

## **ORDINANCE NO 865**

### **AN ORDINANCE AUTHORIZING THE MAYOR AND CITY RECORDER TO EXECUTE A CONTRACT WITH CURRAN-MCLEOD, INC., FOR FACILITIES PLAN AMENDMENT, WASTEWATER TREATMENT PLANT DESIGN AND CONSTRUCTION ENGINEERING; AND DECLARING AN EMERGENCY**

WHEREAS, the City of Canby has heretofore solicited and received bids for the Facilities Plan Amendment, Wastewater Treatment Plant Design and Construction Engineering; and

WHEREAS, the notice of call for fee proposals and statements of qualifications for Facility Planning was duly and regularly published in the Oregon Daily Journal of Commerce on October 31, 1990 and November 7, 1990; and

WHEREAS, the Canby City Council determined that the initial proposal of Brown and Caldwell, a Portland Engineering Firm was the most responsive; and

WHEREAS, a proposal to complete the next phases of the work was solicited from Curran-McLeod, Inc., the City's Engineer of Record; and

WHEREAS, the Canby City Council, acting as the City's Contract Review Board, met on August 21, 1991, and considered the comparative proposals and recommendations of the City staff; and

WHEREAS, Curran-McLeod, Inc. have been determined to be the most responsible bidder; now therefore


#### **THE CITY OF CANBY ORDAINS AS FOLLOWS:**

Section 1. The Mayor and City Recorder are hereby authorized and directed to make, execute, and declare in the name of the City of Canby on its behalf, an appropriate

contract with Curran-McLeod, Inc., for the Facilities Plan Amendment, Wastewater Treatment Plant Design and Construction Engineering on an hourly rate basis not to exceed \$414,620. The copy of said contract is attached hereto and marked as Exhibit "A" and by this reference incorporated herein.

Section 2. Inasmuch as it is in the best interest of the citizens of Canby, Oregon, to complete this project as soon as possible, an emergency is hereby declared to exist and this ordinance shall therefore take effect immediately upon its enactment after final reading.

SUBMITTED to the Canby City Council and read the first time at a regular meeting thereof on Wednesday, August 21, 1991, ordered posted as provided by the Canby City Charter and scheduled for second reading and action of the Canby City Council at a regular meeting thereof on Wednesday, September 4, 1991, commencing after the hour of 7:30 p.m., in the Council Meeting Chambers at Canby City Hall in Canby, Oregon.

  
Marilyn K. Perkett,  
City Recorder

ENACTED by the Canby City Council at a regular meeting thereof on September 4, 1991, by the following vote: YEAS 5 NAY 0

  
Shawn Carroll, Mayor

ATTEST:

  
Marilyn K. Perkett, City Recorder

## AGREEMENT FOR ENGINEERING SERVICES

This Agreement, made this 4<sup>th</sup> day of Sept., 1991, by and between THE CITY OF CANBY, Clackamas County, Oregon, hereinafter referred to as the OWNER, and CURRAN-McLEOD, INC. Consulting Engineers, Portland, Oregon, hereinafter referred to as the ENGINEER:

The OWNER intends to complete the planning tasks to satisfy the Facilities Planning requirements of the Oregon Department of Environmental Quality including the mixing zone criteria and to construct improvements to the wastewater treatment facilities which include a new headworks and pumping station, a new secondary clarifier with activated sludge recirculation pumping facilities, a new sludge digester and sludge storage ponds, odor control facilities, piping improvements and instrumentation as required, and for which the ENGINEER agrees to perform the various professional engineering services as described herein and as further described in Attachment II, the Proposal for Engineering Services, City of Canby, Wastewater Treatment Plant Facilities Plan/Design, July 1991.

### WITNESSETH

That for and in consideration of the mutual covenants and promises between the parties hereto, it is hereby agreed:

### SECTION A - ENGINEERING SERVICES

The ENGINEER shall furnish engineering services to accomplish the work as provided herein:

#### FACILITIES PLAN

1. The ENGINEER shall complete the Facilities Plan tasks in accordance with the rules and guidelines of the Oregon Department of Environmental Quality as necessary to fulfill the State Revolving Fund financing program requirements of wastewater treatment plant improvements.

#### PROJECT DESIGN

2. The ENGINEER will attend conferences with the OWNER, representatives of the State and Federal government, or other interested parties as may be required for completion of the work hereinbefore described.
3. After the OWNER directs the ENGINEER to proceed with project design, the ENGINEER will perform the necessary alignment determination, accomplish the detailed design of the projects, prepare construction Drawings, Specifications and Contract Documents, and prepare a final cost estimate based on the final design for the entire system. It is also understood that if subsurface explorations (such as borings, soil tests, rock soundings and the like) are required, the ENGINEER will furnish coordination of said explorations without additional charge, but the costs incident to such explorations shall be paid for by the OWNER as set out

in Section D hereof. The ENGINEER will be prepared to proceed with design of any one or all of the identified project elements at the direction of the OWNER.

