City of Pearland
FY23 White Papers
Published 6/22/22

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Memo

To: Clay Pearson, City Manager
From: John McDonald, Community Development Director
CC: Matt Buchanan, President PEDC
Date: March 16, 2022
Re: Policy Options Supporting High Quality, Dense, and Financially Sound Development

Council Priority: Building quality of life on a well-planned and maintained foundation of essential water, transportation, and flooding infrastructure, appealing amenities, and long-term value.

Initiative: Promote high-quality, dense development that adds the highest possible value – consider suite of options (residential and commercial)

Executive Summary

The rapid growth experienced by the city as we entered the 21st Century has leveled off. Pearland is no longer experiencing the large scale residential and commercial development of the recent past and is now transitioning to the in-fill of remaining parcels and redevelopment opportunities. No longer a rural community, Pearland is now an established first-ring suburb. We must reevaluate our traditional growth pattern. The wide-open spaces of our past are limited now, and with the limitations placed on annexation by the State Legislature, Pearland must focus on maximizing the remaining finite parcels in a new effort to build attractive and economically healthy places that contribute to the social vibrancy of our community. This paper examines the potential for changes to the Unified Development Code (UDC) for adding high-quality, dense residential development, adding residential in-fill choices, prioritizing quality amenities, and adding value to the community.

Background

As a city built on an abundance of available and easily developable land with the power of annexation, the need for investing in dense developments was never a primary goal. The city's main industry for years was single-family construction, and business was good. Our current zoning and development regulations, the UDC, was built to keep pace with the needs of that time, now we need to seek new opportunities to help the remaining, more difficult to develop areas or redevelopment of previously underutilized parcels, become places of choice.

Pearland's current UDC takes a broad-brush stroke approach to supporting development across our diverse city. *Primarily, the current code supports low-density, suburban development, with higher density projects relegated to the Planned Development process which adds complexity, cost, uncertainty, and time to projects.*

Growth and development here mainly segregate uses, forcing residents to travel by car to enjoy the services and activities offered throughout Pearland. Future development must incorporate horizontal mixed-use, placing residential, commercial, and entertainment options in proximity. A report from the Houston Business Journal, (January 11, 2022), highlights the desire of new residents to seek out and move to places that provide amenities which have typically been reserved for the urban core. Some of the amenities described include parks, amphitheaters, concert halls, bars, and chef-driven restaurants. These uses can help draw regional attraction to keep Pearland residents in town rather than commuting to Houston or our other suburban neighbors.

The UDC contains seven districts for detached single family and two districts allowing attached residential development. Through in-person discussions at community events and information provided in the *Pearland Prosperity - Strategic Plan* (Strategic Initiative 6.4), our community has expressed a desire to have additional diversity in our housing stock. 54.3% of the cities single family detached housing falls into the R-1/R-2 range with 7,000 to 12,000 square feet in area.

High density residential development is approximately 1.2% of the Pearland's Future Land Use. Acreage in zoned and developed land with multi-family development is approximately 1.6% of our total acreage. The difference between the land use plan and developed areas are primarily due to the area of property moved from commercial to multi-family within Shadow Creek Ranch. Current zoning which allows apartment complex development encourages a garden style. Garden style has a place within the city but does not always produce the highest value. In order to encourage development of both higher quality and appropriately located density the City must designate areas for density and design regulations to specify the type of development it desires.

Are there other types of density between a single-family residence and an apartment complex? The answer to that question can be found in what designers have dubbed as the missing middle of housing. There are less intense forms of density found in the UDC as duplex, triplex, fourplex, and townhomes which are allowed (by right or through CUP) in the townhome district. With existing residents expressing reluctance to mixing new development types within their low-density residential communities, additional districts should be explored to provide flexibility where appropriate. New uses and districts should be created to expand opportunity for context appropriate in-fill development of bungalow courts, courtyard apartments, low-rise apartments, and live/work developments and considered by right where these styles of development would be appropriate.

Next Steps and Potential Outcomes

The New Multifamily

Multi-family residential has the highest and best return on density and value while reducing land which the city maintains infrastructure. However, these developments also come with the unfounded connotation of adding crime, drug use, and transient residents to the community. A new multifamily district should be considered with minimum form-based standards. A form-based standard could be the preclusion of exterior accessed units requiring all access to be interior to the building. Form-based codes focus on creating a high-quality public realm by focusing the look and feel of the building/structure and not solely zoning by use category.

In order to curtail the amount of land that would seek out this new zoning district the district should be limited to areas that can maintain higher volumes of traffic, close to 22, or major arterial such as Cullen, Smith Ranch Road, or McHard Road. Additionally, existing areas prime for development as retail, restaurants, or entertainment must be closely located. Adjacent uses, or horizontal mixed-use, allows the area as a whole to be successful providing increases in both ad valorem and sales tax. Other designated areas may be discussed through the catalyst sites discussed in the upcoming Pearland2040 Comprehensive Plan. As detention requirements increase and eat away at developable land, higher density uses encourage financial investment and a good return for both the developer and the city.

Other forms of density

The UDC relies on lot width, depth, and minimum area for the regulation of lot sizes. If our goal is to reduce regulatory barriers to promote adding value on the ground, then we should seek to establish criteria for lot creation based on density or dwelling units per over strict minimum lot standards. Striking a balance between density versus a hard metric of lots-per-linear-foot of frontage may provide additional flexibility to residents who would like to redevelop their oversized lot.

The City of Bryan was awarded a Merit Award in 2020 for their work in creating a ‘Pattern Zone’ to expedite quality infill development which could serve as a model for Pearland. The designs include plans for; cottages, flex house, apartments house (a multi-unit building designed to appear as a single-family house), and walkup apartment building for up to 12 living spaces. The new zone allows for a context appropriate solution with a pre-approval program. While this density may be more radical than our current population may approve, a similar approach may be appropriate for creation of regulations to address accessory dwelling units (ADU). ADU’s are also known as ‘granny flats’ or ‘in-law suites’ which require approval of a conditional use permit in residential districts. Given specific criteria of approval and choices in design we may enable open the residents to provide an ability to age in place at a more affordable price point.

What’s an amenity to you?

The UDC references amenities in discussions of Cluster Plan, Planned Development, and treatment of drainage features along the Corridor Overlay District. Often these amenities come in the form of additional landscaping, equipment, walking paths, or fountains. An effort is made by staff to promote a higher quality component, but that battle is often lost as the project develops. Through additional guidance and by defining minimums for amenities developers will have the information upfront as they design their projects. These types of projects allow for increased densities and the communities proposed must provide increased enhancements to create a balance and livable neighborhood.

Conclusion/Recommendation

Development remains steady and the demands on city and public services continues to rise. In order to provide for the transition to our future we must take steps to revise our development regulations today. The Unified Development Code should be updated with a new document designed to take Pearland into the future envisioned by the Comprehensive Plan and other city planning documents. The initial cost estimate for this project is $300,000 and would be supported by staff and committee of development professionals and residents. This new document will focus on ensuring a future Pearland that is financially sustainable and positions Pearland to continue to remain “The Community of Choice”.

Memo

To: Clay Pearson, City Manager
From: David Van Riper, Assistant Public Works Director
CC: Trent Epperson, Assistant City Manager
Robert Upton, Director of Engineering and Public Works
Date: March 18, 2022
Re: Reuse Water

Council Priority: Sustainable Infrastructure Initiative: Adopt Reuse Water Plan

Executive Summary

This memo provides information illustrating the need to evaluate and develop a Reuse Water Master Plan and program to increase our water portfolio and provide a secure drought resistant alternate supply of water. The City and the region have been subjected to drought conditions in recent years while the City has experienced a population increase over the last decade of 42% and expects future growth at a steady pace. The current water model predicts the need for ten (10) million gallons per day (MGD) from our surface water plant, currently in construction, in 2023 to meet peak day demands and reduce reliance on the connection to the City of Houston system at Shadow Creek which provides bulk water that we buy., Future demand foresees a potential need for an additional five MGD at the Alice Water Plant (in 2030), to augment our existing water supplies.

One way to mitigate need for additional water purchases or production is reuse. The Texas Water Development Board defines Reuse Water as "using treated wastewater for beneficial purpose". The Texas Administrative Code (TAC) defines reclaimed water as "domestic or municipal wastewater that has been treated to a quality suitable for beneficial use" (30 TAC 210.3). The ability to utilize reuse/reclaimed water as an option in the City's Water Portfolio (currently only groundwater and surface water) for irrigated areas, landscaping and industrial applications is a critical component to limit our dependence on outside sources. The ability and cost of obtaining new potable water sources is becoming more difficult and costly to deliver to and within the distribution system.

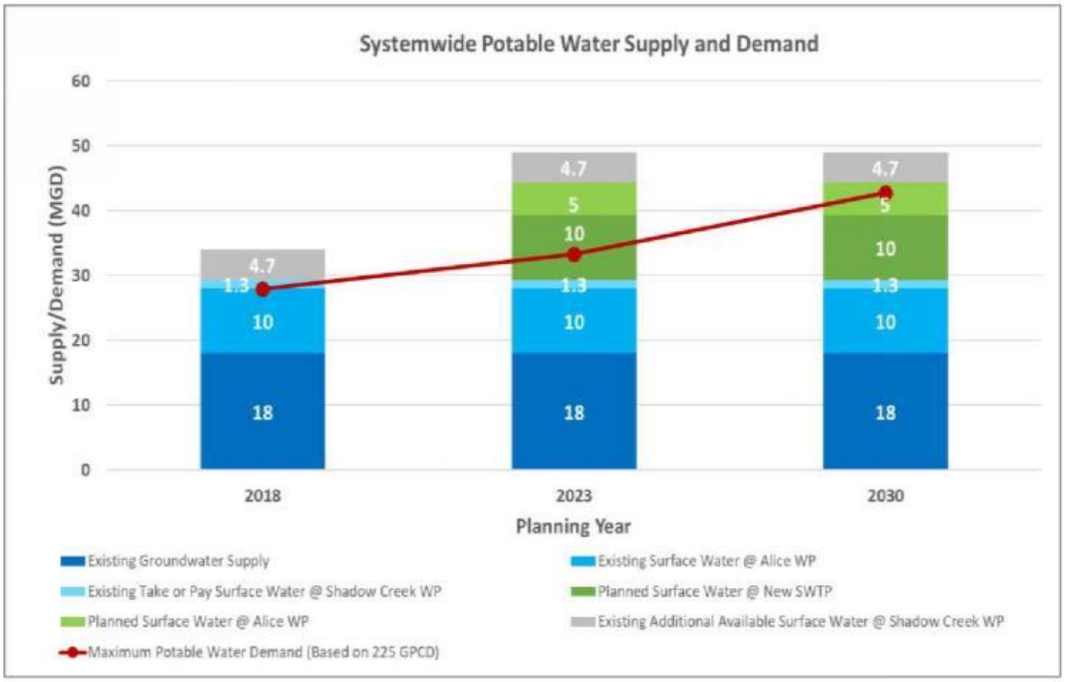
The utilization of reuse water could serve as a less expensive option for irrigation needs and the potential for industry as a water source and would lower the demand on our potable water need now and for the future. The City has an extensive parks and trails system of 16.1 miles and the Parks Department has an ambitious park and trails master plan that has limited irrigation to maintain the landscaping improvements. The utilization of reuse water would allow for more irrigation for the trails and not impact the potable system. Currently all irrigation in parks and landscape medians is using potable water and the use of reuse water is an excellent resource to meet those needs now and in the future. Using reuse water is a great example to our citizens that we are striving to protect the environment and preserve our natural resources while providing a great life quality resource.

As the City is continuing to grow through commercial and residential development, the City of Pearland will be facing significant water resource challenges to meet future water needs to meet peak day demands. The ability to use reuse water has a positive benefit as it utilizes an existing resource that the City has purchased and treated (potable water) and then has paid for treatment (wastewater) before discharge. Utilizing reuse water for specific needs that are currently utilizing potable water will assist in the reduction for the need of locating and procuring future potable water needs.

Background
Water is essential for life and a key indicator of *quality of life* standards. The City of Pearland is making a significant investment to identify future water needs through our water model, water master plan and reuse water plan. Future planning indicates that the City will need a diversified portfolio of water resources. Currently, we have two (2) Surface water take points from the City of Houston, Shadow Creek Ranch (1.3 MGD as take or pay and up to a max of 6 MGD) and Alice Water Plant, (up to 10 MGD). We have a total of 10 wells which can produce 18.6 MGD and will soon have our Surface Water Plant that will produce 10 MGD for a total production capacity of 44.6 MGD. Additionally, the Surface Water Plant is designed at 10 MGD capacity with the footprint to expand to 20MGD. The ability to utilize Reuse Water would add another source of water that could off-set demands and conserve existing potable water resources that would be more expensive or unavailable due to drought. The use for Reuse Water would include irrigation, industry, direct and non-direct use. The use of Reuse Water will secure a drought resistant source of water for the future. Reuse Water will give us one resource to help the City become independent of expensive contracts with other organizations and capital projects.

The City's water model that was developed in 2018 has provided valuable information as to the state of our water system needs and demands. The projected water supply required in 2023 to meet peak day demand is 33.3 million gallons per day. The model has projected out to 2030 and is indicating that for a peak day demand the City will need to 43 million gallons. When the Surface Water Treatment Plant comes on-line the City will then have a total water supply availability of 44.6 million gallons. The model projects that the City should acquire an additional 5 MGD from the City of Houston's Southeast Water Purification Plant. The total water availability to meet peak day demand would then be 49million gallons which includes the max 6 million gallons from the City of Houston at the Shadow Creek water plant. All existing and future sources in the City's water portfolio will be needed to meet the peak day demand and have just under 5 MGD to account for any additional growth. As part of the model, the water system will be split in to two zones, Cullen Boulevard will be the dividing line, to better serve our customers through supply and pressure. The water supply needs assumes that the City is on a dual pressure plane and that 100% of Cullen is supplied to the east side, Alice would need to increase to 15 million gallons capacity and the Surface Water Plant has 10 million gallons per day capacity. Reuse water could be used to supplement and reduce the need for water from Houston at the Alice plant. There are several ways that Reuse Water and assist in reducing the need to obtain additional water. The start of this process would be to develop a Reuse Water Master Plan to determine irrigation utilization and industrial uses. These options would help reduce the need to obtain additional water. A option that would require additional research and a long term discussion is that the City could send the reuse water to Alice through a reverse osmosis, blend and treat to bring the water to drinking water standards. The utilization of Reuse Water needs to be investigated and the implementation could prevent or reduce the need for the City to entering into a contract for more water from SouthEast Water Purification Plant (SEWPP) at a high capital cost to expand the plant and bring more raw water to the plant. Staff recommends that the development of a Reuse Water Master Plant be developed and as this plan moves forward now and in the future, the City will be able to be less dependent on the City of Houston Shadow Creek water plant connection.

