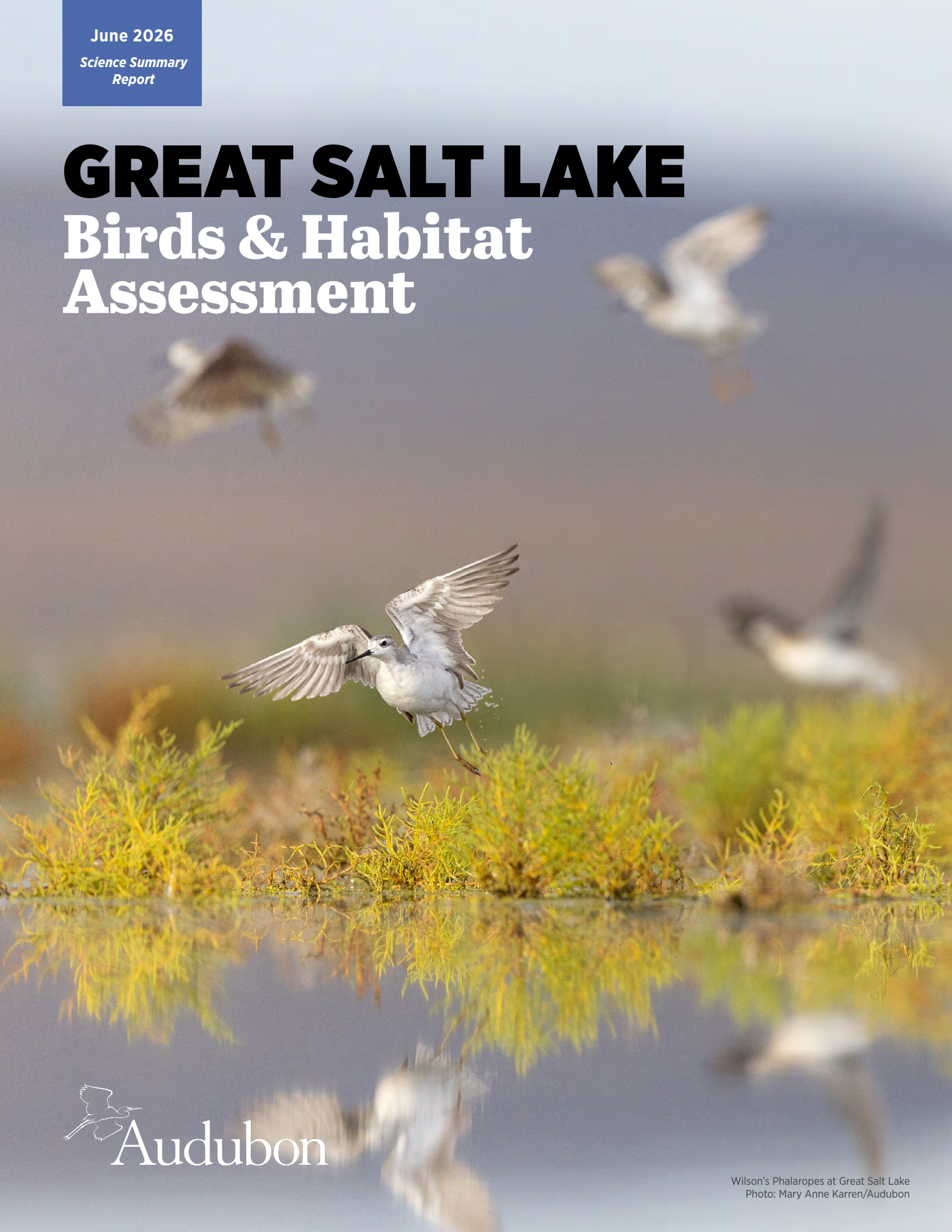


June 2026

Science Summary
Report

GREAT SALT LAKE

Birds & Habitat Assessment



 Audubon

Wilson's Phalaropes at Great Salt Lake
Photo: Mary Anne Karren/Audubon

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National Audubon Society

The National Audubon Society is a leading nonprofit conservation organization with 120 years of science-based, community-driven impact, dedicated to protecting birds and the places they need, today and tomorrow. Birds are powerful indicators of our planet's health, acting as sentinels that warn us of environmental change and inspire action. Audubon works across the Western Hemisphere, driven by the understanding that what is good for birds is good for the planet. Through a collaborative, bipartisan approach across habitats, borders, and the political spectrum, Audubon drives meaningful and lasting conservation outcomes. With 800 staff and over 1.9 million supporters, Audubon is a dynamic and ever-growing force committed to ensuring a better planet for both birds and people for generations to come. Learn more at www.audubon.org and on Facebook, Twitter and Instagram @audubonsociety.



The Need for this Assessment

The Great Salt Lake Birds and Habitat Assessment (the Assessment) is a science-based analysis designed to inform conservation strategies across the Great Salt Lake watershed focused on protecting birds and the places they need, today and tomorrow. Developed by Audubon's team of scientists, with input from habitat and water experts, this effort integrates habitat suitability, climate projection, and human modification data into a unified, spatial framework that identifies priority conservation areas for waterbirds.

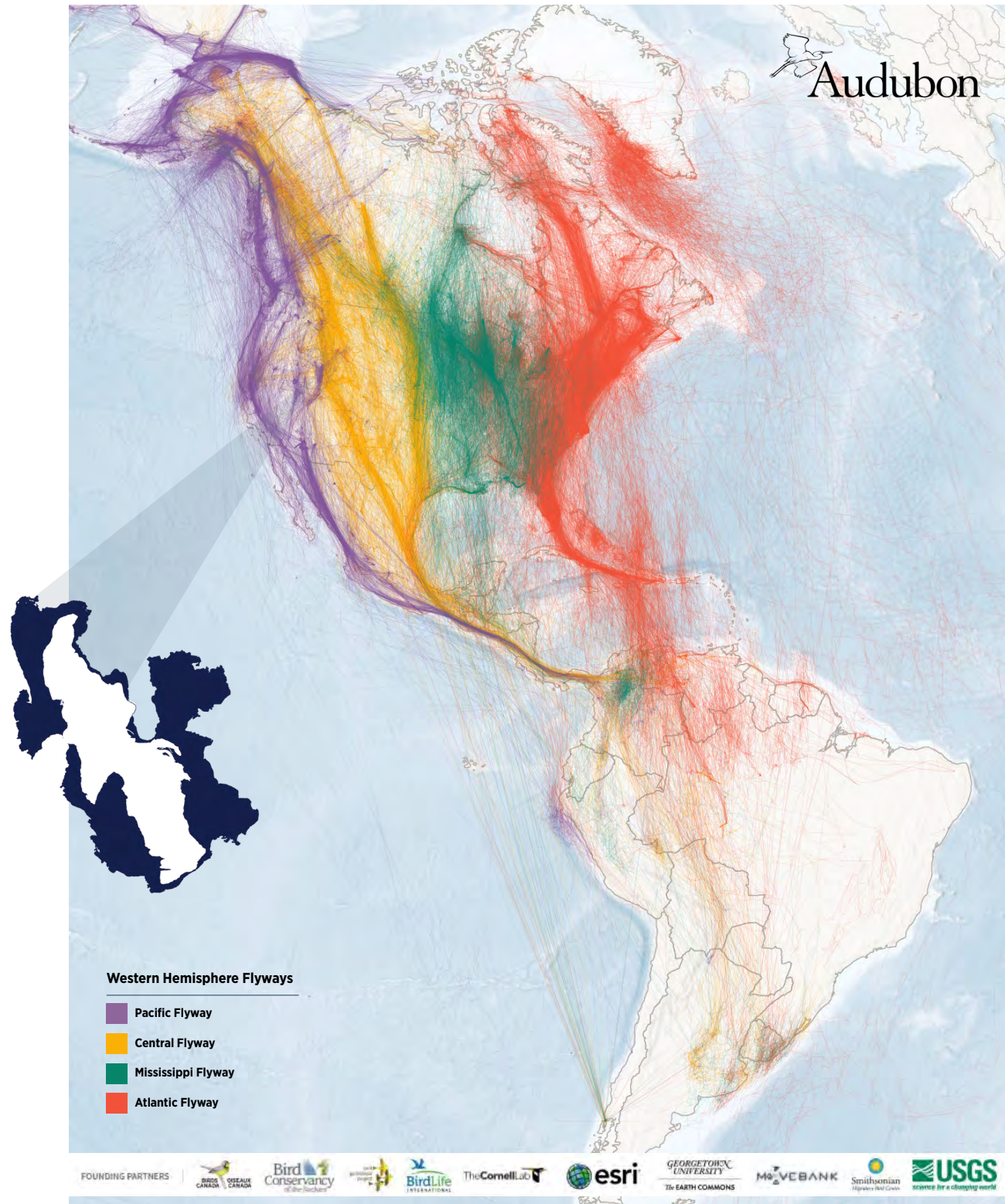
As one of the largest saline lakes in the Western Hemisphere, the Great Salt Lake ecosystem supports approximately 12 million birds annually and hosts globally significant populations—including an estimated two-thirds of the Hemispheric migratory Wilson's Phalaropes, based on 2022 eBird Status and Trends data, and the largest breeding colony of American White Pelicans in the western United States. Increasing water diversion, urbanization, and climate stressors threaten the system's resilience and directly impact habitat quality and availability for waterbirds.

To address these challenges, the Assessment offers a habitat prioritization model to evaluate Audubon's Flight Plan indicator waterbird species across all seasons. By evaluating habitat importance under current and projected climate conditions, it provides site-level management and conservation guidance that can inform adaptive management and conservation strategies. Additionally, as part of this Assessment, Audubon utilized a hydrologic model that depicts contributions to Great Salt Lake from upstream wetlands and flood-irrigated agricultural lands to identify opportunities for enhancing water delivery to the lake and its wetlands. The Assessment illustrates how Great Salt Lake's mosaic of interconnected habitats across the watershed is essential for maintaining the region's exceptional waterbird diversity and abundance.

The Great Salt Lake Birds and Habitat Assessment aims to align several conservation priorities and guide coordinated action for Great Salt Lake's unique landscape to protect birds and the habitats they need to survive.

Great Salt Lake's Global Importance

Great Salt Lake, situated in northern Utah, is one of the largest saline lakes in the Western Hemisphere—spanning over 1,700 square miles on average—and is among the most ecologically important ecosystems in North America.



Learn more about the Western Hemisphere Flyways with Audubon's Bird Migration Explorer: <https://explorer.audubon.org/>

GREAT SALT LAKE'S GLOBAL IMPORTANCE

Great Salt Lake is a globally important ecosystem that provides irreplaceable habitat for some 12 million migratory birds annually, representing 339 species. Several bird species appear in high numbers, representing large percentages of their Western Hemispheric populations. Great Salt Lake also serves as vital natural water infrastructure for human communities and wildlife, provides food and habitat for millions of waterbirds, plays a critical role in Utah's water cycle, supports 7,700 local jobs and nearly \$2.1 billion in annual economic output from minerals, fertilizers, brine shrimp industries, and recreation, and is a source of identity and community heritage.