Statements of probable construction costs and detailed cost estimates prepared by the ENGINEER represent his best judgement as a design professional familiar with the Construction Industry. It is recognized, however, that neither the ENGINEER nor the OWNER has any control over the cost of labor, materials or equipment, over the Contractor's method of determining bid prices, or over competitive bidding or market conditions. Accordingly the ENGINEER cannot and does not guarantee that bids will not vary from any statement of probable construction cost or other cost estimate prepared by the ENGINEER. All construction and service contracts prepared by the ENGINEER on behalf of the OWNER shall require compliance with State of Oregon Workers Compensation statutes.

4. The Contract Documents furnished by the ENGINEER under Section A-2 shall include State of Oregon Wage Rates, and Equal Employment Opportunities requirements as appropriate.
5. Prior to the advertisement for bids, the ENGINEER will provide for each Construction Contract, not to exceed 10 copies of detailed Drawings, Specifications, and Contract Documents for use by the OWNER, and for appropriate Federal, State, and local agencies from whom approval of the project must be obtained. The cost of such Drawings, Specifications, and Contract Documents shall be included in the basic compensation paid to the ENGINEER. The OWNER pays the cost of permits and review fees as provided in Section F-2 of this Agreement.
6. The ENGINEER will furnish additional copies of the Drawings, Specifications and Contract Documents as required by prospective bidders, material suppliers, and other interested parties, but may charge them for the reasonable cost of such copies. Upon award of each contract, the ENGINEER will furnish to the OWNER five sets of the Drawings, Specifications and Contract Documents for execution. The cost of these sets shall be included in the basic compensation paid to the ENGINEER.
7. The drawings prepared by the ENGINEER under the provisions of Section A-2 above shall be in sufficient detail to permit the actual location of the proposed improvements on the ground. The ENGINEER shall prepare and furnish to the OWNER without any additional compensation, three copies of a map(s) showing the general location of needed construction easements and permanent easements and the land to be acquired. Property surveys, property plats, property descriptions, abstracting and negotiations for land rights shall be provided by the OWNER, unless the OWNER requests, and the ENGINEER agrees to provide those services. In the event the ENGINEER is requested to provide such services, the ENGINEER shall be additionally compensated as set out in Section D hereof.
8. The ENGINEER will require prospective contractors to file an approved Prequalification Form with the Oregon Department of Transportation and will require a 10% Bid Bond in the Bidding Documents to secure the Bid.

9. The ENGINEER will attend the bid opening and tabulate the bid proposals, make an analysis of the bids, make recommendations for awarding contracts for construction.
10. The ENGINEER will assist in the Preconstruction Conference, and will review and approve, for conformance with the design concept, any necessary shop and working drawings furnished by contractors.
11. The ENGINEER will interpret the drawings and specifications to protect the OWNER against defects and deficiencies in construction on the part of the Contractor. The ENGINEER will not, however, guarantee the performance of any contractor but will require a performance bond securing performance by the contractor. Planning and design of the project and construction engineering services shall be accomplished with due diligence and in conformance with accepted standards of the practice of professional engineering.
12. The ENGINEER will provide general engineering review of the work of the contractors as construction progresses to monitor conformance with the design concept. A written record of site visits during construction shall be maintained by the ENGINEER, and be available for review by the Owner at anytime requested.
13. The ENGINEER will establish baselines and grades for locating the work together with a suitable number of bench marks adjacent to the work as shown in the Contract Documents.
14. The ENGINEER, as representative of the OWNER during the construction phase, shall advise and consult with the OWNER and all of the OWNER'S instructions to the Contractor shall be issued through the ENGINEER. The ENGINEER shall have authority to act on behalf of the OWNER to the extent provided in this Agreement.
15. Unless otherwise requested by the OWNER in writing, the ENGINEER will not provide Resident Construction Inspection. The ENGINEER'S undertaking construction inspection hereunder shall not relieve the Contractor of Contractor's obligation to perform the work in conformity with the Drawings and Specifications and in a workmanlike manner; shall not make the ENGINEER an insurer of the Contractor's performance; and shall not impose upon the ENGINEER any obligation to see that the work is performed in a safe manner. Items A-11 and A-12 are intended to assure quality engineering and inspection services.
16. The ENGINEER will review the Contractor's applications for progress and final payment and, when approved, submit same to the OWNER for payment.
17. The ENGINEER will prepare and review necessary contract Change Orders on a timely basis for consideration of approval by the OWNER. Prior to implementing any change orders, the OWNER must consent in writing to same.
18. The ENGINEER and a representative of the OWNER will make an inspection of the project or project element to determine the status of completion. The ENGINEER may issue a Certificate of Substantial completion consistent with

the General Conditions of the Construction Contract Documents after review with the OWNER.

