



In the Shadow of the Levee

A Model for Communicating Residual Risk



LOWER PLATTE SOUTH
natural resources district



ASFPM Managing Flood Risk in the Heartland
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Levee Safety Program

- Levee Safety Program Implementation Guidance provided by HQUSACE in 2007 (Post Hurricane Katrina)
 - Designate Levee Safety Officer (LSO) – John Bertino, Jr., PE
 - Designate Levee Safety Program Manager (LSPM) – Andrew Barry, PE (Acting)
 - Implement Levee Inspection Tool and Levee Inspection Checklist
 - Create District National Levee Database (NLD)
 - <http://nld.usace.army.mil/>
- Subsequent Levee Safety Guidance
 - Vertical Datum (2006)
 - Section 408 Alterations (2008, 33 USC 408 replaces 33 CFR 208.10)
 - Further guidance in July 2014 (EC 1165-2-216)
 - Levee Screening Assessments (2009)
 - System Wide Improvement Framework (2011)
- As new guidance is issued by HQ USACE, levee sponsors will be notified how this new guidance will impact them



System Wide Improvement Framework

- Policy for Development and Implementation of System-Wide Improvement, dated 29 Nov 2011.
- **Intended for projects that are “Inactive” in the Rehabilitation Program and ineligible for rehab assistance.**
- Now, with the System Wide Improvement Framework (SWIF), there is a process for which projects can stay conditionally active in the Rehabilitation Program, while the sponsor plans and works to correct the deficiencies.
- A SWIF provides committed sponsors the opportunity to restore their levees, over time, back to USACE standards.