Great Salt Lake functions as both a vital ecosystem in its own right and as a keystone node within the Pacific Flyway, one of four major migratory bird corridors in the Americas. The expansive lake and its surrounding wetlands support a dynamic mosaic

of habitats, which include natural and managed wetlands, salt marshes, wet meadows, deep and shallow water areas, islands, flooded mudflats, and playas—collectively providing essential resources for birds across multiple phases of their life cycles, serving as breeding grounds, stopover sites for migratory staging, and over-wintering refuges.

The ecological significance of Great Salt Lake is closely tied to the wetlands concentrated around the eastern perimeter of the lake, as well as along its north and south shores. The wetland complex surrounding the open waters of Great Salt Lake encompasses both managed and naturally occurring seasonal to perennial wetlands, totaling approximately 350,000 acres of wetlands. The importance of habitat connectivity within this system cannot be overstated. Birds move among wetlands, riparian areas, agricultural lands, and upland areas throughout their annual cycles and even within single days.

1,700 square miles	12 million birds	7,700 local jobs
\$2.1 billion annual economic output		350,000 acres of wetlands

Western Hemispheric Population Proportion

Great Salt Lake hosts hemispherically significant populations annually including:

- 87%** Eared Grebe
- 67%** Wilson's Phalarope
- 63%** American Avocet
- 46%** California Gull
- 50%** Marbled Godwit
- 26%** Cinnamon Teal
- 20%** Tundra Swan
- 10%** Northern Pintail
- 12%** Snowy Plover

Quantities represent the percentage of the Western Hemispheric population that use Great Salt Lake at some point during the year (based on 2022 eBird Status & Trends data)



American Avocet, Great Salt Lake, Salt Lake City, Utah
Photo: Nikunj Patel/Audubon Photography Awards

Threats to Great Salt Lake

Great Salt Lake faces unprecedented conservation challenges that threaten its ecological integrity and cause a variety of cascading impacts that are difficult to reverse and costly to mitigate.



Receding water levels leave an exposed lakebed at Great Salt Lake, 2022
Photo: Mary Anne Karren/Audubon

THREATS TO GREAT SALT LAKE

The challenges facing Great Salt Lake are characterized by their complexity as well as the interconnected nature of the watershed's system—where natural processes and human development are deeply intertwined—creating urgent conservation priorities

that demand coordinated action. A collapsing Great Salt Lake ecosystem would have continent-wide ecological consequences, jeopardize important economic activities for the state and region, and lead to public health hazards from dust emissions.



Declining Lake Levels & Climate Change

The most visible threat to Great Salt Lake is its declining water level. The lake has experienced dramatic reductions in volume over recent decades and hit its lowest recorded lake level in 2022, driven by a combination of factors including historic and increased water diversions, extended periods of drought, and warming temperatures associated with a changing climate. Climate change projections indicate that conditions in the Great Salt Lake basin will continue to degrade.



Displacement of Habitat by Invasive Phragmites

The invasive common reed, *Phragmites australis* (Phragmites), has invaded more than 90 square kilometers of lakebed and managed wetlands transforming once open, productive bird habitat into dense monocultures of little value to those species and impounding sediment, leading to the obstruction of natural water flow. Phragmites has nearly double the water consumption of native saltgrass.



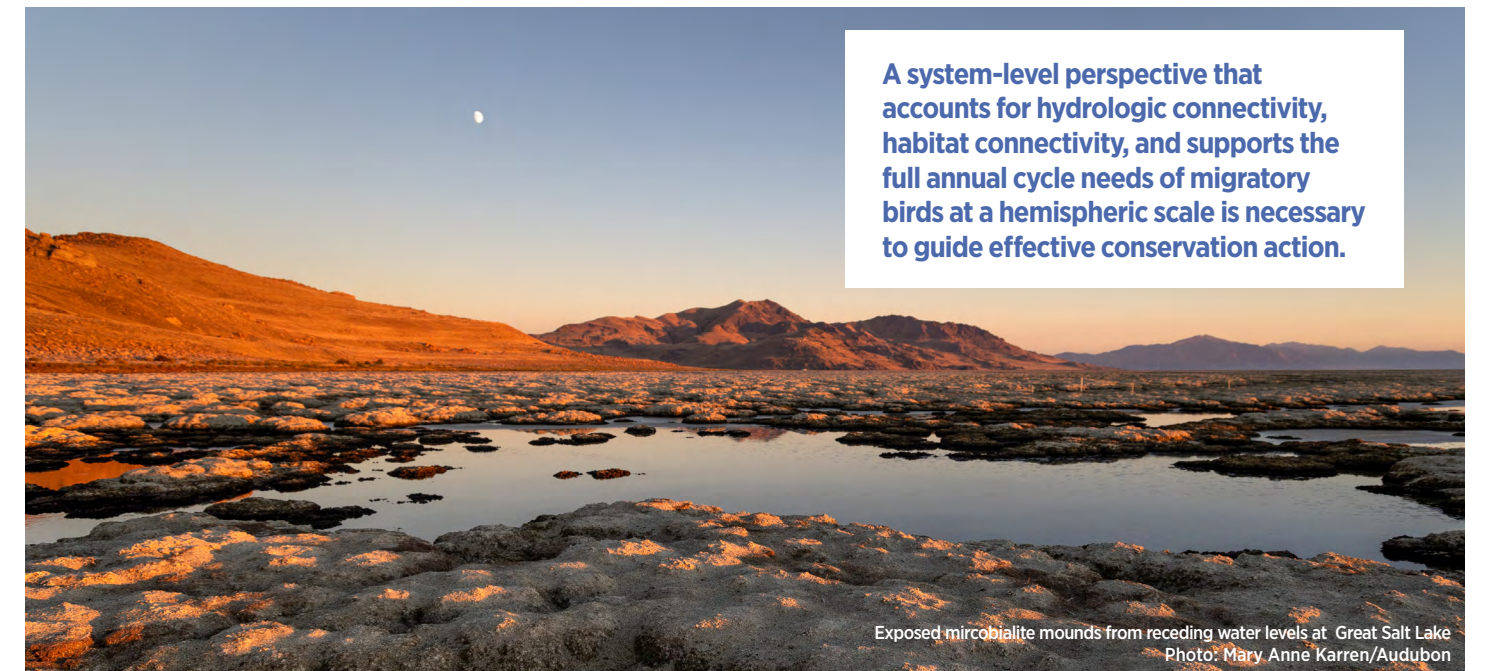
Habitat Loss & Fragmentation

The expanding Wasatch Front urban corridor is encroaching upon essential wetland and upland habitats, converting them to residential, commercial, and industrial uses. These land use changes not only eliminate habitat directly but also fragment remaining habitats, disrupt ecological connectivity, introduce hard edges that degrade habitat and water quality, and convert water from agricultural to municipal use.



Water Diversions & Competing Demands

Water diversions for agricultural, municipal, and industrial uses, along with other upstream ecological uses, reduce inflows to the lake and its wetlands. As Utah's human population continues to grow, competition for water resources intensifies. However, advances in Utah's water policy increase options for dedicating water for use at Great Salt Lake.



A system-level perspective that accounts for hydrologic connectivity, habitat connectivity, and supports the full annual cycle needs of migratory birds at a hemispheric scale is necessary to guide effective conservation action.

Exposed microbialite mounds from receding water levels at Great Salt Lake
Photo: Mary Anne Karren/Audubon

These converging threats create an imperative for strategic, science-based habitat prioritization. Not all areas of the watershed are equally important for waterbird conservation, nor are they equally vulnerable to loss or equally amenable to restoration. Conservation resources—whether financial, political, or organizational—are limited and have the greatest impact when deployed strategically to achieve maximum benefit.

Habitat prioritization must consider both the intrinsic value of individual sites and their functional connectivity within the broader landscape. Isolated habitat patches, no matter how high-quality, may not support viable populations if they lack connectivity to other habitats or to essential water sources.

Overview of the Assessment

The Assessment

The Great Salt Lake Birds and Habitat Assessment was developed to prioritize habitat conservation efforts in the Great Salt Lake watershed and provide users with scientifically informed guidance on areas to focus conservation efforts. To achieve this, Audubon scientists conducted two analyses: an Avian Prioritization Analysis and a Hydrologic Inflows Analysis.

From these analyses, Audubon scientists were able to classify the most important wetlands surrounding Great Salt Lake into three actionable categories, as seen in Figure 1:

Avian Prioritization Analysis

A habitat prioritization model that identifies locations in the Great Salt Lake watershed with the highest suitability for indicator birds based on present and predicted future habitat and climate suitability.

Hydrologic Inflows Analysis

A customized geospatial assessment with the goal of understanding potential flow pathways into Great Salt Lake from wetland environments and return flows from flood irrigated agricultural fields.

Ongoing Priority Areas

These areas are the stable core of the conservation landscape and warrant protection, continued management, and enhancement. These areas are concentrated around the open water of the lake body and existing wetland complexes, particularly managed wetlands and state waterfowl management areas.