19. The ENGINEER will provide the OWNER with one set of reproducible record drawings, and two sets of prints at no additional cost to the OWNER. Such drawings will be based upon construction records provided by the Contractor during construction, as specifically required in the Construction Contract, and reviewed by the ENGINEER, and from the ENGINEER's construction data.
20. If State statutes require notices and advertisements of final payment, the ENGINEER shall assist in their preparation.
21. The ENGINEER will be available for site visits to furnish engineering services and consultations necessary to correct unforeseen project operation difficulties for a period of one year after the date of Statement of Substantial Completion of the facility. This service will include instruction of the OWNER in initial project operation and maintenance but will not include supervision of normal operation of the system. The ENGINEER will assist the OWNER in performing a review of the project during the 11th month after the date of the Certificate of Substantial Completion.
22. The ENGINEER will provide an Operation and Maintenance Manual describing in detail the normal and emergency modes for operating the installed facilities and providing manufacturer's information regarding maintenance of the installed equipment.
23. Upon written authorization from the OWNER, the ENGINEER will complete the Facilities Plan within 120 days and the Final Plans, Specifications and Contract Documents and submit for approval of the OWNER and State regulatory agencies within 270 days from the date of authorization.

If the above is not accomplished within the time period specified, this Agreement may be terminated by the OWNER. The time for completion will be extended by the OWNER for a reasonable time if completion is delayed due to unforeseeable causes beyond the control and without the fault or negligence of the ENGINEER.

## SECTION B - COMPENSATION FOR ENGINEERING SERVICES

1. The OWNER shall compensate the ENGINEER for services in accordance with the following schedule:
  - a. Facilities Plan Services:  
Thirty Seven Thousand Seven Hundred Twenty Dollars  
(\$37,720.00)
  - b. Design Services:  
Two Hundred Eighteen Thousand One Hundred Dollars  
(\$218,100.00)
  - c. Construction Engineering Services and Construction Inspection:  
One Hundred Sixty-eight Thousand Eight Hundred Dollars  
(\$168,800.00)
2. The compensation for the above Engineering Services shall be as follows:
  - a. Facilities Plan Services shall include item A-1
  - b. Design Services shall include items A-2 through A-9.
  - c. Billings shall be submitted monthly by the ENGINEER for Design Services during the previous month. Payments shall be made for these billings within 30 days. Billings shall be based on percent of completion of Design Services. The ENGINEER will provide a status report with the billing.
  - d. Construction Engineering Services and Construction Inspection shall include items A-10 through A-23 and shall be billed by the ENGINEER on an hourly basis. The total shall not exceed the budget figure under Article B.1. above without the express written authorization of the OWNER. Item Article B.1. is estimated based on 1100 hours of Construction Inspection over the construction time.
  - e. Where hourly rates are used, they shall be in accordance with the Standard Hourly Rate Schedule, attached herewith and referenced Attachment I.
  - f. In the event of multiple construction contracts, the ENGINEER may negotiate a revised figure under Article B.1.c.

3. The budget figures shown above shall not be exceeded except by express written authorization of the OWNER.
4. Billings for Engineering Services shall be submitted in a format consistent with the payment provisions and format of the Agreement.

### **SECTION C - RESIDENT CONSTRUCTION INSPECTION**

If the OWNER requests the ENGINEER to provide Resident Construction Inspection, the ENGINEER will, prior to the Preconstruction Conference, submit a resume' of the Resident Inspector's qualifications, anticipated duties and responsibilities for approval by the OWNER. The OWNER agrees to pay the ENGINEER for such services in accordance with the "Inspector" rate schedule set out in Attachment I. The ENGINEER will render to OWNER for such services an itemized bill, once each month, for compensation for such services performed hereunder during such period, the same to be due and payable by the OWNER to the ENGINEER on or before the 10th day of the following period. A separate agreement shall be negotiated for Resident Construction Inspection Services setting out estimated hours required and maximum estimated fees and costs. Items A-11, A-12, A-15, B-1-c and B-2-d prescribe the construction inspection services expected by the OWNER.

### **SECTION D - ADDITIONAL ENGINEERING SERVICES**

In addition to the foregoing being performed, the following services may be provided UPON PRIOR WRITTEN AUTHORIZATION OF THE OWNER.

