

Project Coordination Meetings and Floodplain

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Floodplains

»» Floodplain Encroachment

Floodplain Certification

The CE and Floodplains

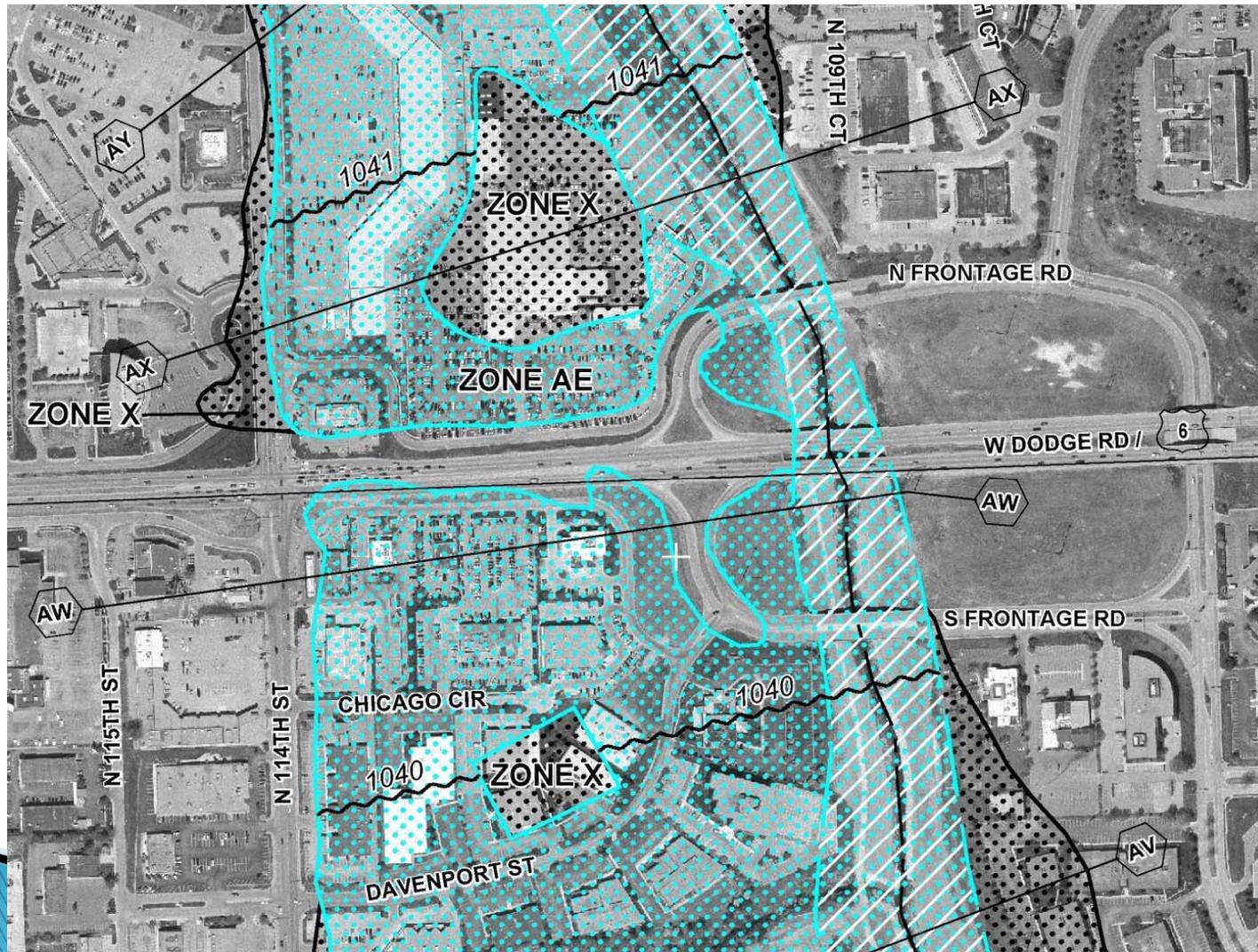
Floodplain Encroachment

Encroachment: What *exactly* is it?

