# APPENDIX: WORK SESSION MATERIALS

**Contents for Each Work Session:**

- Sign-in sheets
- Agendas
- Handouts

# WORK SESSION 1

# Sign-in Sheet – Work Session 1

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| Name | Agency/Department | Email | Phone |
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# Agenda – Work Session 1

## Provide Introduction and Framework, and Assess Community Vulnerability

**Date:**
**Time:**
**Location:**
**Call-in #:**

1. **Welcome and introductions (10 minutes)**

2. **Project overview (30 minutes)**

    a. **Project background and goals**
    b. **Timeline**
    c. **Individual roles and expectations**

3. **Identify community issues and relevant current projects underway (20 minutes)**

4. **Frame the risk assessment process and identify hazards to be addressed (30 minutes)**

5. **Assess community vulnerability (75 minutes)**

6. **Develop problem statements (20 minutes)**

7. **Next steps (5 minutes)**

**Before Work Session 2:**

**ACTION ITEMS TO COMPLETE BEFORE NEXT WORK SESSION:**

| | |
|---|---|
| € | Read FEMA's *Local Mitigation Handbook*, Task 5 – pp. 5-1 to 5-20, fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf . This is a step-by-step guide to the FEMA process for conducting a risk assessment. |
| € | Start preparing the HIRA (may require involvement by some working group participants) |
| € | If you were assigned a data collection role, please collect and distribute and be able to report back to the working group on the relevance of such data to this project during the next work session. |

| | |
|---|---|
| € | If you were given a writing assignment for the stakeholder engagement strategy, please complete that assignment by the agreed upon date and be prepared to report to the working group during the next working session. |
| € | Read "Practice Safe Growth Audits." planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/zoningpractice/open/pdf/oct09.pdf |
| € | Browse "Choosing appropriate planning tools and strategies" in the *Planning for Hazards* guide – pp. 213-214. planningforhazards.com/choosing-appropriate-planning-tools-and-strategies |
| € | Browse the *Planning for Hazards* guide Chapter 4, Planning Tools and Strategies – pp. 23-211 to explore the types of tools to consider implementing. planningforhazards.com/planning-tools-and-strategies |
| € | Browse the applicable planning tools and strategies related to your community's highest risk hazards in the *Planning for Hazards* guide appendix, pp. A-1 to A-47. planningforhazards.com/hazard-identification-and-risk-assessment |
| € | Browse FEMA's *Local Mitigation Handbook*, Task 4 – pp. 4-1 to 4-5, fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf |
| € | Browse FEMA's *Local Mitigation Handbook*, Task 6 – pp. 6-1 to 6-13, fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf |
| € | Prepare the remaining components of the HIRA or local risk assessment (may require working group member participation). |
| € | Follow up on stakeholder engagement tasks. |

# Work Session 1, Handout 1: Hazard Frequency and Severity Chart

*This handout should be populated as a group with the working group participants.*

*Check the box related to each hazard's probability and severity.*

| | Avalanche | Drought | Earthquake | Flood | Hazardous Materials | Extreme Heat | Landslide / Rockfall | Soil Hazards | Wildfire | Wind | Winter Storm | Other Hazard | Other Hazard |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency** (is it likely to happen again?) | | | | | | | | | | | | | |
| Highly likely | | | | | | | | | | | | | |
| Likely | | | | | | | | | | | | | |
| Occasional | | | | | | | | | | | | | |
| Unlikely | | | | | | | | | | | | | |
| **Severity** (how much damage does it cause?) | | | | | | | | | | | | | |
| Catastrophic | | | | | | | | | | | | | |
| Critical | | | | | | | | | | | | | |
| Limited | | | | | | | | | | | | | |
| Negligible | | | | | | | | | | | | | |

