

B R O W N S V I L L E PUBLIC UTILITIES BOARD

## **PUBCAP** Meeting

• • Wednesday, June 12, 2024



## **Call Open Meeting To Order**



## **Approval of Minutes**



## **Old Business**



## **New Business**



# **Drought Update**

### JUNE 12, 2024

#### PUBLIC UTILITIES BOARD CONSUMER ADVISORY PANEL

#### **BPUB Drought Stage Meter**



#### U.S. Combined ownership at Amistad and Falcon Reservoirs June 1, 2024 = 18.8%



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#### U.S. Combined Ownership at Amistad/Falcon



#### National Weather Service June to August (Summer) 2024 Outlook: Perspective for the Lower Rio Grande Valley/Deep S. Texas Region

- No Inflows are expected from Mexican reservoirs serving the Lower Rio Grande Watershed.
- Combined share of water in Amistad and Falcon likely to continue well below 25% through July.
- Drought to expand/worsen across the region by late June and July.
- Water Crisis unfolding for agriculture and likely to develop for some municipalities.
- Trends suggest "La Canicula" may develop in early to mid June and further exacerbate searing heat, humidity and no rain.
- 2024 Hurricane Season began June 1. Late June tropical activity can be a wildcard.



# **BPUB Water Conservation** (Operations)

- Extending filter backwash operations from 80 hour to 100 hour intervals to surface water plants.
  - Saving 10 backwashes per plant per month.
  - Total water savings of approximately 1.6 million gallons per month.
- Additional patrolling of the water system and support given to the water repair crews to lower response time to repairs.
- All dead end flushing will be done manually to reduce water loss.
- Expediting leak detection project to assist identifying possible leaks that have not surfaced.





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### **EVERY DROP COUNTS!**

Learn more about drought at:



brownsville-pub.com/drought-resources



## **Resaca Dredging & Dewatering Operations**

### PUBLIC UTILITIES BOARD CONSUMER ADVISORY PANEL JUNE 12, 2024

- 3 Major Resaca Systems

   Resaca Del Rancho Viejo
   Resaca De La Guerra
   Town Resaca
- Over 50 miles of Resacas
   3500 acres



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## **Operations Background**

#### • 2011

- Start of Resaca Maintenance Department
- 2012
  - o Equipment purchased
  - Staffing at 18 FTE's
  - Dewatering site construction
- 2013
  - Dredging began in March 2013
  - First dredging site Cemetery Resaca within Town Resaca system







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### **Objectives**

- Flood Control (stormwater runoff)
- Increase Water Storage Capacity (water treatment)
- Ecosystem Restoration (birds, fish, plants, wildlife)
- Enhance Aesthetics (recreation, water features, economic development)













### Objective



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## **Dredging Equipment**



- Large Dredge 44'
- 9' cutterhead
- Dredge up to 22' depth
- Used for large resacas
- Hydraulic function
- Self propelled

- Small (mini) Dredge 22'
- 5' 6" cutterhead
- Used for small resacas
- Dredge up to 13' depth
- Hydraulic function
- Manual cable driven

- Divers
- Inaccessible areas
- Zoo
- Suction hoses







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- Dredge Mapping Software

   Depths
  - Plotting
  - $\circ$  Tracking









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### Town Resaca Phase I Dredging

RESACA	SEDIMENT REMOVED	
Cemetery Resaca	19,528 cu yds	
Dean Porter Park Resaca	75,423 cu yds	
Gladys Porter Zoo Resaca	24,365 cu yds	
Resaca Blvd Resaca	33,165 cu yds	
Total	152,481 cu yds (30,795,000 gallon equivalent)	

\*1 cubic yard = 3'x3'x3' or 27 cubic feet \*1 cubic foot = 7.48 gallons





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### Town Resaca Phase II Dredging

RESACA	SEDIMENT REMOVED
Zoo Extension	8,686 cu yds
Calle Jacaranda	12,532 cu yds
St. Joseph	57,136 cu yds
Rotary Park (current project)	1,687 cu yds
Total	80,041 cu yds (16,168,282 gallon equivalent)

\*1 cubic yard = 3'x3'x3' or 27 cubic feet \*1 cubic foot = 7.48 gallons









## **Temporary Staging & Drying Site**

- COB landfill site
- Heavy equipment use
- Disking and tilling
- Material used as alternate daily cover





### **Resaca Maintenance Support Equipment**









#### Resaca Maintenance Department Staff

- Foreman
- Resaca Maintenance Specialist
- Dredge Operators
- Dredge Technicians
- Resaca Maintenance Technician
- Lead Utility Technician
- Senior Motor Equipment Operators
- Motor Equipment Operator/Transporters
- Maintenance Workers



