LINCOLN INSTITUTE
OF LAND POLICY

Integrating Water and Land Use Planning Project Phase 1 Summary

Prepared by Babbitt Center for Land and Water Policy and Western Resource Advocates

BABBITT CENTER
FOR LAND AND WATER POLICY
A Center of the Lincoln Institute of Land Policy

WESTERN RESOURCE ADVOCATES

Prepared for the Great Salt Lake Advisory Council

GREAT SALT LAKE ADVISORY COUNCIL

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Executive Summary

The State of Utah is simultaneously one of the most arid and fastest-growing states in the country. In 2021, with precipitation only 56 percent of average, almost 70 percent of the state is in the “Exceptional Drought” (most severe) category. Meanwhile, the 2020 U.S. Census identified Utah as the fastest-growing state in the country. There is broad consensus that optimizing and reducing demand for municipal, institutional, and industrial (M&I) water use is critical to ensuring that Utah’s limited water supply can equitably meet the needs of people, agriculture, business, and nature. Over the years, the Great Salt Lake Advisory Council has commissioned influential studies and reports that highlight the importance of reducing demand and optimizing M&I water use. Changing the dynamic of M&I water demand, particularly in the face of increasing population and economic growth, is seen as an important step that can indirectly preserve water flows for the Great Salt Lake.

The Babbitt Center for Land and Water Policy (Babbitt Center), a center of the Lincoln Institute of Land Policy, and Western Resource Advocates (WRA) were selected by the Utah Division of Forestry, Fire, and State Lands to complete Phase 1 of a water and land planning integration project. Funding for Phase 1 was provided by the Great Salt Lake Advisory Council and expires June 30, 2021, with all work being completed by this date. This phase was designed to establish the foundational materials for later phases of a “Water and Land Use Planning Integration Project” that is intended to jumpstart municipality and county efforts better incorporate water as part of their land planning and economic development planning processes.

This document summarizes the work completed during Phase 1 and makes recommendations for future phases of a Water and Land Use Planning Integration Project. Included within this document are a summary and takeaways from the stakeholder interviews, a Framework for Community Action, recommendations for next steps, and related materials.

The consultant team interviewed 12 organizations consisting of local governments and water providers. The interviews provided valuable feedback on the Framework for Community Action and insight about the water- and growth-related challenges that communities are facing. Feedback from these interviews was used to refine the Framework for Community Action and begin to inform the recommendations for further work that can aid communities in integrating water and land use planning.

A Framework for Community Action produced by the consultant team illustrates the process communities should undertake to integrate water and land use planning. It includes four stages and resources to aid in implementation. Two components--a Stakeholder Checklist and the Community Self-Assessment--provide tangible guidance for communities to form a team for integrating water and land use and to identify their progress to-date on integration activities.

Looking forward, the consultant team proposes a total of four phases of a Water and Land Use Planning Integration Project whereby this deliverable completes Phase 1.For subsequent phases, we propose the adaptation, development, implementation, and evaluation of a multi-stakeholder workshop, building on the work done in Phase 1, by further developing the relationships initiated through the interviews, refining the documents created for this phase, and adapting and creating the process that will help Utah communities change the dynamic of M&I water demand.

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Introduction

The State of Utah is simultaneously one of the most arid and fastest-growing states in the country. As of 2021, with precipitation only 56 percent of average, almost 70 percent of the state is in the "Exceptional Drought" (most severe) category. Meanwhile, the 2020 U.S. Census identified Utah as the fastest-growing state in the country. There is broad consensus that optimizing and reducing demand for municipal, institutional, and industrial (M&I) water use is critical to ensuring that Utah's limited water supply can equitably meet the needs of people, agriculture, business, and nature.

In response to a 2015 legislative audit and 2017 follow-up and third-party review, the State of Utah in 2019 adopted Regional M&I Water Conservation Goals. These goals vary across the state by region but aim to achieve at least a statewide water use reduction of 16 percent by 2030 (a range of 11-20 percent depending on region). The 2065 projections aim to achieve a statewide water use reduction of 26 percent (a range of 19-32 percent). The pathway for achieving greater M&I water conservation includes many opportunities and challenges, one of which is the integration of water and land use planning.

The consultant team, a collaboration between the Babbitt Center for Land and Water Policy (Babbitt Center), a center of the Lincoln Institute of Land Policy, and Western Resource Advocates (WRA), was selected by the Utah Department of Natural Resources - Division of Forestry, Fire, and State Lands to complete Phase 1 of a water and land use planning integration project, beginning to create a program that will help communities improve M&I water conservation.

The consultant team used their collective experience in adapting a "Growing Water Smart" workshop in Colorado, Arizona, and California to explore and identify how Growing Water Smart (GWS) might be tailored to the needs of Utah communities. GWS helps communities address the tension between growth and development with drought and water scarcity. Communities in other states participate in this program to improve the water efficiency of their land use plans, policies, regulations, and programs. Communities leave the workshop with an action plan and many communities remain engaged in the integration of water and land use planning.

Approach

The primary outcomes of Phase 1 are a Utah Assessment Framework for Integrating Water and Land Use Planning, which is summarized herein. The consultant team prepared the following materials, as specified in the Scope of Work (SOW).

- **Develop and Provide a Project Plan** – the Project Plan describes the approach and key milestones for completing Phase 1 work described in the SOW, with a work completion date of June 30, 2021.

- **Develop a Utah-Tailored Assessment Framework, with Stakeholder Input, for Integrating Water and Land Use Planning, and Related Supporting Materials** – the consultant team developed a Utah-tailored assessment framework and related materials for use by, and with, municipalities, counties, planners, and others that can serve as a tool to: (i) evaluate the status of a local community/government's approach to incorporating water with land planning processes and codes; (ii) identify opportunities and practices that communities/local governments can consider to improve the way in

which water issues, water supplies, water conservation/optimization are incorporated into a local jurisdiction's planning, development, processes, and codes; (iii) identify barriers, including knowledge or resource gaps, that limit a local jurisdiction's ability to incorporate water into land planning and development processes; and (iv) identify policies and laws that support and improve communities/local governments incorporation of water issues, water supplies, water conservation/optimization into their planning, development, processes, and codes. The Framework for Community Action and related materials and resources linked therein make up this Utah-Tailored Assessment Framework.

- **Stakeholder Outreach** – the consultant team conducted interviews to gather information from interested stakeholders. A high-level summary of these interviews is provided within this document. Feedback received from the stakeholder interviews was used to refine the Framework for Community Action.

- **Expressions of Interest from Municipalities, Water Providers, or Other Organizations** – As part of the outreach process, stakeholders were asked about their interest in a future multi-stakeholder workshop about integrating water and land use planning. Universal enthusiasm was expressed. More information on this is included in the sections below.

This document summarizes the work conducted during Phase 1 and makes recommendations for future phases of work of a Water and Land Use Planning Integration Project. Included within this document are a summary and takeaways from the stakeholder interviews, a Framework for Community Action, and recommendations for next steps.

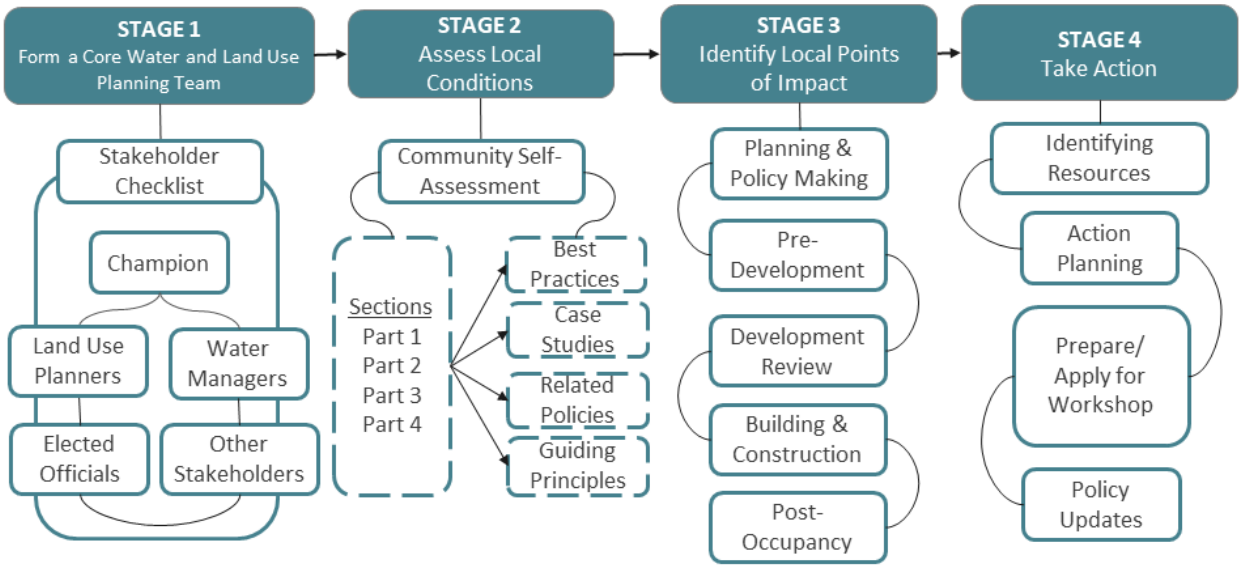
Framework for Community Action and Associated Materials

Framework for Community Action

Integrating water and land use planning can be a difficult and intimidating process, as it involves collaboration across agencies, departments, and organizations that have not traditionally worked together, as well as new organizational, procedural, planning, and policy changes that may result from such an integrated effort. To this end, the consultant team prepared a Framework for Community Action to outline the stages of an integration process.