However, as currently projected by 2030, on the east side of the City there will be a deficit that will need to be addressed.



To provide some perspective of the amount of Reuse Water available, in fiscal year 2021 the City's five (5) water reclamation facilities discharged a total of 3.737 billion gallons (average 10.2 MGD) of treated effluent into receiving streams. The discharged water could be used to extend the life of our current water supply, reduce the need to procure additional potable water, secure a drought resilient source of water, and reduce the capital expenditure to store and distribute water. Reuse water can be used for irrigation, industrial cooling towers, construction dust control, artificial water bodies and direct non-potable reuse. Currently, the City is only utilizing reuse water for wash down and for dewatering equipment at the water reclamation facilities but there are other options for reuse water.

Next Steps and Potential Outcomes
Ground water use will be reduced by regulatory agencies in the future due to subsidence in the Houston metropolitan area. Brazoria County isn't regulated by a subsidence district but all connecting counties are under strict regulation for ground water pumping from Harris-Galveston County and Fort Bend Subsidence Districts. Brazoria County Groundwater Conservation District (BCGCD) works with neighboring subsidence districts focusing on sharing information regarding the control and prevention of subsidence. Each year the conservation district monitors subsidence with periodically active monitoring (PAM) and plans to install more PAM systems to monitor subsidence in Brazoria County. Under an interlocal agreement with Harris-Galveston Subsidence District (HGCSD) Brazoria County has installed 14 PAMs in Brazoria County to monitor subsidence. The future of ground water regulations is unpredictable, and we must be ready to

secure alternative sources of water for the future should subsidence regulations be enacted or requirements to further reduce our reliance on ground water.

Capital Investment Challenges

The most challenging aspect of reuse water would be establishing and maintaining infrastructure system to supply reuse water for industry, irrigation and City parks. This is a capital investment in pumping, storage and underground infrastructure. The most beneficial approach to overcoming the capital funding challenges would be to implement the project over several phases. The first phase would be to identify the maximum amount of type I effluent provided by the water reclamation facilities. Then, identify the top 10 customers (public or private), the amount of pipeline to get the reuse water to those customers, demand projections and customer pressure demands. The City had the foresight to install distribution system for reuse known as "purple pipe" to parks, industry and commercial users in anticipation of reuse in the future. Purple Pipe is plastic pipe that is identified by the purple color and by the pipe industry to be utilized for Reuse Water. Freese and Nichols developed the City's Wastewater Master Plan and part of that report included a preliminary study on reuse water for the City and determining the top potential users for reuse.

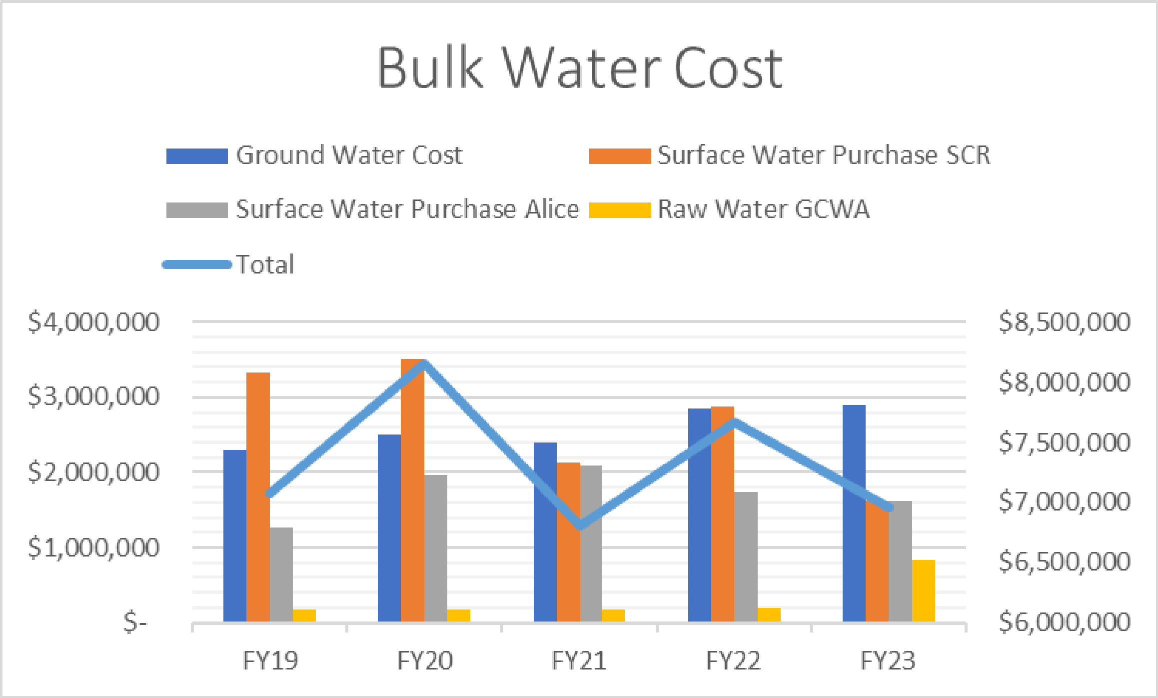
Figure 2 – Historical Irrigation Users

Rank	Irrgation Customer	Historical Irrigation Demand (MG)				4-yr Total Demand MG	4-yr Average Demand (MG)	Maximum Monthly Demand			
		2017	2018	2019	2020			2017	2018	2019	2020
1	Shadow Creek High School	3.78	5.04	3.94	0.051	12.8	3.20	1.04	0.95	1.18	0.5
2	Hickory Slough Sports Complex	2.47	6.55	2.44	0.03	11.5	2.87	0.6	1.73	0.83	0.03
3	Dr. Ronald E McNair Jr High School	0.94	4.68	2.83	0.033	8.5	2.12	0.48	1.33	1.33	0.24
4	Pearland Jr High School	3.45	3.07	1.26	0.005	7.8	1.95	0.57	0.47	0.47	0.005
5	Nolan Ryan Junior High	2.1	1.33	1.36	1.99	6.8	1.70	0.47	0.38	0.38	1.9
6	Shadow Creek Ranch Sports Complex	2.89	0.34	0	0	3.2	0.81	0.18	0	0	0
7	Pearland Rec Center	1.53	1.07	1.35	0.08	4.0	1.01	0.33	0.28	0.28	0.08
8	Mitsubishi	0.42	0.34	0.72	0.4	1.9	0.47	0.18	0.25	0.25	0.21
9	Shirley Dill Brothers Elementary School	0.59	0.29	0.26	0	1.1	0.29	0.22	0.08	0.08	0
10	South Down Park	0.05	0.06	0.89	0.05	1.1	0.26	0.01	0.17	0.17	0.05
11	Laura Ingalls Wilder Elementary	0.69	0.003	0.34	0	1.0	0.26	0.15	0.15	0.15	0
12	Mary Burks Marek Elementary	0.21	0.4	0.22	0	0.8	0.21	0.07	0.04	0.04	0
13	Rogers Middle School	0.02	0.11	0.03	0.01	0.2	0.04	0.01	0.01	0.01	0.01
14	Pearland Jr High School West	0.01	0.13	0.004	0.002	0.1	0.04	0.01	0.001	0.001	0.001
15	Robert Turner High School	0.03	0.08	0.03	0.004	0.1	0.04	0.01	0.01	0.01	0.001
16	Sam Jamison Middle School	0	0	0.07	0.04	0.1	0.03	0	0.05	0.05	0.01
17	Challenger Elementary School	0	0.06	0	0	0.1	0.02	0	0	0	0
18	Alexander Middle School	0	0.02	0	0.0001	0.0	0.01	0	0	0	0.001
19	Aaron Pastentak Park	0.01	0	0	0	0.0	0.00	0.005	0	0	0
20	South Gate Park	0.001	0.01	0	0.0001	0.0	0.00	0.0002	0	0	0.0001
Total		19.19	23.58	15.74	2.70	61.2	15.30				

Cost of Bulk Water

In fiscal year 2021 the City spent $4,402,020 ($2,271,195at Alice Plant, $2,130,825 at Shadow Creek Plant) to purchase treated surface water from the City of Houston and $190,400 to reserve the rights to 10 million gallons of raw water from the Gulf Coast Water Authority. The cost will increase to $955,610 per year when the new Surface Water Plant begins production. Starting in FY23, the total projected annual cost will be $5,510,713 to purchase water from City of Houston and Gulf Coast Water Authority. After the first year of operation at the SWTP and all equipment is through the warranty period, the next step would be to lower or remove our take or pay from the City of Houston at the Shadow Creek water plant once the surface water plant is online. With the cost increase to the full amount for GCWA the budget for purchased water and the reduction of water purchased it is anticipated about a $500,000 savings.

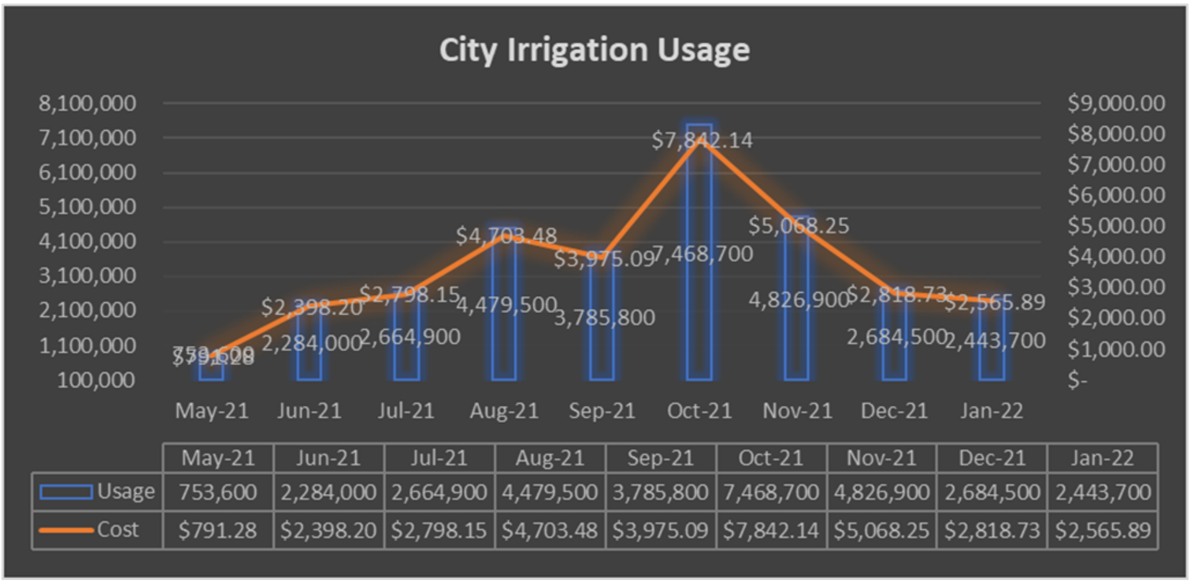
Figure 3 – Bulk Water Costs



The Figure 3 shows accurate information of the funding of purchasing surface water and producing ground water from FY19 through FY21. The average cost to produce ground water at the City is $1.05 per 1000 gallons. FY22 is projected using the cost of water per month in the first four months and scaled over the remaining months based on historical usage. FY23 is projected considering the surface water plant coming online in July of 2023. Currently, the City is in contract to pay 20% ($15,927/month) of the cost to reserve the raw water for the Surface Water Treatment Plant. Once the City commits to the 10 million gallons per day, cost will be at 100% ($79,633/month). FY23 numbers also assume that we will use the minimum take or pay.

The use of Reuse Water to offset the need and cost of potable water has the potential to save the City money, however the overall water picture for the City's needs and demands should be considered. Currently we average 2.665 million gallons per month of City owned irrigation usage totaling almost 32 million gallons per year. The Water Production staff has estimated a composite cost for the treatment of all source water at $2.77 dollars to produce 1000 gallons of treated water which costs the City approximately $88,650 per year. The cost includes salary, utilities, chemicals, purchased source water (groundwater, surface water) and other associated cost. The utilization of Reuse Water allows for existing potable water to be reallocated to meet growth demands in the City should reuse be implemented. The other costs to consider is the cost to locate and purchase additional water to meet demands. The costs to obtain additional water resources are escalating in cost becoming difficult to secure. The costs would definitely raise water rates. Defining the need to explore all options for meeting water system demands is paramount for the future of our residents.

Figure 4 - Metered City Irrigation



Next Steps

Staff is recommending the City develop a Reuse Water Master plan that would start the process of reviewing what will be necessary to utilize this untapped resource. Initial steps at a minimum would be to fully develop potential users, the demand needs, model a proposed system, lay out conveyance systems and develop the process for obtaining reuse authorization from TCEQ for Reflection Bay, Barry Rose and JHEC water reclamation facilities for Type I reuse under the TAC 30 210 regulations. Prioritizing customer reuse will require working with Utility Billing to identify high irrigation use in the City and the cost and return benefits of supplying reuse to those customers. Additional analysis will be needed to calculate the maximum amount of safe reuse available by analyzing effluent flow data and effluent quality. Effluent quality is dependent on flow and capacity, capacity remains constant, but flow fluctuates with rain events. Development of a reuse CIP to identify projects and reuse infrastructure costs and instrumentation requirements. Evaluate a reuse rate study by determining the cost of operating the system, developing a cost and revenue structure, then benchmarking reuse rates. Educating private customers is key early in the process, and ongoing training of operations staff on TCEQ requirements.

Recommendation

Pearland is a progressive city and a steward of the health of the community and the environment. The mission of our staff at EPW is to provide a consistent, high quality and dependable source of water for the residents, business owners, and visitors. There are several components that are key to meeting the challenge of water for the future. The construction of the Surface Water Treatment Plant is providing one goal by providing 10 MGD of new potable water to the system.

The next step in having more control of our water portfolio is to evaluate the utilization of reuse water for irrigation and industrial uses. Currently all treated wastewater is just discharged to the creeks with no capture for utilization. Reuse water is drought resistant and reliable. Staff is recommending conducting the next steps in evaluating this untapped resource and how it can be used to benefit the citizens and to help plan to offset future potable water needs. The estimated cost of the Reuse Master Plan is $175,000

Memo

To: Trent Epperson, Deputy City Manager
From: Carry Capers, Parks & Recreation Director
Tracy Rohrbacher, Executive Director, Pearland Convention & Visitors Bureau
CC: Kevin Carter, Assistant Parks & Recreation Director
Date: March 16, 2022
Re: Expanding Event Hosting

Council Priority: Welcoming Community - Fostering a diverse and unified community with events, amenities, and public spaces that bring people together.

