

# CHANGING COMMUNITY BEHAVIOR: STRATEGIES FOR ENGAGING COMMUNITIES IN REDUCING PREVENTABLE SEWER OVERFLOWS



**HOUSTON**  
**PUBLIC WORKS**

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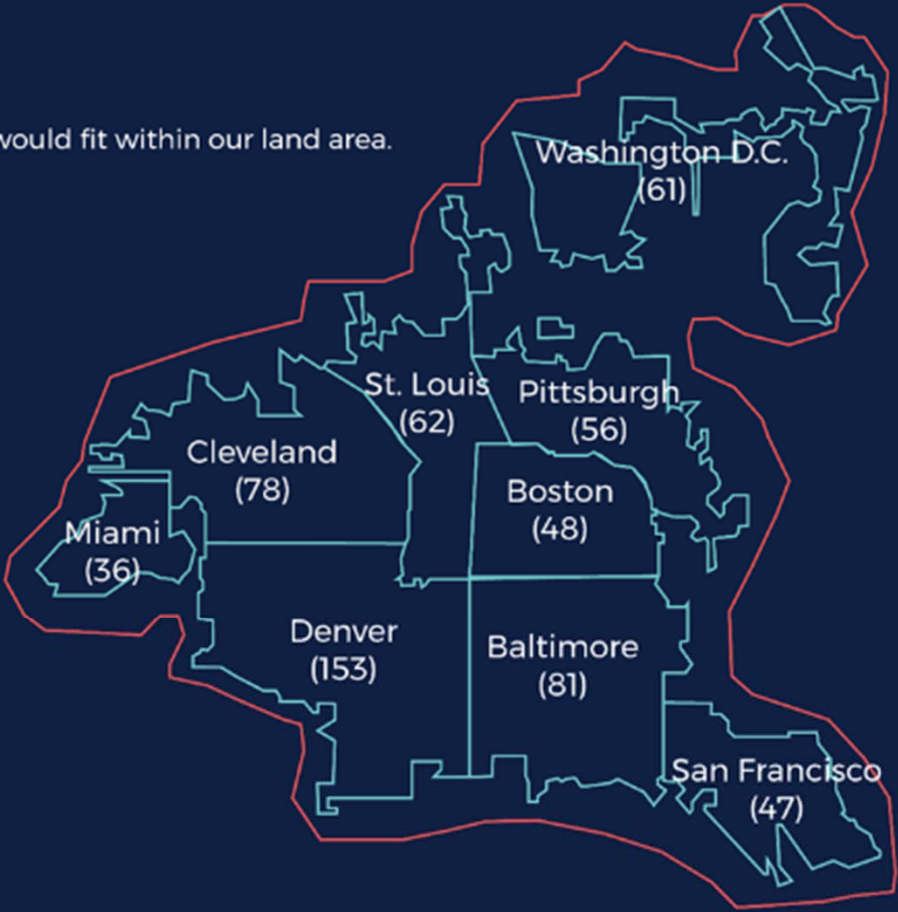
**RYAN PRILLMAN – COMMUNITY LIAISON**  
**HOUSTON WATER**



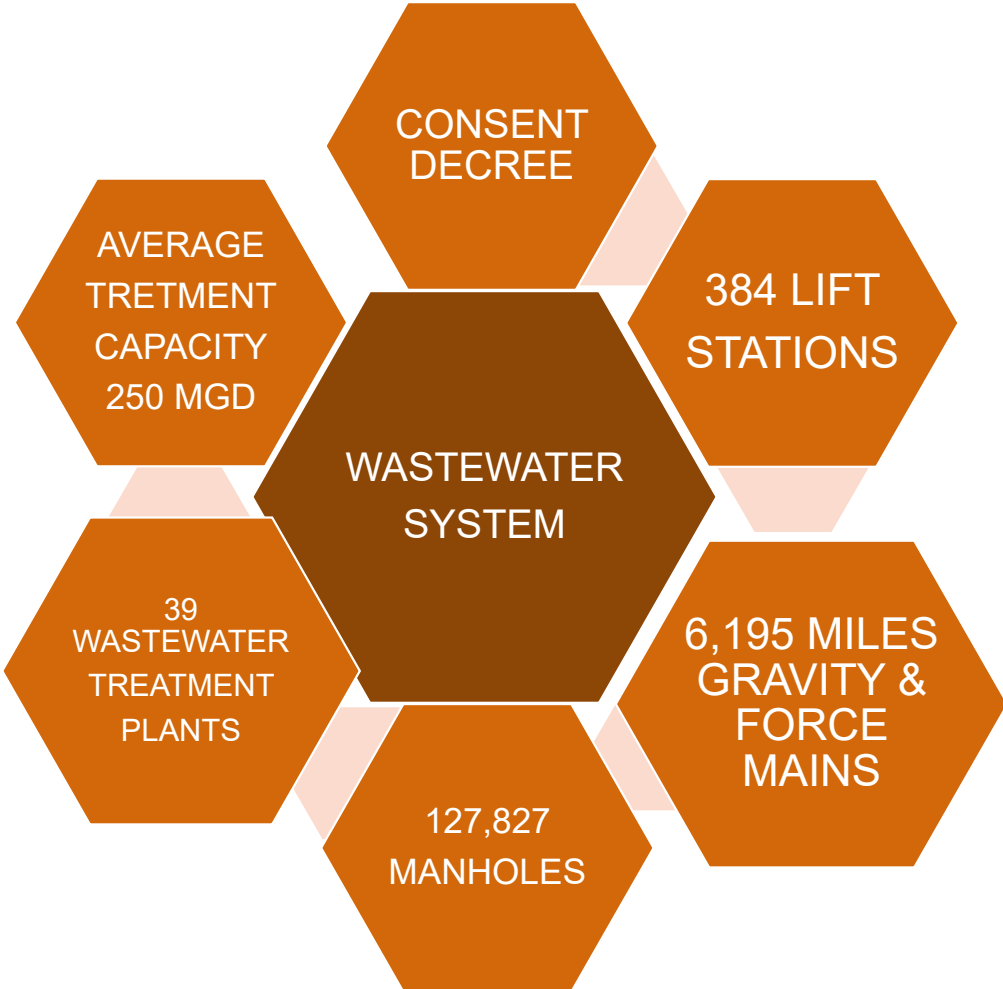
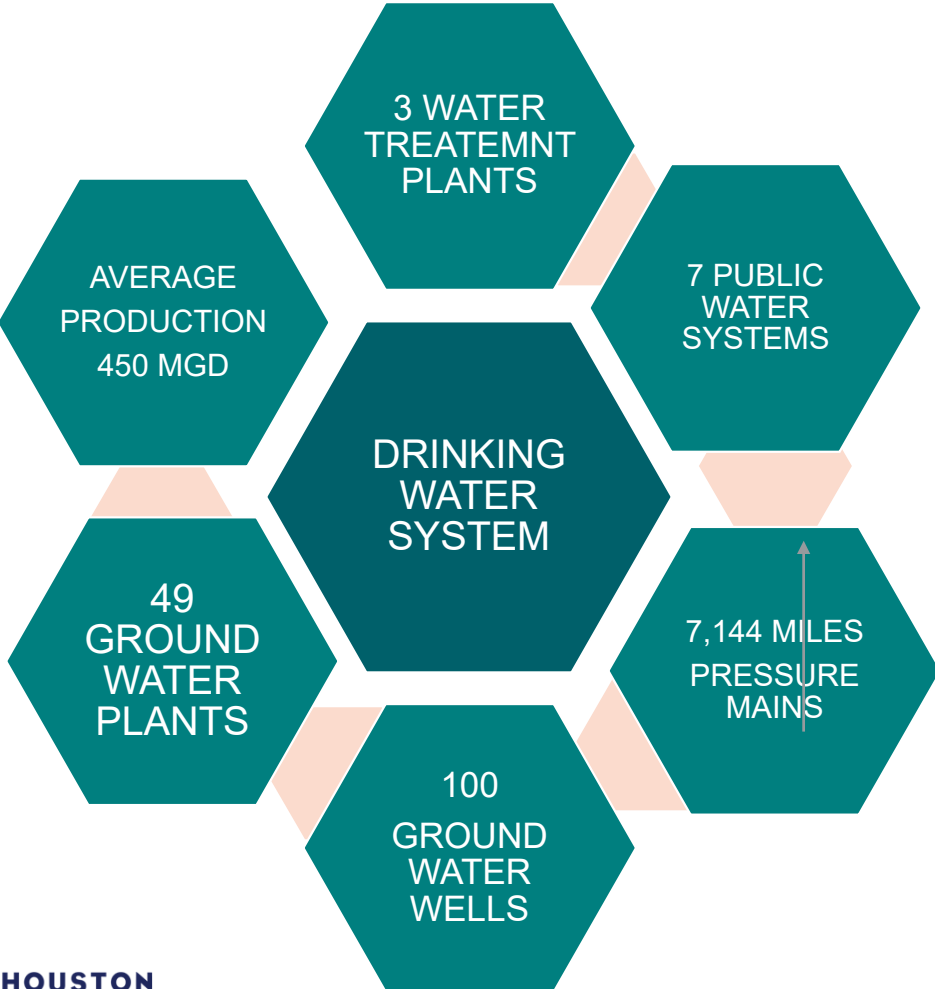
# HOUSTON WATER SYSTEM AREA

