

# Olmsted Locks & Dam

## Inland Waterways Users Board

**MR. DAVID DALE, PE, PMP, SES**

**DIRECTOR, Programs**

**Great Lakes & Ohio River Division**

**18 November 2014**



®

**US Army Corps of Engineers**

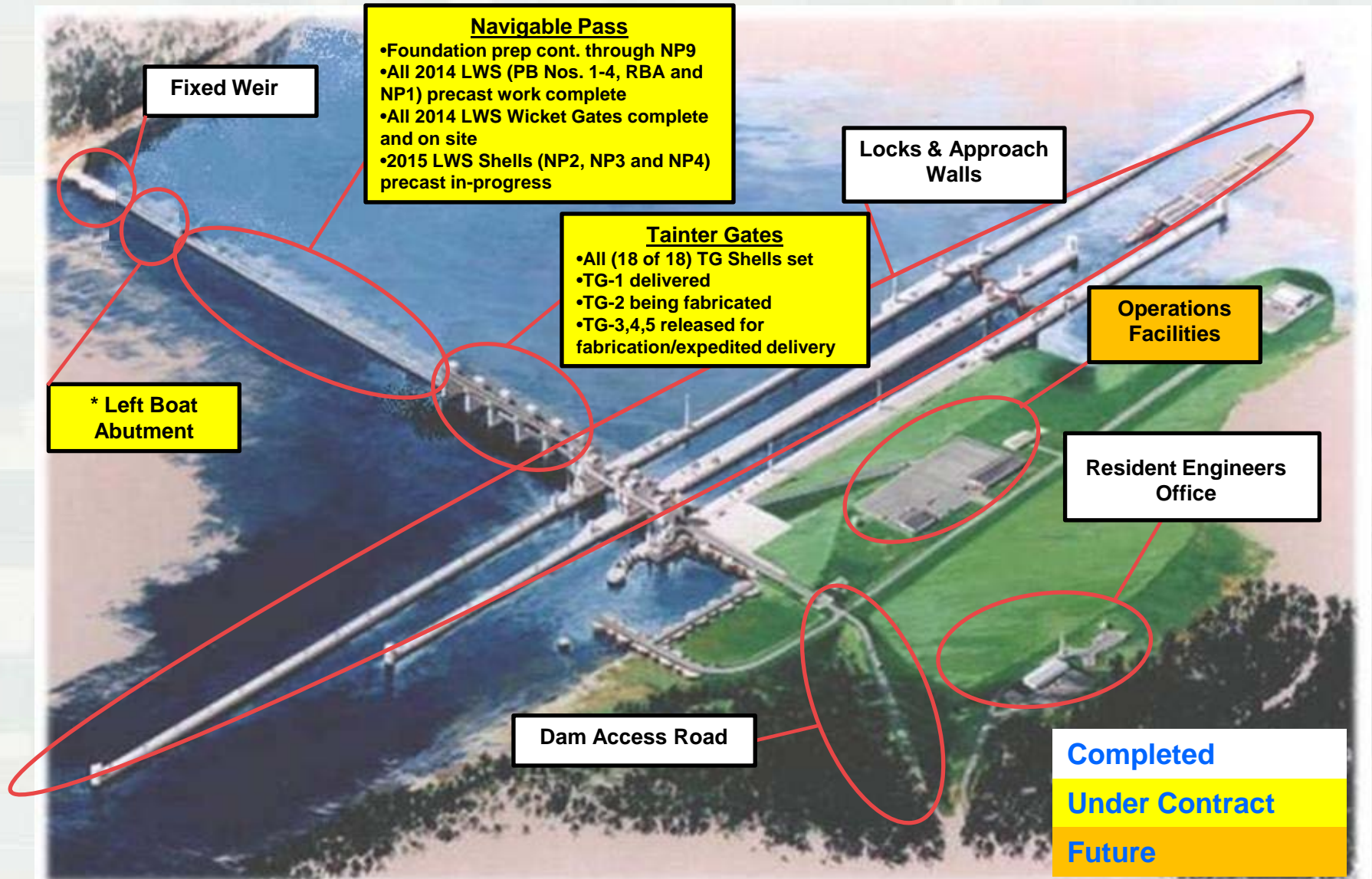
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# Agenda

