

Creating Benefiting Area Maps

This document provides guidance to subapplicants and applicants who create geospatial maps as part of the requirements for the Fiscal Year (FY) 2024 Building Resilient Infrastructure and Communities (BRIC) or Flood Mitigation Assistance grant submissions. Benefiting Area Maps show the “project benefiting area” or the areas and properties that might reasonably benefit from any proposed project.

What are project benefiting areas?

Project benefiting areas are one type of geospatial data gathered during the application process. Depending on the project type and program, a subapplicant may need to submit a project benefiting area, a project location (footprint), a project site inventory, or a combination of these data types. Project benefiting areas delineate the areas and properties that might reasonably benefit from the proposed project. For example, for a flood drainage improvement project that would reduce flood elevations downstream, the project benefiting area would include the polygon encompassing all structures that would experience reduced flood depths because of the proposed project.

What types of subapplications may need a benefiting area map?

Benefiting area maps can be submitted for any subapplication type, but are particularly recommended for:

- BRIC hazard mitigation (construction) projects,
- BRIC project scoping activities,
- BRIC subapplications within or primarily benefiting Community Disaster Resilience Zones (CDRZ),
- BRIC subapplications submitted to the national competition within or primarily benefiting Justice40 communities,
- Flood Mitigation Assistance Localized Flood Risk Reduction (LFRR) projects, or
- Flood Mitigation Assistance Capability and Capacity Building (C&CB) activities.

The BRIC and Flood Mitigation Assistance Notice of Funding Opportunity (NOFOs) have additional detail and guidance on specific subapplication types that may need to include a benefiting area map.

How does FEMA use the benefiting area maps?

In general, FEMA will use the maps to identify what areas and populations are benefiting from a proposed project or activity and measure the wider effects of mitigation projects on more than just the immediate area surrounding a proposed project. Based on this information, FEMA will make determinations for eligible cost-share as well as points in the BRIC National Competition or Flood Mitigation Assistance Priority Scoring Criteria. Additional details about calculations for points are available in the respective BRIC and Flood Mitigation Assistance funding opportunities. **See Appendices A and B for information regarding how benefiting area maps are used during the review process.**



FEMA

How to create a benefiting area with FEMA Grant Equity Threshold Tool (GETT)

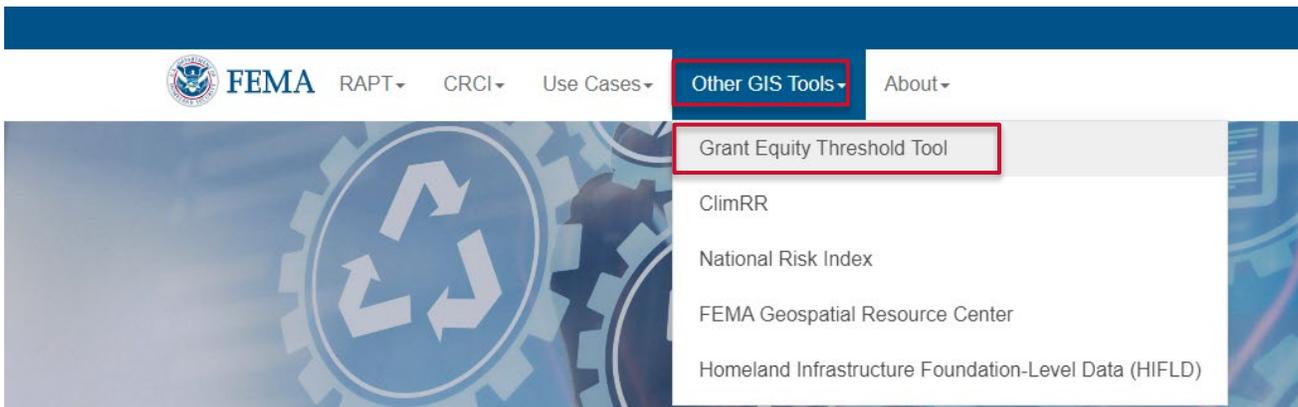
Subapplicants are encouraged to use FEMA's [Grant Equity Threshold Tool \(GETT\)](#) to generate and export geospatial file(s) with key Justice40 and CDRZ information. Subapplicants can augment their subapplications with additional community resilience and demographic information using the [Resilience Analysis and Planning Tool \(RAPT\)](#), which encompasses geospatial layers including the [National Risk Index](#). These tools show the population affected by a proposed project, delineate the benefiting area, and translate between census tract geographies identified by [Justice40](#) or designated [Community Disaster Resilience Zones](#).

