Ordinance 2023-51

SHORT TITLE:

AN ORDINANCE AMENDING THE GENERAL PLAN TO ADOPT THE PROVO RIVER AND LAKESHORE PLAN. CITYWIDE APPLICATION. (PLGPA20230273)

I
PASSAGE BY MUNICIPAL COUNCIL

ROLL CALL

DISTRICT	NAME	FOR	AGAINST	OTHER
CW 1	KATRICE MACKAY	✓		
CW 2	DAVID SHIPLEY	✓		
CD 1	BILL FILLMORE	✓		
CD 2	GEORGE HANDLEY	✓		
CD 3	SHANNON ELLSWORTH	✓		
CD 4	TRAVIS HOBAN			Excused
CD 5	RACHEL WHIPPLE	✓		
	TOTALS	**6**	**0**	

This ordinance was passed by the Municipal Council of Provo City, on the 12th day of December 2023, on a roll call vote as described above. Signed this 2nd day of January 2024.

Chair

II
APPROVAL BY MAYOR

This ordinance is approved by me this 3rd day of January 2024.

Mayor

Ordinance 2023-51

III

CITY RECORDER'S CERTIFICATE AND ATTEST

This ordinance was signed and recorded in the office of the Provo City Recorder on the 4th day of January 2024 and was published on the Utah Public Notice Website on the 14th day of December 2023. I hereby certify and attest that the foregoing constitutes a true and accurate record of proceedings with respect to Ordinance Number 2023-51.

SEAL

Heidi Allman

City Recorder

ORDINANCE 2023-51.

AN ORDINANCE AMENDING THE GENERAL PLAN TO ADOPT THE PROVO RIVER AND LAKESHORE PLAN. CITYWIDE APPLICATION. (PLGPA20230273)

WHEREAS, it is proposed that the Provo City General Plan be amended to adopt the River and Lakeshore Plan; and

WHEREAS, on August 3, 2021 the Municipal Council approved a resolution appropriating funds for the creation of a Hillsides and Canyons Plan, a River and Lakeshore Plan, and a Gateways Plan as part of the review of the General Plan; and

WHEREAS, on November 8, 2023 the Planning Commission held a duly noticed public hearing to consider the proposed amendment, and after such meeting, the Planning Commission recommended approval to the Municipal Council by a vote of 6:0; and

WHEREAS, on December 12, 2023, the Municipal Council met to ascertain the facts regarding this matter and receive public comment, which facts and comments are found in the public record of the Council's consideration; and

WHEREAS, after considering the Planning Commission's recommendation and facts and comments presented to the Municipal Council, the Council finds (i) the Provo City General Plan should be amended as described herein and (ii) the proposed amendment reasonably furthers the health, safety, and general welfare of the citizens of Provo City.

NOW, THEREFORE, be it ordained by the Municipal Council of Provo City, Utah, as follows:

PART I:

The Provo City General Plan is hereby amended by adding the Provo River and Lakeshore Plan as Appendix AC, set forth in Exhibit A.

PART II:

A. If a provision of this ordinance conflicts with a provision of a previously adopted ordinance, this ordinance shall prevail.

B. This ordinance and its various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid, the remainder of the ordinance shall not be affected thereby.

C. The Municipal Council hereby directs that the official copy of the Provo City Code be updated to reflect the provisions enacted by this ordinance.

D. This ordinance shall take effect immediately after it has been posted or published in accordance with Utah Code 10-3-711, presented to the Mayor in accordance with Utah Code 10-3b-204, and recorded in accordance with Utah Code 10-3-713.

END OF ORDINANCE.

provo

RIVER AND LAKESHORE PLAN

FINAL PLAN

Adopted December 12, 2023

ACKNOWLEDGEMENTS

Mayor

Michelle Kaufusi

Deputy Mayor

Isaac Paxman

Chief Administrative Officer

Wayne Parker

City Council

Katrice MacKay (Chair)
Rachel Whipple (Vice Chair)
Shannon Ellsworth
Bill Fillmore
George Handley
Travis Hoban
David Shipley

Development Services

Director

Bill Peperone

Planning Supervisor

Brandon Larsen

Staff

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Jessica Dahneke

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Design Workshop
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David Day
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Koby Hubbs
Chris Blinzinger
Scott Henderson
Doug Robbins
John Bunderson

Photo Credit: Mark Greenwood
Lake and Kayak

Prepared by
DESIGNWORKSHOP

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INTRODUCTION

PROVO RIVER AND LAKESHORE PLAN

Provo residents and visitors enjoy beautiful views and abundant recreational opportunities along the Provo River and the shoreline of Utah Lake. These areas are home to wildlife and diverse ecological systems that are also important for recreational tourism and the City's future economic development.

This River and Lakeshore Plan aims to balance the demand for growth, enhance recreational use and mitigate its potential impacts, and conserve environmentally sensitive areas. By doing so, residents and visitors can enjoy Provo's stunning natural resources in the future.

Alignment with the Hillsides and Canyons Plan

Following the completion of the Provo City General Plan and Conservation and Resiliency Plan, Provo City desires to build on these foundations by developing a Hillsides and Canyons Plan and a River and Lakeshore Plan. These two plans focus on areas of the city with distinct attributes and include specific goals, actions, and policies.

The plans were developed in tandem to acknowledge and enhance the environmental and recreational connections between the two areas. An integrated approach to their creation and implementation offers efficiency in planning efforts and synergies in execution.

INTRODUCTION

Project Area

The River and Lakeshore project area is defined as shown in Figure 1.

The project area follows each side of the Provo River, starting from the northern part of the city at Provo Canyon, connecting down to Utah Lake and Provo Bay. The project area's southern edge generally runs along Lakeview Parkway, including the Provo Airport property. The northern edge closely follows the Provo boundary along the Provo River.

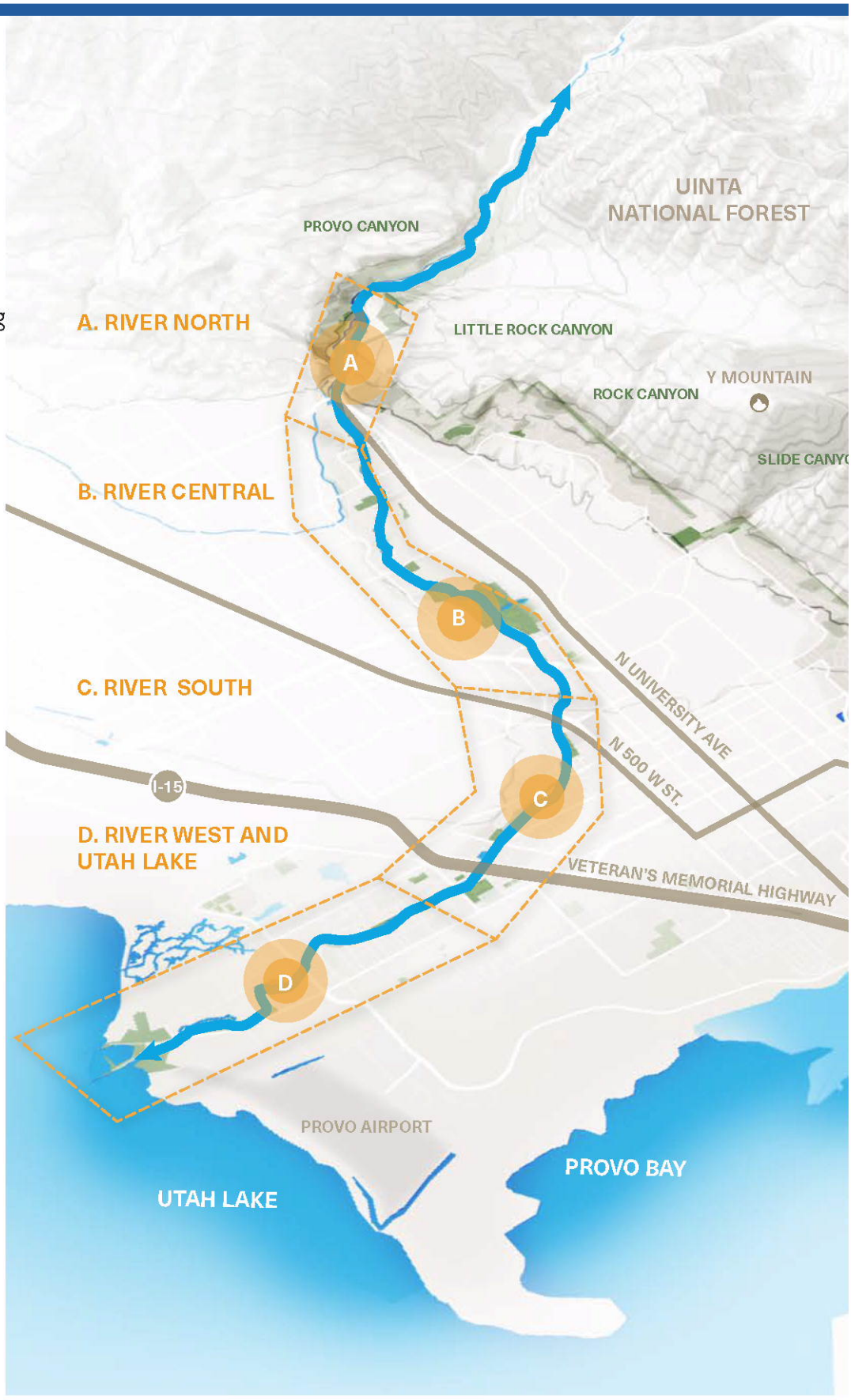


Figure 1: River and Lakeshore Context Map

Benefits of the Provo River and Utah Lake

According to a random sample survey of over 1,000 residents, the Provo River Trail is the most widely used in the city. Utah Lake is the community asset seen as most in need of improvement. Overall, residents would like to see improvements to the natural habitat and ecology of the river and lakeshore.

Natural Habitats

The river and lakeshore are peaceful and serene environments that enhance the quality of life for residents as well as provide a focal point that enhances the local landscape. The water and adjacent land areas provides a habitat for many species of plants and animals, supporting a healthy and diverse ecosystem.

Recreation, Tourism, and Outdoor Activities

The river and lakeshore provide opportunities for activities such as running, walking and biking as well as swimming, boating, fishing. These activities can promote physical and mental health in the community. In addition, tourists can experience the natural beauty and recreational opportunities of the Wasatch Front, such as Provo Canyon and Bridal Veil Falls. Tourism can support local businesses and stimulate economic growth in the community. The Provo River Trail serves as an important active recreation corridor, connecting the hillsides to the lakeshore.

Local Sustainability

The river and lakeshore support the needs of local agriculture and drinking water and aid in the control of flooding by acting as natural sponges through the absorption of excess water during periods of heavy rainfall. These larger bodies of water also moderate temperatures and contribute to the local water cycle and aquifer recharge.

GUIDING PRINCIPLES

To achieve the community's vision, these three overarching themes will guide the recommendations and strategies described in Chapter 3.

Natural Environment

Social Environment

Built Environment

Figure 2: Plan Themes

Source: City of Provo Provo River Trail"

The River and Lakeshore Plan focuses on key findings surrounding the natural environment, the built environment, and the social environment (Figure 2).

These themes emerged from analysis and research informed by feedback from City staff, stakeholders, and technical working group feedback addressing the following:

- Long-term water quality and water management
- Safety
- Improved recreational assets
- Embracing economic opportunities
- Coordinating partnerships for implementation

VISION

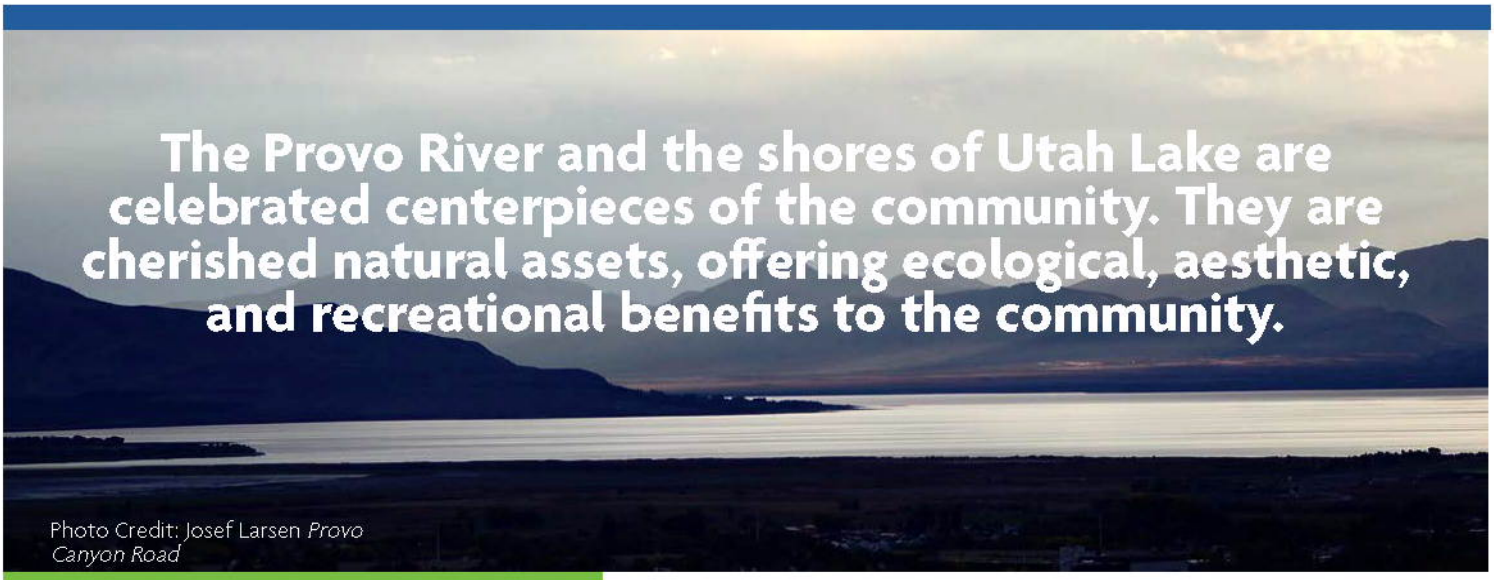


Photo Credit: Josef Larsen *Provo Canyon Road*

Provo River is used more frequently and visited by a higher proportion of Provo residents than Utah Lake.

40%

of survey respondents visit Provo River at least a few times a month.

17%

of survey respondents visit Utah Lake at least a few times a month.

Source: Community Survey

Substantial work has already been done in the Provo River and the shores of Utah Lake by the city, community partners, and residents. This plan acknowledges that work while looking forward to the future.

Vision

A vision is an aspirational statement for the use, perception, or impact of the subject in the future.

The Provo River is:

- A place where residents and visitors can connect with nature, enjoy recreational activities and appreciate the river's surrounding beauty.
- A place with a thriving river ecosystem that supports diverse native species and provides clean water for community use.

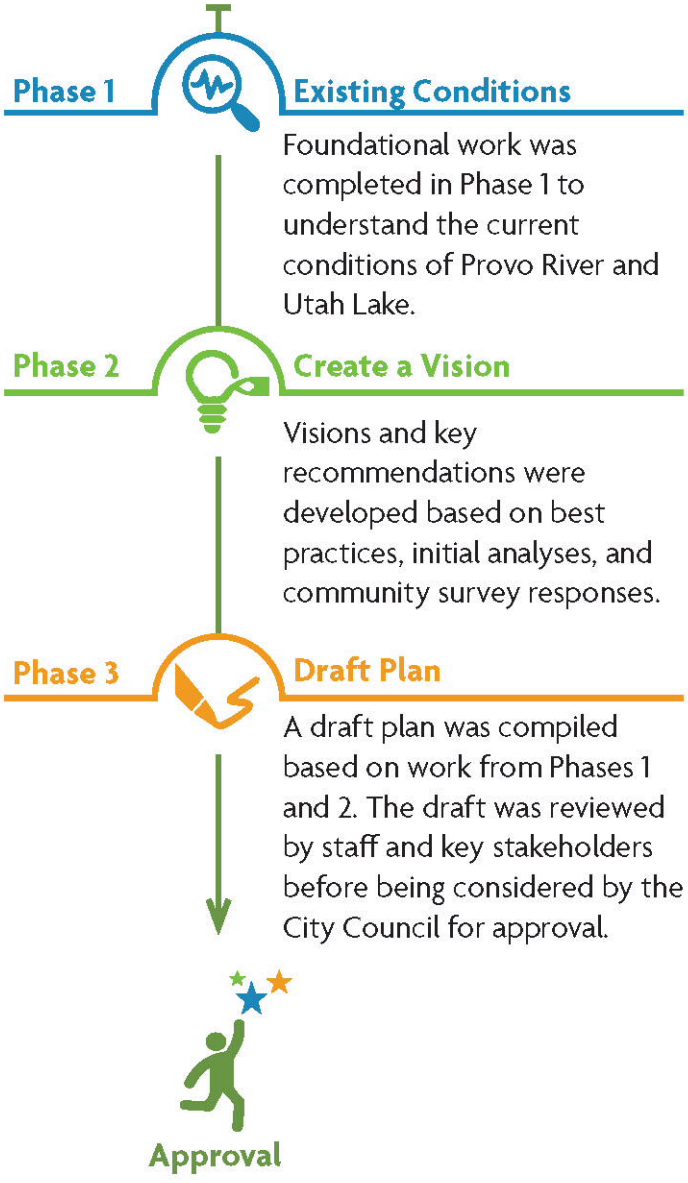
The Utah Lakeshore is:

- A place that is a lush and diverse ecosystem that supports the lake's native species.
- A place cared for by a community that values its resources and strives to promote sustainability for future generations.

PLAN PROCESS

Plan Process

The River and Lakeshore plan process took place within three phases to establish a clear vision for the City (Figure 3). The plan highlights the geographic features that make the city special and sets the stage to preserve those qualities for the future.



(Source: Design Workshop)

Figure 3: Plan Process

Community Engagement

A community-oriented process was necessary to understand the diverse needs of stakeholders and partners and to create a plan that aligns with community values. Community engagement informed the residents of both project areas (River and Lakeshore, as well as Hillsides and Canyons) while maximizing planning efforts. Public participation relied heavily on focus groups, a statistically valid representative survey, and a technical working group.

- **Technical Working Group (TWG):** The Technical Working Group provided input and feedback throughout the plan process. They represented the interests of and communicated with the stakeholders they represented to align the overall community's support. The TWG included representatives from stakeholders such as local and state agencies, recreation enthusiasts, business owners, academic experts, and area residents. The TWG participated in four meetings, during which they provided information and data to the project team, reviewed draft documents and other materials, and spread the word with local partners and the broad community about the effort. See the Acknowledgements at the beginning of this document for a full list of participants.
- **Focus Groups:** Focus groups provided input in the initial phase of the planning process with individuals representing different organizations, interests, and groups in Provo. Four one-hour focus group meetings were hosted with discussions highlighting various perspectives, experiences, and elements to consider. These discussions noted sustainability, safety, preservation, restoration, and maintenance as key elements to consider.
- **Community Survey:** On behalf of Provo City, Y2 Analytics conducted a statistically valid, random sample survey between January 28 and February 12, 2023. Overall, 1,031 residents participated. The survey included topics relating to the Hillsides and Canyons Plan and the River and Lakeshore

Plan. This data was then weighted to reflect the population statistics from the U.S. Census to ensure the findings represent the city regarding sex, age, home ownership, race, and City Council district, with a margin of error of +/-3.0 percentage points. These findings have been integral to shaping the recommendations in this plan. The Community Survey Summary can be found in Appendix B.

- **Relationship to Other Plans.** This plan builds upon previous work to date, emphasizing the importance of balancing the demand for growth, impacts from recreational use, and preservation of natural assets for portions of the Provo River and Utah Lake within Provo City. A summary of the plans reviewed can be found in Appendix C.

Existing Conditions

An analysis of existing conditions was completed to establish a baseline of understanding and identify opportunities for the plan based on key considerations identified from the Technical Working Group and focus group conversations. The analysis addressed four elements within the project area:

- **Land Ownership**
- **Recreation Assets and Connectivity**
- **River and Lake Hydrology**
- **River and Lake Ecology**

Qualitative data from the online survey and quantitative data from the inventory and analysis of existing conditions outlined the framework for the River and Lakeshore Plan. The full existing conditions report can be found in Appendix A.

Plans Reviewed

1. **Utah County General Plan (2020):** Serves as the basis for policies and planning efforts to preserve and protect natural resources and open space within the planning area.
2. **Utah State Water Resources Plan (2021):** Works as a roadmap for quantitative water goals and metrics.
3. **Utah Lake State Park Resource Management Plan (2000):** Identifies recommendations that could align with the River and Lakeshore planning process to make strides toward the vision for the park.
4. **Vineyard Waterfront Plan (2022):** Provides a precedent for the River and Lakeshore Plan, offering insight into what projects a neighboring community was doing and how it was supported.
5. **Provo River Delta Plan (2020):** Identifies joint conservation efforts directly relating to restoring the June Sucker fish habitat.
6. **Provo River Corridor Master Plan (Draft):** Offers numerous recommendations that directly impact the River and Lakeshore Plan, including standards for wayfinding signage, open space, urban design, and safety.

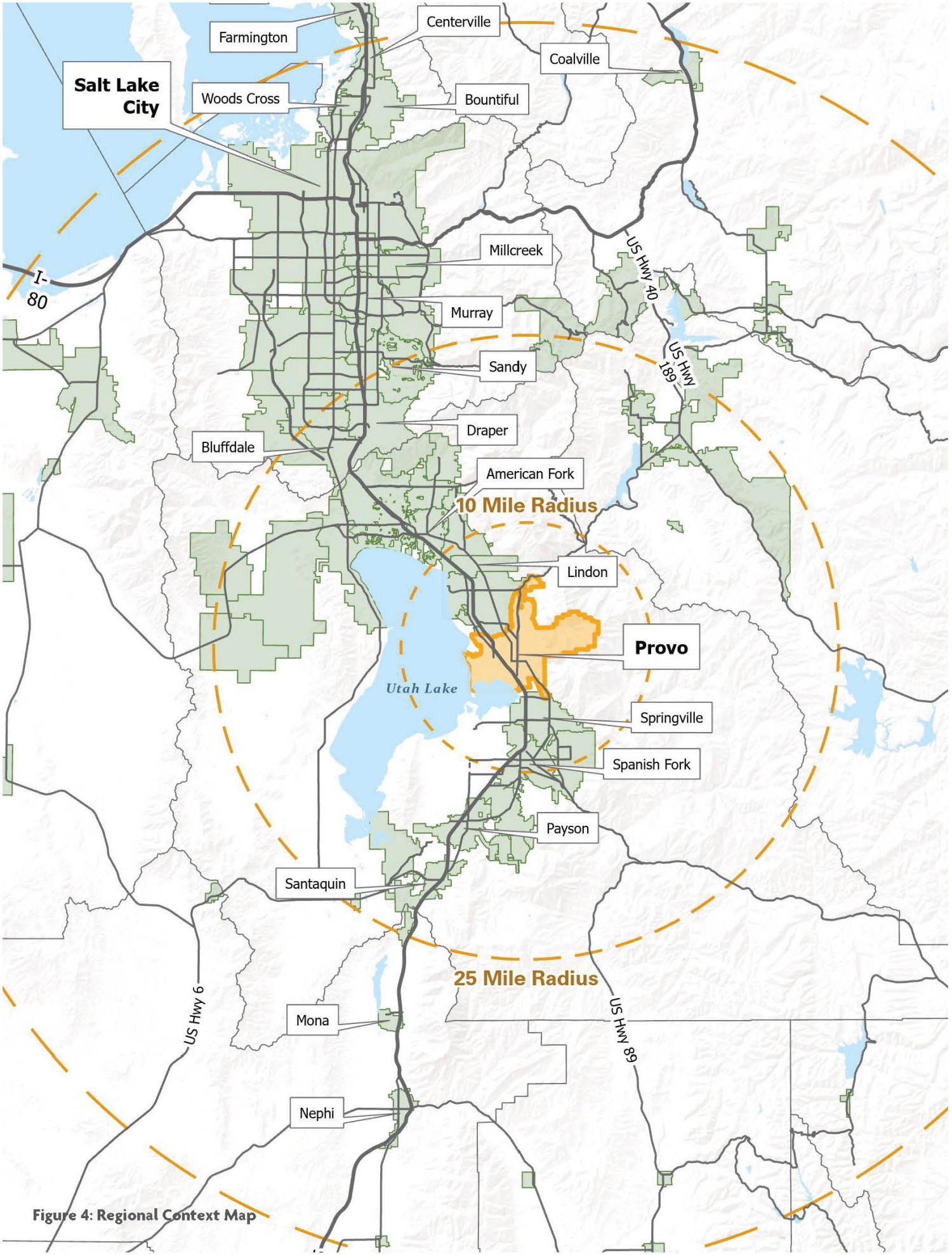


Figure 4: Regional Context Map

2

EXISTING CONDITIONS SUMMARY

Introduction

Provo sits at the center of Utah County and is approximately 45 miles south of Salt Lake City (Figure 4). It is the fourth largest city in the state by population and serves as an educational, business, and recreational center for the region.

To the west of Provo is the east shore of Utah Lake, a key component of the city's aquatic wildlife and habitats, as well as recreational opportunities. The Provo River runs east-west through the city and provides important ecological habitats and recreational opportunities.

The river and lakeshore are also an important part of Provo's history. The earliest known inhabitants of Utah Valley relied on the abundant resources in the area, including the river, lakeshore, hillsides, and canyons. The Timpanogos Ute tribe occupied the canyons and lowland areas throughout the Utah Valley and the Uinta Basin and called the Provo River "Timpanoquint" or "Rock River." Many indigenous people had settlements close to Utah Lake and fished along its shores.

EXISTING CONDITIONS

This chapter summarizes the findings of the Existing Conditions Report presented in full in Appendix A.

The analysis addresses land ownership, recreational assets, connectivity, river and lake hydrology, river and lake ecology, and key findings within the project area.

The key findings emerged from understanding how the previous plans are relevant to this plan, analyzing the existing conditions, and listening to community feedback to shape this plan's recommendations.

The plan recommendations are found in Chapter 3.

Source: City of Provo
The Rivers Nature Area

EXISTING CONDITIONS

Land Ownership

The Land Ownership Map is shown in Figure 5.

Approximately 35% of the project area is privately owned, significantly influencing connectivity and accessibility for the river corridor and lakeshore. A considerable portion of the project area is state sovereign land (approximately 42%), including Utah Lake and Provo Bay. About 1% is federally owned, and 22% is City-owned parcels.

While the Provo Airport brings unprecedented connectivity and economic opportunities, it also impacts the lakeshore with noise and occasional bird strikes.

Riverside Country Club influences the river corridor as the golf course requires the River Trail to diverge from the Provo River and follow University Avenue for several miles.

The bed of Utah Lake, including Provo Bay, is state sovereign land. Utah Lake State Park is owned and managed by the State, yet Provo plays a notable role in the coordination and maintenance of this state park.

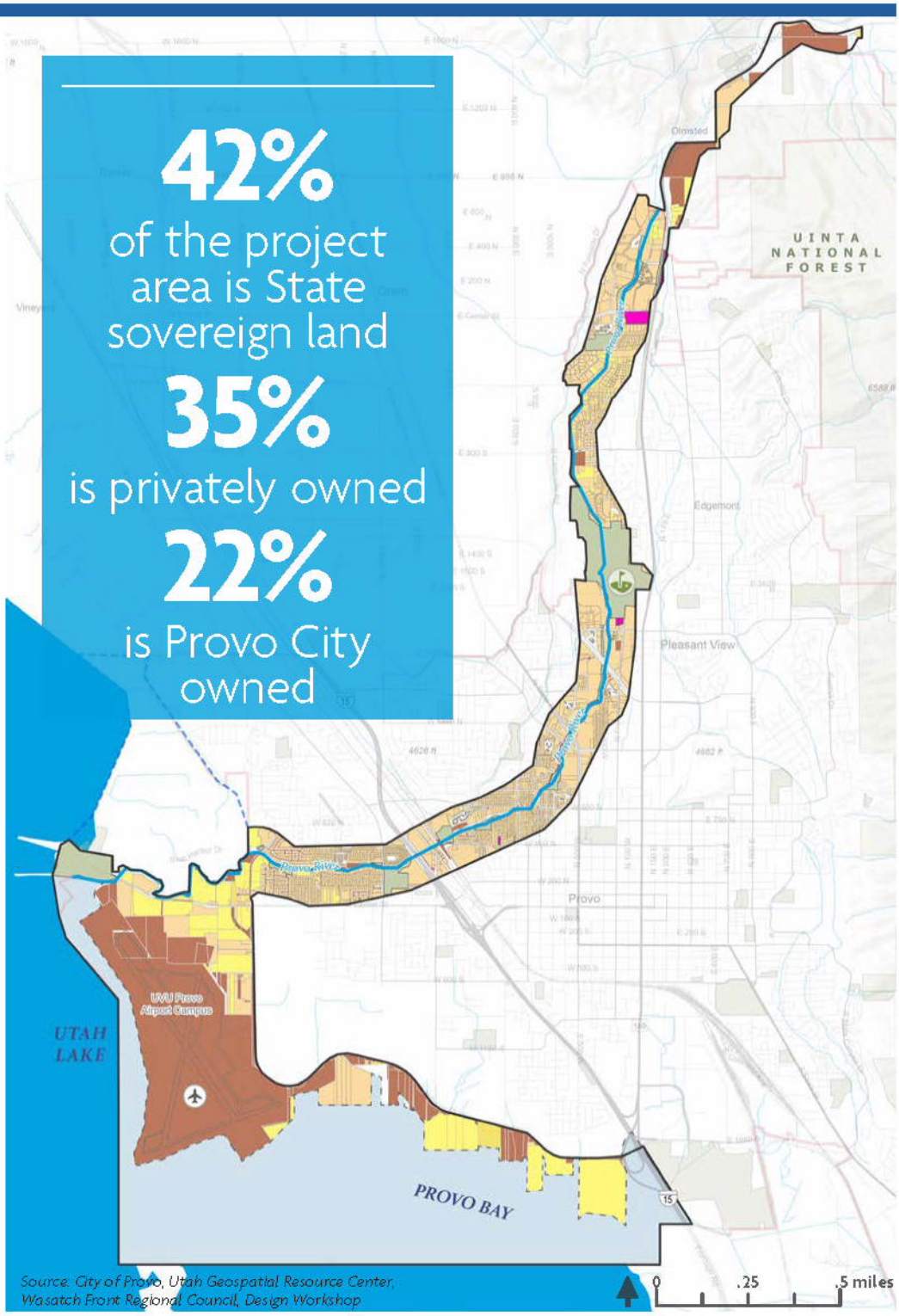


Figure 5: River and Lakeshore Land Ownership Map

Legend

- River and Lakeshore Boundary
- Future Delta Project*
- Provo City Parks
- Surface Water
- Government Parcels
- State Sovereign Land
- Private Developed Parcels
- Project Redevelopment Option
- Private Vacant Parcels

*For the most current and up to date information on the Delta River Project please visit: https://www.provoriverdelta.us/

Recreation Assets

The Recreation Assets Map is shown in Figure 6.

The River and Lakeshore Plan project area includes seven parks: four owned by the city, one owned by the county, one State Park, and one privately owned. These parks connect neighborhoods to the river corridor and lakeshore while offering additional recreational opportunities.

The Provo River runs directly through the privately owned Riverside Country Club, a 163-acre golf course, which interrupts the connectivity and public access through the river corridor.

The City has partnered with the Audubon Society, Hutchings Museum, and the Utah Lake Authority to enhance the City's property south of the Timpanogos Golf Club and to obtain approximately 106 acres of wetland property.

Utah Lake State Park provides a variety of recreational and environmental opportunities at Utah Lake, including camping, boating, fishing, and hiking. To the south of the state park, the Utah Valley University Provo Airport Campus incorporates the remaining access to the lake. A master planning effort for Utah Lake State Park is in progress, led by the Provo City Parks and Recreation Department in collaboration with the Utah State Division of

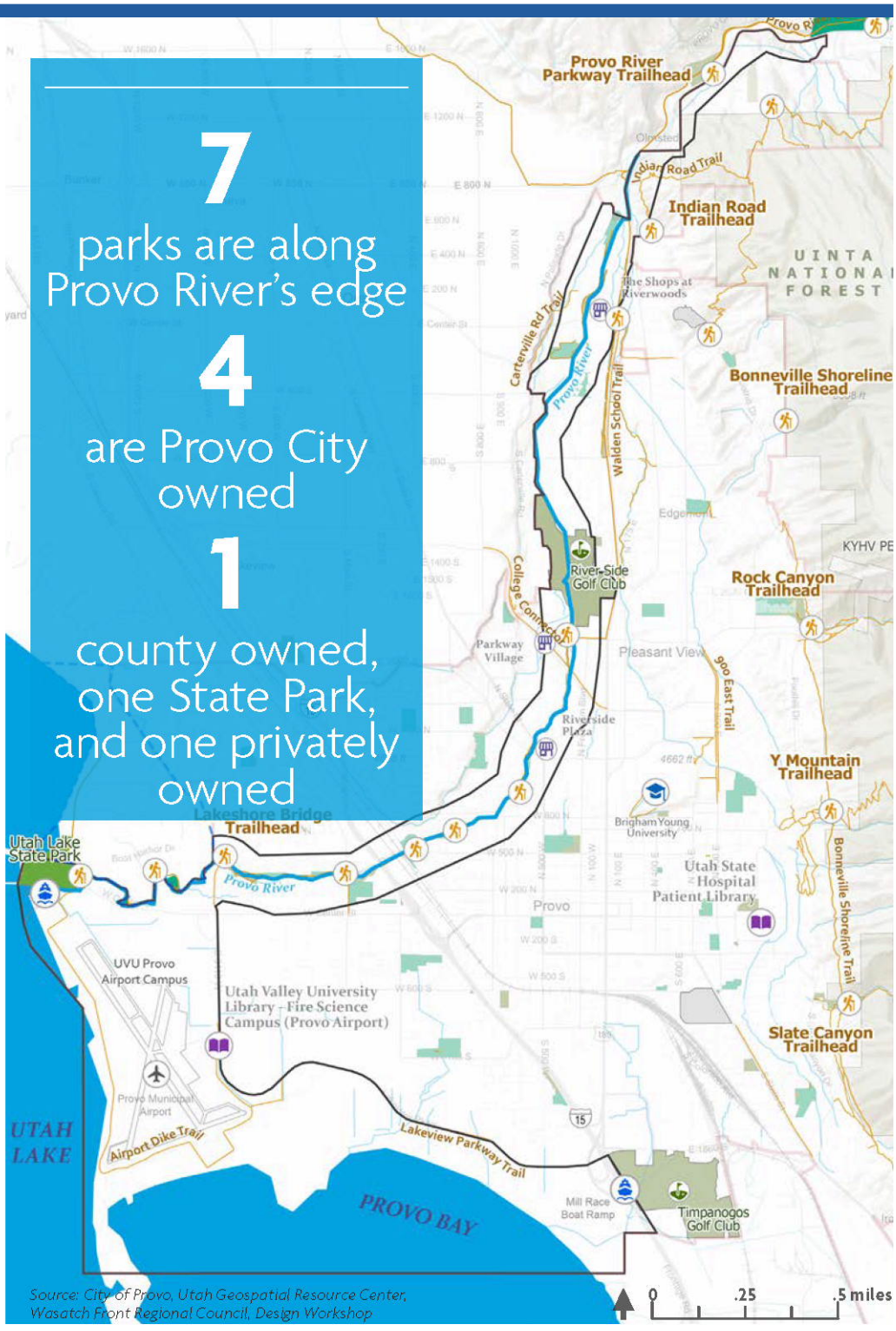


Figure 6: River and Lakeshore Recreation Assessment Map

Legend

- River and Lakeshore Boundary
- Provo City Boundary
- Future Delta Project
- Surface Water

Parks and Parklands

- Local Parks
- Provo City Parks
- County Parks
- National Forest
- Golf Courses
- Cemetery

Amenities

- Trailheads
- Existing Trails
- Boat Ramps
- Retail Centers
- Golf Courses

Connectivity

The Connectivity Map is shown in Figure 7.

Provo River Parkway Trail is a tremendous recreational asset extending 16.5 miles with over a dozen trailheads and access points.

There are 1,113 households within a five-minute walk from a trailhead, and 2,853 households are within a 10-minute walk to the river corridor. Several trails and trailheads connect through the Utah Lake State Park and along Lakeview Parkway. However, the trails along the lake are less defined and not as easily accessible as the river trails.

Note: The walkshed excludes private roads and private properties and is assessed based on the public right of way and sidewalks data. For this analysis, the walkshed looks at how many households are within the 10-minute boundary of a trailhead.

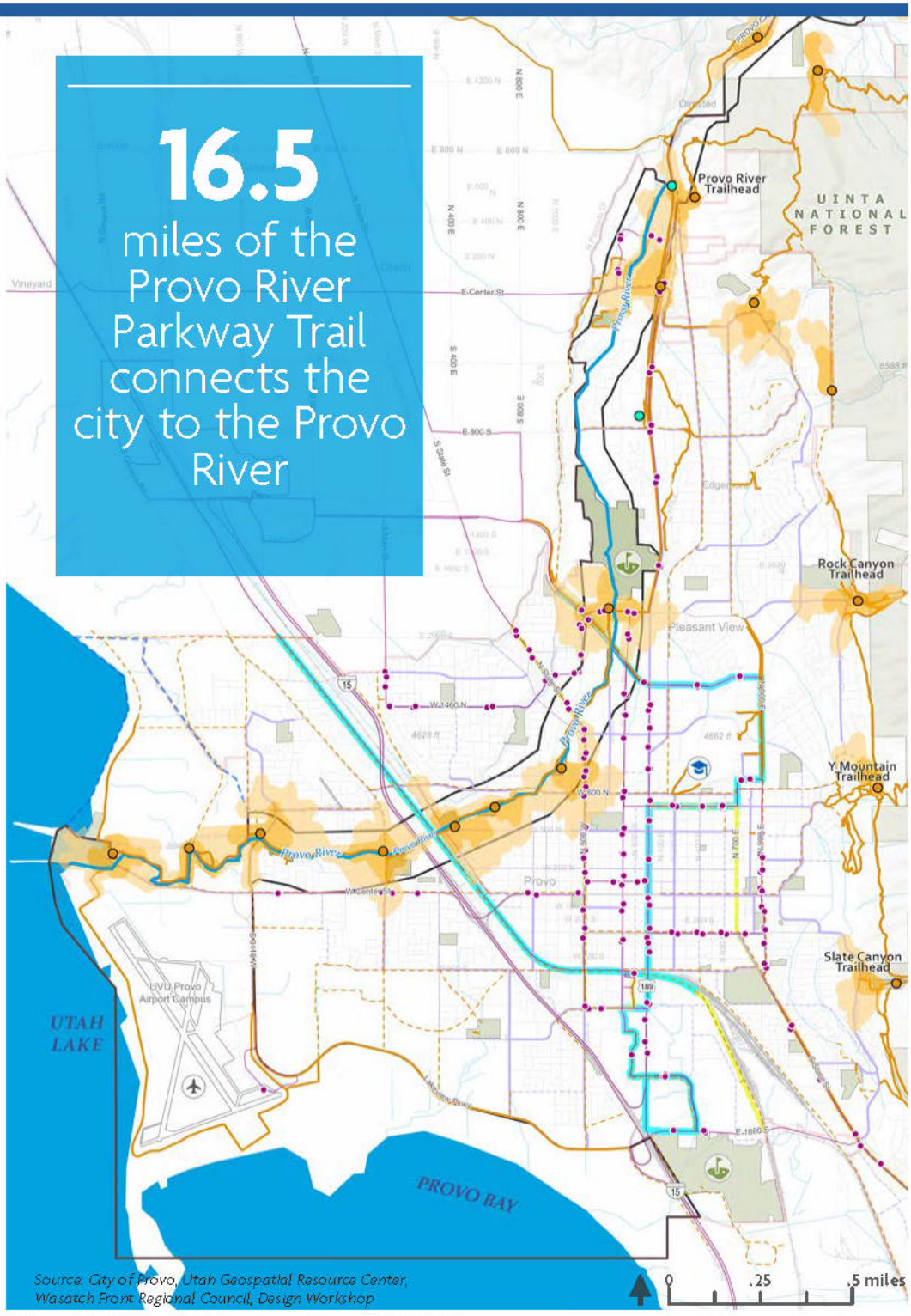


Figure 7: River and Lakeshore Connectivity Map

Legend

- River and Lakeshore Boundary
- Provo City Boundary
- Future Delta Project
- Provo City Parks
- Surface Water

Trailheads
- Proposed Trailheads
- Existing Trailheads

Trailhead Walkshed
- 1/4 mile walking distance to trailheads
- 1/2 mile walking distance to trailheads

Bike Lanes, Trails and Paths
- Proposed Trails
- Existing Trails
- Proposed Bike Lanes
- Bike Lanes and Paths

Public Transit
- Bus Transit Stations
- UTA Routes Most

SB34 Major Transit Investment Corridors
- Planned Near Term
- Existing

River and Lake Hydrology

The Hydrology Map is shown in Figure 8.

Water quality is a critical driver for the River and Lakeshore Plan. The Provo River provides more than just recreation opportunities as it is one of the city's primary source of drinking water.

Stormwater runoff poses a significant concern for the river, as well water within Utah Lake. While the water in the lake doesn't serve as a primary drinking water source, it does play a vital role in agricultural and irrigation activities.

The most significant threat to Utah Lake is high levels of phosphorus, invasive species, and increased lake temperature, causing harmful algal blooms.

Recreational activities and fishing opportunities depend on the lake's water quality. Unfortunately, due to the occurrence of algal blooms and the resulting cyanotoxins, health advisories at the lake are frequent.

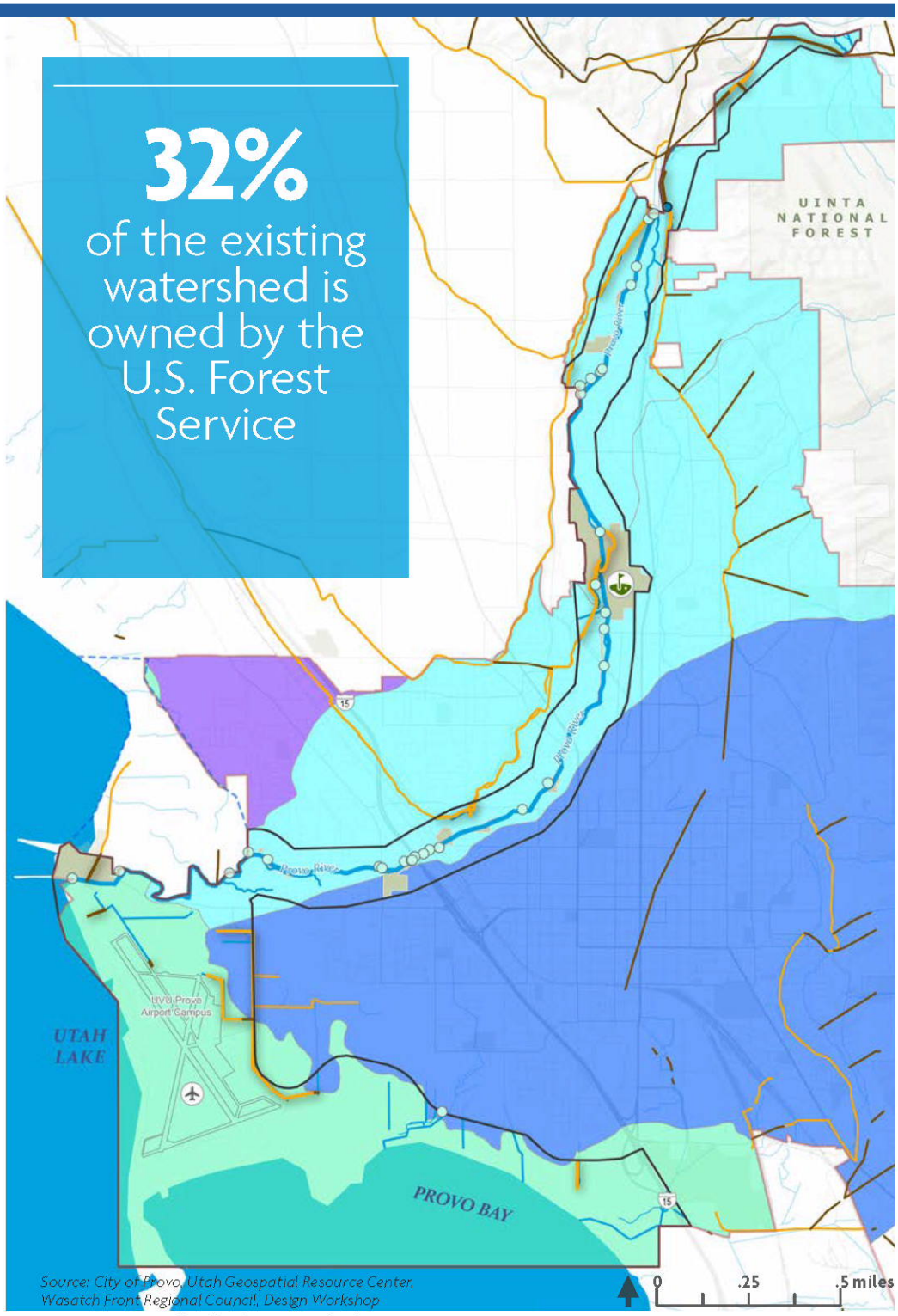


Figure 8: River and Lakeshore Hydrology Map

Legend

- River and Lakeshore Boundary
- Provo City Boundary
- Future Delta Project
- Provo City Parks
- Surface Water

Watersheds

- Big Dry Creek
- Outlet Provo River
- Utah Lake
- American Fork Canyon

- Springs/Steep
- Stream Alteration Points
- Open Channel
- Buried Channel

River and Lake Ecology

The Ecology Map is shown in Figure 9.

Provo River and Utah Lake have many significant ecological benefits. They are home to abundant vegetation and wildlife, such as native grass wetlands and the threatened June Sucker fish that only live in Utah Lake and Utah Lake tributaries.

Seed dispersal along the river from riparian grasses, shrubs, and deciduous plants is essential to vegetative growth and stabilization along the riverbanks. Additionally, conservation efforts in Provo River to help protect the June Sucker fish are ongoing.

The lakeshore and Provo Bay consist of many wetland areas indicated by hydric soils and the presence of saltgrass, cattails, and bullrushes.

Vegetation along the river helps with erosion control and wildlife habitats.

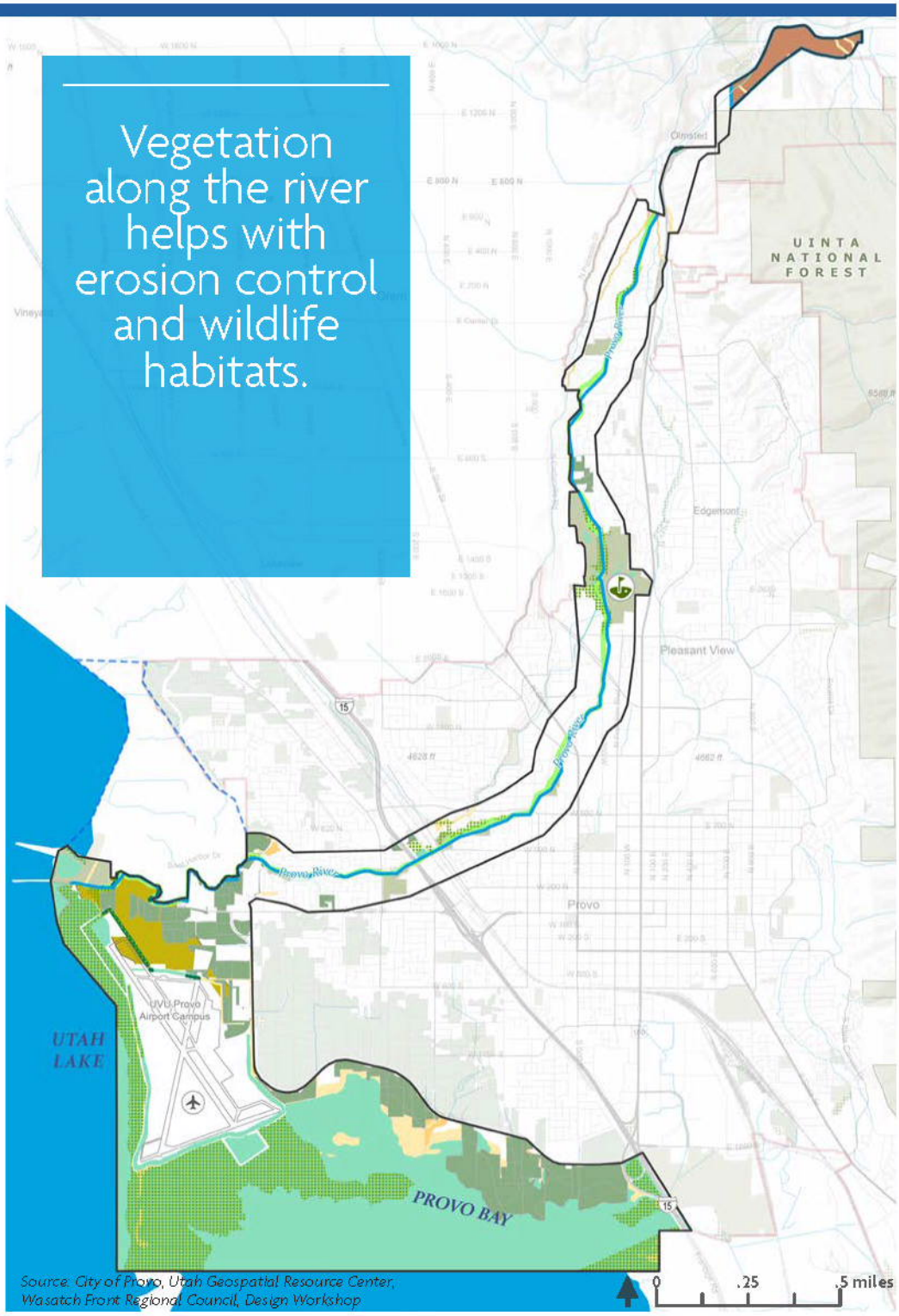


Figure 9: River and Lakeshore Ecology Map

Legend

- River and Lakeshore Boundary
- Provo City Boundary
- Future Delta Project
- Provo City Parks
- Surface Water
- Agricultural
- Riparian/Wetlands

Dominant Vegetation

- Dropseed
- Saltgrass

Wetlands

- Permanently Flooded
- Semi permanently Flooded
- Temporarily/Seasonally Flooded
- Intermittently Exposed

CONSTRAINT ASSESSMENT

Development and Environmental Constraints Assessment

The assessments in this section analyze the developmental and environmental constraints for the river and lakeshore. The assessment is a comprehensive tool to assist Provo City in making future decisions about the most appropriate uses for the lands along the Provo River and Utah Lake.