The land area of all these cities COMBINED would fit within our land area.

Houston Area:  
650 Sq. Miles



# HOUSTON WATER



# HOUSTON'S WASTEWATER SYSTEM

**590 Sq. Miles**

**129,603 Manholes**

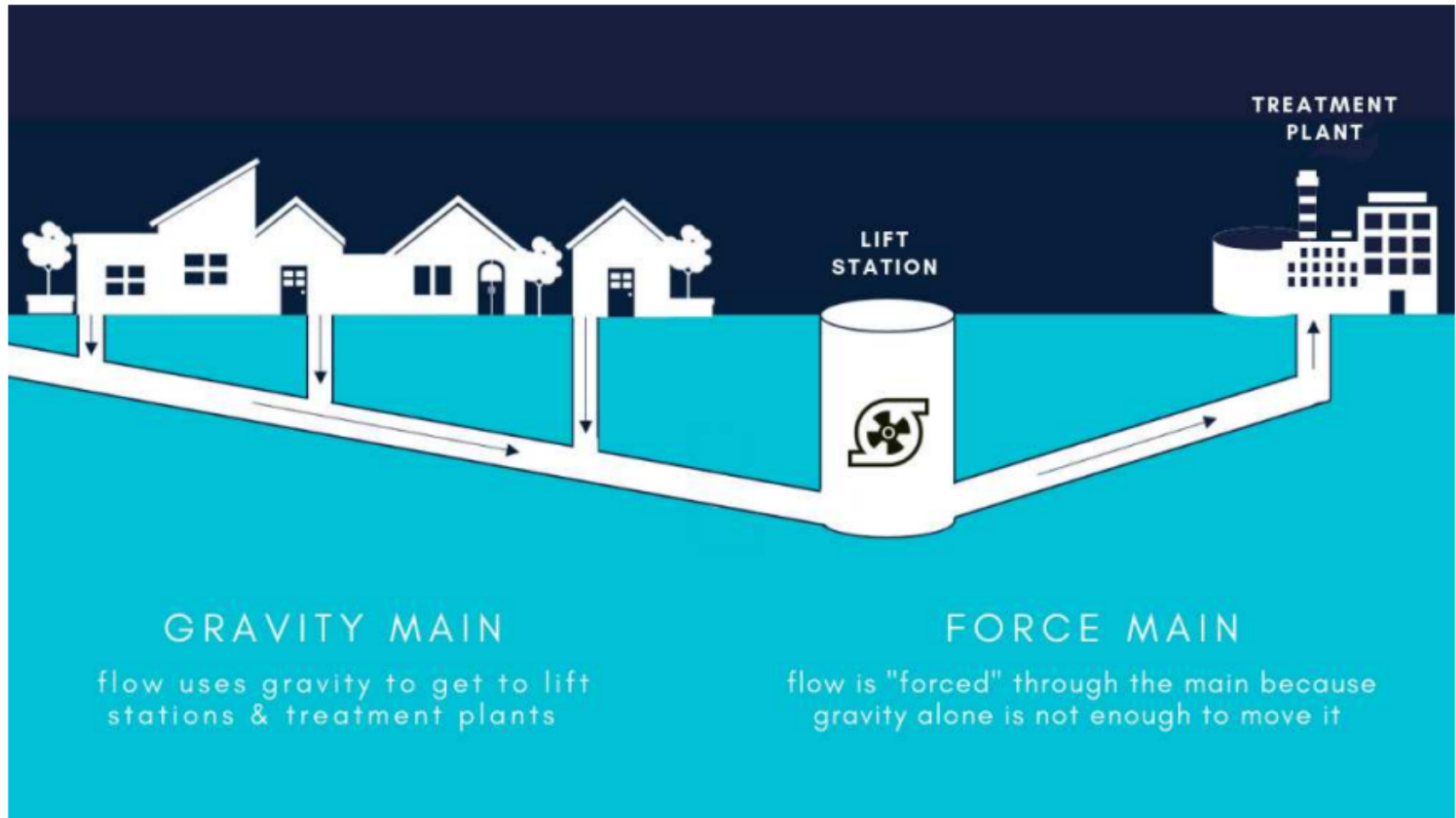
**384 Lift Stations**  
(excluding WWTP Influent LS)