- Status
  - ▶ Overview
  - ▶ Dam Re-Baseline Plan
  - ▶ 2014 LWS Milestone Update
  - ▶ 2014 LWS Summary To Date
  - ▶ 2014 LWS Images
  - ▶ Scorecard
  - ▶ Deferred Demolition L&D Nos. 52/53
  - ▶ Future Challenges
  
- Discussion

# Olmsted Project Overview





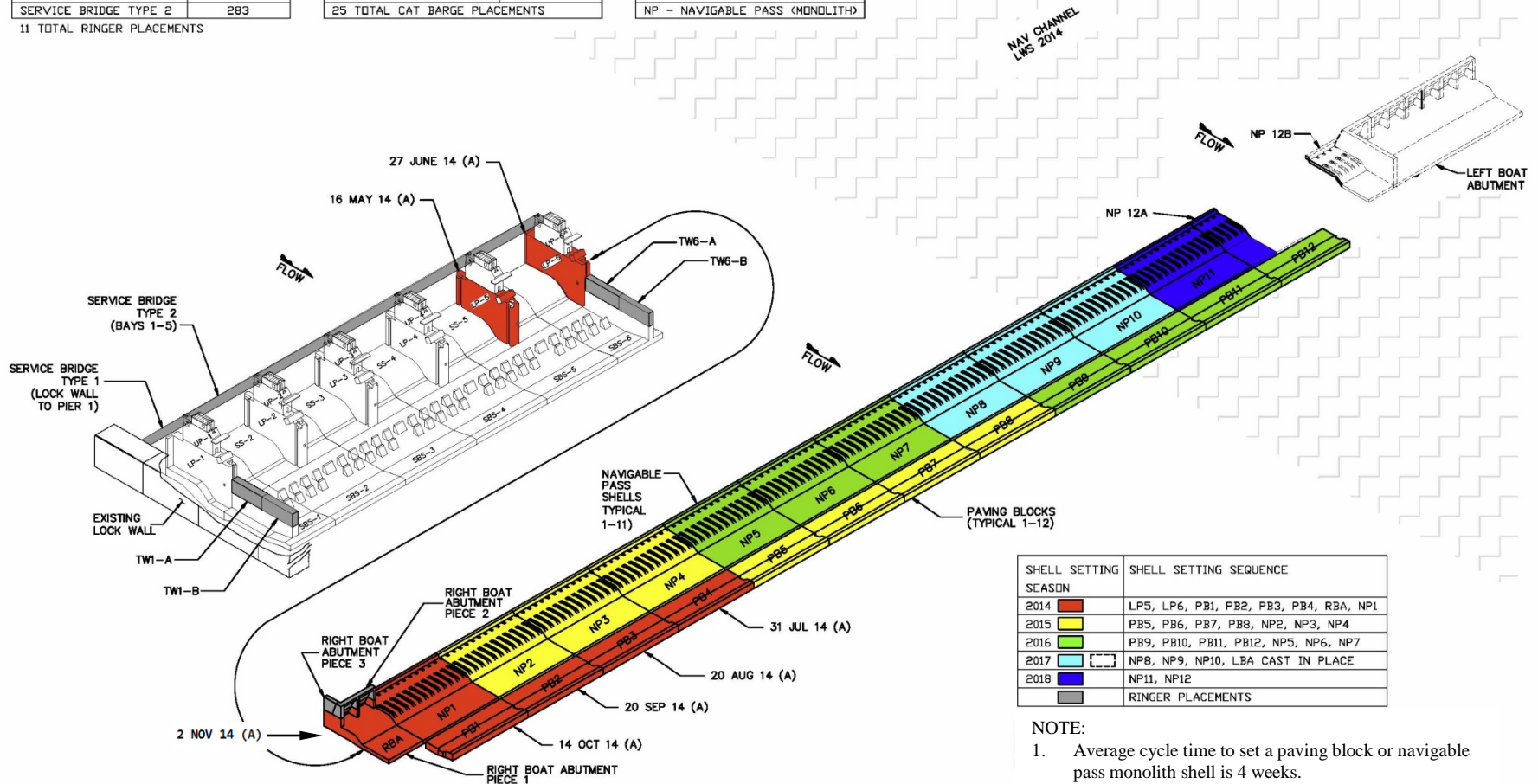
# Olmsted Dam – Plan

RINGER BARGE PLACEMENTS	
SHELL	WEIGHT (TONS)
RBA PIECE 2	372
RBA PIECE 3	81.5
TW1-A	347
T1-B	302
TW6-A	308
TW6-B	316
SERVICE BRIDGE TYPE 1	118
SERVICE BRIDGE TYPE 2	283

11 TOTAL RINGER PLACEMENTS

CAT BARGE PLACEMENTS	
SHELL	WEIGHT (TONS)
RBA PIECE 1	2511.5
NP 1-11	4955
NP 12A	(4785.7) 1/2
PAVING BLOCKS 1-12	2562
25 TOTAL CAT BARGE PLACEMENTS	

ACRONYM LEGEND
LP - LOWER PIER
TG - TAINTER GATE
SB - SERVICE BRIDGE
GM - GROUT MAT
FP - FOUNDATION PILE
M/SP - MASTER/SHEET PILE
RBA - RIGHT BOAT ABUTMENT
PB - PAVING BLOCK
NP - NAVIGABLE PASS (MONOLITHIC)



NOTE:

1. Average cycle time to set a paving block or navigable pass monolith shell is 4 weeks.

# 2014 LWS Milestones

## ▪ Scheduled Milestones

- Set LP-5 (complete)
- Set LP-6 (complete)
- Set PB # 1-4 (12) (complete)
- **Erect TG #1 (underway)**
- Set RBA (complete)
- **Set NP #1 (12) (on schedule for 25 Nov)**

## ▪ Preparatory Milestones

- Install Grout Mat (thru NP #9)
