BROWNSVILLE
PUBLIC UTILITIES BOARD

PUBCAP Meeting

Wednesday, March 20, 2024

BROWNSVILLE
PUBLIC UTILITIES BOARD

Call Open Meeting To Order

BROWNSVILLE
PUBLIC UTILITIES BOARD

Approval of Minutes

BROWNSVILLE
PUBLIC UTILITIES BOARD

Old Business

BROWNSVILLE
PUBLIC UTILITIES BOARD

New Business

BROWNSVILLE
PUBLIC UTILITIES BOARD

Drought Update

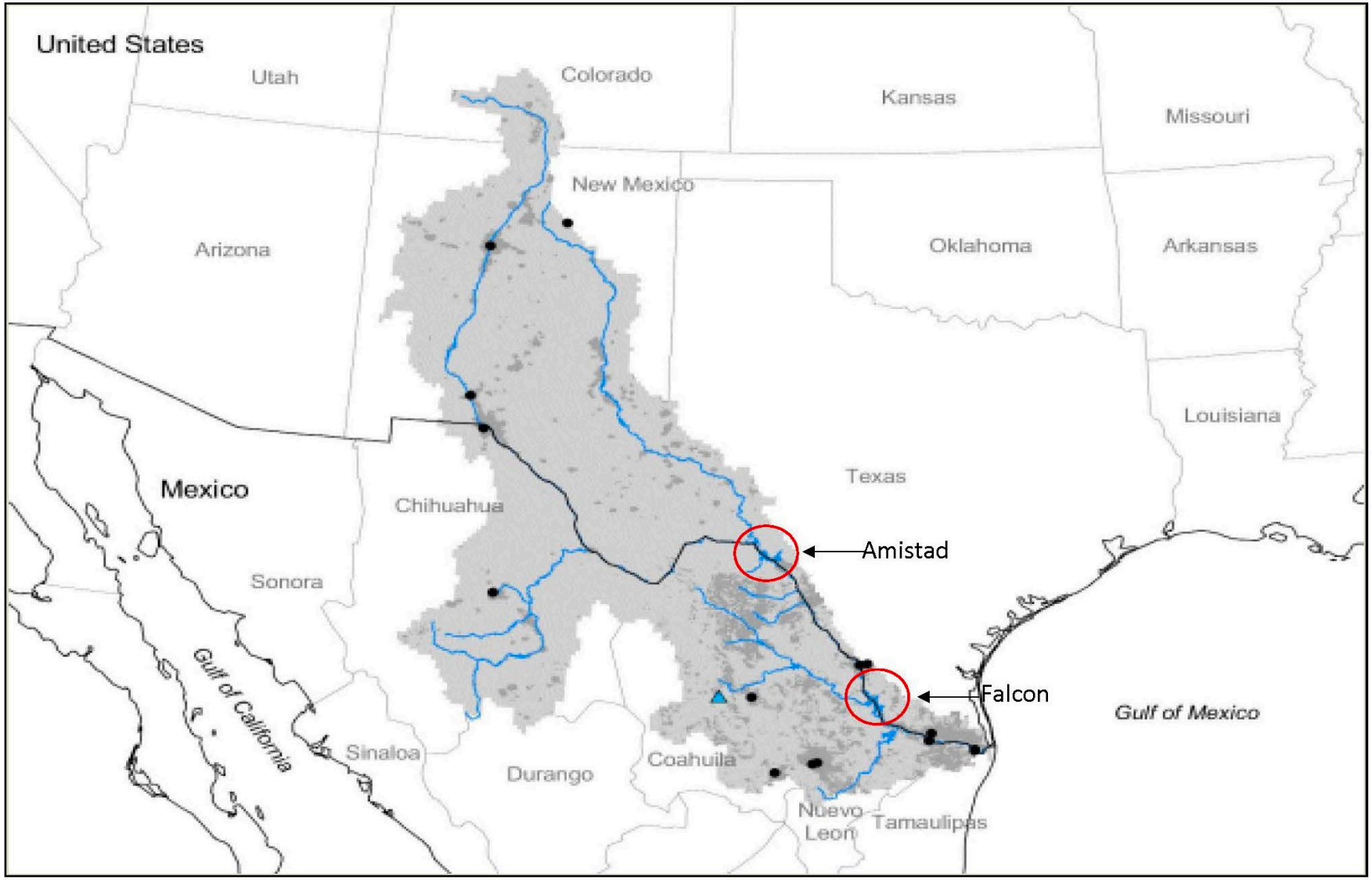
MARCH 20, 2024

PUBLIC UTILITIES BOARD CONSUMER ADVISORY PANEL

Drought Update Message

- Currently in Stage 2 drought.
- Forecast indicates moving to Stage 3 drought.
- Asking citizens to help by complying with Stage 2 restrictions.

Rio Grande Watershed



U.S International Boundary Water Commission (IBWC)

- IBWC responsible for applying treaties between US and Mexico
  - International body with US/Mexican Engineer Commissioner.
- 1944 Treaty
  - Mexico obligation = 350,000 acre-feet/year (1,750,000 acre-feet/5 year cycle).
  - As of March 9, 2024 delivered 379,742 acre-feet (at year 4 of 5-year cycle).
- Resolution
  - Lower Rio Grande Valley Development Council (LRGVDC).
  - BPUB Resolution.

RESOLUTION No. 2023-0710 (IC-10)

WHEREAS, the Rio Grande river is the only source of fresh surface water for the Rio Grande Valley of Texas; and,

WHEREAS, the Rio Grande river flows are greatly dependent on inflows from Mexican tributaries that flow into the Rio Grande river above Amistad and Falcon Reservoirs; and,

WHEREAS, the 1944 Treaty between the United States and Mexico allots to the United States one-third of the tributary inflow from six-named tributaries (Conchos, Arroyo Las Vacas, San Diego, San Rodrigo, Escondido and Salado) that flow into the Rio Grande river above the international reservoirs and this one-third shall not be less than 350,000 acre-feet as an annual average over a cycle of five consecutive years; and,

WHEREAS, the only exception to the annual delivery of this water is if Mexico is experiencing extraordinary drought or has experienced serious accident to the hydraulic systems on the six-named tributaries; and,

WHEREAS, Mexico has accumulated over 2.9-million-acre feet of water in the reservoirs on the six-named tributaries since August 2022, and is an indication that Mexico is not in an extraordinary drought and there have been no reports of any accidents to their hydraulic systems; and,

WHEREAS, the current five-year Treaty Delivery Cycle commenced October 25, 2020, and Mexico is behind in their deliveries to the United States by over 550,000-acre feet of water; and,

WHEREAS, the United States ownership of water in the Amistad/Falcon Reservoir System is slightly less than one years' supply of water; and,

WHEREAS, Mexico has sufficient water in storage in the tributaries that the United States is entitled to receive water from and could release this water as called for by the 1944 Treaty.

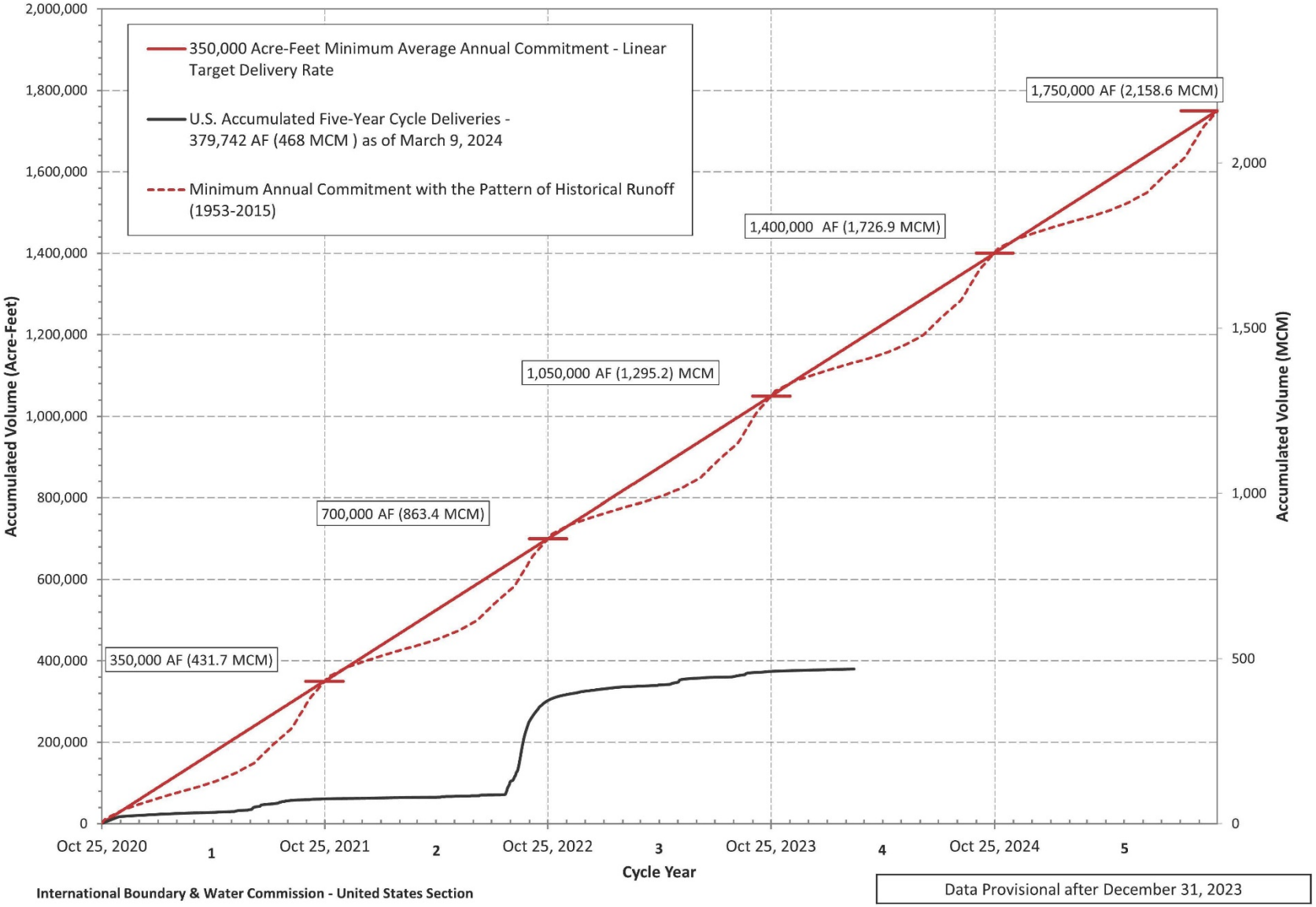
NOW, THEREFORE, BE IT RESOLVED THAT the Brownsville Public Utilities Board strongly urges Mexico to comply with the terms of the 1944 Treaty and release the water due to the United States.

Adopted and approved this 10th day of July 2023.

