LAST MINUTE AGENDA INFORMATION
1/20/16 Regular City Council Meeting

(Agenda Related Writings/Documents provided to a majority of the City Council after distribution of the Agenda Packet for the January 20, 2016 Regular meeting.)

ITEM NO. **DESCRIPTION**

5.2	**REPORT ON SEWER SERVICE CHARGE STUDY UPDATE BY CONSULTANT, KARYN KEESE, KEZE GROUP LLC. (0830-90).** a. Attachment 1 to the Staff Report Document titled: "*Sewer Service Charge and Capacity Fee Update*"

Sewer Service Charge and Capacity Fee Update

City of Imperial Beach

January 20, 2016

Prepared for:
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Abbreviations

AWWA	American Water Works Association
BMP	Best Management Practices as Prescribed by the State of California
BOD	Biochemical Oxygen Demand – A Measure of Sewage Strength
CIP	Capital Improvement Plan
EDU	Equivalent Dwelling Unit
ENR-CCI	Engineering News Record Construction Cost Index
EPA	U.S. Environmental Protection Agency
FYE	Fiscal Year Ending
GIS	Geographical Information System
HCF	Hundred Cubic Feet
Metro	City of San Diego Metropolitan Wastewater System
mg/l	Milligrams per Liter
O&M	Operations and Maintenance
PA	Participating Agency in the San Diego Metro System
TSS	Total Suspended Solids – A Measure of Sewage Strength

Executive Summary

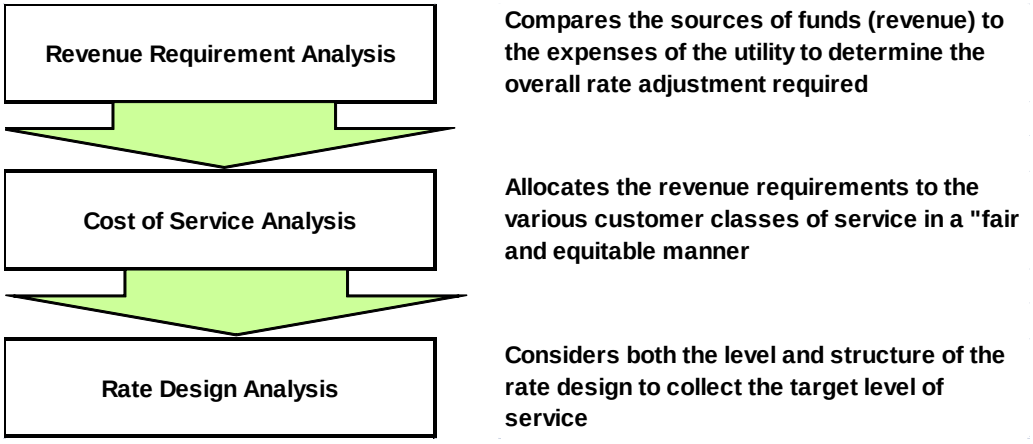
ES.1 Introduction

The Keze Group, LLC was retained by the City of Imperial Beach to perform a comprehensive sewer user and capacity fee rate update study. A comprehensive rate study determines the adequacy of the existing rates and provides the basis for adjustments to maintain cost-based rates. This report describes the methodology, findings, and conclusions of the sewer user and capacity fee rate update study (rate study).

ES.2 Overview of the Sewer User Rate Study Process

A comprehensive rate study typically utilizes three interrelated analyses to address the adequacy and equity of the utility's rates. These three analyses are a revenue requirement analysis, a cost of service analysis, and a rate design analysis. The process is illustrated in Figure ES -1.

