

18 January 2007



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Dover Dam Safety Assurance (DSA)

Draft Environmental Impact Statement
(DEIS)/Evaluation Report
Public Information Meeting
18 January 2007

Rodney Cremeans
Project Manager

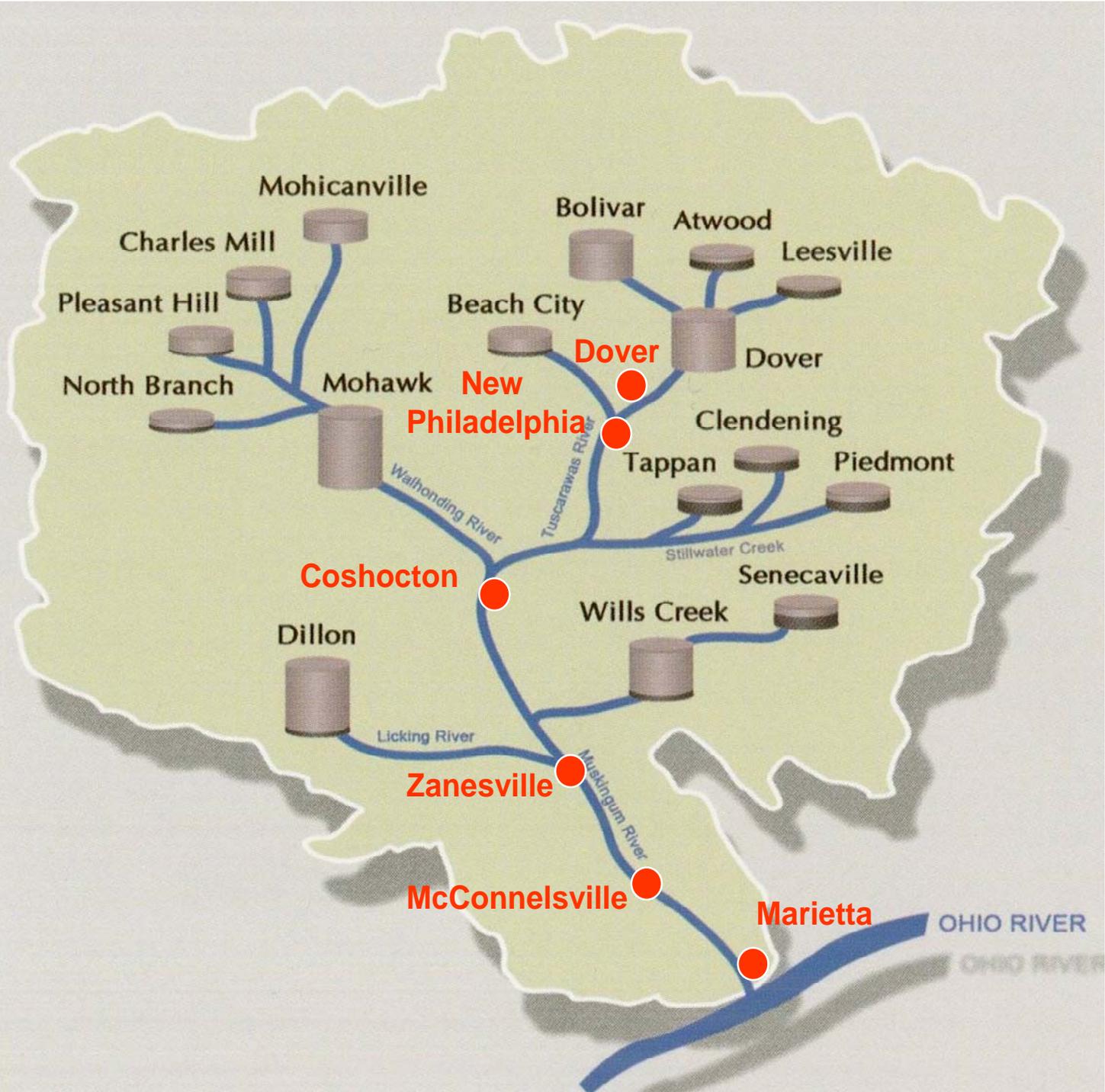
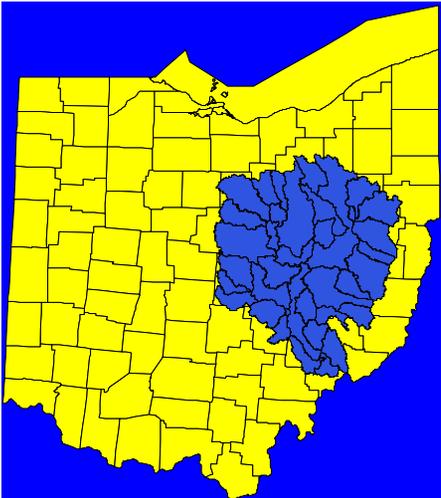
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Why are we here today?