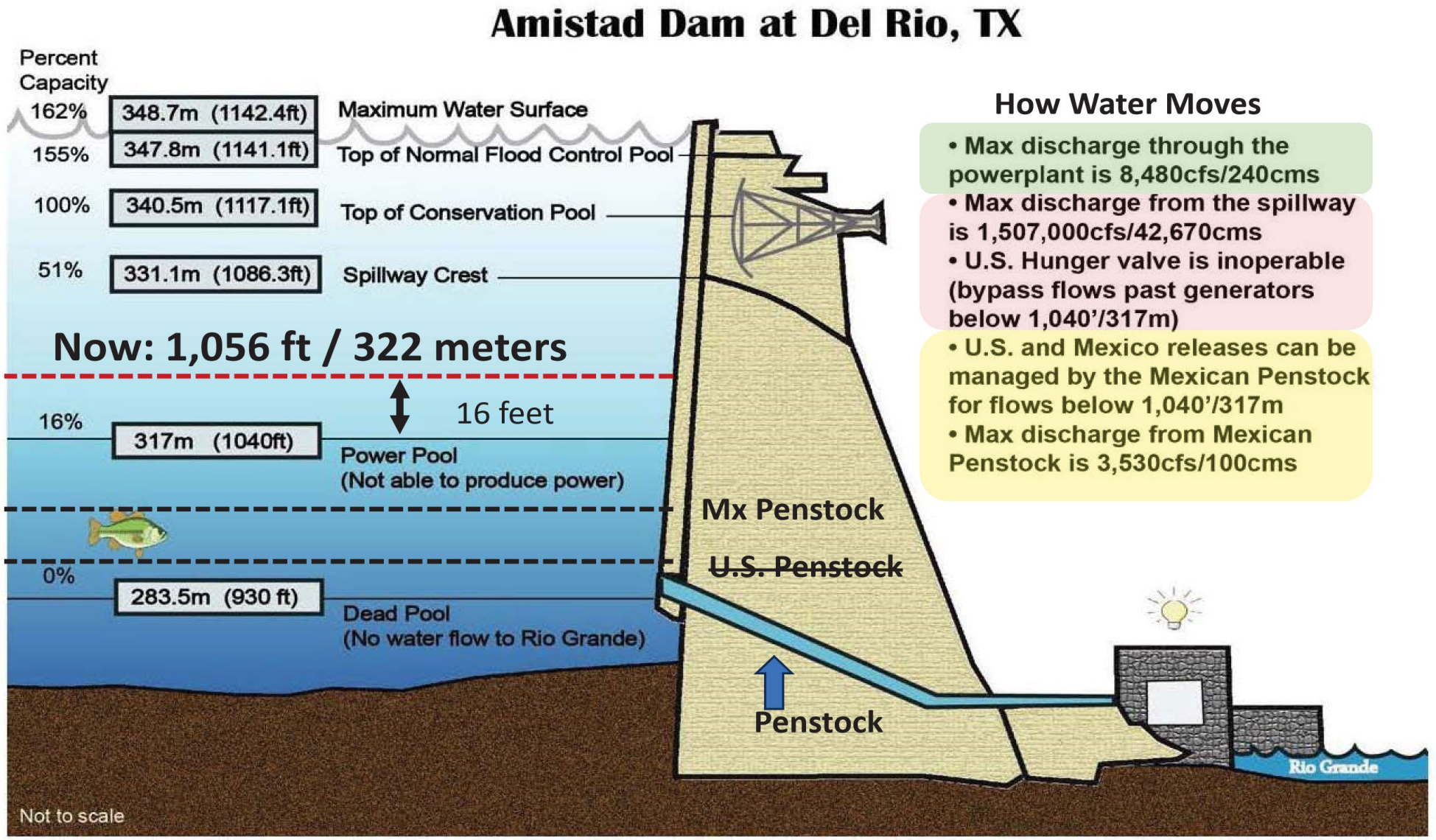
Art Rendon, Chairman

Daisy Zamora, PhD, Secretary/Treasurer

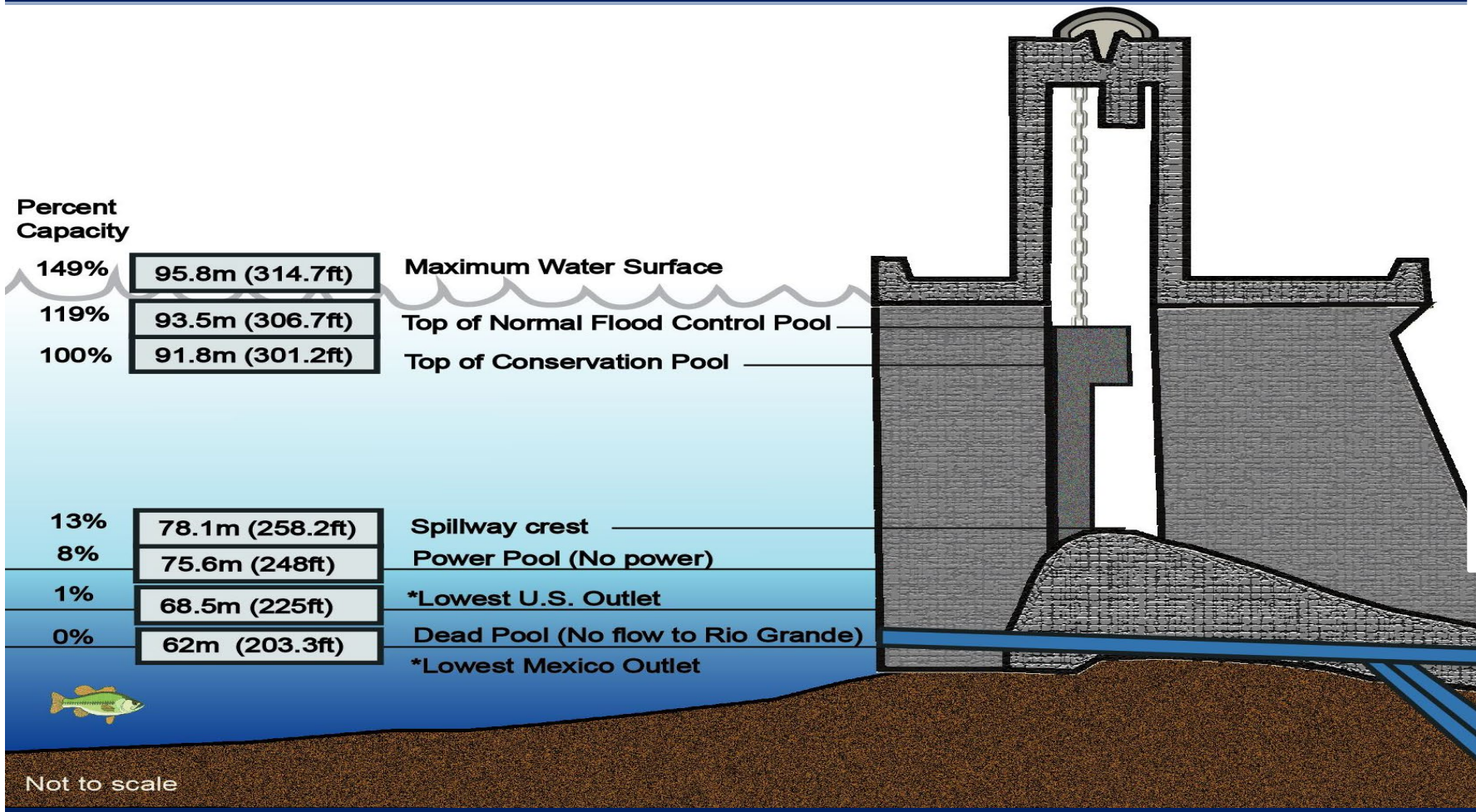
Rio Grande River Basin
Estimated Volumes Allotted to the United States by Mexico from Six Named Mexican Tributaries and Other Accepted Sources* under the 1944 Water Treaty
Current Cycle: October 25, 2020 thru March 9, 2024



Amistad Critical Elevations



Falcon Dam Operational Constraints



Reservoir Elevation 314.2 ft to 256.7 ft
Discharge range through the spillway is 456,000 cfs / 12,900 cms to 0 cfs / 0 cms

Reservoir Elevation 256.7 to 248 ft.
Discharge max via US/MX powerplants
- **256.7 ft - 7,770 cfs / 220 cms**
- **248.0 ft - 7,060 cfs / 200 cms**

Reservoir Elevation 248 ft. to 225 ft
Discharge max via US/MX Hollow Jets
- **248.0 ft - 4,240 cfs / 120 cms**
- **225.0 ft - 1,410 cfs / 40 cms**

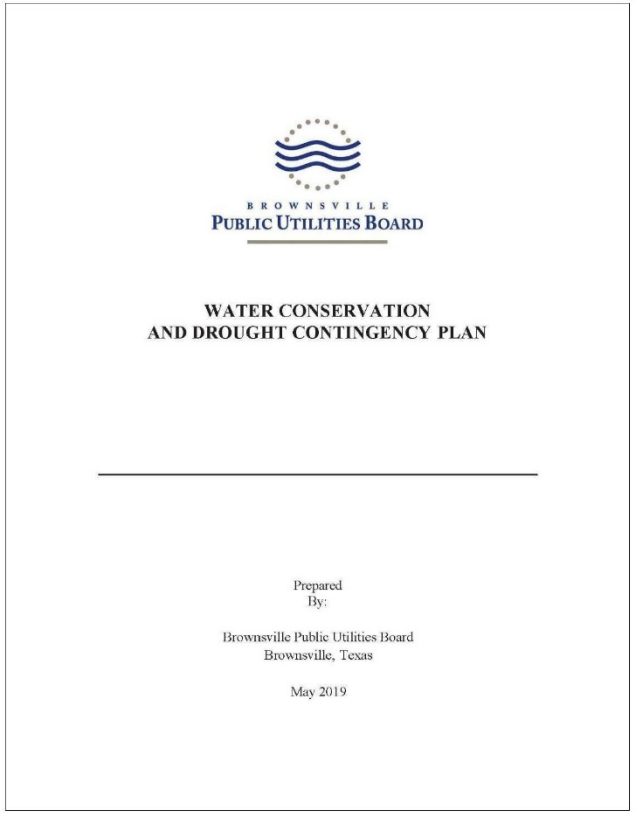
Reservoir Elevation 225 ft to 203.33 ft.
Discharge max via Mexico Hollow Jets
- **225.0 ft - 1,410 cfs / 40 cms**
- **203.3 ft - 0 cfs / 0 cms**

Stop HJV if Tailwater rises above 189.0 ft

Providing binational solutions along the U.S.-Mexico Border

Water Conservation & Drought Contingency Plan (WCDCP)

- WCDCP is state mandated
  - Must be updated every 5 years (30 TAC 288).
  - Submitted to Texas Water Development. Board, Texas Commission on Environmental Quality, Region M Water Planning Group.
  - Due May 1, 2024.
- Water Conservation Plan
  - Conservation goals and strategies.
- Drought Contingency Plan
  - Water restrictions, surcharges, enforcement.


BROWNSVILLE
PUBLIC UTILITIES BOARD

WATER CONSERVATION
AND DROUGHT CONTINGENCY PLAN

Prepared
By:

Brownsville Public Utilities Board
Brownsville, Texas

May 2019

Drought Contingency Plan

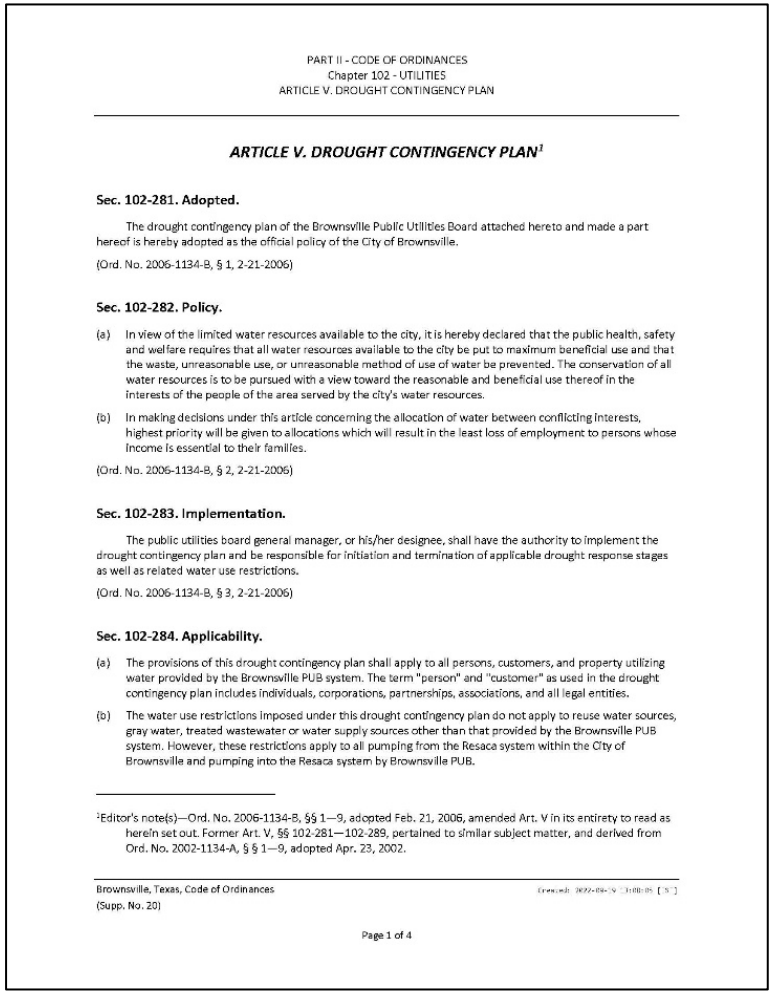
City Ordinance 2006-1134-B, Sec. 1,102-281

Purpose

- To conserve and limit the demand of water during water emergencies.
- To minimize the adverse impacts of water supply shortages or other emergencies.

Authority

- BPUB sets guidelines & criteria for implementation of the stages.
- BPUB GM & CEO and the City of Brownsville Mayor, or their designees, initiate and terminate each stage.



PART II - CODE OF ORDINANCES
Chapter 102 - UTILITIES
ARTICLE V. DROUGHT CONTINGENCY PLAN

ARTICLE V. DROUGHT CONTINGENCY PLAN[1]

Sec. 102-281. Adopted.

The drought contingency plan of the Brownsville Public Utilities Board attached hereto and made a part hereof is hereby adopted as the official policy of the City of Brownsville.

(Ord. No. 2006-1134-B, § 1, 2-21-2006)

Sec. 102-282. Policy.