1. Providing financial feasibility or other special studies.
2. Record boundary surveys for water treatment plants, sewage treatment works, dams, reservoirs, and other similar special surveys as may be required, excepting surveys required to locate the construction project.
3. Laboratory tests (except as required for the mixing zone study), borings, specialized geological, soils, hydraulic, or other studies recommended by the ENGINEER and separate from the tasks required under the Facilities Plan.
4. Record property surveys, detailed description of sites, maps, drawings, or estimates related thereto; assistance in negotiating for land and easement rights.
5. Necessary data and filing maps for storm water discharge permits, adjudication, and litigation.
6. Redesigns not initiated by the ENGINEER after final Plans and Specifications have been approved by the OWNER, except redesigns to reduce the project cost to within the funds available.
7. Appearances before courts or boards on matters of litigation or hearings related to the project and providing services as an expert witness in connection with any public hearing, arbitration proceeding, or the proceedings of a court of record.



8. Preparation of Environmental Impact Statements (E.I.S.).
9. Performance of detailed staking requested by the contractor necessary for construction of the project in excess of the control staking set forth in Section A-13.
10. Preparing documents for alternate bids requested by the OWNER. This is not intended to mean that bid item alternates are considered extra.
11. Providing consultation concerning replacement of any work damaged by fire or other cause during construction, and furnishing professional services of the type set forth as previously mentioned in this Agreement as may be required in connection with the replacement of such work.
12. Providing professional services made necessary by the default of the Contractor in the Construction Contract unless determined to be an engineering oversight.
13. Providing construction engineering services and inspection of construction after the contract time has been exceeded by more than 20% except as noted in F-9.

Payment for the services specified in this Section D shall be as agreed in writing prior to commencement of the work. The ENGINEER will render to OWNER for such services an itemized bill, once each month, for compensation for services performed hereunder during such period, the same to be due and payable by OWNER to the ENGINEER within 30 days.

#### **SECTION E - OWNER'S RESPONSIBILITIES**

1. The OWNER shall provide full information regarding his requirements for the project.
2. The OWNER shall designate, when necessary, a representative authorized to act in his behalf with respect to the project. The OWNER or his representative shall examine documents submitted by the ENGINEER and shall render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the ENGINEER'S work.
3. The OWNER shall furnish all pre-existing mechanical, chemical or other laboratory tests, inspections and reports as required by law or the Contract Documents, and which may impact the design apart from laboratory tests required under the Facilities Plan.
4. The OWNER shall furnish such legal, accounting and insurance counseling services as may be necessary for the project, and such auditing services as he may require to ascertain how or for what purposes the Contractor has used the moneys paid to him under the Construction Contract.
5. If the OWNER observes or otherwise becomes aware of any fault or defect in the project or non-conformance with the Contract Documents, he shall give prompt oral notice with written confirmation thereof to the ENGINEER.

6. The OWNER shall furnish information required of him as expeditiously as necessary for the orderly progress of the work.

## SECTION F - SPECIAL PROVISIONS

The following is agreed to by both parties:

1. That the OWNER reserves the right to request replacement of any Resident Inspector(s) furnished by the ENGINEER or to furnish the Resident Inspector(s) from the OWNER'S own forces, subject to the approval of the ENGINEER regarding the qualifications of the Resident Inspector(s). If the OWNER furnishes the Resident Inspector(s), the OWNER agrees that the Resident Inspector(s) will be under the direction and supervision of the ENGINEER.
2. That the OWNER shall pay for advertisement for bids, building or other permits, licenses, etc., as may be required by local, State or Federal authorities, and shall secure the necessary land easements and rights-of-way.
3. The ENGINEER will assure compliance of his work with applicable State and Federal requirements.
4. That insofar as the work under this Agreement may require, the OWNER shall furnish the ENGINEER all existing maps, field survey data, grades and lines of streets, pavements, and boundaries, rights-of-way, and other surveys presently available, which will be returned upon project completion. ENGINEER will provide the OWNER a copy of survey notes establishing bench marks and location of improvements.
5. That if the engineering work covered in this Agreement has not been completed on or after the expiration of a 24-month period noted in A-23 from the date of execution of this Agreement, the OWNER or ENGINEER may, at the option of either, on written notice, request a renegotiation of Sections B, C, and D (providing for the compensation to be paid the ENGINEER for services rendered) to allow for changes in the cost of services. Such new schedule of compensation is to apply only to work performed by the ENGINEER after delivery date of such written notice.
6. That this Agreement is to be binding on the heirs, successors and assigns of the parties hereto and is not to be assigned by either party without first obtaining the written consent of the other. At least fifteen (15) days shall be allowed for such consent.
7. Attorney's fees: In the event a suit, arbitration or other legal action is required by either the OWNER or the ENGINEER to enforce any provision of this Agreement, the prevailing parties shall be entitled to all reasonable costs and reasonable attorneys' fees upon litigation or upon appeal.

