



Sewer Rates and Financial Plan

June 2009



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Town of Skykomish Sewer Rates and Financial Plan

This report has been prepared to document the analysis and recommendations prepared by CHS Engineers, LLC for the Town of Skykomish, in support of the Town's preparations to complete construction of and begin operation of a public sewer system. The findings and recommendations herein are respectfully presented to the Mayor in support of Town Resolution No. 219.

CHS acknowledges and thanks the following persons for their contributions to completion of this analysis:

Charlotte Mackner	Mayor
Michael Janasz and Harry Sladek	Town Council
Ann Sekor and Gary West	Sewer Advisory Committee
Christina Yates	Clerk/Treasurer
Steve Lerner and Rachel Very-Lerner	Public Works
Clint Stanovsky	Community Technical Advisor
Harry Sellers	Gray & Osborne
David Power and David Carson	Carson Law Group
Ken Ziebart	Department of Ecology

1. Authorization and Scope of Work

1.1. **Authorization** - The Town Council of Skykomish Washington, in their Resolution No. 219, directed the Mayor to prepare a sewer utility ordinance and sewer rate schedule for the soon-to-be completed new community sewer system. Following a solicitation for proposals, the Town approved the proposal from CHS Engineers, LLC in February, 2009. CHS Engineers was issued a "Notice to Proceed" by the Town of Skykomish on February 25, 2009, for the Sewer Rates and Financial Plan for the Town's Sewer Utility.

1.2. **Scope of Work** - The scope for this project includes the following eleven items:

- Revenue Sources – identify existing and potential revenue sources for capital and operation and maintenance requirements.
- Sewer Revenue Requirements – identify the initial and on-going costs of operating and maintaining the sewer system.

- Financial Policies – develop financial policies for operation of the sewer utility
- Ratepayer Base – determine the anticipated sewer customer base
- Capital Improvements – identify future capital improvements and corresponding funding plan
- Connection charges – develop a methodology and recommended charge for new sewer system connections.
- Sewer Rates – develop recommended sewer rates with forecasts for six, ten and twenty years.
- Financial Plan – develop a spreadsheet model to include anticipated revenue, expenses, debt service, capital program and reserves, including forecasts for six, ten and twenty years.
- Workshop/Public Meetings – conduct two workshops with the Council and public to present draft and final recommendations.
- Rate Study Report – prepare report to document the results of the above-described tasks.
- Support for draft ordinances – prepare draft ordinance for sewer utility.

1.3. **Resolution 219** – This Town resolution (see Appendix A) requires the Mayor to consider the following policies:

- The system should be developed for the benefit of the entire Town (Phases I, II and III as defined in the *General Sewer and Facilities Plan*).
- The system should be developed consistent with the schedule of the Final Cleanup Action Plan for the BNSF Railway Former Fueling and Maintenance Facility at Skykomish, as established under the provisions of the Washington Model Toxics Control Act (hereafter, “the MTCA Cleanup”)
- Funds from the State Toxics Cleanup Fund will be used to construct only Common facilities, STEP/STEG tanks and collection pipelines in the Phase I and Phase II areas. Common facilities are the community lift station, the wastewater conveyance pipeline, the wastewater treatment plant, the effluent conveyance pipeline, the drainfield disposal facility, and all appurtenances to those facilities. The completion of Phase III will be dependent upon acquisition of appropriate funding.
- Any capital funding required in addition to the State Toxics Cleanup fund grant and NRD funds should be obtained as advantageously as possible.
- Existing buildings in Phase I and II will receive free sewer hookups (including STEP/STEG tanks and related equipment) consistent with the Consent Decree and according to the MTCA Cleanup schedule, to the extent that grant money or other funding is available to the Town.

- Consistent with requirements set forth in the Consent Decree, within the BNSF cleanup area, Toxics Cleanup Fund and/or NRD funds for sewer system development will not be available for onsite improvements to properties whose owners do not grant full access for the MTCA Cleanup.
- Commercial, institutional or industrial wastewater generators will pay the cost of any required pre-treatment equipment and operations (e.g., grease traps) for their building.
- Sewer assessments will be mandatory for all existing and future buildings in the Town (whether or not they are connected to the system), once sewer lines have been constructed and are operational in the adjacent right-of-way.
- Very low-income users may receive rate relief; the cost of such subsidy should be shared equitably by all other system users.

2. Background

2.1. **New Sewers** – As the Town celebrates its 100th anniversary in 2009, the community is preparing for completion of a completely new public sewer system. The Town has been very successful in securing funds from state and federal agencies to improve public health in the community. A significant portion of the funds are associated with payments to cleanup groundwater and soil contaminated by railroad operations in the immediate area.

2.2. **Utility System Rates** – Publicly-owned sewer systems throughout the state and country typically are operated as separate enterprise funds, which means that the users of the sewer system provide most or all of the funding to install, operate and maintain the system. The sewer system is typically established as a separate utility, with specific policies and standards and separate financial matters. Capital costs are borne by the users of the system through a combination of connection charges and potentially as an element of the periodic service charges. Operation and maintenance costs are borne by users through periodic service charges.

CHS has approached this scope of work in the context of establishing a Town sewer utility, to be viable and self-supporting based on revenue secured by the Town for system implementation and based on monthly service charges to be paid by all users of the system, and a connection charge to recover a share of the capital cost of the system from future connections to the system.