(a) In view of the limited water resources available to the city, it is hereby declared that the public health, safety and welfare requires that all water resources available to the city be put to maximum beneficial use and that the waste, unreasonable use, or unreasonable method of use of water be prevented. The conservation of all water resources is to be pursued with a view toward the reasonable and beneficial use thereof in the interests of the people of the area served by the city's water resources.

(b) In making decisions under this article concerning the allocation of water between conflicting interests, highest priority will be given to allocations which will result in the least loss of employment to persons whose income is essential to their families.

(Ord. No. 2006-1134-B, § 2, 2-21-2006)

Sec. 102-283. Implementation.

The public utilities board general manager, or his/her designee, shall have the authority to implement the drought contingency plan and be responsible for initiation and termination of applicable drought response stages as well as related water use restrictions.

(Ord. No. 2006-1134-B, § 3, 2-21-2006)

Sec. 102-284. Applicability.

(a) The provisions of this drought contingency plan shall apply to all persons, customers, and property utilizing water provided by the Brownsville PUB system. The term "person" and "customer" as used in the drought contingency plan includes individuals, corporations, partnerships, associations, and all legal entities.

(b) The water use restrictions imposed under this drought contingency plan do not apply to reuse water sources, gray water, treated wastewater or water supply sources other than that provided by the Brownsville PUB system. However, these restrictions apply to all pumping from the Resaca system within the City of Brownsville and pumping into the Resaca system by Brownsville PUB.

[1]Editor's note(s)—Ord. No. 2006-1134-B, §§ 1—9, adopted Feb. 21, 2006, amended Art. V in its entirety to read as herein set out. Former Art. V, §§ 102-281—102-289, pertained to similar subject matter, and derived from Ord. No. 2002-1134-A, § § 1—9, adopted Apr. 23, 2002.

Brownsville, Texas, Code of Ordinances
(Supp. No. 20)

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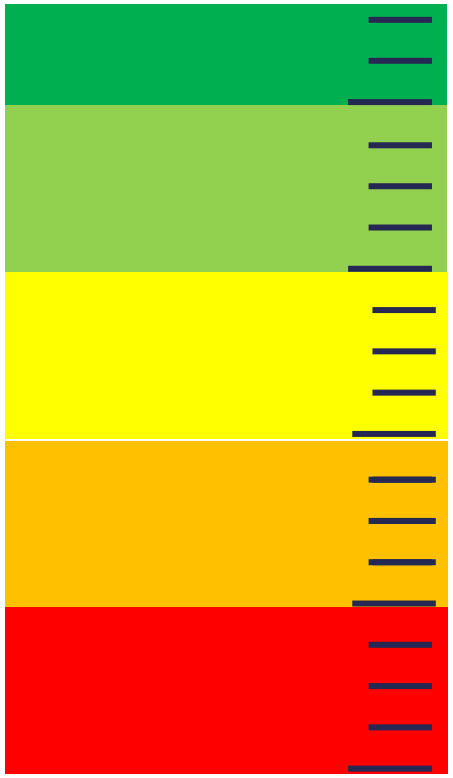
Drought Response Stages

U.S. Combined Falcon Dam and Amistad Reservoirs' Storage



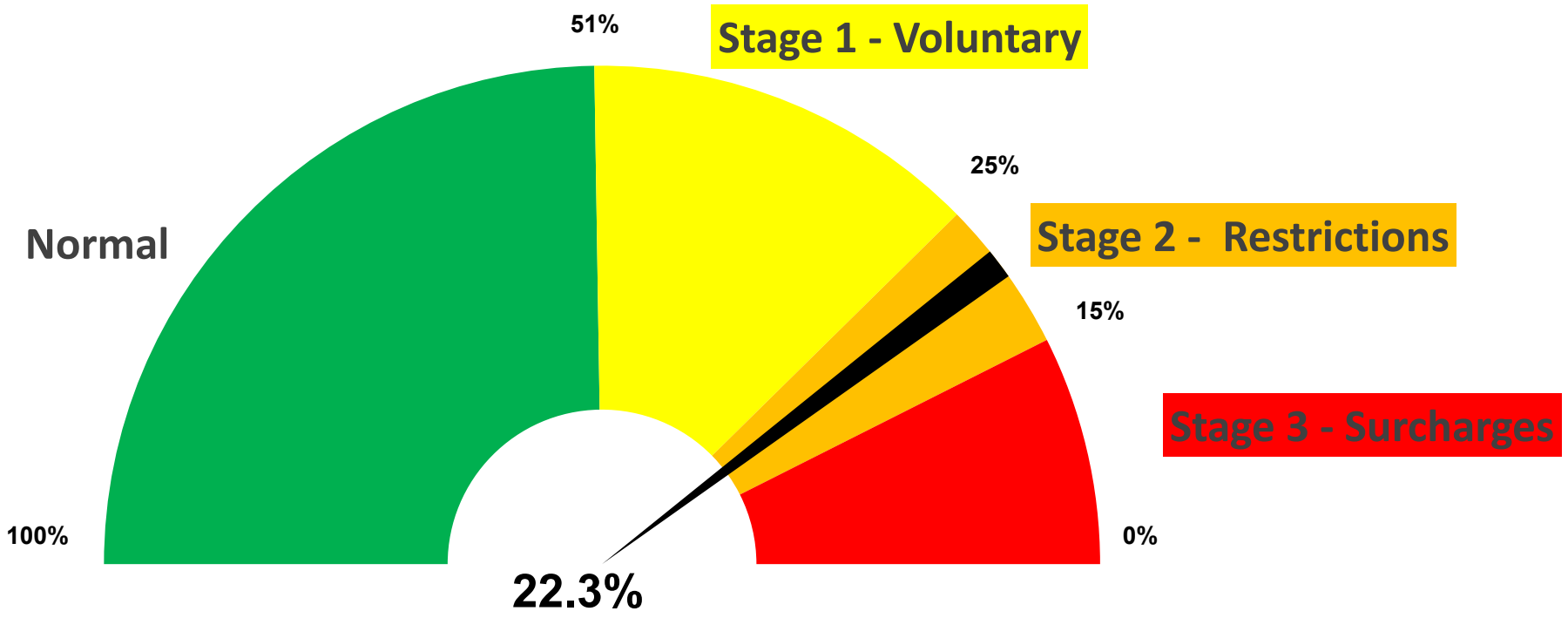
Stage 1 – Voluntary 51%

Stage 2 – Restrictions 25%

Stage 3 – Surcharges 15%

Stage 4 – Rationing Emergency

Drought Stage Meter



U.S. Combined ownership at Amistad and Falcon Reservoirs
March 9, 2024 = 22.3%

STAGE 2: WATER USE RESTRICTIONS

Lawn irrigation is allowed

Midnight through 7:00 a.m.
7:00 p.m. through midnight.
On designated watering days.

- Landscape irrigation with a hand-held garden hose, soaker hose, hand-held bucket, no larger than 5 gallons, or drip irrigation is allowed anytime.
- New landscape vegetation may be irrigated any day during the designated Stage 2 irrigation hour. Requires variance.
- Variance is available for 4 weeks from the date of planting, and renewal is available for 8 weeks total.

Watering Schedule

based on last digit of service address

Last # of Address	Watering Days
0 or 1	Monday, Saturday
2 or 3	Tuesday, Saturday
4 or 5	Wednesday, Saturday
6 or 7	Thursday, Sunday
8 or 9	Friday, Sunday

EVERY DROP COUNTS! Learn more about drought at: **brownsville-pub.com/drought-resources**

STAGE 2: WATER USE RESTRICTIONS

Car washing is allowed

Midnight through 10:00 a.m.
7:00 p.m. through midnight.
On designated watering days.

- Allowed with a hand-held bucket, no larger than 5 gallons, or hose with a positive shutoff nozzle.
- Vehicle washing is allowed at commercial vehicle wash facilities at any time.
- Fundraising car washes will follow the watering schedule and allowed time.

Watering Schedule

based on last digit of service address

Last # of Address	Watering Days
0 or 1	Monday, Saturday
2 or 3	Tuesday, Saturday
4 or 5	Wednesday, Saturday
6 or 7	Thursday, Sunday
8 or 9	Friday, Sunday

EVERY DROP COUNTS! Learn more about drought at: **brownsville-pub.com/drought-resources**

STAGE 2: ADDITIONAL RESTRICTIONS

- Non-essential watering is prohibited, such as washing buildings or sidewalks, using water for dust control, or allowing water to runoff into streets.

STAGE 3: WATER USE RESTRICTIONS

Car washing is allowed once a week

Midnight through 10:00 a.m.
7:00 p.m. through midnight.
On designated watering day.

- Allowed with a hand-held bucket, no larger than 5 gallons, or hose with a positive shutoff nozzle.
- Vehicle washing is allowed at commercial vehicle wash facilities at any time.
- Fundraising car washes are prohibited.

- Hydrant use limited to fire fighting, except those designated for construction purposes under special permit by the BPUB.
- Water use restrictions for golf courses based on water management plans.

Watering Schedule

based on last digit of service address

Last # of Address	Watering Days
0 or 1	Monday
2 or 3	Tuesday
4 or 5	Wednesday
6 or 7	Thursday
8 or 9	Friday

EVERY DROP COUNTS! Learn more about drought at: **brownsville-pub.com/drought-resources**

STAGE 3: WATER USE RESTRICTIONS

Lawn irrigation is allowed <u>once</u> a week

Midnight through 7:00 a.m.
7:00 p.m. through midnight.
On designated watering day.

- Landscape irrigation with a hand-held garden hose, soaker hose, hand-held bucket, no larger than 5 gallons, or drip irrigation is allowed anytime.

- New landscape vegetation may be irrigated twice/week on the designated Stage 2 irrigation schedule. Requires variance.
- Variance is available for 4 weeks from the planting date, and renewal is available for 8 weeks total.

Watering Schedule

based on last digit of service address

Last # of Address	Watering Days
0 or 1	Monday
2 or 3	Tuesday
4 or 5	Wednesday
6 or 7	Thursday
8 or 9	Friday

EVERY DROP COUNTS! Learn more about drought at: **brownsville-pub.com/drought-resources**

STAGE 3: WATER USE RESTRICTIONS

Additional Restriction

- Water for draining/refilling outdoor swimming pool/Jacuzzi is prohibited, except for water to refill pools to maintenance levels that have undergone repair or new construction.
- Operation of any outdoor ornamental fountain/pond for aesthetic or scenic purposes is prohibited, except to support aquatic life or where fountain/ponds recirculate water.
- The use of water from scenic and recreational ponds and lakes (resacas) and pumping water into them is prohibited.

STAGE 3: SURCHARGES

Residential

ALLOCATION

10,000

gallons per month

SURCHARGE

1.5X

the current rate for water used over the allocation amount

Non-Residential

ALLOCATION

80%

of monthly usage for the 12-month period ending prior to the date of implementation of Stage 3

SURCHARGE

1.25X

the current rate for water used over the allocation amount

Irrigation

- Lasts residential rate block 1.5 times current rate

Bottom Line

- Reservoir levels likely to continue at Stage 2 levels through May, if conditions persist
- Drought Stage 3 projected for Summer 2024
- Water Conservation & Drought Contingency (WCDC) Plan
  - Updated every 5 years, update due May 1, 2024.
  - Placeholder to be submitted in April.
  - Amended plan to include any new and/or revised city ordinances to be submitted at a later date.
  - Stage 3 – Team to make recommendations to GM/Mayor on restrictions to implement.

BROWNSVILLE
PUBLIC UTILITIES BOARD

EVERY DROP COUNTS!

Learn more about drought at:

brownsville-pub.com/drought-resources

Springtime Safety & Conservation

PUBCAP Meeting – March 20, 2024

Presented by Ryan Greenfeld


Lantana

Spring is here

- In the Northern Hemisphere, spring officially began this year on March 19
- More gardening activity due to plants waking up
- More people putting in new plants
- More concerns about water supply

Dangers hidden below

- Underground lines can be a hazard to gardeners who are out digging
- Hitting a line can result in service interruptions, a bill for damages, injuries, even death
- Every 9 minutes, an underground utility is damaged by someone who didn't use 811

Why call 811?

LINE MARKER COLOR CODES

- ELECTRIC
- GAS, OIL OR STEAM
- TELEPHONE OR TELEVISION
- WATER
- SEWER
- TEMPORARY SURVEY MARKINGS
- PROPOSED EXCAVATION

BROWNSVILLE
PUBLIC UTILITIES BOARD

When to call 811?

Texas law requires homeowners to contact 811 two business days (excluding weekends and holidays) before digging, even if you're working in your own backyard.

Homeowners should contact 811 when:

Building or repairing a fence

Planting a tree

Installing a sprinkler system

Any chore or maintenance that requires digging

If you are hiring a contractor to do the work for you, it is the contractor's responsibility to contact 811 two business days prior to digging. You may want to make sure your contractor has notified 811 before the work begins by requesting the ticket or notification number.