The output of these studies is dependent on the quality of the data input and provides results and understanding at a high level. These analyses establish the basis by which areas of focus can be identified for future investigation and studied for recommendations for maintenance and development planning.

Areas of Development Constraint

Development constraints are areas that limit or prevent development based on local, state, or federal regulations.

Table 1 identifies the data and sourcing for the development constraint mapping. The development constraints take into account various land management areas, such as federal or state lands, as well as property ownership and regulatory areas like parks, open spaces, preservation or recreation zones, wetland and riparian areas, and 100-foot water buffers for streams, lakes, and rivers. The development constraints mapping is shown in Figure 10 on page 24 and Figure 11 on page 25.

Areas of Environmental Constraint

Environmental constraints indicate places of environmental consideration and areas with a high ecological value or hazard for future development.

Table 2 identifies the data and sourcing for the environmental constraint mapping. The criteria included in the environmental constraints consist of hydric soils, dominant vegetation, and agricultural land cover. The environmental constraints mapping is shown in Figure 12 on page 26 and Figure 13 on page 27.

Survey responses place a high priority for the river and lakeshore for

ENVIRONMENTAL PRESERVATION (56%)

Residents similarly express interest to preserve wildlife habitats (66%) and the watershed (59%).

Source: The City of Provo
Wetlands and riparian habitats serve as an important environmental asset.

CONSTRAINT ASSESSMENT

Table 1: Categories and Sources of Development Constraint Criteria

CATEGORY	DATA	SOURCE
Land Management	Federal Land: (USFS, BLM) State Land: State Sovereign Land	UGRC
Land Ownership	Government Owned Parcels, Private Owned Parcels, Private Parcels, Golf Course, Airport	City of Provo
Regulatory Areas	Open Space, Preservation and Recreation Zone Public Parks, State Park	UGRC
Wetlands	Wetlands and Riparian Areas	USFWS National Wetlands Inventory /AGRC, Utah Division of Water Resources
Stream Buffers	Stream and River Buffer (100 ft) Lake, Waterbodies Buffer (100 ft)	National Hydrology Dataset

Table 2: Categories and Sources of Environmental Constraint Criteria

CATEGORY	DATA	CONSTRAINT LEVEL	DESCRIPTION
Hydric Soil	Soil - Hydrologic Group A	1	Low runoff potential (>90% sand and <10% clay)
	Soil - Hydrologic Group B	1	Moderately low runoff potential (50-90% sand and 10-20% clay)
	Soil - Hydrologic Group C	2	Moderately high runoff potential (<50% sand and 20-40% clay)
	Soil - Hydrologic Group D	3	High runoff potential (<50% sand and >40% clay)
	Soil - Hydrologic Group A/D	2	High runoff potential unless drained (>90% sand and <10% clay)
	Soil - Hydrologic Group C/D	2	High runoff potential unless drained (<50% sand and 20-40% clay)
Dominant Vegetation	Cultivated Land	3	Utah Dominant Vegetation layer Code 602: Cultivated Land
	Dropseed	1	Utah Dominant Vegetation layer Code 403: Dropseed
	Salt Grass	3	Utah Dominant Vegetation layer Code 404: Saltgrass
Agriculture	Agriculture Land Cover	2	Land Cover
	Fallow/Idle	0	Agriculture Types
	Field Crops	2	
	Garden	0	
	Grain/Seeds	2	
	Hay/Turf	2	
	Orchard	3	
	Pastureland	2	

DEVELOPMENT CONSTRAINTS

Development Constraints Evaluation

The following maps (Figure 10) show the individual layers included in the development constraints assessment.

The composite is shown in Figure 11 on page 25. The methodology for this map is an additive process by which criteria that render land unsuitable for development (as defined in Table 1) are layered to help identify areas for future potential development.

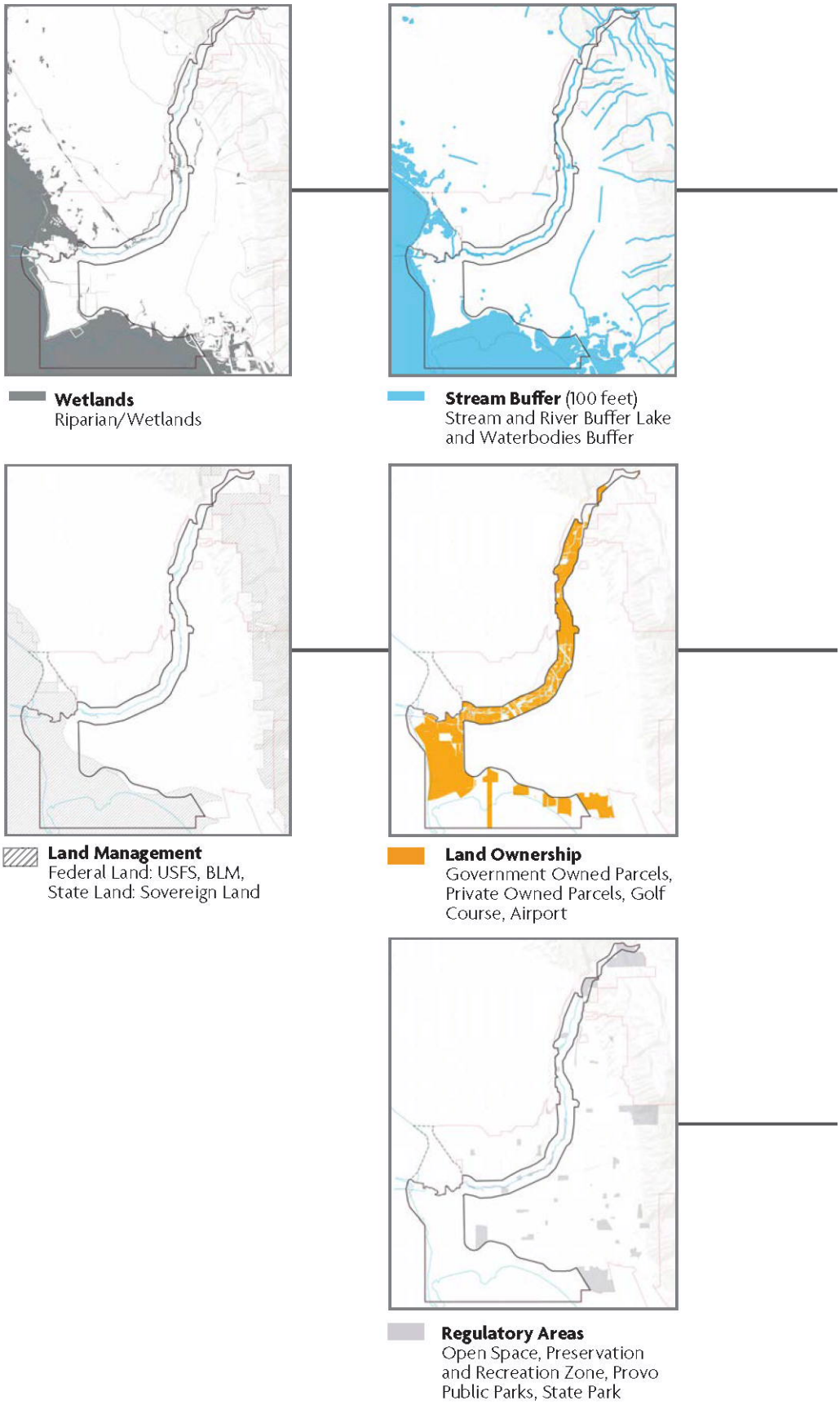


Figure 10: River and Lakeshore Development Composite Layers

DEVELOPMENT CONSTRAINTS

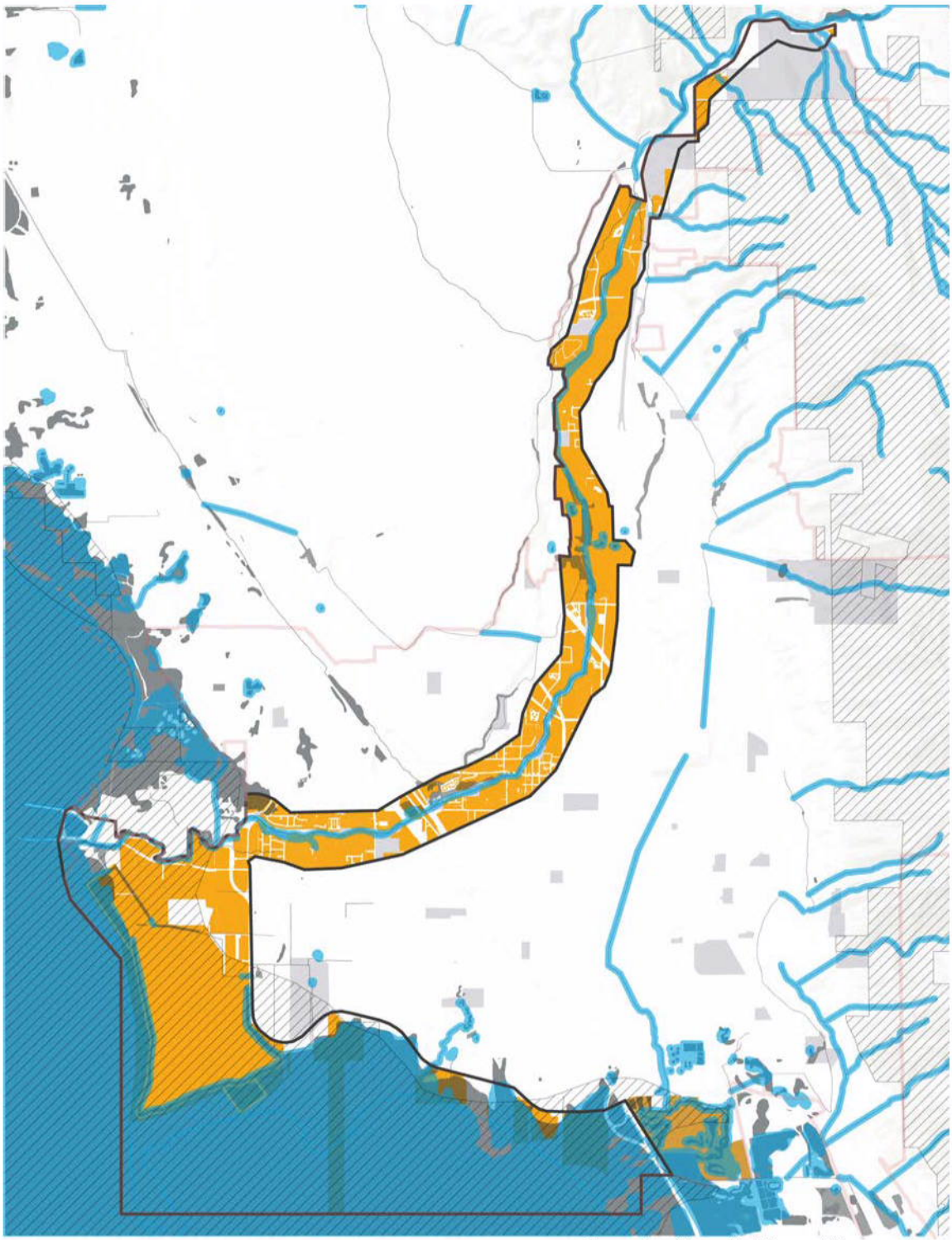


Figure 11: River and Lakeshore Development Constraints

Source: City of Provo, Utah Geospatial Resource Center, Wasatch Front Regional Council, Design Workshop

ENVIRONMENTAL CONSTRAINTS

Environmental Constraints Evaluation

The individual layers for the environmental constraints assessment are shown in the following maps (Figure 12).

The composite is in Figure 13 on page 27. The methodology for the Environmental Constraints map is an additive process where criteria are defined and assigned a Constraint Level, as noted in Table 2 on page 23. The higher the ranking, the more ecological value the land area may have. The Constraint Level is ranked on a scale of one (1) to three (3), where one (1) is the lowest environmental value, and three (3) is the highest.

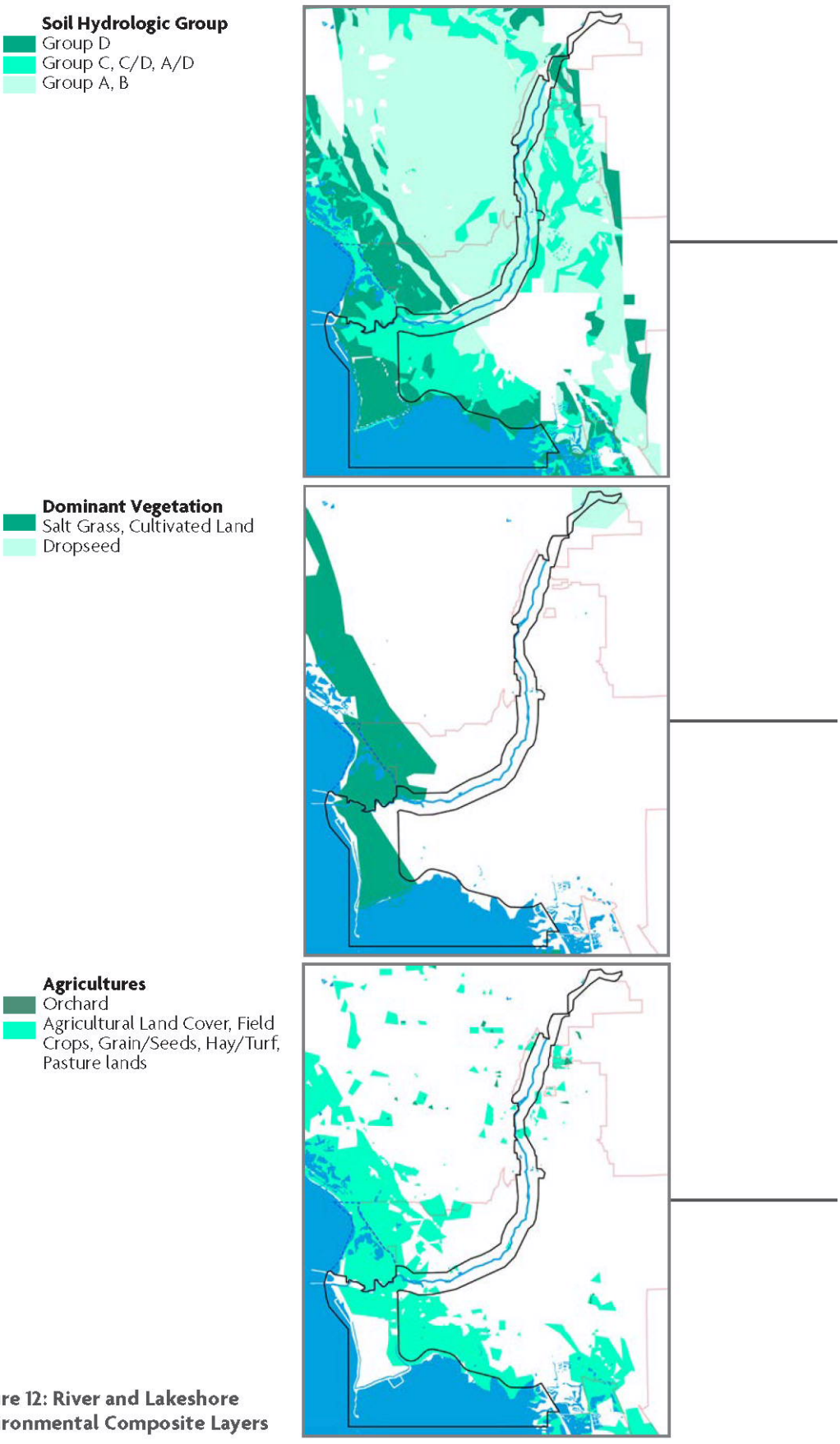


Figure 12: River and Lakeshore Environmental Composite Layers

ENVIRONMENTAL CONSTRAINTS

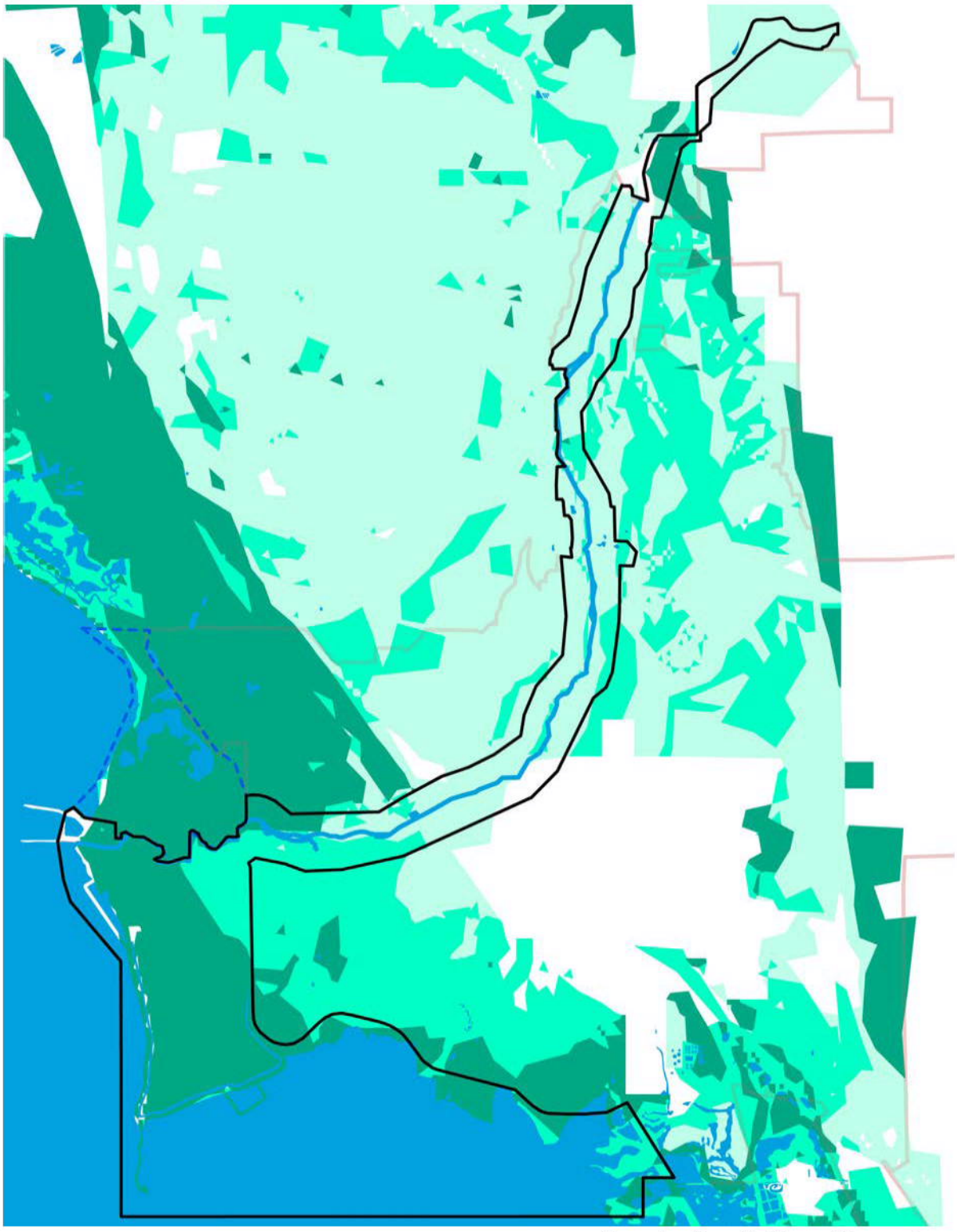


Figure 13: River and Lakeshore Environmental Constraints

Source: City of Provo, Utah Geospatial Resource Center, Wasatch Front Regional Council, Design Workshop

DEVELOPMENT SUITABILITY

Areas Suitable for Development

Figure 14 highlights potential areas that might be suitable for development. The locations unsuitable for development are hatched in orange and green. These areas signify developmental and environmental constraints.

Though much of the land area is privately owned, future development in this area should be sensitive to the ecology of the saltgrass flats. Care should be taken to maintain natural riparian vegetation, including cottonwood and boxelder trees in the canopy of the river.

Source: Design Workshop
Aerial of Provo City and Utah Lake

DEVELOPMENT SUITABILITY

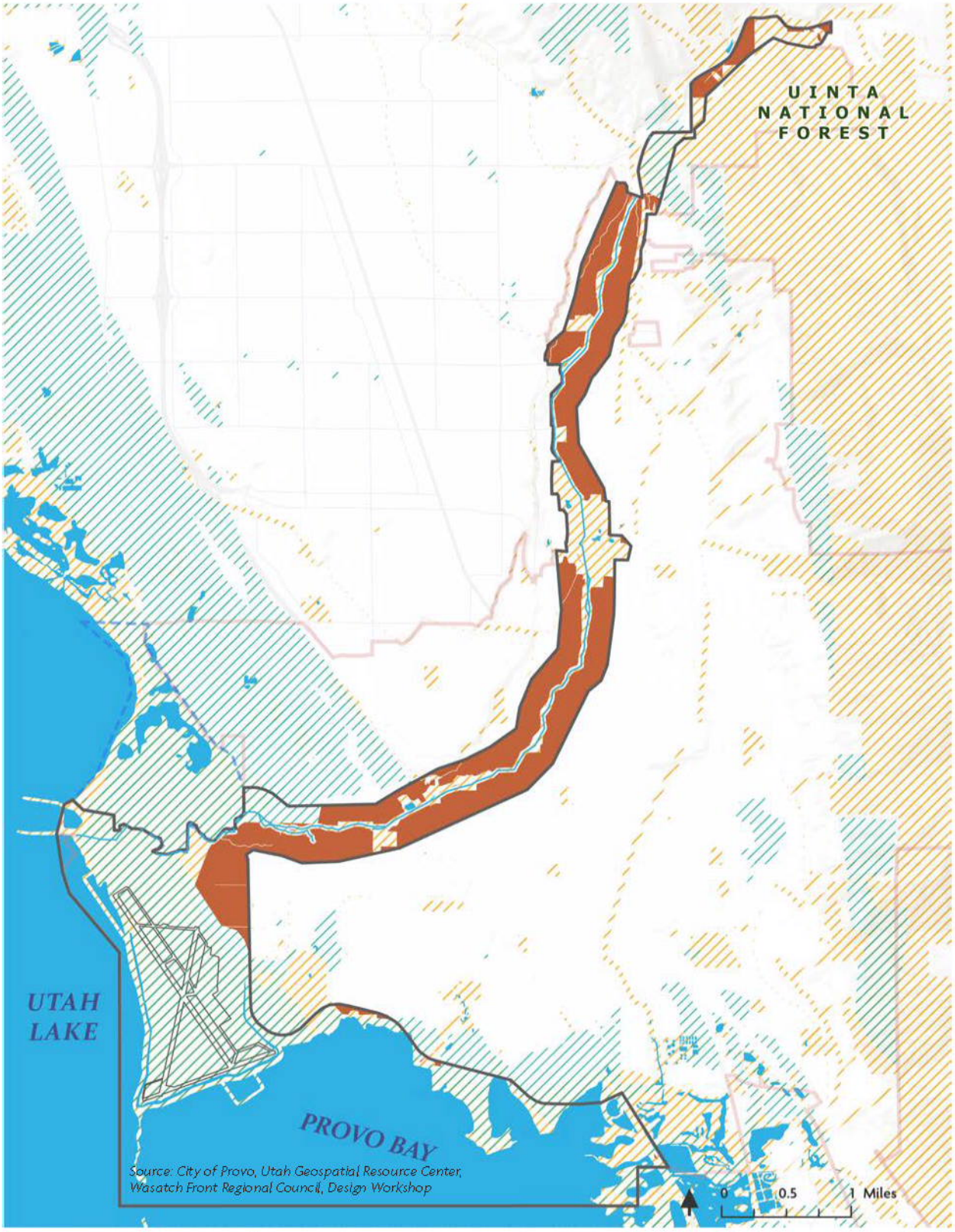


Figure 14: Development Suitability Map

Legend

- River and Lakeshore Boundary
- Provo City Boundary
- Future Delta Project
- Development Constraints
- Environmental Constraints
- Areas Suitable for Development

3

RECOMMENDATIONS AND GUIDELINES

Introduction

The Provo River and Utah Lake are celebrated community assets as well as complex ecosystems that serve an important ecological function for aquatic and terrestrial flora and fauna. Recommendations and guidelines for the river and lakeshore have been developed with the goal of maintaining or enhancing water quality, and preserving or restoring local habitats, while balancing the need for community gathering and recreation opportunities. The following recommendations and guidelines are organized around three themes:

Natural Environment

Social Environment

Built Environment

Within each theme is a summary of input from the community, key policies and recommendations from other plans and Provo City Code, and goals and strategies. This chapter includes two sections:

1. Recommendations, Goals, and Strategies
2. Guidelines and Best Practices

Vision and Goals Framework

Goals and the associated strategies create the path forward for how to achieve the vision. The following diagram explains the terminology that will be used in this plan (Figure 15).

Priority Actions

The following actions have been identified by the City and partners as tangible priority steps for this plan. Implementation should be revisited and revised over time to adapt to changing needs and conditions.

GENERAL

The Vision is an aspirational statement for the use, perception, or impact of the river and lakeshore in the future.

These recommendations consist of a goal statement – a central concept to achieve the vision – and strategies and actions.

Goals include natural, social, and built environments for how to achieve the vision.

Strategies are tactical approaches to attain the goal.

Priority Actions are the next step for implementation.

Following the Recommendations are Guidelines and Best Practices which offer tools and methods for how to apply the goals.

Design Guidelines align design techniques with strategies.

Best Practices are tactics to manage application of strategies.

Areas of Opportunity are projects that may be a good location to apply strategies.

Figure 15: Plan Vision Framework

(Source: Design Workshop)

RECOMMENDATIONS, GOALS, AND STRATEGIES

Plan Themes Summary

The following recommendations will help to achieve the future vision around this theme through these goals and strategies. Goals are overarching statements, and strategies are targeted policies, programs, or projects to achieve the goals. Within each theme is a summary of input from the community, key policies and recommendations from other plans and Provo City Code, and goals and strategies.

The Recommendations are organized into the following themes:

Natural Environment Goals

Pages 36-39

- Water Quality
- Invasive Species
- Watershed Assessment
- Fuels Management
- Habitat Restoration

Social Environment Goals

Pages 44-47

- Recreational Opportunities
- Sense of Place
- Trail Improvements
- Education
- Safety
- Wayfinding/Signage

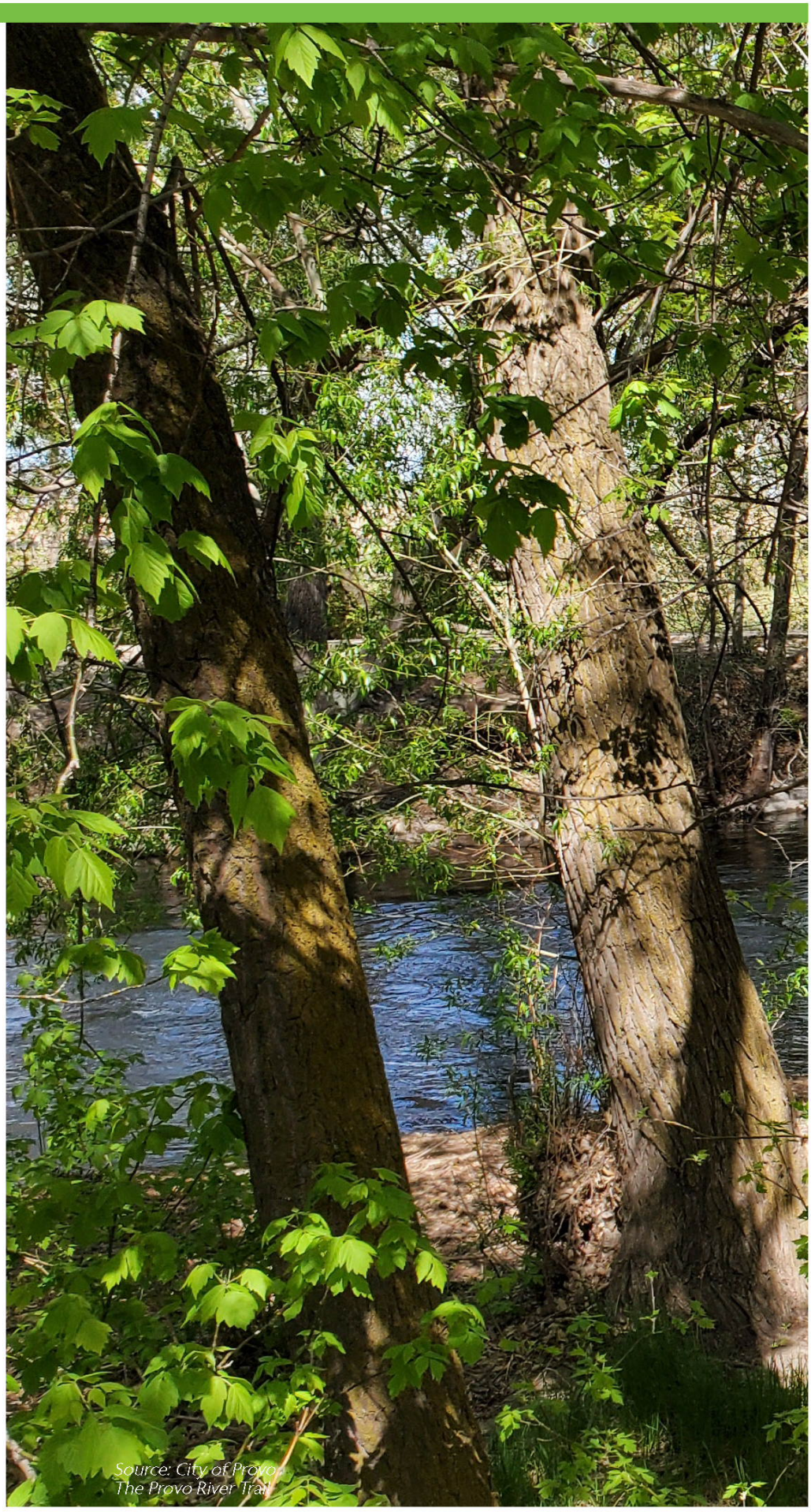
Built Environment Goals

Pages 52-55

- Future Development
- Water Quality
- Tourism
- Partnerships
- Water Health
- Education

THE NATURAL ENVIRONMENT

The natural environment focuses on protecting the river and lakeshore's natural habitats, ecosystems, and water quality. There is an opportunity to conserve the current natural habitats and improve water quality for these ecosystems to thrive. Utah Lake is experiencing increased development interest, decreased water levels, and warmer water temperatures, resulting in challenges for water quality.



Source: City of Provo, The Provo River Trail

Natural Environment Goals

1a. Encourage efforts to enhance water quality throughout the city.

1.b Encourage restoration of habitat along the riverbanks and shoreline, as appropriate.

1.c Assess and implement a plan to manage invasive species.

1.d Develop a comprehensive watershed assessment and management plan.

RECOMMENDATIONS

Natural Environment Goals and Strategies

The following recommendations will help to achieve our vision for the future of Provo River and the shores of Utah Lake.

GOALS	STRATEGIES
1a. Encourage efforts to enhance water quality throughout the city.	1. Follow best practices in the guidelines section of this document for stormwater management to reduce sedimentation and nutrient pollution. 2. Evaluate City Code requirements relative to surface drainage and propose code amendments as necessary to reduce impervious surfaces to mitigate runoff. 3. Consider the implementation of green infrastructure throughout the city to better manage and enhance water entering the river and lake. 4. Encourage limits on dams and diversions, which impact flows, volume, flood duration, and frequency, in addition to negatively impacting the health of the river and stream ecosystems. 5. Ensure compliance with discharge permits and implement treatment technologies where feasible to reduce point source pollution. 6. Support the Division of Forestry, Fire and State Lands in actions affecting the Utah Lake Master Plan Area to be consistent with this plan. 7. Promote reduction of nutrient inputs, particularly phosphorus and nitrogen, from fertilizers and other sources.

Priority Actions

- Review stormwater practices and policies, green infrastructure, and reduction of impervious surfaces as needed.
- Support the Utah Lake Watershed Council's efforts, including working with local farmers and agricultural operations to protect and enhance water quality.

Partnerships

- **Utah Lake Watershed Council.**

RECOMMENDATIONS

GOALS

1b. Encourage restoration of habitat along the riverbanks and shoreline, as appropriate.

STRATEGIES

1. Identify and prioritize areas for native revegetation, such as eroded streambanks and stripped local habitats.
2. Explore opportunities for bioengineering or other natural erosion control methods, including the strategic placement of wood shoring stabilization or erosion-control fabrics.
3. Designate habitat areas to incorporate features such as strategically located snags (standing dead trees) and brush piles, which provide nesting sites, cover, and food for wildlife.
4. Identify opportunities for protection and restoration of wetland areas around the lakeshore. Follow best practices for wetlands to reduce sedimentation and nutrient pollution in the Toolkit Section of this document.
5. When space allows, restore the natural stream channel processes, including meandering patterns, pools, and riffles.
6. Support fish movement by removing instream barriers, restoring natural flows, and creating instream structures.
7. Continue to monitor and assess habitats over time and modify as needed.

Priority Actions

- Identify areas of high erosion for riparian restoration and identify the appropriate strategies for restoration.
- Consider where City-owned lands would allow for meandering stream flows, pools, and riffles.
- Support partners, such as the Utah Lake Watershed Council and the Department of Natural Resources, in their efforts to track stream habitat and health over time, and stay informed on their monitoring efforts and findings.

Partnerships

- **Utah Lake Watershed Council.**
- **Utah Department of Natural Resources**

RECOMMENDATIONS

GOALS	STRATEGIES
1c. Assess and implement a plan to manage invasive species.	1. Work with the City Forester and community partners to develop a strategy for the selective removal of invasive species along stream banks. Ensure removal efforts maintain the integrity of the streambanks and lakeshore to ensure the health of the corridor. 2. Prevent the introduction of invasive species through education. 3. Establish monitoring programs to detect invasive species and prevent spread. 4. Initiate best practices for maintenance, such as cutting, mowing, and hand removal, to manage invasive species. 5. When appropriate, utilize water-soluble herbicides or pesticides to eliminate invasive species. Follow all local, state, and federal requirements for pesticide safety.
1d. Develop a comprehensive watershed assessment and management plan.	1. Conduct a comprehensive watershed assessment to establish a baseline of the river and lake characteristics, including vegetation, soils, stream flows, and wildlife. Analyze and model data to assess trends and simulate scenarios to evaluate management strategies. 2. Support partnerships with the Provo River Commissioner and regional and state agencies to manage water flows. Continue to assess the impact of future diversions and structures on the river's ecology. 3. Coordinate with state and academic partners to be informed on regular monitoring of water quality, including pH, oxygen, nutrient levels, sedimentation, and pollution controls to identify and measure trends. 4. Continue monitoring and tracking stream flows. When needed, evolve current practices based on changes in hydrological patterns. 5. Coordinate with state and academic partners to review audits assessing water efficiency and use in the city. Continue to implement water-wise best practices to support aquifer recharge, water quality, and in-stream flows. 6. Establish a hazard management plan with targeted strategies for flood prevention, including identification of high-risk flood-prone areas and policy to support land use planning and proper water management. *1d. continues on the following page.*

GOALS

Continued from previous page

1d. Develop a comprehensive watershed assessment and management plan.

STRATEGIES

7. Collaborate with the Utah Lake Authority and other applicable governmental agencies to support the management and protection of Utah Lake through increased communication, institutional arrangements, and other mechanisms as appropriate.
8. As resources become available, support fuel mitigation, including the removal of excess debris along the river and lakeshore.
9. Support the Public Works Department, Federal Emergency Management Agency (FEMA), Utah Division of Emergency Management, and other applicable agencies to plan and reconstruct the Provo River and Utah Lake levees. Consider incorporating landscaping, gathering places, and trails into levee reconstruction plans.

Priority Actions

- Review stormwater practices and policies, green infrastructure, and reduction of impervious surfaces as needed.
- Support the Utah Lake Watershed Council's efforts, including working with golf courses, local farmers, and agricultural operations to protect and enhance water quality.
- Review water quality monitoring data produced by the Department of Environmental Quality and other applicable agencies to monitor and track water system health over time.
- Identify areas of flood emergency debris deposition along the Provo River corridor and clean up as needed.
- Conduct a water assessment to analyze water efficiency and use citywide.
- Continue developing and promoting water-wise programs and policies per the Provo Conservation and Resilience Plan.

Partnerships

- **Utah Lake Watershed Council**
- **Utah Lake Authority**

Other Relevant Other Plans

Critical Hillsides Overlay Zone, Chapter 14.33A: Within the CH Overlay Zone, all buildings, structures, and parking lots are required to be set back at least 50 feet horizontally from the ordinary high-water mark of stream corridors and the delineated edge of a wetland.

Sensitive Lands, Section 15.05 (Ongoing): Wetlands, trailheads, and parks are more likely to be adjacent to the river corridor and lake. Although the code provides some standards to encourage safe and sustainable development, it is understood that wetlands may require more environmental considerations than are contained within the code.

Provo River Delta Plan (Ongoing): Plans are currently underway for the Provo River Delta Gateway Park as a part of the June Sucker Program and Provo River Delta Restoration Project. This will be a 3.5-acre park near Utah Lake State Park and will include improvements to the Provo River Trail, such as lighting, clearing, and signage. Construction to date has focused on excavating delta ponds and river channels to divert the Provo River into the new delta area. The Delta Project Area is expected to be fully complete and open to the public in 2024.

Utah State Water Resources Plan (2021): The Division of Natural Resources assembled a State Water Plan Advisory Committee consisting of diverse experts and stakeholders. This committee underscored the importance of developing an actionable plan. As a result, the 2021 Water Resources Plan focuses on goals the Division will strive to accomplish by 2026. The plan notes that the stream flows of Utah Lake's tributaries, including the Provo River and the wetlands surrounding Utah Lake, sustain valuable wildlife habitats. These important environmental and water management needs should be met so that the community can enjoy the quality of life benefits that come from a healthy ecosystem.

Community Survey Findings

66%
say it is important to improve the area's wildlife habitats.

59%
identify watershed protection as a priority.

56%
say ecological restoration is important for the Provo Waterways.

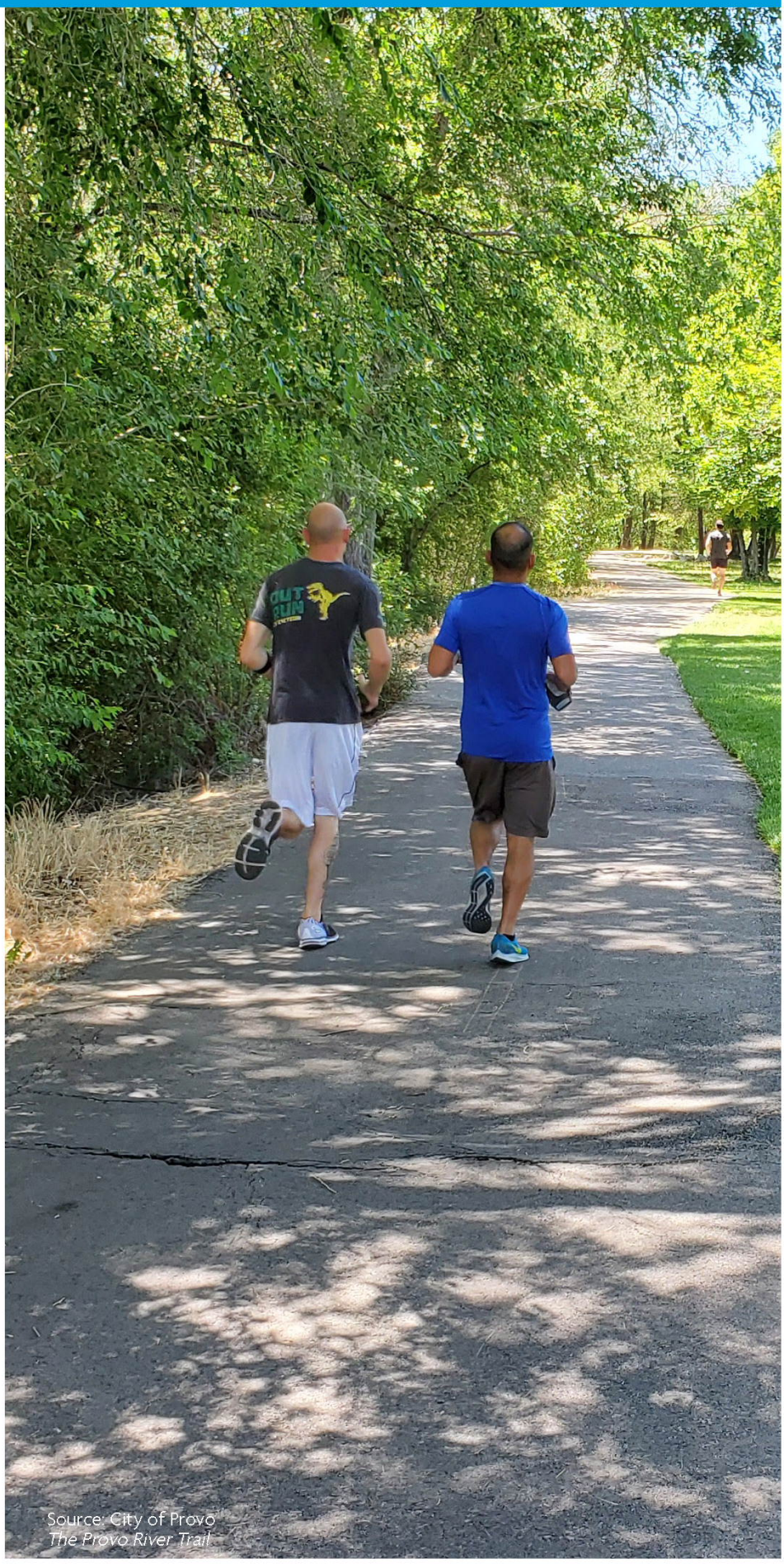
Source: Community Survey

Source: City of Provo
The Provo River Trail

THE SOCIAL ENVIRONMENT

The outdoor lifestyle is an important community value in Provo. Recreation, connectivity, education, safety, and maintenance are important to connect the community and local assets along Provo River and Utah Lake. Provo River serves as a green spine connecting the mountains to Utah Lake. Recreational trails and parks connect with this green spine, providing access for the community to walk, bike, bird watch, and sport fish along the river's edge. There are opportunities to increase active recreation, including kayaking or paddle parks, more locations for fishing, wildlife viewing, and areas for children to play in the water.

Utah Lake provides great recreational opportunities, such as fishing, boating, and other water sports, with Utah Lake State Park and marina serving as a launch point. However, water quality can occasionally limit recreation, specifically activities like swimming. There are additional opportunities for educational amenities like nature centers and signage to share the story of Utah Lake, including its history, the importance of lake stewardship, the June sucker habitat, and other cultural and ecological features of Utah Lake.



Source: City of Provo
The Provo River Trail

Social Environment Goals

2a. Increase recreational opportunities along the river corridor and at key locations along the lakeshore.

2b. Prioritize safety improvements along the River Trail.

2c. Provide interpretive, wayfinding, and educational signage.

2d. Educate the public about the importance of preserving the environment.

RECOMMENDATIONS

Social Environment Goals and Strategies

The following recommendations will help to achieve our vision for the future of Provo River and the shores of Utah Lake.

GOALS	STRATEGIES
2a. Increase recreational opportunities along the river corridor and at key locations along the lakeshore.	1. Ensure all trails are adequately designed and safe for all users, including bikers, walkers, and runners. 2. Improve facilities and amenities along the River Trail, such as seating, signage, waste disposal, shaded areas, and, where appropriate, restrooms. 3. Continue working with the State on improving Utah State Park as a regional asset. Explore options to transfer responsibility and ownership to the City of Provo for increased maintenance and stewardship of this resource. 4. Expand opportunities for outdoor gatherings such as events, informal markets, and relaxing along the river. 5. Identify locations for dog parks and ensure pet waste disposal bags are frequently located along the corridor and in high-use areas. 6. Consider areas of passive use for increased bird and wildlife habitats. 7. Integrate public art and murals along the river corridor and along the lakeshore. 8. Expand and improve the parks system along the river corridor, supporting a "string of pearls" along the green spine. 9. Explore opportunities to increase the availability of watercraft such as kayaks, paddleboards, and tubes. 10. Develop more locations for people to interact with the water, such as small beaches, seating, or wading pools. 11. Explore the feasibility of increased launch points along the river and lakeshore and improve existing launch points along the river corridor. *2a. continues on the following page.*

RECOMMENDATIONS

GOALS

Continued from previous page

2a. Increase recreational opportunities along the river corridor and at key locations along the lakeshore.

STRATEGIES

12. Improve the ability for neighborhoods to access the corridor with connecting trails.
13. Continue to provide high-quality trailhead entrances with amenities such as parking, restrooms, and trailhead signage.

Priority Actions

- Address trails as outlined in the needs assessment of the Parks and Recreation Master Plan.
- Design and complete enhancements to complete amenities and facilities at Paul Ream Wilderness Park, Riverside Park, and Exchange Park.
- Carry out plans to improve the Provo River Trail, such as projects completed at the Fort Utah Greenway, I-15 tunnel crossing, Cottonwood Greenway, and North University Greenway.
- Coordinate and consider partnerships with the State to improve Utah State Park, including increased active and passive recreation such as wildlife habitat and interpretive areas.
- Initiate a whitewater or water-trail recreation feasibility study with a qualified consultant that identifies opportunities and locations for enhanced recreational use of the Provo River, including a kayak park and a kids river beach/ wading area.

Partnerships

- **Utah Division of State Parks**

GOALS

2b. Prioritize safety improvements along the River Trail.

STRATEGIES

1. Increase the lighting along the river corridor trail and the trailhead parking lots.
2. Ensure maintenance of trails and vegetation to promote visibility and a sense of comfort for trail users.
3. Consider the addition of more emergency call boxes and more cameras.
4. Add signage for trail etiquette, including monitoring of speed, yielding, and waste pickup.
5. Support efforts for insect abatement to improve the recreational experience and minimize mosquito-related public health concerns around Utah Lake when appropriate.
6. Add additional waste stations and trash cans along trails, especially at parks and trailheads.

Priority Actions

- Continue adding lighting at underpasses and parking lots.
- Explore ways to improve safety along the Provo River Trail.

Partnerships

RECOMMENDATIONS

GOALS	STRATEGIES
2c. Provide interpretive, wayfinding, and educational signage.	1. Explore establishing a blue trail route for watercraft along the Provo River and around Utah Lake. Promote trail connectivity through signage and wayfinding. 2. Provide interpretive signage along trails and at key locations to educate visitors about the area's natural features, history, and cultural significance. 3. Consider establishing information centers, visitor centers, or visitor kiosks where visitors can access additional resources and engage with interactive exhibits. 4. Continue to improve the wayfinding signage along the corridor with more frequent, high-visibility signage. 5. Increase signage throughout Provo, directing people to the river trail. 6. Consider signage directing trail users to report their location in case of an emergency. 7. Consider an interactive website, app, or guide to share trail conditions, activities, and maps and to integrate story posts along trail segments that can interactively connect to the site through signage and QR codes.
2d. Educate the public about the importance of preserving the environment.	1. Increase educational awareness around how the community can support better water quality through responsible recreation, such as reducing littering and pet waste. 2. Coordinate with local schools and universities to offer environmental education programs, guided tours, and field trips. 3. Utilize digital resources such as websites and social media to share information, resources, and articles. 4. Partner with local organizations and groups to support events, workshops, trainings, research, or projects that contribute to information sharing in the community. 5. Encourage community participation in projects such as river and lakeshore cleanups, habitat restoration, and wildlife monitoring.

Other Relevant Other Plans

Open Space, Preservation and Recreation Zone (OSPR), Chapter 14.33: The purpose of these provisions is to "protect public lands for outdoor recreation, education, scenic and visual enjoyment." Most of the standards in this zone refer to other sections. Relevant to this analysis is permitted principal uses. Allowed principal uses are only those that contribute to both passive and active recreation, such as parks, gardens, trails, and conservation grounds.

Utah Lake Master Plan (2009): The master plan is a guiding document of the Division of Forestry, Fire and State Lands. It informs and guides decisions on actions to improve and protect Utah Lake. This plan aligns with the general policies for land use and shoreline protection, transportation, natural resources, and recreational policy.

Utah Lake State Park Resource Management Plan (2000): This Resource Management Plan (RMP) is required by the Utah State Legislature and the Board of the Utah Division of Parks and Recreation to guide short- and long-term site management and capital development. The planning process recommends limits of acceptable change or modification and a vision for the park. This plan outlines recommendations for facilities, education, land management, and partnerships.

Community Survey Findings

80%
use Provo Trail for walking, hiking, or running the trails.

44%
go to Provo River to meet with friends and family.