Figure ES-1 Overview of the Comprehensive Rate Study Analysis



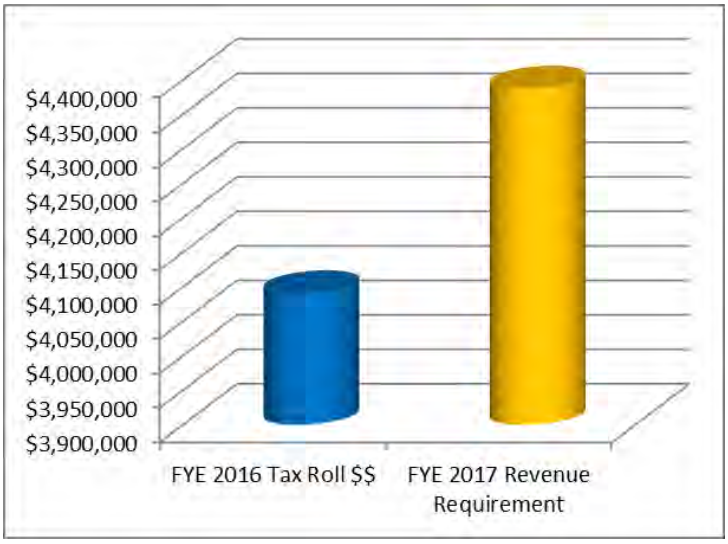
The City's sewer utility was evaluated on a "stand-alone" basis. That is, no subsidies between the utility or other City funds occur. By viewing the utility on a stand-alone basis, the need to adequately fund both operations and maintenance (O&M) and capital infrastructure (CIP) must be balanced against the rate impacts on utility customers.

A detailed and comprehensive process was used to review the City's rates. As a part of the rate study process a number of on-site project meeting and conference calls were used to review the results with City management, staff, and the City Council. From this process, final proposed rates were developed.

The steps shown in Figure ES-1 produced the following results for establishing rates for fiscal years ending (FYE) FYE 2017 to 2022:

Revenue Requirement Analysis: The City's FYE 2017 adopted sewer enterprise fund budget was updated to respond to changed costs from the City of San Diego Metropolitan Wastewater System (Metro) for transportation, treatment, and disposal costs for the City's wastewater. In addition, the historic funding of $400,000 for annual capital repairs to the City's aging sewer infrastructure, and the formal funding of a Replacement Reserve ($200,000) were added to the modified budget to create the revenue requirement for establishing the FYE 2017 sewer rates. Figure ES-2 shows the projected FYE 2016 sewer user revenue that has been placed on the San Diego County Property Tax Roll or hand-billed to government agencies of $4,090,288. With the inclusion of the increased costs the FYE 2017 revenue requirement (modified budget less non-operating revenues) increases to $4,386,773. The sewer user rates included in this study are established based on this increased revenue requirement of 7%.

Figure ES-2 FYE 2016 Tax Roll Revenue versus FYE 2017 Revenue Requirement



The largest component of the City of Imperial Beach's revenue requirement are the costs associated with transportation, treatment, and disposal of the City's wastewater by the Metro facilities and associated City technical services. A summary of the projected expenses associated with these costs follows as Table ES-1.

Table ES-1 San Diego Metro Projections

	FYE17	FYE18	FYE19	FYE20	FYE21	FYE22
Treatment/Disposal/CIP	$2,337,120	$2,499,000	$2,677,500	$2,757,825	$2,840,560	$2,925,777
Transportation	$3,570	$3,641	$3,714	$3,826	$3,940	$4,059
Metro TAC	$10,032	$10,233	$10,437	$10,750	$11,073	$11,405
City Technical Services	$122,850	$125,307	$127,813	$131,648	$135,597	$139,665
Total	$2,473,572	$2,638,181	$2,819,464	$2,904,049	$2,991,170	$3,080,906
	5.9%	6.7%	6.9%	3.0%	3.0%	3.0%

As Table ES-1 shows during FYE's 2017 to 2019 the planning phases of the Pure Water Program are being transitioned. Per a protocol adopted by the City of San Diego and the Metro Commission six-years ago the participating agencies (PAs) portion of the annual Metro budget is $65 million. This budgeted amount is audited and adjusted at year end and the PAs either receive a refund if their actual costs are less than the budget or an invoice if their costs are more. During FYE 2017 to FYE 2019 the City of San Diego will be transitioning the planning costs for the wastewater portion of the Pure Water Program and the PAs share will increase from $65 to $75 million annually. It should be noted that the percent increases shown in Table ES-1 directly correspond with the rate adjustments proposed for the City's sewer rates.

