PUBLIC ENGAGEMENT WHITE PAPER FOR THE UTAH LAKE WATER QUALITY STUDY

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ABSTRACT

The importance of engaging stakeholders and members of the public during planning processes is widely recognized. If a project lacks transparency, it is less likely to obtain support from stakeholders and the public and is therefore less likely to succeed. The Utah Division of Water Quality (DWQ) and Utah Lake Commission initiated a water quality study on Utah Lake in November 2015, to evaluate the role of excess nutrients on the support of the lake's designated beneficial uses. Phase I of the study focused on compilation and synthesis of existing water quality and water quality-related scientific information. Phase II of the study involves developing any necessary in-lake water quality criteria to protect Utah Lake's designated recreational, aquatic life, and agricultural uses. To ensure a collaborative process with engaged stakeholders to guide scientific analyses and regulatory decision making, DWQ developed an approach to create a Steering Committee of stakeholder representatives in addition to a Science Panel to guide the process. Additional public engagement efforts have been described and partially implemented by DWO; however, existing efforts are not sufficient, and a stand-alone final public engagement plan does not exist for the project. This white paper evaluates existing public engagement efforts associated with the Utah Lake Water Quality Study, explores the value of an expanded public engagement effort, and describes an approach that could be implemented in the project. The plan will be evaluated by DWQ and the ULWQS Steering Committee, and their input will be incorporated into the final plan

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BACKGROUND

Purpose of Public Engagement

The history of intentional public engagement is largely linked to past failures in the realm of urban planning. Interstate highway alignments that bisected residential neighborhoods in the 1950s and 1960s and unsuccessful top-down approaches to international development were wake-up calls to the importance of engaging the public in decision-making processes toward the goal of creating sustainable outcomes. In the United States, the passage of key domestic laws that attempted to rectify the historic lack of public participation date back to the 1946 Administrative Procedures Act and the 1972 National Environmental Policy Act.

Consequently, today's environmental planning and policy development processes regularly include some degree of public engagement and outreach, partly in response to the regulatory mandate and also in recognition of the fact that the integration of public input and values increases the likelihood of success and sustainability in large projects. An extensive body of literature on stakeholder involvement (Clark and Peterson 2016; Nolon et al. 2013) and strategic communication (Nisbet and Markowitz n.d. [2017]; Storksdieck et al. 2016) related to science and environmental issues substantiates the need for public engagement and describes successful outreach strategies. This does not mean there are no constraints to public engagement efforts such as cost, complexity, time, and an ever-increasing number of issues that demand the public's attention. Most concerning, however, is that if public engagement is done poorly or without sincerity, it can result in a loss of faith in the entities proposing and facilitating the process.

Practitioners of conflict resolution often refer to successful public engagement in terms of satisfaction. In *The Mediation Process*, Moore (2014) presents the Triangle of Satisfaction model that illustrates the three types of interests held by the public and stakeholders that affect project outcome: Result (substantive), Emotion (psychological), and Process (procedural). Result is directly linked to project need and, more specifically, the data supporting the project and the public's wants and needs concerning the outcome. Emotion can be summarized in terms of trust: Are people's feelings, thoughts, and perspectives about the process and project supported? Process is the series of actions that lead to an outcome. For example, are the actions transparent, inclusive, and based on the best available data?

The extent to which the public and stakeholders feel that each of these interests is satisfied determines their acceptance of the project outcome. In the case of the Utah Lake Water Quality Study (ULWQS), although some members of the public may not want water quality standards for Utah Lake, it is hoped that they will be satisfied that the outcome of the study was the result of an objective and deliberate process. An objective and deliberate process is key to avoiding efforts to sabotage the process or litigate the outcome of the process.

Public Engagement and the Utah Lake Water Quality Standard Development Process

Although the need to invest in some form of public engagement is mandated by Utah law and although the body of evidence linking public engagement to project success is demonstrable, identifying and implementing effective public participation can remain a hurdle for many science-based planning efforts. Phase I of the ULWQS has set a foundation for successful public engagement that includes early engagement in the planning process, integration of interested and affected parties, commitment to using public input, and seating stakeholders on an equal basis with officials and technical experts. Moving

forward with an effective public engagement plan in Phase II is especially critical because of the technical complexity and contentious nature of developing Utah Lake water quality standards.