2.3. **General Sewer and Facilities Plan** - The *General Sewer and Facilities Plan*, August 2007, (the Plan) has been prepared for and adopted by the Town of Skykomish and approved by the State Department of Ecology (DOE) to meet regulatory planning requirements and to provide an executable strategy for providing centralized system for wastewater collection, treatment and disposal. The Town is currently undergoing cleanup of the release of petroleum and other industrial pollutants into the ground in and around the Burlington Northern Santa Fe (BNSF) railroad facilities. The Town recognized that the current cleanup sponsored by BNSF and DOE provides a one-time, unique opportunity to accomplish the longstanding goal of establishing a centralized wastewater collection and treatment system. The Plan provides an analysis for the development of centralized sanitary sewer system alternatives based on three phases of implementation.

Phase I include the properties located within the mapped toxics clean-up area. Phase II includes all other properties south of the Skykomish River within the Town limits. Phase III includes all commercial and residential habitable structures north of the river in Sky View Lane and the river crossing. The STEP/STEG (septic tanks-effluent pumped/septic tanks-effluent gravity) collection system and recirculating gravel filter (RGF) treatment alternative with a disposal to ground alternative were the preferred alternatives.

Total project costs (construction, engineering and construction management) and annual operation and maintenance costs for the three phases of the wastewater collection and treatment project were estimated as follows:

<u>Construction Project costs</u>		<u>Operation & Maintenance Annual Costs</u>	
Phase I:	\$ 3,836,988	Phase I:	\$ 62,794
Phase I & II:	\$ 6,568,555	Phase I & II:	\$ 94,484
Phase I - III:	\$ 7,249,783	Phase I – III:	\$100,656

The number of equivalent residential units (ERUs) associated with each phase and the corresponding estimated monthly operation and maintenance (O&M) cost per ERU were estimated in the Plan as follows:

	Number of ERUs	Monthly O&M	Timing
Phase I	72	\$ 72.68	2008-2009

Phases I & II	173	\$ 45.51	2008-2009
Phases I – III	198	\$ 42.36	2010-2011

Assuming the newly-renovated Town was to become more attractive to outside residents, the population has been forecast to grow at 1.6 percent annually for the next twenty years. The future permanent and seasonal population as estimated in the Plan is shown in the following table:

	Existing	2016	2026
Permanent	210	250	290
Seasonal	80	94	107
Total	290	344	397

At the time of preparation of the Plan, there were approximately 150 residential units within the Town limits, five houses that had been temporarily moved for the cleanup work, six vacant and/or uninhabited structures, and eight single-family residences outside the city limits but along the East Cascade Highway. There were approximately 24 commercial units within the Town. Most can be served by sewer in the same manner as a single-family residential unit due to water use patterns. The following properties will likely require higher-capacity sewer service facilities:

- Sky River Inn and Office
- Whistling Post Tavern
- Cascadia Inn
- School District (Grade School)
- Josh Apartments (Multi-family)
- SR2 Chevron

2.4. **Capital Funding To Date** – Concurrent with and following completion of the Plan, the Mayor, Council, staff and consultants have been very successful in obtaining funding for construction and support of the initial operation and maintenance activities for this new system. The sources, amounts and timing of capital funding sources is summarized as follows (all are grants with the exception of the SRF loan, see Appendix B):

<u>Funding Source</u>	<u>Amount</u>	<u>Year</u>
Washington Toxics Cleanup Account	\$6,000,000	2006
Community Development Block Grant surplus	\$38,000	2006
Natural Resources Damages Settlement	\$700,000 ¹	2009
Community Development Block Grant	\$575,400	2009
DOE NWRO Grant - flagging	\$18,773	2009

DOE NWRO Grant – rate and financial study	\$25,000	2009
Washington Toxics Clean up Grant	\$1,300,000 ²	2009
State Revolving Fund (SRF) Loan	\$500,000 ³	2009
Total (including SRF Loan and NRD funds)	\$9,157,173	

¹ Capital costs share only, not including interest accrued prior to release of funds to the Town. The Town must notify DOE prior to use of these funds.

² Included in the Governor’s 2009 budget.

³ Submitted March 2009, approved, may be secured in lieu of using NRD funds for Phases I and II, as NRD funds may be used for Phase III, whereas SRF funds are dedicated to Phases I and II.

2.5. **Operation and Maintenance (O&M) Funding To Date** – The NRD Settlement included an additional \$800,000 (not including interest accrued prior to release of the funds to the Town) for the Town’s use “...exclusively for operation and maintenance of the Town’s wastewater system pursuant to the plan.” The Town must provide specific notifications to DOE prior to use of these funds, and identify supporting ordinances, rate structures and projected fund usage.

2.6. **Construction Schedule** - Construction started on the wastewater treatment plant, drainfield and main conveyance piping in 2008 and completion is anticipated for late summer 2009. Construction has begun on Phases I and II of the collection system with completion of one lift station and the rail yard crossing in 2008 and the collection system will be completed in the summer and fall of 2009. Construction of Phase III is generally planned for 2011.

