Utah, hunters and agricultural interests have expressed interest in a spring goose hunt to help reduce crop depredation and to increase harvest opportunity on this growing population. With the Wildlife Board action in August, Utah will be the first state in the Pacific Flyway to implement white goose seasons in spring of 2009. In order to avoid conflicts with the Snow Goose festival in Delta, the season in that area will start after the festival is finished.

Although Utah is the only western state implementing the new frameworks this year, it will take significant action by all states in the Pacific Flyway to control expanding white goose populations. Only time will tell if we can avoid the severe ecological consequences experienced in the mid-continent region.

Tom Aldrich
Migratory Game Bird Coordinator
Utah Division of Wildlife Resources

HB 164

What is It and How Will It Benefit Great Salt Lake Wetlands?

Most Great Salt Lake fans are familiar with the Fremont expedition reports of untold numbers of waterfowl teeming along the Lake's southern and eastern shores. As settlement progressed, the Lake's abundance supplied nourishment, economic support and recreation. Farmers whose land included marshes either supplemented their income with market hunting or drained the marshes. Or, in the late 1800's, some of the most productive marshes formed into duck clubs.

Over just a few decades into the early 1900's, dozens of duck clubs sprouted throughout the marshes, sloughs and playas that stretched for miles from the Lake's margins. In the early 1900's, newspapers reported on the good duck hunting close to North Temple, presumably in marshes by the Jordan River. Thousands of Utahns would ride to the clubs in horse drawn wagons on Friday evening from Salt Lake, Ogden, Brigham City or other towns and spend a weekend in the marsh. It became a way of life and time honored tradition for thousands of Utahns. Following this tradition, most clubs still have a collection of shacks where hunters young and old spend the night in the marsh, surrounded by a chorus of swans, honking geese passing overhead or the croak of a heron.

As time went on, duck clubs became the location of choice for community development projects. After all, they were just "duck clubs", swamps, and should ultimately be converted to some higher community purpose. Each succeeding economic need justified an additional incremental incursion into the Great Salt Lake wetlands, almost always at the expense of privately managed wetlands. Duck clubs south of I-80 were drained or turned into degraded community ponds. Willard Bay reservoir sits on old duck clubs. So does the Salt Lake Airport. More have simply vanished under asphalt.

What was once a miles long succession of wetland habitat now ends abruptly at the gates of the states' remaining duck clubs. This is not because that was the natural boundary of the wetlands but, often, because everything that was not protected by a club was drain-tiled, dried out and leveled.

Unknown to most Utahns, most clubs spend a great deal of time and money managing for nesting habitat of shore birds and waterfowl they will never hunt. Most take great pride in well-rounded year round habitat quality. For instance, on just one club in Salt Lake County, there are islands supporting amazing densities of shore bird nests, active beaver colonies, heron rookeries and flotillas of floating grebe nests.

Duck Explosion by Gary Crandall

Utah's remaining clubs protect some 40,000 acres of the most productive fresh water habitat surrounding the lake. The clubs have become alarmed by the growth in development around the Lake. Increasing proximity, they fear, will bring complaints and then conflict with new neighbors who have little understanding or appreciation for what the clubs preserve. As a practical matter, if a club is forced out of existence, the assets are sold. In this case, those assets are the enormous water rights and equally valuable land that are critical components of the Great Salt Lake ecosystem. Each loss is a tragedy. As a result, the Utah Waterfowl Association advocated for legislation to provide protection for all actively managed migratory bird habitat. This became known as HB 164 and was sponsored by Rep. Curt Oda.

HB 164 grants certain protections for privately managed migratory bird areas. Although most of these areas have been protected, managed and financed by waterfowlers for over a century, more recently the Nature Conservancy and Audubon Society have also acquired and protected some migratory bird habitat on the GSL. All of these areas form part of an important wildlife heritage in Utah, one that is highly valued by its participants and that provides added benefits for the state as a whole. Those benefits include fostering the annual spring and fall migrations, increased wildlife numbers, marshes naturally filtering water that enters the Great Salt Lake and important open spaces that are, in themselves, natural wonders.

These areas are now under threat from encroaching development and the potential for uninformed complaints and hostile regulations. HB 164 is intended to allow these areas some measure of protection from nuisance complaints, adverse zoning and regulations and annexation.

