



# DESIGN FOR CHANGE

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EPA communications driven by  
social sciences & community input



**Flint Residents:**  
Bottled or Cold Filtered Water  
**Protecting Your  
Drinking Water**

 United States  
Environmental Protection  
Agency

**Until further notice:**  
U.S. EPA recommends that all residents use either bottled water or cold water that has been through a water filter certified to remove "total lead" for drinking, cooking and making baby formula. This is especially important for pregnant women, infants and children.

illustration of drinking, cooking  
& baby formula

**Flint Residents:**  
Ways You Can Protect Your  
Drinking Water

 United States  
Environmental Protection  
Agency

EPA recommends that all residents use either bottled water or cold water that has been through a water filter certified to remove "total lead" for drinking, cooking and making baby formula until further notice. This is especially important for pregnant women, infants and children.

Normally, EPA recommends running your water when it has not been used for long periods of time. However, the protective coating within the service lines is still being built up following Flint's return to water from the Great Lakes Water Authority and the stability of this growing coating is hard to know throughout the water system.

EPA and the Centers for Disease Control and Prevention believe there is no safe level of lead exposure. Lead is harmful to health, especially for children. While paint, dust, and soil are the most common sources of lead, infants who consume mostly mixed formula can receive 40 to 60 percent of their exposure to lead from drinking water.

Contact:  
EPA's Safe Drinking Water Hotline (800)426-4791  
HHS contact or CDC contact  
City of Flint Water Plant at 810-787-6537

**Important Tips**

- **Do not** drink water directly out of the tap or a water fountain
- **Do** drink bottled water or cold water that has been through a filter
- **Do not** cook or make baby formula with unfiltered water
- **You can** wash your hands with unfiltered water
- **You can** bath and shower in the water

\* Children under 6 and pregnant women should consider getting tested for lead



**Cold Filtered Water  
or Bottled Water**

**Until further notice:**  
U.S. EPA recommends that all residents use either bottled water or cold water that has been through a water filter certified to remove "total lead" for drinking, cooking and making baby formula. This is especially important for pregnant women, infants and children.

Drinking Water

Baby Formula

Cooking

First drafts promptly changed to note diversity and began to address the literacy challenge.

**EPA** United States Environmental Protection Agency

## Flint市居民請注意： 確保家人安全的積極步驟

Updated February 9, 2016

**直至進一步通知之前：**  
環保署 (EPA) 和疾病控制中心 (CDC) 均同意，對兒童並無已知的安全血液鉛度可言。鉛對健康有害，特別是對兒童的健康有害。直至有足夠的資料可決定什麼水是安全飲用之前，環保署和疾病控制中心建議大家只用瓶裝水或過濾的水。

**保護你健康的重要步驟：**

- 給一歲以下的嬰孩，只用瓶裝水作飲用，準備食物和奶用。
- 瓶裝水是懷孕婦女或母乳嬰婦女及六歲以下兒童的最安全選擇。

過濾水只有在過濾器是經檢定可除鉛而你有按照它如何使用／在什麼時候更換的指示時才屬安全的選擇。

瓶裝水、過濾器和試劑可在背頁所列的地點免費索取。本地部門提供的過濾器，是符合除鉛檢定標準。

- 不要飲未經過濾的水。那不安全！
- 不要用未經過濾的水煮食或刷牙
- 不要讓嬰孩和兒童飲淋浴的水

可用NSF檢定除鉛級的水過濾器

- 每天早上開水喉時先讓水沖流兩分鐘
- 每個人均可用未經過濾的水來洗手、淋浴、淋浴

請參看背頁有關鉛的資源和事實的重要資料。

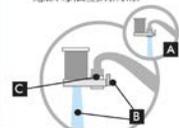
**每個星期清潔水喉**

- 將水喉端水流出來的部份擰開。這是充氣器。(確保知道如何擰開和放回端部份)。
- 除開篩隔，沖淨任何收集的污物。
- 擰回端部份。
- 如你有除開過濾器，將過濾器裝回。