This example is not the only way to create an eligible geospatial file. Table 1 on Page 7 lists other software alternatives.

Step 1: Access the Grant Equity Threshold Tool (GETT)

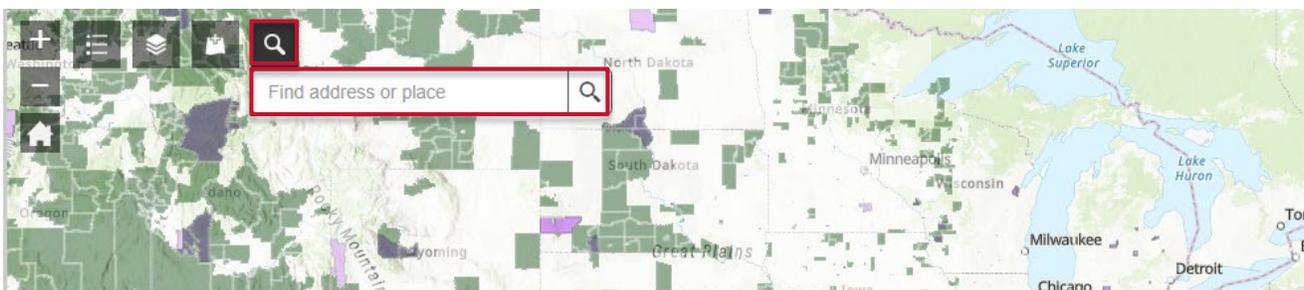
To access the GETT, visit the [Resilience Analysis and Planning Tool Resource Center](#). Click the “Other GIS Tools” tab and select “Grant Equity Threshold Tool.” This will take you to the GETT information page. To access GETT, click “[Go to the GETT](#).”

The GETT is publicly available and does not require a login or ArcGIS account.



Step 2: Find Location

Use the controls in the upper left of the map to zoom into your community. You can also search for an address or community using the Search bar.



Step 3: Create a Benefiting Area

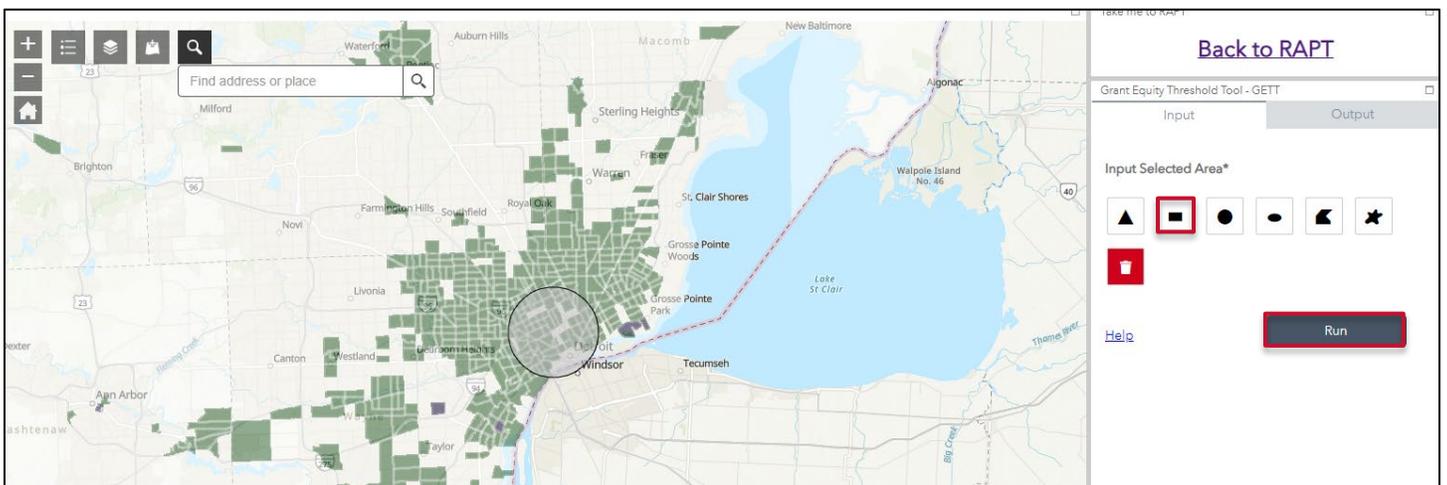
There are multiple ways to create a benefiting area in GETT. The “**Input**” tab allows users to draw a benefiting area on the map using common shapes (as shown in step 3.1), or a user can use pre-loaded community layers (as shown in step 3.2).

