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Understanding How Washington State's Excise Tax Rules Impact Water & Sewer Utilities

By: Chris Gonzalez

This article is the second of a two-part series intended to aid readers in their understanding of Washington's excise tax rules (particularly as they pertain to public utilities).

The previous article covered these rules in a broad sense, identifying a number of measures that jurisdictions may implement to save money on their utility tax bills. One of those measures involved splitting sewer revenues into functional components (collection, transmission, and treatment) to take advantage of the fact that a lower tax rate applies to revenue that is not directly attributable to the collection of sewage. This article specifically focuses on determining this split, which can save utilities tens (if not hundreds) of thousands of dollars per year in excise tax payments. FCS GROUP and CHS Engineers LLC have worked with the DOR on audits for 25 sewer agencies, obtaining approximately \$2.7 million in cumulative refunds to date (and significant reductions in the annual tax liability looking forward) for those agencies.

Functions of Sewer Service

For the purpose of computing excise taxes, the primary functions of interest are sewage collection (subject to taxation at 3.852% per RCW 82.16.020) and "related business activities" (including the transfer, treatment, and disposal of sewage, subject to taxation at 1.5% per WAC 458-20-251). Revenue from treatment, effluent disposal, and related services is treated in one of two ways, depending on the specific utility being considered.

- RCW 82.04.432 allows utilities that pay other agencies (e.g. regional treatment agencies) for treatment and disposal to deduct those payments from the gross revenue that they report on their excise tax returns. Note that this deduction is fairly unique, as it is an expense-based deduction rather than a revenue-based deduction. This means that the deduction may not always match up with the revenue (both pluses and minuses).
- Utilities with their own treatment plants are taxed on related revenues, but may incorporate their treatment and disposal expenses into the percentages that they use to split revenues – the process involved will be discussed in further detail later in this article.

While treatment and disposal expenses are fairly easy to identify, the remainder of the "collection system" can still be split between "collection" and "transmission," further

reducing tax burden. This is generally more difficult to do because both functions involve sewer mains. What makes a particular pipe a "collection main" rather than a "transmission main?" A number of methods have been used to differentiate between collection and transmission mains. For simplicity, this has been treated as a "binary" decision rule, with each main fully assigned to one of the two categories.

- One of the earlier methods based the distinction on pipe diameter, classifying all pipes with a diameter over eight inches as transmission mains; pipes smaller than eight inches in diameter were classified as collection mains. This method is inherently flawed in that smaller jurisdictions tend to have smaller pipes in their sewer systems – consequently, these smaller systems ended up with higher

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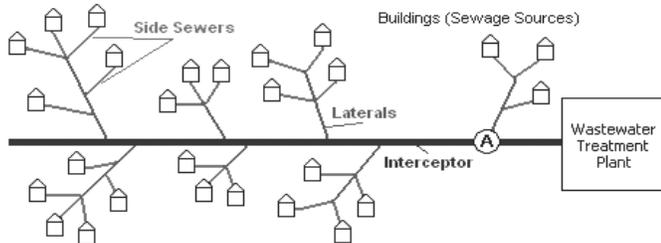
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collection percentages (and a higher amount of their revenue subject to the 3.852% Sewer Collection Tax).

- Another method based the distinction on the layout of the sewer system; according to this method, "collection" ends and transmission begins after the last point of input in the system. This is the method historically accepted by the Department of Revenue (DOR). The diagram below illustrates this concept:



In the diagram above, Point "A" marks the threshold between the collection system and the transmission system – all of the pipes upstream from Point "A" are considered to be collection mains; everything downstream from Point "A" is considered to be the transmission system, carrying the sewage that has been collected to the treatment plant. Under this method, most of the sewer pipe network is classified as collection mains – depending on how literally this method is interpreted, an entire sewer system could be classified as collection mains if there was a toilet in the treatment plant!

The City of Spokane challenged the DOR on this method of classification in court and won – the method that is currently accepted was derived through a collaborative effort between the DOR, FCS GROUP, and CHS Engineers LLC. It differs from the prior method in that it defines a collection pipe as a pipe with no upstream junctions except for side sewers. Generally speaking, the collection system consists of side sewers and laterals, while interceptors comprise the transmission system.

The process to determine the split between collection and transmission begins with an analysis of the layout of the sewer pipe network. This analysis is most simply performed using a geographic information system (GIS) map, selecting the mains assigned to transmission; however, it can also be done by measuring pipe lengths manually and adding them together. Either way, the initial product is a set of pipe lengths (most often in lineal feet, or LF) assigned to either collection or transmission.

