

appendix c worksheets

Worksheet #1	Identify the Hazards
Worksheet #2	Profile Hazard Events
Worksheet #3a	Inventory Assets (Tasks A and B)
Worksheet #3b	Inventory Assets (Task C)
Worksheet #4	Estimate Losses



Date:

What kinds of natural hazards can affect you?

Task A. List the hazards that may occur.

1. Research newspapers and other historical records.
2. Review existing plans and reports.
3. Talk to the experts in your community, state, or region.
4. Gather information on Internet Websites.
5. Next to the hazard list below, put a check mark in the Task A boxes beside all hazards that may occur in your community or state.

Task B. Focus on the most prevalent hazards in your community or state.

1. Go to hazard Websites.
2. Locate your community or state on the Website map.
3. Determine whether you are in a high-risk area. Get more localized information if necessary.
4. Next to the hazard list below, put a check mark in the Task B boxes beside all hazards that pose a significant threat.

	Task A	Task B
Avalanche	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Erosion	<input type="checkbox"/>	<input type="checkbox"/>
Coastal Storm	<input type="checkbox"/>	<input type="checkbox"/>
Dam Failure	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>
Earthquake	<input type="checkbox"/>	<input type="checkbox"/>
Expansive Soils	<input type="checkbox"/>	<input type="checkbox"/>
Extreme Heat	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>
Hailstorm	<input type="checkbox"/>	<input type="checkbox"/>
Hurricane	<input type="checkbox"/>	<input type="checkbox"/>
Land Subsidence	<input type="checkbox"/>	<input type="checkbox"/>
Landslide	<input type="checkbox"/>	<input type="checkbox"/>
Severe Winter Storm	<input type="checkbox"/>	<input type="checkbox"/>
Tornado	<input type="checkbox"/>	<input type="checkbox"/>
Tsunami	<input type="checkbox"/>	<input type="checkbox"/>
Volcano	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire	<input type="checkbox"/>	<input type="checkbox"/>
Windstorm	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>

Use this space to record information you find for each of the hazards you will be researching. Attach additional pages as necessary.

Hazard or Event Description (type of hazard, date of event, number of injuries, cost and types of damage, etc.)	Source of Information	Map Available for this Hazard?	Scale of Map

Note: **Bolded** hazards are addressed in this How-To Guide.

Date: _____

How Bad Can It Get?

Task A. Obtain or create a base map.








You can use existing maps from:

- Road maps
- USGS topographic maps or Digital Orthophoto Quarter Quads (DOQQ)
- Topographic and/or planimetric maps from other agencies
- Aerial topographic and/or planimetric maps

OR you can create a base map using:

- Field surveys
- GIS software
- CADD software
- Digitized paper maps

Title of Map	Scale	Date

 Flood	<input type="checkbox"/> 1. Get a copy of your FIRM. _____ <input type="checkbox"/> 2. Verify the FIRM is up-to-date and complete. _____	<input type="checkbox"/> 1. Transfer the boundaries from your FIRM onto your base map (floodway, 100-yr flood, 500-yr flood). <input type="checkbox"/> 2. Transfer the BFEs onto your base map.
 Earthquake	<input type="checkbox"/> 1. Go to the http://geohazards.cr.usgs.gov Website. <input type="checkbox"/> 2. Locate your planning area on the map. <input type="checkbox"/> 3. Determine your PGA.	<input type="checkbox"/> 1. Record your PGA: _____ <input type="checkbox"/> 2. If you have more than one PGA print, download or order your PGA map.
 Tsunami	<input type="checkbox"/> 1. Get a copy of your tsunami inundation zone map. _____	<input type="checkbox"/> 1. Copy the boundary of your tsunami inundation zone onto your base map.
 Tornado	<input type="checkbox"/> 1. Find your design wind speed. _____	<input type="checkbox"/> 1. Record your design wind speed: _____ <input type="checkbox"/> 2. If you have more than one design wind speed, print, download, or copy your design wind speed zones, copy the boundary of your design wind speed zones on your base map, then record the design wind speed zones on your base map.
 Coastal Storm	<input type="checkbox"/> 1. Get a copy of your FIRM. _____ <input type="checkbox"/> 2. Verify that the FIRM is up-to-date and complete. <input type="checkbox"/> 3. Determine the annual rate of coastal erosion. _____ <input type="checkbox"/> 4. Find your design wind speed. _____	<input type="checkbox"/> 1. Transfer the boundaries of your coastal storm hazard areas onto your base map. <input type="checkbox"/> 2. Transfer the BFEs onto your base map. <input type="checkbox"/> 3. Record the erosion rates on your base map: _____ <input type="checkbox"/> 4. Record the design wind speed here and on your base map: _____
 Landslide	<input type="checkbox"/> 1. Map location of previous landslides. _____ <input type="checkbox"/> 2. Map the topography. _____ <input type="checkbox"/> 3. Map the geology. _____ <input type="checkbox"/> 4. Identify the high-hazard areas on your map. _____	<input type="checkbox"/> 1. Mark the areas susceptible to landslides onto your base map.
 Wildfire	<input type="checkbox"/> 1. Map the fuel models located within the urban-wildland interface areas. _____ <input type="checkbox"/> 2. Map the topography. _____ <input type="checkbox"/> 3. Determine your critical fire weather frequency. _____ <input type="checkbox"/> 4. Determine your fire hazard severity. _____	<input type="checkbox"/> 1. Draw the boundaries of your wildfire hazard areas onto your base map.
Other	<input type="checkbox"/> 1. Map the hazard. _____	<input type="checkbox"/> 1. Record hazard event info on your base map.

Date: _____ *What will be affected by the hazard event?*

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.

Hazard _____

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential									
Commercial									
Industrial									
Agricultural									
Religious/ Non-profit									
Government									
Education									
Utilities									
Total									

Task B. Determine whether (and where) you want to collect additional inventory data.

- | | Y | N |
|---|-------|-------|
| 1. Do you know where your greatest damages may occur in your hazard areas? | _____ | _____ |
| 2. Do you know whether your critical facilities will be operational after a hazard event? | _____ | _____ |
| 3. Is there enough data to determine which assets are subject to the greatest potential damages? | _____ | _____ |
| 4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards? | _____ | _____ |
| 5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards? | _____ | _____ |
| 6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence? | _____ | _____ |
| 7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives? | _____ | _____ |

Date:

How will these hazards affect you?

Hazard _____

Structure Loss (Task A.1.)					Contents Loss (Task A.2.)					
Name/ Description of Structure	Structure Replacement Value (Step 3) (\$)	x	Percent Damage (Step 4) (%)	=	Loss to Structure (\$)	Replacement Value of Contents (Step 3) (\$)	x	Percent Damage (Step 4) (%)	=	Loss to Contents (\$)
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
Total Loss to Structure						Total Loss to Contents				

Structure Use and Function Loss (Task A.3.)							Structure Loss + Content Loss + Function Loss (\$)		
Name/ Description of Structure	Average Daily Operating Budget (Step 3) (\$)	x	Functional Downtime (Step 4) (# of days)	+	Displacement Cost per Day (Step 3) (\$)	x		Displacement Time (Step 4) (\$)	=
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
Total Loss to Structure Use & Function									
									Total Loss for Hazard Event (Task B.2.)