US Army Corps of Engineers

Mosquito Creek Lake

The 90 Day Wonder

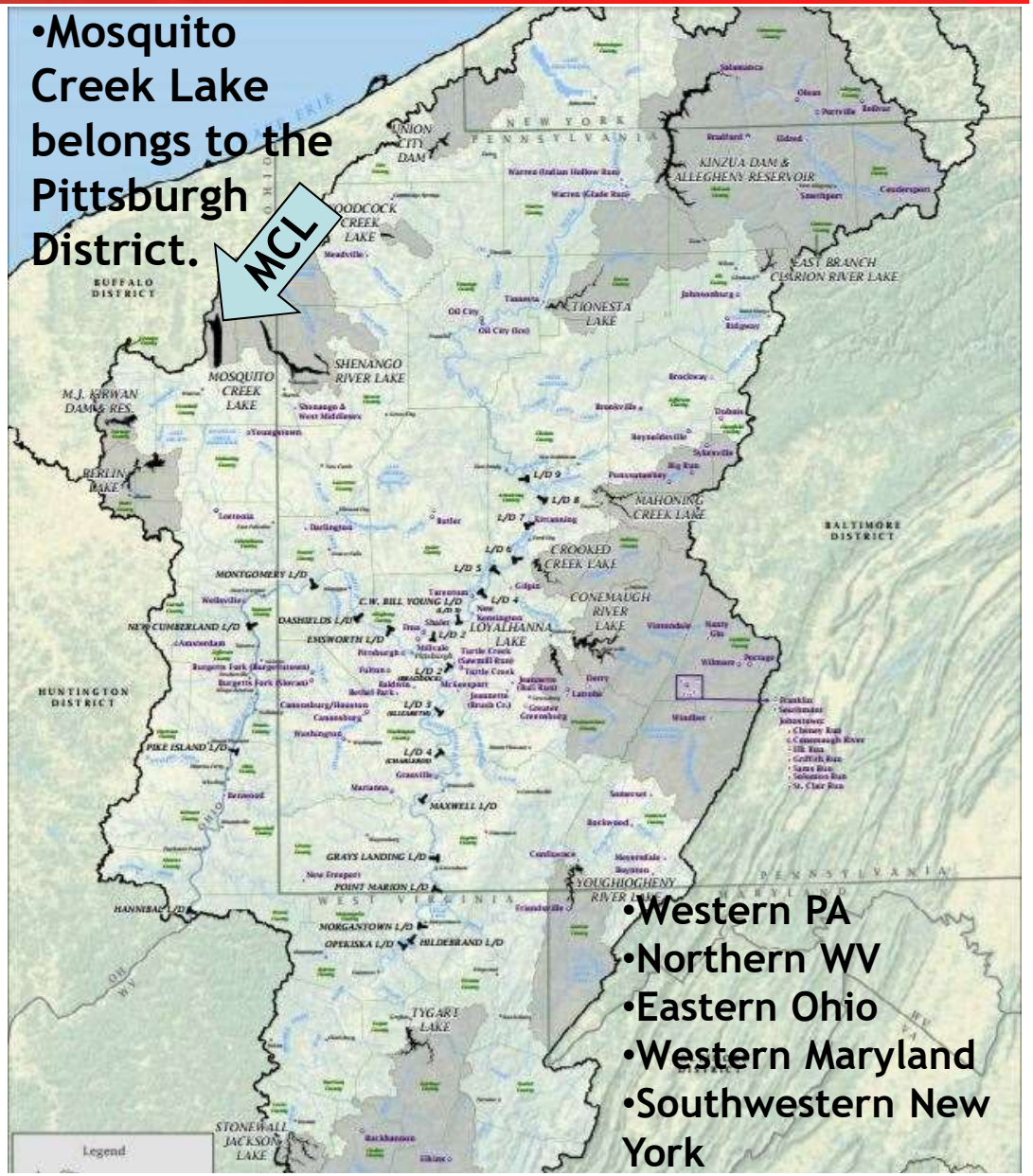
Corps History

- George Washington appointed the first engineer officers of the Army on June 16, 1775
- Army established the Corps of Engineers as a separate, permanent branch on March 16, 1802
- Throughout the 19th century, the Corps built coastal fortifications, surveyed roads and canals, eliminated navigational hazards, explored and mapped the Western frontier, and constructed buildings and monuments in the Nation's capital.
- In the 20th century, the Corps became the lead federal flood control agency
- In the late 1960s, the Corps became a leading environmental preservation and restoration agency.

