

Corpus Christi Powerpoint Annotation

Slide 1

Thanks, everyone, for your continued engagement in the stormwater fee setting process. We appreciate your willingness to continue to work with us on this, despite the circumstance. While we will review this during Wednesday's call, we appreciate your reviewing this slide deck and Word doc in advance, so you're not seeing all of this information and digesting it for the first time Wednesday.

Slide 2

Here's a Meeting Agenda for our call Wednesday. As you know, we are hosting three identical calls, in order to facilitate smaller group discussions. Each group will get the same presentation. Our goal for this slide deck and our meeting is to walk you through what we've been working on, what we've learned from the benchmarking survey and talk a bit about various elements of stormwater programs so that we can develop a program that's best for Corpus Christi.

Slide 3

This slide is a reminder of our objectives for this new fee structure.

Slide 4

This slide is to share with you, where we are in the process. This is meeting 2 of what we imagine will be a series of five meetings with you. The content for these meetings is laid out here. Note that this first step is all about getting your input on the program we fund. Our first deadline is to get a budget amount to City Council in late June and for that, we need to have a good sense of what the program should be – the elements – so that's the meat of this slide deck and our call. Once we have a sense of the program and cost, then we will talk to you about rate structures and impacts, none of which is planned for this year.

Slide 5

Since we met with you last, the City and consultant teams have progressed on several avenues, a few of which are summarized here. These slides summarize some of our work reviewing the programs of other communities. In addition, we are working on developing the City's financial planning model. The City in particular has been working on developing the future stormwater program framework, a key part of that model. That program, of course, is awaiting input from this group. We have been assessing a potential rate structure and associated customer impacts. With respect to public engagement, we've worked to transition to virtual options for engagement and worked with the City on developing the project website.

Slide 6

This slide summarizes the process for the meeting: review of City program costs and current program elements, a review of surveyed communities, and discussion with the group.

Slide 7

For a quick review, at the present time, stormwater costs make up about 20% of the water fund expenditures. The stormwater program is in the process of transitioning to public works for the next budget year.

Slide 8

In fiscal 20, the stormwater expenditures comprise \$31 Million. Of that, \$14 Million is debt service for investments made in the stormwater system over the years. The remainder is operational costs.

Slide 9

As we discussed in the previous meeting, those operational costs include a number of activities. City operates and maintains the stormwater system and carries out a variety of activities to comply with its water quality permit (Municipal Separate Storm Sewer System or MS4 permit)

Slide 10

Communities develop a variety of specific goals for their stormwater programs, but in general, they seek to ensure permit compliance, maintain infrastructure and plan for and execute projects to ensure the future operation of the stormwater system. Overall, the stormwater program serves the important roles of promoting and supporting public health, safety and quality of life.

Slide 11 – Benchmarking

This section covers information on the background, demographic, and income information for the communities selected for the benchmarking study.

Slide 12 – Utility Benchmarks

Stormwater programs and utilities vary widely across the country. In order to help Corpus Christi identify what services they may want included in or enhanced in their stormwater program and identify best practices among communities similar to Corpus Christi, ten different communities were surveyed. The survey contained a variety of questions about stormwater services provided, program size, financing, and rate structures. Today we will only be discussing the results of the survey for questions related to stormwater services, program size, and financing. The results of the rate structure benchmarking will be shared at the next meeting.

Each of the 10 communities selected for benchmarking were selected with a specific purpose. Six of the ten communities are located within Texas. While the remaining 4 are located outside of Texas.

- The City of Austin was selected because it is generally considered to be one of the most mature stormwater programs in Texas.
- The City of Galveston was selected because it is a coastal community, like Corpus Christi.
- The Cities of Dallas, El Paso, Fort Worth, and San Antonio were selected because they have some similar stormwater program drivers and are working within the same regulatory landscape as Corpus Christi.
- The City of Charlotte was selected because it is one of the oldest and most mature stormwater utilities in the state of North Carolina. It is also considered one of the premier programs in the state.
- Jacksonville, FL and Tampa, FL were both selected because they are coastal communities.
- The City of Sacramento, CA was selected because it is relatively similar in size to Corpus Christi.

The consulting team and City staff worked together on the selection of these communities.

Slide 13 – Demographics

The graphs on this slide show the populations, gross area (square mile), and population density (number of people per square mile) for each of the communities benchmarked and how Corpus Christi compares to these communities. All data was obtained from the U.S. Census. You may notice that Corpus Christi is smaller both in population and size compared to the other communities surveyed. The City of Corpus Christi is very development and growth focused making communities slightly larger than Corpus Christi good comparisons for the City.

Slide 14 – Income Demographics

Like the information on the previous slide, this slide shows median household income and percentage of population below the poverty line for each of the communities benchmarked and how Corpus Christi compared to these communities. Note that the median household income is in the top half of the communities benchmarked. The percentage of population below the poverty line is in the lower half of the communities benchmarked.

Slide 15: Level of Service

This next section provides an overview of the types of services and extent of services offered by the other cities we researched. We'll compare their various program components against one another, and also provide more specific details about each of their programs.