Cost of Service Analysis: The cost of service analysis revealed that several major changes have occurred that were not anticipated by the City's 2013 rate study and subsequently adopted sewer user rates. The significant changes are:

- As with other communities in San Diego County and Southern California the City's citizens and businesses have decreased their water usage by 18.4% over the FYE 2012 water usage utilized by the 2013 study. This has decreased revenues from the adopted commodity rates.
- City staff has continued to straighten up the Cal Am water database used for sewer rate billing. As part of this they have identified 400 accounts with zero water usage that are closed and needed to be removed from the rate database. This has caused a decrease in the base charge revenue but is taken into account in determining the FYE 2017 sewer base fees. The City currently has 6,155 viable account as shown in Table ES-2.
- After the adoption of the 2013 study City staff determined that the Navy ___ accounts flowed directly into the City of San Diego and therefore should not be assessed sewer service charges by the City of Imperial Beach. This reduced the City's overall revenue by $140,000 or 3.3%.
- The adopted FYE 2016 budget contained $2,124,360 in needed capital projects. The 2013 rate study only anticipated the continued historic funding of $400,000 per year for capital projects in the sewer revenue requirement. The City has a rate stabilization/fund balance reserve of $2 million established by the City Council. Monies from this reserve are being used to pay for these capital repairs and the reserve is being depleted. Replenishment of this reserve, while not currently included in the FYE 2017 rates, will be discussed with the City Council.
- The planning phase of the City of San Diego's Pure Water Program have begun and during FYE 2017 to FYE 2022 additional Metro costs are anticipated.

Table ES-2 Summary of Current Users and Estimated Sewer Flow

Units of Service and Loadings		FLOW: (A)	(B)	(C)
User Group	**No. of Accounts**	**Annual Consumption per User Class**	**Rate of Return**	**Adjust for Rate of Return**
Residential:		(HCF)		(HCF)
Single Family	4,361	487,284	75.0%	365,463
Subtotal- Residential	4,361	**487,284**		**365,463**
Commercial				
Rest/Bakeries/Mort./Groc.	41	12,377	90.0%	11,139
Small Commercial	103	11,991	90.0%	10,792
Car Wash/Laundries	10	10,173	90.0%	9,156
Public Agency/Institutional	49	25,185	75.0%	18,889
Heavy Commercial	12	11,591	90.0%	10,432
Mixed Use Light	30	6,679	90.0%	6,011
Mixed Use Heavy	2	336	90.0%	302
Navy	1	5	90.0%	5
Multi-Family	1,546	322,084	95.0%	305,980
Subtotal Non-Residential	**1,794**	**400,421**		**372,705**
TOTAL	**6,155**	**887,705**		**738,168**

Rate Design Analysis: In September 2015 the City Council held a planning workshop to review the history of the sewer industry's as well as the City's sewer rate structures. Included in this review were alternative rate structures to the City's current structure and alternate ways of estimating sewer flow for user rates. In addition, the cost allocation process was reviewed. A copy of the Council presentation will be included as Appendix A to the final report

The outcome of this review was that the Council approved continuing with the City's current rate methodologies. The current sewer rate structures meet industry and Federal Government (EPA) standards and follows Best Management Practices (BMP's) established by the State of California. The only request for additional review was to compare increasing the fixed cost allocation in the base rate to 30% from its current 26.4% level to potentially provide for additional revenue stability.

ES.3 Overview of FYE 2017 Rate Case

Table ES-3 compares the current FYE 2016 adopted sewer rates with the proposed FYE 2017 and 2018 rates. Table ES-4 shows the remaining years of the FYE 2017 Rate Case (through FYE 2022).