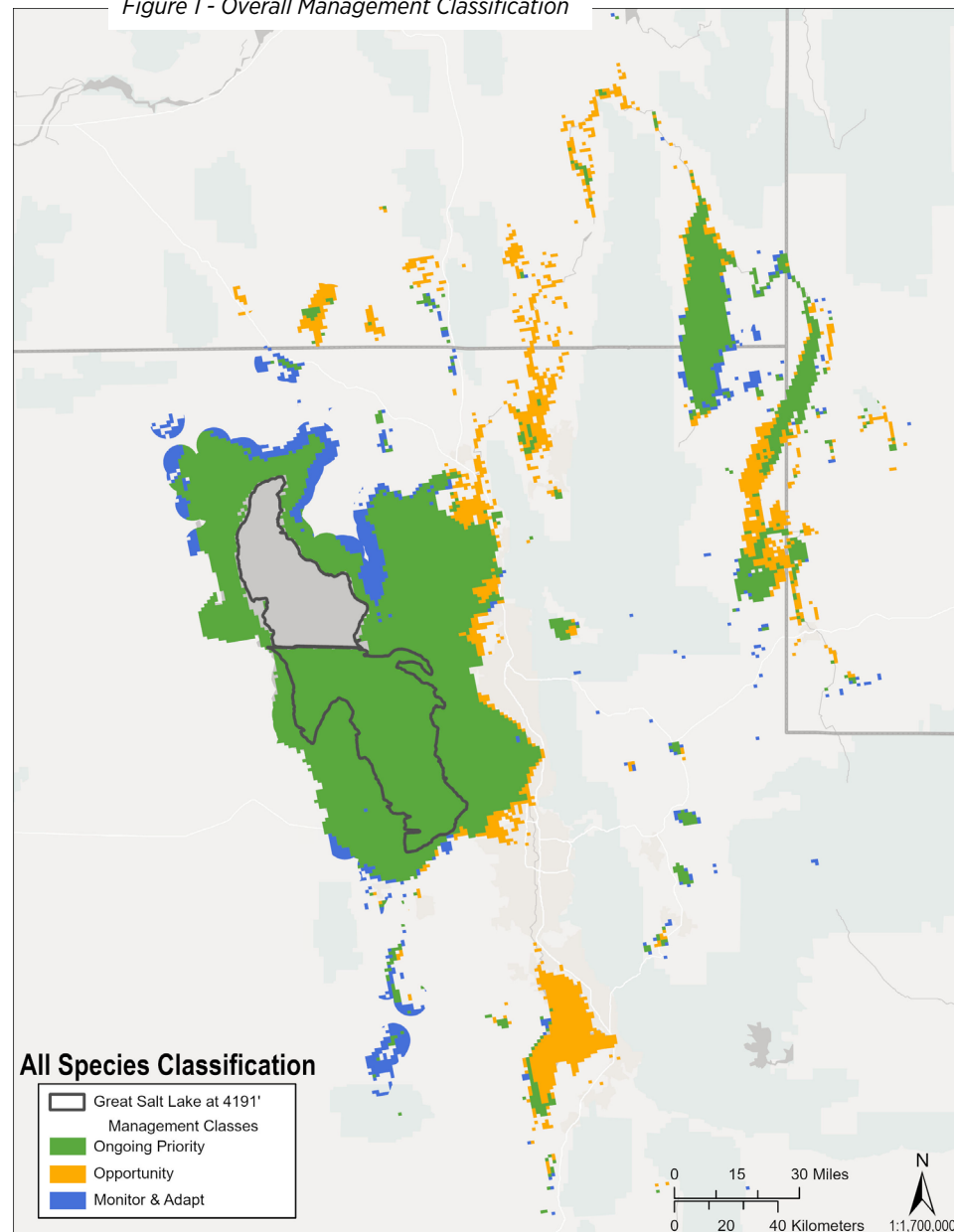
Opportunity Areas

These areas provide the most significant opportunities for enhancement as they are predicted to maintain or gain climate suitability. These areas are primarily agricultural lands and open water, degraded but restorable historical wetlands, and undeveloped areas projected to become more suitable as climate conditions shift.

Monitor & Adapt Areas

These areas are scattered through the watershed and are currently suitable habitats, but projected climate conditions may make the habitat unsuitable. Management strategies can focus on enhancing climate resilience through water and vegetation management.

Figure 1 - Overall Management Classification



The identification of priority habitats is particularly valuable in guiding conservation investment in areas that will provide long term value.

OVERVIEW OF THE ASSESSMENT

Audubon scientists conducted customized spatial prioritizations that identify locations along the northern, southern, and eastern edges of Great Salt Lake with the highest suitability for waterbird species based on present and predicted future habitat and climate suitability. The species are included in Audubon's Flight Plan.

Four priority Species were also included by incorporating additional modeling. The indicator species are a subset of the remarkable diversity of shorebirds, waterfowl, and other waterbirds that spend time on Great Salt Lake and its wetland habitats.

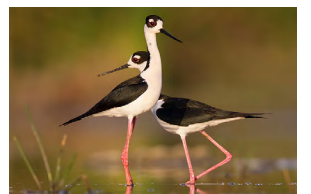
Indicator Bird Species



American Avocet



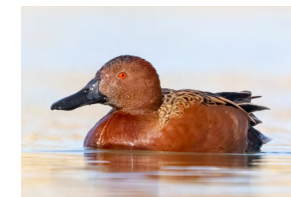
American White Pelican



Black-necked Stilt †



California Gull



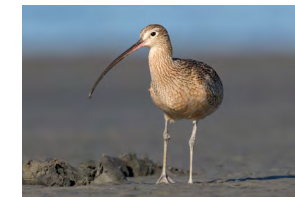
Cinnamon Teal



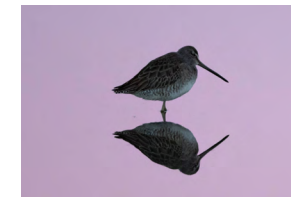
Eared Grebe



Lesser Yellowlegs*



Long-billed Curlew



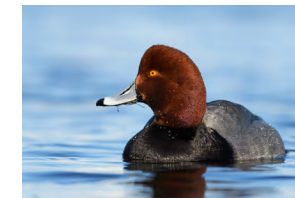
Long-billed Dowitcher*



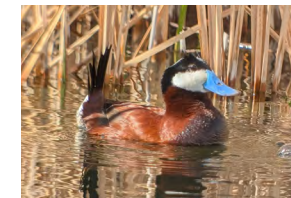
Marbled Godwit*



Northern Pintail



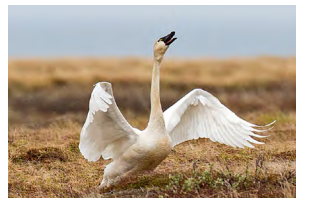
Redhead †



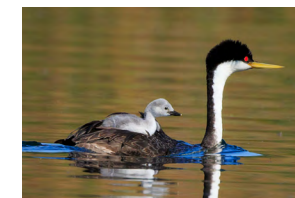
Ruddy Duck †



Snowy Plover



Tundra Swan †



Western Grebe



Western Sandpiper*



White-faced Ibis



Wilson's Phalarope

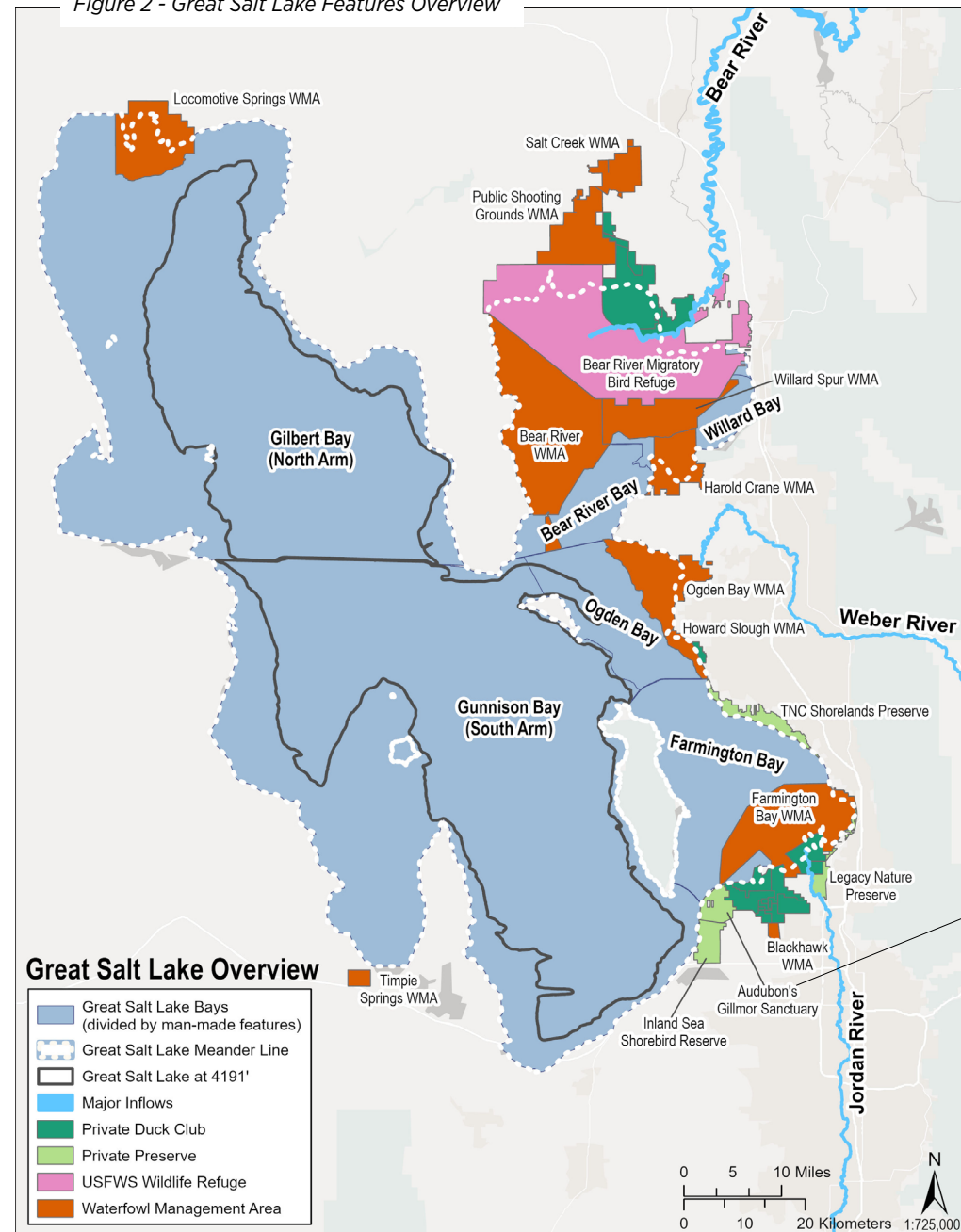
Photos clockwise from top left: Michelle MacKenzie/Audubon Photography Awards, Kevin Rutherford/Audubon Photography Awards, Robert Blanchard/Audubon Photography Awards, Ed Oakes/Audubon Photography Awards, Mick Thompson, Mary Anne Karren/Audubon, Steven Biegler/Audubon Photography Awards, Mick Thompson, Carter Kremer/Audubon Photography Awards, Max Malmquist/Audubon, Ann Pacheco/Audubon Photography Awards, Shayna Marchese/Audubon Photography Awards, Max Malmquist/Audubon, Evan Barrientos/Audubon, William J. Pohley/Audubon Photography Awards, Renda Glick/Audubon Photography Awards, Ronan Donovan/Audubon Photography Awards, Evan Barrientos/Audubon, Evan Barrientos/Audubon

* Species present in Great Salt Lake watershed only during spring and fall migration

† Species not included in Audubon's Strategic Flight Plan

OVERVIEW OF THE ASSESSMENT

Figure 2 - Great Salt Lake Features Overview



As seen in Figure 2, Great Salt Lake is a complex system of bays, natural wetlands and managed environments that sometimes are separated by impoundments or causeways. Many different agencies and entities have a hand in the management of this landscape, including those that are specifically managed as avian habitat by Utah Department of Natural Resources, U.S. Fish and Wildlife Service, conservation organizations (such as Audubon and The Nature Conservancy), and privately owned duck hunting clubs.

