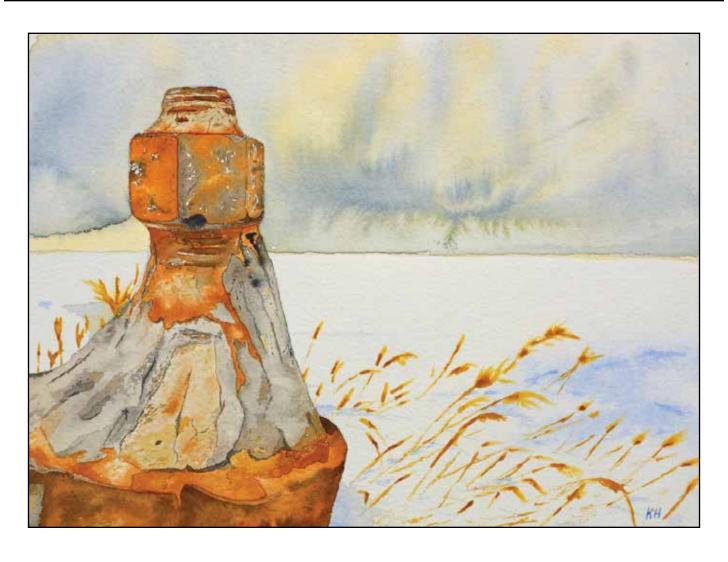


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Meddle
Watercolor by Kelly Hannah
Submitted for the 2019 Alfred Lambourne Prize

## EXECUTIVE DIRECTOR'S MESSAGE

# IF Wishes Were Brine Shrimp, Legacy Parkway Would Remain a Beacon of Transportation Inspiration and Community Connectivity Not Just Another Freeway

"This is an exciting day for our state, with tremendous positive impact for the state's economy, the environment and its transportation system."

-Governor Jon Huntsman, Jr. signing the agreement in principle on the Legacy Parkway, September 21, 2005 (Deseret News 9/22/2005 Legacy Parkway Gets Green Light)

On January 1, 2020, the Legacy Parkway we have known for the past 11 years will no longer exist. What has become a national model for implementing context sensitive design goals to protect the natural environment, encourage more sustainable growth, and provide efficient transportation options is under imminent threat from a raised speed limit (55 mph up to 65 mph) and from a lifting of the ban that restricts large trucks (18-wheelers and double tanker rigs) from the parkway.

Legacy was conceived through a unique collaboration between UDOT and local communities who worked hard to achieve this truly remarkable alternative to high speed freeway driving. Sadly, all of this will become just a memory on January 1.

So why are we on the verge of losing this extraordinary community asset? Some background will help.

In 1996, Governor Mike Leavitt announced plans for a 120 mile long roadway that would parallel I-15 on the west side of Weber, Davis, Salt Lake, and Utah counties, from Ogden to Nephi. He called it the "Legacy Highway." The first 14-mi. segment of the highway would be located in Davis County. It was here where the governor drew his "line in the sand" by declaring the Legacy Highway in Davis County a "boundary" against development further west into Great Salt Lake wetlands. And although it was good to hear him acknowledge that we needed to protect the Lake from encroaching development, choosing a highway to symbolize that was totally ironic because the location of the highway would have significant impacts on the most productive wetlands along the eastern shore of Great Salt Lake.

Aside from this contradiction, many of us believed that the Governor's declaration should have been a broader and more inspiring vision for Utah's future and Great Salt Lake—a vision about how we could address our mobility issues and the connectivity of our communities that would translate into improving our quality of life, building a strong economy, and promoting good health—principles consistent with what we called the Shared Solution. And today, these same principles constitute the Utah Department of Transportation's new Project Prioritization Process that is used to rate impact of its projects. And this is why Utahns for Better Transportation, FRIENDS, the Utah Chapter of the Sierra Club, and Salt Lake City, who became plaintiffs in an eventual legal challenge, chose Legacy as our "line in the sand."

The project required a NEPA (National Environmental Policy Act) process conducted by federal agencies to explore alternatives for building the road including a No Build option. Because of impacts to wetlands from the construction, it also required a 404 permit under the Clean Water Act from the US Army Corps of Engineers. From 1997-2000 the public participated in open houses, public hearings, and formal commenting. During that time, with the help of experts in transportation and planning, air quality, water quality, wetlands and wildlife, we advocated for a Shared Solution—an alternative to the highway that would protect the Lake and its wetlands and wildlife from undue impacts, while also incorporating a range of mobility options for communities.

On January 9, 2001 when federal agencies approved building the project, we—now as plaintiffs—filed lawsuits 8 days later in the federal district court because the federal agencies failed to consider an adequate range of alternatives raised during the NEPA process. When our case was dismissed at the district level we filed an appeal, along with a request for a stay with the 10th Circuit Court of Appeals. The court granted the request and issued a stay against construction of the roadway pending resolution of the appeal. Following that, in September 2002, the court ruled in our favor, finding that the federal agencies had failed in their responsibility to consider an adequate range of alternatives and protecting Great Salt Lake wetlands, and directed those agencies to conduct a Supplemental Environmental Impact Study (SEIS). The SEIS had to consider the following:

- Practicability of a narrower right-of-way
- Elimination of the Denver & Rio Grande regional alignment as a feasible alternative based on cost and substantial impacts on existing development
- Alternative sequencing of the Shared Solution
- Integration of the Legacy Parkway project and mass transit
- Impacts on wildlife, including migratory birds

As work proceeded on the SEIS, we engaged in negotiations with UDOT, and with a legislative committee that culminated in an "agreement in principle" between the state and the plaintiffs. On September 21, 2005, Governor Huntsman signed the agreement that spurred a special Legislative session in October. Federal approval of the project was issued on January 9, 2006, in a Record of Decision on the Final Supplemental EIS Legacy Parkway by the Federal Highway Administration. And once the injunction was lifted, construction resumed in the spring of 2006.



In 2008, Governor Huntsman "christened" the Legacy Parkway with a maiden voyage on his motorcycle to open the road. It was a moment that many of us believed was a sea change in Utah's transportation thinking—sort of anyway. And it was a unique celebration of synergy and satisfaction that was the result of a hard fought battle by the communities that resulted in the Legacy Parkway that we know today.

