Resolution authorizing the Interim Director of Public Works to execute a contract with Nolte and Associates for the Lake Don Pedro Sewer Zone facility needs assessment, after review and approval by County Counsel for form and legal sufficiency.

Nolte and Associates was determined to be the most qualified of five firms to perform the needs assessment for an upgrade of the Lake Don Pedro Sewer Zone wastewater collection and treatment facilities.

The attached Summary Description of the Problem and Preliminary Scope of Services describes the overall needs with the basic needs to re-evaluate the entire system and provide both short- and long-range solutions with cost estimates. This study will provide the basis for final engineering design and funding applications to permanently upgrade the system.

BACKGROUND AND HISTORY OF BOARD ACTIONS:

In July, 1992, the Board of Supervisors was informed of Public Works' intention to interview and select a qualified engineering firm and negotiate a contract.

This study is necessary due to several deficiencies at the wastewater treatment plant that required a number of actions to be taken per notification in March, 1992, by the State Regional Water Quality Control Board. In May, 1992, Public Works responded to the State Regional Water Quality Control Board with a letter summarizing action that had been taken up to that time and a plan to correct other deficiencies. Since that time, additional corrective and emergency measures have been taken at considerable County expense. The system is now stable and no further emergency expenditures are anticipated.

The Board recently approved a similar action authorizing the Public Works Director to execute a contract for professional services for the "Plan of Services" associated with the Coulterville Special District reorganization study. Interviews for this study were conducted concurrently with those for the Don Pedro study. Nolte and Associates was selected for both studies, partly to take advantage of cost efficiencies.

LIST ALTERNATIVES AND CONSEQUENCES OF NEGATIVE ACTION:

Do not approve this action. The study will be delayed causing possible fines or other negative action by the State. A delay could also cause possible funding sources to be exhausted and may hinder a timely turnover of the facility to the Lake Don Pedro Community Services District.
COSTS:  
A. Budgeted current FY $0
B. Total anticipated costs $10,000
C. Required additional funding $10,000
D. Internal transfers $

SOURCE:  
A. Unanticipated revenues $
B. Reserve for contingencies $
C. Source description: Don Pedro Townhouse Project
Balance in Reserve Contingencies, if approved: $

* This is to be paid out of the $50,000 exaction from the townhouse project and is consistent with the identified use of these monies.

CLERK'S USE ONLY
Res. No.: 93-149  Ord. No. 
Vote - Ayes:  
Noes:  
Absent:  
Abstained:  
Approved  
Denied  
Minute Order Attached  
No Action Necessary

The foregoing instrument is a correct copy of the original on file in this office.

ATTEST: MARGIE WILLIAMS, Clerk of the Board
County of Mariposa, State of California
By: Deputy

ADMINISTRATIVE OFFICER'S RECOMMENDATION:
This item on agenda as:

Recommended
Not Recommended
For Policy Determination
Submitted with Comment
Returned for Further Action

Comment:

A.O. Initials:

Action Form Revised 5/92
DON PEDRO SEWER ZONE
FACILITY NEEDS STUDY

SUMMARY DESCRIPTION OF THE PROBLEM AND
PRELIMINARY SCOPE OF SERVICES

I. Description of the Problem:

The Don Pedro Sewer Zone, a special district zone of benefit
maintained by the Department of Public Works, has been
experiencing increasingly serious problems. These problems have
led to enforcement actions by the Regional Water Quality Control
Board. Most recently, the zone experienced an overflow of the
sewage effluent holding pond during the heavy rains early this
month. We expect an additional enforcement action, such as a
"cleanup and abatement" or "cease and desist" order as well as
possible fines.

Last spring, it became evident that the system has severe
inflow/infiltration (I/I) problems. A considerable amount of
money was spent hauling partially-treated effluent to other
facilities to avert a pond overflow and on other interim
improvements. The worst part of the system was T.V.'d and
several leaks were repaired.

With the above-normal rains this winter, many previously-
undetected I/I problems arose with the same result as described
above. We are currently repairing about 25 known leaky manholes.
We expect to T.V. much of the balance of the sewer mains also to
identify and repair other leaks.

Regardless of the remediations described above, there are still
significant deficiencies with the system, including:

1. The final effluent disposal is by irrigation on the
surrounding golf course through a separate sprinkler system.
This system was never built to the design requirements in
that sufficient sprinklers were not installed. Many of the
sprinklers that were installed were located near drainage
ways and have recently been disconnected. Compounding the
problem are thin to non-existent soils over shale rock on
the golf course. Irrigated effluent runs off of the golf
course and into drainage ways after only minimal sprinkling.

2. The effluent holding pond is obviously inadequate, even if
I/I problems are minimized and the irrigation system
enlarged. The original system design did not consider wet
weather holding capacity. From all appearances, the pond
pre-dated the system as a "water hazard" for the golf course
and was never designed specifically as a holding pond. It
is unlined and may actually be collecting groundwater during
the rainy season.
3. The treatment facility is a "packaged" complete mix-activated sludge plant. It is over 20 years old and many components do not operate properly. It has an inadequate gas chlorination system that has caused corrosion of the final effluent compartments.

4. The system has a total of eight lift stations, each with duplex pumps and no standby power. There have been several recent pump failures and considerable costs to rebuild and/or replace them.

5. The zone currently only has 39 residential connections and one commercial connection (golf course clubhouse) to support a relatively-high maintenance system. Service and hookup fees were never increased until last year. Over the years, the capital reserves were depleted for maintenance costs. With recent expenditures for emergency response, the sewer zone is essentially bankrupt. Other County funds have been used to pay for some recent costs.

Through a recent development agreement for an approved townhouse project within this zone, monies have been made available to fund a "facility needs study" and subsequent design costs. Monies for expansion of the treatment facilities to accommodate this project may also become available, but they cannot be used for system upgrades. Public Works intends to pursue other funding sources to finance the necessary system improvements recommended in the study.

II. Preliminary Scope of Services:

An engineering analysis of the system was conducted in February, 1989. This study identified several deficiencies in the treatment and effluent disposal components. Some of these deficiencies were corrected, but most were not. Most of the corrected deficiencies were not properly or completely carried out.

The basic scope of this study will be to re-evaluate the entire system, with and without the townhouse project. The previous study contained several good recommendations; however, they were primarily for remediations of the existing system. This study must reconsider those recommendations plus evaluate other alternatives that may be better long-term solutions. It must look at these options in three basic contexts:

1. The current system's deficiencies and needs with cost estimates for possible short-term remedies.

2. Long-term (build-out) needs of the system with cost estimates, not including the townhouse project.
3. Long-term needs with cost estimates, including build-out of the townhouse project.

Specific tasks within the above general scope will include, but not necessarily be limited to:

1. Review of the existing system, design data, records, and other information (including discussions with current and past operators).

2. Meeting and discussions with representatives of the Regional Water Quality Control Board and County Health Department.

3. Develop and review alternatives to the current facility for treatment and effluent disposal. Provide recommendations for the most feasible alternatives, including estimates of cost. Recommendations should be made with goals in mind of increasing treatment/disposal reliability and long-term maintenance cost reduction.

4. Recommend corrective actions and long-term phased improvements with cost estimates for the alternative of keeping the current system in place.

5. Upon completion and approval of the study report by the Public Works Department, make presentations to County staff and the Board of Supervisors.