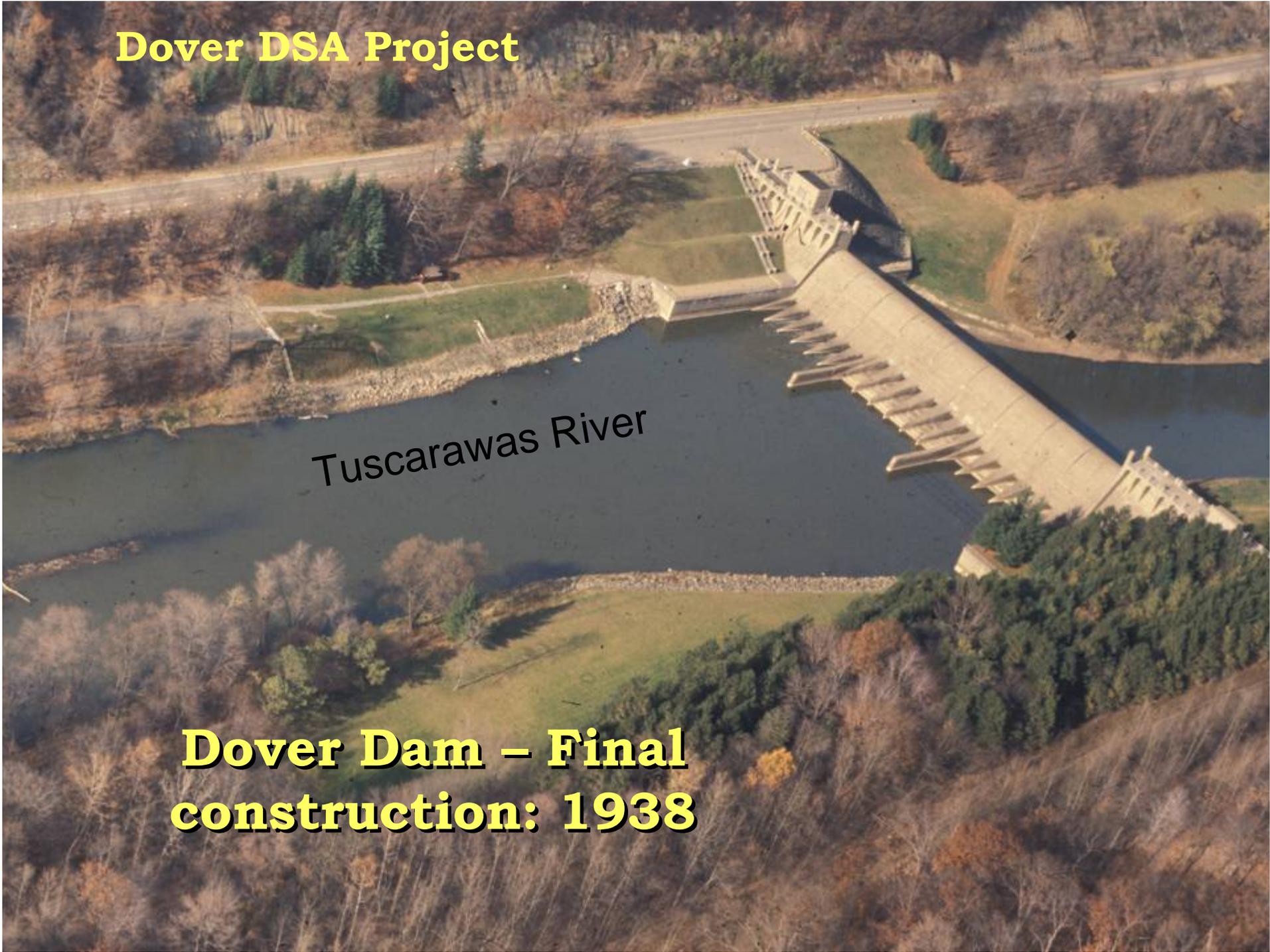
- To briefly summarize the study findings and highlight significant changes.
- To inform the public that the DEIS/Evaluation Report is available and how to provide comments.



