**Cleath & Associates**
Engineering Geologists
Ground Water
(805) 543-1413
1390 Oceanaire Drive
San Luis Obispo
California 93405

August 13, 2001

Mr. Bruce Buel
General Manager
Los Osos CSD
2122 9th Street
Los Osos, CA 93402

**SUBJECT: Proposal for Nitrate Monitoring Program Design and Oversight, Los Osos.**

Dear Mr. Buel:

Cleath & Associates is pleased to offer our services for the design and oversight of a nitrate monitoring program for Los Osos, with emphasis on nitrate concentrations. This proposal includes a brief introduction and discussion of the purpose of monitoring, the type monitoring information needed, and the estimated costs for program design and oversight, including data interpretation. After the initial program start-up, Cleath & Associates would recommend using personnel from the District or other member purveyor for on-going sampling activities.

**Introduction**

Water quality monitoring in Los Osos has historically been performed by purveyors, by permitted waste dischargers, and by various consultants and government agencies. The monitoring program proposed herein would not replace or modify existing purveyor or waste discharger monitoring programs, although data collected from the proposed nitrate program would be made available for purveyor and waste discharger use.

The purpose of the Los Osos nitrate monitoring program is to establish the areal distribution of nitrate concentrations in ground water and to identify trends in nitrate concentrations over time. This information would be useful to local purveyors for assessing the impacts of nitrates on shallow aquifer use, including present and future blending requirements. Continued monitoring of nitrate concentrations over time may also be used to evaluate and improve the existing ground water basin management plan (GBMP) model. Future monitoring program data will also show the impacts of the proposed community sewer project with respect to decreased nitrate loading of the basin.

The last basin-wide reviews of nitrate concentrations include the October 1994 Metcalf & Eddy Report (Los Osos Wastewater Study Report on Sanitary Survey and Nitrate Source Study) and the December 1995 Regional Water Quality Control Board study (Assessment of Nitrate Contamination in Ground Water Basins of the Central Coast Region.

## Scope of Work

Cleath & Associates will review the results of previous studies and our in-house inventory of existing wells to produce a list of recommended sampling wells for the nitrate monitoring program. Wells with historical data will be favored where possible. Cleath & Associates will compile all existing nitrate data into an electronic database, and group the historical well data according to aquifer zone. The historical data will be graphed and trends identified. Rationale for specific sampling well selection will be described, along with a hydrogeologic setting description of each sampling well.

Sampling protocol and field measurements/equipment would be identified. For maximum flexibility in future basin wide water quality studies, complete general mineral analyses at each sampling well would be recommended for the first sampling event. Cleath & Associates would perform the initial sampling event, accompanied by purveyor technical staff. Subsequent sampling events would be performed by purveyor technical staff.

One report would be delivered discussing the results of the first sampling event and comparing the historical trends to current conditions. The recommended format for future semi-annual monitoring reports will be provided, along with the electronic database and graphs. Future semi-annual reports could be generated by the purveyor technical staff or by Cleath & Associates, as needed.

## Cost Estimate and Schedule

Cleath & Associates proposes to perform the above scope of work on an hourly rate plus expenses basis in accordance with the hourly rate schedule shown below and the attached terms of fees and conditions. The estimated cost for Cleath & Associates' services related to the above scope of work is $5,000.00 for the monitoring program design, database set-up, and historical data review and interpretation. The cost for the initial round of monitoring (including report), assuming 20 wells in the monitoring program, is estimated at $5,500 00, plus laboratory costs estimated at $3,500.00. The total cost for the monitoring program design and initial round of sampling is estimated at $14,000.00.

## SCHEDULE OF HOURLY RATES

| | |
|---|---|
| Principal Hydrogeologist | $90 |
| Associate Hydrogeologist | $75 |
| Staff Geologist | $65 |

## EXPENSES

| | |
|---|---|
| Mileage | $0.35/mile |
| Copies | $0.15/copy |

Other expenses at cost plus 15 percent handling.

## AGREEMENT

If the herein described work scope and fees and conditions are acceptable, this proposal will serve as the basis for agreement with your signature affixed below.

Very truly yours,

Timothy S. Cleath
Cleath & Associates

Signature Date

Printed name