City of Port Orford Workshop
At Port Orford City Hall Council Chambers

MEETING AGENDA

Subject: Water Project – Planning Process

Date: April 18, 2019
Time: 2:00 p.m.

Purpose of the Meeting: WATER CONTACT TIME & PLANNING PROCESS

In Attendance:

____ Tim Pogwizd, Mayor
____ Travis Williams, President
____ Pat Cox, Councilor
____ Carolyn LaRoche, Councilor
____ Vacant, Councilor
____ Jim Campbell, Councilor
____ James Garratt, Councilor
____ Terrie Richards, City Admin
____ Duane Eckhoff, Public Works

Meeting Agenda

☐ Hear the issues
☐ How would the Council like to address the project?
☐ Discuss the procedures of the planning process
☐ Create a list of changes/additions
☐ What next?
City of Port Orford

CITY COUNCIL AGENDA DOCUMENTATION

SUBJECT: Water/Sewer Projects

ITEM NO:

Date: 10/17/17

BACKGROUND:

Water: Fiscal year 2016-17 $200,000 was earmarked for meter replacement. Due to a small crew and time the meters were not installed.

At the 2017-18 budget session the Mayor made it very clear the meters will be installed this year. There were questions about grants to do more. At that time we were still waiting for the income survey report that was going to make a big difference on what type of funding would be available to us.

July 18, 2017 we received the approval letter from Business Oregon for the Income Survey – once again we are eligible for the Community Development Block Grants (CDBG).

Water project: I propose to the council total meter replacement that includes adding a meter to City Hall. I will have the crew research and call out any other properties where meters need to be installed for this project. Also Deady Street North and South as called out in the master plan. Even though they are priority 2 projects I feel they should be bumped to priority 1 status due to the calls received by property owners on Deady.

Sewer: Our sewer lift stations are our biggest concern with the age of the motors and small repairs needed more frequently. The Wyoming lift station needs to be upgraded and relocated at some point. With heavy rain and the I&I that has not been addressed the Wyoming lift station cannot always handle the volume which leads to possible overflow that could result in fines.

FISCAL IMPACT:

Unknown until a decision on what the projects will be.

RECOMMENDATION:

Put together the projects the Council wants to see done and apply for funding.

SUBMITTED BY:

Terrie Richards, City Administrator
AGREEMENT (Deady Street Waterline)

THIS AGREEMENT made and entered into this 9th day of April 1986, by and between the CITY OF PORT ORFORD, a political subdivision of Curry County, State of Oregon, hereinafter referred to and designated as CITY, and RICHARD L. Gorman and FRANCES CARRIGNON, hereinafter referred to and designated as OWNERS.

WITNESSETH:

THAT WHEREAS, there is in existence a 2 inch PVC domestic waterline of CITY in and along Deady Street of said CITY between 9th Street and 13th Street, and

WHEREAS, said water pipeline in order to serve prospective dwellings on Deady Street between said 9th Street and 13th Street, requires improvements consisting in part of installation of a larger pump, and additional pressure tanks to provide required water pressure to serve dwellings that will come in to the service of said existing pipeline and OWNERS wish to make said improvements at OWNERS sole cost and expense for labor, materials, engineering, inspection and other fees, and CITY consents and agrees that OWNERS can make said improvements,

NOW THEREFORE, it is understood and agreed as follows:

1. CITY does hereby give consent and permission to OWNERS to install on that existing 2 inch PVC domestic waterline serving the area on Deady Street between 9th Street and 13th Street of the City of Port Orford, Oregon, larger pumps than now are on said line and additional pressure tanks, sufficient and necessary to provide required water pressure to dwellings in the service area of said line.

2. All of such improvements, both labor and material, shall be at OWNERS sole cost and expense and CITY shall have no obligation whatsoever for payment or reimbursement thereof, save and except as set forth hereinafter.

AGREEMENT - Page 1
3. Said waterline improvements shall be designed by a state licensed and qualified engineer and upon construction shall meet State Board of Health requirements of the state of Oregon where applicable.