• Comprised of 16 multi-purpose flood control reservoirs, 23 Locks and Dams, and 328 miles of navigable waterways.

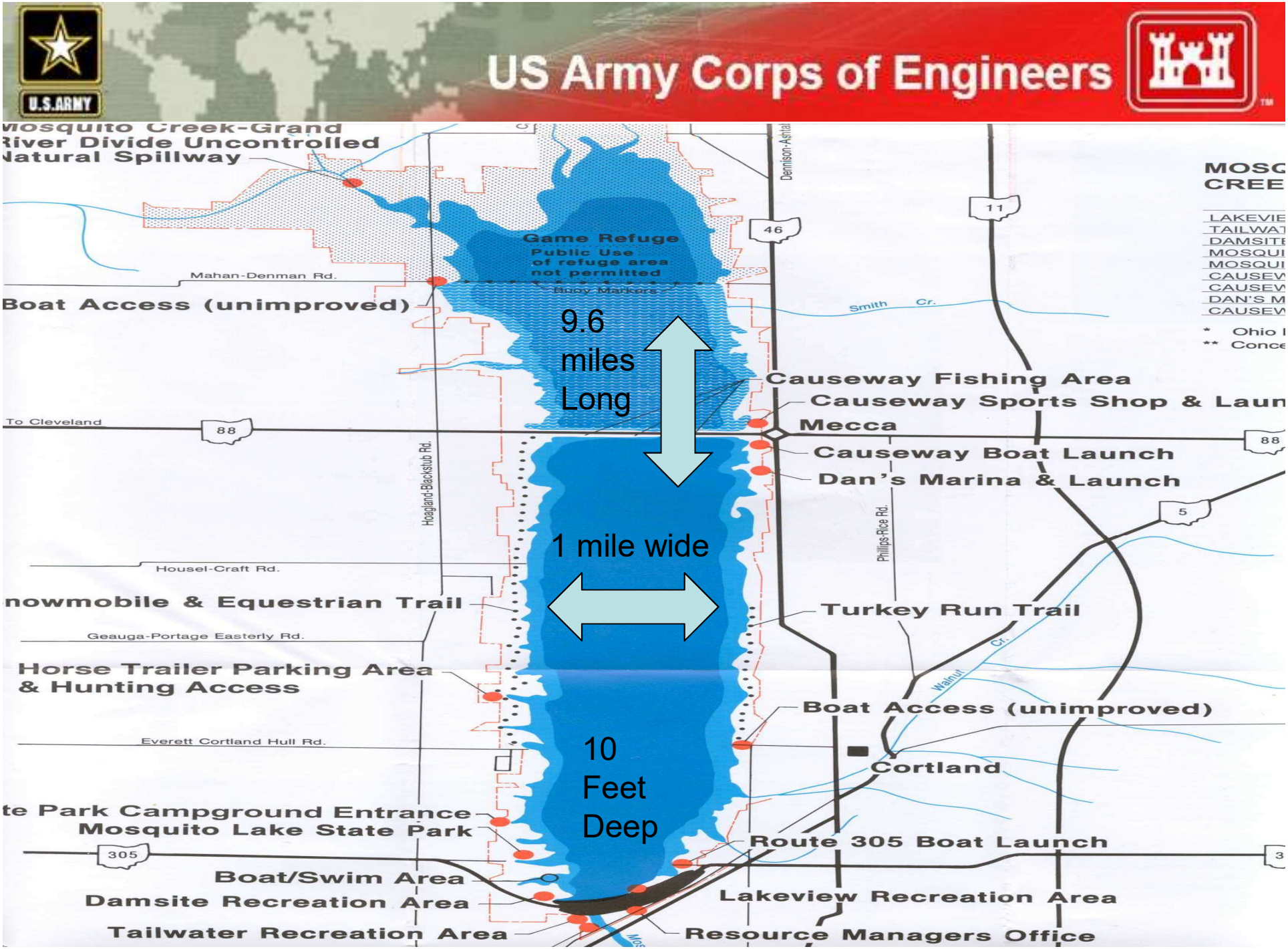
•USACE Districts are divided by watershed boundaries, NOT States.