Legacy is a 14-mi. billboard-free transportation facility on the southeastern edge of the Great Salt Lake in Davis County. Designated a Utah State Scenic Byway because of its intrinsic natural beauty, Legacy is comprised of 4 lanes of quiet pavement, a slow speed of 55 mph, night sky lighting, and a pedestrian/bike trail with educational kiosks, benches, and opportunities for users to pause and admire the Great Salt Lake viewscape to the west, and the mighty Wasatch to the east. At the 500 South trailhead, auto travelers can pull off to stretch their legs and take a short walk adjacent to the Legacy Nature Preserve while experiencing the peace and quiet of the open landscape. Work on designating Legacy as a National Scenic Byway is progressing.

The 2,100 acre Legacy Nature Preserve consumes most of the west side of the Parkway where the diverse and important Great Salt Lake ecosystem provides locally, nationally, and globally significant habitat for nearly 10 million resident and migratory birds representing over 250 species. If Legacy is reduced to a big rig corridor, not only will the sounds of nature disappear from this unique experience, but the higher speeds and increased traffic will also have direct impacts on bird populations relying on these highly productive wetlands and uplands. Course correction on Legacy would be virtually impossible once big rigs arrive.

Breaking the sound barrier with the Legacy Parkway did not come without political opposition. And unfortunately, this opposition had a hand in the final terms of the Settlement Agreement that the Utah Legislature approved during the special session in October 2005. Those terms included lifting the restrictions on big trucks and slower speeds on January 1, 2020.

The Utah Truckers Association argued that keeping large trucks (18-wheelers and double tanker big rigs) off the new roadway would set a precedent that would prohibit commerce and trucking from new corridors. Legacy Parkway does allow trucks with a gross weight less than 80,000 lbs. and fewer than 5 axels (similar to UPS and many semi-trucks). And currently all trucks can use Legacy as an alternative if there's an incident on the I-15 freeway. And although it wasn't an issue at the time, talk about the need for Legacy to serve the Inland Port has become a common refrain from politicos and truckers about why big trucks need it. The rationale for limiting big trucks and having slower speeds was not just to achieve a unique driving experience on the meandering

roadway, or address air quality and noise, but rather to increase road and trail safety, and enhance the livability of the communities adjacent to Legacy. All of these values that we strived for will be undermined by lifting these restrictions.

Unfortunately, under the circumstances we, the plaintiffs, did the best we thought we could with developing the terms of the Settlement Agreement. At that time, our hope was that before 2020 the political climate would have changed and the communities and users of Legacy would be successful in preventing the restrictions from being lifted. To the communities' credit, different measures were taken to raise awareness and exercise political capital to support the cause. A series of open houses and panel discussions at Foxboro Elementary located next to Legacy brought large crowds to express their concerns and expectations about next steps. Between November 2017 and March 2019, city resolutions passed by all five city councils bordering the parkway supported the continuation of the truck restrictions. Public comments from the communities at the October UDOT Transportation Commission meeting also expressed the need for keeping lower speeds and needing a study on the impacts of big trucks. HB 366 sponsored by Rep. Melissa Ballard and supported by a parade of legislators from Davis, Weber, and Salt Lake Counties, and SB 119 sponsored by Sen.Todd Weiler-Woods Cross both requested extensions on the trucks ban to allow for more study of the impacts. Unfortunately both bills died in committee.

The January 9, 2006 Record of Decision issued by the Federal Highway Administration, states:

UDOT could consider the need to raise the posted speed limit and allow large trucks at that time. UDOT's decision to continue these restrictions beyond 2020 will depend on the pace of development and the rate of growth in travel demand.

In an October 2, 2019 response to a letter from Gary Uresk, City Administrator Woods Cross, to Carlos Braceras, Executive Director of UDOT, requesting more time for a study before lifting the restrictions, Braceras stated that "In this case, the law is very clear—the truck restriction is repealed on January 1, 2020, and there is not a legal reason to continue to restrict trucks from this public roadway."

Legacy Parkway belongs to all of us. All we are saying is give the communities and this extraordinary asset the study it deserves.

In saline,

Lynn



# FRIENDS' ORGANIZATIONAL STATEMENT

Founded in 1994, FRIENDS of Great Salt Lake is a membership-based nonprofit 501c3 with the mission to preserve and protect Great Salt Lake ecosystems and increase public awareness and appreciation of the Lake through education, research, advocacy, and the arts. The long-term vision of FRIENDS is to achieve comprehensive watershed-based restoration and protection for the Great Salt Lake ecosystem.

FRIENDS of Great Salt Lake sponsors programs related to our mission statement: Lakeside Learning, the Doyle W. Stephens Scholarship, the Great Salt Lake Issues Forum, and the Alfred Lambourne Prize.

Lakeside Learning Field facilitates 2.5 hour inquiry-based educational field trips for 4th grade students. The trips combine informal environmental education strategies while incorporating science, technology, engineering, art and math (STEAM) to reinforce the Utah Common Core State Science Standards. Lakeside Learning emphasizes learning through participation.

Within the research component of our mission, we sponsor the Doyle W. Stephens Scholarship for undergraduate or graduate research on Great Salt Lake ecosystems. Established in 2002, the scholarship supports students in new or on-going research focused within the Great Salt Lake watershed. Recent project winners span the effects of changing salinity on microbialites to the impacts low water levels in Great Salt Lake have on Utah's air quality.

FRIENDS is actively involved in advocating for Great Salt Lake. Every two years, FRIENDS hosts the Great Salt Lake Issues Forum to provide focused discussions about the Lake for a variety of stakeholders including policy makers, researchers, and industry leaders. Each Forum engages the community in constructive dialogue regarding the future of Great Salt Lake.

In 2014, FRIENDS established the annual Alfred Lambourne Prize for creative expressions of our Inland Sea in the categories of visual art, literary art, sound, and movement. FRIENDS celebrates the relationship between local artists and one of Utah's most precious natural resources, Great Salt Lake. Through artistic expressions, we enhance our capacity to build awareness about the Lake and our need to preserve and protect it for the future.