4. The fee for hooking up to said domestic water pipeline shall be the sum of $1,000.00 and shall be paid to CITY. Of all hookup fees paid to CITY, CITY shall pay to OWNERS 1/2 thereof until OWNERS' actual costs of improvements have been reimbursed or OWNERS have been paid the sum of $1,000.00, whichever sum is less. It is agreed that unreimbursed sum shall not be an obligation of CITY, except to the extent that CITY receives hookup fees. Said cost of improvements for purposes of reimbursement shall bear no interest.

IN WITNESS WHEREOF, CITY has caused these presents to be signed by its authorized representatives, and OWNERS have hereunto set their hands the day and year first above written.

CITY OF PORT ORFORD
a political subdivision of Curry County, Oregon.

By: [Signatures]
Mayor
City Recorder

OWNERS

[Signatures]

STATE OF OREGON,
County of Curry,

BE IT REMEMBERED: That on this 26th day of May, 1986, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named:

Richard L. Goergen

Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year above written.

Notary Public

My Commission expires: July 13, 1986
June 4, 2009

Mr. Mike Murphy
City of Port Orford
PO Box 310
Port Orford, OR 97465

Subject: Deady Street Water System Capacity Analysis

Dear Mike:

We have completed our analysis of the Deady Street Water System following the City's request to determine if sufficient capacity exists to allow one additional hook-up. As discussed below, our analysis shows there is insufficient capacity to allow an additional hook-up without specific equipment being provided to facilitate the service or the City implementing the system upgrade discussed in the past. Our analysis follows:

Existing Conditions
The existing water system is comprised of approximately 1,000 linear feet of 2-inch PVC waterline serving 11 residential connections (one of these connections maintains a day tank for storage and fills the tank using timers to limit usage to off peak hours). The existing booster pump station, a Grundfos 5 Hp multistage turbine pump, provides 42 gpm at 264 feet total dynamic head to lift water into the system. The pump station is located at the intersection of Deady Street and 9th Street, approximately 140 feet lower than the last service at the top of the hill. This pump cycles to maintain an operating pressure at the pump discharge between 90 psig and 110 psig. Suction pressure at the head of the pump is approximately 9 psig, however, during operation, the suction pressure drops to 7 psig.

Demands for the 11 services were estimated based upon the uniform plumbing code (UPC) recommended rules for sizing a water supply system. The UPC methodology assumes a maximum water demand for a small system using water system fixture units (WSFU). Depending upon the appliances and features in a house, the WSFU is estimated to be approximately 20.5 fixture units per household (3-bedroom 2 bath house with kitchen, dishwasher, laundry room, and 3 outdoor hose bibs). Using fixture units, the UPC methodology estimates the maximum water demand for Deady Street at 60 gpm (or 6 gpm per active household).

Analysis of System
Based upon this information, we prepared a detailed water system model to analyze usage on the system for each household at the exact point of usage (the water meter elevations). In order for the water system to have excess capacity, each service meter must be maintained with a minimum supply pressure at 20 psig.

The analysis revealed that during maximum usage, negative pressures (~14 psig) develop in the pipeline at the top of the hill, causing individual homes to reduce water. With this information, we
Mr. Mike Murphy  
Deadly Street Water System Capacity Analysis  
June 4, 2009  
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conclude that the peak domestic demand required by the UPC cannot be met and, therefore, customers will receive less water when their neighbors are also using water. The actual peak usage in the system appears to be limited to 5 gpm per household. During periods of peak demand it is very likely that, customers on the Deadly Street system have dramatically fluctuating pressures and variable rates of water supply. Users at the top of the hill may even run out of water while a lower user is drawing a large volume of water from the system.

To evaluate the impacts from an additional connection, we added a new user to the system near the existing (abandoned) City storage tank. With this additional usage, the problems in the system become more significant. At the UPC peak demand period (6 gpm/household), negative pressures at the top of the hill become significant (negative pressures on the order of -34 psi). Actual demand available to the remaining users also decreases to approximately 3 gpm.