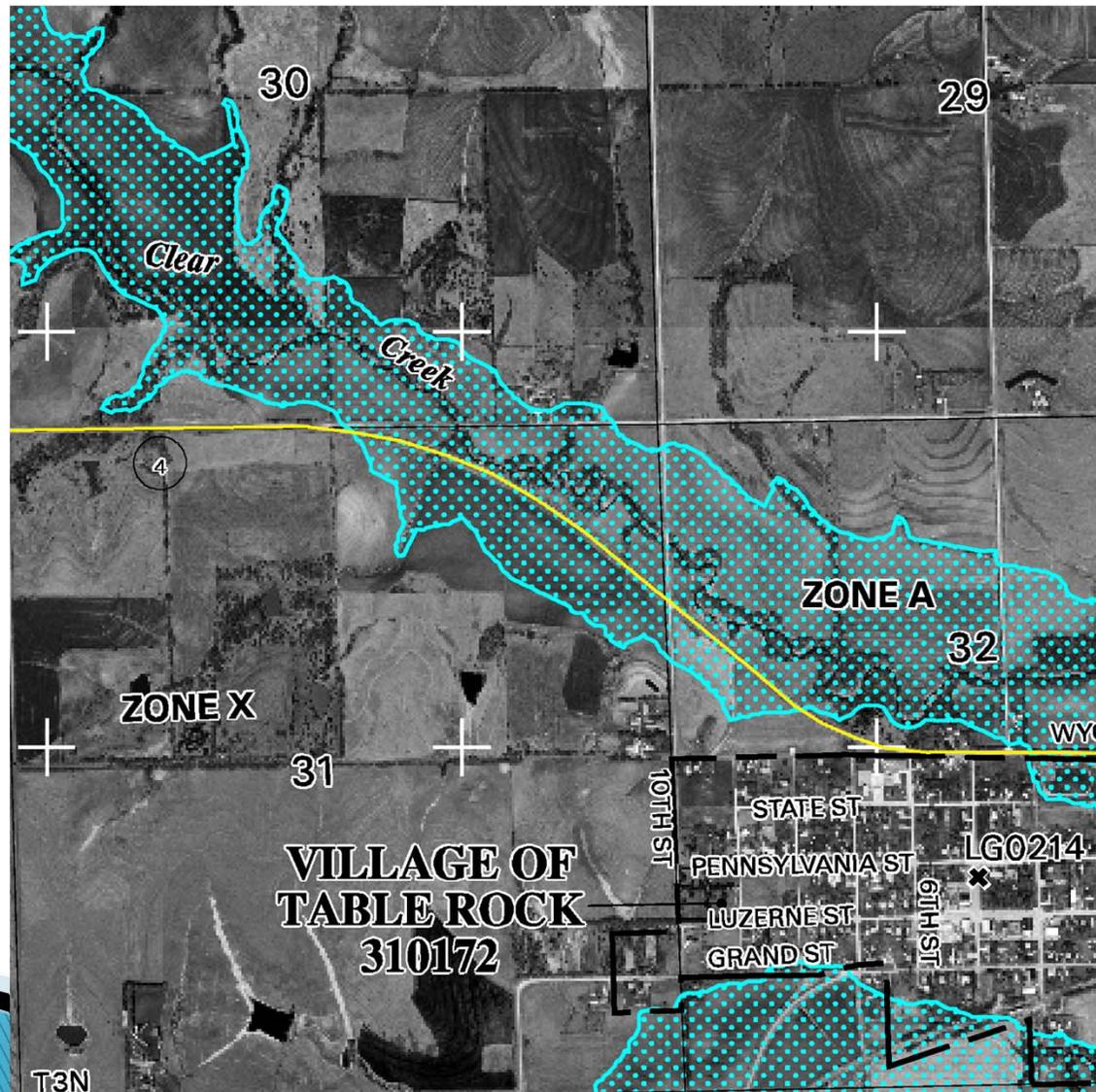
- An *encroachment* is an action within the limits of the base floodplain
 - Does the project cross a mapped floodplain (Or drainage area exceeding 640 acres in an unmapped community/no FIRMs available)?
 - Does any part of the project within the limits of construction fall within floodplain boundaries?
- Each location where an *encroachment* occurs will need to be addressed.



Floodplain Encroachments – Type 1 (Highway crosses a floodplain)



Floodplain Encroachments - Type 2 (Highway Parallels a Creek)



