

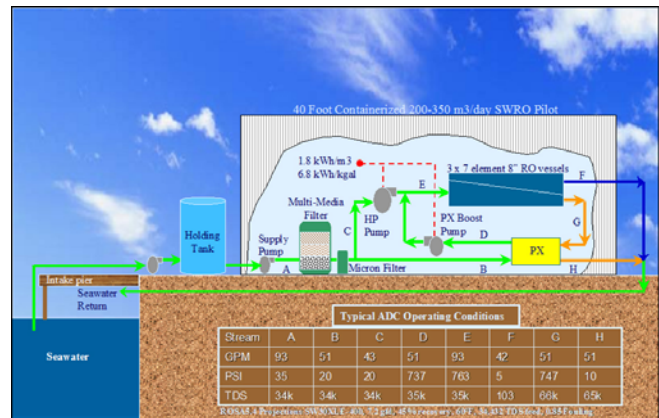
**The Affordable Desalination Collaboration (ADC) Awards pilot plant to top RO manufacturer.** *San Leandro, California, February 8<sup>th</sup>.* The ADC selected Harn R/O Systems, Inc. to manufacture the 190-350 m<sup>3</sup>/day (58,000-92,000 gpd) SWRO containerized pilot plant. The pilot plant, worth approximately \$350,000 will take 12 weeks to produce. The plant will be a combination of state of the art SWRO technologies and designs, producing drinking water from seawater at record low energy levels. In October-04 the ADC sent out a 25-page request for quotation that included system specifications, P&ID diagrams and bills of materials to six leading RO system manufacturers. Harn responded with the most complete and competitive proposal and followed up by working hard to optimize the design and in some cases provided higher quality components than were originally specified. Tom Seacord of Carollo Engineers and an ADC Project Leader said, "Harn's performance and desire to provide a show piece plant for this project were refreshing. It makes our decision easy when they provide the most responsive bid for the best price."

ADC team members combined their expertise and resources to develop a plant design that is optimized for efficiency while simultaneously building a platform to collect critical data. The plant will utilize some significant advances that have occurred in the pumping and membrane technologies of SWRO systems over the past 3 to 5 years. Some examples of these advances include:

- Energy Recovery, Inc. Pressure Exchanger™ yields 60% power savings
- David Brown Union Pumps running in 35 mgd desalination plants at over 88% efficiency
- New FILMTEC™ low energy seawater membranes

These technologies represent the **Core RO Technologies** for the ADC. The Project will combine and optimize these best available technologies to create a system that will produce fresh water from seawater at an overall energy consumption rate between 1.5-2.0 kWh/m<sup>3</sup> (5.7-7.6 kWh/kgal). All of the equipment and components will be commercially available and scaleable technologies as well as standard plant designs that can be directly and economically scaled up to the municipal level. The plant will be able to vary recovery, pressure and product flow independently in search of the "optimum

energy point". The overall layout of the plant was also considered and compartmentalized to accommodate visitors inside the container with comfortable ambient noise levels.



ADC Pilot Design and Installation

The plant will use state of the art web based monitoring software from WaterEye to monitor the equipment 24/7 and send the data to a live web page. Energy consumption, product quality, production rate and other parameters will be displayed in real time and compared to other traditional sources of fresh water from Southern California and around the world.

The ADC is a non-profit organization comprised of the following group of leading companies and agencies within the water industry that are combining their efforts and sharing their expertise in a mission to help make seawater desalination affordable.

- California Department of Water Resources
- California Energy Commission
- Carollo Engineers
- David Brown Union Pump Comp. - subsidiary of Textron
- Energy Recovery, Inc.
- FilmTec Corporation
- Marin Municipal Water District
- Municipal Water District of Orange County
- Office of Naval Research
- Pentair Water Treatment-CodeLine Division
- Piedmont Pacific Corporation
- Poseidon Resources
- Rolled Alloys
- U.S. Bureau of Reclamation
- U.S. Desalination Coalition
- WaterEye
- West Basin Municipal Water District

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