The bill does not provide a tax break, it does not spend government money and it does not prohibit condemnation.

The bill preserves property rights and current management. The protections are narrowly limited to waterfowl management areas. Each area must be 500 acres or more in size and actively managed for migratory bird habitat.

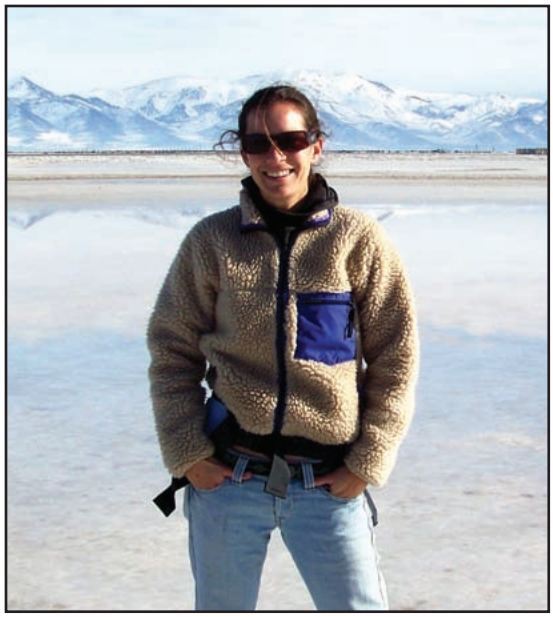
Waterfowlers treasure time in the marsh. They wade into a slough and thrill to the sight of the fall migration swirling around them in a habitat whose beauty and abundance has existed for ages and sustained generations before them. They want more than anything to preserve this for others.

Regulations or complaints that would close the duck clubs that form the bulk of the privately managed wetlands would result in the loss of water rights, management and habitat on a scale that would irreparably cripple the GSL ecosystem. The bill is largely intended to avoid such catastrophic impacts and allow those who have protected and nurtured these marshes for over a century to continue this legacy into the future.

Jack Ray, President, Utah Waterfowl Association

Introducing Elizabeth Jarrell

Friends New Assistant Director



At the Lake courtesy E. Jarrell

I am extremely grateful for this opportunity to work with FRIENDS of Great Salt Lake as the newly appointed Assistant Director. I look forward to the challenges and rewards that the position will inevitably bring. I have great respect for the mission of FoGSL and feel that the organization's goals are closely aligned with my own. In particular, I have an enduring and strong desire to promote awareness and appreciation for the natural environment in which we live. I am thrilled to have found a position which will allow me to focus my time and energy on activities that are directly related to these objectives.