3. Revenue Sources

3.1. **Capital Funding** - The capital funding summarized in Section 2.4 is available or in-hand as of June, 2009, with the exception of the 2009 Toxics Cleanup Account funds and the SRF loan. The toxics cleanup funds are pending approval by the Governor following the 2009 legislative session. The SRF loan has been approved by DOE but the Town has a few months to determine if they will enter into that loan agreement.

Two future sources of revenue have been identified for funding future capital improvement activities of the sewer utility:

- Connection Charge – a sewer connection charge has been calculated to charge future connections an equitable share of the cost of the system

benefitting their project or property. The determination of the charge is discussed below.

- Fund Interest – the capital fund balances should be invested in interest-bearing accounts and the interest generated therein should be returned to the fund.

3.2. **O&M Funding** – Four sources of revenue have been identified for funding the O&M activities of the sewer utility:

- NRD Settlement Funds – As noted above, \$800,000 plus interest is available as an initial balance and to subsidize O&M revenue for the Town’s sewer utility. This is a one-time source of funds but interest earnings and careful management of this source will allow its benefit to serve the utility for many years.
- Fund Interest – the O&M fund balances should be invested in interest-bearing accounts and the interest generated therein should be returned to the fund.
- Sewer Service Rates – The primary revenue source for O&M funding should be monthly sewer service charges, levied to all customers connected to the sewer system. The development of the rate and rate structure is described below.
- Miscellaneous Charges – as described in the sewer utility ordinances referenced below, nominal fees and/or administrative charges are recommended for various activities related to the sewer system (e.g. permit fees, capping fee, late charges, etc.).

4. Revenue Requirements

4.1. **Estimated Revenue Requirements** – To determine the revenue requirements for the recommended capital fund and O&M fund, the activities to be supported by each fund must be determined, whether by correlation with the Town’s experience with their water utility, the experience of similar small sewer utilities, or estimates for activities unique to the system planned for Skykomish. For each fund, the determination of anticipated expenses is the basis for the respective fund’s revenue requirements, in the context of a self-supporting utility and funds.

4.2. **Capital Expenses** – The facilities that have been or will be constructed as part of Phases I and II are anticipated to cost a total of \$8,454,962 (see Appendix B). Phase III is forecast to cost approximately \$768,126. Other future capital facilities recommended for the sewer utility are a service truck with an estimated cost of

\$10,000 (2009) and an allowance for future update of the Plan in the amount of \$15,000 (2016). Looking beyond 10 years the Town should plan to replace the sewer utility vehicles on a 10-year cycle and prepare for significant rehabilitation of the sewer pump stations at their 20-year life.

With the exception of Phase III, where capital expenses are planned in future years in the financial model discussed below, the cost at the time of implementation is estimated based on present cost plus inflation through the time of project initiation.

4.3. **O&M Expenses** – Anticipated O&M expenses are identified in several categories summarized as follows and shown in detail in the financial model presented in Appendix C:

- *Direct Operation and Maintenance Expenses* - Annual operation and maintenance expenses were estimated from a variety of sources: input from the Town Staff, as reported in the Plan, quotes from vendors and estimates based on experience. Annual expenses for the Sewer Utility staff were assumed to begin as of July 1, 2009. All other costs were expected to begin in October 2009. These expenses include salaries and benefits, power and other utilities, chemicals and treatment, monitoring, materials, supplies and parts, vehicle expenses and miscellaneous direct expenses. The total estimated direct O&M expense is \$75,806 for the first full year of operation (2010).
- *General and Administration Expenses* - Annual general and administrative expenses were estimated from the same sources as for the O&M expenses. Given that the Town will now operate another utility, expenses associated with the Town Hall such as cleaning, copying, heating etc will be shared at a rate of one-third with the water utility and general town expenses.¹ These expenses include salaries and benefits, office supplies and postage, insurance, professional services, and miscellaneous fees and expenses, all as attributable to the sewer utility. The total estimated general and administrative expense for 2010 is \$31,078.
- *Debt Service/Transfer to Capital Fund* - At the time of this report, the Town did not have any debt service. However, the Town is considering, and CHS recommends, securing an already-approved SRF loan in the amount of approximately \$600,000 with a 20-year term at an annual interest rate of 2.9%. A portion of the O&M revenue requirement could be to support debt service on this loan by way of programmed transfer from the O&M fund to the capital fund. The financial model as presented does not include this debt service specifically but does assume that, beginning in

¹ CHS has not evaluated the corresponding benefit this may have on the water utility or general fund.

2013 (i.e. following completion of Phase III), an amount equal to approximately 0.35 percent of the sewer utility plant-in-service (including additional facilities as they are built) will be transferred from the O&M fund to the capital fund, to support future capital fund expenditures for repair and replacement and debt service. The estimated annual transfer, beginning in 2012, is \$29,592.

- *Taxes* – Taxes on sewer utility revenue will be due to the State Department of Revenue quarterly and are based on total sewer utility revenue. There are two components to the tax – a utility tax on all revenue at one tax rate and a business and operation tax on connection charge revenue at a different rate. The estimated total tax due in 2010 is \$814.
- *Total* – the total estimated O&M expenses and revenue requirement is \$107,698 for 2010.

O&M expenses have been estimated for 2009 and 2010. For forecasting purposes, those costs have been increased annually by an assumed rate of inflation.