Conclusions  
In summary, we conclude that the Deady Street Water system is at capacity. The addition of one single user to Deady Street will create a 40 percent decline in the already poor service provided by this system. The only way we can envision adding an additional user would be to require a private booster pump with a day tank that only fills at night during periods of minimum usage. (This would not be an ideal situation and may set the wrong precedent). The other alternative is for the City to implement the Deady Street improvement project as outlined in our June 2007 Memorandum.

I hope this information is useful and the City is able to resolve the water supply issues on Deady Street as quickly as possible. Feel free to give me a call should you have any questions.

Regards,

SHN Consulting Engineers & Geologists, Inc.

Steven K. Donovan, P.E.  
Regional Manager

SKD:dkl
Compilation of an environmental report is typically a requirement of government organizations funding infrastructure improvements. The purpose of this environmental report is to consider any adverse effects that the project may have on the surrounding environment and propose mitigation measures to minimize these impacts. The estimated cost for compiling an environmental report for each Phase was included in this CIP.

A brief description of each phase of improvements including recommended improvements, associated costs, and estimated percentage and cost eligibility for improvement system development charges (See Section 8.), is discussed below. Detailed cost estimates for the CIP project are in Appendix F.

8.2.1 Phase I Improvements

Phase I improvements called for in this CIP represent the highest priority projects that require addressing in order to ensure the effective treatment and delivery of water for the City's residents and customers.

Project Descriptions

1. Meters (Total Cost: $200,000)

Comparison of the raw water usage records and metered water use indicate a high percentage of unaccounted-for water within the distribution system. A meter replacement program is proposed to eliminate meter inaccuracies that contribute to the high loss rate. According to City staff many of the meters are over forty years old and had use prior to installation. The meter replacement project includes approximately 500 residential meters, 140 larger commercial meters, and a backflow prevention device for the grade school.

To identify areas with badly deteriorated and leaking pipelines, it is proposed that metering vaults be placed on mains within the distribution system. As shown as part of the proposed improvements in Figure 5.5 four metering vault locations are proposed.

Total construction cost for service meter replacement and installation of distribution system metering is $161,000. The total project budget, including contingency and engineering for the mainline metering vaults is estimated at $200,000.

2. Leakage and Detection Program (Total Cost: $50,000)

The City may wish to perform a preliminary survey of the water treatment plant by an engineer before embarking on this improvement. This preliminary study is estimated to cost from $10,000 to $20,000 for development of a program to detect and repair leaks to reduce the quantity of unaccounted water.

3. Replace Filters and Install Air Scour System for Water Treatment Plant (Total Cost: $719,000)

The water treatment plant is in need of the following: repair floor slab, replace filter media, and install air scour system for the filtration system.

4. Priority 1 Waterline Replacement Improvements (Total Cost: $2,822,605)

Based on input from the City's staff regarding excessive leakage and other high maintenance issues the following waterlines were determined to be of the highest priority for replacement:
A. Lakeshore Drive (a): The existing unknown-size water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of Lakeshore Drive and Hamlet Place. The line will continue west along Lakeshore Drive, in the same location as the existing waterline, to the end of Lakeshore Drive. The total improvement length is approximately 1,550 feet.

B. Hamlet Place: The existing 4-inch water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of Lakeshore Drive and Hamlet Place. The line will continue west along Hamlet Place in the same location as the existing waterline, to the end of Lakeshore Drive. The total improvement length is approximately 2,500 feet.

C. Lakeshore Drive: The existing 4-inch water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of Lakeshore Drive and Pinehurst Drive. The line will continue east along Lakeshore Drive, then along Park Drive in the same location as the existing waterline, to Arizona Street. The total improvement length is approximately 1,260 feet.

D. Wyoming Street: The existing 6-inch water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of Hamlet Place and Wyoming St. The line will continue south along Wyoming St. in the same location as the existing waterline, continuing east along 12th Street to Arizona Street, continuing north along Arizona Street to 12th Street, then east along 13th Street to Oregon Street. The section along 13th Street is a new installation that was requested by the City for serviceability issues. The total improvement length is approximately 2,680 feet.

E. Jackson Street: The existing 6-inch water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of 25th Street and Jackson Street. The line will continue south along Jackson Street, in the same location as the existing waterline, to 18th Street. The total improvement length is approximately 1,960 feet.