Executive Summary

Events are increasingly popular as a means to enhance communities and local economies. Festivals and special events play an important role in destination development, they drive community engagement and quality of life. The City of Pearland's Parks & Recreation Department currently hosts eight community-based special events each year attracting between 1,000 to 10,000 residents. Events such as the Hometown Christmas Festival, Celebration of Freedom, and the Summer Concerts in the Park series have tremendous value. Likewise, the City of Pearland's Convention & Visitors Bureau annually produces the Pearland Art & Crafts on the Pavilion event and sponsors several events designed to attract visitors and residents alike. These types of events make our community more livable by bringing people from all walks of life together, showcasing what our city has to offer, and connecting people through shared experiences. Those connections provide gathering places for families and social groups, as well as for individuals of all ages and economic status, regardless of their ability to pay.

One of City Council's Strategic Priorities is to *create a welcoming community by fostering a diverse and unified community with events, amenities, and public spaces that bring people together*. **One of the ways we can do that is by hosting a signature event celebrating our diverse community, creating an identity and style that people can rally around, and attracting people from across the region, state, and beyond, to experience the unique flavor and culture Pearland has to offer.**

While the Parks & Recreation Department's special events team has the logistical knowledge and ability to coordinate a signature event, *a full-service event management, production and consulting company can provide a high degree of event expertise*. Specifically, with regard to the planning, production, strategic brand building, marketing and logistical elements that help an event of this magnitude succeed. Staff have engaged two event management companies to provide an overview of the event-related services they can provide to the City of Pearland.

Background

Festivals play an important role in building community pride, providing structure to our social lives, and connecting us with our families, our community, and with Pearland's culturally diverse population.

Our community events are part of what makes Pearland a great place to live. Besides being fun, well-managed festivals and events offer a host of economic and social benefits to communities.

The benefits are similar in events designed with a tourism intent to drive visitors, in general, according to Tracy Rohrbacher, Executive Director of Pearland Convention & Visitors Bureau.

The Houston Livestock Show & Rodeo is the gold standard of a community event that grew from a grassroots effort to an event that instills community pride and generates economic impact to Houston and its surrounding areas.

The economic benefits of festivals are easiest to see and most often cited – festivals designed to attract visitors, stimulate the growth of tourism and other business in a city. For most events, spending by visitors in the local area particularly for accommodations is the biggest factor in generating economic impact; however, spending by event organizers is another important consideration. Overall, direct and indirect impacts, jobs, income, and tax revenues are factors contributing to the economic impact of events.

The social benefits are less visible, but they are just as important. Community events provide opportunities to build community pride, engage in social interactions, develop social networks, and strengthen relationships. Festivals promote community pride by celebrating things that make a city special and evoke good feelings. A recent example from Pearland illustrates the point. Pearland's Hometown Christmas Festival held during the month of December welcomed more than 50,000 people to the park over a course of 30 days. The event brought joy, excitement, nostalgia, and connection for everyone who attended. Social media platforms and news outlets were buzzing with positive reviews and stories of exceptional experiences. The City's media channels alone received more than 28,000 likes, comments, and shares. The 8,000+ volunteer hours served by local residents throughout the month provided an opportunity for volunteers to meet new people, make new friends, increase social interactions, and connect with people who have shared values. Volunteering is also a known way to help fight types of mental issues like depression, anxiety, stress, and anger, and to boost self-esteem.

The Parks and Recreation Department and Convention and Visitors Bureau recognize the value and importance of local community-based events, we see tremendous value in expanding our event hosting to include a large-scale festival that generates visitors and drives hotel room occupancy while also engaging the local community.

Staff have engaged two event production companies specializing in the management of a wide variety of event programming for festivals. Their services include event design, operations, audiovisual production, logistics, budgeting, sponsorship sales, onsite activations, community building, contract negotiation and, above all guest experience.

Festival Management Group, Inc. (FMG) is a full-service management, production and consulting company headquartered in Delray Beach, Florida. The company is responsible for the creation and production of the South Florida Garlic Fest and Bacon & Bourbon Fest, Wellington Hot Chili Cool Wings, Craft Cocktail Series as well as the management of a variety of large-scale festivals and events in south Florida such as the 56-yearold Delray Affair and LagoonFest. They specialize specifically in event marketing, public relations, graphic design, advertising, full-service event management, event production, and event consulting. Their company has experience marketing and producing small to large scale, internationally award-winning events. Their event marketing expertise includes commercial concerts, food, and entertainment events, parades, community events, non-profit fundraisers, galas, golf tournaments, as well as large-scale festivals, which can attract over 250,000 attendees annually. They cater to the needs of cities and government organizations for programming venues, and amphitheaters with great entertainment.

FMG has over 33 years of experience in the marketing and advertising industry, 25 of which specialized in event marketing, specifically community-based events. Over these 25 years, FMG, has expanded on small-scale homegrown community events and turned them into internationally award-winning events, which have been featured on hundreds of websites as “Top Things to Do,” “Top Event in the County,” and have also been featured on the Food Network’s program “Unwrapped” and Food Channel’s “Carnival Eats”.

Another event producer option is Open Sky Media which is a Texas-based company which began producing music festivals more than 10 years ago. Their business model includes multi-venue, multi-day showcases of great music in unique locations. Their events are natural extensions of their branded publication Texas Music which has an online and print presence celebrating the diversity of music in the Lone Star State.

Open Sky Media’s festivals such as the Bastrop Music Festival, are made possible through partnership with local city leaders and tourism entities who are looking to increase travel to their markets by appealing to music fans statewide and across the county. Open Sky Media’s 2021 festival in Bastrop attracted attendees from states other than Texas including: Virginia, Oklahoma, California, Nevada, Louisiana, Florida, and Illinois. Another signature event is Viva Big Bend which draws from even more states and cities and has an estimated direct economic impact of $1.55 million, and direct, indirect, induced impact of $2.6 million. Open Sky Media is hosting the inaugural Conroe Crossroads Music Festival in April 2022 based on their proven business model.

Open Sky Media provides complete turnkey marketing, promotion, talent selection and management, production, lights, and sound. The Bastrop event footprint included 4-days with 40 shows at 10 venues. Ticketed shows take place in the evenings and free shows are scheduled during the day.

Next Steps and Potential Outcomes

Both companies recognize communities operate with various size budgets and offer a range of packages to suit a community’s specific needs. Representatives from both companies are enthusiastic about moving to next steps to create a customized proposal and recommended spends to meet our specific objectives.

Further discussions about our needs, desired outcomes, gaps in the market, and venue capabilities, will need to take place with both companies in order to create a proposal and budget impact based on our objectives which can include specific community components as well. Site visits and a review of venue options will also help to shape the custom proposal.

Conclusion/Recommendation

A large-scale event requires planning effort and an ample marketing window which feasibly targets Spring 2024 as the earliest event date. *Consensus from Council in the following areas will help drive the direction for next steps toward the effort:*

- Is the desired outcome to host a large-scale event with a tourism/economic impact expectation?
- How important is the inclusion of community components to the event footprint?
- Alternatively, is there a desire to create a large-scale community event with local engagement as the primary objective?
- Is there a general interest regarding the type of festival or components to include, such as a music festival, food/drink festival, cultural festival, art festival, extreme sports, technology, parade, etc. that you would like considered?

Both event companies specialize in recommending and building events that will be successful in various communities and parts of the country. Pending Council's interest staff will continue more in-depth consultations with each company.

Memo

To: Clay Pearson, City Manager
From: John McDonald, Community Development Director
CC: Matt Buchanan, President PEDC
Date: March 1, 2022
Re: Small Business & Permitting Policy and Procedure Improvements

Council Priority: Trusted Government - Delivering Transparent, high-quality, and accessible city services by developing cutting edge solutions, engaging with the community, and continuously improving our capabilities.

Initiative: Support small, local, and expanding businesses/Simplify permitting

Executive Summary

Community Development entered FY2022 with a renewed focus on serving the needs of our local business community. In our continuing endeavor to be a partner with those seeking to invest in Pearland, the department built upon their improved service levels with new initiatives. With the launch of OpenCounter in the summer of 2021, a strengthened connection with the Pearland Chamber of Commerce, and the move to creating a more user-friendly website, Pearland continues to improve our support for those wishing to start or grow their business.

The key efforts to meet this initiative rely on delivering a positive customer experience, providing information in a consistent, understandable format, and utilizing technology to support these goals and our desire of maintaining a streamlined permitting process. The full implementation of this program will keep Pearland well situated to continue to serve as an invested cohort with the business community.

Background

As we adjusted to life in a pandemic, Community Development was forced to modify its programs to protect employees and customers while doing our best to maintain quality service provision. These adjustments often led to improvements that we continue to utilize as we adapt to life post-Covid. Predevelopment meetings and project consultations moved online. While originally always in person, we have now found that keeping these meetings online allow for an applicant and their design team to save time and money by not having to travel to the City Hall Annex. This has been quite beneficial as many projects have out of state support for their projects.

OpenCounter is an online platform that allows businesses the opportunity to identify locations that meet their zoning requirements and obtain quotes on permit costs. Users receive a summary that highlights their projects specifications, details estimated permit and impact fee costs, and highlights permits needed. Implemented in June 2021; OpenCounter now averages over 1,000 queries per month.

The department has provided a permitting kiosk in the Permit Office lobby to assist customers in accessing a variety of information including viewing GIS maps, and submittal resources found on Community Development's webpage. This resource also provides a space for staff to sit with customers and provide training on using the eTrakit permitting system.

We are currently working with Communications to create a more user-friendly website experience. This will include a small business resource page that links the Pearland Chamber of Commerce, the Small Business Development Corporation, the Pearland Economic Development Corporation, and Community Development in one location.

Establishing Community Development as a cornerstone of trusted government is a strategic priority of City Council and a vital goal for staff within the department. Community Development, in partnership with Communications, publishes monthly social media post regarding the development process, ways for citizens to participate with code adoption/creation, and tips & tricks for applying for permits and projects.

In late 2021, the PEDC Board of Directors and City Council approved a contract with The Cannon Workplace, LLC for the creation of an entrepreneurship hub for Pearland. The Pearland Innovation Hub (Hub) will enhance Pearland's innovation entrepreneurship culture by creating events, programs activities for entrepreneurs and small business owners to inspire ideation, innovation and entrepreneurship. The Hub will connect the City to local and regional entrepreneurship assistance programs, service providers and funding sources to ensure local entrepreneurs and small businesses in Pearland connect with these resources to maximize their growth potential and overall success. Offerings of the Hub will include business plan competitions, proactive coaching, networking events and student programs to encourage entrepreneurship.

Next Steps and Potential Outcomes

Moving forward, Community Development will continue to build upon these successes and look to develop new programs to better serve the local business community.

As we work towards going live with the reinvented Community Development webpage, customers and staff can expect to see:

1. Connections to business resources within the city (Chamber of Commerce, EDC, SBDC) Including how to start a business in Pearland – getting started and growing your business is topic we want clearly addressed/illustrated for our customers when they visit our online resources. Part of answering this question will include a hub site that connects community resources for folks looking to grow or start a local business.

2. Replacing the Development Guide with focused cut sheets that provide detailed information about high volume permit types (fences, roofs, storage buildings, driveways, generators, etc.), application processes, and permit checklists.

3. A metrics page that highlights the types and numbers of permits processed, and displays permit turn-around times by reviewing group.
4. A video library that provides guidance for different development processes, registering as a contractor or design professional, getting started as a new or growing local business and much more.

Building on our strong relationship with the Pearland Chamber of Commerce we have committed to joining them monthly for the Business Development & Entrepreneur Series that focuses on supporting local business owners. Staff regularly attend Chamber social and outreach events to better connect with the local business community.

Two major initiatives we look to launch as we move into the next fiscal year are the updating of the Unified Development Code and replacing TRAKiT as our permitting software. These two actions will allow us to greatly improve understanding and application of our development regulations and provide an improved permitting experience.

The TRAKiT permitting software currently handles all land development projects/processes. This includes zone changes, CUPs, plats, variances, infrastructure permits, building permits, and all subtrades associated with construction. Over the years, TRAKiT's customer service level has continuously deteriorated, and they are unable to respond to our issues in a timely manner. Furthermore, there are a variety of fundamental flaws that have existed for years that TRAKiT is aware of and that have gone unresolved with no resolution insight, including issuing permits before fully reviewed and poor integration with our payment vendor. Rather than increasing efficiency and saving staff/customer time, TRAKiT continuously creates more work for staff and its poor settings options lead to confusion among customers.

In addition to the currently existing software solutions in place and underway. We have also partnered with CivStart, an organization that assist municipalities connect with technology solution providers to relieve pain-points identified by Community Development and the Economic Development Corporation. Staff has met with several vendors to explore possible replacement for the TRAKiT system. Our goal is to issue an RFP later this summer and transition to a new platform in FY2023.

In March 2019, the City Council ad-hoc Committee on the Unified Development Code (UDC) issued a report to Council which included a recommendation to hire a consultant to work with staff to update the UDC. This effort would be to create a new, more accessible document to assist citizens, local business owners, developers, and staff in better understanding and addressing the requirements set forth on developing Pearland. The final product will be a clearer, more concise online document, with built in links between connected sections, and increased illustrations/charts/tables to facilitate clarity of communication of information. Original estimates for this project are approximately $300,000.

Conclusion/Recommendation

Meeting the needs of local business, as they start, as they develop, and as they grow, will always be an important focus of the Community Development. We are always looking for ways to improve our service levels and ensure a positive experience for all customers. Understanding that we must partner with our businesses, seek solutions, and provide an engaging, informative customer experience, will allow us to address the Council initiative.

Supporting our work to meet these goals though funding the *replacement of UDC and a new permitting software* will ensure that this we continue to meet the needs of our local business community.

To: City Manager's Office

From: Budget Office

CC: John Robuck, Financial Advisor, BOK Financial Securities

Date: 6/22/2022

Re: Financial Metrics Report

Council Priority: Resilient Finances: Providing ***long-term*** *community value through trusted stewardship and responsible financial management*
Initiative: Focus on Priority/Program-based budgeting reviews

Background

City Council has requested robust information on Pearland's financial position. Thoroughly understanding the City's financial situation is key to ensuring that Pearland's financials are sound enough to meet Council Priorities. Staff reviewed a variety of systems and selected the Financial Reporting Model[1] from North Carolina to deploy and provide reports. Created by the University of North Carolina for cities to implement, this model provides several metrics that staff can use to measure a city's financial performance. All measures are calculated using data from the Annual Comprehensive Financial Report (ACFR). City governments most often report their finances through a standardized ACFR – allowing for potential future benchmarking with other communities in Texas using publicly available information. Budget Staff expect that this report can act as a "basket of metrics" to provide a holistic look at the City's Financial Condition. If this report is found to be useful it can be updated and shared with Council and the public.

Executive Summary

The selected financial metrics focus on the General Fund and Enterprise Funds. The General Fund consists of assets and liabilities used to finance the daily and core governmental functions of the City of Pearland. The Enterprise Funds contain the City's Water and Sewer operations and are run as a business. Applying the metrics to both the General Governmental Funds and Enterprise Funds' metrics showed positive results.