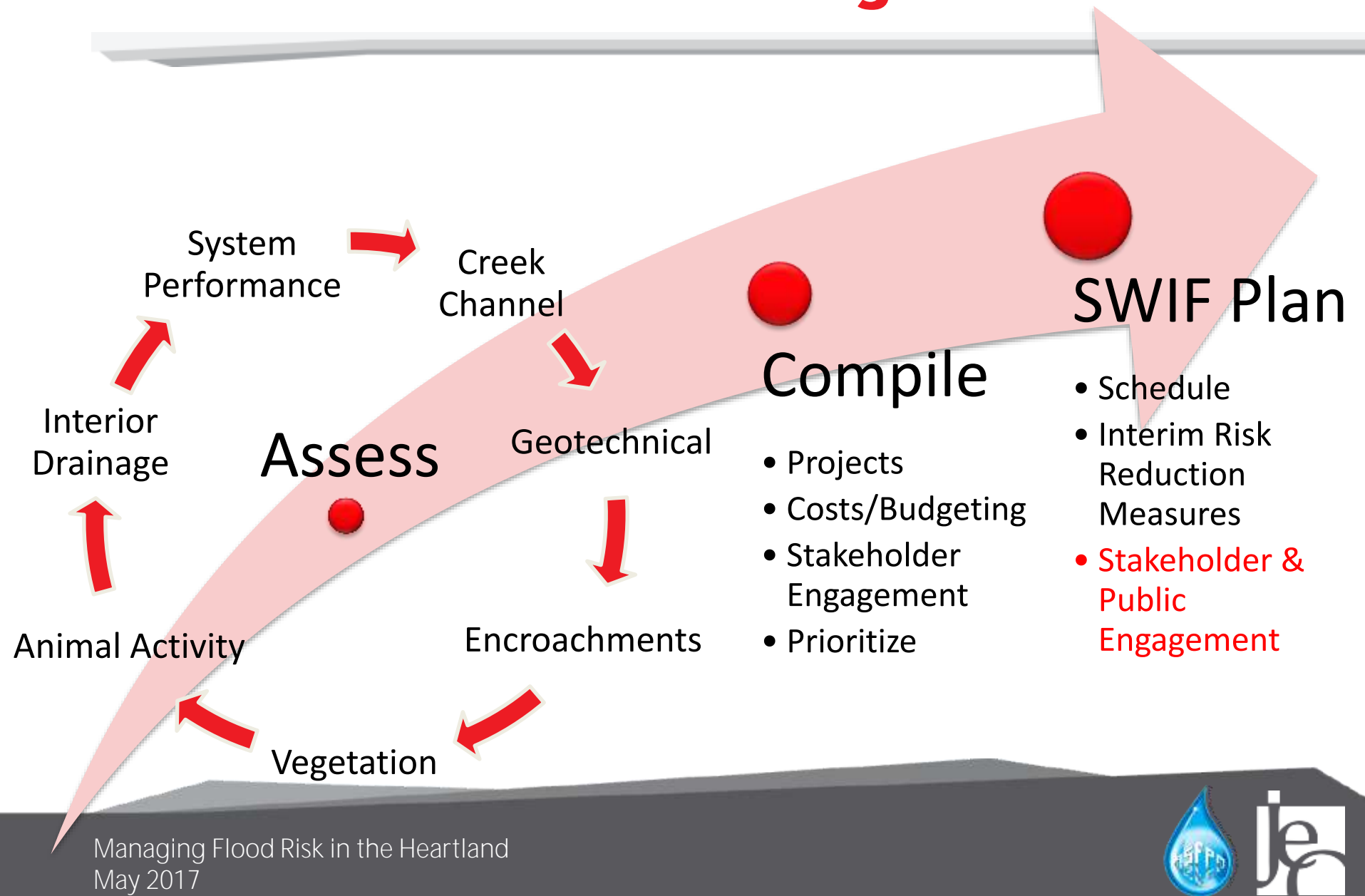


History of Salt Creek Levees

- Congress authorized project in 1958
- Current system constructed by USACE 1964-1968
 - Constructed from reshaping spoil banks from earlier channel straightening and new levees from local soils (dispersive clays) in the gaps
 - System owned and operated by LPSNRD
 - Originally design to contain the 100-year flood, but downgraded later to at least 50-year during a FEMA restudy in the 1980s
 - Prevented ~\$125M damages