F. Ninth Street: The existing 6-inch water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of Arizona Street and 9th Street. The line will continue east along 9th Street, in the same location as the existing waterline, to Jackson Street. The total improvement length is approximately 1,670 feet.

G. Seventh Street: The existing 6-inch water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of Coast Guard Road and 7th Street. The line will continue east along 7th Street, in the same location as the existing waterline, crossing a wooded draw to Oregon Street. The total improvement length is approximately 1,020 feet.

H. Pinehurst Drive: The existing 6-inch water main needs to be replaced due to excessive leakage and other high maintenance issues. The new 6-inch diameter line will begin at the intersection of Arizona Street and Pinehurst Drive. The line will continue east along Pinehurst Drive, in the same location as the existing waterline, to Oregon Street/Highway 101. The total improvement length is approximately 820 feet.
5. **Priority 1 Treated Water Storage Improvements (Total Cost: $1,947,300)**

Based on computer modeling of the City’s water distribution system, fire flows available to certain areas are below those required:

**Deady Street Reservoir:** The abandoned existing treated water reservoir needs to be removed and replaced with a new 0.1 MCG treated water reservoir.

6. **Priority 2 Waterline Replacement Improvements (Total Cost: $3,029,225)**

Based on computer modeling of the City’s water distribution system, fire flows available to certain areas are below those required:

A. **Coast Guard Hill Road:** The existing 6-inch water main needs to be replaced due to inadequate fire flow availability. The new 8-inch diameter line will begin at the intersection of Coast Guard Hill Road and Sweet Way. The line will continue west along Coast Guard Hill Road, in the same location as the existing waterline, to the end of Coast Guard Hill Road. A new pump station and PRV will be installed along Coast Guard Hill Road between Sweet Way and Tichenor Avenue.

   The total improvement length is approximately 1,000 feet.

B. **Deady Street South:** The existing 6-inch water main needs to be replaced due to inadequate fire flow availability. The new 10-inch diameter line will begin at 9th St. and Deady St. The line will continue south along Deady Street, in the same location as the existing waterline, to the end of Deady Street at 6th Street.

   The total improvement length is approximately 700 feet.

C. **Deady Street North:** The existing 2-inch water main needs to be replaced due to inadequate fire flow availability. The new 8-inch diameter line will begin at 9th Street and Deady Street. The line will continue north along Deady Street, in the same location as the existing waterline, to the end of Deady Street. Also a new pump station and PRV station will be installed near Deady Street and 10th Street.

   The total improvement length is approximately 1,000 feet.

D. **Sixth Street/Jefferson/Seventh Street:** The existing 6-inch water main needs to be replaced due to inadequate fire flow availability. The new 8-inch diameter line will begin at 6th Street and Deady Street. The line will continue west along 6th Street, in the same location as the existing waterline, run north along Jefferson Street to 7th Street, then to the intersection of Jackson Street and 7th Street.

   The total improvement length is approximately 1,400 feet.

E. **Jefferson Street Pump Station:** The existing pump station needs to be replaced due to inadequate fire flow availability. The new pump station and PRV station will be constructed near 9th Street and Deady Street.

F. **Dock Road:** The existing 4-inch water main needs to be replaced due to inadequate fire flow availability. The new 8-inch diameter line will begin at 5th Street and Dock Road. The line will continue south along Dock Road, in the same location as the existing waterline, to the end of Dock Road. A new PRV station will be installed approximately 300 feet along Dock Road from 5th Street.

   The total improvement length is approximately 1,800 feet.
Financing of wastewater system improvements by general obligation bonds is usually accomplished by the following procedure:

- Determination of the capital costs required for the improvement,
- An election authorizing the sale of general obligation bonds,
- Following voter approval, the bonds are offered for sale,
- The revenue from the bond sale is used to pay the capital costs associated with the projects.

From a fundraising viewpoint, general obligation bonds are preferable to revenue bonds in matters of simplicity and cost of issuance. Since the bonds are secured by the power to tax, these bonds usually command a lower interest rate than other types of bonds. General obligation bonds lend themselves readily to competitive public sale at a reasonable interest rate because of their high degree of security, their tax-exempt status, and their general acceptance.