- Drive Foundation Pile (thru **NP #2**)
- Drive M/S Pile (thru NP #4 U/S, **NP #4 D/S**)

## ▪ Stretch Goal Milestone

- Set NP #2 (12)

### Legend

LP – Lower Pier  
TG – Tainter Gate  
SB – Service Bridge  
GM – Grout Mat  
FP – Foundation Pile  
M/S – Master/Sheet  
RBA – Right Boat Abutment  
LBA – Left Boat Abutment  
PB – Paving Block  
NP – Nav Pass Shell (Monolith)



# 2014 LWS Summary

- **Pre-cast Yard:**

- ▶ All TG (Tainter Gate) shells complete (18/18)
- ▶ NP (Navigable Pass) shells RBA and NP1 complete (2/13)
- ▶ PB (Paving Block) Nos. 1 - 4 complete (4/12)

- **Heavy Lift:**

- ▶ All TG shells set (18/18)
- ▶ PB Nos.1 - 4 set (4/12)
- ▶ TG-1 Erection in Progress

- **Marine:**

- ▶ All TG foundation pile and master/sheet pile complete
- ▶ TG/NP transition piling complete
- ▶ D/S M/S pile PB4 through RBA complete, RBA End Wall, U/S Thru M-3
- ▶ NP-1, RBA foundation piling complete
- ▶ Silt/Sediment mitigation (Dredge Hurley) complete
- ▶ Foundation/Drainage stone through NP 6 (50% of NP footprint) complete
- ▶ Grout mat through NP 5 (41% of NP footprint) complete

- **TG Upper Pier:**

- ▶ UP (Upper Pier) Nos. 1 and 2 all concrete work complete (machinery house remaining)
- ▶ UP Nos. 3 and 4 trunnion anchorage on-going
- ▶ UP Nos. 5 and 6 infill concrete on-going

