

# RAIN, RAIN, AND MORE RAIN



Extreme rain events like the one in 2021 that dropped six inches of rain on Detroit are becoming more frequent. In fact, according to a University of Michigan report, <https://bit.ly/3cfC9ez>, extreme events are now happening 31 times as often.



Widespread flooding in Southeast Michigan, Summer 2021.  
Photo: Michigan.gov

The climate, or long-term weather, in southeast Michigan is getting wetter and warmer, causing more rain in the spring, summer, and fall, which increases flooding of roads and basements, property damage, more sewage or pollution discharges to our downstream neighbors, and potentially higher taxes and water bills.

Understanding how the increase in rainfall impacts your neighborhood, community members, and all of your residences is the first step in finding solutions to adapt, change, and minimize the harmful effects.

## WHY USE THE FLOOD FOCUS APP?

Using the Flood Focus App is easy and straightforward. Using smartphones, your organization's leaders and volunteers can document flooding by scanning a QR code.

Your neighborhood will have a unique survey with a short set of questions to capture the extent of the flooding (depth, area, and location) and a geolocated photo documenting the exact location. The data and images collected in the survey are stored in a database that will be used by Freshwater Future to create maps for your organization showing where flooding is occurring and where it is most severe.

With the map(s) in hand, you can then create solutions and ask the City to implement the community approved solutions.

## ADAPTING AND FINDING SOLUTIONS

Reducing flood risks requires understanding where flooding occurs most frequently so that the most helpful solutions can be created in the best locations to solve the problems. One of the most effective ways to reduce flood risks is to use nature-based solutions or green infrastructure to absorb, store, and slow discharge to storm drains from rainstorms.

Green infrastructure has been widely used in the Detroit-metro area, examples include:

- Rain harvesting through barrels or cisterns
- Rain gardens
- Permeable paving and replacing concrete with plantings
- Infiltration trenches on lot or in-line
- Runoff basins
- Green roofs



Neighbors Building Brightmoor harvests rain to store for use in gardens and reduce flooding.



West Grand Boulevard Collaborative installed a rain garden in the Children's Outdoor Library to manage stormwater and a place for youth to enjoy nature.

# BENEFITS OF USING FLOOD FOCUS APP



**Your community organization will benefit from using the Flood Focus App in many ways. The Flood Focus App will:**

- Provide your community members a way to collect data on flooding in your neighborhood
- Use maps created for your neighborhood to advocate for the solutions to flooding that residents in your community support
- Engage your residents and build connections to your organization
- Speed progress in reducing the flooding problems in your neighborhood
- Contribute to increasing resilience to climate change impacts.

**To support your community organization as a partner in using the app, at a minimum, Freshwater Future can provide:**

- Training to use the Flood Focus App
- Digital map with the volunteer collected data to aid in planning and advocacy
- Assistance in interpreting the data collected
- Strategy session to help the organization present community flooding concerns and solutions to key decision makers
- Opportunity to become an organizational member of Freshwater Future that makes you eligible for grant funding.



**FRESHWATER™**  
**F U T U R E**

Freshwater Future is a catalyst for community action that helps move policies designed to safeguard the waters of the Great Lakes region. We are a collaborative and entrepreneurial organization that seeks perspective from diverse communities and individuals. We build partnerships and collaborations, work to ensure equity in the solutions we advocate, and value residents' knowledge and abilities in our work to protect and restore the health of all the waters in the Great Lakes region.

## **FOR MORE INFORMATION:**

**[WWW.FRESHWATERFUTURE.ORG](http://WWW.FRESHWATERFUTURE.ORG)**

(231) 348-8200

[INFO@FRESHWATERFUTURE.ORG](mailto:INFO@FRESHWATERFUTURE.ORG)



# COMMUNITY LEADER'S GUIDE

## GETTING YOUR COMMUNITY USING THE APP



The more data collected on flooding in your neighborhood, the more information your community group has to understand the problems and identify potential solutions. For this, community members will need to use the Flood Focus app for most rain events.

To help you engage your community, Freshwater Future will work with you to hold an in-person or virtual training to prepare volunteers in your neighborhood. At the training, we will provide background on the problems with flooding, climate change, and practice using the app. A sample list of training topics for using the Flood Focus App is below.

### Sample Training Agenda: Using Flood Focus App

- Welcome and Introductions
- Detroit Flooding and Climate Change Impacts Personal experiences
- Power of Data and Why Use the Flood Focus App Review Data Examples
- How to Use the Flood Focus App Practice Using the Flood Focus App Setting
- Data Collection Goals--Focus Area, Incentives
- Using the Data to Get Community-Driven Solutions

### Using Flood Focus App Results to Get Solutions

Once the app is up and running in the community, Freshwater Future staff will provide regular check-ins with organization leader(s) to share and review data collected and maps that display the information. We will also share the data regularly so incentives or rewards encouraging continued participation can be sent out to community members.

After a period of data collection, your organization can schedule a planning meeting with Freshwater Future to share a map of the community with the stormwater flooding entries, photos, and data analysis. Every community map will look different and allow you to show your representatives exactly where flooding is in your neighborhood!

This map can be shared with community partners, members, and local politicians to advocate for solutions like green infrastructure, policy change, and much more.

Freshwater Future can also put on advocacy training for your organization and community members to put the map into action. Whatever the goal of the community is to address stormwater issues with this data, Freshwater Future is here to support it!



