

Inland Waterways Infrastructure Projects and the Bigger Picture

Guests:

NAS
Marine Board
Spring Meeting
Paducah, KY

Briefer:

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and Taking Care of People!



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LEAR
BULKHEADS CAN BE
DMS & DAM
ESTRESSED CONCRETE
UNION GRIDER

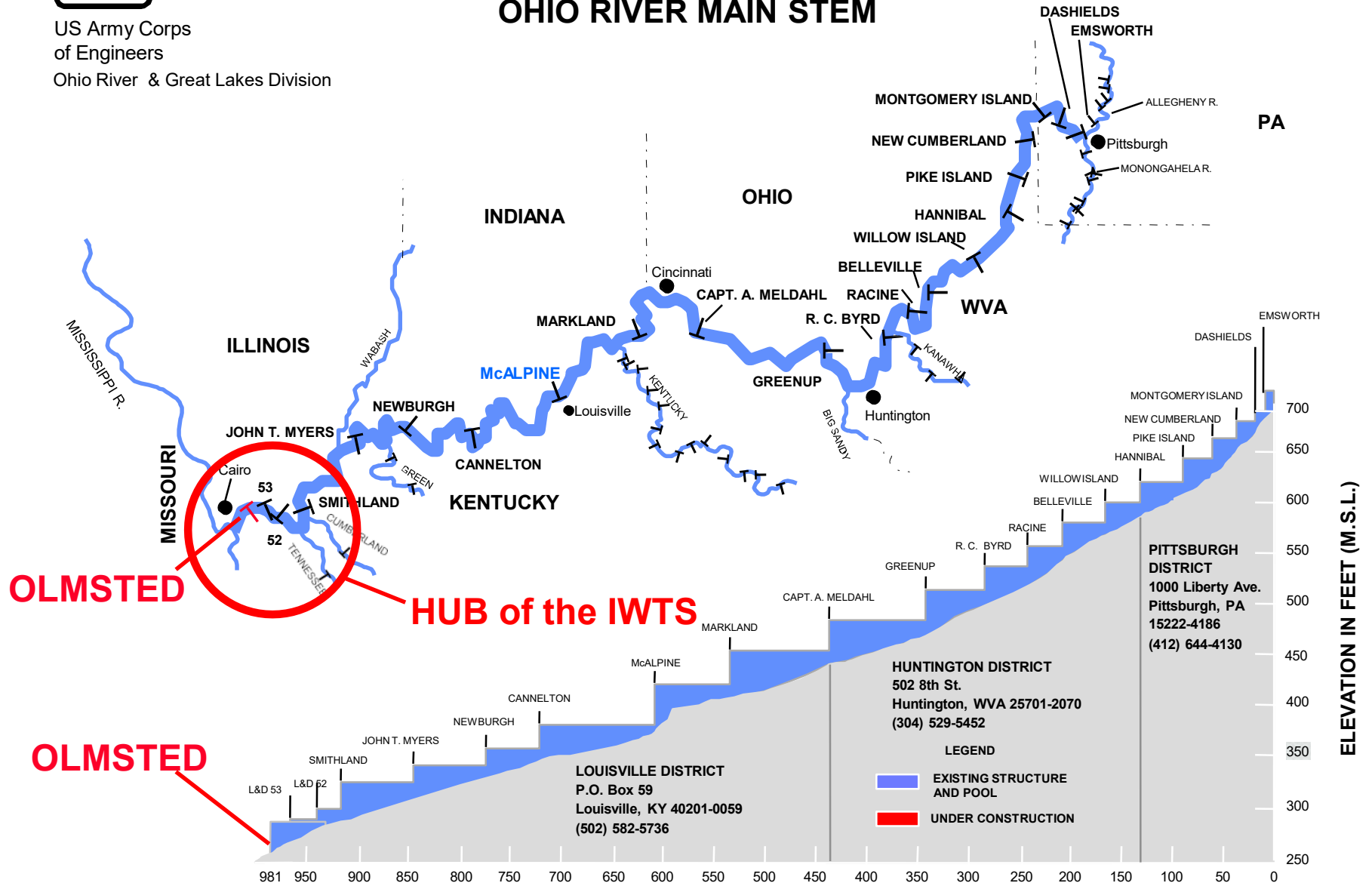
IR GATE
HOWN



US Army Corps
of Engineers
Ohio River & Great Lakes Division

LOCKS & DAMS

OHIO RIVER MAIN STEM

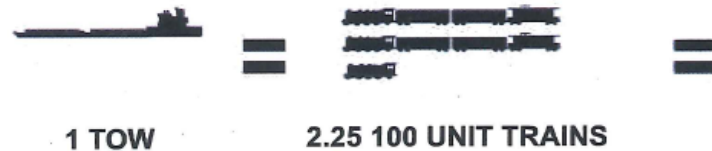
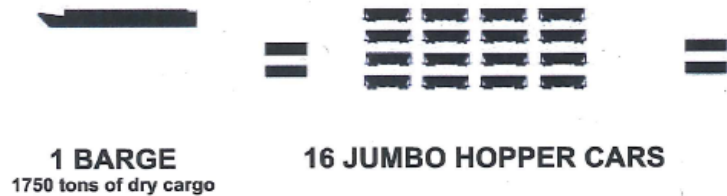


COMPARISON

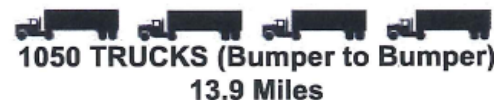
CARGO CAPACITY

				
BARGE	15 BARGE TOW	JUMBO HOPPER CAR	100 UNIT TRAIN	LARGE SEMI TRUCK
1750 TON	26,250 TON	110 TON	10,000 TON	25 TON
61,250 BUSHELS	918,750 BUSHELS	3,850 BUSHELS	350,000 BUSHELS	779 BUSHELS
1,375,000 GALLONS	20,625,000 GALLONS	30,240 GALLONS	3,024,000 GALLONS	7,885 GALLONS