**你的水過濾器**

\*參看說明書如何安裝

- 你可以在附有過濾器的水喉流沖已經或未經過濾的水。
- 如想要過濾的水，將過濾器的開關杆旋轉，因而水可從新徑流出。
- 你的水過濾器亦有一個篩隔，應該每個星期清潔。



**EPA** United States Environmental Protection Agency

## سكان فلينت: خطوات فعالة للحفاظ على سلامة أسرته

Updated February 9, 2016

**حتى إشعار آخر**

أنه ليس هناك مستوى (CDC) ومراكز مكافحة الأمراض والوقاية منها (EPA) صرحت وكالة حماية البيئة أمن الرصاص في الدم بالنسبة للأطفال، ويضر الرصاص بصحة الإنسان، لا سيما الأطفال. ونحن نحاول على معلومات كافية لتحديد شروط أمن مياه للشرب، توصي وكالة حماية البيئة ومراكز مكافحة الأمراض والوقاية منها بشرب المياه لعمامة أو للصفحة

**تنظيف الصنابير أسبوعيًا**

- أ. فك القطعة الطرفية من الصنبور التي تخرج منها المياه. وهذه هي مقدمة الصنبور. (احرص على معرفة كيفية فك القطع، حتى تستطيع (تركيبها معًا مرة أخرى
- ب. انزع المصفاة واغسل أي أوساخ متجمعة.
- ج. ركب القطعة مرة أخرى.
- د. ضغ الفلتر في مكانه إذا كنت قد أزلته قبل فك مقدمة الصنبور.

**فلتر المياه**

راجع الدليل لمعرفة كيفية التركيب \*

يُمكنك استخدام المياه المصفىة وغير المصفىة دون نوع الفلتر من مكانه للحصول على مياه مصفاة، افتح للقبض حتى تتدفق المياه أسفل الثقبة. يحتوي فلتر المياه كذلك على مصفاة بنهي تنظيفها أسبوعيًا

**خطوات مهمة لحماية صحتك**

- استخدم المياه لعمامة فقط للشرب، وطهي الطعام، وضع العلاء للأطفال الذين تقل أعمارهم عن عام واحد.
- لعد المياه لعمامة الاختيار الأكثر أمانًا بالنسبة للمسببات الحوامل والمرضعات والأطفال الذين تقل أعمارهم عن ٦ أعوام.

لعد المياه للصفحة حيازًا أمًا أيضًا إذا كان الفلتر الذي تستخدمه معتمداً في إزالة الرصاص وإذا كنت تترجم لجميع إرشادات كيفية استخدام الفلتر والوقت الأمثل لاستبداله. تتوفر المياه لعمامة والفلتر وأدوات الاختيار معاً في جميع الأماكن الواردة على ظهر هذه الورقة. ويستون الفلتر التي قدمتها الجهات الأهلية إلى السكان شروط اعتماد إزالة الرصاص من المياه

لا تشرب مياها غير مصفاة، فهي غير آمنة

لا تطه أو تغسل أسنانتك بمياه غير مصفاة

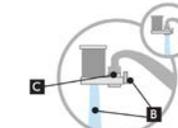
لا تسمح للرضع والأطفال بشرب المياه المخصصة للاستحمام

استخدم فلتر مياه معتمد من قبل مؤسسة العلوم الوطنية وحاصل على تقييم في إزالة الرصاص من المياه

