

Recommended improvements will comply with all applicable DOE requirements and consist of a new Sequencing Batch Reactor (SBR) treatment process with basins sized to handle anticipated wastewater flows through the year 2023. It is also recommended that treated effluent be disinfected with ultraviolet (UV) light, and that solids be stabilized utilizing an aerobic digestion process.

- G. Give a complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The following is a list of the recommended Phase I improvements:

- 1. Construction of a new headworks facility. The new headworks would re-utilize the existing Hycor screening equipment and would have new grit removal equipment.**
- 2. Construction of two SBR basins with associated aeration, mixing, decanting and sludge wasting equipment to provide secondary treatment of influent wastewater.**
- 3. Construction of a new disinfection system consisting of two 2.6 MGD closed conduit units.**
- 4. Construction of a 100,000 gallon post equalization basin.**
- 5. Construction of a new covered aerobic digestion facility consisting of two aerobic digester basins, a pre-mix basin and a gravity thickener.**
- 6. Upgrade the existing effluent pump station and gravity discharge pipeline.**
- 7. Installation of new influent and effluent flow meters.**
- 8. Demolition of existing RBC, SBC and secondary clarifier basins to make room for new aerobic digestion facility.**
- 9. Demolition of existing headworks and existing primary clarifier.**
- 10. Construction of a new laboratory building.**
- 11. Required modifications to existing blower/control building to house new electrical control equipment and blower equipment for the SBR's and aerobic digesters.**
- 12. Remove interior walls and modify existing undersized lab/control/chlorination building into a maintenance shop for the WWTP.**
- 13. Site work required to incorporate additional land needed to construct recommended treatment units.**
- 14. Yard piping and electrical improvements required to construct recommended treatment units.**
- 15. Upgrade the existing Pump Station No. 4 and tie the forcemain from Pump Station No. 3 directly into the forcemain to the WWTP.**

- H. Describe the future environment without the proposal.

If the recommendations in this plan are not implemented water quality standards for chlorine will continue to be violated. Also, the City of Woodland will not be able to lift their sewer hook-up moratorium and adequate wastewater capacity and reliability will not be provided to meet existing treatment standards and provide adequate capacity for the planning period.

I. Public Involvement.

Please indicate the extent of public involvement or awareness of the planning process:

	Dates
a. Public Meeting(s)	July 1998 & 1/25/99
b. Public Hearing(s)	
c. Committee Meeting(s)	10/29/98 & 4/1/99
d. Media Coverage	
e. No Public Involvement	
f. Other (please specify)	

J. Is there significant controversy about the proposed project? If yes, explain.

Not at this time.

K. List alternatives to the proposed project which were considered:

1. **Expanding the plant with existing Submerged Biological Contactor (SBC) technology.**
2. **Expanding the plant using Sequencing Batch Reactor (SBR) technology.**
3. **Providing land-application of treated effluent during summer months.**
4. **Locating the effluent outfall on the Columbia River.**
5. **Various WWTP site locations.**
6. **Purchasing land at the existing WWTP site location.**
7. **Aerobic sludge handling facilities.**
8. **Anaerobic sludge handling facilities.**
9. **ATAD sludge handling facilities.**
10. _____

Briefly outline why alternatives were rejected (e.g. cost, environmental impacts, etc.)

1. **Cost – both capital and present worth**
2. **Selected Alternative**
3. **Cost/Feasibility**
4. **Cost/current outfall location will meet water quality criteria**
5. **Cost/Feasibility**
6. **Selected**
7. **Selected**
8. **Cost/inappropriate solids treatment process for SBR sludge.**
9. **Cost/Environmental Impacts (Odor Concerns)**

L. How were the following measures considered to be included in the proposed alternative, and if not, why were they not considered:

1. Flow and waste reduction measures, including infiltration/inflow reduction and pretreatment requirements?

Yes How: **Enhanced pretreatment requirements and enforcement are recommended to be implemented. A long-term I/I program is recommended to be initiated to maintain the City's relatively low I/I flows.**