These bonds can be revenue-supported, wherein a portion of the user fee is pledged toward payment of the debt service. Using this method, the need to collect additional property taxes to retire the obligated bonds is eliminated. Such revenue-supported general obligation bonds have most of the advantages of revenue bonds, but also maintain the lower interest rate and ready marketability of general obligation bonds. Because the users of the water system pay their share of the debt load based on their water usage rates, the share of that debt is distributed in a fair and equitable manner.

Advantages of general obligation bonds over other types of bonds include:

- The laws authorizing general obligation bonds are less restrictive than those governing other types of bonds.
- By the levying of taxes, the debt is repaid by all property benefited and not just the system users.
- Taxes paid in the retirement of these bonds are IRS-deductible.
- General obligation bonds offer flexibility to retire the bonds by tax levy and/or user charge revenue.

The disadvantage of general obligation bond debt is that it is often added to the debt ratios of the underlying municipality, thereby restricting the flexibility of the municipality to issue debt for other purposes. Furthermore, general obligation bonds are normally associated with the financing of facilities that benefit an entire community and must be approved by a majority vote and often necessitate extensive public information programs. A majority vote often requires waiting for a general election in order to obtain an adequate voter turnout. Waiting for a general election may take years, and too often a project needs to be undertaken in a much shorter amount of time.

9.2.2 Revenue Bonds

Revenue bonds offer some advantages over general obligation bonds and are becoming a more frequently used option. Revenue bonds are payable solely from charges made for the services provided. These bonds cannot be paid from tax levies or special assessments; their only security is the borrower's promise
to operate the system in a way that will provide sufficient net revenue to meet the debt service and other obligations of the bond issue.

Many communities prefer revenue bonding, as opposed to general obligation bonding, because it insures that no tax will be levied. In addition, debt obligation will be limited to system users since repayment is derived from user fees. Another advantage of revenue bonds is that they do not count against a municipality's direct debt, but instead are considered "overlapping debt." This feature can be a crucial advantage for a municipality near its debt limit or for the rating agencies, which consider very closely the amount of direct debt when assigning credit ratings. Revenue bonds also may be used in financing projects extending beyond normal municipal boundaries. These bonds may be supported by a pledge of revenues received in any legitimate and ongoing area of operation, within or outside the geographical boundaries of the issuer.

Successful issuance of revenue bonds depends on the bond market evaluation of the revenue pledged. Revenue bonds are most commonly retired with revenue from user fees. Recent legislation has eliminated the requirement that the revenues pledged to bond payment have a direct relationship to the services financed by revenue bonds. Revenue bonds may be paid with all or any portion of revenues derived by a public body or any other legally available monies. In addition, if additional security to finance revenue bonds is needed, a public body may mortgage grant security and interests in facilities, projects, utilities or systems owned or operated by a public body. Normally, there are no legal limitations on the amount of revenue bonds to be issued, but excessive issue amounts are generally unattractive to bond buyers because they represent high investment risks. In rating revenue bonds, buyers consider the economic justification for the project, reputation of the borrower, methods and effectiveness for billing and collecting, rate structures, provision for rate increases as needed to meet debt service requirements, track record in obtaining rate increases historically, adequacy of reserve funds provided in the bond documents, supporting covenants to protect projected revenues, and the degree to which forecasts of net revenues are considered sound and economical.

Municipalities may elect to issue revenue bonds for revenue-producing facilities without a vote of the electorate (ORS 288.805-288.945). In this case, certain notice and posting requirements must be met and a 60-day waiting period is mandatory. A petition signed by 5% of the municipality's registered voters may cause the issue to be referred to an election.

9.2.3 Improvement Bonds

Improvement (Bancroft) bonds can be issued under an Oregon law called the Bancroft Act. The bonds are an intermediate form of financing that is less than full-fledged G.O. or revenue bonds, but is quite useful especially for smaller issuers or for limited purposes.