An emphasis on science communication is particularly important in Phase II of the ULWQS because of the highly technical nature of numeric criteria development. Outreach efforts will prove to be unsuccessful if the messaging is not easily understood by the target audience. Public engagement is as much an outreach effort as it is a participation effort, which necessitates dialogue between project organizers, stakeholders, and the public. Storksdieck et al. (2016) outline the following principles for successful integration of science in a public engagement process: 1) genuine curiosity for the views of other parties, 2) willingness to listen, 3) openness to diverse stakeholder perspectives, 4) ability to limit the amount of information conveyed to what is needed for the situation, 5) ability to be accurate while tolerating some level of scientific uncertainty, 6) willingness to make personal connections with audience members, and 7) avoiding confrontational interaction with audiences over issues related to norms, values, or beliefs.

In addition, the perceived potential ramifications of new water quality standards make the process highly contentious. In many ways, water quality issues parallel other issues such as climate change, where the dialogue requires maintaining trust in a polarized debate, countering misinformation and false beliefs, tailoring information to audiences, and promoting conversation (Nisbet and Markowitz n.d. [2017]). Nisbet and Markowitz summarize guidance on these four critical areas of focus in science communication:

- Maintaining trust
 - Maintain credibility by conveying findings that do not favor a specific outcome or group over another
 - Emphasize motives to which the public can relate, such as education and protecting environmental resources
 - Partner with people (e.g., opinion leaders) that relate more directly to the identity of the various stakeholders
- Countering misinformation
 - Identify the potential for intentional efforts to mislead the public
 - Actively correct misperceptions in information
 - Provide factually correct and compelling alternatives to misinformation
- Tailoring information
 - Avoid the desire to counter false beliefs
 - Develop methods to explain complex subjects to non-expert audiences
- Promoting conversation
 - Continue the conversation beyond formal meetings
 - Encourage discussions with stakeholders rather than just with political leaders or experts
 - $\circ~$ Engage opinion leaders who are motivated by the issue and have a special ability to share information with others

These strategic areas of focus are highly applicable to the ULWQS and could be useful for all parties involved.

WATER QUALITY STANDARD DEVELOPMENT PROCESS

Existing Public Engagement

As documented in the *Utah Lake Water Quality Study Stakeholder Process, Version 10* (Steering Committee charter; approved May 12, 2017), public outreach efforts during Phase I were intended to "ensure a collaborative process with engaged stakeholders to guide scientific analyses and regulatory decision making." Stakeholders are characterized simply as those that have a "stake" or interest in the study process and/or outcome, and, in this case, the stakeholders represent a broad range of interests from publicly owned treatment works to water users, conservation groups, and many others. One of the outcomes of Phase I was the establishment of a Steering Committee made up of stakeholder representatives from a diverse group of organizations. Additionally, the proposal to formulate a Science Panel that would be made up of researchers with specializations in the disciplines relevant to nutrient cycling in Utah Lake was developed during Phase I. During Phase II, the Steering Committee selected the specific group of researchers to serve on the Science Panel.

The ULWQS Steering Committee charter provides the following guidance for public engagement activities to be directed by the Steering Committee:

- Encourage ongoing collaboration and communication among the private sector and citizens working to protect and improve the water
- Provide a platform for diverse perspectives and ideas
- Consider feedback, comments, and recommendations from stakeholders (including the public) during the process and at regularly scheduled meetings

In addition, one of the objectives of the Steering Committee (as described in the charter) is to conduct a transparent public process by identifying and involving interested stakeholders, accepting public comment and input, and sharing results, among other things. Further details on how public engagement will be pursued are not included in the charter.

