

# AFFORDABILITY ANALYSIS For Communities

Community: \_\_\_\_\_

Authorized Representative: \_\_\_\_\_

Analysis Prepared By: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Alternative Description: \_\_\_\_\_

## WHAT IS IN THE FACILITY PLAN SCOPE OF STUDY?

<b>The proposed facilities will be:</b>	<input type="checkbox"/> New	<input type="checkbox"/> An Expansion	<input type="checkbox"/> An Upgrade	(check more than one if applicable)
<b>The facilities will serve:</b>	<input type="checkbox"/> Existing Population on Sewers	<input type="checkbox"/> Existing Area Served by On-Site Systems	<input type="checkbox"/> Existing Industries	<input type="checkbox"/> Anticipated Growth
<b>Indicate the approximate percentage of the plant's capacity that will be allocated to each:</b>	____%	____%	____%	____%
<b>Entities to be served:</b>	<input type="checkbox"/> County	<input type="checkbox"/> Municipality	<input type="checkbox"/> Sewer District	<input type="checkbox"/> Industry
<b>Design population:</b>	_____ (Year _____)			

## WHAT ROLES AND RESPONSIBILITIES WILL LOCAL GOVERNMENTS HAVE?

Cooperative arrangements between various entities may be required to meet the financial and management needs of wastewater treatment facilities.

What agency will:	<input type="checkbox"/> Own the facilities _____	<input type="checkbox"/> Operate _____	<input type="checkbox"/> Finance _____
Will there be financial contributions by:	<input type="checkbox"/> Other agencies <input type="checkbox"/> Industry		
Have participating agencies reviewed the:	<input type="checkbox"/> FP scope of study	<input type="checkbox"/> Population projections	<input type="checkbox"/> Service area boundaries
Have agreements been sought between the operating agency and:	<input type="checkbox"/> Participating agencies	<input type="checkbox"/> Other agencies	<input type="checkbox"/> Industry

## HOW MUCH WILL THE ALTERNATIVE COST AT TODAY'S PRICES?

The following figures are estimated costs for construction, operation, and maintenance of the proposed facilities. Dollar amounts reflect today's prices.

Base year for the following estimate of today's prices: (\_\_\_\_)

A. Construction costs estimate		B. Estimated annual operation, maintenance, and maintenance replacement (O, M+R)	
Treatment plant	\$	Labor	\$
Pump stations	\$	Utilities	\$
Interceptor sewers	\$	Materials	\$
Collection sewers	\$	Outside services	\$
On-site systems	\$	Miscellaneous expenses	\$
Land acquisition	\$	Equipment replacement	\$
Other	\$	Other	\$
<b>Total construction costs</b>	<b>\$</b>	<b>Total O, M+R</b>	<b>\$</b>

## HOW WILL THE ALTERNATIVE BE FINANCED?

A. Amount to be borrowed

Total project costs	\$
Less grant amount	\$
Less contributions by the community	\$
Less contributions by other agencies and/or industry	\$
<b>Amount to be borrowed</b>	<b>\$</b>

**B. Methods of financing existing facilities and wastewater improvements alternative**

Financing Method	Amount Borrowed	Amount to be Borrowed	Interest Rate	Term of Maturity	Annual Debt Service Payment
G.O. Bond(s)*	1. \$ _____ 2. \$ _____ 3. \$ _____	4. \$ _____	1. _____% 2. _____% 3. _____% 4. _____%	1. _____ years 2. _____ years 3. _____ years 4. _____ years	1. \$ _____ 2. \$ _____ 3. \$ _____ 4. \$ _____
Revenue Bond(s)*	1. \$ _____ 2. \$ _____ 3. \$ _____	4. \$ _____	1. _____% 2. _____% 3. _____% 4. _____%	1. _____ years 2. _____ years 3. _____ years 4. _____ years	1. \$ _____ 2. \$ _____ 3. \$ _____ 4. \$ _____
Other Loan(s)*	1. \$ _____ 2. \$ _____ 3. \$ _____	4. \$ _____	1. _____% 2. _____% 3. _____% 4. _____%	1. _____ years 2. _____ years 3. _____ years 4. _____ years	1. \$ _____ 2. \$ _____ 3. \$ _____ 4. \$ _____
<b>Total</b>	\$ _____	\$ _____			\$ _____