No Why Not:

2. Appropriate water conservation measures;

Yes How: **The City's current Water System Plan completed in 1996 included a recommended conservation program. The goal of the WSP conservation program was a 10% reduction in water use during the 20 year planning period. In late 1997, the City adopted a higher commodity charge that went into effect in early 1998. The rate nearly doubled the commodity charge for water use above 600 cubic feet per month for a residential connection.**

No Why Not:

3. Alternative locations, capacities and construction phasing of facilities;

Yes How: **Several new locations were evaluated for the WWTP based on land availability. These locations were along Caples Road, a site along the Columbia River, and a location just south of Horseshoe Lake. All new sites were rejected based on cost. The site south of Horseshoe Lake was not large enough. The City has opted to pursue two phases for the WWTP upgrade to provide the capacity required for the overall planning period.**

No Why Not:

4. Alternative waste management techniques, including pretreatment, treatment and discharge, wastewater reuse, land application, and individual systems;

Yes How: **Stricter pretreatment requirements and enforcement are recommended, and are being implemented by the City. SBC and SBR technologies were evaluated in detail to provide a secondary treatment system that is cost-effective. Land application of treated effluent was evaluated during summer months to determine the cost potential to beneficially reuse the treated/disinfected effluent.**

No _____ Why Not:

5. Alternative methods for management of sludge;

Yes How: **Several alternatives were considered for sludge treatment and thickening. The treatment alternatives are: Aerobic Digestion, Anaerobic Digestion, ATAD, Composting and Lime Stabilization. Thickening alternatives included gravity, gravity belt, rotary drum and centrifugal thickening. It is recommended that the City continue to land apply stabilized biosolids since this is a beneficial use and there are approved nearby forest and non-food cropland sites available to the City. Stabilization alternatives were rated based on cost, reliability and feasibility.**

No _____ Why Not:

6. Improving effluent quality through more efficient operation and maintenance;

Yes How: **The recommended improvements will produce a better quality effluent than the existing WWTP and is designed to produce this high quality effluent with efficient operation and maintenance due to the inherent flexibility of the treatment process and the ease with which operators can adjust the process as required by utilizing the programmable logic control (PLC) unit.**

No _____ Why Not:

7. Appropriate energy reduction measures; and

Yes How: **Energy reduction was considered by providing the City with an alternative that provides efficient treatment, and reasonable operation and maintenance effort.**

No _____ Why Not:

8. Multiple use including recreation, other open space, and environmental education;

Yes ___ How:

No X Why Not: **Currently, there are no adverse affects on the environment.**

III. ENVIRONMENTAL ELEMENTS

A. AIR

1. Is the project located in an attainment area?

No.

2. Will the ambient air quality remain within standards if the project is constructed?

Yes.

3. Discuss mitigation measures to reduce or control emissions or other impacts to air quality, including during construction:

All recommended treatment processes are aerobic and odor problems are not anticipated. The aerobic digesters will be covered which will allow for odor control to be added in the future if required. Odor will be kept at minimum levels through design of redundancy in both the number and size of tanks and also in the aeration equipment, and should not be an issue once the WWTP Phase I upgrade is complete.

B. WATER

1. Surface Water:

a) What body(ies) of water will water pollution control project protect?

Lewis River.

b) What body of water will water pollution control facility discharge to?

Lewis River.

c) Does the proposed project lie within a 100-year floodplain? If so, note location of the floodplain and the project on the site plan and provide a discussion of why there is no feasible or prudent alternative for locating the project in the floodplain.

Yes. The 100-year floodplain elevation at the existing WWTP site is approximately 30.8 feet and is shown on the preliminary hydraulic profile of the

The above answers are true and complete to the best of my knowledge.

Signature: Robert A. Wood

Date: 3/15/99