Benefits and Limitations

To date, the Utah Division of Water Quality (DWQ) has identified public engagement as an important component of the ULWQS process and (in the charter) has illustrated feedback and communication linkages between three entities: 1) the ULWQS Steering Committee, 2) the ULWQS Science Panel, and 3) Utah Lake stakeholders and the public. This structure appears to be well thought out and sets the stage for successful public engagement. Although DWQ has made it clear that public engagement is a priority and although there is a focus on stakeholder outreach and relationships, there is no information on process, timing, or responsibilities in the charter. The acknowledgement of a need for public engagement is a critical element; what is lacking are further details on how public engagement will be undertaken. The attached example public engagement plan (Appendix A) presents an approach for how public engagement could be expanded in the ULWQS.

The Value of Expanded Public Engagement

There is considerable potential for valued added from an expanded public engagement process as part of the ULWQS. Some of the specific benefits could include the following:

- Improved communication between the Steering Committee and the public
- Improved decision-making process

- Public support for the process and the outcome of the study
- Improved understanding of DWQ's responsibilities
- Improved DWQ credibility and trust
- Process transparency and legitimacy
- Outcome sustainability through creating ownership of the decision
- Access to community skills and knowledge
- Improved community understanding of Utah Lake management and conservation issues

However, there are limitations to an expanded process; these limitations center on cost and availability of resources to invest in the effort. Given the potential for disgruntled stakeholders to derail the process and the potential for limited public participation due to competition from other issues or planning processes, an effective public engagement effort may require significant expenditure of resources. However, for the reasons described in this paper, the investment in public engagement would be worth the cost. Schedule, which is often considered a limitation, is likely not a concern given the 3-year duration of the project.

PUBLIC ENGAGEMENT – KEY ENTITIES

The organizational chart for the *Utah Lake Water Quality Study Stakeholder Process* identities five key entities with potential roles in public engagement. Although each entity does not have a direct connection to the Utah Lake stakeholders/public in the stakeholder process depicted in the charter, their involvement in the ULWQS comes with the responsibility of participating in public engagement where possible. The role of some of the entities involved in the study (the ULWQS Steering Committee, the ULWQS Science Panel, the Utah Lake Commission, and DWQ) could be considered a primary role, whereas the role of the Utah Water Quality Board (Water Quality Board) could be considered a secondary role. A primary role is defined for a given entity where public engagement is outlined in a project charter or a mission statement. Secondary roles reflect an entity's overarching participation in or responsibility for the process and its particular relationships with project stakeholders. The Water Quality Board is not involved in the day-to-day activities of the ULWQS, but, given its role in adopting the final nutrient standard, it has a responsibility to participate in public engagement where appropriate. A brief description of the role of each of the five entities is provided below:

ULWQS Steering Committee: The ULWQS Steering Committee has a primary role in public engagement because it is composed of individuals responsible for representing various Utah Lake stakeholder groups. The Steering Committee is charged with a transparent public process and the responsibility to propose numeric nutrient criteria to present to the Water Quality Board. The Steering Committee is on the front line of public engagement, both in representing their stakeholders and in participating in a transparent public process.

ULWQS Science Panel: The ULWQS Science Panel has a secondary role in public engagement as a neutral entity responsible for interpreting scientific information and advising the ULWQS Steering Committee. The Science Panel is charged with a transparent process and will engage with the public during their meetings. Additionally, the Science Panel is indirectly responsible for components of public engagement by interpreting scientific information for the Steering Committee to be conveyed to stakeholders and the public.

Utah Lake Commission: The Utah Lake Commission has a primary role in public engagement because their executive director serves as a co-chair of the ULWQS Steering Committee and has the charge of promoting, informing, sustaining, and protecting Utah Lake. The Utah Lake Commission is funded by member entities and participates in public engagement on a regular basis.

DWQ: The DWQ has a primary role in public engagement because the director serves as a co-chair of the ULWQS Steering Committee and because the organization is responsible for organizing and funding the ULWQS. The DWQ's role focuses on process transparency and serving as a neutral clearinghouse for information; the agency is therefore a natural source for members of the public who are seeking information related to the ULWQS.

Water Quality Board: The Water Quality Board has a secondary role in providing outreach related to validation of the process when solicited. Members of the Water Quality Board have opportunities to provide outreach passively as they encounter members of the public during their activities associated with and away from the Water Quality Board.