4.4. **Reserve Funds** – In addition to the regular activities of a sewer utility, some allowance should be made for unanticipated financial circumstances. While the entire system will be brand new, there are mechanical and electrical components that may malfunction unexpectedly, natural disasters may impact the system, or the estimates used for determining revenue requirements may be understated. Therefore a minimum balance or reserve amount should be established to allow the Town to address unforeseen events impacting the sewer utility without relying on the general fund or other resources. Several potential events were considered and other utilities were consulted to determine a reasonable amount for a reserve fund or minimum balance, generally as follows:

- Replacement of major system components – the most significant operating elements in the system are pumps at the WWTP or pumps stations, with an estimated value of under \$30,000 each.
- Assume WWTP shut down for 48 hours. During the shut down, it is expected that a wastewater hauling vendor would be standing by with a pumper truck to remove sewage from the plant. The estimated impact of this event could be a few to several tens of thousands of dollars.
- Insurance deductible payment is estimated at \$50,000.
- One year of O&M revenue requirement is approximately \$100,000.

Based on review of the above examples with the Mayor and Sewer Advisory Committee, a minimum balance of \$75,000 is recommended in the O&M fund, as a

reserve. This value should be reviewed periodically and increased to keep pace with the cost of inflation.

5. Financial Policies

5.1. **Sewer Utility** – It is recommended that the Town establish a self-supporting Sewer Utility, separate from the Water Utility, to function as a separate enterprise for provision of sewer service to the Town’s sewer customers. An ordinance and two new sections for the Skykomish Municipal Code have been prepared to implement and govern the utility and activities therein, as presented in Appendix D. The code sections have been prepared to be the same as or similar to the current Town water utility requirements to the extent relevant and feasible. All properties with existing development should be connected to the sewer system, with limited exception as provided in the proposed code. All future development should be required to connect to the sewer system.

5.2. **Capital Funds** – The proposed code update recommends establishing a separate sewer capital fund, to support sewer system capital financial activities. Capital expenses are defined as those with a value of over \$5,000 and a useful life of two or more years. Capital funds shall be used to the broadest extent possible for the sewer utility, subject to the constraints of specific funding sources. Long-term debt shall only be used to finance projects under certain conditions, when approved by the Council. The capital fund shall be used to pay for capital projects including capital repair and replacement work, and shall be used for debt service payments. Connection charge revenue shall be deposited to the capital fund and interest earned by the capital fund shall be returned to this fund.

Based on the policies identified in Resolution No. 219 and the success in securing grant funds for most of the project cost of Phases I, II and III, property owners with existing structures ready for sewer service (i.e. those that have an active and current water account) will have the opportunity to connect to the system without having to pay a connection charge or having to bear the cost for the STEP/STEG system on their property. To be eligible for this benefit, property owners must complete their application for service by the initial commitment deadline for the appropriate phase of the improvements.

5.3. **O&M Funds** – The proposed code update recommends establishing a separate sewer O&M fund, to support sewer system O&M financial activities. O&M funds shall be used to the broadest extent possible for the sewer utility, subject to

the constraints of specific funding sources. All ERUs connected to the sewer system shall be considered as receiving essentially the same benefit from the system, without regard to variations in flow (other than as accounted for in the definition of one ERU) or strength of wastewater, or regular or seasonal use of the structure connected to the sewer system. The O&M fund shall be used to pay for direct sewer system O&M expenses, Town general and administration expenses attributed to the sewer utility, debt service/transfer to capital, sewer utility taxes and related expenses. Sewer service charge revenue and related fees and charges shall be deposited to the O&M fund and interest earned by the capital fund shall be returned to this fund. The O&M fund shall include a sub-account as an O&M reserve fund, with a minimum balance of \$75,000, for emergency appropriation at the discretion of the Town Council.

5.4. **Sewer Service Charges** – A monthly sewer service charges should be established per ERU connected to the sewer system. Additional discussion of the determination of the charge is presented below. The financial model should be used annually to confirm the rate is appropriate to maintain the minimum O&M reserve and meet other obligations of the sewer utility in a self-supporting fashion. Service charges shall be billed monthly with the Town water and garbage collection bills, and such charges shall be the responsibility of the property owner, whether or not the property owner resides at the service address. The Town may discontinue sewer service to the property for non-payment of sewer or water service charges.

With the understanding that funds were available to subsidize O&M expenses for a time and considering the monthly charges for similar-sized communities in Western Washington, the Sewer Advisory Committee concluded that a monthly rate of \$39 was a reasonable target for an initial sewer service charge. Communication with the King County Housing Authority reveals that public assistance programs include an allowance for sewer services of about \$34 per month and service charges for other communities range from the \$30s to the \$50s.

Resolution No. 219 included a policy that “Sewer assessments will be mandatory for all existing and future buildings in the Town (whether or not they are connected to the system).…” If the meaning of “sewer assessments” is the same as the monthly service charges described herein, we recommend not enforcing that policy as it appears to be contrary to case law. We understand there are a number of legal cases in Washington that resulted in the courts finding that municipal sewer and water service providers don’t have authority to charge undeveloped lots for service, because such charge would be an unconstitutional tax.

Resolution No. 219 also directs consideration of rate relief for low-income sewer system customers, with the subsidy shared by all other users. A low-income discount was evaluated using the financial model to understand the benefit and impact of various discount levels and impacts on the regular service charge. A questionnaire was posted on the Town website regarding the income levels of potential sewer customers and only a few responses were returned.

