IMPROVING COMMUNITY RESILIENCE THROUGH RISK MODELING

PLANNING OPPORTUNITIES REPORT

Background

In order to identify planning opportunities for potential implementation in the pilot communities, AECOM developed a *Resource Inventory* of models, tools, and methods with the assistance of the American Planning Association (APA), Association of State Floodplain Managers (ASFPM), and National Association of Counties (NACo).[1] This inventory includes a description of potential planning opportunities, labeled as "points of intervention," for the integration of these resources into key points in the local planning process. The inventory also identifies the logical target user(s) at the local level for each resource as well as the estimated level of effort needed to utilize the resource.

This report provides a summary of these points of intervention as well as summary comments from APA, ASFPM, and NACo on survey results received from members of their respective associations regarding online resources.[2] It should be noted that the *Implementation Strategy* to be developed as part of Task 4 will include more detailed information on the implementation of the potential planning opportunities identified in this report.

In general, there are many benefits to integrating hazard risk reduction into local comprehensive planning for the purposes of overall community resilience, including:

- Promoting consistency within and concurrency between plans
- Increasing the visibility and elevating the legal standing of mitigation goals, objectives, and policies
- Promoting mitigation as a policy priority across multiple elements (e.g., land use, infrastructure, economic development, environment, etc.)
- Increasing the likelihood of successful hazard mitigation plan implementation
- Encouraging multi-objective management and planning
- Guiding future land use and development
- Leveraging available resources and potential funding opportunities
- Improving coordination between planners, emergency managers, public works directors, building officials, floodplain managers, and other local officials
- Avoiding conflicting outcomes resulting from uncoordinated planning
- Facilitating more holistic solutions to community problems
- Synchronizing geospatial hazard analysis/mapping and policy recommendations
- Eliminating redundancies in planning for known hazards
- Enhancing decision making for post-disaster redevelopment

[1] This refers to the Task 2 Deliverable: Task_2_resource_inventory.xls.

[2] An online survey was released by AECOM in December 2015 to solicit input from APA, ASFPM, and NACo members. The survey consisted of questions regarding the types of flood risk models used by survey respondents, the frequency of their use, and other details to support this project. These questions are provided as Attachment A.

- Providing opportunities for public and stakeholder participation in pre-disaster planning

All of the benefits above will be considerations during future phases of this project.

Overview of Planning Opportunities

The inventory of models, tools, and methods developed as part of Task 2 includes 31 resources that have been selected for evaluation. Each of these resources was tied to a general point in the local planning process as listed in the subsections below where each resource could be utilized to enhance community resilience. These are referred to in this report as local "points of intervention." Community planners are challenged with developing plans and policies that balance physical, social, economic, environmental, and political issues of concern. The intent is for the wide range of resources studied throughout the duration of this project to help cover all of these considerations and to fill in gaps in the local planning sphere of influence.

Opportunities to link resources to key community planning activities are summarized in the subsections below. Also included as part of each subsection are potential scenarios for interjecting the identified resources into the local planning process. These opportunities are all characterized as "potential scenarios" in the sense that any scenarios implemented during the course of this project will be dependent upon the pilot communities selected to participate in this effort. Otherwise, these are all practicable scenarios that could potentially take place in a community given the right conditions.

Opportunity #1: Risk Assessment Development and Updates

Risk assessment development, including the updating of existing risk assessments, is often associated with hazard mitigation planning requirements. However, many other local planning mechanisms include risk analysis for natural, accidental, and/or intentional hazards. These may include safety elements in local comprehensive plans, Emergency Operations Plans (EOPs), Emergency Action Plans (EAPs), Continuity of Operations Plans (COOPs), and others. Communities may implement risk prevention measures through comprehensive plans, zoning ordinances, and floodplain management ordinances. Many of the resources identified in the inventory can be considered and factored into the risk assessment development or update process, especially those that relate to the flood hazard (for the purposes of this project).

- One potential scenario could be to introduce a series of tutorials on risk modeling tools during the updating of a local risk assessment. For most hazard mitigation planning projects, there is a two to three month window, two to three months into the planning process. This window could be used to identify opportunities to enhance and expand the local risk assessment to include better models, better data, better methodologies, etc., leading to better mitigation strategies.

- Another potential scenario could be to coordinate with State agencies on risk analysis related to State-owned facilities in the local planning area, especially any that are critical or essential in nature.

