2023 State of Nevada Enhanced HMP Update

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Why Engage in Hazard Mitigation Planning?

- Mitigation is good for us – increases resilience for our communities
- "Reduces loss of life and property by minimizing the impact of disasters"
- FEMA requires a HMP to receive all categories of public assistance
- It saves us money – every $1 of mitigation saves $6
- It makes us money
  - $2B - $10B in post disaster hazard mitigation
  - $2.295B in 2022 pre-disaster Building Resilient Infrastructure and Communities
- You have the local knowledge / perspective
  - We can pull from databases, but you have the insight for your community
- Expectations
  - Review shared documents
  - Provide your input

Overview

- Wise Oak Support
- Administrative
- Update methodology
- Progress
- Future Actions

Wise Oak Support

GENERAL PROJECT MANAGEMENT ASSISTANCE

RESEARCH AND ANALYSIS

GIS

TECHNICAL WRITING

OTHER ESSENTIAL ACTIVITIES ON REQUEST

Major Actions to Date

Developed / developing text style guide

Developed / developing image style guide

Developed / developing FEMA National Risk Index maps

- Hazards Risk Index
- Expected annual loss
- Social vulnerability
- Community resilience

Aligned hazards with national/state standards

- New hazard names match the State of Nevada Threat and Hazards Guide
- National Risk Index hazards

Working with FEMA on potential new hazard assessment process

Administrative

Style Guide - Text

Text

Font

- Body: Times New Roman, 12 pt.
- Figure and table labels: Figure/Label; Arial, 10 pt.

General:

- Alignment: Justified
- Outline Level: Body Text
- Special: none
- Unselect: mirror indents
- Select: "Automatically adjust right indent when document grid is defined."

Line Spacing

- Single: 6 pt. before and after; justified; Body Text; 0 indentation;
- Unselect - "Don't add space between paragraphs of the same style"
- Select - Snap to grid when document grid is defined

Outline

- X
- X.X
  - Heading 1: Times New Roman; 13 pt.; bold
- X.X.X
  - Heading 2: Times New Roman; 13 pt.; bold
- X.X.X.X
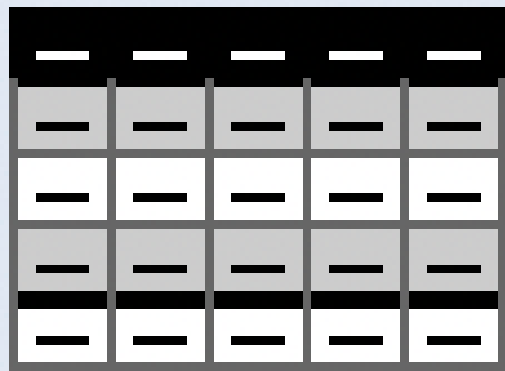 - Heading 3: Times new Roman; 12 pt.; Bold; Italics

Style Guide - Graphics

Figures

- Label
  - Figure/Table
- Black border
  - Black
  - ¾ point
- Shadow
  - Right and bottom

Tables

- Label
  - Table Title
- Style

What preferences do you have?

Other?

