

### 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](mailto:cwc@water.ca.gov) by 5:00 p.m. on March 31, 2016. Completed concept papers should not exceed four pages.

#### Contact Information

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<b>Agency/Organization Name:</b> River Recycler Systems
<b>Agency. Type (select one):</b> <input type="checkbox"/> Public Agency <input type="checkbox"/> Nonprofit Organization <input type="checkbox"/> Public Utility <input type="checkbox"/> Tribe <input type="checkbox"/> Mutual Water Company <input type="checkbox"/> Local Joint Powers Authority xx Other:

#### Project Information

<b>Project Name:</b> Thomas Didymus Waterline
<b>Project Type:</b> <input type="checkbox"/> CALFED Surface Storage X Groundwater Storage <input type="checkbox"/> Groundwater Contamination Prevention or Remediation <input type="checkbox"/> Conjunctive Use <input type="checkbox"/> Reservoir Reoperation <input type="checkbox"/> Local Surface Storage <input type="checkbox"/> Regional Surface Storage X Other: Off Shore Freshwater Reservoir
<b>Estimated Project Cost:</b> 12 Billion
<b>Estimated WSIP Funding Request:</b> 2 Billion
<b>Please describe your project, including location, water source, facilities, and operations:</b> This project collects freshwater in Southeast Alaska using our patented OFF SHORE FRESHWATER RESERVOIR. Recent studies released by NOAA claim there is too much freshwater entering the Ocean in some places in Southeast it is changing the salinity of the Ocean. This is the source of freshwater we are targeting for collecting. The collected freshwater will be transported to California through our Patent pending waterline system. Anyone who has ever pushed an inflated ball under the water and then let it go, has witnessed the same laws of physics that make our whole system work; Gravity and Floatation.  The waterline uses a solid pipe as an injection tube that utilizes gravity to raise the head pressure inside the solid pipe that is extending under the Ocean when the head pressure is high enough the solid pipe is attached to a flexible pipeline that extends on down to the Sea Floor. On the bottom a large submersible reef supports a solid steel elbow with a 95 degree bend. This is also an anchor that helps hold the injection station in place on the surface.  The flexible waterline coming down from above is attached to the top of the elbow so the freshwater coming down the waterline enters the solid steel elbow and it is redirected around the corner and slightly back towards the surface. Right at that point it changes back to a flexible waterline and the floatation factor takes over and because freshwater is lighter than saltwater it floats back toward the surface. By going down 3 miles the water line can move water 300 miles between injection stations. So with 3 injection stations between South East Alaska and Monterrey Bay we could supply 12 Trillion gallons of NEW FRESHWATER to the San Luis Reservoir. If the Freshwater goes through the

Moss Landing area the waterline system could follow the abandoned railway all the way through the pass. Once there seems there was a canal or ditch running all the way across the valley to the base of the hills. From there the water would be pumped up to the San Luis Reservoir using power generated from the pipe line.

Because this system injects compressed air into the waterline at the elbow to make the water even have more flotation, the system is capable of generating electricity at each injection station from the lift of the rising water.

Once the freshwater is in San Luis Reservoir it would be sent to various locations for recharge or even actual injection to refill the aquifers as quickly as possible. Recent NASA studies revealed that nature will never replace the ground water that has been pumped out. But they also just released a study that claims if we refill aquifers we may slow or even stop Ocean level rise from climate change.

This system can deliver freshwater at a projected cost of 350 to 500 per acre foot with no Carbon footprint with a waterline that is submerged but floating so it has very little impact. There is nothing to over harvest and it combats the effects of Climate Change.

The only real answer for California has to include new freshwater, this is the only system that is capable of delivering the amount of water it will take to stop the subsidence and keep the Central Valley the agriculture capital of the Country.

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 project will make the tunnels obsolete, even if subsidence hasn't already proved the task is not feasible. It has the capabilities to supply NEW freshwater right to the pump inlets in the Delta ending the competition between people and fish for the last drop of freshwater. This project uses Gravity and Flotation to move freshwater, the way it works the more water that is moved the more energy the system can produce. So for every gallon of water this system provides is one more gallon the Delta gets to keep.

It is conceivable that this system can supply all of the freshwater that is currently exported out of the Delta System.

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 is actually the only one that brings new water into the discussion of sustainability. Everyone knows this drought is the "NEW NORMAL" and nature is not going to recover on its own. So any more trying to divide up what little water California has left is never going to restore the Delta.

Please describe any other benefits provided by your project, such as water supply reliability benefits, and the potential beneficiaries:

This water storage idea is to refill the depleted Californian aquifers, as the recent NASA study revealed; if you pump out the freshwater it can be replaced with saltwater. This can be a real problem by the coast as Santa Cruz is well aware. It is imperative that we begin refilling them instantly as millions of cubic feet of storage space is being lost forever costing Billions in damage with subsidence and saltwater intrusion.

Because the waterline is submerged but floating, suspended in the water column the size of the waterline is not important as it is supported by the Ocean. So the bigger it is the more water it can hold, this project uses a 100 foot diameter waterline holding about 300 billion gallons and capable of delivering 700,000 gallons per second. All Californians will be beneficiaries of this project but it will be felt around the world.