

Olmsted Locks & Dam

Inland Waterways Users Board

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US Army Corps of Engineers
BUILDING STRONG®



Agenda

- Status
 - ▶ Project Overview/BLUF
 - ▶ Dam 2015 Plan to Complete
 - ▶ Dam 2015 LWS Milestone Identification
 - ▶ 2015 LWS Image
 - ▶ Project Scorecard
 - ▶ Capability Alignment
- Discussion

LWS = Low Water Season



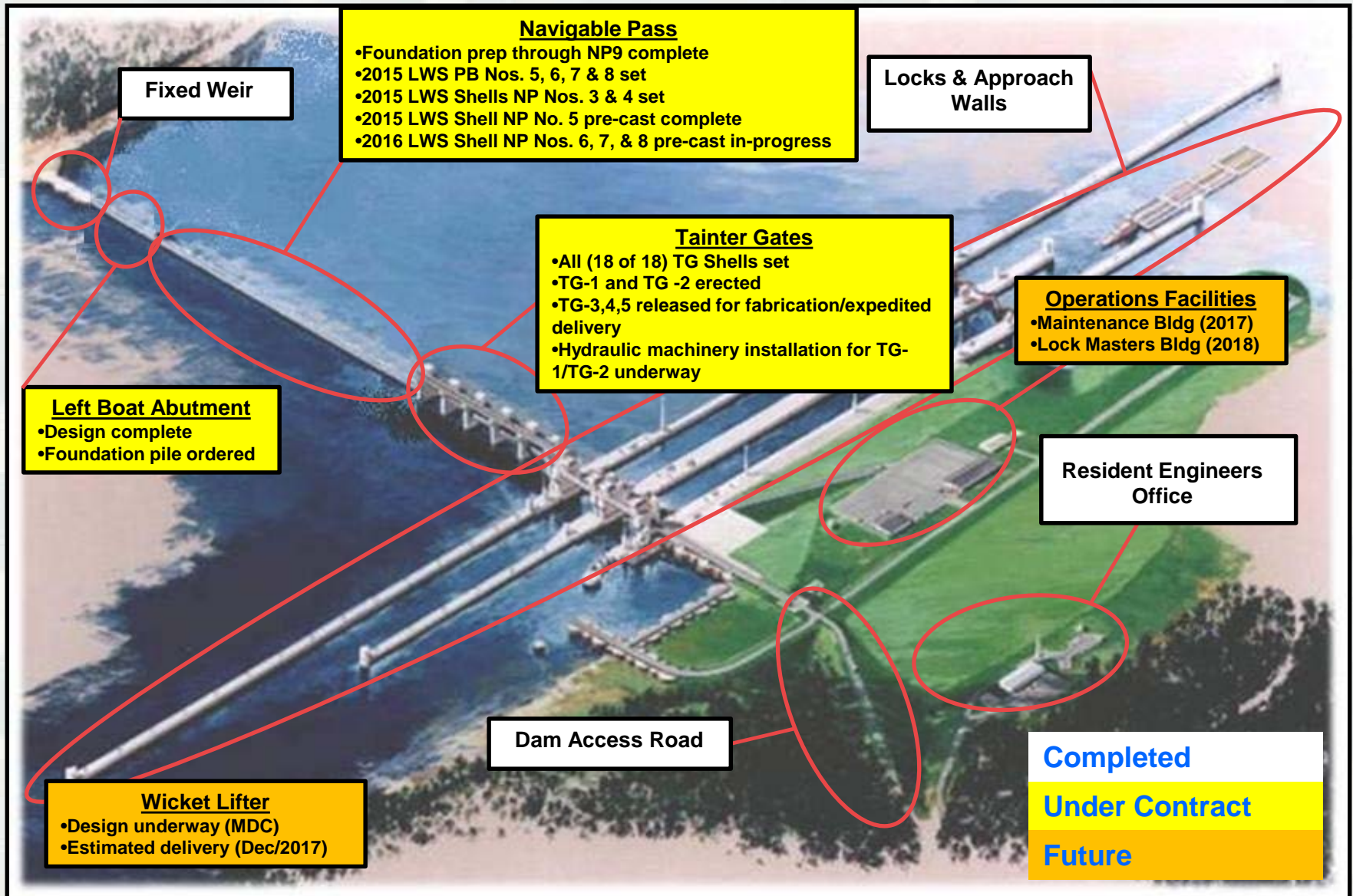
BLUF

■ Bottom Line Up Front

- ▶ Capability funding stream continues to drive under budget (\$65M) and ahead of schedule (approx. two years) performance.