Update Methodology

Text Review

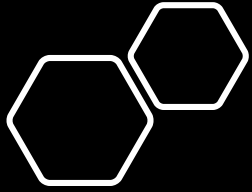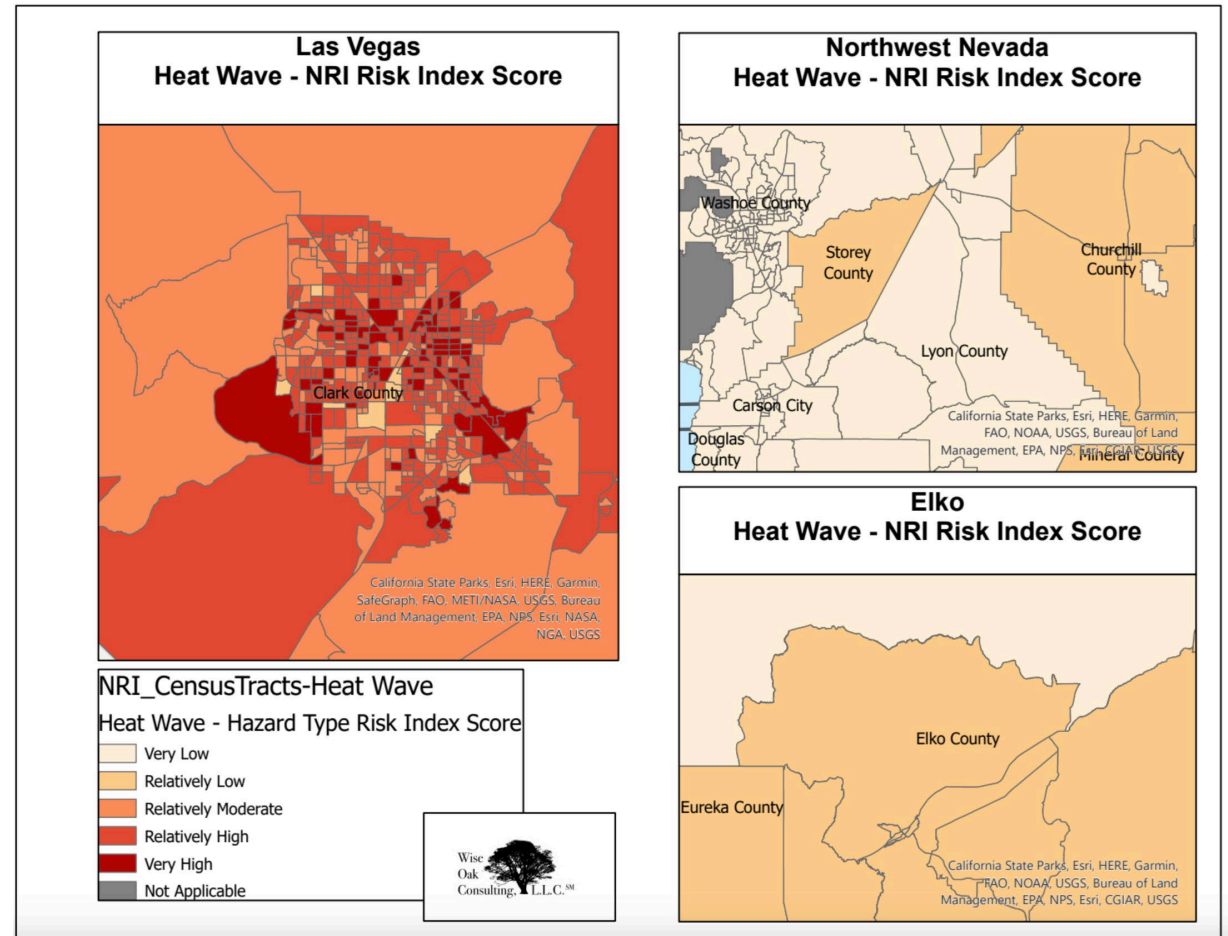|		
Editorial review for standardization	Updating – NOT re-writing	Freshening up information
Consistent formatting	"XX" is a placeholder for items like figure numbers	The very last review will be for final formatting and numbering

Image Review

- Updating if older than 1 year
- Border: Black; ¾ point
- Shadow: Right and Bottom

Table Review

- General: Times New Roman 11 point
  - Adjust as required
- Black Heading
- Table Title
- Alternating grey and white

Table 3-03. HMP – 2022 THIRA Crosswalk.			
HMP Profiled Hazard	**HMP Risk**	**THIRA Threat/Hazard**	**THIRA Jurisdiction**
N/A	N/A	Utility Interruption – Extreme Heat	Southern Nevada
Human-Caused Threats			
Terrorism/WMD (Not profiled)	N/A	• Active Shooter • Active Shooter • Mass Casualty Attack	• Northern Nevada • Eastern Nevada • Southern Nevada
Terrorism/WMD (Not profiled)	N/A	• Cyberattack – SCADA • Cyberattack – Ransomware on Pipeline • Cyberattack • Cyberattack	• Northern Nevada • Northern Nevada • Eastern Nevada • Southern Nevada
Terrorism/WMD (Not profiled)	N/A	Tunnel Poisoning Gas Attack	Southern Nevada
Terrorism/WMD (Not profiled)	N/A	Pipeline Attack	Southern Nevada

HMP Hazards vs. State vs. FEMA NRI (1 of 3)