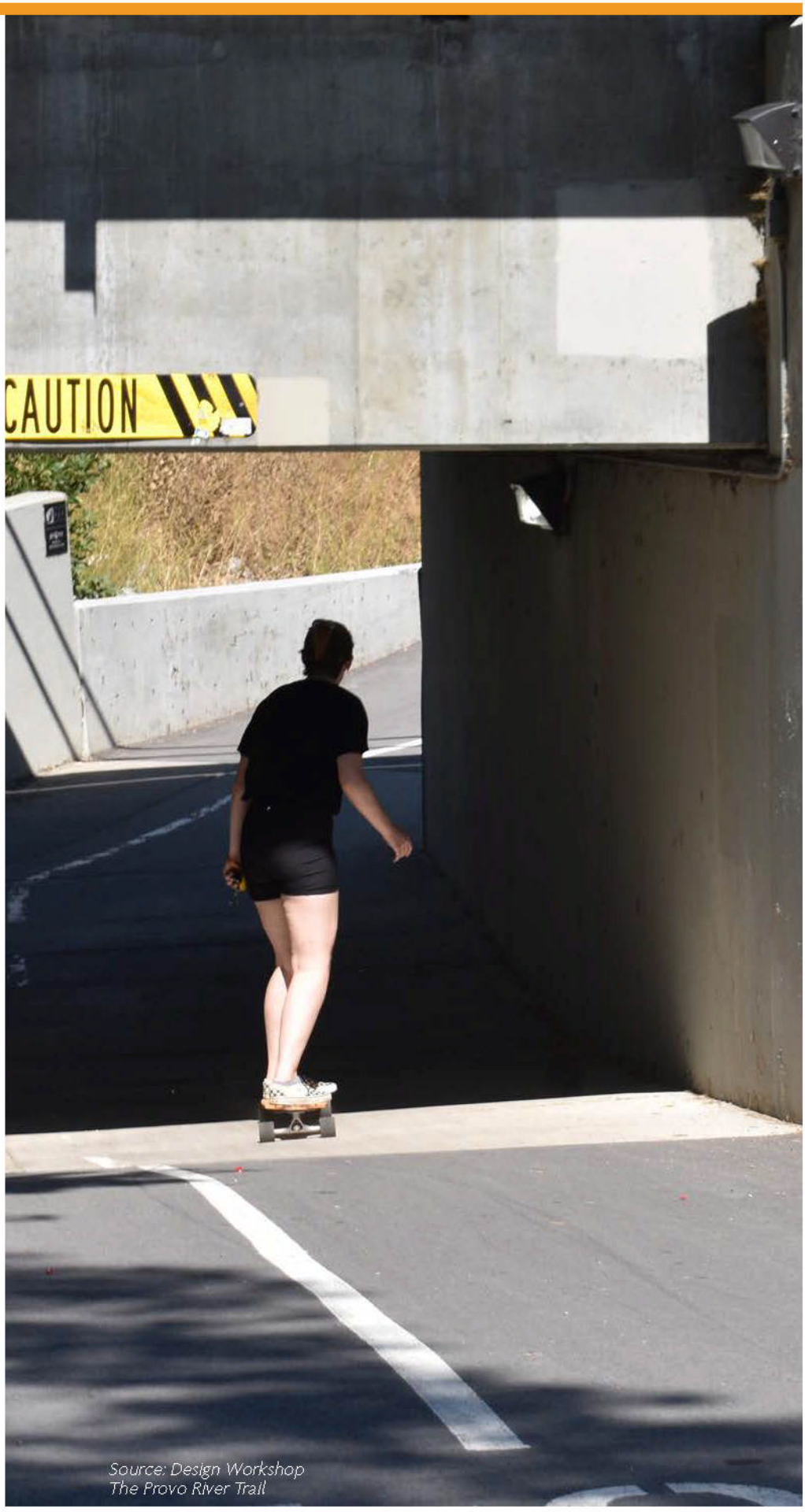
41%
participate in fishing when visiting Utah Lake.

Source: Community Survey

Source: Design Workshop
The Provo River Trail

THE BUILT ENVIRONMENT

The Provo River and Utah Lake are valuable economic assets. There is an opportunity to expand the economic prospects along the river corridor and lakeshore. There is a sense of the community "turning its back" to the river and lake, yet these are special assets that could promote vibrant businesses and commercial centers near them. Many case studies throughout the region exhibit increased profitability and desirability when fronting development to rivers and green spaces. Infill development of parking lots and underutilized properties along with development guidelines that encourage future development to connect to the river will all support the longevity of the Provo business community and promote tourism throughout the city.



Source: Design Workshop
The Provo River Trail

Built Environment Goals

3a. Encourage future development to embrace the Provo River as a community asset and promote the Corridor as a linear greenbelt.

3b. Require future development around Utah Lake to prioritize lake health and water quality.

3c. Develop programs, events and marketing to educate the public about Provo River and Utah Lake, and raise awareness of these community resources.

3d. Promote development that will generate tourism opportunities for the Provo River and Utah Lake.

RECOMMENDATIONS

Built Environment Goals and Strategies

The following recommendations will help to achieve our vision for the future of Provo River and the shores of Utah Lake.

GOALS	STRATEGIES
3a. Encourage future development to embrace the Provo River as a community asset and promote the Corridor as a linear greenbelt.	1. When possible, residential and commercial developments should face the river and connect to the water through pathways and greenspaces to promote walkability and access. 2. Commercial developments should incorporate the river corridor into their site design. 3. Consider the development of Design Guidelines for the river corridor in alignment with the strategies in this plan. 4. Ensure development along the Provo River corridor aligns with the requirements of the Open Space Preservation and Recreation Zone and Section 15.05.180, Provo City Code, Floodplain Management and Development Standards, when applicable 5. Expand existing trails and connect gaps along the Provo River trail and around Utah Lake. 6. Connect the current Provo River Trail to nearby parks and neighborhoods. 7. Preserve land along the river corridor to promote civic, cultural, and educational facilities. 8. Encourage Provo City parks along the river corridor under the Open Space Preservation and Recreation Zone. 9. Incentivize infill development of underutilized properties such as parking lots, vacant lots, or degraded properties. 10. Explore opportunities for property acquisition strategies along the river corridor for public uses (i.e., open space, parks, trail connections), as it aligns with the City's General Plan.

RECOMMENDATIONS

GOALS	STRATEGIES	
Continued from previous page **3a. Encourage future establishments to embrace the Provo River as a community asset and promote the Corridor as a linear greenbelt.**	**Priority Actions** • Develop Design Guidelines for the Provo River Corridor. • Reach out to property owners along the river corridor to identify and promote opportunities for improved use and for economic partnerships. • Coordinate with private developers to identify locations for public spaces such as plazas, promenades, and parks along the river and lakeshore.	**Partnerships** 1. **Private Development Community**
3b. Require future development around Utah Lake to prioritize lake health and water quality.	1. Encourage future residential, commercial, or recreational development at Utah Lake that is consistent with the future vision of the Provo General Plan. 2. Design future development to protect or enhance the ecological function of Utah Lake's natural resources, including a 100-foot buffer between the lakeshore and adjacent development to provide safety, flood protection, public access, recreation, open space, and resource protection. 3. Acquire, expand, and protect shorelines, open spaces, critical lands, and wetland areas for public use, preservation of natural resources, and potential mitigation purposes.	

GOALS	STRATEGIES
3c. Develop programs, events and marketing to educate the public about Provo River and Utah Lake, and raise awareness of these community resources.	1. Coordinate with the Provo Parks and Recreation Community Events Team to support events like the Utah Lake Festival, Movies in the Park, and races on city trails. 2. Develop a regional brand strategy for the Provo River. Coordinate with local and regional partners to craft strategic messaging. 3. Encourage informal and formal biking, walking, and running events, which could include 5Ks or block parties. 4. Consider "tactical urbanism" events such as chalk art, temporary art installations, pop-up parks, or other short-term, low-cost projects to encourage reinvestment along the corridor. 5. Consider events to engage youth, such as bicycle training and education campaigns.

GOALS	STRATEGIES
3d. Promote development that will generate tourism opportunities for the Provo River and Utah Lake.	1. Encourage private investment in hospitality infrastructure to accommodate the growing number of visitors. Develop and expand hospitality and accommodations in proximity to the Provo River. 2. Enhance the riverfront areas by creating vibrant and attractive public spaces such as parks, promenades, and recreational facilities that provide easy access to the river. 3. Encourage mixed-use development that incorporates commercial spaces, restaurants, and cultural venues with a lively riverfront atmosphere. 4. Promote the establishment of gear shops, equipment rentals, and outdoor clothing stores to provide a range of products and services for visitors. 5. Support events and programs along the Provo River and Utah Lake, including fishing tournaments, water sports competitions, outdoor concerts, art exhibitions, and community gatherings. 6. Consider opportunities for camping or glamping along the river or lakeshore.

Other Relevant Other Plans

Provo City Code 14.33A, Critical Hillsides Overlay Zone: Within the CH Overlay Zone, all buildings, structures, and parking lots are required to be set back at least 50 feet horizontally from the ordinary high-water mark of stream corridors and the delineated edge of a wetland.

Provo City Code 15.05, Sensitive Lands (Ongoing): Wetlands, trailheads, and parks are more likely to be adjacent to the river corridor and lake. Although the code provides some standards to encourage safe and sustainable development, it is understood that wetlands may require more environmental considerations than are contained within the code.

Provo River Delta Plan (Ongoing): Plans are currently underway for the Provo River Delta Gateway Park as a part of the June Sucker program and Provo River Delta Restoration Project. This will be a 3.5-acre park about half a mile from the Utah Lake State Park entrance and will include maintenance improvements for the Provo River Trail, including lighting, clearing, and signage. The Delta Project Area is expected to be fully complete and open to the public in 2024.

Utah State Water Resources Plan (2021): The Division assembled a State Water Plan Advisory Committee consisting of diverse experts and stakeholders. This committee underscored the importance of developing an actionable plan. As a result, the 2021 Water Resources Plan focuses on goals the Division will strive to accomplish by 2026. The plan notes that the stream flows of Utah Lake's tributaries, including the Provo River and the wetlands surrounding Utah Lake, sustain valuable wildlife habitats. These important environmental and water management needs should be met so that the community can enjoy the quality of life benefits that come from a healthy ecosystem.

Community Survey Findings

44%
expressed interest in additional recreational facilities at Utah Lake.

32%
identified a desire for better surface maintenance on trails.

21%
would like to see more restrooms and lighting along trails.

Source: Community Survey

Source: Design Workshop
The Provo River Trail

GUIDELINES AND BEST PRACTICES

This section is intended to complement the recommendations in the previous section and provide additional details to achieve specific strategies in this plan.

- **Best Management Practices for Stormwater Runoff**
- **Safety and Maintenance Standards**
- **Green Infrastructure**
- **Benefits of Wetlands Restoration**
- **Water-wise Best Practices**
- **Recreation Amenities**
- **Activities and Programs**
- **Recommended Plant List**

Source: City of Provo
The Provo River Trail

Best Management Practices (BMP) for Stormwater Runoff

Why is it important to manage stormwater?

Stormwater runoff from urban areas is a significant cause of environmental degradation, and management is crucial for minimizing flooding, erosion, and pollution of water bodies. Implementing stormwater management and green infrastructure can mitigate the impacts and protect water resources. Improving water quality in the Provo River and Utah Lake will be a complex challenge. It requires the cooperation and involvement of various stakeholders, including government agencies, industry, and the public.

The stormwater system in Provo City is a separate collection and conveyance system and is not connected to the wastewater system in any way. Consequently, stormwater is not cleaned in the treatment plant before it is released into the Provo River, Utah Lake, or groundwater systems. Provo City is responsible for ensuring compliance with stormwater quality regulations from the Environmental Protection Agency (EPA) and the Utah State Department of Environmental Quality (DEQ).

The following are best practices to improve the water quality of stormwater released into the Provo River and Utah Lake:

- **Reduce Nutrient Pollution:** Nutrient pollution from agricultural runoff, golf courses, and urban areas, particularly phosphorus and nitrogen from fertilizers, can lead to excessive algae growth and low oxygen levels, harming the aquatic ecosystem and making the water less desirable for recreational activities. Encourage best management practices such as using low-phosphorus fertilizers, limiting the use of chemicals, and proper disposal of pet waste to reduce nutrient inputs.
- **Manage Sedimentation**: Erosion and sedimentation along the Provo River increases turbidity and reduces light penetration. BMPs to reduce sedimentation include reducing erosion from nearby construction sites, revegetating riparian areas, controlling runoff, and reducing impervious surfaces.
- **Control Point Source Pollution**: Point source pollution, such as wastewater discharges from treatment plants and other facilities, can have a significant impact on water quality. Ensuring compliance with discharge permits and implementing advanced treatment technologies can help to reduce point source pollution.
- **Increase Public Awareness and Participation:** Educate the public about the importance of water quality and actions to take, such as litter collection, pet waste removal, and responsible recreation. Public education programs could provide information on proper waste disposal and the proper use of fertilizers and pesticides.

The following best management practices should be considered for Utah Lake in addition to the practices above.

- **Manage Shoreline Development:** Development along the shoreline should minimize the use of fertilizers and pesticides in nearby agricultural areas, limit sedimentation, and encourage wetland and riparian habitats.
- **Manage Aquatic Invasive Species:** BMPs such as inspecting boats for invasive species, cleaning boats before and after use, and promoting native plantings can help control aquatic invasive species, which can outcompete native species and alter the ecosystem.

Figure 16: Stormwater Management Systems

Source: City of Provo
Provo Signage


Source: City of Provo
The Provo River Trail Under Crossing

Safety and Maintenance Standards

Regular maintenance is crucial to the health and sustainability of the river and lakeshore environment. These maintenance and safety standards ensure Provo parks and recreation spaces are well maintained, enjoyable, safe, and accessible for recreation and enjoyment. The Provo Parks and Recreation Plan (Section 10.1) touches on maintenance standards based on levels 1-3 and generally performs at an appropriate level of service. The following will be important for the City facilities along the river and lakeshore.

- **Regular Inspection and Maintenance Schedule**: A maintenance schedule with a set timeframe and identified department responsibilities for regular inspections, timely repairs, and systematic upkeep will ensure the longevity, functionality, safety, and aesthetics of Provo facilities.
- **Trail Surface Maintenance:** Trails should be regularly maintained to ensure they are safe and accessible for users, including clearing debris and repairing erosion (soft surfaces) and cracks and bulging (hard surfaces).
- **Trash and Litter Management**: Trash and other waste should be regularly removed and disposed of properly to prevent pollution and environmental damage. Graffiti should be promptly removed and addressed. A mural program can help to disincentivize graffiti.
- **Vegetation Management:** Vegetation management includes controlling invasive species, promoting the healthy growth of native plants, and removing hazardous or dead trees around the Lake and River Trail. Vegetation should be kept clear to support visibility and safety along the Provo River Trail.
- **Tree Risk Assessment:** Establish a protocol for yearly or biannual level one assessment by a Tree Risk Assessment Qualified Professional to ensure that weak-wooded or hazardous trees in or along parks, trails, and gathering spaces are monitored and removed as needed.

GUIDELINES AND BEST PRACTICES

- **Restrooms:** Restrooms and gathering areas should be regularly cleaned and maintained to ensure they are safe, sanitary, and accessible for users. Adequate facilities should be provided at trailheads, parks, and high-use areas. When possible, the design and construction of restrooms should be environmentally friendly.
- **Signage and Wayfinding:** Clear signage directs visitors to important destinations and recreation areas and communicates important information such as trail maps, rules, and regulations. Signs should be placed strategically at trailheads, parking areas, along trails, and gathering locations.
- **Lighting**: Lighting should be regularly checked to ensure it is functioning properly. Lighting can be used to improve safety and visibility in certain areas like parking lots and restrooms along the river corridor. Lighting should be designed to minimize light pollution, such as using downward-facing fixtures and low-wattage bulbs and turning off when not in use to reduce energy consumption. Consideration should be given to the use of lighting around the lakeshore to limit disruption to the habitat. When possible, lighting should include solar options.
- **Americans with Disability Act (ADA)**: Accessibility should be considered to ensure that individuals with disabilities have adequate access to parks and trails, public facilities, programs, services, and activities. Refer to the Parks and Recreation ADA response plan to ensure alignment with ADA requirements throughout the system.
- **Design for Visibility**: Trail design should be considered to ensure user comfort and visibility, including appropriate sightlines, paths clear of vegetation, comfortable travel paths, and minimized construction points along the corridor.

Source: City of Provo
Provo Roadway Standard

Source: City of Provo
Provo Lighting Standard

Survey responses place a high priority for the river and lakeshore to

IMPROVE MAINTENANCE

(32%) express interest in improvements to surface maintenance.

Community Survey Findings

GUIDELINES AND BEST PRACTICES

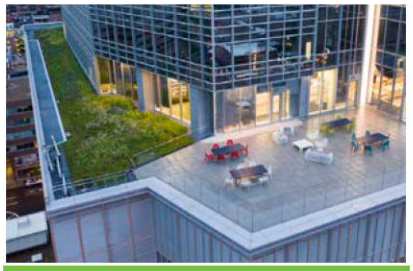
Green Infrastructure

What is Green Infrastructure?

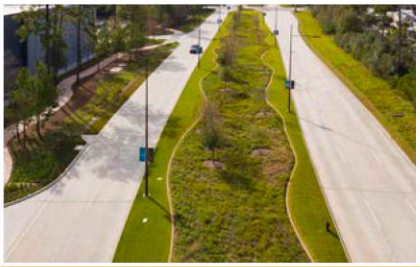
Green infrastructure is a more sustainable way to manage stormwater runoff by mimicking natural processes to slow water flows, reduce volume, and filter pollutant loads before water reaches lakes or rivers. Green infrastructure can be more cost effective than typical stormwater infrastructure and offers more community benefits. Green infrastructure should be implemented judiciously, ensuring that it is introduced only when environmental conditions are favorable, and there exists a capacity for proper design and ongoing maintenance.

The following are some strategies to capture and filter stormwater into the groundwater:

Rain Gardens: Small depressions, planters, or recessed gardens capture and absorb water to allow infiltration into the ground rather than flowing directly into storm drains.



Green Roofs: Vegetated rooftops provide insulation to buildings, reduce reflection and heat radiation, reduce stormwater runoff to adjacent surfaces, and can offer building residents a place to relax.



Bioswales: Vegetated channels or swales are designed to direct and slow down stormwater runoff, filter pollutants, and allow for water infiltration rather than directing water to underground pipes along roadsides or parking lots.

Permeable Pavements: Using pervious concrete or porous asphalt for parking lots, sidewalks, and driveways allows stormwater to infiltrate into the ground, reducing runoff and improving water quality.

Erosion and Sediment Control: Erosion and sediment control measures – such as silt fences, sediment basins, and erosion control blankets – prevent sediment runoff from entering lakes and rivers.

Maintenance and Monitoring: Regular inspection and maintenance of stormwater infrastructure, such as detention ponds and sediment traps, ensures proper functions. Adjust management strategies as needed.

Benefits of Wetlands Restoration

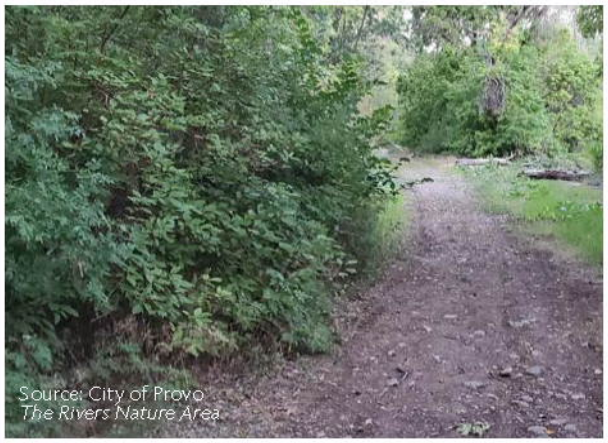
Restoration or creation of wetlands and vegetated buffers along streams and water bodies benefits the river and lake and provides ecological, social, and economic advantages for the surrounding communities. The following are some benefits of wetlands restoration.

Why are wetlands important?

- **Habitat Restoration:** Wetlands and riparian areas provide critical habitats for a diverse range of plant and animal species, including migratory birds, amphibians, and fish. Restoration of riparian plantings and wetlands is key to preserving these ecosystems.
- **Water Filtration and Nutrient Reduction:** Wetlands act as natural filters, removing pollutants, sediments, and excess nutrients to mitigate the impacts of agricultural runoff, stormwater runoff, and other sources of pollution.
- **Erosion Control:** The intricate root systems of wetlands and riparian areas stabilize the soil and reduce erosion.
- **Flood Control and Water Storage:** Wetlands serve as natural flood control buffers by absorbing and storing excess water during periods of heavy rainfall or snowmelt.
- **Climate Resilience:** Wetlands and riparian areas store carbon dioxide from the atmosphere and can provide small microclimates to reduce the urban heat island effect.

Strategies to Restore Wetlands

Source: City of Provo
The Rivers Nature Area



Source: City of Provo
The Rivers Nature Area

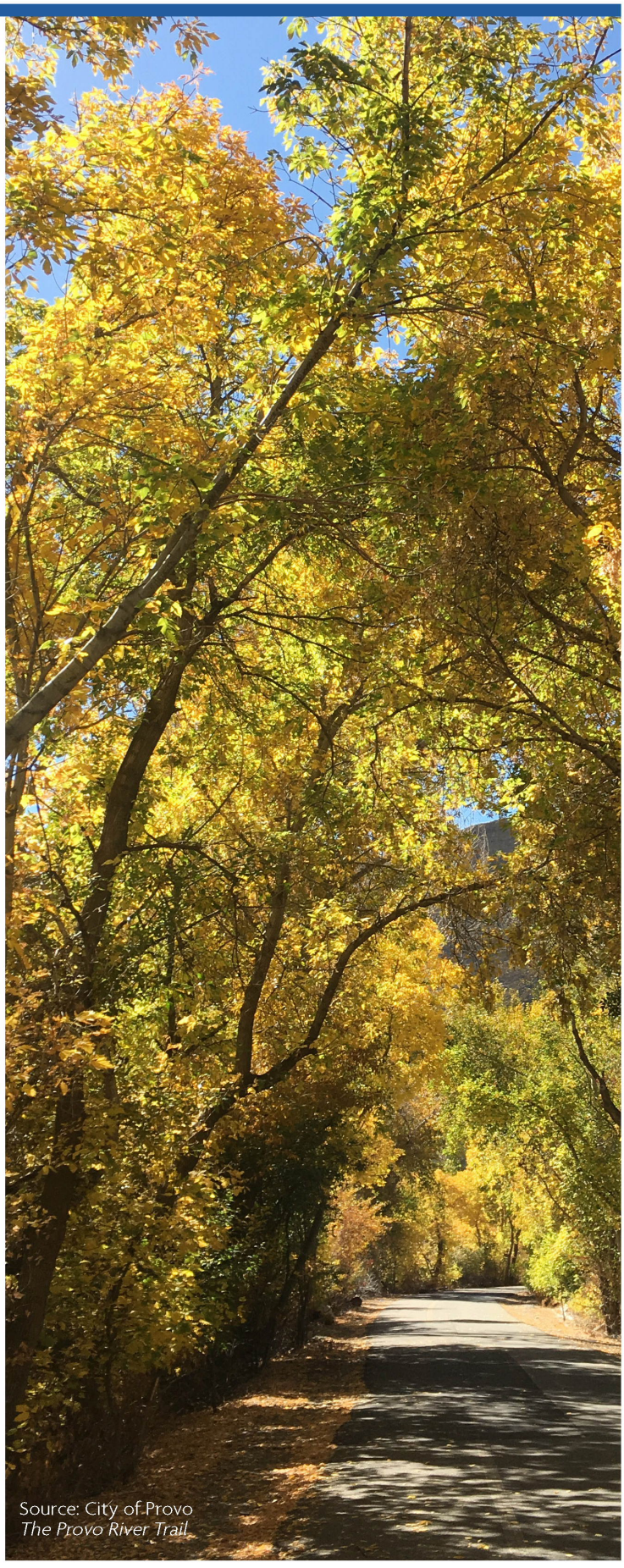
- **Improve Hydrology:** Restoration of the natural hydrology of the river or lake by establishing natural flows and limiting new construction that blocks stream flows.
- **Plant Vegetation:** Plant native wetland vegetation, including emergent plants and wetland species.
- **Create Structures:** Natural structures such as planted areas and stands of trees in wetland areas, human-made or natural, provide aquatic and avian life habitats.
- **Connect Wetland Areas:** Restoring or improving connections between wetland areas can support wildlife corridors and improve the hydrology of the system.

GUIDELINES AND BEST PRACTICES

Water-wise Best Practices

Water use is a community-wide effort where individuals and the City can work together to make a significant contribution to ensure the sustainable use of this valuable resource. The following are some examples of how the City and community could support the goal of using less water.

- **Efficient Irrigation:** Explore strategies to reduce evaporation, such as watering plants and lawns early in the morning or late in the evening. Advocate for the use of drip irrigation or soaker hoses to provide water directly to plant roots. Adjust irrigation schedules and encourage the use of rain and wind sensors or soil moisture sensors to prevent overwatering .
- **Native and Drought-tolerant Landscaping:** Promote the use of native or drought-tolerant plant species that require less water and are better adapted to the local climate. Shade from trees can also further reduce water loss from surrounding plants and soils.
- **Efficient Indoor Water Use:** Install water-efficient fixtures, such as low-flow toilets, showerheads, and faucets. Install water-saving appliances, such as dishwashers and washing machines, with high-efficiency ratings.
- **Rainwater Harvesting:** Collect and store rainwater from roofs in rain barrels or cisterns for later use in irrigation and direct downspouts toward garden areas to capture rainwater and minimize runoff.
- **Education and Awareness:** Promote water conservation through educational campaigns, community outreach programs, and information on water-saving practices to residents and businesses.
- **Policy and Regulation:** When appropriate, support water conservation policies and regulations, such as water-efficient building codes.
- **Incentives and Tools:** Promote incentives, rebates, or tax credits for the installation of water-efficient fixtures, appliances, and landscaping. Promote the MyUsage portal so residents can track their water use.



Source: City of Provo
The Provo River Trail

GUIDELINES AND BEST PRACTICES

Provo River and Utah Lake Recreation Amenities

Recreation along the Provo River and around Utah Lake includes boating, fishing, paddleboarding, kayaking, bird watching, gathering, hiking, and biking. Recreation amenities should be designed to enhance visitors' experience while minimizing negative impacts on the environment. When planning and implementing future amenities, accessibility, and safety should be a top priority. These amenities are organized into three sections: (1) facilities, amenities and gathering spaces, (2) linear facilities, and (3) programs and activities.

Facilities, Amenities, and Gathering Spaces

- **Public Parks and Beaches:** Developing public parks along the Provo River and designated areas along Utah Lake provides opportunities for gathering and should include seating areas, grills, restroom facilities, and playgrounds.
- **Boat Ramps and Marinas:** Constructing boat ramps and marinas for easy access to the river and the lake to accommodate various types of non-motorized watercraft, including paddleboards, kayaks, and canoes. Depending on space available, boat rentals and boat storage facilities might be appropriate.
- **Fishing Piers and Docks:** Building fishing piers and small docks along the shoreline provides dedicated fishing areas and may include amenities such as seating and fish cleaning stations. Encourage step-down entry points to access the water.
- **Viewing Decks and Boardwalks:** Boardwalks and elevated platforms minimize the impacts of recreation in sensitive ecosystems when they are strategically placed along the river or lakeshore. They can also provide places for scenic views, wildlife viewing, walking, and hiking.
- **Wildlife Viewing Areas:** Designate areas away from conflicting uses for observation of wildlife with interpretive signage to educate visitors about the local habitat of the lake and its surrounding ecosystem.
- **Nature Centers and Interpretive Centers:** Nature centers or interpretive centers near Utah Lake and the Provo River would serve as educational hubs to provide information about ecology, history, and conservation efforts through exhibits, interactive displays, and programs.
- **Children's Play Areas:** Playgrounds, interactive art sculptures, splash pads, and eddy pools are opportunities for children to recreate and engage with the water.
- **Facility Enhancements:** Improvements to existing amenity areas could include visitor centers, educational centers, information kiosks, and picnic shelters to provide a positive visitor experience.
- **Gathering Areas:** Gathering areas should be located near parking areas and restrooms, include trash receptacles, and minimize impact on natural habitat. Overhead shelter structures are ideal in the local climate and should be designed to blend in with the natural environment and not impede scenic views. Gathering areas should be properly maintained and cleaned to prevent trash and other pollutants from contaminating the environment.

The Community survey suggestions a high priority for the river and lakeshore is to

INCREASE AMENITIES.

Other common requests include more restrooms, lighting, and trails.

Community Survey Findings

GUIDELINES AND BEST PRACTICES

What does the Provo Community like to do along the river and lakeshore?

44%
Meeting and gathering with friends and family

41%
Fishing

38%
Running and walking

Community Survey Findings

Trails and Pathways

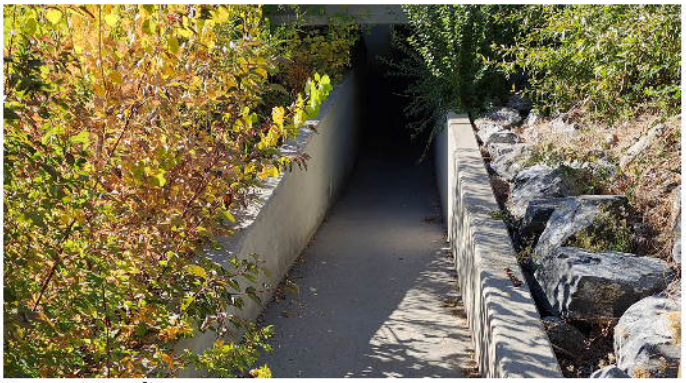
- **Blue Trails:** Establishing a water-based recreational trail that primarily focuses on non-motorized watercraft activities, such as kayaking, canoeing, paddleboarding, or rowing, with marked access points or put-in/takeout locations for watercraft. These should be accompanied by signage that provides information about the trail, safety guidelines, and points of interest. Blue trails can provide opportunities for wildlife viewing and may be part of larger trail systems that incorporate land-based trails for hiking, biking, or horseback riding to create a comprehensive network that allows users to explore both land and water environments.
- **Whitewater Park or Kayak Course:** A whitewater park or kayak course is a human-made and designed stretch of river where the water flow is controlled for kayaking, canoeing, or rafting to allow for training, competitions, and skill development.
- **Multi-use trails:** All trails should be designed as multiuse to accommodate walking, jogging, and cycling and include clearly posted speed limits. Trails should ensure accessibility, including meeting ADA requirements, ramps, and handrails, as appropriate. Trails should include benches, wayfinding signage, pet waste stations, water fountains, and trash receptacles. Trails may include interpretive elements or signage, art, sculpture, and rest areas. Trails should adhere to the City standard of a 14-foot trail tread surface with 2-foot shoulders on both sides.
- **Tunnels and Under Crossings:** Safe crossings under roadways limit conflicts with vehicular traffic and allow for an uninterrupted path of travel for the river and recreators. Tunnels and under crossings should adhere to the City standard of 14 feet interior on new construction projects. The floor-to-ceiling clearance standard on new structures is 8 feet. Civil engineers are required to evaluate river flow lines and capacities for each tunnel and undercrossing.
- **Educational Signage and Interpretive Signage:** Interpretive signs and educational displays can educate visitors about vegetation, geology, and the history of Utah Lake and Indigenous Peoples.
- **Public Access Improvements.** Public access to the river corridor and improved recreational amenities such as trails, boardwalks, and observation points along the river provide opportunities for walking, cycling, and wildlife viewing.
- **Fitness Courses and Programs:** Fitness courses and exercise stations for all ages along trails or open spaces allow residents to connect with nature and promote a healthy and active lifestyle.

Activities and Programs

- **Water Sports Equipment and Rentals:** Rental facilities for water sports equipment, such as paddleboards and kayaks, can allow individuals to enjoy various water activities.
- **Public Art:** Public art can support the local arts community and help visitors connect to the local culture. Art could include water or cultural themes and serve as a landmark or a place to play. This might consist of murals to activate vacant walls in underpasses, sculptures and interactive art in landscape, and performance areas for showcasing local artists.
- **Community Events:** Hosting a variety of events along the river and lakeshore, such as concerts, food and beverage vendor gatherings, outdoor markets, and sporting/recreation events, supports these areas as vibrant cultural and recreational hubs to attract visitors and foster a sense of community pride.
- **Camping:** Designated camping areas for tent or recreational vehicle camping with designated fire rings, picnic areas, and hookups for electricity and water can minimize disruption to the habitat and offer additional opportunities for recreation and enjoyment of Provo River and Utah Lake.
- **Placemaking:** Installing seating areas, gathering spots, and public art installations creates inviting spaces that promote relaxation and social interaction. In addition, shade elements, adequate restrooms, and trash receptacles encourage safe, clean, and comfortable environments.
- **Food Vending:** Identifying possible places for food trucks, markets, or concessions could draw people in and generate revenue depending on the event.

Source: City of Provo
The Provo River Trail Signage

Source: City of Provo
The Rivers Nature Area Pathway Connections



Source: City of Provo
The Provo River Trail Undercrossing

Source: City of Provo
The Provo River Trail Signage and Wayfinding

GUIDELINES AND BEST PRACTICES

Recommended Plant List

It is important to choose plants that are well suited to the region's climate, soil conditions, and natural habitat when considering native, riparian, and wetland plants. Riparian plants can help stabilize soil, reduce erosion, improve water quality, and provide food and habitat for a variety of wildlife species. Choose plants that are adapted to wetter conditions and can tolerate periodic flooding. The list below comes from the Utah Bureau of Land Management's Sensitive Plan Species List. For a list of water-wise plants, please refer to Utah State University's Water-wise Plants for Utah Landscapes.

Riparian Plants for Utah Rivers and Lakes

Trees

- Narrowleaf Cottonwood - *Populus angustifolia*
- Fremont Cottonwood - *Populus fremontii*
- River Birch - *Betula nigra*
- Netleaf Hackberry - *Celtis reticulata*
- Peachleaf Willow - *Salix amygdaloides*
- River Hawthorn - *Crataegus rivularis*

Shrubs

- Red Osier Dogwood - *Cornus sericea*
- Elderberry - *Sambucus nigra*
- Big Sagebrush - *Artemisia tridentata*
- Snowberry - *Symphoricarpos*
- Yellow Rabbitbrush - *Chrysothamnus viscidiflorus*
- Douglas Hawthorn - *Crataegus douglasii*
- River Hawthorn - *Crataegus douglasii var. rivularis*
- Golden Currant - *Ribes aureum*
- Woods' Rose - *Rosa woodsii*
- Coyote Willow, Narrowleaf Willow - *Salix exigua*
- Three-leaf sumac - *Rhus trilobata*
- Fragrant Sumac - *Rhus aromatica*

Perennials

- Indian Hemp- *Apocynum cannabinum*
- Western Yarrow- *Achillea millefolium*
- White Sagebrush, Prairie Sage - *Artemisia ludoviciana*
- Silver Sagebrush- *Artemisia cana*
- Showy Milkweed- *Asclepias speciosa*
- Common Sunflower- *Helianthus annuus*
- American Licorice, Wild Licorice- *Glycyrrhiza lepidota*
- Prostrate Vervain, Carpet Vervain - *Verbena bracteata*
- Desert Paintbrush - *Castilleja chromosa*
- Silvery Lupine - *Lupinus argenteus*
- Western Sweetroot - *Osmorhiza occidentalis*
- Showy Cinquefoil - *Potentilla gracilis*
- Gooseberry Globemallow - *Sphaeralcea grossulariiefolia*

Considerations on Invasive Eradication

It is important to note the challenge for trees to grow in a dry, arid environment such as Utah and the Wasatch Front. While some invasive species should be eradicated for environmental and ecological safety, some species serve a role in stabilizing streambanks and providing shade for people, animals, and fish.

Invasive Species and Prohibit Use Plants

The following is an incomplete list of plants that are invasive to Utah Lake and should be eradicated to minimize potential disruptions to the ecosystem. Refer to the City Do Not Plant List, state resources, and additional information for Utah Lake, as appropriate.

Invasive Plants at Utah Lake:

- Cotton Thistle - *Onopordum acanthium*
- Common Reed - *Phragmites australis*
- Common Chicory - *Cichorium intybus*
- Perennial Pepperweed, Tall Whitetop - *Lepidium latifolium*
- Bittersweet Nightshade, Snakeberry, Blue Bindweed, Poisonberry - *Solanum dulcamara*
- Moth Mullein - *Verbascum blattaria*
- Russian Olive - *Elaeagnus angustifolia*
- Yellow Sweetclover, Yellow Clover, Yellow Melilot - *Melilotus officinalis*
- Houndstongue - *Cynoglossum officinale*
- Spiked Loosestrife, Purple Lythrum - *Lythrum salicaria*
- Puncturevine (goatheads) - *Tribulus terrestris*

Additional Plants to Avoid from the State of Utah:

- Hoary Cress, Whitetop - *Lepidium draba*
- Musk Thistle - *Carduus nutans*
- Oxeye Daisy - *Chrysanthemum leucanthemum*
- Canada Thistle - *Cirsium arvense*
- Poison Hemlock - *Conium maculatum*
- Field Bindweed - *Convolvulus spp.*
- Leafy Spurge - *Euphorbia esula*
- St. John's Wort - *Hypericum perforatum*
- Dyer's Woad - *Isatis tinctoria*
- Dalmation Toadflax - *Linaria dalmatica*
- Yellow Toadflax - *Linaria vulgaris*
- Scotch Thistle - *Onopordum acanthium*
- Saltcedar, Tamarisk (Tree/Shrub) - *Tamarix ramosissima*
- Garlic Mustard - *Alliaria petiolata*
- Myrtle Spurge - *Euphorbia myrsinites*

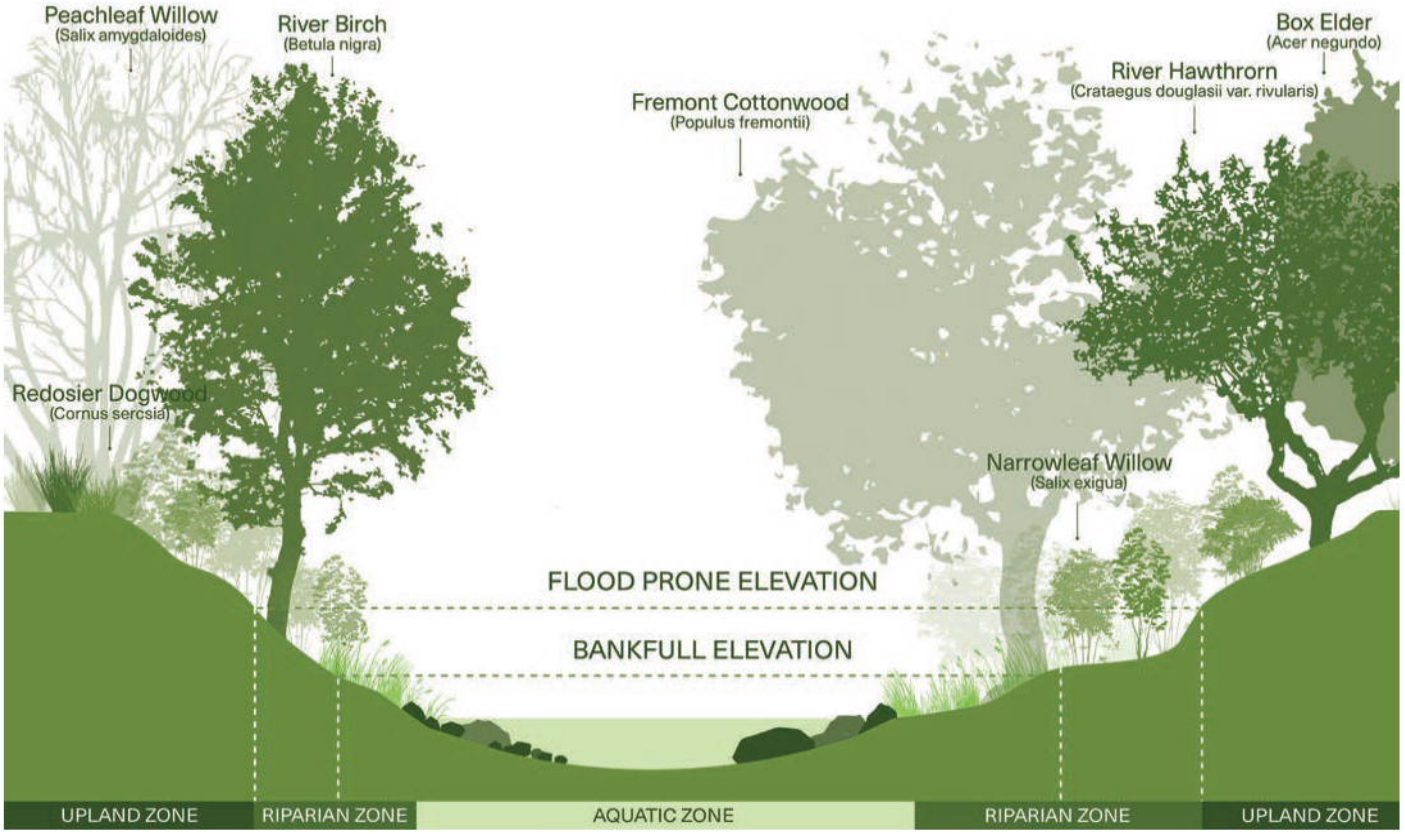


Figure 17: Riparian Vegetation Section View

4

IMPLEMENTATION

Introduction

Implementation is important for the effective execution of the goals and strategies. Methods and strategies can vary depending on the nature of the initiative, the context, and the resources available. Flexibility and adaptability are key, as unforeseen challenges may arise during implementation. Regular communication, collaboration, and a commitment to achieving the desired outcomes are crucial for successful implementation.

The following chapter explores areas of opportunity along the corridor, partnerships, and funding considerations.

AREAS OF OPPORTUNITY

The Character Zones Map is shown in Figure 18.

Each character zone includes differing areas of opportunity. Provo Canyon to Utah Lake has a different identity, character, and experience. These four character zones acknowledge the varied nature of the Provo River and aim to address different interventions and investments to meet the goals of this plan.

Legend

- Habitat Restoration
- Views
- Wayfinding/Signage
- Trail Improvements and Connections
- Commercial Opportunities
- Camps
- Recreational Opportunities
- Safety

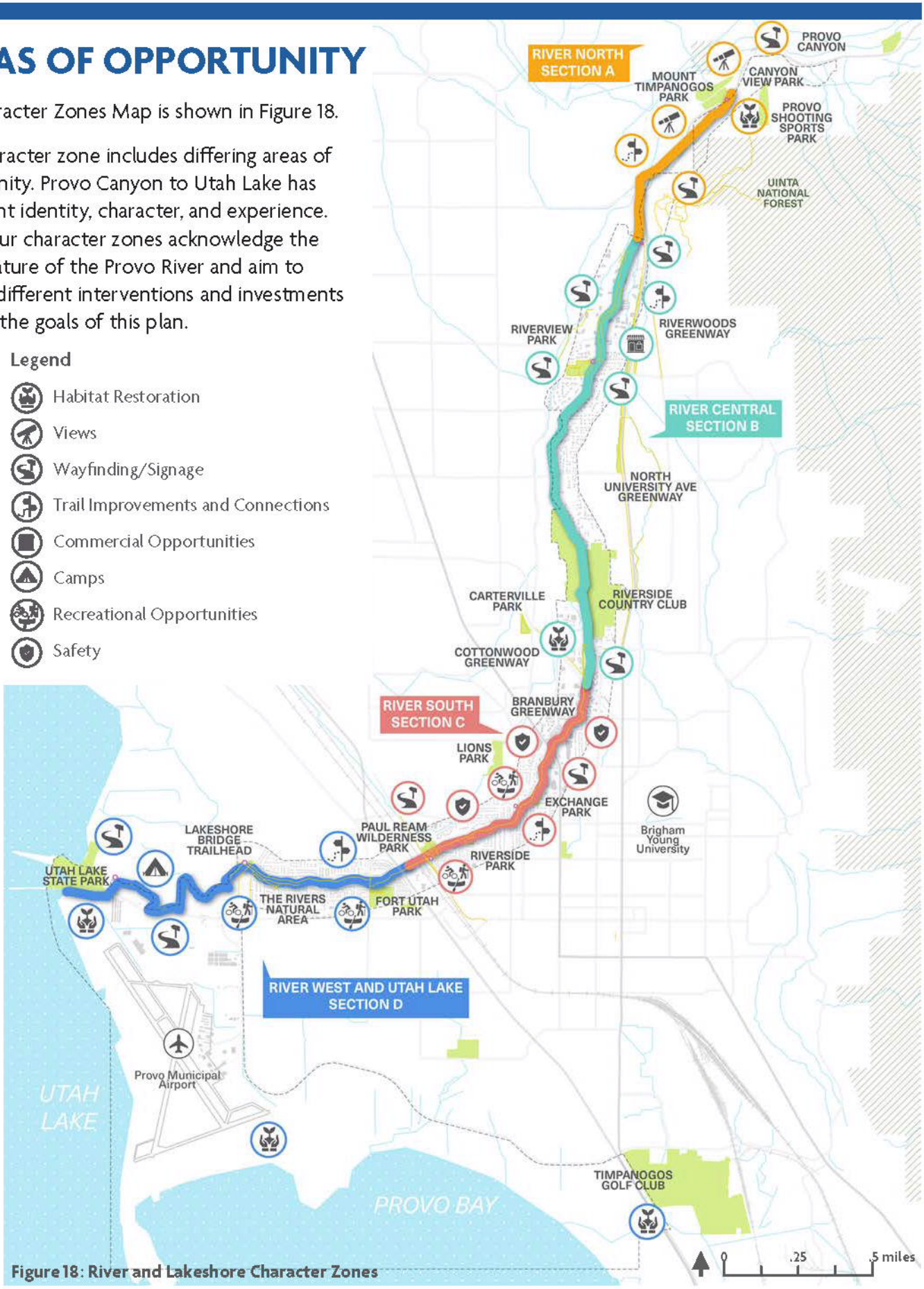


Figure 18: River and Lakeshore Character Zones

IMPLEMENTATION

River North
Section A: Tourism Zone/River Bottoms

The Provo River enters north of the city at Provo Canyon. This section of the river is a favorite of locals and tourists, with camping and trailheads and the Provo River Trail running adjacent to SR 189, Provo Canyon Road, a major thoroughfare.

River Central
Section B: Development Zone

As the river enters the more developed portion of the city, it runs through numerous private developments and Riverside Country Club and Golf Course. The Provo River Trail diverges to run adjacent to University Parkway, disconnecting the "River Trail" from the Provo River.

River South
Section C: Community Zone

As the river transitions from flowing south out of the mountains to the west toward the lake, the River Trail converges with the river once again, running through Exchange Park, Riverside Park, and Paul Ream Wilderness Park, with multiple trailheads and community connections made with many under and over crossings to connect the trail.

River West and Utah Lake
Section D: Natural Zone

After the Provo River and River Trail cross under I-15 toward Utah Lake, the river character transitions to more natural, wild, and rugged in nature, connecting to Utah Lake State Park marina. The Dike Road follows the lake's shoreline. Utah Lake shorelines are shallow and dominated by grasses for wildlife habitat. The influence of Provo Airport is notable in this area.

River North

Section A: Tourism Zone/River Bottoms

The River North Map is shown in Figure 19.

The following are potential projects along this segment:

- Create a connection from the Provo River Trail to the Bonneville Shoreline Trail and Murdoch Canal Trail, and consider connecting trails to Provo Canyon and Rock Canyon trailhead.
- Add signage to promote additional trail connectivity.
- Develop concept plans for amenities and enhancements to Provo Canyon, including an amphitheater and other event facilities. Improve wayfinding and access, restroom facilities, and gathering spaces to increase the visitor experience.
- Identify areas for habitat restoration and streambank stabilization along this segment.

Legend

- River and Lakeshore Boundary
- Existing Trail
- Trailhead
- Park
- National Forest
- Habitat Restoration
- Views
- Wayfinding/Signage
- Trail Improvements and Connections

- "Partner with Central Utah Water Conservancy District to open the Olmstead campus and museum that are along the river at the mouth of the canyon. Open access to that campus from the river trails

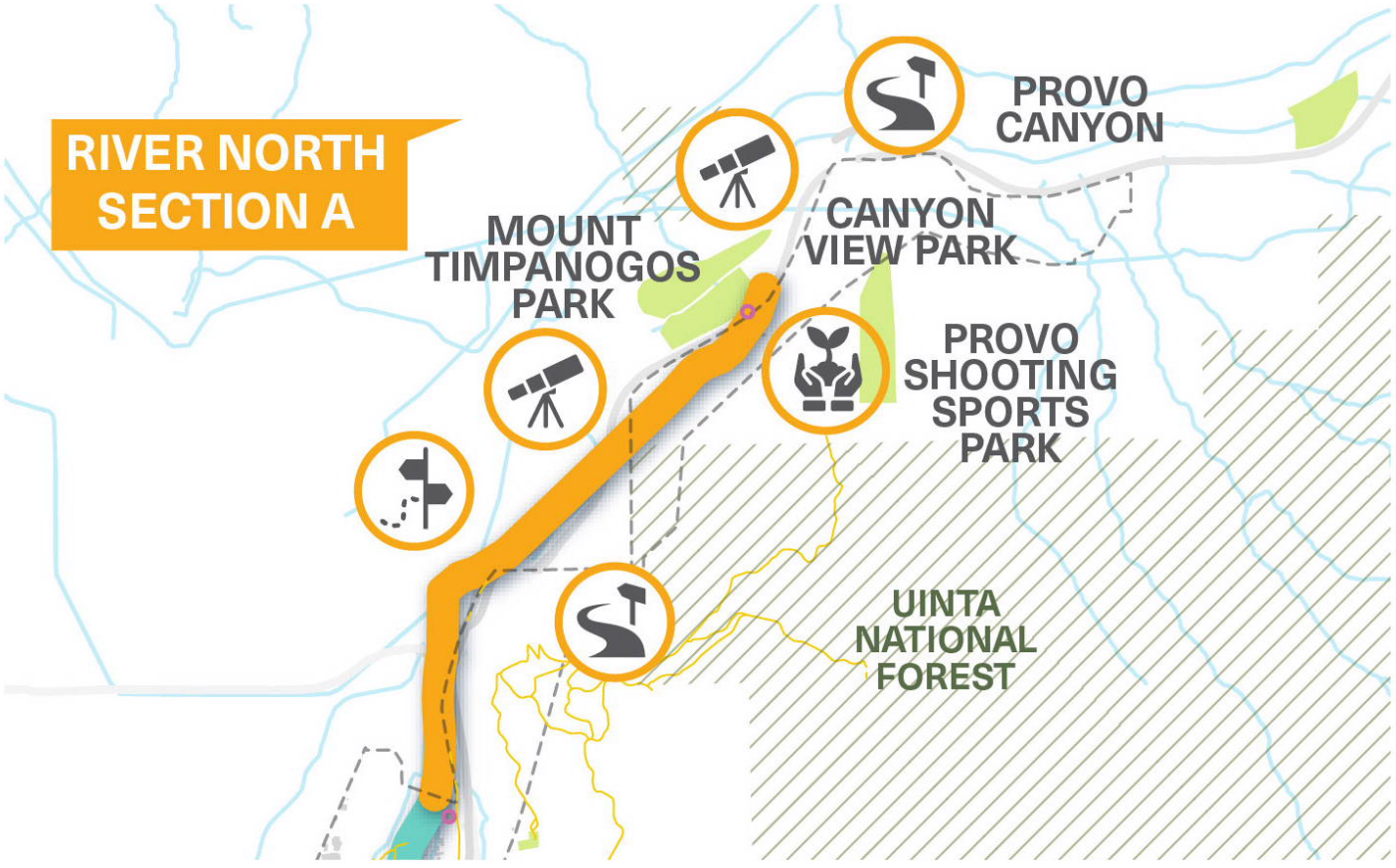


Figure 19: River North

Figure 20: River Central

River Central

Section B: Development Zone

The River Central Map is shown in Figure 20.