[1] See report "Communicating Financial Condition to Elected Officials" by Rivenbark, Roenigk, and Allison. Communicating Financial Condition to Elected Officials in Local Government

General Fund Financial Metrics

Financial Dimension - Metric Name	Description	Calculation	FY 2020	FY 2021	Target Blue is at or above target Red is below target	One-year change Blue is favorable Red is unfavorable	Interpretation
Service Obligation - Operations Ratio	Measures whether government's annual revenues were sufficient to pay for operations	Total revenues plus transfer in divided by total expenditures plus transfer out	1.14	1.04	>1.02	Unfavorable	The ratio falls above the *healthy* target (greater than 1). In other words, the city had $1.14 in FY20 and $1.04 in FY21 of revenue to cover every $1 of expenses. The 10% decrease in the ratio from FY20 to FY21 was largely due to the reduction of the property tax rate from $0.72 to $0.7014, which decreased the margin between revenues and expenditures.
Dependency - Intergovernmental Ratio	Measures extent to which government relies on other governments for resources	Total intergovernmental revenue divided by total revenue	7%	1%	<10%	Favorable	In 2021, intergovernmental revenues as a percentage of total revenues was 1%. The CoP result is a 6% decrease compared to the 2020 ratio of 7%. The decrease indicated that Pearland was significantly less reliant on intergovernmental revenue in FY21The City has very little exposure to being cut off from intergovernmental revenue

							because it is not reliant upon it in any significant way as a funding stream. The 2020 ratio is larger due to COVID-19 funding from the Federal Government.
Financing Obligation - Debt Service Ratio	Measures service flexibility, or amount of expenditures committed to annual debt service	Debt service (principle and interest payments on long term Debt) divided by total expenditures in General Fund and Debt Service Fund.	27%	28%	<30%	Unfavorable	The debt service ratio grew slightly from 27% in FY20 to 28% in FY21. The debt service ratio indicates the City was paying more debt service in FY21 than in FY20, reducing its flexibility to cover for operational expenses. Although the ratio only shows a 1% increase, from FY20 to FY21, Debt Service Expenses increased by $3M (9%) while total expenditures increased by $9M (8%).
Liquidity - Quick Ratio	Measures government's ability to meet short-term debt obligation	Cash and investments divided by current liabilities (not including unearned revenue)	4.44	5.64	>3	Favorable	From FY20 to FY21, the Ratio increased 1.20 points from 4.44 to 5.64. This improvement indicates that the General Fund had a stronger ability use its quick assets to cover its current immediate liability. The improvement is due to a $7M increased in Cash and Investment that is correlates with $3M increase in Fund Balance and $4M decrease in Receivable.

Solvency - Fund Balance as a % of Expenditures	Measures government's ability to meet long-term obligations	Unrestricted (committed, assigned, & unassigned) fund balance divided by total expenditures (less proceeds from capital leases) plus transfers out	35.8%	36.3%	>25%	Favorable	In FY21, the City's unrestricted General Fund balance was 36.3 % of its expenditures. This is an increase of 0.5% from FY20's 35.8% and indicates that the unrestricted general fund balance could sustain its basic operations for 36.3% of its annual operating expenditures at the end of 2021. The improvement is caused by unrestricted Balance improved by $3M (12%) while total expenditure only increased by $8M (10%)
Leverage - Debt as a % of Assessed Value	Measures extent to which government relies on tax-supported debt	Tax-supported, long-term debt divided by the assessed property valuation	2.9%	2.9%	<4%	No Change	In 2021, the city has the same debt as a percentage as in 2020 - 2.9%. According to Moody's data, when the ratio is bigger than 1.75% and less than 4%, the ratio will fall into the "Moderate" category with "A" (moderate) rating (Table 4 Moody's US Local Government General Obligation Scorecard). An Aa (strong) rating requires a metric between 0.75% and 1.75%. **Therefore, the ratio and the trend are within the guidelines and there is no concern at this point with this ratio.**

End of General Fund Metrics

Enterprise Fund Financial Metrics

Financial Dimension - Metric Name	Description	Enterprise Funds Calculation	FY 2020	FY 2021	Target Blue is at or above target Red is below target	One-year change Blue is favorable Red is unfavorable	Interpretation
Inter-period Equity - Total Margin Ratio	Measure if government lived within its financial means during the fiscal year	Total resource inflow (operating and nonoperating revenues plus transfers in) divided by total resource outflow (operating and nonoperating expenses) plus transfers out)	1.10	1.01	>1.05	Unfavorable	For FY20 and FY21, the Total Margin Ratio was 1.10 in FY20 and 1.01 in FY21. This result falls within a healthy range (greater than 1). In other words, the City had $1.10 in FY21 and $1.01 in FY20 of revenue to cover the $1 of expenses. The decrease in the Total Margin Ratio is largely due to a decrease in investment earnings, which will always track the larger market performance. The decrease from FY20 to FY21 is also due to the Sale of Water and Sewer services to residents and businesses. Each decreased by $1.3M and $2.1M (correlates with a 4% reduction of Water Usage). In FY21, the reduction in the Total Margin of Enterprise Funds combined correlates with the operating deficit of approximately $8M in the Water and Sewer Operational Fund (Fund 600) The trend of this metric indicates that Enterprise Fund revenues will need to increase in FY23, likely accomplished via rate increases.

Enterprise Fund Financial Metrics

Financial Dimension - Metric Name	Description	Enterprise Funds Calculation	FY 2020	FY 2021	Target Blue is at or above target Red is below target	One-year change Blue is favorable Red is unfavorable	Interpretation
Financial Performance - % Change in Net Assets	Measures the extent to which government's financial position improved or deteriorated as a result of resource flow	Change in net assets divided by net assets, beginning	2.5%	0.9%	>5%	Unfavorable	For FY20 and FY21, the % Change in Net Assets was 2.5% in FY20 and 0.9% in FY21. The City's Net assets grew during both Fiscal Years, but growth in FY21 ($2.3M) was $4.1M smaller than growth in FY20 ($6.4M).The smaller growth was largely due to the Enterprise Fund generating less revenue in FY21 compared to FY20 as explored in the Total Margin Ratio.
Financing Obligation - Debt Service Ratio	Measures service flexibility, or amount of total expenses committed to annual debt service	Debt service (principle and interest payments on long term debt) divided by total expenses plus principal.	32%	41%	<33%	Unfavorable	The debt service ratio grew from 32% to 41% from FY20 to FY21. The Enterprise Fund had taken on significantly more Debt to build the Surface Water Plant and to ensure the Water and Sewer infrastructure complies with State Regulations while supporting the usage of Pearland's residents. These debt payments are being incurred due to needed capital improvement projects. However, as debt obligations have increased revenues have not kept pace. To improve this metric, revenue would need to increase more than the increase in annual debt service costs.

Enterprise Fund Financial Metrics

Financial Dimension - Metric Name	Description	Enterprise Funds Calculation	FY 2020	FY 2021	Target Blue is at or above target Red is below target	One-year change Blue is favorable Red is unfavorable	Interpretation
Capital – Capital Assets Condition Ratio	Measures the condition of capital assets as defined by remaining useful life	1.0 – (accumulated depreciation divided by capital assets being depreciated)	59.8%	59.1%	>50%	Unfavorable	The Capital Asset Condition Ratio decreased from 59.8% to 59.1% from FY20 to FY21 – meaning the Enterprise Fund's capital assets have slightly more than half their useful life left. The Water and Sewer are almost at half of their life expectancy. However, the ratio cannot reflect the higher demand for Water and Sewer System expansion to support the population of Pearland. Table 3, at the end of this report) breaks down the Capital Condition Ratio for different asset types. In general, the system is aging. The metrics suggest that the City needs to further investments in Machinery and Equipment (Motor Pool). It also suggests that most Furniture and Fixtures are at the end of their useful life (13.8% remaining). The Furnitures and Fixtures ratio should improve with the opening of the new Orange Street Facility and its new furniture/fixtures.

Enterprise Fund Financial Metrics

Financial Dimension - Metric Name	Description	Enterprise Funds Calculation	FY 2020	FY 2021	Target Blue is at or above target Red is below target	One-year change Blue is favorable Red is unfavorable	Interpretation
Liquidity - Quick Ratio	Measures governments ability to meet short-term obligations	Cash and investments divided by current liabilities (not including deferred revenue)	0.96	1.91	>1	Favorable	From FY20 to FY21, the Enterprise fund's quick ratio increased from 0.96 to 1.91. From FY20 to FY21, Enterprise Fund Cash Balance increased from $14 million to $55 million. Although an improvement in quick ratio indicates that the Enterprise Fund had a stronger ability to use its quick assets to cover current its immediate liability, the increase was largely due to the proceeds generated from the issuance of TWDB bond – which were classified as cash. Since TWDB bond proceeds are restricted to the use of Capital Projects only, the FY21 Quick Ratio makes the Enterprise seem more liquid than it is.
Solvency - Net assets ratio	Measures government's ability to meet long-term obligations	Unrestricted net assets divided by total liabilities.	9.4%	17.0%	>10%	Favorable	From FY20 to FY21, the Net Asset Ratio increased from 9.4% to 17%. This increase in Net Asset Ratio indicates the Enterprise Fund has more capabilities to cover its obligations than last fiscal year. The increase is due to unrestricted Asset of $77 million in FY21 was more than double $36 million in FY20. This increase is largely due to the proceeds generated from the issuance of TWDB bond were classified as unrestricted cash.

Enterprise Fund Financial Metrics

Financial Dimension - Metric Name	Description	Enterprise Funds Calculation	FY 2020	FY 2021	Target Blue is at or above target Red is below target	One-year change Blue is favorable Red is unfavorable	Interpretation
Leverage - Debt-to Assets Ratios	Measures the extent to which total assets are financed with long-term debt	Long-term debt divided by total assets	52.9%	56.2%	<66%	Unfavorable	From FY20 to FY21, the Debt to Asset Ratio increased from 52.9% to 56.2%. This increase indicates the Enterprise has taken on more debt. The increase corresponds to increased water and sewer revenue bonds issuances to build the Surface Water Plant and to ensure the Water and Sewer infrastructure complies with State Regulations while supporting the usage of Pearland's residents.

Metric: Service Obligation - Operations Ratio

Did the General Fund annual revenue fully cover annual expenses?

Description:

The ratio is calculated by dividing all asset inflows against all outflows. Due to the future needs for capital asset replacement and existing debt amortization, **it is helpful for governments to have a ratio larger than 1 to maintain sufficient reserves for asset replacements**.

Results:

For FY20 and FY21, the Operation Ratio was 1.14 and decreased to 1.04 in FY21. This falls above the *healthy* target (greater than 1). In other words, the city had $1.14 in FY20 and $1.04 in FY21 of revenue to cover every $1 of expenses. The 10% decrease in the ratio from FY20 to FY21 was largely due to the reduction of the property tax rate from $0.72 to $0.7014, which decreased the margin between revenues and expenditures.

Metric: Dependency - Intergovernmental Ratio
How much of the City's General Fund revenue came from other governments?

Description:
This ratio measures how self-sufficient the city is and how much it depends on sources beyond its direct control for funding. A lower ratio indicates a better position to operate efficiently without additional, intergovernmental support. A higher ratio indicates that the City is relying more on external resources for funding, exposing Pearland to higher financial risk if an external funding stream dries up. It is calculated by dividing intergovernmental revenue by total revenue.

Results:
In 2021, intergovernmental revenues as a percentage of total revenues was 1%. This is a 6% decrease compared to the 2020 ratio of 7%. This large decrease indicated that Pearland was significantly less reliant on intergovernmental revenue in FY21.The City has very little exposure to being cut off from intergovernmental revenue because it is not reliant upon it in any significant way as a funding stream. The 2020 ratio is larger due to COVID-19 funding from the Federal Government.

Metric: Financing Obligation - Debt Service Ratio (Table 1. Metrics for General Fund)
How much of City's expenditures are dedicated for debt service payments?

Description:

The Debt Service Ratio provides feedback on service flexibility with the amount of expenditures committed to annual debt service. There is no uniform benchmark for this ratio, and it is an internal policy decision. A lower ratio demonstrates a stronger ability to repay outstanding debt. The debt service ratio is calculated by taking the expenditure for debt service (principal and interest) in the General Fund plus debt service (principal and interest) in the debt service fund and dividing it by total expenditures in general fund and debt service fund.

Results
The debt service ratio grew slightly from 27% in FY20 to 28% in FY21. The debt service ratio indicates the City's ability to repay outstanding debt remains constant year over year.

Metric: Liquidity - Quick Ratio
Were the General Fund expenses able to be paid as they come due with "quick" assets?

Description:
The Quick Ratio assesses the City's ability to pay for its most immediate obligations. The quick ratio is calculated by using cash and investments divided by current liabilities (not including unearned revenue).

This is a more conservative approach to measure liquidity as it uses quick assets, or assets that are normally convertible into cash within a relatively short period, such as Cash and Investments. Unlike current assets, quick assets exclude receivables which are mainly related to taxes and fines, because of the nature of the receivables they are not normally converted to cash in a relatively short period. There is no uniform benchmark for this ratio.

Results

The City's General Fund Quick Ratio increased 1.20 points from 4.44 in FY 20 to 5.64 in FY21. This improvement indicates that the General Fund had a stronger ability use its quick assets to cover its current immediate liability.

Metric: Solvency - Unrestricted Fund Balance as a % of Expenditures
Was the City's General Fund able to cover long-term obligations?

Description:

Unrestricted fund balance as a percent of expenditures measures the percentage of available current financial resources relative to the annual expenditures. The metric reflects the City's ability to address long-term obligations. The Government Finance Officers Association (GFOA) recommends the ratio should not be less than 17% when using unrestricted general fund operating revenues divided by regular general fund operating expenditures.

However, the Pearland policy is more restrictive by requiring a minimum unassigned General Fund balance of 25% of the total operating expenditures according to Pearland Comprehensive Financial Management Policy Statements Section V.A. This ratio is calculated using available unrestricted (committed, assigned, & unassigned) fund balance divided by total expenditures (less proceeds from capital leases) plus transfers out.

Results:

In FY21, the City's unrestricted General Fund balance was 36.3 % of its expenditures. This is an increase of 0.5% from FY20's 35.8% and indicates that the unrestricted general fund balance could sustain its basic operations for 36.3% of its annual operating expenditures at the end of 2021.

Metric: Leverage - Debt as a percentage of Assessed Value (Table 1. Metrics for General Fund)
Did the city heavily rely on its property tax supported debt?

Description:

The ratio of debt as a percentage of total assessed value is used to analyze the extent to which the city relies on tax supported debt. There is no uniform benchmark for this ratio, and it is an internal policy decision. However, the Moody's scoreboard has been considered a good reference tool to evaluate the ratio. This ratio is calculated as the sum of outstanding net bonded debt is divided by the assessed property valuation.