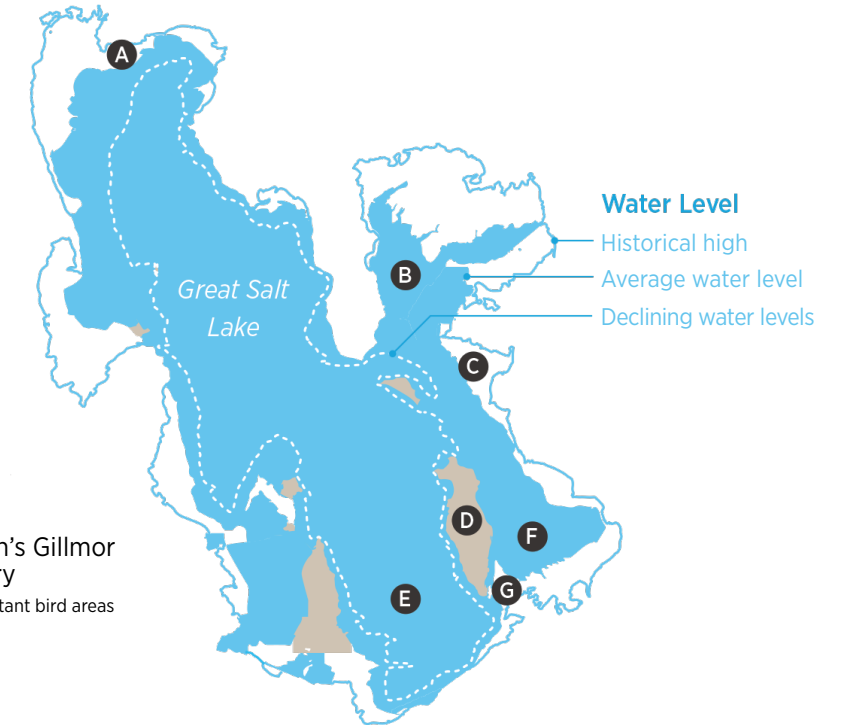
Located along the southern shoreline of Great Salt Lake, Audubon's 3,597-acre Edward L. & Charles F. Gillmor Sanctuary provides vital habitat to vast numbers of shorebirds, waterfowl, and other migratory birds. Gillmor Sanctuary includes adjacent land owned by the Utah Reclamation Mitigation Conservation Commission that Audubon manages as well, known as the South Shore Preserve. Audubon is continuing to develop and apply science-based adaptive management techniques to increase the number of waterbirds at Great Salt Lake. The entirety of the sanctuary is classified as Ongoing Priority.



OVERVIEW OF THE ASSESSMENT

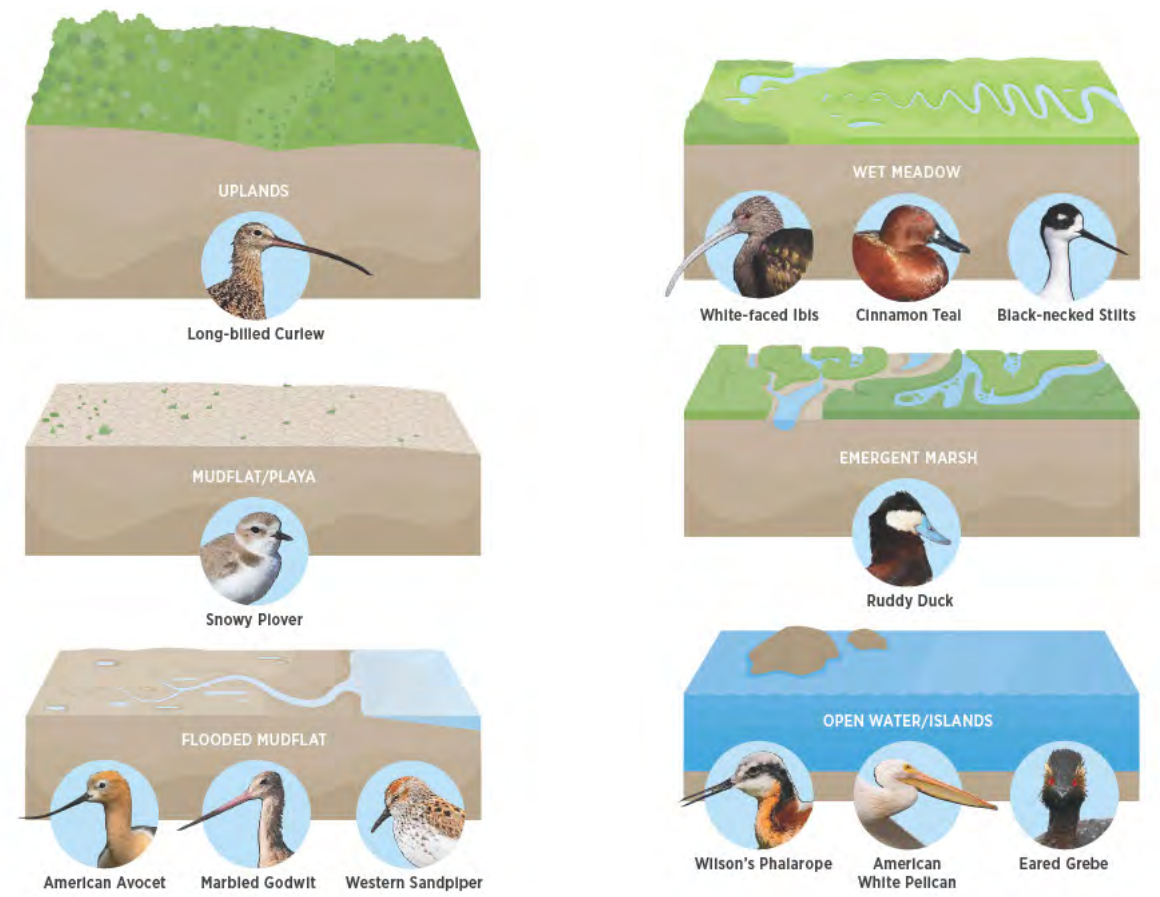
A Mosaic of Habitats at Great Salt Lake

Birds move among wetlands, riparian areas, agricultural lands, and upland areas throughout their annual cycles and even within single days. Breeding birds may nest in managed wetlands but forage in nearby agricultural fields, and vice versa. Migratory birds stage in different wetlands depending on water levels and food availability. The connectivity between these habitat areas—and critically, between wetlands and their upstream water sources—determines the functional capacity of the entire system to support bird populations. Conserving hydrologic connectivity is therefore not simply a water management concern, but a foundational bird conservation priority.



IMPORTANT BIRD AREAS

- A Gunnison Bay*
 - B Bear River Bay*
 - C Ogden Bay*
 - D Antelope Island
 - E Gilbert Bay*
 - F Farmington Bay*
 - G Audubon's Gillmor Sanctuary
- *Globally important bird areas



Avian Prioritization Analysis

No single habitat type can support the full suite of focal species; rather, the mosaic of habitats distributed across the watershed provides the diversity needed to sustain the region's incredible waterbird diversity and abundance.



Waterfowl at Great Salt Lake
Photo: Mary Anne Karren/Audubon

AVIAN PRIORITIZATION ANALYSIS

Vital Corridors Between Wetlands and Uplands

Priority areas showing strong wetland-upland connectivity are concentrated where managed wetlands border agricultural lands or grasslands that remain undeveloped. These areas provide landscape-scale habitat mosaics essential for species with diverse habitat requirements, and in many cases represent opportunities for restoration.

As seen in Figures 3 and 4, areas like the agricultural lands in the Bear River corridor and connected to the Bear River Migratory Bird Refuge bridge the gap between important wetland and open land habitat for birds, and provide hydrologic connectivity to Great Salt Lake from both water sources.

Figure 3 - All Species Map

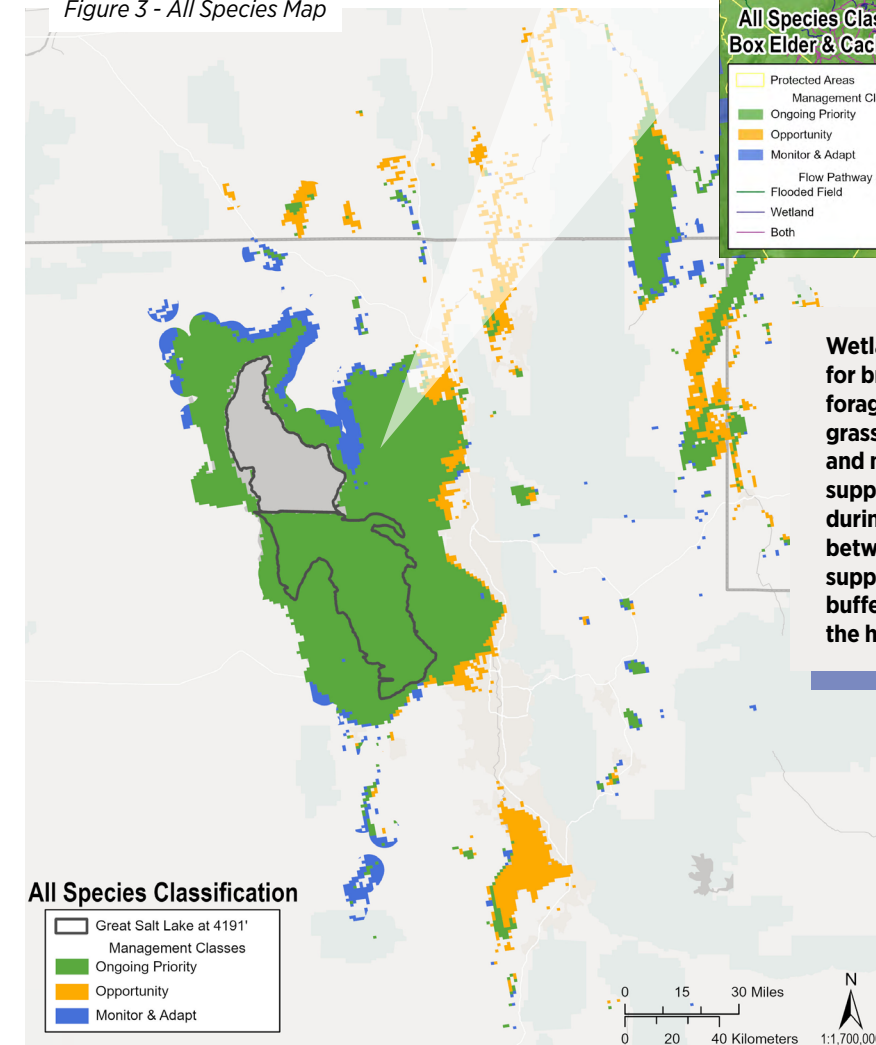
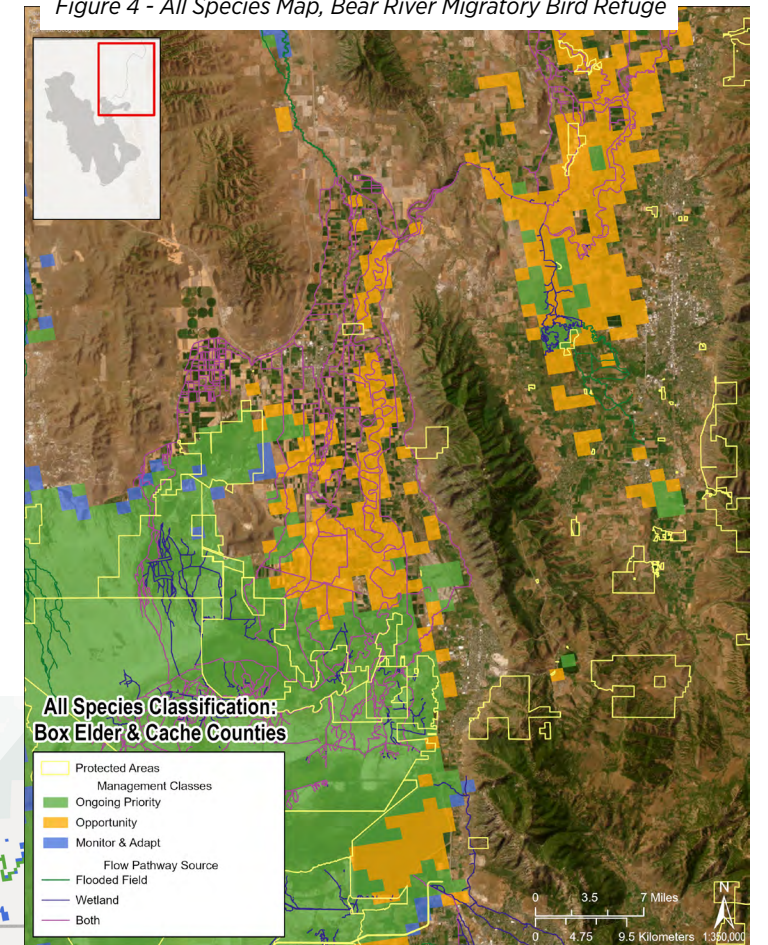