افتح المياه الباردة في المنزل لمدة دقيقتين كل صباح لدفع المياه من الأنابيب

يُمكنك للجميع استخدام مياه غير المصفىة في غسل البين أو الأخصال أو الاستحمام

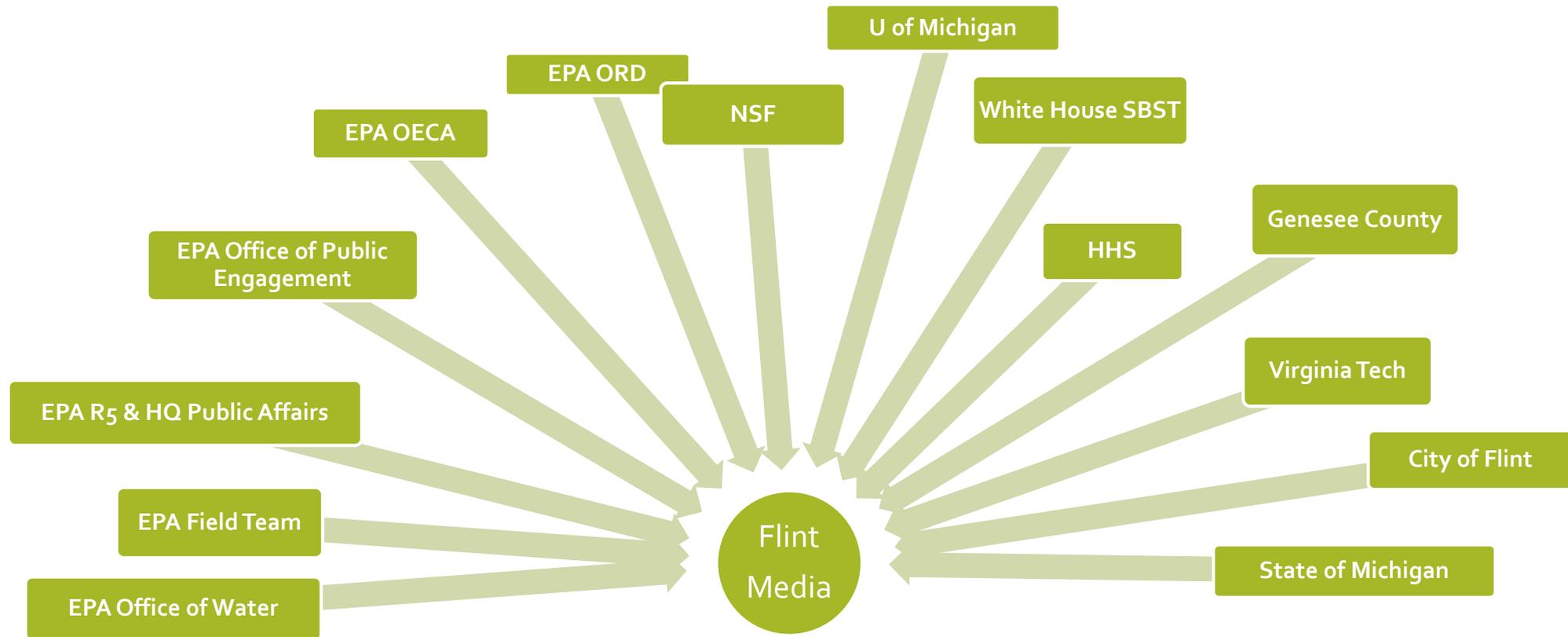
راجع جانب هذه الورقة لمعرفة بعض المراجع والمخاطر المهمة حول الرصاص



Alerted to the language demographics. Stayed mindful of dialect, cultural sensitivities and required modifying translation to accommodate crisis communications.

Continued on with necessary translations (Chinese, Spanish, Arabic)

# Partners: Experts, all levels of Govt & Community



**EPA** United States Environmental Protection Agency

# Flint Residents: Information on Drinking Water

**Until further notice: February 5, 2016**

The Environmental Protection Agency (EPA) and the Centers for Disease Control and Prevention agree that there is no safe level of lead exposure. Lead is harmful to health, especially for children. While paint, dust, and soil are the most common sources of lead, it can also enter drinking water when service pipes that contain lead corrode. Water utilities use corrosion control strategies to help prevent corrosion.