The following are potential projects along this segment:

- Expand and improve the Provo River trail between Utah Lake to 5600 North, University Parkway to State Street, and State Street to 820 North.

River South

Section C: Community Zone

The River South Map is shown in Figure 21.

The following are potential projects along this segment:

- Make improvements to Paul Ream Wilderness Park, Riverside Park, and Exchange Park.
- Safety enhancements along the length of this segment to include increased maintenance and landscape improvements to enhance visibility, increased lighting, addition of emergency call boxes, and signage.
- Add additional amenities in key locations, such as benches, trash receptacles, murals and sculptures, and shade elements.
- Add lighting to all underpasses and murals, and increase maintenance to ensure cleanliness.
- Coordinate with the Police Department to explore camera installation and enhanced security at areas of concern, including State Street bridge, Columbia Lane, 820 North, the rail track bridges toward I-15, the Pump House at 820 North, and the small building at 2555 West 370 North.
- Improve trail conditions along the 3-mile section of Exchange Park by widening the trail, repairing cracks, increasing signage and lighting, adding amenities such as benches and trash receptacles, and, as appropriate, restrooms.
- Encourage the addition of neighborhood trail connections to additional City-owned property adjacent to the park for public access and increased amenities.

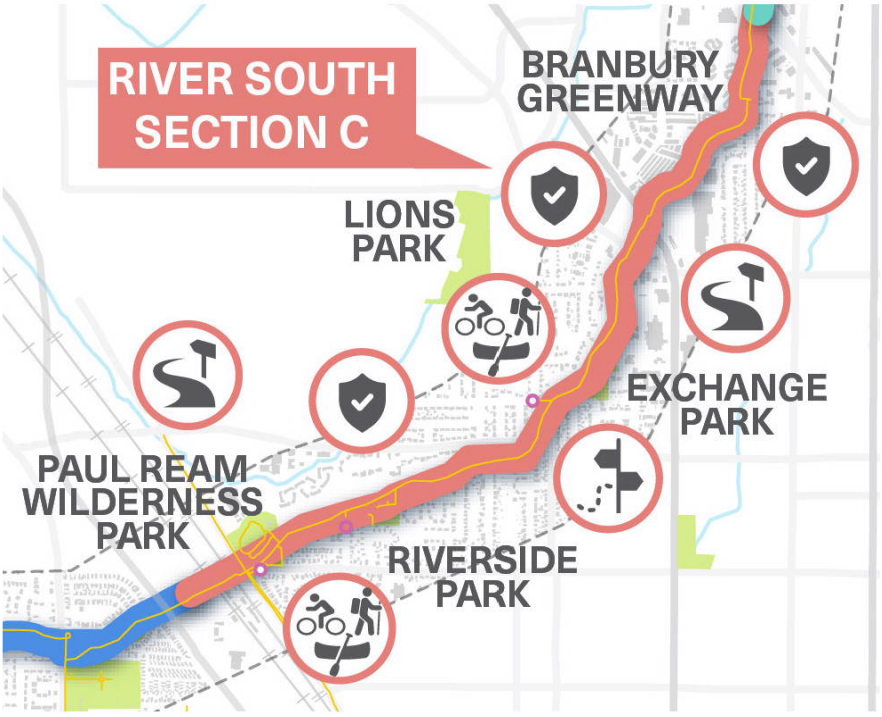


Figure 21: River South

Legend

- River and Lakeshore Boundary
- Existing Trail
- Trailhead
- Park
- Safety
- Recreational Opportunities
- Wayfinding/Signage
- Trail Improvements and Connections

River West and Utah Lake

Section D: Natural Zone

The River West and Utah Lake Map is shown in Figure 22.

The following are potential projects along this segment:

- Increase maintenance and safety enhancements along the length of this segment, such as landscape improvements to enhance visibility, increased lighting, the addition of emergency call boxes, and signage.
- Develop trails, boardwalks, and observation points along the river to provide opportunities for wildlife viewing, with a particular focus on the area south of Lakeview Parkway.
- Enhance public access to the river corridor by creating launches for recreational activities such as kayaking and paddling.
- Create a children's splash zone where the water is slowed with a shallow pool and play beach.
- Improve local and regional connections to Utah Lake State Park through signage and entrance enhancements.
- Identify locations along the River or Lake for camping facilities, ensuring no disruption to habitats or residential areas.
- Partner with Utah State Park and Utah Lake Authority to explore a master planning/design effort for enhanced recreational opportunities at the park and develop a phasing plan for implementation.
- Support efforts of the Utah Lake Authority for a Utah Lake Trail, as well as collaborative efforts by local groups to build trails and outdoor educational classrooms in this area south of Utah Lake State Park. Utilize the Dike Road to serve as a portion of a trail connection for a contiguous trail around Utah Lake.
- Increase gathering and passive recreation at Utah Lake in alignment with previous plans developed by Parks and Recreation, exploring the opportunity for a community gathering space that celebrates the water without encouraging water activities.
- Encourage any commercial or industrial development along the river to include public access and trail facilities

River West and Utah Lake

Section D: Natural Zone

The recent annexation of 106.19 acres at approximately 2800 South, 750 East demonstrates the City's commitment to future land, water, and open space investments. Much of the land lies in a wetlands area and has been zoned under the Open Space, Preservation and Recreation Zone to protect and preserve for future generations. Modest improvements to the land, including wetlands and habitat creation, will support the goals within this plan.

Legend

- River and Lakeshore Boundary
- Existing Trail
- Trailhead
- Park
- Recreational Opportunities
- Habitat Restoration
- Camps
- Wayfinding/Signage
- Trail Improvements and Connections
- Provo Municipal Airport

Figure 22: River West and Utah Lake Map

Source: Design Workshop
Utah Lake

Priority Project: Utah Lake State Park Facilities

Residents expressed interest in developments at Utah Lake, particularly additional trails, facilities, rental options, attractions, and retail space.

44%

of residents would like to see more recreational facilities at Utah Lake

34%

of residents would like to see more rentals at Utah Lake

Community Survey Findings

Partnerships

Partnerships are essential for the area's future. Partners like Brigham Young University (BYU), United States Forest Service (USFS), Mountainland Association of Governments (MAG), and the Utah Lake Authority play a critical role in the future of the river and lakeshore. These and other stakeholders can work together to promote the guidelines and recommendations in this plan.

- **Federal Government:** The City can work in partnership with Federal agencies, including the U.S. Forest Service (USFS) and the Utah Division of State Parks for future improvements and to promote sustainable development practices.
- **State:** State agencies, including the State Department of Natural Resources and the State Department of Environmental Quality (especially the Division of Water Quality), can work in partnership with the city to promote sustainable development practices, trail maintenance projects, and environmental education programs.
- **Local Government:** The City can work in partnership with the Mountainland Association of Governments (MAG), local community groups, businesses, and organizations to promote the goals in this plan and coordinate internally between different City departments.
- **Community Groups:** Local community groups, including religious organizations like the Church of Jesus Christ of Latter-day Saints, as well as clubs, nature conservancy organizations, and others, can partner with the City to organize events, trail maintenance projects, and environmental education programs.
- **Educational Institutions**: Collaborations with educational institutions like Brigham Young University, Utah Valley University, and local schools are encouraged to conduct research, provide expertise, and offer educational opportunities related to sustainable development and environmental stewardship.
- **Private Sector:** Businesses and private sector organizations, such as recreation anglers and guides, can partner with the City to promote sustainable development practices, sponsor events, or provide funding for conservation efforts.
- **Volunteer Organizations:** Volunteer organizations such as the Utah Valley Trails Alliance (UTVA), Utah Conservation Corps, BikeWalk Provo, Conserve Utah Valley, AmeriCorps, and other service groups can partner with the City to provide labor and resources for trail maintenance and environmental stewardship projects.
- **Nonprofit Organizations:** Nonprofit organizations focused on environmental conservation, wildlife preservation, and outdoor recreation, such as the Utah Lake Authority, the Utah Lake Watershed Council, and other environmental groups, can partner with the City to offer educational programs, sponsor events, and advocate for sustainable development practices.

Empowering Community Advocates

While governmental and agency involvement is essential for future improvements to the river and lakeshore, the community also plays an important role in advocating for the future of these places. Programs should be developed and coordinated to bring local organizations together. This could include programs for volunteer clean ups, programs to increase education and awareness, and programmed events to bring people to both utilize and raise awareness of the built, social, and natural environments.

Funding Strategies

This plan is a first step in opening the door to a wide variety of programs and funding opportunities, as many programs and grants require community support and adopted plans with applications. The future of the river and lake will require short-, mid-, and long-range funding strategies. Different sources are available at the federal, state, and local levels. Private and philanthropic funders may provide financial support for targeted investments.

The City of Provo

The City of Provo should prioritize investments in City-owned property and dedicated capital improvement funding for targeted priority projects. Local funding can be allocated to specific projects through general funds, impact fees, and utility assessment or integrated into transportation projects. Larger infrastructure projects may require the creation of special districts.

Federal and State Project Funding

Federal and State funding programs vary and change from year to year. Annually researching programs available through the DNR, FEMA, and FHWA at the federal level, UDOT Transportation Funds and Community Investment Programs, and the Utah Office of Outdoor Recreation for opportunities that align with recommendations in this plan.

Government Grants

A variety of grant funding options are available from multiple local, regional, state, and federal levels. Grants usually require a formal application that aligns with targeted programs and initiatives. Often, grants have reporting requirements to quantify grant impacts.

Private and Philanthropic

Non-governmental agencies (NGOs) such as foundations, nonprofits, and land trusts are valuable partners for improvements. Private foundations and land trusts often act as intermediaries between cities and private landowners through lease agreements, fee simple purchase agreements, or conservation easements. Public-private partnerships with developers are an opportunity for municipalities, organizations, and individual property owners to work together on shared goals.

provo

Exhibit A

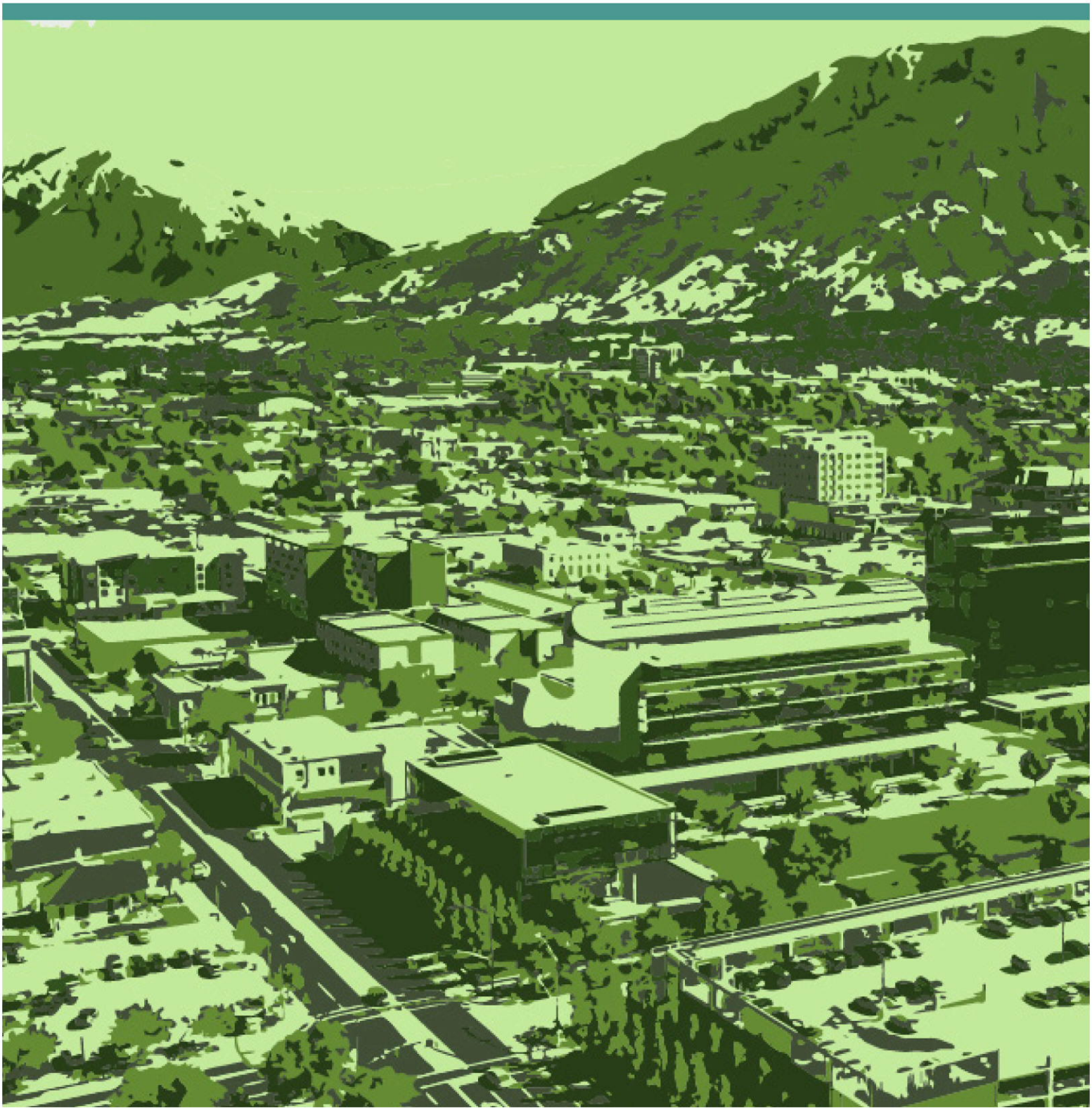
Due to document format, this exhibit will be added at a later step.

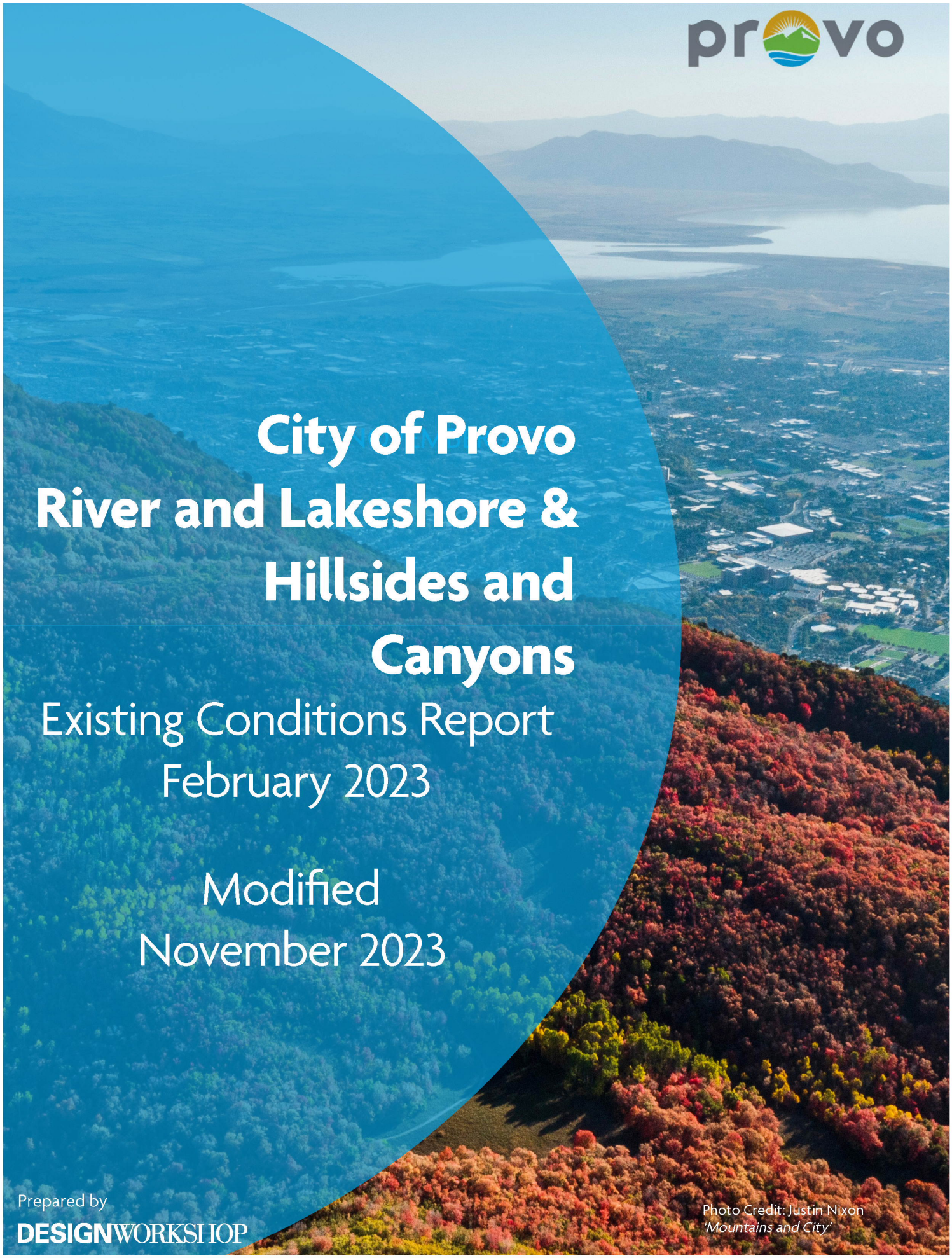
The River and Lakeshore Plan is too large to attach here in its entirety. It can be viewed online at the link below:

www.provo.org/departments/development/planning

APPENDIX A

EXISTING CONDITIONS SUMMARY





City of Provo River and Lakeshore & Hillsides and Canyons

Existing Conditions Report
February 2023

Modified
November 2023

Prepared by
DESIGNWORKSHOP

Photo Credit: Justin Nixon
'Mountains and City'

Contents

1. Introduction

INTRODUCTION

With proximity to mountains, canyons, rivers and lakes, Provo boasts abundant recreational opportunities, which its residents and visitors deeply value. The community celebrates views of the Wasatch Mountains, Provo River and Utah Lake, boasting a myriad of trails, trailheads and parks that contribute to the community connection of an outdoor lifestyle. These systems are unique and intricately connected from the Wasatch Mountains through the river to the shores of Utah Lake. **This plan attempts to balance the demand for growth, impacts from recreational use, and preservation of natural assets for the portions of Provo River, Utah Lake and Wasatch foothills within Provo City.**

There is a growing concern that development pressures will impact these assets—including development on the hillsides affecting both water quality and availability in Utah Lake and the Provo River. The foothills are characterized by a variety of flora and fauna, but they also have poor soils, fault lines, and gravel pits. The city has made significant efforts recently to protect the foothills, including the Critical Hillside Overlay. In 2020 the Critical Hillside Overlay Zone was enacted to protect the city's hillsides. However, the standards regulating development in the foothills may still be loosely interpreted and can potentially result in unsightly or hazardous conditions for residents.

There have been considerable improvements to Utah Lake, including the Provo Delta Restoration Project and efforts to restore the endangered June sucker habitats. However, Utah Lake has dangerous impaired water quality conditions from harmful algal blooms (HABs). Provo River, which is hidden in many parts of the community, has decreased water flows impacting lake levels.

Why do this now?

Following the development of the Provo City General Plan and Conservation and Resilience Plan, Provo City desires to build on these foundations by developing a Hillsides and Canyons Plan and a Rivers and Lakeshores Plan. These specific plans focus on areas of the city that have distinct attributes and include specific goals, actions and policies. This integrated approach ensures efficiency in planning efforts and synergies in implementation.

- **Hillsides and Canyons.** The hillsides and canyons on the east side of Provo are important for recreation opportunities, visual aesthetics, natural systems and access to nature—all of which are important community values identified in the General Plan. The purpose of the Hillsides and Canyons Plan is to establish policies related to development, preservation and conservation to facilitate the best outcomes possible and help them retain their distinct characteristics and safeguard the city's natural features.

- **River and Lakeshore.** The Provo River and Utah Lake are recreational and economic assets within the community. This plan intends to emphasize the river and greenway's urban ecology and economic opportunities by exploring options for economic development with open space amenities and adjacent development opportunities. The lakeshore portion of this plan will explore opportunities for restoration and integrate efforts led by the Utah Lake Authority, Utah Lake State Park and Federal Delta Restoration, as appropriate.

INTRODUCTION

Plan Objectives

Provo's natural systems—from lake to the west and canyons to the east—are valued and ecologically sensitive habitats. These plans will review previous work and align efforts to date, provide a toolbox for hillside and lakeshore preservation, and address connectivity and recreation assets. The River and Lakeshore Plan will address long term water quality and water management, safety, improved recreational assets, embrace economic opportunity and coordinate partnerships for implementation. These plans will define development and use of the hillsides, increase education and define trails and identify impactful changes. The Hillsides and Canyons plan will define development and use of the hillsides, increase education and define trails and identify regulation changes to help balance preservation and future development. The following will be addressed in this planning process:

- Development of standards for the hillsides and river to guide policy development.
- Balancing the environmental, economic and recreation pressures of these assets and create measurable standards for success.
- Considering that these areas will mean different things to different people and aim to ensure a voice for all and balance all interests.
- Bringing the pieces of various efforts together.
- Promoting a sustainable future and a generation of stewards for these resources.

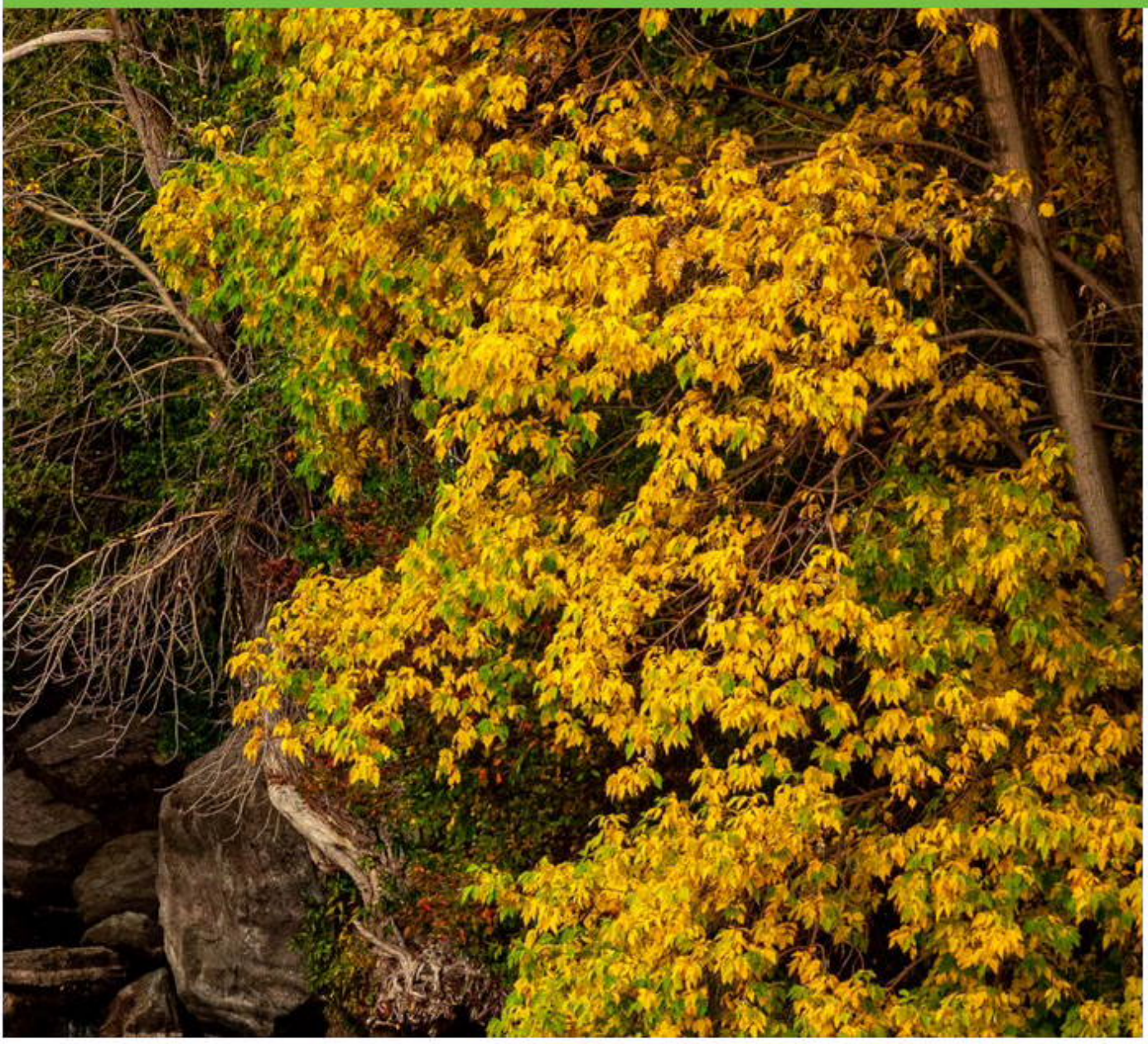
Process

A strong community process will unite the city, the development and business community, residents, and other community partners to work together for a planning effort that aligns future planning with community values. Community input is important for both plans and the process will inform the residents of both planning areas at one time and maximize engagement efforts.

The engagement proposed in this scope is light touch, relying heavily on the technical working group to guide the plan's direction. Broad community engagement includes a community wide survey and pop-up events. Efficiencies for producing both plans in tandem are built into community and stakeholder engagement and the approval process.

2
Context Analysis

Photo Credit: Melinda Pineda *'Bridge over Provo River'*



REGIONAL CONTEXT

Regional Context

Provo, the fourth largest city in Utah, is situated in Utah Valley, south of Salt Lake City. The city is bordered by mountains to the east and north and Utah Lake to the west (See Figure 1). Provo is encompassed by an abundance of natural amenities and outdoor recreational assets including mountains, canyons, river and lakes. Interstate 15 intersects Provo running north and south, while highway 189 parallels the Provo River as it enters city boundaries to the north. Provo's regional connectivity to Salt Lake City and its proximity to an international airport supports worldwide visitors, many of whom come to enjoy the city's recreational opportunities.

District Map

Refer to Figure 1, District Map.

The district map provides an overview of land use and historical areas within the City of Provo, including Wasatch Choice (WC) Significant Centers, the Historic Building District, Historic Memorial Markers, State and Municipal Lands, and Equity Focus Areas.

Wasatch Choice 2050 Vision Significant Centers: The Wasatch Choice (WC) Significant Centers are part of the regional land use types used in the Wasatch Choice 2050 Vision Map showing regionally significant centers throughout the region. The Significant Centers shown within the District map include the following centers and area:

- Educational Center: Brigham Young University (BYU)
- Employment District: Riverwoods
- Industrial District: Mountain Vista Industrial Park, East Bay
- Special District: Provo Airport
- Urban Center: Downtown Provo

Historic Building District: The historic downtown in Provo is considered a valuable asset to the community. It is rich with culture, a mix of historic buildings, food and entertainment options, and walkability throughout the downtown area.

Historic Memorial Markers: Memorial Markers are locations of historical monuments and memorial markers throughout the region. A marker is typically identified by a decorative plaque. An example includes the Provo City Veterans Memorial, Fort Utah or Saw and Grist Mills.

State and Municipal Lands: The city limits of Provo extend into the Uinta National Forest. As such, Provo partners with many state and municipal lands within city limits. Additionally, the lakebed of Utah Lake is owned by the State of Utah. Planning partnerships include:

- US Forest Service (USFS): Uinta National Forest
- Bureau of Land Management (BLM)
- State Wildlife Reserve/Management Area (DNR): Uinta National Forest (State Inholding)
- State Sovereign Land (Utah Division of Natural Resources): Utah Lake

Equity Focus Area: The Mountainland Association of Government (MAG) committees and Board adopted the Equity Focus Areas framework that uses census block groups to aid transportation planning efforts. MAG categorizes the census groups into the following:

- Greater than 25% Low-Income — included in low-income populations are those lacking access to reliable and efficient transportation, which can be a significant barrier to economic mobility.
- Greater than 40% Persons of Color — this category is comprised of racial-ethnic minority populations, as many land use and transportation investments in the U.S. have had disproportionate adverse impacts upon communities of color.
- Greater than 10% Zero-Car Households — this category includes all zero-car households, including those with disabilities, depend more on transit, paratransit, walking, and bicycling to reach employment and other destinations.

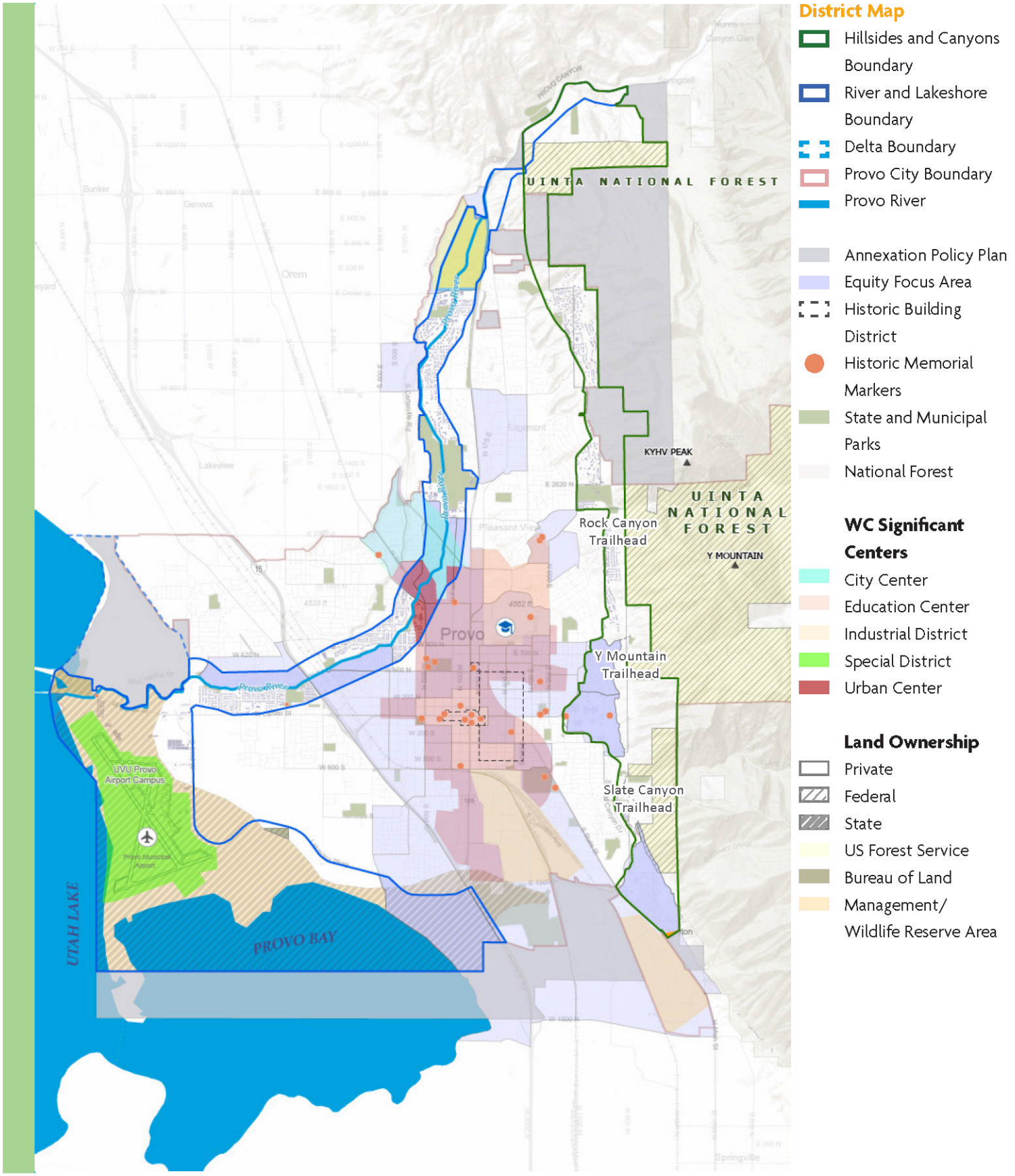


Figure 1: District Map

Source: City of Provo, Utah Geospatial Resource Center, Wasatch Front Regional Council, Design Workshop

REGIONAL CONTEXT

History

The earliest known inhabitants roamed the valleys of the Great Basin from about 10,000 B.C. to A.D. 300-500. After an impactful drought, those who resided near what is known as Provo consisted of Paiutes, the Utes and the Shoshone. These early inhabitants relied heavily on natural resources, including the hillsides, canyons, river and lakeshore, for survival.

Canyons and Hillsides History

Provo's canyons were developed through the forces of nature and utilized by humans over thousands of years. Before indigenous peoples inhabited the area, the Provo River continually carved out the canyon through forces of erosion. The Timpanogos Utes occupied the canyon's boundaries, using the river as a food source for fish. The Utes resided in both Utah Valley and the Uinta Basin. The Provo Canyon was used as a connection for communication and interaction[1].

The Church of Jesus Christ of Latter-day Saints settlers arrived to the area in the 1800s. An indigenous trail was the only established travel route through the canyons until Provo Canyon Road was built as proposed by William Gardner in 1852. The road soon led to communities being developed around the area. This new accessibility also led to more travel through the canyon. Visitors to the canyon increased with the popularity of outdoor recreation including camping, fishing and sightseeing. The canyon and hillsides area continue to be a valued asset to the community. The increased use, alongside development and environmental pressure, results in potentially harmful impacts to the hillsides and canyons into the future.

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1 Provo Canyon History. Provo Canyon. (n.d.). Retrieved November 30, 2022, from https://www.provocanyon.us/provo-canyon-history.html#:~:text=Built%20in%201857%2D58%2C%20the,attack%20of%20the%20U.S.%20Army.

REGIONAL CONTEXT

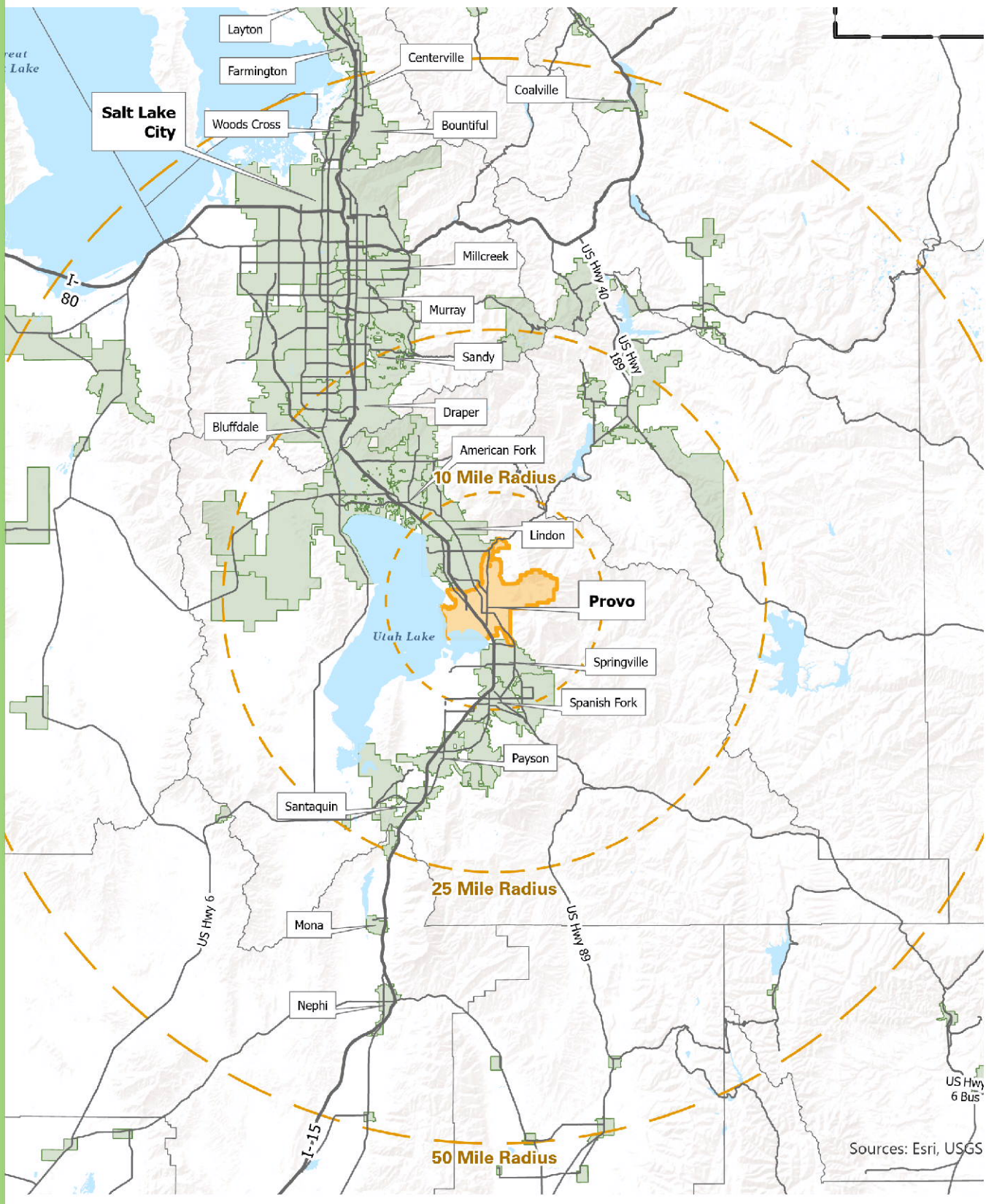


Figure 2: Regional Context Map

RELEVANT PLANNING EFFORTS

Relevant Planning Coordination

A key component of this planning process was reviewing existing local and regional planning efforts to understand previous and concurrent efforts that align with the river, lakeshore, canyons and hillsides. The following section summarizes our understanding of Provo's previous and current planning efforts, including what has been executed, and what remains to be implemented. The following goals are addressed:

- Understand the city's current system as it relates to the river, lakeshore, hillsides and canyons.
- Review strategies, recommendations, and action items from prior plans that can be supported and built upon in this plan.
- Ensure previous work and current policies are reflected in the Plan to be consistent in recommendations.

Provo City
Parks and Recreation Master Plan

2021

Hillsides and Canyons

The Provo Parks and Recreation Plan, Provo Southeast Neighborhoods Plan, Critical Hillsides Overlay Zone, and Provo Trails Plan were reviewed as foundational efforts for the hillsides and canyons. The recommendations and goals from the four plans serve as building blocks for the Hillsides and Canyon Plan. They lay the foundation of current conditions and efforts. The following list highlights the key takeaways from each of the reviewed plans.

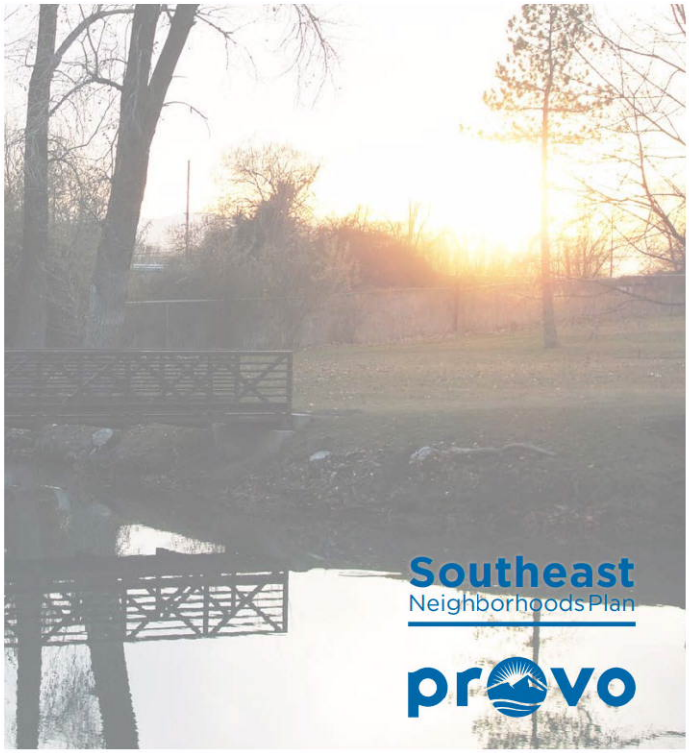
1. Provo Parks and Recreation Plan: The purpose of the City of Provo's Parks and Recreation Master Plan Update is to provide a roadmap for future development of parks and recreational opportunities to be provided by the nationally accredited department over the next 10 years. The Parks and Recreation Department reviews projects annually. High priority services and amenities include paved and unpaved/natural trails, parks and natural areas, and outdoor recreation. The Hillsides and Canyons Plan should consider gaps in the system and the tactics that the Parks and Recreation Plan lays out to address them, including an increase in connectivity and access points to expand capacity and provide more public accessibility.

2. Critical Hillsides Overlay Zone: The Critical Hillside (CH) Overlay Zone is established to provide prudent development standards to help protect the sensitive hillside areas of Provo City's east bench. The provisions of this zone are intended to aid in the protection of ridgelines, to support the stability of slopes, and to protect existing public accesses. Restrictions within this zone have significant impacts to development that may result from the recommendations of this Master Plan. This CH Zone was established to address the concern that the hillsides area of Provo would be developed without due regard to environmental, recreational, and aesthetic considerations including natural qualities, enhanced ecological elements, and the type of growth that is sustainable. Referring to the overlay district's limitations during the development of the Plan's recommendations will help to acknowledge goals for the canyons/hillsides development and determine what development may be recommended and how.

3. Provo Trails Plan: This plan encompasses a substantial area known as the "Provo Foothills," broadly defined as the area above the urban development of Provo City but still generally in sight of the city. The study area extends north to Provo Canyon, south to Buckley Draw, west to

the residential edge of the city, and east to the ridgeline of Cascade Peak and Provo Peak. This plan assesses the challenges, obstacles, and opportunities for the trails in the Hillsides and Canyons planning area. The Hillsides and Canyons planning process should refer to this plan when making recommendations for the future. It should acknowledge what work is already being done to avoid repetition and advance existing efforts.

4. Provo Southeast Neighborhoods Plan: The Southeast Neighborhoods Plan provides a guide for the future of the Provost, Provost South and Spring Creek neighborhoods. Future development in the area, including repairs, replacements, and remodels must be consistent with both the General Plan and this Neighborhood Plan. This plan is relevant to the Master Planning process because of the impacts to development in the hillsides and canyon neighborhoods. Results from the plan to consider are policies that encouraged high density development, such as apartments and townhomes, on the west side of State Street to attract young professionals.

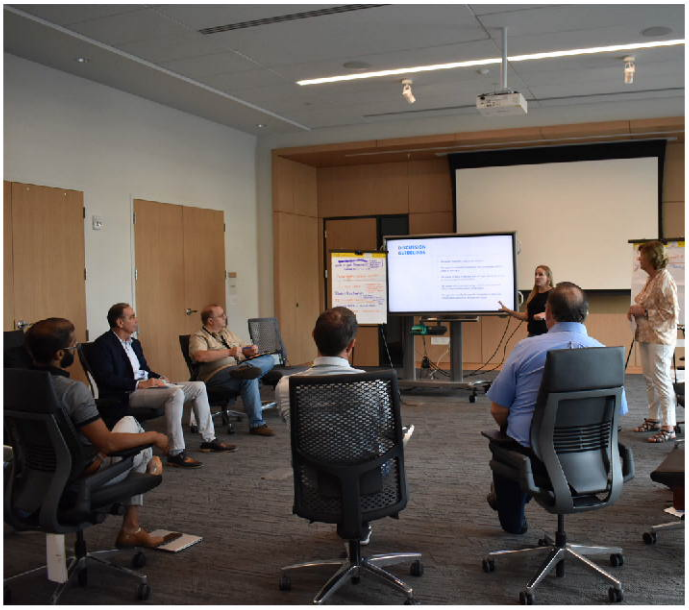


RELEVANT PLANNING EFFORTS

Focus Group Meeting Summary

Four, one-hour focus group meetings were hosted during the initial phase of this process. Individuals represented different organizations, interests and groups in Provo. The meetings were centered on specific areas of interest related to Hillsides and Canyons as well as the River and Lakeshore, and were intended to provide a greater understanding of the key components that play a role in these plans.

Focus group discussions highlighted a variety of perspectives, experiences and elements to consider. Sustainability, safety, preservation, restoration and maintenance came up in nearly every discussion, regardless of the group's focus area. The input gathered throughout these focus groups helped to identify existing conditions, challenges, and areas to prioritize for the project analyses. The key takeaways from these meetings are summarized below:



Source: Design Workshop
Relevant plans and stakeholder input were used to lay the foundation of the existing conditions report and final plans.

Hillsides and Canyons:

1. Efforts that may align with these planning efforts:
   - Master Plan for Rock Canyon
   - Land purchase interest
   - Working to address challenges with private property owners
   - Trail and accessibility improvements
   - Park enhancements
   - Potential commission representation
2. Challenges with Hillsides and Canyons:
   - Fire safety accessibility
   - Water supply
   - Hazard mitigation
   - State fire standards are seen as a minimum
   - Private property conflicts
   - Maintenance issues
3. Opportunities and goals:
   - Firewise standards are put in place
   - Riverbank restoration
   - Restore the hillsides in a more sustainable slope

RELEVANT PLANNING EFFORTS

Current City Code

Hillsides and Canyons

Multiple sections of zoning code exist with the intent of protecting the hillsides and canyons and managing development in this area. It is important to understand the existing standards in the planning area to realize how they can be supported or improved. The impacting chapters include Chapter 14.33A, Critical Hillsides Overlay Zone, and Chapter 15.05, Sensitive Lands. These sections set standards and limitations on development to limit hazards and harmful impacts to the environment.

The Critical Hillsides Overlay Zone (CH) intends to aid in the protection of ridgelines, support the stability of slopes, and protect existing public accesses. Standards included in this chapter such as limiting the percentage of the parcel within the limits of disturbance (LOD) and prohibiting tree and vegetation removal outside of the LOD, aim to preserve vegetation and encourage revegetation when suitable. Design standards within this chapter, such as those that require development to follow natural contours or specify fencing material, seek to preserve the natural aesthetics and balance them with future development. Lastly, they also consider and require mitigation of potential hazards through provisions including forbidding ridgeline development and necessitating access for fires. Table 1 provides more information on how this section is applicable to the plan's analysis.

Similarly, Chapter 15.05, Sensitive Lands, works to ensure that proposed development on sensitive lands minimizes natural hazards, protects the natural character of areas inside of the foothills, and ensures the capacity of public infrastructure to handle such development. Due to the delicate nature of the land, this chapter requires that the landowner hire a geologist or engineer to evaluate the land, placing liability in their hands. Below are key takeaways from this section.

- It is understood that slopes under 10% are considered suitable for development and over 30% are not suitable for development. As a result, the suitability assessment uses a spectrum of under 10%, 10-30%, and above 30% to consider what areas are, or are not, opportunities for development.
- There is a requirement for a letter report or a geologic report to be approved and signed by a geotechnical engineer or an engineering geologist.

Table 1: Critical Hillside Overlay Zone Takeaways

SECTION	TAKEAWAY
14.33A.090 Limits of Disturbance (LOD)	No more than 40% of a lot or parcel may be included in the LOD, except that an additional 10% of the lot may be disturbed for landscaping only.
14.33A.100 Slope Protection and Stability	The slope requirements must conform with those in Chapter 15.05
14.33A. Ridgelines	No development, including utility infrastructure, may be located within 100 feet (map distance) from either side of the crest of a ridgeline designated for protection by the city.
14.33A.130 Streets and Access	An easement shall be granted to Provo City over and across all private development roads for utility maintenance and fire and emergency access.
14.33A.180 Stream Corridor and Wetland Protection	All buildings, structures, and parking lots shall be set back at least 50 feet horizontally from the ordinary high-water mark of stream corridors.