Note

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Check 2, continued from previous page that side sewers must be considered separately as they may or may not appear on your sewer system map – they should only be included in the LF assigned to collection if your utility owns and depreciates them (some utilities have policies that explicitly place side sewer ownership and maintenance responsibilities with private property owners). Furthermore, only the length of side sewers in the public right-of-way should be included in this calculation – a standard assumption would be about 30 LF per sewer service connection within a 60-foot right-of-way (or 30 LF per two service connections if the utility has “wye” connections in which two properties share a side sewer).

As another consideration, most sewer pump stations will be considered transmission. To decide how to separate revenues, these may also be converted into an “equivalent” pipe length and added to the total length of transmission pipe because they are part of the transmission system (pumping is a transmission-exclusive function). For any given pump station, this conversion is done by dividing the replacement cost of the pump station by the representative current cost of gravity sewer pipe.

In the absence of specific cost data, the DOR has accepted a method that uses estimated construction costs to assign equivalent pipe length to pump stations. CHS Engineers LLC, our engineering partner in a number of audits with the DOR, developed the following scale classifying pump stations in one of three ways:

1. **Small:** These pump stations typically serve localized low areas (generally small neighborhoods or business parks), and are gener-

ally sized to pump up to approximately 150 gallons per minute. The average cost of such pump stations is set at approximately \$200,000 in 2002 dollars; the estimated cost of equivalent gravity sewer pipe is \$100 per foot. This corresponds to an equivalent pipe length of \$200,000 / \$100, or 2,000 LF.

2. **Medium:** Commonly used in small sewer basins, these pump stations are usually sized to pump between 150 and 600 gallons per minute. On average, these structures cost approximately \$360,000 in 2002 dollars; the estimated cost of equivalent gravity sewer pipe is \$120 per foot. This corresponds to an equivalent pipe length of \$360,000 / \$120, or 3,000 LF.

3. **Large:** Most often used in large sewer basins or for re-pumping within basins, these pump stations are frequently capable of pumping at a rate in excess of 600 gallons per minute. The estimated construction cost of these facilities is approximately \$600,000 in 2002 dollars; the estimated cost of equivalent gravity sewer pipe is \$150 per foot. This corresponds to an equivalent pipe length of \$600,000 / \$150, or 4,000 LF.

Utilities owning treatment facilities may also convert those facilities into equivalent pipe length using a method similar to the cost-based method described above for pump stations. Use the ENR Index to escalate the original cost of your utility’s treatment plant assets to current dollars, and divide the resulting amount by \$120 per LF of pipe.

A sample calculation of the collection and transmission percentages is

<i>Length of Collection Mains: 65,000 LF</i>	<i>Length of Transmission Mains: 85,000 LF</i>
<i>Number of Sewer Service Connections: 2,000</i>	<i>Replacement Cost of Pump Stations: \$3,000,000</i>

Equivalent Collection Pipe Length:

Mains: 65,000 LF
 Side Sewer: 2,000 Connections × 30 LF / Connection = 60,000 LF
 Subtotal: 125,000 LF

Equivalent Transmission Pipe Length:

Mains: 85,000 LF
 Pump Stations: \$3,000,000 / \$120 per LF = 25,000 LF
 Subtotal: 110,000 LF

Total Pipe Length: 125,000 LF (Collection) + 110,000 LF (Transmission) = 235,000 LF

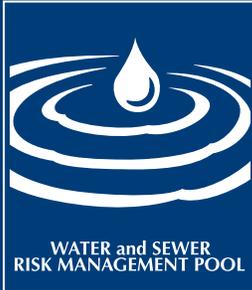
Collection Percentage: 125,000 LF / 235,000 LF = **53.19%**

Transmission Percentage: 110,000 LF / 235,000 LF = **46.81%**

shown below for a hypothetical utility.

This example assumes that treatment costs can be separately identified

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Expense	Total Expense	Transmission & Treatment		Collection
		% of Total	Amount	Amount
Treatment Plant Salaries & Benefits	\$1,000,000	100.00%	\$1,000,000	\$
Other Salaries & Benefits	\$500,000	46.81%	\$234,050	\$265,950
Treatment Plant Repair & Maintenance	\$40,000	100.00%	\$40,000	\$
Other Repair & Maintenance	\$80,000	46.81%	\$37,448	\$42,552
Power	\$100,000	100.00%	\$100,000	\$
Chemicals	\$75,000	100.00%	\$75,000	\$
Total	\$1,795,000		\$1,486,498	\$308,502
Percent of Total			82.81%	17.19%

Chart 1

expenses related to chemicals would also be related to treatment. Power costs would also add to this side of the calculation, as they are exclusively related to treatment and transmission. Consequently, \$1,215,000, or about 67.8% of the expenses shown above would be related to treatment and transmission (with a corresponding share of total sewer revenue being assigned to the B&O tax). The other salary, benefit, and maintenance costs would be split between collection and transmission using the percentages derived above.

