California
WATER COMMISSION

Water Storage Investment Program Concept Paper Form

Please complete the questions below and return your completed concept paper by email to cwc@water.ca.gov by 5:00 p.m. on March 31, 2016. Completed concept papers should not exceed four pages.

Contact Information

Contact Name: Steve Bowhay	
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Agency/Organization Name: River Recycler Systems, LLC	
Agency Type (select one):	☐ Public Agency ☐ Nonprofit Organization ☐ Public Utility ☐ Tribe ☐ Mutual Water Company ☐ Local Joint Powers Authority x Other:

Project Information

Project Name: Ocean Chilled Freshwater to Shasta	
Project Type:	x CALFED Surface Storage x Groundwater Storage ☐ Groundwater Contamination Prevention or Remediation ☐ Conjunctive Use☐ Reservoir Reoperation ☐ Local Surface Storage☐ Regional Surface Storage X Other: Off Shore Freshwater Reservoir with waterline to LK. Shasta
Estimated Project Cost: $2.3 Billion	
Estimated WSIP Funding Request:1.7	

Please describe your project, including location, water source, facilities, and operations:

This project would recycle storm water from the EEL River utilizing an patented Off Shore Freshwater Reservoir to clean the water. This system is designed to replace some Dams on rivers, as the off shore reservoir would be disposed a distance from the mouth of a river. The reservoir includes a flotation portion in a salt sea that supports a downwardly extending tubular skirt which defines a barrier between the freshwater on the inside and the saltwater on the outside. This system includes a method of salvaging freshwater after it has finished its duties as a river and has left the mouth of the river, but before it mixes with and becomes saltwater. It is a portable system that is designed to capture storm water from in the Ocean and pump it to the Reservoir where it can be cleaned and stored until it is needed.

Our next NEW innovation is the patent pending PUMPING SYSTEM FOR TRANSPORTING FRESHWATER IN A SALTWATER ENVIRONMENT. This system is designed to move trillions of gallons of freshwater over vast distances under the sea.

Anyone who has ever pushed an inflated ball under the water and then let it go has witnessed the same forces of nature that make our system work, GRAVITY and FLOTATION. Our pumping system uses a ridged pipe to insert freshwater into a collapsible type pipe (similar to a fire hose). The ridged pipe holds back the weight of the ocean so GRAVITY can pull the freshwater down to a desired depth, and when it switches to a collapsible pipe the weight of the ocean takes over squeezing the freshwater towards the surface through the pipeline.

This system is most efficient where the ocean is deep and the distance between points are great. If the ocean is 3 miles deep, the maximum distance between injection stations is 300 miles. The longer the distance between points the more energy is generated by the moving freshwater at the exit end where that energy can be converted to electricity. This lowers the cost of the freshwater to a point where it can be used for recharging aquifers and available for agriculture.

With this system there is no digging or filling, and the freshwater has already finished its duties as a river so there is nothing to over harvest.

The System uses wave power to compress air that is then injected into the Freshwater which makes it even more buoyant. This can move the freshwater through the pipeline faster or lift the freshwater to reservoirs on land at higher elevations.

In this case that would be high enough to push the water up and over the Coastal mountains to Lake Shasta.

The goal is to reach the lake with ocean chilled forty degree freshwater this should be chilly enough to save the salmon.

Per Water Code section 79753, the Commission may only fund the public benefits of water storage projects. Further, ecosystem improvements must make up 50% of the funded public benefits (Water Code section 79756(b)). What public benefits does your project provide? (select all that apply):

X Ecosystem Improvements x Water Quality Improvements ☐ Flood Control
x Emergency Response x Recreation

Please describe the magnitude of the public benefits and how the project will be operated to provide the public benefits: This project use green renewable energy to deliver life saving chilled freshwater to endanger salmon on its way to recharging aquifers that could slow sea level rise.

Water Code section 79752 requires that funded projects provide measurable improvements to the Delta ecosystem or to the tributaries of the Delta. Please describe how your project provides ecosystem improvements in the Delta or tributaries to the Delta:

This is new water for a seriously over used water source that can replace millions of acre feet of freshwater and is the only proposed project that could replace the idea of the Delta tunnels. That is quite a measurable improvement.

Water Code sections 79755 and 79757 require the Commission to make a finding that a project will advance the long-term objectives of restoring ecological health and improving water management for beneficial uses in the Delta prior to allocating funding for a project. Please describe how your project could help advance the long-term objectives of restoring ecological health and improving water management for beneficial uses in the Delta:

This project would supply enough freshwater that it could actually be managed.

Please describe any other benefits provided by your project, such as water supply reliability benefits, and the potential beneficiaries: This project can supply Trillions of gallons of freshwater at fraction of the cost of desalination and not just benefit the Californians that use it, all Americans will benefit from the agriculture that this project will save. The world will benefit from the climate change impact reductions this will provide.