



FLOODPLAIN ORDINANCE UPDATE FOR ALPINE COUNTY, CARSON CITY, DOUGLAS COUNTY AND LYON COUNTY



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Background

Basics

- ❑ A Carson Water Subconservancy District project
- ❑ Funded by the Federal Emergency Management Agency (FEMA)
- ❑ Focused on the Carson River
- ❑ Four local jurisdictions
 - ❑ Alpine County
 - ❑ Douglas County
 - ❑ Carson City
 - ❑ Lyon County



Four Local Jurisdictions — Similar But Different



- ☐ All include the same watershed
- ☐ All include the Carson River
- ☐ All participate in the National Flood Insurance Program (NFIP)
- ☐ All need to regulate their floodplains

Four Local Jurisdictions – Similar But Different

- ❑ Different floodplains
- ❑ Different personalities
- ❑ Different political considerations
- ❑ Different needs
- ❑ Different opportunities
- ❑ Different ways of approaching floodplain regulation
- ❑ At different points on the road of floodplain regulation



Basic Regulatory Framework



- ☐ National Flood Insurance Program (NFIP) requirements
- ☐ Federal Emergency Management Agency (FEMA) requirements, guidance, and programs
- ☐ Two different state model floodplain ordinances
- ☐ Four different city/county floodplain ordinances

Regional Guidance

- ❑ Carson River Watershed Regional Floodplain Management Plan
- ❑ Carson Flood Mitigation Plan
- ❑ Carson River Regional Hydraulic Model
- ❑ Model Management, Distribution, and Update Guide



2016 Floodplain Ordinance Review and Improvement Project



- ❑ Precursor to the current project
- ❑ The 2016 project developed:
 - ❑ Jurisdiction specific needs and opportunities for floodplain ordinance improvements
 - ❑ Preliminary draft floodplain ordinance language to incorporate the use of the Carson River Regional Hydraulic Model

2016 Needs and Opportunities Conclusions

- ❑ Need for technical and staff support to assist the jurisdictions:
 - ❑ Update and improve floodplain ordinances
 - ❑ Develop, prepare and adopt ordinances to implement identified mitigation measures
- ❑ Need for assistance with training on the new FIRMs and the Carson River Regional Hydraulic Model
 - ❑ For city/county staff, elected officials, planning commissioners, professionals and the public
 - ❑ For all jurisdictions



2016 Needs and Opportunities Conclusions

- ❑ Alpine County needs significant support:
 - ❑ To develop, adopt and implement a floodplain management program and ordinance
 - ❑ To develop and implement its identified mitigation measures
- ❑ Carson City, Douglas County, and Lyon County:
 - ❑ Each have differing floodplain management program strengths
 - ❑ Each have differing floodplain management program improvement opportunities
 - ❑ Each requires some support and assistance to make timely progress



2016 Needs and Opportunities Conclusions

- ❑ Need for continuing regional CWSD support to:
 - ❑ Oversee, coordinate, maintain, and manage the Carson River Regional Hydraulic Model
 - ❑ Maintain and update the regional Floodplain Management Plan
- ❑ Need to continue the CWSD regional coordination approach to Carson River management
 - ❑ To allow the jurisdictions to discuss, coordinate and cooperate with, and learn from each other





Current Project

Purpose

- ❑ Provide assistance to Alpine County, Carson City, Douglas County, and Lyon County
- ❑ Support Carson Water Subconservancy District (CWSD) and jurisdiction efforts to:
 - ❑ Accommodate the new regional floodplain mapping and flood insurance rate maps (FIRMs)
 - ❑ Implement the use of the Carson River Regional Hydraulic Model
 - ❑ Improve standards to exceed FEMA minimum requirements
 - ❑ Implement Carson Flood Mitigation Plan mitigation measures
 - ❑ Update and improve floodplain ordinance language
- ❑ Improve consistency among jurisdictions



Primary Project Tasks



- ☐ Review pertinent documents, guidance, and resources
- ☐ Update Jurisdiction Specific Needs and Opportunities
- ☐ Prepare Floodplain Ordinance Language, Draft and Final
- ☐ Assist with Floodplain Ordinance Adoption