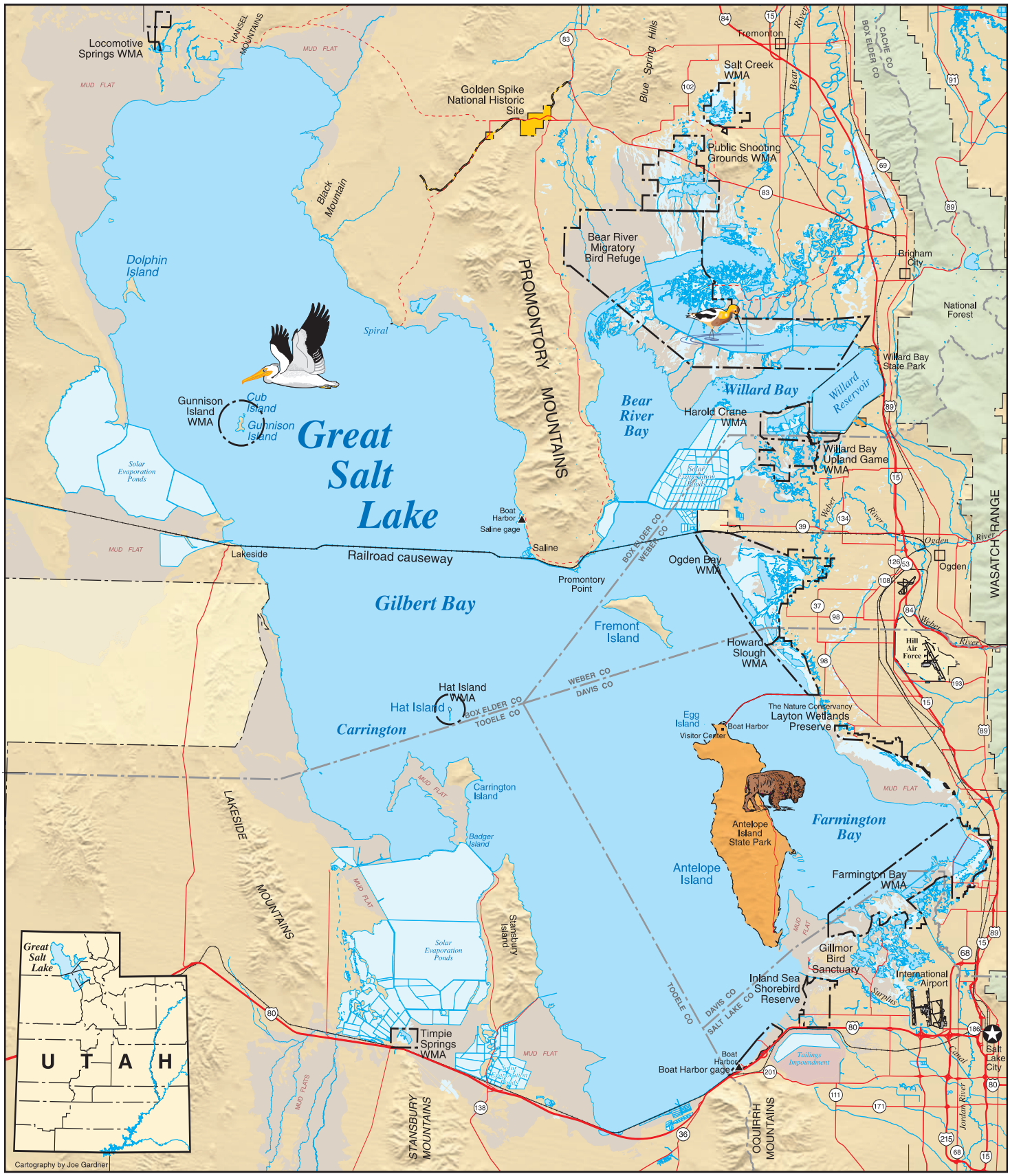
Accepting the Assistant Director position represents a professional shift for me from focusing in the past on scientific research and education. My prior experience consists of multiple roles as an environmental educator in various capacities and various locations (including a summer camp in Colorado, the nature center of a 5-star island resort in South Carolina, the White Mountains of New Hampshire, and the Ogden Nature Center in northern Utah) and a strong background in natural science, particularly in the areas of biology and ecology. My enthusiasm for scientific study, which led to a B.S. degree in Zoology from the University of Texas in 2003 and graduate work in Biology at the University of Utah, has its roots in a deep curiosity about the world and concern for the preservation and conservation of our environment.

I love exploring and spending time outdoors. As an avid kayaker and bird enthusiast, I particularly enjoy spending time in wetland ecosystems. I have felt a deep connection with the Great Salt Lake since moving to Utah a little over four years ago. Originally from Georgia, something about marshy environments makes me feel at home. I have been lucky to have opportunities over the past few years both to learn about and teach about the Great Salt Lake ecosystem. I am excited to continue fostering a greater appreciation for that ecosystem with FoGSL.

I am currently completing a Masters degree in Biology at the University of Utah. I learned about the wetland ecosystems that surround the Great Salt Lake directly through my thesis research which focused on the development and coordination of vocal and visual displays in Yellow-headed blackbirds (Xanthocephalus xanthocephalus). The overall objectives of the project were a) to describe timelines of the ontogeny of vocal and visual displays, b) to collect data regarding the coordination of these behaviors during development, and c) to better understand the function and use of song in adults. Much of the research involved took place in a lab, but my project required an important field component. I spent three breeding seasons making careful observations of the singing behavior of Yellow-headed blackbirds at Farmington Bay Wildlife Management Area in Davis County.