- **Off Site Fabrication:**

- ▶ TG -1 delivered to site 29 Sep 2014. Erection underway. TG-2 fabrication is 32% complete.
- ▶ NP-1 Wicket Gates installed. 36 total Wicket Gates delivered to site (sufficient to support all 2014 LWS scheduled and stretch goal setting milestones)

## Legend

**LP** – Lower Pier  
**TG** – Tainter Gate  
**SB** – Service Bridge  
**GM** – Grout Mat  
**FP** – Foundation Pile  
**M/S** – Master/Sheet  
**RBA** – Right Boat Abutment  
**LBA** – Left Boat Abutment  
**PB** – Paving Block  
**NP** – Nav Pass Shell (Monolith)





# 2014 LWS Images



1. Aerial Photo - August 2014   2. TG-1 transiting L&D 52   3. Testing NP-1 Wicket Gates  
4. Setting bulkheads Bay No. 1   5. RBA moving down skidway   6. Setting RBA/Erecting TG-1



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# Olmsted Project

## Time and Cost Scorecard – Sept 2014

### Expenditures

Planned (BCWS)	\$1.819B
Earned (BCWP)	\$1.822B
Actual (ACWP)	\$1.806B

**BCWP:** Reports the value (based on % complete) of the work performed to date.

#### Target:

Actuals as compared to Planned: (<1% = Green) (>1% and <3% = Yellow) and (>3% = Red)

### Schedule

(PACR)/(Current)

Project Complete	Sep 2024/Mar 2022
Dam Operational	Sep 2020/Oct 2018

**Measures:** Planned project completion and Dam contract operational dates

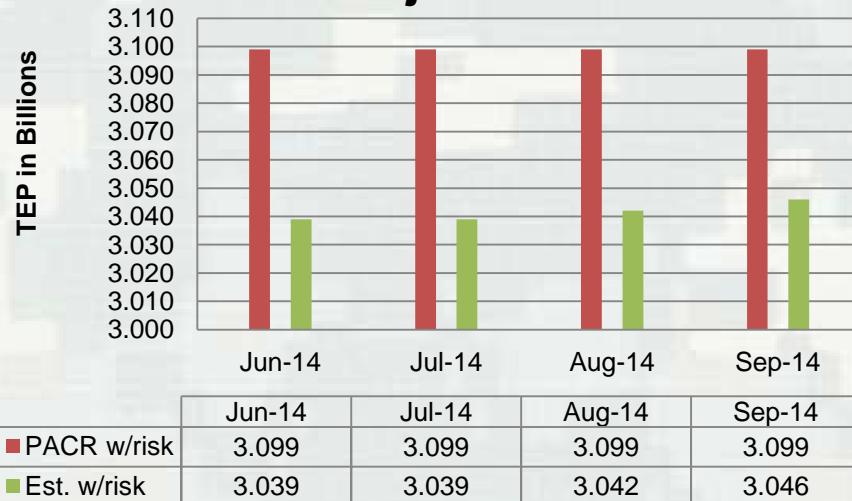
#### Target:

Green: Current = PACR-12 months

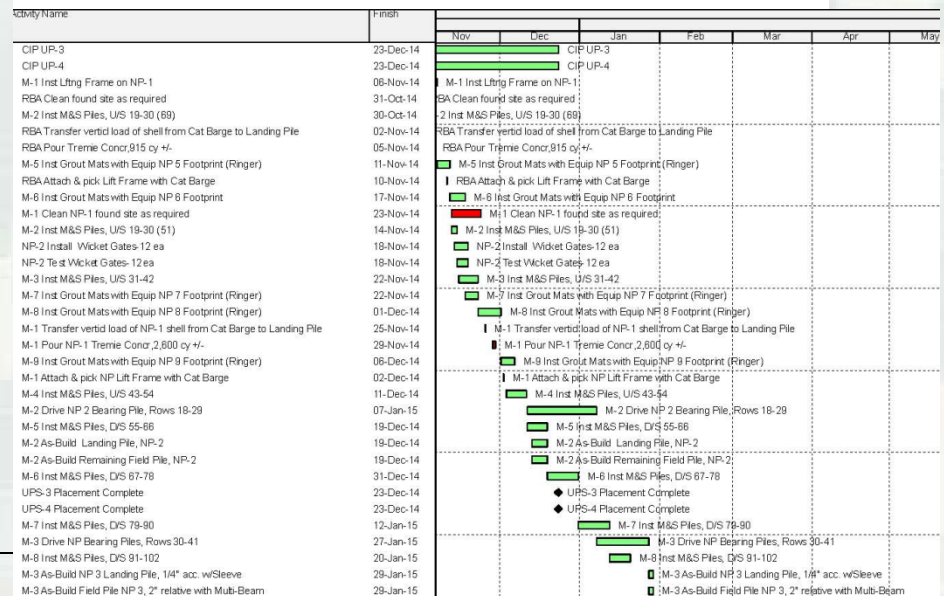
Yellow: Current = PACR-11 months to PACR-7 months