Given the calculations shown above, this hypothetical utility could justify paying the lower tax rate on 82.81% of its sewer revenue – assuming annual revenues commensurate with its expenses (\$1,795,000), using this split would lead to roughly \$35,000 per year in tax savings!

The steps are slightly different for agencies that utilize the services of a regional treatment plant – specifically, treatment-related expenses (payments to the regional plant) are deducted from revenues prior to the collection / transmission split. We will use an example that parallels the one presented above to illustrate this process, with the difference being that the treatment-related expenses will be replaced with an equal payment for regional treatment. The first step would be to deduct treatment expenses from gross revenues:

$$\$1,795,000 - \$1,115,000 = \$680,000$$

The next step would be to use an operating expense weighting process similar to the one shown above in the prior example. Note that the regional treatment payments are not included in this calculation because the corresponding revenue is already deducted prior to this split.

and assigned to the B&O tax – this method is typically most advantageous to the utility, as treatment O&M and related debt service costs are often major cost factors. Given this sample calculation, the hypothetical utility referenced above would determine the “composite” percentages to apply to its sewer revenue using its operating budget. This budget and its breakdown are summarized in chart 1:

This budget identifies \$1,040,000 in salary, benefit, and maintenance expenses that are specifically related to the utility’s treatment plant – in addition, ex-

Expense	Total Expense	Transmission & Treatment		Collection
		% of Total	Amount	Amount
Salaries & Benefits	\$500,000	46.81%	\$234,050	\$265,950
Repair & Maintenance	\$80,000	46.81%	\$37,448	\$42,552
Power	\$100,000	100.00%	\$100,000	\$
Total	\$680,000		\$371,498	\$308,502
Percent of Total			54.63%	45.37%

These percentages would be applied to the net taxable sewer revenue to determine the amount of tax payable:

$$(\$680,000 \times 54.63\% \times 1.5\%) + (\$680,000 \times 45.37\% \times 3.852\%) = \$17,456$$

It is worth noting that this method will result in year-to-year fluctuations in the percentages, based on the utility’s expenses in any particular year – while it will require some additional effort on the staff level, it helps to ensure that the utility’s excise tax burden most accurately reflects the nature and use of its revenues.

What This Means for Your Utility

Your utility can use this information in a couple of ways:

- It may initiate a refund audit with the DOR to claim a refund for excess tax payments that it has made. Such an audit will include many different excise tax issues in its scope, considering both overpayments and liabilities in the final refund awarded. A refund audit may go back five years, including the current year.
- A number of utilities have employed the services of a consultant for such audits – consultant services may range from preparing analytical materials in support of the refund request to working directly with a DOR auditor during the audit process. If your utility would like to use a consultant, you

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(or the consultant, with your authorization) will need to file a Confidential Tax Information Authorization Form with the Department of Revenue. This form can be found on the Department of Revenue's website (<http://dor.wa.gov>), and will allow the DOR auditor to share confidential information with the consultant.

- Alternatively, your utility may decide that it does not want to take on the costs and potential risks of an audit – in this case, you can use this information to determine an appropriate split for sewer revenue to apply to sewer revenues looking forward (this can either be done internally or with the help of an external consultant). Documenting the data and methods used to derive the sewer revenue split is crucial, as significant drops in tax payments may trigger curiosity from the DOR.

Either way, your utility may be able to save a substantial amount of money by taking advantage of the collection / transmission sewer revenue split and the various deductions and exemptions allowed by the RCW and the WAC. Think of the good that money could do – it could provide some relief for your ratepayers, or provide a resource to assist with your utility's long-term financial planning objectives!

Chris Gonzalez is a senior analyst with FCS GROUP. He is skilled in utility rate studies, system development charges, specialized rate structures, and Washington State excise tax rules. He has a bachelor's degree in operations research and financial engineering and a certificate in engineering and management systems from Princeton University.



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Commissioners Workshop Draws Large Crowd

The 2008 Commissioners Workshop, held on January 5th was an outstanding success this year. Nearly 100 attendees participated. Over 30 % were new commissioners just starting their first terms as district commissioners.

Issues ranging from ethics, open public meetings, contracting with engineers, the role of commissioners and district management were all discussed. Experienced commissioners were asked to sit next to a new commissioner so that information could be more easily shared.

The week following the workshop saw some of these first time commissioners calling the WASWD office for more information. We urge all commissioners and district staff to consider the Association a resource for questions or referrals to services, to assist in the resolution of problems with state agencies, or to find similar districts that could provide assistance with a question.

This workshop was our 10th or 11th offering and we will be holding it again next year on the first Saturday in January. Please consider sending your most experienced commissioners next year for a refresher course and to learn about new requirements, whatever they may be, coming out of the current legislature.