Dover DSA Project

Tuscarawas River

**Dover Dam – Final
construction: 1938**





← 338 feet wide spillway →

6 25 402



**Non-Overflow
Section Elevation 931.0**

Spillway Elevation 916.0

Alert Pool Elevation 900.0

River Elevation 867



824 feet

Pool of Record, Jan 2005



Pool el. 907.4

Normal River Elevation 870



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Flood Damage Reduction Mission

- Protect human life, property and environment by:
 - Safely operating dams
 - Communicating with public
 - Reduction of flood damages
 - Monitoring and surveillance
 - Making necessary repairs



Planning Objectives

Dover Dam Safety Assurance Study

- Public Safety
- Meet Authorized Project Purposes
- Cost Effective
- Environmentally Acceptable



DSA Study To Date

- We Applied New Criteria to the Way We Look at Things:
 - New storm forecasting techniques
 - New Component Analyses
- We Analyzed The Existing Conditions

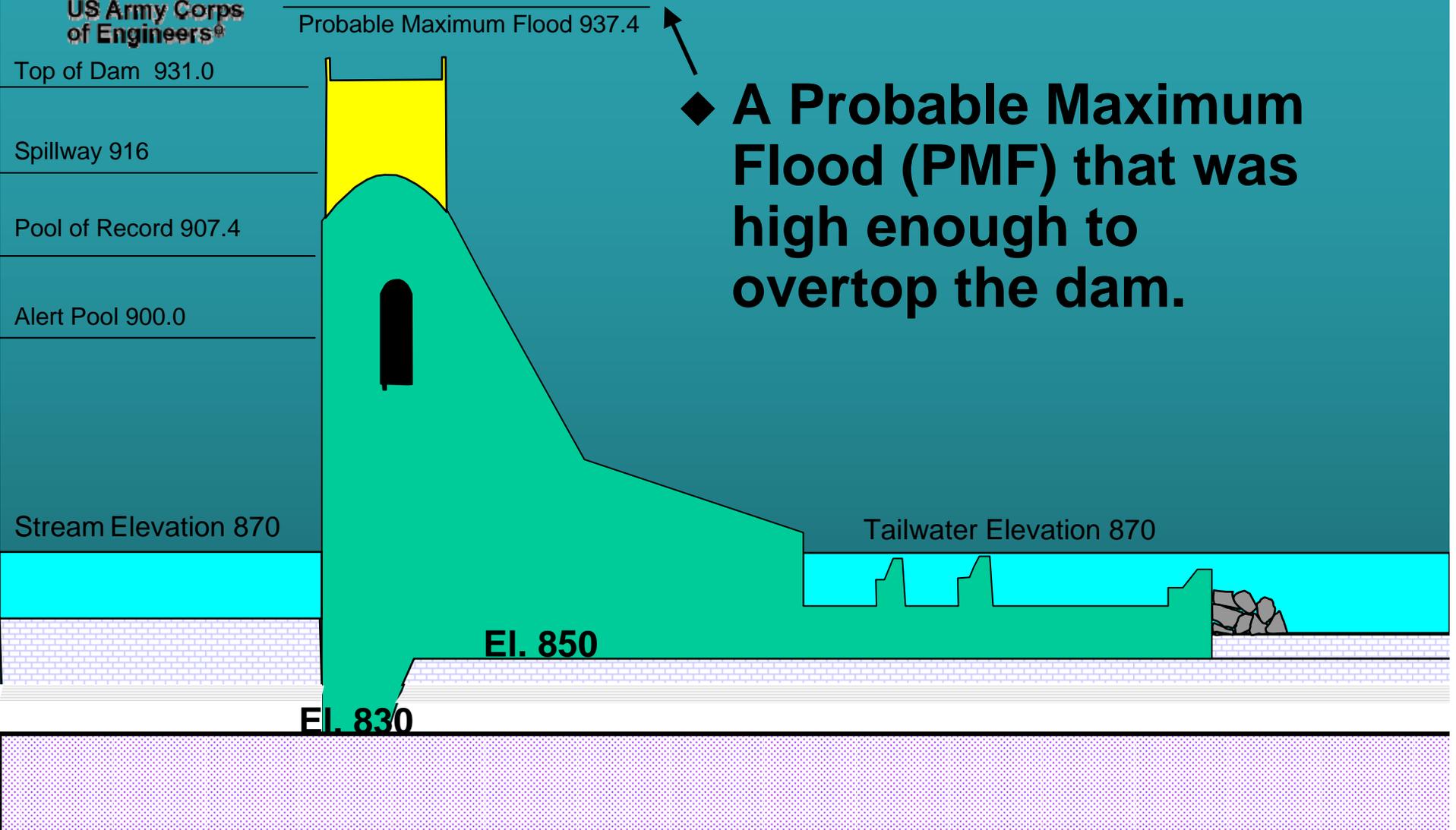
And...We Found:



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Findings

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◆ A Probable Maximum Flood (PMF) that was high enough to overtop the dam.

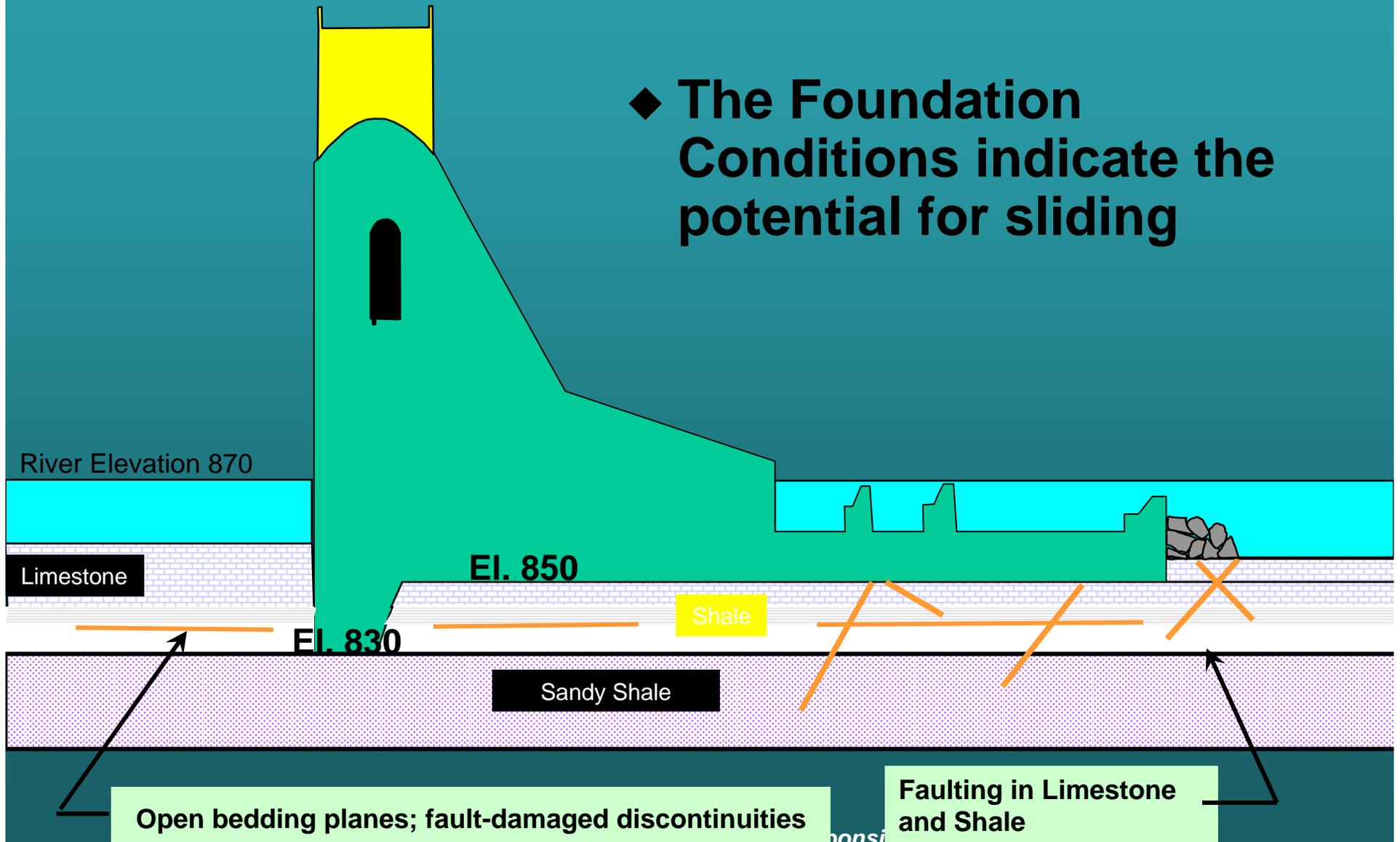
Findings

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- ◆ The Foundation Conditions indicate the potential for sliding