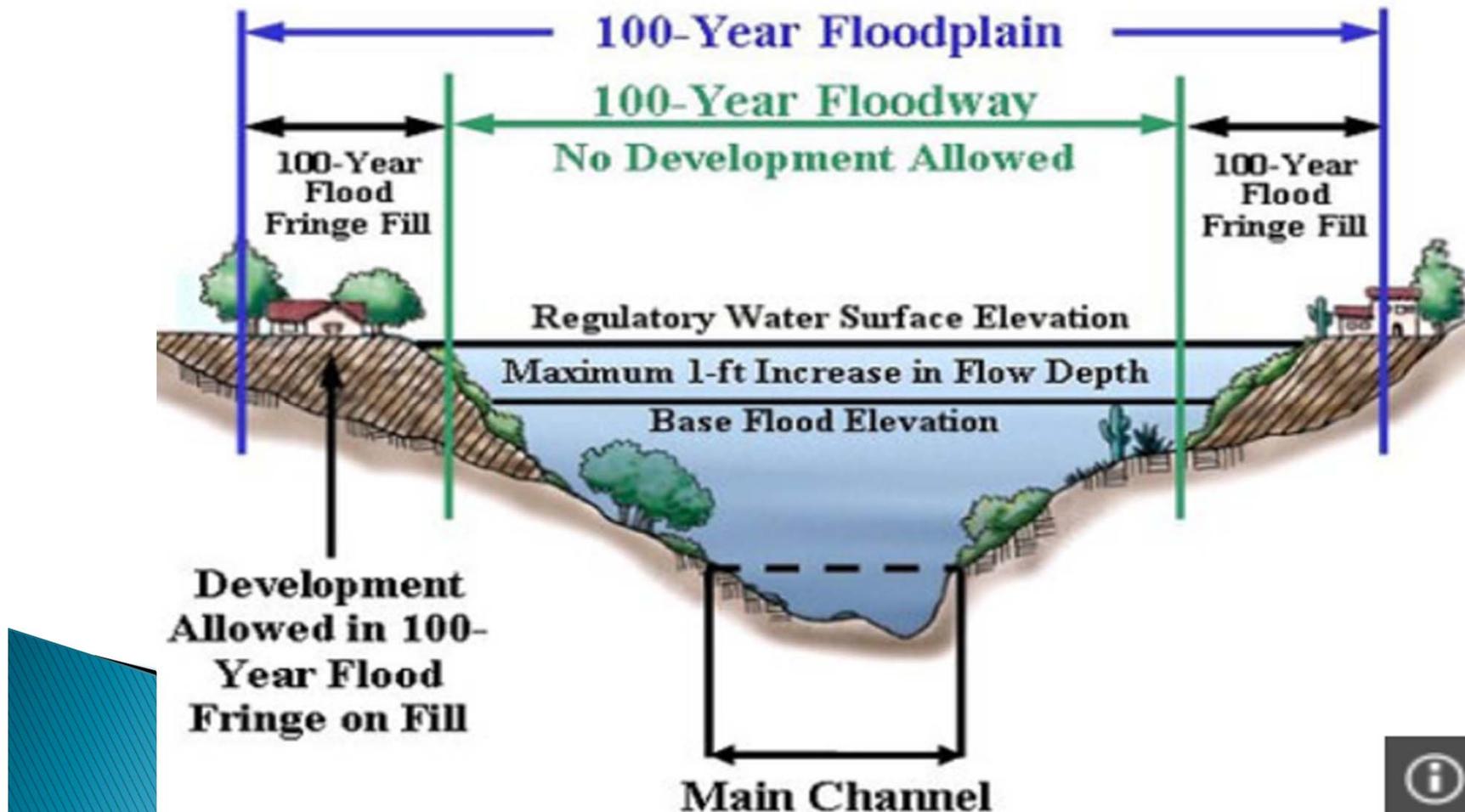
Floodplain Identification Resource

- ▶ Where do I find a map??
 - Nebraska Department of Natural Resources (NDNR)
 - http://prodmaps.ne.gov/html5dnr/?viewer=dnr_floodplain
 - Federal Emergency Management Agency (FEMA)
 - <https://msc.fema.gov/portal>



Redundancies Created During Project Delivery

- ▶ Proposed redundancies within project delivery process in identifying Floodways and Floodplains on projects



Redundancies Created During Project Delivery

- ▶ Early Identification Floodplain/Floodway on DR73
- ▶ Identify Floodplain/Floodway by Planning, Environmental Section, Roadway Design, and Bridge
- ▶ Final Scope (Plan-in-Hand) Report Includes Floodplain/Floodway Statement & Begin Analysis
- ▶ Floodplain Certification Completed by Bridge/Roadway Design Hydraulics (or Consultants)
- ▶ Roadway & Bridge Hydraulics Sections respond to questions from Community Floodplain Administrators or Environmental Section

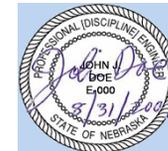


Floodplain Certification Process

- ▶ The Process is in itself an avoidance, minimization and mitigation strategy.
- ▶ Early identification of Floodway/Floodplain locations can affect pavement/bridge determinations at each location to minimize impacts.
- ▶ Completing a hydraulic analysis to determine impacts to the floodplain also identifies locations of potential liabilities.
- ▶ Maintain open communication with NDNR regarding NDOR's Floodplain compliance process.