Red: Current = PACR-6 months to after PACR date

### Olmsted Project TEP Trend



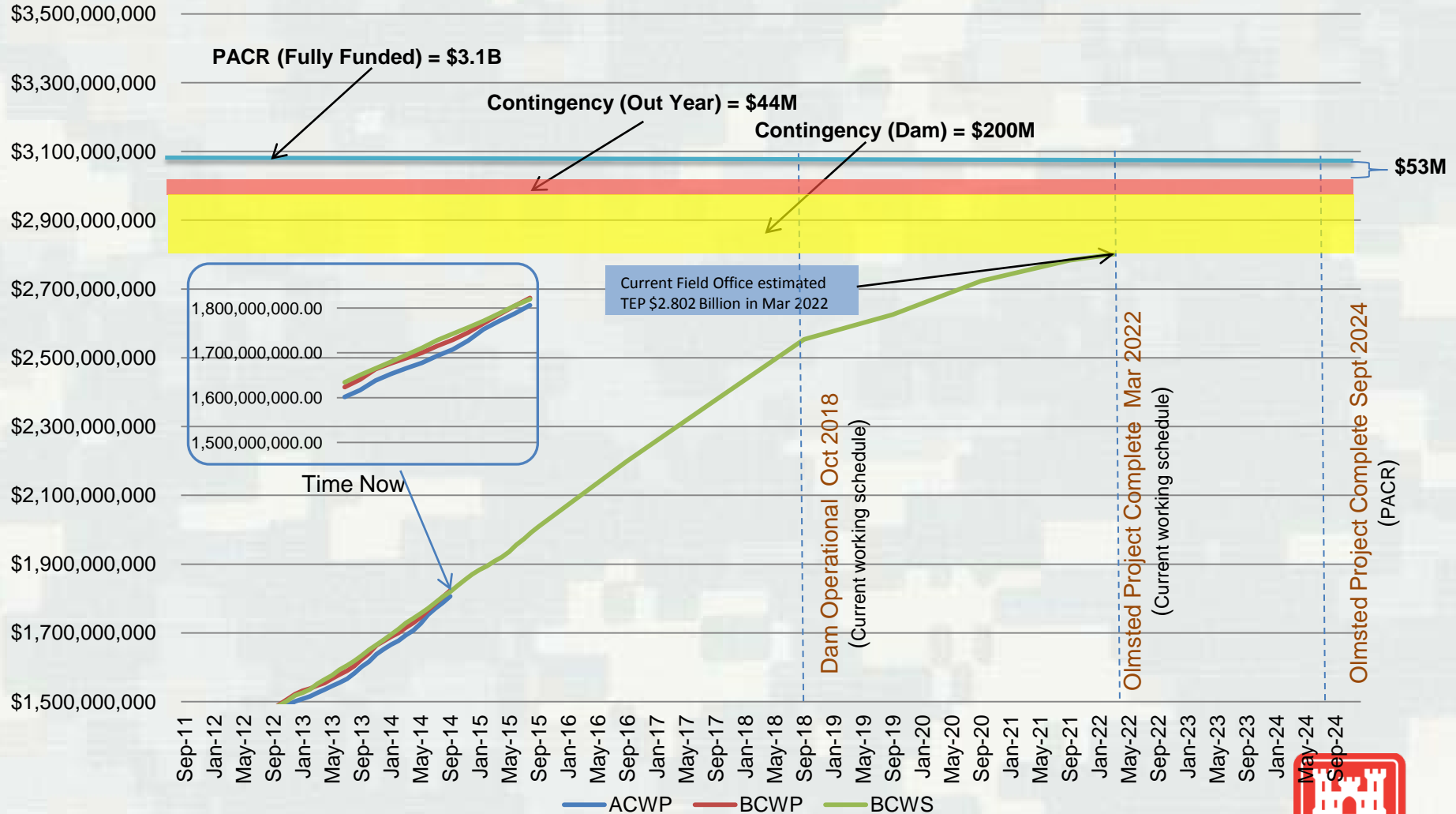