Slide 16: Service Offerings Funded by Stormwater

From the communities we've spoken with thus far, you can see common elements of the services and activities that are funded by their stormwater program. These generally align well with the components of effective stormwater programs outlined on slide 10. All programs fund activities for MS4 permit compliance. Also, all programs generally provide infrastructure maintenance, repair, and replacement services for storm sewers, inlets, and other city-specific infrastructure (pump stations, levees, etc.) within the public right-of-way or on city-owned property.

However, there are specific levels of service and activities that are unique to each city. For example, each city manages how their stormwater program funds street repairs or curb and gutter maintenance. As streets and curbs/gutters convey stormwater, some communities choose to use stormwater funding for aspects of maintenance and repair. Dallas reimburses the City's Street Department for 25% of curb and gutter work it performs. However, El Paso is very specific in that stormwater funds are used only if damage to pavement or curb and gutter is caused by faulty stormwater infrastructure; otherwise, funding for roadway maintenance is provided strictly by the Streets & Maintenance Department.

Other city-specific services include maintenance of detention basins and BMPs. Austin and El Paso provide maintenance of residential ponds and BMPs if they are dedicated to the city. Others only provide this maintenance for public basins or BMPs.

Specific levels of service will be looked at more closely in several of the following slides.

Slide 17: Street Sweeping

Cities choose to fund street sweeping services using different sources (stormwater utility, general fund, etc.) because it provides a variety of benefits to the city. Not only does it provide water quality benefits by keeping sediments and debris out of the storm sewer and waterways, it can reduce frequency of infrastructure maintenance and increase aesthetics for the city.

While several of the cities we spoke with provided street sweeping as a city service, only three cities fund this service through the stormwater fund: San Antonio, Dallas, and Tampa. Each utility has varying levels of service based on road class as outlined in the slide.

It should be noted that cities who provide street sweeping but do not fund it through their stormwater utility may still take credit for it in their MS4 compliance activities.

Slide 18: Flood Warning Systems

As flash flooding is a concern for many Texas communities, some that we researched have implemented flood warning systems. The City of Ft. Worth provides an example of a high level of service for advanced flood warning system technologies. Easy-to-understand warning levels and notification systems/flashers are strategically mapped at over 50 locations across the city. During discussions with cities on this topic, it was noted that costs have been a barrier to implementation of these types of technologies. Ft. Worth received grant funding from Texas Water Development Board to provide support for the development of this system.

While not all cities may have formal or high-technology flood warning systems, they are investing in other efforts. El Paso has developed their “Turn Around, Don’t Drown” education and signage campaign. They also proactively deploy vector trucks to flooding hot spots across the city, especially in areas with no drainage infrastructure. The City of Austin’s stormwater program assesses bridges throughout the city for overtopping for floodgates. They work closely with their Streets and Bridge Department to identify threats and solutions.

Slide 19: Infrastructure Mapping & Condition Assessments

To maintain infrastructure, you must know where the infrastructure is located. To determine risk of failure and prioritize maintenance, repair, and replacement activities, you must also know condition of the infrastructure. While this is an important component of a stormwater management program, it is one that often takes cities many years to complete. There are also different drivers of this type of activity:

1. MS4 permits requirements
2. Age of infrastructure and risk of failure
3. Funding and resources

From conversations with each city, it is fair to say that all have some inventory of their infrastructure, but the degree of completeness can vary significantly from program to program. This is an effort that can take significant time and resources to complete. The City of Tampa is required to inspect 10% of their infrastructure each year due to MS4 permit requirements. However, Charlotte – an established and well-respected utility – has only completed 60% of its inventory and will be hiring outside contractor services to further this effort.

Asset management programs that inspect infrastructure, assess level of risks, and proactively prioritize maintenance and replacement activities are often found in more developed, mature programs. Charlotte has initiated an asset management program, and Austin has a formalized asset management program in place. Asset inventory and inspection are important to long-term stormwater program effectiveness, but it takes time and resources to map and inspect infrastructure. It’s also important to note that these activities can occur concurrently and build over time as the program matures.

Slide 20: Prioritization Factors for Providing Service

While knowing infrastructure location and condition is important to prioritizing maintenance and repairs, each city listed several different factors they use to prioritize services. Regulatory compliance is a factor for all cities, while risk and emergency response are also prioritization tools for many. For communities with fairly proactive inspection programs, inspection results help prioritize maintenance and repair activities.

Several listed service requests as a prioritization factor. This is interesting because mature programs like Charlotte are using backlogged service requests to drive and prioritize projects in their capital improvements program. Though they proactively inspect their system, service requests are also evaluated and prioritized with inspection results.

A final observation notes that Austin uses a master plan to prioritize service. As a more mature program, they have a citywide master plan in place that prioritizes system improvements. While having the master plan and ranking for infrastructure replacement is proactive, number of service requests within a given region is one of the factors used to establish ranking for the master plan. Although master planning can take significant focus, effort, and resources to develop, it often results in greater program effectiveness and gained efficiencies.