An improvement bond is payable only from the receipts of special benefit assessments, not from general tax revenues. Such bonds are issued only where certain properties are recipients of special benefits not occurring to other properties. For a specific improvement, all property within the improvement area is assessed on an equal basis, regardless of whether it is developed or undeveloped. The assessment is designed to apportion the cost of improvements, approximately in proportion to the afforded direct or indirect benefits, among the benefited property owners. This assessment becomes a direct lien against the property, and owners have the option of either paying the assessment in cash or applying for improvement bonds. If the improvement bond option is taken, the city sells Bancroft improvement bonds to finance the construction, and the assessment is paid over 20 years in 40 semi-annual installments with interest. Cities and special districts are limited to improvement bonds not exceeding three percent of true cash value.
With improvement bond financing, an improvement district is formed, the boundaries are established, and the benefited properties and property owners are determined. The engineer usually determines an approximate assessment, either on a square foot or a front-foot basis. Property owners are then given an opportunity to object to the project assessments. The assessments against the properties are usually not levied until the actual cost of the project is determined. Since this determination is normally not possible until the project is completed, funds are not available from assessments for the purpose of making monthly payments to the contractor. Therefore, some method of interim financing must be arranged, or a pre-assessment program, based on the estimated total costs, must be adopted. Commonly, warrants are issued to cover debts, with the warrants to be paid when the project is complete.

The primary disadvantage to this source of revenue is that the property to be assessed must have a true cash value at least equal to 50 percent of the total assessments to be levied. As a result, owners of undeveloped property usually require a substantial cash payment. In addition, the development of an assessment district is very cumbersome and expensive when facilities for an entire community are contemplated. In comparison, G.O. bonds can be issued in lieu of improvement bonds, and are usually more favorable.

9.2.4 Capital Construction (Sinking) Fund

Sinking funds are often established by budget for a particular construction purpose. Budgeted amounts from each annual budget are carried in a sinking fund until sufficient revenues are available for the needed project. Such funds can also be developed with revenue derived from system development charges or serial levies.

A City may wish to develop sinking funds for each sector of the public services. This fund can be used to rehabilitate or maintain existing infrastructure, construct new infrastructure elements, or to obtain grant and loan funding for larger projects.

The disadvantage of a sinking fund is that it is usually too small to undertake any significant projects. Also, setting aside money generated from user fees without a designated and specified need is not generally accepted in municipal or public utility budgeting processes.

9.2.5 Connection Fees

Most cities charge connection fees to cover the cost of connecting new development to water systems. Based on recent legislation, connection fees can no longer be programmed to cover a portion of capital improvement costs.

9.2.6 System Development Charges

A system development charge (SDC) is essentially a fee collected as each piece of property is developed, and which is used to finance the necessary capital improvements and municipal services required by the development. Such a fee can only be used to recover the capital costs of infrastructure. Operating, maintenance, and replacement costs cannot be financed through system development charges. Two types of charges are permitted under the Oregon Systems Development Charges Act, improvement fees and reimbursement fees. SDCs charged before construction are considered improvement fees and are used to finance capital improvements to be constructed. After construction, SDCs are considered reimbursement fees and are collected to recapture the costs associated with capital improvements already constructed or under construction. A reimbursement fee represents a charge for utilizing excess capacity in an existing facility paid for by others. The revenue generated by this fee is typically used to pay back existing loans for improvements.
Under the Oregon SDC Act, methodologies for deriving improvement and reimbursement fees must be documented and available for review by the public. A capital improvement plan must also be prepared which lists the capital improvements that may be funded with improvement fee revenues, and the estimated cost and timing of each improvement. Thus, revenue from the collection of SDCs can only be used to finance specific items listed in a capital improvement plan. In addition, SDCs cannot be assessed on portions of the project paid for with grant funding.