Through a teaching fellowship called W.E.S.T. (Water, the Environment, Science, and Teaching) and more recently as an adjunct professor at Westminster College, I have also been able to teach many students in Utah about the Great Salt Lake. These experiences allowed me to be involved in the design and implementation of hands-on science education, including numerous field trips to the lake and also exposed me to scientific research and environmental issues related to the Great Salt Lake ecosystem. I believe strongly in the potential for education and outreach to make a difference in terms of conserving our natural resources. I am pleased that a large part of my responsibilities for the Assistant Director position will be tied to the development and expansion of FoGSL's education agenda. I can't wait to get started.

Great Salt Lake at a Glance



Courtesy of USGS

Another Lens for Viewing the Lake

The Great Salt Lake Institute

Lake work by by B. Baxter

This Great Salt Lake of ours…with how many lenses can we view it? Is it an economic resource for the state? An aesthetic subject for artwork? A fragile ecosystem we need to protect? A natural resource that should be managed? A model for teaching science? An extreme environment with biological secrets to share? Those of us who have studied Great Salt Lake know that seeking answers to these questions only reveals complexity and begs more questions. Westminster College has created a body to help bring these questioning voices together.

The Great Salt Lake Institute (GSLI) is dedicated to supporting research, education and stewardship of the unique ecology and history of Great Salt Lake. It encourages and

Testing the water by B. Baxter

supports efforts that engage Westminster College students and faculty from the entire campus. At the same time, it seeks to partner with public and private groups beyond campus that are interested in preserving the lake as vital resource for research and scholarship, education, recreation, commerce and the environment.

This iconic ecosystem holds great promise as a source of inspiration for scholarship in a variety of disciplines from art and literature to research in the humanities and sciences. Academic study of the lake will lead to a more coherent understanding of this extreme environment and its relationship to society and the economy. GSLI engages in collaborative research efforts, facilitating studies with scholars all over the world. For example, we are currently housing a project, funded by the U.S. Department of Energy Joint Genome Institute, which will involve sequencing the genes of the GSL directly from water samples. These data will be made public through our website and accessible to the international scientific community. We especially encourage opportunities for undergraduate research and scholarship in all of the work of the Institute.

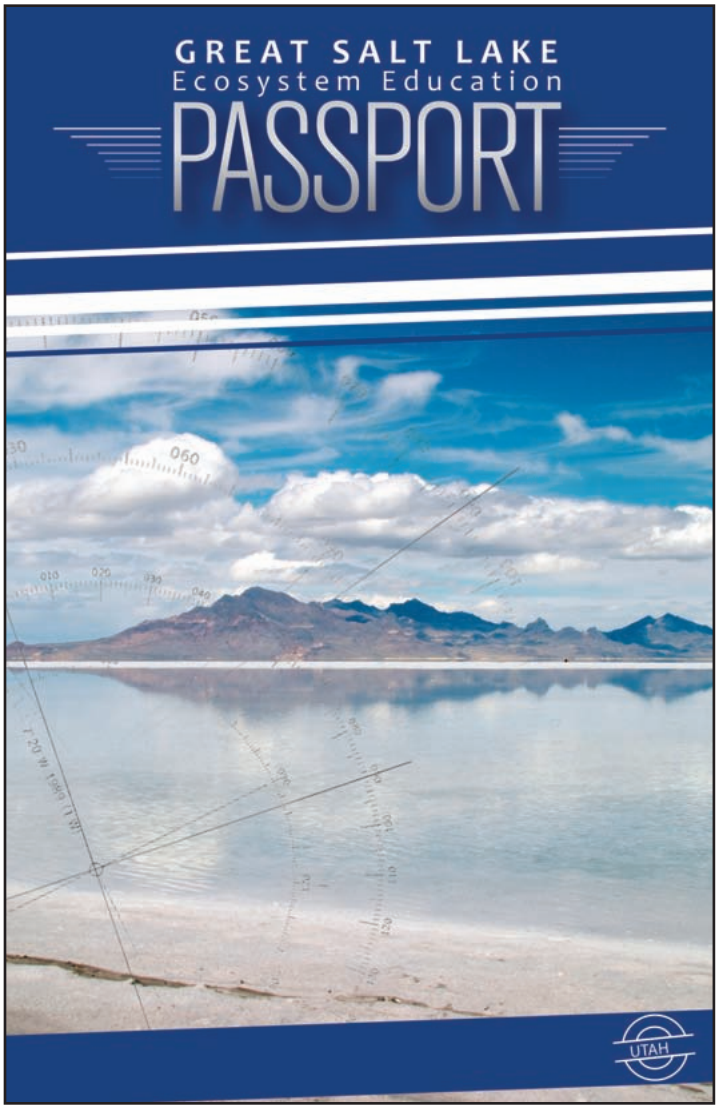
In addition to its focus on higher education, GSLI promotes science and environmental education for K–12 students. We support outreach through field trips, summer camps, teacher training, and curriculum development centered on Great Salt Lake. We link teachers to project opportunities and link curriculum to ongoing research activities. The goal is to promote learning and inspire stewardship. Currently, this branch of the Institute is funded through a program sponsored by the Utah State Workforce Innovation in Regional Economic Development (WIRED) initiative, which is underwritten by the U.S. Department of Labor.