Step 3.1: Draw a custom Benefiting Area

Click on one of the shapes under the **Input** tab and move your cursor to the map. Tips for drawing a shape will be displayed in a pop-up.

Draw your desired shape(s) on the map. You can click the red “**Clear**” button to start over and draw a new shape.

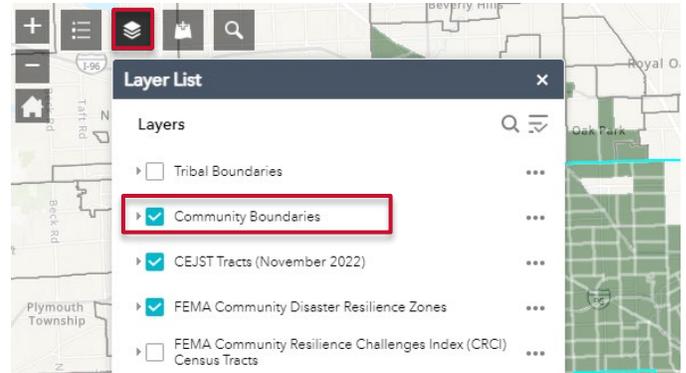
Once the Benefiting Area shape is drawn, click the “**Run**” button.



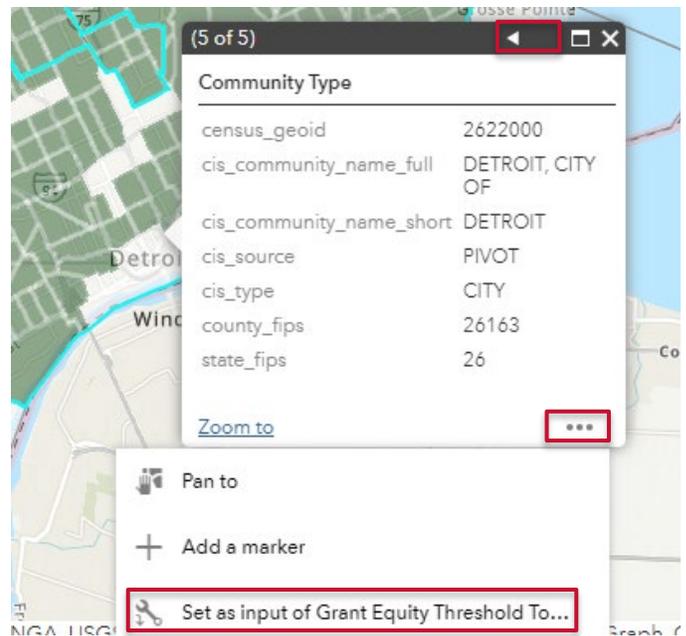
Step 3.2: Create a Benefiting Area from an Existing Community Layer

The GETT includes Tribal and Community Boundaries layers that provide borders for tribal lands, towns, cities, and other communities. To use either of these layers as an input, turn the layer on as demonstrated in the image below. Users can also use the “Add data” button  found in the upper left-hand corner of the map. This enables users to add outside data layers that may be relevant to the subapplication, such as school district boundaries or economic development zones, and use those layers as input to the benefiting area.