Table ES-3 Comparison of Current versus Proposed Sewer User Rates

Classes of Users	Current FYE 2016 Rates		FYE 2017 Projected Rates		FYE 2018 Projected Rates	
	Base Charge (5/8" Water Meter)	Commodity Rate ($ /HCF)	Base Charge (5/8" Water Meter)	Commodity Rate ($ /HCF)	Base Charge (5/8" Water Meter)	Commodity Rate ($ /HCF)
Single Family	$146.78	$4.19	$166.29	$4.35	$170.38	$4.59
Non-Residential (Includes Multi-Family)						
Rest/Bakeries/Mort./Groc.	$146.78	$8.90	$166.29	$9.14	$170.38	$9.71
Small Commercial	$146.78	$3.79	$166.29	$3.94	$170.38	$4.16
Car Wash/Laundries	$146.78	$3.62	$166.29	$3.76	$170.38	$3.97
Public Agency/Institutional	$146.78	$3.50	$166.29	$3.64	$170.38	$3.84
Heavy Commercial	$146.78	$5.79	$166.29	$5.98	$170.38	$6.34
Mixed Use Light	$146.78	$4.45	$166.29	$4.62	$170.38	$4.89
Mixed Use Heavy	$146.78	$5.30	$166.29	$5.47	$170.38	$5.79
Navy	$146.78	$4.92	$166.29	$5.10	$170.38	$5.40
Multi-Family	$146.78	$4.19	$166.29	$4.35	$170.38	$4.59

Table ES-4 Comparison of Current versus Proposed Sewer User Rates

Classes of Users	FYE 2019 Projected Rates		FYE 2020 Projected Rates		FYE 2021 Projected Rates		FYE 2022 Projected Rates	
	Base Charge (5/8" Water Meter)	Commodity Rate ($ /HCF)	Base Charge (5/8" Water Meter)	Commodity Rate ($ /HCF)	Base Charge (5/8" Water Meter)	Commodity Rate ($ /HCF)	Base Charge (5/8" Water Meter)	Commodity Rate ($ /HCF)
Single Family	$174.57	$4.86	$179.81	$5.01	$185.20	$5.16	$190.76	$5.32
Non-Residential (Includes Multi-Family)								
Rest/Bakeries/Mort./Groc.	$174.57	$10.33	$179.81	$10.64	$185.20	$10.96	$190.76	$11.29
Small Commercial	$174.57	$4.40	$179.81	$4.53	$185.20	$4.67	$190.76	$4.81
Car Wash/Laundries	$174.57	$4.20	$179.81	$4.32	$185.20	$4.46	$190.76	$4.59
Public Agency/Institutional	$174.57	$4.06	$179.81	$4.18	$185.20	$4.31	$190.76	$4.44
Heavy Commercial	$174.57	$6.73	$179.81	$6.94	$185.20	$7.15	$190.76	$7.36
Mixed Use Light	$174.57	$5.18	$179.81	$5.34	$185.20	$5.50	$190.76	$5.66
Mixed Use Heavy	$174.57	$6.15	$179.81	$6.33	$185.20	$6.52	$190.76	$6.72
Navy	$174.57	$5.73	$179.81	$5.90	$185.20	$6.08	$190.76	$6.26
Multi-Family	$174.57	$4.86	$179.81	$5.01	$185.20	$5.16	$190.76	$5.32

It should be noted that 91% of the City's current users have either a 5/8" or ¾" water meter and thus pay the average base rate. Large water meters are used by multi-family with a large number of living units attached to the same water meter and large commercial properties. Table ES-5 shows the number of water meters by size as well as the projected rates for each size during the planning period.

Table ES-5 Comparison of Current versus Proposed Base Rates by Meter Size

Size of Water Meter	Number of Meters	AWWA Hydraulic Capacity	Current 2016 Base Rate	2017 Proposed Base Charge	2018 Proposed Base Charge	2019 Proposed Base Charge	2020 Proposed Base Charge	2021 Proposed Base Charge	2022 Proposed Base Charge
5/8"	5,622	1.00	$146.78	$166.29	$170.38	$174.57	$179.81	$185.20	$190.76
3/4"	3	1.00	$146.78	$166.29	$170.38	$174.57	$179.81	$185.20	$190.76
1"	341	1.67	$219.60	$248.84	$254.96	$261.23	$269.07	$277.14	$285.46
1 1/2"	110	3.33	$401.66	$455.21	$466.41	$477.88	$492.22	$506.99	$522.20
2"	76	5.33	$620.13	$702.86	$720.15	$737.87	$760.00	$782.80	$806.29
3"	1	10.00	$1,129.90	$1,280.71	$1,312.20	$1,344.50	$1,384.83	$1,426.38	$1,469.17
4"	2	16.67	$1,858.14	$2,106.21	$2,158.00	$2,211.11	$2,277.44	$2,345.76	$2,416.14
Total	6,155								

Table ES-6 summarizes the rate impacts on an average single family when the items discussed in the Overview subsection are applied.