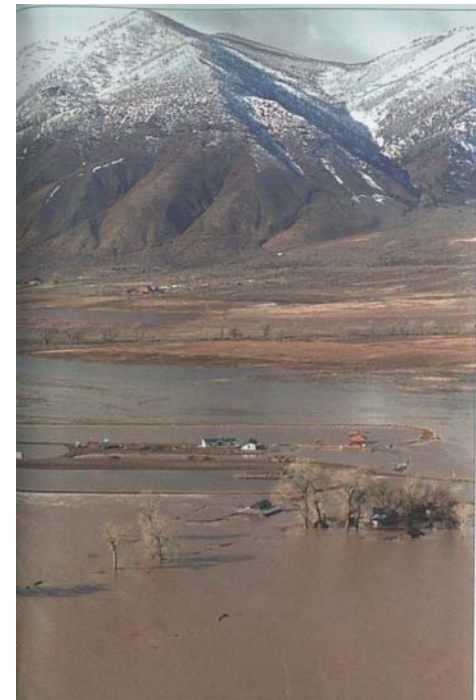
Guidance, Documents & Resources

- ☐ Existing jurisdiction ordinances
- ☐ Model ordinances
- ☐ FEMA guidance
- ☐ Carson River Regional Floodplain Plan
- ☐ Carson River Flood Mitigation Plan
- ☐ Carson River Regional Hydraulic Model
- ☐ Model Management, Distribution, and Update Guide



Update Needs and Opportunities

- ☐ Meet with each jurisdiction's staff
 - ☐ Review the 2016 needs and opportunities assessments
 - ☐ Discuss and update needs, unique circumstances, programs, and opportunities
- ☐ Meet with CWSD staff to:
 - ☐ Review the 2016 needs and opportunities assessments
 - ☐ Discuss and update general and specific jurisdictional needs and opportunities
- ☐ Update each Needs and Opportunities Summary



Alpine County – Updated Needs and Opportunities



- ☐ The new West Fork of the Carson River FIRMs will have special flood hazard zones
- ☐ Interested in including requirements to use the Carson River Regional Hydraulic Model
- ☐ Interested in integrating the floodplain ordinance with the building code
- ☐ Possibly add/increase development standards along non-mapped waterways
- ☐ Possibly add provisions for dam failure inundation zones

Douglas County – Updated Needs and Opportunities

- ❑ Currently require and want to continue to require use the Carson River Regional Hydraulic Model
- ❑ Interested in integrating floodplain ordinance with the International Building Code
- ❑ Possible inclusion of an erosion setback along watercourses



Carson City – Updated Needs and Opportunities

- ❑ Continuing desire to make necessary changes to become a Class 4 CRS community
- ❑ Want to include requirements to use the Carson River Regional Hydraulic Model
- ❑ Want to change the minimum design standard for stormwater drainage to the 10-year storm
- ❑ Want to include better standards for erosion, landslides and mud flows
- ❑ Want to explore coordination of floodplain ordinance with the International Building Code



Lyon County – Updated Needs and Opportunities



- ☐ Interested in exploring participation in the CRS program
- ☐ Still want to require use the Carson River Regional Hydraulic Model
- ☐ Want to improve the floodplain ordinance language and consistency
- ☐ May consider increasing some standards

Updated Needs and Opportunities – Some Conclusions

- ❑ The jurisdictions want to implement requirements to use the Carson River Regional Hydraulic Model
- ❑ There is interest in exploring floodplain ordinance and building code integration
- ❑ Standards improvements vary by jurisdiction
- ❑ There is continuing support for the CWSD to lead and coordinate the regional approach to management of the Carson River



Prepare Draft and Final Floodplain Ordinance Language

- ☐ Collaborative process with the jurisdictions and CWSD
- ☐ Prepare floodplain ordinance language for each jurisdiction
- ☐ Incorporate identified items for each jurisdiction, as applicable:
 - ☐ Updated and improved language
 - ☐ Model provisions
 - ☐ Requirements
 - ☐ Needs and opportunities
 - ☐ Mitigation measures



Floodplain Ordinance Adoption

- ❑ Assist the jurisdictions with the adoption of the revised/improved floodplain ordinances
 - ❑ Planning Commission or public outreach meeting for each jurisdiction as desired
 - ❑ Presentation of the revised ordinance language at Board of Commissioners/Board of Supervisors meetings for each jurisdiction as desired



Status and Timeline

- ❑ Completing needs and opportunities updates
- ❑ Beginning ordinance language drafts
- ❑ Ordinance language drafts to be completed Fall 2018
- ❑ Ordinance adoption processes anticipated during the first half of 2019



Questions?



Thank You



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