A potential scenario was considered for understanding of the impact to low-income and other ratepayers, with the ratepayers and not the O&M fund subsidizing the low-income ratepayers. The amount of discount was assumed to be 15% off a \$39.00 per month charge, resulting in a low-income rate of \$33.15. If 25% of the customers qualified as low income, the other ratepayers' monthly charges would need to increase from \$39.00 to \$40.95.

Based on the challenge of determining qualifications, the benefit of the NRD Settlement funds for all customers, and discussion with the Sewer Advisory Committee, a low-income rate discount is not recommended at this time. The financial model is still formatted to review this in the future.

6. Ratepayer Base

6.1. **Ratepayer Definitions and Equivalency** – Costs incurred by the sewer utility can be related to flow rate and/or volume and sewage strength. Taken to the extreme, each customer could be charged directly in proportion to their sewer flow rate and strength. However two issues suggest a more basic approach. Most of the O&M costs are fixed costs, independent of the rate or strength of flow from each customer. Additionally the cost to measure each customer's flow and strength would be very significant and administratively burdensome. Therefore sewer rates are developed for similar classes of customer, avoiding the need to monitor actual flow and strength. This approach assumes, on average, that each member of the customer class has, more or less, the same benefit from and impact on the sewer system.

For the Town, the primary customer class will be single-family residential connections. The only other customer class in this small community is non-residential, mostly commercial properties. To determine an appropriate monthly charge for non-residential properties, service charges could be determined for specific customer types, or customer types could be defined in terms of an equivalent residential unit. The basis for determining equivalency could be water

meter size, number of plumbing fixture units, square footage of building or property or other tangible methods. Based on discussion with the Sewer Advisory Committee, we recommend defining an ERU on the basis of water use for single-family residential water customers within the Town for water use for the November thru April period each year. A baseline water use value is determined for the period typically associated with very limited outdoor water use, and the value expressed as gallons/ERU. The non-residential customers' water use for the same period is determined from monthly billing records. The actual water use is then divided by the baseline for single-family residential customers to determine the number of ERUs for each non-residential customer. The result is rounded down to the nearest one-half ERU but in no case would it be less than one. This should be done annually to capture any changes in water use from year to year. Following this approach, all customers can be counted by ERUs and billed the sewer service rate per ERU.

6.2. Rate of Connections - In preparing for Phases I and II of this project, the system design engineer contacted each of the property owners to determine site specific plans for connection to the utility. The engineer visited a total of 120 properties. The Sky River Inn and Motel will not be reconnecting with the other customers in Phase I as a substantial remodel is expected to occur. It is not known when it will reconnect and is not included in any specific year. Phase III is expected to begin design in 2010 with construction and connections expected in 2011.

For purposes of forecasting capital and O&M fund revenue, the following pattern of connections was used in the financial model:

For Phases I and II, 144 ERUs were assumed to connect in 2010. The ERUs would increase linearly from 144 ERUs in 2010 to 2029 or approximately two ERUs per year until the total reaches 173 ERUs.

For Phase III, 15 ERUs were assumed to connect in 2011 out of an anticipated 25 ERUs. The ERUs are forecast to increase linearly from 15 ERUs in 2012 to 2029 or approximately one ERU ever year until the anticipated 25 are connected.

There are possibly approximately 78 additional ERUs based on the availability of existing lots and developable land within the Town. After much discussion with the Sewer Advisory Committee, the conservative forecast for financial planning purposes assumes that only 47 ERUs will connect over the planning period. Therefore, the Town will begin with an initial 144 ERUs after the first two phases of the project and sewer connections are anticipated to increase to a total of 247 ERUs in 2029.

7. Capital Improvements

7.1. **Capital Improvements** – The sewer system capital improvements consist of work in three phases. The first two phases are essentially combined to include the WWTP, drainfield and conveyance piping presently under construction, the main sewer pump station and rail yard crossing completed in 2008 and the collection system including a second pump station schedule to begin in the summer of 2009. The first two phases should be completed by late 2009 or early 2010, at an anticipated cost of \$8,454,962 (see Appendix B).

Phase III will result in extension of sewer service across the river for service to existing development and potential future development areas. The present estimated project cost is approximately \$768,126. Phase III may be further subdivided but the details have not been confirmed nor considered in this evaluation.

The only other capital expenditures discussed as recommended for this new sewer system was an allowance for an update of the Plan when the Town's comprehensive (land use) plan is updated in the next few years, and a recommendation to provide a truck for the sewer utility, and replace it on an approximately 10-year cycle.

The identified capital improvements shall be funded from the capital fund sources described above and as presented in the financial model (see Appendix C).

8. Connection Charge

8.1. **Authority** - The authority for the Town to establish a sewer connection charge is found in RCW 35.92.025.

Cities and towns are authorized to charge property owners seeking to connect to the water or sewerage system of the city or town as a condition granting the right to so connect, in addition to the cost of such connection, such reasonable connection charge as the legislative body of the city or town shall determine proper in order that such property owners shall bear their equitable share of the cost of such system. The equitable share may include interest charges applied from the date of construction of the water or sewer system until such connection, or for a period not to exceed ten years, at a rate commensurate with the rate of interest applicable to the city or town at the time of construction or major rehabilitation of the water or sewer system, or at the time of installation of the

water or sewer lines to which the property owner is seeking to connect but not to exceed ten percent per year; PROVIDED, That the aggregate amount of interest shall not exceed the equitable share of the cost of the system allocated to such property owners. Connection charges shall be considered revenue of such system.

