

Division of Water

Leveraging Partnerships Collaboration & Cooperation

Kenneth Smith, PE
Interim Director
Division of Water

DNR FOCAL POINTS

CUSTOMER SERVICE

FISCAL RESPONSIBILITY

COMMUNICATION

DIVERSITY & SUCCESSION PLANNING

PERSONAL GROWTH

FLATTER ORGANIZATION

ENHANCE THE DNR BRAND

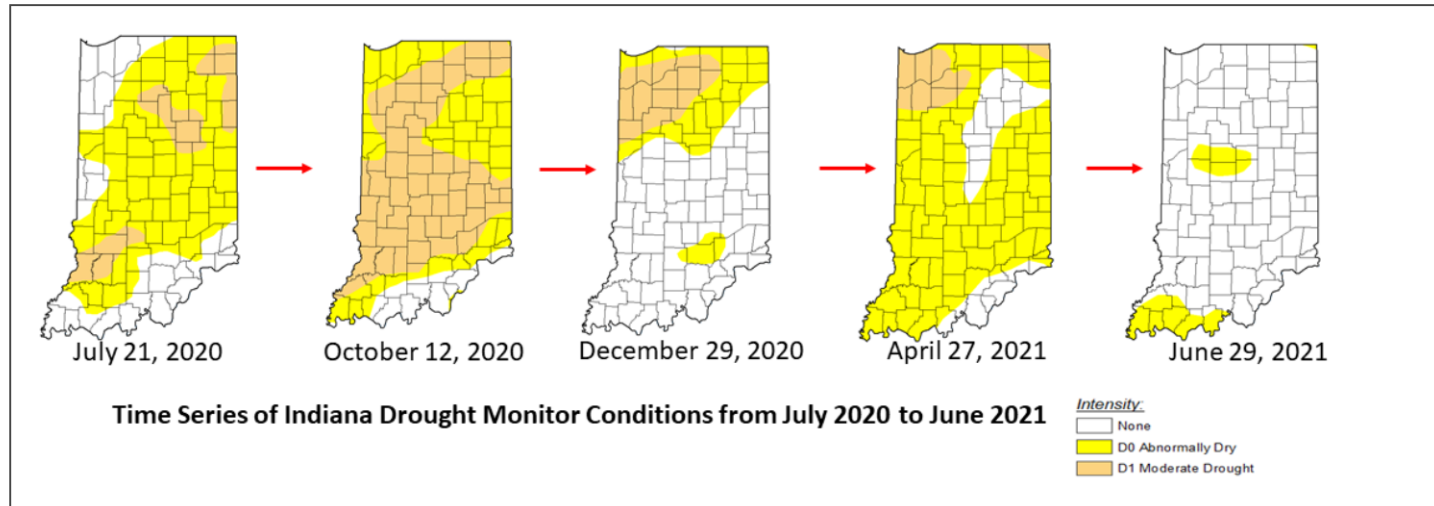
Division of Water Summary Annual Report July 1, 2020 – June 30, 2021



THE DIVISION OF WATER'S MISSION

**SERVE AS STEWARDS OF INDIANA'S
SURFACE AND GROUND WATER RESOURCES
FOR THE BENEFIT OF
PRESENT AND FUTURE GENERATIONS.**

STATE OF THE WATER RESOURCE



STATE OF FLUVIAL EROSION HAZARDS

The Indiana Fluvial Erosion Hazard (FEH) Initiative (a multi-agency, public, private, and academia partnership) continues to respond to reports of increasing stream and river erosion around the state. The Division of Water and the IUPUI Center for Earth and Environmental Science (CEES) are contracted together in support of this awareness and documentation project.