Figure 4 - All Species Map, Bear River Migratory Bird Refuge



Wetland-upland interfaces are particularly important for breeding waterbirds that nest in wetlands but forage in surrounding agricultural lands and upland grasslands, or for species that forage in wetlands and nest in surrounding uplands. The interface also supports species that require different habitat types during different life stages, maintain natural transitions between aquatic and terrestrial ecosystems that support diverse ecological communities, and provide a buffer from anthropogenic disturbances associated with the human-built landscapes and associated predators.



Photo: Evan Barrientos/Audubon

A group of White-faced Ibis, adult and juvenile, forage in a saline wetland.

Figure 3 shows the spatial overlay of the downstream trace analysis and the avian habitat analysis.

AVIAN PRIORITIZATION ANALYSIS

Connectivity Among Wetland Complexes

Key corridors connect major wetland complexes including the Bear River Migratory Bird Refuge, Farmington Bay, Ogden Bay, Willard Spur and the wetlands surrounding Utah Lake. Maintaining these connections is crucial for landscape-scale functionality. Additionally, important riparian resources along hydrologic corridors within the watershed—including major rivers, tributaries, and canals that connect upstream lakes such as Bear Lake and Utah Lake with Great Salt Lake—cannot be overlooked.

As seen in Figures 3 and 5, wetlands, regardless of management classification, remain an important resource for waterbirds. The continued prioritization of these sites on an individual- and landscape-scale is critically important.

Figure 3 - All Species Map

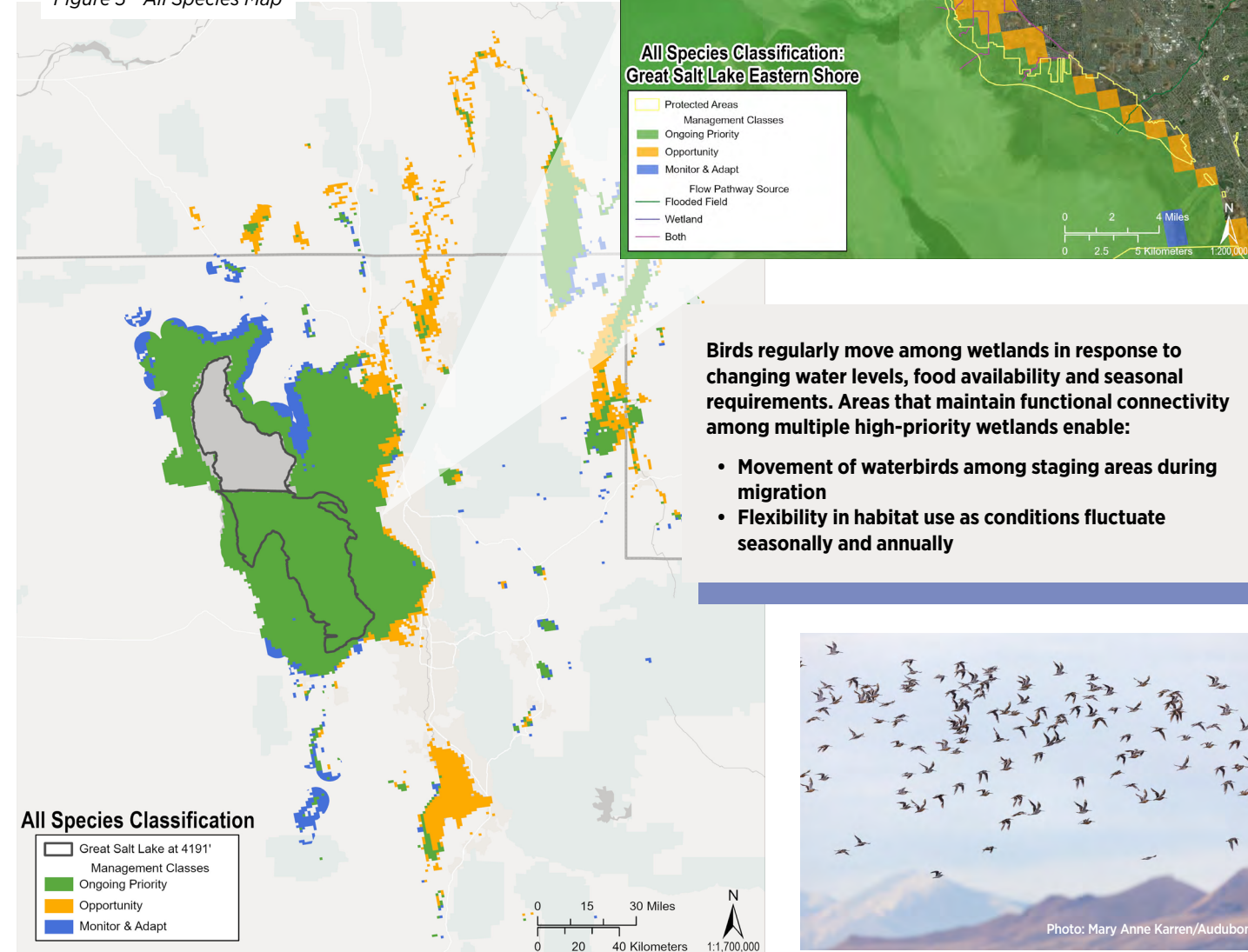
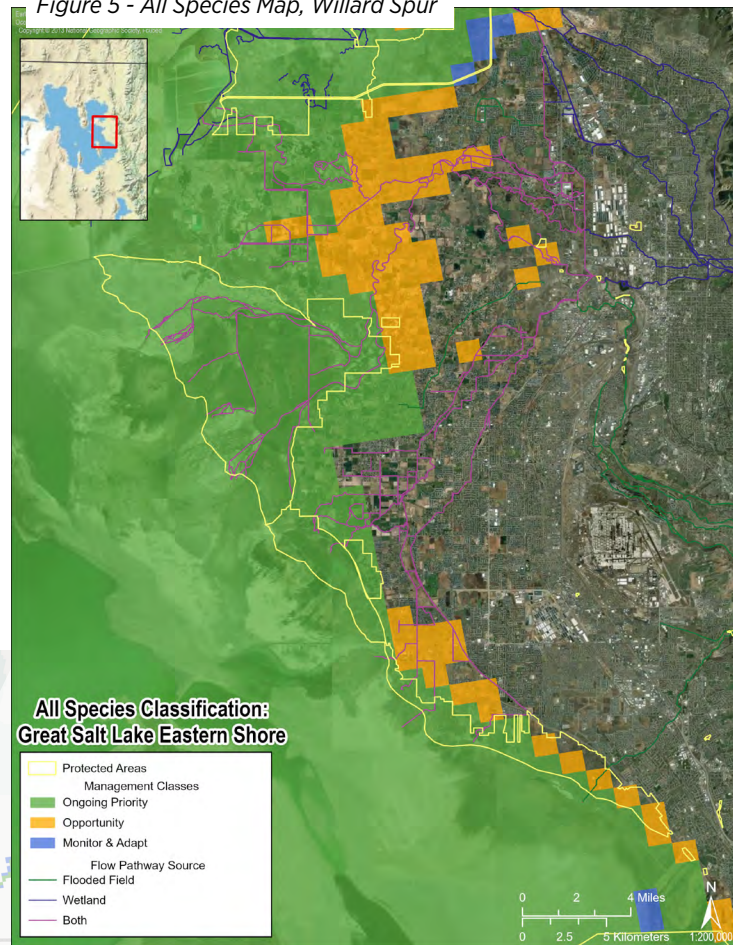


Figure 3 shows the spatial overlay of the downstream trace analysis and the avian habitat analysis.

