City of Santa Barbara
Public Works Department

Memorandum

DATE: May 16, 2019
TO: Water Commission
FROM: Joshua Haggmark, Water Resources Manager
SUBJECT: Continuation of Wastewater High Strength Surcharge Fee Discussion

RECOMMENDATION:

That Water Commission receive a presentation for continuation of the wastewater high strength surcharge fee discussion.

DISCUSSION:

Staff and the City’s rate consultant, HDR Engineering (HDR), presented the proposed wastewater rates for fiscal years 2020, 2021, and 2022 to the Water Commission on March 28, 2019. The Water Commission recommended that staff send a Notice of Public Hearing to customers and return to Water Commission with further discussion on high strength surcharges. Since that time, HDR completed the final rate study report, which has been posted on the City’s website and is available for viewing at https://civicaweb.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=219666. In particular, Sections 4 and 5 of the rate study report discuss the development of the high strength fees. Staff has also researched the impacts from implementing a high strength surcharge. Below is a summary of relevant sections of the rate study report and staff’s own research.

High Strength Customers

HDR recommended the addition of a high strength wastewater surcharge fee to cover the additional treatment costs associated with waste streams with unusually high strength. Discharges that fall into this category might include, but are not limited to, domestic septic tank/portable restroom discharges, industrial laundry services, and alcohol beverage manufacturing (brewery, wineries, and distilleries). The cost-of-service analysis has determined the equitable and proportional allocation of costs on a per pound basis for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), and Ammonia.

Staff is reaching out to customers that may be impacted by the implementation of high strength surcharges, including MarBorg Industries, which operates a large domestic septic tank/portable restroom hauling service and receiving station. Alcohol beverage manufacturers will be contacted to discuss their discharges and the potential fee impacts from the high strength surcharge. Dumping a bad batch of alcohol, for instance, can cause
high loadings at the El Estero Water Resource Center. Staff would like to begin the conversation with these businesses on the importance of communicating with wastewater staff when they have potentially irregular discharges. Staff has scheduled a meeting with MarBorg in advance of the Water Commission meeting to review HDR’s report and discuss staff’s research on the impact of a high strength surcharge on MarBorg’s customers.

**Rate Study Summary on High Strength Surcharges**

The cost-of-service analysis began by separating the City’s wastewater assets (infrastructure) and operations and maintenance expenses into different functions (e.g. collections, treatment, etc.). The functionalized asset and expense accounts were then classified into their various cost components. Once the costs were classified, they were proportionally allocated to the various customer classes of service based on the allocation factors previously developed. For example, volume-related costs were allocated based on each customer class’ share of total wastewater contributions. The total allocated costs were then compared to the current revenues of each class of service to determine the overall change in revenues needed from each class of service. To comply with the requirements of Article XIII D, Section 6 (b) of the California Constitution (Proposition 218), HDR recommended that cost-of-service adjustments be made in accordance with the results of this study. To accomplish this, the allocated costs were used to develop unit costs, which became the proposed rates. In this way, the proposed rates are proportional and cost-based and reflect the results of the study.

The development of the high strength surcharges followed the same generally accepted methodology described above. The development of the high strength surcharge was based on the City’s actual treatment process and the total pounds of BOD, TSS, and Ammonia removed at the wastewater treatment plant. The calculation of pounds contributed by each customer class of service was developed based on known strength levels for the commercial high/industrial customers, and industry benchmarks for all other customer classes. This process defined the maximum limits for allocating costs to standard domestic and commercial strength discharges. The total pounds removed for all customer classes, plus the additional pounds that may be contributed up to the maximum limits, was subtracted from the total actual pounds removed at the wastewater plant. The remaining amount was determined to be from customers that have wastewater volumes with strength levels greater than the maximum limits developed as part of this study. Treatment costs were then allocated to the high strength pounds based on the cost-of-service methodology described above. A summary of the strength factors is included in Exhibit 9 of the technical appendices. The total allocated costs to the high strength surcharge category are divided by the total pounds over the limit to determine the cost per pound for each constituent.

It should be noted that these high strength charges reflect only those pounds greater than the strength included within the rate structure: greater than 750 mg/l for BOD, greater than 850 mg/l for TSS, and over 90 mg/l for Ammonia. These limits are based on the maximum values experienced by the City’s system for commercial customers as well as industry standard strength levels for domestic customers. All strength discharges below
these levels are included within the rates charged for these customers, which are primarily commercial high/industrial customers.
WASTEWATER RATE STUDY
CONTINUED DISCUSSION ON HIGH STRENGTH SURCHARGES

Water Commission
May 16, 2019
Presentation Overview

• Rate Study Review
  - Cost-of-Service Analysis
    - Treatment costs
    - Strength Factors

• High Strength Surcharges
  - Customers
  - Outreach
  - Rate Impacts
**Rate Study Review**

- Cost-of-service Analysis
  - Functionalize Costs
  - Allocate costs to components
    - *e.g.* volume, BOD, TSS
  - Allocate components to classes
  - Group components into fixed or volume charges
Rate Study Review – Strength Factors

- Gather information
  - Local sampling data – City Industrial customers
  - Industry standards
- Determine reasonable limits for customer class strengths
- Calculate per pound unit cost
Rate Study Review – High Strength Surcharges

• Recover costs associated with treating all pounds of waste beyond reasonable limits
  - BOD>750 mg/l
  - TSS> 850 mg/l
  - Ammonia>90 mg/l

• Treatment costs derived from cost-of-service analysis
  - Reconcile pounds to actual plant data
    - BOD, TSS, Ammonia, Volume
High Strength Surcharges – Customers

• Septic and Portable Restroom Haulers
• Alcohol Beverage Manufacturers
  - Breweries, Wineries, distilleries
• Industrial Laundry Operations
High Strength Surcharges – Customer Outreach

• Pretreatment Program Customers
  - Individual Notification
    - Description of new potential surcharges
    - Based on quarterly samples

• Non-pretreatment Customers
  - Identifying potential high-strength dischargers
  - Developing relationship; educating on new charge
High Strength Surcharges – Customer Outreach

• Marborg Industries – Portable Restroom/Septic Unit
  - Rate study estimates ~300K increase in annual wastewater fees
  - Early estimates provided in December 2017 and June 2018
  - Recent Meetings
    - March 2019: Preview of strength allocations
    - May 2019: Review of rate study, discussion of impacts
High Strength Surcharges – Customer Impacts

- Alcohol Beverage Manufacturers
  - Minimal Volumes: 750 – 1400 gallon storage tanks
  - Infrequent batch dumps
  - Waste strength: Upwards BOD of 100,000 mg/L and TSS of 50,000 mg/L
  - Minimal cost impacts based on preliminary calculations
High Strength Surcharges – Customer Impacts

• Marborg Industries
  - Portable restroom service
    - *Monthly rental, 48 services, 480 gallons of waste*
  • Current customer cost: $691.60
  • Current treatment costs: $2.88
  • Proposed treatment costs: $24.00
High Strength Surcharges – Customer Impacts

• Marborg Industries
  - Septic service
    - 5,000 gallon tank, pumped every 7 years
      • Current customer cost: $2,400
      • Current treatment costs: $30.00
      • Proposed treatment costs: $250.00
QUESTIONS?