Legacy HMP	Nevada Threat & Hazard Guide	FEMA NRI	Comment / Question
Avalanche	Geohazards - Avalanche	Avalanche	Updated with no name change
Drought	Drought	Drought	Updated with no name change
Earthquakes	Geohazards - Earthquake	Earthquake	Updated and changed to "Earthquake"
Epidemic	Infectious Disease • Emerging Disease with Epidemic or Pandemic Potential; • Respiratory Virus with Epidemic or Pandemic Potential	N/A	Updated and changed to "Infectious Disease"
Expansive Soils	N/A	N/A	No change
Heat extreme	Severe Weather • Extreme Heat	Heat Wave	Updated and changed to "Extreme Heat"
Floods	Floods, Landslides & Debris Flow • Alluvial Fan Flooding • Flash Flood • Riverine	Riverine Flooding	Updated and remains "Floods"
Hail & Thunderstorms	Severe Weather • Microburst • Straight-Line Winds • Thunderstorms & Lightning	• Hail • Lightning • Strong Wind	Do we want to Make this section "Severe Weather" or change to "Thunderstorm & Lightning" or leave it as is?

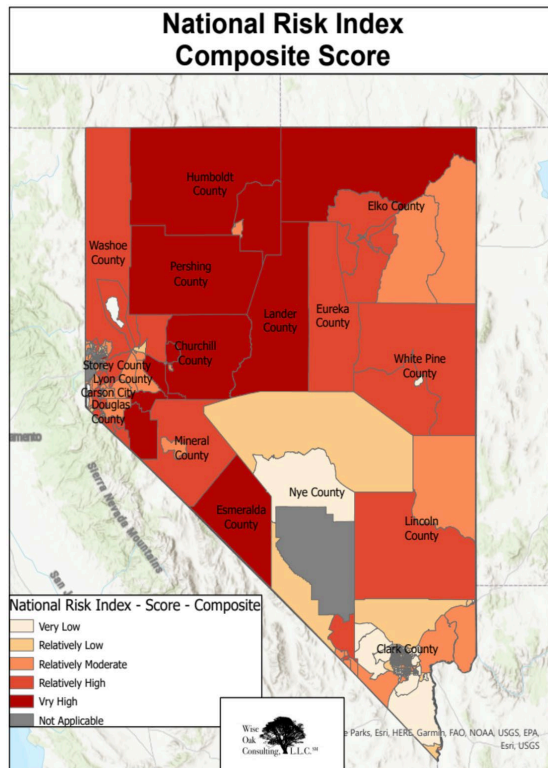| Legacy HMP	Nevada Threat & Hazard Guide	FEMA NRI	Comment / Question
Infestation	N/A	N/A	Updated with no name change
Land Subsidence and Ground Failure	Geohazards • Fissures and Subsidence	N/A	Updated and changed to "Fissures and Subsidence"
Landslide	Floods, Landslides & Debris Flow • Landslides & Debris Flow	Landslide	Updated and changed to "Landslides and debris Flow"
Severe Storm and Extreme Snowfall	Severe Weather • Winter Storms & Extreme Cold	• Cold Wave • Ice Storm • Winter Weather	In process, suggest changing to, "Winter Storms & Extreme Cold."
Tornado	Tornado	Tornado	In process, no name change
Tsunami/Seiche	Seiche	Tsunami	Updated and changed to "Seiche"
Volcano	Volcanoes	Volcanic Activity	In process, suggest changing to, "Volcanoes."
Wildland Fire	Fire • Wildland Fire • Wildland Urban Interface	Wildfire	In process, retain, "Wildland Fire."