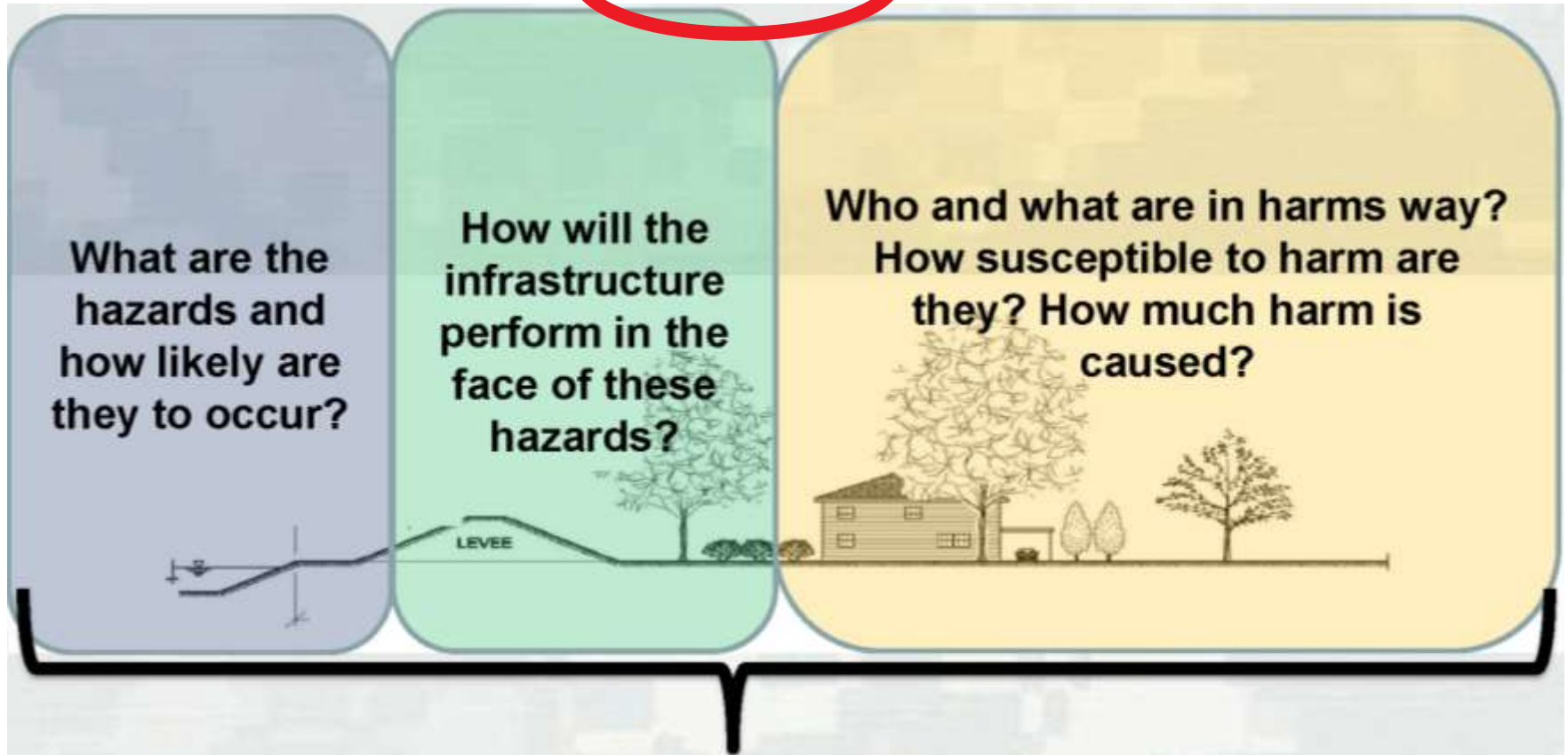


LPSNRD SWIF Planning



Modifying Consequences

Risk = f(Hazard, Performance, Consequences)



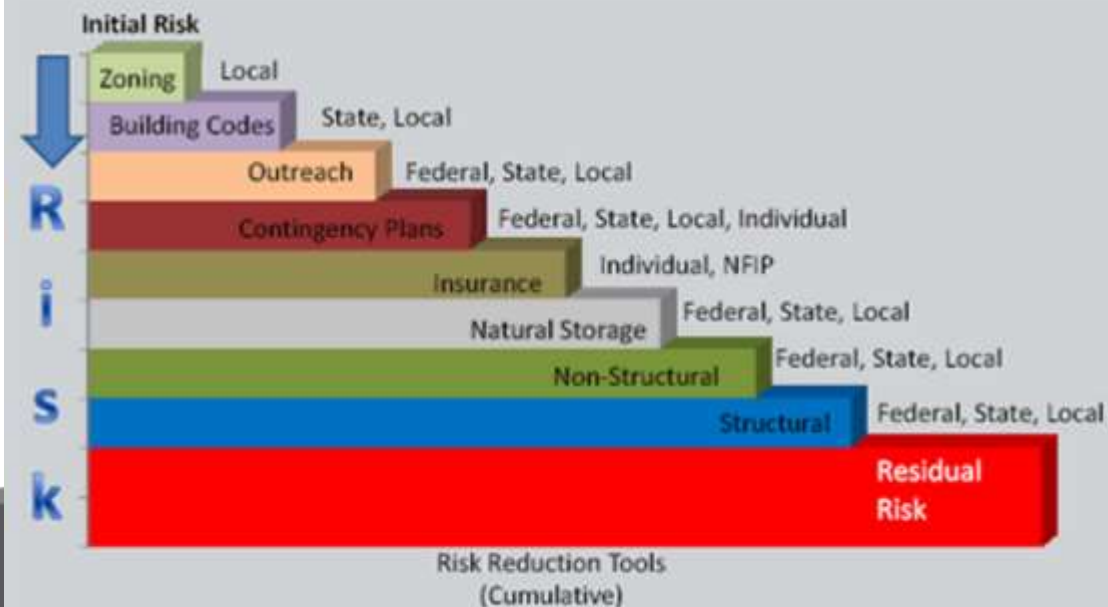
Source: USACE

Non-Structural Risk Reduction

Emergency Preparedness Planning

- Risk Awareness Communication Plan
- Flood Warning and Action Triggers
- Emergency Action Plans
- Evacuation Planning
- Training and Exercise

Shared Flood Risk Management: Buying Down Risk



All stakeholders contribute to reducing risk!