EQUIVALENT UNITS



EQUIVALENT LENGTHS



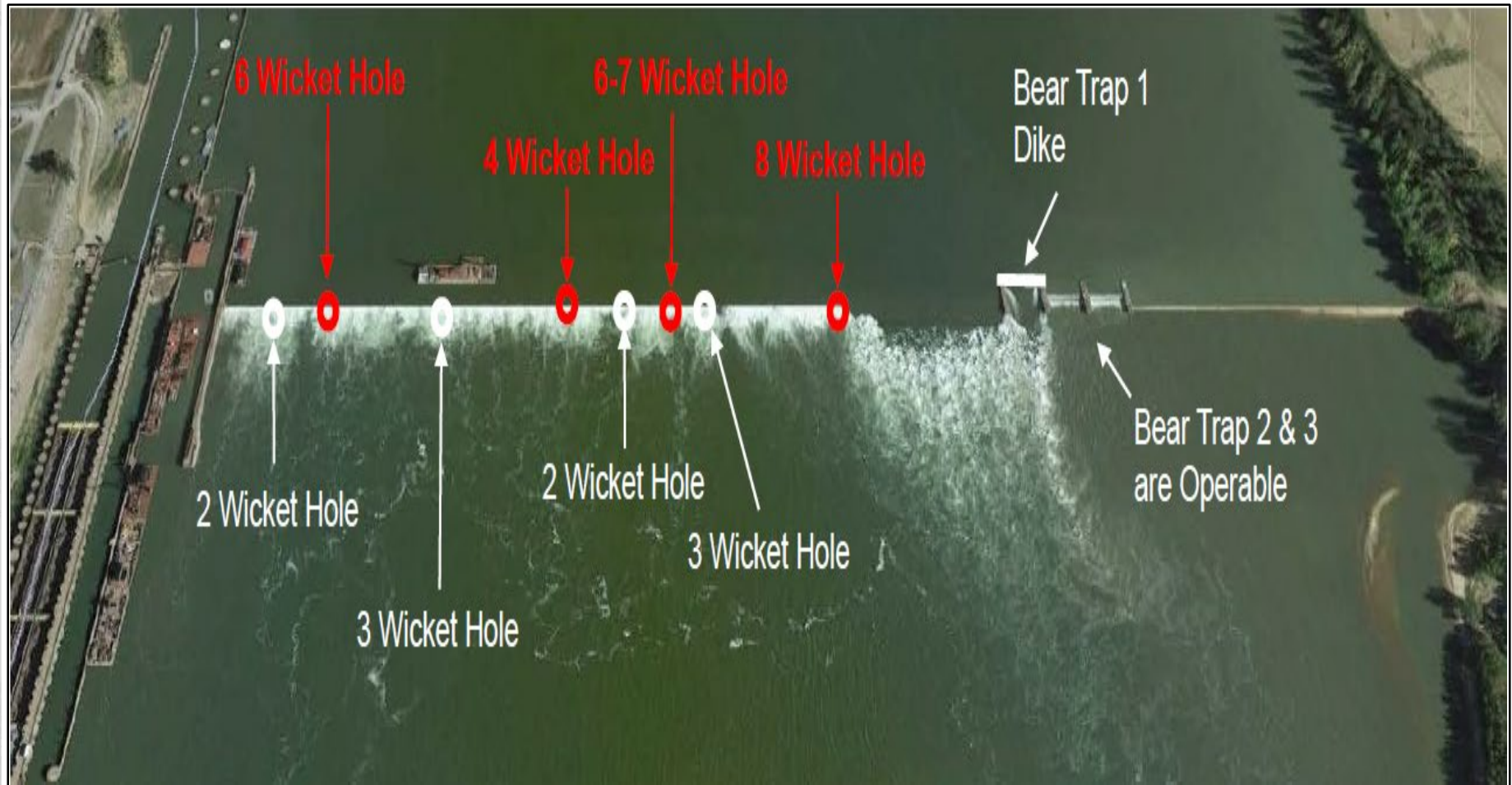
OLMSTED RELEVANCE



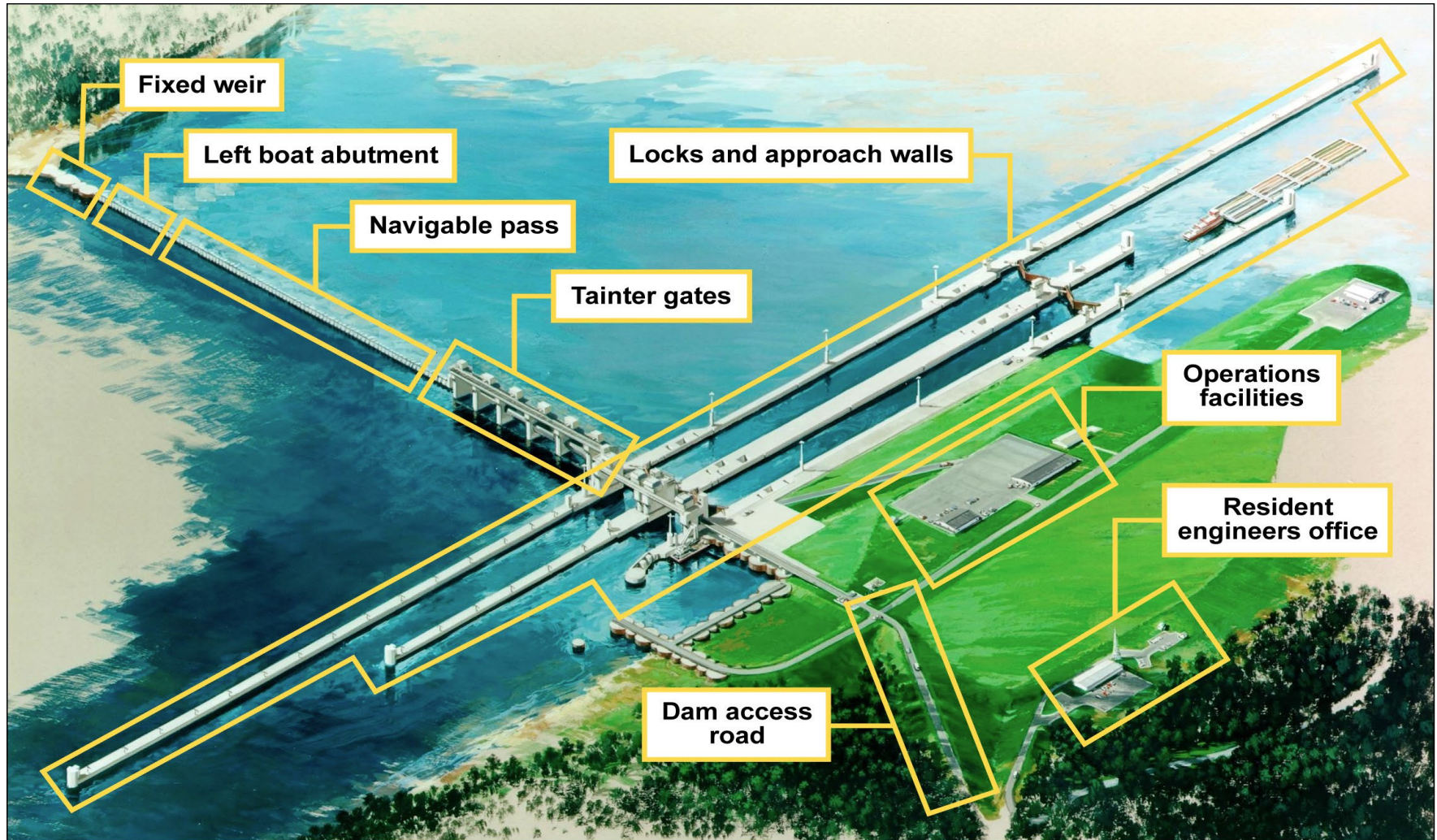
Commodities transiting Olmsted proportionately
equal to the **passenger** traffic through Dallas-Fort
Worth + Atlanta Hartsfield + Chicago O'Hare +
LAX