Due to Flint's recent return to using water from the Great Lakes Water Authority, the protective coating within service lines is being built up to appropriate levels. EPA is currently collecting samples to determine the effectiveness of the corrosion control measures being taken. Until sufficient information is gained to determine when the water is safe to drink, EPA and CDC recommend that people only consume bottled or filtered water. Once the water is safe to drink, EPA and CDC recommend running the water before using it when it has not been used for long periods of time.



### Filters

Flint's drinking water is currently not safe to drink without being passed through NSF-certified filters that have been rated to remove lead. The filters that have been provided to residents by local agencies meet this certification.

### Getting water tested

Flint residents can call the city or the state for a FREE water test.

City of Flint Water Plant  
810-787-6537,  
then press 1.  
Flint residents may email:  
flintwater@cityofflint.com

**For more information:**  
**Visit:** [www.epa.gov/Flint](http://www.epa.gov/Flint)  
**email:** [flintwater@epa.gov](mailto:flintwater@epa.gov) or  
**call** EPA's toll-free hotline at 800-426-4791  
*The hotline will provide simultaneous telephonic interpretation into Spanish and other languages.*

### Important Tips

- **Do not** drink water straight from a faucet. It isn't safe right now.
- The safest choice for **pregnant women and kids under six years of age** is to use **bottled water** for drinking, cooking or making formula.
- Filtered water is a safe option as long as your filter is certified to remove lead and you follow all the instructions on how to use it/when to replace.
- Run water 1-2 mins every morning to flush pipes.
- **Do not** cook with unfiltered water. Always start with cold filtered water.
- **You can** wash your hands with unfiltered water.
- **You can** bathe and shower in unfiltered water; however, babies and children should not drink the water while bathing.

**EPA** **CDC** United States Environmental Protection Agency  
Centers for Disease Control and Prevention

## You and your family need water: Here's how to make it safe

*A quick-reference guide for the people of Flint*

### What water is safe to drink?

Pregnant Women + Breastfeeding Women + Babies + Children under 6 = **Should ONLY drink bottled water (and only use bottled water in formula)**

Kids older than 6 + Teenagers + Adults = **Should ONLY drink bottled OR filtered water**

### How do I use a filter?

- Check that it is NSF-Certified to remove lead
- Install it carefully, follow the instructions that come with your filter
- Switch the lever to make the water flow through the new cartridge to get filtered water for drinking, cooking, and brushing your teeth
- Clean the screen weekly

### You can get free bottled water, NSF-certified filters, and test kits!

Please see locations for pick-up on the back of this sheet.

### What do I do...

**...in the morning?**  
Turn on the cold water on all the faucets in your house for 2 minutes to flush the pipes

**...to cook?**  
Use **filtered** water

**...to wash my hands and body?**  
Using unfiltered water for hand washing, baths and showers is OK – but **DO NOT** let it get in your (or your kids!) mouth

**...to brush my teeth?**  
Use **filtered** water

**...to wash dishes?**  
**...every week?**  
Clean your faucets!

**EPA** United States Environmental Protection Agency

## Flint Residents: You and Your Family Need Water Here's a Quick Reference Guide to Making it Safe

### What water is safe to drink?

pregnant women + breastfeeding women + kids under age 6 = **should ONLY drink bottled water and use bottled water for with baby formula**

kids older than 6, teenagers & adults = **should ONLY drink bottled or filtered water**

### What water can I use?

**unfiltered water**  
OK to wash hands & body  
BUT: don't let it get into your (or your kids!) mouth

**filtered water**  
OK to cook with  
OK to brush teeth

**OK to wash dishes**  
BUT: use filtered water washing baby bottles & kids' cups

**Boiling Water Does Not Remove Lead**

### What else should I do?

**Every morning**  
Run unfiltered (see back) cold water for 5 minutes to flush the pipes.

**Every week**  
Clean the aerators in all faucets and clean the screens in your filters.

After collaborating with Social & Behavioral Sciences Team (SBST) we focused on minimizing text, replacing with graphics when possible.