\* List each bond and loan separately

**C. What are the existing annual debt service payments for wastewater if any in each year for the next 10 years?**

Existing Facilities Annual Debt Service Payments (USD)	
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____
20__	\$ _____

**D. Total estimated annual wastewater facilities costs**

Total estimated annual wastewater facilities costs (USD)			
	Existing Facilities	Increase for Alternative	Alternative
Annual O, M&R	\$ _____	\$ _____	\$ _____
Annual debt service payment	\$ _____	\$ _____	\$ _____
<b>Total estimated annual wastewater costs</b>	\$ _____	\$ _____	\$ _____

E. Sources of funding for total annual wastewater facilities costs

Sources of funding for total annual wastewater facilities costs (USD)	
Service charges	\$
Surcharge	\$
Special assessments and fees	\$
<i>Betterment assessments</i>	\$
<i>Connection fee</i>	\$
<i>Other</i>	\$
Transfers from other funds	\$
Other	\$
Total funding	\$

**WHAT ARE THE ANNUAL COSTS PER HOUSEHOLD?**

Cost Item (USD)	
Total estimated annual wastewater facility charges	\$
Less nonresidential share of annual charges	\$
Residential share of total annual charges	\$
Number of households	
Annual costs per household for	
<i>Wastewater collection and treatment</i>	\$
<i>Other</i>	\$
Total annual costs per household	\$

**ARE THE RESIDENTIAL COSTS HIGH IN COMPARISON TO MEDIAN HOUSEHOLD INCOME?**

Median Household Income = Median Family Income X 0.854

The median household income must be updated from the last census (either 1999 or 2009 income):

1. Obtain the consumer price index for the year in which the most recent income information is available. For urban communities in the Midwest, the Consumer Price Index (CPI) was 162.7 in the year 1999.
2. Obtain the current CPI and adjust for inflation to the base year for which the total annual cost per household was estimated.
3. Divide #2 by #1 or use the inflation calculator at the following web site to obtain a CPI ratio. [http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)
4. Adjust the median household income census or survey figure by multiplying that value by the CPI ratio found in #3.

Compare the total annual cost per household to the community's median household income (express the cost per household as percentage of the median household income).

Generally, if the total annual cost per household is less than 1.0 percent of the median household income, it is assumed that the project is not expected to impose a substantial economic hardship on households.

## **ANALYSIS OF ABILITY TO PAY**

The answers to the preceding questions will provide useful information regarding the cost of the proposed facility, how it will be financed, and what this means in terms of costs to the typical household user. In order to evaluate effectively the true impact of the proposed wastewater disposal system, however, this information must be viewed within the overall context of the community's financial condition, financial resources, legal constraints, and local public policy.

The guidance document entitled, "Interim Economic Guidance for Water Quality Standards," EPA-823-B-95-002 presents one public sector approach.

Listed below are additional elements relating to a community's overall financial condition and its ability to pay the local costs of constructing and operating the treatment system:

- Reasonableness of population projections relative to historic trends (if new population growth is needed to help finance the proposed system).
- State finance laws and legal debt limits.
- Historical trends in your community's revenue sources (e.g., changes in taxable assessed property valuation with respect to population).
- Current bond rating and its historical trend.
- Median household income in the community as a percentage of statewide household income.
- Families below the poverty level in the community as a percentage of the statewide number of families below the poverty level.
- Per capita outstanding debt of the system as a percentage of median household income.
- Cost effectiveness calculated by determining construction costs per user.

In most cases, total annual per household costs that exceed 2% of the MHI are considered unaffordable. However, the analysis of the other factors listed above must also be considered before a final determination can be made. The factors listed above could make costs above 2% of the MHI affordable and costs below 2% of the MHI unaffordable. For example, if the majority of the factors listed above are positive indicating a stronger financial condition costs above 2% of the MHI could be affordable. Also, if the majority of the factors listed above indicate a weaker financial condition, costs below 2% of the MHI could be considered unaffordable.

The guidance document entitled, "Interim Economic Guidance for Water Quality Standards," EPA-823-B-95-002 presents one approach for private sector facilities to determine the affordability of less degrading options.