WaterWise Solar: Deploying Floating Solar Technology to Conserve Water

Legislative Water Development Commission

January 9, 2026

Photo: 8.9 MW project located at the Canoe Brook Reservoir in Short Hills, New Jersey (NJ American Water)

Deploying Floating Solar Technology to Conserve Water

Who we are

Jim Andersen
Founder and Chief Developer - Water Wise Solar Solutions

- Extensive energy project development experience and relationships
- Special expertise in complex EPC / delivery
- Univ. Portland (MBA, Energy/ Environment focus); Arizona State University (B.Sc. Business)
- *jim@waterwisesolar.com*

Lee Addams
Founder, Open Trail Ventures, LLC; Head of Strategy and Growth, WaterWise Solar

- Advisory experience at Ernst & Young - Parthenon (Partner); McKinsey & Company
- Valmont Industries (NYSE:VMI) management team ; irrigation technology company CEO
- Stanford University (Ph.D Earth Sciences / Hydrology); Brigham Young University (B.Sc. Applied Physics)
- *addams@opentrailventures.com*

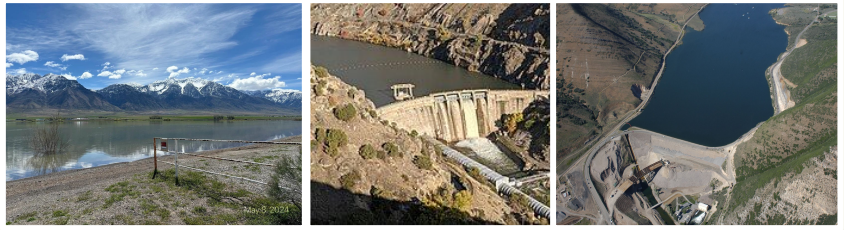
Our purpose today:

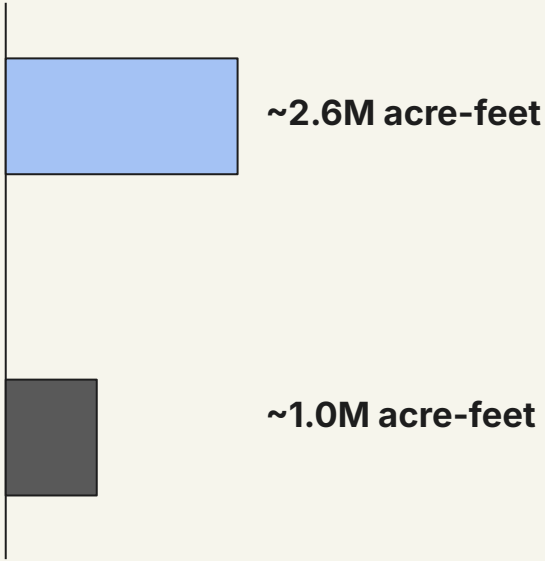
Overview the Floating Solar opportunity for Utah

Reality: Considerable amounts of evaporation occur from Utah's water bodies

Great Salt Lake

Other Utah storage reservoirs





(1) Utah Division of Water Resources, 2021 Utah Water Resources Plan, Chapter 3 – Water Supply, Utah Department of Natural Resources. Additional evaporation occurs on lakes and wetlands

The floating solar opportunity addresses multiple challenges in Utah

The need to **conserve water** for human and environmental needs

The need to **conserve land** for other economic and environmental purposes

The need for **more energy generation** and associated economic development

Floating solar is a proven technology (1 / 2): Domestic U.S.

Key characteristics

- **Uses standard solar panels**.
- **Runs more efficiently** than land-based.
- **Provides higher energy density.**
- **No land disturbance or leasing costs.**
- **Provides peak power, but best integrated with baseload generation.**(e.g, nuclear, geothermal)

Examples (US)

- **Healdsburg, CA 4.7 MW**
- **Gray water storage pond**

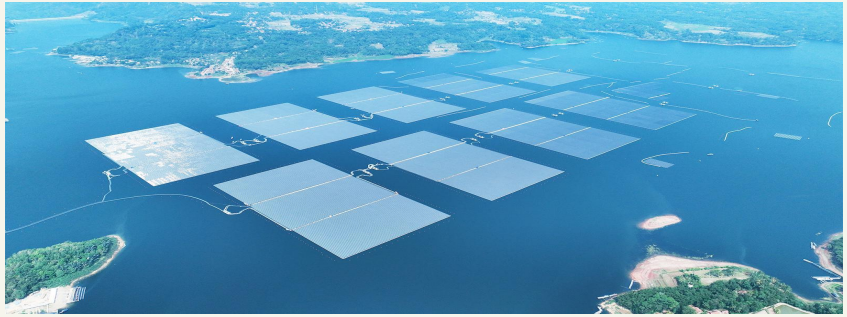
- **Windsor, CA 1.8 MW..**
- **“Recycled” water pond**

- **Park City, UT 0.6 MW**
- **Raw Water Storage Pond**

- **Sayreville, NJ, 4.4 MW**
- **Raw water storage pond**

Floating solar is a proven technology (2 / 2): International

Examples (International)



- West Java, Indonesia, 500 MW
- Linked with Cirata hydropower / reservoir

- Three Gorges New Energy, China (2017)
- 150 MW hydropower reservoir

- CECEP 70 MW, China (2019)
- Water Storage Reservoir

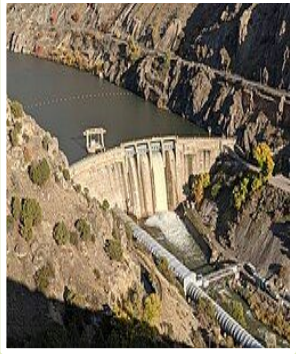
- Changhua County, Taiwan 440 MW
- Tidal flats-designed for tides, saline water and wind/wave action.