This document presents a framework to help communities break down silos and act to integrate water and land use planning. This framework is applicable to all towns, cities, and counties that are preparing to integrate water and land use planning. It contextualizes two supporting documents, the Stakeholder Checklist and the Community Self-Assessment, that are invaluable to the integration process. The Framework for Community Action includes additional resources, from technical guidebooks to funding and networking sources, to help initiate and implement local integration efforts. The Framework presents four stages, illustrated below.

Figure 1: Phase 1 Framework for Community Action Flow Chart.



Stakeholder Checklist

The Stakeholder Checklist is used in Stage 1 of the Framework for Community Action and helps communities identify and prioritize the departments, agencies, organizations, and groups that should be involved in integrating water and land use planning. The Stakeholder Checklist aids communities in forming their Core Team that will drive the integration process and includes a checklist for considering additional stakeholders to involve as the integration process evolves. The Stakeholder Checklist document provides instructions for how best to fill out and use the checklist.

Community Self-Assessment

The Community Self-Assessment in Stage 2 creates a strong foundation for Stages 3 and 4 of the Framework for Community Action. The Community Self-Assessment helps communities gauge the current state of land and water integration in their community. The included links to best practices, guidebooks, reports, and case studies provide communities the opportunity to continually learn as they walk through the self-assessment process. The Self-Assessment is designed to be completed by the core water and land use planning team identified in Stage 1. The introduction to the self-assessment outlines the most appropriate department and position to complete each part of the assessment (e.g., public works director, land use planner, etc.). The self-assessment is a working document, to which resources and best practices can continually be added to keep it as up to date as possible for the communities filling it out.

Stakeholder Outreach

Summary of Interviews

The consultant team conducted interviews with representatives from twelve communities or organizations to solicit feedback on the Framework for Community Action and potential expressions of interest to participate in a future multi-stakeholder workshop. The stakeholders interviewed included water providers, land use planners, city attorneys, and other related staff from the twelve communities or organizations, and were identified through the consultant's team existing networks, as well as recommendations from the Project Team (Laura Vernon, Rachel Shilton, Candice Hasenyager, and Marcelle Shoop). Phase 1 targeted Northern Utah (Wasatch Front and Back), although one community was in Southern Utah. In each interview, the consultant team asked a series of questions to gain an understanding of water and growth challenges faced by the communities and solicited feedback on the draft Framework for Community Action after walking through it with each interviewee.

Table 1: List of Interviewees. Representatives from the following communities/organizations were interviewed. This table also includes each interviewees expression of interest[1] in a multi-stakeholder workshop:

Community /Organization	Interviewee (Water, Planner, Other)	Expression of interest in multi-stakeholder workshop
Sandy	Water	Very interested, especially if other JVWCD member agencies were to attend. Would be helpful for educating elected officials.
Park City	Water	Open to the idea, but not anytime soon because of the drought and current projects. After the fall of 2021, could have more capacity to attend.
Jordan Valley Water Conservancy District (JVWCD)	Water	Interested in potentially partnering/facilitating/hosting a workshop. Keep in the loop and follow-up as the workshop idea progresses.
Salt Lake County	Planner	Interested, but would need to check with higher-ups first; would be helpful to do it with JVWCD.
Salt Lake City Public Utilities	Water	Very interested and it probably would not be hard to convince the city to attend. A champion would be helpful (e.g., Mayor).
Spanish Fork	Water	Yes, interested in potentially participating, as it would be good for "cross pollination" within the community.
Moab	Planner	Yes, very interested.
Bear River Association of Governments	Planner	Generally interested in the idea.

[1] It is important to note these were specifically expressions of interest only, and the responses here do not commit any community or organization to future participation in a workshop.

Ogden	Water	Yes, very interested. A workshop would help keep momentum when new things are proposed, especially because it would include staff from multiple agencies.
Utah League of Cities and Towns (ULCT)	Other	ULCT would consider getting involved with a workshop through outreach and/or facilitation. Potential avenues could include offering a workshop at ULCT's Annual Conference and/or Land Use Academy of UT.
Morgan County	Planner	It could be useful but would be challenging to get a group from Morgan County. Very small county with limited staff resources makes things like that difficult
Oakley	Planner & Water Advisor	Yes, very interested. Could bring a group of planners, water staff and commissioners together. One interviewee may be interested in helping facilitate the workshop.

Interview Key Themes

Several key themes emerged from the interviews. The following high-level summaries of those key themes are divided into two sections: water and growth-related issues and challenges within the communities/organizations; and feedback on the Framework for Community Action.

Water and Growth-Related Issues and Challenges

As noted above in the introduction, Utah communities are growing fast and water supplies are limited in many regions, and the interviewees confirmed this to be the case. Only one community interviewed suggested they could continue to grow with existing supplies without many constraints in the coming decades. Some communities anticipate most of their growth will be in redevelopment or infill, while other communities are preparing for new development, but in most cases, there was widespread concern about having enough water to serve both current and future demands. Several interviewees noted this is compounded by climate change.

While interviewees all seemed to agree that better integration of water and land use planning is important for helping with current and future challenges, they also identify some key barriers to begin that integration process. For example, some communities experience a capacity issue where staff do not have the time, resources, or expertise to take on a new process. One interviewee noted it can be a chicken and egg issue—the community knows it needs to integrate water and land use planning, but staff are so busy keeping up with existing growth, they do not have time to make sure that growth is water efficient and will not exacerbate water supply challenges. Other communities presented evidence of limited water and land use planning integration, but often at relatively basic levels. In one such community, staff from public works and the planning department regularly meet, but it is typically the field staff discussing technical challenges (e.g., water supply lines), as opposed to long-range planners and water conservation staff discussing higher level planning.

Despite the limited occurrence of robust integrated water and land use planning, there was widespread interest in learning more about specific opportunities, best practices, case studies, guidebooks, etc. that could potentially be implemented in these communities. The interviewees

largely understood the value and importance of integrating water and land use planning and were interested in identifying ways to begin (or further) integration efforts.

Feedback on the Framework for Community Action

Broadly speaking, the stakeholders interviewed found the Framework to be interesting and potentially useful for their community or organization, although to varying degrees. For example, one interviewee described the Framework as “very cool” and thought it does a great job of getting into the nuts and bolts of water and development, and it would help their community prioritize certain types of development based on water needs. Another interviewee thought the framework would allow their community to embrace water as a key sustainability opportunity. Finally, one interviewee noted their community’s current efforts to update their water conservation plan, saying this Framework would help them think through all components to include.

The most common concern with the utility of the Framework was around staff capacity and motivation. Many of the interviewees noted their staff capacity is limited and it would take serious motivation for them to utilize the Framework in full (one interviewee said many Utah communities are experiencing five times the usual growth but do not have five times the planning staff). In some cases, this meant folks might only use part of the Framework (e.g., Community Self-Assessment) or none of it unless they had that motivation. Specific ideas for motivation included funding attached for completing the Framework, external support to complete the Framework (e.g., expert facilitation), connection of the Framework to something like a workshop/training, or a specific champion in the community (e.g., a Mayor making this a priority). Without these types of motivation, one interviewee said there would be “low to medium success utilizing this Framework as a standalone resource”.