FRIENDS maintains a Board of Directors and Advisory Board composed of professionals within the scientific, academic, planning, legal, arts, and education communities. Staff members include, Lynn de Freitas, Executive Director; Rob Dubuc, General Counsel; Holly Simonsen, Membership & Programs Director; and Katie Newburn, Education & Outreach Director.



American Avocets
Photograph by Scott Baxter
See more at scottbaxterphotographer.com

## On The Cover

I fell in love with Great Salt Lake three decades ago and two of the most profound, spirit filled moments in my life occurred on its shore. Great Salt Lake has connected me to my being in ways I imagine are not unlike the way it connects the bird to the hemisphere. This particular scene stirred my soul as an apparent remnant sentinel overlooks a vast expanse in the great basin; a critical waypoint, for me, for a bird, and which leaves me in wonder about the hands and dreams that bolted this piece together.

-Kelly Hannah



## CREATIVE EXPRESSION INSPIRED BY OUR INLAND SEA



On The Edge
Oil on Canvas, 36 x 48, by Lisa McAfee
Submitted for the 2019 Alfred Lambourne Prize

My painting evokes a memory I have of my visit to the Great Salt Lake to see Smithson's *Spiral Jetty*. Even though we were there initially for the Jetty, the Lake itself is what most impressed me. We stood at the edge of the Lake surveying the endless horizon, the shore of sparkling white, and still water. For a moment it felt as if we were the only people in existence. I was in awe; the silence was deafening and so acute that we fell silent ourselves taking in the wonder of it.

## BEAR RIVER CANAL COMPANY:

## OUR RELATIONSHIP WITH GREAT SALT LAKE

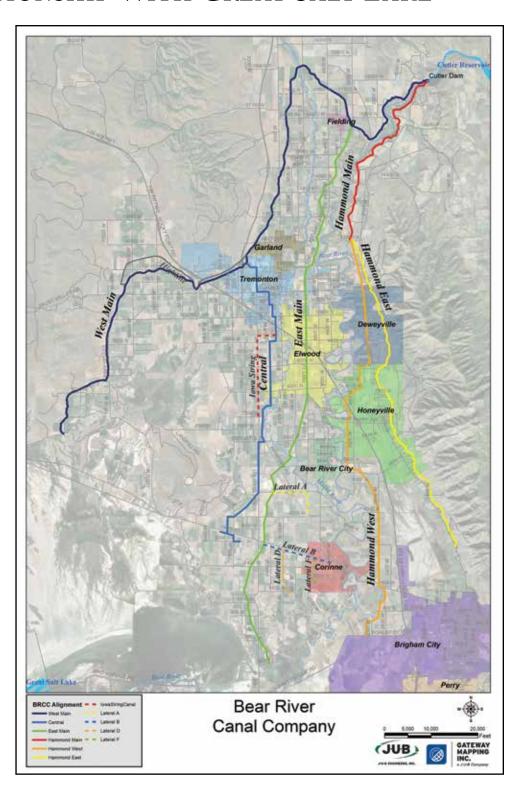
#### **Origins**

Bear River Canal Company was organized in 1889 as the first major agricultural water development on the Bear River's main channel. After several years the canal company was purchased by Utah-Idaho Sugar Company. The purpose of their purchase was to develop the eastern Box Elder County area for the growing of sugar beets. In 1912, Utah Power and Light and Utah-Idaho Sugar Company entered into a contract greatly expanding the canal company's ability to deliver to water users throughout the growing season by allowing runoff water to be stored in Bear Lake and released for use later in the summer. In 1927, Cutler Hydroelectric Power Plant was built in Cutler canyon about 1 mile downstream of the Wheelon Dam, the original rock and crib diversion dam. Although Cutler replaced Wheelon Dam, the Wheelon was left in place and when Cutler reservoir is drawn down it can still be seen today. In 1980, the Utah-Idaho Sugar Company sold the canal to the farmers of eastern Box Elder County who are the current owners of the system.

#### **Description**

The system includes two large trunk canals that divert water from both the north and south sides of Cutler dam. These two trunk canals split into five main canals and five lateral canals for a total of 123 miles of canal channel. This massive system irrigates roughly 65,500 acres

or 102 square miles making it the largest single entity irrigation company in the state of Utah. Because not all irrigated areas are connected, the service area is roughly 30 miles long and 18 miles wide spanning



from the northeast branch of Great Salt Lake to 10 miles short of the Idaho-Utah boarder. Our shareholders primarily irrigate using flood systems, however sprinklers are becoming much more common.



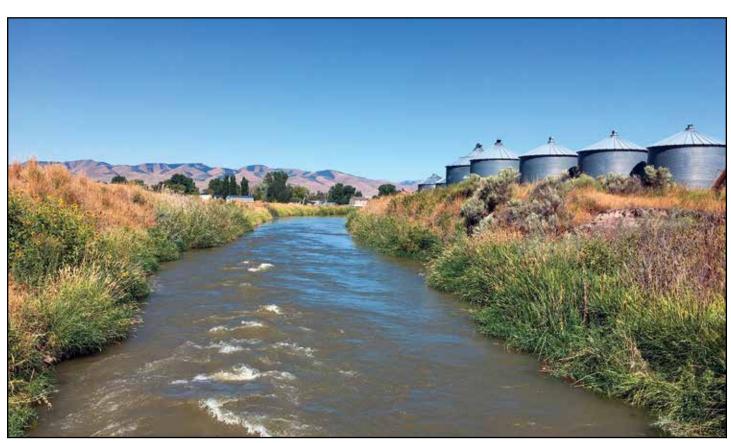
#### Who do we serve?

Although the majority of our shareholders are agriculturalist, Bear River Canal serves a variety of water users. Our shareholders include farmers, ranchers, duck clubs, wildlife management areas, cities/towns, and private homeowners. The duck clubs and wildlife management areas use the water to provide riparian habitat for birds, fish, and other animals. The cities provide water to their citizens in the form of landscape and garden irrigation. These systems range from advanced pressurized systems to small town-run ditch systems. Our farmers and ranchers grow a variety of crops. The major crops grown include alfalfa, corn, wheat, barley, and onion, but many specialty crops are also grown including mint, pumpkins, a variety of other vegetables, and more recently a few shareholders have ventured into hemp production. Additionally, irrigated farms provide feeding areas for migrating waterfowl and resident birds such as White Faced Ibis, California Gulls, Sand Hill Cranes and resident Canada Geese.