- ▶ Early season High Water event schedule impact (approx. 45 day delay) mitigated by opportunistic management, additional resourcing, strategic planning and increased production.
- ▶ Capability funding allows the team to actively mitigate risk aka buy down cost and reducing schedule.



Olmsted Project Overview



2015 Plan to Complete

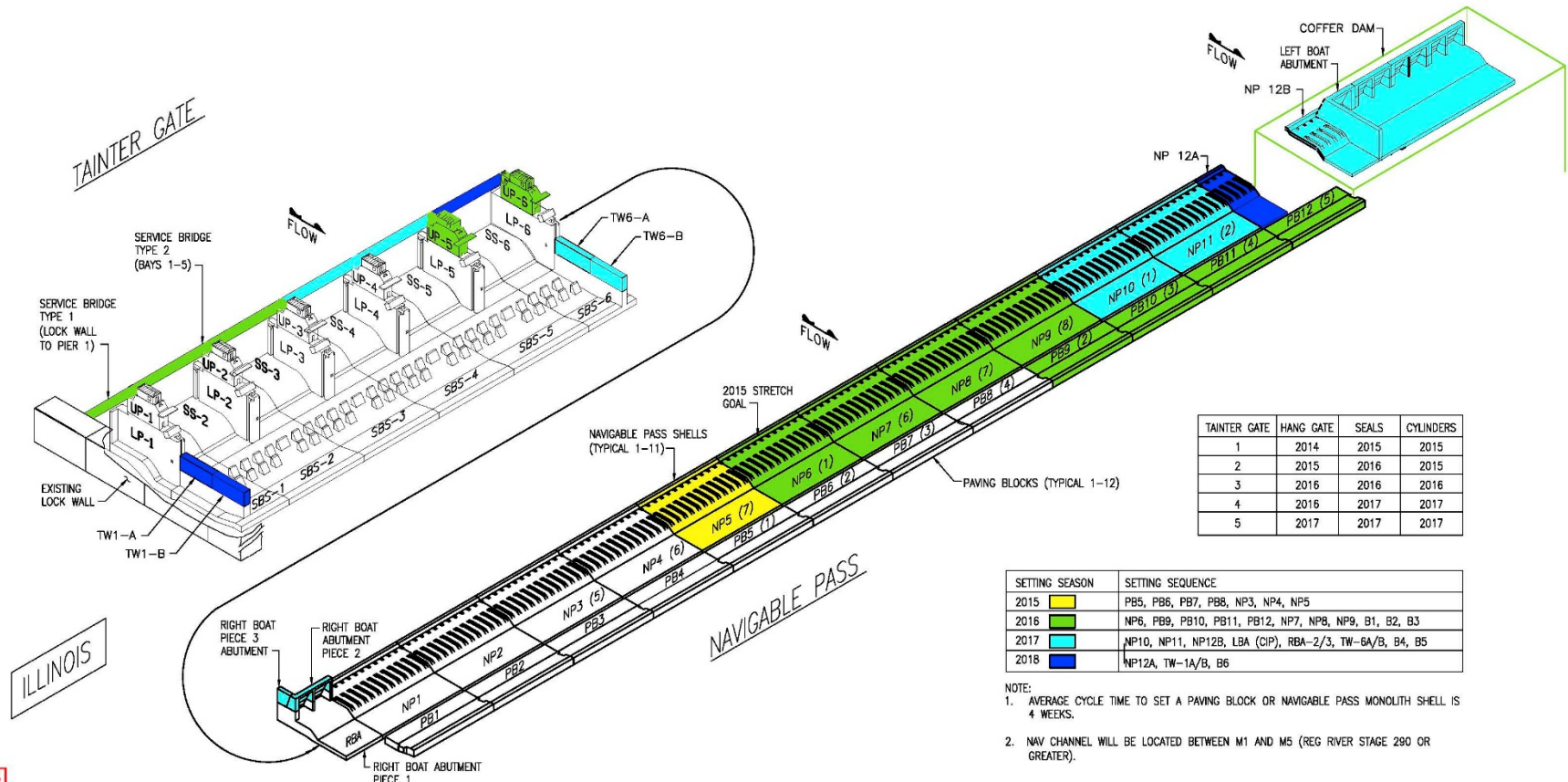
RINGER BARGE PLACEMENTS	
SHELL	WEIGHT (TONS)
RBA PIECE 2	372
RBA PIECE 3	81.5
TW1-A	347
TW1-B	302
TW6-A	308
TW6-B	316
SERVICE BRIDGE TYPE 1	118
SERVICE BRIDGE TYPE 2	283
12 REMAINING RINGER PLACEMENTS	