Targeting ACTIONS: WHO, WHAT, HOW & WHEN.

This increase in communications and feedback alerted us to community having difficulty installing filters and confusion on when to change them.

The “HOW TO/WHEN” instruction had to take into consideration: NSF filter product certification, breaking down your aerator for cleaning, filter installation, etc.

### How do I use the filter?

- ▶ **First, check that it is NSF-Certified\*** to remove lead.
- ▶ **Follow the manual** that comes with your filter for correct installation.
- ▶ **Do not run hot water** through the filter.
- ▶ **Start with cold filtered water** then heat to cook.
- ▶ **Your hot water heater tank should be flushed regularly.** Follow manufacturer’s instructions or contact a licensed professional for assistance.

**You can run unfiltered water** with the filter attached.



unfiltered from under faucet

**Turn lever for filtered water** to flow from under the cartridge.



lever

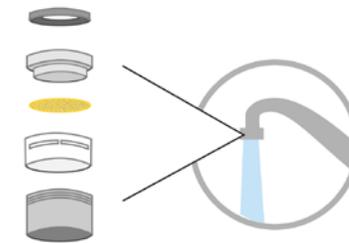
**Change filter** when indicator turns red. ♦



\*The U.S. EPA does not endorse NSF International, its products, services, or any product or service that displays the NSF International mark. U.S. EPA does not certify the product. U.S. EPA is aware that the certification mark belongs to an independent organization that certifies these products, and that there are other third party testing services including UL and VQA.

### Clean Faucet Aerators Weekly

- 1 Unscrew the end-piece of your faucet where the water comes out. This is the aerator. (Make note of how the pieces come off, to put back together. Parts vary.)
- 2 Remove the screen and rinse out any dirt that has collected.
- 3 Screw it back on.



### Important Resources for Flint Residents

#### Medical Questions

**Rashes:** You can contact your primary care provider, or call 2-1-1 or Michigan Toxic: 1-800-648-6942

**Blood tests:** You can contact your primary care provider, or call 810-257-3833

**Appearance or odor of your water**  
Call Flint Water Plant: 810-787-6537

#### Questions about safe water

- ▶ email [flintwater@epa.gov](mailto:flintwater@epa.gov)
- ▶ visit [www.epa.gov/Flint](http://www.epa.gov/Flint)
- ▶ call EPA’s hotline: 810-434-5122

🐦 @EPAGreatLakes

📘 facebook.com/EPAGreatLakes

# How Do Ortho-Phosphates Protect water Pipes?

*Discontinued since 19xx*

Lead  
Copper  
Iron

Water service lines typically found from water main into home or inside homes

Ortho-Phosphates

- starts on what this is

Not Phosphate

Pic of Ortho phosphates

Diagram of what it Does

ortho-phosphates

Chemically react with atoms of PIPE

Ortho phosphates

"Bonds" changes chemical property

ortho Lead

Bond Lead phosphate

Pic of pipe with white Lead phosphate scale

WHY IT PROTECTS

**EPA** United States Environmental Protection Agency

## Trayendo agua potable a Flint

Como está el sistema ahora El 12 de marzo de 2016

Los residentes de Flint están utilizando agua filtrada o embotellada para el consumo.

Lago Huron planta de tratamiento acueductos red de distribución

deje correr el agua por 5 minutos cada día

Se añade un anticorrosivo al suministro de agua para crear ortofosfatos que ayudan a construir una capa de protección en las tuberías.

Se añade desinfectante para evitar el crecimiento de bacterias.

El muestreo de agua ayudará a la EPA a entender y supervisar la recuperación del sistema, los niveles de desinfección y la eficacia del control de la corrosión.