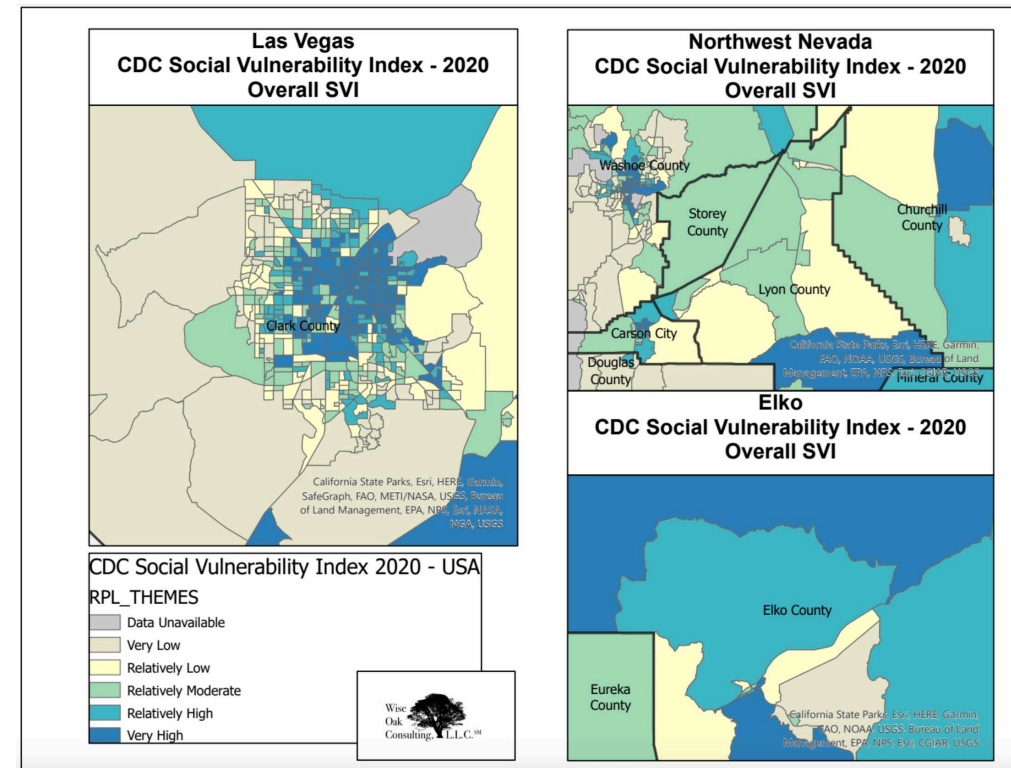| Legacy HMP	Nevada Threat & Hazard Guide	FEMA NRI	Comment / Question
Hazardous Materials	Chemical, Biological, Radiological, Nuclear & Explosives (CBRNE) • Chemical • Biological • Radiological • Nuclear • Explosives	N/A	Updated Separated into a "Technological Hazards" section Retain "Hazardous Materials"
Flooding due to Dam Failure	Infrastructure • Dam Failure	N/A	Updated Separated into a "Technological Hazards" section Changed to "Dam Failure"
Flooding Along Irrigation Ditches and Canals	Floods, Landslides & Debris Flow • Flash Flood	N/A	Updated Separated into a "Technological Hazards" section Remains "Flooding Along Irrigation Ditches and Canals"
???	Infrastructure • Natural Gas Pipeline Incident		Do we want to add Natural Gas Pipeline Incident?
???	Infrastructure • Power Outage		Do we want to add Power Outage?