The key points in this statute are summarized as follows:

- the charge shall be reasonable at the discretion of the town council
- each property owner shall bear an “equitable share” of the “cost of such system”
- up to ten years of interest may be included at the rate of interest applicable to the town.

A similar statute for water and sewer districts (RCW 57.08.005(10)) includes the following additional statements:

For the purposes of calculating a connection charge, the board of commissioners shall determine the pro rata share of the cost of existing facilities and facilities planned for construction within the next ten years and contained in an adopted comprehensive plan and other costs borne by the district which are directly attributable to the improvements required by property owners seeking to connect to the system. The cost of existing facilities shall not include those portions of the system which have been donated or which have been paid for by grants.

Comparing the two statutes reveals that towns do not have express authority to include the cost of future planned improvements in their connection charge, and that the legislature specifically noted in the water-sewer district statute that the cost of the system cannot include donated or grant-funded facilities.

In a Washington State Supreme Court case, Landmark Development v. City of Roy (1999), the court majority opinion stated that given the wording in the statute for towns, donations and grants are not required to offset the gross cost of the system. The court dissenting opinion held that it was not appropriate to avoid offsetting the cost of the system with grant funds. Consultation between CHS, Gray and Osborne, the Town Attorney and Community Technical Advisor revealed that no one was aware of a case that challenged a Town’s ability to include future facilities in the calculation of its charge, using the language in RCW 57 as guidance.

8.2. **Methodology** - Financial and engineering consultants have developed methodologies to determine reasonable connection charges for water and sewer systems, whether for cities and towns or water and sewer districts. Each system has a unique set of financial situations and assets, both existing and planned, and therefore connection charges can vary widely from system to system. While each approach will have variations based on interpretation of the statute and relevant case law, the underlying approach is based on the legislative statement that property owners shall “bear their equitable share of the cost of such system”. The “equitable share” is widely interpreted as the pro-rata share or the system cost per connection served by the system.

To calculate the charge, determination of two components is required:

- Cost of existing system – this is typically the net costs incurred to date by the Town to install the assets and provide the service, including construction and allied costs (engineering, permitting, legal, administration, etc.), plus interest paid on the value of the assets, potentially less contributions and net debt service. This information must be allocated between the “general” and “local” facilities. For the system at the time of completion of Phases I and II per the Town’s *General Sewer and Facilities Plan*, the actual costs incurred to date and anticipated costs based on bids or estimates for remaining work to be completed in 2009 and 2010 are used as the beginning point for the “cost of the system”. The total project cost to completion is anticipated to be \$8,454,962.

The next step would be to deduct those funding sources and net debt service that are not directly attributed to the Town or its sewer system customers. It is assumed the Town will accept the 20 year SRF loan at 2.9% for \$500,000. This debt is offset by the cash remaining on hand (the NRD funds reserved for completion of Phase III).

If future facilities are to be factored into the connection charge, the system improvements likely necessary within the next ten years, and their estimated project cost, in current-year dollars must be documented. The three projects identified in the 10-year CIP amount to approximately \$793,000, in 2009 dollars². This includes Phase III, a sewer utility truck and an update of the Plan. This CIP does include two items not in the adopted Plan (the truck and future update of the Plan). However, these

² These figures are not escalated as they are in the rate model. Connection charge calculations are typically completed using current value estimates with an annual update of the cost of projects planned but not yet completed.

are covered, in our opinion, under the guidance of the phrase "...and other costs borne by the district which are directly attributable to the improvements..." in RCW 57.08.005(10).

- Customer base – this is the number of customers to be served by the existing system (whether connected or not). The system has been sized to serve the more-or-less developed areas of Town, with some potential for in-fill or increased density within the limits of Phases I, II and III. Additionally, there are large undeveloped areas of Town where the system may be extended without changes to the collection, treatment and disposal facilities under construction. The WWTP is the capacity-limiting facility in the system and it has been designed for 271 ERUs³. This figure is purposely different than the forecast for ERU growth in the system for O&M charge revenue and expenses. For determination of the connection charge, the pro-rata share is based on the capacity of the installed and planned system and not the anticipated growth of connections over a planning period.

8.3. **General Facilities** - A portion of the improvements to be constructed under Phases I and II are of general benefit to the customers of the sewer utility. The allocation of the existing system, through Contract 2A, between general and local facilities is estimated as follows:

System Element	Allocation
WWTP, Drainfield, Conveyance lines	100% General
Pump Station and Rail Yard Crossing	100% General
Collection System (2A contract)	80% Local, 20% General
Phase III – with pump station and bridge piping	30% Local, 70% General

Engineering and other costs are allocated to these project elements and general and local facilities allocation in proportion to the construction costs for each element. Similarly all project funding is allocated to each project element and general and local distinction in proportion to construction cost.

