Extreme Challenges
Establishing Remote Floating Comfort Stations on Inland Lakes

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Steps to Establish a Remote Comfort Station:

1. Establish Trusted and Sustainable Relationships with the Army Corps
2. Work with Corps to Establish Desired Locations
3. Establish a Formal Partnership Between the Corps and Grant Coordinator
4. Define the Scope of Work to be Performed for Station Maintenance
5. Develop a list of Potential Maintenance Contractors
6. Contractor Recruitment and Negotiation
7. Consideration of Onshore Effluent Aerobic Disposal
8. Adequate/Compliant System for Hauling from Shore to Offsite Facility
9. Produce Scope and Project Budget for both Installation and Maintenance
10. Contractor Installation of Remote
11. Rewards
Components and Material List for Remote Comfort Stations

10’ X 20’ floating dock:
Framework anodized aluminum - extra heavy corners for stress points
20” HDPE high quality-controlled encapsulated floats for easier boarding
Decking-composite/ weatherproof

Fiberglass Housing
Walls, ceiling, floor (with trapped drain to holding tank)
500 gallon heavy duty fiberglass molded to fiberglass housing
Doors of molded fiberglass and quality improved handles
Louvered ventilation top of wall
Portal windows
Solar independently operated beacon for night visibility
Components and Material List for Remote Comfort Stations

Anodized aluminum welded frames for solar panels (4) cover entire roof angle
Weatherproof wiring in custom fiberglass secured between the two housings
Solar panels/Charge Controller to 12 volt battery (Sealed Lead Acid)
To Inverter to 110 volt to aerator to 24 inch diffuser in solution at 50% depth
Never less than 50%/250 gallons at all times
Nolan Labs Bacterial 2# blocks
Capful of fabric softener to minimize foaming action which is critical.
110 volt exhaust fan on PVC tank vent piping at top of housing
With 45 degree PVC bend to minimize rainwater entering the holding tank
Straws at 50% depth for controlled pumping and 100% length(locked out)
unless evacuating the holding tank
Maintenance inside the housings should be with bristled brush on long handle
and use water for cleaning with no chlorine or ammonia based products,
which would endanger the aerobic culture in the holding tank.

AND
We have put a timer on the aeration pump/runs during daylight hours and off
at dark  to preserve the battery life.

AND
Remotes are out 24/7/365 days-once anchored they are not moved away.
Remotes are user friendly since we went aerobic, even if the aerator stops
pumping air, the power vent will hold user-friendly until maintenance is made.

AND
Since we have established aerobic remotes, my contractor is pumping half as
much and hauling to disposal---that means money saved.
Every 61 miles for the pump-out round trip on Greer’s Ferry Lake is $100/ fuel.

AND
50% less to haul ashore to aerobic disposal
Contractor Recruitment and Negotiating Service and Maintenance

- Service/maintenance averages $25,000 per remote per year.

- Don’t reinvent the wheel. Use existing service contractors to install Remotes in other locations.
Our Primary / secondary anchoring diagram that performs for all three lake levels (flood level / normal pool / historical low)
Anchoring the Remote

Water depth---Depth at Normal Pool
Depth at Flood Level
(Top of Flood Gate)
Depth at Historical Low

Determines: Length of Stainless Steel Cable to 2000-lb primary anchor

Length of Stainless Steel Cable to 500-lb secondary anchor
Anchoring the Remote

Here are our 2,000-lb concrete anchors and the 500-lb half-barrel anchors that we construct.

5/8" wire rope cable---8 stainless steel wire rope clamps
4 stainless steel thimbles, stainless washers, locknuts

Above Lake Level
8' 3/8" galvanized chain cut to 2' sections
8 bolts with double washers and locknuts
4 galvanized stimbles
8 galvanized u-bolts

Under Water
Greer's Ferry Lake E. coli Beach Samples

- 2016: 51 safe/4 unsafe = 7.2% unsafe
- 2017: 41 safe/3 unsafe = 6.8% unsafe
- 2018: 47 safe/0 unsafe = 0% unsafe
- 2019: 38 safe/0 unsafe = 0% unsafe

Overall result is: IMPROVED WATER QUALITY FOR BOTH RECREATION AND RAW WATER SOURCE
Are You Next?
Expect the Unexpected Wear Your Life Jacket
Questions