

RESOLUTION NUMBER 08-030

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF KETCHUM, IDAHO
AUTHORIZING THE MAYOR TO EXECUTE A LETTER AGREEMENT WITH
PHARMER ENGINEERING TO PERFORM A WASTEWATER FACILITIES PLAN
IN AN AMOUNT NOT TO EXCEED \$59,900.

WHEREAS, the current facilities plan was performed in 2003; and

WHEREAS, since then, a three-phase upgrade project that included UV
disinfection/electrical, aeration basin and filtration improvements has been completed; and

WHEREAS, the proposed wastewater facilities plan will incorporate the recent
upgrades and use relevant information from the 2006 Ketchum Master Plan and the 2005
Sun Valley Master Plan for future growth projections as related to flows and loads in the
treatment plant and collection system; and

WHEREAS, explanations for each task are attached hereto and incorporated herein
as Exhibit A.

NOW THEREFORE BE IT RESOLVED, that the Ketchum City Council
authorizing the Mayor to execute a letter of agreement with Pharmed Engineering to
perform a wastewater facilities plan in an amount not to exceed \$59,900.

This Resolution will be in full force and effect upon its adoption this fourth (4th)
day of February, 2008.

CITY OF KETCHUM, IDAHO



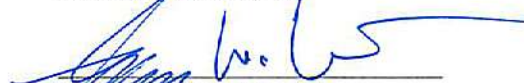
Ron Parsons, Acting Mayor

ATTEST:

APPROVED AS TO FORM
AND CONTENT:



Sandra E. Cady, CMC
City Treasurer/Clerk



Benjamin W. Worst,
City Attorney



January 23, 2008

Steve Hansen
Ketchum Utilities Manager
P.O. Box 2315 Ketchum, ID
83340

Re: Wastewater Facilities Plan Proposal

Dear Steve:

The Ketchum / Sun Valley Wastewater Treatment Facility (WTF) have undergone extensive improvements during the last ten years. As a team, Pharmer Engineering staff have guided the City through numerous critical projects including: headworks (pump station/screening), sludge load out (digester retrofit), secondary clarifier (including alum), electrical (new centralized MCC's, standby generator, SCADA), ultraviolet (UV) disinfection (including effluent pump station), aeration basins and filtration. The smooth implementation of these improvements has been aided by the Facilities Planning process. The 1999 Facilities Plan provided an extensive review of the planning area and planning period and also provided the basis for predicting/calculating wastewater flows and loads and system plant capacity. In addition, it provided initial upgrade and expansion alternatives, solids handling alternatives, collection system review, and electrical/instrumentation/control upgrades.

The 2003 Facilities Plan served as a Predesign for near term improvement projects. The 2003 Plan revisited the design flows and loads then looked specifically at the improvements needed near-term including the aeration system basin, tertiary filtration, UV disinfection, and electrical & controls improvements. The 2003 Facilities Plan also updated the solids handling chapter and introduced a new concept, wastewater reuse.

Since the planning effort in 1999, the City of Ketchum and Sun Valley master plans have been revised. The Ketchum Master Plan was issued in 2006 and the Sun Valley Master Plan in 2005. The new 2008 Wastewater Facilities Plan will incorporate any relevant information from these master planning documents and update planning information last updated nine years ago. In addition the new 2008 Facilities Plan will review current and future flows/loads and implications of total maximum daily load (TMDL) limits in future discharge permits. The implications of these future TMDL limits could have a huge impact on the wastewater treatment/discharge approach.

Other planning issues that will be addressed by the 2008 Facilities Plan includes: review of the major collection system trunk lines, evaluation of the current system capacity, condition of each treatment component, recommendations for treatment upgrades or capacity expansion, review of support structure components, update of the water reuse potential, and compilation of the environmental information documents.

SCOPE OF WORK

The scope of work will be broken into categories as follows:

- > Planning Criteria
- > Wastewater Flows/Loads and Discharge Requirements
- > Collection System
- > Existing Plant Capacity
- > Treatment Upgrades and Expansion
 - o Headworks
 - o Activated Sludge
 - o Filtration/Disinfection
 - o Sludge Handling
 - o Electrical & Control
- > Support Facilities
- > Reuse Update
- > Environmental Information Documentation (EID)

Task 1 - Planning Criteria

The 1999 Facilities Plan broke the impact areas to be served into four zones:

- Zone 1 - Development north of Ketchum, including Hulen Meadows, Lake Creek, and Riverwoods.
- Zone 2 - Lower Board Ranch located west of Ketchum along Warm Springs
- Zone 3 - Warm Springs Golf Course and adjacent lands
- Zone 4 - Developments south of Ketchum, including the River Run base facilities to McHanville.