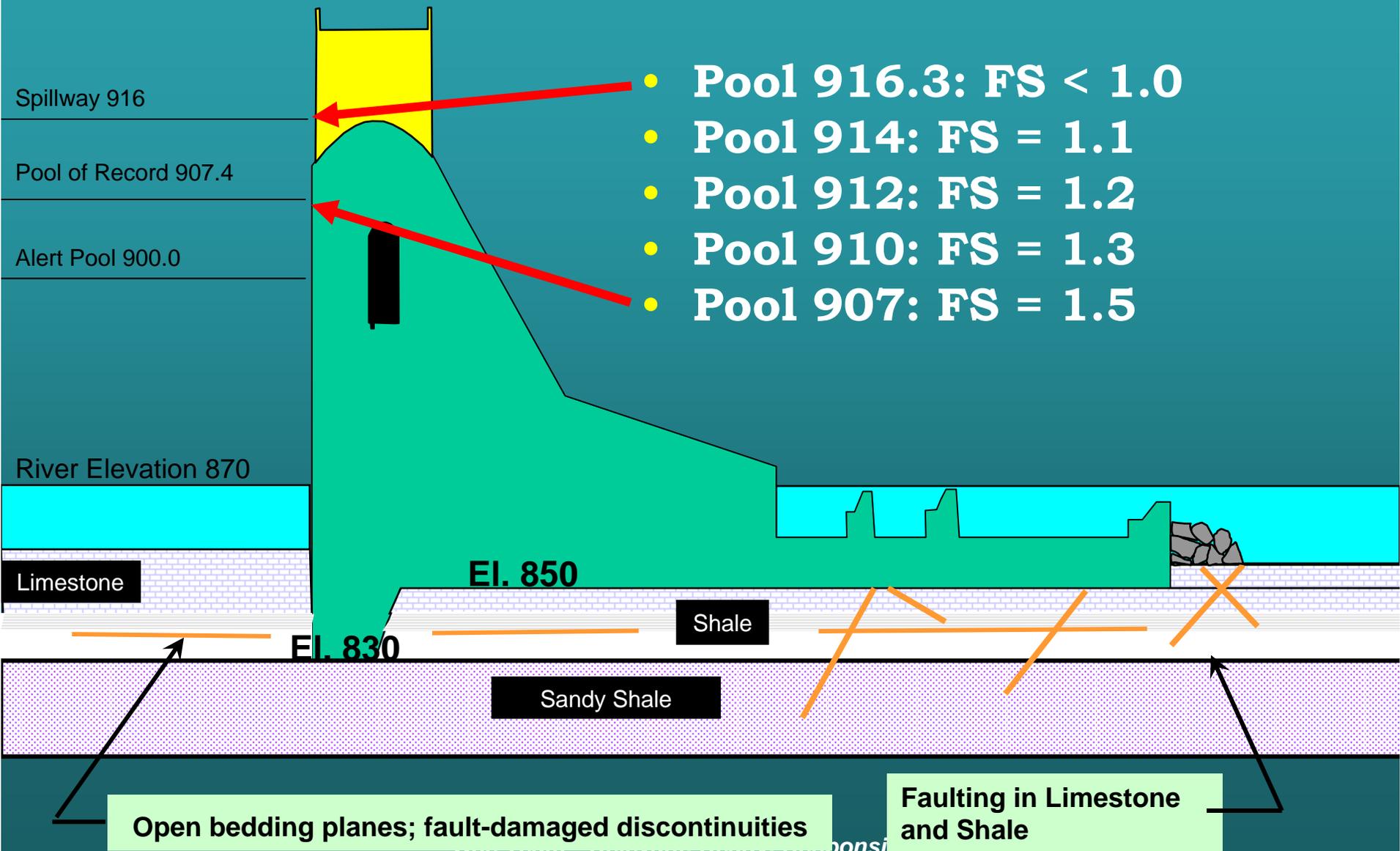




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Findings as of 6 April 2006

Probable Maximum Flood 937.4