4
Hillsides and Canyons Analysis

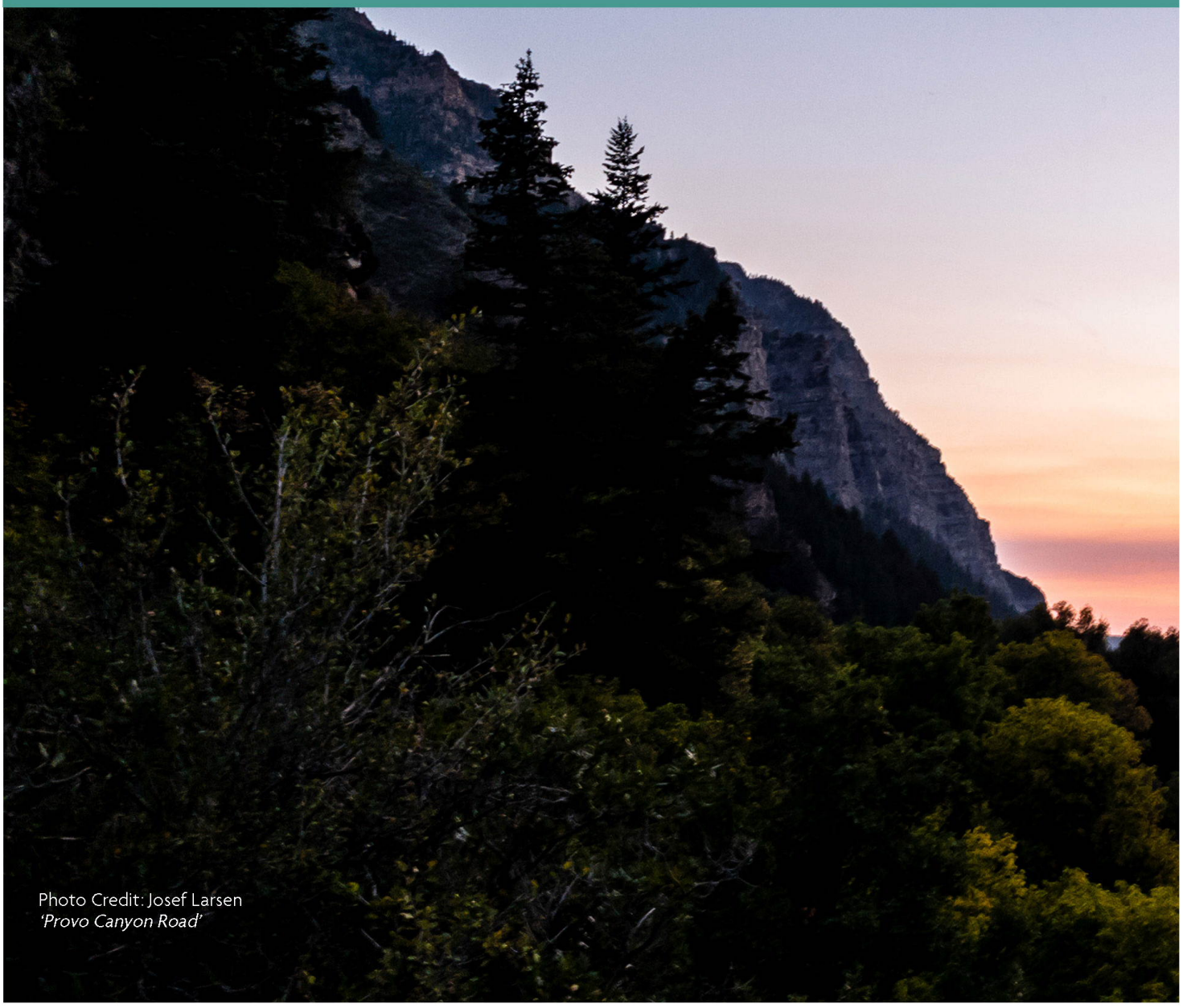
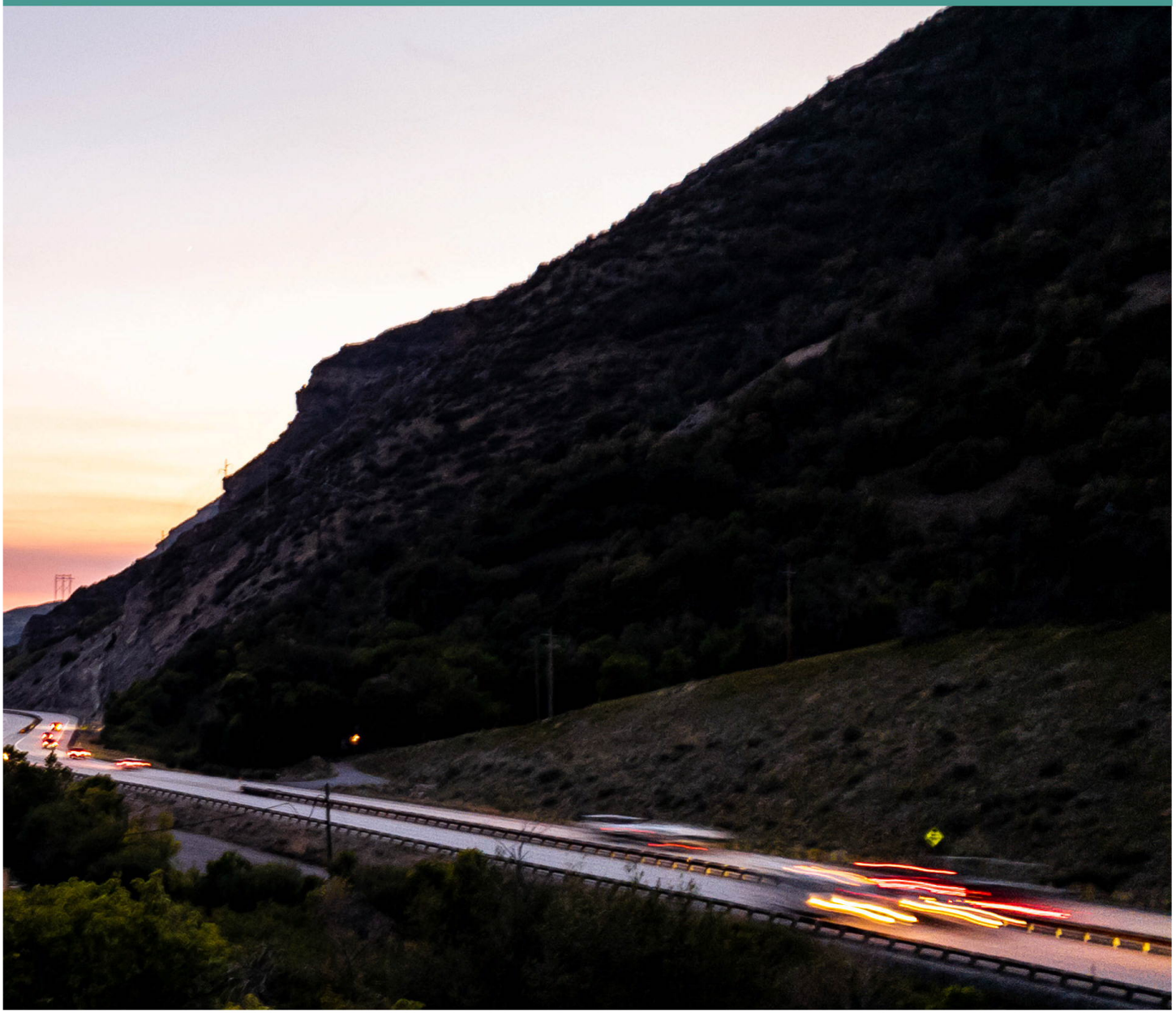


Photo Credit: Josef Larsen
'Provo Canyon Road'



PLANNING CONTEXT

Introduction

The Hillsides and Canyons area is defined by a project boundary of Provo City to the west and follows along Timpview Drive, S 900 E St. and S. Slate Canyon Drive to the east. The following section will review the existing conditions and analysis within the project boundary around (1) Land Ownership, (2) Recreation Assets and Connectivity, (3) Land Cover and Ecology and (4) Hazards.

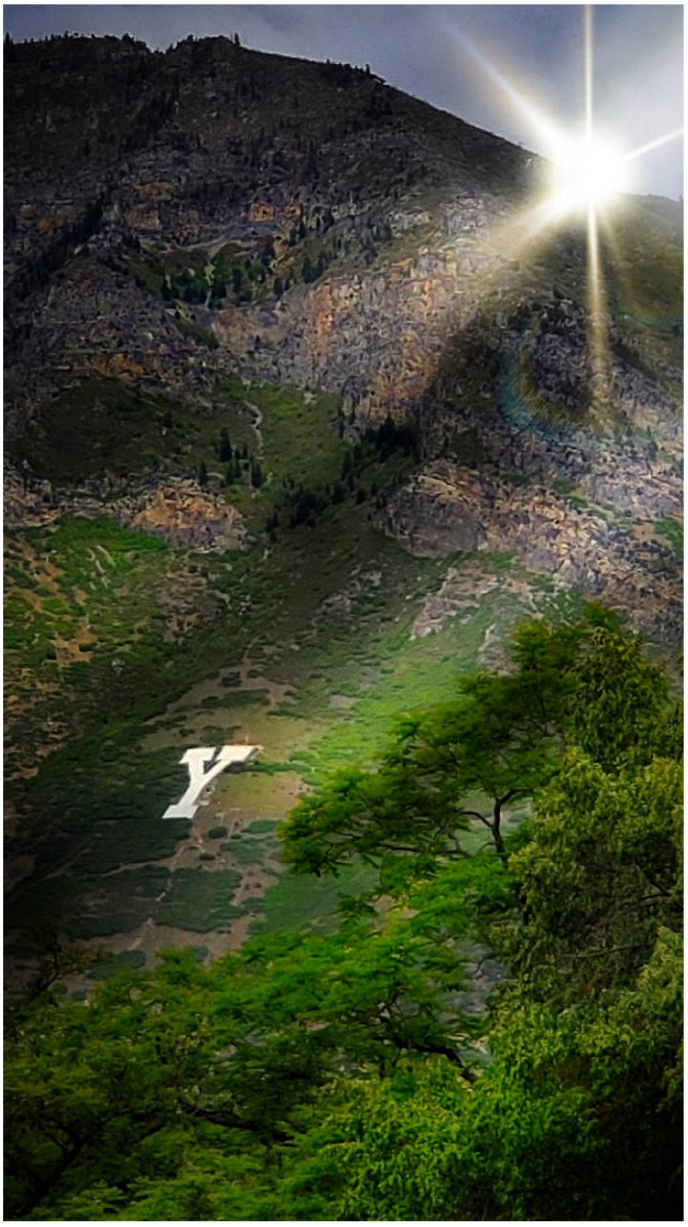


Photo Credit: Garth Rogers, *'Y Mountain'*
Y mountain is a valued recreational asset to community members.

Land Ownership

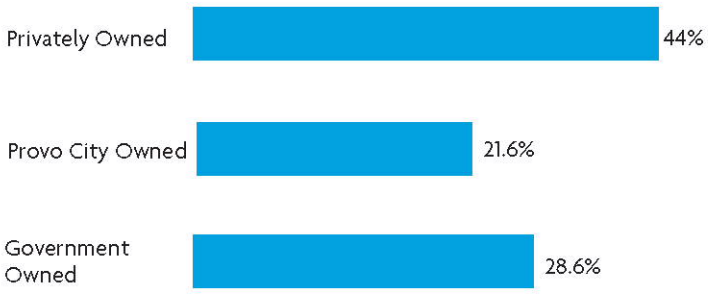
Refer to Figure 15, Hillsides and Canyons Land Ownership Map.

Private: Most of the area along the foothills consists of large, single family lot homes with 924 single family residences, 312 residential planned unit developments (PUDs) and 342 vacant residential lots.

Public: Provo City owns a significant portion of land in the foothills, including three major trailheads, Rock Canyon Trailhead and Park, Slate Canyon Trailhead and Y Mountain Trailhead. A few smaller public parks and East Lawn Memorial Hills Cemetery are located within the project area.

Government owned parcels: The large government owned parcel to the north of the project area is called 'River Bottoms' and includes a large gravel pit owned by the US Forest Service (USFS). Other sizable governmentally owned parcels to the south of the project area include Utah State Hospital parcels associated with Slate Canyon Open Space, including a disc golf course and trailhead owned by the USFS.

Figure 3: Percent of Acreage by Ownership



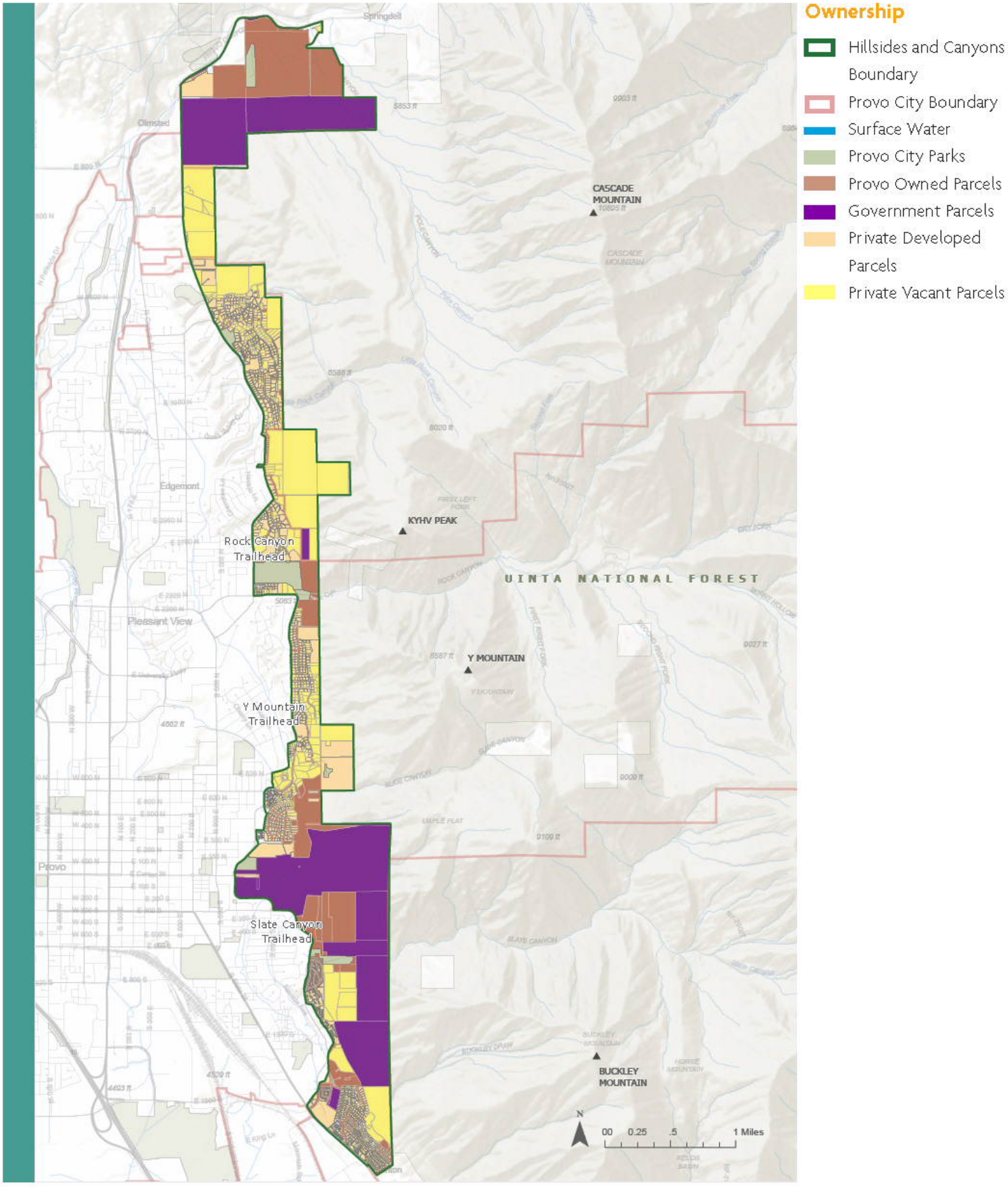
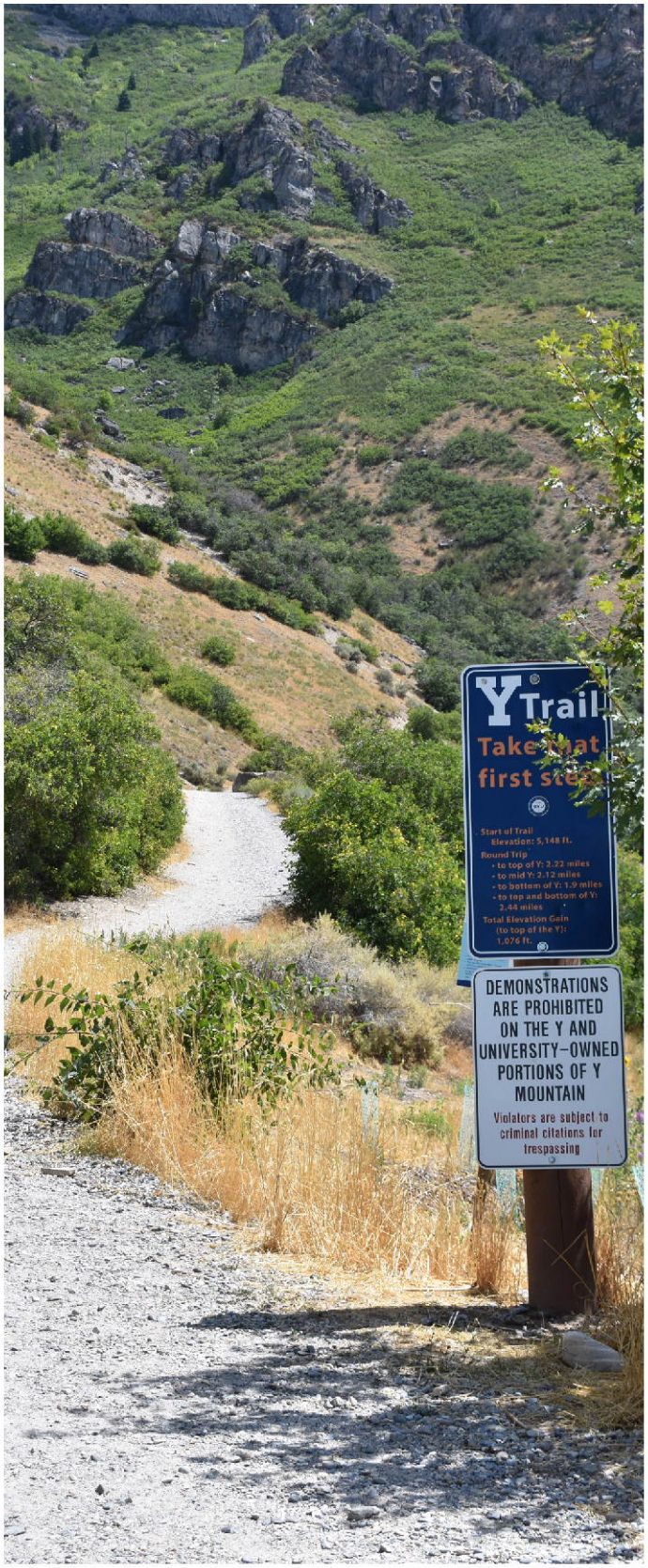


Figure 4: Hillsides and Canyons Land Ownership

Source: City of Provo, Utah Geospatial Resource Center, Design Workshop

RECREATION ASSETS



Source: Design Workshop
The hillsides and canyons offer a plethora of both active and passive recreational opportunities.

Recreation Assets

Refer to Figures 16 and 17, Hillsides and Canyons Recreation Assets and Connections Maps.

Trails

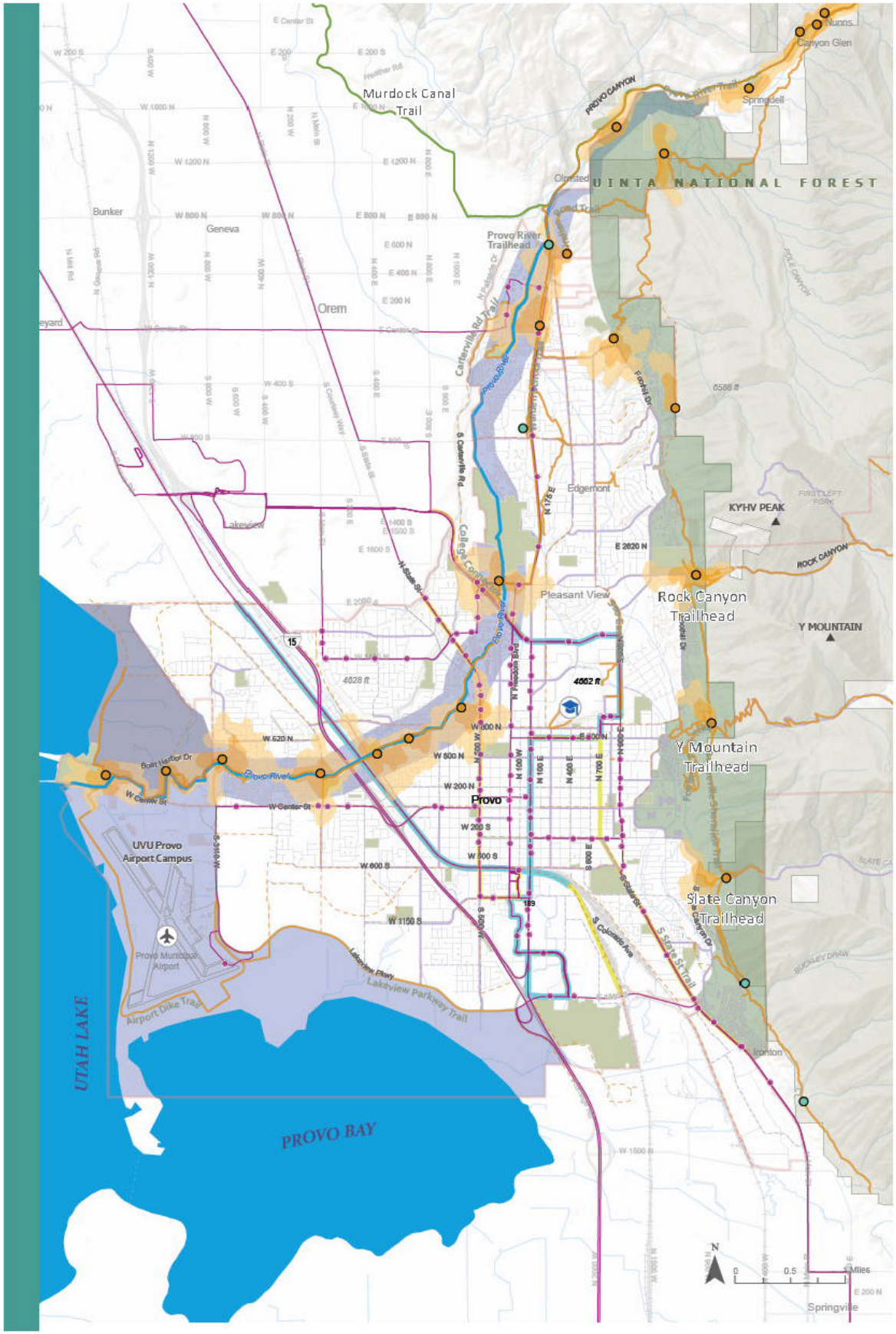
Trailheads: The Hillsides and Canyons are great public assets. The canyons area has three well developed trailhead areas connected by the Bonneville Trail. The canyons also contain some less developed trailheads along the northern portion of the project area. Bridal Veil Falls is a popular destination in the area, though not within the City of Provo. Many canyons have recently developed master plans to identify opportunities and priorities for the future, specifically for trailheads. Trailheads in the project area include:

- Rock Canyon Trailhead and Park (city owned and maintained)
- Slate Canyon Trailhead (city owned and maintained)
- Y Mountain Trailhead (BYU owned and maintained)
- Rock Canyon Trailhead (city owned and maintained)
- Provo Canyon Trailhead (city owned and maintained)

Trails: The Bonneville Trail travels through public (state and/or federal land), private and Provo-owned property and connects with Springville to the south. There is a break in the trail in north Provo before it picks up again in Orem. The trail through Rock Canyon crosses through private property, which results in department partnerships with private property owners for access. The trail through Rock Canyon to Provo Canyon will be on USFS property, so the department is currently working to coordinate with that entity. Other trails in the area extend from trailheads, most of which are near the base of the foothills, through canyons into the Uinta National Forest. The Y Trail leads to a popular overlook. The Provo Trails Plan outlines all trails in this area and project improvement phasing.

Figure 5: Hillsides and Canyons Recreation Assets

Source: City of Provo, Utah Geospatial Resource Center, Wasatch Front Regional Council, Design Workshop



Connections Map

- Hillsides and Canyons Boundary
- River and Lakeshore Boundary
- Delta Boundary
- Provo City Boundary
- Provo River

Public Transit

- Bus Transit Stations
- UTA Routes Most Recent Ridership

SB34 Major Transit Investment Corridors

- Planned Near Term
- Existing

Trails

- Proposed Trails
- Existing Trails
- Bike Paths and Lanes
- Proposed Bike Lanes

Amenities

- Proposed Trailheads
- Existing Trailheads

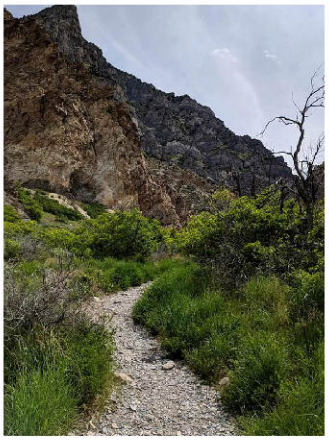
Trails Walkshed

- 1/4 mile walking distance to trailheads
- 1/2 mile walking distance to trailheads

Figure 6: Hillsides and Canyons Connections

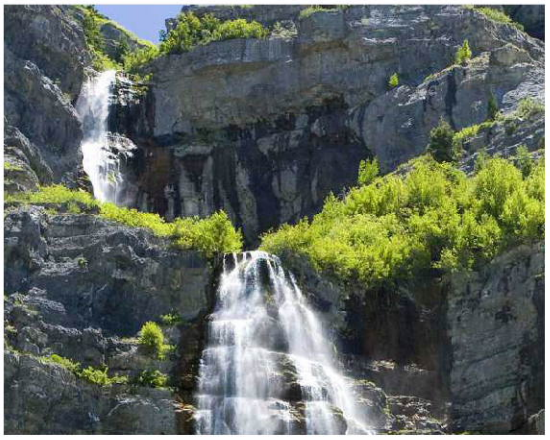
Source: City of Provo, Utah Geospatial Resource Center, Wasatch Front Regional Council, Design Workshop

TRAIL CHARACTER IMAGES



Rock Canyon

https://trails.hikeitbaby.com/trail/provo-rock-canyon-trailhead/

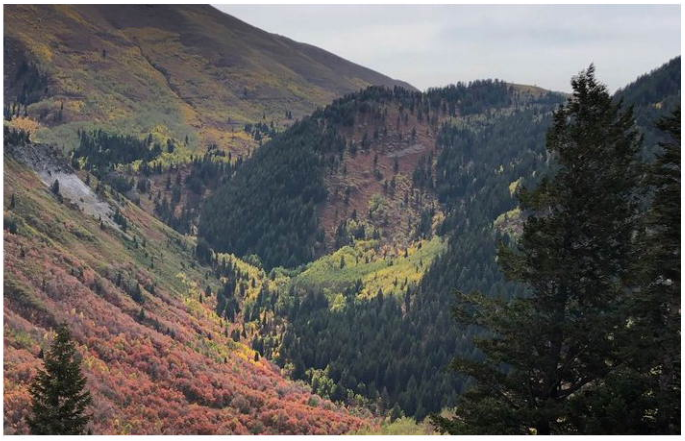


Bridal Veil Falls

https://www.utah.com/destinations/cities-towns/provo/hiking/

The 'Y"

https://www.provo-utah.us/the-y-hike.html



Slate Canyon

https://www.provo-utah.us/slate-canyon-park---provo.html

https://www.hikingproject.com/trail/7033278/slate-canyonrock-canyon-loop

LAND USE, COVER AND ECOLOGY

Land Use, Cover and Ecology

Land Cover

Refer to Figure 19, Hillsides and Canyons Land and Ecology Map.

Land cover: The foothills have rich ecological value, including various types of land cover. The western edge of the project boundary, lower in elevation, is primarily developed with homes and open space, ranging from medium-high intensity development to low intensity development. Adjacent to the urban areas, the lower foothills include areas of invasive perennial grassland. These are locations of notable fire hazards. Most foothills within the project boundary to the east are classified as Rocky Mountain Montane Woodland and Shrubland, which includes scrub oak, brush and pinion pine forest. Table 5 identifies the land cover descriptions from GIS spatial data and the consolidation of these data layers as noted on the map in figure 18.

Figure 7: Percent of Land Cover

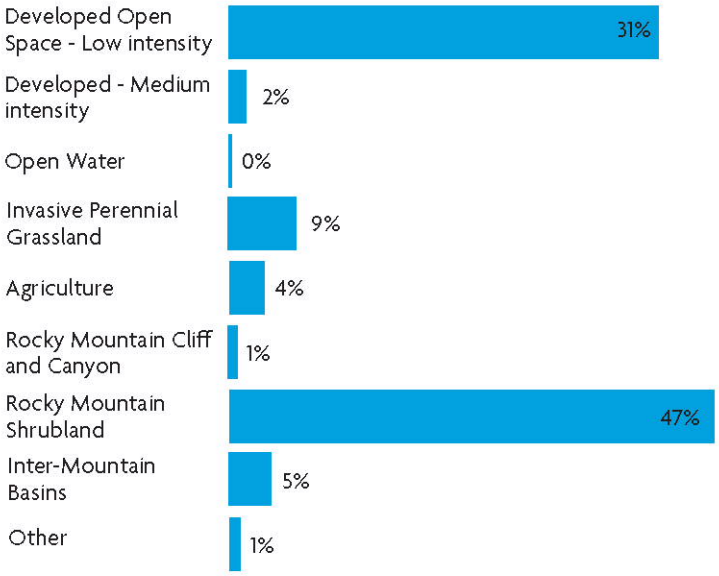


Table 2: Land Cover Descriptions

LAND COVER	
Inter-Mountain Basins	Inter-Mountain Basins Big Sagebrush Shrubland
	Inter-Mountain Basins Big Sagebrush Steppe
	Inter-Mountain Basins Montane Sagebrush Steppe
Rocky Mountain Montane and Subalpine	Rocky Mountain Montane Dry-Mesic Mixed Conifer Forest and Woodland
	Rocky Mountain Montane Mesic Mixed Conifer Forest and Woodland
	Southern Rocky Mountain Montane-Subalpine Grassland
Rocky Mountain Montane Shrubland and Woodlands	Rocky Mountain Bigtooth Maple Ravine Woodland
	Colorado Plateau Pinyon-Juniper Woodland
	Rocky Mountain Gambel Oak-Mixed Montane Shrubland
	Rocky Mountain Lower Montane Riparian Woodland and Shrubland

LAND USE, COVER AND ECOLOGY

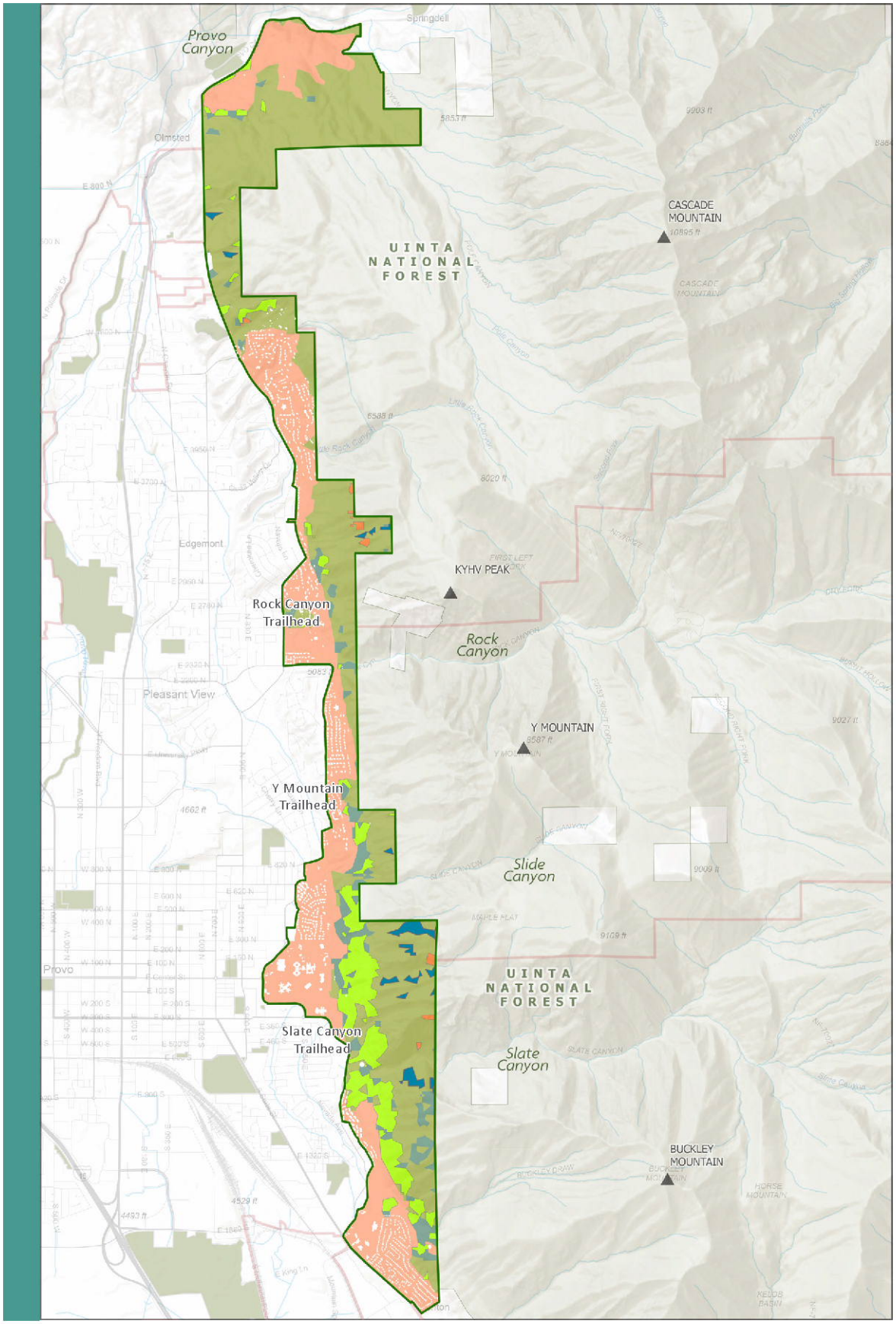


Figure 8: Hillsides and Canyons Land Use and Ecology

Source: City of Provo, Utah Geospatial Resource Center, Design Workshop

Source: USFWS Mountain-Prairie, *'Rocky Mountain Bighorn Sheep'*
The hillsides are home to many animals, including the endangered Rocky Mountain Bighorn Sheep.

Wildlife

Refer to Figure 20, Hillsides and Canyons Wildlife Habitat Map.

Wildlife: The primary habitat for the hillsides includes birds like quail and grouse, and small wildland rodents such as chipmunks and squirrels. Some larger animals, such as bighorn sheep, moose and deer, migrate down from high elevations for access to food and water. However, only a small portion of the project areas are defined as habitats for these species. Table 6 identifies the available wildlife data and critical habitat status.

Table 3: Wildlife Habitat

ANIMAL	HABITAT STATUS	CONSERVATION STATUS	SEASON
Band Tailed Pigeon	Crucial, substantial	Least Concern	Spring, fall
Dusky Grouse	Crucial	Least Concern	Yearlong
Moose Habitat	Crucial, calving habitat, substantial	Least Concern	Yearlong, summer, winter
California Qual	Crucial	Least Concern	Yearlong
Rocky Mountain Bighorn Sheep	Detected	Endangered	Summer, fall

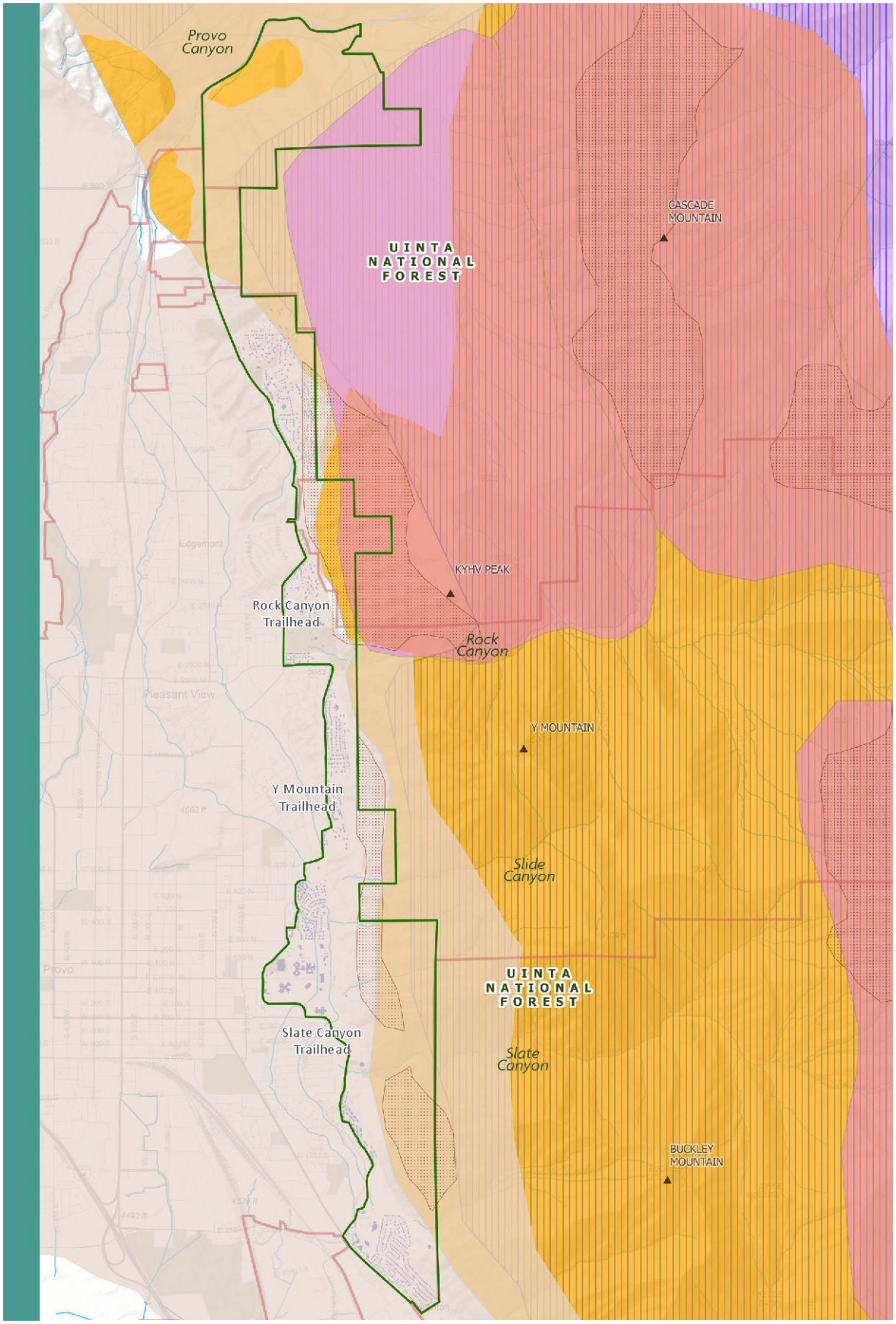


Figure 9: Hillsides and Canyons Wildlife Habitat

Source: City of Provo, Utah Geospatial Resource Center, Utah Division of Wildlife Resources, Design Workshop

Hazards

Slopes: Per Provo City Code 15.05.160, Hillside Development Standards, a slope of 10% or less is most suitable for development and slopes above 30% are not suitable for development. Most of the project area is between 10% and 30% slope (See Table 8 and Figure 21). 30% of the hillside project area is below a 10% slope and 15% of the project area is considered greater than 30% slope, meaning that based on this one metric, most of the area is suitable for development. Currently, there are 411 residences, three Utah State Hospital buildings in the 10 to 30% slope boundaries. There are no buildings on a slope greater than 30%.

Table 5: Slope

SLOPE	PERCENT TOTAL
≤ 10% Slope	30%
10% - 30% Slope	55%
≥ 30% Slope	15%

Geological Hazards: The length of the foothills range is located within the Wasatch Fault Zone, a Quaternary Fault extending 240 miles along the Wasatch Front. The Provo Segment is an independent portion of the fault. According to a study on the earthquake probabilities for the Wasatch Front Region in Utah, Idaho, and Wyoming, there is a 43 percent chance that an earthquake with a magnitude of 6.75 or higher will occur in the Wasatch Region between 2014 and 2063.[7] Two major faults, the Maple Flat Fault and the Horse Mountain Fault further west, run along the Wasatch Mountain Range. A significant number of smaller, unnamed fault lines run north to south along the foothills in Provo. Per City Code 15.05, future development on the project area's 10% and 30% slopes is required to submit a geologic report reviewing risk.

Refer to Figures 21-23, Hillsides and Canyons Slope, Geological Hazards and Wildfire Risk Maps.

Wildfire Risk: More than half (68%) of the project boundary is at high risk for wildfires: 40% in extreme fire risk areas, and 28% in high fire risk areas. The dry canyons and adjacent grasslands make for serious fire risks for homes in the area. Provo Fire and Provo Parks and Recreation departments have put significant resources and efforts into fuel management and hazard mitigation along the wildland-urban interface, such as fire wise education efforts and accessibility trail planning.

The biggest challenge of wildfires is fire truck access to people living or recreating on the hillsides and canyons. There are 240 residential buildings and Utah State Hospital buildings within the extreme fire risk zone. Also, within the zone are 91 vacant residential and four commercial land parcels. Water supply, water access and hazard mitigation are all concerns to be addressed and considered in future development. Currently, Provo Fire reviews applications for planning and zoning reviews by using the state standards, although such measures are considered minimums. Provo Fire intends to adopt fire wise strategies for development and landscape before allowing development in the mountains. Table 7 summarizes the acreage of land within each rated zone.

Table 4: Hazard Rating

HAZARD RATING	ACRES	TOTAL PERCENT
Extreme	1208.89	40%
High	836.43	28%
Low	61.53	2%
Very Low	638.65	21%
None	249.43	8%

7 *2016, Earthquake Probabilities for the Wasatch Front Region in Utah, Idaho, and Wyoming*

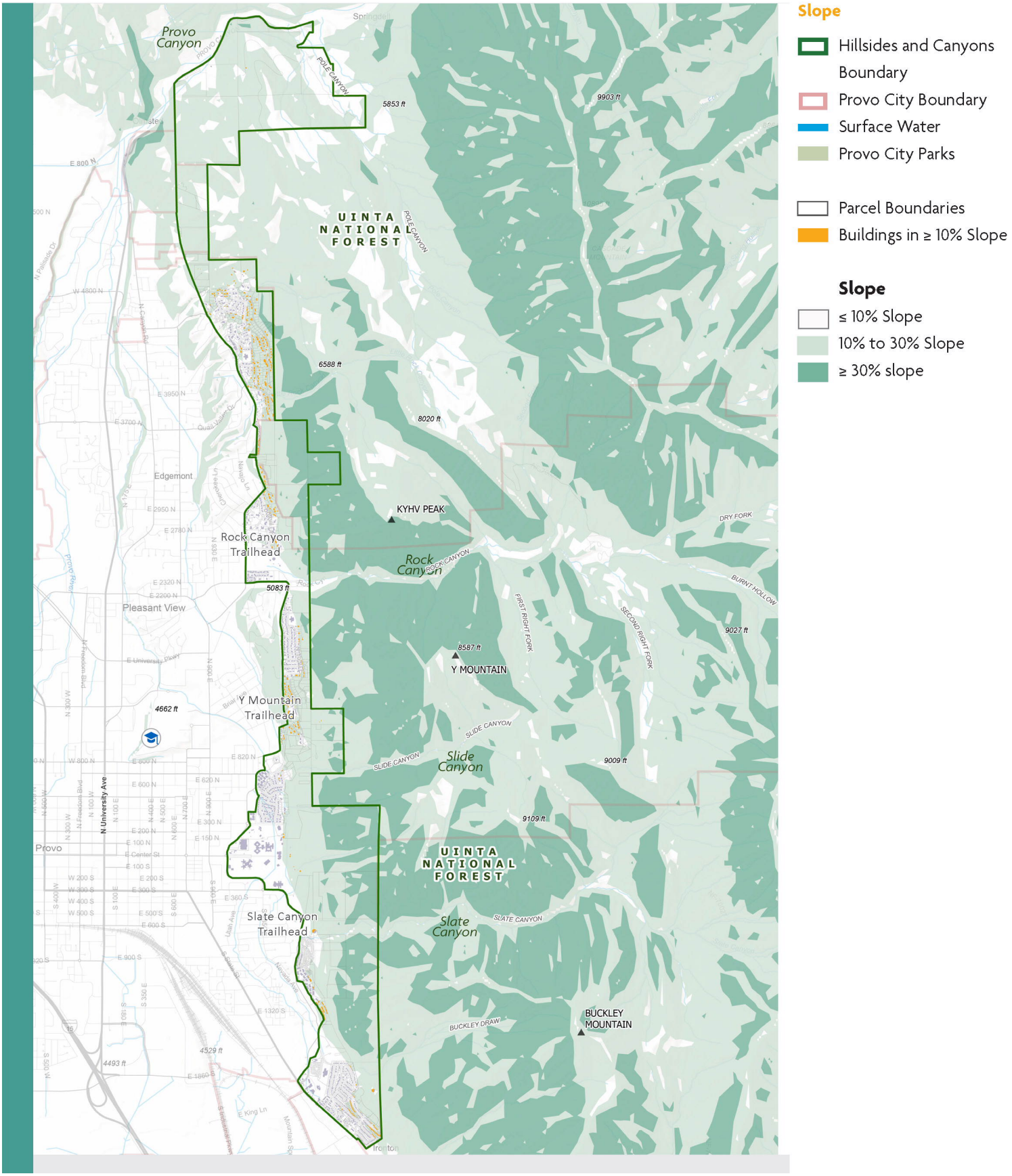


Figure 10: Hillsides and Canyons Slope

Source: City of Provo, Utah Geospatial Resource Center, United States Geological Survey, Design Workshop

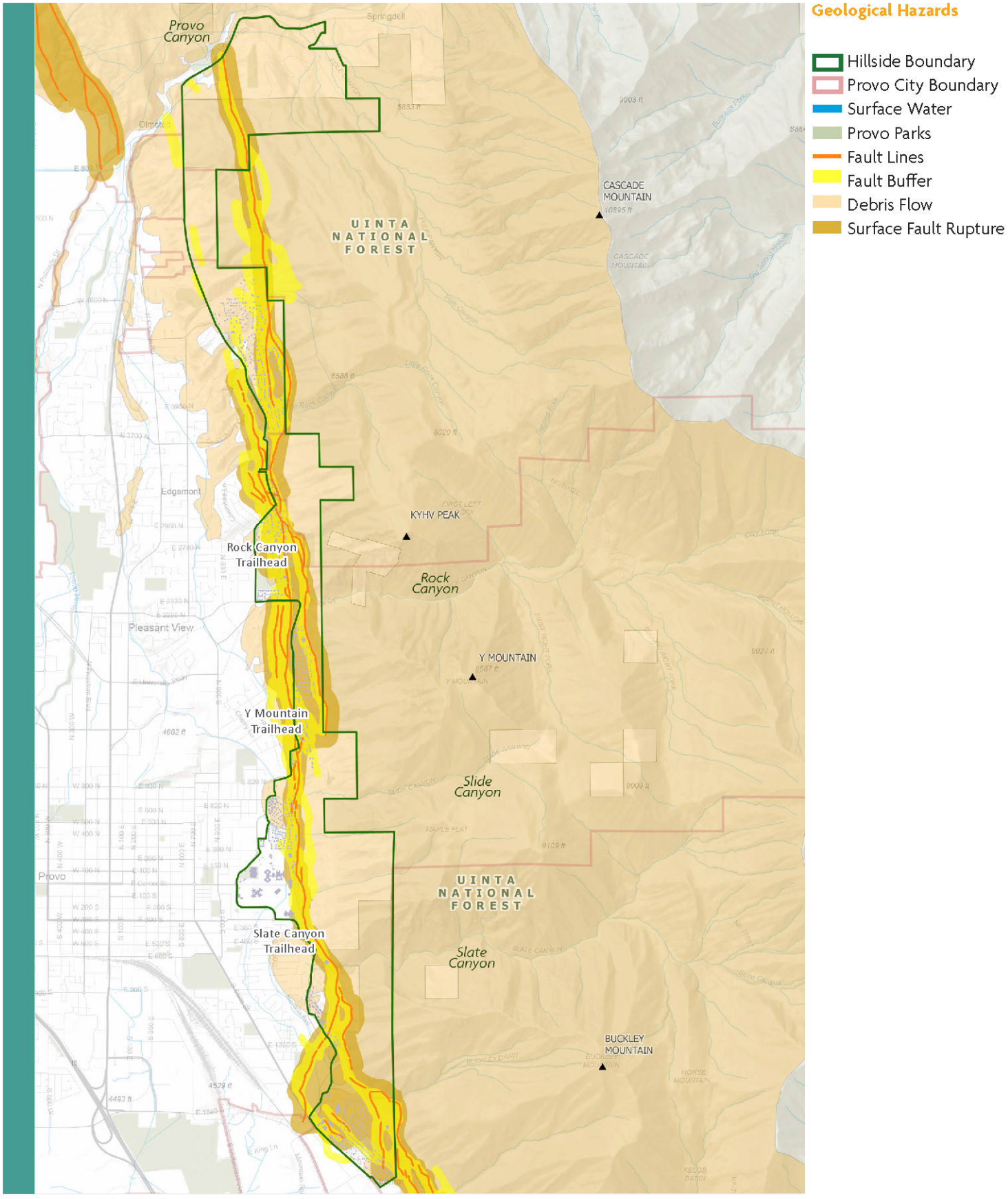


Figure 11: Hillsides and Canyons Geological Hazards

Source: City of Provo, Utah Geospatial Resource Center, Design Workshop

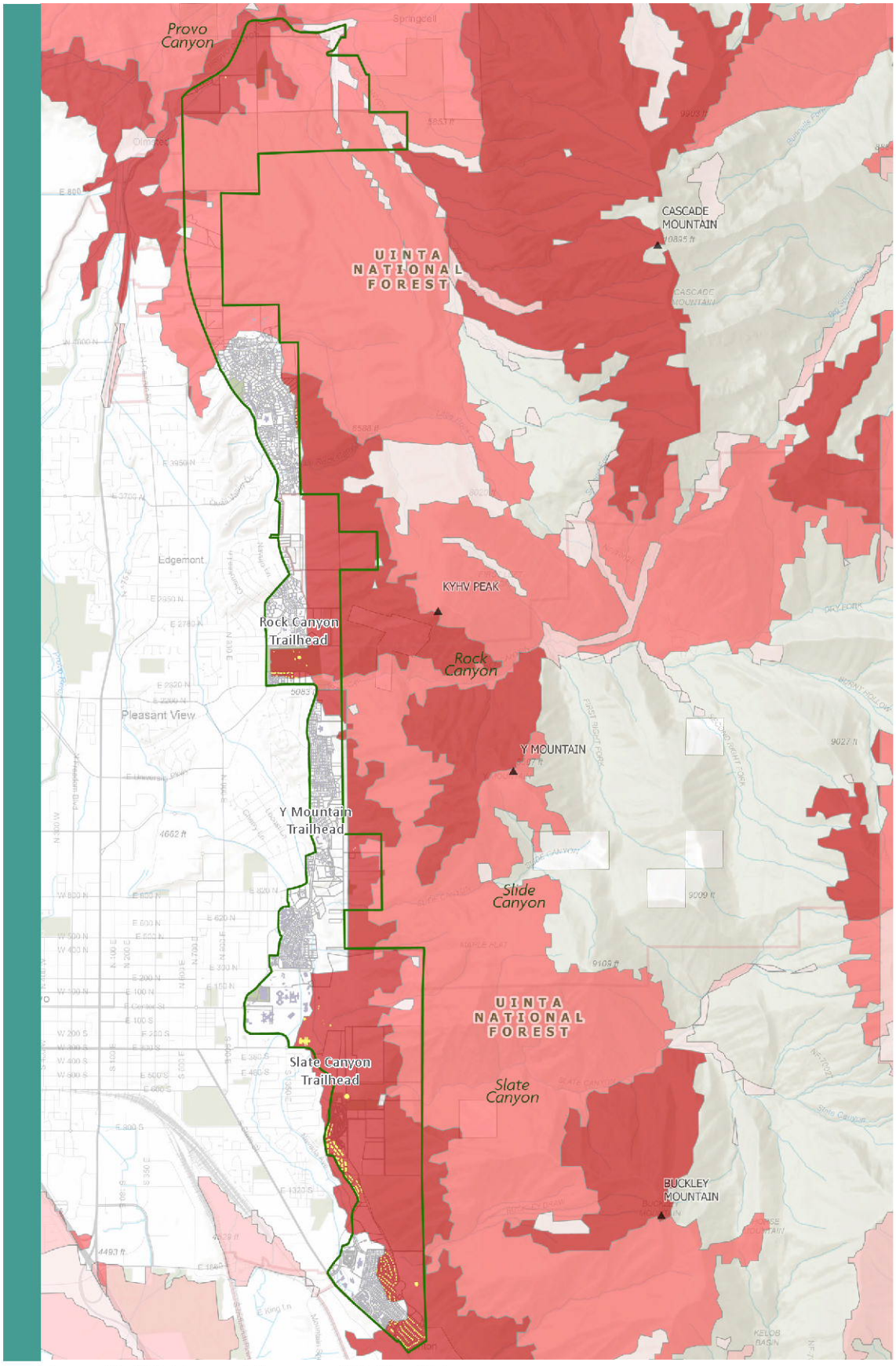


Figure 12: Hillsides and Canyons Wildfire Risk

Source: City of Provo, Utah Geospatial Resource Center, Design Workshop

LAND COVER AND ECOLOGY

Source: Scott Stubs
Due to the makeup of the soils at the base of the foothills, plant growth is most typical here.