8. Termination

- a. This Agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party, provided that no termination may be effected unless the other party is given (1) not less than ten (10) calendar days' written notice (delivered by certified mail, return receipt requested) of intent to terminate, and (2) an opportunity for consultation with the terminating party prior to termination. This notation does not invalidate A-23.
  - b. This Agreement may be terminated in whole or in part in writing by the OWNER for its convenience, provided that the ENGINEER is given (1) not less than ten (10) calendar days' written notice (delivered by certified mail, return receipt requested) of intent to terminate, and (2) opportunity for consultation with the terminating party prior to termination.
  - c. If termination for default is effected by the OWNER an equitable adjustment in the price provided for in the Agreement shall be made, but (1) no amount shall be allowed for anticipated profit on unperformed services or other work, and (2) any payment due to the ENGINEER at the time of termination may be adjusted to cover any additional costs to the OWNER because of the ENGINEER'S default. If termination for default is effected by the ENGINEER, or if termination for convenience is effected by the OWNER, the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to the ENGINEER for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by the ENGINEER relating to commitments which had become firm prior to the termination.
9. The ENGINEER agrees to hold harmless and indemnify the OWNER against all claims, damages, losses and costs, including costs of defense, arising out of the negligent performances of services under this Agreement.
  10. The ENGINEER agrees to acquire and maintain for the duration of this Agreement, Professional Liability Insurance in the amount of \$500,000. The ENGINEER further agrees to obtain and maintain, at the ENGINEER'S expense, such insurance as will protect the ENGINEER from claims under the Workers' Compensation Act and such comprehensive general liability insurance as will protect the OWNER and the ENGINEER from all claims for bodily injury, death, or property damage which may arise from the performance by the ENGINEER or by the ENGINEER'S employees of the ENGINEER'S functions and services required under this Agreement.
  11. The ENGINEER will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The ENGINEER will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin, such action shall include, but not limited

to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; lay off or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

12. Affirmative steps shall be taken to assure that small, minority and female business firms located in labor surplus areas are used when possible as sources of supplies, equipment, construction and services.
13. The records and documents with respect to all matters covered by this Agreement shall be subject at all times to inspection, review or audit by the OWNER, County, Federal or State officials so authorized by law during the performance of this contract. Required records shall be retained for a period of three (3) years after termination of this Agreement.
14. ENGINEER covenants that he presently has no interest and shall not acquire interest, direct or indirect, which would conflict in any manner or degree with the performance of his services under this agreement. Any interest on the part of the ENGINEER or his employees must be disclosed to the OWNER.
15. No member or delegate to the Congress of the United States and no Resident Commissioner or city official shall be admitted to any share or part of this Agreement or to any benefit that may arise hereunder.
16. This Agreement, including Attachment I represents the entire integrated agreement between the OWNER and the ENGINEER and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both OWNER and ENGINEER.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in duplicate on the respective dates indicated below.

OWNER: CITY OF CANBY

ENGINEER: CURRAN-MCLEOD, INC.

BY: *Sharon Stavel*

BY: *Patrick Duncan*

BY: *Marilyn Kuback*

TITLE: PRESIDENT

DATE: 9/4/91

DATE: 8/22/91

CURRAN-McLEOD, INC.  
CONSULTING ENGINEERS

7460 S.W. HUNZIKER ROAD, SUITE D  
PORTLAND, OREGON 97223  
PHONE (503) 684-3478

CURRAN-McLEOD, INC.

STANDARD HOURLY RATE SCHEDULE

EFFECTIVE JANUARY 1, 1991

STANDARD HOURLY RATES

1.	Principal Engineer	\$ 70.00
2.	Project Engineer	60.00
3.	Design Engineer	50.00
4.	Design Technician	40.00
5.	Drafting Technician	36.00
6.	Clerical and Word Processing	24.00
7.	Construction Inspector	45.00
8.	Survey:	
	a. Two-man Crew	80.00
	b. Three-man Crew	100.00

REIMBURSABLE EXPENSES

Reproduction expenses are at cost.

ATTACHMENT II

CURRAN-McLEOD, INC.  
CONSULTING ENGINEERS

7460 S.W. HUNZIKER ROAD, SUITE D  
PORTLAND, OREGON 97223  
PHONE (503) 684-3478

July 11, 1991

Mr. Wayne Klem  
Public Works Director  
City of Canby  
P.O. Box 930  
Canby OR 97013

**RE: WASTEWATER TREATMENT FACILITIES  
PLANNING AND IMPLEMENTATION**

Dear Rusty:

We have reviewed the Wastewater Treatment Facilities Plan prepared by Brown and Caldwell, Consultants. The plan is a sound base from which the City's wastewater treatment planning and implementation may be completed.

