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Legislative Water Development Commission

Subsurface Drip Irrigation and Salton Sea Tour



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Great Salt Lake
COMMISSIONER'S OFFICE



Utah Department of Natural Resources

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What is subsurface drip irrigation?

- High-efficiency irrigation system that uses buried drip tubes or drip tape to meet crop water needs
- Subsurface irrigation can save water and improves yields by eliminating surface water evaporation



Netafim

- Pressurized sub-surface irrigation system
- Israeli product developed in the 60s
- Long-standing technology
- Lots of research associated with Netafim



N-Drip - Subsurface Drip Irrigation

- N-Drip is a newer technology
- Gravity fed systems
- 3-5 inches below the surface
- Lower cost alternative



Key Takeaways

- Motivations of installing drip irrigation in Yuma were mainly based on power reduction and increase yield
- Pros and cons for each type of irrigation systems but both maximize yield and save diverted water



Salton Sea Tour



Source: California Natural Resources Agency



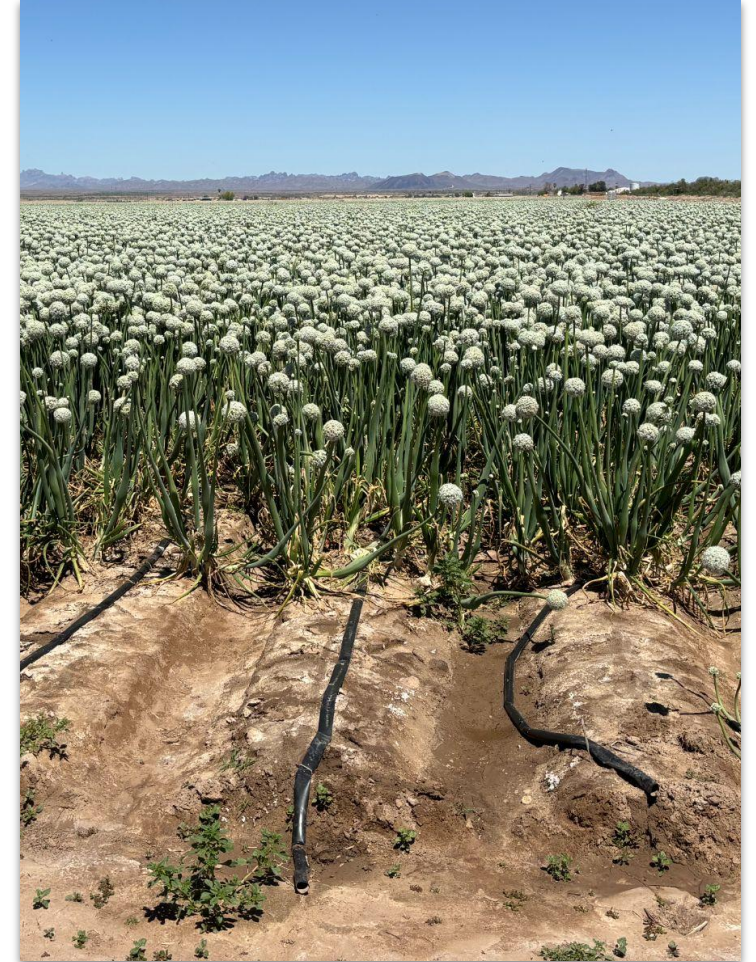
Why the Salton Sea?

- Salton Sea has been faced with decreasing elevation for decades
- Similar Challenges exist in another Western saline lake system
 - Habitat creation
 - Dust mitigation
 - Ecosystem decline- increased salinity
- Collaboration opportunity with Federal and California State Agencies
- All good ideas come from Utah! But we can learn from California.....sometimes.



Salton Sea what we learned.....

- The Salton Sea is a fraction of the size of the Great Salt Lake (35 miles long 15 miles wide)
- Water is diverted from upstream for agricultural purposes
- Most improvements have been to increase crop yield and not reduce water consumption
 - Utah's goal is to reduce water depletion while maintaining crop yields
- The main objective is dust mitigation not restoring water levels
 - Lake managers have spent ~\$500 million dollars on these projects



Key Takeaway

We cannot let the Great Salt Lake reach the same fate as the Salton Sea. Rather, we need to focus on conservation and other efficiencies to ensure water is reaching the lake.



text



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Key Takeaways

- Pros and cons for each type of irrigation systems but both maximize yield (up to 33% and save water (up to 70%)
- Salton Sea is a very different system and faces a range of different challenges
- Dust mitigation is incredibly expensive
- Most cost effective solution is to keep water in the lake
- Utah still has time to save Great Salt Lake at perhaps a fraction of the cost





Thank you.

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