- Another potential scenario could be to coordinate with local and/or State Health and Human Services on any risk analysis that has been or is going to be conducted that involves at-risk or vulnerable populations.

Opportunity #2: Mitigation Strategy Development

Most commonly associated with hazard mitigation planning, the development of goals, objectives, and actions to minimize the effects of future hazard occurrences is critical to community resilience. Prioritization of mitigation activities can be based upon numerous factors including the risk assessment, benefit-cost analysis, public interest, and feasibility. Many of the resources identified in the inventory can be considered during decision-making processes on creating, adopting, updating, or deleting potential mitigation projects. This extends not only to traditional mitigation planning, but any planning process that includes hazard risk reduction policies.

- One potential scenario could be to interject risk analysis findings and information based on the identified resources into strategy sessions where the local planning team is crafting potential risk reduction actions, activities, and projects. This can create a specific focus on risk-based decision making, such as a problem/solution approach that is grounded in enhanced data and/or methodologies.

- Another potential scenario could be to attempt to integrate mitigation strategies into local updates to zoning ordinances, subdivision regulations, site plan reviews, etc., so that natural hazard risk is considered along with other routine criteria. For example, slope with regard to landslide risk, floodplain boundaries with regard to flood risk, etc.

Opportunity #3: Public Outreach and Stakeholder Involvement

Public outreach, open public meetings, public participation surveys, stakeholder involvement meetings, and other opportunities to solicit input for local planning efforts are also ideal for conveying community resilience messages back through those communications channels and for collecting input and buy-in for later decision-making. Many of the resources identified in the inventory can be used to identify vulnerable populations, demonstrate scenarios, visualize potential hazard effects, and illustrate the value of proposed mitigation projects. This can also help with local political support for community resilience activities.

- An example of public outreach and stakeholder involvement could be to engage a cross-section of stakeholders (government services, emergency response groups, local businesses, etc.) to help identify risks and community assets that are essential to their respective missions. This information could be used to update and further evaluate risks that the community faces and to evaluate assumptions on risks. By promoting the varied resources contained in the inventory, there is a greater chance of securing individual stakeholder interests.

- Targeted stakeholder groups could be identified for specific sectors of the community, such as downtown revitalization groups, owners of critical facilities, utility owners, etc. and resources could be tailored for and presented to each group. This could be accomplished through a “Town Hall” type meeting, a booth at a local fair, a kiosk at a shopping mall or other public venue, or other opportunities. The goal would be to encourage the stakeholders to develop a personalized prevention, preparedness, and/or mitigation plan for their homes, businesses, assets, etc.

Opportunity #4: National Flood Insurance Program (NFIP) Participation and Community Rating System (CRS) Points

Active participation in the NFIP is required in order for communities to remain in good standing with the program. Directly associated with flood hazards, NFIP participation also factors in heavily with land use

planning decisions. Any local planning process that takes into account land use planning for flooding, can also take into account other natural hazards with a mappable geographic boundary, such as zoning ordinances and municipal codes, subdivision regulations, site plan review, etc. Communities that are in the process of trying to improve their CRS class rating could be strong candidates for integrating additional resources as a means of accomplishing community resilience. This is also an excellent opportunity to continue to partner with the Federal Emergency Management Agency (FEMA) on issues that relate to floodplain management, natural hazard mitigation, and community resilience.

- One potential scenario could be to integrate specific tools and resources as part of the local floodplain manager's normal routine, including public education and outreach activities.

- Another potential scenario could be to encourage communities to use identified resources as a means of obtaining additional CRS credit points. Specific suggestions would need to be developed and presented to the pilot communities for feedback and recommendations on how to effectively implement this.

Opportunity #5: During the Implementation of Plan Maintenance Procedures

Many plans include detailed procedures for the review, evaluation, and implementation of their plan, including how the community is going to monitor, evaluate, and update the plan over time. During this window of opportunity, there are mechanisms in place to allow for revisions to the plan. These revisions may be necessary in order to reflect changes in development, progress with the plan's goals, etc. Revisions can also be prompted by newer, better data, newer studies, and other opportunities for betterment. This could also be a strong tie-in with the resources identified in the inventory.

- One way to build this into a scenario could be to create a calendar that identifies when all local plans are scheduled to undergo a review of their plan maintenance procedures. A "checklist" and/or "scorecard" of some sort could potentially be developed to coordinate and evaluate the effectiveness of the reviews in terms of risk reduction activities. One idea would be to identify plans that consistently underperform with regard to implementation of mitigation actions and recommend potential solutions, changes, or other refinements to increase effectiveness.