# COMMUNITY ENGAGEMENT

People in your neighborhood are impacted by the rain and will likely be motivated to help gather data by using this app. Increasing familiarity and comfort with technology such as smart phones and computers should make it easy for people to use. We have a few suggestions for partner organizations trying to engage local youth in using this Flood Focus App.

## GETTING THE WORD OUT

- Seek out youth organizations and groups that may be interested such as through faith groups, school environmental clubs, and local environmental, safety, and beautification groups.
- Engage your family members of all ages that live in the community!
- Put up flyers with the QR code to access the app in popular spots in your community and where young people tend to be (Freshwater Future can help develop these flyers as well!).
- Send a digital flyer out through community group chats, social media groups, email chains, and digital newsletters.

## GETTING PEOPLE TO USE THE APP

- Set up a training with Freshwater Future which will cover topics from stormwater education to how to use the app and potential uses of the data collected.
- Freshwater Future can train both your organization leaders and community members at the same time and offer additional trainings as needed!
- Encourage volunteers to save the app or survey link to their phone's home screen for easy access during rain events.
- One way that people can be engaged in this app is to provide incentives such as gift cards after a certain number of submissions or have contest where you select a volunteer(s) to receive a gift card. Similar incentives could be offered to those who attend the training such as a T-shirt, food, or stipend.



# STORMWATER AND FLOODING VOLUNTEER DATA COLLECTION GUIDE



## 1 Open the QR Code

### APPLE PHONES

Open the smartphone camera and position over the QR code until an ArcGIS.is web link presents itself.

### ANDROID PHONES

Open a QR reader and position over the QR code until an ArcGIS.is web link presents itself.

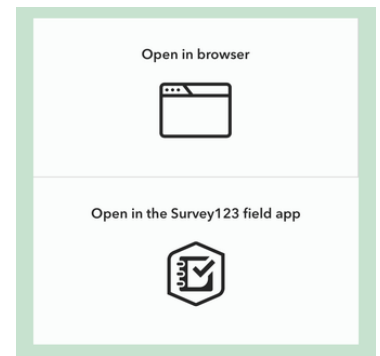
It may take a few tries until the link appears - don't worry if you don't see it the first try! Adjust your camera until you see a yellow link like in the photo. Bookmark the app on whatever browser you use most to make it easier to find and use when rain falls!



## 2 Open in Browser

Select the 'Open in Browser' option so that the link will open on the phone's web browser. Once this step is taken, an option to open the ArcGIS application in the web browser or the downloadable ArcGIS software will appear.

*Organization leaders can also send out the survey link in an email or have it available on their website to access.*



## 3 Add Information

It is simplest for participants to open the application within their web browser. The app will open within the browser once the web link is selected. Participants can then add their information and photo in the short survey and submit! Any question with a red star is required to be filled out before submitting.

### Depth of Flooding\*

Approximate amount of flooding. (Do not risk injury to measure flooding depth)

- ☐ 1-5 inches
- ☐ 6-12 inches
- ☐ Greater than 12 inches

### Date Observed\*

May 31, 2022

### Time Observed\*

1:36 PM

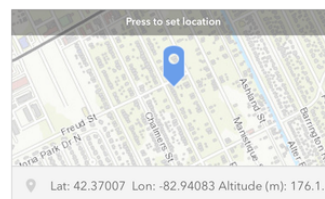
### Photo\*

Please take a picture of the flooded area and upload from your phone.

Select file

### Location of flooding\*

Rewrite the address you provided above in the "search bar" so that it is placed on the map.



### Type of Flooding\*

Check all that applies.

- ☐ Outdoor Flooding
- ☐ Indoor Flooding
- ☐ Flowing Water
- ☐ Still Water (Not Flowing)

### Photo\*

Please take a picture of the flooded area and upload from your phone.

Select file

### Comments

Any additional comments or observations.

### How did you hear about us?\*

...

Submit

Powered by ArcGIS Survey123



# WHEN AND HOW TO USE THE FLOOD FOCUS APP



## WHEN

It is best to use the Flood Focus App during and after rainfalls. These periods of time are important to collect data to convey a better understanding of how rainfall effects the community in real time.

## WHAT

Document ponding or large puddles, in-house flooding, street flooding, both small and large.

## PHOTO TIPS

Taking photos is an important part of the data collection. They help tell the story of flooding impacts.

### DO:

- Take a few photos of each site
- Try to get good lighting to show the extent of the flooding

### NOT TO DO:

- Avoid taking photos of any characteristics that may link the photo to private information, e.g., license plates on cars, house numbers, architectural features of a home.
- Only share your own photos. Do not reuse the same photo or someone else's photo. It is okay to take a new one later if the flooding is still there.

## Data Privacy Policy

Freshwater Future and [Local Partner Organization Name] place a high priority on protecting your privacy. This policy explains what types of information is collected through the Stormwater App, and how this information is used.

### What Personally Identifiable Information is Collected

In order to utilize the Stormwater App and ensure we can contact the data collector, each user of the App voluntarily provides us with contact information (name and e-mail address).

### How Your Information May Be Used

This information may be used to contact you with questions about the data you upload to the App, to contact you about the results of the data collection, and other uses by Freshwater Future and [Local Partner Organization Name] in connection with our programs and your interests.

### Ability to "opt out"

You may always "opt out," either now or at any time in the future, if you do not wish to receive our messages by informing both Freshwater Future and [Local Partner Organization Name].



**FOR MORE INFORMATION:**  
**Kwame Hampton**  
**kwame@freshwaterfuture.org**  
**(231)348-8200 ext 5**

WWW.FRESHWATERFUTURE.ORG  
INFO@FRESHWATERFUTURE.ORG

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