Although several key elements were not addressed, the bulk of the information provided is usable.

We would be very concerned that no State Revolving Fund financing could be acquired, no NPDES permit revision would be issued nor construction approved by DEQ without a complete Facilities Plan including:

1. Water Quality Impact Analysis;
2. Development of Alternatives;
3. Groundwater Protection, and
4. Environmental Assessment.

With additions and minor modifications, item 2 is complete. Development of both the Water Quality Impact Analysis and the Environmental Assessment seems insufficient to satisfy the anticipated State scrutiny. Groundwater impact estimates are required under new DEQ regulations whenever a potential hazard exists, such as sludge holding ponds. These elements almost certainly require considerable attention to allow the City of Canby to proceed with financing and construction.

Attached is a proposed project approach intended to position the City to proceed with S.R.F. or other financing.

We have projected a Design Time Schedule, Cost Estimates and Cash Flow Projection based on the current Facilities Plan tasks. While this work is unlikely to change dramatically, some adjustments may occur resulting from completion of the Facilities Plan.

It is interesting to note that DEQ has been sampling the Willamette River routinely for more than 40 years. Sufficient data are available for making the necessary analyses to demonstrate the City of Canby impacts on the Willamette River. We can see no reason to delay the necessary water quality analysis pending DEQ review and study of the river.

Mr. Wayne Klem  
Page Two  
July 11, 1991

There will likely be very strict controls of phosphorus and nitrogen for nutrient removal. The total phosphorus contribution by the City of Canby discharged at 2.0 MGD through a diffuser outfall is unlikely to exert a measurable effect on water quality in the river. However, the DEQ may impose a blanket allowable phosphorus residual calling for added treatment facilities by all Willamette River communities. Because of the relatively small contribution of phosphorus from the City of Canby, the effects of a blanket limit by DEQ would be expensive and largely cosmetic.

Ammonia-Nitrogen and nitrogen in other species which may be contained in Canby wastewater discharges will doubtless require reduction. Nitrogen levels should be less than 20 mg/l in treated effluent at 2.0 MGD to assure the lowest level of measurable effect outside the mixing zone.

We are prepared to follow on the work done to date and complete it in a manner approvable by DEQ. This will assure access to available funding and will minimize the investment of City dollars. In addition, the City will be prepared, with a cohesive and complete plan, to proceed on a solid timetable with identified goals and achievable end points.

Please let us know when you wish to proceed with the project components.

Very truly yours,

**CURRAN-McLEOD, INC.**



Patrick D. Curran, P.E.

PDC:ks

## CITY OF CANBY - WASTEWATER TREATMENT FACILITIES

### PROJECT APPROACH

The State of Oregon Department of Environmental Quality exercises legal authority to prevent and abate water pollution. Of the control procedures available, the most practicable regulatory constraints are:

1. NPDES Permits; and
2. Sewerage Works Plan Review

Under These two programs, municipalities are issued a permit allowing the discharge of treated wastewater to state waters under strict limitations of load, frequency and duration. Solids handling and ultimate fate of contaminants are also addressed in the permits.

Once a permit has been issued, plans for construction of wastewater collection, pumping, treatment and discharge facilities must be reviewed and approved prior to construction. Plan approvals are always conditional and contain provisions requiring construction quality assurance and performance.

Neither NPDES permits nor construction plan approvals are issued without specific compliance of the municipality with river basin water quality standards and general state water quality policies.

In addition to the control methods above, the State has taken a page from the federal playbook and has continued to use low-cost project financing to assure compliance with water quality program requirements and desires. Such is the case with the more esoteric requirements under the Facilities Planning guidelines. Since 3% funding for 20 years affords a net fiscal gain in these times of limited grants, the desirability of the funding often outweighs the clumsiness of the program requirements.

Providing local financing of local projects is desirable whenever the costs of performing for the state exceed the benefits of project economies and specific project need. In general, projects under \$100,000 are very questionable beneficiaries of state benevolence.

The City of Canby may by acquiring local financing, bypass the Facility Plan requirements and proceed to design of Phase I upgrades. However, no application was ever made to the state for a NPDES permit increase to 1.15 MGD based on the 1981 plant expansion. When the necessary permit increase is requested, the state will want to know:

1. What are the Willamette River impacts of existing discharges, if any? Mixing zone and toxics?
2. What will be the projected effects of any requested discharge increase? Of increased nutrient?
3. What are the current and future groundwater effects of plant operations and effluent disposition?



