



Agenda Date: 4/4/2006
Agenda Placement: 9C

NAPA COUNTY BOARD OF SUPERVISORS Board Agenda Letter

TO: Board of Supervisors
FROM: Ed Weber for Nancy Watt - County Executive Officer
UC Cooperative Extension
REPORT BY: Ed Weber, County Director / Viticulture Farm Advisor, 253-4221
SUBJECT: Presentation of new recycled water quality study

RECOMMENDATION

University of California Cooperative Extension Director to make a presentation of a new report: "Suitability Study of Napa Sanitation District Recycled Water for Vineyard Irrigation".

EXECUTIVE SUMMARY

Napa Sanitation District (NSD) provided a grant to UC Cooperative Extension in 2005 to evaluate the suitability of NSD recycled water for use in vineyard irrigation. UC Cooperative Extension was selected due to their expertise and reputation as a source of unbiased information.

The study evaluated samples of recycled water collected weekly in 2005 for water quality parameters important for vineyard irrigation. Significant findings included:

- | The salinity (saltiness) of the recycled water is not expected to create problems with long-term use in vineyards.
- | Concentrations of potentially harmful ions (sodium, chloride and boron) were not at levels that would indicate potential problems.
- | Trace elements and heavy metal concentrations were below thresholds for levels of concern in irrigation waters.
- | At typical irrigation rates, the NSD water will deliver 14-21 pounds of nitrogen per acre. This could be a concern to some growers who do not normally apply nitrogen to their vines. Potential mitigation measures are discussed in the background section of this staff report and in the recycled water report.

The study concludes that NSD recycled water is suitable for vineyard irrigation. There were no salinity or toxicity issues that would limit the use of this water for vineyard irrigation. Some growers may choose to adopt mitigation measures for the nitrogen delivered with this water, while others will see the nitrogen as an added benefit.

FISCAL IMPACT

Is there a Fiscal Impact? No

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND AND DISCUSSION

The Napa Sanitation District (NSD) is looking to expand the use of recycled water in Napa County and has developed a Recycled Water Strategic Plan to explore options to maximize water recycling. Included in their plan is expanded use of recycled water for vineyard irrigation, in particular in Carneros and the Milliken-Sarco-Tulocay (MST) region east of the City of Napa.

In order to provide information to potential users of their recycled water, NSD provided a grant to UC Cooperative Extension in 2005 to evaluate the suitability of NSD recycled water for use in vineyard irrigation. UC Cooperative Extension was selected due to their expertise and reputation as a source of unbiased information.

Samples of NSD recycled water were collected on a weekly basis from May 1 through October 31, 2005. Testing of important water parameters was performed at Caltest Analytical Laboratory in Napa. Additionally, water samples were collected three times during this time period from existing water sources at ten sites throughout Carneros and the MST regions. Analyses of these waters provide a comparison to the NSD water. In addition, soil samples were collected from a vineyard that has been irrigated solely with NSD recycled water for eight years. These were evaluated for salinity and other factors important in irrigation waters.

The final report was completed in March 2006. The study indicates that NSD recycled water is suitable for vineyard irrigation. The salinity and concentration of specific ions (sodium, chloride and boron) were not at levels that would indicate potential problems. The evaluation of soil samples corroborated that buildup of salts was not a problem.

The level of nitrogen in the water is a possible concern to some grape growers. At typical irrigation rates, the exclusive use of NSD recycled water would deliver approximately 14-21 pounds of nitrogen per acre per season. This amount of nitrogen is not exceptionally high, but it may be enough to be of concern to some growers and winemakers, especially on sites that are already fairly vigorous. High vigor grapevines are not desired for premium wine production. Potential mitigation measures for growers concerned about nitrogen in the NSD recycled water include selective use of cover crops and having an additional source of water available for irrigation.

The study concludes that NSD recycled water is suitable for vineyard irrigation. There were no salinity or toxicity issues that would limit the use of this water for vineyard irrigation. Some growers may choose to adopt mitigation measures for the nitrogen delivered with this water, while others will see the nitrogen as an added benefit.

SUPPORTING DOCUMENTS

A . Recycled water report

CEO Recommendation: Approve

Reviewed By: Andrew Carey