CAT BARGE PLACEMENTS	
SHELL	WEIGHT (TONS)
NP 5-11	4955
NP 12A	(4785.7) 1/2
PAVING BLOCKS 9-12	2562
12 REMAINING CAT BARGE PLACEMENTS	

ACRONYM LEGEND	
LP	LOWER PIER
TG	TANTER 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 (MONOLITH)
UP	UPPER PIER

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
2015	PB5, PB6, PB7, PB8, NP3, NP4, NP5
2016	NP6, PB9, PB10, PB11, PB12, NP7, NP8, NP9, B1, B2, B3
2017	NP10, NP11, NP12B, LBA (CIP), RBA-2/3, TW-6A/B, B4, B5
2018	NP12A, TW-1A/B, B6

NOTE:

1. AVERAGE CYCLE TIME TO SET A PAVING BLOCK OR NAVIGABLE PASS MONOLITH SHELL IS 4 WEEKS.
2. NAV CHANNEL WILL BE LOCATED BETWEEN M1 AND M5 (REG RIVER STAGE 290 OR GREATER).

11/5/15

2015 LWS Milestones

- Scheduled Milestones
 - Set NP #3-5 (of 12) - #3/#4 COMPLETE, #5 ON SCHED
 - Set PB #5-8 (of 12) - COMPLETE
 - Erect TG #2 (of 5) - COMPLETE
- Preparatory Milestones
 - Install Grout Mat (thru NP #12/LBA) - ON SCHEDULE
 - Drive Found Pile (thru NP #8) - COMPLETE
 - Drive M/S Pile (thru NP #8) - COMPLETE
- Stretch Goal Milestones
 - Set NP #6 (of 12)
 - **Drive Left Boat Abutment (LBA) Foundation Piling**

	<u>FINAL (FY15)</u> (\$213M)
PB-5	10 Jun
PB-6	29 Jul
PB-7	14 Aug
PB-8	31 Aug
NP-3	10 Oct
NP-4	03 Nov
NP-5	9 Dec
TG-2	01 Oct