#### What is our relationship with Great Salt Lake?

Bear River Canal Company resides in the greater Bear River Delta. Our very fertile cropland is a product of that river delta as it entered Great Salt Lake. Most of our irrigation is flood irrigation because of soil characteristics this is unlikely to change. This form of irrigation provides significant underground return flows. These flows contribute a significant water input to the Lake. GSL is our backyard. Many of our shareholders are duck clubs and wildlife areas who border the Lake. Our shareholders' land provide significant habitat for the wildlife that call the outer Great Salt Lake their home. Our shareholders' ancestors were key participants in the beginnings of the Bear River Migratory Bird Refuge. The tie to the refuge is still strong today, and we want to see a sustainable Lake.

Trevor Nielson, General Manager Bear River Canal Company



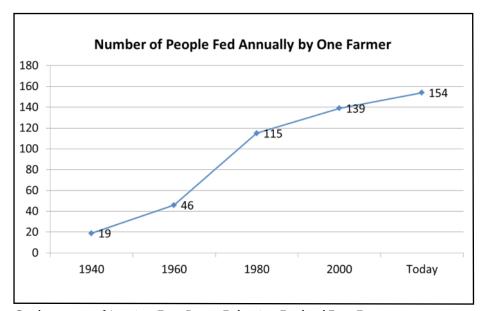
BRCC West Canal, Fielding, Utah, photograph courtesy of L. de Freitas

## WATER, THE LIFEBLOOD OF THE WEST:

## AGRICULTURE AND CONSERVATION

Few things are more important than your water supply. Mother nature and her water cycle is complex. Man's efforts to wade through the intricacies, complexities and dynamics of water management, distribution, development, funding and determining best use is debatable and certainly political. The issue of water supply and demand quickly becomes both an urban and rural issue because this limited and renewable resource is what sustains life, drives economic growth and wealth. Water is the lifeblood of the West and as such, policies and laws regarding water use must be sound and strictly enforced.

# Number of Farms (in millions) 7 6 6.3 5 4 3 2 1 0 1940 1960 1980 2000 Today



Graphs courtesy of American Farm Bureau Federation: Food and Farm Facts

#### **Food Production & Water Consumption**

Less than one percent of Utah's population is a farmer or rancher. United States consumers spend less than 10 percent of their disposable income on food each year, while those in other countries spend much more—Philippines 36%, Kenya 41% and Indonesia 55%. Today, each farmer produces food and fiber to feed 154 people in the United States and abroad, compared to feeding just 19 people in 1940.

On average, a 1,400 pound dairy cow produces 61 pounds of milk per day. She consumes 35 gallons of

water, 20 pounds of grain and 35 pounds of hay per day. She will produce 3.3 pounds of butter, 8.1 gallons of milk or 7.0 pounds of cheese per day. With 95,000 milk cows in Utah, that's a lot of daily water consumption and requirement. Eighteen gallons of water are needed to produce one apple,10 gallons for one slice of bread and 35 gallons to produce one egg. Agriculture is a major user of ground and surface water, accounting for nearly 80 percent of Utah's consumptive water use. Utah's safe, abundant and affordable food requires a lot of water. Food production is water intensive.

#### Water Development

Challenges of providing sufficient, sustainable water for life, lifestyle, economic development and the production agriculture industry are just as great as they have ever been in Utah. The ongoing management of scarce water supplies, particularly during times of drought, requires a delicate balance act among competing interests—farmers/ranchers, industries, cities and towns and a variety of agencies including irrigation companies and water conservancy districts. The best prospect and most cost effective method for increasing water supplies, for both urban and rural economies, lies in reducing





Utah farm, photograph courtesy of Utah Farm Bureau

waste and improving the efficiency of delivery and application. With dedicated financial resources and continued technical and educational assistance, both agriculture and municipal and industrial users can and will be better stewards of water.

#### **Water Conservation**

Everyone is a steward of water. Reducing waste and increasing efficiency is the best way to conserve water. Ongoing public funds are well spent when promoting and implementing water conservation and efficiency programs.

Significant amounts of water can be conserved by modernizing water storage and delivery systems, working with state and local partners to improve water management with new technology, and targeting technical and financial assistance to help farmers, ranchers and municipalities make more efficient use of their irrigation and drinking water.

Each water basin is unique and may require different approaches to decrease waste, increase efficiency resulting in overall water conservation. Perceived agricultural water conservation is not always best management. For example:

- More efficient irrigation techniques can result in more water availability; however, increased efficiency may result in less return flow and reduce the water available for downstream users.
- Agricultural sprinkler systems may divert less water but consume more of the diverted water due to increased evaporation.
- Lining or piping a canal may result in less absorbing into the soil; however, may diminish return flow, impacting a downstream user.

Aldo Leopold (January 11, 1887 – April 21, 1948), an American author, philosopher, scientist, ecologist, forester, conservationist, and environmentalist stated, "When the land does well for its owner, and the owner does well by his land—when both end up better by reason of their partnership—then we have conservation. When one or the other grows poorer, either in substance, or in character, or in responsiveness to sun, wind and rain, then we have something else, and it is something we do not like."

Sterling Brown Vice President of Public Policy Utah Farm Bureau Federation



## LAKESIDE LEARNING:

# INQUIRY, OBSERVATION, PARTICIPATION, AND PLAY

At the beginning of every Lakeside Learning Field Trip, we ask our students, "raise your hand if this is your first time ever visiting Great Salt Lake." Without fail, almost every student raises their hand. Each year, our Lakeside Learning Field Trip program brings more than 3,000 Utah fourth graders to Great Salt Lake, where we are able to craft their first exposure to this unique ecosystem.



Student catching brine shrimp, photo courtesy of Katie Newburn

The Lakeside Learning Field Trip program has been a hallmark FRIENDS of Great Salt Lake program for over 15 years, advancing our mission to protect the Great Salt Lake ecosystem and raise public awareness and appreciation for the Lake through education. This program has a number of objectives—reinforcing state science standards, exploring the basic ecology of Great Salt Lake—but the most fundamental is to help Utah's future decision makers gain an appreciation for the Lake and a sense of responsibility to protect it. Through inquiry, observation, participation, and play, our students not only learn about Great Salt Lake, they experience it and form a relationship with it.