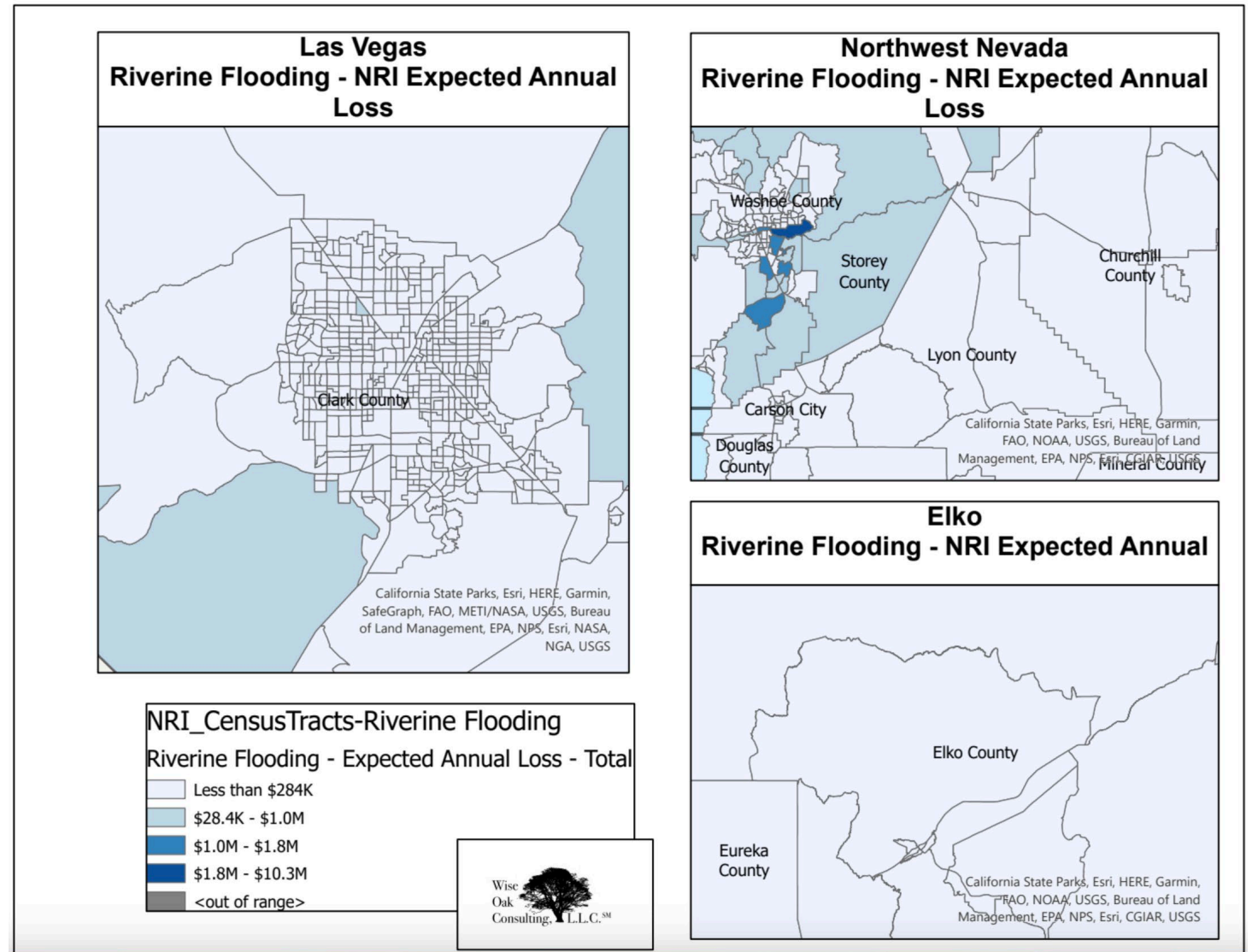# Baseline: FEMA's National Risk Index

National Risk Index

Social Vulnerability Index

Expected Loss

- From FEMA's National Risk Index database

- Request for FEMA to approve as "quantitative" expected loss – 2018 comment

Las Vegas
Riverine Flooding - NRI Expected Annual Loss

Northwest Nevada
Riverine Flooding - NRI Expected Annual Loss

Elko
Riverine Flooding - NRI Expected Annual

NRI_CensusTracts-Riverine Flooding
Riverine Flooding - Expected Annual Loss - Total
- Less than $284K
- $28.4K - $1.0M
- $1.0M - $1.8M
- $1.8M - $10.3M
- <out of range>

Progress Update

Section 3 Complete Actions

HAZARD PROFILES COMPLETE		OTHER ITEMS
Avalanche	Infectious Disease	NRI risk maps are in the Hazard folder as each is developed
Dams	Infestation	Complete hazard profiles are in Working Documents folder
Drought	Landslides & Debris Flow	Updating HMP requirement boxes throughout Section 3
Earthquake	Seiche	Coordinated Appendices
Expansive Soils	Thunderstorms & Lightning	Integrating into Section 3
Extreme Heat	Tornado	*Quantitative impact of Climate Change
Fissures & Subsidence	Volcano	
Floods	Wildland Fire	
Flooding Along Irrigation Ditches and Canals	Winter Storms & Extreme Cold	
HAZMAT		

Future Actions

Complete hazard profiles

Review as they are integrated into Section 3

Mitigation Activity update – 4/04/23

Planning meeting 2 - 4/05/2023

Planning meeting 3 – ?

Ranking of hazards - TBD

Vulnerability and loss assessment

TBD

Building HAZUS runs

Build out section 3 - combine new profiles

Ongoing

We are approximately 1 month behind the desired timeframe.
We can still meet FEMA deadlines.

Summary

Standardizing the style

- Based on existing style
- Capturing new style

Moving to national – level databases

- National Risk Index
- Social Vulnerability

Request for map-displayed quantitative losses

- FEMA requires quantitative impacts

All 19 Hazards have been updated

- Working quantitative impact of Climate Change

Look to wrap up hazard analysis in APril

- Hazard Ranking
- New hazards such as pipelines and power failures?