The impact of this approach is that in-fill customers or those that chose not to connect prior to the initial deadline for their phase will not have to pay for the local service main in front of their property (i.e. same grant benefit as their neighbor who did connect initially). For those properties connecting by developer extension, this

³ See *General Sewer and Facilities Plan* Pages 5-8 and 6-19.

approach insulates them from paying for any local facilities benefitting property outside their development, as they will bear this cost for their own project as part of their plat or property improvements.

8.4. **Alternatives** – Given the different ways of interpreting the statutes referenced above, and the question of deducting grant funds, several alternative calculations were prepared, with and without an SRF loan. The range of results was from a connection charge of zero to nearly \$25,000 per ERU. In the context of the statutes and consideration of the equity among near-term and future customers, the most reasonable and equitable charge is a result of the calculation assuming deduction of grant funding, inclusion of future planned facilities and assuming taking a loan to complete Phases I and II. This results in a charge of \$3,420. The calculation is presented on a worksheet in Appendix C.

8.5. **Connection Charge** - CHS recommends the Town adopt a sewer connection charge of \$3,420 per ERU. This approach is reasonable and equitably deducts grant funding, reasonably includes the cost of future general facilities planned for the system and assumes SRF funding for completion of Phases I and II.

The connection charge is in addition to any Town installation charge, property owner cost for onsite facility and/or building sewer construction, or Town sewer system permit fees.

9. Sewer Service Charges

9.1. **Authority** – The Town has the authority to fix the price for services and facilities for customers of the sewer system per RCW 35.92.020. This statute includes specific factors to consider when classifying customers but such factors are not applicable given that the approach recommended herein results in only one customer class.

9.2. **Capital Fund Balance** – Considering the capital revenue and expenses for Phases I, II and III and future system needs as described above, a connection charge of \$3,420 per ERU, a \$600,000 SRF loan to be obligated in 2010 and debt service commencing thereafter, the year-end fund balance has been estimated from 2009 through the year 2029. The SRF funding amount and the amount of O&M fund transfer to support the Capital Fund has been adjusted to maintain a positive capital fund balance through year 2029, with a tolerance for balance less than \$50,000 in the early part of the forecast period (assuming unanticipated capital costs should be

lower initially) and a \$100,000 minimum later in the forecast period. The minimum forecast balance is approximately \$34,800 in year 2012 and the maximum (after completion of Phase III) is approximately \$186,900 in year 2027. The results are presented on a worksheet in Appendix C.

9.3. **O&M Fund Balance** – Considering the initial O&M Fund balance (NRD funds), estimated O&M expenses, recommended transfer to Capital Fund and estimated growth in connections to the system, and assuming an initial rate of \$39 per month per ERU as a sewer service charge, the year-end fund balance has been estimated from 2009 through the year 2029. The sewer service charge has been increased at different points in time to maintain a minimum balance of \$75,000 in the fund. One dollar per month increases are forecast annually for years 2011 through 2014. Beginning in 2015, the service charge is forecast to increase two dollars per month. The minimum forecast balance is approximately \$111,000 in year 2029 and the maximum is approximately \$795,700 in year 2009. The year-end balance begins to increase in year 2030 due to the growth assumptions and rate increases beginning to fully cover the anticipated O&M expenses of the system (i.e. the subsidy effect lasts about 20 years for this set of variables and assumptions). The results are presented on a worksheet in Appendix C.

10. Financial Model

10.1. **Spreadsheet Model** – A financial model has been developed to capture the numerical definition of the evaluations and findings presented in the previous sections. The financial model consists of several worksheets in once Excel spreadsheet. Each worksheet has been developed independently with specific values then linked so that changes in one worksheet will be seen in the related worksheets. Each worksheet has a focus such as capital funding and expenses, connection charge or ratepayer base, as described in more detail below. The main variables and assumptions used on the seven worksheets to test different scenarios have been compiled on one worksheet for ease of future data input. The results of the worksheets are presented in one summary worksheet: The worksheets, generally in the order they should be reviewed to understand the financial model are summarized as follows:

- ERUs – Growth rate assumptions for connections following completion of Phases I, II, III and additional growth. With the exception of the Connection Charge worksheet, this growth forecast is used throughout the model.
- O&M Expenses – Estimated expenses derived from five sources. Specific assumptions identified for certain expense items are also identified. The

expenses are forecast to increase each year. Some expenses are budgeted for each year but will only occur every several years in reality (e.g. pumping solids from sedimentation tanks).

- Revenue Sources – Estimated O&M fund income from rates, interest, additional customers and NRD settlement funds. Assumed annual interest rates are identified. This worksheet may be used to review how a low-income discount for a portion of the ratepayer base would impact the service charge for other ratepayers, without subsidizing the discount from the O&M Fund.
- 10 year CIP – Future capital improvement projects are identified for specific years as either a new capital expense or a replacement expense. Costs include escalation to the year of project initiation.
- Connection Charge – The connection charge is calculated based on the value of the plant-in-service (has been estimated for Phases I and II), future CIP projects, deductions for grant funding and allocation over the capacity of the system in ERUs. This charge should be annually updated to add the value of interest on the plant in service, for a maximum of ten years of interest. The annual interest rate should be commensurate with the Town's cost of money. This charge has not been calculated for future years, but the first-year charge has been escalated by the cost of inflation for use in revenue forecasting from future customers.
- Capital Fund – Estimated income sources and expense to determine year-end balance for forecast period.
- Data Entry – The uniform assumptions (highlighted cells) in each of the previous worksheets have been summarized on one spreadsheet so that future updates to global factors in the model can be made from this one worksheet.
- Summary – Information from all other worksheets as well as the assumed beginning and year end fund balances. The financial outlook of the sewer utility can be seen from this one sheet. The first six years, 10 year and 30 year end balances are shown although information is available for the entire forecast period.