**31 million LF Gravity Sewer**

**1.6 million LF Force Main**



# WASTE WATER SYSTEM



# SEWER OVERFLOWS

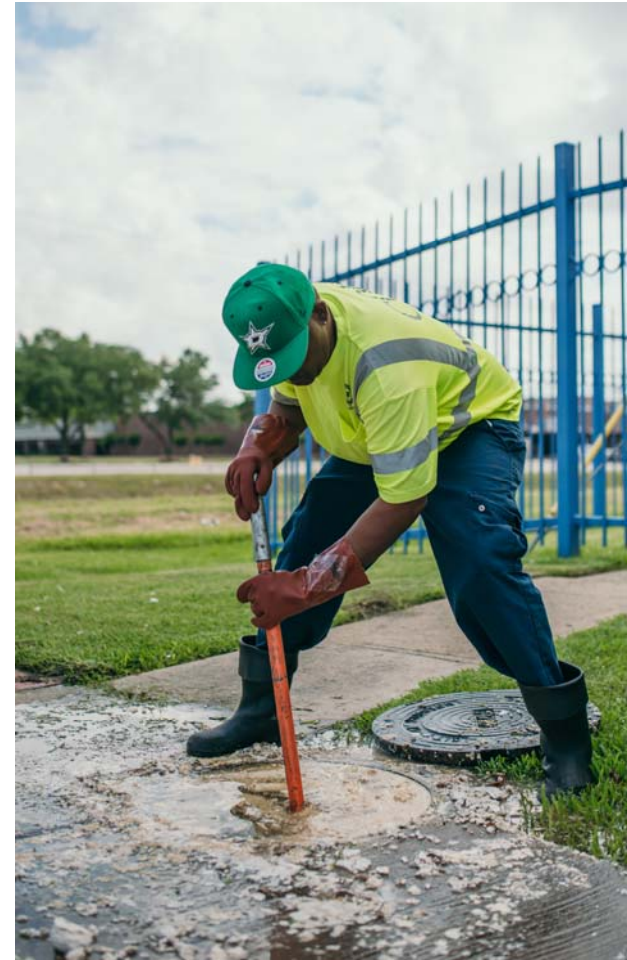
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- A sewer overflow is a backup of raw wastewater that is harmful to the environment, causing property damage and threatening public health. The untreated sewage is discharged from the sewer prior to reaching sewage treatment facilities.



# PREVENTING & REDUCING SEWER OVERFLOWS

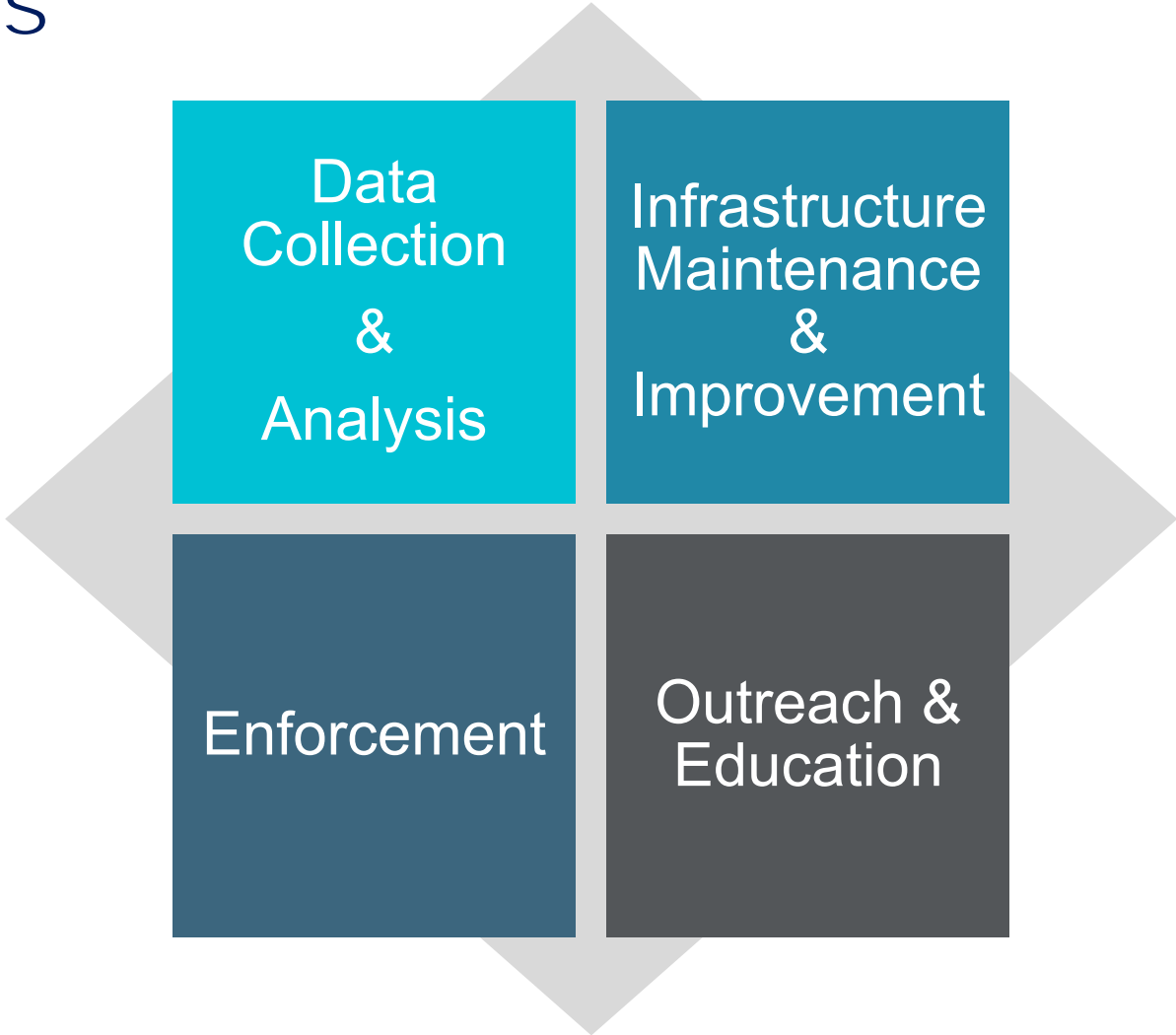
## Public Works

- infrastructure improvements
- sewer overflow tracking & response
- preventative cleaning
- outreach & education
- regulation & compliance



# PREVENTING SSOS

**Coordination  
of all  
strategies**





Introducing:  
Protect Our Pipes  
Campaign



The graphic features a large dark blue circle on a light blue background with bubbles. Inside the circle is the Houston Public Works logo and the text 'PROTECT OUR PIPES' in large white letters, followed by 'Keep Grease & Wipes Out of the Drain' in yellow. Three circular icons are placed around the circle: an elderly woman with glasses and a magnifying glass at the top right, a chef with a beard and spatula at the bottom left, and a young child holding a roll of paper at the bottom center.