Figure 5 - All Species Map, Willard Spur



AVIAN PRIORITIZATION ANALYSIS

Fragmentation Risks and Conservation Opportunities

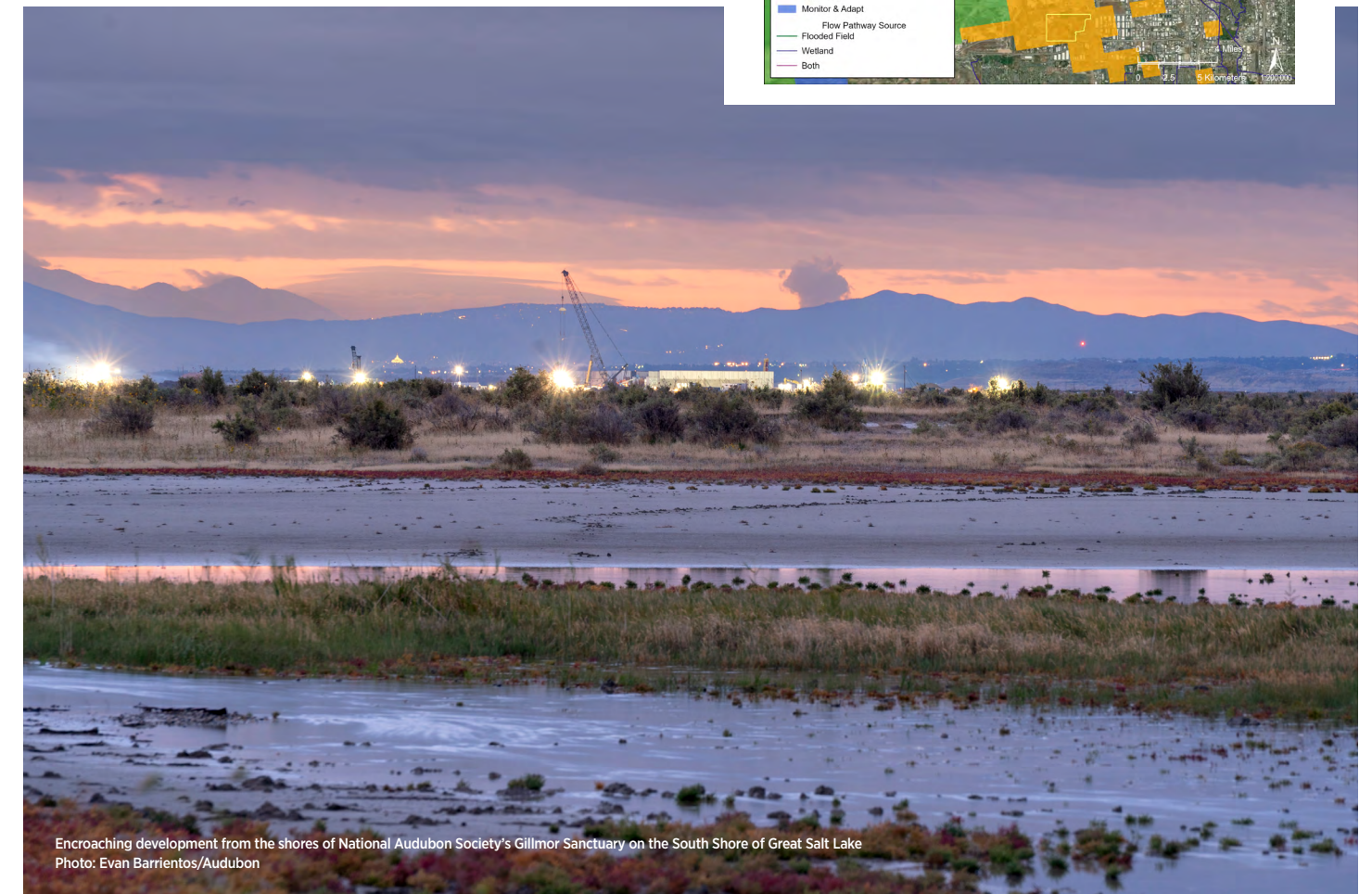
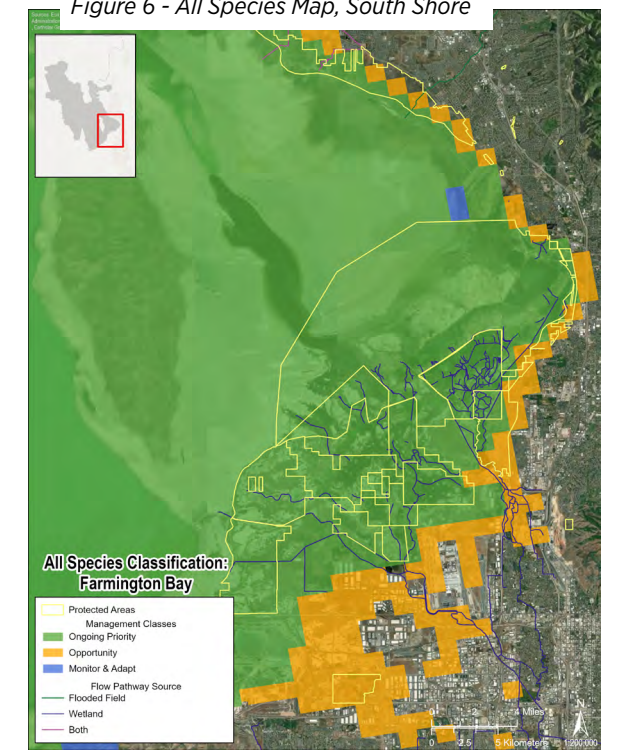
The analysis reveals fragmentation risks where high-priority habitats are becoming isolated by urbanization, infrastructure, or habitat degradation. Areas of particular concern include:

- Wetland complexes increasingly surrounded by hard-scaped urbanization
- Loss of connectivity between agricultural lands and wetlands due to land conversion pressures
- Decreasing hydrologic connectivity due to water diversions for urban uses

The integration of connectivity considerations into the prioritization framework ensures that conservation investments support not just individual high-quality sites, but also functional landscape networks that sustain bird populations across their full annual cycle.

Figure 6 shows the abundance of protected areas on the south shore of the Great Salt Lake and the areas that border encroaching development.

Figure 6 - All Species Map, South Shore



Encroaching development from the shores of National Audubon Society's Gillmor Sanctuary on the South Shore of Great Salt Lake
Photo: Evan Barrientos/Audubon

Hydrologic Inflows Analysis

Hydrologic connectivity is not peripheral to waterbird conservation at Great Salt Lake—it is central to it.



Goggin Drain to Great Salt Lake
Photo: Sydney Walsh, Audubon

HYDROLOGIC INFLOWS ANALYSIS

Wetland Connectivity Patterns

The wetland inflows analysis (Figure 7) shows the spatial distribution of stream reaches with connected wetlands and quantifies the total wetland acreage accessible to each reach.

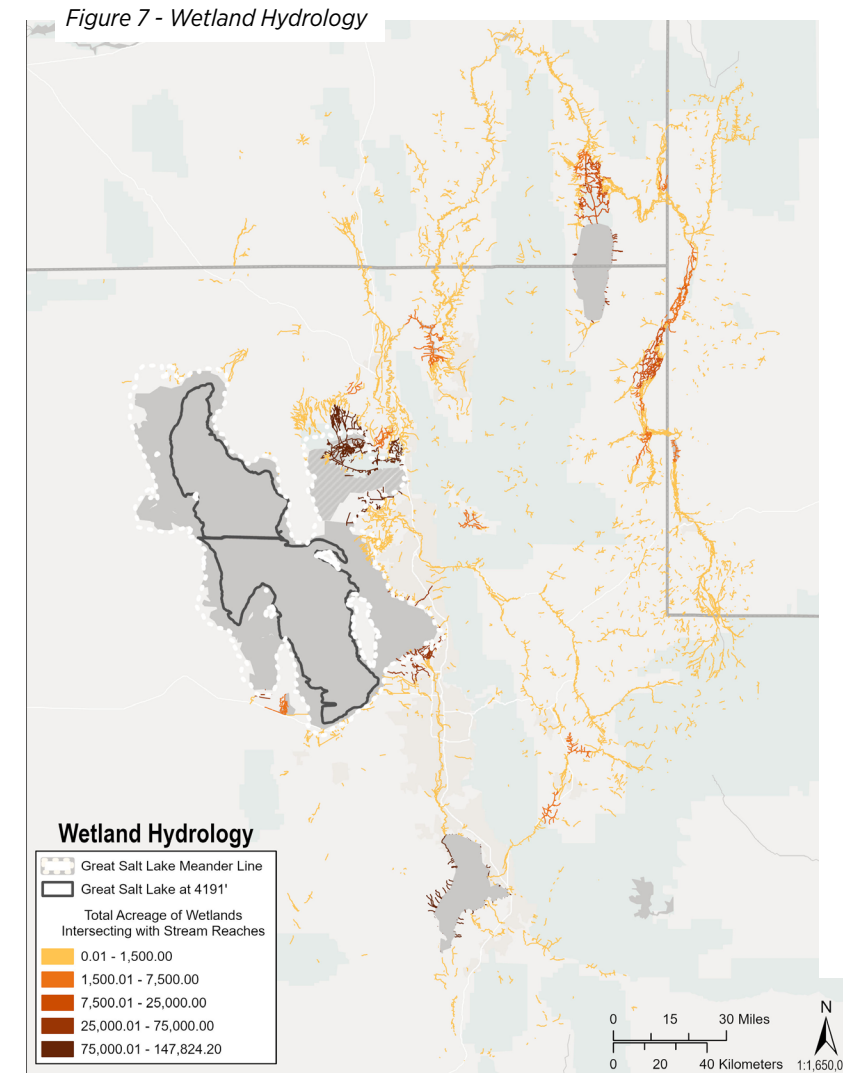
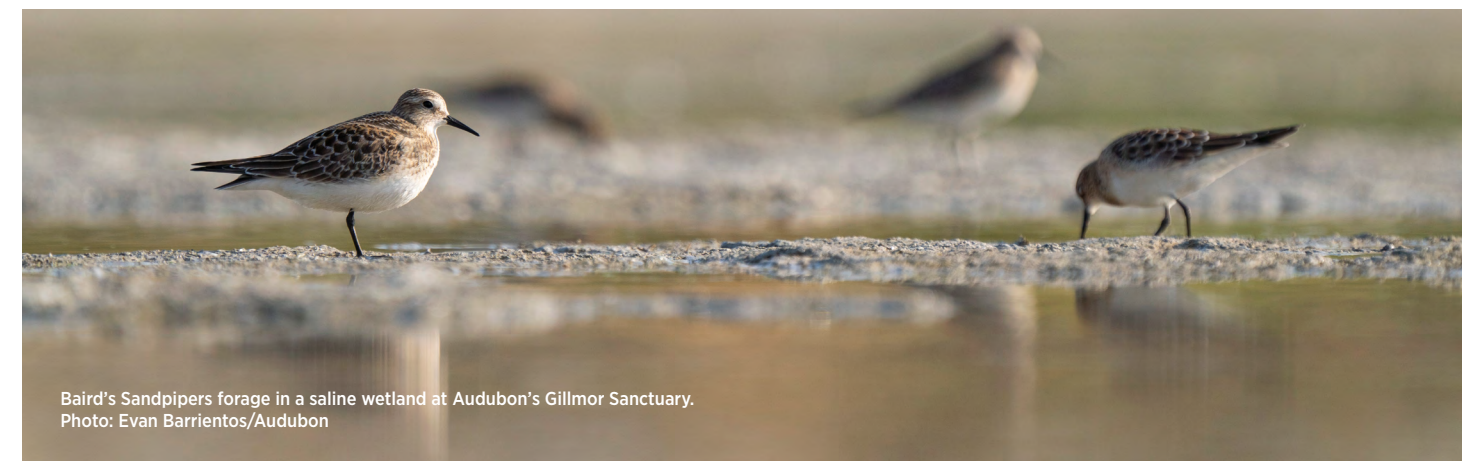


Figure 7 modeled results not field verified.

