

Inclusion of Wastewater Treatment Expense within the Drainage Rate

System Background

Beginning in the early 1900s, Seattle developed a combined wastewater and drainage system. Storm runoff in combined areas is routed to the combined system via gutter downspouts and road inlets. In the 1960s and 70s, many of the combined areas were “partially separated” to reduce capacity pressure on wastewater treatment plants and reduce the frequency of Combined Sewer Overflows (CSOs). These areas are considered partially separated rather than fully separated because only the road inlets have been disconnected; gutter downspouts still connect into the combined pipes. Once in the combined pipes in either the combined or partially separated systems, storm runoff contributes to Seattle and King County Metro treatment and Combined Sewer Overflow control costs.

Funding of Current System

Based on the existing system developed through the 1900’s, storm runoff in the City is conveyed through one of three systems: (1) separate storm sewers, (2) ditches and culverts, or (3) combined stormwater and wastewater pipes. Prior to 2008, drainage rates funded the costs associated with the first and second conveyance systems. The cost of the third conveyance system – the combined stormwater and wastewater pipes – was allocated entirely to the wastewater rates.

Between 2005-2007, the Executive proposed and Council adopted an updated methodology for recovering the costs associated with the City’s Drainage and Wastewater systems. Instead of viewing the two as wholly separate systems and services, a framework was adopted with the underlying assumption that it is more appropriate to think of the services as deeply inter-related, and to treat the drainage and wastewater fees as two different mechanisms to recover drainage and wastewater costs as a whole. The drainage fee is the relatively fixed component of the customer bill (as a function of parcel area and impervious surface), which we relate more to stormwater management. The wastewater fee is the variable component of the customer bill (as a function of water consumption) and relates more to wastewater collection and treatment. Together, they collect the total cost of the drainage and wastewater utility, but there is no firewall between drainage and wastewater services or costs.

In this combined system framework, it is appropriate that the combined system customer pays for stormwater quality because their stormwater is treated by the Drainage and Wastewater Utility. This treatment is also consistent with the legal and financial frameworks of the Drainage and Wastewater Utility. The authorization to provide stormwater management services is contained in the state law authorizing sewer utilities, and revenue bonds are issued for the Drainage and Wastewater Utility as a whole, not separately for drainage services and for wastewater services.

As part of this new framework, the decision was made to allocate a share of combined system costs to drainage fees based on average annual flows of wastewater and stormwater through the City system. This approach improves the cost-of-service allocations among customers as it ties system costs to services based on their overall use of the infrastructure.

Allocation of Treatment Costs to Drainage Rates

Treatment costs paid to King County Wastewater Treatment Division account for the single largest expense in the Fund. Using the average annual flow approach discussed above, it was determined that 11 percent of the system flows treated are attributable to the combined system. Combined system

costs are split 55/45¹ between Drainage and Wastewater rates, which results in 6.05% of treatment expenses being assigned to the Drainage rate revenue requirement. This expense is then allocated to the various Drainage tiers through the same methodology as other expenses described in the rate study. We then isolate treatment expense based on the percent of flow cost, apply the multiplier to allocate the portion of tax and UDP associated with the treatment component of the bill, and finally divide that number for each tier by either the number of parcels (single family < 10,000 sq ft) or total square feet in the tier (General service including large residential).

¹ The designation of 55% of CSO costs assigned to Drainage and 45% assigned to Wastewater was calculated using rainfall data, pervious/impervious land and projected wastewater volumes to estimate the average annual flows of wastewater and stormwater through the combined system.