Risk Awareness Communication Plan: Message Timing

- Ideal: Communicate to Mitigate
- Essential Component: Communicate to Prepare
- Critical Component: Communicate During Response



Communication Environment

- The imminent threat (hazard and outrage are perceived as low)
- Denial and the blame game
- Overwhelming task and limited resources



Risk Communication Definition

Risk communication: a science-based approach for communicating effectively in:

- High concern and low trust situations
- Sensitive or controversial situations

Source: Dr. Covello, Director Center for Risk Communication



Risk Communication Definition

Risk communication, further defined

- Any purposeful exchange of information about risk or perceptions about risk
- Any public or private communication that informs individuals about the existence, nature, form, severity, or acceptability of risk
- The probability of losing something of value, such as health, safety, job security, self-esteem, wealth, natural resources or community

Source: Dr. Covello, Director Center for Risk Communication



Risk Communication Principles

- Practical concepts of risk communication
 - Perception = Reality
 - Communication = Skill
 - Goal = Trust + Credibility

Source: Dr. Covello, Director Center for Risk Communication



Risk Communication Principles

- Risk communication goals
 - Create a communications environment based on trust and credibility
 - Produce an informed audience that is involved, interested, reasonable, thoughtful, solution-oriented, and collaborative
 - **Build confidence in your organization's professionalism, commitment and expertise**

Source: Dr. Covello, Director Center for Risk Communication



Risk Communication Principles

Risk Communication Summary

Theory	Effect	Solution
Mental noise	Blocks communication	Use clear, concise messages and active listening
Trust determination	Enhances or detracts from message	Show that you care
Risk (threat) perception	Frustration and outrage	Recognize and respond to RP factors
Negative dominance	Distorts communication	Develop positive messages

Source: Dr. Covello, Director Center for Risk Communication



Risk Communication Principles

Seven Cardinal Rules of Risk Communication

1. Accept and involve the public as a legitimate partner
2. Plan carefully and evaluate efforts
3. **Listen to the public's specific concerns**
4. Be honest, frank, and open
5. Coordinate and collaborate with other credible sources
6. Meet the needs of the media
7. Speak clearly and with compassion