Lock & Dam 52 Condition (12 Jan 2018)



Olmsted Locks & Dam



Source: U.S. Army Corps of Engineers. | GAO-17-147



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OLMSTED COFFERDAM/LOCKS/APPROACH WALLS

Awarded 1993

Completed 1995



Awarded 1999



Awarded 1995

Completed 2002



Completed 2004



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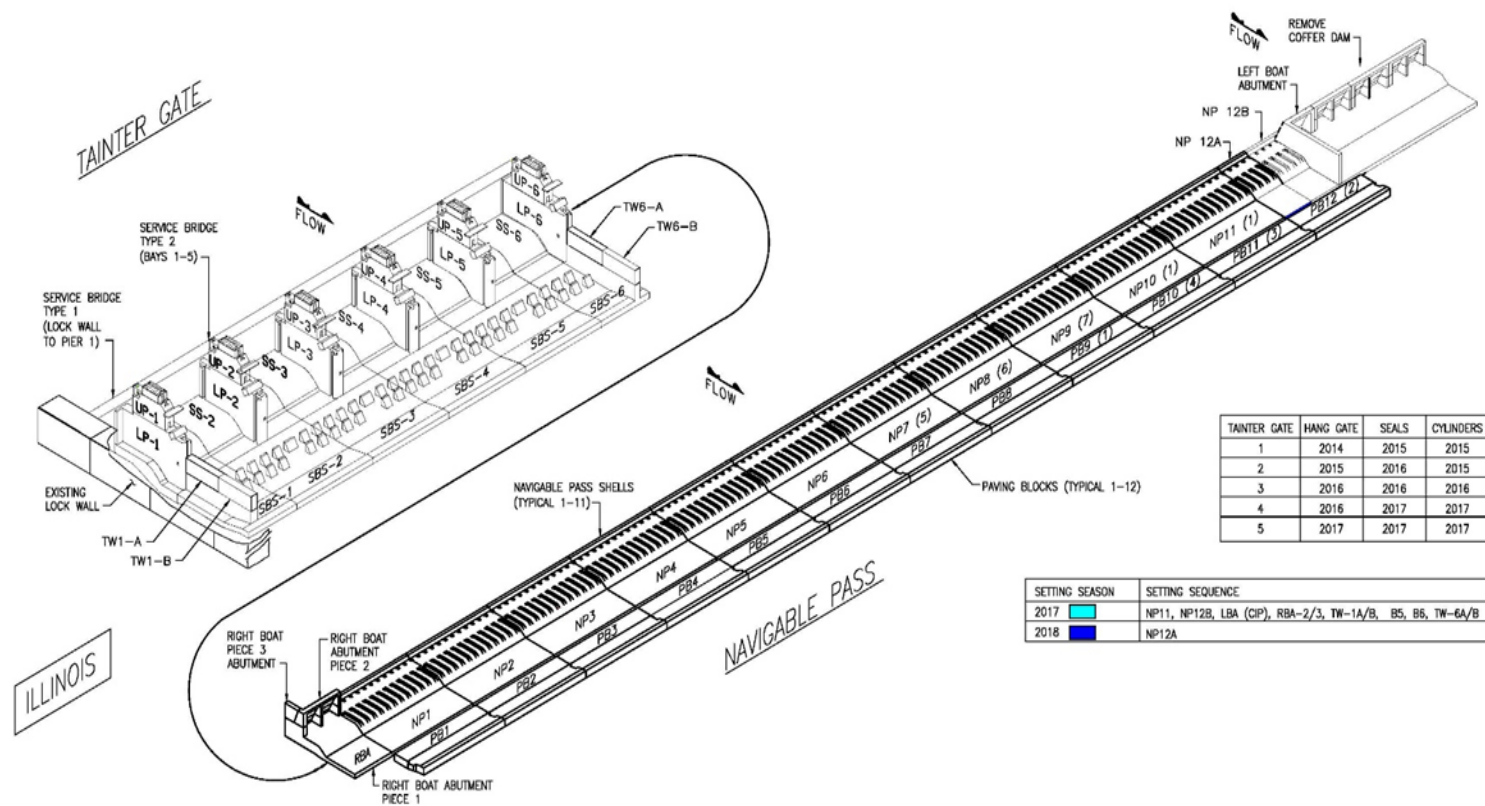
Dam (In-The-Wet) Construction Isometric