Table ES-6 Determination of Average Single Family User Rates FYE 2017

	A	B	C	D	E	F	G	H
	Annual HCF	Rate of Return	Sewer Flow HCF	Base Charge	Commodity Charge	Total Annual	Total Monthly	Percent Change
	112	75%	84			D+(E*C)	F/12	
Current 2016 Charges				$146.78	$4.19	$498.74	**$41.56**	
2017 Approved Rates				$150.89	$4.23	$506.21	**$42.18**	**1.5%**
2017 Updated Rates				$166.29	$4.35	$531.34	**$44.28**	
Change from 2017 Approved						$25.13	**$2.09**	**5.0%**
Total Change from 2016						**$32.60**	**$2.72**	**6.5%**
Potential Rate Changes								
Increase to 30% Fixed				$188.12	$4.14	$535.76	**$44.65**	
Change from 2017 Approved						$29.55	**$2.46**	**5.8%**
$100,000 CIP Increase				$173.64	$4.42	$544.55	**$45.38**	
Change from 2017 Updated						$13.21	**$1.10**	**2.5%**

The average Imperial Beach single family customer uses 112 HCF annually. For rate setting purposes this is reduced by an industry standard rate of return to the sewer of 25% to convert to a sewer flow of 84 HCF annually. This can further be converted to monthly of 9 HCF and 7 HCF respectively. The following rates are shown on the ES-6 chart in the order they appear:

- Current adopted FYE 2016 rates of $498.74 annually or $41.56 monthly.
- Currently approved FYE 2017 rates adopted in the 2013 study which will be implemented January 2017.
- FYE 2017 adopted rates updated to current costs, users, and flow to create proposed annual rates.

It should be noted that the revised FYE 2017 rate adjustment includes two parts. The first is the 2013 adopted increase of $.63 per month. The second is an additional $2.09 per month to cover the increased Metro and Imperial Beach CIP costs for a total of $2.72 per month. It should be noted the increased Metro costs account for 5.9% of this proposed 6.5% rate adjustment.

Below the yellow line two other rate impacts are illustrated and entitled "Potential Rate Changes". The first is the impact on the average single family user of moving to 30% fixed cost recovery in the base rate. As can be noted this increases the base fee and decreases the commodity charge with an overall net impact of an additional $2.46 per month for a total increase of $5.18 per month for FYE 2017. Increasing the base charge increases the annual charge to lower usage customers and decreases the charge to high-end users.

The second "Potential Rate Change" is the impact of increasing the current historically budgeted $400,000 annually for capital projects. As stated earlier the FYE 2016 adopted budge included over $2 million in needed project cost that year which far exceeds the annual budgeted amount of $400,000 and the amount included in the adopted user rates. The additional monies are coming from the sewer enterprises rate stabilization/fund balance reserve of $2 million which is being depleted. Staff and consultant would like to discuss with Council the potential of replenishing this reserve over the next five-years. The $1.10 per month is for each $100,000 increase to replenish the reserve.

ES.4 Overview of the Capacity Fee Rate Update Study

At the time of connection to a public agency's utility system, or at the expansion of existing units on a connection line, customers are typically charged a capacity fee. The capacity fee requires new users to pay for their share of costs to construct facilities required to provide their utility service or in the case of increased density their increased intensity of use. Revenues generated through capacity fees can be used to directly offset system expansion costs and/or for renewal and replacement capital projects. Use of capacity fee revenues to offset these CIP costs reduces the amount of revenue required from rates assessed to existing users. This way, capacity fee revenues in effect, reimburse existing users (through lower rates) for costs they have incurred to build and maintain capacity for new users to connect to.

In 2013 discussions with City staff, The Keze Group was requested to update the City's sewer capacity fees to reflect the true value of its capital facilities, to ensure that these fees are in accordance with current industry guidelines and practice, and to properly value the City's investment in the Metro System and create a capacity fee per equivalent dwelling unit (EDU[1])

[1] One EDU is equivalent to the assumed gallons per day of a single family residential user. Imperial Beach uses 232 gallons per day for a single family residential user. All other users are assigned EDUs at the time they purchase a capacity fee in their proportional relationship to a single family user.