We will work with Ketchum and Sun Valley staff to determine if the four zones still accurately define the growth areas. We will then go through each area and compare the previous predicted growth with any new information. Our evaluation will examine the past population projections and actual growth. In addition, we will use the planning area growth projections to confirm or modify the future flows/loads in Task 2. Task 1 will be summarized in a Technical Memorandum for review with Ketchum/SVWSD.

Task 2 - Wastewater Flows/Loads and Discharge Criteria

Recent plant flow and load data will be reviewed to determine the validity of past projections and the basis for future growth. The historical per capita flow and load data provides key information related to development of the future flows and loads. We are aware of recent efforts (last five years) to minimize or eliminate many Inflow and Infiltration (I/I) sources. The systematic collection system evaluation and repair appear to have had a positive effect on plant flow, i.e. reduction.

Wastewater flow and load projections provide the basis for treatment plant unit sizing but equally important is the required discharge quality. The plant is currently awaiting re-issuance of the National Pollution Discharge Elimination System permit (NPDES), issued by the US

Environmental Protection Agency (US EPA) for plant effluent discharge to the Big Wood River. A re-application was submitted for a new five year permit in 2006. The facility has not yet received the new permit. The key component influencing the future permit limits is The Big Wood River Watershed Management Plan submitted by the State of Idaho to the US EPA in 2002. The Plan develops total maximum daily load (TMDL) for pollutants of concern in the watershed. In the case of the Big Wood River Subbasin the pollutants of concern were total suspended solids (TSS), total phosphorus (TP) and temperature. The point source load allocations, such as those assigned to the Ketchum/SVWSD wastewater treatment plant, are defined based on the watershed achieving water quality standards.

The TMDL limits for TSS and TP have been known since 2002. The 2003 Facilities Plan update took these mass limits into account. The TMDL for temperature, on the other hand, required more study and only became known in a January 2007 draft. The temperature TMDL could pose a serious issue for the plant discharge. Draft limits will be difficult to achieve even at the current discharge rate. The temperature issue becomes even more critical at higher future plant flow rates. This task will closely examine the temperature TMDL implications.

Task 2 will be summarized in a Technical Memorandum for review by Ketchum/SVWSD.

Task 3 - Collection System

Both Ketchum and Sun Valley have made significant progress in identifying and remedying collection system deficiencies. We will rely on the information collected by each City through TV sewer monitoring and maintenance logs to determine the extent of infiltration & inflow reduction from previous estimates. Existing sewer modeling information supplied by each City will be reviewed with staff from both Ketchum and Sun Valley. Using this information, we will identify collection system changes related to future growth identified in Task 1 and 2. Task 3 will be summarized in a Technical Memorandum for review by Ketchum/SVWSD. The Tech Memo will include costs for improvements and an estimated implementation schedule.

Task 3 only includes reviewing existing models and review of major trunk lines. The scope of work will require revision if sewer CAD modeling does not exist or insufficient information is available.

Task 4 - Existing Plant Capacity

The Facilities Plan will review the existing treatment system sizing and capacity for each treatment component. The capacity analysis will then be used in determining the "weak links" in the process. Each treatment area will be reviewed for equipment size and condition.

The work for this task will include computer modeling the treatment process with BioWin® software. The modeling results provide operating conditions and capacities for the existing biological system. The software model will also be used to predict operating conditions and capacities based on future flows and loads. Task 4 will be summarized in a Technical Memorandum for review by Ketchum/SVWSD.

Task 5 - Treatment Plant Upgrades and Expansion

The areas identified in Task 4 as needing additional capacity or equipment replacement will be expanded in this section of the report. We will work with City staff during review of each area of treatment to determine sizing and maintenance issues. The treatment process will be divided into several major areas and broken down into the following individual components for each area:

1. Headworks - screening, lift pumps, grit removal, odor control,
2. Activated Sludge - aeration basins, clarifiers, return activated sludge pumps, blowers, diffusers, alum,
3. Tertiary Treatment - filter pump station, filters, backwash return
4. Disinfection - ultraviolet banks, flow measurement, outfall
5. Electrical & Control - review of communications and control for plant
6. Sludge Handling - sludge transfer pumps, gravity thickener, aerobic digester, blowers, diffusers, sludge load-out, Ohio Gulch drying beds

Plant areas defined by numbers 1 through 5 have been upgraded in the last ten years. We expect only minor upgrades will be necessary in these areas. The sludge digestion and dewatering area is the next area scheduled for upgrade. We will refine the upgrade schedule for proper planning. This task will also incorporate information related to sludge disposal at the Ohio Gulch drying beds. The operating plan for the Ohio Gulch drying beds is to be examined in detail under a separate contract with Pharmer Engineering.

Task 5 will be summarized in a technical memorandum for review by Ketchum/SVWSD. The Tech Memo will include costs for improvements and an implementation schedule.