### Juan Degollado

Foreman

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### **Questions?**







#### CROSS CONNECTION CONTROL PROGRAM CUSTOMER SERVICE INSPECTION FEE SCHEDULE

05/07/2024

• • FINANCE COMMITTEE

FINANCE COMMITTEE

# **Objectives**

• Recommendation for the Implementation of a Customer Service Inspection fee

History regarding our Customer Service Inspection (CSI) Program

- July 6, 2015 TCEQ Performed a Compliance Investigation of our Water System.
  - Alleged Violation 290.46 (j) Implementation of CSI Certificate.
  - City of Brownsville Plumbing Inspection Department utilized a Green Inspection Tag referencing 260.46J requirement.
  - Must utilize CSI certificate instead of Green Tag
- July 11, 2018 TCEQ Performed a compliance Investigation of Cross Connection Control Program
  - Deficiency No CSI Certificates available
  - Corrective Action Must complete CSI certificates to demonstrate compliance

• December 4, 2018 City of Brownsville Cross Connection Control Ordinance was adopted

WHY is a Cross Connection Control and Backflow Prevention Program required

- State Regulation 30 Texas Administrative Code 290
  - Prohibits Public Water Systems from connecting to an actual or potential contamination hazard without protecting the potable-water supply
  - Requires a Customer Service Inspection
  - Requires Backflow Protection
  - Requires Backflow Assemblies to be tested and maintained
- Local Regulation City of Brownsville Cross Connection Control and Backflow Prevention Program 2018-983-DD
- BPUB Water Service Agreement





service connection, positive for lead What is a Customer Service Inspection:

It identifies:

- 1. Cross Connections
- 2. Potential Contamination Hazards
- 3. Lead Material





When is a Customer Service Inspection Required

- 1. New Construction (Temporary)
- 2. Request for new water service
- 3. After any material improvement, correction, or addition to the private water distribution facilities
- 4. On any existing service either when the water purveyor has reason to believe that cross-connections or other potential contaminant hazards exist

(Note: CSI's are tied to the location and valid for 10 yrs.)

Where are Customer Service Inspections performed

1. Residential Sites

- 2. Commercial Sites
- 3. Industrial Sites



How are Customer Service Inspections performed

- 1. Lead Swab Test of piping solder
- 2. Toilet Reservoir Fill Valves
- 3. Water Heater Expansion Valve/Tank
- 4. Hose bib Vacuum Breakers
- 5. Identification of Cross Connections
  - i. Pool Fill Valves
  - ii. Landscape Irrigation
  - iii. Auxiliary Water Supply (Resaca & Well)

## Customer Service Inspection Proposed Fee

Service Type	Recommended Cost of Service	Cost - Industry Range (\$)
Customer Service Inspection	\$ 50.00	\$ 45 - \$ 225

Note: current BPUB contractor charges \$90/CSI

**ORDINANCE NUMBER 2018-983-DD** 

#### Sec. 102-710.- Potable Water Retailer Fees

(a) The Brownsville Public Utilities Board's governing body is authorized to adopt fees for services provided by the Brownsville Public Utilities Board in accordance with this Ordinance in an amount determined to be sufficient to recover potable water retailer's costs.
# **BPUB CSI Cost Analysis**

Cost factors associated with performing CSI							
Inspection Duration (Hrs.)	Varies per location						
Lead Check Cost (\$)	\$6.00						
Hose Bib VB Cost (\$)	\$7.50						
IRS Mileage Cost/Mi (\$)	\$0.66						
Labor Cost	\$25.30						

Aspect	Total Sites	Cost Range	Average Cost
Inspection Data	107	\$11.82 - \$74.58	\$40.26

- Methodology: The cost analysis was conducted by compiling the time and resources required for BPUB Technicians to perform Customer Service Inspections (CSIs).
- **Duration of Study:** The study spanned approximately two months, allowing for a comprehensive assessment of the process.
- **Scope:** Customer Service Inspections were conducted in a variety of facilities, including residential and commercial establishments, ensuring a representative sample.