INTEGRATING THE STEERING COMMITTEE WITH STAKEHOLDERS

The ULWQS Steering Committee in composed of individuals who have been identified to represent different stakeholder groups. As the primary point of stakeholder integration into the process of nutrient criteria development, Steering Committee members are well positioned to perform outreach to and channel input from their constituents and the greater public. However, each member's ability to effectively integrate with the public and his or her constituents should not be assumed because: 1) the expectation to actively engage with constituents might not have been understood when he or she agreed to serve; and 2) it is unlikely that Steering Committee members are trained in (or aware of) public engagement techniques. Therefore, it is recommended that members of the Steering Committee are reminded of the expected role in the public engagement process and receive some level of training in goals and methods of outreach and facilitation. In addition, assessment of the Steering Committee's ability to guide bi-directional communication, and therefore represent their stakeholders, should be considered.

Potential methods of assessing the Steering Committee members' ability to represent their stakeholders include the following:

- Focusing on public engagement concerns and stakeholder expectations during a Steering Committee meeting
- Soliciting input directly from stakeholders and stakeholder groups via email
- Inquiring about each member's existing method for staying in touch with stakeholders and soliciting input
- Assessing any gaps in public engagement or stakeholder involvement, especially if there is concern that some groups are not participating in the process

ENGAGEMENT AND OUTREACH TOOLS

The following techniques and tools are commonly used as part of an outreach and public engagement process. Each has its own benefits and constraints in terms of cost, level of effort, target audience, content, and scale. Those recommended for use during the project are described in more detail in the attached example public engagement plan (see Appendix A).

- Formal interactive: Meetings, workshops, demonstrations, field tours, educational programs, and open houses
- Informal interactive: Community events and pop-up booths
- Print and visual media: Newspaper advertisements, press releases, posters, newsletters, white papers, project logo and branding, and mailings (e.g., included in utility bills)
- Broadcast media: Radio, television, video
- Electronic media: Social media, emails, interactive comment maps, story maps, and websites

UNIFIED STEERING COMMITTEE MESSAGING

Project messaging is the narrative framework for consistency and continuity in communication regarding the current state of Utah Lake, the rationale for developing numeric nutrient criteria, the methods for developing numeric water quality criteria, the results of data analysis, and the final recommendation document.

In its capacity as a stakeholder body, the ULWQS Steering Committee (in coordination with the ULWQS Science Panel) is in the position to craft messages relevant to the overall project (e.g., explaining why DWQ is developing water quality standards at this time) or specific messages related to an individual component of the process (e.g., describing the phosphorous levels and sources in Utah Lake). Regardless of the message's content, there should be clarity and consensus from the Steering Committee to avoid confusion or mixed messages. Given the vast connections between members of the Steering Committee and stakeholder groups, the Steering Committee has the capacity to reach a broad audience. However, consistency in the messaging is critical to the success of the project.

RESOURCES TO IMPLEMENT AN OUTREACH CAMPAIGN

The financial resources required to implement public outreach and engagement depend in many ways on the specifics of the campaign. A full public relations campaign could necessitate engaging a professional public relations firm with the staff and experience necessary to craft messages, develop branding materials, conduct polling, and coordinate media outlets. Scaled-down outreach and public engagement can be both effective and less expensive, especially if DWQ relies on existing consultants or in-house staff. For example, public relations staff working for the Utah Department of Environmental Quality and/or DWQ could disseminate messages crafted by the Steering Committee to local media outlets. DWQ personnel could staff open houses, community events, and other informational events. Finally, in-kind resources such as using stakeholder websites to advertise the project and communicate project status are alternatives to creating a project-specific website, and such efforts might be better received. Additional resources needed for a public engagement process could include supplemental facilitators, graphic design expertise, and printing costs.