9.2.7 Local Improvement District (LID)

Improvement bonds issued for local improvement districts (LIDs) are used to administer special assessments for financing local improvements in cities, counties, and some special districts. Common improvements financed through an LID include storm and sanitary sewers, street paving, curbs, sidewalks, water mains, recreational facilities, street lighting, and off-street parking. The basic principle of special assessment is that it is a charge imposed upon property owners who receive special benefits from an improvement beyond the general benefits received by all citizens in the community. A public agency should consider three “principles of benefit” when deciding to use special assessment: 1) direct service, 2) obligation to others, and 3) equal sharing/basis. Cities are limited to improvement bonds not exceeding three percent of true cash value.

The Oregon Legislature has provided cities with a procedure for special assessment financing (ORS 223.387-399), which applies when city charter or ordinance provisions do not specify otherwise. To establish an LID, an improvement district is formed, the boundaries are established, and the benefited properties and property owners are determined. An approximate assessment to each property is determined based on the above three principles of benefit, and is documented in a written report. Property owners are then given an opportunity to object to the project assessments. The assessments against the properties are usually not levied until the actual cost of the project is determined. Since this determination is normally not possible until the project is completed, funds are not available from assessments for the purpose of making monthly payments to the contractor. Therefore, some method of interim financing must be arranged based on the estimated total costs.

The primary disadvantage to this source of revenue is that the property to be assessed must have a true cash value at least equal to 50 percent of the total assessments to be levied. As a result, owners of undeveloped property usually require a substantial cash payment. In addition, the development of an assessment district is very cumbersome and expensive.

9.2.8 Ad Valorem Taxes

Ad valorem property taxes are often used as a revenue source for utility improvements. Property taxes may be levied on real estate, personal property or both. Historically, ad valorem taxes were the traditional means of obtaining revenue to support all local governmental functions.

A marked advantage of these taxes is the simplicity of the system; it requires no monitoring program for developing charges, additional accounting and billing work is minimal, and default on payments is rare. In addition, ad valorem taxation provides a means of financing that reaches all property owners that benefit from a system, whether a property is developed or not. The construction costs for the project are shared proportionally among all property owners based on the assessed value of each property.

Ad valorem taxation, however, is less likely to result in individual users paying their proportionate share of the costs as compared to their benefits.
9.2.9 User Fees

User fees can be used to retire general obligation bonds and are commonly the sole source of revenue to retire revenue bonds and to finance operation and maintenance costs. User fees represent monthly charges to all residences, businesses, and other users that are connected to the wastewater system. These fees are established by resolution and can be modified, as needed, to account for increased or decreased operating and maintenance costs. The monthly charges are usually based on the class of user (e.g., single family dwelling, multiple family dwelling, schools, etc.) and the quantity of water through a user's connection.

9.2.10 Assessments

Under special circumstances, the beneficiary of a public works improvement may be assessed for the cost of a project. For example, the city may provide some improvements or services that directly benefit a particular development. The city may choose to assess the industrial or commercial developer to provide up-front capital to pay for the administered improvements.

9.3 Financing Strategy

A financing strategy or plan must provide a mechanism to generate capital funds in sufficient amounts to pay for the proposed improvements over the relatively short duration in design and construction, generally two years. The financing strategy must also identify the manner in which annual revenue will be generated to cover the expense for long-term debt repayment and the on-going operation and maintenance of the system. The objectives of a financial strategy include the following:

- Identify the capital improvement cost for the project and the estimated expense for operation and maintenance.
- Evaluate the potential funding sources and select the most viable program.
- Determine the availability of outside funding sources and identify the local cost share.
- Determine the cost to system users to finance the local share and the annual cost for operation and maintenance.

With any of the proposed funding sources within the financial strategy, the City is advised to confirm specific funding amounts with the appropriate funding agencies prior to making local financing arrangements.

Proposed Financing Plan

A financial strategy to address financing of the Phase I Improvements within the Capital Improvement Plan is discussed below.

Low Interest Loans

Four types or programs of project funding were identified as viable for funding the City's proposed Phase I improvements: 1) Rural Development Rural Water and Waste Disposal Grants and Loans; 2) Infrastructure Finance Authority Water/Wastewater Financing Program; 3) Drinking Water State Revolving Fund; and 4) Private Financing. Based on these funding programs, four alternative funding packages were compiled and evaluated. A summary of the funding alternatives for these improvements is given in Table 9.3.1.