## Probability/Frequency

| | |
|---|---|
| **Highly likely** | Near 100 percent chance of occurrence next year or it happens every year. |
| **Likely** | 10-100 percent chance of occurrence next year or it has a recurrence interval of 10 years or less. |
| **Occasional** | 1-10 percent chance of occurrence in the next year or it has a recurrence interval of 11 to 100 years. |
| **Unlikely** | Less than 1 percent chance of occurrence in the next 100 years or it has a recurrence interval of greater than every 100 years. |

## Severity

| | |
|---|---|
| **Catastrophic** | Extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, and/or government functions which includes sustained city and regional impacts; overwhelms the existing response strategies and state and local resources; and requires significant out-of-state and Federal resources. |
| **Critical** | Isolated deaths and/or multiple injuries and illnesses; major or long-term property damage that threatens structural stability; and/or interruption of essential facilities and services for 24-72 hours. |
| **Limited** | Minor injuries and illnesses; minimal property damage that does not threaten structural stability; and/or interruption of essential facilities and services for less than 24 hours. |
| **Negligible** | No or few injuries or illnesses; minor quality of life loss; little or no property damage; and/or brief interruption of essential facilities and services. |

**NOTES:**

# Work Session 1, Handout 2: HIRA Summary Outline and Responsibilities

*This handout provides a summary outline of a typical HIRA and can be used to assign responsible parties to research and writing assignments. Responsibilities for Sections 2, 3, and 4 may not be determined until work sessions 2 or 3.*

| Section | Description |
|---|---|
| **Section 1: Hazard Identification** | This section describes the various hazards that are present in the community and explains why some have been omitted from further consideration. |
| [*responsible party*] | [*assignment*] |
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| **Section 2: Community Assets** | This section documents the community's assets including critical facilities and natural, historic, cultural, and economic assets. |
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| **Section 3: Risk Analysis** | This section analyzes the community's assets and describes the potential impacts and losses associated with each hazard through exposure analysis, historical analysis, and scenario analysis. This section typically requires the greatest mapping needs. |
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| **Section 4: Vulnerability Summary** | This section documents the community's vulnerability to significant hazard risks including an analysis of land use and development trends, social vulnerability, and an assessment of the community's administrative, technical, and financial capabilities. |
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# Work Session 1, Handout 3: Initial Data Collection Checklist

*[internal/facilitator use]*

***NOTE**: Responsible parties should be familiar with the respective data and be prepared to present its relevance to the larger working group during Work Session 2.*

| Data Type and Description | Available? | Responsible Party for Collecting Data |
|---|---|---|
| **Plans, regulations, and studies** | | |
| Hazard mitigation plan | ☐ | |
| Community wildfire protection plan | ☐ | |
| Comprehensive or community master plan | ☐ | |
| Subarea plans | ☐ | |
| Parks, open space, and recreation plan | ☐ | |
| Climate plan | ☐ | |
| Sustainability plan | ☐ | |
| Land use and subdivision regulations | ☐ | |
| Relevant building codes | ☐ | |
| Capital improvements plan | ☐ | |
| Stormwater management plan | ☐ | |
| Pre-disaster or disaster recovery plan | ☐ | |
| Departmental organizational charts | ☐ | |
| Administrative and/or engineering manual(s) | ☐ | |
| Supporting developer handouts | ☐ | |
| **GIS data** | | |
| Parcels | ☐ | |
| Current land use | ☐ | |
| Future land use | ☐ | |
| Zoning | ☐ | |
| Land ownership (fed/state/local/etc.) | ☐ | |
| Trees | ☐ | |
| Building footprints | ☐ | |
| Roads | ☐ | |
| Critical infrastructure | ☐ | |
| Parks and open space | ☐ | |
| Bodies of water | ☐ | |
| Floodplain | ☐ | |
| Wildfire hazards | ☐ | |

| | | |
|---|---|---|
| Geologic hazards | ☐ | |
| Click here to enter text. | ☐ | |