RINGER BARGE PLACEMENTS	
SHELL	WEIGHT (TONS)

CAT BARGE PLACEMENTS	
SHELL	WEIGHT (TONS)

SHELL SETTING ISOMETRIC

KENTUCKY



TANTER GATE	HANG GATE	SEALS	CYLINDERS
1	2014	2015	2015
2	2015	2016	2015
3	2016	2016	2016
4	2016	2017	2017
5	2017	2017	2017

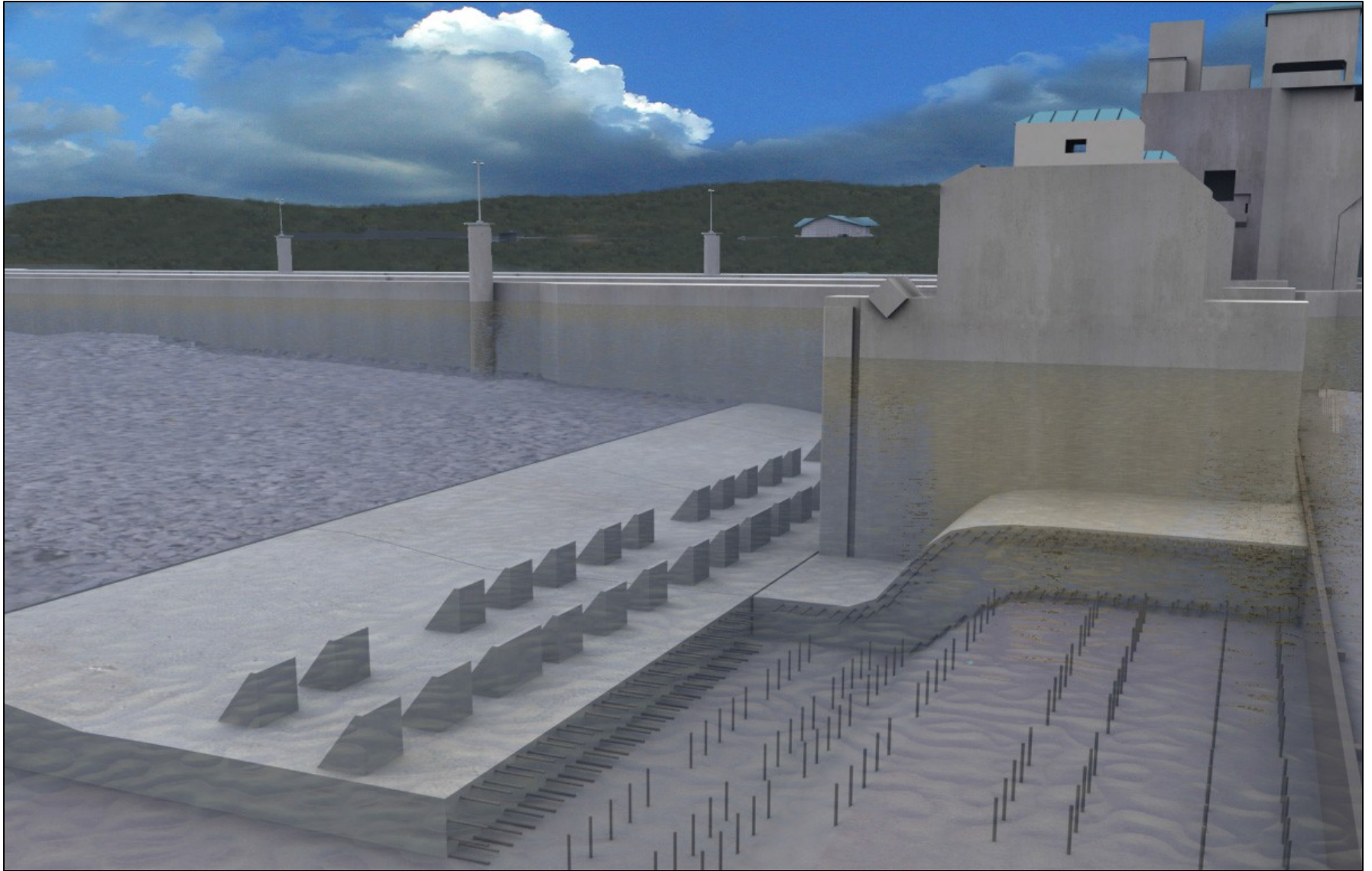
SETTING SEASON	SETTING SEQUENCE
2017	NP11, NP12B, LBA (CIP), RBA-2/3, TW-1A/B, BS, BS, TW-6A/B
2018	NP12A

