



FEDERAL ENERGY REGULATORY COMMISSION

Office of Energy Projects

Division of Dam Safety and Inspections

March 2006

FERC DAMS

By Hazard Potential

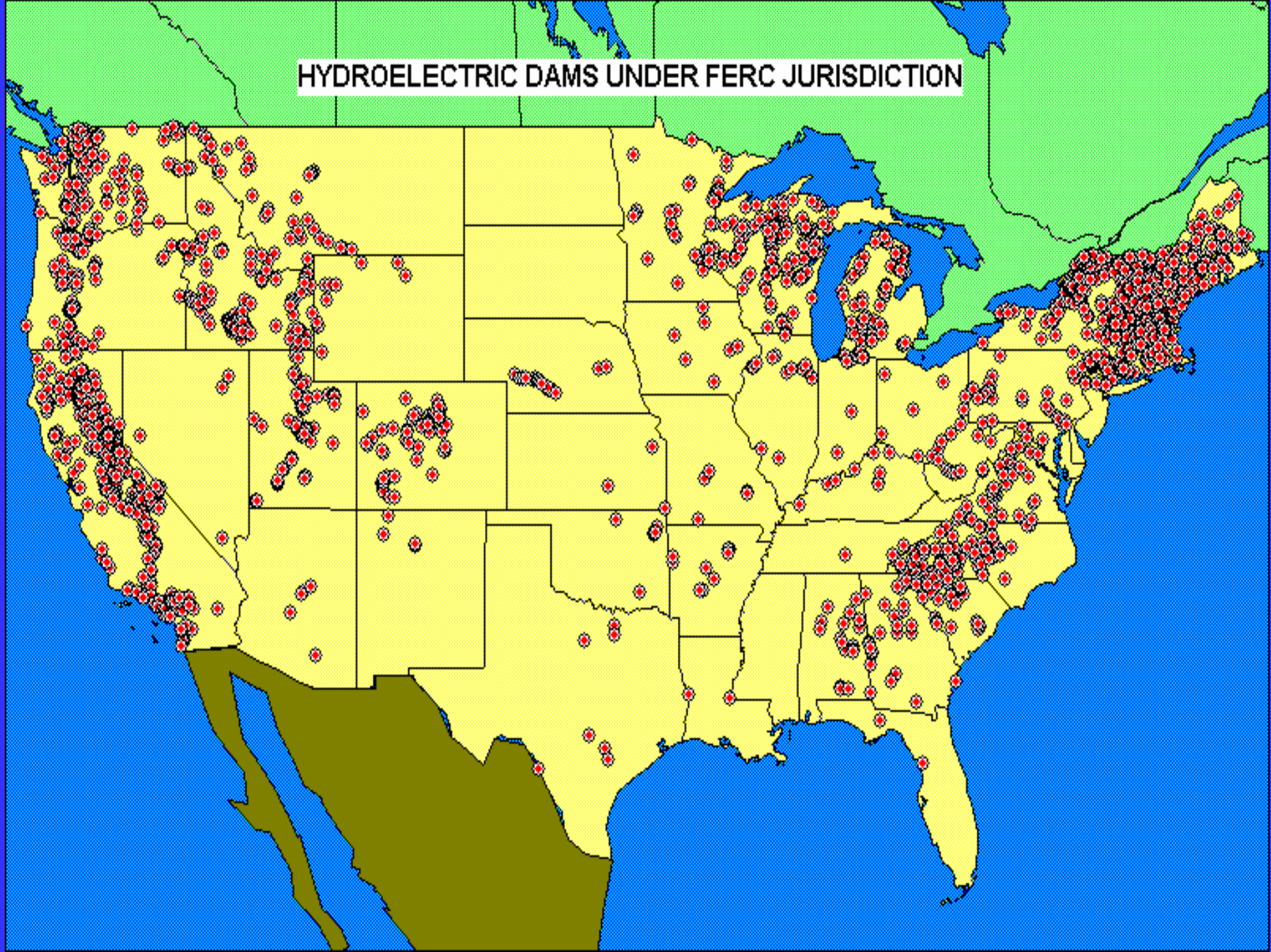
High	764
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Significant	203
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Low	1,568
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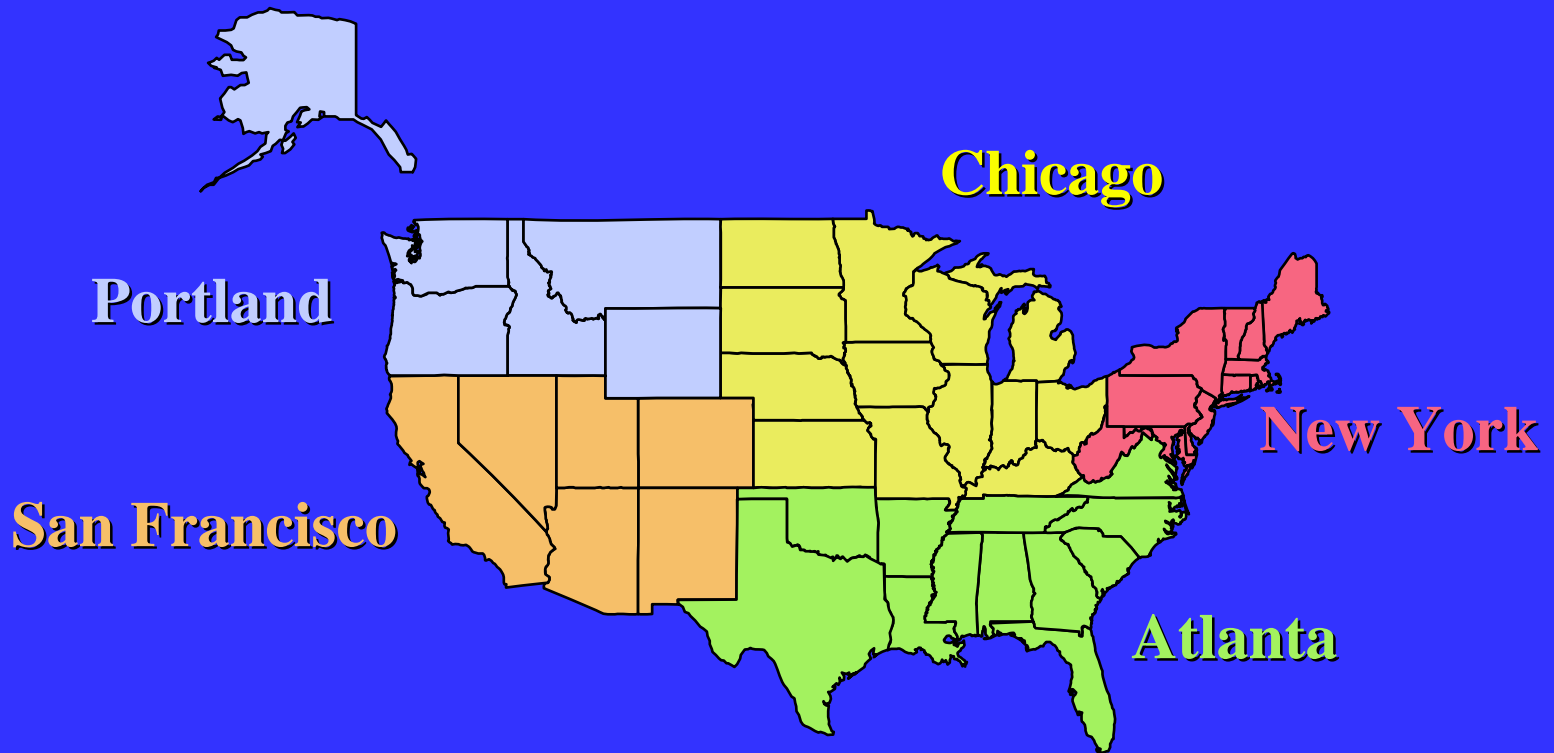
Total	2,535
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HYDROELECTRIC DAMS UNDER FERC JURISDICTION