Task 6 - Support Facilities and Water Reuse

The support facilities include: administration services, laboratory services and maintenance services. We will review each of these areas to determine if the plant has adequate building areas to support these services, both as currently constructed and with future improvements.

The potential for reuse of treated wastewater is an exciting new outlet for Ketchum's discharge. In lieu of direct discharge to the Big Wood River, landscape irrigation conserves precious groundwater by providing an alternative irrigation water source. Irrigation of the treatment plant grounds and nearby SVWSD property are currently in the permitting process. We will summarize the current situation with reuse at Ketchum and Sun Valley. The implications of the temperature limitations on direct discharge make reuse an even more attractive option.

Task 6 will be summarized in a Technical Memorandum for review by Ketchum/SVWSD.

Task 7 - Environmental Information Documentation (EID) and Report Preparation

The EID is a required part of the Facilities Planning report. This section provides information on a wide variety of items including project planning area, topography, geology, climate, economics and social profile, floodplain, wetlands, wild and scenic rivers, cultural resources, flora and fauna, recreation and open space, agriculture lands, air quality, water quality, public health, solid waste management, and energy. The EID is a necessary component if DEQ State Revolving Fund (SRF) monies or federal funding (e.g. US Dept. of Agriculture - Rural Development loans) are involved in any of the improvements. We expect much of this work has been done in the previous reports and will only require a minor update.

The Technical Memorandum developed in Tasks 1 through 6, along with the EID will be compiled into a single report with all relevant information related to the development of each task. A summary section will present the information from each task memo and present the costs identified for improvements. The summary section will also present an implementation schedule for the improvements. The report will be submitted to Ketchum/SVWSD for review prior to submittal to Idaho DEQ.

Task 8 - Project Management and Review Meetings

The project management of the Facilities Plan preparation and review meetings are an important element to successful project execution. We will conduct four review meetings with Ketchum/SVWSD staff.

Engineering Fee

The following fee table provides our estimate of labor and expense costs for the scope of work described above.

Fee Summary

2008 Wastewater Facilities Plan

Task	Labor Hours	Labor Cost	Expense Cost	Total
Task 1 - Planning Criteria	84	\$8,600	\$100	\$8,700
Task 2 - Flows/Loads and Discharge Criteria	80	\$7,900	\$100	\$8,000
Task 3 - Collection System	40	\$3,900	\$200	\$4,100
Task 4 - Plant Capacity	32	\$3,900	\$100	\$4,000
Task 5 - Upgrades & Expansion	128	\$12,650	\$250	\$12,900
Task 6 - Support Facilities & Reuse	48	\$4,300	\$100	\$4,400
Task 7 - EID & Report Preparation	100	\$9,900	\$300	\$10,200
Task 8 - PM & Review Meetings	60	\$6,800	\$800	\$7,600
TOTAL	572	\$57,950	\$1,950	\$59,900

Our engineering work will be done on a time and materials basis according to a Fee Schedule. The total amount will not be exceeded without written authorization from the City of Ketchum/SVWSD. Our current Fee Schedule and Engineering Agreement are on file with the City of Ketchum and SVWSD.

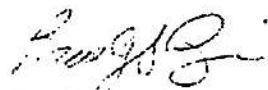
Schedule

We have developed the following general schedule for your consideration. If a more condensed schedule is needed, we can adjust the schedule accordingly. The tasks are set up as sequential building blocks so we will review each section with the Ketchum/SVWSD representatives before proceeding to the next task. This will insure that our work is efficient and complete.

<u>Item</u>	<u>Completion Date</u>
Authorization to Proceed	February 2008
Initiation of Work	February 2008
Task 1 Draft	April 2008
Task 2 Draft	May 2008
Task 3, 4 and 5 Draft	June 2008
Task 6 and 7 Draft	July 2008
Final Document Preparation	July 2008
Submittal to DEQ for Approval	August 2008

We appreciate the opportunity to work with the City and SVWSD on the new Wastewater Facilities Plan. If you have any questions regards this proposal, please call.

Sincerely,



Bradley S. Bjerke, P.E.
Pharmer Engineering, LLC

Our Standard Terms and Conditions are on file with previous proposals. If this letter agreement proposal is acceptable, please sign and date both copies, and return one copy with original signatures to Pharmer Engineering at 1998 W. Judith Lane, Boise, Idaho, 83705. If you have any questions about this proposal, please call Brad Bjerke at (208) 433-1900.

CITY OF KETCHUM

Printed Name: Raymond Hall
Signature: [Handwritten Signature]
Title: MAYOR
Date: 2/13/08

PHARMER ENGINEERING, L.L.C.

Printed Name: Bradley S. Bjerke
Signature: [Handwritten Signature]
Title: Principal
Date: 01-23-08

SUN VALLEY WATER & SEWER DISTRICT (SVWSD)

Printed Name: _____
Signature: _____
Title: _____
Date: _____