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APPENDIX A

Example Public Engagement Plan

EXAMPLE PUBLIC ENGAGEMENT PLAN

Purpose of Public Engagement

This public engagement plan for the Utah Lake Water Quality Study (ULWQS) provides guidance and direction for project messaging and public involvement activities throughout the extent of the process. Clear, articulate communication and effective public involvement are critical to transparent and effective decision making. Because the Utah Division of Water Quality (DWQ conducts this type of numeric criteria development infrequently, some members of the public and stakeholders may not have a clear understanding of DWQ's mandate to protect water quality, how beneficial uses are identified, and the process by which numeric criteria are developed. Therefore, the public engagement process must include consistent and effective messaging about the project from the beginning. The process must also include methods to reach multiple user groups and obtain as much feedback from as many participants as possible.

DWQ is committed to a comprehensive public involvement process to educate and inform interested parties about the development of numeric nutrient criteria for Utah Lake and about DWQ's role in protecting the surface waters of Utah. Additionally, DWQ seeks to incorporate public input into the process along the way. This process requires recognizing and understanding of the diversity of user groups and interested parties and providing ample opportunities and means of participation for public engagement. Throughout the project, DWQ seeks to clearly describe the process, allow for active involvement, and capture public and stakeholder feedback at key points in the process.

This public engagement plan describes general approaches for public outreach and activities appropriately tailored to specific stakeholder groups at different phases of the process. Meaningful public involvement will be encouraged throughout the process by involving interested parties early, frequently, and effectively.

PUBLIC ENGAGEMENT GOALS

The five public engagement goals for the ULWQS are as follows:

- Increasing public awareness
- Presenting scientific data (e.g., economic costs and benefits, and changes in use based on water quality conditions)
- Soliciting public opinion
- Managing misinformation and removing barriers to change
- Encouraging public participation

IDENTIFYING THE TARGET AUDIENCE

Stakeholders

Stakeholders are characterized simply as those that have a "stake" or interest in the study process and/or outcome. DWQ identified many stakeholders during Phase I of the project. The situation assessment conducted as part of Phase II confirmed the initial stakeholder list and expanded upon it. The current list

of stakeholders consists of local residents, recreation groups, conservation groups, publicly owned treatment works, water/sewer rate payers, tribal governments, local governments, state legislators, state and federal agencies, adjacent and nearby landowners, the agriculture community, local conservation districts, irrigators, and the media. Although adding and engaging additional groups can be time consuming and add complexity, it avoids marginalizing stakeholders and provides for balanced opinions.

Public Engagement Geographic Area

The general focus area for outreach and public engagement is the Utah Lake Valley (Figure 1). Communities and stakeholders in the upper Utah Lake watershed areas, although potentially a source of pollutants or and potentially interested in Utah Lake, will not be targeted directly in this process. Although located outside of the focus area, some stakeholders such as Utah Lake water users in the Salt Lake Valley will be included, due to their direct connection to the water quality in Utah Lake. Finally, those stakeholders who live outside the public engagement focus area but who use Utah Lake (e.g., recreation groups) will be engaged where possible in certain locations such as boat access points and marinas.

PUBLIC ENGAGEMENT: ROLES AND RESPONSIBILITIES

ULWQS Steering Committee: The ULWQS Steering Committee, by its mandate, has the primary responsibility for public engagement in the ULWQS. To meet the goals of transparency, Steering Committee meetings should be open to the public. The Steering Committee should develop a method for recording public and stakeholder comments during meetings and should post these comments along with a response on the project website. The period during which comments are solicited should also be considered. Steering Committee members, as liaisons, are responsible for two-way communication regarding the project and status of the process. **Periodic "check-ins" at Steering Committee meetings with previously identified stakeholder points of contact are recommended to assess the type and level of information passing between contacts and members. Members of the Steering Committee should be encouraged to attend public engagement activities and speak about the project and the process in their capacity as interest-based representatives.**

ULWQS Science Panel: One of the goals of the public engagement process is to make science, water quality regulations, and policy formation accessible to the layperson. In this capacity, the ULWQS Science Panel plays four important roles:

- Identifying relevant and rigorous literature and research that will be used to develop nutrient criteria for Utah Lake
- Analyzing data
- Interpreting data
- Assisting the Steering Committee in developing messaging that is scientifically sound and accessible to the public

Utah Lake Commission: Given that the executive director is one of the co-chairs of the Steering Committee, the Utah Lake Commission in its current role in promoting, informing, sustaining, and protecting Utah Lake has preexisting relationships with stakeholders. In many capacities, the members of the commission function as opinion leaders and as advocates for the appreciation and management of Utah Lake. The commission members engage with the public as part of normal operation and should incorporate ULWQS messaging (in coordination with the rest of the Steering Committee) into this engagement effort.