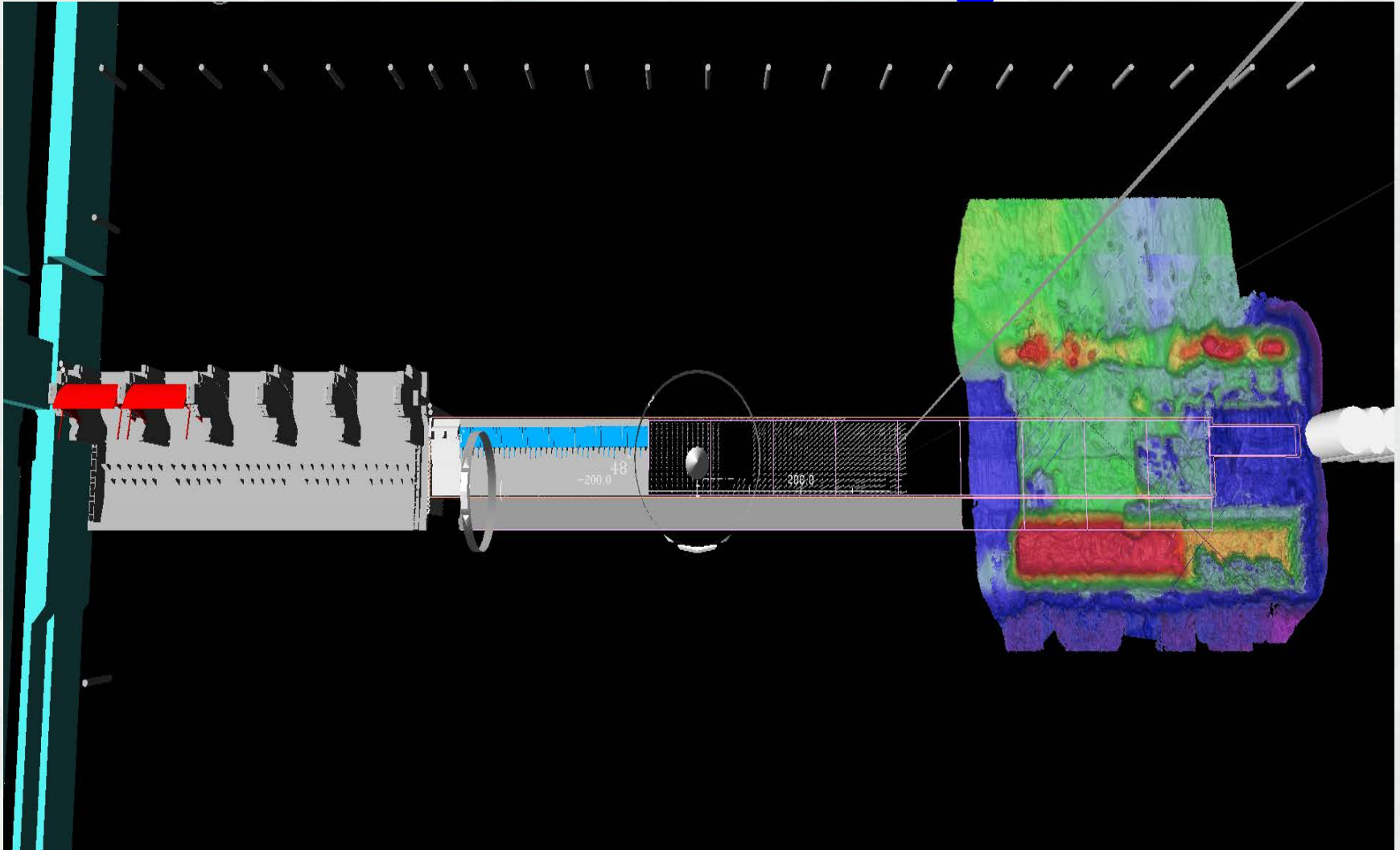
* Milestone complete

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)



2015 LWS Image



22 October 2015



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Olmsted Project

Time and Cost Scorecard – Sept 2015

Expenditures

Planned (BCWS)	\$2.040B
Earned (BCWP)	\$2.000B
Actual (ACWP)	\$2.047B

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

Target:

Actual 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:

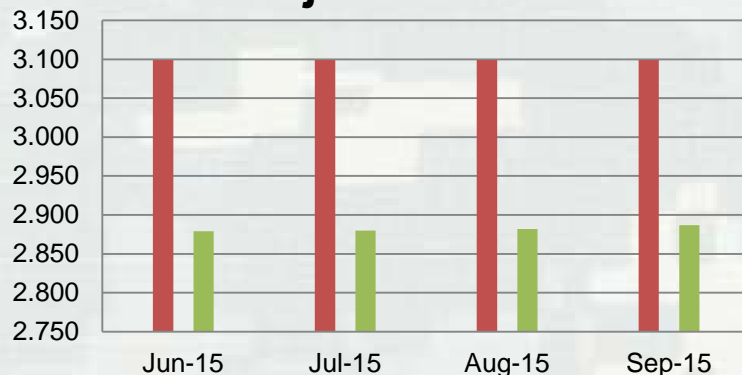
Green: Current = PACR-12 months

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

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

Olmsted Project TEP Trend

TEP in Billions



	Jun-15	Jul-15	Aug-15	Sep-15
PACR w/risk	3.099	3.099	3.099	3.099
COE TEP	2.879	2.880	2.882	2.887

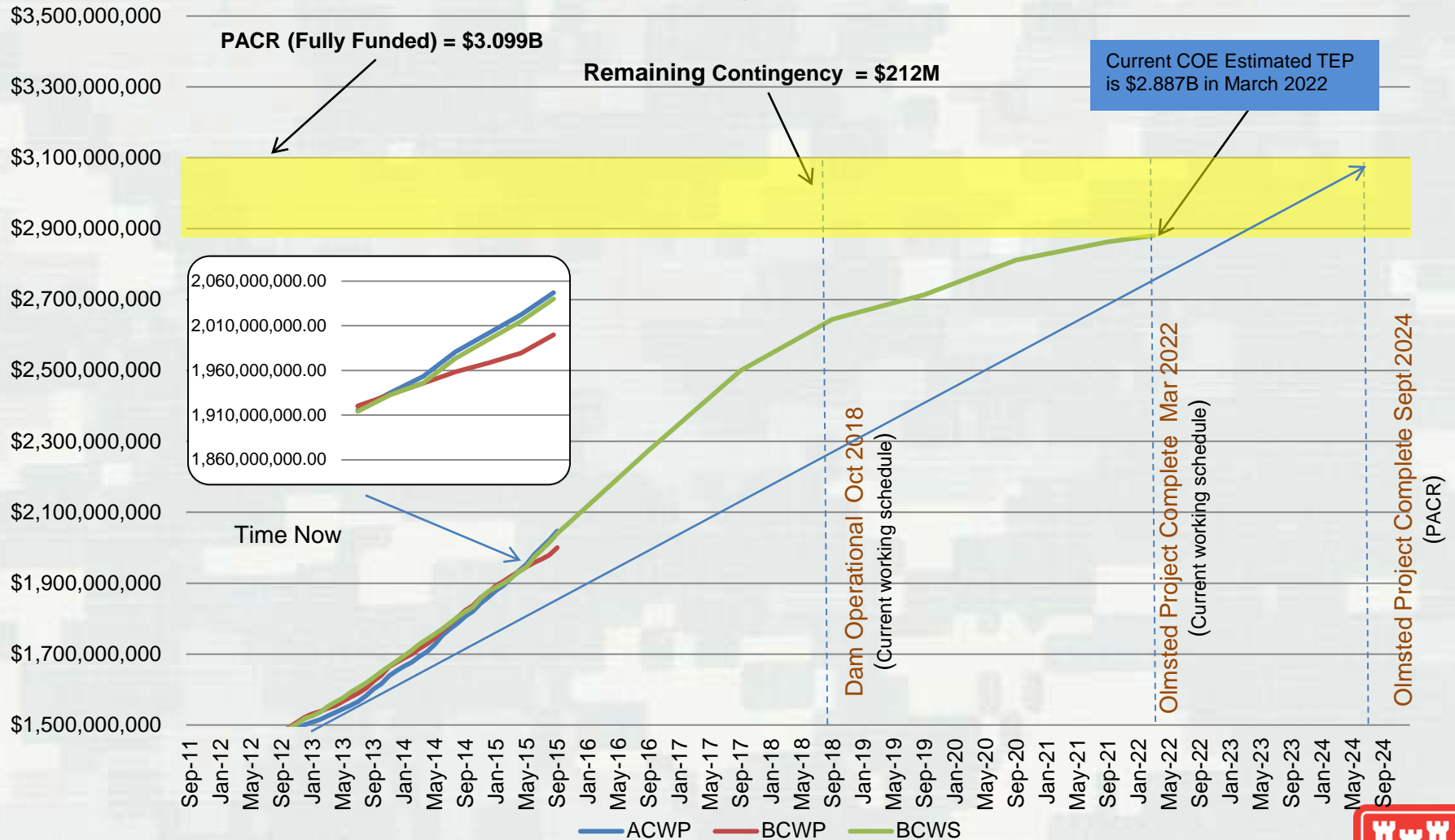
Major Activity Schedule

6 Month Look Ahead

Activity Name	Finish	Nov	Dec	Jan	Feb	Mar	Apr
NP-3 Attach & pick NP-3 Lift Frame with Cat Barge	20-Oct-15	3 Attach & pick NP-3 Lift Frame with Cat Barge					
M-7 Drive NP-7 Bearing Pile (20 Barge)	22-Oct-15	7 Drive NP-7 Bearing Pile (20 Barge)					
M-4 As-Build Landing Pile, NP-4	23-Oct-15	4 As-Build Landing Pile, NP-4					
M-7 As-Build Remaining Field Pile, NP-7	23-Oct-15	7 As-Build Remaining Field Pile, NP-7					
NP-4 Place 691 Stone (Aquadigger)	28-Oct-15	NP-4 Place 691 Stone (Aquadigger)					
UPS-5 Placement Complete	28-Oct-15	UPS-5 Placement Complete					
M-5 As-Build Field Pile, NP-5	03-Nov-15	M-5 As-Build Field Pile, NP-5					
