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AGENDA

Mid-Coast Water Planning Partnership Strategy Development

Session #3: Reliable Water Infrastructure and Operations  
January 20, 2021 11:30am–1:00pm

**Please join my meeting from your computer, tablet or smartphone.**  
[**https://global.gotomeeting.com/join/756758117**](https://global.gotomeeting.com/join/756758117)

**Objective:** Develop draft strategies that address the [key issues](https://www.midcoastwaterpartners.com/key-water-issues) associated with Reliable Water Infrastructure and Operations in the Mid-Coast region of Oregon.

**Reliable Water Infrastructure and Operations**

* The degradation of aging water infrastructure used to divert, store, treat, and convey water can lead to water loss and water quality issues, and poses a threat to the health and safety of communities.
* Infrastructure to manage water for self-supplied uses (rural residences and agricultural operations) is oftentimes undocumented, old, inefficient, and fails to meet current construction and quality standards, which negatively affects water security and source water quality throughout the region.
* Multiple sources of funding are needed to address current and legacy infrastructure issues and to design and build resilient infrastructure that can withstand natural hazards and help communities adapt to climate change.

11:30am–11:40am Welcome, introductions

11:40am–11:45am Review of key objectives, definition, and key issues from Step 3 of the Planning Process

11:45am–12:45pm Review/affirm/edit draft strategies/actions discussed by partners to date, and consider other potential actions.

12:45pm–12:55pm Consider additional objectives and strategies to address Reliable Water Infrastructure and Operations goals.