Floodplain Certification Process

- ▶ Completed by Bridge and/or Roadway Design Hydraulics (Or Consultant)
- ▶ Certification includes:
 - **Certification of Compliance** that base floodplain will not increase more than one foot at any location, and/or there is no rise along the base floodway
 - Stamped and Sealed by Registered P.E.
 - **Memo** with Summary of Project
 - **Analysis** at each Encroachment
 - **FIRMette Maps**
- ▶ Sent to the Environmental Permits Unit for the Floodplain Permit Application Submittal and Acquisition.



Floodplains and NEPA – CE Form

▶ The CE Form

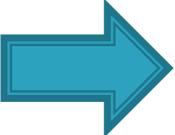
6.1 Floodplain/Floodway – Will the action occur within the boundaries of a mapped Zone A floodplain or a mapped floodway?

Yes (1) No (1) N/A

If Yes, attach permits to the CE document. If a floodplain permit has not been obtained, add commitment that one will be obtained prior to the start of construction.

6.2 Will the action cause a greater than 1-foot rise in the Base Flood Elevation (*BF E*), any rise in a floodplain that potentially impacts an adjacent structure, or any rise in a floodway?

Yes (3) No (1) N/A



6.3 Will the actions reviewed under Appendix B, Paragraphs (26), (27), and (28) result in a floodplain encroachment other than functionally dependent uses or actions that facilitate open space use?

Yes (3) No N/A

6.4 Describe resources, impacts, and the coordination conducted with officials/agencies:

Summarize information for 23 CFR 650.111 (c-d)

6.5 Floodplain/Floodway Mitigation

When 23 CFR 650.111 Analysis Occurs

- ▶ When the Project falls under paragraphs (26), (27) or (28) from the “C List”
(See 23 CFR 771.117 (c))

AND

- ▶ Not a Functionally Dependent Use or an Action that Facilitates Open Space Use



23 CFR 650.111 Analysis

§650.111 Location hydraulic studies.

(a) National Flood Insurance Program (NFIP) maps or information developed by the highway agency, if NFIP maps are not available, shall be used to determine whether a highway location alternative will include an encroachment.

(b) Location studies shall include evaluation and discussion of the practicability of alternatives to any longitudinal encroachments.

(c) Location studies shall include discussion of the following items, commensurate with the significance of the risk or environmental impact, for all alternatives containing encroachments and for those actions which would support base flood plain development:

- (1) The risks associated with implementation of the action,
- (2) The impacts on natural and beneficial flood-plain values,
- (3) The support of probable incompatible flood-plain development,
- (4) The measures to minimize flood-plain impacts associated with the action, and
- (5) The measures to restore and preserve the natural and beneficial flood-plain values impacted by the action.

(d) Location studies shall include evaluation and discussion of the practicability of alternatives to any significant encroachments or any support of incompatible flood-plain development.

(e) The studies required by §650.111 (c) and (d) shall be summarized in environmental review documents prepared pursuant to 23 CFR part 771.

(f) Local, State, and Federal water resources and flood-plain management agencies should be consulted to determine if the proposed highway action is consistent with existing watershed and flood-plain management programs and to obtain current information on development and proposed actions in the affected watersheds.

23 CFR 650 Applicable Definitions

- ▶ Significant Encroachment
 - *Significant encroachment* shall mean a highway encroachment and any direct support of likely base floodplain development that would involve one or more of the following construction–or flood–related impacts:
 - (1) A *significant potential for interruption or termination of a transportation facility* which is needed for emergency vehicles or provides a community's only evacuation route.
 - (2) A *significant risk*, or
 - (3) A *significant adverse impact* on natural and beneficial floodplain values.

- ▶ Significant Risk
 - Potential for *property loss*
 - Potential *hazard to life* during the service life of the highway



23 CFR 650.111 Analysis

- ▶ (c)1 **Risks** associated with implementation of the action
 - Potential for **interruption or termination of a transportation facility** needed for emergency vehicles or a community's only evacuation route.
 - Potential for **Property Loss**
 - Potential for **Hazard to life** during the service life of the highway.
- ▶ (c)2 **The impacts on natural and beneficial floodplain values** (Fish, Wildlife, Plants, Open Space, Water Quality, Forestry, Groundwater Recharge, etc.)
- ▶ (c)3 The **support of** probable incompatible **floodplain development**
 - Does the project encourage development in the floodplain?
- ▶ (c)4 The **measures to minimize floodplain impacts** associated with the action, and
- ▶ (c)5 The **measures to restore and preserve** the natural and beneficial floodplain values impacted by the action.
- ▶ (d) Location studies shall include evaluation and discussion of the practicability of **alternatives to any significant encroachments** and/or **development in the floodplain**.