# **Next Steps**

Submit board item to consider the implementation of a Customer Service Inspection fee

Request the consideration of additional FTE's to decrease cost and improve program efficiency

## Questions





# **Credit Card Payment Analysis**

## JUNE 12, 2024

• • FINANCE COMMITTEE

FINANCE COMMITTEE

## Overview

Total billable accounts:72,761

Total payments received FY 2023: 796,421

### Breakdown by Payment Type FY 2023:

0	Online & IVR Credit Card:	55%
0	Online EFT:	11.5%
0	ACH:	4.3%
0	POS Credit Card:	3.5%
0	WF IBP & Lockbox:	5.2%
0	Check:	2.1%
0	Cash:	7.6%
0	Substation Locations:	9.9%
0	Wire Transfer:	0.9%

## Online & IVR Credit Card & EFT Overview

Cost to customer at time of payment:	\$0
Cost of each credit card transaction:	\$1.65 per transaction
Number of CC transactions allowed per 30 days:	2; up to \$1k each
Cost to BPUB for each E-check and ACH transaction:	\$0.33 per transaction
Surcharge for IVR transactions:	\$0.25 per transaction

### **Online & IVR Credit Card Costs:**

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
TC	296,213	388,468	440,998	443,130	436,619
Total	\$ 486,825.04	\$ 539,425.16	\$ 692,949.08	\$ 696,867.98	\$ 759,001.59

### Total Online & IVR CC Fees Paid by BPUB FY 2019- FY 2023:

### \$3,175,068.85

## **POS Credit Card Fees**

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Total	\$ 49,482.70	\$ 26,204.13	\$6,188.40	\$ 22,024.98	\$ 35,811.24

# **Total Credit Card Costs Combined**

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Total	\$ 536,307.74	\$ 565,626.29	\$ 699,137.48	\$ 718,892.96	\$ 795,852.83
	5	.5% 23	.6% 2	8% 10	).7%

## Total CC Fees FY2019 - FY2023:

## \$3,315,817.30

## **Staff Recommendation**

## Credit Card and ACH/EFT Fee

Credit/Debit Fee per transaction paid by<br/>payer1.95% or \$2.50\$1,000 max cap per transactionIVR Surcharge fee per transaction paid by<br/>payer\$0.95This fee is in addition to<br/>CC/ACH fee

		\$1	K (	Online Exa	mp	ole:
Example:		<u>Bill</u>		Fee		<u>Total</u>
	\$	100.00	\$	2.50	\$	102.50
	\$	200.00	\$	3.90	\$	203.90
	\$	500.00	\$	9.75	\$	509.75
	\$ 1	,000.00	\$	19.50	\$	1,019.50

		\$1 K IVF	R Exa	mple:	_	
	Bill	Fee	<u>IVR</u> :	<u>Surcharge</u>		<u>Total</u>
\$	100.00	\$ 2.50	\$	0.95	\$	103.45
\$	200.00	\$ 3.90	\$	0.95	\$	204.85
\$	500.00	\$ 9.75	\$	0.95	\$	510.70
\$	1,000.00	\$ 19.50	\$	0.95	\$	1,020.45

## Phase I & Phase II

#### Phase I:

- Credit card payments made online and through the IVR system
- o 55% of all customer transactions
- \$759,001.59 in credit card fees for FY 2023
- Current payment processor: Invoice Cloud

#### Phase II

- Credit card payments made in person and the drive-through lanes
- o 3.5% of all customer transactions
- \$35,811.24 in credit card feed for FY 2023
- Current payment processor: Clover

# Phase II POS Proposed Solution

Invoice Cloud POS payment terminal: PAX A80
 Invoice Cloud will collect the fee directly at the POS via PAX A80

 \$40/ month per terminal (9 terminals required); annual cost of \$4,320



# **Communication Strategy**



Verbiage we can add to the payment portal page, alerting BPUB payers of upcoming price changes.

BPUB Staff and Invoice Cloud's Marketing Team can assist with additional communication:

- Email & Direct mail campaigns
- Bill inserts
- Messages on bills and envelopes

## **Questions?**

# **\$5k Online & IVR Option:**



IVR Surcharge fee per transaction paid by payer

•	
	This
\$0.95	

<u>\$5,000 max cap per transaction</u> fee is in addition to CC/ACH fee

## Example:

	\$5 I	< Online Exa	mpl	e:				\$5 K IV	RE	Example:	-	
Bill		Fee		Total			<u>Bill</u>	<u>Fee</u>		IVR Surcharge		<u>Total</u>
\$ 100.00	\$	2.50	\$	102.50	\$	5	100.00	\$ 2.50	\$	0.95	\$	103.45
	Ĭ				9	5	200.00	\$ 4.50	\$	0.95	\$	205.45
\$ 200.00	\$	4.50	\$	204.50	9	5	500.00	\$ 11.25	\$	0.95	\$	512.20
\$ 500.00	\$	11.25	\$	511.25	9	6	1.000.00	\$ 22.50	\$	0.95	\$	1.023.45
\$ 1,000.00	\$	22.50	\$	1,022.50	9	6	2.000.00	\$ 45.00	\$	0.95	\$	2.045.95
\$ 2,000.00	\$	45.00	\$	2,045.00	9	5	3,000.00	\$ 67.50	\$	0.95	\$	3,068.45
\$ 5,000.00	\$	112.50	\$	5,112.50	9	5	5,000.00	\$ 112.50	\$	0.95	\$	5,113.45