  
**PROTECT  
OUR PIPES**  
Keep Grease & Wipes  
Out of the Drain

# PURPOSE

create a relevant, inclusive education campaign that is easy understand  
reduce sanitary sewer overflows



An infographic titled "PROTECT OUR PIPES" from Houston Public Works. The top section is a dark blue rounded rectangle with the Houston Public Works logo and the title. Below the title, it says "Help keep fats, oils, grease, and other items from going down the drain." The infographic is split into two vertical panels: a yellow panel on the left for "GREASE CLOGS PIPES" and a blue panel on the right for "WIPES CLOG PIPES". The yellow panel says "Put Grease in its Place" and lists three actions: "POUR in a safe container" (with a glass icon), "COOL in the fridge" (with a snowflake icon), and "TOSS in the trash" (with a trash can icon). The blue panel says "Only Flush the 3 P's" and lists three actions: "PEE is easily processed" (with a yellow drop icon), "POO breaks down" (with a brown poop icon), and "TOILET PAPER dissolves in water" (with a toilet paper roll icon). In the center, there are two cartoon characters: an elderly woman with glasses and a young boy. At the bottom, it says "LEARN MORE AT ProtectOurPipes.org".

# PURPOSE & MESSAGING

focus messaging on:

- a) establishing the problem
- b) providing actionable solutions

**HOUSTON PUBLIC WORKS**

## PROTECT OUR PIPES

Help keep fats, oils, grease, and other items from going down the drain.

### GREASE CLOGS PIPES

Put Grease in its Place

- POUR** in a safe container
- COOL** in the fridge
- TOSS** in the trash

### WIPES CLOG PIPES

Only Flush the 3 P's

- PEE** is easily processed
- POO** breaks down
- TOILET PAPER** dissolves in water

LEARN MORE AT [ProtectOurPipes.org](https://ProtectOurPipes.org)

# GREASE & WIPES CLOG PIPES

**70%**  
of Sewer Overflows  
are Caused by  
Grease & Wipes

The infographic features a large green circle in the center with the text '70% of Sewer Overflows are Caused by Grease & Wipes'. Surrounding the circle are illustrations of a grease container labeled 'GREASE', a piece of bacon, a turkey, a paper plate, a paper napkin, and a paper towel dispenser. The background is a light blue wavy pattern. A small Houston Public Works logo is in the top right corner.

**COOKING  
SHOULDN'T  
CLOG**

This infographic has a yellow background with a large red circle in the center containing the text 'COOKING SHOULDN'T CLOG'. Surrounding the circle are illustrations of a turkey, a paper plate, a paper napkin, a paper towel dispenser, a grease container labeled 'GREASE', and a blue trash can. A small Houston Public Works logo is in the top left corner.

**THINK  
BEFORE  
YOU  
FLUSH**

This infographic has a light blue wavy background. In the center is a white toilet with a blue seat. The text 'THINK BEFORE YOU FLUSH' is written in bold black letters to the left of the toilet. A small Houston Public Works logo is in the top left corner.

# PUT GREASE IN ITS PLACE



## POUR

Scrape or pour grease into an empty container, such as a heat resistant bag, glass jar, or tin can



## COOL

Cover the grease and let it cool. Store in the fridge until the container is full



## TOSS

Once full, toss the container in the trash

# ONLY FLUSH THE "3 P'S"



## PEE

Pee is treated at our wastewater treatment plants



## POO

Poo breaks down and doesn't clog our wastewater pipes



## TOILET PAPER

Toilet paper easily dissolves in water

**HOUSTON PUBLIC WORKS**

**PROTECT OUR PIPES**  
Help keep fats, oils, grease, and other items from going down the drain.

**WHAT IS A SEWER OVERFLOW?**  
A sewer overflow is a backup of untreated wastewater. It can cause costly damage to your property and harm our health and the environment. **MOST** sewer overflows **ARE PREVENTABLE.**

**70%**  
The approximate number of sewer overflows caused by large items like grease and wood in drains.

**365**  
The number of days a year Houston had a water response to reports of sewer overflows.

**\$2,500**  
The cost to homeowners in getting permits and fees from a sewer repair due to a pipe failure could be even higher.

**UP TO 2X**  
**THE AMOUNT OF SEWER OVERFLOWS**  
Occur during the holiday season due to a significant increase of grease in drains.

**HOUSTON** residents poured **TABLESPOON OF GREASE** down the drain. It would fill up an **OLYMPIC-SIZED POOL** every year.

**SEWER OVERFLOWS CAN MAKE YOU SICK**  
Contact with raw wastewater can cause many different types of illness, including symptoms similar to food poisoning.

# PRE LAUNCH PLAN

outreach to City staff

education – social & City platforms

engagement - community partnerships

advertising - media & publications

Brand recognition and behavior change

# CITY OF HOUSTON STAFF

Weekly eNews

HPW - EBlast  
To: PWE - All Employees Distribution Group  
11/16/2020

## PROTECT OUR PIPES

**WE NEED YOUR HELP TO REDUCE SANITARY SEWER OVERFLOWS!**  
The main cause of sanitary sewer overflows in Houston is clogged pipes from fats, oils and grease poured down sinks and wipes flushed down toilets. These items block our wastewater lines and cause overflows.

This week, Houston Water is launching its new "Protect Our Pipes" campaign to remind the community to dispose of fats, oils, and grease in the trash and to only flush the "3 P's". You can dispose of leftover cooking waste with these easy steps: **pour it** in a jar, can, or bag, **cool it**, and once full, **toss it** in the trash.

Houston Public Works also reminds the community that only the 3 P's - pee, poo, and (toilet) paper belong in the toilet (even at work). Everything else should go in the trash.