Several interviewees suggested that the Framework should be disseminated to communities through multiple sources rather than coming from one agency. Potential organizations that interviewees thought would be beneficial for dissemination include:

- Utah League of Cities and Towns (including Land Use Academy of Utah)
- Utah Division of Water Resources
- Rural Water Association of Utah
- Utah Chapter of the American Planning Association
- Utah Water Users Association
- Jordan Valley Water Conservancy District, Weber Basin Water Conservancy District, Central Utah Water Conservancy District, and Washington County Water Conservancy District

Recommendations and Next Steps

Recommendations

Based on the interviews, the consultant team recommends additional outreach with Utah communities to further refine the Framework through an ongoing, iterative process. Since much of the feedback has been incorporated into the Framework to-date, it would be worthwhile to understand if the latest version is better suited to support communities’ water and land use integration. Further, it would be beneficial to begin identifying external resources (i.e., funding, training, and facilitation opportunities) that help motivate communities to utilize the Framework

in a comprehensive manner. Continued feedback from communities on the most helpful types of external resources would increase the efficacy of the Framework. Finally, per discussions with the Project Team, this Framework was designed to be a living document that is often refined and populated as new resources and materials are identified. The stakeholders interviewed all seem to suggest that any additional materials would be welcome.

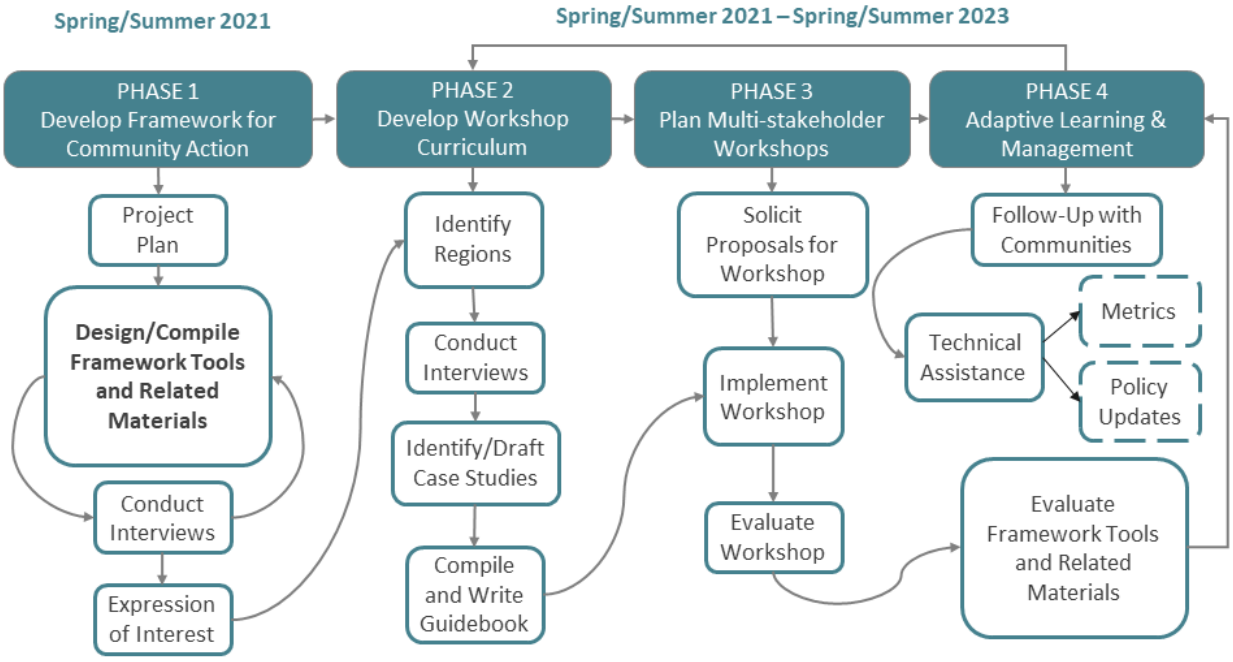
In addition to ongoing refinement of the Framework and related materials, the consultant team recommends identifying additional avenues for general education and outreach related to water and land use planning information. As noted above, there was strong interest in learning more on these topics, and as future phases on this project evolve, concurrent education and outreach could prove beneficial in garnering and sustaining interest in the project. Learning opportunities could include webinars, presentations (e.g., ULCT semi-annual conference), emails, listservs, etc., utilizing many of the materials identified during this Phase 1. For example, additional webinars building upon the October 2020 webinars conducted by WRA in partnership with the Babbitt Center, Utah Chapter of the American Planning Association, and Utah State University would further these education and outreach efforts.

Related, and in accordance with the Request for Qualifications, March 31, 2021, the deliverables for the Phase 1 scope of work are part of a larger water and land use planning integration project. The intention is that this phase lays out the foundational materials for subsequent phases, which are intended to jumpstart municipality and county efforts to better incorporate water as part of land planning and economic development processes. The feedback from the interviews conducted on the Framework for Community Action points toward subsequent phases that include multi-stakeholder workshops to further advance integration of water and land use planning at the local government level.

Next Steps

Looking forward, the consultant team proposes a total of four phases: Phase 1 is complete with this deliverable and Phases 2, 3, and 4, which include the adaptation, development, implementation, and evaluation of a multi-stakeholder workshop will be implemented over a period of two years (Summer 2021 to Summer 2023). Phase 2 focuses on developing curriculum, which entails identifying regions, conducting interviews, identifying and drafting case studies and best practices, and compiling and writing an accompanying guidebook that reflects the target regions of the workshop. Phase 3 focuses on conducting outreach and soliciting applications from communities interested in participating in a workshop, as well as scheduling, organizing, implementing, and evaluating the workshop. Phase 4 is dedicated to adaptive learning and management, where the implementation team follows up with communities, presents communities with additional resources and technical assistance opportunities, and conducts an overall evaluation of the framework, program, and all related materials to improve for the next round. This is an iterative process that continually improves and becomes more refined with increased experience and knowledge about communities' needs, challenges, and goals. The model upon which these workshops is based holds at least two workshops per year, with five to seven community teams per workshop.

Figure 2: Integrating Water and Land Use Planning Project. This is a two-year program flow chart for a multi-stakeholder workshop. As proposed, there are four phases, one of which is complete with this deliverable. Three more phases comprised of multiple workshops with five to seven communities per workshop would take place over a period of two years.



Related Resources and Materials

The consultant team identified numerous related materials and resources from a broad geographic range (primarily Colorado River Basin States) and a diversity of water and land use themes, including water supply and demand, water conservation and efficiency, and the nexus between land use and water, which focuses on the impact of development on both indoor and outdoor water use. Resources and related materials are embedded in the Framework for Community Action, the Stakeholder Checklist, and the Assessment and are tied directly to specific guiding questions based on these and more targeted themes.

Two types of resources are included within the Framework for Community Action: Technical Resources and Implementation Resources. Technical Resources are tools and guidance about how to use the tools that will help integrate water and land use planning, organized by geography. Many of the Technical Resources are also included in Table 2 and the Community Self-Assessment. Implementation Resources are organized into four categories: 1) funding sources; 2) technical assistance with grant applications; 3) direct assistance; and 4) networking. These resources will help communities reach the short-, mid-, and long-term goals they have set.

Table 2 provides a list of 49 related materials meant to help inform and educate municipalities and counties about the larger Integrating Water and Land Use Planning Project. These materials include guiding principles, examples of best practices, considerations for exploring and addressing social and equity considerations, technological or design advancements, approaches for incentivization, actual incentives, as well as related laws and policies.

Table 2: List of related materials that are also included in the Assessment.