- Another scenario could be based upon a performance measurement tool that highlights gaps, deficiencies, inefficiencies, etc. that could potentially be addressed using identified resources.

Opportunity #6: Comprehensive Land Use Plans

During the comprehensive land use planning process, communities go through a series of steps that includes evaluating existing conditions, assessing current and future needs, land suitability assessments, and developing future land use scenarios. Several of the tools inventoried can help communities identify natural and cultural resources, complete socio-economic analysis, and incorporate natural and human-caused risks into their land suitability assessments. These tools will aid in developing land use plans and policies that will make communities more resilient.

- As communities develop comprehensive land use plans, they can incorporate risk into the planning process by identifying areas of high risk that are prone to flooding and other hazards. This data can then be incorporated into the land suitability analysis to determine the most appropriate land uses for the area of risk. Aligning the future land use plans with the risk

assessment process will help make communities more resilient.

- In addition to the consideration above, communities can also place added emphasis on how decisions in one part of the planning area affect others, especially with regard to larger floodplain management issues should as watershed planning. In other words, ensuring that communities look at a holistic approach to risk management, possibly not just within a specific set of jurisdictional boundaries but possibly involving neighboring communities.

- One potential scenario could be built around comparing and crosswalking the comprehensive land use plans of multiple neighboring communities, possibly in coordination with a review of the local mitigation plans for the same communities, to look for conflicts in policies, strategies, etc. that could inadvertently contribute to hazard risk and diminish overall community resilience. Through this process, neighboring communities might be able to enhance each of their plans based upon the newly broadened perspective.

Summary of Membership Survey Responses

An online survey was released by AECOM in December 2015 to solicit input from APA, ASFPM, and NACo members (see Attachment A). The survey consisted of questions regarding the types of flood risk models used by survey respondents, the frequency of their use, and other details to support this project. Each association reviewed the responses received from their members and generated the following summary comments. Detailed findings of the survey are available in a separate report.

American Planning Association (APA) Survey Summary

APA was asked to review the responses received through the online flood risk modeling survey and to synthesize the results. The respondents tended to reflect the typical mix of APA members. Counting both complete (33) and incomplete (28) survey responses for a total of 61, a majority (36) work for local government, nine in the private sector (consulting firms, for the most part), five in academia, seven for state government, two in regional government, and two in non-profit organizations. As a general rule, about two-thirds of APA members work in local government, so these results are not surprising.

The question about services and tools being used yielded very clear results, with the FEMA Flood Map Service Center a runaway winner. This review scored only those services that respondents indicated they used either often (at least monthly) or very often (at least weekly). The top-ranking services included, with numbers of responses:

- FEMA Flood Map Service Center (31)
- NOAA Sea Level Rise Viewer (9)
- FEMA Hazus-MH (7)
- COAST (5)

A variety of other tools and services were scattered among the responses, including the USGS National Streamflow Information Program, Social Vulnerability Index, TNC Coastal Resilience, NWS Advanced Hydrologic Prediction Service, EPA Flood Resilience Checklist, and CanVis, among others. More importantly, respondents were quite prolific in specifying the types of plans for which these tools and services had been used, and a more elaborate cross-reference of tools and plans for which they are used, and the employment of the respondents, while it might take more time to produce, might well be

a worthwhile exercise. Most commonly, respondents mentioned the application of the most popular services in connection with development of the following types of plans:

- Comprehensive plans
- Area plans
- Hazard mitigation plans
- Post-disaster redevelopment plans
- Capital improvements plans
- Functional plans

With regard to community resilience tools that respondents suggested were helpful, these results were scattered, with most respondents failing to answer this question, but the responses offered included the following, with parentheses indicating the number of times the suggestion was made:

- FEMA DFIRMs or flood maps (5)
- FEMA Flood Hazard Boundary Maps
- Region 2 Coastal Analysis & Mapping
- TNC Coastal Resilience Network
- Sea Level Rise Sketch Planning Tool (University of Florida)
- Oregon Risk Map
- Oregon HazVU (DOGAMI)
- Digital Coast
- Local geomatics services (Hillsborough County FL)
- Hazus
- SWMM

Association of State Floodplain Managers (ASFPM) Survey Summary

ASFPM was asked to review the responses received through the online flood risk modeling survey and to synthesize the results. This analysis is provided below. Overall, the respondents represented a good mix of local officials (municipal/county), regional agencies, state officials, federal officials, and private sector consultants.