Results:

In 2021, the city has the same debt as a percentage as in 2020 - 2.9%. According to Moody's data, when the ratio is bigger than 1.75% and less than 4%, the ratio will fall into the "Moderate" category with "A" (moderate) rating (Table 4 Moody's US Local Government General Obligation Scorecard). An Aa (strong) rating requires a metric between 0.75% and 1.75%. Therefore, the ratio and the trend are within the guidelines and there is no concern at this point with this ratio.

General Fund Financial Condition Conclusion

Five out of the six ratios and ratio trends are indicated desirable financial positions. The operation ratio, which deteriorated in FY21, was the lone exception. The financial condition of the City's General Fund is relatively strong based on dependency, liquidity, solvency, and leverage. Although the City maintains sufficient reserves the City should watch, or improve its operating ratio by increasing revenues or reducing expenditures.

Enterprise Fund Financial Metrics (Table 2. Metrics for Enterprise Fund)
Metric - Interperiod Equity - Total Margin Ratio
Did the Enterprise Fund annual revenue fully cover annual expenses?

Description:
The ratio is computed by dividing all sources of financial inflows against all outflows. Due to the future need of the capital asset replacement and existing debt amortization, it is usually helpful for the Enterprise Fund to have a ratio larger than 1 to maintain a reserve for asset replacement.

Results:
For FY20 and FY21, the Total Margin Ratio was 1.10 in FY20 and 1.01 in FY21. This result falls within a healthy range (greater than 1). In other words, the City had $1.10 in FY21 and $1.01 in FY20 of revenue to cover the $1 of expenses. The decrease in the Total Margin Ratio is largely due to a decrease in investment earnings, which will always track the larger market performance. The decrease from FY20 to FY21 is also due to the Sale of Water and Sewer services to residents and businesses. Each decreased by $1.3M and $2.1M (correlates with a 4% reduction of Water Usage). In FY21, the reduction in the Total Margin of Enterprise Funds combined correlates with the operating deficit of approximately $8M in the Water and Sewer Operational Fund (Fund 600) The trend of this metric indicates that Enterprise Fund revenues will need to increase in FY23, likely accomplished via rate increases.

Metric - Financial Performance - % Change in Net Assets
Did the City's financial position improve or deteriorate due to the resource flows?

Description:
This metric is the percentage change in Net Position balance compared to the prior year for the City's Business Activities. It measures how much the Enterprise system's financial position improved or deteriorated year over year. There is no uniform benchmark for this ratio.

Results:
For FY20 and FY21, the % Change in Net Assets was 2.5% in FY20 and 0.9% in FY21. The City's Net assets grew during both Fiscal Years, but growth in FY21 ($2.3M) was $4.1M smaller than growth in FY20 ($6.4M).The smaller growth was largely due to the Enterprise Fund generating less revenue in FY21 compared to FY20 as explored in the Total Margin Ratio.

Metric - Financing Obligation - Debt Service Ratio
How much of City's expenditure is dedicated for debt service payments?

Description:

The Debt Service Ratio measures the level of total expenditures committed to annual debt service. A low ratio is preferred because it indicates a stronger ability to repay outstanding debt. The debt service ratio is calculated by dividing the total debt service expenditure (principal and interest) by total expenditures. There is no uniform benchmark for this ratio.

Results:
The debt service ratio grew from 32% to 41% from FY20 to FY21. The Enterprise Fund had taken on significantly more Debt to build the Surface Water Plant and to ensure the Water and Sewer infrastructure complies with State Regulations while supporting the usage of Pearland's residents. These debt payments are being incurred due to needed capital improvement projects. However, as debt obligations have increased revenues have not kept pace. To improve this metric, revenue would need to increase more than the increase in annual debt service costs.

Metric - Capital Asset Condition Ratio
What is the remaining life left in the Water and Sewer Capital Assets?

Description:
This metric measures the remaining life of the Water and Sewer capital assets. While replacement costs will likely exceed the original cost of capital assets, this ratio will show how much useful life remains

before assets need to be replaced. The ratio can run from 0.0 (fully depreciated capital) to 1.0 (brand new capital). There is no uniform benchmark for this ratio.

Results:
The Capital Asset Condition Ratio decreased from 59.8% to 59.1% from FY20 to FY21 – meaning the Enterprise Fund's capital assets have slightly more than half their useful life left. The Water and Sewer are almost at half of their life expectancy. However, the ratio cannot reflect the higher demand for Water and Sewer System expansion to support the population of Pearland.

The table below breaks down the Capital Condition Ratio for different asset types. In general, the system is aging. The metrics suggest that the City needs to further investments in Machinery and Equipment (Motor Pool). It also suggests that most Furniture and Fixtures are at the end of their useful life (13.8% remaining). The Furnitures and Fixtures ratio should improve with the opening of the new Orange Street Facility and its new furniture/fixtures.

Capital Condition Ratio	**FY19**	**FY20**	**FY21**	**Three Year Trend**
Infrastructure	62.6%	60.2%	60.0%	Downward, but >50%
Buildings and Improvements	73.7%	71.3%	69.0%	Downward, but >50%
Machinery and Equipment	20.9%	23.6%	18.4%	Downward and <50%
Furniture and Fixtures	8.1%	21.0%	13.8%	Downward and <50%
Contractual Water Rights	54.9%	51.0%	47.0%	Downward and <50%
Total Capital Assets Subject to Depreciation	**62.3%**	**59.8%**	**59.1%**	**Downward, but >50%**

Metric - Liquidity - Quick Ratio
Are Enterprise Fund expenses able to be paid as they come due with "quick" assets?

Description:
The Quick Ratio assesses the Enterprise Fund's ability to pay for its most immediate obligations. The quick ratio is calculated by using cash and investments divided by current liabilities (not including unearned revenue). There is no uniform benchmark for this ratio.

Results
From FY20 to FY21, the Enterprise fund's quick ratio increased from 0.96 to 1.91. From FY20 to FY21, Enterprise Fund Cash Balance increased from $14 million to $55 million. Although an improvement in quick ratio indicates that the Enterprise Fund had a stronger ability to use its quick assets to cover current its immediate liability, the increase was largely due to the proceeds generated from the issuance of TWDB bond – which were classified as cash. Since TWDB bond proceeds are restricted to the use of Capital Projects only, the FY21 Quick Ratio makes the Enterprise seem more liquid than it is.

Metric - Solvency – Net Asset Ratio
Is the City's Enterprise Fund able to cover for the long-term obligations?

Description:
Net Asset Ratio measures the percentage of net asset available to cover for total liabilities. Thus, it reflects the City's ability to address long-term obligations. This ratio is calculated using available unrestricted net asset divided by total liabilities. There is no uniform benchmark for this ratio.

Results:

From FY20 to FY21, the Net Asset Ratio increased from 9.4% to 17%. This increase in Net Asset Ratio indicates the Enterprise Fund has more capabilities to cover its obligations than last fiscal year. The increase is due to unrestricted Asset of $77 million in FY21 was more than double $36 million in FY20. This increase is largely due to the proceeds generated from the issuance of TWDB bond were classified as unrestricted cash.

Leverage - Debt to Asset Ratio
How much of Enterprise Fund Assets are financed by debt?

Description:
The Debt to Asset Ratio is used to analyze how much of the Enterprise Fund's assets have been financed by debt. This ratio is calculated as the sum of outstanding net bonded debt divided by the assessed property valuation. Even though property taxes are not used to pay for enterprise fund debt, they are used here as a measure of total city value, which is highly correlated with Enterprise Fund revenue. There is no uniform benchmark for this ratio.

Results:
From FY20 to FY21, the Debt to Asset Ratio increased from 52.9% to 56.2%. This increase indicates the Enterprise has taken on more debt. The increase corresponds to increased water and sewer revenue bonds issuances to build the Surface Water Plant and to ensure the Water and Sewer infrastructure complies with State Regulations while supporting the usage of Pearland's residents.

Conclusion
Only 2 out of 8 measures improved in FY21. The financial condition of the City's Enterprise Fund based on ratios with six deteriorating at least somewhat since FY20.

Although the Enterprise Fund's solvency and liquidity slightly improved, the fund saw no growth in the Margin Ratio and an increase in Net Assets. The outcome correlates with no customer rate increase in FY21, unfavorable weather caused by the winter storm, and overall lower water usage. The Financial Obligation and leverage have worsened year over year due to the increase required for debt incurred to finance major capital improvement plans.

Table 3. City of Pearland Capital Condition Ratio

GOVERNMENTAL ACITIVITIES	9/30/2019	9/30/2020	9/30/2021
Capital Assets Subject to Depreciation			
Infrastructure	1,035,600,379	1,050,165,484	1,088,579,067
Buildings and Improvements	110,466,005	123,307,311	133,954,931
Machinery and Equipment	25,700,182	27,460,586	30,014,563
Furniture and Fixtures	8,254,672	8,754,377	10,051,442
Totals Assets Subject to Depreciation	**1,180,021,238**	**1,209,687,758**	**1,262,600,003**
Accumulated Depreciation			
Infrastructure	(431,430,551)	(466,610,214)	(500,856,393)
Buildings and Improvements	(41,965,821)	(48,191,961)	(50,561,238)
Machinery and Equipment	(16,361,881)	(18,299,548)	(19,669,229)
Furniture and Fixtures	(6,149,297)	(6,856,897)	(7,576,337)
Total Accumulated	**(495,907,550)**	**(539,958,620)**	**(578,663,197)**
Capital Condition Ratio			
Infrastructure	0.583	0.556	0.540
Buildings and Improvements	0.620	0.609	0.623
Machinery and Equipment	0.363	0.334	0.345
Furniture and Fixtures	0.255	0.217	0.246
Total Capital Assets Subject to Depreciation	0.580	0.554	0.542

BUSINESS-TYPE ACTIVITIES	9/30/2019	9/30/2020	9/30/2021
Capital Assets Subject to Depreciation			
Water and Sewer System	364,431,770	366,628,617	391,239,811
Buildings and Improvements	32,268,698	32,042,833	32,042,833
Machinery and Equipment	5,348,890	5,783,065	5,491,308
Furniture and Fixtures	127,521	153,050	153,050
Contractual Water Rights	34,511,428	34,511,428	34,511,428
Totals Assets Subject to Depreciation	**436,688,307**	**439,118,993**	**463,438,430**
Accumulated Depreciation			

Infrastructure	(136,280,342)	(145,818,635)	(156,493,519)
Buildings and Improvements	(8,486,168)	(9,210,175)	(9,945,103)
Machinery and Equipment	(4,230,445)	(4,416,630)	(4,481,028)
Furniture and Fixtures	(117,129)	(120,883)	(131,865)
Contractual Water Rights	(15,550,993)	(16,926,062)	(18,301,130)
Total Accumulated	**(164,665,077)**	**(176,492,385)**	**(189,352,645)**
Capital Condition Ratio			
Infrastructure	0.626	0.602	0.600
Buildings and Improvements	0.737	0.713	0.690
Machinery and Equipment	0.209	0.236	0.184
Furniture and Fixtures	0.081	0.210	0.138
Contractual Water Rights	0.549	0.510	0.470
Total Capital Assets Subject to Depreciation	0.623	0.598	0.591

Table 4 Moody's US Local Government General Obligation Scorecard

Appendix A: US Local Government General Obligation Scorecard

	Very Strong	Strong	Moderate	Weak	Poor	Very Poor	
	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Economy/Tax Base (30%)							
Tax Base Size: Full Value	> $12B	$12B ≥ n > $1.4B	$1.4B ≥ n > $240M	$240M ≥ n > $120M	$120M ≥ n > $60M	≤ $60M	10%
Full Value Per Capita	> $150,000	$150,000 ≥ n > $65,000	$65,000 ≥ n > $35,000	$35,000 ≥ n > $20,000	$20,000 ≥ n > $10,000	≤ $10,000	10%
Socioeconomic Indices: MFI	> 150% of US median	150% to 90% of US median	90% to 75% of US median	75% to 50% of US median	50% to 40% of US median	≤ 40% of US median	10%
Finances (30%)							
Fund Balance as % of Revenues	> 30%	30% ≥ n > 15%	15% ≥ n > 5%	5% ≥ n > 0%	0% ≥ n > -2.5%	≤ -2.5%	10%
5-Year Dollar Change in Fund Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%
Cash Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 5%	5.% ≥ n > 0%	0% ≥ n > -2.5%	≤ -2.5%	10%
5-Year Dollar Change in Cash Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%
Management (20%)							
Institutional Framework	Very strong legal ability to match resources with spending	Strong legal ability to match resources with spending	Moderate legal ability to match resources with spending	Limited legal ability to match resources with spending	Poor legal ability to match resources with spending	Very poor or no legal ability to match resources with spending	10%
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures	> 1.05x	1.05x ≥ n > 1.02x	1.02x ≥ n > 0.98x	0.98x ≥ n > 0.95x	0.95x ≥ n > 0.92x	≤ 0.92x	10%
Debt/Pensions (20%)							
Net Direct Debt / Full Value	< 0.75%	0.75% ≤ n < 1.75%	1.75% ≤ n < 4%	4% ≤ n < 10%	10% ≤ n < 15%	≥ 15%	5%
Net Direct Debt / Operating Revenues	< 0.33x	0.33x ≤ n < 0.67x	0.67x ≤ n < 3x	3x ≤ n < 5x	5x ≤ n < 7x	≥ 7x	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value	< 0.9%	0.9% ≤ n < 2.1%	2.1% ≤ n < 4.8%	4.8% ≤ n < 12%	12% ≤ n < 18%	≥ 18%	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues	< 0.4x	0.4x ≤ n < 0.8x	0.8 x ≤ n < 3.6x	3.6x ≤ n < 6x	6x ≤ n < 8.4x	≥ 8.4x	5%

Source: Moody's Investor Service

Table 5 Outstanding Debt and Taxable Assessed Valuation as of March 22,2022

Year	Taxable Assessed Valuation (a)	Growth Rate	Outstanding General Obligation Debt	GO Debt to AV
2004/05	3,019,449,422	28.20%	148,445,000	4.92%
2005/06	3,576,439,129	18.45%	171,580,000	4.80%
2006/07	4,412,821,949	23.39%	231,030,000	5.24%
2007/08	5,389,790,165	22.14%	259,965,000	4.82%
2008/09	5,904,826,560	9.56%	263,270,000	4.46%
2009/10	6,269,047,937	6.17%	286,165,000	4.56%
2010/11	6,356,685,878	1.40%	298,255,000	4.69%
2011/12	6,383,927,907	0.43%	289,595,000	4.54%
2012/13	6,550,714,662	2.61%	308,750,000	4.71%
2013/14	7,033,529,520	7.37%	306,100,000	4.35%
2014/15	7,635,908,210	8.56%	307,230,000	4.02%
2015/16	8,548,604,068	11.95%	322,710,000	3.78%
2016/17	9,828,535,518	14.97%	328,005,000	3.34%
2017/18	10,715,389,795	9.02%	324,770,000	3.03%
2018/19	11,013,443,068	2.78%	325,620,000	2.96%
2019/20	11,650,098,973	5.78%	339,195,000	2.91%
2020/21	12,468,069,479	7.02%	350,080,000	2.91%

Memo

To: Clay Pearson, City Manager
From: Priya Bhakta, Internal Services Administrator
Eric Roche, Budget Officer
CC: Trent Epperson, Deputy City Manager
Robert Upton, Director of Engineering & Public Works
Amy Johnson, Chief Financial Officer
Date: March 30, 2022
Re: Motor Pool Update

Council Priority: Trusted Government and Resilient Finances
Initiative: Long term capital asset financial plan (asset management tracking, plan to create internal service funds, financing)

Executive Summary

The Motor Pool Fund is an internal service fund established to account for the financing of Engineering and Public Work's (EPW) Fleet Division, vehicle and equipment acquisition, and maintenance. The Motor Pool Fund delivers vehicle replacement, fleet services and fuel management to City departments in a financially sustainable manner.