Title	Theme	Source	Type of resource
Salt Lake City Climate Plan	Climate	Salt Lake City	Web page - Plan and video
UT DWR Climate Change, Water Resources, and Potential Adaptation Strategies in Utah	Climate	State of Utah	Report
A Guide to Low Impact Development within Utah	Land Use-Water Nexus	Utah Department of Environmental Quality, Division of Water Quality	Guidebook
Assured Water Supplies in Western States	Land Use-Water Nexus	Colorado. Natural Resources, Energy & Environmental Review	Legal research
Ch. 13.04.260 Waste Prohibited	Land Use-Water Nexus	South Jordan City	Web page - Code
City of Bluffdale Floodplain Management Plan	Land Use-Water Nexus	City of Bluffdale	Plan
Growing Water Smart Water-Land Use Nexus: Arizona and Colorado	Land Use-Water Nexus	Sonoran Institute and Babbitt Center for Land and Water Policy	Workbook
Guiding Principles for Equitable Management in Coordinated Planning	Land Use-Water Nexus	Local Government Commission	Guiding Principles
Incorporating Water into Comprehensive Planning	Land Use-Water Nexus	Lincoln Institute of Land Policy	Manual
Incorporating Water into Comprehensive Plans in UT	Land Use-Water Nexus	Western Resource Advocates	Web page - Webinars
Landscaping Standards	Land Use-Water Nexus	Sandy City	Web page - Code
Model Landscape Ordinance	Land Use-Water Nexus	South Metro Water Supply Authority, Colorado	Web page - Model code
Model Water Efficient Landscape Ordinance	Land Use-Water Nexus	California Department of Water Resources	Web page - Model code
Rule R317-401-Graywater Systems	Land Use-Water Nexus	State of Utah	Web page - Code

Salt Lake City Sustainability Plan	Land Use-Water Nexus	Salt Lake City	Plan
Strengthening Collaboration*	Land Use-Water Nexus	Sonoran Institute	Video
Water Efficiency Standards	Land Use-Water Nexus	Herriman City	Web page - Code
Water Efficient Landscape Design and Development Standards	Land Use-Water Nexus	Salt Lake County, UT	Web page - Code
Water-Wise Plants for Utah Landscapes	Land Use-Water Nexus	Utah State University Extension - Center for Water-Efficient Landscaping	Web page - Lists
Qualified Water Efficient Landscaper (QWEL)	Landscaping	Utah State University Extension - Center for Water-Efficient Landscaping	Web page - Training and certification
WATER CHECK PROGRAM	Landscaping	Utah State University Extension - Center for Water-Efficient Landscaping	Web page - Monitoring and evaluation
A Guide to Municipal Water Conservation Pricing in Utah	Water Conservation	Utah State University Extension	Guidebook
Conserve Water	Water Conservation	Utah DWR	Web page
Drought Management Toolkit for Public Water Suppliers	Water Conservation	Utah DNR	Toolkit
Flip Your Strip	Water Conservation	Jordan Valley Water Conservancy District	Incentive Program
H2OATH	Water Conservation	Utah DWR	Pledge
Localscapes	Water Conservation	Localscapes	Web page - Classes, designs, videos
Preparing for Drought in the Home	Water Conservation	Utah State University Extension	Web page - Guide
Rain Barrels in Utah	Water Conservation	Utah State University Extension	Factsheet
Reports and Resources	Water Conservation	Alliance for Water	Reports

		Efficiency	
Slow the Flow	Water Conservation	Utah DWR	Web page - Guide, rebates, and monitoring
Smart Controller Project	Water Conservation	Spanish Fork	Web page
South Jordan City Water Conservation Plan	Water Conservation	South Jordan City	Plan
Tap Into Resilience	Water Conservation	Spanish Fork in partnership with Water Now Alliance	Web page - Case studies
UT Water Savers Localscapes Rewards	Water Conservation	Localscapes Rewards	Incentive Program
Utah Water Savers	Water Conservation	UT DWR	Web page - Programs and rebates
Water & Energy Efficiency Grants and Small-Scale Water Efficiency Grants	Water Conservation	Bureau of Reclamation	Federal Grant Program
Water Amendments	Water Conservation	State of Utah	Web page - Law
Water Rate Structures in Utah	Water Conservation	Western Resource Advocates	Guidebook
Weekly Lawn Watering Guide	Water Conservation	Utah DNR	Web page - Guide
Great Salt Lake Advisory Council Conservation Impacts Assessment	Water Conservation, Land Use-Water Nexus	Northern Utah	Study
Integrating Water Efficiency into Land Use Planning in the Interior West: A Guidebook for Local Planners	Water Conservation, Land Use-Water Nexus	Western Resource Advocates	Guidebook
City of Logan Drinking Water System Master Plan 2016	Water Supply and Demand	City of Logan	Plan
City of Orem Water Master Plan 2017	Water Supply and Demand	City of Orem	Plan
Public Water Supplier 40 Year Water Requirement Plan Standards	Water Supply and Demand	State of Utah, Water Rights	Policy Document
Utah's Regional M&I Conservation Goals	Water Supply and Demand	Utah DNR	Report

WRA Water System Development Charge Guidebook	Water Supply and Demand	Western Resource Advocates	Guidebook
Conservation Plan Resources	Water Supply and Demand, Water Conservation	State of Utah	Web page
Great Salt Lake Advisory Council, 2019 Great Salt Lake Integrated Model	Water Supply and Demand, Water Conservation	Northern Utah	Report

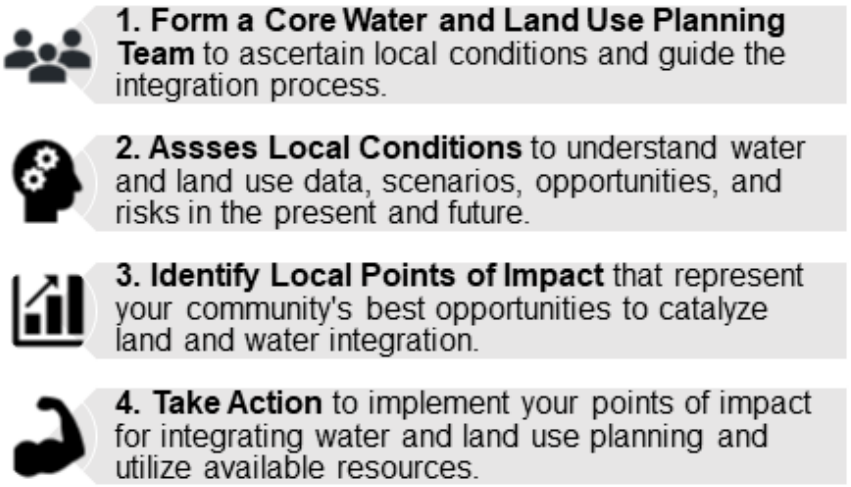
* This resource is listed in the Stakeholder Checklist.

INTEGRATING WATER AND LAND USE PLANNING IN UTAH
FRAMEWORK FOR COMMUNITY ACTION

The State of Utah is simultaneously one of the most arid and fastest-growing states in the country. In 2021, with precipitation only 56 percent of average, almost 70 percent of the state is in the "Exceptional Drought" (most severe) category. Meanwhile, the 2020 U.S. Census identified Utah as the fastest-growing state in the country. There is broad consensus that optimizing and reducing demand for municipal, institutional, and industrial (M&I) water use is critical to ensuring that Utah's limited water supply can equitably meet the needs of people, agriculture, business, and nature. Over the years, the Great Salt Lake Advisory Council has commissioned influential studies and reports that highlight the importance of reducing demand and optimizing M&I water use. Changing the dynamic of M&I water demand, particularly in the face of increasing population and economic growth, is seen as an important step that can indirectly preserve water flows for the Great Salt Lake.

Integrating water and land use is a promising way to change the dynamic of M&I water demand. However, integration is not an easy or straightforward process, as it involves breaking down the traditional silos between water management and land use planning. This document presents a framework to help communities foster collaboration between agencies and act to integrate water and land use planning. This framework is applicable to all towns, cities, and counties that are preparing to integrate water and land use planning.

This framework contains four stages:



Technical and implementation resources (funding, technical assistance) are provided in this framework to help communities kick-off integration work.

Stage One: Form a Core Water and Land Use Planning Team

The first step of integrating water and land use planning is to create a land and water planning team from diverse disciplines to develop and inform the effort. At a minimum, this team should consist of land use planners and water providers that serve the community. Elected officials and members of planning boards and

commissions are also crucial additions to the team. The team should be spearheaded by a champion within the community, who is seen as a leader and who has the authority to bring a multidisciplinary team together.

Building a land and water planning team may require land use planners and water providers to establish a new working relationship. For a community served by multiple water providers, this may be complicated and time-consuming. It may not be possible to have total participation for a variety of reasons—the number of water providers in a service area or willingness to participate—but it is critical that all providers be invited and encouraged to join the team.

The efforts of the land and water planning team can be strengthened by commitment and direction from upper management, such as senior staff, city or town councils, planning commissions, county supervisors, or water provider boards. It may be appropriate for senior leadership from the planning department or the water provider to serve as committee leaders or chairs. The team should communicate, meet, and share data throughout the integration process.

The Babbitt Center and Western Resource Advocates have developed a Stakeholder Checklist to aid communities in forming their Core Team as well as considering additional stakeholders to involve as the integration process evolves. The Stakeholder Checklist document provides instructions for how best to fill out and use the checklist.