Learn more at [protectourpipes.org](http://protectourpipes.org) or [https://youtu.be/nECVZR\\_no6w](https://youtu.be/nECVZR_no6w)



**PROTECT OUR PIPES**

**PUT GREASE IN ITS PLACE**

**ONLY FLUSH THE 3 P'S**

**POUR**  
in a safe container

**COOL**  
in the fridge

**TOSS**  
in the trash

**PEE**  
is easily processed

**POO**  
breaks down

**TOILET PAPER**  
dissolves in water

HOUSTON PUBLIC WORKS  
LEARN MORE AT [ProtectOurPipes.org](http://ProtectOurPipes.org)





# PUBLICATIONS & MEDIA

SPECIAL ADVERTISING FEATURE

## HOW YOU CAN PROTECT OUR PIPES!

Help prevent harmful sewer overflows in Houston's communities.

Have you ever been about to rinse or flush something down the drain but wondered if you shouldn't? You're not alone! Rinsing and flushing products such as cooking grease and wipes clog our pipes and causes sewer overflows in Houston every day. These clogs are expensive to repair, they pollute our environment and they may even make us sick. Luckily, while these overflows are common, they are easily preventable. Here's what you need to know about sewer overflows and how you can help prevent them.

**GREASE CLOGS PIPES**  
Put Grease in its Place

**WIPES CLOG PIPES**  
Only Flush the 3 P's

LEARN MORE AT [ProtectOurPipes.org](http://ProtectOurPipes.org)

**How to Prevent Sewer Overflows in Your Community**  
The best way to prevent sewer overflows is to properly dispose of fats, oils and grease. Put grease in its place—the trash—and never down the drain. Just Pour, Cool and Toss (or Reuse!).

**Pour:** Scrape or pour grease into an empty container, such as a metal can, glass jar or heat-resistant bag.

**Cool:** Let the grease cool and cover it. Store in the fridge until the container is full.

**Toss or Reuse:** Once the container is full, toss it directly in the trash can, or reuse for cooking.

**Remember to only flush the 3 P's:**

- Pee:** Pee and poo are treated at our wastewater treatment plants.
- Poo:** Poo breaks down and doesn't clog our wastewater pipes.
- Paper:** Toss paper products in water.

**Household items that should never be flushed:**  
All wipes—including those advertised as "flushable"

- Paper towels
- Food leftovers
- Coffee grounds
- Cleaning and disinfectant items (including eggs, gloves and masks)

**For More Information**  
Learn more about how to properly dispose of fats, oils and grease at [ProtectOurPipes.org](http://ProtectOurPipes.org). Email [ProtectOurPipes@houston.gov](mailto:ProtectOurPipes@houston.gov) or call 832-395-3790 to request a presentation or materials to share with your community.

HOUSTON PUBLIC WORKS

**Protecting Our Pipes: It Starts at Home**

Protecting our pipes starts at home. It's a simple but essential step in preventing sewer overflows and protecting our environment. Here's how you can help:

**PUT GREASE IN ITS PLACE**

**ONLY FLUSH THE 3 P'S**

LEARN MORE AT [ProtectOurPipes.org](http://ProtectOurPipes.org)

**Houstonia**

How You Can Protect Our Pipes

Help prevent harmful sewer overflows in Houston's communities.

LEARN MORE AT [ProtectOurPipes.org](http://ProtectOurPipes.org)

**HOUSTON PUBLIC WORKS**

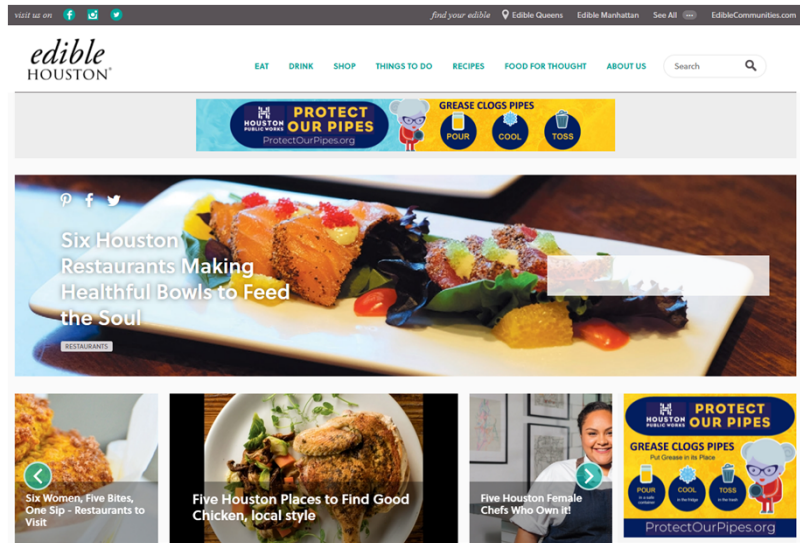
**GREASE CLOGS PIPES**

[ProtectOurPipes.org](http://ProtectOurPipes.org)

total estimated impressions: 14,295,826  
total estimated reach: 3,357,337



# PARTNERSHIPS & DIGITAL ENGAGEMENT



# PARTNERSHIPS & DIGITAL ENGAGEMENT

PR firm was hired to:

- Increase engagement in the Spanish speaking community
- Interviews on Telemundo and Univision
- Find local level events to spread message



# MESSAGING IN DIFFERENT LANGUAGES

Our message has been translated to Spanish, Mandarin, Vietnamese And Arabic to target the diverse Houston audience

**LA GRASA BLOQUEA LAS TUBERÍAS**  
Evite desbordamientos dañinos siguiendo estos tres sencillos pasos.  
**Ponga la Grasa en su Lugar**

- VIÉRTALA** en un recipiente seguro
- ENFRÍELA** en el refrigerador
- DESÉCHELA** en la basura

**油脂堵塞管道**  
按照这三个简单的步骤，防止有害物溢出。

将油脂放入适当的位置

- 倒入** 安全的容器中
- 放在** 冰箱中冷却
- 扔进** 垃圾桶

**湿纸巾堵塞管道**  
湿纸巾、抹布以及除卫生纸以外的任何物品造成的堵塞，都会导致油脂滞留，并导致溢流。

只冲下小便、大便和卫生纸

- 小便** 容易处理
- 大便** 会分解
- 卫生纸** 能在水中溶解

**ĐƯỜNG ống TẮC NGHẽn VÌ DẦU MỠ**  
Ngăn chặn nước chảy tràn ra gây hại bằng ba bước đơn giản sau.  
**Bỏ Dầu Mỡ Vào Đúng Nơi**

- ĐỔ VÀO** trong một thùng chứa an toàn
- LÀM MÁT** trong tủ lạnh
- QUẢNG** vào thùng rác