BRIEF HIGHLIGHT OF 2020-2021 SUCCESSES

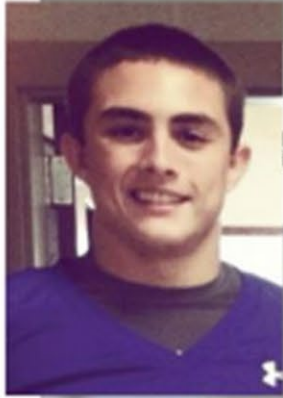
- ❑ Initiated the newly enacted low head dam program
- ❑ Creation and NRC approval of the Low Head Dam Roster, which can now be found on the NRC Nonrule Policy Document page at <https://www.in.gov/nrc/nonrule-policy-documents-npd/>
- ❑ Creation of the internal Water Awareness Task Team (WATT)
- ❑ Participation in the Drought Monitoring Advisory Committee and creation of weekly drought monitoring reports
- ❑ Participation in the Central Indiana Water study
- ❑ Technically reviewed and processed more than 1,000 applications for construction activities along the shorelines of public freshwater lakes and in the floodways of streams.
- ❑ For the public, lake associations, local floodplain administrators, and conservation officers, conducted over a dozen virtual training sessions hosted by staff on various topics
- ❑ For public and private dam owners, dam safety officials, and emergency responders, participated in the 2021 Statewide “Dam Information Resources and Training” Seminar (DIRT)

The Changing View

Dams are Becoming - *Public Destinations*



The Inspiration



IndyStar.
Opinion Obituaries E-Edition Legals

North Sports Indy 500

PUBLIC SAFETY
Franklin teen's body pulled from Big Blue River near Edinburgh

Justin L. Mack IndyStar
Published 11:17 a.m. ET Jun. 8, 2014 | Updated 10:56 p.m. ET Jun. 8, 2014

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A photograph showing a young man in a red shirt walking on a stone dam structure over a river. The river has a small waterfall on the left side.

Indiana conservation officer divers have located the body of the missing teenager this morning in the Big Blue River. 2013 file photo. A young fisherman takes advantage of low water to walk onto the dam in the big Blue River in Edinburgh. Rob Goebe/The Day File Photo

INDIANA NEWS

Search to continue for missing kayaker in Fort Wayne river

A photograph of a red fire truck with its emergency lights on, driving on a road. There are trees and a clear sky in the background.

INDIANA SILVER JACKETS

USGS
science for a changing world

NORR

NATIONAL WEATHER SERVICE

USDA
United States
Department of Agriculture

FEMA

NRCS

PURDUE UNIVERSITY

IUPUI

The Nature Conservancy
Protecting nature. Preserving life.

The Polis Center
We bring things into perspective.

IDHS

MAUIEE
MAINE
WATER COMMISSION

INDIANA DEPARTMENT OF TRANSPORTATION

IDEM

OCRA
Office of
COMMUNITY &
RURAL AFFAIRS

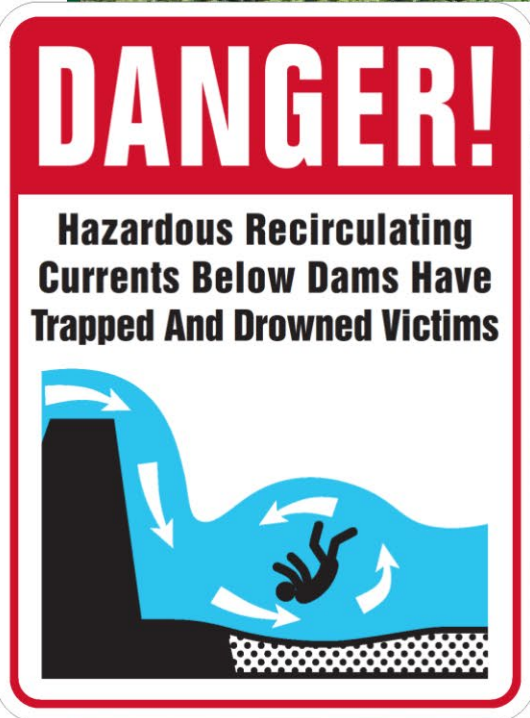
NATIONAL GUARD
UNITED STATES ARMY
MILITARY RESERVE

Indiana GEOGRAPHIC INFORMATION COUNCIL

MRCC

DNR
Indiana Department
of Natural Resources

INDIANA SILVER JACKETS LOW HEAD DAM TEAM



Diverse Partners

- Dam Owners
- Many Agencies
- 1st Responders
- Habitat Restoration
- Public & Private Professionals & Groups
- Recreation Groups
- Survivors
- Victim's Families
- Non- Profits
- Private Donors
- Educators & Students
- Academia

Hidden Dangers and Public Safety at Low-head Dams

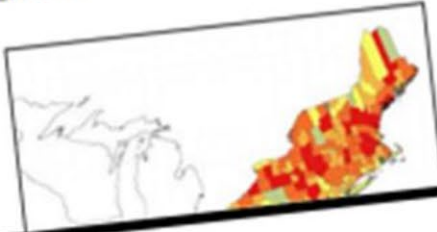
BRUCE A. TSCHANTZ, PE
KENNETH R. WRIGHT, PE