Open bedding planes; fault-damaged discontinuities

Faulting in Limestone and Shale

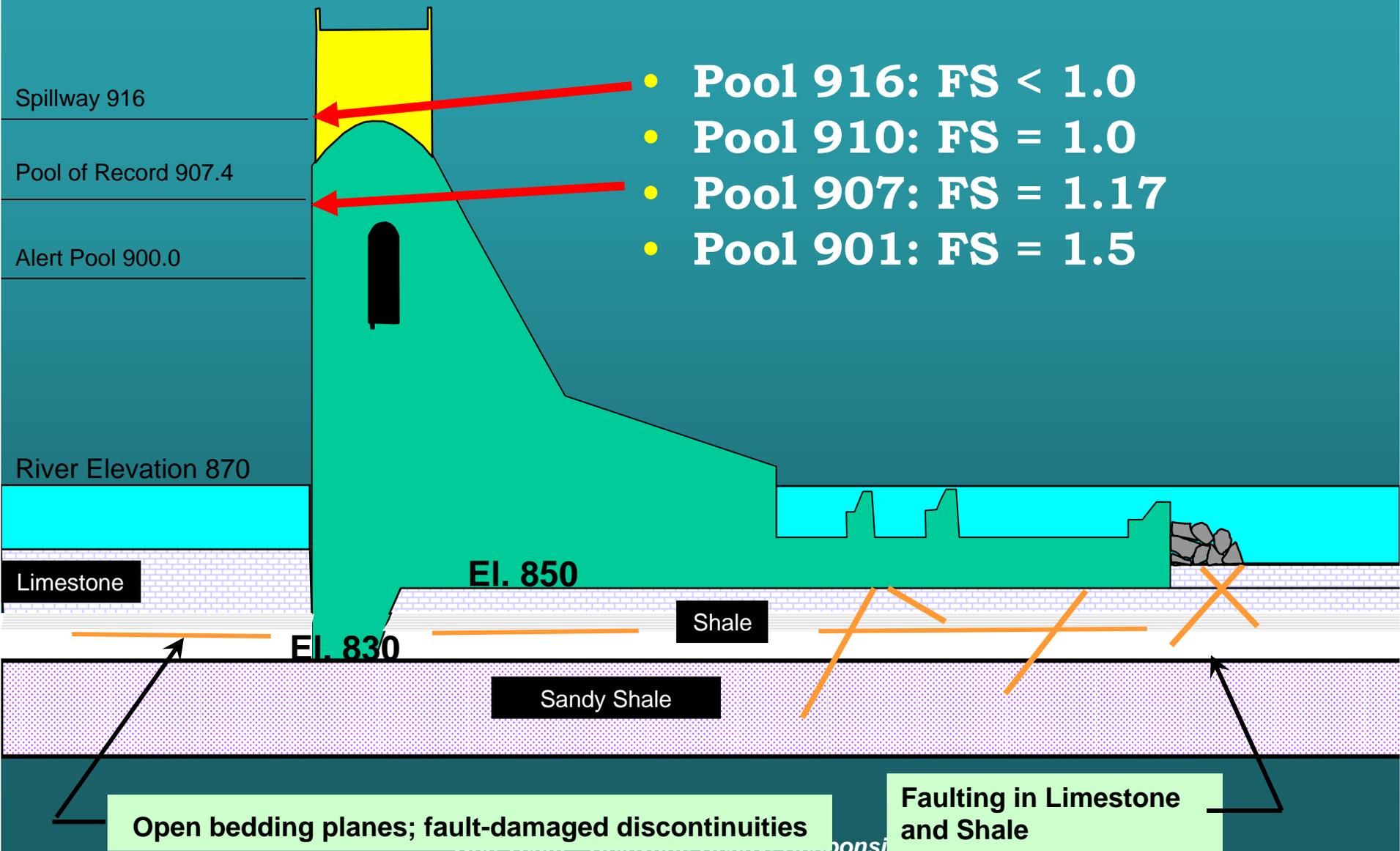
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Findings as of January 2007