Table ES-7 shows the three components of the 2013 developed capacity fee. The upper portion of the table shows the capacity fee based on the value of the City's wastewater system (line 2). The middle portion of the table shows the value of the City's pump stations and the related capacity fee (line 4). The lower portion of the table shows the Metro component of the capacity fee (line 6). Each component of the capacity fee is calculated by taking the value of facilities and dividing by the current total EDUs. Line 7 shows the total capacity fee for one sewer unit (EDU), summing all components, under each valuation method. For each new customer or for increased density, the City will ascertain, at the time of capacity fee assessment, the number of new EDUs required and charge the fee accordingly.

California state law regarding capacity fees requires a valuation of an agencies system as was prepared by the 2013 study. Once the total value of the system is established as shown in Table ES-7 an agency can establish their capacity fee up to the maximum valuation. However, an agency can choose to adopt a lower capacity fee. In 2013 the City Council directed staff and consultant to adopt a capacity fee based on the replacement cost less depreciation methodology for only the City's assets of $2,667 per EDU and then potentially phase in the remaining $2,108 per EDU for the valuation of the Metro System due to the 2013 economic climate.

Table ES-7 Proposed Sewer Capacity Fee

(A)	(B)	(C)	(D)
Line No.	**Valuation Component**	**Replacement Costs**	**Replacement Cost Less Depreciation**
1	Pipelines	$46,031,303	$23,015,652
2	Cost Per EDU *(a)*	$4,352	$2,176
3	Pump Stations	$15,596,987	$5,197,589
4	Cost Per EDU *(a)*	$1,475	$491
5	Metro Assets	$32,818,033	$22,300,011
6	Cost Per EDU *(a)*	$3,103	$2,108
7	Total Cost Per EDU	$8,929	$4,776
(a)	Total EDUs	10,577	10,577

Note: Pipelines and Pump Stations are based on replacement costs
Metro Assets are valued as Reproduction Cost from Raftelis 2005 Study brought to present value using the June 2012 ENR

The City's economic climate has much improved since 2013 and staff and consultant would like to discuss with the City Council the adoption of the Metro portion of the capacity fee. In addition the valuation numbers could be updated based on the change in the ENR-CCI-LA to reflect construction inflation since 2013. The City's adopted FYE 2017 budget projects $30,000 in

capacity fee revenue. The implementation of the Metro portion of the capacity fee would serve to double this projected revenue and provide much needed capital financing for capacity expansion and rehabilitation repairs. As stated earlier, every $100,000 in change to the sewer user revenue requirement is $1.10 per month per average single family user. This applies to revenue requirement decreases as well as increases. Thus, increased revenue from capacity fees would help moderate future user rate adjustments.

Summary and Conclusions

The City proposes to update its sewer user rates and capacity fees. This report proposes several potential changes to both. The final report will include two appendices to provide for detailed data of the final rates. Appendix B will contain the full output from the economic model used to create the user rates. Appendix C will include the full output from the capacity fee model. The following recommendations are presented for Council's review and discussion.

1.1 Sewer User Fee Recommendations

1. Continue to use annual water usage for each customer
2. Update 2013 adopted rate case to reflect current budget and financial forecasts
3. Update 2013 adopted rate case to reflect current users, use, and revenue requirement
4. Adopt a revised "pass-through" ordinance to protect the City from unknown future costs
5. Formally adopt and implement reserve polices
    - Rate stabilization reserve: 6-months operating cash
        - Rebuild to $2 million minimum as per Council policy
    - Capital reserve: $400,000+ for major capital repairs
    - Replacement reserve: based on annual depreciation to provide a reserve for replacement projects
6. Review annual actual revenue to projected revenue to maintain financial stability should use patterns or revenue requirement change.
    - Especially review in FYE 2018 and FYE 2019 for adjustments by the Pure Water Program

1.2 Capacity Fee Recommendations

1. Fully implement 2013 fee recommendations to include Metro portion of the capacity fee
2. Update 2013 fee to increase in asset values of both the City and the Metro System
    - Potentially implement 2017 asset values for change in fee over upcoming planning period of FYE 2018 to 2022