### Olmsted Major Activity Schedule





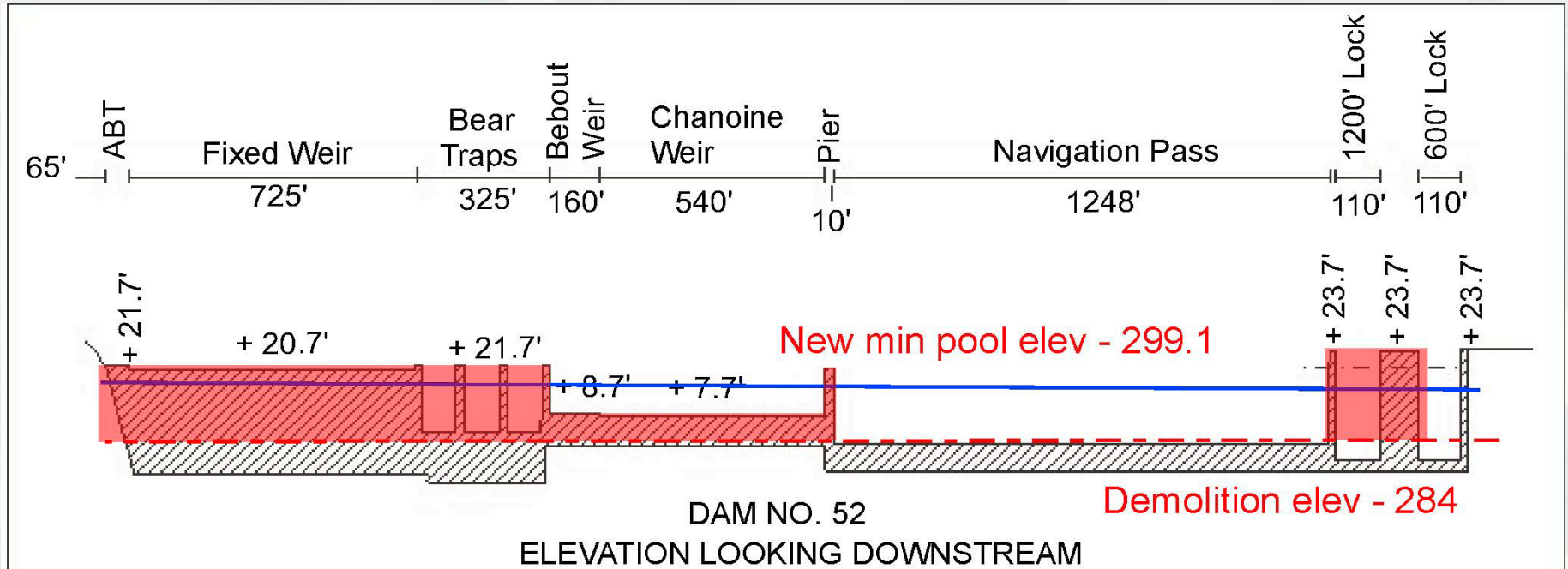
# Olmsted L&D Project Earned Value Analysis (Based on DOD Gold Card)