•Pittsburgh District is known as the Headwaters District, includes the upper 127 miles of the Ohio River and drainage basins of the Allegheny and the Monongahela rivers which join at the Point in the Pittsburgh to form the Ohio.



Project Location

- Mosquito Creek originates in Cherry Valley Township, Ashtabula County.
- Flows southeast for a distance of 16 miles, whereupon it empties into Mosquito Creek Lake.
- Mosquito Creek Dam is located two miles southwest of Cortland, Trumbull County.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U.S.ARMY
Mosquito Creek-Grand River Divide Uncontrolled Natural Spillway
Game Refuge
Public Use of refuge area not permitted
Buoy Markers
Mahan-Denman Rd.
Boat Access (unimproved)
9.6 miles Long
1 mile wide
10 Feet Deep
Dennison-Ashtabula
46
11
Smith Cr.
Causeway Fishing Area
Causeway Sports Shop & Laun
Mecca
Causeway Boat Launch
Dan's Marina & Launch
To Cleveland
88
Hoagland-Blackstub Rd.
Phillips-Rice Rd.
5
Housel-Craft Rd.
nowmobile & Equestrian Trail
Turkey Run Trail
Geauga-Portage Easterly Rd.
Horse Trailer Parking Area & Hunting Access
Walnut Cr.
Boat Access (unimproved)
Everett Cortland Hull Rd.
Cortland
te Park Campground Entrance
Mosquito Lake State Park
305
Route 305 Boat Launch
Boat/Swim Area
Damsite Recreation Area
Lakeview Recreation Area
Tailwater Recreation Area
Resource Managers Office
MOSQ
CREE
LAKEVIE
TAILWA
DAMSITE
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Project Needs & Purposes

1.) Flood Control - For Warren and the Mahoning Valley. ($280 Mill)

2.) Low Flow Augmentation / Water Quality – Originally to increase the level of the Mahoning River at low flow to ensure adequate water for the mills. Plus Cool the water to 100 degrees Fahrenheit for steel production during the WWII war effort. Now for fish and wildlife down stream.

3.) Water Supply - 10-16 million gallons a day to warren water department.

1948: USACE contracted to sell Warren up to 16 millions gallons of water per day.

4.) Recreation.

1946: USACE contracted with ODNR to manage recreation on the lake.

Project History

- July 2, 1943 – Congress appropriated $4,385,000 to build Mosquito Creek Reservoir.
- Approved by the Federal War Production Board to benefit the Youngstown steel Mills.
- July 24, 1943: Groundbreaking ceremonies.
- July 29, 1943: Work began on dam, which was finished within 90 days “90-Day Wonder”.
- April 1944: Full operation of the reservoir was initiated.

Scene in Youngstown, Ohio during the Big Flood of March, 1913 - Mahoning Avenue from the B&O Railroad tracks.
Source: "Pennsylvania lines west of Pittsburgh", by Charles Wilbur Garrett


Crest- 47 feet above
original streambed
PROPOSED DAM SITE
Stream Channel

Design

- Rolled random earth-fill structure (Vs. Concrete)
- Layer of stone providing protection from erosion on the upstream slope.
- The downstream is covered by grass and terminates in a stone toe drain which helps control seepage.
- Maximum base width of the dam is 430 feet.