Stage Two: Assess Local Conditions

Self-assessments help communities understand their water issues and determine the level of land and water integration they have already achieved. The Core Team should endeavor to understand its current conditions and policy enabling environments as an initial activity of coordinated planning. This self-assessment is designed to guide communities through a process that will help inform their integrated water and land use planning efforts/actions.

The Babbitt Center and Western Resource Advocates have prepared a Community Self-Assessment for Utah communities. As well as being a guide for understanding the current state of land and water integration in the community, the included links to best practices, guidebooks, reports, and case studies provide communities the opportunity to continually learn as they walk through the self-assessment process.

Stage Three: Identify Local Points of Impact

The Community Self-Assessment presents a crucial opportunity to identify local points of impact. Based on the Core Team's responses in the Self-Assessment, the answers to the questions below, among others, may become clear:

- What gaps can be filled to integrate land and water?
- Are certain policies, plans, codes, or regulations due for an update?
- Are there sectors that use more water or land use areas that are anticipated to see high rates of growth?
- Which best practices or examples from other communities can be adopted or emulated?

Completing the Self-Assessment with these questions in mind will begin to demonstrate where integrated activities may be most impactful.

The following table summarizes different points of impact for integrating water and land use planning. Specifics about each impact point are included in either the Community Self-Assessment or the Technical Resources Section below.

POINTS OF IMPACT SUMMARY

POINTS OF IMPACT	TOOL	PURPOSE
Planning and Policy Making	• Water Conservation Plans • General Plans • Capital Improvement Plans • Economic Development Plans or Goals	Establishes goals and objectives for managing the intersection of natural resources and the built environment.
Pre-Development	• Water Adequacy Requirements • Conservation Tap Fees	Links new development to water supply planning.
Development Review	• Zoning and Subdivision Regulations • Annexation Policies • Planned Development Policies • Development Agreements	Determines what water resource management, conservation and efficiency requirements are applied to development.
Building and Construction	• Building, Plumbing and Landscaping Codes	
Post-Occupancy	• Water Conservation Rate Structuring • Conservation and Efficiency Incentives • Outdoor Watering Restrictions • Water Budgets and Auditing	Empowers and incentivizes homeowners and renters to reduce water consumption.

Stage Four: Take Action

After the Core Team has identified potential local points of impact, the next step is to take action. The nature of the action will depend on the community itself, and involve factors such as resources, political readiness, urgency, capacity, and goals. Potential action steps include:

- **Identify resources** - perhaps more is needed before the Core Team and relevant stakeholders can work to integrate water and land use planning. This action step involves the Core Team taking stock of existing resources available within the community that can be expanded to aid in the integration of

water and land use planning, or for the Core Team to find new resources to aid in this goal. Both technical and implementation resources are included in the following sections of this document.

- **Prepare and apply for a stakeholders' workshop** - a workshop will take the Core Team through concerted strategic planning, resulting in a 12-month action plan with discrete implementation steps and necessary resources, for the community to act upon. The workshop should include follow-up funding and technical assistance to help communities achieve the goals described in their action plans.
- **Action planning** - the Core Team may be ready to form a strategic plan for integrating water and land use planning or may utilize a general plan or water conservation plan process to do such action planning.
- **Policy updates** - the community may be poised to update codes and regulations to integrate water and land use planning. Low-hanging fruit for this action item includes adopting model ordinances or using a routine update to the building code to apply more sophisticated water conservation standards.

Examples, best practices, model policies, case studies, and guiding principles in the Community Self-Assessment may help target specific actions that a community may easily or quickly take.

Technical Resources

These resources offer excellent guidance on specific tools that you may want to explore more deeply as your core team identifies its local points of impact. More resources are included in the Community Self-Assessment.

General

- Growing Water Smart Metrics Report: Guidance on how to measure progress on water/land use integration.
- Integrating Water into Comprehensive Plans: Best practices on development of a comprehensive plan.
- Integrating Water Efficiency into Land Use: Comprehensive review of nearly all tools for integrating water and land use.
- Equitable Integration of Water and Land Use: Guidance on how to include equity when integrating water and land use planning.
- Guiding Principles for Equitable Engagement in Coordinated Planning: Guidance for creating an equitable planning process when integrating water and land use planning.
- Colorado River Basin Map: provides detailed information on the Colorado River Basin.

Utah

- Public Water Supplier 40 Year Water Requirement Plan Standards: serves as a reference for the requirements of 40 Year Water Plans.
- Utah DWR Water Conservation Plan Resources: outlines three steps for water conservation plan success.
- Utah's Regional M&I Conservation Goals: recommends regional goals and practices for municipal and

industrial (M&I) water conservation.

- Utah DNR Drought Management Toolkit for Public Water Suppliers: guidance to help public water suppliers better prepare for and manage future droughts.
- Envision Utah Water Strategy Recommendations
- Utah DWR Conserve Water: resources for water conservation practices.
- Utah State University Center for Water Efficient Landscaping: a research and outreach center designed to improve the efficient use of water for landscape irrigation.
- Utah Water Savers: demonstrates available cash rebates and programs.
- Western Resource Advocates Wasatch Front Land Use & Water Integration Webinar Series: a two-part webinar series on water and land use planning integration.
- Utah League of Cities and Towns Land Use Academy of Utah: supports training and education in land use for local elected and appointed officials.
- Jordan Valley Water Conservancy District Water Conservation Programs: robust conservation programs.
- Weber Basin Water Conservancy District Conservation & Garden: information about waterwise landscaping, drought, water audits, and secondary water use.
- Central Utah Water Conservancy District Conservation: conservation programs and best practices.
- Washington County Water Conservancy District Conservation: conservation programs, including information about rebates, events, and best practices.

Other Colorado River Basin States

- **Arizona**
    - Resources for Water Conservation Planning: serves as a reference for state legal requirements, model codes for water waste and indoor and outdoor efficiency.
    - Regulatory Authority Outside Active Management Areas: summarizes, at the state and local government levels, the regulatory authorities, and tools available to manage water resources and land.
    - Local Land Use Planning Toolbox: from Friends of the Verde River, provides many aspects of how water can be integrated in the land use planning and development process.
- **Colorado**
    - Colorado Growing Water Smart Water/Land Use Nexus Guidebook: overview of water saving toolboxes that include goals, strategies, case studies, and additional resources.

- NWCCOG QQ Water Savings Resource Guide: model code provisions for adequate water supply and outdoor and indoor water efficiency.
- Municipal Water Efficiency Plan Guidance Document: serves as a reference tool for water. providers and local governments for developing State-approved local water efficiency plans.

Implementation Resources

Funding, help with grant applications, direct assistance, and networking are available to support communities in integrating water and land use planning.

Technical Assistance with Grant Applications

RESOURCE	APPLYING FOR U.S. BUREAU OF RECLAMATION GRANTS
PROVIDER	WaterNow Alliance
DESCRIPTION	WaterNow is available to provide Utah water providers with pro-bono, hands-on assistance to apply for the Bureau of Reclamation's (USBR) WaterSMART funding opportunities. WaterNow's organizational mission is to help communities make tangible progress in bringing sustainable water management approaches to scale and they currently provide application support for five WaterSMART grant opportunities: Water & Energy Efficiency Grants (WEEG), Small Scale Water Efficiency Grants (SWEP), Drought Resiliency Projects (DRP), Drought Contingency Planning (DCP), and the Water Conservation Field Services Program (WCFSP). Support services include (but are not limited to): 1-on-1 calls to discuss grant opportunities; targeted research tasks related to your application; guidance on USBR grant submission processes, application, and budget templates; and editing and detailed review of your application.
NOTES	
ELIGIBILITY	Eligible entities include states, Indian tribes, irrigation districts, water districts or other organizations with water or power delivery authority in the Western U.S. Nonprofit conservation organizations that are acting in partnership with an entity listed above are also eligible. Applicants must be able to commit to 50 percent or more cost-sharing of total project costs and projects must be completed in two to three years.
WEBSITE	www.usbr.gov/watersmart/index.html
CONTACT	Georgia Beesemyer, gb@waternow.org

DIRECT ASSISTANCE

RESOURCE	GENERAL DIRECT ASSISTANCE
PROVIDER	Babbitt Center for Land and Water Policy
DESCRIPTION	Connect to resources, case studies, best practices related to land use planning; assist communities with scopes of work, RFPs, convenings, comprehensive planning, scenario planning, and serve on technical advisory committees.
NOTES	
ELIGIBILITY	Any Utah Community
WEBSITE	www.babbittcenter.org
CONTACT	Faith Sternlieb, fsternlieb@lincolninst.edu

RESOURCE	GENERAL DIRECT ASSISTANCE
PROVIDER	Western Resources Advocates + WaterNow Alliance
DESCRIPTION	Working with communities to identify specific water and land use planning programs or policies and support them, from creation to implementation. This includes assisting communities with specific policy updates, code changes, landscape regulations, comprehensive planning, and other related efforts. Also, presentations to educate elected officials to build political support for the policy or program can be arranged. This support is free of charge, courtesy of grant funding to provide this technical assistance.
NOTES	
ELIGIBILITY	Utah towns, cities, and counties
WEBSITE	westernresourceadvocates.org/land-use-planning-for-water-efficiency/
CONTACT	John Berggren, John.berggren@westernresources.org

RESOURCE	PROJECT ACCELERATOR PROGRAM
PROVIDER	WaterNow Alliance
DESCRIPTION	Twice a year, WaterNow Alliance selects several sustainable water projects to receive professional hands-on support, and technical and program assistance. WaterNow Alliance expertise ranges from deep water policy guidance to support and advice on communications strategies. Selected Project Accelerators receive up to 250 hours of professional support in six to nine months (valued at $25,000 each).