ABSTRACT
Low head dams, a.k.a. "killer dams" or "drowning machines" often present a safety hazard to the public because of their ability to trap victims in a submerged hydraulic jump formed just downstream from the dam. Most of these dams, especially smaller ones, are in need of policies, standards, regulations, and incentives to make them safe and to reinforce a dam owner's responsibility to protect the public from property damage and loss of life in event of structural failure. Forty state states and all federal agencies having some responsibility for dam safety have programs to regulate the

What We Know (and Don't Know) About Low-head Dams

BRUCE TSCHANTZ

INTRODUCTION
Low head, or run-of-the-river, types of dams - usually spanning the entire river or stream - can present a safety hazard to the public because of their capability to produce dangerous recirculating currents, large hydraulic forces, and other hazardous conditions sufficient to trap and drown victims immediately downstream from the overflowing water. Thousands of these dams, mostly of concrete or masonry construction and ranging up to about 15000 feet in



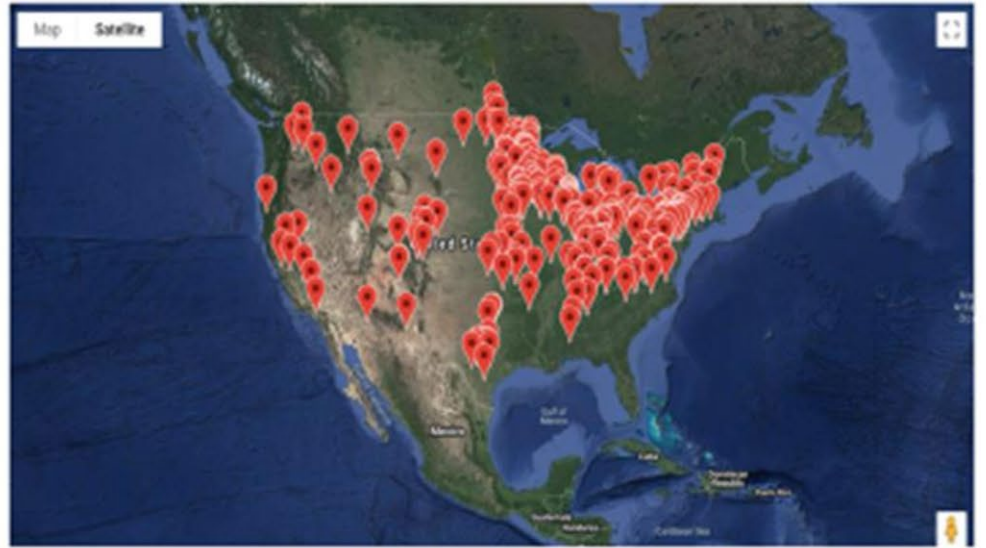
Research

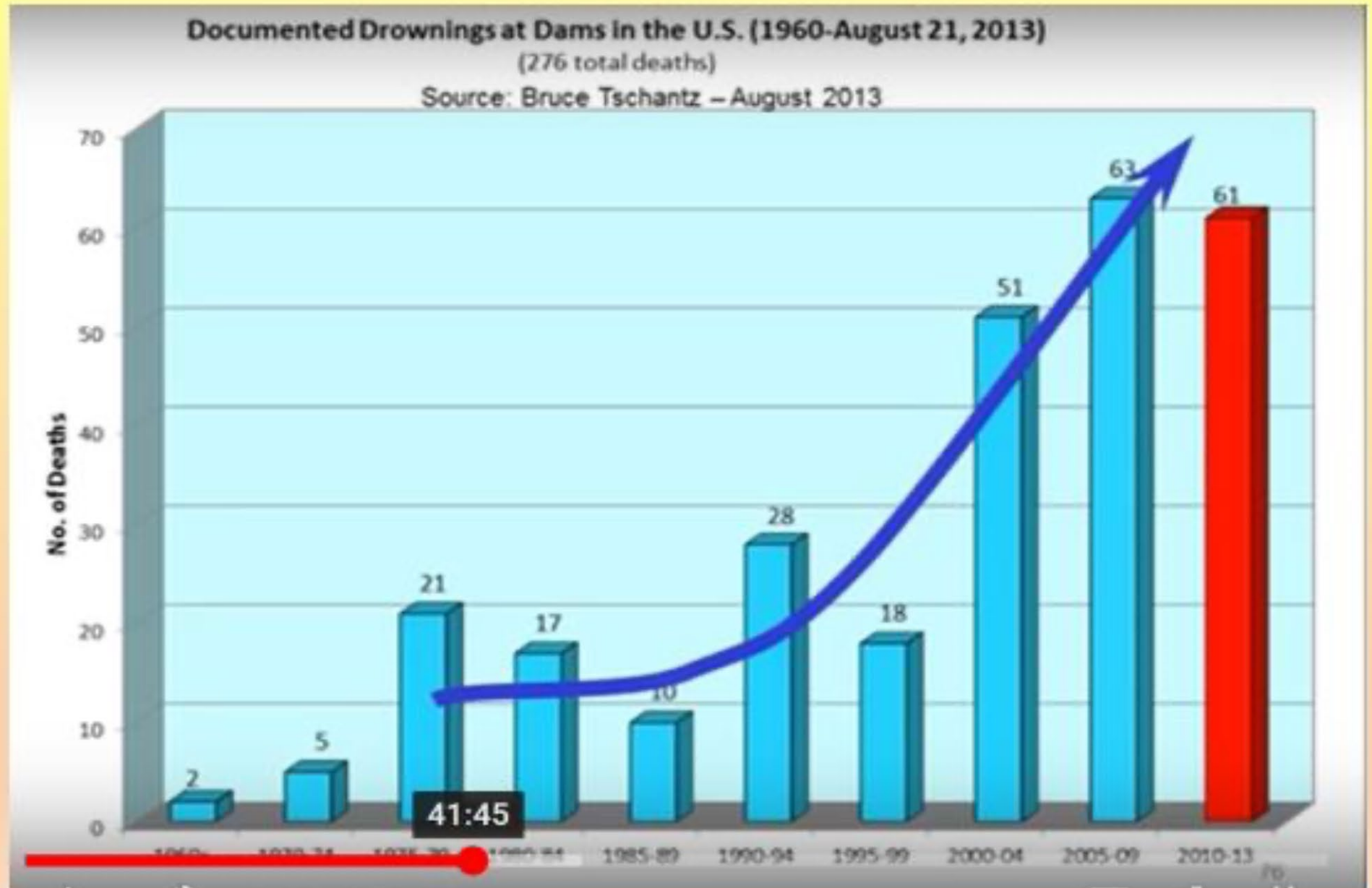
BYU
BRIGHAM YOUNG UNIVERSITY

[About Submerged Hydraulic Jumps](#) [Browse Records](#) [Report an Incident](#)

Locations of Fatalities at Submerged Hydraulic Jumps