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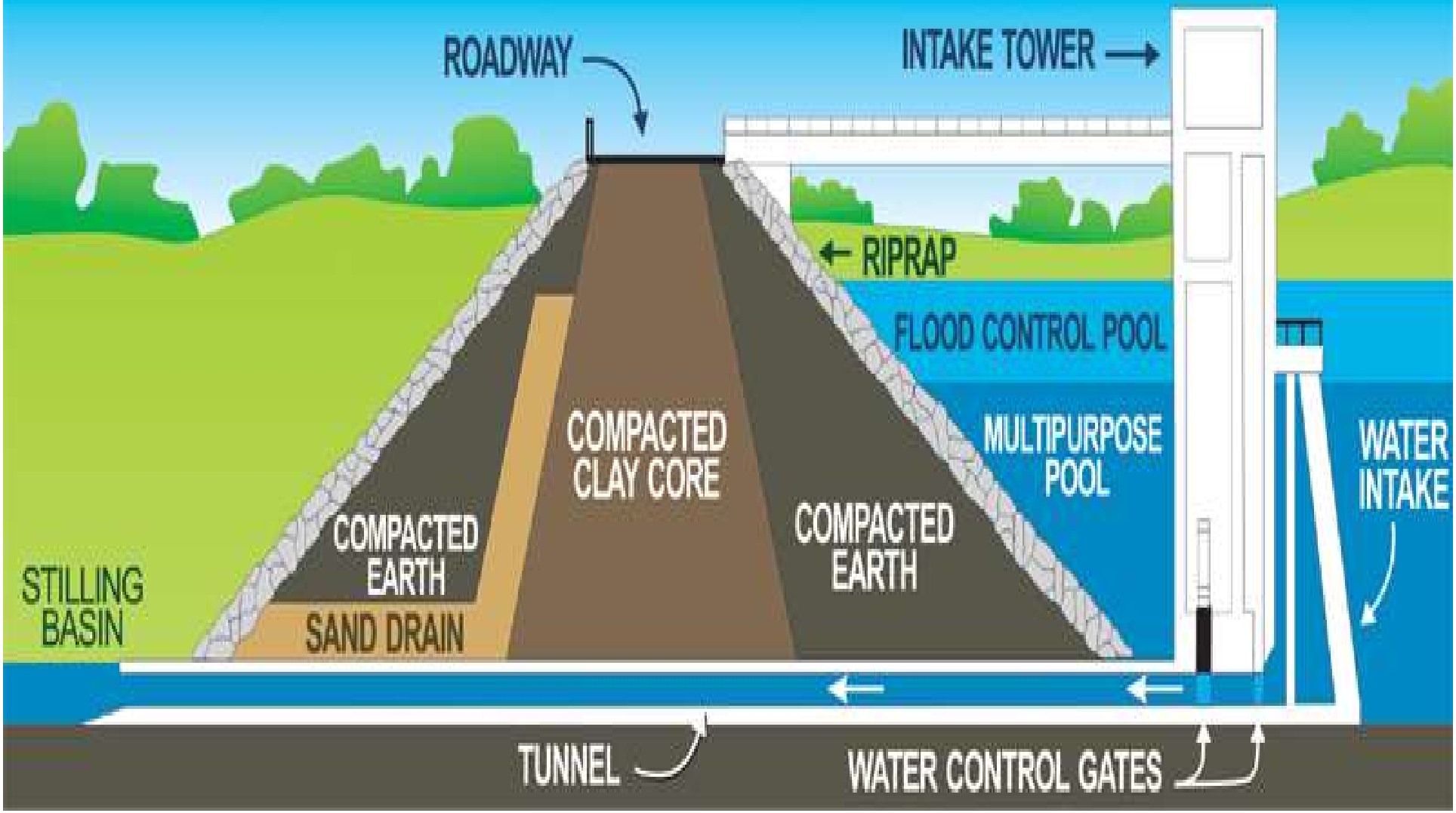
Typical cross section of an Earthen Dam



Intake Control Structure

A structure used to regulate or release water impounded by a dam

Upstream

Reservoir Discharge

- Four 4’ X 8’ sluice gates
- Two 24-inch diameter gates
  - Each discharged into one of the 8 foot square sluice ways in the conduit structure.