The GSLI actively promotes partnerships among colleges and universities, industry, government agencies, and non-profit organizations interested in sustaining Great Salt Lake as an important ecosystem and resource. We support dialogue on important issues and areas of interest related to the lake. We believe that working together is the best way to raise the level of knowledge and concern about this special place.

For more information, our blog, or to contact us please visit our website, www.greatsaltlakeinstitute.org.

W. Griffith, B. K. Baxter and B. J. Avery

GSLEEP - Building Great Salt Lake Watershed Awareness with an Ecosystem Passport



Passport Cover courtesy M. Larese-Casanova

How do we help people discover the cool entities that provide education about the Great Salt Lake Ecosystem? What if there were some kind of device or tool that could act as a comprehensive guide?

Soon after Justina started as Director of the Great Salt Lake Nature Center at Farmington Bay Waterfowl Management Area, she realized that creating a passport as an incentive to visit all of these experiences might just be the ticket for building understanding about Great Salt Lake.

With this vision, we held a series of meetings to get the Great Salt Lake Ecosystem Education Passport (GSLEEP) started. The first meeting took place in June 2007. Meetings were held at the Ogden Nature Center, the GSL Nature Center, and Hardware Ranch. We collected more GSLEEP partners and we made key decisions about what the document and the educational philosophy behind the project should be. Partners included Hardware Ranch, Bear River Bird Refuge, Bend-in-the-River Urban Green Space, Ogden Nature Center, the Nature Conservancy, the Great Salt Lake Ecosystem Program, Antelope Island State Park, Utah Botanical Center, and FRIENDS of Great Salt Lake.

Our goal in designing the GSLEEP was to create an easy to use guide to all of the sites in northern Utah where people can learn about the Great Salt Lake Ecosystem. The passport features a map of northern Utah, with all of the passport locations and major roads highlighted, instructions on how to use the passport, and a detailed page for each passport location. The passport had to be designed so that it was valuable to anyone, from long-time Utah residents to tourists visiting from faraway lands.

There is just enough information on each site's page to get people excited about visiting and learning more about this great ecosystem in which we live. Each page has information about education programs, facilities, directions for traveling to the site, and a small photo to give adventurers a quick preview to the site.

We think the passport will provide the impetus for participants to:

Become aware of, gather knowledge about and participate in educational experiences concerning the vastness, importance, uniqueness and diversity encompassed by the Great Salt Lake Ecosystem and get to know the organizations that educate about, regulate and protect that ecosystem.

The partners see the potential for the passport to appeal to broad audiences including families, special interest groups, schools, local individuals and tourists. We have tried to be equally expansive in our brainstorming about distribution "ports" for the document:

- Tourist Bureaus/Visitor Centers
- Schools
- Libraries
- Boy Scouts/Girl Scouts
- Boys and Girls Clubs
- Ski Resorts
- River/Outdoor Festivals
- Large Environmental/Public Events
- Hotels
- Campgrounds
- Partner Organization Facilities
- On-line

Lastly, we made provisions for proof of visitation to unstaffed physical sites and virtual sites by deciding that each partner entity would have its own logo as its passport stamp to be imprinted by rub plate at all physical sites and by downloading on all virtual sites. After visiting two thirds of the 15 physical sites and ALL of the virtual sites, a successful Great Salt Lake Ecosystem explorer would be given the opportunity to qualify for a special GSLEEP prize.