Soils

Refer to Figure 24, Hillsides and Canyons Soils Map.

Soils: The soils along the hillsides are high in rock content along steep slopes. These soils are low in nutrient content and are undergoing the process of erosion. Significant particle sorting through wind and water is causing a breakdown of materials, resulting in highly unstable soils. There are also some silty and loamy soils at the base of the foothills aligning with areas of deposition and lower slopes. These soils contain higher levels of organic materials to allow for plant growth and are more stable and less likely to slide.

According to the Utah Geological Survey the rock layers adjacent to Provo City along the Wasatch Range include:

- Lake Bonneville Alluvial Land and Delta Deposits: Cobbly gravel, sand, silt and clay deposited above (subaerial) and in Lake Bonneville (subaqueous); typically mapped where Provo shoreline is obscure, so that line cannot be drawn between fan and delta.
- Tintic Quartize: Light-brown weathering, cliff- and ledge-forming, off-white to tan quartzite with quartz-pebble conglomeratic beds in lower 200 feet (60 m) and boulders of quartz 1 foot (0.3 m) or more in diameter near basal unconformity; interbedded greenish quartzite and phyllite in top.
- Maxfield Limestone: Mainly light- to dark-gray, thin-bedded limestone with yellow brown to grayish-yellow mottling, and with interbedded gray to white dolomite and oolitic or pisolitic limestone.

Water: The foothill region is also a primary aquifer recharge area and opportunities to recharge the groundwater in this area are underway and should continue to be prioritized. Prioritization may be accomplished in a number of ways, including the following:

- Review of proposed land uses within Drinking Water Source Protection Zone 2 around one of Provo City's culinary water supply wells should include an assessment of whether the proposed land use may include handling or disposal of materials that, if released into the environment, could potentially adversely affect water pumped from the water supply well.
- The eastern part of Provo City near the base of the Wasatch Mountains includes zones important for natural recharge of the aquifer that provides drinking water to the City. In addition, Provo City has a managed aquifer recharge program to augment the natural aquifer recharge. Review of the proposed development in the zones of natural recharge or near the City's sites of managed aquifer recharge should include an assessment of whether the proposed land use may include handling or disposal of materials that, if released into the environment, could potentially adversely affect water quality in the aquifer from which the City's water supply wells pump water.
- All developments within the primary recharge zone along the mountain front should include considerations of the potential for infiltration to rapidly recharge the drinking water supply aquifer. This includes the possible location of sites for infiltration that might be included in the City's managed aquifer recharge program. If appropriate, the City may seek to secure a site within the development dedicated to managed aquifer recharge.

Provo City Public Works notes that varied and steep topography along the foothills makes the planning, construction, and maintenance of the water system in this area particularly challenging and expensive. Steep topography means that pressure zones, typically representing 110 feet to 200 feet in elevation differential, are long and narrow, making the looping of water lines and redundancy almost impossible to achieve without expensive and maintenance-intensive pressure-reducing stations, booster stations, and water storage tanks. Keeping pressures within an acceptable range with undulating topography and roads that do not follow natural contours is very difficult, if not impossible.

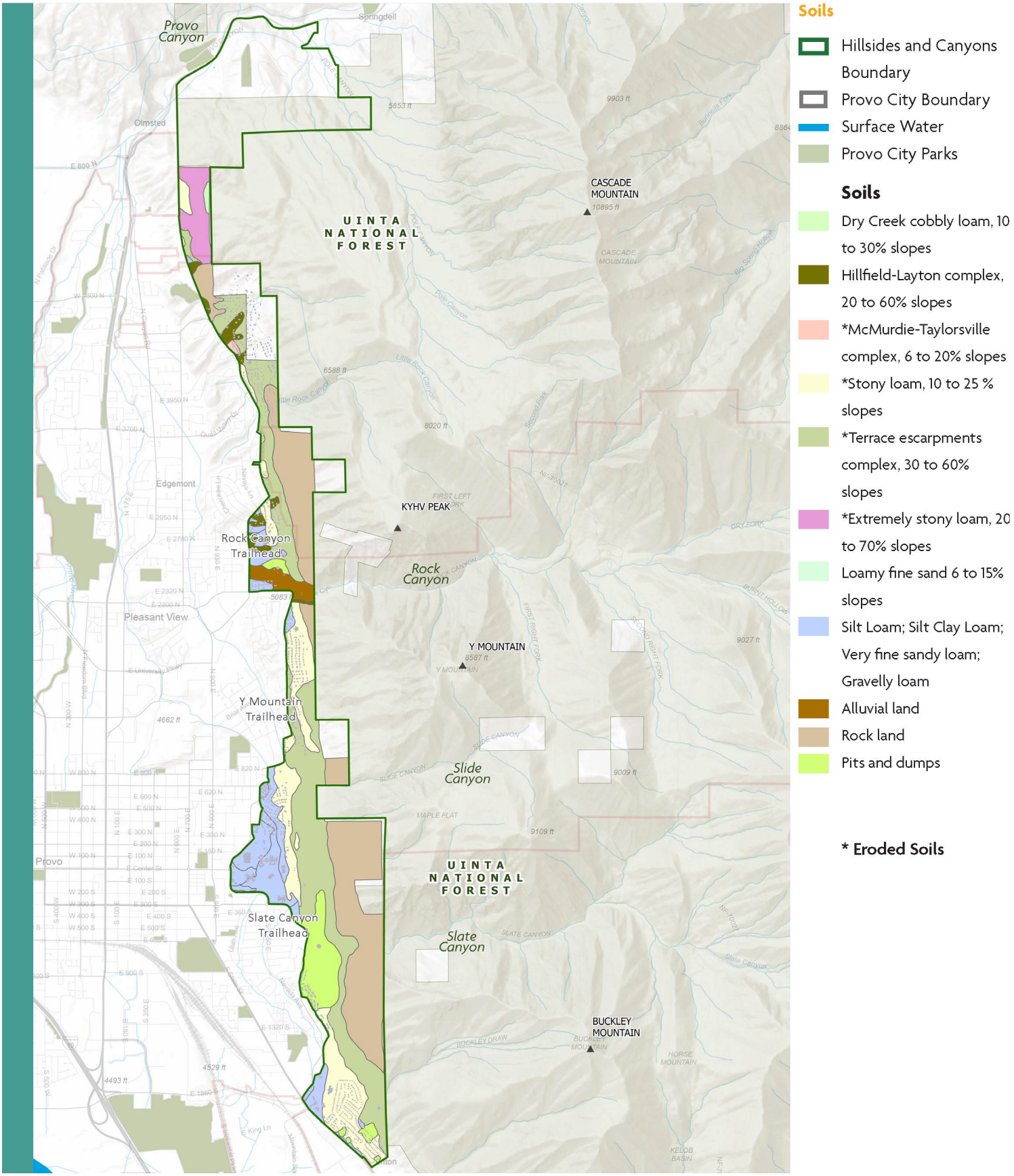


Figure 13: Hillsides and Canyons Soils

Source: City of Provo, Utah Geospatial Resource Center, United States Geological Survey, Design Workshop

CONSTRAINT MAPPING

Constraint Assessment

The following map assessments are a layering of the map analyses to serve as decision-making tools and assist in determining the best uses of lands in the Hillsides and Canyons. The output of these studies depends on the quality of the data input and provides results and understanding at a high level. These analyses establish the basis by which areas of focus can be identified for future investigation and study for recommendation and development programming. Table 9 identifies the data and sourcing for the mapping.

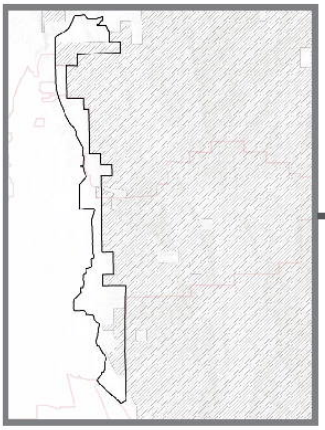
Development Constraints Evaluation

The Development Constraints Map indicates areas of constraint such as regulatory considerations, including property ownership, policy, and regulated environmental areas that either limit or prevent development based on local, state or federal regulations. Figure 25, Development Constraints indicates areas of high hazard that are not ideal for development in the darkest color of orange. Areas of particular consideration include slopes above 30% and stream corridors.

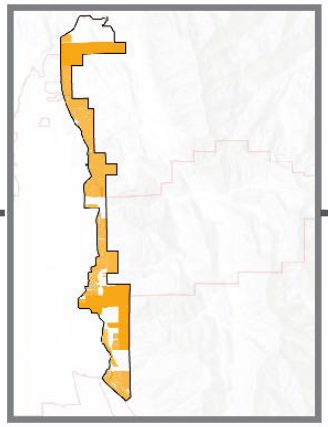
Table 6: Areas of Constraint Criteria

CATEGORY	DATA	SOURCE
Land Management	Federal Land: (USFS, BLM)	UGRC
	State Land: Wildlife Reserve/Management Area	
Land Ownership	Government Owned Parcels, Private Parcels	City of Provo
Regulatory Areas	Critical Environment	UGRC
	Open Space, Preservation, and Recreation Zone	
	Public Parks	
Wetlands	Wetlands	USFWS National Wetlands Inventory /AGRC, Utah Division of Water Resources
Slope	Greater than 30% Slope	UGRC, USGS
Stream Buffer	Stream and River Buffer (100 ft)	National Hydrology Dataset
	Lake, Waterbodies Buffer (100 ft)	

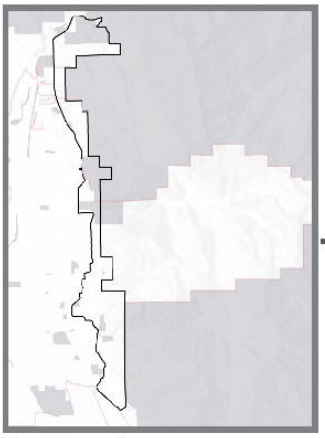
DEVELOPMENT CONSTRAINTS



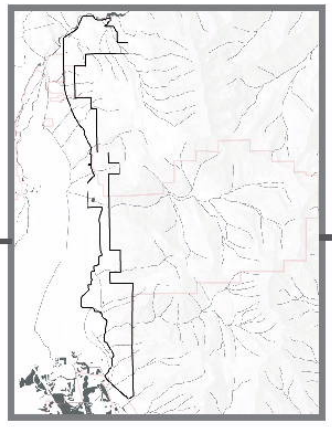
Land Management
Federal Land: USFS, BLM, State Land: Sovereign Land



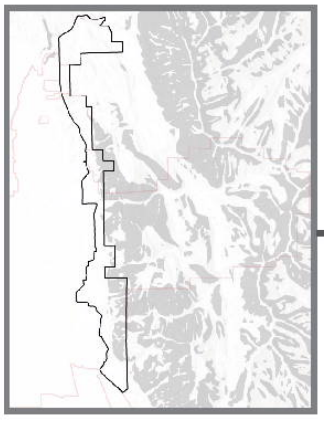
Land Ownership
Government Owned Parcels, Golf Course, Cemetery



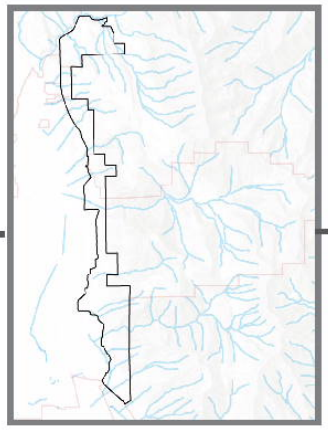
Regulatory Areas
Critical Environment Area, Open Space, Preservation and Recreation Zone, Provo Public Parks



Wetlands



Slope
Greater than 30% slope



Stream Buffer (100 feet)
Stream and River Buffer
Lake and Waterbodies Buffer

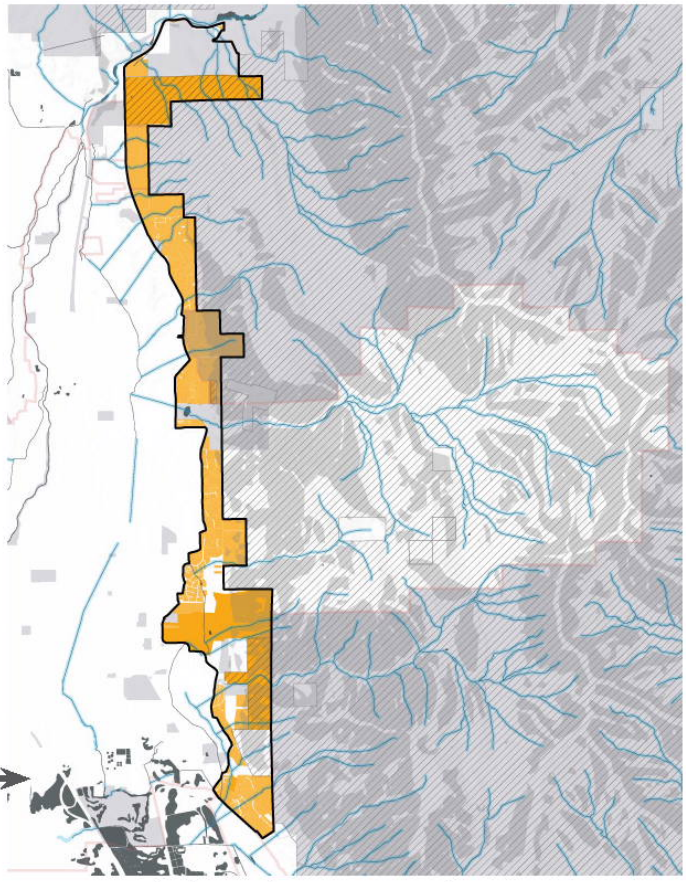


Figure 14: Hillsides and Canyons Development Constraints

Areas of Development Constraint

The methodology is an additive process by which a set of criteria defined in table 9, identify the suitability of land area of for a potential future use.

- Hillsides and Canyons Boundary
- Provo City Boundary
- Land Management
- Land Ownership
- Regulatory Areas
- Wetlands
- Slope
- Stream Buffer

CONSTRAINTS MAPPING

Environmental Constraints Evaluation

The Environmental Constraints Map indicates areas of environmental consideration and/or areas that have a high ecological value or are hazard for future development. Environmental assets are defined as features and areas whose environmental value contributes to community values. The Environmental Constraints Map (Figure 26) for the hillside development indicates areas of environmental value using the existing environmental conditions assets.

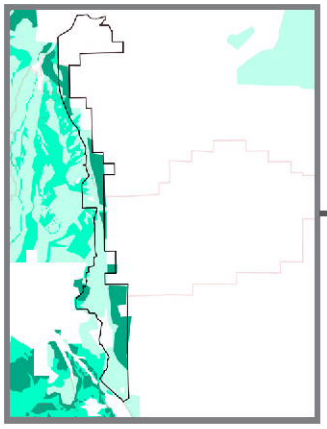
Because Provo's hillsides are located along a major fault line, there are many secondary and tertiary faults running along the foothills. These faults in combination with slopes over 30% and rocky and unstable soils also mean that there are several areas not well suited for development. In addition, a significant portion of the foothills are located in areas of high or extreme fire risk. This in combination with limited water access and slopes that do not allow for easy fire truck access add to the list of areas not suited for development. Due to the steep slopes and lack of water, it is difficult to bring sewer access to these areas. Some of these areas support habitats for local wildlife, especially in areas near the canyons where social trails allow for animals to access food and water, and the grassland areas provide habitats for migratory birds in the region. These areas are also poorly suited to development.

Figure 26, Environmental Asset Assessment indicates areas of considerable constraint in the darkest green. Table 10 identifies the data and sourcing for the constraint mapping.

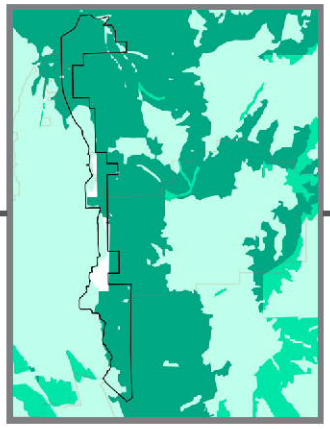
Table 7: Environmental Assets

CATEGORY	DATA	SCORE	DESCRIPTION
Soil	Soil - Hydrologic Group A	1	Low runoff potential (>90% sand and <10% clay)
	Soil - Hydrologic Group B	1	Moderately low runoff potential (50-90% sand and 10-20% clay)
	Soil - Hydrologic Group C	2	Moderately high runoff potential (<50% sand and 20-40% clay)
	Soil - Hydrologic Group D	3	High runoff potential (<50% sand and >40% clay)
	Soil - Hydrologic Group A/D	2	High runoff potential unless drained (>90% sand and <10% clay)
	Soil - Hydrologic Group C/D	2	High runoff potential unless drained (<50% sand and 20-40% clay)
Fire Risk	Extreme	3	Area of Extreme Fire Zone
	High	3	Area of High Fire Zone
	Medium	2	Area of Medium Fire Zone
	Low	1	Area of Low Fire Zone
Geological Hazards	Fault Line Buffer	2	
	Alluvial Fan	2	
Habitat Priority Areas	Band Tailed Pigeon - Crucial Habitat	2	Habitat Crucial=2 Habitat Substantial=1 Conservation Status: Least Concern
	Dusky Grouse - Crucial Habitat	2	Conservation Status: Least Concern
	Moose Habitat - Crucial Habitat	2	Habitat Crucial=2 Habitat Substantial=1 Conservation Status: Least Concern
	Rocky Mountain Bighorn Sheep - Detected	3	Rocky Mountain bighorn sheep are on the Endangered Species Act: Endangered
Land Cover	Agriculture	2	

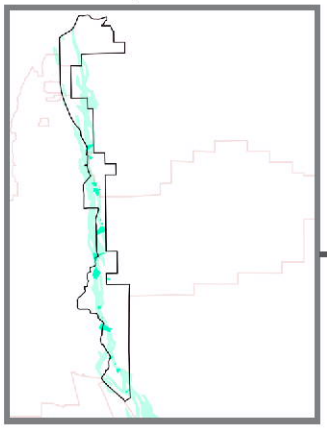
ENVIRONMENTAL CONSTRAINTS



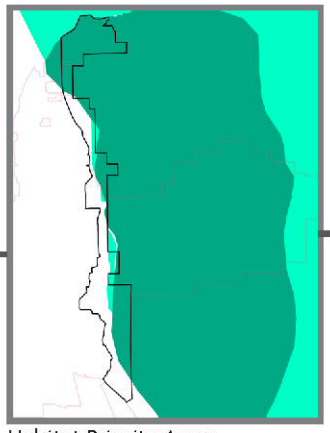
Soil Hydrologic Group
Value 3: Group D
Value 2: Group C, C/D, A/D
Value 1: Group A, B



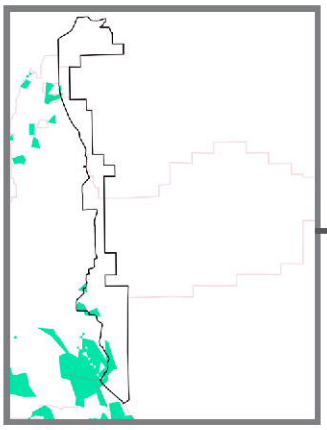
Fire Risk
Value 3: Extreme High, High
Value 2: Medium
Value 1: Low



Geological Hazards
Value 2: Alluvial Fan
Value 1: Fault Line Buffer



Habitat Priority Areas
Value 3: Rocky Mountain Bighorn Sheep
Value 2: Band Tailed Pigeon, Dusky Grouse, Moose Habitat



Land Cover
Value 2: Agriculture

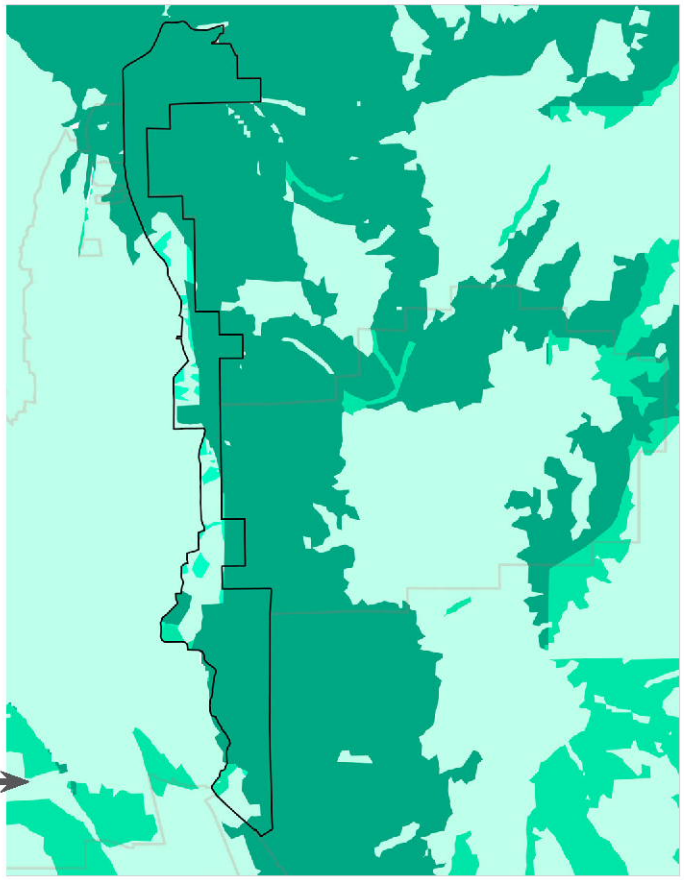


Figure 15: Hillsides and Canyons Environmental Constraints

Areas of Environmental Constraint

The methodology for this map is an additive process where criteria is defined and assigned a score ranking, noted in Table 10. The higher the ranking, the more ecological value the land area may have. The input is ranked on a scale of one (1) to three (3), where one (1) is the lowest environmental value, and three (3) is the highest.

- High Ecological Value- Higher Constraint
- Moderate Ecological Value
- Lower Ecological Value- Lower Constraint

KEY FINDINGS

Key Findings

Through discussions between the study team, Provo City staff and stakeholders, several themes were identified that reflect the issues and challenges that exist with respect to the project area. These themes are grouped into the following key findings: environment, community and economy.

**NOTE this section is a preliminary draft of key findings based on assessment from stakeholder conversations, the Technical Working Group, and data analysis. The section will be revised based on community input to better align the values and priorities of the Provo community.*

Themes

Theme 1: Environmental Considerations

- **Hazard Management:** There are significant geological and wildfire hazards in the foothills. Provo Fire and Parks and Recreation Departments are working to mitigate risk through fuel reduction in the wildland urban interface; however, the presence of lower foothills grassland habitats will continue to be a risk in the future. Soils and faults in the area are also a potential risk. While these risks are reviewed with all development applications, there is question as to what type and how much development is appropriate given the unique geological characteristics.
- **Land Stewardship:** There are several partners and stewards for the canyons and foothills trails and trailheads including Provo City, Brigham Young University (BYU), United States Forest Service (USFS), Mountainlands Association of Governments (MAG), Utah Valley Trails Alliance (UVTA), Conserve Utah Valley, and BikeWalk Provo. These partnerships are essential to manage, build and maintain the foothills trails network to meet the recreation needs of the community and to be environmentally sustainable and accessible to a variety of users.

Theme 2: Community Benefits

- **Trails and Recreation Assets:** The foothills are the starting point for many locally loved trails that extend into the Wasatch Mountains. Residents use these lands for hiking, mountain biking, horseback riding, running, and cross-country skiing. In addition, the historic Bonneville Trail, the Y Trail, and Bridal Veil Falls are part of the history and story of Provo. The Provo Foothills Trails Plan includes detailed plan recommendations for the designation, removal and routing of trails, improvements to trailheads, interpretive points and other facilities.
- **Education** The Provo community values education, with the influence of BYU and the many families that live in the community it is central to the local culture. The story of the foothills from the geology to the Y, to the culture of outdoor lifestyle is important to the community. There are opportunities for increased interpretive signage along trails and educational facilities at the trailheads.

KEY FINDINGS

Theme 3: Economic Vibrancy

- **Development Suitability:** Due to the fire and geologic hazards in the foothills, the difficulty to access water, and the prevalence of wildlife habitats, development in the foothills should be addressed through a special set of standards and considerations. The current Critical Hillside Overlay Zone (CH) is a first step in addressing the future of the hillsides. Other considerations could include view corridors to preserve this habitat and manage natural areas.

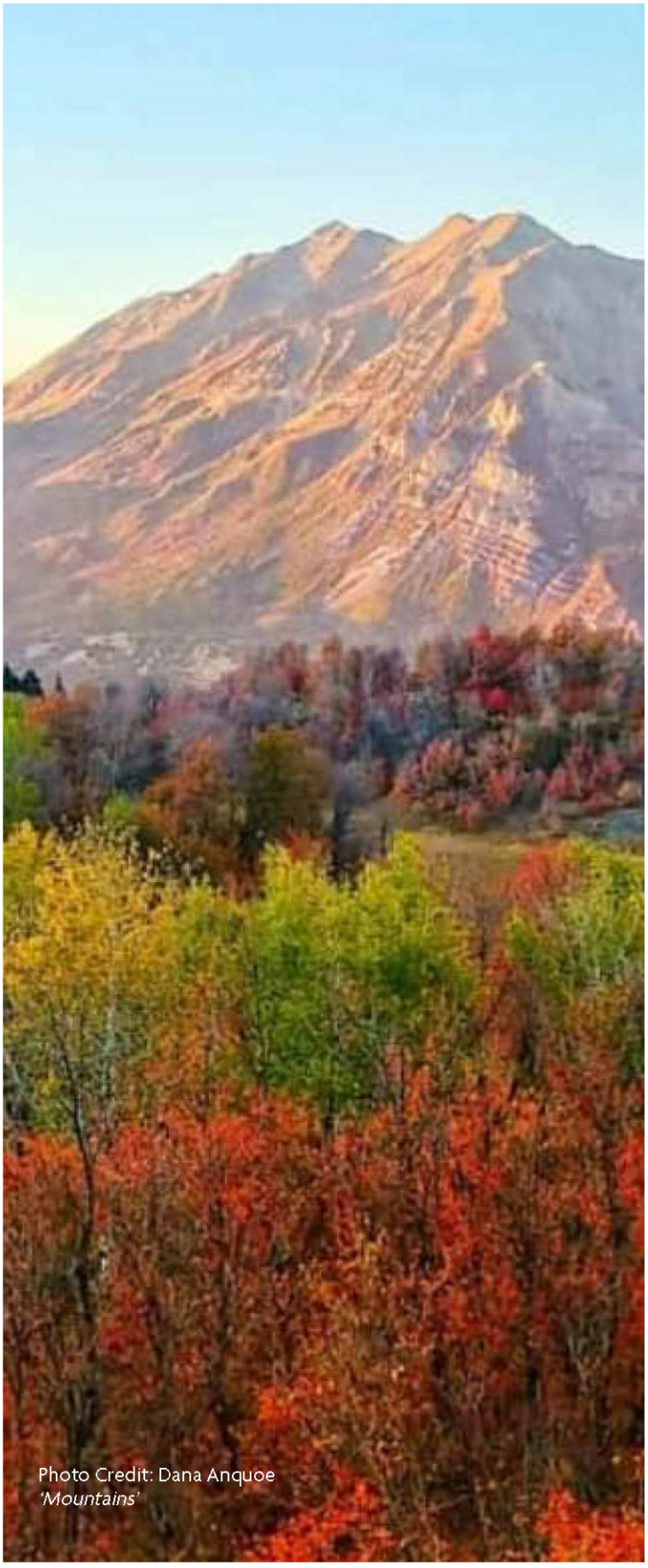
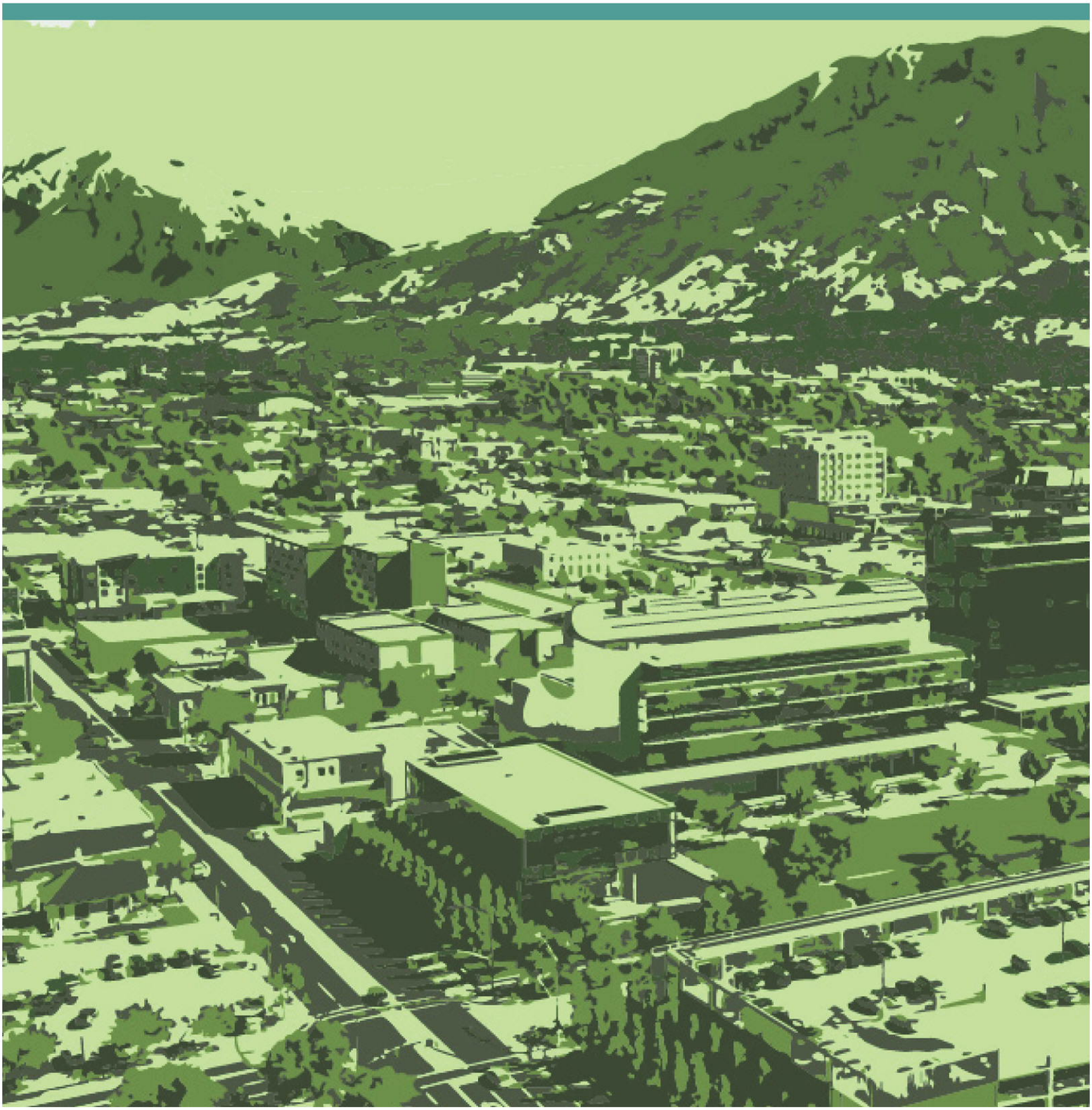


Photo Credit: Dana Anquoe
'Mountains'


DESIGNWORKSHOP

APPENDIX B

PUBLIC SURVEY RESPONSES FOR THE HILLSIDES AND CANYONS PLAN



COMMUNITY ENGAGEMENT SUMMARY

INTRODUCTION

Background
Provo worked with Y2 Analytics to administer a city-wide, random sample survey that ran between January 28 and February 12, 2023. Survey invitations were sent via email and mailed postcards. Survey interviews were completed online. Respondents were required to be over the age of 18 and live in Provo.

The survey received 1,031 responses, enough to meet the threshold for statistical validity. All five Districts were approximately equally represented with between 211-255 responses, except for District 2 with 82 responses. Because the responses to the open-ended questions cover several dozen pages, they have not been included in this summary. They are available from the Development Services Department upon request.

Key Findings
Y2 Analytics identified four key findings from the survey.

1. Of all of Provo's Natural Features, Provo Canyon is the most heavily used and visited and Utah Lake is seen as the most in need of improvement.
- Nearly all residents (91%) have visited Provo Canyon during the past year and nearly half consider it the feature they visit most often. In addition, Provo Canyon is the feature most considered by respondents to be the busiest and most iconic for visitors to Provo.
- Among all of Provo's natural features, Utah Lake is overwhelmingly identified as most in need of improvement. It is also the feature for which residents report the lowest levels of satisfaction with its current condition and maintenance.

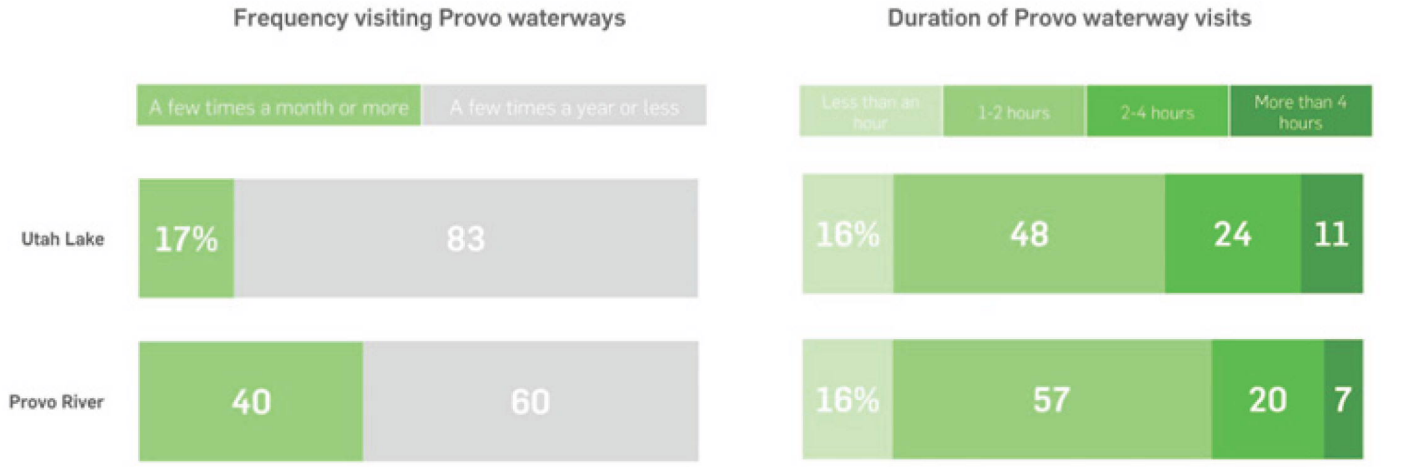
2. While priorities differ slightly between the two waterways, residents are most enthusiastic about improvements to overall cleanliness and environmental preservation—both at Provo River and Utah Lake. Between the two waterways, residents are much more open to potential developments along Utah Lake.
- When asked about improvements they would like to see made to Utah's waterways, a majority say they would like to see improvements made to overall cleanliness and natural habitat and ecological restorations. Residents similarly report that their top priorities would be to preserve wildlife habitat and the watershed.
- Residents express interest in developments at Utah Lake, particularly additional trails, facilities, rental options, attractions, and retail space.

3. When it comes to Provo's Canyons and Foothills, residents largely want to see the areas preserved as they are, with limited additional development and are most enthusiastic about improvements to basic amenities.
- Residents visit Provo's Canyons and Foothills for similar purposes, using the trails, visiting with friends/family, and picnicking being the most common. Residents prioritize initiatives that focus on preservation of canyons and foothills and express limited support for developments in these areas. In terms of improvements in these areas, residents are most enthusiastic about improvements to basic amenities such as restrooms, parking, overall cleanliness, and signage, as well as preservation of natural habitat.

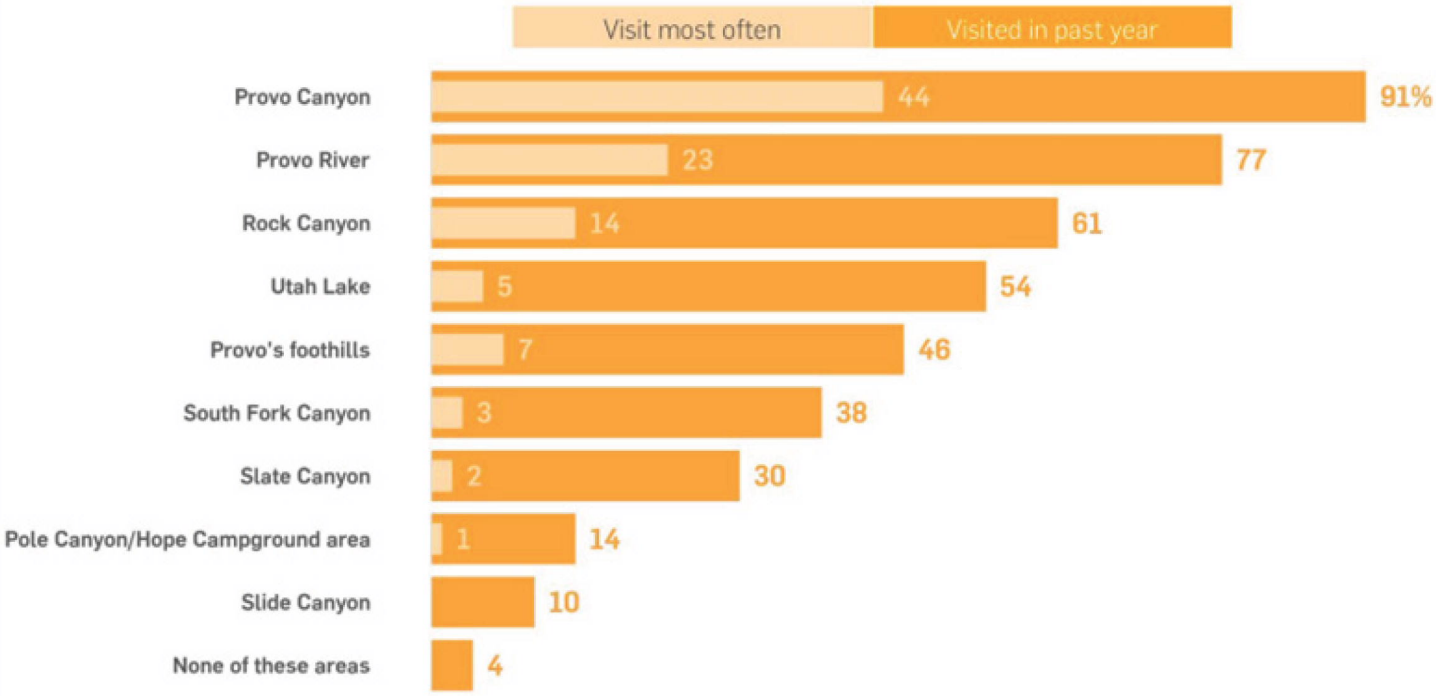
4. The vast majority of residents regularly use Provo trails and are largely satisfied with the trail conditions. Of all possible improvements that could be made to city trails, surface maintenance appeals to the most residents.
- Nearly all residents (92%) use Provo City trails at least once a year, many of which use the trails as regularly as a several times a month. The Provo River trail is most heavily visited, followed by Y Mountain trail. While residents report high levels of satisfaction with trail conditions, a plurality (32%) express interest in improvements to surface maintenance. Other common requests include more restrooms, lighting, and trails.

RIVER UTILIZED MORE FREQUENTLY THAN LAKE

Between Provo's two waterways, Provo River is used more frequently and by a higher proportion of Provo residents. 40% report visiting the river at least a few times a month, while only 17% report the same for Utah Lake. When visiting the waterways, visitors tend to spend about equal amounts of time at each, with slightly more multi hour visits paid to Utah Lake.

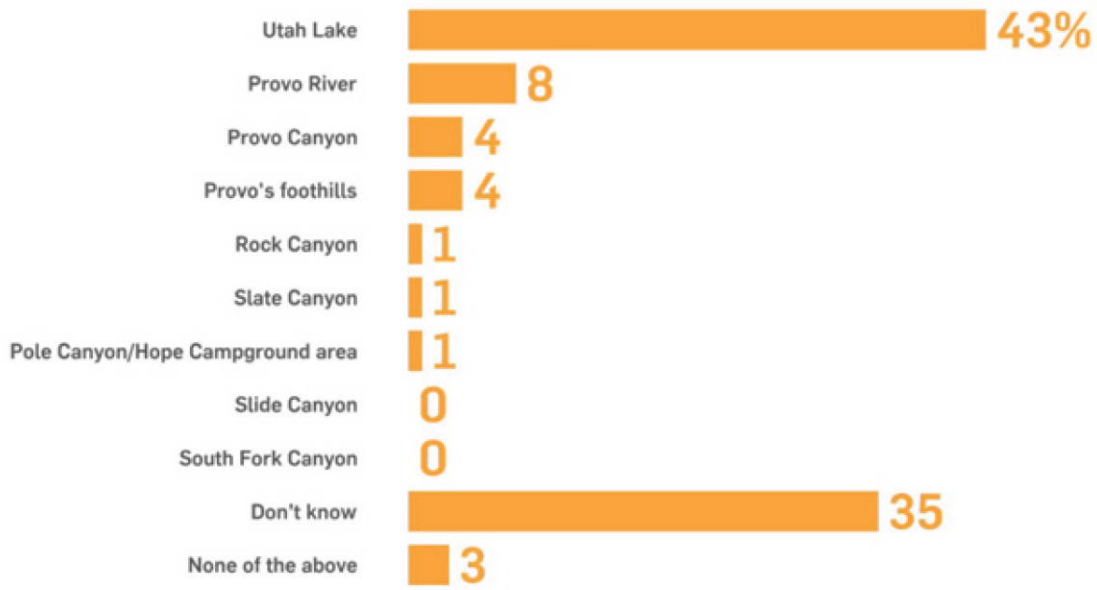


Q: About how often do you visit each of the following natural features? (n = 577, 798)
Q: When you visit these natural features, how much time do you typically spend there? (n = 576, 796)



Of all of the natural features in Provo, Provo Canyon is the most frequently visited, with over 90% of residents having visited in the past year, and nearly half saying it is the feature they visit most often. Provo River comes in second in terms of visitation, with Pole Canyon and Slide Canyon in last place.

COMMUNITY ENGAGEMENT SUMMARY



When asked which feature is most in need of improvement, a plurality (43%) of residents select Utah Lake. About a third say they do not know which feature is most in need of improvement, indicating that residents are fairly satisfied with the attention these features receive from the City and that, aside from Utah Lake, there is no clear mandate for improvements that need to be made.

COMMUNITY ENGAGEMENT SUMMARY

1. Do you currently live in Provo?

	Non-student	*Student*
Yes	100%	100
No	0	0

2. Please select the year you were born. (Reported as age ranges)

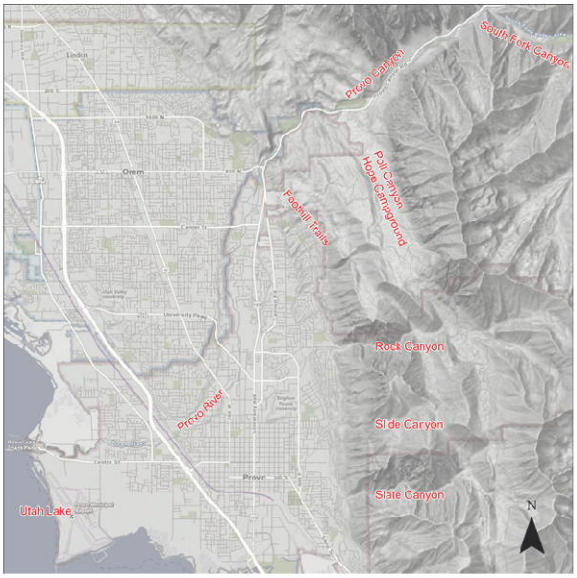
	Non-student	*Student*
18-24	11%	74
25-34	26	21
35-44	16	2
45-54	18	3
65+	13	<1
	16	0

3. How long have you lived in Provo?

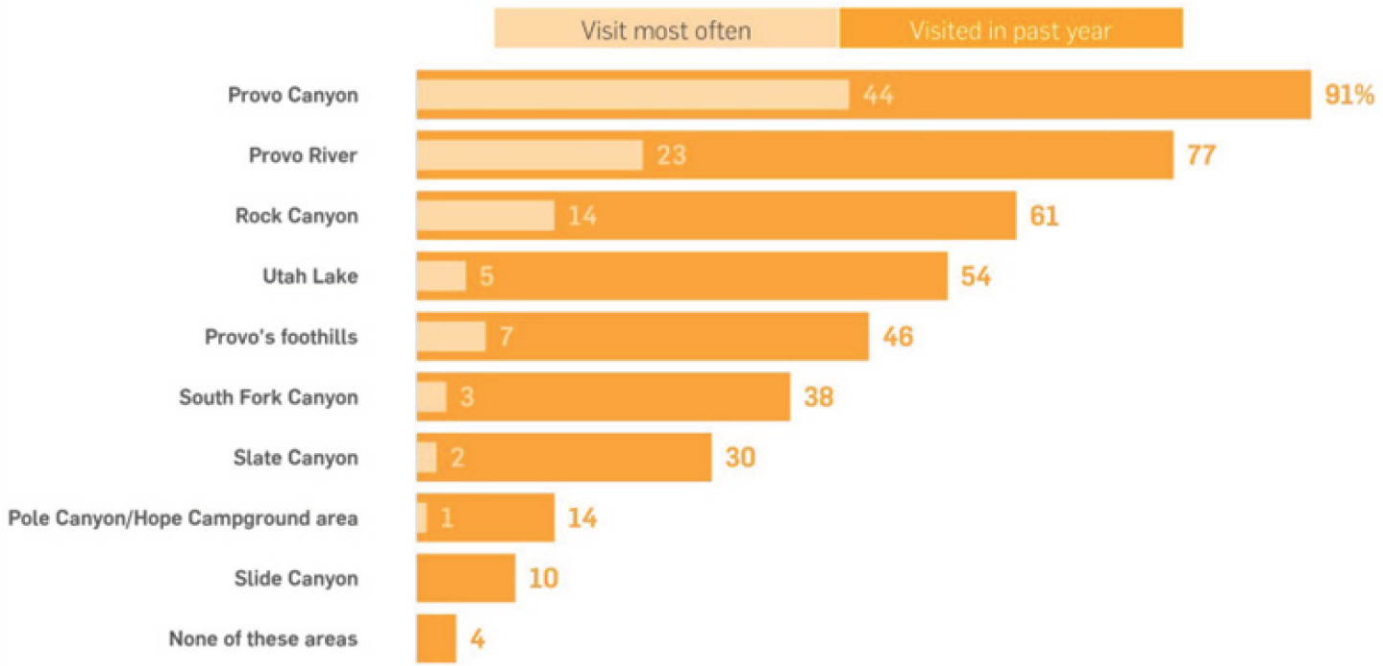
	Non-student	*Student*
Less than 2 years	7%	18
3-5 years	23	63
6-10 years	18	9
11-20 years	18	8
21-30 years	17	3
31-40 years	9	0
41 years or more	8	0

COMMUNITY ENGAGEMENT SUMMARY

4. Which of the following natural features, if any, have you or members of your household visited during the past year? Please select all that apply. A map is provided below for your reference.