**ĐƯỜNG ống TẮC NGHẽn VÌ KHĂN Llau**  
Các vật gây tắc nghẽn từ khăn lau, giẻ lau và bất kỳ vật dụng nào khác ngoài giấy vệ sinh đều có bám dầu mỡ và gây chảy tràn.  
**Chỉ Dội Xả 3 Chữ P**

- PEE (NƯỚC TIỂU)** được xử lý dễ dàng
- POO (PHÂN)** vỡ thành các mảnh
- TOILET PAPER (GIẤY VỆ SINH)** hòa tan trong nước

**الدهون تسبب انسداد المواسير**  
أمن فيضانات الصرف الصحي و المجاري بتابع هذه الخطوات الثلاثة السهلة  
**اسكب الدهون في مكانها**

- القيها** في صندوق القمامة
- ضعها** في التلاحة
- خزنها** في عبوة و الثلج

**المناديل المبللة تسد المواسير**  
المناديل و الاقمشه وأي شي غير ورق الحمام يحبس الدهون و يسبب انسداد في مواسير الصرف الصحي  
**ما عليك سوي فتح المياه في المراض علي البول و البراز و ورق التواليت فقط**

- وورق التواليت** يدوب في المياه
- والبراز** يتحلل
- البول** يتم صرفه بسهو له



# GIVEAWAYS

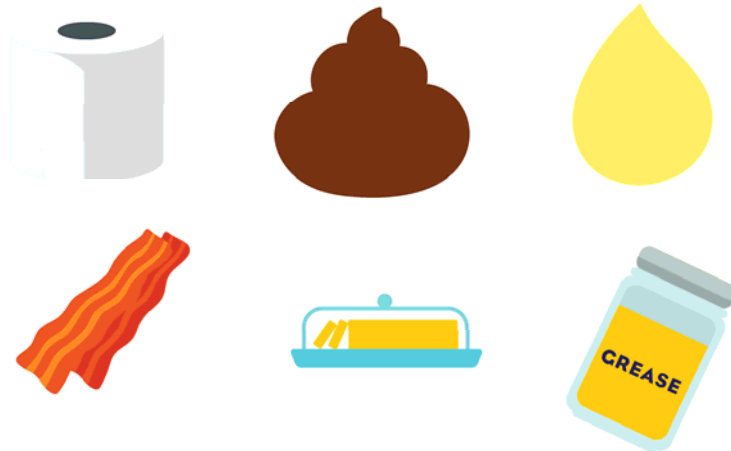


# IN THE COMMUNITY





# IN THE COMMUNITY



# FIELD RESPONDERS & MAILOUTS

**HOUSTON PUBLIC WORKS**

**PROTECT OUR PIPES**  
Help keep fats, oils, grease, and other items from going down the drain.

**PROTEGE NUESTRAS TUBERÍAS**  
Ayuda a evitar que los grasas, aceites y otros artículos se vayan por el drenaje.

**GREASE CLOGS PIPES**  
Put Grease in its Place  
**LA GRASA BLOQUEA LAS TUBERÍAS**  
Ponga la Grasa en su Lugar

**WIPES CLOG PIPES**  
Only Flush the 3 P's  
**LAS TOALLITAS BLOQUEAN LAS TUBERÍAS**  
Solo Tire las 3 P

**POUR** in a safe container  
**VIÉRTALA** en un recipiente seguro

**COOL** in the fridge  
**ENFRÍELA** en el refrigerador

**TOSS** in the trash  
**DESÉCHELA** en la basura

**PEE** is easily processed  
**PIPI** se procesa fácilmente

**POO** breaks down  
**POPO** se desmenuza

**PAPER** dissolves in water  
**PAPEL** se desmenuza en agua

LEARN MORE AT [ProtectOurPipes.org](http://ProtectOurPipes.org) OBTENGA MÁS INFORMACIÓN EN [ProtectOurPipes.org](http://ProtectOurPipes.org)

**HOUSTON PUBLIC WORKS**

**HI, NEIGHBOR!**

Grease and wipes in a wastewater pipe caused a sewer overflow in your neighborhood. Houston Public Works does not want this to happen at your home. Cooking grease should never get poured down the drain. When grease settles, it can clog wastewater pipes and cause expensive repairs.

Only the 3 P's can be flushed down the toilet - **Pee, Poo, and Toilet Paper**. Anything else will clog your pipes and cause sewer overflows.

Learn more at [ProtectOurPipes.org](http://ProtectOurPipes.org)  
For questions or to report sewer overflows, call 311 (713.837.0311)

**¡HOLA, VECINO!**

La grasa y las toallitas desechables en una tubería de drenaje causó un desbordamiento de aguas residuales en su vecindario. Houston Public Works quiere prevenir que esto suceda en su hogar en el futuro. La grasa para cocinar nunca se debe de tirar en el drenaje. Cuando la grasa se endurece, causa bloqueos que tapan las tuberías de las casas y puede ocasionar reparaciones costosas.

Solo tire 3 Tres P - **el pipi, el popó, y el papel (higiénico) por el inodoro**. Cualquier otra cosa bloquea sus tuberías y puede causar un desbordamiento de aguas residuales.

Obtenga más información en [ProtectOurPipes.org](http://ProtectOurPipes.org)  
Si tiene preguntas o quiere reportar un desbordamiento de aguas residuales, llame al 311 (713.837.0311)

postcard

**HOUSTON PUBLIC WORKS**

**PROTECT OUR PIPES**  
Help keep fats, oils, grease, and other items from going down the drain.

**WHAT IS A SEWER OVERFLOW?**

A sewer overflow is a backup of untreated wastewater into our streets and homes. **Sewer overflows can be prevented.** The main cause of sewer overflows in Houston is clogged pipes from fats, oils, and grease poured down sinks and wipes flushed down toilets.

**PROTECT YOUR WALLET**  
Sewer overflows can cost thousands of dollars in plumbing costs and fines.

**PROTECT YOUR HEALTH**  
Sewer overflows include harmful microbes that can make you and your family sick.

**PROTECT OUR WATERS**  
Sewer overflows can pollute our environment, making our public spaces less enjoyable.

**HELPFUL TIPS**

**USE A SINK STRAINER**  
Garbage disposals do not prevent clogs. Keep food scraps, hair, and other items from going down the drain.

**USE A SPATULA OR PAPER TOWEL**  
Wipe grease from pots, pans, plates, and utensils before washing. Throw the paper towel in the trash.

**RECYCLE YOUR GREASE AT AN ENVIRONMENTAL SERVICE CENTER**  
Visit [ProtectOurPipes.org](http://ProtectOurPipes.org) for more information and for locations.