### Como debe ser el sistema ya recuperado

Se verifica que la estación potabilizadora tenga los recursos necesarios

Se mantiene el sistema correctamente

El agua se trata adecuadamente en la planta

Se controla la calidad del agua constantemente

agua potable limpia

Vea más información al dorso de esta hoja

## El plomo en el agua potable

El plomo entra en el agua potable cuando las tuberías y otros componentes de plomería que contienen plomo se corroen. Las empresas de suministro de agua utilizan estrategias de control de la corrosión para proporcionar una capa protectora – que contiene ortofosfatos – en las tuberías.

Debido a que Flint regresó a utilizar agua de la Autoridad de Agua de los Grandes Lagos recientemente, la capa protectora dentro de las líneas de servicio se acumuló con el tiempo hasta llegar a los niveles adecuados. La EPA está recogiendo muestras para determinar la eficacia de las medidas de control de la corrosión que se están realizando.

### ¿Cómo cubren y protegen los ortofosfatos a las tuberías de agua?

- Control de la corrosión tal como el ácido fosfórico se añade al suministro de agua en la planta de tratamiento.
- Se produce una reacción química que une los ortofosfatos al plomo.
- Esta unión forma una protección – una capa dentro de las tuberías de agua.
- Esta capa reduce los niveles de plomo del agua potable.

capa blanca de ortofosfato

### Recursos importantes para los residentes de Flint

**Preguntas médicas:**  
**Erupciones:** Usted puede comunicarse con su médico de atención primaria, o llame al 2-1-1 o a Michigan Toxic: 1-800-648-6042

**Preguntas acerca del agua segura**  
 ▶Envíe un email a [flintwater@epa.gov](mailto:flintwater@epa.gov)  
 ▶Visite [www.epa.gov/flint](http://www.epa.gov/flint)  
 ▶Llame la línea gratuita de: 810-434-5122

**Pruebas de sangre:** Usted puede comunicarse con su médico de atención primaria, o llame al 810-257-3833

**La apariencia o el olor de su agua**  
 Llame a la Planta de Agua de Flint: 810-787-6537

@EPAGreatLakes;  
 en español [twitter.com/EPAespanol](https://twitter.com/EPAespanol)

facebook.com/EPAGreatLakes; en español: [Facebook.com/epaespanol](https://facebook.com/epaespanol)

Triple Whammy: Complex messaging, scientific content, in multiple languages.  
 Oh yeah... and ASAP.

#FlushforFlint campaign in May 2016 (electronic billboards, bus wrap graphics) encouraged residents to use their water. This was critical in coating lead pipes throughout the system.



**EPA**

**#FlushForFlint**  
The state will cover this cost  
✓5 minutes ✓14 days in May  
visit [www.epa.gov/flint](http://www.epa.gov/flint)

# Shared information without ownership

**Governor Rick Snyder** @onetoughnerd · May 12  
RECAP: At today's press conference, we encouraged the #FlushForFlint campaign and more --> [1.usa.gov/1Xn0r5O](http://1.usa.gov/1Xn0r5O)

### Flush for Flint

#FlushforFlint  
Take These Steps to Flush Pipes and Aid in Flint Water System Recovery

Flushing pipes is very important to remove loose lead particles and to coat pipes. Lead line replacement is the long-term goal. The state will cover this cost. Residents will receive a credit on their water bill.

**Step 1**  
Run cold water at the highest flow in the bathtub\* for 5 minutes.

**Step 2**  
Run cold water at the highest flow from the kitchen faucet for 5 minutes.

**Step 3**  
Do this every day for 14 days in May.

\*If you do not have a bathtub, run cold water at highest flow from laundry tub or garden hose.

**ASPR** @PHEgov  
#Flint Residents: You can help the water system recover with these 3 steps → [go.usa.gov/cuUve](http://go.usa.gov/cuUve) #FlushForFlint

### Flush for Flint

Take These Steps to Flush Pipes and Aid in Flint Water System Recovery

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Run cold water at the highest flow from the kitchen faucet for 5 minutes.

**Step 3**  
Do this every day for 14 days in May.

\*If you do not have a bathtub, run cold water at highest flow from a laundry tub or garden hose.