The Motor Pool owns 616 pieces of vehicles and equipment, which is an 86% increase since 2019 (388 pieces). It is important to note that this increase is not due to newly added vehicles and equipment to the City's inventory, however the increase has been to fully transition all vehicle and equipment to the Motor Pool.

The Motor Pool allows the City to make annual contributions to the fund rather than large periodic dollar investments. In turn, the fund creates a more predictable and controllable financial impact on the operating budget and allows for a more systematic approach to the acquisition and maintenance of high dollar vehicles and equipment. The fund's revenue is transferred from department operating budgets on an annual basis according to a consistent formula to support operations, maintenance and capital replacements.

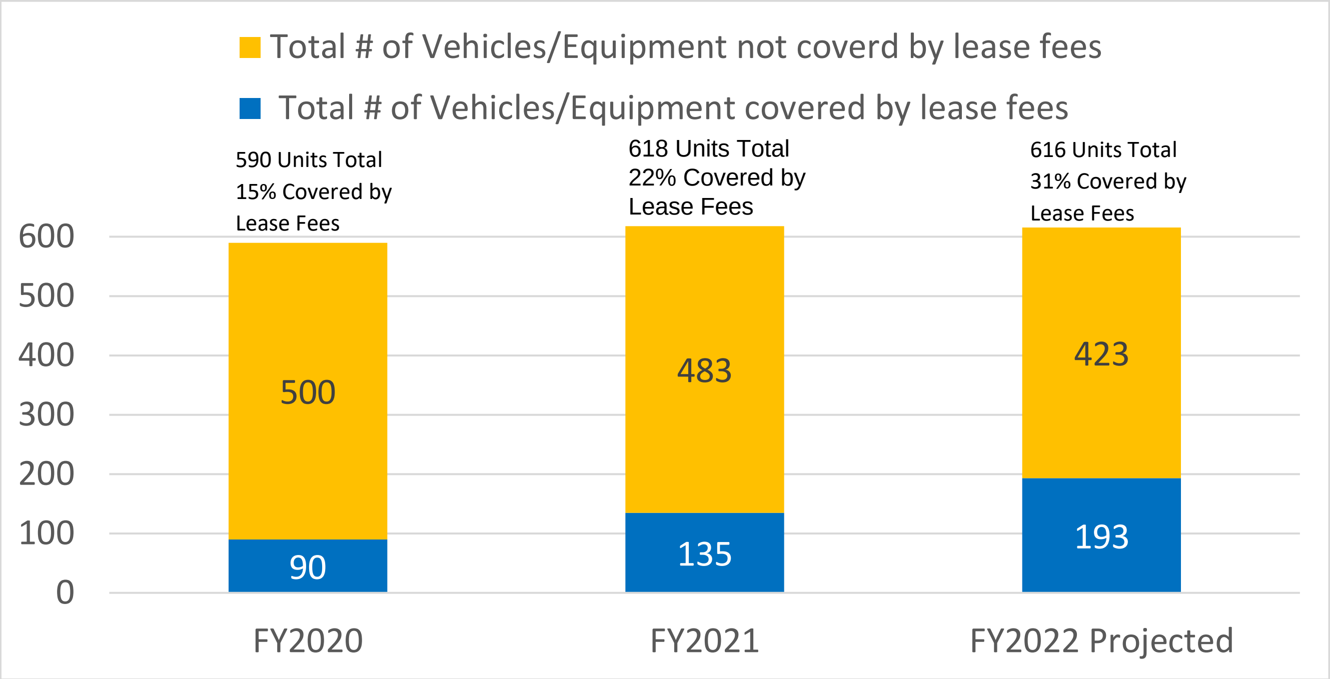
Financial Impact

In 2019, the City transitioned to a Motor Pool Fund in which departments pay lease fees into the fund when new vehicles are purchased. The transferred lease "revenue" builds the fund balance for future replacement vehicles. However, since the City is still in the early stages of capitalization, it will take several years, even with the infusion from Broadway Infrastructure reimbursement, before all vehicles and equipment have an assigned lease fee.

With the fund not being fully capitalized, it is important to limit the increases in fleet size until the City is able to "catch up" on lease fees via the replacement of outdated vehicles and equipment. **The Motor Pool will not be fully funded until every vehicle and piece of equipment has been replaced at least once.** The chart below shows how the City's fleet has changed since the beginning of FY21.

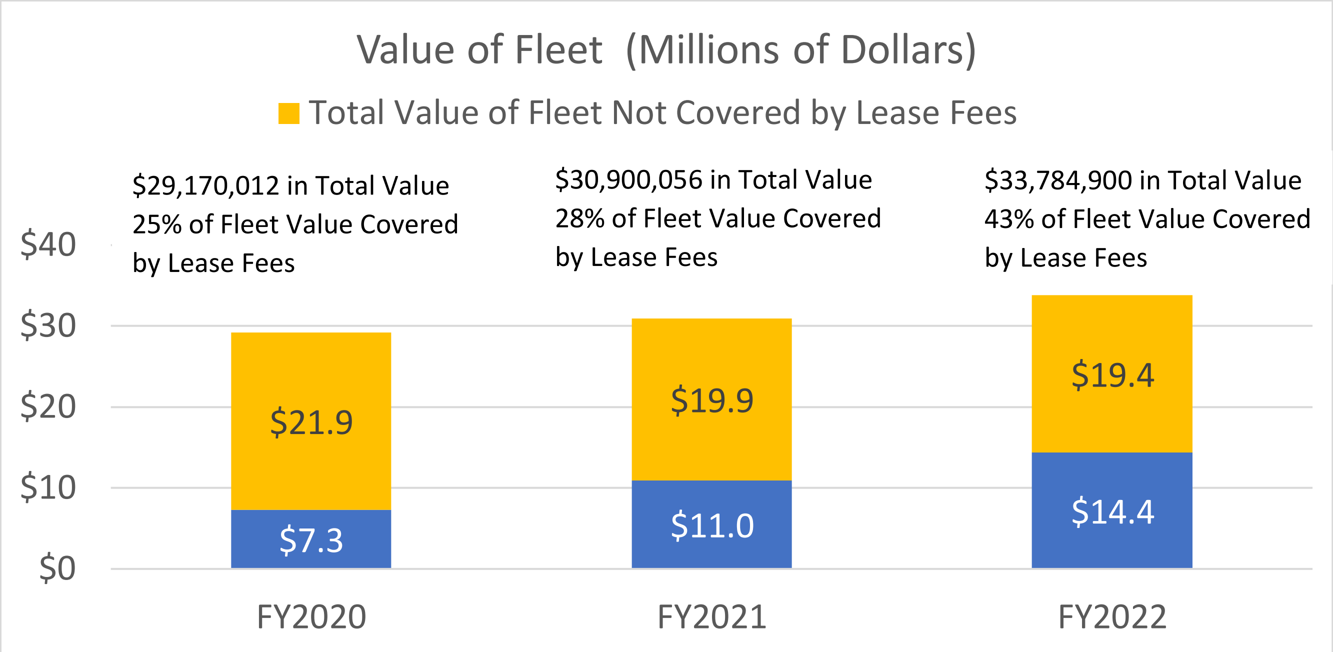
Fleet Size Over Time Split Out of Lease Fee Coverage

The chart below illustrates the Motor Pool is expected to contain 193 total units (vehicles and equipment) by the time all the FY22 budgeted purchases have been ordered and received. This



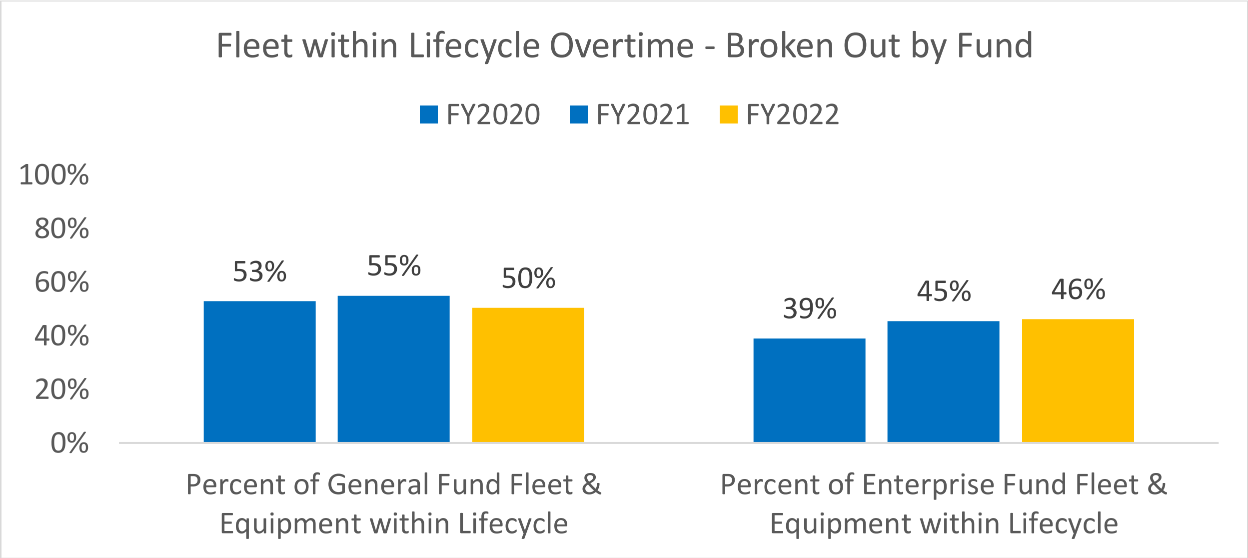
would result in a 31% of the Motor Pool units being covered by lease fees, up 10% since FY21.

Another way to look at the progress within this fund is to calculate coverage not as a percent of total units but based on the total value of the fleet. This is due to fluctuations between vehicles and equipment, for example a fire apparatus and a pickup truck have considerably different costs. The chart below showcases the value of the fleet over time (in millions). It does not include an FY22 projection as lease fees are not built into the budget until the following year.



Value of the Fleet (millions) Broken Out by Lease Fee Coverage Status as of January 2022, $14,361,789 worth of fleet vehicles and equipment have been covered by lease fees. This represents an increase of $3,370,905M in value, or about 23% over FY21. By value, 77% of the fleet is not covered by lease fees. The percentage of vehicles not covered by lease fees will decrease with the purchase being made in FY22 that have not yet been received and assigned lease fees.

The Motor Pool consist of two funding sources, the Enterprise Fund and the General Fund. The Enterprise Fund provides funding for vehicles and equipment operated by water, stormwater and wastewater (sewer) staff to maintain those utilities. Taxpayer dollars cannot be used to purchase vehicles for these operations, instead, funding is allocated from fund revenues. The General Fund comprises the remaining vehicles and pieces of equipment in the City and is paid through tax revenues. The chart below indicates the percentage of units within lifecycle for each fund as of January 2022. A vehicle that is “within lifecycle” means that is still within its expected lifespan and does not need to be replaced. Ideally, 100% of vehicles and equipment would be within lifespan. It does not include vehicles ordered or budgeted for in FY22, but not yet received.



Presently, the General Fund has 50% units within lifecycle and the Enterprise Fund has 46% units within lifecycle. The 5% decrease from FY21 to FY22 is due to the added Parks & Recreation equipment along with any other vehicles and equipment that have fallen out of lifecycle in FY22. These numbers will continue to change as vehicles age out of their expected useful service lifespan and are replaced.

Next Steps and Potential Outcomes

In order to fully capitalize the Motor Pool Fund significant funding will continue to be required over the next several years. During the next two years (FY23 and FY24), 382 existing units will need to be replaced, based on mileage/age/condition, at a cost of $10,335,162 from the General Fund and $2,625,206 from Enterprise Funds. For comparison, the FY22 Budget for replacement and new vehicles and equipment purchases (non-lease fee covered units) was $1,564,220 in the General Fund and $532,000 in the Enterprise Fund. Looking further out, over the next five years, 499 units will have to be replaced at a cost of $16,123,754 in the General Fund and $3,913,970 in the Enterprise Fund. These figures do not include any units that will be covered by lease fees due to the newness of the funding mechanism; as the motor pool balance has been created to replace vehicles that have paid the full amount of lease fees, it is unlikely that funding will be available from the Motor Pool Fund for replacing vehicles that have not paid lease fees.

Capital Outlay

Fire apparatus are capital assets owned and replaced within the Motor Pool. Due to their replacement costs, it is crucial that Fire, Fleet and Finance evaluate and conduct financial planning for current and future replacements. At present, twelve fire trucks are operated within Fire operations and response and one engine is dedicated for training.

The Motor Pool vehicle replacement criteria identifies Truck Heavy (TH) vehicles to have a twenty-year life span, with ten years as a front-line (primary) truck and ten years as a reserve (secondary) unit. As of March 2022, TH142 has met its useful life as a front-line fire truck. It Is recommended to replace this engine. The estimated cost for the replacement is $971,000.

Manufacturers of fire apparatus are indicating a two-year delivery time from the date of order for new fire truck. Fire trucks are specialized units that require a very detailed and lengthy process for buildout. Along with this, the COVID-19 pandemic has impacted the automotive industry, which has created severe supply chain issues and delays in vehicle and equipment delivery, replacements and repairs. With these potential buildout schedules, TH122 will be over its life cycle by the time a new fire truck is delivered.

Future Planning

The industry life cycle for fire apparatus indicates for a ten-year front-line engine with an additional three to five years as a reserve. The standards also recommend replacing units at 10,000 engine hours or 100,000 miles. By 2024, eight fire trucks will be over ten years old, with estimated hours and mileage over the recommended benchmark. As the fire apparatus fleet continues to age; maintenance cost and downtime will continue to rise. The goal is to create a replacement schedule within Motor Pool that provides for both operational efficiency and resilient financing.

Fleet and Finance are in the process of reviewing and revising the Motor Pool policy. One area of focus will be to look at the current vehicle and equipment criteria for all categories and work to create replacements schedules based on age, mileage, and maintenance cost that are operationally and fiscally feasible.