**GREASE CLOGS PIPES**  
Prevent harmful overflows by following these three easy steps:  
**Put Grease in its Place**

**POUR** in a safe container  
**COOL** in the fridge  
**TOSS** in the trash

**WIPES CLOG PIPES**  
Clogs from wipes, rags, and any item other than toilet paper trap grease and cause overflows.  
**Only flush the 3 P's**

**PEE** is easily processed  
**POO** breaks down  
**TOILET PAPER** dissolves in water

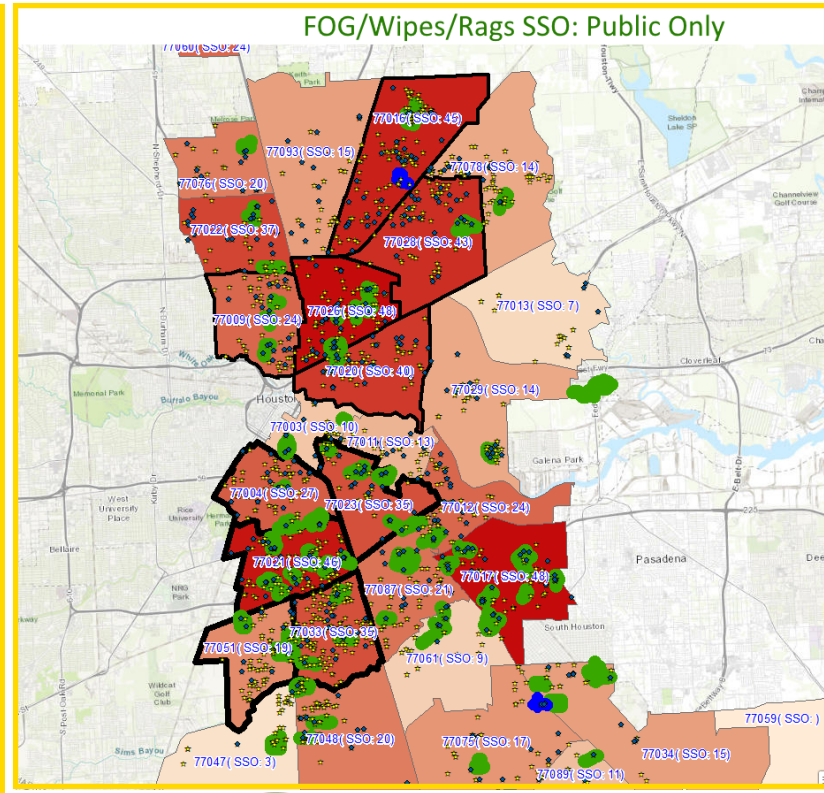
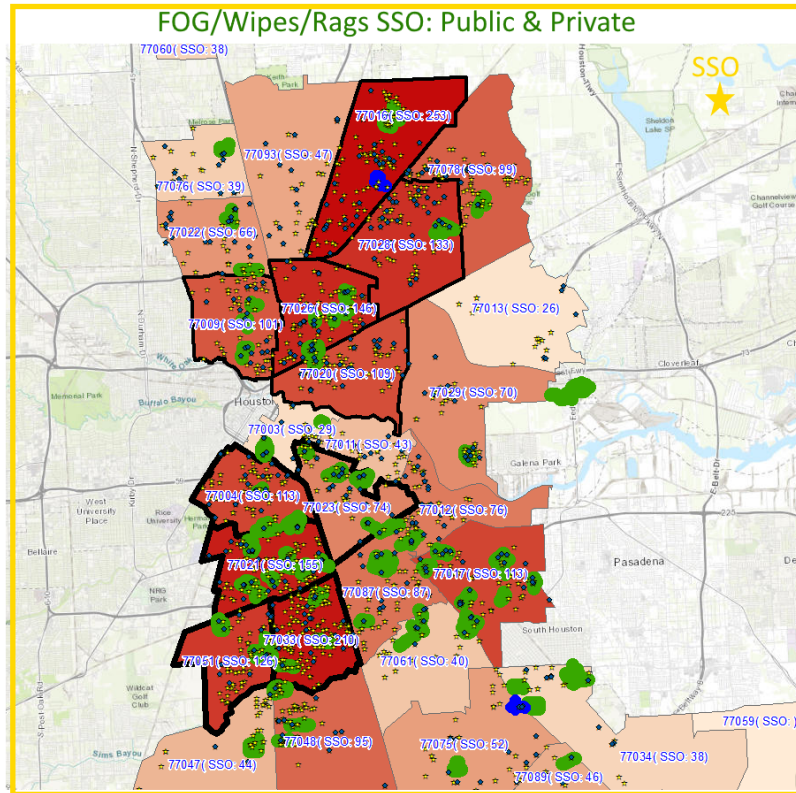
**HOUSTON PUBLIC WORKS**

LEARN MORE AT [ProtectOurPipes.org](http://ProtectOurPipes.org)

trifold

# TARGETED OUTREACH IN HOTSPOT LOCATIONS

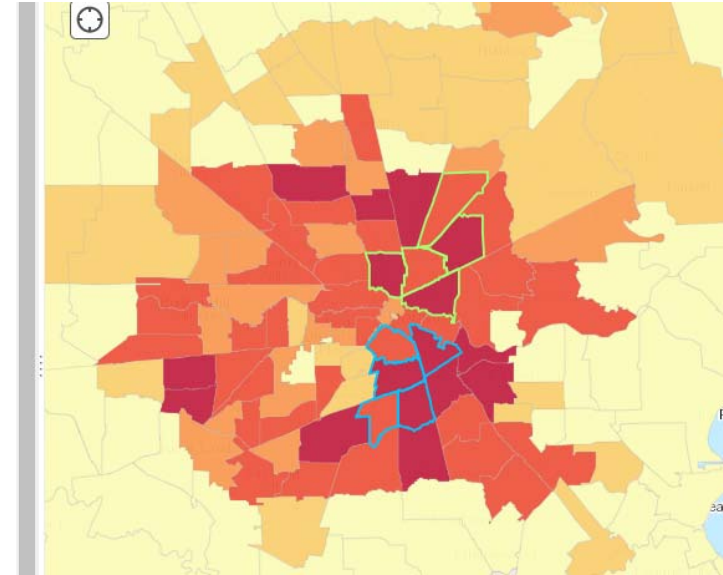
1 Year SSO Data : 01/01/2020 --> 10/31/2020



