I. Respondent:

Dan Tafolla, Environmental Services Director

II. Presenters:

Dan Tafolla, Environmental Services Director
Dan Ferguson, Operations Supervisor

II. Treatment Plant Characteristics:

- Wastewater Treatment Plant
- ~110,000 customers served
- ~82 employees

III. Innovation:

A. Description

Our lime stabilized biosolids treatment and beneficial use program is a unique program that treats sludge produced in the wastewater treatment with lime to reduce pathogens to safe levels for use as a soil amendment and source of nutrients at a District owned farm. We have been land applying our nutrient rich, lime-stabilized biosolids on Tubbs Island in Sonoma County since 1978; this program has improved the soil condition, making for more favorable growth conditions and the production of higher cash crops. The amount received from crop production offsets hauling costs and the District has saved millions of dollars by avoiding landfill tipping fees. This project represents an environmentally sound use of valuable nutrients that would otherwise be disposed of in a sanitary landfill.

B. Type of Innovations
C. Motivation for Innovations

Our original treatment process used quick lime to remove solids in the primary treatment process which resulted in the generation of lime sludge. Eventually the process utilized waste lime solution from acetylene production - a true synergy of waste product utilization and environmentally-sound practices. The District purchased land to allow the long term utilization of our nutrient rich biosolids and the rest is history.

D. Barriers/Challenges

Obtaining the proper permits and approval from Sonoma County was the first hurdle. The program required the county to change their General Plan, allowing an out of County agency to land apply biosolids. Another challenge was ensuring that lime stabilized biosolids were covered under the EPA 503 Regulations for land application of biosolids.

E. Benefits

The District has been utilizing biosolids on our site since 1978; since that time, we have saved the ratepayers millions of dollars in landfill costs. We also receive about 10 percent of the crop sales each year; earnings from crop sales offset hauling costs, representing additional savings for ratepayers.

F. Lessons Learned
Pilot testing for the current dewatering system evaluated several methods for lime stabilizing of our biosolids; we tested several technologies that mix solid lime with raw sludge but none worked as well as utilizing a liquid lime solution.

IV. Drought Response

As a result of the current drought the District is in the process of making reclaimed wastewater a reality. Thus far, we have completed a reclaimed water study to identify potential users and a suitable treatment process, and we have applied for grant funding to be able to turn the study into a project. We are also utilizing water from drink water system flushing to clean our sanitary sewer lines: we are using water that would otherwise be discharged directly to the Bay.

V. Information Sharing

- We would be willing to host an on-site tour (45 minutes to an hour) that would include a demonstration or discussion of your innovation.

- We would be willing for a staff member from another water/wastewater utility to conduct a follow-up visit to our utility to learn more about our innovation.