12:55pm–1:00pm Summarize, discuss goals for next week, and adjourn

| **Table 3. Reliable Water Infrastructure and Operations states, objectives, and actions to address key water issues in the Mid-Coast region of Oregon.** | | | |
| --- | --- | --- | --- |
| **States** | **Objectives** | **Actions Discussed by Partnership To Date** | **Potential Actions to Consider/Incorporate** |
| Degradation of aging infrastructure that diverts, stores, treats and conveys water.  Rural residences and agricultural operations often have undocumented, old, inefficient infrastructure that fails to meet current standards. | Create more resilient[[1]](#footnote-1) infrastructure.  Replace aging infrastructure. | 1. Self-supplied water users    1. Establish a revolving loan program for people on private wells for infrastructure improvements.    2. Support the update of current self-supplied water system databases, including system description, system status, and system needs.    3. Improve efficiency of irrigation systems and replace aging systems.    4. Recommend well water reporting. 2. Water suppliers (Municipal, special districts, and private suppliers)    1. Identify funding programs to support infrastructure enhancements that advance sustainable water solutions for the region.    2. Support upgrading and maintaining water metering system infrastructure. | 1. Water suppliers (Municipal, special districts, and private suppliers)    1. Develop a regional initiative to provide education to water providers on infrastructure financing and funding.       1. Explore sources of funding (e.g., water rates, tiered rate structures) that fund water development, treatment and infrastructure (acknowledging the visitor influx during the summer months that stress water supplies, e.g., City of Yachats 5% food and beverage tax), considering the multiple benefits of adequate rate structures (which helps conservation and paying for infrastructure) while ensuring that low-income people have affordable water bills).       2. Provide education to municipal water customers re: the costs and workload associated with maintaining and improving water infrastructure.    2. Create a management structure that incorporates fees, grants and incentives to fund infrastructure updates over time.    3. Support the expansion of the state-supported revolving fund (including developing a new fund for self-suppliers) to accelerate water infrastructure improvements.    4. Study how other cities and counties have funded their infrastructure improvements through time.    5. Recommend that any major infrastructure repair/replacement projects as well repairs for smaller-sized water providers be included in and approved as part of a Lincoln County regional water supply system plan and funds secured through the overall plan funding.    6. Design water system repair/replacement projects to withstand landslides and earthquakes to the greatest extent feasible. |
| Lack of adequate workforce of skilled water technicians to maintain present and future water supply systems.[[2]](#footnote-2) | Support training and professional development to ensure the availability of skilled water technicians. |  | 1. Support an internship program that provides hands-on training for water technicians. 2. Address continual turnover of municipal staff that contributes to scheduled maintenance delays. 3. Advocate for the creation/development of local community college and other local/high school/community programs to provide technical skills for water technicians.[[3]](#footnote-3) 4. Provide outreach and education to smaller water providers and their boards re: resources available to support them. 5. Advocate for the expansion the certification process at the state level such that it allows certification from those in addition to those actively working in a distribution or treatment plant. |
| Lack of identified additional and alternative sources of water. | Identify additional and alternative sources of water for the Mid-Coast region of Oregon. |  | 1. Use OSU Engineering and research on desalinization, e.g., solar and/or wave energy, to seek alternative water sources to conserve streams with anadromous fish runs. 2. Seek federal research funding for new efficient and cost effective desalinization technologies to supplement and, if necessary, replace water sources for the region. 3. Consider existing studies for additional water sources, such as the *2001 CH2MHill Report on the Rocky Creek Regional Water Supply Project* *and Preliminary Water Management Plan*. 4. Consider potential for shared sources of water (as a secondary source) among water suppliers using interconnections (redundant source water supplies) (some can receive water, but not send). |
| Insufficient water infrastructure to address water emergencies (e.g., tsunamis, earthquakes). | Create redundancy, water system interconnections, and alternative sources of water to ensure access to safe drinking water in case of emergencies. | 1. ~~Use green/natural infrastructure (e.g., natural capture, treatment and storage) to create resilience that can support insufficient water infrastructure.~~ 2. Acquire equipment capable of moving large quantities of water (tanker trucks) during emergencies. 3. Identify opportunities and access for shared water available for addressing emergency interconnections. 4. Support resiliency for tsunamis and earthquakes using water bladders, a water recycle system, installing earthquake valves in water tanks, and other solutions. | 1. Collaborate with emergency operations planners to identify highest priority water needs and develop alternative systems and plans. Where is redundancy needed? Where will infrastructure fail? What water sources are available and what has to be done so it can be used? 2. Address distribution system failures by installing earthquake valves in water tanks to retain water even if distribution system fails. 3. Use the latest technologies available when retrofitting, or replacing, water infrastructure. |
| Insufficient water infrastructure to address water shortages (e.g., peak summer visitation to the Mid-Coast region). |  | 1. Use green/natural infrastructure (e.g., using the natural environmental for the purposes of storing, or conveying water - natural capture, treatment and storage) to create resilience that can support insufficient water infrastructure to help prevent water shortages. | 1. Using the Water Management Economic Assessment Model (Oregon State University, Oregon Water Resources Department, and MCWPP are developing a Water Management Economic Assessment Model using existing water supply, pricing, and consumption data integrated with climate change projections to simulate the impact of future water shortages and illustrate tradeoffs among potential adaptation measures.), develop a suite of adaptation measures (e.g., storage investments, conservation rebate programs, and new pricing models) to address existing and predicted water shortages in the region. |

Move to Ecosystem Protection and Enhancement Table:

1. Natural storage: Develop well-planned built and natural storage capacity, replace/repair aging infrastructure, and revise existing structures for municipal and public water systems.

Flood attenuation

1. Increase water retention in channel upstream via re-meandering, addition of large wood and coarse sediment, reopening of side channels, replacing road culverts with bridges, removal of physical structures (dams), decreasing bank slopes, introducing beaver.
2. Increase water retention capacity in the floodplain upstream via installing new floodplains, riparian wetlands, and dry buffer strips.
3. Increase water retention capacity in upstream and adjacent uplands via upland wetlands, forest planting and revegetation, and green roofs/green areas and underground water storage areas (urban areas)

1. Resilient systems can absorb a high level of disturbances, has greater capacity to reorganize itself to adapt and evolve with disturbances while maintaining essential functions, and self-directs the path of adaptation toward a more desirable state (Adger et al. 2005, Folke 2006). [↑](#footnote-ref-1)
2. This is an urgent concern in the industry – positions remain open – no to few applicants. Aging workforce issues in this industry. [↑](#footnote-ref-2)
3. Clackamas and Linn Benton Community Colleges have certification programs. Oregon Coast Community College does not. [↑](#footnote-ref-3)