NOTES	Occurs twice a year
ELIGIBILITY	Cities, towns, and other municipal water providers
WEBSITE	waternow.org/our-work/our-work-projects/project-accelerator/
CONTACT	Amy Weinfurter, aw@waternow.org

NETWORKING

RESOURCE	**GROWING WATER SMART PEER-TO-PEER EXCHANGE**
PROVIDER	Sonoran Institute
DESCRIPTION	This peer-to-peer network will be available for you to meet peers from other communities in other states, foster dialogue, and serve as an exchange of information and resources.
ELIGIBILITY	Past Growing Water Smart participants from Colorado and Arizona and subject matter experts/resource providers
WEBSITE	TBD - In development
CONTACT	Waverly Klaw, climateresilience@sonoraninstitute.org

INTEGRATING WATER AND LAND USE PLANNING IN UTAH
STAKEHOLDER CHECKLIST

Integrating water and land use planning involves breaking down silos between water management and land use planning professionals to plan for a more resilient and sustainable future. This can be a daunting task, given the variety of stakeholders that could—and often *should*—be brought into the process. This checklist is intended to help a local government identify and prioritize stakeholders to bring into the water and land use integration process.

Two tables are included below: one for forming a core team for integrating water and land use planning, and one for stakeholders who should be engaged at different stages and to various degrees throughout the process.

The checklists refer to different types of stakeholders and qualify them according to applicability and priority. Because every jurisdiction is different and has different entities, organizations, and actors, use the applicability column to determine if a stakeholder exists within your community.

The priority column of the Stakeholders to Engage Throughout the Process checklist helps identify potential collaborators throughout the water and land use integration process—high priority stakeholders; those who may need periodic engagement—medium priority stakeholders; and those who should be tangentially involved or involved during public events—low priority stakeholders. These designations have been generalized for the sake of relevance across contexts, so they require customization as appropriate for your local context. Determining the priority of potential stakeholders is an appropriate activity for the core team.

The final lines of the checklists are available to add any stakeholders that may otherwise be missing, be it because they are specific to your local context or because they are highly interested and involved in the integration of water and land use planning.

More information about collaboration for integrating water and land use planning can be found in the video "Strengthening Collaboration."

Participants for the Core Team

Potential Participants	**Applicability to Your Context** (A - Applicable, N/A - Not Applicable)	**Contact information**
Long-Range Land Use Planners		
Development Review Land Use Planners		
Water Conservation Staff		
Water Utility Managers		
Retail Water Providers		
Wholesale Water Providers		
Elected Officials/ Board of Trustees		
Representative from Governing Body of Private Water Utility		
Representative from Planning and Zoning Commission/Board		
Wastewater Utilities		
Flood Control/ Stormwater Management Agencies		
Building Department Staff		
Economic Development Staff		
City/County Attorney		
[additional relevant stakeholders]		
[additional relevant stakeholders]		
[additional relevant stakeholders]		

Stakeholders to Engage Throughout the Process

Stakeholder	**Applicability to Your Context** (A - Applicable, N/A - Not Applicable)	**Priority** - Low - Medium - High	**Contact information**
Developers and Home Builders		High	
Environmental, Watershed, Land, or Habitat Conservation/Groups		High	
Farmers and Ranchers		High	
Major Institutional, Commercial, or Industrial Water Users (e.g., schools, churches, data centers, manufacturing, golf courses, recreation areas)		High	
Other Local Governments in the Region		High	
Other Land Management or Resource Agencies Relevant for your Region or Watershed (USFS, BLM, BOR, State Lands, Div. of Wildlife, UDOT)		High	
Ski and Snow Park Owners/Managers		Medium	
Community Advocates and Grassroots Organizations		Medium	
Parks and Open Space Managers (including land trusts)		Medium	
Homeowners Associations		Medium	
Citizen Advisory Boards		Medium	
Regional Groups, Regional Associations, COGs, MPOs		Medium	
The Public/ Residents/ Ratepayers		Low	
Local Businesses and Chambers of Commerce		Low	
Land/Habitat Conservationists		Low	
Local Media		Low	
[additional relevant stakeholders]			
[additional relevant stakeholders]			
[additional relevant stakeholders]			

INTEGRATING WATER AND LAND USE PLANNING: COMMUNITY SELF-ASSESSMENT

Instructions

The first step in becoming water smart is understanding your current conditions. This self-assessment is designed to guide your community through a data gathering process that will help inform your community's integrated water and land use planning efforts/actions.

The capacity of your community and history of planning will influence the thoroughness of the data available. Please collect as much existing data as possible on current conditions. Responses to this self-assessment do not need to be comprehensive status reports. Keep responses high-level and brief enough to guide discussions and provide a link, document, or page citation so additional information is easily accessible, when it is appropriate.

There is no expectation for you to gather data that does not currently exist. In cases where you do not have information, simply acknowledge what you do not know. Communities with more capacity or a longer history of planning are likely to have invested more resources in studies that provide them a more comprehensive understanding of water resources.

The self-assessment is organized into four parts and is designed for several different representatives from your planning department, public works, and/or water utilities to complete:

Part 1 gathers data related to trends that influence your community's water supply and demand, such as population and economic data on growth rates and drought. This information is likely to be found in current planning documents (e.g., general plan, climate adaptation plan, drought plan, or emergency preparedness plan). If you have no local data, you can find data on trends on various regional and state websites such as the Utah Division of Water Resources Water Reports, Groundwater Management Plans, and Kem C. Gardner Policy Institute. *Sources of data for this section will likely be the planning department.*

Part 2 gathers water supply and demand information that is typically found in water planning documents. Several questions reference your community's water provider, which is a broad category that can include retail, wholesale, or other types of public water suppliers. Because each community is different, it will be important to determine if this data comes from one or multiple water providers, and consult each one appropriately. *Sources of data will likely be the water utilities or water resource managers.*

Part 3 gathers information on current water conservation and efficiency efforts included in water and land use policies and plans. *Sources of data will likely be the planning department, water utilities, or water resource managers.*

Part 4 gathers information regarding your community's current regulatory land use policies that are most likely to link water and land use beyond traditional water conservation and efficiency standards. These include connecting water demand to growth patterns, water quality, and watershed health. Sources of data will likely be the *planning department or planning commission.*

Parts 2, 3, and 4 include questions related to identified best practices for integrated water and land use planning. As you fill out this assessment, if the answer to a specific question is not known or a specific item is not currently being done refer to

the entry in the "Related Materials" column for guidance documents and best practices related to that question or topic. Where appropriate, examples from other communities are provided. If available, add links to your community's similar documents.

Part 1: Understanding Trends that Influence Water Supply and Demand

Please enter your responses into the highlighted boxes.

AREA OF INFLUENCE	TRENDS					
1. What changes or trends has your community experienced that may influence your water supply?						
A. Is your economy growing, declining, or shifting?						
• Growing, declining, or shifting?						
• Largest economic sector changes?						
B. What changes in business sectors (e.g., agricultural, commercial, industrial) are you seeing? This could include agricultural land transitioning to urban, an increase in industrial development, etc.						
C. What demographic shifts have you seen?						
• Population growing or declining?						
• What is your projected population growth rate?						
D. How are you growing?						
• Where is most of the new development located? Write-in a percentage for each category if known.		**Urban Residential Homes**		**Exurban**		**Rural**
• What are the most frequent types of development applications (i.e., major subdivisions, multi-family re-development, in-fill)?						
E. In the past five years, have any of the following extreme events impacted your water supply or demand? (if yes, please provide short description.):						
• Heat waves						
• Droughts						
• Fires						
• Floods						
F. Does your community have specific environmental concerns or priorities (e.g., low stream/lake levels, drought conditions, water temperature, water quality, recreation)?						