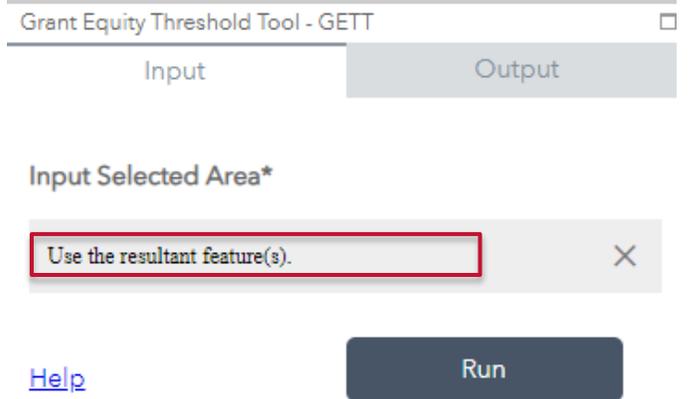
Select the desired community boundary on the map. Toggle between boundaries by using the arrows at the top of the pop-up box to select the correct community.



Click on the three dots (...) in the bottom right of the pop-up box and select “Set as input of Grant Equity Threshold Tool” from the dropdown list that appears.



Once selected, the Input tab will show “Use the resultant feature(s)” as the input of the tool. Click “Run.”

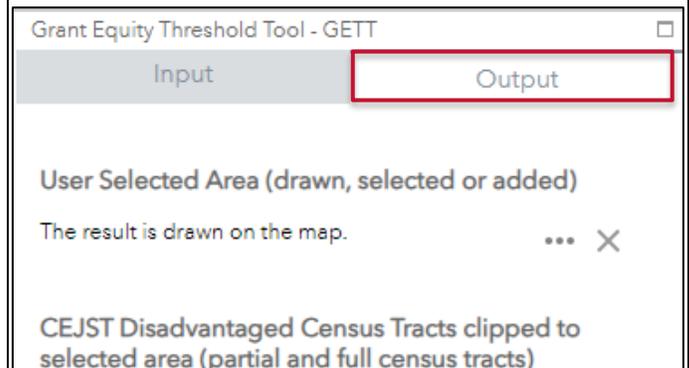


Step 4: Export Benefiting Area Shapefile

After the input area is drawn or selected and the “Run” button has finished executing, the results of the population calculations will appear in the display boxes at the bottom of the GETT dashboard.

In addition to the data in the display boxes, three output layers will be available for download within the “Output” tab.

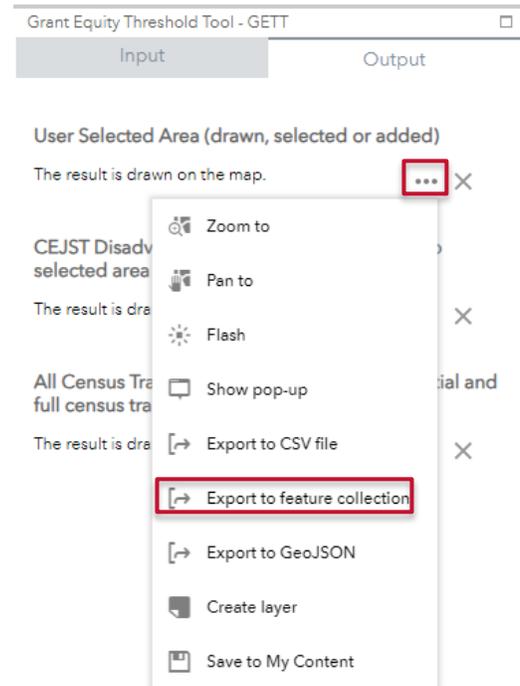
The User Selected Area layer represents the area drawn or uploaded to the map and set in the Input tab. **This is the layer the user will want to export and use as the Benefiting Area for the grant application.**



Click on the three dots (...) in the bottom right of the pop-up box and select **“Set as input of Grant Equity Threshold Tool”** from the dropdown list that appears.

To meet the FEMA Grants Outcome (FEMA GO) system requirements, the GeoJSON file will need to be saved as a .ZIP compressed file before uploading as an attachment to the subapplication. If the unique subapplication identifier is known, rename the file using the following naming convention **“[Subapplication_Identifier]_BA.zip”** before uploading to FEMA GO. If the subapplication identifier is not known, rename the file using the **“[applicant]_[subapplication_short_title]_BA.zip”** (Note: replace the portions in brackets with the corresponding information from the subapplication.)

