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Experiment's Water Purity Tests Out : Hyacinths Plus Treatment Kill Up to 99% of Viruses at Plant

July 12, 1989 | GREG JOHNSON | Times Staff Writer

Initial results of a study suggest that recycled waste water produced by the city of San Diego's unique experimental waste-water treatment plant in Mission Valley contains the same low level of microorganisms as untreated drinking water stored in nearby reservoirs.

Scientists from the Berkeley-based Western Consortium for Public Health have determined that the first two treatment steps at the plant, which uses water hyacinths to eliminate pollutants, removes 90% to 99% of viruses from waste water, or as much as standard biological treatment methods.

Remaining microorganisms are removed by additional--but more traditional--treatment steps, according to the report that was released Tuesday in Austin, Tex., during the American Society of Civil Engineers' annual Environmental Engineering Meeting.

Water Quality Important

The quality of reclaimed waste water is of growing importance in San Diego because of a recent City Council proposal that calls for the use of 120-million gallons daily of reclaimed waste water for irrigation.

That proposal calls for the city to build six water reclamation plants to provide treated water for use in areas such as Otay Mesa, the Interstate 15 corridor and North City. However, those proposed treatment plants would use proven treatment methods rather than the experimental methods being used at the Mission Valley plant.

Although the initial findings are promising, scientists associated with the program cautioned that the study is far from complete.

"There are about six different phases of this study, and only one part of the microbiology (section) has been completed," according to Richard Danielson, a microbiologist with the consortium.

The consortium's scientific staff will continue to monitor the plant's ability to eliminate chemical pollutants and toxic wastes including metals, organic solvents and pesticides. The consortium will also monitor the reliability of the Mission Valley plant as well as the probable reliability of a much larger water reclamation plant that has been proposed in the San Pasquale Valley.

When research is completed in 1990, scientists will spend a year preparing a final report for the city. The city would use the final report to determine if the expected benefits of recycling waste water into potable water outweigh the risks.

Danielson said the $2.5-million study wasn't designed to determine if San Diego should be turning waste water into drinking water. "We're strictly involved in a data-collection and analysis kind of thing," Danielson said. "We're here to provide . . . technical information." Whether San Diego uses the plant for potable water or not is up to it, Danielson said.

The Mission Valley plant provides secondary treatment for 300,000 gallons of waste water a day. About 50,000 gallons receive advanced water treatment and are used to irrigate state-owned lands bordering nearby highways.

The proposed aquaculture plant in the San Pasquale Valley would treat about a million gallons of waste water a day. Half of that water would receive advanced treatment. The treated water would be used by industry to irrigate land or would be reinjected into natural aquifers underneath the Earth's surface, according to Ken Thompson, the city's project manager for aquaculture facilities.

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