Source: Dr. Covello, Director Center for Risk Communication

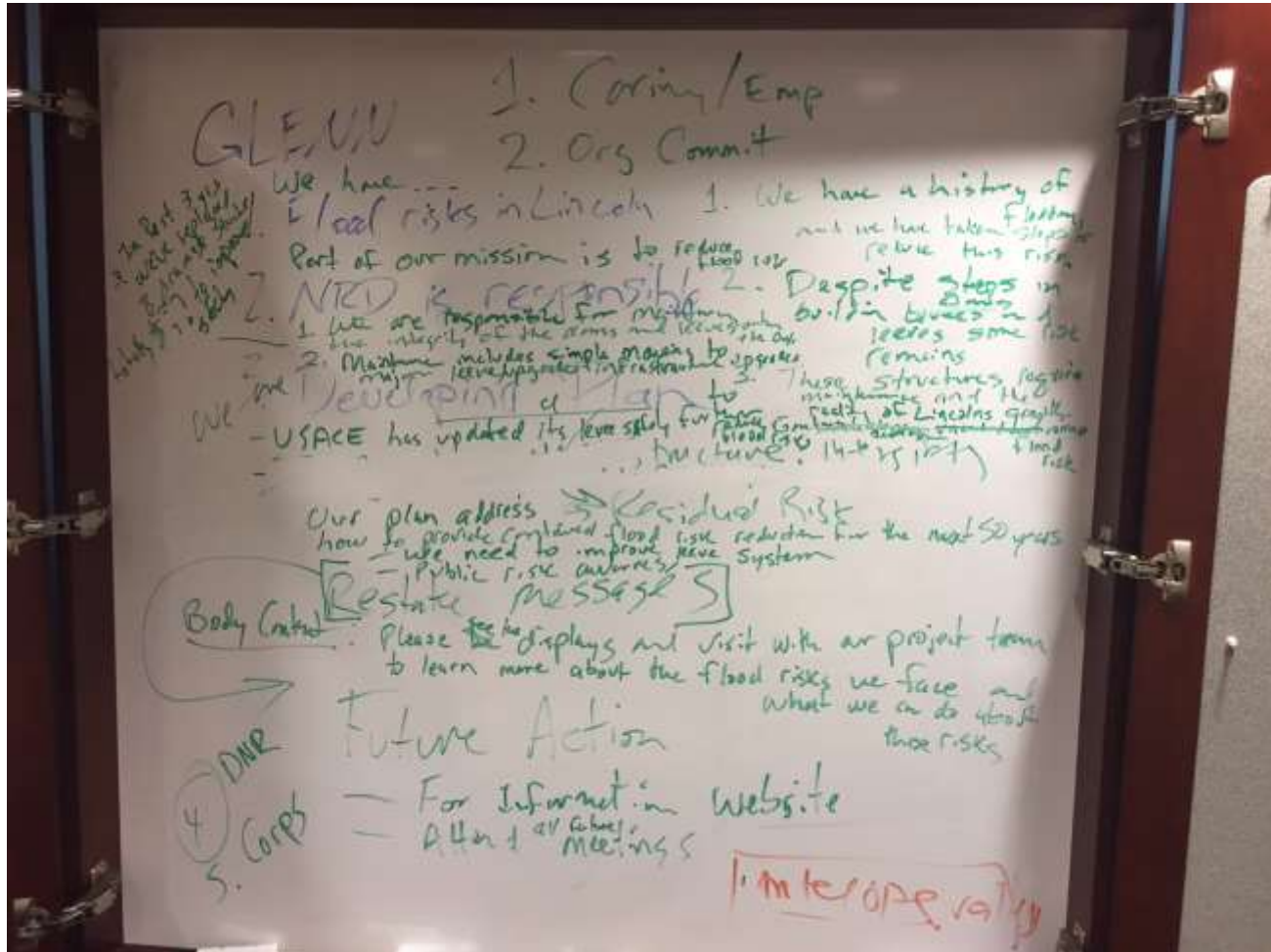


Tools for Success

- Proactive
- Team work
- Preparation



Team Work



Results

- 35 federal, state, municipal government and private sector utilities reps attend interagency meetings
- Public Open House well attended 2 television news stations covered the meeting
- Additional outreach with other key stakeholders affected by Levee System... **85** contractors, 52 engineering consultants, 40 public works employees



Your NRD is always working to reduce current and future flood risks

The Lower Platte South NRD is responsible for operating and maintaining the Salt Creek Levee System to federal standards, as well as rehabilitating the system as needed.



The NRD is currently working with the U.S. Army Corps of Engineers to develop a comprehensive plan for the Salt Creek Levee System. This plan is called a System-Wide Improvement Framework (SWIF).

A SWIF plan identifies the deficiencies and maintenance needs of a levee system, and will help guide the NRD's flood risk reduction efforts for at least the next 50 years.



Developing a SWIF plan is necessary for the Salt Creek Levee System to remain eligible for federal rehabilitation assistance.



This planning effort will not result in an increased or decreased level of flood protection, affect FEMA maps, or flood insurance.

The NRD will use the SWIF plan as part of a long-term maintenance and improvement plan to ensure Lincoln residents continue to have reliable flood risk reduction along Salt Creek.

- <http://saltcreeklevee.jeo.com>