4. How are sewage bypasses initiated, controlled and monitored?
5. How is effluent reuse addresses in light of state regulations?

Regardless of the financing vehicle, these issues and others must be addressed at some point prior to construction of the proposed facilities. Since the NPDES flow limit of 0.85 MGD is the crux of the current urgency, the permit increase is essential to proceed with plant improvements. Without relief from the current permit limits, the City's options for wastewater disposition are extremely confined.

The City's strategy for continued growth and development must include the following:

1. Complete the necessary requirements for Facilities Planning including satisfaction of S.R.F. funding requirements. The extra \$30,000 to \$40,000 will be returned in the first year's interest. (The difference between 3% and 6% interest on \$2,500,000 principal for 20 years is \$50,000 per year.)
2. Prepare an application for an NPDES permit modification increasing dry weather flow to 2.0 MGD and holding monthly average effluent mass loadings to the current 142 lbs/day of BOD and Suspended Solids. Commensurate monthly average of BOD and S.S. at 2.0 MGD would be 8.0 mg/l each. The City shouldn't attempt to obtain more than one permit modification per decade.
3. Apply for S.R.F. funding (or conventional financing) in an amount sufficient to accomplish Phase I construction or the maximum allowable in the case of limited program funds.
4. Proceed with design of the Phase I plant expansion to construct in 1992-93.
5. The Council should authorize the sale of revenue bonds for the amount of the project - Phase I. This will motivate both public and private funding sources with the seriousness of the City's intent.
6. Construct the Phase I expansion with units and capacities as shown in the Facilities Plan, 1991.

**CITY OF CANBY**

**WORK PLAN**

**GENERAL**

A detailed WORK PLAN has been developed with the intent of showing:

- TYPE I: Scope of work remaining to satisfy the DEQ for State Revolving Fund financing and NPDES permit issuance;
- TYPE II: Scope of work unrelated to financing but yet remaining to clear the way for the issuance of an NPDES permit for increased discharge of treated wastewater to the Willamette River.

The greater scope of work is attributable to carryover requirements of the federal construction grant program. These are not all required if no EPA/DEQ funding is needed.

# CITY OF CANBY

## WORK PLAN

### Type I: State Revolving Fund Program

#### Facilities Plan Amendments

1. Analysis of Innovative/Alternative Technology
  - a. Reuse of wastewater and sludge:
    - irrigation/recycle
    - golf course and agricultural applications
    - composting alternative
  - b. Effects of Improved O&M on Expansion Program
  - c. Consideration of Possible Revenue Generation from Wastewater Site Uses and Sludge Disposal
  - d. Energy Conservation and Recovery
  - e. Water Use/Waste Discharge Comparisons - water conservation effects
2. Surface Water Quality Impact Analysis
  - a. Nutrient Evaluation and River Effects
  - b. Probable Nutrient Limitations/Interim Solutions
  - c. River Dilution Requirements and Limitations
  - d. Mass Loading Limitations/Interim Solutions
  - e. Bacteriological Considerations
  - f. Toxics and Mixing Zone Analysis
  - g. Bypass Elimination
3. Groundwater Protection
  - a. Groundwater Characterization
  - b. Protection Plan
    - 1) Existing Sludge Ponds
    - 2) New Sludge Storage
    - 3) Site Irrigation
    - 4) Golf Course Irrigation
    - 5) Agricultural Applications
4. Environmental Assessment
  - a. Project Description
  - b. Potential Environmental Impacts; wetlands, floodplain, agricultural, residential and recreational
  - c. Alternatives to Plant Expansion
  - d. Description of Public Participation
  - e. Documentation of coordination with State and federal agencies
  - f. Preparation and Distribution of A-95 Clearing house Notification

**CITY OF CANBY**

**WORK PLAN**

**Type II: NPDES Permit Modification**

1. Facilities Plan Amendments
  - a. Prepare a Plan to Minimize Waste Load Impacts on the River
    - 1) Agricultural reuse
    - 2) Golf Course irrigation
    - 3) Water use/ Waste load comparison - water conservation effects
  
2. Surface Water Quality Impact Analysis
  - a. Nutrient Evaluation and River Effects
  - b. Mass Loading Evaluation
  - c. Bacteriological Considerations
  - d. Toxic and Mixing Zone Analysis
  - e. Outfall Diffuser Effects
  - f. Bypass Elimination
  
3. Groundwater Protection Plan
  - a. Groundwater Characterization
  - b. Protection Plan
    - 1) Existing Sludge Pond
    - 2) New Sludge Storage
    - 3) Site Irrigation
    - 4) Agricultural and Golf Course Irrigation
  
