



SPWS Operations and Maintenance for Technicians

Workshop Overview

This 5-day in-person workshop equips operations and maintenance (O&M) staff and technical professionals with the knowledge and practical skills needed to operate, maintain, and sustain Solar Powered Water Systems (SPWS) for long-term community benefit. Participants are introduced to SPWS design principles and layout to build a foundational understanding of how systems are designed and ongoing preventive O&M requirements. The workshop combines interactive sessions, scenario-based design exercises, 3D model building, a site visit to an existing SPWS, and hands-on troubleshooting case studies. Participants will develop and apply O&M practices using forms, checklists, and standard operating procedures associated with sustainable O&M program implementation. Participants leave with concrete goals and practical tools to strengthen SPWS O&M in their own contexts.

Target Audience

This workshop is designed for professionals responsible for the operations, maintenance, and monitoring of Solar Powered Water Systems, including:

- O&M technicians and field staff
- Water utility and service provider personnel
- WASH program staff overseeing SPWS maintenance
- Community water system operators and supervisors
- NGO and government staff supporting SPWS program implementation

Some familiarity with SPWS or water systems is helpful but not required.

Learning Outcomes

By the end of the workshop, participants will be able to:

- Explain the key components of a SPWS
- Explain how design decisions influence O&M requirements.
- Explain preventive O&M plans including daily, weekly, quarterly, and annual maintenance activities.
- Use standard operating procedures, forms, and checklists to inspect and maintain a SPWS.
- Evaluate an SPWS against design and O&M specifications.
- Troubleshoot common SPWS issues, identify probable causes, and recommend corrective actions.

- Address common O&M program implementation challenges within their organizational context.

Agenda Overview

Day #	Broad Topics
Day 1	Introduction to Solar Powered Water Systems Design
Day 2	Safety & Preventive Operations and Maintenance of SPWS
Day 3	SPWS Evaluation, Site Visit, Inspection and Practice with O&M Forms and Checklists
Day 4	Common Issues in Implementing O&M, Troubleshooting Issues
Day 5	Basic Water Quality Monitoring, Action Planning, Next Steps