Part 2: Your Current Water Supply and Demand

Please enter your responses into the highlighted boxes.

WATER SUPPLY AND DEMAND QUESTIONS	RESPONSE	RELATED MATERIALS
1. What is your total current and projected supply and demand in acre feet?		
• Current Supply (dry year average):		
• Projected Supply (for what year):		
• Current Demand:		
• Projected Demand (for what year):		

2. Do you have a study or plan that summarizes your water supply and/or demand?	Yes	No	**e.g., City of Orem Water Master Plan 2017** **e.g., City of Logan Drinking Water System Master Plan 2016** **e.g., South Salt Lake City Water Master Plan**
If yes, please provide a link to the study or plan.			
3. Are any of your water providers (retail, wholesale, or other) required to have a Public Water Supplier 40 Year Water Requirement Plan?	Yes	No	**Public Water Supplier 40 Year Water Requirement Plan Standards**
If yes, please provide a link to the study or plan			
4. How would you characterize your water supply? If known, provide a percentage breakdown (e.g., surface water, groundwater, secondary water, wells, reuse, conservation).			
5. What is the sector breakdown of your current water demand (in AF or %)?			
• **Agriculture**			
• **Industrial/Commercial**			
• **Residential**			
6. How does your water provider (retail, wholesale, or other) project future demands (e.g., scenario planning, population projections, local or regional economic development plans)?			**Utah DWR Resources** **Great Salt Lake Advisory Council , 2019 Great Salt Lake Integrated Model**
7. Does your water provider (retail, wholesale, or other) engage with land use planners to project future demands (e.g., have projected land use changes been connected to future water demands)?			**Lincoln Institute's Incorporating Water into Comprehensive Planning; pg. 31**
8. Does your water provider (retail, wholesale, or other) engage with entities focused on economic development goals or opportunities for your locale or region to project future demands or inform on water supply availability (e.g., economic development planning, including GOED)?			
9. What is the structure of your system development charge/tap fee? Does it incentivize conservation?			**WRA Water System Development Charge Guidebook**
10. If you know your current gallons per capita per day (GPCD), please provide.			

If you use other criteria to measure demand, include that instead.			
11. Has an assessment of the effects of water conservation and integrated land use planning been conducted (e.g., revenue, water infrastructure needs, water available for the environment)?			Great Salt Lake Advisory Council Conservation Impacts Assessment
12. Do you have a water efficiency, conservation, or optimization target? Please provide.			Utah's Regional M&I Conservation Goals
13. Are additional water supply acquisitions or storage projects being considered to meet future demand?	Yes	No	
• *If so, which acquisition or storage projects?*			
Temperature check: How did this water supply and demand section go for you? To learn more, please see resources in the Related Materials column.			

Part 3: Your Water Conservation and Efficiency Programs

Please enter your responses into the highlighted boxes.

WATER CONSERVATION QUESTIONS	RESPONSE		LINK TO POLICY / PROGRAM	RELATED MATERIALS
1. Has your community adopted any of the following plans to promote water conservation?				UT DWR Conserve Water
	Yes	No		
• Water Conservation Plan				WRA Guidebook; Chapter 3, pg. 22 Utah DWR Water Conservation Plan Resources e.g., South Jordan City Water Conservation Plan
• Drought Management Plan or Preparedness Plan				Utah DNR Drought Management Toolkit
2. Does your community's water provider (retail, wholesale, or other) conduct any of the following water conservation programs?	Yes	No		AWE Reports and Resources Utah DWR Conserve Water
• Localscapes incentives (cash for grass/turf replacement)				UT Water Savers Localscapes Rewards Jordan Valley Water Conservancy District Flip Your Strip Bureau of Reclamation's WaterSMART Water &

				Energy Efficiency Grants and Small-Scale Water Efficiency Grants
• Rebates for fixtures, appliances, and outdoor irrigation				UT DWR Utah Water Savers Programs & Rebates
• Water efficient product giveaways				e.g., Spanish Fork Smart Controller Project & Tap into Resilience Case Study
• Conservation education for consumers				UT DWR Slow the Flow Localscapes Design Utah's Water-Wise Pledge UT DNR Lawn Watering Guide USU Extension In Home Conservation
• Landscaping education for landscaping professionals				QWEL Program Overview & Utah State QWEL Program
• Indoor water audits and/or outdoor irrigation audits				UT State WaterCheck Program
• Rainwater harvesting				USU Extension Rain Barrels in Utah
• Culinary water metering				
• Secondary water metering				SB199 Water Amendments
• Conservation-oriented rate structuring				UT State Extension Guide to Municipal Water Conservation Pricing
• Industrial, institutional, or commercial water conservation innovations				
• Other				
3. If you have a water provider (retail, wholesale, or other) that uses rate structuring to promote water conservation, which of the following does the utility use? *Please place an X in the leftmost column to indicate the structure(s) used.*				WRA Water Rate Structures in Utah
	Drought Demand Pricing: *Rates are higher during drought periods.*			
	Excess Use: *Rates are higher for above average water use.*			
	Inclining Block: *Rate per block increases as water use increases.*			
	Indoor/Outdoor: *With separate meters, rates for indoor use are lower than rates for outdoor use.*			
	Penalties: *Customers are charged for exceeding allowable limits of water.*			
	Scarcity Pricing: *The cost of developing new supplies is added to bills.*			
	Seasonal Pricing: *Water rates are higher during the summer.*			

	Sliding Scale: *The unit price increases based on an average consumption.*		
	Spatial Pricing: *Water rates are determined by the actual costs to supply water to specific locations.*		
	Time-of-Use: *Water rates are higher during peak days or specific hours of the week.*		
	Water Budget: *Block rates are defined for each individual customer based on an efficient level for that customer.*		
	Other		
	Temperature check: How did this water supply and demand section go for you? To learn more, please see resources in the Related Materials column.		

Part 4: Assessing the Policy Enabling Environment: Land Use – Water Nexus

Please enter your responses into the highlighted boxes.

GENERAL PLAN QUESTIONS	RESPONSE		LINK TO POLICY	RELATED MATERIALS
1. Does the general plan include recommended goals and/or strategies for the following topics?	**Yes**	**No**	*Please provide a link to the plan*	**Lincoln Institute's Incorporating Water into Comprehensive Planning** **WRA Webinar 2: Incorporating Water into Comprehensive Plans in UT**
• **Sustainable water supply and/or demand management**				
• **Water quality protection or water source protection**				
• **Water conservation and efficiency**				
• **Designed growth areas connected to water infrastructure**				
• **Ensuring adequate water supplies for environmental needs in the watershed**				
• **Promotion of compact development patterns**				
• **Climate change (mitigation and adaptation)**				
• **Drought management**				
• **Wastewater management**				
• **Floodplain and stormwater management**				
• **Groundwater management and protection**				
2. Does your general plan contain a discrete water element? (This element may be an entire chapter or a subsection of a chapter.)				**Lincoln Institute's Incorporating Water into Comprehensive Planning; pg. 19: The Role of a Water Element**
3. Is water deliberately integrated as a consideration throughout all relevant components of your general plan?				
4. Are social equity considerations related to water included in the general plan?				**Local Government Commission's Guiding Principles for Equitable Management in Coordinated**

				Planning
5. Does your general plan identify water conservation goals and objectives?				Lincoln Institute's Incorporating Water into Comprehensive Planning; pg. 33: General Water Conservation Programs
• If yes, is the water conservation plan for your community consistent with these adopted goals and objectives?				
6. Does your general plan identify water conservation strategies and implementation techniques?				Lincoln Institute's Incorporating Water into Comprehensive Planning
• If yes, is the water conservation plan for your community consistent with these adopted strategies and implementation techniques?				
7. Is the water element (or integrated elements) of your general plan consistent with the policies of your water utility/supplier?				
8. Is the land use element of your general plan consistent with the policies of your water utility/supplier?				
9. Does your general plan quantify the water demand that would result from projected population growth (i.e., demand forecasting)?				Lincoln Institute's Incorporating Water into Comprehensive Planning; pg. 41: Forecasting Water Supply & Demand
• Is the water element (or integrated water elements) of your general plan consistent with any applicable regional or State water plans (e.g., Regional M&I Water Conservation Goals)?				Utah's Regional M&I Conservation Goals
10. Does your general plan contain a strategy to ensure that proposed project re-zonings, development approvals, and permits do not adversely affect water supplies and resources?				Lincoln Institute's Incorporating Water into Comprehensive Planning; pg. 48 - 51: Water in Development Processes & Evaluation
11. Does your general plan include strategies for water efficient land use (e.g., urban growth boundary, cluster development, Accessory Dwelling Units, and volume/demand-based tap fees)?				Lincoln Institute's Incorporating Water into Comprehensive Planning; pg. 51: Water Efficient