Call 811 Before You Dig

- 811 is FREE
- Call 2 business days before digging
- For homeowners and businesses
- Used when building a fence, planting a tree, installing sprinkler, performing any digging

Digging safe in April

Dangers lurking above

- Trees waking up in spring will grow quickly
- Branches near lines can be a hazard and can cause service interruptions

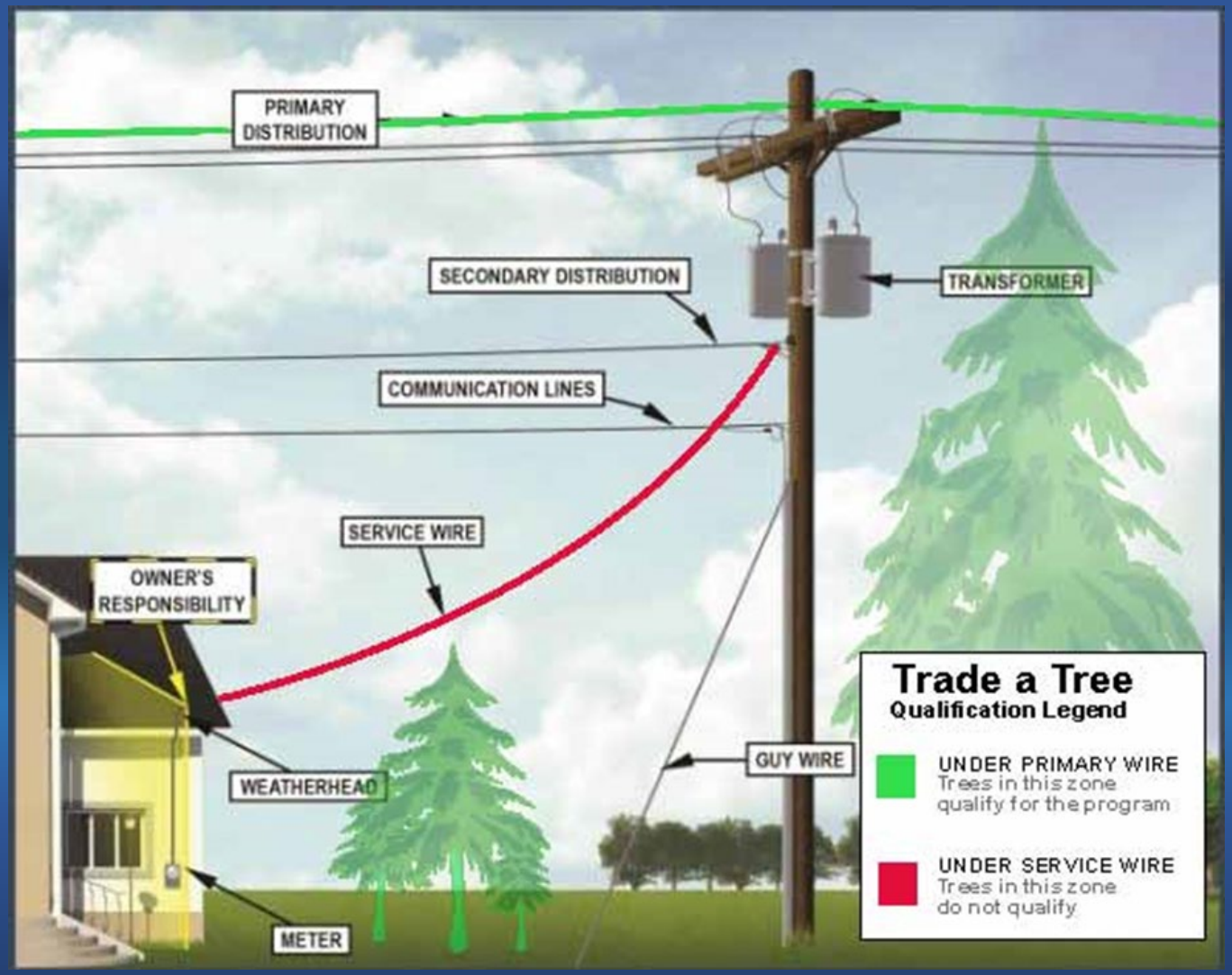
Dangers lurking above

- Trim branches before they become a problem
- Proactive tree trimming by BPUB in problem areas
- Trade a tree program

Tree trimming program

- Contracted with ABC Professional Tree Services
- Problem areas targeted by BPUB
- Free tree trimming service for trees near primary or secondary service lines

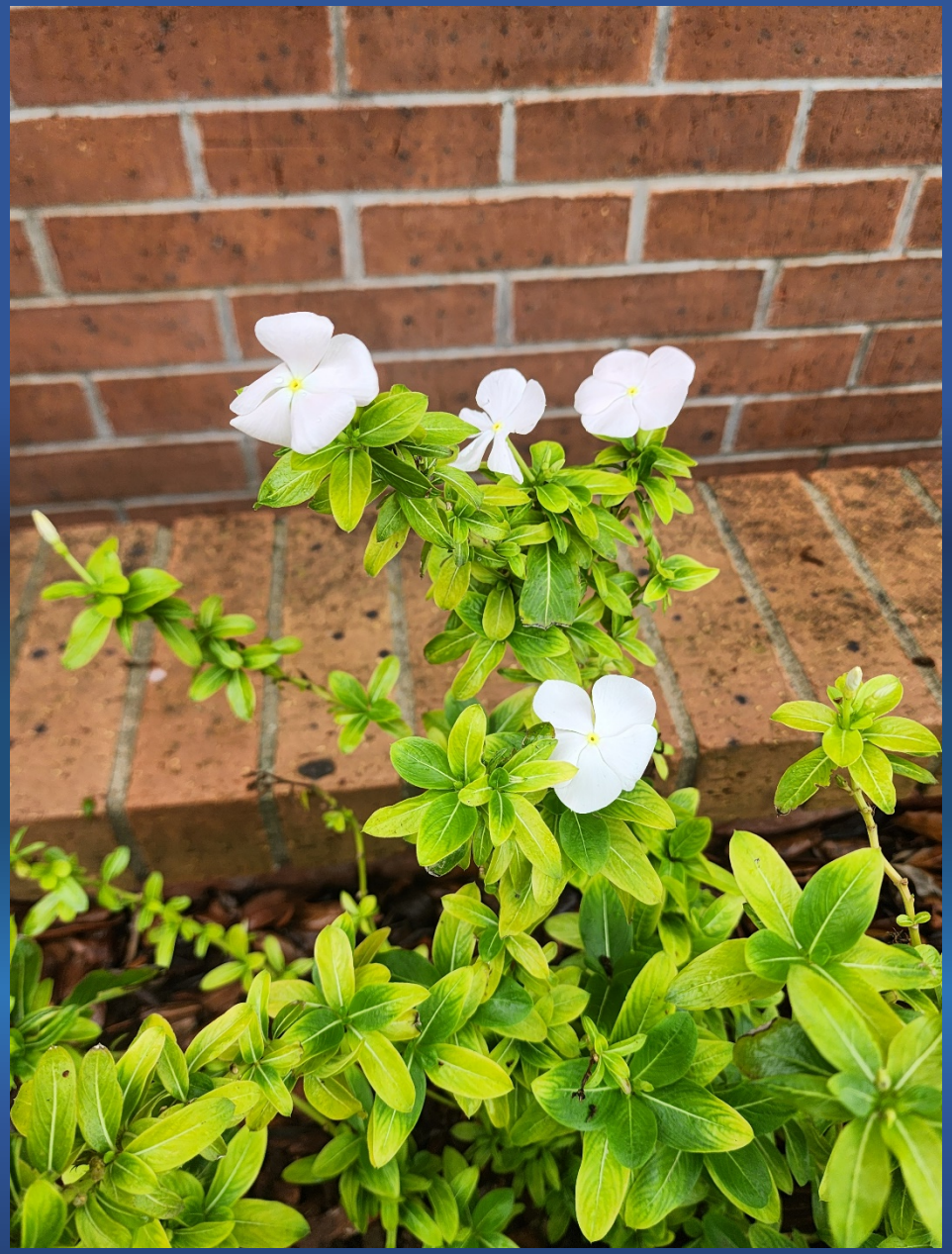
Trade-a-Tree Program



- Swap a problem tree for a native tree
- Tree must be under primary service line
- BPUB, COB will remove, clean debris, provide replacement
- New tree must be appropriate distance

Water conservation landscaping

- Drought conditions persisting
- In urban areas, about 25% of water supply used to water landscapes and gardens
- In summer, as much as 60% of the water the average household uses may be for landscape maintenance



Efficient watering

- Limited to 2 watering days per week, midnight-7 a.m.; 7 p.m.-midnight
- Better to water early in morning or at the end of the day
- Water infrequently but deeply
- Avoid watering grass every day, even when not under restrictions

Water to conserve

- Water down, not up
- Drip irrigation more efficient than sprinkler irrigation
- Get a water nozzle for the garden hose
- Use the right watering tool for the job

Plan ahead your landscape

- Place plants with similar water needs together
- Optimize sprinkler locations
- Reduce turf
- Improve soil
- Plant at the right time

Plant smart; plant native

- Better adapted to environment
- Better equipped to handle pests
- Acts as a “bait crop” to keep pests off other plants
- Attracts more pollinators
- St. Augustine not native, very resource intensive

Xeriscape to save more

- Extensive use of native plants
- Incorporates non-plant elements like rocks and mulch
- Greatly reduces need to water
- Low maintenance – less need for mowing, pruning
- Pest and disease resistant
- Right plant for right region

Xeriscape in practice

Invest in conservation

- Add mulch wherever possible
- Permanent irrigation system
- Water timer
- Cameron County Master Gardeners program
- Consult with landscaping expert about xeriscape

Don’t be afraid to ask for help

- Cameron County Extension Office – Cameron.agrilife.com
- RGV Chapter of Texas Master Naturalist - rgvctmn.org/rgv-plants/
- Native Plant Society of Texas - npsot.org/chapters/rio-grande-valley


Questions?
BROWNSVILLE
PUBLIC UTILITIES BOARD
SRWA
Southmost Regional Water Authority

BROWNSVILLE
PUBLIC UTILITIES BOARD

BPUB Sponsorship Policy

PUBCAP MEETING – MARCH 20, 2024

2019-2024 BPUB Strategic Plan

Customer Service & Community Partnership identified as one of BPUB's values

Other values include Employee Satisfaction & Collaboration; Environmental Stewardship; Innovation & Continuous Improvement; Open Communication; Safety

Customer and Community Engagement Goal – To increase awareness of the value of BPUB through outreach, open communication and excellent customer service.

Current Policies

CPR-1100 Last revised & approved by the Board on June 9, 2014.

CPR-1101 Last revised & approved by the Board on March 12, 2019

- Established BPUB's provisions related to sponsoring events.
- Established separate funding sources based on type of sponsorship.
- Established separate responsibilities for the managing departments (General Manager's Office/ Comm. & PR departments).

Policy Changes

General changes include language to:

- Require “return benefit” for all sponsorship types.
- Set definitions for community, civic and industry/professional sponsorships.
- Establish an expenditure limit on civic/industry sponsorships.
- Require sponsors to sign an agreement limiting types of images or messages used in ads or promotions.
- Require BPUB ensures sponsorship funds are spent on stated purpose.
- Allow BPUB to request documents from sponsors on how funds were spent.

Who’s eligible for sponsorship?

Governmental entities with programs/events that further policy of BPUB

Professional association events

Qualified non-profit tax-exempt groups for programs/events that further policy of BPUB

Who’s not eligible?