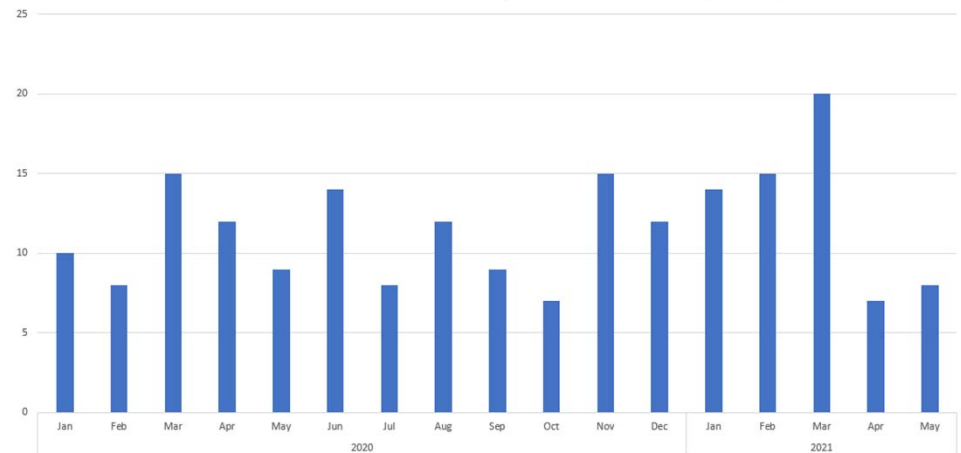
# MEASURING SUCCESS

- reach & impressions
  - 15+ million impressions so far
  - 3+ million regional reach
- actions taken
  - webpage views
  - click throughs
- community input & feedback
  - community surveys
- compare with trends & overlay w/  
preventative maintenance cleaning efforts
- follow up on specific incidents (RSOs)

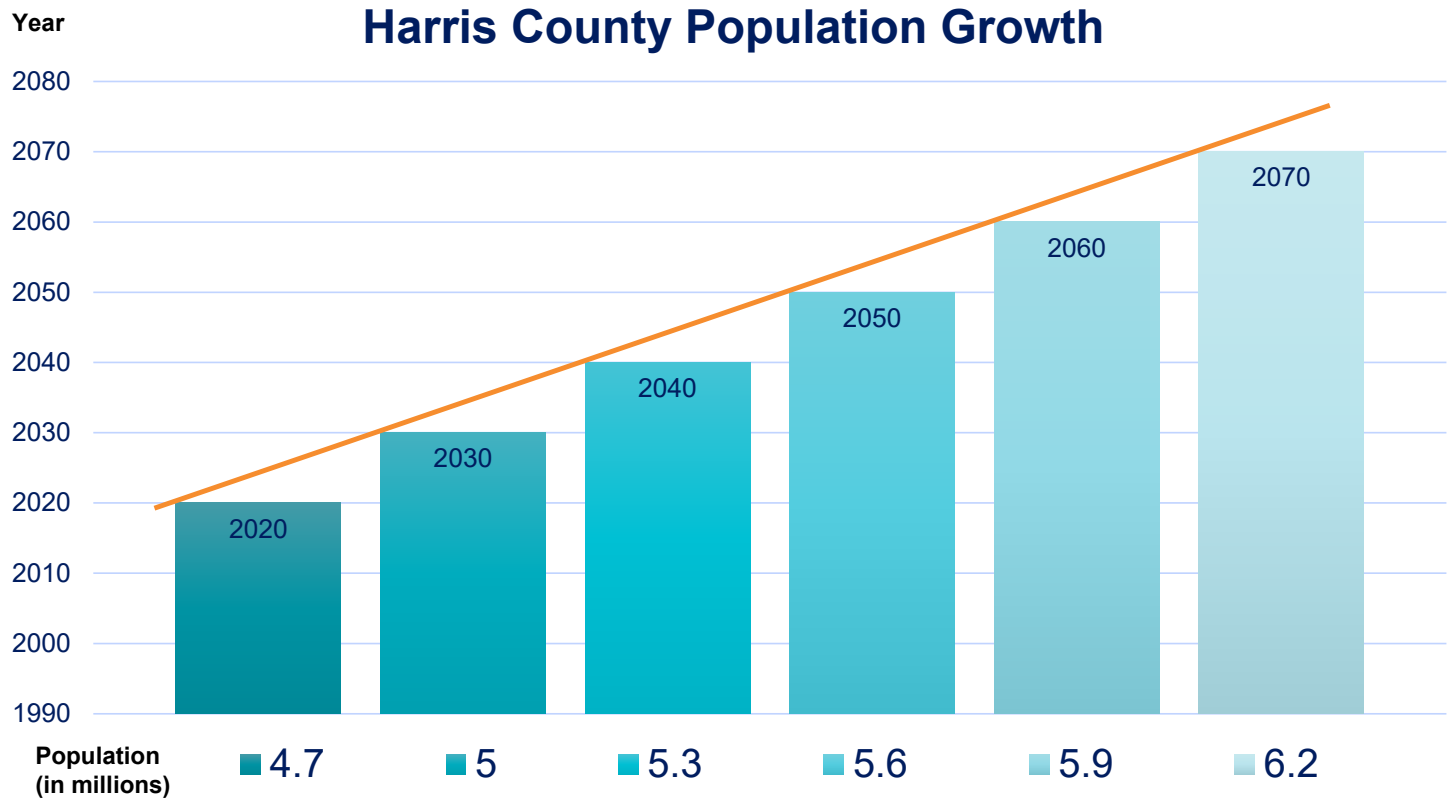
- Zip Codes Scored by Mailers and Incidents
- TOTALSCORE
  - > 15 - 20
  - > 10 - 15
  - > 5 - 10
  - > 0 - 5
  - 0 - 0
- Number of Mailers for SSO Events
- Number of Postcards Mailed
- Number of Events Greater than 10 Mail Outs
- Number of Mailers for Wipes



Public & Private SSOs Caused from FOG & Wipes in 77021: 2020 vs. 2021 (5-31-2021)



# POPULATION GROWTH



Source: TWDB 2017 State Water Plan

# MEASURING SUCCESS

The Number of Sewer Overflows have reduced significantly.



Total Number of Public SSOs (Grease, Rags/Wipes)

**2020**

**2021**

**364**

**247**

# MEASURING SUCCESS

*Protect Our Pipes*  
2022 Watermark award  
recipient for raising the  
public's level of  
understanding of Texas  
water issues



# BEHAVIOR CHANGE

spread the word

share through newsletters, social media, etc.

- [Facebook](#)
- [Twitter](#)
- [YouTube Video](#)
- [Infographic](#)
- [Banner](#)

more downloads at

[ProtectOurPipes.org](http://ProtectOurPipes.org)

request a community presentation at

[ProtectOurPipes@houstontx.gov](mailto:ProtectOurPipes@houstontx.gov)





# thank you!

Ryan.prillman@houstontx.gov



[houstonpublicworks.org](http://houstonpublicworks.org)

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