OLMSTED DAM - AERIAL

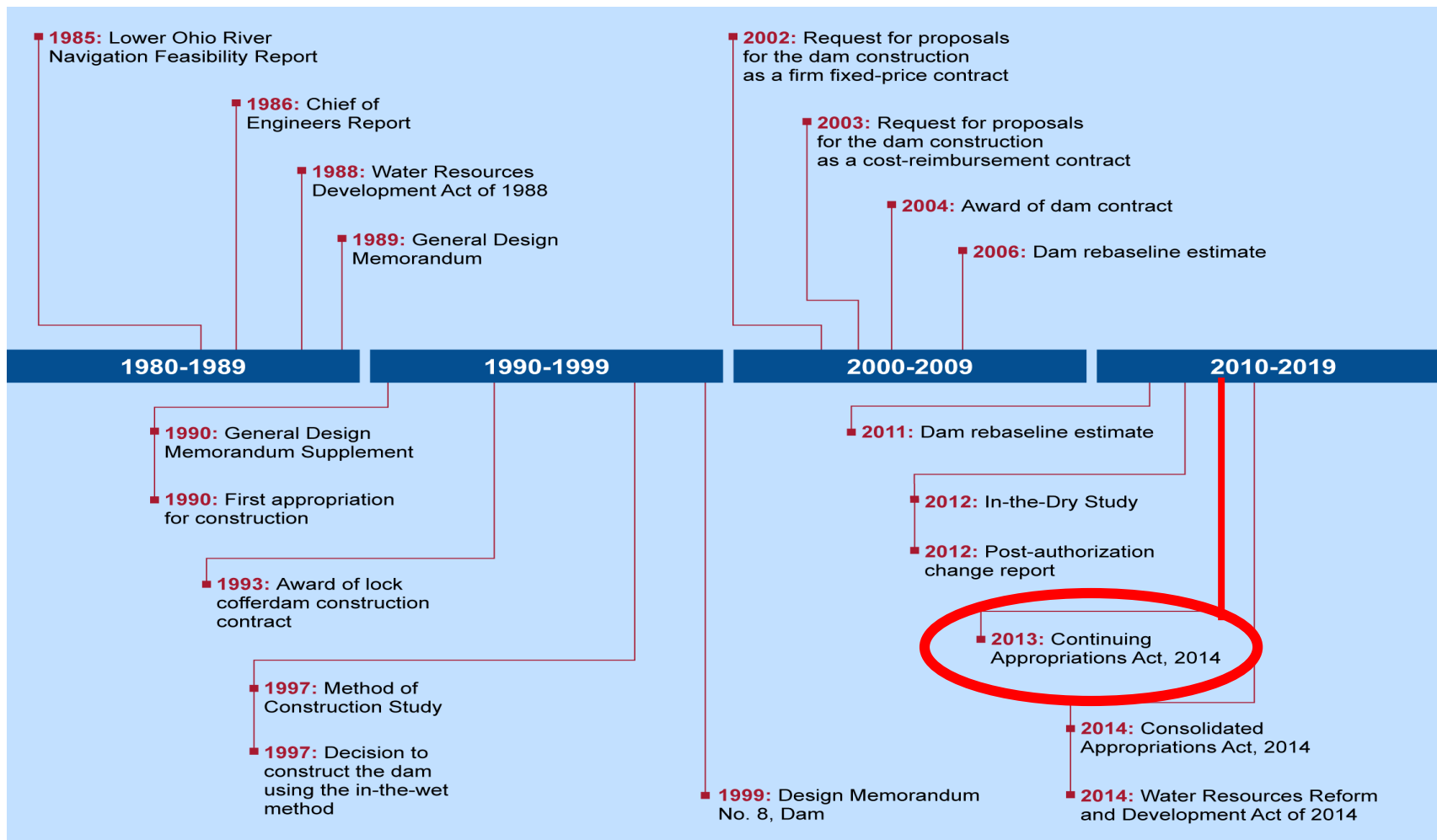


November 2017

TAINTER GATE (CUT-AWAY)



PROJECT TIMELINE