Floating solar projects can be developed at different scales

Public water and industrial projects

- High ROI
- Self-provision of power
- Ability for utilities / industrials to help conserve water

Hydropower - irrigation aligned projects



- Ability to enhance existing hydropower operations
- Proximity to transmission and substation infrastructure
- Improve economics for local irrigation companies
- **Largely under federal control**

Utah Lake / Great Salt Lake (for study)

- Large (1+ GW) projects are possible when sited correctly
- Ability to pair with large conventional baseload
- **Possible revenue source for other water conservation projects**

All applications have meaningful water conservation opportunities of 4-5 acre-feet / acre of area covered

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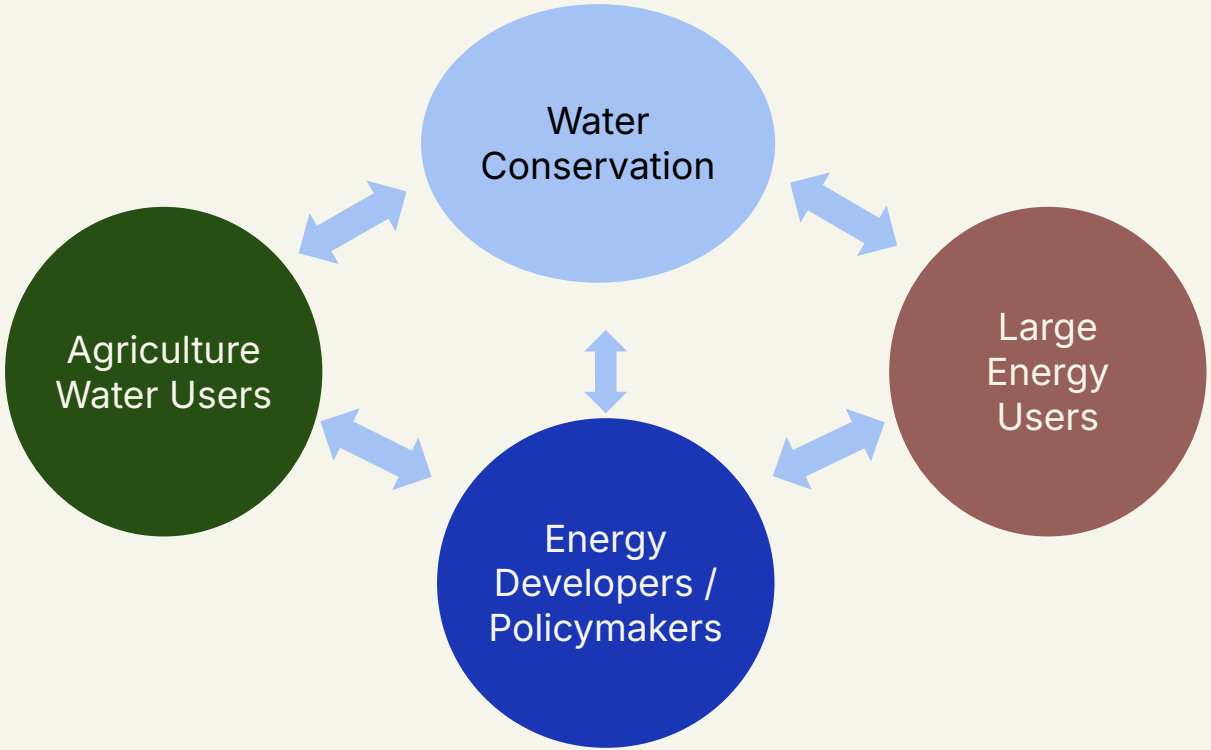
APPENDIX

Utah can be an innovator on floating solar deployment - and can build on the unique opportunity to build alignment across interests

Agricultural water users can be part of the sustainable solution to both energy and water issues by implementing floating solar on irrigation-oriented reservoirs



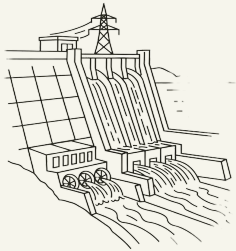
Through PPAs and direct development, large energy users (i.e. technology players, extractive industries) can be part of the sustainable solution to both energy and water issues

Energy / economic development advocates can contribute towards solving water issues and fund other water conservation efforts through floating solar

Floating solar has water conservation advantages, along with other co-benefits

1

Significantly reduced evaporation over water surface covered by floating solar (depending on elevation, evaporative losses can be **3-5 acre-feet / per acre**) (NREL, 2019)

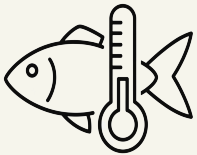


2

Provides increased flexibility for existing grid energy sources - provides operational flexibility for hydropower and pumped hydro facilities - minimizing downstream impact of releases

3

Reduces surface water temperature for healthy aquatic ecosystems - providing constraints on harmful algal blooms (HABs), and additional tools for managing fish habitat



4

Does not compete for other land use activities, compared to conventional solar. When sited near existing hydropower, floating solar also may require less transmission build

* Recreation amenities of water bodies need to be assessed for public good tradeoffs, optimal siting of arrays, or potential integration with new marine recreational infrastructure