



A Tradition of Stewardship
A Commitment to Service

Agenda Date: 3/19/2019

Agenda Placement: 10B

NAPA COUNTY BOARD OF SUPERVISORS

Board Agenda Letter

TO: Board of Supervisors

FROM: Steven Lederer - Director of Public Works
Public Works

REPORT BY: Phillip Miller, Dep Dir PW-Flood Control & Water Resources - 707-259-8620

SUBJECT: Presentation and Acceptance of the Hennessey and Milliken Watersheds Study

RECOMMENDATION

Director of Public Works recommends the following:

1. Acceptance of the Hennessey and Milliken Watersheds Study conducted jointly by the City of Napa and the County; and
2. Direction to develop an agreement with the City of Napa to implement the Sampling and Analysis Plan recommended in the Study.

EXECUTIVE SUMMARY

The City and County have a shared interest in how changes in the Hennessey and Milliken watersheds might impact the related lake and reservoir. The City owns the two water bodies, and the watersheds are located in the unincorporated area of the County. A study of the watersheds has been completed that was cost shared equally.

On June 26, 2017 a Request for Qualifications/Proposals was published for the Hennessey and Milliken Watersheds Study (Study). On July 28, 2017 proposals were received from four firms. A review committee consisting of staff members representing the City of Napa Water Department and County Planning, Building and Environmental Services and County Public Works was formed to review the proposals. The committee unanimously recommended award of a contract to Systech Water Resources, Inc. On September 26, 2017 the Board awarded the contract to them.

The work is now complete and staff will provide a presentation on the Study results and request direction regarding next steps to implement the sampling and analysis plan recommended in the Study.

The Napa County Strategic Plan Item 12F under Vibrant and Sustainable Environment states "Propose to Cities

and Town to coordinate and develop a regional approach to municipal watershed studies and monitoring." Cooperating on evaluation the Lake Hennessey and the Milliken Reservoir watersheds advances this goal.

PROCEDURAL REQUIREMENTS

1. Staff reports.
2. Public comments.
3. Motion, second, discussion and vote on the item.

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 City and County have a shared interest in how changes in the Hennessey and Milliken watersheds might impact the related lake and reservoir. The City owns the two water bodies, and the watersheds are located in the unincorporated area of the County. Whereas some jurisdictions own all or a majority of the land making up the watershed above their water supplies, the City of Napa does not, leading to the need for the City, County, and private property owners to cooperate in order to protect the City's water supply.

On June 20, 2017 the County and City both approved a Memorandum of Understanding (MOU) regarding a study of the watersheds that would be cost shared equally. The County took the lead in preparing the Request for Qualifications/Request for Proposals in coordination with the City. On June 26, 2017 a Request for Qualifications/Proposals was published for the Hennessey and Milliken Watersheds Study. On July 28, 2017 proposals were received from four firms. A review committee consisting of three staff members representing the City of Napa Water Department and County Planning, Building and Environmental Services and County Public Works was formed to review the proposals. The committee unanimously recommended award of a contract to Systech Water Resources, Inc.

On September 26, 2017 the Board approved a professional services agreement with Systech to develop a calibrated watershed model simulating hydrology and water quality, develop a water quality monitoring plan, and provide a tool which the City and County can use for watershed management on an ongoing basis. The model combines the physical characteristics of the watershed (topography, land use, soils, vegetation, stream locations etc.) with historical weather data (rainfall, wind etc.), known hydrology (stream flow and depth, lake elevations, diversions etc.) and available water quality data (total dissolved solids, pesticides, nitrogen, etc.) collected over time at various sampling points in the watersheds. The model was calibrated by comparing model simulations with known past events to verify accuracy. If the model accurately represents known events, presumably it can be relied upon to predict future events.

It should be noted that the model was developed based on existing and historical data. No new watercourse

mapping, water quantity, or water quality information was developed as a result of the study. The scope of the approved study was limited to developing the model and developing a water quality monitoring plan to support use of the model. The model will provide valuable long-term insights into watershed behavior, but it is not designed to address more immediate policy concerns.

Once sufficient data is available, the model will be able to predict flows into the reservoirs from the various creeks and water quality parameters for those flows. Example parameters include turbidity, total dissolved solids, suspended solids, temperature etc. These results can then be interpreted on their own or incorporated into separate models of the lakes themselves to predict lake behavior. The model can be used to evaluate various future scenarios by changing the initial parameters. If, for example, a new development is proposed in the watershed, the new land use characteristics (topography and vegetation) could be added to the model and the results compared to the no-project analysis. Another example would be to change the weather data to reflect various climate scenarios to estimate the impacts of climate change. However, the scope of the current effort does not include evaluation of alternative scenarios, just model calibration. Recommendations for further monitoring, in the form of a Sampling and Analysis Plan, is also included in the final study report (documents attached).

If the Board sees value in evaluating alternative scenarios for policy consideration, staff recommends continuing to develop the relationship with the City beyond this scope of work and in support of a broader effort to jointly implement the sampling and analysis plan recommended in the Hennessey and Milliken Watershed Study. That broader effort is not currently funded. Staff will return with a scope and cost estimate for the sampling and analysis plan after discussion with the City if the Board so directs.

SUPPORTING DOCUMENTS

- A . Hennessey and Milliken Watershed Study
- B . Sampling and Anaysis Plan

CEO Recommendation: Approve

Reviewed By: Leigh Sharp