Of the resources identified as being used, unsurprisingly most identified those made available by FEMA:

- FEMA Map Service was by far the most used resource by floodplain managers, with many respondents citing its use as often or very often.
- FEMA Hazus-MH
- FEMA DFIRMs and other mapping products (this was a write-in on a number of surveys)

However, there were other resources that were shown being used often or very often by survey respondents:

- COAST
- EPA Flood Resilience Checklist
- NHC SLOSH Maximum of Maximum Model
- NOAA Coastal County Snapshots
- NOAA Coastal Flood Exposure Mapper

- NOAA Sea Level Rise Viewer
- NWS Advanced Hydrologic Prediction Service (AHPS)
- TNC Coastal Resilience 2.0
- USGS National Streamflow Information Program (NSIP)

There are some non-public tools that respondents indicated are helpful, including: Mike 2D and Flo 2D. Also, several public tools were referenced, including:

- FEMA Region 2 Coastal Analysis and Planning (http://www.region2coastal.com/)
- FEMA Region 3 Coastal (www.r3coastal.com)
- NJ Flood Mapper (New Jersey) (http://slrviewer.rutgers.edu/)
- EPA Stormwater Management Model (SWMM)
- Getting to Resilience (http://www.prepareyourcommunitynj.org/)
- New Hampshire Coastal Viewer (http://www.granit.unh.edu/nhcoastalviewer/)
- Connecticut Environmental Conditions Online (CTECO)
- Oregon HazVU
- Watershed Management Plan (http://www.swfwmd.state.fl.us/projects/wmp/)
- USACE North Atlantic Coast Comprehensive Study (http://www.nad.usace.army.mil/CompStudy)

Private sector floodplain managers typically have the most familiarity with and use more tools (usually by a noticeable margin). State/regional floodplain managers are probably somewhere in the middle, and local floodplain managers with the least.

Responses on the uses of tools for different planning activities was extremely varied and there were no discernable trends among floodplain managers other than 1) Private sector floodplain managers tended to know more about which tools could be used for a specific planning activity and that the FEMA Map Service Center tended to be the resource identified as the most used for planning activities.

Several responses talk about:

- Need for more local data or use of local data to improve models or meet expectations of community – national data/tools are not always accepted
- Need for integrated/comprehensive methods/models – each agency has its own tools, resources, which makes them difficult to use

National Association of Counties (NACo) Survey Summary

NACo was asked to review the responses received through the online flood risk modeling survey and to synthesize the results. Overall, very few entries provided additional narrative information. Only four "new" resources were mentioned, and even those seemed connected to other previously identified resources. The resources mentioned consist of:

- ArcGIS Online
    - This resource is a scalable and secure software-as-a-service hosted by Esri that can be used by anyone to easily make and share maps, applications, and analytics as well as browse and use ready-to-use maps.
    - Two survey responders indicated they use it as a direct or indirect resource, one very often (GIS Department Director) and the other occasionally (GIS Manager).

- FEMA Flood Mapping Information Platform
    - This resource provides all of the GIS-based layers available via FEMA and allows for them to be easily added to ArcGIS Online generated maps and applications.
    - The survey responder (GIS Department Director) indicated they use this resource very often for: Comprehensive Plans, Functional Plans, Area Plans, Capital Improvements Plans, Hazard Mitigation Plans, and Post-disaster Redevelopment Plans. They recommend using it to check if properties and structures are in flood zones and to get qualitative information about National Flood Insurance Program and flood reforms over the last several years.

- USGS Water Data
    - This resource provides the public, state and local governments, public and private utilities, and other federal agencies involved with managing water resources with access to water resources data collected at approximately 1.5 million sites in all 50 states, the District of Columbia, and American territories, including the occurrence, quantity, quality, distribution, and movement of surface and underground waters.
    - The survey responder (GIS Manager) indicated that they use this source only occasionally for: Hazard Mitigation Plans and Post-disaster Redevelopment Plans.