				Urban Form & Zoning Regulations
11. Does the water element (or integrated elements) of your general plan include strategies for water efficient landscaping? For example, soil quality improvements, low-water use plant lists, turf limitations, irrigation system efficiency requirements, public ROW xeriscaping, and open space options that are not water intensive (e.g., natural trail system.)				Lincoln Institute's Incorporating Water into Comprehensive Planning; pg. 52: Landscaping & Irrigation Policies
12. Are your water conservation regulations consistent with your general plan (i.e., have they been updated to implement the strategies outlined in your general plan)?				
13. Does your community have any supporting plans that include elements on water resource management?	Yes	No	*Please provide a link to the plan*	
• Climate action plan, adaptation plan or resiliency plan				UT DWR Climate Change, Water Resources, and Potential Adaptation Strategies in Utah e.g., SLC's Climate Plan
• Sustainability plan				e.g., SLC's Sustainability Plan
• Emergency preparedness plan				
• Floodplain management plan				e.g., City of Bluffdale Floodplain Management Plan
• Economic development plan (that takes water supply into account)				
DEVELOPMENT CODE QUESTIONS **Adequate Water Supply**	**RESPONSE**		**LINK TO POLICY**	**RELATED MATERIALS**
12. Does your development code include a policy for the provision of adequate water supply for new development?	Yes	No	*Please provide a link to the code section*	Green and Castle, 2017, Assured Water Supplies in Western States Sonoran Institute, GWS Water-Land Use Nexus; pg. 14 WRA Guidebook, Chapter 9; pg. 176
a. If Yes, what are some of the requirements (e.g., definition of "supply", time period for water availability, legal/physical availability, etc.)?				
b. At what point is the proof of water required in the development approval process (e.g., preliminary plat submittal, final development approval)?				
c. Who conducts the review for adequate water supply for development proposals (e.g., State Engineer's Office, Planning Staff/Commission, Water Provider)?				

d. Are new major economic developments or industries required to provide their own water supply or are they required to engage with water planners/providers to assess water availability?				
DEVELOPMENT CODE QUESTIONS **Site Development Standards for Water Quality**	**RESPONSE**		**LINK TO POLICY**	**RELATED MATERIALS**
13. Does your development code include zoning or development standards for water quality protection? This could include limiting development in sensitive areas (e.g., wetlands), stream buffers/setbacks, riparian corridor standards, soil erosion mitigation standards, etc.	**Yes**	**No**	***Please provide a link to the code section***	**WRA Guidebook, throughout** **Sonoran Institute, GWS Water-Land Use Nexus; Section 4** **UT Dept. of Water Quality Low Impact Development Guidebook**
DEVELOPMENT CODE QUESTIONS **Water Efficient Land Use Pattern**	**RESPONSE**		**LINK TO POLICY**	**RELATED MATERIALS**
14. Does your development code include policy that promotes and/or supports compact form? This could include higher density/smaller lot sizes, mixed use, housing types, development incentives for water efficiency, etc.	**Yes**	**No**	***Please provide a link to the code section***	**WRA Guidebook; Chapter 7**
15. Does your development code have a provision requiring water conservation and efficiency in the planned development policy, annexation policy, or any similar policies?	**Yes**	**No**	***Please provide a link to the code section***	
DEVELOPMENT CODE QUESTIONS **Efficient Outdoor Water Use**	**RESPONSE**		**LINK TO POLICY**	**RELATED MATERIALS**
16. Does your development code include landscaping standards to reduce outdoor water use?	**Yes**	**No**	***Please provide a link to the code section***	**SMWSA Model Landscape Ordinance** **WRA Guidebook; Chapter 11** **SL County Landscape Regulations**

				CA Model Water Efficient Landscape Ordinance WRA Webinar 2: Water Efficient Landscape Regulations in UT
a. If Yes, does it include any of the following?				
• Requirement for a landscape plan				Sandy City Landscape Regulations
Plant Materials Standards				
• Turf limitation (e.g., type of turf or turf square footage maximum)				Herriman City Water Efficiency Standards
• Total landscaped area square footage maximum (e.g., maximum amount of landscaping vs. hardscape)				
• Plant selection standards or plant lists (e.g., native shrubs, perennials and trees, xeriscape, suitable plants for hydrozones)				SL County Landscape Regulations Utah State Center for Water Efficient Landscaping Water Wise Plan Lists & Native Plants for the Intermountain West
• Soil enhancements and mulching requirements				Herriman City Water Efficiency Standards
• Live vegetation requirements (e.g., reducing urban heat island effects or other means of avoiding heat island effect)				
Water Efficient Irrigation Standards				
• Irrigation efficiency practices (e.g., drip, bubblers, low flow sprinklers, rain and/or evapotranspiration sensors)				SMWSA Model Landscape Ordinance CWEL Transitioning Trees from Traditional to Low-Water Landscapes
• Water schedules for outdoor irrigation to reduce demand and/or evapotranspiration (e.g., time of day, day of week, seasonal)				
• Water budgets for outdoor water use (limitations on allowable water consumption in a landscape area)				

• Rainwater harvesting				
• Graywater reuse				UT Rule 401: Greywater Systems
• Site inspections				
Streetscape/Parking Lot Standards				
• Xeriscape standards				
• Low impact development/rain garden best practices				UT Dept. of Water Quality Low Impact Development Guidebook
Water Conservation Ordinance				
• Water waste limitations				WRA Land Use Guidebook, Ch. 11; pg. 203 e.g., South Jordan City Code. Ch. 13.04.260 Waste Prohibited
• Code enforcement and fines for violations of standards				
17. Does your development code include any regulations, restrictions, or requirements for how home owners associations manage landscapes on their property?	Yes	No		
18. Does your development code include any regulations, restrictions, or requirements that might prevent a property owner from installing water efficient landscapes?	Yes	No		
DEVELOPMENT CODE QUESTIONS	**RESPONSE**		**LINK TO POLICY**	**RELATED MATERIALS**
19. Does your development code include zoning or development standards for water quality protection? This could include limiting development in sensitive areas (e.g., wetlands), stream buffers/setbacks, riparian corridor standards, soil erosion mitigation standards, etc.	Yes	No	*Please provide a link to the code section*	WRA Guidebook, throughout Sonoran Institute, GWS Water-Land Use Nexus; Section 4 UT Dept. of Water Quality Low Impact Development Guidebook
Temperature check: How did this building and plumbing code section go for you? To learn more, please see resources in the Related Materials column.				

BUILDING & PLUMBING CODE QUESTIONS Efficient Indoor Water Use	RESPONSE		LINK TO POLICY	RELATED MATERIALS
20. What are your current plumbing and building codes (e.g., International Plumbing Code, state plumbing code)				
21. Does your code have additional water efficiency standards that promote water conservation for commercial, industrial, institutional uses?	**Yes**	**No**		**WRA Land Use Guidebook, Ch.10; pg. 184**
• **If yes, are there additional commercial standards for high water consumption uses (e.g., car washes, golf courses, hotels, restaurants, laundromat, etc.), which could include pre-rinse spray valves, water recycling or greywater, cooling systems, or water saving signage?**				
22. Does your code include any of the following plumbing and building water saving standards?	**Yes**	**No**		
• **Metering for commercial and single-family units for new development connections**				
• **Submetering for multifamily units for new development connections**				
• **Incentive for new development to incorporate additional water efficient fixtures, appliances, or plumbing above the required standard**				**WRA Land Use Guidebook, Ch. 14; pg 237**
• **Requirement for plumbing fixture retrofit on resale or for rehabilitation of property to receive Certificate of Occupancy as a fee incentive for new development**				
• **Tap availability limitations**				
Temperature check: How did this building and plumbing code section go for you? To learn more, please see resources in the Related Materials column.				

FINAL QUESTION	RESPONSE	LINK TO POLICY
23. Please describe anything else your community does to conserve water that is not already mentioned in this assessment.		