Division of Dam Safety and Inspections

Regional Office Boundaries



FERC

Inflow Design Flood (IDF) Guidelines

- **Determined by Hazard Potential Classification**
- **Hazard Potential Classification Reviewed Annually**
- **IDF Reviewed Every Five Years**

Federal Guidelines FEMA 333 For Hazard Potential Classification

Hazard Potential Classification Summary Table

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
High	Probable. One or more Expected	Yes (but not necessary for this classification)
Significant	None Expected	Yes
Low	None Expected	Low and generally limited to owner

FERC

For Hazard Potential Classification

Hazard Potential Classification Summary Table

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, Lifeline Losses
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Inflow Design Flood (IDF) Guidelines

- **Chapter 2 of the Engineering Guidelines**
- **Selecting and Accommodating Inflow Design Floods for Dams**
- **IDF Determined by Hazard Potential Classification**

FERC Inflow Design Flood (IDF) Guidelines

For Low Hazard Dams

100 Year Flood

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Inflow Design Flood (IDF) Guidelines

Significant and High Hazard Potential Dams

- **Probable Maximum Flood (PMF)**
- **IDF less than PMF allowed if no impact**

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Inflow Design Flood (IDF) Guidelines

IDF Less than the PMF

- **Allowed if failure of the dam at floods above the IDF up through the PMF do not constitute a hazard to downstream life or property**
- **Requires Dambreak Studies**
- **Requires annual review of downstream development to ensure IDF is still applicable**

FERC Inflow Design Flood (IDF) Guidelines

Significant and High Hazard Potential Dams

- **Probable Maximum Flood (PMF)**
- **IDF less than PMF allowed if no impact**

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Inflow Design Flood (IDF) Guidelines

Revisions to Chapter 2

- **Enhanced discussion on 2-foot criteria to emphasize it is only a guide, not the rule**
- **Additional guidance on fine-tuning studies when incremental rise is around 3 feet**
- **New: Guidance on how to address silt in reservoir**
- **New: Establish a minimum value for IDF (e.g. 100 yr flood)**
- **New: Criteria for fuseplugs**

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Inflow Design Flood (IDF) Guidelines

Summary

High and Significant Hazard Potential Dams
PMF or IDF

Low Hazard Potential Dams
100 Year Flood

**EMERGENCY
ACTION
PLAN
PROGRAM**

EMERGENCY ACTION PLANS

- **EAPs Save Lives**
- **First Federal Agency to Promote EAP and Most-Developed Federal EAP Program**
- **Only Option When Unexpected Happens**
- **EAP Methodology Used World-Wide**

FERC EAP PROGRAM

- **EAPs Required For All Projects**
- **Exemptions Issued For Low Hazard Projects**
- **99% of All FERC Projects Meet EAP**
- **Recognized as Leading Expert In EAP by FEMA and the Dam Safety Community**

FERC EAP GUIDELINES

- **Revised February 22, 1988
(Amended September 9, 1988)**
- **Require EAP Exercise Program**
 - **Annual Drills**
 - **Periodic In Depth Testing - Also
Known as Comprehensive Exercise**

EAP EXERCISE PROGRAM

- **Initiated 1991**
- **Essential Part of EAP Program**
- **1 Test Per Owner Every 5 Years**
- **Value Recognized**