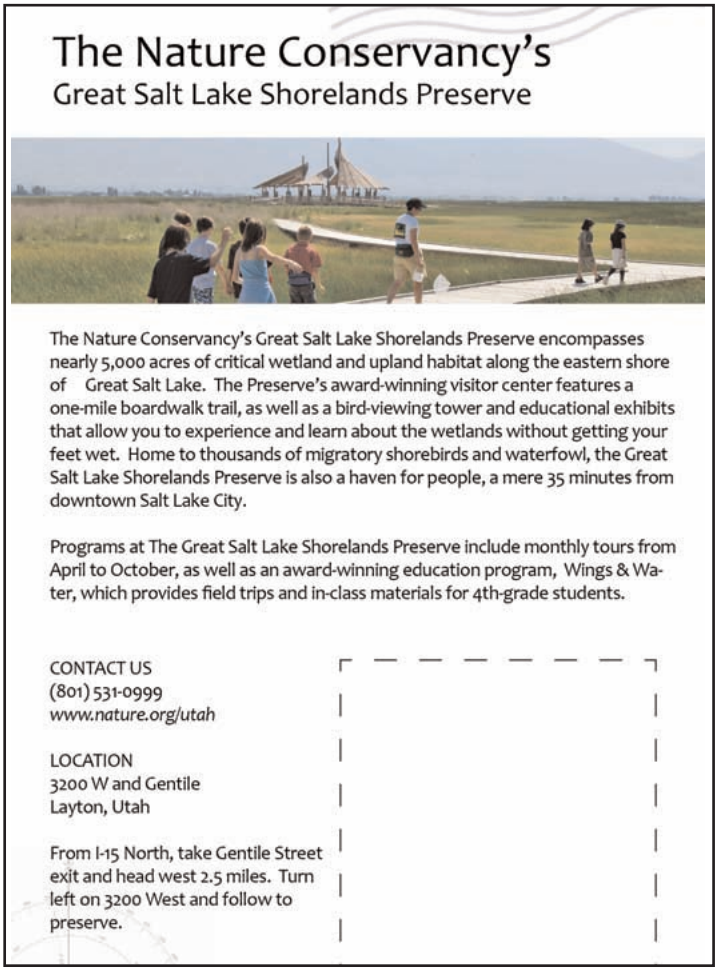
By January 2008, the partners had the Great Salt Lake Ecosystem Education Passport concept down and even a mocked-up first design draft. Final layout of the GSLEEP was created by designers from Utah State University Extension Marketing.

It was our goal to build a document that was useful and informative, and that gave the overall impression that the holder of this passport was truly going on an adventure. We hope we have succeeded!

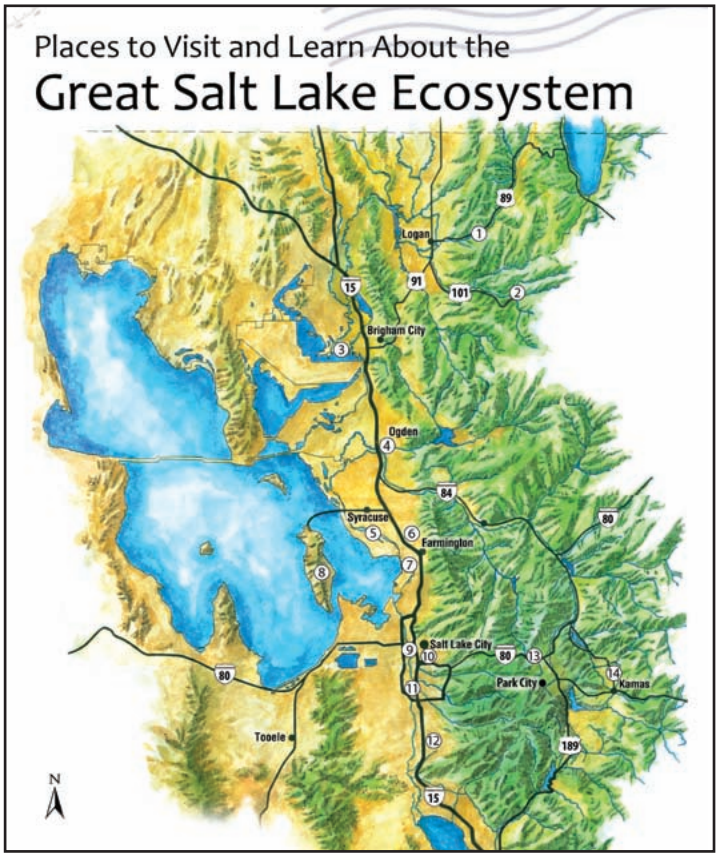
GSLEEP is now available online in a PDF version at the Utah Wetlands Interpretive Network website (utahwetlands.org). We are also seeking donors to sponsor print copies.