# Work Session 1, Handout 4: Identifying Community Assets

*This handout should be used to identify community assets. Community assets can fall within several categories, including but not limited to people, economy, built environment, and natural environment. Many assets fall within more than one of those categories (for example, emergency services and healthcare are both important "people" as well as "built environment" critical facilities).*

| Critical Facilities, Infrastructure, and Assets | Examples | Our Community |
|---|---|---|
| Water | Reservoirs, stormwater system, wastewater facilities | |
| Emergency Services | Fire stations, police stations, etc. | |
| Communications | Telephone lines, radio towers, cellular service | |
| Gas/Electric | Natural gas lines, power lines, gasoline stations | |
| Healthcare and Public Health | Hospitals, urgent care facilities, doctor's offices | |
| Food/Grocery | Restaurants, grocery stores, markets | |
| Transportation | Major roads, bridges, bus stations, airports | |
| Banking | Banks and other financial institutions | |
| Government Facilities | City hall, schools, jails, military installations | |
| Nearby Dams | Dams (private and public) | |
| Computer Driven Technology | Fiber-optic and cable | |
| Nuclear Materials/Waste | Nuclear power plant, waste storage facility | |
| Chemical Facilities | Propane storage, other chemical storage | |
| Defense Industry Contractors | Staff support services to military installation | |
| Postal or Shipping | USPS offices, FedEx, UPS, others | |
| Critical Manufacturing | Manufacturing critical to local economy | |
| Monuments or Icons | Historic buildings, natural features, local icons | |
| Places of Assembly | Churches, public squares | |
| Natural Assets | Wetlands, endangered species, parks and open spaces | |
| Historic Assets | Registered historic properties or districts, historic landmarks | |
| Cultural Assets | Zoos, museums, libraries | |
| Economic Assets | Top employers in the region or local jurisdiction, other key economic assets | |

# Work Session 1, Handout 5: Developing Problem Statements based on HIRA

| Hazard | Problem Statements |
|---|---|
| **Avalanche** | Click here to enter text. |
| **Drought** | |
| **Earthquake** | |
| **Flood** | *E.g., There are 18 identified critical facilities located in the 100-year floodplain. The community should look for opportunities to relocate such facilities to the extent possible.* |
| **Hazardous Material Release** | |
| **Extreme Heat** | |
| **Landslide, Mud/Debris Flow, and Rockfall** | |
| **Soil Hazards** | |
| **Wildfire** | *E.g., Nearly 38% of the community's parcels are located within the wildland-urban interface. Review of proposed development in these areas should be strengthened.* |
| **Wind Hazards** | |
| **Severe Winter Storms** | |

## WORK SESSION 2

# Sign-in Sheet – Work Session 2

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# Agenda – Work Session 2

## Assess Capabilities and Develop Planning Strategies

**Date:**
**Time:**
**Location:**
**Call-in #:**

1. **Welcome and updates (10 minutes)**
2. **Follow up on Work Session 1 (10 minutes)**
3. **Discuss the draft HIRA or local risk assessment (30 minutes)**
4. **Review community capabilities (45 minutes)**
5. **Discuss initial planning implementation strategies (60 minutes)**
6. **Next steps (5 minutes)**

**ACTION ITEMS TO COMPLETE BEFORE NEXT WORK SESSION:**

| | |
|---|---|
| € | Review the summary table of planning tools and strategies – pp. 28-29<br>planningforhazards.com/planning-tools-and-strategies |
| € | Read Chapter 5 – Moving Forward in the *Planning for Hazards* guide – pp. 213-225<br>planningforhazards.com/moving-forward |
| € | Read FEMA's *Local Mitigation Handbook*, Task 6, subsections on evaluation criteria and action prioritization – pp. 6-7 to 6-8,<br>fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf |
| € | Review FEMA's *Integrating Hazard Mitigation into Local Planning*, Table 2-1 beginning on page 2-4,<br>fema.gov/media-library-data/20130726-1908-25045-0016/integrating_hazmit.pdf |
| € | Finalize HIRA or local risk assessment (may require working group member participation). |