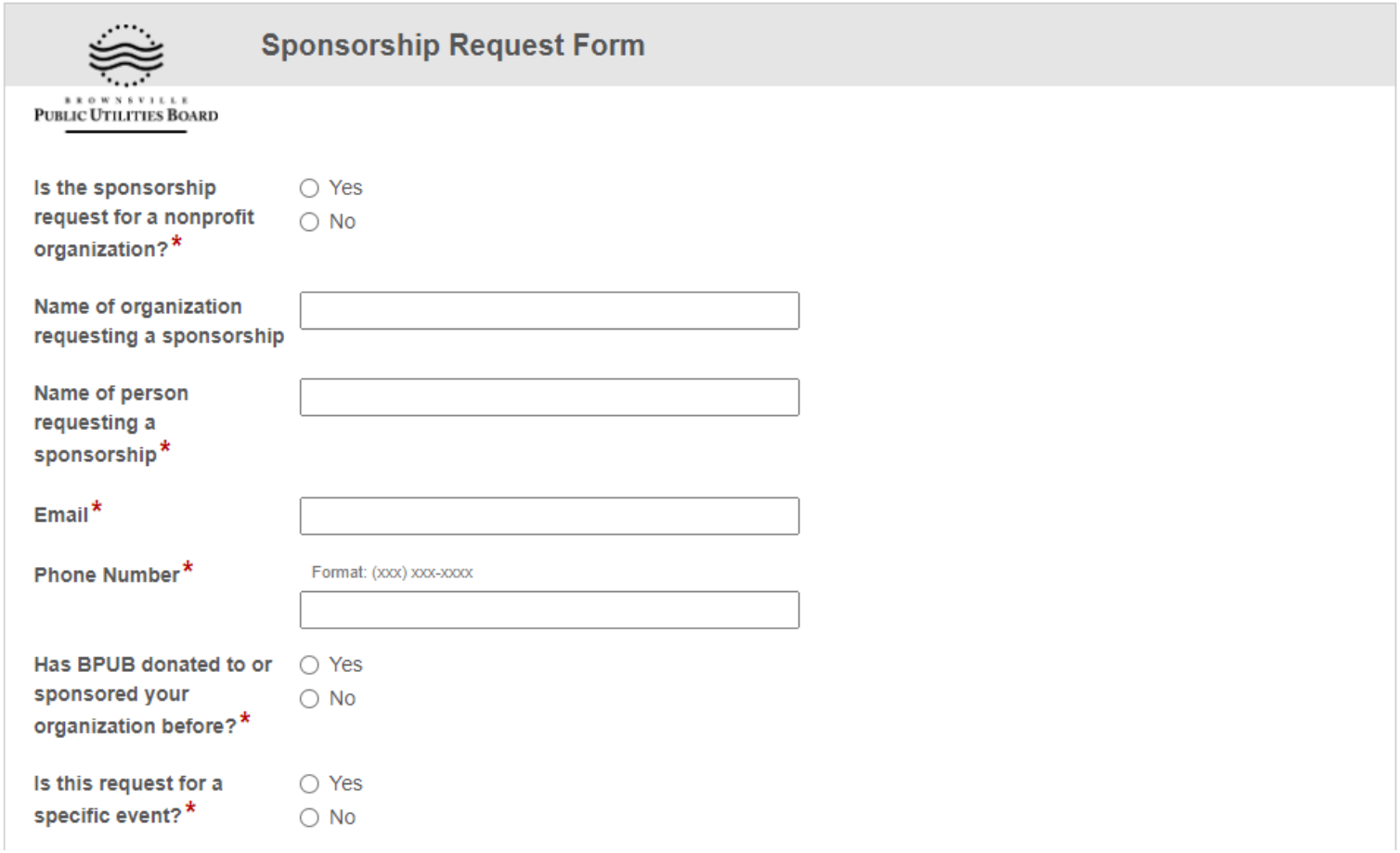
Unconditional grants or donations of public money

Any group not qualified as a nonprofit or tax-exempt organization

Political candidates, parties, causes, propositions, events

Religious, fraternal, social, or recreational activities**

How to apply



Sponsorship Request Form

BROWNSVILLE PUBLIC UTILITIES BOARD

Is the sponsorship request for a nonprofit organization?*
- ○ Yes
- ○ No

Name of organization requesting a sponsorship

Name of person requesting a sponsorship*

Email*

Phone Number*
Format: (xxx) xxx-xxxx

Has BPUB donated to or sponsored your organization before?*
- ○ Yes
- ○ No

Is this request for a specific event?*
- ○ Yes
- ○ No

BPUB website - brownsville-pub.com/about/events-calendar/request-a-sponsorship/

Past sponsorships

Children's Museum of Brownsville

CHARRO DAYS FIESTA BROWNSVILLE TEXAS

MOODY CLINIC

United Way

United Way of Southern Cameron County

GLADYS PORTER ZOO

MR. AMIGO ASSOCIATION Mr. Amigo SINCE 1964 BROWNSVILLE TEXAS USA

BROWNSVILLE MUSEUM of FINE ART

Brownsville Society for the Performing Arts BSPA www.brosociety.org

Questions?

Update on SRWA

PUBCAP MEETING

March 20, 2024

Outline

- SRWA Partners
- Water Levels in Reservoirs
- Aquifer Storage
- SRWA Plant Phases
  - Phase 1
  - Phase 2
  - Phase 3 (Future)
- Optimization Study
- Cost Summary
- Challenges and Benefits

SRWA
Southmost Regional Water Authority

Southmost Regional Water Authority Partners

Formed in 1981, revived in 2000

Brownsville Public Utilities Board
92.91%

Valley Municipal Utility District No.2
2.51%

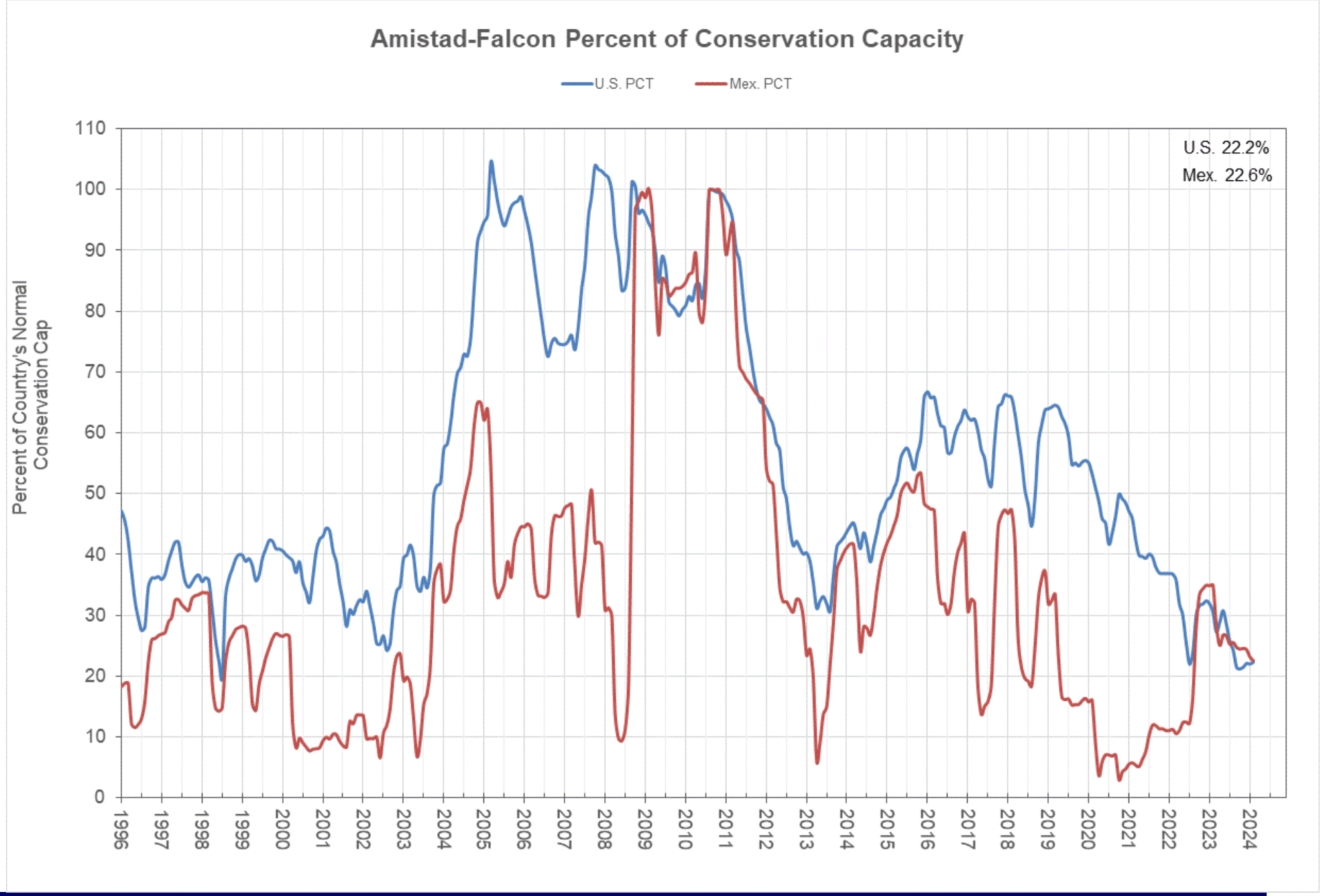
Brownsville Navigation District
2.10%

City of Los Fresnos
2.28%

- TEXAS -
LOS FRESNOS
COMMUNITY WITH OPPORTUNITY

Town of Indian Lake
0.20%

SRWA
Southmost Regional Water Authority



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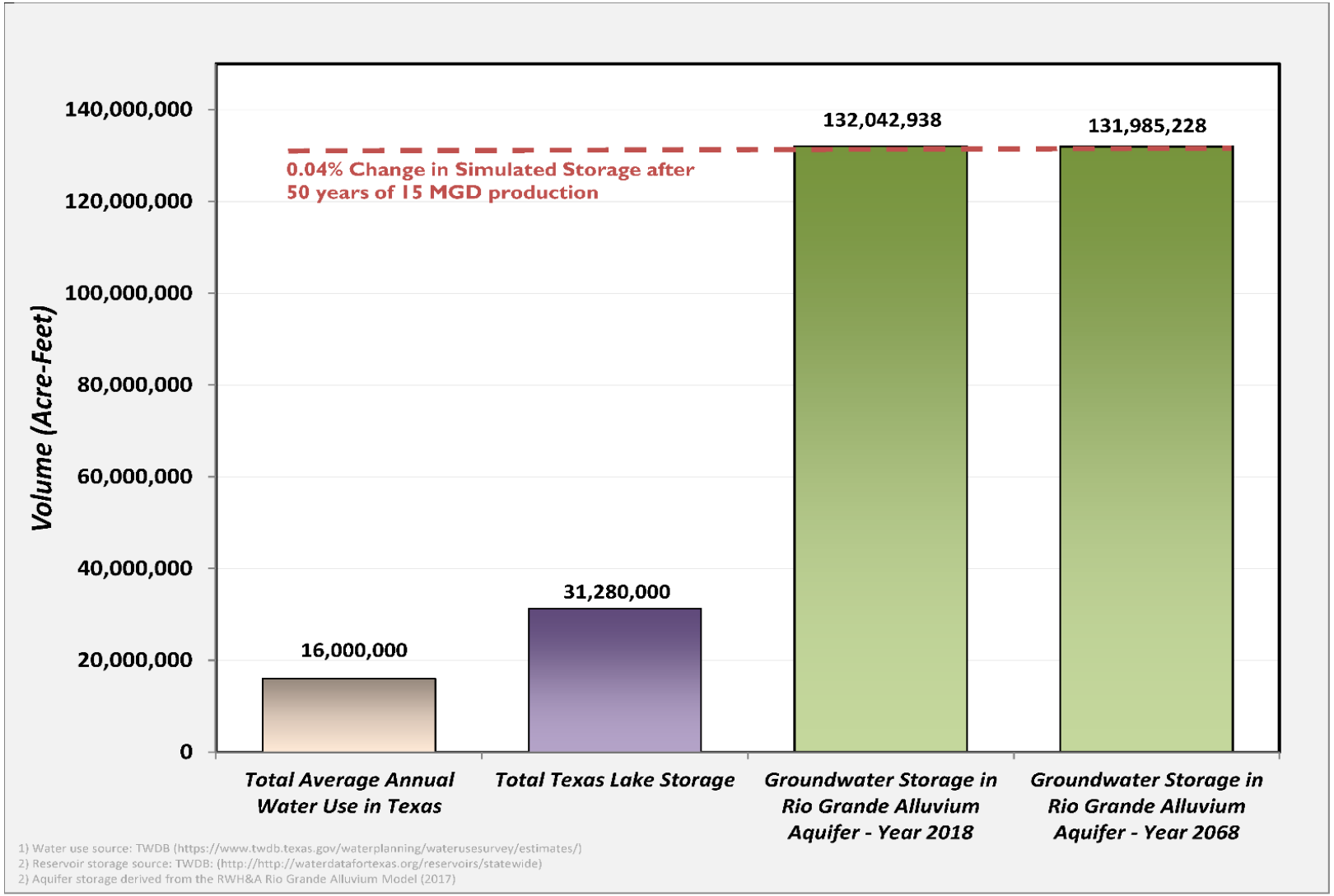
2017 Aquifer Storage