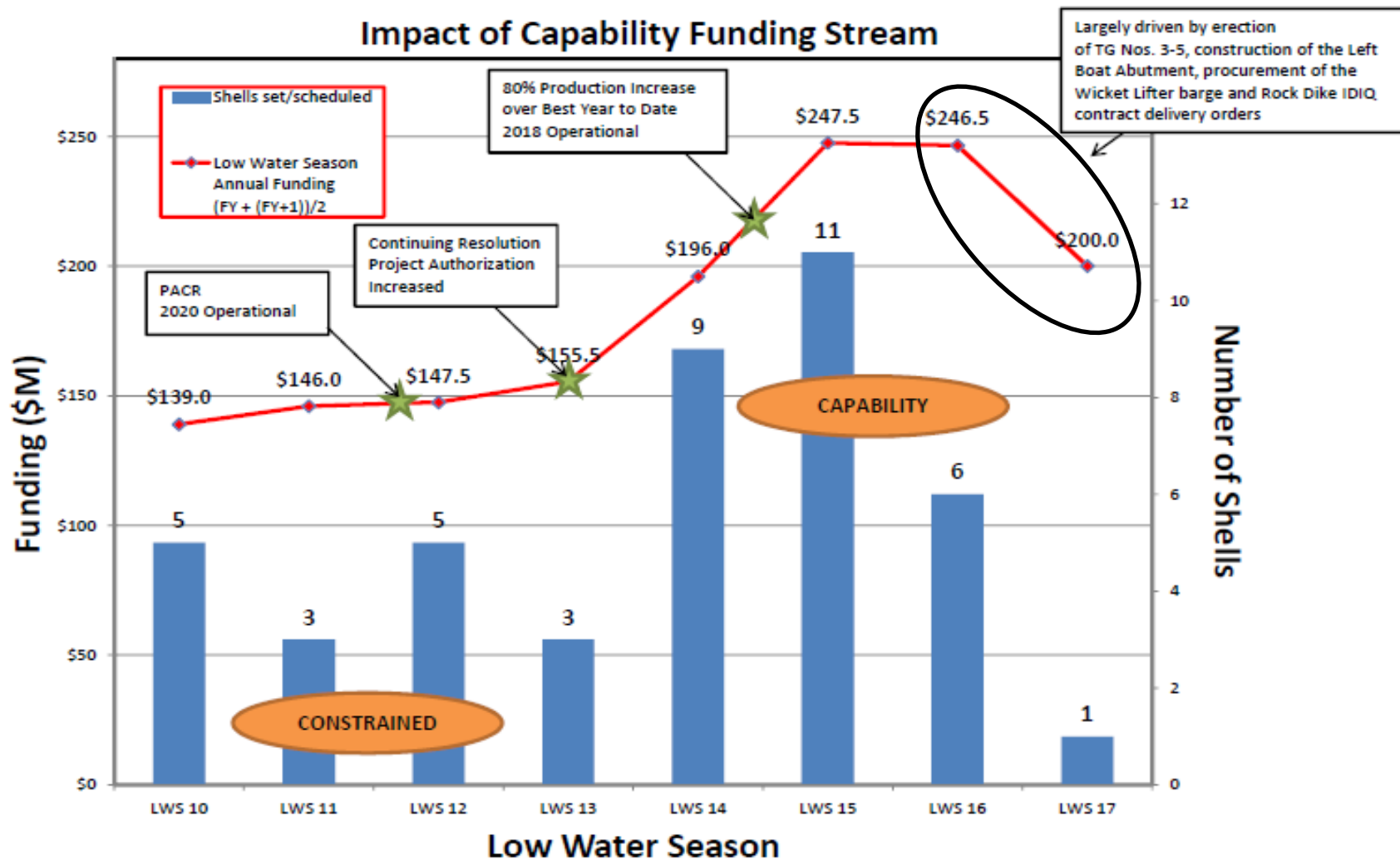
Source: GAO analysis of U.S. Army Corps of Engineers information. | GAO-17-147