| | |
|---|---|
| € | Follow up on stakeholder engagement tasks. |

# Work Session 2, Handout 1: Community Capability Assessment Questions

Adapted from the American Planning Association's "Practice Safe Growth Audits" – Zoning Practice Issue 10.09

| Community Capability Assessment Questions | Yes/No | Actions |
|---|---|---|
| **Comprehensive Plan** | | |
| **Land Use** | | |
| Does the future land use map clearly identify natural hazard areas? | | |
| Do the land use policies discourage development or redevelopment within natural hazard areas? | | |
| Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas? | | |
| **Transportation** | | |
| Does the transportation plan limit access to hazard areas? | | |
| Is transportation policy used to guide growth to safe locations? | | |
| Are movement systems designed to function under disaster conditions (e.g., evacuation)? | | |
| **Environmental Management** | | |
| Are environmental systems that protect development from hazards identified and mapped? | | |
| Do environmental policies maintain and restore protective ecosystems? | | |
| Do environmental policies provide incentives to development that is located outside protective ecosystems? | | |
| **Public Safety** | | |
| Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan? | | |
| Is safety explicitly included in the plan's growth and development policies? | | |
| Does the monitoring and implementation section of the plan cover safe growth objectives? | | |
| **Zoning Ordinance** | | |
| Does the zoning ordinance conform to the comprehensive plan in terms of discouraging | | |

| Community Capability Assessment Questions | Yes/No | Actions |
|---|---|---|
| development or redevelopment within natural hazard areas? | | |
| Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones? | | |
| Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use? | | |
| Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains? | | |
| **Subdivision Ordinance** | | |
| Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas? | | |
| Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources? | | |
| Do the regulations allow density transfers where hazard areas exist? | | |
| **Capital Improvement Program and Infrastructure Policies** | | |
| Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards? | | |
| Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards? | | |
| Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan? | | |
| **Other** | | |
| Do small area or corridor plans recognize the need to avoid or mitigate natural hazards? | | |
| Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces? | | |
| Do economic development or redevelopment strategies include provisions for mitigating natural hazards? | | |
| Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards? | | |

**NOTES:**

# WORK SESSION 3

# Sign-in Sheet – Work Session 3

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# Agenda – Work Session 3

## Prioritize Planning Implementation Tools

**Date:**

**Time:**

**Location:**

**Call-in #:**

1. **Welcome and updates (10 minutes)**
2. **Discuss draft assessment memo (20 minutes)**
3. **Planning implementation tools prioritization exercise (120 minutes)**
4. **Next steps (10 minutes)**

**ACTION ITEMS TO COMPLETE BEFORE NEXT WORK SESSION:**

| | |
|---|---|
| € | Depending on the planning implementation strategies selected, read the respective tool profiles and model code language (where applicable) in the Planning for Hazards guide, Chapter 4 – pp. 23-211 planningforhazards.com/planning-tools-and-strategies |
| € | Contact individuals that should be involved in drafting and/or reviewing tool(s). |
| € | Prepare draft planning implementation tools and distribute to working group. |
| € | Review draft planning implementation tools once distributed to the working group. Prepare to share feedback during Work Session 5. |
| € | Participate in interim meetings if you play an integral role in the development of the planning tools selected. |
| € | Follow up on stakeholder engagement tasks. |

# Work Session 3, Handout 1: Prioritization Criteria

This form should be completed for each planning implementation being considered.