- FLO-2D
    - This resource is a comprehensive, fast, user-friendly, two dimensional hydraulic and hydrologic model for flood routing that simulates channel flow, unconfined overland flow and street flow over complex topography. The user can generate flood simulation details by adding rainfall, infiltration, sediment transport, buildings, levees, embankments, walls (wall collapse), dam breach, mudflows, storm drain, culverts, bridges, hydraulic structures and groundwater. Most features can be spatially and temporally variable with historical rainfall events replicated with NEXRAD data. The Basic Model is free with unlimited nodes and multiple flood modeling features. The Pro Model is an annual subscription service that delivers flood routing diversity with added dam breach, sediment transport, mudflow, groundwater, and storm drain components. It includes technical support, free training webinars, updates, newsletter, and discount short courses.
    - The survey responder (Flood Control District Engineer) indicated that they use this source very often for: Comprehensive Plans, Area Plans, Capital Improvements Plans, Hazard Mitigation Plans, and Post-disaster Redevelopment Plans.

The original list of resources included in the survey is fairly comprehensive.[3] Two out of the four "new" resources were related by the resource owner to many of the resources already on the list. The two resources that were not related by the resource owner to others already included on the list were ArcGIS, which is a fairly well-known source, and FLO-2D.

[3] The online survey can be accessed at https://www.surveymonkey.com/r/floodriskmodeling. The survey questions are also provided as Attachment A.

Attachment A:
"Improving Community Resilience Through Risk Modeling" Survey

The American Planning Association (APA), Association of State Floodplain Managers (ASFPM), National Association of Counties (NACo), and AECOM have partnered with the U.S. Department of Housing and Urban Development (HUD) and National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management (OCM) on a project to improve community resilience through risk modeling.

We are asking for your help in creating an inventory of flood risk models, tools, datasets, portals, viewers, and other resources that determine inundation risk at the community level. This is part of a larger vision to identify resources that can be integrated into local planning processes for purposes of hazard risk reduction and overall community resilience.

The type of information we are primarily looking for through this survey is GIS-based, or information that is designed to support GIS-based analysis (such as the methodologies needed to use GIS-based hazard data for local risk assessments.) Examples of the types of resources being included in the inventory are the individual resources available through NOAA's Digital Coast website, such as the Coastal Flood Exposure Mapper or Coastal County Snapshots. Resources can be from national, state, regional, or local sources.

This survey is targeted primarily toward community planners, floodplain managers, GIS coordinators, emergency managers, and others who are involved with local planning processes. The information you provide will assist us in working with two pilot communities over the next year. Results of that study will be provided through a variety of outreach methods for other communities to learn from and replicate.

Please complete the questions on the following pages to the best of your ability. The length of time needed to complete the survey will vary depending on how many resources you choose to provide information on. The core portion of the questionnaire should only take a few minutes to complete. It is recommended that you complete the entire survey in one sitting. Your responses will be kept confidential and will only be used for purposes of developing the inventory.

If you are a member of more than one association and you receive this survey more than once, we are only asking you to complete the survey one time.

AECOM has been contracted to serve as the project consultant for this overall effort. If you have any questions or need any assistance with the survey, please contact Mike Robinson with AECOM.

The questions on this page will provide us with some background information before we ask for your recommendations on resources for us to review for possible inclusion in the inventory.

1. Which association(s) are you a member of? (Check all that apply)

- [ ] APA
- [ ] ASFPM
- [ ] NACo
- [ ] None
- [ ] Other (please specify)

2. What is your primary professional role? (e.g., Planner, GIS Coordinator, Floodplain Manager, Elected Official, etc.)

3. What type of organization do you work for?

- ( ) Private sector
- ( ) A/E firm
- ( ) Federal government
- ( ) State government
- ( ) Local or county government
- ( ) Regional governmental agency
- ( ) Advocacy organization
- ( ) Environmental protection organization
- ( ) Other (please specify)

4. How often do you use any of the following resources?

	Very often (on a weekly basis)	Often (on a monthly basis)	Occasionally (a few times a year or less)	Never
C-CAP Coastal Comparison Tool	○	○	○	○
COAST (Coastal Adaptation to Sea Level Rise Tool)	○	○	○	○
ENOW Explorer	○	○	○	○
EPA Flood Resilience Checklist	○	○	○	○
EPA Climate Resilience Evaluation and Awareness Tool (CREAT)	○	○	○	○
FEMA Flood Map Service Center	○	○	○	○
FEMA Hazus-MH	○	○	○	○
NACo County Explorer	○	○	○	○
NHC SLOSH Maximum of Maximum (MOMs) Model	○	○	○	○
NOAA Coastal County Snapshots	○	○	○	○
NOAA Coastal Flood Exposure Mapper	○	○	○	○
NOAA Sea Level Rise Viewer	○	○	○	○
NOAA/USDA CanVis	○	○	○	○
NWS Advanced Hydrologic Prediction Service (AHPS)	○	○	○	○
Sea Level Affecting Marshes Model (SLAMM)	○	○	○	○
Social Vulnerability Index (SoVI)	○	○	○	○

