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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

| **T**able 1. States, objectives, and actions to address key water issues in the Mid-Coast region of Oregon. | | | |
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| **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    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 ~~Support~~ well water reporting. 2. Water suppliers (Municipal, special districts, and private suppliers)    1. Identify ~~current loan and grant~~ funding programs to support ~~regional~~ infrastructure that advances 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 that supports 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). Assess existing water rates and the potential for ~~these~~ tiered rate structures ~~rates~~ to support addressing aging infrastructure (special districts and municipalities. (Comment: Consider the multiple benefits of adequate rate structures, which helps conservation and paying for infrastructure. Realize that increasing water rates can be difficult for low-income people).       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 over time.    5. Recommend that any major infrastructure repair/replacement projects be included in and approved as part of a Lincoln County regional water supply system plan and funds secured through the overall plan funding. (Add shared resources to address repairs for smaller water providers).    6. Water system repair/replacement projects should be designed 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. | 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. Support local community college and other local/high school/community programs to provide technical skills for water technicians. 4. Provide outreach and education to smaller water providers and their boards re: resources available to support them. |
| Lack of identified additional and alternative sources of water. |  |  | 1. Utilize OSU Engineering and research on desalinization, using solar and/or wave energy to seek alternative water sources - conserving 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. |
| Insufficient redundancy, and water system connections.~~, and alternative sources of water~~. | Create redundancy, water system interconnections, and alternative sources of water to ensure access to safe drinking water in case of emergencies or shortages.  **Note: Separate emergencies from predictable shortages and alternative sources of water** | 1. Implement green infrastructure (natural and nature-based engineered systems that mimic natural processes) to reduce impacts from natural hazards, stabilize shorelines, attenuate waves, reduce flooding and erosion impacts, aid in the storage of freshwater supplies, improve water quality, and enhance habitat and biodiversity. 2. Acquire equipment capable of moving large quantities of water (tanker trucks) during emergencies and water shortages. 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, and 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 could 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. |
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Move:

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) *These (1,2,3 ,belong in the Session 4 table: Ecosystem Protection and enhancement.*

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)