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CAPABILITY PRODUCTION IMPACT



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OLMSTED IMAGES

1



Tainter Gate 5

2



Commercial Tow

3



LTG Semonite

4



Left Boat Abutment (LBA)

CONGRESSIONAL INTERACTION & AUTHORIZATION MILESTONES

- WRDA 1986 – Omnibus authorization bill (established process)
- WRDA 1988 – Authorized Olmsted Project at a cost of **\$775M**
- Post Authorization Change Request (13 Apr 2012)
 - ▶ **\$3.1B (Fully-Funded), Dam Operational 2022, Project Complete 2026**
- Construction Method Validation (31 May 2012)
 - ▶ Validated that In-The-Wet (ITW) is the most efficient method to complete the project
- Qualitative Risk Assessment (28 Aug 2012)
 - ▶ Validated that **Locks & Dam Nos. 52/53 are failing** and identified failure mode mitigation measures
- Continuing Resolution (17 Oct 2013) increased Olmsted authorization avoiding significant slow/shutdown impacts
 - ▶ Cost (\$80M - \$208M)
 - ▶ Schedule (1 - 3 Years)
- 2014 Consolidated Appropriations Act (17 Jan 2014)
 - ▶ Division D—Energy and Water Development and Related Agencies
 - ▶ **25% IWTF “during [this] fiscal year period”**
- 2014 WRRDA Legislation (10 Jun 2014)
 - ▶ **15% IWTF cost share for FY15 and beyond**
 - ▶ **Sense of Congress to expend not less than \$150M annually until complete**



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FOOD FOR THOUGHT

- **Earned Value**
 - Mandatory on Cost Reimbursement Contracts (32 point ANSI Compliant)
 - A management tool **not a panacea for sound management practice**
- "Conditioned" Decision Making/Communication
 - Stakeholder input
 - Upward reporting
 - Risk adverse culture (**outlier management**)
- Certified Cost Estimates (risk-based contingency)
 - Monte Carlo – Delivery (Time/Cost) @ 80% certainty
 - **Every two years (albeit lagging budget cycle 2.5 years)**
 - Navigation business line programming challenge
- Project Justification (Economic vs National Security/Strategic)
 - BCR > 2.5
 - OMB Policy (Threshold to Pres Bud)
 - BCR vs. RBRCR
 - **Continuing Resolutions/Earmarks**
- Risk Management
 - Identification
 - Mitigation
- **GAO Report (GAO-17-147)/www.gao.gov**



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Where We Are - Olmsted

✓ Current Schedule: **Ahead of Schedule**

2018 (Project **Operational**) vs. 2022 (80% certainty)

2020 (Project Complete) vs. 2026 (80% certainty)

✓ Current Cost: **Under Budget**

TEP (Total Estimated Price) = \$2.780B vs. \$3.1B (80% certainty)

Savings = \$320M (FY19 Request = \$35M “Funds to Completion”)

✓ Keys:

1. Efficient funding (annual capability) has allowed the PDT to effectively plan and execute our annual work plan.
2. Advantageous river conditions have allowed the work to expand beyond the contractual low water season (15 Jun – 30 Nov).



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Questions



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