Sept 2014



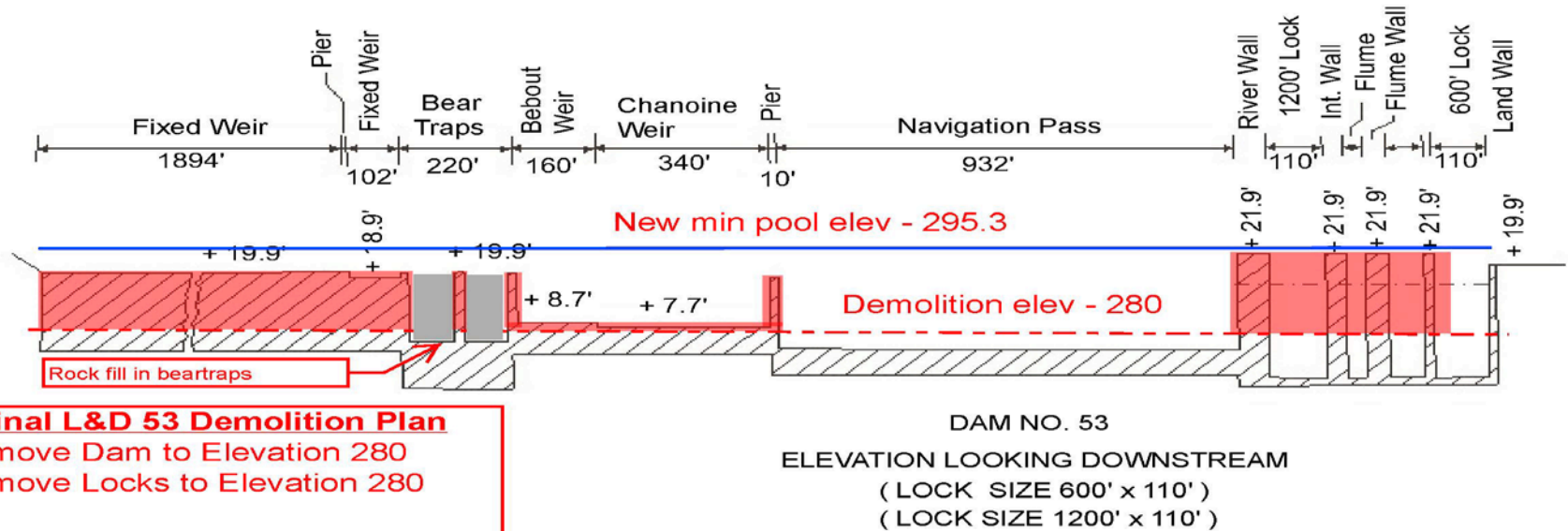
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# L/D 52 Deferred Demolition



Demo Plan	Scope of Work	Demo Est. Cost	*ROM Instant Savings CG(85%)/IWTF(15%)	Navigation Channel
Original Plan	Remove Locks and Dam	\$69 M	\$0	~3,000'
Alt #1	Locks and Dam remain	\$2 M	\$67 M	~1,200'
Alt #2	Remove bebout and chanoine weirs	\$11 M	\$58 M	~1,900'

# L/D 53 Deferred Demolition



Demo Plan	Scope of Work	Demo Est. Cost	ROM Instant Savings CG(85%)/IWTF(15%)	Navigation Channel
Original Plan	Remove Locks and Dam	\$54 M	\$0	~4,000'
Alt #1	Remove bebout & chanoine weirs	\$9 M	\$45 M	~1,400'
Alt #2	Remove 1,200' lock, bebout & chanoine weirs	\$30 M	\$24 M	~1,700'



# Future Challenges

- Efficient Funding Stream
  - Minimum of \$150M/year through 2020
  - Less than \$150M would have direct impact on the schedule
  - Optimal Funding of \$180M/year (**FY15** /FY16)
- Passing Traffic as Work continues into the Navigable Pass Footprint



# Discussion



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