In two and a half hours, students explore Great Salt

Lake's playa, wetlands, and uplands, learning about the plants and animals adapted to those habitats. Students use binoculars to observe birds, plants, boats, and land formations that have shaped the Lake's unique ecosystem. At the beach, students dig in the sand to create their own model of our watershed, experiment with oolitic sand, and wade in the Lake searching for brine shrimp and brine flies for a salty, hands-on experience. This program emphasizes learning through inquiry and participation, encouraging every student to make observations, ask questions, and share their ideas.

FRIENDS of Great Salt Lake provides Lakeside Learning Field Trips at two sites: Antelope Island State Park since 2004, and Great Salt Lake State Park and Marina since 2015 (the latter made possible by the generous support and passion of the local Cargill salt plant in Grantsville, UT). Between these sites, we serve students who live adjacent to Great Salt Lake in communities like the Davis, Weber and Tooele School Districts, as well as communities further upstream like the Granite, Canyons, Murray, and Ogden and Salt Lake City School Districts. What they all have in common is our shared watershed and its lowest point, Great Salt Lake. On our field trip, they all ask and discover, "why is Great Salt Lake salty," "why is Great Salt Lake important," "why is Great Salt Lake shrinking," and "what would happen if it disappeared?" Our program introduces students to their watershed and shows them that our actions—water diversion, consumption, pollution, development— have downstream consequences.

But we also get to play. Creating a fun, positive and memorable experience of Great Salt Lake could be the most valuable element of this program. Spending the day outside, getting dirty, chewing pickleweed, watching pelicans soar overhead, and wading into that briny water is unforgettable. Now more than ever, children are growing up disconnected from the natural world, and it's proving to have physical and mental health consequences. Moreover, our natural environments are threatened when the public doesn't have a relationship with nature that inspires their protection. The outdoor play made accessible to students through this field trip is not only building their relationship with Great Salt Lake, it's building their relationship with the natural world as a whole and showing them they're a part of it.





Students and volunteers from Cargill construct watershed models, photograph courtesy of Katie Newburn

Lakeside Learning is also a resource for the schools and teachers in our community. Our field trips are free for public and charter schools, and on top of that, we offer schools up to \$150 in reimbursement for the rising expense of bus transportation—breaking down barriers and making environmental education accessible. We provide safe, high-quality outdoor education where students participate in hands-on activities that are difficult to provide in the classroom. Students are finally able to make connections with key science concepts by observing and experiencing for themselves how the Great Salt Lake ecosystem works. Our curriculum aligns with the Utah Science Core, covering standards including the water cycle, the rock cycle, and plant and animal adaptations.

To ensure we best meet the needs of our teachers and students, we have also begun integrating the state's new science core (passed this June to be implemented Fall 2020) into our curriculum. Great Salt Lake provides an incredible outdoor classroom to see these concepts demonstrated in the real world, which helps students make those critical connections and also helps teachers find new opportunities to teach science through the lens of our local environment. In this way, Lakeside Learning advances environmental education both inside and outside the classroom.

This field trip is an inspiring Great Salt Lake adventure for all who experience it. In addition to the teachers and thousands of students we serve each year, we also reach hundreds of parent chaperones. We invite them to dip their own feet in the briny water and dig their own hands into the sand. For them, it's a reminder of a beautiful landscape they may have forgotten, and of their role in preserving the ecosystem. For the FRIENDS of Great Salt Lake education team, it's an honor to share this place with those who are unfamiliar. Every moment of excitement and awe fills us with hope that those we serve will feel more appreciation and responsibility for the Lake.

Ignorance and misunderstanding pose an existential threat to Great Salt Lake. Through the Lakeside Learning Field Trip program, FRIENDS of Great Salt Lake is combatting that threat. The generosity of our members and donors is what has made Lakeside Learning possible for the last 15 years. Thank you for your support of this transformative work and for your own commitment to protecting and preserving the Great Salt Lake ecosystem.

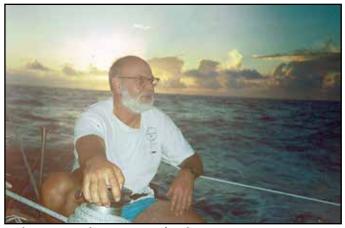
Katie Newburn Education and Outreach Director



## FROM SEA SCOUT TO SAILOR:

## LESSONS FROM GREAT SALT LAKE

Before I was a Boy Scout, I was a Sea Scout. On the Great Salt Lake. Some 60–70 years ago, the GSL Sea Scouts had a scout master, merit badges, and a small boat with a one-cylinder diesel engine. Sea Scouts taught me how to use a compass, how to read the weather, and how to manage a boat under different conditions. My family also spent some serious time out on the Lake. I remember Mom packing a lunch for the four of us and heading out. Sometimes, we'd ride the electric train between Salt Lake City and the Saltair amusement park and the beaches. Our favorite beach was at Black Rock and it was fun to ride out there by train before bobbing up and down like a cork in the salty water.



Paul Van Dam sailing, courtesy of Paul Van Dam

I've been in love with Great Salt Lake most of my life. After all, we have the great western "inland sea" right on our doorstep. It is a beautiful, dangerous, unique wonder in an otherwise "pretty dry state."

Years later during my time as Utah Attorney General, I would sail every week with my good friend Harry VanSoolen. Over the years we explored virtually all of the Lake south of the railroad causeway. We had to be alert to weather changes that sometimes seemed to come out of nowhere and deliver huge waves. In August 1990, when returning from a day's sailing we were surprised by a very fast-moving front. I was at the helm and unaware of the approaching weather until I literally felt the blast of wind and water overtake us. I knew we needed to come about and face the oncoming storm and began a hard turn to starboard. Midway through the turn the velocity of the wind and water knocked us down and we "turtled" (turned upside down).