# \$10k Online & IVR Option:



2.5% or \$2.50

\$0.95

Credit/ Debit Fee per transaction paid by payer

IVR Surcharge fee per transaction paid by payer

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This fee is in addition to CC/ACH fee

\$10,000 max cap per transaction

\$10 K Online Example:							
<u>Bill</u>		<u>Fee</u>			<u>Total</u>		
\$ 100.00	\$	2.50	:	\$	102.50		
\$ 200.00	\$	5.00	:	\$	205.00		
\$ 500.00	\$	12.50	:	\$	512.50		
\$ 1,000.00	\$	25.00	:	\$	1,025.00		
\$ 2,000.00	\$	50.00	:	\$	2,050.00		
\$ 3,000.00	\$	75.00	:	\$	3,075.00		
\$ 5,000.00	\$	125.00	:	\$	5,125.00		
\$ 7,000.00	\$	175.00	:	\$	7,175.00		
\$ 10,000.00	\$	250.00	:	\$	10,250.00		

	-	\$10 K IV	RE	Example:	
Bill		Fee	<u> \</u>	/R Surcharge	<u>Total</u>
\$ 100.00	\$	2.50	\$	0.95	\$ 103.45
\$ 200.00	\$	4.50	\$	0.95	\$ 205.45
\$ 500.00	\$	11.25	\$	0.95	\$ 512.20
\$ 1,000.00	\$	22.50	\$	0.95	\$ 1,023.45
\$ 2,000.00	\$	45.00	\$	0.95	\$ 2,045.95
\$ 5,000.00	\$	112.50	\$	0.95	\$ 5,113.45
\$ 7,000.00	\$	157.50	\$	0.95	\$ 7,158.45
\$ 10,000.00	\$	225.00	\$	0.95	\$ 10,225.95

## Example:

Option 2:



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## What is Load?

JUNE 12, 2024

## **Integrated Resource Planning Flow**



## What is Load?

"Load" is a general term that refers to the use of electricity by customers on the power system.

BPUB's load is part of the South Load Zone served by ERCOT.

Whenever someone turns on a light or air conditioner, plugs in an electric vehicle, or starts electrical equipment, system load increases directly and immediately.

BPUB accounts for approximately 0.4% of ERCOT's peak system load.



# **Electric Demand vs. Consumption**

"Load" can refer to either instantaneous usage ("Demand"), or usage over a period of time ("Consumption").

#### DEMAND

Measured in kilowatts (kW) and represents the rate at which electricity is used

#### CONSUMPTION

Measured in kilowatt-hours (kWh) and represents the amount of electricity used over a certain period time.

# How is Load Measured?

Load is expressed in units of watts, kilo-watts, and mega-watts.

1 kilo-watt (1kw) = 1,000 watts

1 mega-watt (1mw) = 1 million watts

1 kilo-watt of power used continuously for 24 hours = 24 kilo-watt-hours, or 24 kWh.



50

#### 45 40 35 28.9 400 kWh per day 25 20 26.7 23.6 22.0 15 10 5 South US average Northeast Midwest West Data: US Energy Information Administration.

36.7 kWh per day per household, which is the same as having fifteen 100-watt light bulbs on all day (24 hours).

## What residential appliances use the most load?

Here are a few of the residential appliances that contribute to a total residential load.

Many of these are only used for a few hours a day and consume a modest amount of power.

#### Household Electricity Consumption



# Load Customer Classes

The load of each Customer Class has unique characteristics.

Customer Class	Load Characteristics
Residential	<ul> <li>Numerous small loads</li> <li>Very dependent on the size and age of the home, weather, and number of residents living in the home</li> <li>Higher during the day, peaks in the evening, and lower at night</li> <li>Poor load factor</li> </ul>
Commercial/Government	<ul> <li>Similar to residential, which are fewer but larger</li> <li>Huge variability based on size, type of business, and hours of operation</li> <li>Average load factor</li> </ul>
Industrial	<ul> <li>Small number of very high loads</li> <li>Uses electricity in a manufacturing process</li> <li>Tends to follow business operating patterns and operation of large equipment rather than weather</li> <li>Excellent load factor</li> </ul>

# Load by Customer Class







Consumption in MWh

#### Peak Demand 308MW

## How Does Load Behave?

Load tends to be higher during the day when people are active in their homes and schools and when businesses are operating. Load is also higher when it is hot outside and more air conditioners are running.

