Indiana Dam Safety Program





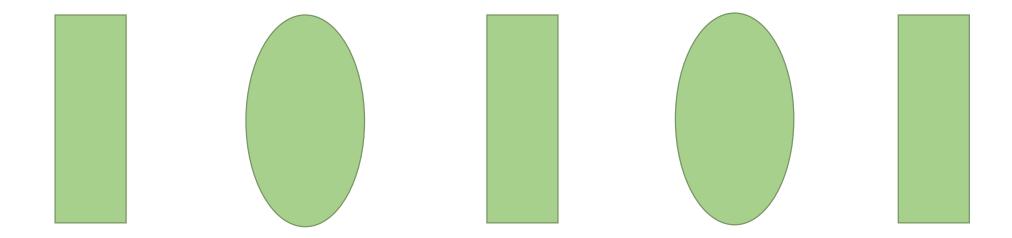
Moumita Mukherjee, PhD, P.E.

Manager, Dam Safety Section, DNR Division of Water



Presentation Overview:

- General Overview of Indiana DNR Dam Safety Program
- Meet Indiana Dam Safety Team





Dams in Indiana

Purpose of Dams:

- Flood Control
- Water Storage
- Recreation
- Farming
- Power, Hydroelectric



Regulated by any one of these agencies:

- Department of Natural Resources non-hydropower, non-federal dams at the State Level
- United States Army Corps of Engineers (USACE) Federal dams
- Federal Energy Regulatory Commission (FERC) –Hydropower dams

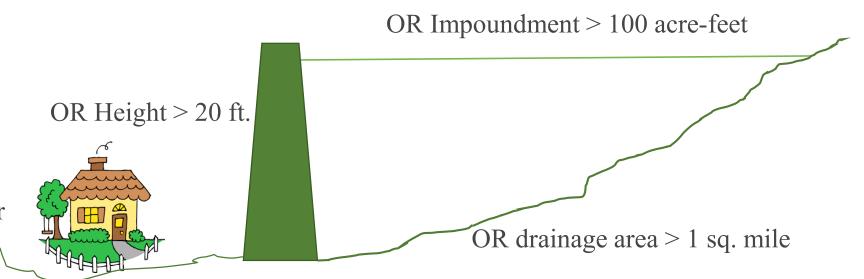
Dams Regulated by I.C. 14-27-7.5

Dam **Safety** Statutes and Rules (IC-14-27-7.5)

Jurisdictional criteria:

- ≥ 20 feet high or
- ➤ 100 acre-feet impounded or
- ➤ 1 square mile drainage area or

Petition from downstream owner

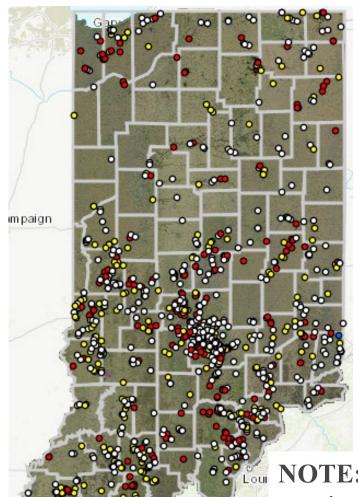


• Jurisdictional dams ~ 1388



Hazard Classification I.C. 14-27-7.5

- High Hazard Dams 278
 - Loss of life likely to occur
 - Serious damage to residences, commercial /Industrial buildings, public utilities, railroads and highways
 - Indefinite interruption of services Inspection done every 2 years
- Significant Hazard Dams 321
 - Damage to isolated homes and highways
 - Temporary interruption of services Inspection done every 3 years
- Low Hazard Dams 789
 - Damage to farm buildings, agricultural land or local roads
 - No interruption of services
 Inspection done every 5 years



When downstream conditions change, classification can change.

NOTE: There are several non-jurisdictional dams not shown.



Dam Safety Program

Key responsibilities

- Permit new dams
- Approve plans for repair/reconstruction/removal
- Conduct safety inspections (~120 dams/year)
- Review inspection reports for privately owned high hazard dams
- Provide emergency response
- Hazard classification
- Maintain database of dams
 ✓ ownership information, problems and recommendations
- Refer to compliance section
- Educate dam owners







Inspection Activities

- Look for change
- Complete inspection checklist
 - ✓ Walk all portions of embankment
 - ✓ Evaluate concrete portions of dam
 - ✓ Evaluate outlet structures
 - ✓ Look for downstream development
 - ✓ Check water level
- Document with photographs
- Prepare inspection report and forward to owners
 - ✓ Observations/deficiencies, recommendations
 - ✓ Conditional assessment satisfactory, fair, conditionally poor, poor, and unsatisfactory
- Opportunity for outreach and education with owners





Dam Safety Team



Ken Smith, P.E. Assistant Director



Jon Eggen, CFM
Manager
Compliance and Enforcement



Moumita Mukherjee, Ph.D., P.E.

Manager

Dams and Levee Safety



Garth Lindner, Ph.D. Hydraulic Engineer



Marco Alvarez-Rengifo
Engineering Geologist



Jim Wertz, P.E. **Hydraulic Engineer**



Ryan Silvers
Construction Technologist



Scott Hines
Construction Technologist



Resources

Indiana DNR Dam Safety Program

https://www.dnr.IN.gov/water/2458.htm

Dams

Indiana Dam Safety Inspection Manual

General Guidelines for New Dams & Improvements to

Existing Dams in Indiana

IC 14-27-7.5 Regulation of Dams

312 IAC Article 10.5 Regulation of Dams

Incident and Emergency Action Plans

Levees

IC 14-27-7 Dams, Dikes and Levees; Regulation Act



Thank you!

Moumita Mukherjee, Ph.D. P.E.

Email: mmukherjee@dnr.IN.gov

Ph. – 317-232-1103