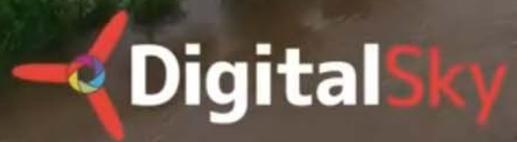


23 CFR 650.111 Process

- ▶ We are currently working with the Environmental, Roadway Design and Bridge Sections to develop our internal process and deliver this information for NEPA.
- ▶ Working with FHWA to determine appropriate level of effort.



QUESTIONS?



BEATRICE FLOOD 2015

Project Coordination Meetings

- »» • Purpose
- Footprint and Resources
- NEPA Level Thresholds
- Brief Meeting Descriptions

Project Coordination Meetings

- ▶ New Name – Environmental Coordination Meetings → Project Coordination meetings
- ▶ Internal Meetings within NDOR involving Roadway Design, Environmental, Project Scheduling, Bridge Divisions and the District
- ▶ Aim to Improve District involvement and communication during the project development process
- ▶ CE Thresholds
 - Knowing the CE thresholds will help focus the Scope of work on the Project “need” and avoid environmental resources that might delay the project
 - If we are close to a threshold, we can consider ways to reduce the impacts if needed.

Project Footprint vs. Resources

▶ Project Coordination Meetings

- Environmental brings resource information
- Design & Bridge bring the project footprint
- District personnel would bring knowledge of project scope and construction experience
- The meeting essentially overlays the footprint/scope on to resources to determine impacts and to consider thresholds
- If we are close to a CE NEPA Level threshold we will likely consider ways to reduce the impacts



Reviewing Environmental Resources

- ▶ Review Threshold Levels to determine CE Level
 - Highway Capacity, Traffic Disruptions, Property Access
 - ROW
 - Rivers, Wetland, Floodplains, Section 404, Section 9
 - Threatened & Endangered Species
 - Section 106, Section 4F
 - Hazardous Materials
 - Traffic Noise & Air
 - Minority / Low Income Populations
 - Public Involvement



Communication and NEPA Levels

- ▶ CE NEPA threshold levels will make a difference in the delivery time (*estimated times*)
 - Level 1 → 3 months for NEPA
 - Reviewed and Approved by EDU NEPA Analyst at NDOR
 - Level 2 → 6 months for NEPA
 - Reviewed and Approved by EDU Manager or Environmental Section Manager at NDOR
 - Level 3 → 12 months for NEPA
 - Reviewed and Approved by FHWA
- ▶ Scope needs to be determine and finalized to avoid changes in scope and project footprint

Project Coordination Meetings

- ▶ PCM's are scheduled by Roadway Design
 - The four meetings are required for each project (Used to be 6 meetings – 10, 20, 30, 40, 50, 60)
 - PCM 20 – Beginning of Project
 - PCM 30 – Prior to Plan-In-Hand
 - PCM 35 – Following Plan-In-Hand
 - PCM 70 – CE Validation
 - Meetings are held on 1st and 3rd Mondays of each month, 1:00 – 4:00 PM



Project Coordination Meetings – 20, 30, 35

- ▶ Occurs during key phases of the delivery process
- ▶ Each has specific purposes, key inputs, and desired outcomes defined (Meeting Protocol)
 - Finalize the project scope earlier during the delivery process
 - Better prepare us for a productive PIH field visit
 - Identify impacts to environmental resources which affect the CE NEPA level
 - Confirm assignment of NEPA level to a project to ensure that it is correct.

Project Coordination Meeting – 70

- ▶ Occurs after the ROW process and Prior to PS&E Turn-in
- ▶ Confirm the plans reflect and are consistent the project details identified by the Final Scope Report (PIH Report)
- ▶ Verify that Plans and Special Provisions reflect environmental commitments in the Green Sheet



Project Coordination Meetings and CE Thresholds

▶ Summary

- **Understanding** the **NEPA thresholds** can help focus the Scope of Work on the “need”.
- New process allows for **increased communication** between District, Design, Bridge and Environmental **throughout** project delivery process.
- The best opportunity to influence the Scope of project is during the beginning of the project.
- Avoid **impacts** to environmental resources that might delay project delivery.
- Avoid **re-evaluations** that might delay project delivery.
- **AVOID DELAYS**