DWQ: As the backer of the ULWQS and given that the director serves as one of the co-chairs, DWQ should be the project champion but should coordinate all its messaging with the Steering Committee to ensure consistency. Given DWQ's relationship with the project, DWQ staff will likely be contacted directly by the public and must be prepared to handle these inquiries.

Water Quality Board: The mission of the Water Quality Board is to guide the development of water quality policy and regulations in Utah. Board members represent various stakeholder groups and might be approached by constituents interested in the water quality standards development process. DWQ should provide the board with regular updates and informational materials in coordination with the Steering Committee so that they can speak accurately and clearly about the project purpose and address any questions presented to them. The members of the Water Quality Board also effectively act as opinion leaders.

PUBLIC ENGAGEMENT STAGES

Public engagement will pass through three stages during the life of the ULWQS:

- 1. Stage 1, Introduction (announcing the project): This phase must answer the common questions of who, what, where, when, and—especially—why. Public engagement efforts during this stage should:
 - announce the project;
 - provide public education on watershed planning, trends, and existing conditions;
 - explain the goals of the project and how participants can get involved;
 - o gather email addresses for notification of future meetings; and
 - allow the public to comment on the process defined for the study.
- 2. Stage 2, Scoping: During this data- and information-gathering stage, the goal should be to solicit input on key issues and concerns from the public and stakeholders. Many concerns may have been identified during the situation assessment, but new issues may arise during the course of the process. Public engagement during this stage should:
 - \circ $\,$ provide the public with opportunities to review data summaries and existing information, and
 - allow the public to contribute supplemental data and information.
- 3. Stage 3, Review: Once draft plans or decisions are complete, this stage provides for reviews of the process and outcomes. Public engagement during this stage should:
 - allow the public to comment on the overall process, and
 - allow the public to review decisions and outcomes.

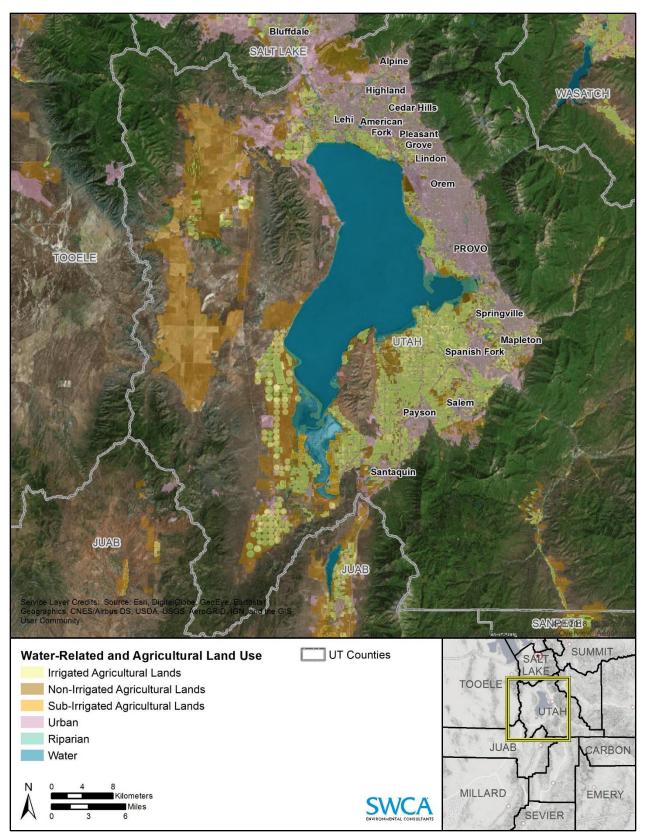


Figure A-1. Utah Lake Valley, which is the focus area for outreach and public engagement.