Justina Parsons-Bernstein, PhD
Director, The Great Salt Lake Nature Center at Farmington Bay WMA

Mark Larese-Casanova
Dept. of Watershed Sciences
Education Specialist - Utah Botanical Center



Lake Visitation Site courtesy M. Larese-Casanova



Ecosystem Map courtesy M. Larese-Casanova

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Thank you - for your thoughtful support of our Lake work.

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Genevieve Atwood
James Bach - Landscape Architects
Joyce Barnes
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** Lakeside Learning & Investigations

Submition Deadlines: Sept. 16 (Fall), Dec. 16 (Winter), Mar. 16 (Spring), and June 16 (Summer). Submit articles and images for consideration to Lynn de Freitas ldefreitas@ earthlink.net or call 801-583-5593.

New FRIENDS and Old
new and renewed members

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Richard & Erin Swapp
Amanda & Mark Woodliff

GREAT SALT LAKE PEOPLE

Plan to attend the 11th Annual Great Salt Lake Bird Festival - May 14 -18, 2009. The keynote speaker this year is Scott Weidensaul. Weidensaul has written dozens of books on natural history including Living on the Wind: Across the Hemisphere with Migratory Birds, a Pulitzer Prize finalist. Festival program booklets are available by calling 801-451-3286 or email tour@co.davis.ut.us. Program information is also available online at www.greatsaltlakebirdfest.com.

As you can image, a great deal of time and energy goes into planning this Great Salt Lake celebration. We want to thank the festival committee for always doing such a great job in helping to raise awareness about this hemispherically important ecosystem. Committee members are - Neka Roundy, Chair, Scott Baxter, John Bellmon, Betsy Beneke, Barry Burton, Kathi Dysert, Bill Fenimore, Jolene Hatch, Jayne Johnson, Wayne Martinson, MarJean Muhlstein, Ann Neville, Deedee O'Brien, Justins Parsons-Bernstein, Don Paul, Lee Shirley, Jerry Thompson and Roberta Wherritt.

On November 28, 2008 our Great Salt Lake community lost a dear friend and a visionary of sustainability, Craig Forster. Forster died in a hiking accident in Zion National Park. He was the University of Utah's first sustainability director. He was on the faculty of the College of Architecture and Planning and worked to implement sustainability practices and programs on the U of U campus. We will always be grateful for having had the opportunity of knowing and working with Craig and for his commitment to making our community and our world a better place.

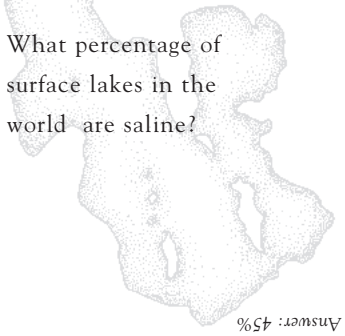
Farewell to Natalie Rees (Wannamaker): Water Resources Specialist- Salt Lake County Water Resources Planning and Restoration Program. Natalie has recently married and will be moving to Corpus Christi, TX. Natalie worked very effectively with a broad range of stakeholders to implement planning tools that will help to improve water quality in Salt Lake County. It has been a great pleasure working with her.

Belated birthday wishes to Rosalie Winard - January 3, 2009

Visit our website to read Maurine Haltiner's poem "A Day of Swans".

Lake Fact:

What percentage of surface lakes in the world are saline?



Answer: 45%