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Gate Controls inside Control Tower

Programmable Logic Controller

Three Warren Water Control Gates

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Generator

Automatic Transfer Switch

Trash Rack

- A device consisting of closely spaced bars or gates mounted on the intake structure to prevent floating debris from entering the outlet works

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Inside Trash Racks

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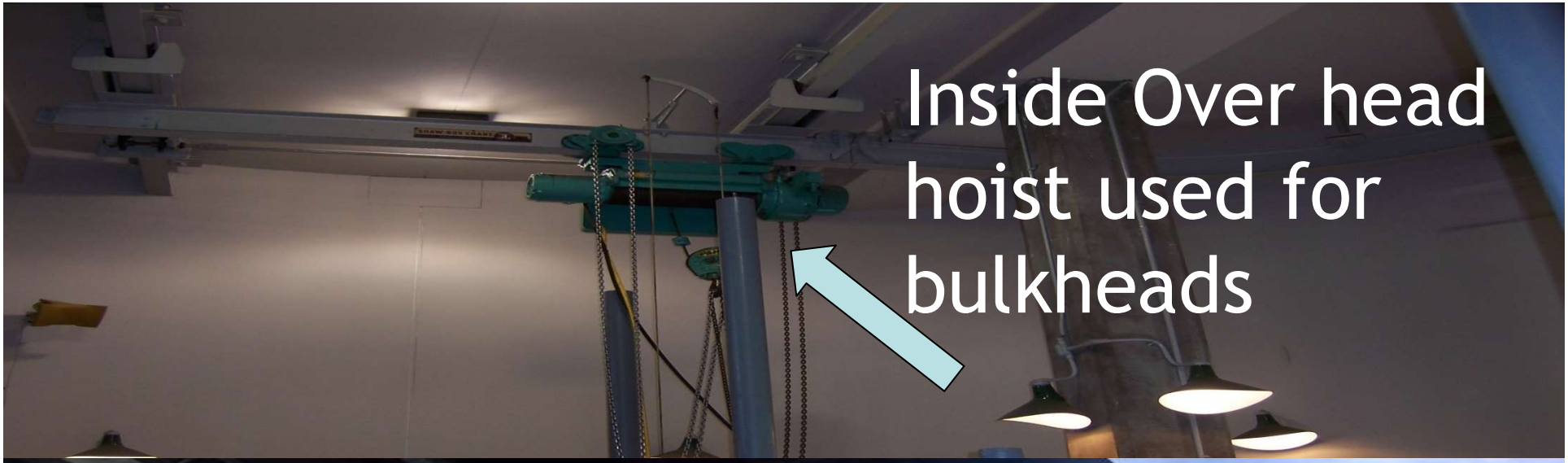
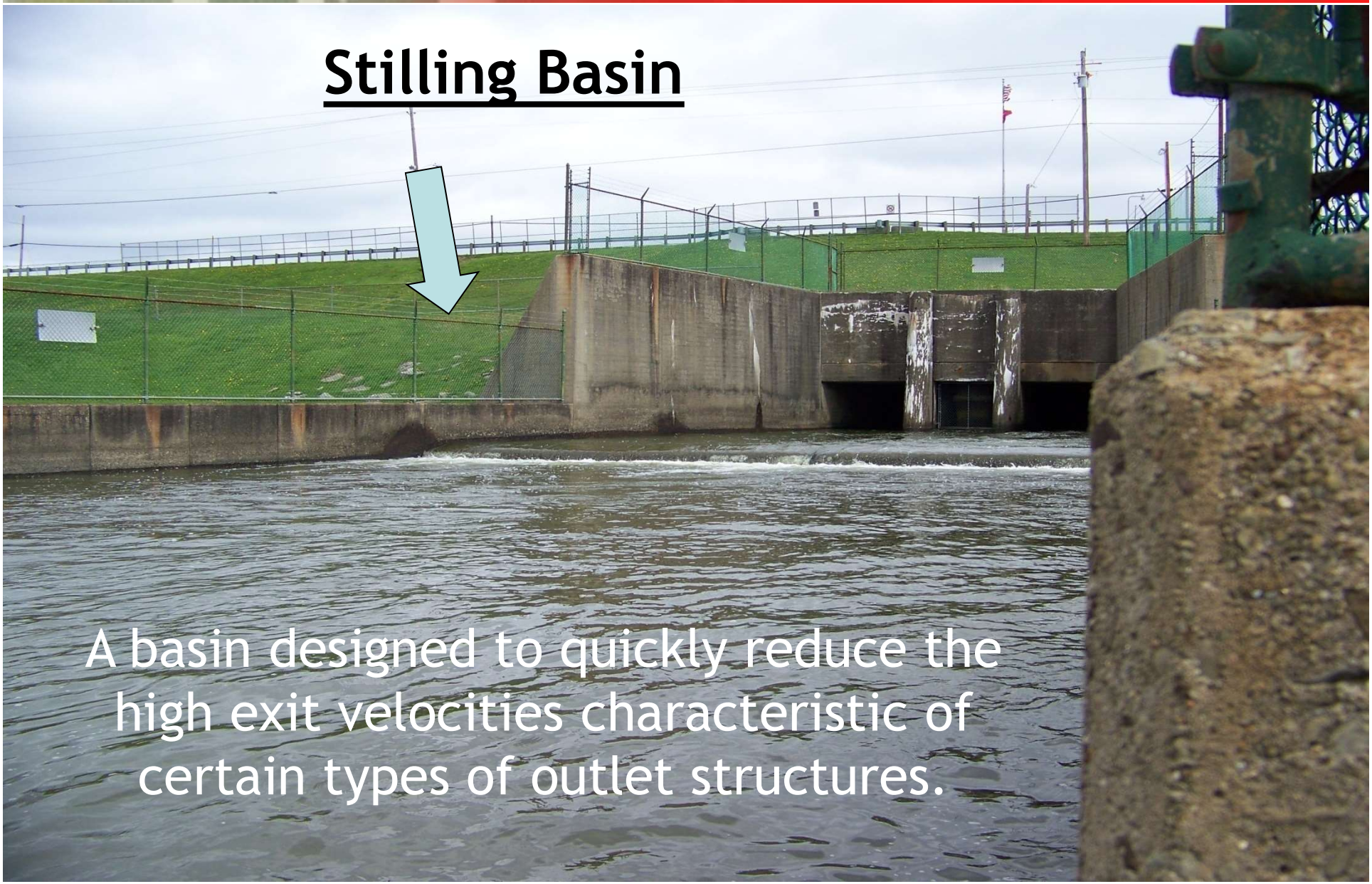


Stilling Basin



A basin designed to quickly reduce the high exit velocities characteristic of certain types of outlet structures.

Mosquito Lake today!

- Ohio's 2nd largest inland lake at 7,850 acres 97.4 square mile drainage area
- Over half a million visitors per year
  - Unique bird refuge on the north end
    - One of the top fishing lakes in Ohio for variety
      - Crappie, natural walleye population, bass, northern pike, pan fish

How can you help Mosquito?

- Rivers and lake provide habitat for wildlife and drinking water for human beings
- Remember to always throw garbage away in proper waste containers
  - Never leave trash behind or in the water!
- If you are helping your family plant, make sure to always use native species only.
  - Steer clear of autumn olive, buckthorns and bush honeysuckles!


Together we can make
Mosquito a fun and safe place
for years to come!