ENGAGEMENT AND OUTREACH STRATEGIES

The following engagement and outreach strategies are recommended for the ULWQS because they are low cost, have the potential to reach a broad audience, or provide opportunities to engage with people concerned with Utah Lake. As recommended in the situation assessment conducted as part of Phase 2, the ULWQS Steering Committee should be intimately involved in the development of public engagement activities because of their familiarity with the stakeholders and their primary role in directing the ULWQS. Additionally, given the affiliations of the Steering Committee members, some of them may already have processes and/or channels to communicate with the public, and these should be used in ULWQS public engagement efforts. Specific strategies that could be used to target the various audiences during the three stages of the public engagement process are listed in Table A-1.

- Open houses: Public meetings can serve as a forum of communication with the public about the numeric criteria development process. These meetings in an open house format would be informal and would allow people to attend for as long as is needed to ask questions and learn about the process. Stage 1 meetings would kick-off the process, provide the public with an understanding of the goals and intended outcomes of the process, and outline the public involvement process moving forward. Stage 2 meetings would provide an opportunity for the public to review findings and contribute data or other information. These open houses could be organized around specific stakeholder groups to obtain feedback from them. Stage 3 meetings would give interested stakeholders and the public a chance to comment on the process and outcomes. Each stage could have one to four open houses dependent on location and geographic coverage.
- Pop-up events: This strategy consists of project-created events, such as hosting booths at popular boat ramp locations around Utah Lake.
- Community events: Several communities within the ULWQS public engagement focus area host public events that could provide an opportunity for outreach. Hosting a booth at such events offers the opportunity to educate the public about water quality protection, the Clean Water Act, and the ULWQS and to encourage their involvement. Stages 1 and 2 of the study would be the most logical time to pursue outreach at community events. Examples of community events include the Utah County Fair in Spanish Fork, the Salmon Supper in Payson, the Utah Lake Festival, and Splash Days in Saratoga Springs.
- Steering Committee meetings: The Steering Committee holds open meetings that the public and stakeholders are invited to attend. During certain meetings, the committee could allocate time for public questions and comments.
- Website- or map-based comment tool: A project website can serve as the main project information hub. This site should be referred to in all announcements and press releases and would allow anyone interested in the project to find out more about the standards development process and its status. Hits to this site should be tracked and evaluated. A map-based comment tool within the website could serve as an online survey tool to track responses within the project area.
- Stakeholder websites: In partnership with stakeholder groups and local governments, the Steering Committee could request that project information be posted to third-party websites. Because these websites receive their own public or stakeholder traffic, they are a useful location to advertise the project.
- Opinion leaders: Key individuals or groups within a community have the ability to influence public opinion. These individuals can be business people, politicians, celebrities, or respected members of the community. Because they understand the process, opinion leaders can be valuable allies in outreach and translating stakeholder issues to the Steering Committee.

- Press releases: Press releases can be used at various points in the process. At the beginning of the project, a press release can introduce the rationale for the development of the water quality standards. As the process progresses, other releases may announce public involvement opportunities such as attendance at major festivals or the availability of online comment opportunities. When applicable, calls to local media with story ideas (e.g., major findings, policy changes, or new regulations) could be made. Press releases would go to news media and radio and cable television outlets. Press releases would be distributed by the Steering Committee or DWQ.
- Social media: A proactive campaign using Twitter and Facebook could be prepared to assist in reaching all participants. Although a project account would need to be established for both social networking sites, existing social media accounts (e.g., Utah Lake Commission) could also be used to disseminate project information.
- Field trips: Hands-on activities on or around Utah Lake are recommended to view specific issues associated with lake condition or examples of successful management strategies. Field trips could be conducted by the Steering Committee, Science Panel, or stakeholder groups.
- Printed materials (e.g., direct mailers): A direct mailer could be used at the beginning of the process to notify residents, businesses, and sewer/water users about the process and how they can be involved. The mailers may be included in utility bills.
- Public surveys: Online surveys could be sent to specific stakeholders as a method of obtaining input and feedback on the ULWQS. Additionally, surveys could be developed as a means of evaluating the opinions, perspectives and priorities of stakeholders, which could be compared to those of the Steering Committee members that represent them.