We did not have our life vests on (so much for that scout training) and although the boat floated, there was only one flat spot on the bottom for us to lie on

to stay out of the water. That necessitated taking turns lying on top of each other. It was no fun to be the bottom guy! We'd trade positions when it was no longer bearable. Because of the rough, salty water there was no chance to swim under the boat and look for a light or coat. We just had to tough it out and wait for help.

Because I was the Attorney General of the state, I thought surely someone would miss me—or so I'd hoped. Though it was still summer, the flying water and wind made it pretty cold. As the darkness approached, we could see the marina from where we were, but we both realized it was going to be a long, cold night. After what seemed like an eternity, we could see several boats coming out of the harbor and felt we would survive this embarrassing experience. It was clear that the boats were going to run a search pattern and it was still going to be a long time before they found us.

It took one of the search boats about an hour and a half after we first saw them to reach us. Finally, a warm dry blanket and a drink of water felt wonderful when rescuers arrived. We saw a lot of lights and people as we approached the marina, and it occurred to me that the press had gotten wind of our fiasco. Sure enough, I spent the next forty-five minutes rather embarrassed and telling our story to the press.

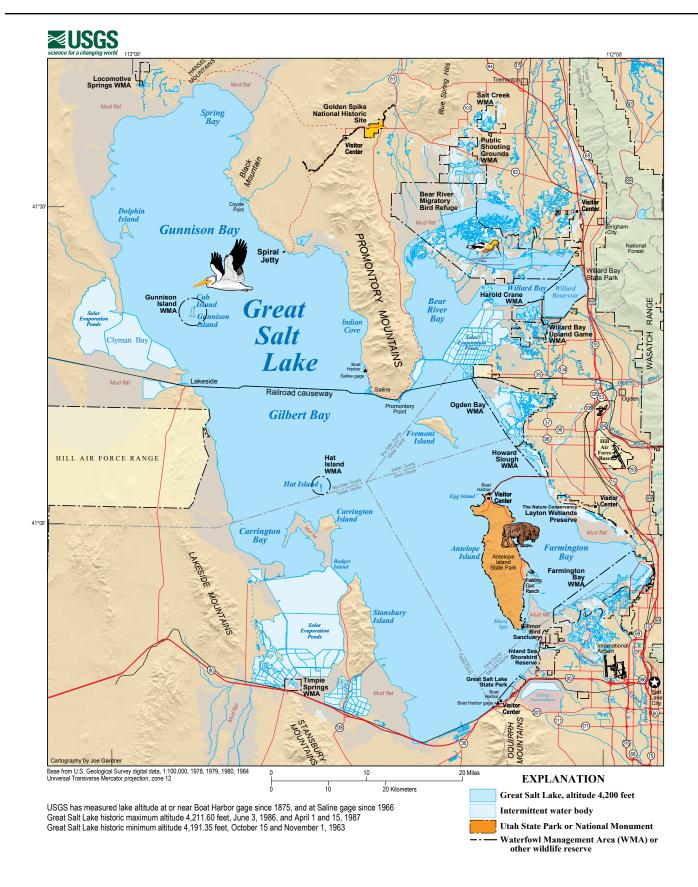
We salvaged our boat, sold it, and bought a bigger one. We decided to graduate to a 31-foot boat and continued our weekly forays on Great Salt Lake. After I retired in 2003, I continued my love of sailing and bought a 38-foot catamaran and spent the next three years sailing the Caribbean. My Great Salt Lake experience prepared me for the ocean, but that's another story.

I love the Great Salt Lake and mourn its shrinking size. It's difficult to believe that we allow the taking of water, water necessary to maintain the lake. It is one of the great treasures in our state and should be treated with the respect it's due. For all we talk about being good stewards of our environment in this state, our Great Salt Lake stands as an example of our deeds not living up to our words. Projects such as the Bear River Project that would divert much-needed water from the Great Salt Lake and the Promontory Landfill project that would allow trash to be placed near the Lake are projects that should be rejected. Great Salt Lake is a landmark that deserves our protection and respect not our abuse.

R. Paul Van Dam



## GREAT SALT LAKE AT A GLANCE



Courtesy U.S. Geological Survey

## DR. EPHYDRA—WE WELCOME YOUR QUESTIONS VIA EMAIL OR PHONE



E•phy'•dra, a noun; a genus of two species of brine flies that live on the bottom of the Great Salt Lake as larvae and pupae, and along the shores of the Lake as adults.

#### Pelicans on Gunnison Island—Where Are The Birds?

This summer, seven boats carrying nearly 50 people made a two-hour journey from the southern tip of Great Salt Lake, through a gap in the railroad causeway and into the Lake's north arm on what has become an annual event: banding pelicans on Gunnison Island.

This effort began in 2011 with just one boat and a small crew. Three trips were made that year, and a total of 200 pelicans were banded. Increased coordination and refined techniques reduced the trips to one per year and increased the number of pelicans banded to 500. This year, however, we banded just 74. The low number of birds banded wasn't through a lack of effort or planning or even manpower. No, the culprit was a lack of birds.



Pelican breeding colongy on Gunnison, photo courtesy of DWR

#### **Pelican Management Act**

Gunnison Island has been a pelican rookery for as far back as records exist. Howard Stansbury noted many pelicans nesting on Gunnison during his survey of Great Salt Lake in 1849. Other than a brief hiatus when Alfred Lambourne homesteaded the island in 1896, or when guano sifters were visiting, pelicans have used Gunnison as a breeding ground. In fact, it's one of the largest breeding colonies for American white pelicans in the world. During some years, it's ranked as high as the second largest.

The high number of pelicans that use the island prompted the Utah State Legislature to create the Pelican Management Act, which Gov. Scott M. Matheson signed into law in 1977. The act authorized the condemnation and purchase of both Gunnison and Cub islands, which were privately held under a mineral patent. Purchase of the

islands was finalized in 1980. Since that time, the Utah Division of Wildlife Resources has monitored and managed the islands as one of its wildlife management areas.

#### Pelicans and disturbance

Pelicans are extremely susceptible to disturbance when nesting. They choose isolated and remote locations to raise their young. Gunnison Island certainly meets this criteria. It's a secure location that's still in close proximity to the extremely productive wetlands on the eastern shore of GSL. Located in the north arm, along the west side of the Lake, the island is about as remote and isolated as a location can be. It's typically surrounded by extremely saline water.