Probable Maximum Flood 937.4





Alternatives

- The Corps of Engineers Study Guidelines Allow Us to Look at Four Levels Of Remediation
 - 100% Of Probable Maximum Flood (PMF)
 - <100% Of PMF
 - Breach The Dam
 - Do Nothing



Recommended Design Level

- The Base Safety Condition (BSC) is defined as the flood where no additional damages or probable loss of life is incurred from dam failure as compared to that of non-failure.
- For this project, the BSC evaluation indicated the probable loss of life and economic damages were always greater during dam failure for floods up to 100% of the PMF.
- Therefore the 100% PMF is the BSC for this project.



Alternatives Eliminated

- Any alternative that does not safely pass up to the 100% PMF
- Any alternative that was not cost effective or environmentally sound.
 - New dam
 - Auxiliary Spillways



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Breach (Remove) Dam Alternative

- Analysis indicates the benefits of keeping the dam significantly outweigh the costs of the recommended plan.
- Estimated annual benefits of Dover Dam are over \$15M



Final Array of Alternatives

- Three alternatives were carried forward for detailed consideration
 - Raise Dam (Non-overflow portion)
 - Dam Overtop
 - No Action

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Raise Dam Alternative

100% Of Probable Maximum Flood (PMF)

- Parapet Wall Constructed On Top Of Non-Overflow Sections
- Anchor Dam
- Cut-off wall
- Gate Closure Across Route 800 And Tie-In To High Ground
- Tie-In To High Ground On Left Bank

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Dam Overtop Alternative

100% Of Probable Maximum Flood (PMF)

- Anchor Dam
- Cut-off wall
- Armor Downstream Of Non-Overflow Sections
- Gate Closure Across Route 800 And Tie-In To High Ground
- Tie-In To High Ground On Left Bank

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No Action

- No physical changes to the dam
- Does not meet the planning objectives of the study