| PLANNING IMPLEMENTATION TOOL: | | | |
|---|---|---|---|
| **Evaluation Criteria** | **Discussion: It is important to consider…** | **Factors** | **Notes/Scoring** |
| **Effective Risk Reduction** | …if the planning implementation tool is expected to result in reducing risk to known hazards | • Proven risk reduction measures<br>• Addresses problem statements from HIRA | |
| **Administrative Capability** | …if the community has the capacity to implement the tool in-house or if it would require additional resources | • Staffing needs<br>• Funding allocation<br>• Maintenance and operations<br>• Technical feasibility | |
| **Political and Public Support** | …the political and public temperature related to the environment, economic development, safety, and emergency management | • Political support<br>• Public support<br>• Local champions/advocates<br>• Alignment with policies | |
| **Benefits and Costs** | …whether or not the planning tool could be funded with current or future internal and external resources and if the costs are reasonable for the type of project | • Benefits vs. costs<br>• Contribution to other economic goals<br>• Outside funding required | |
| **Alignment with Community Goals** | …the potential impacts on the environment and the community as it relates to adopted policies | • Aligned with environmental policies<br>• Builds resilience<br>• Protects natural assets | |
| **Social Equity** | …whether or not there would be public support for the planning implementation tool | • Community acceptance<br>• Avoids adverse impacts to population<br>• Social equity – applies fairly across various geographies and social backgrounds | |

## Other potential considerations:

- Does the community have the legal authority to implement the planning tool?
- Would the project solve multiple problems in the community? (Is there synergy with other community values and policies?)
- Is the project relatively easy to develop, fund, implement, and close out?

# WORK SESSION 4

# Sign-in Sheet – Work Session 4

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# Agenda – Work Session 4

## Review and Refine Draft Planning Implementation Tools

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**Date:**
**Time:**
**Location:**
**Call-in #:**

1. **Welcome and updates (10 minutes)**

2. **Review draft implementation tools (90 minutes)**

3. **Develop outreach strategy ad process for approval and/or adoption (20 minutes)**

4. **Next steps (10 minutes)**

**ACTION ITEMS TO COMPLETE BEFORE NEXT WORK SESSION:**

| | |
|---|---|
| € | Read the "Implementation and Enforcement" subsection under "Implementing Planning Tools and Strategies" – pp. 214-218 in the *Planning for Hazards* guide, planningforhazards.com/implementing-planning-tools-and-strategies |
| € | Browse FEMA's *Local Mitigation Handbook*, Task 7 Keep the Plan Current – pp. 7-1 to 7-38, fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf |
| € | Submit additional feedback related to draft implementation tools to the facilitator and/or project manager. |
| € | Establish timeline for adoption/approval of planning implementation tools. |

| | |
|---|---|
| € | Follow up on stakeholder engagement tasks. |

# Work Session 4, Handout 1: (template)

## Review and Refine Draft Planning Implementation Tools

Click here to enter text.

| Chapter/Section Number | Comments |
|---|---|
| Click here to enter text. | Click here to enter text. |
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**NOTES:**

# WORK SESSION 5

# Sign-in Sheet – Work Session 5

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# Agenda – Work Session 5

## Establish Implementation and Maintenance Procedures

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**Date:**
**Time:**
**Location:**
**Call-in #:**

1. **Welcome and updates (10 minutes)**
2. **Discuss final draft implementation tools (45 minutes)**
3. **Discuss adoption and/or approval procedures (15 minutes)**
4. **Establish protocols for ongoing administration and maintenance (30 minutes)**
5. **Identify future risk reduction projects (15 minutes)**
6. **Dismiss the working group (5 minutes)**

***Thank you again for your commitment to strengthening Colorado communities!***

# Work Session 5, Handout 1: Implementation and Maintenance Worksheet

*Identify the ongoing needs to effectively administer and maintain the planning tool(s).*

| Implementation Tool | Who Administers? | Ongoing Enforcement Required? | Performance Metric | Evaluation Period/Responsibility | Updates Required |
|---|---|---|---|---|---|
| ***[EXAMPLE]*** *Overlay zoning* | *Planning department* | *Yes, work with code enforcement division* | *Losses avoided within overlay; streamlined development procedures* | *Annually/Planning and Zoning Commission* | *12/24/17 – need to require defensible space within overlay* |
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