- **High concentrations of connected wetlands occur along major tributary systems** including the Bear River, Weber River, and Jordan River. These river corridors support extensive riparian and floodplain wetlands that maintain hydrologic connectivity to the stream flow network.
- Many hydrologically connected wetlands are actively managed for waterfowl and other waterbirds and may have dedicated water rights associated with their management and practices, which are **strategically aimed at facilitating water delivery to important habitats.**
- **Many highly productive foraging areas are located where freshwater and saline water mix**, creating estuary-like transition zones that are distinctive to the Great Salt Lake Basin.
- Beyond the berms and dikes of managed areas, vast complexes of sheetflow wetlands—which are areas of shallow, overland waterflow—are fed by water flowing out onto the lakebed. These wetlands gradually shift from freshwater emergent vegetation to salt-tolerant vegetation as surface water disperses and mixes with salt water. These wetlands support foraging and nesting resources for many species of wading birds, waterfowl and shorebirds. Eventually the sediment and water become too saline for vascular plants to tolerate, but **the shallowly flooded mudflats, connected to other wetlands areas, are vitally important habitat providing highly productive food resources for many species of shorebirds and other waterbirds.**

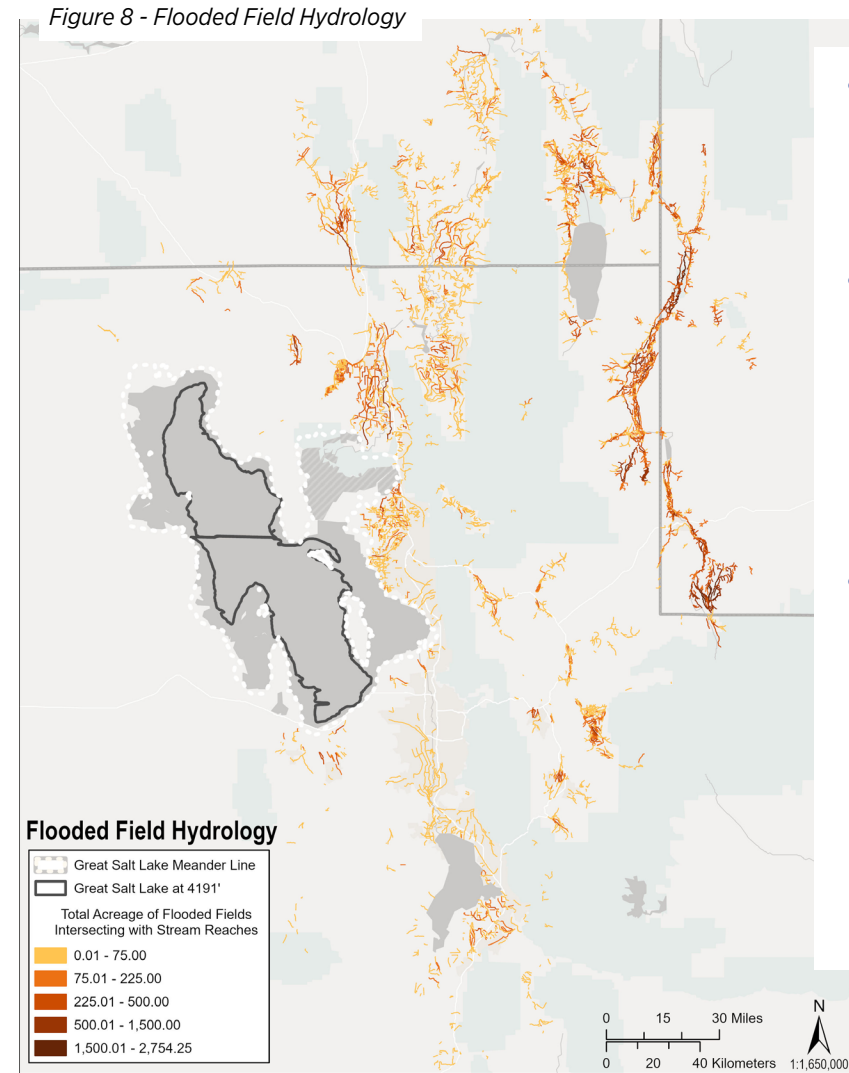


Baird's Sandpipers forage in a saline wetland at Audubon's Gillmor Sanctuary.
Photo: Evan Barrientos/Audubon

HYDROLOGIC INFLOWS ANALYSIS

Agricultural Return Flow Connectivity

The flooded agricultural field analysis (Figure 8) reveals widespread connectivity between flood-irrigated agriculture and the stream network.



- **Flooded agricultural fields are extensively connected to streams throughout the lower elevations of the watershed**, particularly in areas of intensive agriculture in the valleys surrounding Great Salt Lake.
- **The highest concentration of connected agricultural lands occurs in the same areas as high wetland connectivity**—around Great Salt Lake, Utah Lake, and along major river corridors. This overlap indicates that these are key zones where both natural wetlands and agricultural water use contribute to potential inflows.
- **Many flood-irrigated fields provide incidental wetland habitat for birds during irrigation season, effectively functioning as seasonal wetlands within the agricultural landscape.** The connectivity of these fields to the stream network also suggests that management of agricultural water may have direct implications for downstream wetland habitats and lake inflows. And the present threat of conversion of these agricultural fields to residential development fractures this connectivity.

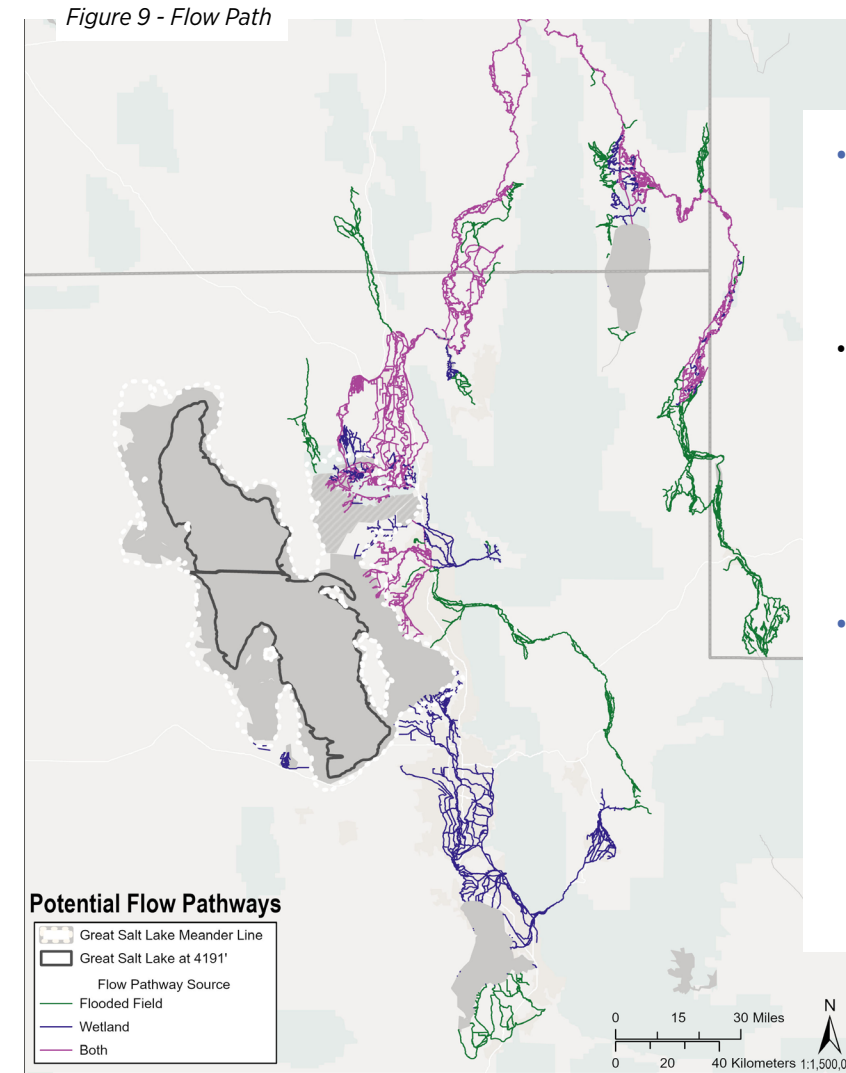
Figure 8 modeled results not field verified.



HYDROLOGIC INFLOWS ANALYSIS

Downstream Flow Network

The downstream flow analysis (Figure 9) visualizes potential flow pathways from source wetlands and agricultural fields to Great Salt Lake.



- **Multiple flow pathways converge on Great Salt Lake from different portions of the watershed**, representing the integrated hydrologic system that sustains the lake and its wetlands.
- High spatial clustering of flooded fields and wetlands results in overlap of flow paths, particularly in key tributary valleys. These convergence zones represent key hydrologic functions where **water management decisions can have a disproportionate impact on downstream habitats.**
- **The network analysis demonstrates the functional connectivity between upland water sources, mid-elevation wetland and agricultural lands, and terminal lake habitats.** This system's perspective is essential for understanding how water management and water conservation efforts, land use changes, or restoration projects in one location may affect habitats and bird populations elsewhere in the watershed.

Figure 9 modeled results not field verified.



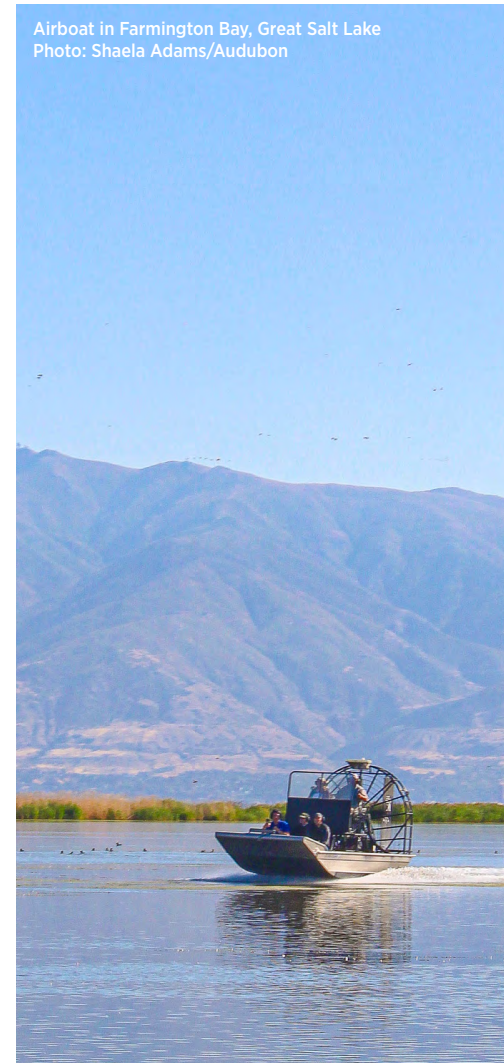
Conservation Implications

The interconnectedness of this ecosystem requires a systemic perspective on conservation and planning decisions.

At this moment in the Great Salt Lake Basin’s ecological trajectory, no change occurs in isolation. Bird and habitat conservation at Great Salt Lake must consider the dynamic nature of climate change and land conversion pressure in a forward-looking and coordinated approach with multiple partnerships. Every area of quality habitat today warrants attention and protection, and as habitat conditions are predicted to shift in the future, many opportunities to improve the health of the lake and its wetlands have been identified and described in this Assessment. More

conservation resources and efforts—strategically aligned—are needed to address the challenges facing Great Salt Lake, its habitats, and surrounding communities to have the greatest beneficial and durable impact.