Slide 21

This slide and the two slides highlight certain notable aspects of several communities surveyed. The City of Tampa, FL has a very similar stormwater program revenue level as the City of Corpus Christi. Tampa's stormwater program focuses on MS4 permit compliance and stormwater infrastructure maintenance. They also have a pretty extensive street sweeping program. Currently they are procuring a software (Cityworks) to help them schedule and track stormwater maintenance activities.

Slide 22

As mentioned previously, the City of Austin has one of the most mature stormwater programs in Texas. They perform extensive maintenance on stormwater infrastructure. They have fully mapped their stormwater system including information on the infrastructure age, material, and condition. Note that the stormwater utility revenue for the City of Austin is the highest of the communities benchmarked.

Slide 23

El Paso and Charlotte both have some unique stormwater program services. The City of El Paso uses a hydro-meteorologist to provide them with storm information which allows the City to proactively position vector trucks in areas predicted to flood. They also share this information

with City departments, such as Streets, so they can move equipment to higher ground if needed. Flooding is one of the main program drivers so having this service has been very valuable.

The City of Charlotte has until recently maintained drainage infrastructure on private property. Many stormwater programs avoid performing maintenance on private property because it significantly increases the amount of drainage infrastructure they are responsible for maintaining. Last year, the Charlotte made the decision to at least temporarily stop maintenance on private property in favor of increasing focus on public right-of-way maintenance.

Slides 24 – 29: City-Specific Program Details

These next several slides provide a deeper look at various service components of each city's stormwater program including program drivers, standard services, level of service, prioritization, and program needs. To provide context of services with size and maturity of each city's program, each slide also provides a snapshot of program age, budget, and revenue. As you review these slides, you'll note that the City of Austin which has a larger and more mature program has different program elements than other. For example, as previously discussed they have a citywide infrastructure master plan; they also allow subdivision basins and BMPs to be dedicated to the city for ownership and maintenance.

You'll also note that no two utilities are exactly alike. Several provide the same basic levels of service, but each also has differences to meet city-specific and program-specific needs.

Observations to note of similarities and differences between programs:

- Common drivers for all programs are regulatory compliance and flooding.
 - All programs are providing the necessary services to meet their regulatory requirements such as MS4 permit conditions.
 - Flooding is also noted as a common driver for several reasons. First, flooding is one of the most visible challenges of stormwater management to the public. Flooding also includes considerations of safety and transportation interruption.
- All programs include a reactive level of service component when providing infrastructure maintenance and repair. As programs become more mature, they begin becoming more proactive in many activities such as inspection, maintenance, and overall asset management.
 - Austin is proactive in inspection and maintenance, but reactive in repairs
 - El Paso is proactive in inspections, but reactive in repair
 - Dallas is primarily reactive in repair and maintenance
 - Tampa is proactive in inventory and inspection, still reactive in maintenance and repair

- Most communities focus only on infrastructure within the public right-of-way. If maintenance is performed on private property, it is usually because a public drainage easement exists. However, some cities do provide services beyond conveyance or collection systems within right-of-way:
 - Austin and El Paso both provide detention basin and BMP maintenance for residential subdivisions. Some communities choose to maintain residential BMPs because homeowner associations often don't have the funding or resources to do so. Some cities provide this as a standard service, some assess a special fee in subdivisions where they provide this service.
 - Charlotte used to perform maintenance regularly on private property. However, city administration's focus has shifted to public right-of-way, so now service is only provided on private property if it impacts or was caused by the public drainage system.
- All programs maintain infrastructure for functionality over aesthetics. While activities like grass cutting may be provided for residential BMPs, the City of Austin, for example, only mows these 3-4 times per year. This mowing frequency may be a lesser level of service than what a resident would consider favorable for aesthetic purposes.
- All cities listed additional funding as a program need.
- Issues may arise that you wouldn't consider to be traditionally stormwater-related.
 - San Antonio is having inter-department discussions to decide who is responsible for addressing issues caused by homeless populations that camp in culverts, channels, and other drainage ways. This infrastructure is stormwater-related, but the stormwater program hasn't been equipped to manage these types of issues.

Slide 30

We asked each of the utilities surveyed two summary questions related to stormwater service offerings and stormwater utility implementation.

Slide 31

All of the utilities identified increased funding as their greatest need, and this is a common issue for stormwater programs across the country. Each of the utilities discusses activities that they would pursue if they had additional funding. The majority of the responses identified capital needs such as flooding projects, water quality retrofits, and private property projects. Technological and data needs (geographic information system (GIS) updates) include developing and updating information on the location and condition of stormwater infrastructure. Operational needs identified include increased maintenance and street sweeping frequencies.

Slide 32

We also asked the benchmarked communities what advice they had for Corpus Christi as they move forwards with assessing the feasibility and implementation of a stormwater utility. Some common ideas identified included understanding that it takes time to develop and implement the program and the starting simple is helpful.

Slide 33

This slide summarizes the elements of the presentation

Slide 34

Our plan is to host our third meeting in June to share the program we developed with your input and costs, and obtain any final input before presenting to the Coty Council at its June 23 meeting.

After Wednesday's call we will send out a survey to get your final read/input on some of the elements we're considering, and that survey will be due back to us May 27.

Thanks, and we look forward to speaking with you Wednesday.