Flip lever to bypass filter or remove filter first, then reinstall filter.

Watch the water draining to avoid overflow of sinks or tubs.

**EPA Great Lakes** @EPAGreatLakes · May 4  
#Flint residents - have you started 14 days of #FlushForFlint? Take these steps to flush your pipes:

### Flush for Flint

epa.gov/Flint  
Take These Steps to Flush Pipes and Aid in Flint Water System Recovery

**Step 1**  
Run cold water at the highest flow in the bathtub for 5 minutes.

**Step 2**  
Run cold water at the highest flow from the kitchen faucet for 5 minutes.

**Step 3**  
Do this every day for 14 days in May.

**Michigan DEQ** @MichiganDEQ · Apr 19  
#Flint residents - please flush your pipes to help speed up the recovery. [1.usa.gov/1WbHqCl](http://1.usa.gov/1WbHqCl)

*Flint residents should **run the water in their homes and businesses** to speed the recovery of the Flint drinking water system. There will be **no associated cost to residents** related to this flushing program.*

## HOW TO DO IT?

The following steps are recommended for residents to flush out particles and to help build the coating in pipes:

**Step 1:** Run cold water at the highest flow in the bathtub for 5 minutes. Do not use the showerhead because it has a lower flow rate.

**Step 2:** Bypass or remove your filter, then run cold water at the highest flow from the kitchen faucet for 5 minutes. Remember to turn your filter back on or reinstall it when done. EPA testing has shown filters are effective at removing even very high levels of lead.

**Step 3:** Do this every day for **14 days**.

## Experts in:

Environmental Sciences

Communications

Social Sciences

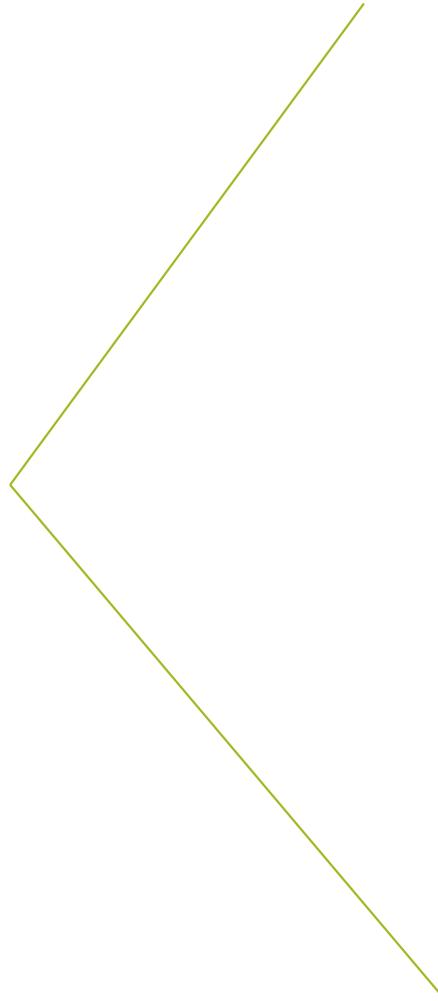
Policy

Language Translation

Social Media

Technical Illustration

Printing



Flyers

Press Releases

Media Advisories

Door hangers

Social Media Posts

Church Bulletins

Invites to Open House

Bus Wrap Graphics

Electronic Billboards

# Lessons Learned

- When translating to other languages, be mindful of cultural practices and dialect.
- Discovered mods needed to be made to translation contract to accommodate very tight turn-around (change existing SOPs).
- Rely on experts (NSF, ORD) for accuracy and community leaders and social science data to organize & reinterpret complex messaging.
- Flyers were determined to be the appropriate means of mass communication.
- Hundreds of door-to-door visits were necessary to gather feedback, gain trust, sample, install filters, delivering water, education ops.
- Open House forums provided ops to engage with community and visit both simple and highly technical public health issues.