A more detailed discussion of use and update of the model is presented in Appendix E.

11. Sewer Utility Ordinance

11.1. **Proposed Ordinance** – As described above, an ordinance has been prepared to implement a separate self-supporting sewer utility, including adoption of two additional sections to the Skykomish Municipal Code, to integrate the recommendations presented herein and supporting details into the code and operation of the Town. The materials recommended for adoption are included in Appendix D. These materials have been reviewed by legal counsel for the Town and their comments have been addressed and incorporated in the attached final draft. Several standard forms to be used by staff are presented in Appendix F.

12. Workshops and Public Meetings

12.1. **Kickoff Meeting** – CHS Engineers met with the Mayor, Clerk and Community Technical Advisor on February 25, 2009. The scope of the project and possible data sources were identified for completing the project. A proposed outline for the project and proposed milestone dates were identified. The Town representatives provided significant background information for the sewer system development and guidance regarding the council's very general approach to rate policies.

12.2. **Preparatory Meetings** – CHS Engineers met with the Community Technical Advisor on March 26, 2009. A preliminary review of the presentation for the Advisory Committee was made, including a draft rate model for review. Outstanding questions were discussed and guidance from the Town was given in telephone communications with the Mayor and Clerk-Treasurer. A second meeting was held with Harry Sellers, Clint Stanovsky, and CHS on April 8, 2009 specific to the assumptions included in the number of ERUs for the immediate, short and long term forecast periods. Some additional O&M expense estimates and assumptions were also clarified.

12.3. **Advisory Committee Meetings** - CHS met with the Sewer Advisory Committee on April 2, 2009. Those in attendance included: Mike Janasz, Gary West, Anne Sekor, Steve Larner, Rachel Very-Larner, Christina Yates, Charlotte Mackner, Clint Stanovsky, Ken Ziebart, Rodney Langer, and Diane Pottinger. A detailed presentation was made identifying the key pieces in the study. A detailed breakdown of O&M expenses was presented and discussed. The results of these assumptions were included in the first version of the rate model and the impacts

were discussed. Those in attendance were tasked to review the assumptions and provide input to CHS for future refinements.

A second version of the rate model was provided to the Sewer Advisory Committee later in April. A summary of the changes to date, and the results of three different rate scenarios were included in the transmittal. Several individual communications occurred between various members of the Sewer Advisory Committee.

Prior to the second committee meeting, a draft of the proposed code revisions for both the water and sewer utility was provided for public review to the Sewer Advisory Committee. At the follow up meeting on May 13, 2009, the following individuals were in attendance: Mike Janasz, Harry Sladek, Anne Sekor, Gary West, Harry Sellers, Charlie Brown, Clint Stanovsky, Charlotte Mackner, Ken Ziebart, Steve Larner, Rodney Langer and Diane Pottinger. Discussions included new sewer utility policy, standards and process, and a third version of sewer rates, fees and charges, proposed forms and outlining of final work and schedule.

12.4. **Ordinance Readings** – The first reading of the proposed sewer ordinance and code was at the May 11, 2009 Council meeting. A second reading of the code, following review by the Town attorney, was on June 8, 2009. The third reading and consideration for adoption is scheduled for July 13, 2009.

12.5. **Public Meeting/Council Workshop** – Following discussion with the Council and Sewer Advisory Committee, the Town scheduled a Council Workshop and Public Meeting to review the sewer rates and financial plan proposal. The meeting was scheduled for June 25, 2009 at Town Hall. Notice of the meeting with invitation to the public to attend and provide input was posted at the Post Office, Town Hall, Cascadia Café and the Whistling Post Tavern and on the Town website on Friday, June 19, 2009. At the meeting, CHS presented a summary of the study and recommendations for Mayor Mackner, Council Member Lorna Goebel, Committee Members Ann Sekor and Gary West, Clint Stanovsky and one member of the public. A draft of this report was presented and clarifications were provided in response to numerous questions and topics. All comments received during and immediately following the meeting have been considered by CHS for incorporation in the final recommendations and report.

Recommendations

12.6. **Connection Charge** – CHS recommends the Town approve a sewer connection charge of \$3,420 per ERU (adoption per item 13.3 below). CHS recommends the connection charge should be reviewed annually to include the completed projects and

12.7. **Sewer Service Charge** – CHS recommends the Town approve a sewer service charge of \$39 per month per ERU for calendar years 2009 and 2010, increasing to \$40 per month per ERU for 2011 and to \$41 per month per ERU for 2012 (adoption per item 13.3 below). The service charge should be reviewed annually for consideration of adjustment for calendar year 2011, based on actual O&M expenses compared to estimated values.

12.8. **Ordinance** – CHS recommends adoption of the proposed ordinance presented in Appendix D, including addition of new Chapters 13.20 and 13.25 to the Skykomish Municipal Code, with the connection charge, sewer service charge and miscellaneous fees and charges included in proposed Chapter 13.25.