When the avian prioritization and hydrologic connectivity analyses are considered together, as in Figure 10, several strategic conservation opportunities emerge. These key findings can inform and help prioritize conservation actions and investments in the Great Salt Lake watershed, including:



Protect & Enhance Open Water & Core Wetland Complexes

- Securing inflows and continuing water deliveries to major wetland complexes and Great Salt Lake bays
- Enhancing habitat through water management, vegetation management, and water delivery and infrastructure improvements
- Strategically timing water delivery to wetlands identified as Ongoing Priority areas
- Incentivizing the improvement and preservation of wetland habitats
- Strengthening management resources at key sites

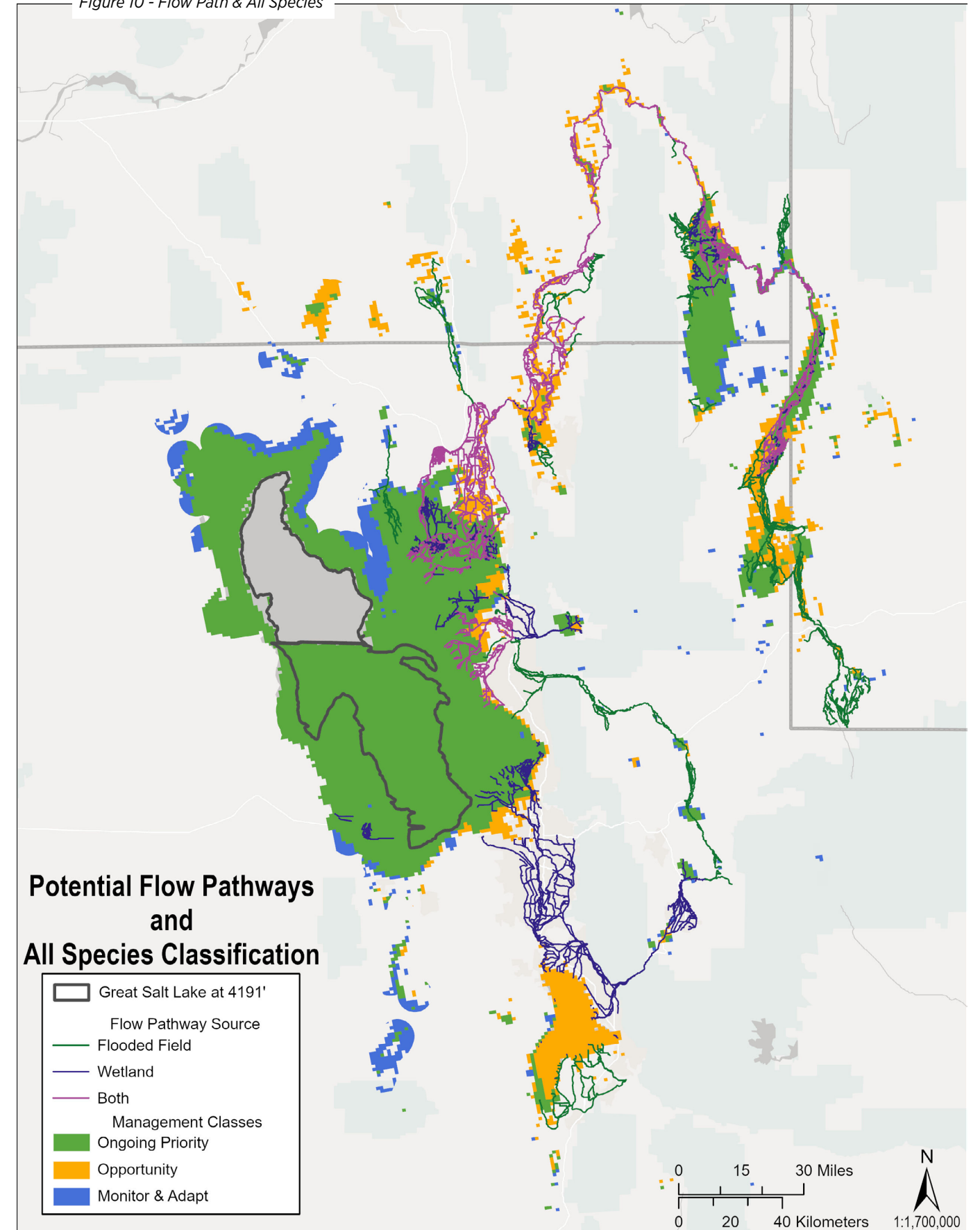
Invest in Future Priority Areas

- Restoring degraded wetlands predicted to maintain climate suitability, including vegetation management
- Incentivizing voluntary land preservation and conservation easements on working lands that provide current and future habitat values
- Identifying opportunities to strategically protect undeveloped areas projected to become suitable
- Enhancing hydrologic connectivity and improved water conveyance infrastructure to ensure water delivery to restoration sites

Integrate & Enhance Wetland & Water Connectivity

- Incentivizing land conservation to connect existing wetland complexes and protect riparian zones and wetlands near urban areas to improve water quality and habitat function
- Developing opportunities for agricultural conservation easements that maintain working landscapes while preserving connectivity
- Removing barriers to hydrologic and ecological connectivity

Figure 10 - Flow Path & All Species



Strategic Applications

Multiple avenues exist for integrating the Assessment's findings into ongoing conservation efforts by Audubon and partner organizations.

Strategic Applications of the Assessment:

- Landscape-scale Conservation Planning
- Land Use Planning & Decisions
- Proactive Conservation in the Face of Climate Change

The value of this Assessment lies in its use as a tool to aid land use and other planning decisions and projects. Examples of key applications include:

State & Federal Alignment & Public Funding Guidance

The Assessment supports state and federal efforts to manage, restore and sustain Great Salt Lake, including through planning, prioritizing, and funding conservation efforts and management of the watershed's wildlife areas, state parks, and the Bear River Migratory Bird Refuge. The Assessment can also support the implementation of Utah's State Wildlife Action Plan by identifying and informing sites for habitat protection or restoration projects and supporting the development of habitat management plans and restoration on state lands. Furthermore, multiple state and federal agencies administering wetland or habitat protection and enhancement grants, research, and conservation grants can use the Assessment as an additional tool that can be used to support criteria for grant eligibility and assist review panels in assessing which projects are likely to provide the greatest ecological benefits.

Snowy Plover on the South Shore of Great Salt Lake
Photo: Shaela Adams/Audubon



Water Resource Planning & Decision-making

Agencies and organizations working on water conservation in the Great Salt Lake basin can use the Assessment's findings to prioritize their efforts and evaluate opportunities for collaboration. For example, the Great Salt Lake Commissioner's Office and Great Salt Lake Watershed Enhancement Trust can use the Assessment to strategically target water deliveries for maximum habitat benefit, while the Utah Geological Survey wetlands program can apply it to prioritize wetland restoration sites and guide invasive species mapping and removal efforts. Utah State University's Functional Flows research examining the environmental flows required by rivers and wetlands to maintain ecological health can be informed by the Assessment's identification of important habitats.

Audubon's Gillmor Sanctuary
Photo: Sydney Walsh/Audubon



Conclusion

Great Salt Lake sits at the intersection of multiple converging defining moments: a decades-long decline in lake levels, accelerating urbanization pressure across the Wasatch Front, increasingly variable precipitation driven by a changing climate, and increasing competition for a finite water supply. Against this

backdrop, the millions of birds that depend on the Great Salt Lake ecosystem annually have little margin for further habitat loss. This science-based Assessment was developed to prioritize responses to that urgency by identifying where conservation actions will have the greatest impact.

Great Salt Lake Watershed is Defined by its Heterogeneity of Habitat Types

Great Salt Lake watershed thrives on a variety of habitat and wetland types ranging from permanently inundated, managed impoundments to ephemeral playa habitats that may only hold water briefly. Conservation strategies must account for the need for diverse habitat types and their vulnerability to system-wide threats.

The Interconnectedness of this Ecosystem Requires a Systemic Perspective

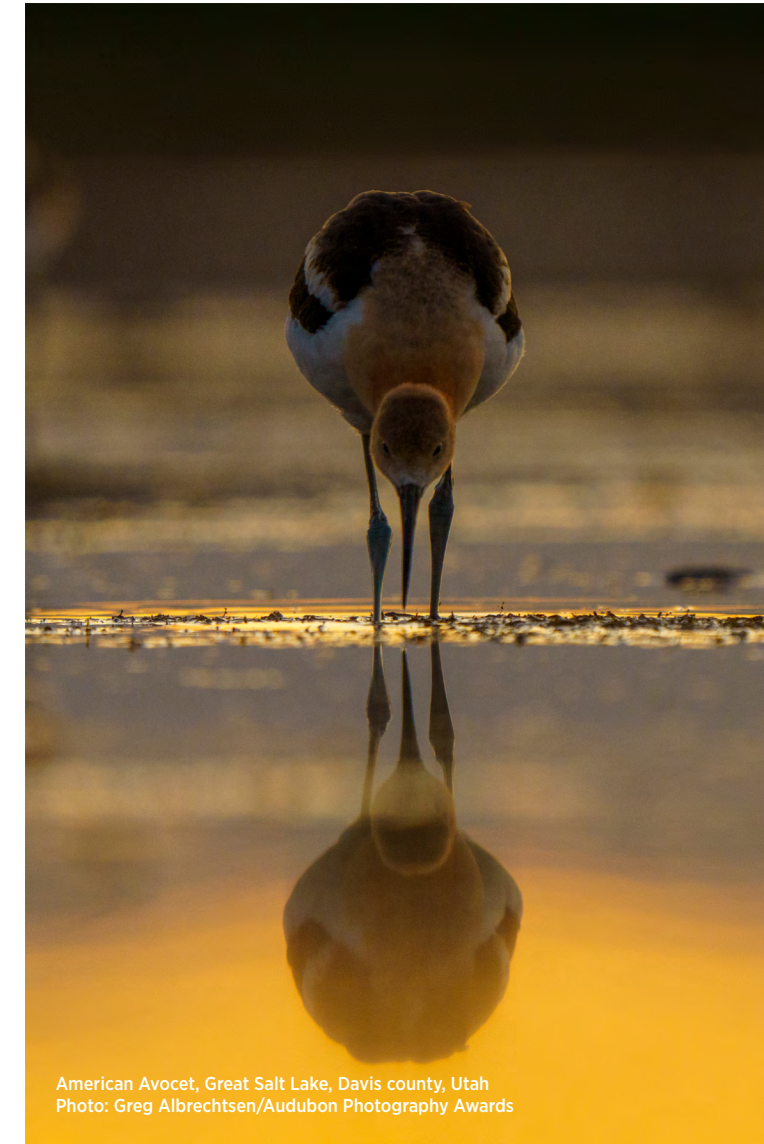
The interconnectedness of the Great Salt Lake ecosystem requires a systemic perspective on conservation and planning decisions. The goal is simple: improve habitat where possible and prevent further degradation where it can still be avoided.

Hydrologic Connectivity is Central to Bird Conservation at Great Salt Lake

Landscape level conservation and planning decisions can result in the most effective preservation of Great Salt Lake. Protecting and restoring wetland water sources and water delivery pathways that sustain this system is as important as protecting the wetland and lake footprints themselves.

Opportunities to Build on this Assessment

Further refinement of this habitat prioritization framework—through ongoing bird surveys, expanded hydrologic monitoring, and collaboration with partner institutions across the region—will strengthen its utility and extend its reach.



American Avocet, Great Salt Lake, Davis county, Utah
Photo: Greg Albrechtsen/Audubon Photography Awards

For Assessment sources and further information about the spatial prioritization methods, model inputs, data sources, expanded discussion on application, and Audubon's approach, visit www.audubon.org/gsl-assessment to read the full Great Salt Lake Birds and Habitat Assessment. Partners looking to access the interactive web tool please contact: salinelakes@audubon.org.