Fleet Maintenance

The Fleet Maintenance division aims to provide customers with safe, dependable, and reliable services to ensure maximum utilization of the fleet through economical and environmentally efficient fleet management. The division is responsible for maintaining and repairing 503 pieces of vehicles and equipment (currently not responsible for Parks & Recreations small equipment), vehicle and equipment replacements, auctioning replaced vehicles, fuel management, and regulatory compliance with state agencies.

2021 Accomplishments

- Completed 1708 work orders
- Reduced heavy equipment outsourcing by completing 44 work orders related to heavy equipment and machinery in-house
- Began conducting Texas State Inspections in-house, allowing for an annual cost savings of $12,000 by eliminating this previously outsourced service
- Hired and trained two new positions to the Fleet division: Shop Foreman and Preventative Maintenance Mechanic
- Brought on a Fuel Management System to allow for real-time fuel monitoring via the web
- Operated and maintained a newly constructed fuel island at the Orange Street Campus
- Purchased and installed an alignment machine and lift to allow for this service to be conducted in-house allowing for a potential $16,000 in cost savings per year
- Placed QR codes along the fleet shop and fuel islands for vehicle and equipment operators to scan with their mobile phones to provide a step-by-step process for work order creation and obtain fuel from pumps
- Created Vehicle Data Sheets to allow for a data-driven approach to vehicle and equipment replacement

Challenges

Fleet Shop
The current configuration of the fleet shop and the Orange Street Service Center hinders the ability for expansion and growth due to size and location. Fleet has five work bays with four lifts,

leaving one stall for state inspections services, which has become operationally difficult due to having more mechanics than lifts. This issue is further exacerbated when a mechanic is waiting for parts or other services for a vehicle, due to the vehicle being in a state of disrepair, the vehicle cannot be moved to free up the lift and delaying other scheduled work orders. To increase efficiency and productivity having two lifts per mechanic is needed to allow staff to work on multiple vehicles, along with the addition of three full size drive through bays, which gives the ability to conduct in-house repairs to large heavy equipment, fire trucks and trailers, which due to the current shop restrictions must be outsourced.

Aging Fleet
With an aging fleet, the division will not see a significant increase in cost savings due to maintenance and repair needs on older fleet. Parts and material become difficult to source for aged vehicles and equipment, which causes longer downtime in getting the unit back in operation. Staff anticipates repair work orders and costs to remain trending high until the Motor Pool is full capitalized and the fleet inventory is newer and not out of life cycle.

Staffing
The Fleet division manages and maintains a full-service fleet shop for its customers and continuously works to develop process improvements and provide efficient, high-level customer service. The division's goal is to regularly evaluate service levels and identify potential cost savings. A few areas of focus will be conducting maintenance and repairs on emergency vehicles and small motor engines, providing vehicle transportation to and from vendors for recalls, outsourcing and other service items.

In order to achieve these service levels, the division will need specialized training in emergency vehicles and small engine repairs, along with additional positions to allow for specialized skill sets and the ability to conduct more in-house services and repairs. Based off the staffing plan Fleet will be requesting the following personnel requests over the next three years:

- Automotive Service Technician (FY23)
- Service Advisor (FY24)
- Specialized Mechanic & Fleet Specialist (FY25)

Industry Delays and Rising Costs
Since 2021 the automotive industry has seen major delays in receiving vehicle and equipment replacements, specialty equipment and repair parts. Due to the COVID-19 pandemic the industry has severely been impacted with supply chain issues and have caused production to slow down, hindering the ability to repair and replace vehicles and equipment in a timely manner, which affects departmental operations. Many of these issues stem from manufacturing issues with steel, aluminum and copper, which make up vehicles, equipment and parts. To mitigate supply issues, the division orders and stocks multiple items when available, which allows for continued servicing of vehicles and equipment, keeping downtime to a minimum.

Memo

To: Clay Pearson, City Manager

From: Miesha Johnson-Budget Analyst, Eric Roche-Budget Officer

CC:

Date: March 30, 2022

Re: New Internal Service Funds for FY23

Council Priority: Resilient Finances - Providing longer-term community value through trusted stewardship and responsible financial management.

Initiative: Long term capital asset financial plan (asset management tracking, plan to create internal service funds, financing)

Executive Summary

The Budget Office, in collaboration with both the Facilities and Information Technology departments, is developing internal service funds in order to streamline internal resource allocations, enhance fund sustainability, and better predict upcoming expenses. Internal Service Funds account for the services delivered by the City's support departments to operating departments. These services will be funded by charges to operating departments based on a set of data-driven factors including building square footage, number of full-time employees (FTE's), and amount of specialized software and hardware. The Facilities Fund and Information Technology Fund are both internal services funds created based on the same structure as the City's Motor Pool fund policy and feedback from Staff. **The purpose of an internal service fund is to provide a long-term mechanism to properly account costs to departments, anticipate the full cost of replacements, and fund the service's annual operating budget.** The goal of creating these funds is to enhance Staff's ability to adequately allocate resources among departments using data-driven methodologies given the inflated costs expected to affect both Facilities and Information Technology related products and services in Fiscal Year 2023. The addition of these funds will provide enhanced "cost of service" information by allocating IT and Facilities cost to departments and enables a financial mechanism to save for future expenses.

Background

Budget Staff were tasked with creating an internal service fund for both Information Technology and Facilities to enhance financial sustainability. This shift towards an internal service fund model for service departments started with the City's creation of a Motor Pool fund in Fiscal Year 2019, which created a more uniform and efficient approach to funding vehicle and heavy equipment repairs, leases, and purchases. The City also has internal service funds for Medical Insurance and Risk Management.

Internal Service Funds will support the fiscal priorities of Pearland by allowing the City to make annual contributions to the fund rather than making periodic large-dollar investments. Pearland can then use those contributions to pay for maintenance and high-cost investments.

Because of Pearland's continued rapid expansion, the purchase, maintenance, and replacement of the City's technology and buildings should be handled on a more deliberate and structured basis. Underinvestment now will lead to serious funding challenges in the future. **The City's current total fixed asset valuation as of September 30, 2019 is approximately $1.59 billion,**

with the vast majority ($1.16 billion) being General Government Fixed Assets. Fixed assets include land, infrastructure, building and improvements, machinery, equipment, and vehicles; as well as the furniture, fixtures and equipment in our facilities. The number of assets is growing as Pearland's population grows, and as we acquire and maintain more physical space and technology in order to serve our citizens and businesses.

At present, Pearland has three internal service funds: Medical Insurance Fund, Motor Pool Fund, and Risk Management Fund. Through the FY 22 Budget, the City's facilities needs are budgeted within a Division of Public Works' operating budget, and technology needs are budgeted within the IT department's operating budget on an annual basis **with no planned funding for future equipment or software replacement.**

Internal Service Funds start as simple budgetary tools for clarity and transparency for allocating resources and over time can become more robust with data-driven formulas to anticipate and meet the needs of the City. For example, allocating police-specific software costs to the Police Department will help the public and Council see the true cost of service delivery. Previously, this expense would have simply shown up as an "IT Department Expense" even though it was really the Police Department utilizing the software.

It is also possible to save for replacements in these funds. For example, if an HVAC unit is built or replaced it will be assigned an expected life and charged a lease fee to put aside money for its eventual replacement. If the HVAC unit cost $1M and had an expected lifespan of 10 years, $100K would be charged to the department(s) the equipment serves each year and set aside to replace the HVAC unit in ten years. Once fully capitalized, this will have the same benefit as the Motor Pool Fund – a sustainable funding source for these items.

To achieve the benefits outlined on the last page, the City must commit to making continued financial investments in the existing Motor Pool Fund and into the IT and Facilities funds when they come to fruition. The City Council has repeatedly expressed awareness of the need to think in terms of multiple budget years over the long term, to afford the City we are and are becoming. Although not something visible in any given budget year or touted in an annual calendar report or social media post, recognizing the value of assets and recapitalization in internal service funds is one way to meet this goal.

As Pearland continues to rapidly expand, the purchase, maintenance, and replacement of the City's technology and facilities requires a more deliberate approach. **The internal service funds will help to ensure future funding is both adequate and sustainable and help to anticipate potential funding challenges.**

Next Steps and Potential Outcomes

Future – Facilities Fund

The Facilities Fund would support the maintenance and repair of all City facilities, as well as the replacement of 'big-ticket' items such as HVAC systems, roofs, electrical, and plumbing systems. The Facilities Management division currently manages 38 buildings totaling 365,475 of square footage. Nine (9) new facilities are projected to be completed within the next five years, totaling 140,000 additional square feet of conditioned space. All buildings are owned by the City except the Convention and Visitors Bureau which is leased space. Facilities Management provides services through outside contractors and in-house staff. Services provided by outside contractors include HVAC, electrical, plumbing, fire suppression systems, overhead doors, automated gates, and emergency generator preventative maintenance and repairs. In addition to managing all the service contracts, services provided by in-house staff include minor repairs on HVAC, electrical, plumbing, fire suppression systems, generators, painting, ceiling and tile replacements, and minor projects such as furniture moves.

In Fiscal Year 2022 the Facilities Management Division, which currently services city-owned buildings, is budgeted at $1.69 Million.

The annual maintenance and service contracts managed by Facilities include:

- HVAC and Ice Machine preventative maintenance and repairs: $602k
- Plumbing Repairs: $100K
- Generator preventative maintenance and repairs: $120k
- Custodial cleaning services except Public Safety Building: $500K
- Electrical for Facilities only: $68k

In addition to the above operational and maintenance costs, examples of capital costs that would be funded by the Facilities Fund that are no longer under warranty include but are not limited to:

1. Roof replacements

2. Chiller replacements

3. HVAC replacements

4. Plumbing replacements

5. Electrical replacements

6. Boiler replacements

7. Generator repair and replacements

In essence, a Facilities Internal Service Fund provides planned funding to properly maintain and reinvest in the City's significant building infrastructure without large and varying impacts on the General Fund budget.

Future – Information Technology Fund

The Information Technology Fund will cover the routine maintenance and replacement of IT software and hardware as well as large dollar, wholesale replacement of existing systems. To ensure departments can continue to provide necessary services to our community, the City annually dedicates a considerable amount of funds for maintaining and replacing aging technology. Historically, these costs have been funded within the IT Department.

Each year, the Information Technology department allocates a significant amount of funds for technology that has reached its useful life. These items include desktops, laptops, vehicle docking stations and rugged laptops, iPads, cameras, servers, storage, network equipment, and other required technology. Currently, the City is on a four-year replacement cycle for desktop computers and peripherals which equates to an annual cost of $179,000 for the General Fund and $50,000 for the Water and Sewer Fund. Moving to an Internal Service Fund would allow the City to increase its level of transparency, make strategic decisions related to the acquisition and use of technology, accurately account for technology costs, formulate a long-term plan, and provide a funding mechanism for maintaining the City's technology.

For Fiscal Year 2022, software maintenance expenses were budgeted at about $1.7 million. For Fiscal Year 2023, software maintenance expenses are estimated to increase approximately $1 million based on a variety of factors. These factors include new software additions during both the budget process as well as the mid-year allocation approved by City Council, contract term expiration which includes the City's Microsoft Office 365 contract, and an overall technological shift by manufacturers to cloud based systems and protection against cyber-attacks. Public Safety accounts for approximately $326,000 of the anticipated increase which includes 10 new and/or replacement software packages.

Another major change affecting the software costs is the City's Microsoft Enterprise Agreement. The City's Microsoft Enterprise Agreement expires in Fiscal Year 2023 requiring a new 3-year agreement to be executed to utilize the Office 365 software suite. The expected increase for the new agreement is $160,000.00 annually.

The FY23 software new & replacement software list includes the Flock Camera system, Iris Automation and White Fox for the drone as first responder pilot program, Blue Fusion for Crime Analysis, Vigilant Plate Scanning Software, Netmotion VPN for data connectivity, ESO Fire Records Management, Boomi for seamless data integration and protection, additional software for the Police OSSI system for Investigations, and the in-car/body camera system.

Conclusion/Recommendation

Both the information technology and facilities funds will be set up similarly to the motor pool fund. To properly track upcoming expenses there will be two distinct classifications inside each fund, one for unassigned Operating and Maintenance (O&M) and one for assigned money saved for replacements. These classifications will anticipate upcoming major expenses based on estimated useful life and charge the associated department(s) accordingly each year.

The effective implementation of the Facilities Management and Technology Funds requires the continuous collaborative effort of various staff across the organization. Some of the required key staff included in the formulation and implementation of Internal Service Funds include staff from Finance, IT, and Public Works, with support from stakeholder departments and management. Finance is convening the necessary personnel resources to design, set up, and implement these two internal service funds similarly to the Motor Pool Fund.

In the same manner that staff made a collaborative effort to implement the Motor Pool Fund and related operating manual, Staff is currently doing the same for the facilities and technology internal services funds. As we move forward toward the implementation of the additional internal service funds, the operating policies, procedures, and methodology of these funds will be reviewed annually to ensure best practices and continuous improvement. Implementation of these internal service funds will allow the City to continue to improve its ability to maintain its financial stability and long-term success.

Attached for your review is the generalized version of the Internal Service Fund Operating Manual. Although this manual is very general, it has served as the universal guide for each of the City's specific Internal Service Fund manuals. As always, regular performance evaluation will allow us to adapt as demand and utilization change, and more importantly, these tools will allow us to improve our ability to keep our overall goal in sight and ensure the long-term success of our operations.

Both Funds will become operational in the FY23 budget. This will cause some costs to be shifted to departments when they had previously been shown as an EPW-Facilities expense. However, this is primarily an optics change, rather than any significant increase in facilities spending. If facilities spending does increase in any area of the budget due to higher costs the Budget Office will note those increases.

Memo

To: Clay Pearson, City Manager
From: Eric Roche, Budget Officer
CC: Amy Buckert Johnson, CFO
Date:
Re: Economic and Budget Outlook

Council Priority: Resilient Finances: Providing longer-term community value through trusted stewardship and responsible financial management.
Initiative: Focus on Priority/Program-based budgeting reviews

Executive Summary

The only predictable thing about the current economic situation is its unpredictability. Inflation, supply chain disruptions, and labor markets will continue to put pressure on the City's budget in FY23.

Background

Inflation

Inflation has risen to levels not seen for over 20 years. Over the past 12 months, the Consumer Price Index (CPI) has increased by 7.9%[1]. These are cost increases residents, businesses, and our employees are experiencing now and will continue to experience in the immediate future. It is tempting to think the price of every good has increased 7.9%, but like all indices, there is value in understanding the underlying components of the CPI. Some goods have gone up less than 7.9%, some more. In particular energy costs have recently spiked largely due to Russia's unprovoked war against Ukraine. Fortunately, the US is blessed to have vast energy reserves and in a strange twist of fate, our metro area can often benefit from higher energy prices because so much of the country's energy is produced, refined, and shipped from Houston. Thus, the local impact of high energy prices will bring increased profits to many local companies.