Load tends to be lower in the early morning when activity is lower and it is cooler.



## How Has BPUB Load Grown?

Like most utilities, BPUB load fluctuates over time, but generally grows.

Growth, or the lack thereof, is driven buy the number of new customers added each year and how much power each type of customer uses.

As part of the Integrated Resource Plan, BPUB must analyze and forecast customer load to ensure it has sufficient resources of the proper types so that all customers are served with affordable and stable rates.





## **Integrated Resource Plan**

### STATUS UPDATE AND NEXT STEPS

## **IRP** Basics

Most utilities develop an Integrated Resource Plan approximately every five years to identify preferred power supply options.

It has become common practice across the industry to engage the community, either directly or through organizations similar to PUBCAP, to provide input during the process.

Most plans begin with a detailed load forecast as the first step.



## **Updated Timeline Estimate**

			Half 1, 2024 Half 2, 2024 Half 1, 20
Task Name	Start	✓ Finish	J F M A M J J A S O N D J
RFP issued	Fri 1/5/24	Fri 1/5/24	÷ 1/5
Respondent review time	Fri 1/5/24	Thu 1/18/24	We are currently in contract negotiations
Last day to submit questions	Thu 1/18/24	Thu 1/18/24	
Responses to questions prepared	Fri 1/19/24	Thu 1/25/24	
Responses to questions issued	Thu 1/25/24	Thu 1/25/24	After we have the
Respondent proposal prep time	Fri 1/26/24	Thu 2/22/24	kickoff meeting with the
Proposals due	Wed 3/6/24	Wed 3/6/24	<sup>3/6</sup>
Proposals acknowledgment	Thu 3/7/24	Thu 3/7/24	
Proposals evaluated	Mon 4/1/24	Fri 4/26/24	with PUBCAP to create
Present recommendation to Finance Committee	Tue 5/7/24	Tue 5/7/24	a detailed schedule for
Board approval of contract award	Mon 6/10/24	Mon 6/10/24	<sup>6/10</sup> project workshops.
Contract negotiations	Mon 6/10/24	Fri 6/28/24	
Contract Execution	Fri 6/28/24	Fri 6/28/24	6/28
Project Execution	Mon 7/8/24	Fri 1/31/25	
Kickoff Meeting	Mon 7/8/24	Mon 7/8/24	▲ 7/8
Load Forecast	Wed 7/10/24	Tue 9/3/24	
Resource Analysis	Wed 9/4/24	Tue 10/29/24	
Prepare Draft Plan	Wed 10/30/24	Tue 12/24/24	
Prepare Final Plan	Wed 12/25/24	Fri 1/31/25	



## Conservation Superheroes Drawing Contest

## Conservation Superheroes Drawing Contest

Purpose: To promote water and energy conservation among students (Grades 1-5) and create community awareness.

- **Contest Period:** March 18 April 12
- **Community Voting:** April 24 May 10
- Process:
  - Students submitted drawings with conservation messages
  - BPUB staff selected five finalists per grade
  - Community voted for grand prize winners
- Grand Prize per grade: 9<sup>th</sup> Generation Apple iPad

# By the Numbers

- Number of participating schools: 7
- Total entries received: 180
- Total community votes: **11,983**
- Total Social Media Engagement (likes, shares, & comments): **772**
- Total website visits: 24,900



### First Grade: Jesse, Castaneda Elementary



## Second Grade: Jenavi, R.L. Martin Elementary



### Third Grade: Amberly, Burns Elementary



## Fourth Grade: Miley, Bryss Academy


#### Fifth Grade: Dafne, St. Mary's School

#### YOU'RE A CONSERVATION HERO!



Draw a water conservation message!





#### Brownsville Public Utilities Board

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Congratulations to our Conservation Superheroes Drawing Contest winners! Your artistic talents and conservation messages were truly amazing. Thanks again to everyone who participated and helped make this year's contest a success. Here's to many more years of nurturing our Conservation Superheroes!#ConservationSuperheroes #Conservation

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B R O W N S V I L L E PUBLIC UTILITIES BOARD

### **Questions?**



#### **Public Comments**



## **Next Meeting Date**

JULY 17, 2024



# Adjournment