Public Engagement Strategy	Stage 1, Introduction	Stage 2, Scoping	Stage 3, Review Public, stakeholder groups, governmental officials, and media			
Open houses	Public, stakeholder groups, governmental officials, and media	Public, stakeholder groups, governmental officials, and media				
Pop-up events	Specific stakeholders (e.g., recreationists)	Specific stakeholders (e.g., recreationists)	N/A			
Community events	Public and nearby landowners	Public and nearby landowners	N/A			
Steering Committee meetings	Public and stakeholders	Public and stakeholders	Public and stakeholders			
Project website	All interested parties	All interested parties	All interested parties			
Stakeholder websites	Specific stakeholder groups (e.g., homeowner's associations, residents, governments)	Specific stakeholder groups (e.g., homeowner's associations, residents, governments)	Specific stakeholder groups			
Opinion leaders	Specific stakeholder groups (e.g., agriculture and irrigation)	Specific stakeholder groups (e.g., agriculture and irrigation)	Specific stakeholder groups (e.g., agriculture and irrigation)			
Print media and press releases	Public, stakeholder groups, and government officials	Public, stakeholder groups, and government officials	Public, stakeholder groups, and governmental officials			

Table A-1. Outreach Strategies by Audience and Project Stage

Public Engagement Strategy	Stage 1, Introduction	Stage 2, Scoping	Stage 3, Review			
Social media	All interested parties	All interested parties	All interested parties			
Field trips	Stakeholder groups, government officials, and media	Stakeholder groups, government officials, and media	N/A			
Printed materials (e.g., direct mailers)	Public, specifically sewer and water users	Public, specifically sewer and water users	Public, specifically sewer and water users			
Public surveys	N/A	Stakeholder groups, ratepayers, recreationists	Stakeholder groups, ratepayers, recreationists			

PROPOSED PUBLIC ENGAGEMENT SCHEDULE

The schedule for public engagement activities associated with the ULWQS would largely depend on direct input from DWQ and the Steering Committee on the final public engagement plan. Depending on the strategies identified, additional public engagement activities should be implemented as soon as possible. A suggested schedule of public engagement strategies is provided in Table A-2.

Public Engagement Strategy	2018			2019				2020			
	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall
Open houses											
Pop-up events											
Community events											
Steering Committee meetings											
Project website											
Stakeholder group websites											
Press releases											
Social media											
Field trips											
Printed materials (e.g., direct mailers)											
Public surveys											

 Table A-2. Suggested Timeline of Public Engagement Strategies

EVALUATION OF OUTREACH CAMPAIGN EFFECTIVENESS

Periodic check-in points can be inserted throughout the process to evaluate how well the various strategies of public engagement are reaching the public and specific stakeholders. These check-in points will allow for opportunities to modify the engagement approach as needed and avoid getting to the end of the process without having adequately engaged the public and stakeholders. These check-in points could take the form of discussions at Steering Committee meetings, direct questions to participants at open houses or other events, or an online survey of people who have contributed email addresses to the project contact list.

Ultimately, an evaluation of campaign effectiveness should determine the participants' level of satisfaction with the public engagement efforts. Using the Triangle of Satisfaction in *The Mediation Process* (Moore 2014), the evaluation may consider questions related to Result (Substantive), Emotion (Psychological), and Process (Procedural) issues, as follows:

- Result: Was the project purpose and need credible, and was the outcome supported by data or the best available science?
- Emotion: Were the participants' feelings, thoughts, and perspectives validated and addressed?
- Process: Did the participants feel that they had access to the process? This question should be assessed not only in terms of logistical access but also conceptual access.

The inclusion of online public surveys could be a powerful method of evaluating the success of public engagement efforts. Surveys could be pursued several times throughout the project and could provide critical information that would inform future strategies related to public engagement. Any indication of low satisfaction from the public should cause DWQ and the Steering Committee to re-evaluate public engagement efforts and revise this plan.