Unfortunately, recent low Lake levels have exposed a land bridge to the island.

As I mentioned, our goal is to band 500 pelicans each year. With an average of 10,000 to 12,000 breeding adults, we usually have about 2,000 chicks to choose from. Those are pretty good odds, and we usually band about 25% of the total chicks on the island. Most years, we're able to get our quota in one efficient "round up." Things were a little different this year, though, as numbers have dwindled.

#### PELI Project

So why just 74 this year? It has been well documented that the elevation of GSL continues to fall. We have flirted with an all-time low water level in the south arm for several years now. It's gotten low in the north arm too. In fact, we had to take

all-terrain vehicles to Gunnison during the 2016 pelican banding trip when the north arm reached an all-time low, making it impossible to access the island by boat. Since that time, we have feared that coyotes would access the island via the land bridge. During the 2016 banding trip, we actually saw a coyote departing the island across the salt flats.

After noting coyote scat and even seeing a live coyote on Gunnison Island itself, we decided to start monitoring coyotes on the island more closely. Through cooperation with Westminster College, MesoWest at the University of Utah, Tracy Aviary, and Great Salt Lake Audubon, the PELI Project was born. This collaboration helps us track the goings on at Gunnison on a more frequent basis. Since trips to Gunnison are logistically difficult, and we try to limit our visits to minimize disturbing the pelicans, we installed cameras around the island to keep us informed about what happens through the year.





Peli Pods on Gunnison Island, photograph courtesy of DWR

#### Coyotes and pelicans

One of the drawbacks to Gunnison Island is that it doesn't have any fresh water. The lack of water may also be one of the island's perks, though, since the absence of fresh water keeps predators from staying on the island during the hot months when the pelicans are nesting. At least since 2016, coyotes have visited the island, but they either seem to leave when pelicans arrive or they haven't had an overly detrimental impact on them. This year was different, though. Numbers of nesting pelicans were the lowest they've been since 1981, and the number of juveniles available to band was down to a fraction of what it is during an average year.

What effect might coyotes be having on the pelicans? A telling observation this year was that all of the nesting was restricted to the north end of the island. On normal years, the entire island is inhabited by nesting pelicans. It seems as though these birds were pushed to the north half of the island, since the coyotes will invariably access the island from the south where the land bridge connects the island with the mainland. We'll know more once we have a chance to collect and review all of the photos from the cameras on Gunnison Island. I don't believe pelicans are the prey coyotes are targeting. If that was the case, there would not have been any nesting pelicans at all this year. Instead, coyotes are very efficient at finding and feeding on rodents.

Gunnison Island has no snakes, and the entire island is full of kangaroo rats and deer mice. In fact, when we are on the island this year, it was hard to walk anywhere without the soil collapsing under you due to the rodent burrows. I think the coyotes are taking advantage of the large rodent population, and disturbing the pelicans is just a by-product of this activity.

#### More than covotes

Quite honestly, coyotes are not the problem with this precarious breeding population. The real concern is the level of the lake. If Gunnison was surrounded by water, we wouldn't be seeing the coyotes visit at all. I have always equated the pelicans on Gunnison to our version of a canary in a coal mine, albeit a large and goofy-looking canary. The breeding colony seems like a warning sign that we should heed when it comes to low lake levels. It is probably the first in a line of concerns we will start to see when it comes to wildlife around the lake.

#### A changing ecosystem

I have been asked if bird numbers around GSL have decreased with the low lake levels. In some cases, yes, while in other cases, bird numbers have actually increased. This sounds like a positive until you realize that the reason they've increased is because other saline lakes around the West are drying up and losing their habitat for birds. Great Salt Lake is just so big that it is one of the few locations left for birds that have no other choice but to come here.

People often say that if habitat for birds disappears "birds are mobile, so they'll just fly somewhere else." That's true. They do fly somewhere else, until there is no other place to go. Many birds that stop to rest at GSL fly thousands of miles to and from their wintering and breeding grounds. Habitat connectivity between these areas has become increasingly important as habitats disappear.

This year was a very disappointing one for pelicans on Gunnison Island. It was a disappointing year for the banding party too. With lake levels as low as they are, this may be the new norm.

John Luft, Great Salt Lake Ecosystem Project Coordinator, Division of Wildlife Resources



## THE WASATCH WIGEONS ASSOCIATION

Wasatch Wigeons Association (WW) was founded in 2015 by eight concerned waterfowlers in Northern Utah. We formed a non-profit (501c3) to give back to the pastime we are so passionate about. Unique among conservation organizations, WW focuses on improving the wetlands right here in Northern Utah.

future wood duck habitat. Wood duck boxes are averaging 86% utilization and the mallard hen houses are at 36%. Wood ducks are now observed on a regular bases at the ONC for the first time in over ten years.

#### **3V Event (Veterans guiding Veterans on Veterans**

Day): In 2017, we started a new way of saying thank you to our service men and women. On Veterans Day, the current President of Wasatch Wigeons (Troy Burgess), a 30% disabled Veteran himself, took several disabled Army Veterans on a guided and filmed duck hunt on the Bear River Migratory Bird Refuge.

Kingfisher Wetlands: In July 2017, WW signed a contract with Weber County granting us stewardship of the Kingfisher wetlands. Kingfisher is an urban wetland located in Ogden, Utah near Fort Buenaventura. We started work on removing

phragmites, massive amounts of overgrowth, and adding water control devices. In 2018, we partnered with a non-profit organization named Youth Build that helps disadvantaged and troubled youth to learn construction trades. Youth Build helped design and build a two-story observation tower/blind, so the community can view wildlife with minimum disturbance. In 2019, we continued our pursuit of pushing back the overgrowth and phragmites that used to cover several acres of this important wetland habitat. The fruits of that labor have paid off with a significant reduction of approximately 3 acres of phragmites in the second year of the program and seeing great results. This year we are seeing a 96% nesting utilization on our Wood Duck boxes as well as a pair of geese using the goose nesting platform.