Inflation does have one positive impact on Pearland. The current rate of inflation is higher than expected and was not priced-in to previously sold bonds. When issuing bonds, the interest rate is "locked-in". As a result, inflation will not affect the interest rate on existing debt. For existing debt, debt payment amounts will remain the same; however, the real value of the debt has decreased due to inflation. The positive result is now Pearland will be making debt payments with money that is now worth less due to inflation. For example, If Pearland had $1 in debt payments each year, it is now essentially paying only ~$0.92 for the debt payment.

Inflation will continue to increase the cost of goods and labor. Since the Federal Reserve's goal is to bring inflation back to the 2% target, it will begin to intervene in the market to control inflation.

Rising Interest Rates

Already, the Federal Reserve has begun making moves to raise interest rates to curb inflation.[2] These moves are all but guaranteed to continue until the Federal Reserve sees signs of abating inflation, or signs the economy is entering a recession. Rate increases will raise borrowing costs,

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[1] BLS News Release – March 10th 2022 - https://www.bls.gov/news.release/cpi.nr0.htm
[2] https://www.federalreserve.gov/newsevents/pressreleases/monetary20220316a.htm

and thus the cost of debt-funded projects. Specifically, due to the increased debt payment costs higher interest rates will usher in (on new debt issuances), CIP and Budget staff may need to adjust the timing, number, and/or scope of CIP projects to decrease the amount having to be borrowed. Borrowing costs are not the only thing affecting Pearland. The labor market is facing a significant shortage of workers, something the City is not immune to.

Labor Market

The tight job market is due to a recovering, but low labor force participation rate.[3] The low participation rate has resulted in 1.47 job openings for every 1 person looking for a job.[4] The tight labor market affects Pearland in two ways. First, it is increasing income among residents. Higher wages will result in greater spending in the short term, but as costs adjust upward the real increase in residents' purchasing power may prove to be temporary. Labor market shortages should ease as more people re-enter the workforce, which the current labor force participation rate suggests should, and is, happening over time.

Retaining staff and managing employee churn will continue to be a priority in FY23. Operationally, the hot labor market means staff turnover will be higher than normal. It is easier than ever for our staff to find a higher paying job somewhere else. Staff turnover may lead to performance challenges if not managed well. The City of Pearland will need to continue investing in professional development to quickly develop new employees into productive assets. It will also be important to maintain HR employee attraction and recruitment budgets in FY23.

For Pearland's budget, the tight labor market means City leaders should be aware of increasing staff costs, or Pearland will lose talent to competitors. All employees on a step plan, plus open pay range employees will receive a raise in FY23. For step plan employees that raise will be the previously agreed to percentage change between each step in the pay plan. However, the step plans and open range positions will also have a market adjustment that moves the entire plan up a certain percentage to keep positions at competitive market wages. As of now, it is uncertain how much wages will need to increase in order to maintain market competitiveness. However, wages will be a significant part of the FY23 budget discussion. **The tight labor market and its resulting wage growth will be the single most impactful externality to the City's FY23 budget.**

Expenditures

Inflation will affect the City of Pearland in two primary ways. First, the cost of goods will increase – meaning budget items like vehicle purchases, capital projects, firefighter boots, police vests, parks slides, etc., will all increase in cost much more than they have in recent years. Second, contracted programs will see price increases as well. Inflation will trickle into nearly every account in Pearland's FY23 budget, an impact which will be reflected in the bottom line. Without decreasing service levels, labor costs are the only cost controllable by Pearland; however, changing the compensation lever has tradeoffs (as discussed in the Labor Market section).

However, it is not all bad news. Pearland's revenue picture remains bright, and inflation's impacts are more nuanced when discussing revenue streams.

Revenue Streams

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[3] https://www.bls.gov/charts/employment-situation/civilian-labor-force-participation-rate.htm

[4] https://www.federalreserve.gov/newsevents/speech/powell20220321a.htm

Higher interest rates will also factor into Pearland's largest revenue sources. Sales Taxes make up ~25% of the FY22 adopted budget. Sales taxes are somewhat inflation-proof. As the price of goods increase from inflation, Pearland will receive the same 1% rate it has always received. Inflation is very likely to already be pushing up sales tax revenue numbers to historic highs in FY22. Price increases are heavily concentrated in the goods sector, with relatively little inflation (near zero) occurring in services.[5] It is extremely likely spending will shift away from goods and to services as prices drive down consumption of goods. Consumer spending's shifts back towards services will also be augmented as we move through, or become more inured to, the COVID-19 pandemic. A wide variety of services are exempted from sales tax under Texas law. These include accountants, hairdressers, interior designers, essentially any professional service. The shift away from goods and towards services will put downward pressure on sales tax revenues.

Property taxes, on the other hand, are much more complicated. Home prices, and therefore assessed valuations, have increased significantly in the past few years. The assessment process may take a few years to fully account for the current inflation. While the amount of money earned from property taxes may go up nominally, the real dollars increase will be less, or even negative. Cities are limited by Texas State law to the amount of increased revenue it can capture from property taxes each year (3.5% cap on existing structures[6]) without triggering an election. It's possible, even if Pearland utilizes the full voter approved rate, there will be more revenue in nominal terms, but less in real terms – and thus Pearland will not be able to do as much with increased property tax revenue. Staff will bring more information forward when assessed value estimates are available from Brazoria, Harris, and Fort Bend Counties later this year.

Going forward, Pearland should be extremely cautious about shifting too much of its General Fund to be reliant upon sales taxes. Sales taxes are highly reactive to any economic downturn, and with rising interest rates the United States may be headed towards a recession soon. Property taxes are a less volatile revenue stream because property values are not as reactive to a sudden economic slump. In an abrupt recession sales taxes will fall almost immediately as people cut spending. However, it can take years for a tax assessor's valuation on a home to reflect the new recession price. Thus, property taxes are somewhat counter-cyclical to sales taxes and not being too reliant on either one results in a less risky revenue portfolio for Pearland.

Next Steps and Potential Outcomes

One of the surest bets for FY23 is the unexpected will happen. The war in Ukraine will have negative effects on global supply chains. Recent COVID-19 lockdowns in China show the world's factory is still vulnerable and will continue to cause international supply chain shocks. Inflation will likely continue for at least the next few years. The US labor market should cool-off, but there is little supporting evidence so far. Housing prices may remain stabilized as the interest rate increases, or inflation may outpace interest rate increases. The Federal Reserve's increase of the Federal Fund Rate has sometimes coincided with recessions, and sometimes it has not (as in 1965, 1984, 1994). The current economic conditions look favorable for Pearland right now but forecasting the future economy cannot be done with much certainty.

Pearland can prepare for the challenges described in this paper by increasing revenues, controlling costs, and saving reserves for a rainy day.

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[5] Federal Reserve https://www.c-span.org/video/?518841-1/acting-fed-reserve-chair-others-remarks-economic-conference-part-1 at 1:38:25

[6] https://capitol.texas.gov/tlodocs/86R/billtext/html/SB00002F.htm

The immediate future is likely to have more supply chain disruptions, from COVID-19, the war in Ukraine, or natural disasters. These types of disruptions inevitably lead to project delays and increased costs for both CIP and workplace materials such as construction supplies, laptops, and vehicles. Currently, Pearland has strong reserves to handle such an overrun. However, if Council wishes to take a more risk-averse approach they may consider increasing the General Fund reserve requirement from 90 days to 100 days or increasing property tax revenues.

Conclusion/Recommendation

Pearland does not have any control over the labor market or general inflation. Budget staff assumes the current situation will continue in FY23 and begin to plan accordingly. Revenues will also increase, some of which increase will be sourced in inflation, not real revenue growth. Expenditures will be up more in FY23 than in previous years simply due to higher inflation. Pearland's budget will need to absorb those cost increases just to maintain existing service levels. In previous years, Pearland has decreased the property tax rate by adopting a rate below the no-new-revenue rate, which may not be possible or advisable in FY23.

Pearland's General Fund reserves remain healthy enough to weather any large or unexpected conditions which may arise. However, should City Council wish to be more fiscally cautious due to current market conditions they can direct staff to take actions mentioned throughout this paper.

For Enterprise Operations (Water/Sewer) the picture is slightly more concerning. As shown during the FY23 CIP Presentation on 3/11/22 (page 47) the rate model for FY23 indicates the need for a 12.5% rate increase and shows the Enterprise Operating Fund balance falling below the 25% reserve requirement in FY24. Inflation-driven cost increases will affect the Enterprise Operation Fund more acutely than the General Fund because of the former existing structural imbalance. Therefore, the Enterprise Fund will require a significant revenue increase in FY23, even before accounting for inflation.

Memo

To: Clay Pearson, City Manager

From: Chad Randall, Asst. Chief Operations Bureau

CC: Johnny Spires, Chief of Police and Ron Fraser, Assistant City Manager

Date: April 4, 2022

Re: Drone as First Responder Pilot Program

Council Priority: Safe Community – Making Pearland a welcoming place by ensuring a safe environment and providing efficient and effective Public Safety services for residents, businesses, and visitors.

Initiative: Innovating and investing in public safety resources.

Executive Summary

A Drone as First Responder (DFR) program uses drones to respond to police, fire, and EMS incidents. The program is designed to increase safety for first responders, improve situational awareness, and provide a quick response for many types of calls. DFR provides the ability to observe what is occurring at an incident before the first emergency personnel arrive on scene. The Pearland Police Department is launching a pilot DFR program mid-2022 utilizing staff and equipment already approved by City Council.

Background

Following an observation on the varied use of drones throughout the city, Officer Brandon Karr was placed into a position as a subject matter expert to help lead citywide efforts in the efficient and effective use of drones. Officer Karr is a licensed pilot and spearheaded the police department's program, he is widely recognized in his field for his work and is often a guest speaker or instructor on the topic. While most of the drones in the city are used by the police department, they are used in other areas of the city such as GIS mapping, arson investigation, communications, and an increased use for public works and engineering inspections. Officer Karr's knowledge of and experience with drones, along with the relationships he has built made him the perfect choice to develop the DFR program.

In 2021, the police department's drone team deployed 175 times, located 22 suspects, 3 victims, assisted in locating 8 stolen vehicles, and helped with the seizure of over $20k of narcotics. The top reason for drone use has been searching for people (both suspects and victims), followed by use at special events, the reconstruction of crash scenes, and special/tactical operations.

The current program operates as a secondary reactive response component, with a drone-equipped officer responding to an area as needed. A DFR program stages a drone in an area of high demand and provides a primary rapid assessment of a scene to aid in scene safety assessment, safe-route assessment, response resource assessment and suspect or victim location details.

The nation's first DFR program was started in 2018 when the Chula Vista, CA Police Department partnered with the FAA to test and evaluate the integration of civil and public drone operations into our national air space. To date, their program has responded to over 9,000 calls for service, assisted in the arrest of 1,100 people, and avoided the dispatching of a patrol unit to over 2300 calls for service. While the CVPD program has been successful, a major disadvantage from our department's perspective has been the cost of personnel. The CVPD program requires both a pilot and visual observer on the roof of their launch locations during their hours of operation due to limitations on their FAA authorizations. The CVPD DFR program has varied in size and scope, however it remains the blueprint for most DFR programs nationwide as well as the program Pearland will model on a test pilot basis, with alterations.

On March 7th, 2022, Pearland City Council adopted FY22 Budget Amendment Ordinance No. 1605-4 which authorized the purchase of software and hardware for Pearland to pilot a DFR program. While Pearland's DFR program is modeled after CVPD, a significant difference is the use of technology to reduce human intervention and therefore reduce personnel costs. Through software and FAA authorizations, PPD will be able to use software for de-confliction of airspace, thereby eliminating the need for both a pilot and a visual observer required under the CVPD program. When the Pearland Police Department's program is launched, it will be the first DFR program in the nation to respond in this manner.

Next Steps and Potential Outcomes

A single drone can cover an estimated radius of 2 miles from the launch site. From call received to on scene takes a drone about 5 minutes to arrive. While there may be rare atmospheric conditions which prevent a drone from flying, they have a big advantage of not having their response time impacted by traffic conditions. Drones, through the use of their cameras are also able to start searching the area prior to their arrival and with the use of infrared technology are capable of seeing people in complete darkness.

Six launch sites have been chosen around the city, based on flight radius and coverage, as well as the existence of an existing city facility from which to launch. Unlike the Chula Vista PD program which would require 12 personnel (6 pilots and 6 visual observers) to fly 6 drones in the city, the Pearland program during the same time frame would only require 1 pilot. While a single pilot under this program can fly a drone from any or all six identified sites seen in the map below, each site does require its own drone and accompanied licensing software for use without the on-site pilot and visual observer. Further a pilot can only fly a drone from one site at a time and either a landing hub capable of recharging batteries is needed or a person who is already on site would need to change a battery before the next flight. These hubs, known as a "drone in a box" are currently under development by the department's primary large drone provider and will be researched further when they are available.

Once all pilot program software, hardware, and authorizations are obtained (estimated to be May 2022), the police department will begin operations. Based on data analysis, the department will begin the pilot program by launching the one obtained drone from Fire Station #5 on Kirby, as indicated by the arrow in the map above. From this location, the drone will be able to respond to the identified DDACTS Zone 1 near the intersection of Broadway and SH288 as well as southern parts of DDACTS Zone 3 near Shadow Creek Ranch and SH288. These areas have historically had a higher than average UCR 1 crime, the type of calls drones can be most beneficial in responding to.

Initially the department will utilize a single drone pilot's work shift for the DFR program. As staffing permits, other pilots may participate in the program as well. The drone will be used to respond to a variety of calls within its flight radius including, but not necessarily limited to:

- Missing persons/children
- Fleeing suspects
- In progress crimes such as shoplifting, burglary or robbery.
- Reported fires or hazardous materials calls
- Major crashes
- Other calls when a bird's eye view may be beneficial to responders or citizens

Upon initiation of the DFR program, the PD will gather and analyze data regarding the usefulness, utility, and cost-effectiveness of the initiative. The department will provide an update to City Council in the form of a Thursday packet after 6 months to describe the observations. Should the program be deemed an asset and there be a desire for further resources, the department will make the requests for expansion with a further explanation of costs and benefits expected in FY24.

Future costs would be scalable and include up to 5 additional drones, the accompanying software and equipment. An estimated cost for this would be roughly $350k with $65k recurring. Equipment would be expected to have a useful life of approximately 3 years.

While scalable, to provide 24/7/365 flight coverage an additional 4 FTEs would also be needed. These would not need to be, nor would the department recommend the staff be police officers. An estimated cost for these positions with benefits would be $250k to $300k.

An alternative to hiring staff could also be contracting pilots, which many other agencies running the CVPD model do. These costs are estimated at $300k and are also scalable.

Conclusion/Recommendation

Should the department find the pilot DFR program successful, the department will further analyze needs, feasibility, and cost effectiveness and make any necessary recommendations to city council.