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SRWA Phases

Original Plant – 7.5 MGD

Microfiltration and Expansion – 10 MGD

SRWA Phase 1

Brackish Groundwater Desalination

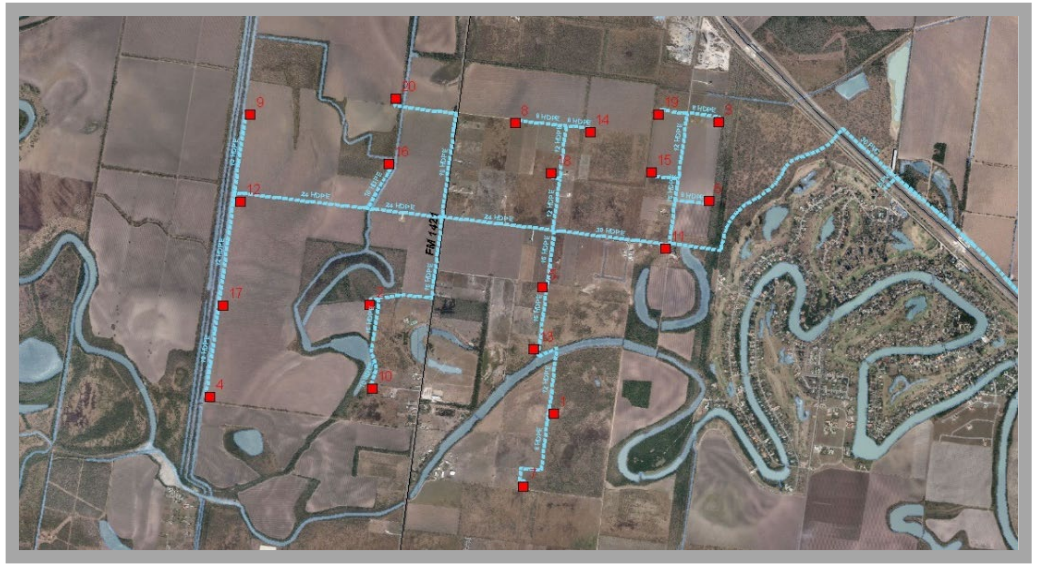
- Reverse osmosis (RO) membrane treatment facility
- Construction completed in 2004
- Original construction costs: $29 million
- 7.5 MGD Original plant capacity
- 8,400 acre-feet of water rights savings

  (equivalent to $17 million)

SRWA
Southmost Regional Water Authority

Brackish Groundwater Wells

- 20 Brackish groundwater wells
- Well depth: approximately 250-300 feet
- Well pump rate: 330-800 gpm
- Groundwater: 3,700 mg/L total dissolved solids (TDS)



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Reverse Osmosis Membrane Trains

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Southmost Regional Water Authority

SRWA Phase 2

Pretreatment and RO Expansion

- USEPA reduced arsenic level in drinking water standards in 2006
- Installed 5 Pall microfiltration trains for arsenic and iron removal
- Added 2 RO trains expanding plant capacity to 10 MGD
  - 11,200 Acre-feet of water rights saved (equivalent - $22.4 Million)
- Cost - $13 million
  - TWDB Loan
  - Completion – December 2015

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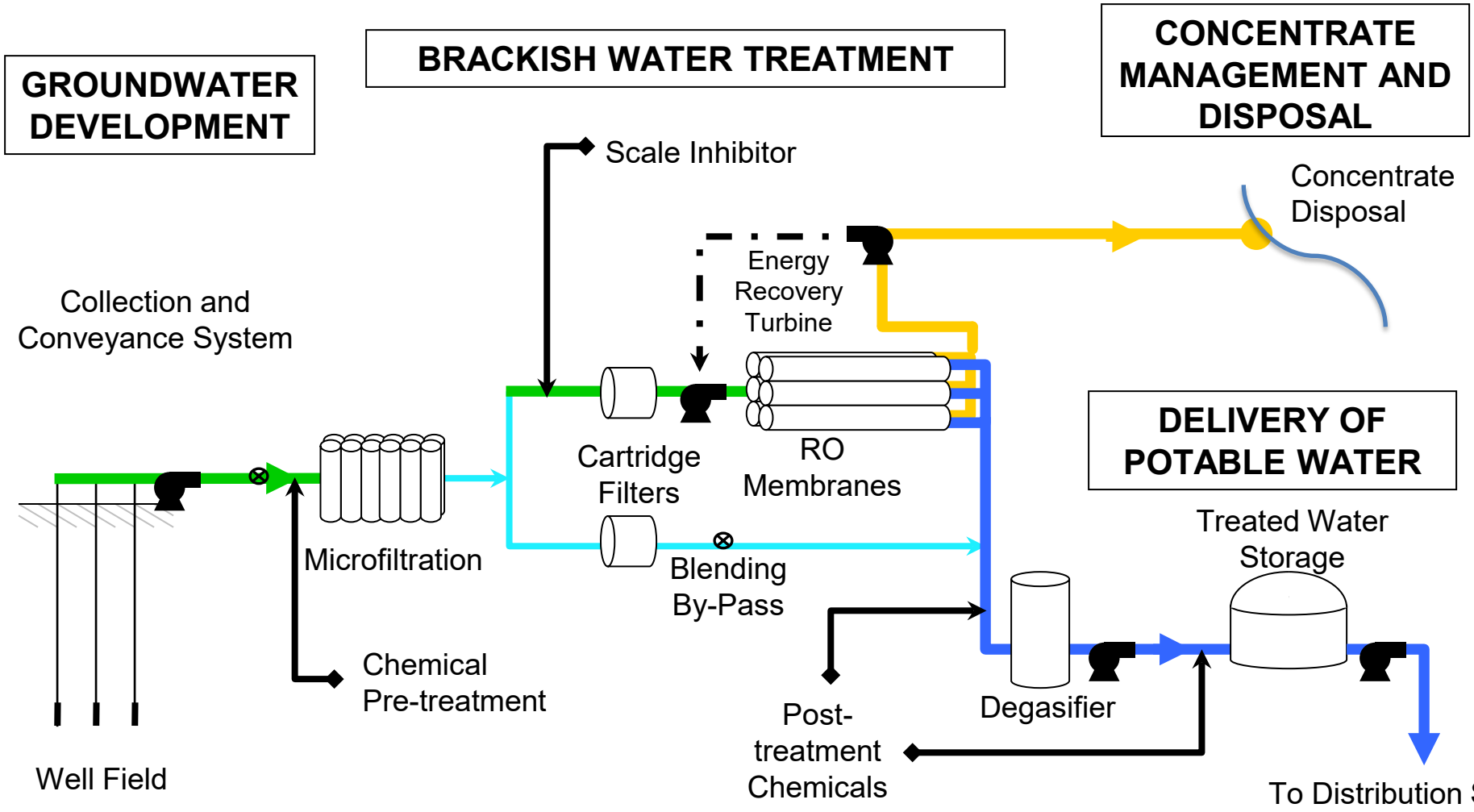
Treatment Process



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SRWA Phase 3 (Future)

- Optimization
- Future expansion

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Southmost Regional Water Authority

SRWA Phases

	Phase	Design Capacity	Max Production	Cost of Construction	Components
1	**2004 - Original Plant**	7.5 MGD	6.0 MGD	$29 Million	6 RO trains, Arsenic Rule eliminates blending, original plant has oversized components
2	**2015 – Pretreatment and Expansion**	10.0 MGD	7.3 MGD	$11.7 Million	Adds: 5 MF trains and 2 RO trains (Total of 8 RO trains). Defers a 6th MF train for $728,370.
3A	**Optimization Only**	10.0 MGD	TBD	$31.8 Million	Adds: 8 Replacement wells, 2 MF trains, instrumentation, flow dosing, etc. (no electrical system improvements)
3B	**Optimization and Expansion to 20 MGD**	20.0 MGD	TBD	$202 Million (Estimated)	Implement optimization recommendations, add: 20 wells, 10 MF trains, 16 RO trains, etc.

Optimization Study

- Final Optimization Study Report – 100% complete
- Study recommended 15 projects:
  - 14 Tier 1 and Tier 2 projects ($31.8 million):
    - $ 23.2 Million in 8 replacement wells
    - $ 4.2 Million in 2 additional MF trains
    - $ 4.4 Million in SCADA and infrastructure upgrades
  - Overall electrical system reliability projects: $ 14.4 million

Optimization Study

	Project Name	Est. Capital Cost $
1	RO permeate piping backflow modification	142,000
2	Replacement wells	23,200,000
3	Wellfield programmable logic controllers (PLC) uninterruptable power supplies (UPS) upgrades	825,000
4	MF clean-in-place	*O&M*
5	Two additional MF racks	4,190,000
6	MF filtrate transfer pump	575,000
7	Instrumentation upgrades	1,400,000
8	RO membrane replacement	*O&M*
9	Post treatment chemical flow dosing	271,000
10	PLC AI/AO spares	542,000
11	Pretreatment chemical flow dosing	349,000
12	Citric acid bulk storage	219,000
13	RO permeate piping for MF CIP	123,000
14	RO membrane cleaning	*O&M*
	Subtotal	*31,836,000*
15	Electrical system improvements	14,400,000
	Grand Total:	46,236,000

Chemical Optimization

- Chemical Optimization: Savings of $14,498 per month

Chemical	Initial Dosage - mg/L	Current Dosage - mg/L	Monthly Savings	Yearly Savings
Chlorine Dioxide	0.8	0.4	$4,222.00	$50,664.00
Sodium Bisulfite	1.9	1.7	$232.00	$2,784.00
Ferric Chloride	2	1.5	$550.00	$6,600.00
Scale Inhibitor	2	0.55	$9,494.00	$113,928.00
Total:			**$14,498**	**$173,976.00**

Cost Summary

FY 2023 O&M Costs: $4.3 million

- Distributed: 2,544,489,000 gals.
- Electrical: 33% of operational costs
- Chemicals: 32% of operational costs
- 11 Full-time employees

FY 2023 Unit costs:

- $1.80 per kgals (O&M)
- $2.69 per kgals
  (O&M, debt service, and capital)

SRWA
Southmost Regional Water Authority

Benefits and Challenges

Challenges

- Arsenic, iron, and manganese levels in groundwater
- Higher operating costs
- Discharge permit

Benefits

- Alternate water supply independent of Rio Grande
- Water rights savings
- Produces high quality water
- Potential mutual assistance between partners

SRWA
Southmost Regional Water Authority

Questions?

BROWNSVILLE
PUBLIC UTILITIES BOARD

Electric Service Policies

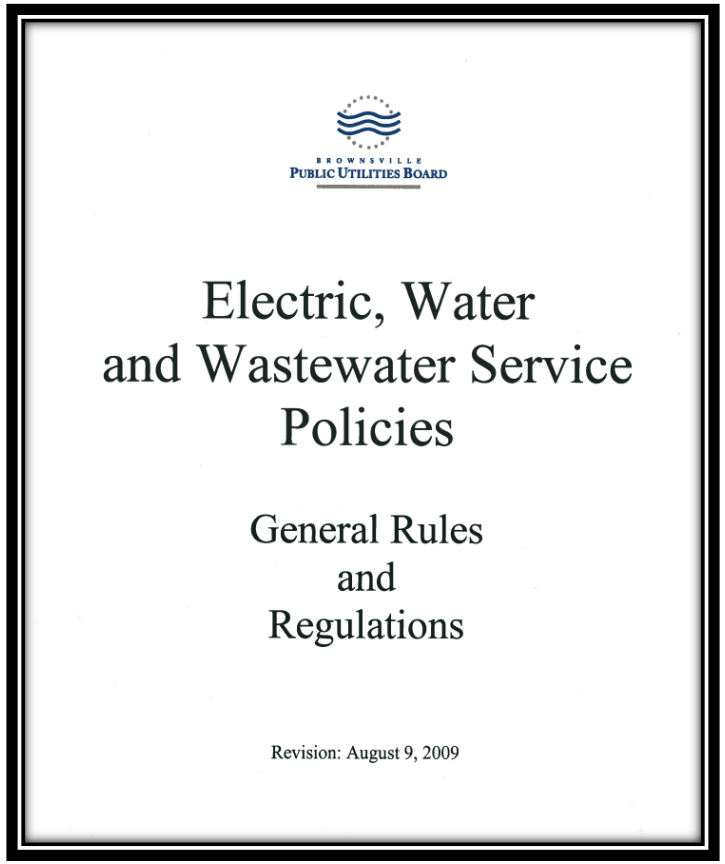
PUBCAP MEETING

Agenda

1. Old service policies, their provisions, and the need to update.
2. New Electric Service Policies
3. BPUB Board Direction
4. Summary of Adopted Changes and their Impact on Customers