Willard Spur: We received permission from the Utah Division of Forestry, Fire and State Lands to do what some declared impossible. The crew removed an old Lincoln Zephyr automobile (AKA "Can Opener") from the Willard Spur. This navigational water hazard had been a part of the Spur landscape for well over twenty-five years, damaging several boats over the



Wasatch Wigeons removing engine from Willard Spur, photo courtesy of Alan Peterson

**Our Vision:** To build an organization to sustain our waterfowling legacy through sound conservation methods and active community engagement that can be passed on to the next generation. Here's a sample of the work we've accomplished with our all-volunteer team over the last four years.

### **Ogden Bay & Howard Slough Waterfowl**

Management Areas (WMA): Removed 21,140 pounds (more than 10 tons) of metal debris, scrap metal and six additional truckloads of trash. Hauled out 4.7 tons of woody debris. Installed twenty-three wood duck boxes and thirty-eight mallard hen houses. Sponsored Eagle Scout projects installing trash barrels as well as seventy geese boxes.

**Ogden Nature Center (ONC):** Cleared invasive tamarisk from the center's Teal Pond. Teal Pond has shown to be the most productive pond in the ONC for wood duck breeding and duckling survival. WW has sponsored scout projects to construct eighteen wood duck boxes and installed seven mallard hen houses. We also cleared approximately 5/8 of a mile of over growth and trash in Willow Creek to prepare it for

course of its existence. Any way you look at it, such an item doesn't belong in the marsh. We're proud that we removed it from this unique wetland ecosystem.

Cache Valley: Early in 2018, WW welcomed a new chapter which will focus on wetland habitat in the Cache Valley. This chapter is already making a difference by installing wood duck boxes and conducting clean-ups. We've made an agreement with the Bear River Land Conservancy to take over the stewardship of the waterfowl nest boxes on



Mallard hen house, photograph courtesy of Sherry Burgess

their 500 acre property. We recently signed an agreement with PacifiCorp allowing us to install ten goose platforms in Cutler Reservoir.

Standing up for the wetlands: Politics was never our original intent and still isn't. We started partnering with Utah River Council (URC), the Utah Airboat Association (UAA) and Utah Waterfowl Association (UWA) to protect our wetlands. We're honored to add "FRIENDS of Great Salt Lake" to that list of partners. Troy Burgess speaks at URC events about the importance of our wetlands, and the need to protect them. We're honored to have a small part in the drafting of HB 265sponsored by Rep. Casey Snider, Cache County, which designated 13,940 acres of the Willard Spur as a Wildlife Management Area (WMA). This unique asset will benefit from the Division of Wildlife Resources' management oversight to ensure its protection as a reference wetland of Great Salt Lake. The WMA designation also ensures that this area will continue to allow public access and will not be significantly altered by dikes, dams and roads. The unique flowing features of the Willard Spur will be left to continue its natural path toward joining with the Bear River Bay and on into the Great Salt Lake.

**Passing on the heritage:** In addition to encouraging youth to participate in our hands-on approach to habitat cleanup and improvement efforts, for the last 4 years we've hosted a youth outdoors activities fair in Weber County. This year Wasatch Wigeons taught

sixth graders at Capstone Classic Academy charter school from Pleasant View, Utah about waterfowl and our nesting box program. In an effort to increase our impact, WW has expanded our mentoring program to include not only youth, but adults as well. We have also adjusted the program to cater to the different challenges new hunters face in the various stages of development. Additionally, we have created a program for non-hunters called "tag along." This new program allows non-hunters or those not sure about waterfowl hunting to "tag along" with an experienced hunter and learn firsthand what it's all about. All of these efforts combine to inspire the next generation of conservationists.

Check out our website: www.wasatchwigeons.org

YouTube channel: www.youtube.com/channel/UCB\_lKvz8bEiDtILfINQsngA

Follow us on Facebook: www.facebook.com/groups/ WasatchWidgeons/

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Better, yet—come join us on a future project.

Troy Burgess President Wasatch Wigeons Association



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#### LAKE FACT:

Q: How many acres comprise the new Willard Spur Wildlife Management Area?

> acres. 0+6,81:A

## Thanks for Making a Difference

Memberships and Donations Received Between February 1, 2019 thru October 31, 2019

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Save the Dates:

December 4, 2019 Holiday Open House May 6-8, 2020 Great Salt Lake Issues Forum Great Salt Lake: The Gift That Keeps On Giving, Just Add Water Fort Douglas Officers Club, University of Utah



## MAKING A DIFFERENCE

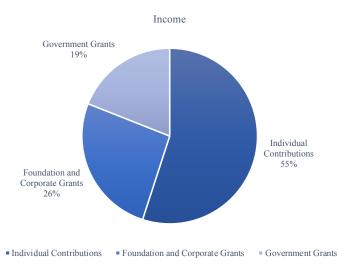
## How We Do Our Work—Thanks To You

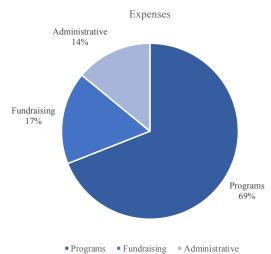
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As a 501(c)(3) nonprofit, FRIENDS of Great Salt Lake relies upon the generosity of our members, individual donations, foundations, and grants. Individual memberships and donations provide the bulk of our funding at approximately 55% of our annual revenue. Foundation donations and corporate grants generate 26%, and government grants generate 19%.

With an annual operating budget of \$285,000, FRIENDS of Great Salt Lake spends a majority of funds on Programming (69%), including our Education Programs, The Doyle Stephens Research Program, Advocacy Programs, and the Alfred Lambourne Arts Program. We have a goal to increase this percentage to 80% during the 2019-2020 fiscal year. Fundraising costs average 17%, and administrative expenses 14%.

FRIENDS of Great Salt Lake is a member of Utah Nonprofits Association (UNA). We operate with a Donor Bill of Rights, a Conflict of Interest Policy, a Gift Acceptance Policy, and adhere to UNA's Standards of Ethics. Access to our IRS form 990 is on our website.







Lady of the Lake,
oil paint and photography overlay by
Linda Dalton-Walker
Submitted for the 2019 Alfred Lambourne Prize

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Gillmor Sanctuary Sunset, photograph by Heather Dove