Proceed to FEMA GO to upload the .ZIP file with the grant application



How else can a benefiting area be produced?

Many other common mapping software packages and online tools can create benefiting area maps. Table 1 below provides a list of common tools subapplicants may use. Table 2 lists the acceptable formats subapplicants may output before compressing into a .ZIP file and uploading to FEMA GO. Remember, FEMA recommends following the naming convention: If the unique subapplication identifier is known, rename the file using the following naming convention **“[Subapplication_Identifier]_BA.zip”** before uploading to FEMA GO. If the subapplication identifier is not known, rename the file using the **“[applicant]_[subapplication_short_title]_BA.zip”** (Note: replace the portions in brackets with the corresponding information from the subapplication.)

Table 1: Mapping Software

Software Program	Producer	Program Description
GETT	Environmental Systems Research Institute (ESRI) ArcGIS Online	GETT allows users to quickly calculate the percentage of the population within a potential benefiting area that lives in Justice40, CDRZ, and Community Resilience Challenge Index census tracts.

Software Program	Producer	Program Description
ArcGIS Desktop	ESRI	ArcGIS Desktop is the foundation of the ArcGIS platform. Geographical Information System (GIS) professionals use it to create, analyze, manage, and share geographic information so decision makers can make intelligent, informed decisions. It can create maps, perform spatial analysis, and manage data. www.esri.com
ArcGIS Pro	ESRI	ArcGIS Pro is the latest professional desktop GIS application from ESRI. With ArcGIS Pro, you can explore, visualize, and analyze data; and create 2D maps and 3D scenes.
QGIS	Open Source Geospatial Foundation	QGIS is a free and open-source, cross-platform desktop GIS application. It supports viewing, editing, and analysis of geospatial data. www.qgis.org
Google Earth Pro	Google	A free geospatial software application that displays a virtual globe with the ability to analyze and capture geographical data. www.google.com/earth
RAPT	ESRI ArcGIS Online	The Resilience Analysis and Planning Tool (RAPT) includes over 100 preloaded layers. They include community resilience indicators from peer-reviewed research; the most current census demographic data; infrastructure data; and data on weather, hazards, and risk. Information about RAPT's easy-to-use analysis tools, ways to add data from other sources, and the print and download functions are available online via www.fema.gov/emergency-managers/practitioners/resilience-analysis-and-planning-tool .

Table 2: Acceptable Geospatial File Types

File Extension	File Type Name	Producer
GeoJSON (preferred)	Geographic JavaScript Object Notation	Opensource
SHP (preferred)	Shapefile	ESRI
Geo-enabled PDF	Portable Document Format	See the instructions below.
KMZ/KML	Keyhole Markup Language	Google
MPK	Map Package	ESRI

File Extension	File Type Name	Producer
MPX	Microsoft Project Exchange	Microsoft

Additional Resources

If you have any questions or comments, please contact the Hazard Mitigation Assistance (HMA) Helpline at 1-866-222-3580 to speak to someone from FEMA. Callers can leave a message. Messages will be returned during business hours Monday – Friday, 9 a.m.– 5 p.m. Eastern Time.

Additionally, please reference the latest NOFO and the HMA Job Aids website for more information:

- For **BRIC and Flood Mitigation Assistance funding opportunities** and additional program support materials, visit <https://www.fema.gov/grants/mitigation>.
- For **Hazard Mitigation Assistance Job Aids**, visit <https://www.fema.gov/grants/mitigation/training-resources/tools-aids>.
- [Resilience Analysis and Planning Tool User Guide \(fema.gov\)](#). For assistance or questions about RAPT, , email TARrequest@fema.dhs.gov.
- To determine if your community is a disadvantaged community under the **Climate and Economic Justice Screening Tool**, visit <https://screeningtool.geoplatform.gov>.
- To identify the social vulnerability of your community under the **Centers for Disease Control and Prevention Social Vulnerability Index**, visit <https://www.atsdr.cdc.gov/place-health/php/svi/index.html>
- To determine if a community is identified as a **Community Disaster Resilience Zone**, visit <https://www.fema.gov/partnerships/community-disaster-resilience-zones>.