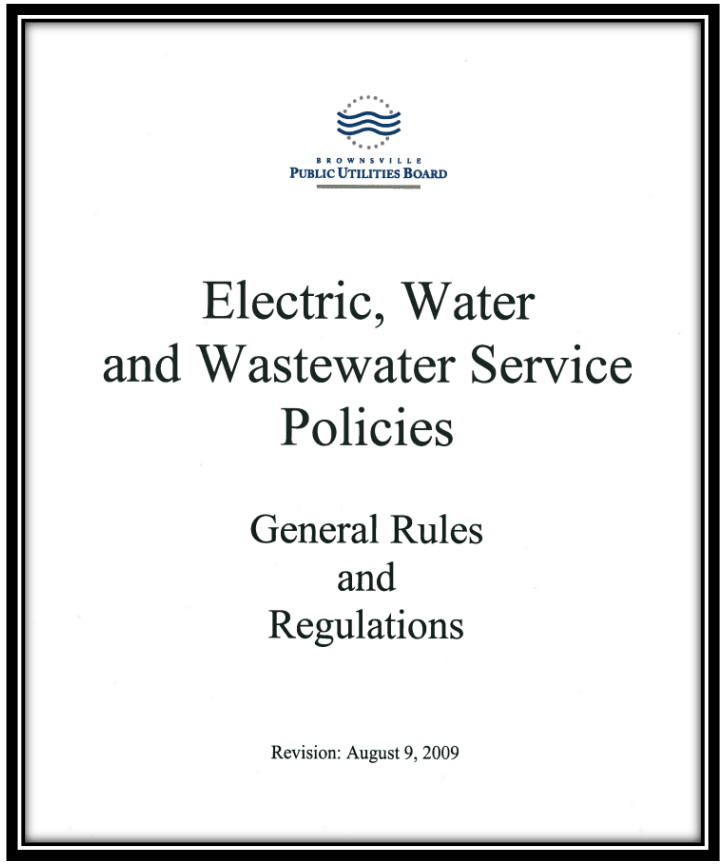
Old Service Policies

- "*For customers to receive a uniform, efficient and adequate utility service, all customers who have applied for or are receiving electric, water and wastewater service from the BPUB are subject to our Service Policies*."
- Covers all three utilities in a single volume
- Policies and appendices contain 216 pages
- Principle users are developers, contractors, engineering firms, Public Works, and City Planners
- Last revised and approved in August of 2009



Service Policy Provisions

- Terminology
- Standards of service
- Connection to systems requirements
- Classes of customers
- Metering
- Customer equipment
- Impact fees (water and wastewater only)



Need to Update Service Policies

- Existing policies haven’t been updated in 15 years
- Significant changes in costs and customer demand for services
- Existing policies aren’t aligned with industry best practices
- Existing policies do not reflect current BPUB practices
- Reliability-related projects lack clarity on needs and responsibility
- Inconsistencies between the three utility policies
- Existing policies are combined with utility-specific information is noncontinuous

Need for Updating Electric Service Policies

	~2009	~2023	Percent Change
Brownsville population (1)	175,023	189,382	8.2%
Electric customers (2)	44,268	53,138	20.0%
Total consumption (2)	1,310,160	1,408,620	7.5%
Producer Price Index by Industry: Electrical Equipment Manufacturing (3)	128.70	203.16	57.9%
Consumer Price Index for All Urban Consumers: All Items (4)	211.933	308.742	45.7%
Average system rate (5)	8.843¢ / kWh	13.056¢ / kWh	47.6%

(1) U.S Census Bureau, Population Estimates, retrieved from https://www.census.gov/quickfacts/fact/table/brownsvillecitytexas#, February 20, 2024.

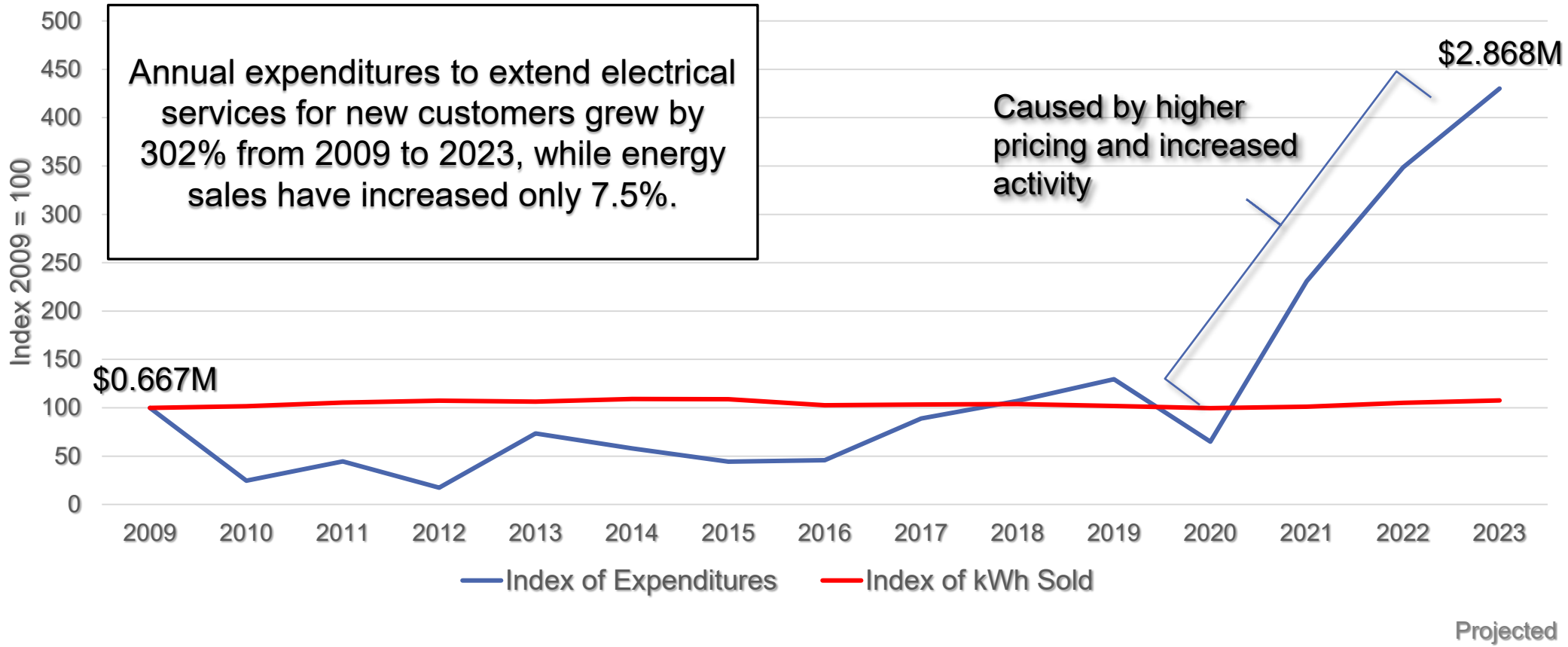
(2) Brownsville Public Utilities Board, Annual Comprehensive Financial Report, Statistical Section, 2009-2023.

(3) U.S. Bureau of Labor Statistics, Producer Price Index by Industry: Electrical Equipment Manufacturing [PCU3353133531], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PCU3353133531, February 20, 2024.

(4) U.S. Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers: All Items in U.S. City Average, Monthly, Seasonally Adjusted, retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/CPIAUCSL, March 7, 2024.

(5) U.S. Energy Information Administration. Form EIA-861, Annual Electric Power Industry Report, Released October 5, 2023, retrieved https://www.eia.gov/electricity/data/eia861/, February 20, 2024.

Annual Expenditures for Subdivisions and Line Extensions Are Increasing Disproportional to Energy Sales



New Electric Service Policies

- BPUB Staff went through several revisions to the policies to incorporate business needs
- In addition to staff and legal counsel review, BPUB staff presented BPUB Committee presentations and held a BPUB Board of Director Workshop
- Draft policies were presented to the Regulatory-Policy Committee twice (June 2023 and February 2024) and feedback has been incorporated
  - June 2023 - Regulatory-Policy Committee Presentation
  - February 2024 - Regulatory-Policy Committee Presentation
  - March 2024- BPUB Board of Director Meeting Workshop Presentation
  - March 2024- BPUB Board of Director Meeting Agenda Item

BPUB Board Direction

- On March 11, 2024, BPUB staff prepared a board item for open session with a recommendation to approve the Electric Service Policies as submitted by BPUB Staff.
- The BPUB Electric Service Policies became effective once the BPUB Board of Directors unanimously approved the recommended action.

  - BOD Board Approval Date: March 11, 2024 (Consent item 1)

Summary of Adopted Changes to Electric Service Policies

	Service Policy Changes and Reference Pages	Basis for Adopted Change to Electric Service Policies
1	Separate Electric Service Policy from Water and Wastewater	Difference services, territories, different requirements
2	New Reliability Improvements Section (Pg. 18)	Defines BPUB's ability to address study-based customer reliability issues.
3	Other customer responsibilities (Pgs. 29)	Defines the customer's responsible for electric meter service, primary and secondary trenching and backfilling.
4	Meter enclosures (Pg. 47)	Defines the customer's responsibility to provide meter enclosures.
5	Line Extension Policy (Pg. 24)	Provides a narrower definition of the customer's or developer's responsibility to pay for line extensions for new developments.
6	Customers will be responsible for paying all costs associated with overhead to underground service wire conversions. (Pg. 29)	Provides a narrower definition of the customer's responsibility to pay cost differential for overhead to underground conversion costs for non-reliability.
7	Contributions in aid of construction (Pgs. 2, 7, 24, 29, 30)	Defines the requirement for CIAC associated with line extensions, new residential subdivisions, and overhead to underground conversions
8	Large Load/Generation interconnections (Pg. 55-57)	Provides a policy framework for large load or generation interconnections.
9	Update Distribution standards (Appendices B-F)	Updates BPUB standards (2020) to match current BPUB practices.
10	Update Streetlights Light-Emitting Diode (LED) Availability and Rates (pgs. 36-37 | Appendix J)	Updates to reflect the 2019 Black & Veatch ST LT Cost of Service Study and Ordinance 2020-1569-A Streetlight and Security Light Rates

Questions?

Line Extension Policy

When a customer or developer builds new structures that need electricity, BPUB must run service lines, raise poles, bury conduits, and install transformers to bring the electricity from the existing BPUB infrastructure to the new buildings or homes. That new infrastructure is called a “line extension.”

The issue is who should pay for that line extension:

1. The developer/customer who requests and benefits from the line extension?
2. All customers by socializing the costs?
3. Or a shared allocation?

Impact Fees

A charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development.” Tex. Loc. Gov’t Code§ 395.001(4).

Put more simply, an impact fee is a tool that cities can use to recoup, from property developers, some of the costs that new development places on city infrastructure. Impact fees require new development to pay for the costs of new development.

Line Extension Policy

Existing Policy

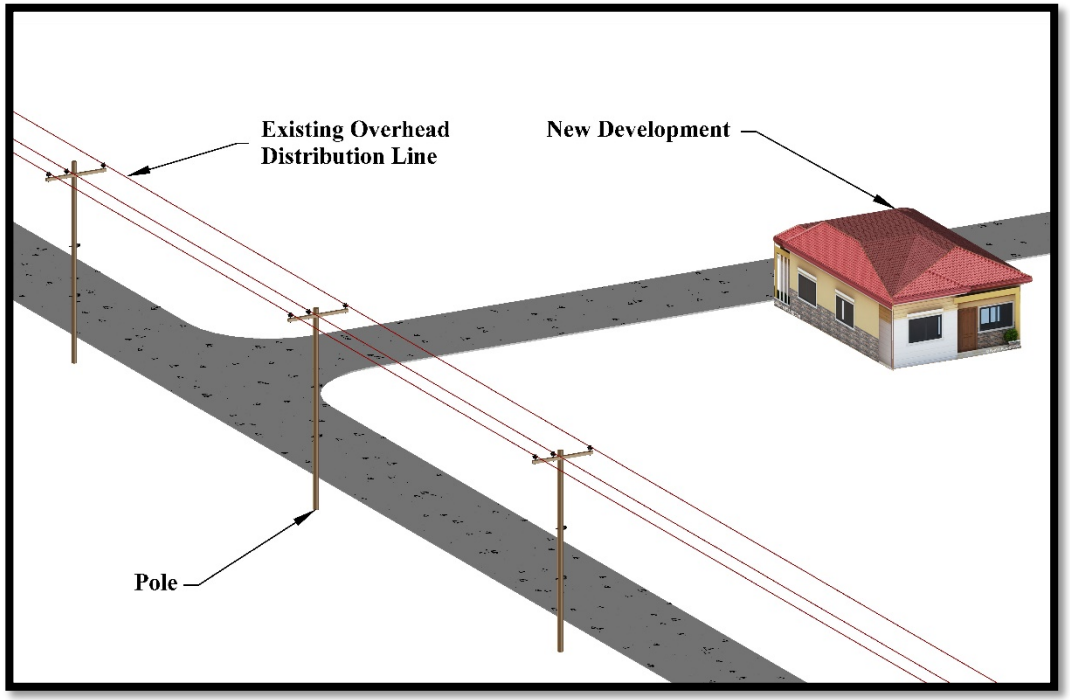
2.1.1. Should an extension of BPUB's facilities be required, BPUB will pay the cost of such an extension provided that in the utility's opinion, the immediate or potential revenues justify the full cost of the extension. BPUB may require monthly or annual revenue guarantees, or contributions in aid of construction in those cases where estimated revenues do not justify the full cost of the extension. Providing that the above conditions are met, BPUB will provide, at no cost, overhead electric distribution facilities to the customer's service entrance weatherhead.