The interactive database was designed and built by Ed Lee, a masters student at BYU. John Grayson, a former BYU graduate student, created a [GIS database](#) with 61 locations, and more than 200 fatalities recorded. There are many more locations that need to be added to obtain public contributions. If there are any files or appropriate entries please report them to [Ed Lee](#). We have received significant contributions from several sources including Dr. Bruce Tschantz who has supplied the data he has been collecting at low head dams, and Charlie Walbridge from the American Whitewater Association who has given us the data that they have been collecting at [www.americanwhitewater.org](#).





Outreach

- PBS stations throughout the country
- Universities
- Conferences
- Businesses
- Professional Organizations
- Magazines
- TV News Coverage



NEW - IC 14-27-7.3 Low Head Dams

- ***Driven by*** Local Champion
- DNR ROSTER of Regulated LHDs
- Owners' Warning Standards
- Owners' yearly proof of a Million Dollar Liability Insurance
- Person may not access LHD or within 50 feet, wade, boat, or swim,
Class C infraction



Indiana News

Dam Removals Completed in 2020

Martinsville – IPL/AEP Dam

Starke Co. – Hook Ditch

Muncie – 3 dams removed or
modified

Scheduled for 2021

Crawfordsville – Sugar Creek

Logansport – 9th and 10th St Dams

Silver Creek – Clark County

National Efforts

- National Signage Best Practices Manual
- National Inventory
- Annual – Low Head Dams Public Safety Awareness Month – APRIL 2022
- Continued Pursuit of remote and automated detection of low head dams methods
- A National Low Head Dams Inventory and Map