Appendix A: Links to related sections of BRIC Notice of Funding Opportunity

C.4 (c) Identifying as a Disadvantaged Community

Subapplicants should include location data in the “Community” and “Location” sections of the FEMA GO subapplication; this will be used to verify if a project or a Capability and Capacity Building activity is within or primarily benefits designated community disaster resilience zones, Justice40 Communities, or qualifies as an Economically Disadvantaged Rural Community (ERDC)

C.5 (c) Community Disaster Resilience Zones

Hazard mitigation projects and C&CB activities performed within, or that primarily benefit, a designated Community Disaster Resilience Zone, as defined in Title 42 United States Code Section 5136(a)(1), are eligible for an increase in BRIC cost share up to 90% federal / 10% non-federal with the goal to lessen the financial burden on communities to perform resilience-related activities.

E.1.a.II. Technical Evaluation Criteria

5	Application covers a project that is located within or primarily benefits:	30
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	<p>a. A Justice40 community or communities, including any geographically defined community or communities identified as disadvantaged by the Climate and Economic Justice Screening Tool (CEJST).</p> <p>OR</p> <p>b. Designation as an EDRC (as defined in Title 42 United States Code Section 5133(a) a small impoverished community) or a federally recognized Tribal government, or a subapplication within or that primarily benefits a Community Disaster Resilience Zone (as defined in Title 42 United States Code Section Section 5136(a)(1)).</p> <p>Note: A subapplication receives a maximum of 40 points if it is identified by both Justice40 and designated as a Community Disaster Resilience Zone.</p>	<p>OR</p> <p>40</p>
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Appendix B: Links to Related sections of Fiscal Year 2024 Flood Mitigation Assistance Funding Opportunity

C.4.d Other Eligibility Criteria/Restrictions

All subapplications submitted under the Capacity and Capability Building Activities’ Project Scoping and Additional Capacity and Capabilities Building Activities priorities, and Localized Flood Risk Reduction Project priority must demonstrate that the proposed project benefits National Flood Insurance Program (NFIP)-insured properties.

C.5 Cost Share or Match

b Capability and Capacity Building Activities federal cost share options and

c Localized Flood Risk Reduction (LFRR) Projects federal cost share options

Flood mitigation projects and C&CB activities performed within, or that primarily benefit, an area with a Centers for Disease Control (CDC) Social Vulnerability Index (SVI) score that is not less than 0.5001 are eligible for an increase in Flood Mitigation Assistance cost share up to 90% federal / 10% non-federal, with the goal of lessening the financial burden on communities to perform resilience-related activities.

E.2.a Review and Selection Process

II Capacity and Capabilities Building (C&CB) Activities and

III Localized Flood Risk Reduction (LFRR) Projects

Justice40 Community or Community Disaster Resilience Zones	<p>Application covers a project that is located within or primarily benefits:</p> <p>a. A Justice40 community or communities, including any geographically defined community or communities identified as disadvantaged by the Climate and Economic Justice Screening Tool (CEJST), or a federally recognized Tribal government.</p> <p>OR</p> <p>b. Designation as a subapplication within or that primarily benefits a CDRZ (as defined in Title 42 United States Code Section 5136(a)(1)).</p> <p>Note: A subapplication receives a maximum of 300 (LFRR) or 8 (C&CB) points if it is identified by both Justice40 and designated Community Disaster Resilience Zone.</p>	<p>LFRR: 200 C&CB: 6</p> <p>OR</p> <p>LFRR:300 C&CB: 8</p>
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E.2.a.III Localized Flood Risk Reduction (LFRR) Projects

National Flood Insurance Program (NFIP) Policy Holder	Points will be assessed for every NFIP policy that is active as of the Flood Mitigation Assistance application start date (Section D.1, Key Dates and Times, of this funding opportunity) and is verified within the benefiting area of the project. Full and partial points are assigned to this category.	2 points per NFIP policy, up to 200 points
Flood Mitigation Assistance -	Points will be assessed for all Flood Mitigation Assistance- and NFIP- defined Severe Repetitive Loss (SRL) or Repetitive Loss (RL) structures verified within the benefiting area of the project.	5 points per RL and 10 points per

and National Flood Insurance Program (NFIP)- Defined SRL and RL Properties	Full and partial points are assigned to this category.	SRL, up to 175 points
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