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Recommended Plan



Gate Closure

Parapet Walls

Anchors

Erosion Cut-Off

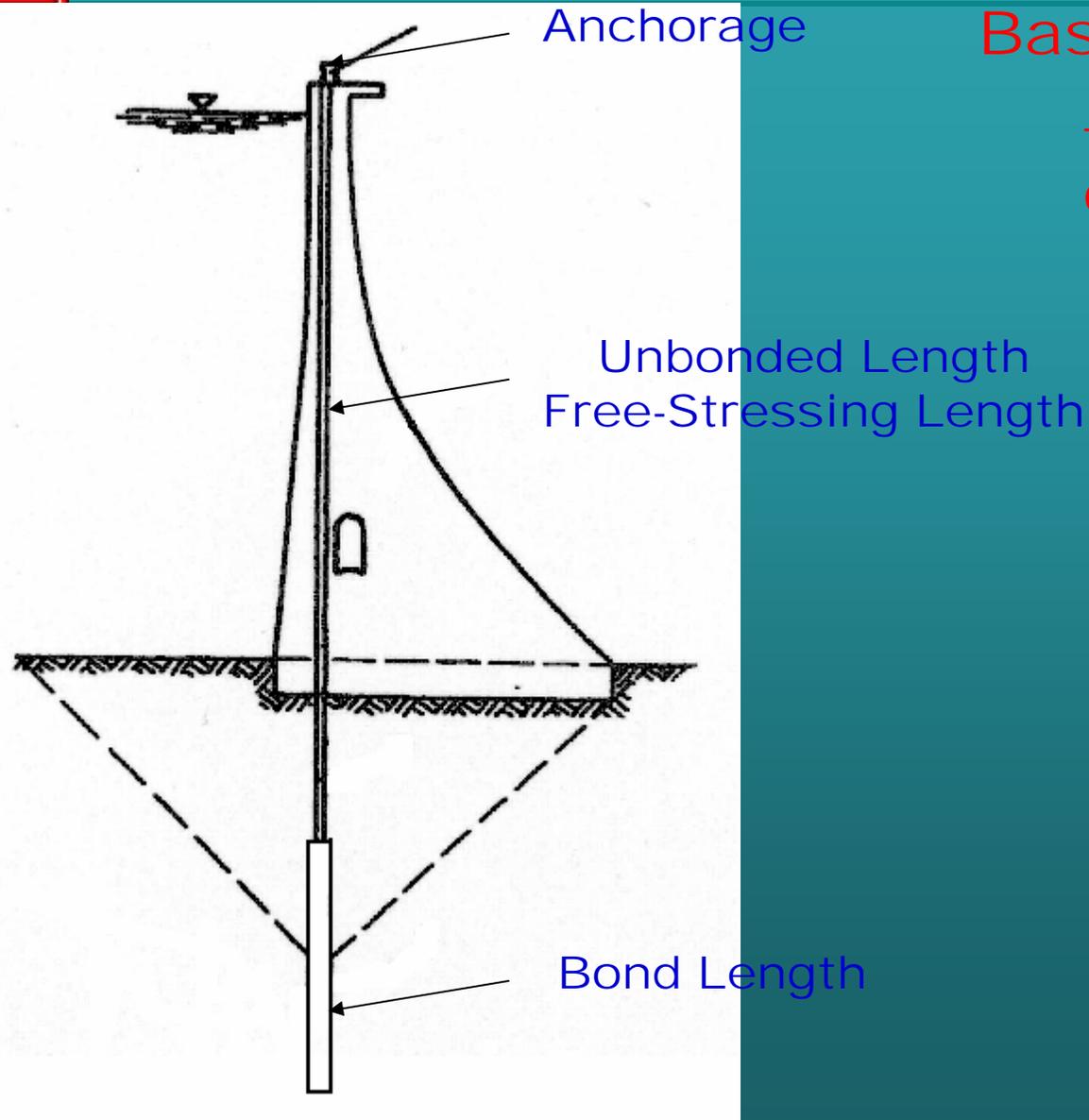
Bank Protection

Tuscarawas River

Bank Protection



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Basic Definitions

Tiedown or
Ground Anchor

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Study Milestones

- 2007 – DSA Evaluation Report
 - Draft EIS released for Public Review 26 January 07
 - Final EIS completed Mar 07
- 2007 - 2008 – Prepare detailed design
- 2009 – Construction Plans & Specifications
- 2010 – Begin Construction
Project Cost = \$94.5 M

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We would like YOUR input!

- This Comment period is open for 45 days. Please respond by March 12th.
- All comments received during the comment period will be considered. A final EIS will then be issued in late Spring 2007.



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Document Availability

- Tuscarawas County Library
121 Fair Ave. NW, New Philadelphia, OH 44663
- Dover Public Library
525 N. Walnut St., Dover, OH 44622
- Muskingum Area Office
5336 State Rt. 800 NE, Dover, OH 44662
- Huntington District Office
502 8th Street, Huntington, WV 25701
- www.lrh.usace.army.mil/projects/review



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How to Comment

- Comment now
- Fill out a Comment Form
- Seek out Corps Representative
- Send comments by US Mail:
U.S. Army Corps of Engineers, Huntington District
502 Eighth Street
Huntington, WV 25701-2070
- Or E-mail:
Rodney.G.Cremeans@usace.army.mil



Question and Answer Period

- Comments
- Suggestions
- Questions

◆ **Contact Information available on handouts**