4. Environmental Assessment

NONE

CITY OF CANBY  
ESTIMATED COST OF ENGINEERING

JULY, 1991

Canby Sewage Treatment Plant

FACILITIES PLAN TASKS	1989 ESTIMATE		TYPE I - 1991		TYPE II - 1991	
	Man Hours	Estimated Costs	Tasks Completed	Tasks Remaining	Tasks Completed	Tasks Remaining
1. Data Collection City Data; DMR, Chemical, Flow Mixing Zone Data Sewer Rate/Charges; Water usage data, City codes & schedules Sludge Characteristics & Disposal Pretreatment information	280	\$14,800	80%	\$2,980	80%	\$2,980
2. Data Analysis and Testing	225	12,400	25%	9,300	NONE	NONE
3. Alternative Matrix	40	2,800	75%	700	90%	280
4. Environmental Assessment	180	7,400	NONE	8,000	NONE	NONE
5. Alternative Selection	80	4,200	80%	1,680	80%	840
6. Economic Evaluation and Cost Estimates	100	8,400	80%	1,680	90%	940
7. Financial Plan	140	12,600	100%	-0-	100%	NONE
8. Sewer Use Code	80	4,600	100%	-0-	100%	NONE
EST. COST: ENGINEERING STUDY	1,085	\$68,000	\$43,480	\$24,620	\$6,020	

GROUNDWATER PROTECTION PLAN	TYPE I - 1991		TYPE II - 1991	
	Tasks Completed	Tasks Remaining	Tasks Completed	Tasks Remaining
1. Observation Wells 3 @ 50ft. x \$40/ft.	NONE	8,000	NONE	8,000
2. Analysis of Data		4,200		4,200
3. Preparation of Plan		3,000		3,000
GROUNDWATER PROTECTION PLAN SUBTOTAL		\$13,200		\$13,200
TOTAL REMAINING WORK		\$37,720		\$18,220

**CITY OF CANBY WASTEWATER TREATMENT FACILITIES**  
**ENGINEERING COST ESTIMATE**

**Design Tasks**

**PHASE I EXPANSION**

**Design Engineering**

Preparation of Site Maps	\$ 3,600
Site Planning and Layout	6,200
Unit Process Selection and Hydraulic Design	14,400
Equipment and Pump Selection	13,000
System Hydraulics	14,000
Detailed Unit Layouts	13,200
Concrete Design	5,000
Yard Piping Design	15,800
Small Piping Systems	2,400
Electrical Power Design	14,000
Motor Controls	5,000
Alarms and Telemetry	1,500
Site Environmental Design and Restoration	16,000
Meetings and Reviews	1,500
Drafting and Graphics/Reproduction	4,000
Preparation of Construction Drawing	22,000
Development of Technical Specifications	8,500
State Review of Plans/Permit Modifications/Meetings	2,500
Contract Documents	500
Estimate of Costs	4,200
Project Advertising and Bidding/Contract Award	<u>8,500</u>
<b>SUBTOTAL</b>	<b>\$ 208,100</b>

Construction Engineering

Preconstruction Coordination	\$ 2,200
Preconstruction Conference	400
Project Scheduling/Layout	2,600
Submittals: Reviews and Approvals	2,400
Change Order Reviews and Recommendations	5,400
Contractor Coordination & Project Management	32,700
Interpretation of Contract Documents	27,000
Pay Estimates	4,100
Construction Inspection	66,000
Meetings/Reviews/Council Reports	5,000
Final Inspection/Punch List/Acceptance	3,500
Warranty Inspections	1,200
O&M Manual	9,500
O&M Assistance as needed	<u>6,000</u>
 SUBTOTAL	 \$ 168,800

CITY OF CANBY  
WASTEWATER TREATMENT FACILITIES

JULY, 1991

PROJECT DESIGN SCHEDULE

TASK DESCRIPTION	MONTHS									
	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY
Phase I - Expansion										
Site Maps	█									
Site Planning	█									
Unit Processes/Hydraulics	█	█		█						
Equipment & Pumps		█		█						
System Hydraulics		█								
Concrete Design				█	█	█				
Mechanical Design	█		█	█		█				
Piping Design				█	█					
Small Piping					█	█	█			
Electrical Power Design			█				█	█		
Motor Controls/Specs							█	█		
Alarms/Telemetry							█	█		
Environmental Design						█				
Plans & Specifications		█	█	█	█		█	█		
Estimate of Costs								█	█	
Reviews/Bidding		█	█	█		█	█	█	█	█
Estimated Cash Flow	\$18,000	\$21,200	\$24,700	\$23,400	\$27,000	\$26,000	\$22,000	\$18,400	\$16,400	\$12,000

TOTAL DESIGN ESTIMATE \$208,100