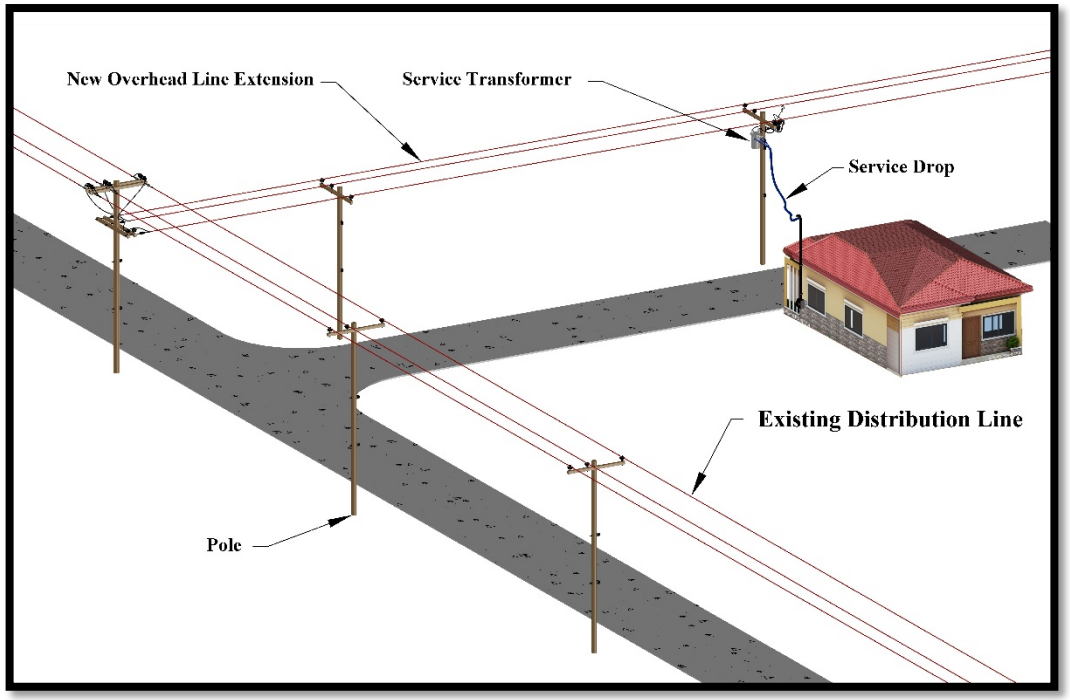
3.1.1 a. Subject to the provisions of Section 2.1.1, BPUB will provide at no cost, overhead electric distribution facilities to the customer's service entrance weatherhead.

Proposed Policy

3.1 **BPUB Line Extension Policy**. A customer requesting new electric service will be charged all estimated costs for labor, materials and equipment required to modify existing infrastructure and to extend service from BPUB existing infrastructure to the customer point of service to serve the requested load, sometimes referred to as “Contributions in Aid of Construction” or “CIAC.” This policy does not apply to all new request for electrical service submitted to BPUB Electrical Engineering before the adoption and approval of this document. The developer shall have the option to install its own extensions at BPUB’s specifications, where applicable.

Line Extension vs Service Drop





Undergrounding Policy

Unified Development Code 3.4.12. now requires all new subdivision developments to have underground utilities. However, much of the existing service territory is still served with overhead distribution. If reliability cannot be maintained[(A)] with existing overhead service, undergrounding may be required, a system improvement with socialized costs.

The issue is who should pay for undergrounding for non-reliability reasons or esthetic purposes:

1. The customers who request the undergrounding?
2. All customers by socializing the costs?
3. A shared allocation?

[(A)] Addressed in 2.1.8 Reliability Improvements in Proposed Policies

Undergrounding Electrical Infrastructure Matrix

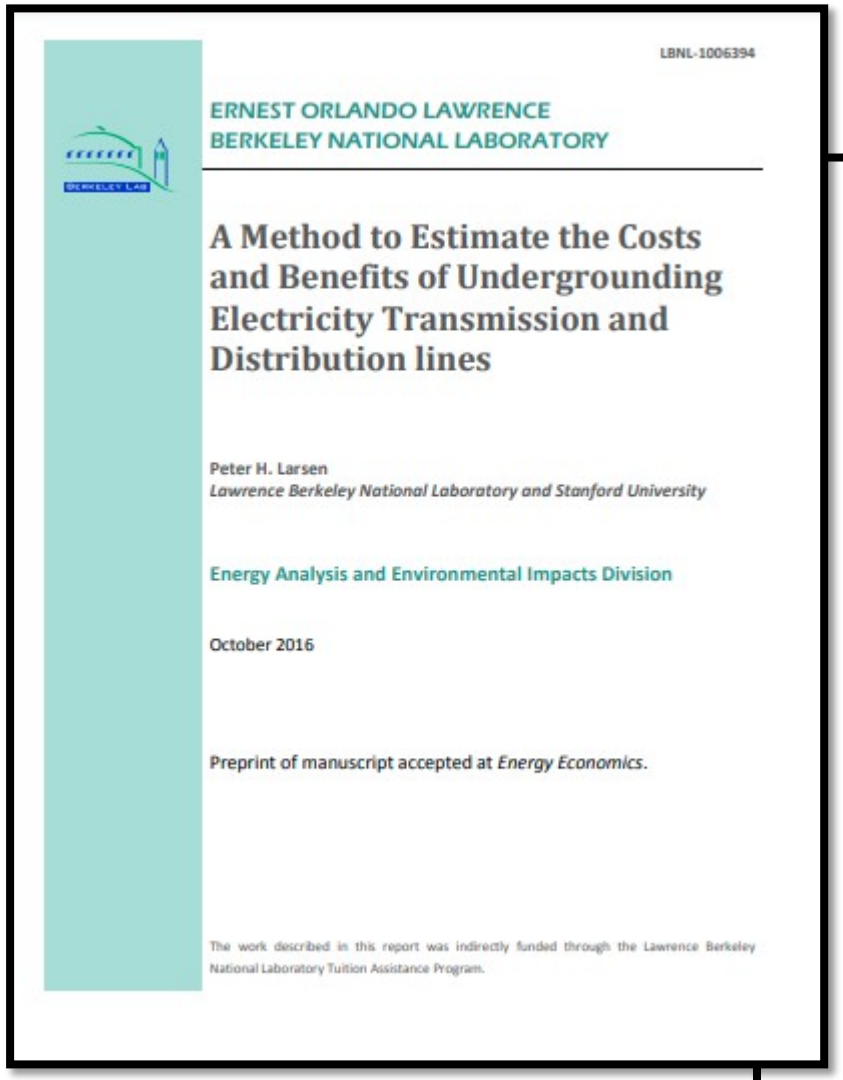
Situation	Existing Policy	Proposed Policy
New subdivision - Unified Development Code 3.4.12	• Utility pays for underground electric distribution facilities for new residential developments of four lots or more. (3.1.3.a.ii) • No line extensions policy, Utility pays • Developer pays for streetlighting, street crossings, and trenching for service conductors. • Customer pays for service connection	• Developer/customer pays CIAC per Line Extension Policy. • Developer/customer pays CIAC for distribution facilities per General Policies for Underground. (3.2.a.iii) • Developer pays for streetlights as part of the CIAC. • Customer pays for service connection
New development – overhead service present but developer wants underground	• Residential developments of less than four lots pay a **difference** in cost for an overhead and underground system. (3.1.3.a.ii) • Residential developers, multiple-family, housing, commercial, and industrial may pay the cost **difference** for underground service. (3.2, 3.3, 3.4)	• Subdivisions are included in the underground service policy (3.2.a.iii). • Residential developers, multiple-family, housing, commercial, and industrial may **pay the cost** for underground service. (3.3 3.4, 3.5)
Existing service – customer requests overhead to underground	• Customers requesting underground service for existing buildings with overhead services, may have underground installed by BPUB by paying the total cost of the conversion. (3.1.3.a.iii)	• Customers requesting underground service for buildings with existing overhead service may have underground installed by BPUB by paying the CIAC of the conversion. (3.2.a.iii)
Existing service – reliability driven	• No Policy. • Reviewed by the BPUB Board of Directors in past instances.	• Reliability Improvements Policy (2.1.8) BPUB may initiate projects to improve system reliability.

In a study of Texas IOU utilities, the cost of burying lines would exceed benefits by $21 billion—30 cents for every dollar spent. (2012 Dollars)

Conversion from overhead to underground delivers limited benefits system-wide.

In rural areas, the cost of undergrounding is estimated at 2 to 4 times the cost of overhead lines. In dense urban areas, as much as 10 times.

However, BPUB should consider it a viable option when addressing reliability if other means are not successful or economic.



LBNL-1006394

ERNEST ORLANDO LAWRENCE
BERKELEY NATIONAL LABORATORY

A Method to Estimate the Costs and Benefits of Undergrounding Electricity Transmission and Distribution lines

Peter H. Larsen
Lawrence Berkeley National Laboratory and Stanford University

Energy Analysis and Environmental Impacts Division

October 2016

Preprint of manuscript accepted at *Energy Economics*.

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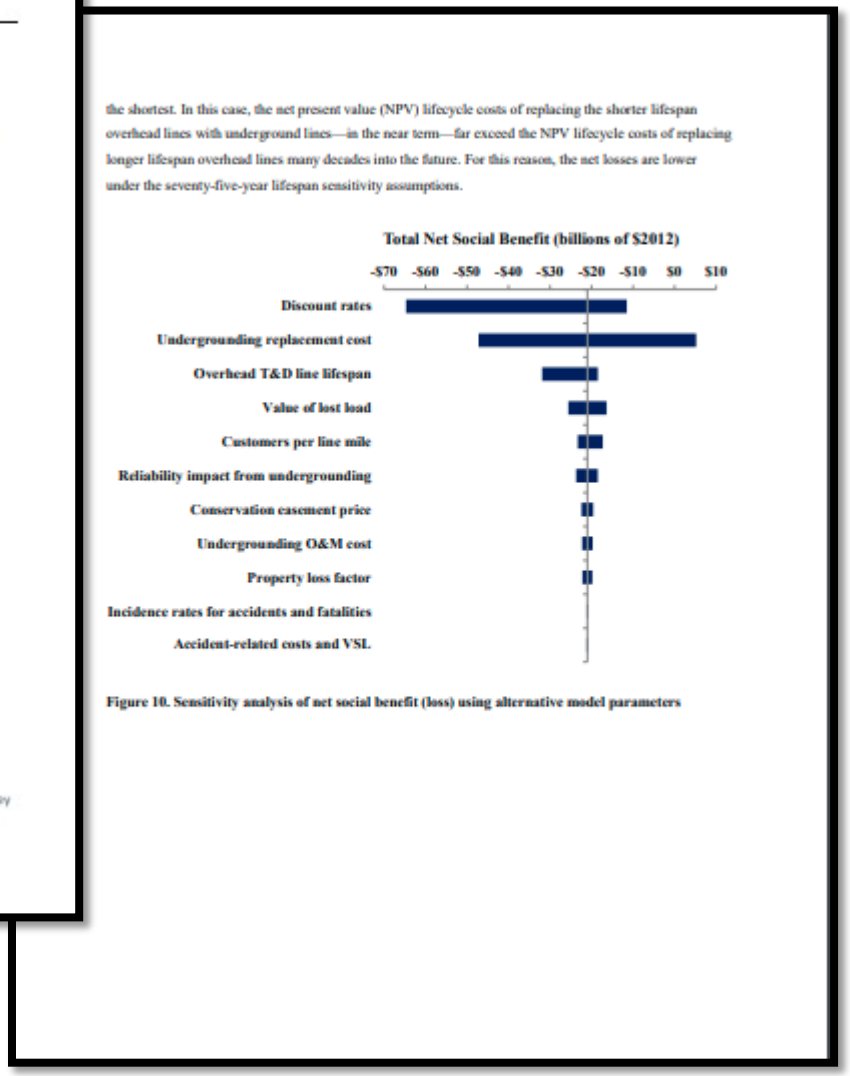

the shortest. In this case, the net present value (NPV) lifecycle costs of replacing the shorter lifespan overhead lines with underground lines—in the near term—far exceed the NPV lifecycle costs of replacing longer lifespan overhead lines many decades into the future. For this reason, the net losses are lower under the seventy-five-year lifespan sensitivity assumptions.

Figure 10. Sensitivity analysis of net social benefit (loss) using alternative model parameters

BROWNSVILLE
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Public Comments

BROWNSVILLE
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Next Meeting Date

APRIL 17, 2024

BROWNSVILLE
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Adjournment