	Very often (on a weekly basis)	Often (on a monthly basis)	Occasionally (a few times a year or less)	Never
TNC Coastal Resilience 2.0	○	○	○	○
USGS National Streamflow Information Program (NSIP)	○	○	○	○

5. What types of local planning activities have you seen the following resources used for, if any?

	Comprehensive Plans	Functional Plans	Area Plans	Capital Improvements Plans	Hazard Mitigation Plans	Post-disaster Redevelopment Plans	Consolidated Plans	Other	None
C-CAP Coastal Comparison Tool	☐	☐	☐	☐	☐	☐	☐	☐	☐
COAST (Coastal Adaptation to Sea Level Rise Tool)	☐	☐	☐	☐	☐	☐	☐	☐	☐
ENOW Explorer	☐	☐	☐	☐	☐	☐	☐	☐	☐
EPA Flood Resilience Checklist	☐	☐	☐	☐	☐	☐	☐	☐	☐
EPA Climate Resilience Evaluation and Awareness Tool (CREAT)	☐	☐	☐	☐	☐	☐	☐	☐	☐
FEMA Flood Map Service Center	☐	☐	☐	☐	☐	☐	☐	☐	☐
FEMA Hazus-MH	☐	☐	☐	☐	☐	☐	☐	☐	☐
NACo County Explorer	☐	☐	☐	☐	☐	☐	☐	☐	☐
NHC SLOSH Maximum of Maximum (MOMs) Model	☐	☐	☐	☐	☐	☐	☐	☐	☐
NOAA Coastal County Snapshots	☐	☐	☐	☐	☐	☐	☐	☐	☐

	Comprehensive Plans	Functional Plans	Area Plans	Capital Improvements Plans	Hazard Mitigation Plans	Post-disaster Redevelopment Plans	Consolidated Plans	Other	None
NOAA Coastal Flood Exposure Mapper	☐	☐	☐	☐	☐	☐	☐	☐	☐
NOAA Sea Level Rise Viewer	☐	☐	☐	☐	☐	☐	☐	☐	☐
NOAA/USDA CanVis	☐	☐	☐	☐	☐	☐	☐	☐	☐
NWS Advanced Hydrologic Prediction Service (AHPS)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Sea Level Affecting Marshes Model (SLAMM)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Social Vulnerability Index (SoVI)	☐	☐	☐	☐	☐	☐	☐	☐	☐
TNC Coastal Resilience 2.0	☐	☐	☐	☐	☐	☐	☐	☐	☐
USGS National Streamflow Information Program (NSIP)	☐	☐	☐	☐	☐	☐	☐	☐	☐

6. Briefly describe any examples you can think of where any of the resources listed above were used successfully for local risk reduction.

Community Resilience Resource Form (1 of 10)

What flood risk modeling resources (mostly GIS-based in nature) would you recommend to a community that is integrating community resilience, risk reduction and hazard mitigation elements into their existing local planning processes?

7. Name of resource:

8. URL of resource:

9. Owner of resource (if known):

10. Brief description of resource:

11. Primary benefit of resource for community resilience:

12. How often do you use this resource?

	Very often (on a weekly basis)	Often (on a monthly basis)	Occasionally (a few times a year or less)	Never
Frequency of use:	○	○	○	○

13. What types of local planning activities have you seen this resource used for, if any?

	Comprehensive Plans	Functional Plans	Area Plans	Capital Improvements Plans	Hazard Mitigation Plans	Post-disaster Redevelopment Plans	Consolidated Plans	Other	None
Types of plans:	☐	☐	☐	☐	☐	☐	☐	☐	☐

14. Is this resource referenced in any guidance material that you are aware of?

- ◯ Yes
- ◯ No

If yes, please specify:

*** 15. Would you like to fill out a form for another resource?**

- ◯ Yes
- ◯ No

Thank you!

Thank you for participating in this survey. Your input will be very useful as we develop our inventory.

16. Please feel free to provide any additional comments you may have in the box below, including any new potential resources you think might benefit communities in the future.

17. We encourage you to leave your contact information so that we have a record of your participation and in case we have any follow-up questions regarding your responses (optional):

Name:	
Organization:	
Email Address:	
Phone Number:	