	Non-student	*Student*
Utah Lake	61%	47
Provo River	82	74
Provo Canyon	92	92
Rock Canyon	63	60
Slate Canyon	33	28
Slide Canyon	13	6
South Fork Canyon	40	38
Provo's foothills (i.e., trails and open space along the base of the mountains)	49	46
Pole Canyon/Hope Campground area	16	13
None of these areas	3	5



5. About how often do you visit each of the following natural features?

UTAH LAKE

	Non-student	*Student*
Daily	<1%	5
A few times a week	4	0
A few times a month	15	8
A few times a year	79	85
Never	1	3

PROVO RIVER

	Non-student	*Student*
Daily	4%	5
A few times a week	11	16
A few times a month	27	20
A few times a year	57	59
Never	1	0

PROVO CANYON

	Non-student	*Student*
Daily	2%	3
A few times a week	13	6
A few times a month	33	26
A few times a year	52	69
Never	<1	0

ROCK CANYON

	Non-student	*Student*
Daily	<1%	4
A few times a week	6	6
A few times a month	26	21
A few times a year	68	70
Never	<1	0

SLATE CANYON

	Non-student	*Student*
Daily	1%	0
A few times a week	4	1
A few times a month	20	20
A few times a year	74	79
Never	1	0

SLIDE CANYON

	Non-student	*Student*
Daily	<1%	34
A few times a week	2	2
A few times a month	14	2
A few times a year	84	62
Never	1	0

5. About how often do you visit each of the following natural features? (Continued)

SOUTH FORK CANYON

	Non-student	*Student*
Daily	0%	0
A few times a week	3	0
A few times a month	26	29
A few times a year	69	71
Never	2	0

PROVO'S FOOTHILLS (I.E., TRAILS AND OPEN SPACE ALONG THE BASE OF THE MOUNTAINS)

	Non-student	*Student*
Daily	5%	1
A few times a week	12	1
A few times a month	22	25
A few times a year	61	73
Never	0	0

POLE CANYON/HOPE CAMPGROUND AREA

	Non-student	*Student*
Daily	0%	0
A few times a week	1	0
A few times a month	11	3
A few times a year	87	97
Never	2	0

6. When you visit these natural features, how much time do you typically spend there?

UTAH LAKE

	Non-student	*Student*
Less than an hour	16%	12
1-2 hours	51	54
2-4 hours	24	21
More than 4 hours	9	13

PROVO RIVER

	Non-student	*Student*
Less than an hour	18%	12
1-2 hours	58	54
2-4 hours	21	21
More than 4 hours	3	13

PROVO CANYON

	Non-student	*Student*
Less than an hour	9%	6
1-2 hours	44	34
2-4 hours	36	39
More than 4 hours	12	22

6. When you visit these natural features, how much time do you typically spend there? (Continued)

ROCK CANYON

	Non-student	*Student*
Less than an hour	10%	5
1-2 hours	54	54
2-4 hours	32	23
More than 4 hours	4	17

SLATE CANYON

	Non-student	*Student*
Less than an hour	20%	19
1-2 hours	56	44
2-4 hours	23	30
More than 4 hours	2	8

SLIDE CANYON

	Non-student	*Student*
Less than an hour	17%	7
1-2 hours	64	15
2-4 hours	18	78
More than 4 hours	1	0

SOUTH FORK CANYON

	Non-student	*Student*
Less than an hour	7%	2
1-2 hours	45	44
2-4 hours	41	39
More than 4 hours	7	15

PROVO'S FOOTHILLS (I.E., TRAILS AND OPEN SPACE ALONG THE BASE OF THE MOUNTAINS)

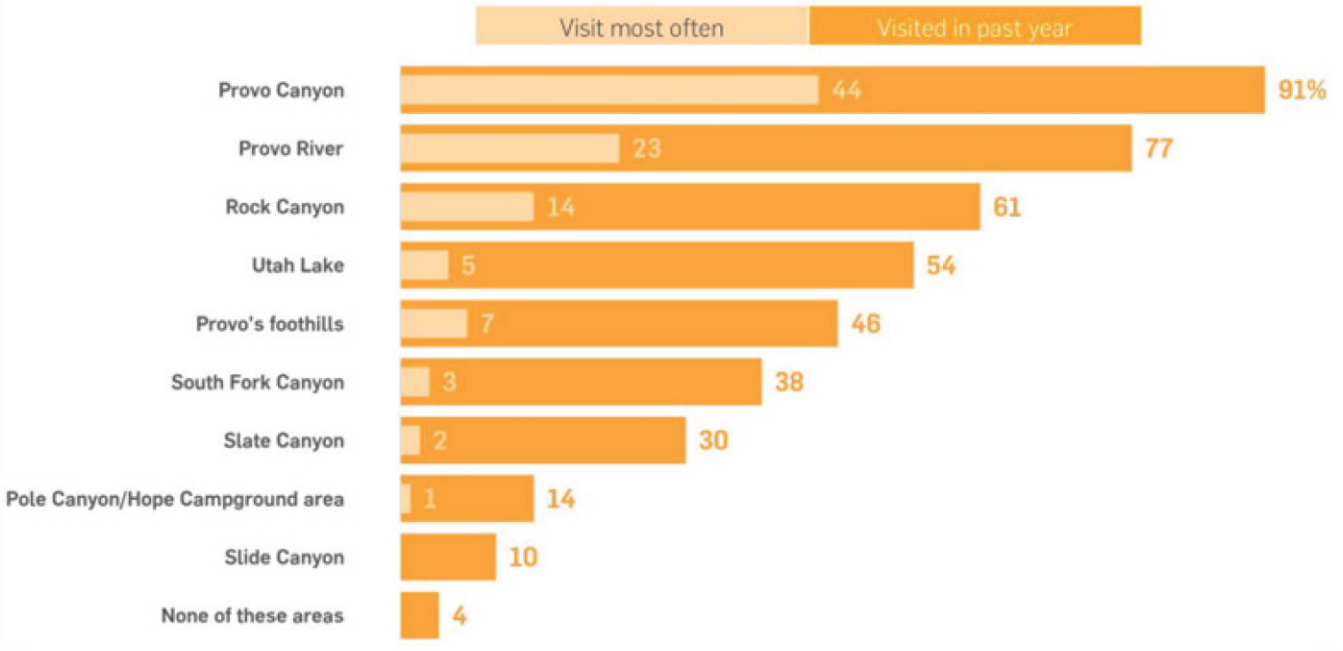
	Non-student	*Student*
Less than an hour	12%	4
1-2 hours	65	68
2-4 hours	21	28
More than 4 hours	2	0

POLE CANYON/HOPE CAMPGROUND AREA

	Non-student	*Student*
Less than an hour	6%	11
1-2 hours	35	48
2-4 hours	25	7
More than 4 hours	35	35

COMMUNITY ENGAGEMENT SUMMARY

7. Of the features you have visited, which would you say you visit the most often?



	Non-student	*Student*
Utah Lake	7%	3
Provo River	22	30
Provo Canyon	43	39
Rock Canyon	12	18
Slate Canyon	3	1
Slide Canyon	<1	0
South Fork Canyon	4	3
Provo's foothills (i.e., trails and open space along the base of the mountains)	8	8
Pole Canyon/Hope Campground area	2	0

8. Regardless of the ones you regularly visit, which of Provo's natural features would you consider to be the busiest or most heavily used? Select up to three.

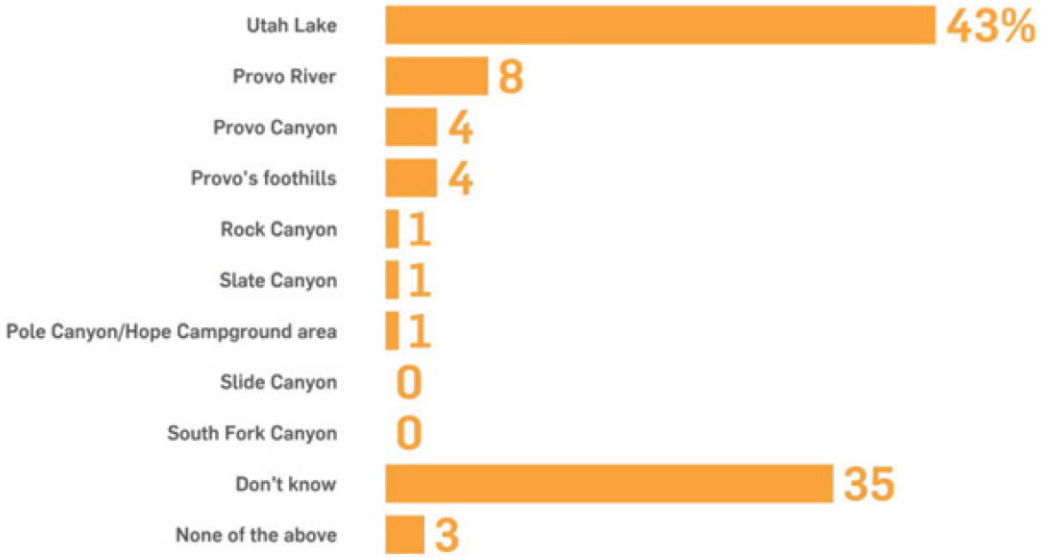
	Non-student	*Student*
Utah Lake	20%	18
Provo River	37	28
Provo Canyon	64	58
Rock Canyon	29	28
Slate Canyon	1	1
Slide Canyon	<1	0
South Fork Canyon	9	11
Provo's foothills (i.e., trails and open space along the base of the mountains	9	22
Pole Canyon/Hope Campground area	1	6
Don't know	20	22

9. Of the natural features listed below, which of the following do you consider the most iconic for visitors coming to Provo?

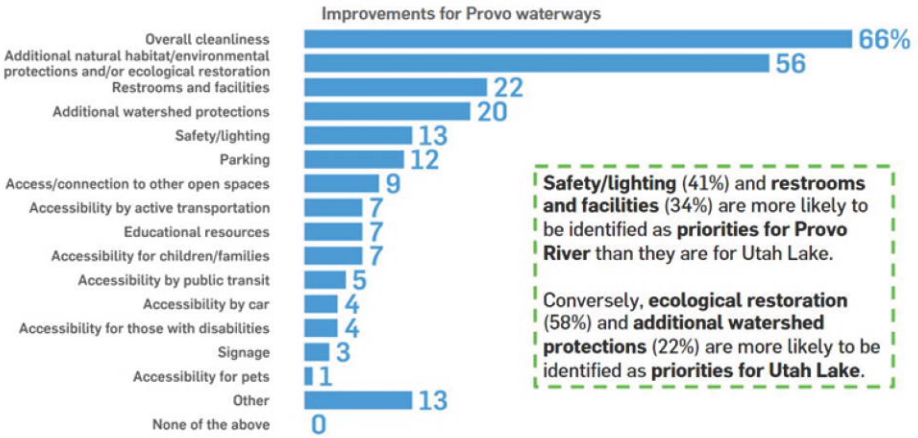
	Non-student	*Student*
Utah Lake	8%	12
Provo River	9	4
Provo Canyon	62	63
Rock Canyon	9	8
Slate Canyon	<1	<1
Slide Canyon	0	0
South Fork Canyon	1	2
Provo's foothills (i.e., trails and open space along the base of the mountains	2	2
Pole Canyon/Hope Campground area	<1	0
None of these areas	1	0
Don't know	8	9

COMMUNITY ENGAGEMENT SUMMARY

10. Of the natural features listed below, which of the following do you consider the most in need of improvement?



	Non-student	*Student*
Utah Lake	42%	47
Provo River	7	9
Provo Canyon	3	5
Rock Canyon	1	<1
Slate Canyon	2	<1
Slide Canyon	<1	0
South Fork Canyon	1	0
Provo's foothills (i.e., trails and open space along the base of the mountains	5	3
Pole Canyon/Hope Campground area	2	<1
None of these areas	4	1
Don't know	32	34



11. Thinking about this feature, what aspect(s) specifically would you say need improvement? Please select up to three. (Respondents were randomly assigned a natural feature they reported having visited.)

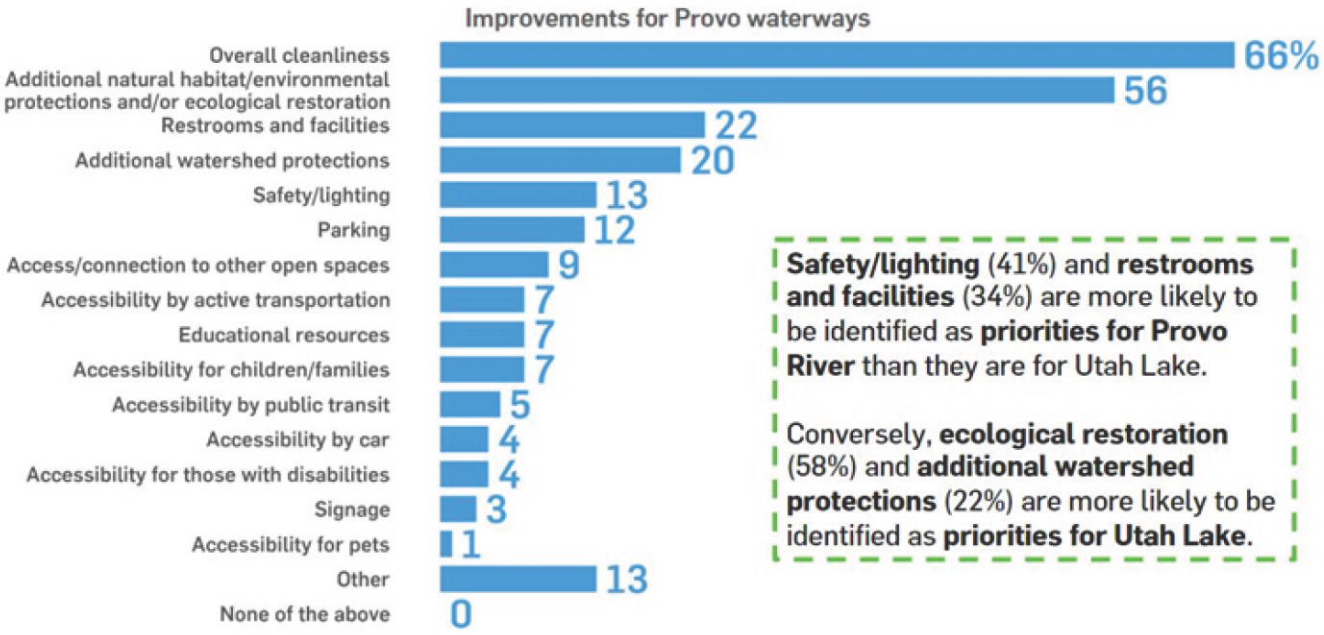
UTAH LAKE

	Non-student	*Student*
Safety/lighting	6%	12
Accessibility by car	4	4
Accessibility by public transit	4	5
Accessibility by active transportation (e.g, walking, cycling, etc.)	9	2
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	23	14
Overall cleanliness	59	72
Accessibility for those with disabilities	2	5
Signage	1	6
Educational resources	7	6
Parking	6	24
Access/connection to other open spaces	9	6
Accessibility for children/families	10	7
Accessibility for pets	1	1
Additional watershet protections	23	24
Additional natural habitat/environmental proections and/or ecological restoration	55	60
Other, please specify	16	10
None of the above		

PROVO RIVER

	Non-student	*Student*
Safety/lighting	42%	29
Accessibility by car	0	0
Accessibility by public transit	10	0
Accessibility by active transportation (e.g, walking, cycling, etc.)	23	0
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	28	28
Overall cleanliness	54	71
Accessibility for those with disabilities	6	7
Signage	6	2
Educational resources	0	27
Parking	14	2
Access/connection to other open spaces	14	23
Accessibility for children/families	6	0
Accessibility for pets	0	0
Additional watershet protections	12	1
Additional natural habitat/environmental proections and/or ecological restoration	29	83
Other, please specify	20	4
None of the above		

11. Thinking about this feature, what aspect(s) specifically would you say need improvement? Please select up to three. (Respondents were randomly assigned a natural feature they reported having visited.) (Continued)



Safety/lighting (41%) and **restrooms and facilities** (34%) are more likely to be identified as **priorities for Provo River** than they are for Utah Lake.

Conversely, **ecological restoration** (58%) and **additional watershed protections** (22%) are more likely to be identified as **priorities for Utah Lake.**

PROVO CANYON

	Non-student	*Student*
Safety/lighting	8%	0
Accessibility by car	10	0
Accessibility by public transit	0	17
Accessibility by active transportation (e.g, walking, cycling, etc.)	40	0
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	34	44
Overall cleanliness	8	54
Accessibility for those with disabilities	0	0
Signage	18	11
Educational resources	7	0
Parking	19	89
Access/connection to other open spaces	2	28
Accessibility for children/families	5	0
Accessibility for pets	3	0
Additional watershet protections	0	0
Additional natural habitat/environmental proections and/or ecological restoration	5	56
Other, please specify	40	0
None of the above	4	0

11. Thinking about this feature, what aspect(s) specifically would you say need improvement? Please select up to three. (Respondents were randomly assigned a natural feature they reported having visited.) (Continued)

ROCK CANYON

	Non-student	*Student*
Safety/lighting	0%	0
Accessibility by car	0	0
Accessibility by public transit	0	0
Accessibility by active transportation (e.g, walking, cycling, etc.)	9	0
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	45	0
Overall cleanliness	29	70
Accessibility for those with disabilities	4	0
Signage	9	0
Educational resources	0	0
Parking	68	0
Access/connection to other open spaces	18	0
Accessibility for children/families	22	0
Accessibility for pets	9	0
Additional watershet protections	0	0
Additional natural habitat/environmental proections and/or ecological restoration	8	0
Other, please specify		100
None of the above	0	0

SLATE CANYON

	Non-student	*Student*
Safety/lighting	11%	100
Accessibility by car	4	0
Accessibility by public transit	0	0
Accessibility by active transportation (e.g, walking, cycling, etc.)	4	0
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	59	100
Overall cleanliness	44	0
Accessibility for those with disabilities	0	0
Signage	17	0
Educational resources	0	0
Parking	29	0
Access/connection to other open spaces	15	0
Accessibility for children/families	14	0
Accessibility for pets	0	0
Additional watershet protections	4	0
Additional natural habitat/environmental proections and/or ecological restoration	15	0
Other, please specify	24	100
None of the above	1	0

11. Thinking about this feature, what aspect(s) specifically would you say need improvement? Please select up to three. (Respondents were randomly assigned a natural feature they reported having visited.) (Continued)

SLIDE CANYON

	Non-student	*Student*
Safety/lighting	0%	0
Accessibility by car	100	0
Accessibility by public transit	0	0
Accessibility by active transportation (e.g, walking, cycling, etc.)	0	0
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	0	0
Overall cleanliness	0	0
Accessibility for those with disabilities	0	0
Signage	0	0
Educational resources	0	0
Parking	100	0
Access/connection to other open spaces	100	0
Accessibility for children/families	0	0
Accessibility for pets	0	0
Additional watershet protections	0	0
Additional natural habitat/environmental proections and/or ecological restoration	0	0
Other, please specify	0	0
None of the above	0	0

SOUTH FORK CANYON

	Non-student	*Student*
Safety/lighting	13%	0
Accessibility by car	13	0
Accessibility by public transit	8	0
Accessibility by active transportation (e.g, walking, cycling, etc.)	13	0
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	66	0
Overall cleanliness	0	0
Accessibility for those with disabilities	0	0
Signage	0	0
Educational resources	0	0
Parking	70	0
Access/connection to other open spaces	15	0
Accessibility for children/families	0	0
Accessibility for pets	0	0
Additional watershet protections	17	0
Additional natural habitat/environmental proections and/or ecological restoration	38	0
Other, please specify	2	0
None of the above	0	0

11. Thinking about this feature, what aspect(s) specifically would you say need improvement? Please select up to three. (Respondents were randomly assigned a natural feature they reported having visited.) (Continued)

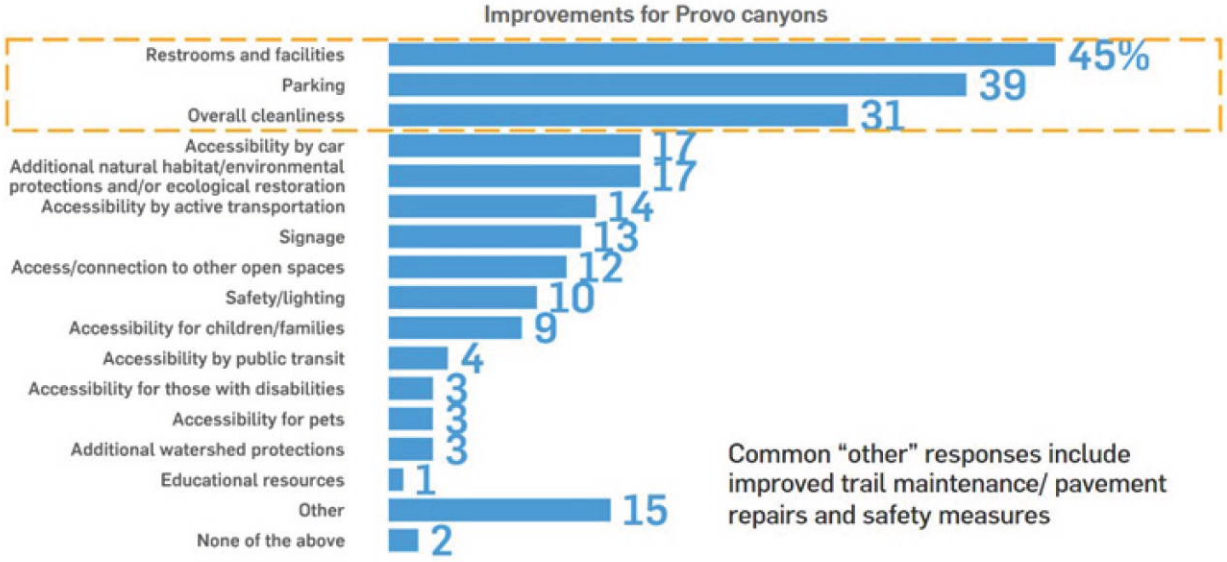
PROVO'S FOOTHILLS (I.E., TRAILS AND OPEN SPACE ALONG THE BASE OF THE MOUNTAINS)

	Non-student	*Student*
Safety/lighting	3%	0
Accessibility by car	0	0
Accessibility by public transit	0	0
Accessibility by active transportation (e.g, walking, cycling, etc.)	18	0
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	41	17
Overall cleanliness	19	43
Accessibility for those with disabilities	0	0
Signage	15	40
Educational resources	0	17
Parking	18	0
Access/connection to other open spaces	15	0
Accessibility for children/families	8	17
Accessibility for pets	0	0
Additional watershet protections	8	0
Additional natural habitat/environmental proections and/or ecological restoration	53	43
Other, please specify	42	4
None of the above	0	0

POLE CANYON/HOPE CAMPGROUND AREA

	Non-student	*Student*
Safety/lighting	9%	10
Accessibility by car	70	71
Accessibility by public transit	0	0
Accessibility by active transportation (e.g, walking, cycling, etc.)	5	5
Restrooms and facilities (e.g., water stations, bike racks, tables, etc.)	33	37
Overall cleanliness	36	39
Accessibility for those with disabilities	14	15
Signage	20	22
Educational resources	0	0
Parking	3	3
Access/connection to other open spaces	4	4
Accessibility for children/families	0	0
Accessibility for pets	4	5
Additional watershet protections	4	0
Additional natural habitat/environmental proections and/or ecological restoration	0	0
Other, please specify	0	0
None of the above	0	0

11. Thinking about this feature, what aspect(s) specifically would you say need improvement? Please select up to three. (Respondents were randomly assigned a natural feature they reported having visited.) (Continued)



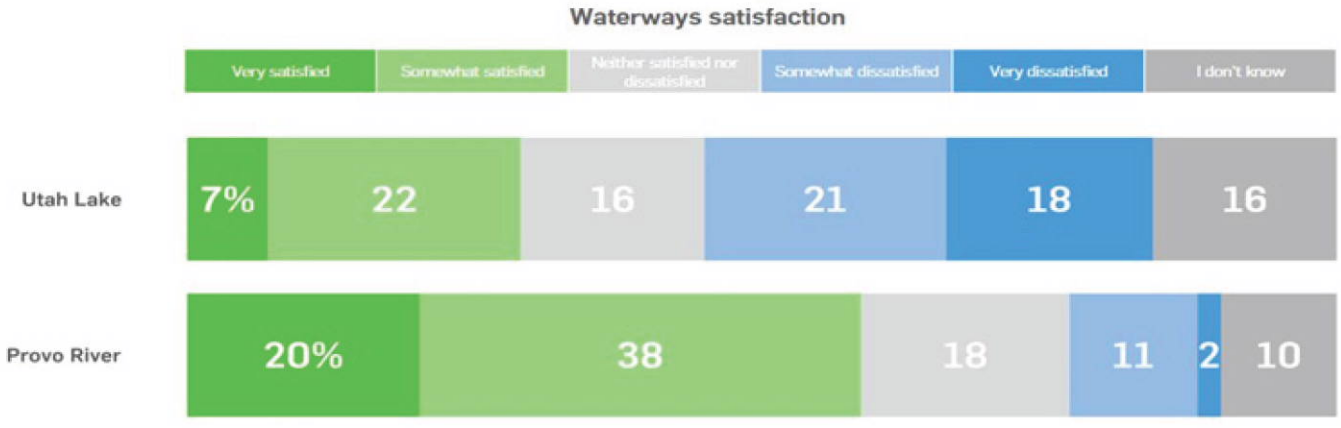
12. For each of the natural features listed below, please rate your level of satisfaction with the condition and maintenance.

UTAH LAKE

	Non-student	*Student*
Very satisfied	9%	5
Somewhat satisfied	19	24
Neither satisfied nor dissatisfied	16	15
Somewhat dissatisfied	23	18
Very dissatisfied	20	16
I don't know	13	22

PROVO RIVER

	Non-student	*Student*
Very satisfied	23%	17
Somewhat satisfied	37	39
Neither satisfied nor dissatisfied	15	22
Somewhat dissatisfied	13	10
Very dissatisfied	2	2
I don't know	10	9



12. For each of the natural features listed below, please rate your level of satisfaction with the condition and maintenance. (Continued)

PROVO CANYON

	Non-student	*Student*
Very satisfied	36%	37
Somewhat satisfied	40	45
Neither satisfied nor dissatisfied	12	9
Somewhat dissatisfied	5	2
Very dissatisfied	1	2
I don't know	5	5

ROCK CANYON

	Non-student	*Student*
Very satisfied	26%	27
Somewhat satisfied	34	35
Neither satisfied nor dissatisfied	16	13
Somewhat dissatisfied	3	1
Very dissatisfied	<1	0
I don't know	22	24

SLATE CANYON

	Non-student	*Student*
Very satisfied	14%	7
Somewhat satisfied	18	19
Neither satisfied nor dissatisfied	15	17
Somewhat dissatisfied	3	<1
Very dissatisfied	0	0
I don't know	49	56

SLIDE CANYON

	Non-student	*Student*
Very satisfied	8%	4
Somewhat satisfied	13	9
Neither satisfied nor dissatisfied	13	19
Somewhat dissatisfied	2	<1
Very dissatisfied	<1	0
I don't know	64	68

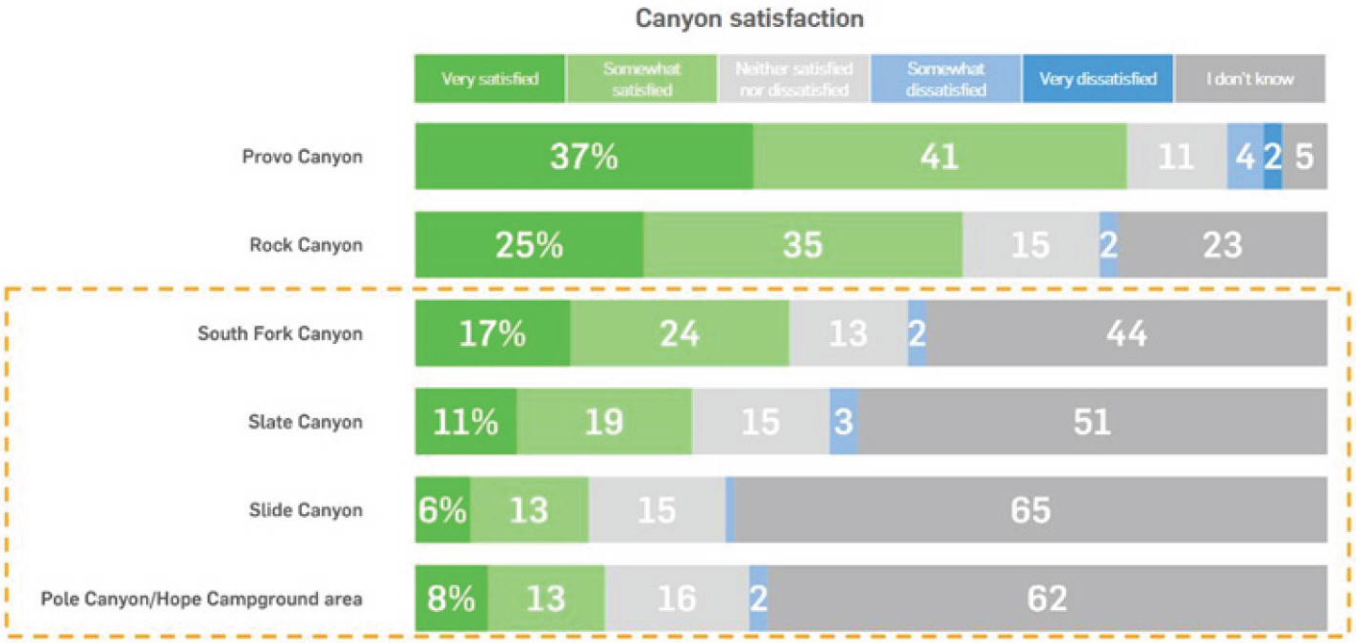
SOUTH FORK CANYON

	Non-student	*Student*
Very satisfied	20%	12
Somewhat satisfied	23	24
Neither satisfied nor dissatisfied	13	15
Somewhat dissatisfied	2	<1
Very dissatisfied	<1	0
I don't know	42	49

POLE CANYON/HOPE CAMPGROUND AREA

	Non-student	*Student*
Very satisfied	9%	1
Somewhat satisfied	12	13
Neither satisfied nor dissatisfied	15	18
Somewhat dissatisfied	2	1
Very dissatisfied	<1	0
I don't know	62	61

12. For each of the natural features listed below, please rate your level of satisfaction with the condition and maintenance. (Continued)



PROVO'S FOOTHILLS (I.E., TRAILS AND OPEN SPACE ALONG THE BASE OF THE MOUNTAINS)

	Non-student	*Student*
Very satisfied	17%	15
Somewhat satisfied	24	24
Neither satisfied nor dissatisfied	20	20
Somewhat dissatisfied	6	3
Very dissatisfied	2	0
I don't know	31	29

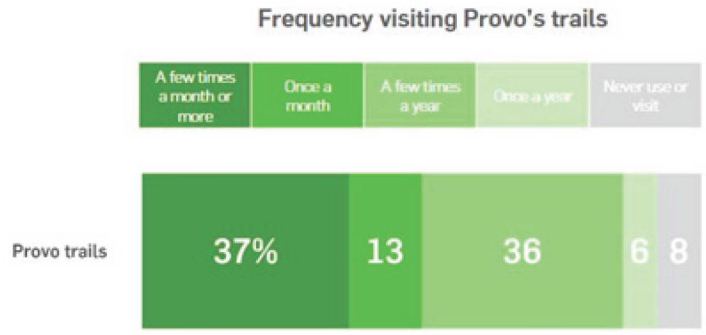
COMMUNITY ENGAGEMENT SUMMARY

13. How often do you or members of your household use trails in or around Provo City?

	Non-student	*Student*
A few times a month or more	42%	30
Once a month	10	14
A few times a year	33	40
Once a year	6	6
Never use or visit	8	10

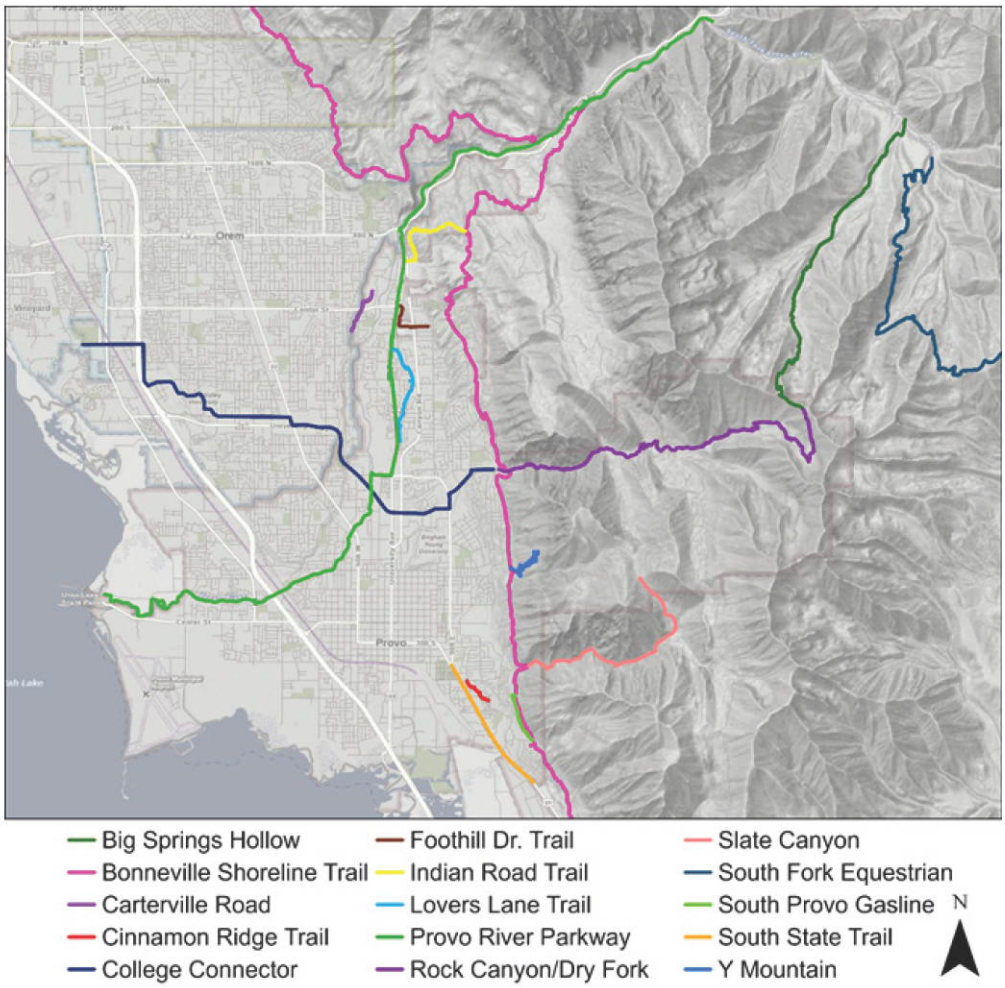
14. How long do you typically spend on the trails per visit?

	Non-student	*Student*
Less than an hour	12%	9
1-2 hours	70	70
2-4 hours	17	19
More than 4 hours	1	3



COMMUNITY ENGAGEMENT SUMMARY

15. In the past 12 months, which Provo City trails have you or members of your household used or visited? Select all that apply. A map is provided below for your reference.



	Average Non-student	*Average Student*
Big Springs Trail	26%	13
Bonneville Shoreline Trail	45	46
Carterville Road Trail	14	8
Cinnamon Ridge Trail	4	<1
Indian road Equistrian Trailhead (and adjacent trails)	12	3
College Collector	9	12
Foothills Collector (4800 N between University Ave and Canyon Rd)	14	2
Lovers Lane	17	10
Provo River Parkway Trail	80	56
Rock Canyon Trailhead (and adjacent trails)	51	40
Y Mountain Trailhead (and adjacent trails)	57	65
Slate Canyon Trailhead (and adjacent trails)	28	20
South Fork Equestrian Trailhead (and adjacent trails)	9	10
South State Trail	7	4
South Provo Trail	14	12
None of these trails	4	6

16. In your opinion, how well maintained are each of these trails?

Big Springs Trail

	Non-student	*Student*
Very well maintained	34%	33
Mostly well maintained	58	62
Needs improvement	7	4

Bonneville Shoreline Trail

	Non-student	*Student*
Very well maintained	24%	32
Mostly well maintained	58	59
Needs improvement	18	10

Carterville Road Trail

	Non-student	*Student*
Very well maintained	23%	33
Mostly well maintained	58	67
Needs improvement	19	0

Cinnamon Ridge Trail

	Non-student	*Student*
Very well maintained	8%	52
Mostly well maintained	78	48
Needs improvement	14	0

Indian Road Equestrian Trailhead (and adjacent trails)

	Non-student	*Student*
Very well maintained	26%	6
Mostly well maintained	63	89
Needs improvement	12	5

College Connector

	Non-student	*Student*
Very well maintained	35%	36
Mostly well maintained	58	59
Needs improvement	7	4

Foothills Connector (4800 N between University Ave and Canyon Rd)

	Non-student	*Student*
Very well maintained	35%	33
Mostly well maintained	51	53
Needs improvement	14	14

Lovers Lane

	Non-student	*Student*
Very well maintained	19%	32
Mostly well maintained	57	68
Needs improvement	23	0

16. In your opinion, how well maintained are each of these trails? (Continued)

Provo River Parkway Trail

	Non-student	*Student*
Very well maintained	28%	37
Mostly well maintained	55	46
Needs improvement	18	17

Rock Canyon Trailhead (and adjacent trails)

	Non-student	*Student*
Very well maintained	36%	31
Mostly well maintained	56	67
Needs improvement	8	2

Y Mountain Trailhead (and adjacent trails)

	Non-student	*Student*
Very well maintained	60%	60
Mostly well maintained	36	39
Needs improvement	4	1

Slate Canyon Trailhead (and adjacent trails)

	Non-student	*Student*
Very well maintained	28%	14
Mostly well maintained	62	71
Needs improvement	10	15

South Fork Equestrian Trailhead (and adjacent trails)

	Non-student	*Student*
Very well maintained	27%	22
Mostly well maintained	60	55
Needs improvement	13	23

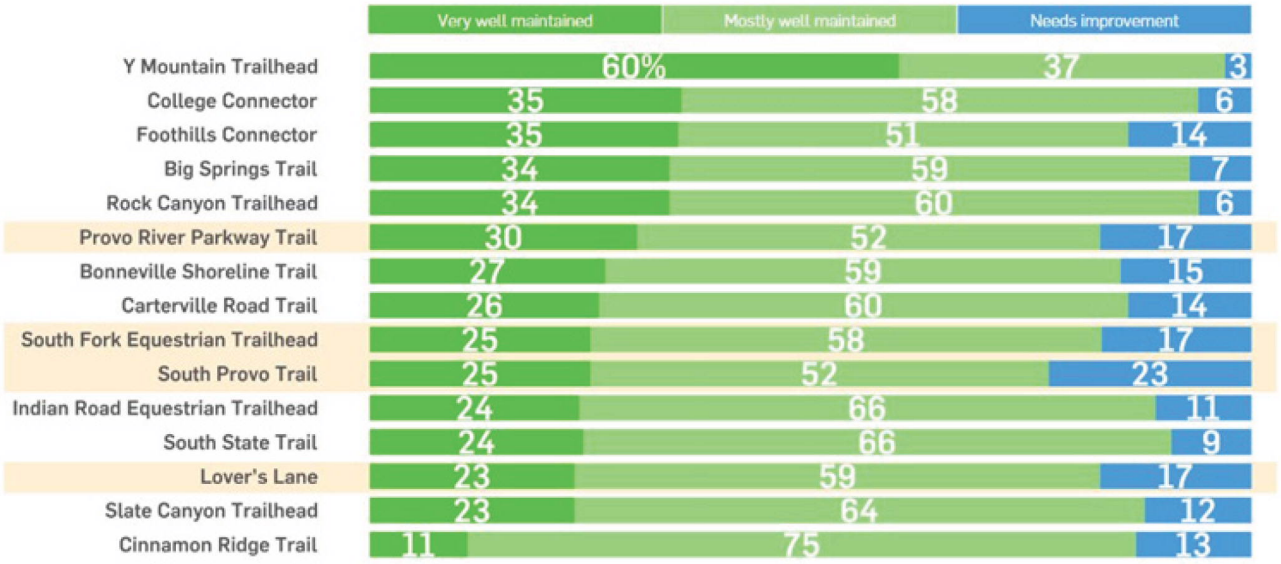
South State Trail

	Non-student	*Student*
Very well maintained	20%	35
Mostly well maintained	67	65
Needs improvement	13	0

South Provo Trail

	Non-student	*Student*
Very well maintained	26%	24
Mostly well maintained	51	54
Needs improvement	24	22

16. In your opinion, how well maintained are each of these trails? (Continued)



17. Which Provo City trail do you use most often? (Residents who responded that they never use or visit trails were not given this question.)

	Non-student	*Student*
Big Springs Trail	4%	1
Bonneville Shoreline Trail	10	13
Carterville Road Trail	1	0
Cinnamon Ridge Trail	<1	0
Indian road Equistrian Trailhead (and adjacent trails)	<1	0
College Collector	<1	6
Foothills Collector (4800 N between University Ave and Canyon Rd)	1	0
Lovers Lane	1	3
Provo River Parkway Trail	50	37
Rock Canyon Trailhead (and adjacent trails)	14	11
Y Mountain Trailhead (and adjacent trails)	8	13
Slate Canyon Trailhead (and adjacent trails)	5	3
South Fork Equestrian Trailhead (and adjacent trails)	<1	3
South State Trail	<1	0
South Provo Trail	1	3
None of these trails	3	6

18. What is the most important reason why you use (SELECTED TRAIL USED MOST OFTEN) most often? (The survey filled in the trail the respondent said they used most often.)

	Non-student	*Student*
Close to home	43%	39
Close to work	<1	<1
Recreation program	<1	0
Community race/event	<1	4
Dog walking	4	2
Biking (recreation)	16	7
Biking (community)	3	2
Equestrian	<1	0
Walking/jogging	27	33
In-line skating/skatehoarding	1	5
Other, please specify	5	9

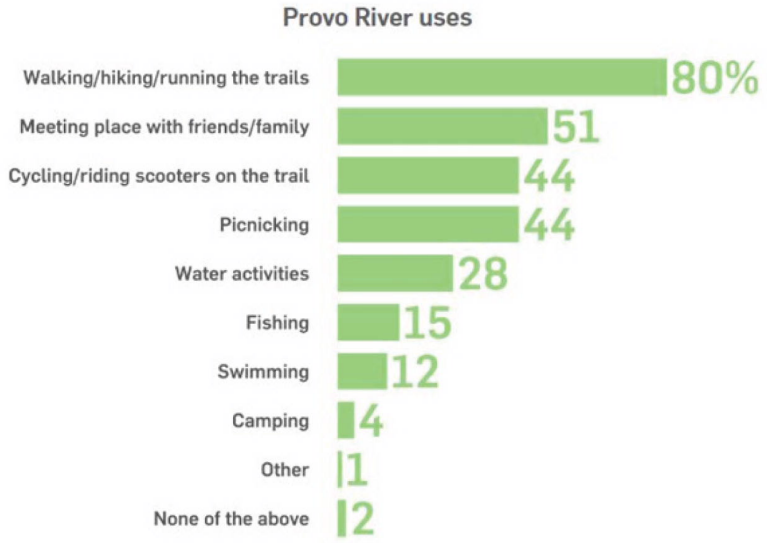
19. Which, if any, of the following improvements should be made to trails and trailheads in Provo City? Select up to three.

	Average Non-student	*Average Student*
Prefer trails outside the city	0%	0
Lack of information about Provo City trails	11	100
Accessibility (ADA, etc.)	11	35
Not enough trailheads	0	0
Not enough vehicular parking	0	33
Not enough bicycle parking	0	0
Not enough lighting	11	0
Not open long enough during season	0	0
Not enough restrooms	11	0
Not connected to neighborhoods, inconvenient access points	0	33
Not pet friendly	0	0
Safety concerns	0	0
Trails are incomplete or not connected	0	0
Too many pets	0	0
Too much user conflict	0	0
Poor trail maintenance (e.g., cracks/buckling, overgrowth/debris, etc.)	0	0
Not interested in trail use activities	76	35
Other, please specify	13	0

At this point in the survey, respondents were assigned a natural feature at random and asked questions about that feature.

20. When visiting Utah Lake, which of the following activities, if any, do you engage in? Please select all that apply.

	Average Non-student	*Average Student*
Fishing	35%	54
Swimming	8	15
Paddleboarding/kayaking	22	27
Boating/sailing/water skiing	38	12
Walking/running the trails	36	42
Beach access	32	17
Meeting place with friends/family	30	26
Camping	6	24
Picknicking	23	31
Birding	11	22
Other, please specify	8	0
None of the above	1	0

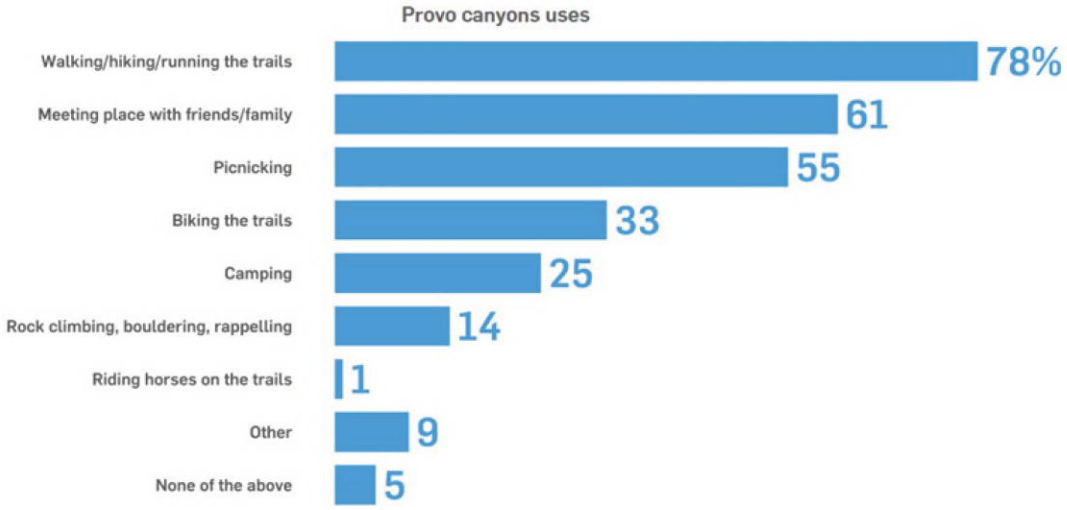


21. When visiting Provo River, which of the following activities, if any, do you engage in? Please select all that apply.

	Average Non-student	*Average Student*
Fishing	12%	24
Swimming	15	7
Water activities (rafting, canoing, etc.)	32	18
Walking/running the trails	78	84
Cycling/riding scooters on the trail	50	30
Meeting place with friends/family (including parks adjacent to the river)	58	38
Camping	4	5
Picknicking	48	35
Other, please specify	1	0
None of the above	2	0

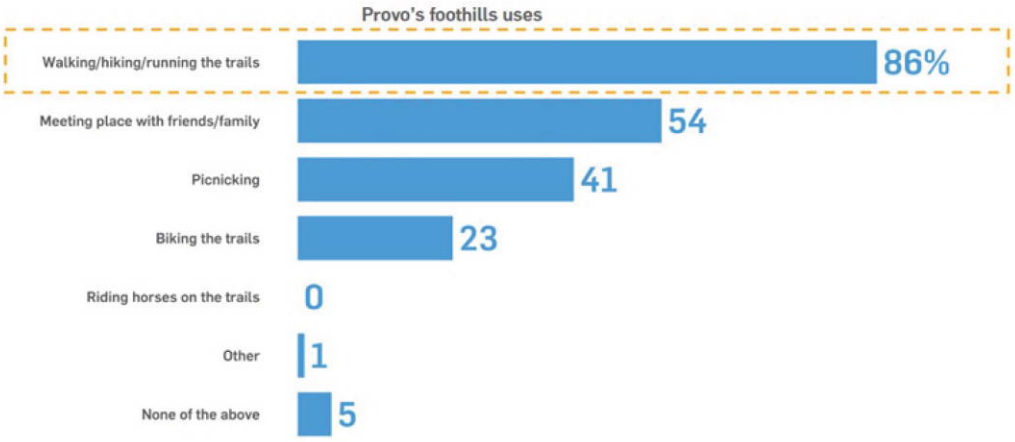
22. When visiting Provo's canyons, which of the following activities, if any, do you engage in? Please select all that apply.

	Average Non-student	*Average Student*
Walking/hiking/running the trails	79%	78
Biking the trails	36	30
Riding horses on the trails	2	0
Rock climbing, bouldering, rappelling	14	13
Meeting place with friends/family	59	65
Camping	24	28
Picknicking	56	55
Other, please specify	10	8
None of the above	5	5



23. When visiting Provo's foothills, which of the following activities, if any, do you engage in? Please select all that apply.

	Average Non-student	*Average Student*
Walking/hiking/running the trails	88%	83
Biking the trails	21	26
Riding horses on the trails	0	0
Meeting place with friends/family	39	77
Picknicking	29	60
Other, please specify	1	0
None of the above	8	0

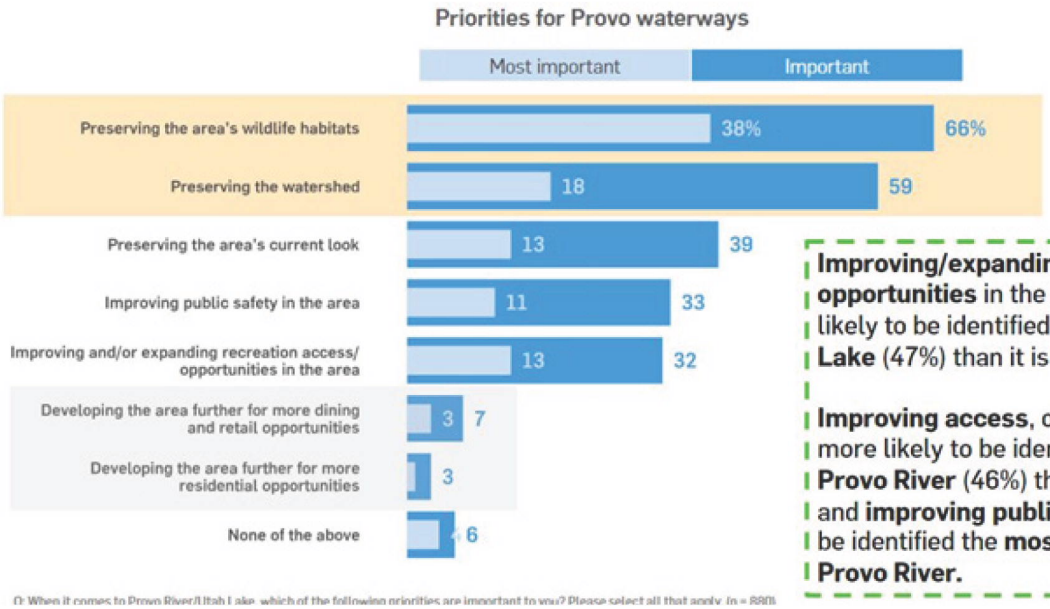


24. When it comes to Utah Lake, which of the following priorities are important to you? Please select all that apply

	Average Non-student	*Average Student*
Preserving the areas current look	27%	30
Perserving the areas wildlife habitats	61	63
Preserving the watershed	65	44
Improving and/or expanding recreation access/opportunities in the area	44	50
Improving public safety	40	27
Developing the area further for more dining and retail opportunities	7	25
Developing the area further for more residential opportunities	2	9
None of the above	4	2

25. When it comes to Provo River, which of the following priorities are important to you? Please select all that apply

	Average Non-student	*Average Student*
Preserving the areas current look	49%	43
Perserving the areas wildlife habitats	66	76
Preserving the watershed	58	63
Improving and/or expanding recreation access/opportunities in the area	29	3
Improving public safety	35	25
Developing the area further for more dining and retail opportunities	5	0
Developing the area further for more residential opportunities	2	2
None of the above	5	14



Q: When it comes to Provo River/Utah Lake, which of the following priorities are important to you? Please select all that apply. (n = 880)

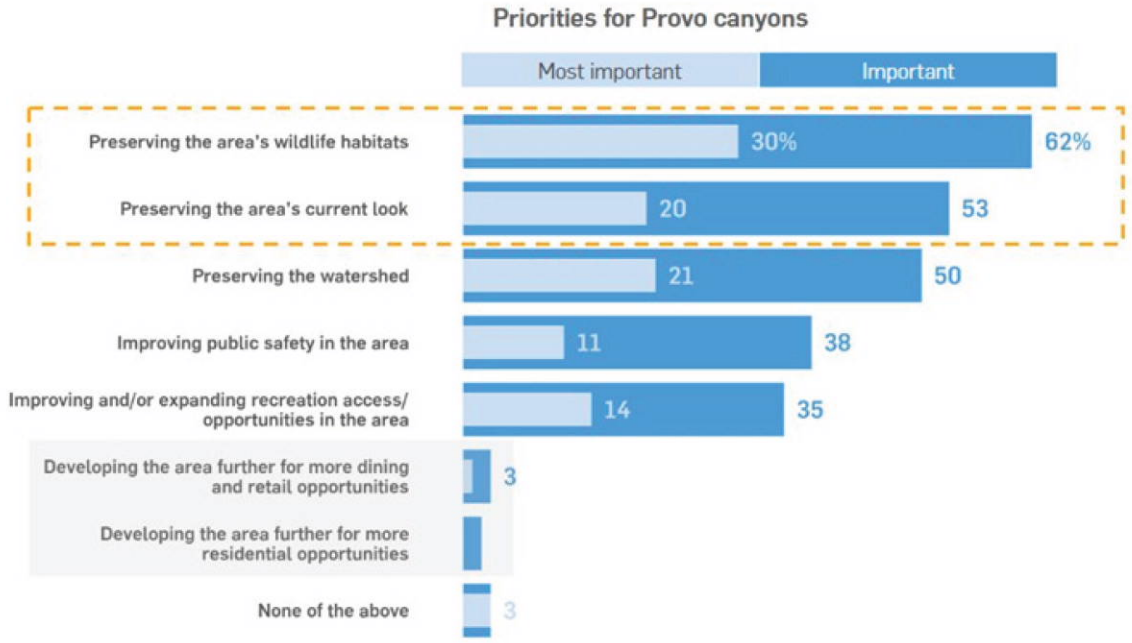
Improving/expanding recreation opportunities in the areas is much more likely to be identified as a **priority for Utah Lake** (47%) than it is for Provo River (28%).

Improving access, on the other hand, is more likely to be identified a **priority for Provo River** (46%) than for Utah Lake (21%) and **improving public safety** more likely to be identified the **most important priority for Provo River.**

COMMUNITY ENGAGEMENT SUMMARY

26. When it comes to Provo's Canyons, which of the following priorities are important to you? Please select all that apply

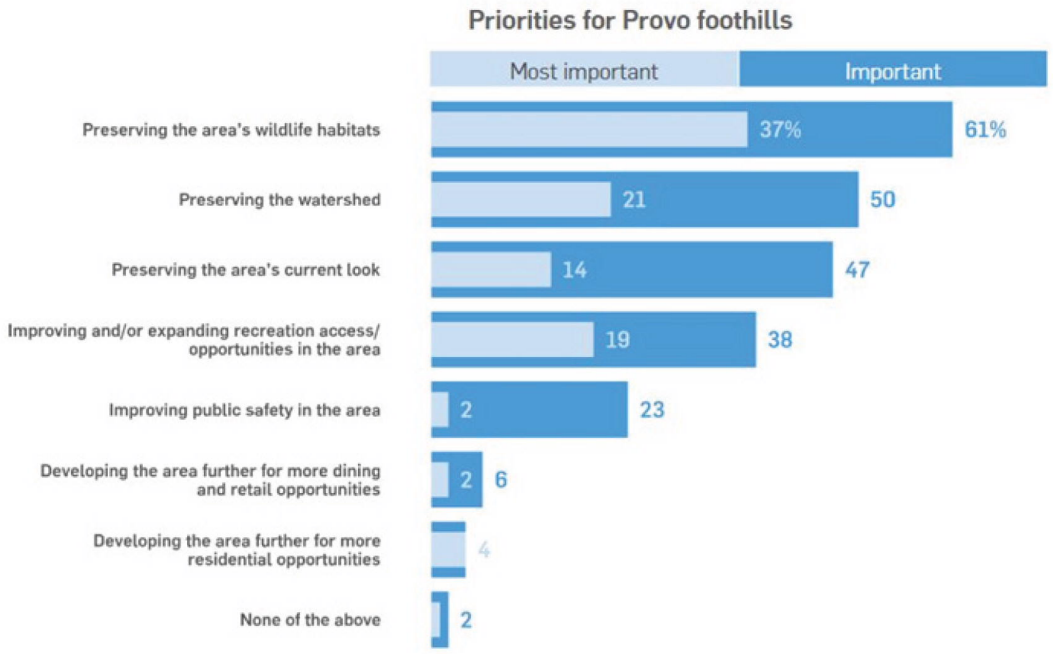
	Average Non-student	*Average Student*
Preserving the areas current look	61%	42
Perserving the areas wildlife habitats	56	71
Preserving the watershed	44	57
Improving and/or expanding recreation access/opportunities in the area	34	37
Improving public safety	34	44
Developing the area further for more dining and retail opportunities	5	<1
Developing the area further for more residential opportunities	3	<1
None of the above	5	1



COMMUNITY ENGAGEMENT SUMMARY

27. When it comes to Provo's foothills, which of the following priorities are important to you? Please select all that apply

	Average Non-student	*Average Student*
Preserving the areas current look	47%	44
Perserving the areas wildlife habitats	61	69
Preserving the watershed	53	55
Improving and/or expanding recreation access/opportunities in the area	34	33
Improving public safety	34	34
Developing the area further for more dining and retail opportunities	6	4
Developing the area further for more residential opportunities	3	2
None of the above	4	4



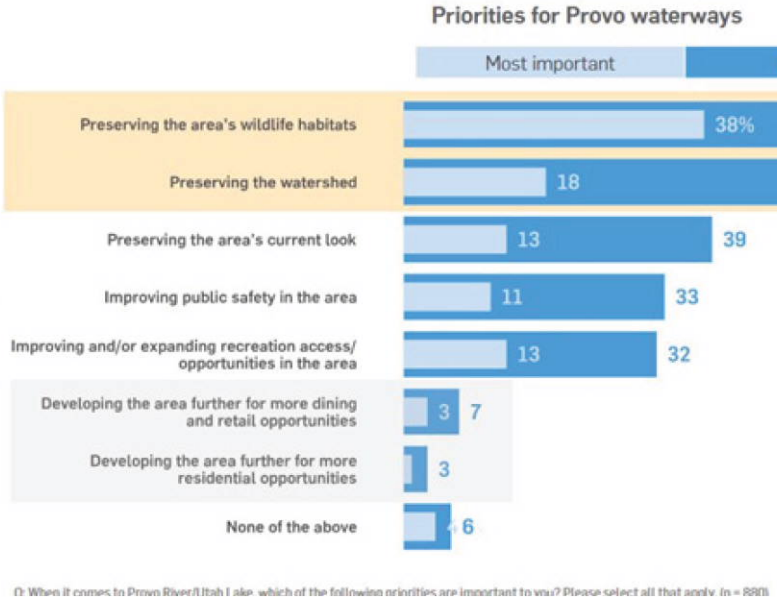
COMMUNITY ENGAGEMENT SUMMARY

28. When it comes to Utah Lake, which of the following priorities would you consider most important? Please select all that apply

	Total Non-student	*Total Student*
Preserving the areas current look	5%	9
Perserving the areas wildlife habitats	33	40
Preserving the watershed	29	5
Improving and/or expanding recreation access/opportunities in the area	19	29
Improving public safety	7	0
Developing the area further for more dining and retail opportunities	3	15
Developing the area further for more residential opportunities	0	0
None of the above	4	2

29. When it comes to Provo River, which of the following priorities would you consider most important? Please select all that apply

	Total Non-student	*Total Student*
Preserving the areas current look	20%	11
Perserving the areas wildlife habitats	32	58
Preserving the watershed	18	8
Improving and/or expanding recreation access/opportunities in the area	8	0
Improving public safety	15	18
Developing the area further for more dining and retail opportunities	2	0
Developing the area further for more residential opportunities	1	2
None of the above	4	4



Q: When it comes to Provo River/Utah Lake, which of the following priorities are important to you? Please select all that apply. (n = 880)

Improving/expanding recreation opportunities in the areas is much more likely to be identified as a **priority for Utah Lake** (47%) than it is for Provo River (28%).

Improving access, on the other hand, is more likely to be identified a **priority for Provo River** (46%) than for Utah Lake (21%) and **improving public safety** more likely to be identified the **most important priority for Provo River.**

30. When it comes to Provo's canyons, which of the following priorities would you consider most important? Please select all that apply

	Total Non-student	*Total Student*
Preserving the areas current look	25%	15
Perserving the areas wildlife habitats	27	34
Preserving the watershed	20	22
Improving and/or expanding recreation access/opportunities in the area	13	16
Improving public safety	10	13
Developing the area further for more dining and retail opportunities	1	0
Developing the area further for more residential opportunities	0	0
None of the above	4	1

31. When it comes to Provo's foothills, which of the following priorities would you consider most important? Please select all that apply

	Total Non-student	*Total Student*
Preserving the areas current look	10%	20
Perserving the areas wildlife habitats	37	37
Preserving the watershed	21	20
Improving and/or expanding recreation access/opportunities in the area	15	24
Improving public safety	4	0
Developing the area further for more dining and retail opportunities	4	0
Developing the area further for more residential opportunities	7	0
None of the above	2	0

32. What kind of uses or developments, if any, would you like to see incorporated in Utah Lake area? Please select all that apply.

	Average Non-student	*Average Student*
Additional trails	47%	37
Additional recreation facilities (e.g. pavilions, picnic areas, fire rings ets.)	46	41
Additional Housing	7	0
Additional dining and retail spaces	12	26
Additional attractions (e.g. ski resort)	15	27
Additional recreational rentals (e.g. canoes, paddleboards, etc.)	36	31
Other, please specify	10	40
None of the above	15	4

COMMUNITY ENGAGEMENT SUMMARY

33. What kind of uses or developments, if any, would you like to see incorporated in Provo River area? Please select all that apply.

	Average Non-student	*Average Student*
Additional trails	38%	39
Additional recreation facilities (e.g. pavilions, picnic areas, fire rings ets.)	39	10
Additional Housing	3	0
Additional dining and retail spaces	9	2
Additional attractions (e.g. ski resort)	9	5
Additional recreational rentals (e.g. canoes, paddleboards, etc.)	17	3
Other, please specify	8	2
None of the above	34	40

34. What kind of uses or developments, if any, would you like to see incorporated in Provo's canyon area? Please select all that apply.

	Average Non-student	*Average Student*
Additional trails	38%	25
Additional recreation facilities (e.g. pavilions, picnic areas, fire rings ets.)	36	33
Additional Housing	4	0
Additional dining and retail spaces	6	0
Additional attractions (e.g. ski resort)	15	4
Additional recreational rentals (e.g. canoes, paddleboards, etc.)	9	29
Other, please specify	11	6
None of the above	31	33

35. What kind of uses or developments, if any, would you like to see incorporated in Provo's foothills area? Please select all that apply.

	Average Non-student	*Average Student*
Additional trails	36%	32
Additional recreation facilities (e.g. pavilions, picnic areas, fire rings ets.)	28	35
Additional Housing	7	0
Additional dining and retail spaces	11	0
Additional attractions (e.g. ski resort)	6	1
Additional recreational rentals (e.g. canoes, paddleboards, etc.)	6	13
Other, please specify	6	13

COMMUNITY ENGAGEMENT SUMMARY

Demographic information to categorize responses.

36. Which of the following best describes how you think of yourself?

	Non-student	*Student*
Male	46%	51
Female	53	46
In another way, specify if you wish	1	2

37. How many children under the age of 18 live in your home, if any?

	Average Non-student	*Average Student*
Zero	49%	84
One	14	7
Two	15	3
Three	10	3
Four	6	2
Five or more	5	1

38. which of the following best describes where you are currently living?

	Average Non-student	*Average Student*
Own or buying my own home	71%	9
Rent my home or apartment	27	91
Live with parents, relatives, or otherwise rent-free	1	1
Other	<1	0

39. What is the last year of school you completed?

	Average Non-student	*Average Student*
Some high school or less	49%	84
High school graduate	14	7
Some college	15	3
College graduate	10	3
Post graduate degreee (e.g. MA, MBA, LLD, PhD)	6	2
Vocational school or technical school	5	1

40. Are you currently a college student?

	Non-student	*Student*
Yes, I'm a full-time student	0%	51
Yes, I'm a part-time student	0	46
No, I am not a student	100	2

COMMUNITY ENGAGEMENT SUMMARY

Demographic information to categorize responses. (Continued)

41. What is your employment status?

	Average Non-student	*Average Student*
Self-employed	13%	7
Employed by someone else	59	74
Unemployed	1	2
homemaker	13	2
Retired	14	0
Student	0	16

42. Are you currently...

	Average Non-student	*Average Student*
Married	72%	69
Divorced	8	2
Widowed	4	<1
Living with a partner	4	<1
Single	12	29

43. Are you... Please select all that apply

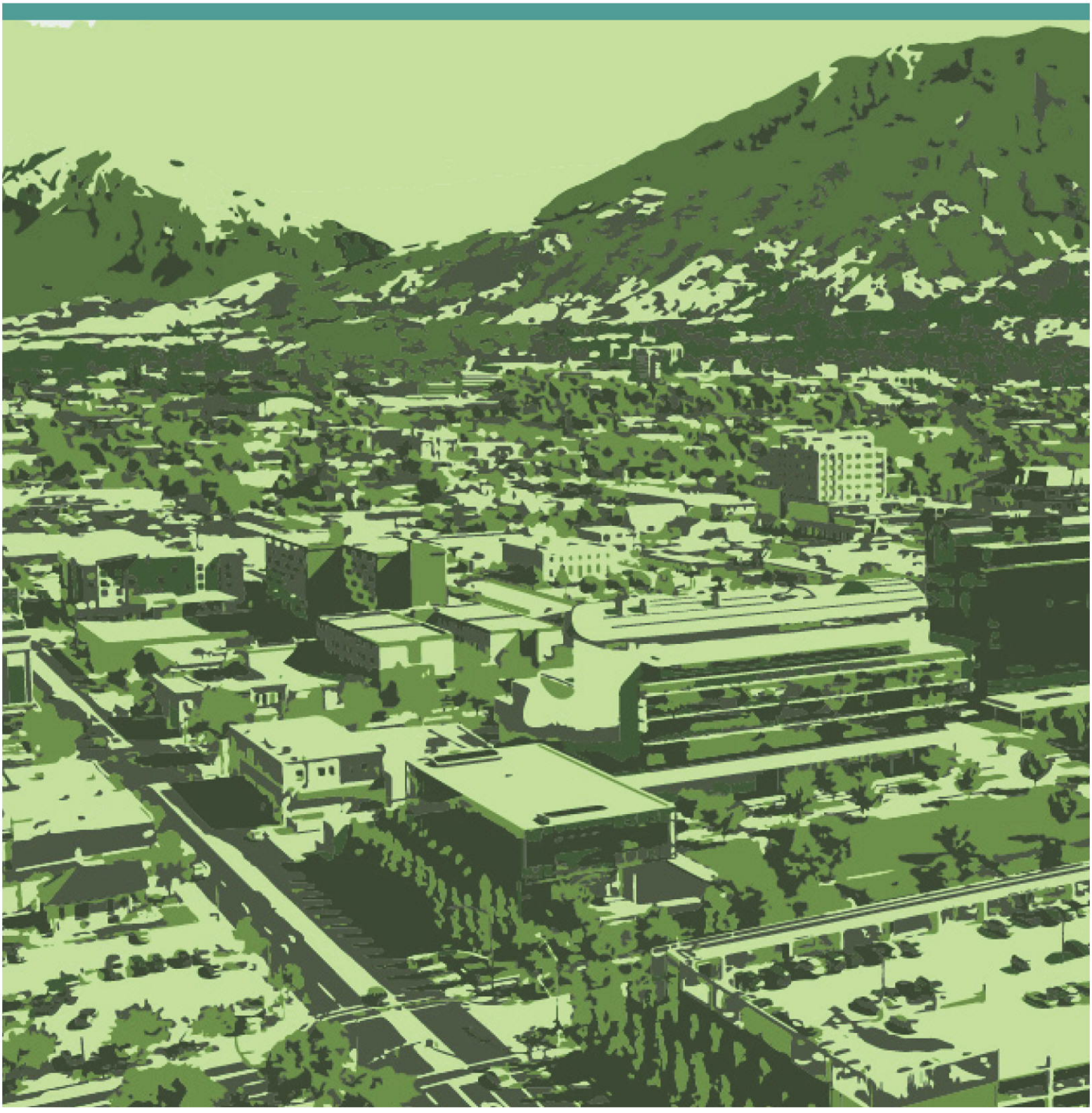
	Average Non-student	*Average Student*
American Indian/Native America	3%	4
Asian	7	3
Black/African American	2	0
Hispanic/Latino	6	4
White/Caucasian	84	88
Pacific Islander	4	2
Other, please specify	4	1
Prefer not to say	5	5

44. What do you expect your pre-tax family income to be?

	Average Non-student	*Average Student*
Under 25,000	4%	41
$25,000 – 39,999	9	26
$40,000 – 49,999	5	12
$50,000 – 74,999	16	11
$75,000 – 99,999	15	3
$100,000 – 124,999	13	3
$125,000 – 149,999	8	1
Over $150,000	20	1
Prefer not to say	8	2
Don't know	1	<1

APPENDIX C

EXISTING PLAN REVIEW SUMMARY



Existing Plan Review Summary

To: City of Provo Staff
From: Design Workshop – Becky Zimmerman, Alison Bourquin, Ashley McKnight, Jennifer Pintar
Date: 9/1/22
Project Name: Provo Hillside and Canyons
Subject: Existing Plan Review Summary

Below is a summary of plans that have been completed in and around the City of Provo. These are considered to be relevant or related to the Hillside and Canyons area. This is intended to be an internal document to assist Design Workshop in the understanding of these plans and how they intersect with the Vision Plan work. Comments are confined to a brief summary and recommendations that directly and indirectly impact the current planning effort.

The following plans have been reviewed:

1. Provo Parks and Recreation (2021)
2. Provo Scenic Corridor Management Plan Update (2008)
3. Provo Southeast Neighborhoods Plan (2015)
4. Critical Hillsides Overlay Zone
5. Provo Trails Plans

Plan / Document Name:	Provo Parks and Recreation Plan (2021)
Department Issuing:	Provo Parks and Recreation Advisory Board, City Staff, Mayor, and City Council
Publication Year:	2021
Summary (50 – 100 words):	The purpose of the City of Provo's Parks and Recreation Master Plan Update is to provide a roadmap for future development of parks and recreational opportunities to be provided by the nationally accredited department over the next 10 years, in alignment with the current General Plan update and the 2018 Impact Fee Analysis and Impact Fee Facilities Plan. This plan is based on recognized park planning principles and standards and reflects input from residents and stakeholders in Provo, City staff, the Parks and Recreation Advisory Board, and the City Council.
Recommendations that directly impact this plan:	**A. Park Specific Recommendations:** 1. Canyon Glen Park a. Update the Master plan with the expansion of remaining undeveloped property at Canyon Glen Park located downriver from existing developed area. b. Install new access bridge leading to the Provo River Trail from the existing parking lot. c. Remove old composting restroom that was destroyed by fire. d. Improve ADA accessibility. e. Remove guardrails around parking and install parking blocks. f. Resurface asphalt pathways throughout park. 2. Foothill Trails Park a. Revisit and update a trails park design that reflects a reasonable development budget and maintenance expectation. b. Add wayfinding, rules, and trail map signage/informational kiosk. c. Coordinate with Provo Fire and Rescue to continue weed abatement efforts in the wildland urban interface (WUI).

3. Rock Canyon Park
    a. Revise Master Plan and pursue development of improvements.
    b. Consider tennis and pickleball courts.
    c. Consider consolidation of the two existing restrooms with an updated larger year-round accessible restroom.
    d. Upgrade the trail-lighting system.
    e. Consolidate the two existing playgrounds into one larger and upgraded playground center near the water tank.
    f. Complete paving at the upper parking lot and add parking where possible.
    g. Repave pathways throughout the park.
    h. Continue building a sand-based playing surface in the basin through topdressing, to provide better sports programming.
4. Rock Canyon Trailhead
    a. Construct improvements designed in the Rock Canyon Trailhead Master Plan, including:
        - Improve connection to Bonneville Shore Trail.
        - Enhanced interpretive signage.
        - Vehicle parking improvements and traffic control.
        - Improved asphalt, concrete, and natural surface trails.
    b. Continued preservation of natural resources at Rock Canyon.
5. Sherwood Hillside Park
    a. Infill native plants in non-irrigated areas.
    b. Coordinate with Public Works-Storm Water Division in maintenance of control structure in basin and Phragmites/weed abatement.
    c. Develop and implement a maintenance plan for the non-irrigated areas in the landscape.
    d. Consider the potential for a dedicated pickleball courts conversion on one of the tennis courts.
6. Slate Canyon Park
    a. Prepare an updated Master Plan for recreation facilities and trails in the Slate Canyon area.
    b. Consider all of the City owned land at Slate Canyon and evaluate select parcels that may be suitable for residential development and utilize proceeds for park development.
    c. Realign the Bonneville Shoreline Trail on property newly acquired by the City that connects the canyon to the south Provo boundary.
    d. Coordinate with Public Works Department to integrate courts on the water tank decks.
    e. Consider integration of Mountain Bike element

B. General Trail Recommendations

1. Improve the connectivity within Provo by completing links to existing trails and pathways.

EXISTING PLAN REVIEW SUMMARY

Recommendations that directly impact this plan:	2. Partner and combine efforts with Utah Valley Trails Alliance (UVTA), US Forest Service and other groups to: a. Designate and construct the Bonneville Shoreline Trail on the east foothills from Provo Canyon to Rock Canyon. b. Plan, design, maintain and patrol trail features and amenities. c. Improve new and the existing natural-surface trails as backcountry connectors. 3. Rate the trails within the city and provide consistent distance markers that inform users of the health benefit and impacts of each trail. Select potential trail segments to include fitness stations. **C. Funding recommendations:** 1. Adopt-a-Trail Programs: These are typically small-grant programs that fund new construction, repair or renovation, maps, trail brochures, and facilities (bike racks, picnic areas, birding equipment, etc.), as well as providing maintenance support. These programs are similar to the popular "adopt-a-mile" highway programs most states utilize. Adopt-a- trail programs can also take the form of cash contributions in the range of $12,000 to $16,000 per mile to cover operational costs. 2. Adopt-a-Park Programs: These are small-grant programs that fund new construction and provide maintenance support. Adopt-A-Park programs can also take the form of cash contributions in the range of $1,000 to $5,000 per acre to cover operational costs. 3. Operational Partnerships: Partnerships are operational funding sources formed from two separate agencies, such as two government entities, a non-profit and a public agency, or a private business and a public agency. Two partners jointly share risk, operational costs, responsibilities, and asset management based on the strengths of each partner.
Recommendations that indirectly impact this plan:	1. Consider establishing a section of the trail system within the city as an arts-and-culture trail, such as along a section of paved trail near the center of the city. This trail can feature trail art and sculptures that celebrate local artists, local history, and culture. 2. Develop partnerships/sponsorships to finance and maintain the trail system in the city. 3. Accentuate the vital benefits of trails within the community.

EXISTING PLAN REVIEW SUMMARY

Key takeaways:	High priority services and amenities include: • Paved and unpaved/natural trails • Parks and natural areas (open space, nature preserve) • Outdoor recreation/adventure Some of these have begun to be implemented. The Parks and Recreation Department reviews them annually. It's an element of their CAPRA agency accreditation. Utah Lake State Park may be a gap in the service area. Provo Parks & Recreation lead a master planning/design effort for enhanced recreational opportunities at the park. This information was shared with Utah State Parks for implementation. The Provo River in Provo has the opportunity for enhanced public access, recreational use, and thoughtful redevelopment in the Moon River area. The Bonneville Shoreline Trail alignment needs to be completed on the east bench of Provo, connecting Provo Canyon with the trailhead at Rock Canyon. Several access points could be established along this needed route. Canyon Glen Park could be expanded to additional City owned property adjacent to the park. This would effectively double the capacity of the park and provide more public access to this resource.

Plan / Document Name:	Provo Scenic Corridor Management Plan Update
Department Issuing:	The Provo Canyon Scenic Byway Corridor and Watershed Management Plan Steering Committee
Publication Year:	2008
Summary (50 – 100 words):	The Provo Canyon Scenic Byway is 22 miles long and runs from Orem, Utah, to Heber City, Utah, on U.S. Highway 189 and SR113. Beginning in the south, the byway starts at the mouth of Provo Canyon in Orem. The landscape transitions immediately from a mixed residential and commercial area into the undeveloped beginnings of the canyon. The road curves gently as it climbs steadily from an elevation of 4,800 feet above sea level. The byway's overall landscape consists of three basic elements: the canyon experience, the reservoir experience, and the valley experience. This plan lays out opportunities, challenges, and recommendations for future updates to the byway.

EXISTING PLAN REVIEW SUMMARY

Recommendations that directly impact this plan:	**A. Recommendations** 1. To restore, conserve, and enhance the corridor's intrinsic qualities while developing consistent tourism and economic development activities along the Provo Canyon Scenic Byway. a. Identify and protect intrinsic qualities along the corridor within a balanced framework. b. Define management strategies for the maintenance and enhancement of intrinsic qualities. c. Accommodate increased tourism and development of related amenities. d. Identify significant environmental issues that may affect management and development along the corridor. e. Identify existing development and how to accommodate new development while protecting resources. f. Identify problems in highway design, maintenance, or operation and recommend corrections. g. Develop a monitoring and evaluation plan to assess progress toward project goals. h. Produce tourism development and management strategies to strengthen local economies in ways that are compatible with the above objectives. 2. The Deer Creek Reservoir Biking Center and Trail System: Establish a cycling-focused visitors center/museum on a site near the reservoir and create a bike and trail system around Deer Creek Reservoir that will allow for loop touring, mountain biking in the surrounding Sage Hills area, and exploring the appropriate trails in and near Wasatch Mountain State Park and Deer Creek State Park. Arrange for private vendors to transport cyclists by boat to various points along the trail system. Work with the U.S. Department of the Interior (USDI) Bureau of Land Management and the USDI Bureau of Reclamation (BOR) to take existing roads and sign a mountain biking system through their lands. 3. Bridal Veil Falls Provo Canyon Visitors Center and Hiking and Walking Center: The Bridal Veil Falls property should create a small-scale center on the site or a series of interpretive/ visitor services facilities in conjunction with Nunns Park. Given site constraints and hazards (i.e., avalanche, rock fall and floodplain), a series of small buildings would be preferable to a larger building. A nonprofit group working on a Bridal Veil Falls project envisions a range of amenities for the area including bathrooms, restaurants, souvenir shops, tourist information, small theater, train station/museum, additional parking trails landscaping.

4. Low Key Promotion of the Lower Canyon: As noted above, one reason for this strategy's focus on the mid-to-upper canyon is to lessen congestion in the lower canyon. While investments should be made in lower canyon facilities (see Secondary Recommendations below), visitors will be directed to make their first stop in the mid-to-upper canyon. Facilities such as the Parkway Trailhead, Canyon View Park, Squaw Peak Road, and Canyon Glen Park will not be heavily signed as byway-oriented facilities. Signing in the lower canyon should direct visitors to the main visitor's facilities further up the canyon.
5. Canyon View Park: Interpretive funds should be acquired to upgrade and replace interpretive materials at the park. Kiosks and placards are already in place. Improved signing and road striping are needed for the park approach. A reclamation plan should be required for the Provo Pit gravel operation. Enhancement and National Scenic Byway funds could support interpretive improvements.
6. Build a Reservoir Trail System: Working with either existing trails running toward Wasatch State Park or a new trail system through BOR lands, a biking trail should be established around or in portions of the reservoir lands. As noted above, a cycling interpretive center might be part of this concept. Potentially, bikes could ride the Heber Creeper to a midpoint along the reservoir and then set off to explore nearby trails with a loop extending into the State Park trail system. Federal trail funds and private dollars could support this system.
7. Establish Viewing Areas along the Future Road Alignment East of the Dam: As the future road rises above the reservoir north of the dam, viewing areas should be provided. The accessible views should extend across the reservoir and down Provo Canyon. Federal highway funds should support these facilities.
8. Given the combination of public land ownership and distance from the view, small-scale residential projects (20 and 50 acre minimum lot sizes) along the Utah County portion of the corridor would have minimal impact on the scenic experience. Development along Segment 5 of small- scale projects would impact the visual quality of the road. Therefore, consideration should be given to farmland protection strategies.

B. Conclusions:

1. While there is the theoretical potential for large-scale projects to be built in the Provo Canyon Watershed, there is no potential for such development along the immediate corridor and viewshed of the byway. Much of the land is in public ownership, slopes are steep, and wastewater disposal would be problematic and costly.
2. Public land ownership along Deer Creek Reservoir removes the potential for development in Segment 4 that would degrade the byway's character.
3. Given the combination of public land ownership and distance from the view, small-scale residential projects (20 and 50 acre minimum lot sizes) along the Utah County portion of the corridor would have minimal impact on the scenic experience. Development along Segment 5 of small- scale projects would impact the visual quality of the road. Therefore, consideration should be given to farmland protection strategies.
4. Ideally, for the purposes of maintaining a high-quality Scenic Byway, additional residential development in the corridor viewsheds should be discouraged.

	5. Utah County's zoning district designation of Bridal Veil Falls as a Highway Services zoning district is inappropriate. The Highway Zoning district allows a wide range of commercial uses, but the site's physical limitations (floodplain, rock fall area, etc.) as well as its location near a scenic area make it inappropriate for most commercial uses. 6. The most development potential along the byway is in the South Fork and North Fork watersheds. Projects in these areas would not have a great impact on the byway directly, but indirect impacts may be a factor. 7. There may be visitor service development potential at Vivian Park (UDOT site), Nunns Park/Bridal Veil Falls, and south of the dam on abandoned land following road realignment. 8. The potential for land use changes and development along the Heber Valley portion of U.S. Highway 189 merits a recommendation for de-designation. The landscape is also not on par with Route 113. 9. The interest from Wasatch County in protecting the landscape around Midway bodes well for long-term byway management efforts and landscape preservation. **C. Themes:** 1. Recreation Theme: Experience and learn about the past, present, and future of outdoor recreation along America's Outdoor Recreation Byway. 2. Water Theme: Learn about the water systems of the Provo River watershed and the ways in which people use and impact these waters. Develop a better understanding of the balance that exists between human's use of water and its impacts on the environment.
Recommendations that <u>indirectly</u> impact this plan:	1. Safety of the Byway and Deficiencies Highway Design Standards: a. Pedestrians and Bicyclists: Concern raised about the Provo River Parkway trail involves the mix of bicyclists and pedestrians. Future widening of U.S. Highway 189 should incorporate into the shoulder a rumble strip that would accommodate bike traffic. Presently, UDOT has been keeping the roadside shoulders swept and free of debris to help accommodate the bike traffic. b. Aesthetics and Kinesthetics: The more-gentle curvature of the road results in a more pleasant driving experience. The feeling of how the road moves across the landscape is the kinetic experience of driving. Portions of the improved road provide the feeling of floating up the canyon. It is hoped that future reconstruction will offer similar benefits over the current alignment. The utmost attention is required in the two unimproved segments of the highway to avoid oncoming traffic and prevent long lines of vehicles behind the scenic driver. c. Alignments and Opportunities: Recreational opportunities will be created in the upper canyon. Portions of the existing road will be abandoned and the areas of land will become available for potential public and recreational use.

EXISTING PLAN REVIEW SUMMARY

	2. Transit services: a. Railroad: Along the Heber Creeper railroad, planning for tourism must take this imbalance between location of the users and the facility and encourage visitors to begin their canyon experience at a point accessible to the rail. From there, the rail can serve to reduce auto trips and give people a more-intimate experience with Provo Canyon and Deer Creek Reservoir. This concept will also help with dispersing auto travelers to portions of the canyon that are north of the primary areas used daily by local residents. 3. Accommodate commerce while maintaining traffic flow: a. Presently, there are no restrictions on commercial truck traffic in Provo Canyon other than the legal load limits set by the state. Guardrails and Jersey barriers in some tight-corner locations are the only barriers to vehicles entering the river. Pursuing restrictions to certain heavy vehicles containing hazardous materials should be considered in order to reduce the risk of contaminants entering the Provo River and harming the drinking water supply and fisheries.
Key takeaways:	Challenges include high levels of use, economic impacts/job creation, US Highway 189 congestion/overuse, stress on water systems, accessibility/ opportunities for all abilities and demographics, and hazard-sensitive areas. Additionally, much of the land is in public ownership, slopes are steep, and wastewater disposal would be problematic and costly.
Questions:	1. Have the current recommendations been sufficient in maintaining, preserving, and further protecting environmental resources? 2. Have there been any changes to the project list or priorities since the plan was written? 3. Are there any success metrics in place for this plan?

EXISTING PLAN REVIEW SUMMARY

Plan / Document Name:	Provo Southeast Neighborhoods Plan (2015)
Department Issuing:	Provo City Community Development
Publication Year:	2015
Summary (50 – 100 words):	The Southeast Neighborhoods Plan provides a guide for the future of the Provost, Provost South, and Spring Creek neighborhoods. The South State Street Corridor is an important unifying element to these three neighborhoods and close attention should be given to how this corridor interacts both internally and externally with each neighborhood. The Southeast Neighborhoods Plan is adopted as a supplement to the Provo City General Plan and, as such, reinforces and extends the goals and policies of the General Plan. Future development in the area, including repairs, replacements, and remodels must be consistent with both the General Plan and this Neighborhood Plan. This plan aims to address the following: 1. The character of established single-family residential neighborhoods is being lost as pressures to convert these homes to multi-unit housing increases and their affordability for owner-occupants decreases. 2. Inter-connectivity throughout neighborhoods is lacking, thus creating a high level of dependence on State Street for all modes of transportation. 3. The undeveloped property to the west of State Street lacks an informed vision of the type of development that would help promote community goals for the area. 4. South State Street lacks the aesthetic and welcoming appeal that would be reflective of a gateway into the City. 5. Current enforcement efforts have been ineffective in maintaining and preserving a clean and appealing community.
Recommendations that <u>indirectly</u> impact this plan:	**1.** Utilize current General Plan policies to encourage preferred future land uses. **a.** Update the General Plan map and text to reflect the goals and objectives outlined in the Southeast Neighborhoods Plan. **2.** Require that all future development complies with the proposed land use map and existing ordinances, such as the South State Street Design Guidelines. **a.** Determine which zones are inconsistent with the proposed land use map. **b.** Amend the zoning map to be consistent with the proposed land use map. **c.** Provide appropriate buffers between commercial and residential uses, per Provo City Code 14.34.300 **3.** Amend the Planned Industrial Commercial Zone criteria to better promote the goals established in the General Plan **a.** Increase open space and landscape requirements to ensure a "park- like" atmosphere is achieved. **4.** Prioritize the current Parks and Recreation Master Plan recommendations. **a.** Fund and develop the expansion site to the east of Bicentennial Park. **b.** Provide protection to the Slate Canyon Trailhead from future development activities that could negatively impact its recreational benefits. **c.** Update Parks and Recreation Master Plan to reflect the planned future phases of Slate Canyon Park

EXISTING PLAN REVIEW SUMMARY

Key takeaways:	The elements of this plan that are impactful to the Canyons and Hillside Plan are the area's efforts to provide outdoor opportunities. The area hopes to implement goals in previous plans that help achieve this outcome.

Plan / Document Name:	Critical hillsides overlay zone
Department Issuing:	City of Provo Zoning
Summary (50 – 100 words):	The Critical Hillside (CH) Overlay Zone is established to provide prudent development standards to help protect the sensitive hillside areas of Provo City's east bench. The requirements of the CH Overlay Zone impose additional or prevailing requirements to those required by the underlying zone. The provisions of this zone are intended to aid in the protection of ridgelines, to support the stability of slopes, and to protect existing public accesses. Trees and other vegetation provide earth-stabilizing and aesthetic benefits. The provisions of this zone help preserve existing vegetation and require the re-establishment of vegetation areas disturbed in the development process. Design standards are included herein to preserve and complement the natural beauty and ecological health of Provo's hillside areas. The requirements of this zone consider the potential slope, fire, and natural hazards associated with the hillside areas and require mitigation of these hazards in the development process.
Recommendations that directly impact this plan:	1. Developable land has a slope of no more than 30% unless permitted by exception.

EXISTING PLAN REVIEW SUMMARY

Recommendations that indirectly impact this plan:	1. No development, including utility infrastructure, may break the horizon line, defined as the point where the ridgeline visibly meets the sky as viewed from public rights-of-way or trails. 2. A trail dedicated to the City shall meet the following requirements: a. The trail must be constructed according to the applicable Provo City Public Works and Parks and Recreation Department standards. b. The dedicated trail right-of-way is a minimum of twenty (20) feet. c. The trail improvements and right-of-way must be dedicated to the City prior to issuance of any building permits within the development; and (d) Such trail, or portion thereof, shall be part of a planned City trail system. 3. No development activity may be conducted that disturbs, removes, fills, dredges, clears, destroys, or alters, stream corridors or wetlands, including vegetation, except for restoration and maintenance activities allowed by this Code, and applicable State or Federal law. 4. The layout of a cluster development shall protect significant natural resources within the proposed development. Natural resources include riparian areas, wetlands, ecological resources, and steep slopes and ridgelines. The overall site design shall employ the site's natural topography to hide multiple residential clusters from the sight of adjacent clusters.
Key takeaways:	The purpose of this overlay zone is to ensure that development in the area is compatible with its surroundings, preserve long-term. Referring to this overlay district when making recommendations will help to acknowledge goals for the canyon/hillside development.

EXISTING PLAN REVIEW SUMMARY

Plan / Document Name:	Utah Valley Trails Alliance on Working Group
Publication Year:	2021
Summary (50 – 100 words):	This plan encompasses a substantial area known as the "Provo Foothills," broadly defined as the area above the urban development of Provo City but still generally in sight of the city. The study area extends north to Provo Canyon, south to Buckley Draw, west to the residential edge of the city, and east to the ridgeline of Cascade Peak and Provo Peak. • As the task force developed this plan, we were committed to a common goal to create a trail network that is: • Sustainable in the long term, both to preserve the natural environment that draws us to this area in the first place, and to reduce maintenance costs. • Open to the widest variety of users, including hikers, trail runners, mountain bikers, and horseback riders of varied ability levels. We acknowledge that motorized vehicles are already banned in most of this area, but we want to facilitate their use where allowed. • Interconnected to enable a variety of short-distance and long-distance travel options. • Legal, operating within the state legal regime for outdoor recreation and with the cooperation of private and public landowners.
Recommendations that directly impact this plan:	**A. Trailheads:** 1. Bridal Veil Park: Improve existing facility. a. Need for restrooms and drinking water. 2. Squaw Peak Outdoor Recreation Area (SPORA): Improve existing facility. a. Develop a major trailhead, picnic facilities, and restrooms. 3. Smith Ditch: Improve existing facility. a. Improve driveway, trailhead, restrooms, and picnic amenities. 4. Little Rock Canyon: minor improvement a. Additional parallel parking 5. Rock Canyon: Major improvement a. Follow the City and Forest Service master plan. 6. Slate Canyon a. Develop a master plan for this area. b. Immediate need for wayfinding 7. Montana Ave: New construction a. Small trailhead and/or park 8. Terra: New construction a. Develop a trailhead. **B. Spine Trails:** 1. Bonneville Shoreline Trail a. Little Rock Canyon Access: Reroute and designate social trail. • Reroute removed connection to Imperial Way on Provo City property. b. Slate Canyon to Buckley Draw: partially complete, designate social trail, minor improvements. • Minor improvements and signage necessary • Opportunity for an interpretive site and the historic lime kilns 2. The Dells Trail a. Reroute and designate existing social trail, multiple use. • Improve to be a high traffic multi-user trail with some reroutes to improve general grade and simplify trail loops.

	3. Ridgeline Trail a. Improve and designate existing social trail. • Designate segments under a single name that reflects their common character. • Plan parts of the trail have very steep grades which may lead to conflicts between hikers, horses, and downhill mountain bike riders. 4. Cascade Ramparts Trail b. New construction, pedestrian, and horse only • Increasing mountain bike presence is incompatible with horses. **C. Local Trails** 1. Aqueduct Trail: Reconsider in the future a. Current lack of feasibility of public access due to negative impacts 2. SPORA Bike park: New construction, mountain bike only in summer and multi-use in winter a. Opportunity for a mountain biking park with varying skill-levels b. Opportunity to groom for fat tire biking, snowshoeing, and Nordic skiing in winter. 3. Luna's: Designate existing social trail with some re-routing, downhill biking only encouraged. a. Extend trail for downhill mountain bikers to avoid main Dells trail. 4. Indian Road: Designate existing trail for mixed use. a. Signage to designate trail. 5. Terra: Reroute existing trail or build new trail for mixed use a. Used land is unofficial and may be built upon b. Preserve trail as land is annexed into the city. 6. Foothills Park: Reroute and designate. a. Parts of this trail are unsuitable steep and should be rerouted. b. Unofficial freeride biking area that causes conflicts with landowners. 7. Northslate Canyon Gravel Pit Area: Freeride area and/or bike park. a. Opportunity to designate gravel pit as a major freeride biking area. b. Move disc golf course elsewhere. c. Formally designate as a bike park 8. Lime Kilns: Designate existing trail, multiple use. a. Designate trail as is. b. Opportunity to rehabilitate the kilns as an interpretive historical site
Key takeaways:	This plan assesses the challenges, obstacles, and opportunities for the trails in the Canyons and Hillside area. The planning process should refer to this plan when making recommendations for the future. It should acknowledge what work is already being done to avoid repetition and advance efforts.

APPENDIX D

COUNCIL RESOLUTION

Resolution 2022-02

SHORT TITLE

A JOINT RESOLUTION OF THE PROVO MAYOR AND MUNICIPAL COUNCIL OUTLINING THEIR SUPPORT FOR SCIENCE-BASED PRESERVATION AND RESTORATION OF UTAH LAKE (21-122)

PASSAGE BY MUNICIPAL COUNCIL

ROLL CALL

DISTRICT	NAME	FOR	AGAINST	OTHER
CW 1	KATRICE MACKAY	✓		
CW 2	DAVID SHIPLEY	✓		
CD 1	BILL FILLMORE	✓		
CD 2	GEORGE HANDLEY	✓		
CD 3	SHANNON ELLSWORTH	✓		
CD 4	TRAVIS HOBAN	✓		
CD 5	RACHEL WHIPPLE	✓		
	TOTALS	7		

This resolution was passed by the Municipal Council of Provo City, on the 4th day of January 2022, on a roll call vote as described above. Signed this 1st day of February 2022.

Chair

Mayor

Resolution 2022-02

CITY RECORDER'S CERTIFICATE AND ATTEST

I hereby certify and attest that the foregoing constitutes a true and accurate record of proceedings with respect to resolution number 2022-02.

This resolution was signed and recorded in the office of the Provo City Recorder on the 3rd day of February 2022.

City Recorder

RESOLUTION 2022-02

A JOINT RESOLUTION OF THE PROVO MAYOR AND MUNICIPAL COUNCIL OUTLINING THEIR SUPPORT FOR SCIENCE-BASED PRESERVATION AND RESTORATION OF UTAH LAKE. (21-122)

WHEREAS, Utah Lake is the centerpiece of Utah Valley; and

WHEREAS, the economic vitality of the Wasatch Front depends on prudent water management and access to water rights; and

WHEREAS, Utah Lake has benefited from ongoing efforts of ecological restoration including agreements between farmers and other water users which have helped to restore water flow to the Lake; and

WHEREAS, wastewater treatment upgrades and other nutrient pollution measures have contributed to declining algal blooms, and these ongoing efforts have required millions of dollars and will continue to bring needed improvements; and

WHEREAS, removal of invasive species including Asian carp, phragmites, tamarisk, and Russian olive have resulted in measurable progress, including removal of nearly 80% of the carp; and

WHEREAS, large scale restoration of Utah Lake habitat includes highly successful projects at Hobble Creek, Provo River, Powell Slough, and Wakara Way; and

WHEREAS, recovery of Utah Lake's native plant and animal species is illustrated by recent downlisting of the June Sucker from Endangered to Threatened; and

WHEREAS, expanded public access to Utah Lake includes a comprehensive trail plan, improved marinas, and shoreline projects; and

WHEREAS, the above collaborative efforts over many years and their significant financial commitments demonstrate that Utah Lake is not irreparably damaged nor in need of Lake-wide dredging; and

WHEREAS, dredging Utah Lake is unnecessary, ecologically risky, highly expensive, and any islands that could result from such dredging will deface the Lake, harming its aesthetic and recreational values; and

WHEREAS, the best available research demonstrates measurable recovery of the Utah Lake system, indicating that we should sustain and enhance ongoing and future restoration efforts; and

WHEREAS, scientific studies indicate that Utah Lake is naturally shallow, will always have some turbidity, and the Lakebed is not as contaminated as some have suggested; and

WHEREAS, evaporation from the Lake provides needed regulation of our local climate and nutrient regulation within the Lake; and

WHEREAS, wind and wave action on Utah Lake are natural and critical to maintaining oxygen levels during algal blooms; and

WHEREAS, many businesses and individuals in Utah County and Salt Lake County depend on water and water rights from Utah Lake; and

WHEREAS, the citizens in our community expect robust transparent processes on resource management decisions; and

NOW, THEREFORE, we call upon the Utah Legislature…

1. To act prudently, in a spirit of shared stewardship, to ensure that the past and ongoing restoration efforts are not negated but are allowed to continue, bringing additional, needed benefits to the Lake;

2. To ensure that any action taken on behalf of the Lake would not undermine the Lake's responsiveness to past and present restoration efforts;

3. To ensure that all future action should be based in rigorous scientific and ecological understanding of the Lake's history and ecological services and should be responsive to a robust and transparent public process that includes collective and vigilant oversight from cities, businesses and communities which use and benefit from the Lake; and

4. To consider legislative amendments that will provide these necessary additional protections against any developments or proposals that would put the Lake's ecological health at risk.

BE IT FURTHER RESOLVED, that the clerk of Provo City transmit duly authenticated copies of this resolution to the President of the Utah Senate, to the Speaker of the Utah House of Representatives, to the clerk of the Legislature, to the Utah Lake Commission, and to the news media of Utah.

END OF RESOLUTION.