M-5 Drive NP-5 Bearing Pile, (3rd) (20 Barge)	03-Nov-15	M-5 Drive NP-5 Bearing Pile, (3rd) (20 Barge)					
M-7 Inst M&S Piles, US 79-90 (34 Barge)	05-Nov-15	M-7 Inst M&S Piles, US 79-90 (34 Barge)					
NP-4 Clean NP-4 found site as required	06-Nov-15	NP-4 Clean NP-4 found site as required					
NP-4 Transfer vert load of NP-4 shell from Cat Barge to Landing Pile	09-Nov-15	NP-4 Transfer vert load of NP-4 shell from Cat Barge to Landing Pile					
NP-4 Load Out/Set Shell Complete	09-Nov-15	NP-4 Load Out/Set Shell Complete					
NP-4 Pour NP-4 Tremie Concr, 2,600 cy +/-	12-Nov-15	NP-4 Pour NP-4 Tremie Concr, 2,600 cy +/-					
NP-4 Attach & pick NP-4 Lift Frame with Cat Barge	17-Nov-15	NP-4 Attach & pick NP-4 Lift Frame with Cat Barge					
UPS-6 Placement Complete	18-Nov-15	UPS-6 Placement Complete					
NP-5 Place US 691 Stone	24-Nov-15	NP-5 Place US 691 Stone					
NP-5 Inst Ltrng Frame	25-Nov-15	NP-5 Inst Ltrng Frame					
LBA - Install Grout Mats (Ringer)	02-Dec-15	LBA - Install Grout Mats (Ringer)					
(TG-1) - Tainter Gate 1 Complete	03-Dec-15	(TG-1) - Tainter Gate 1 Complete					
NP-5 Clean NP-5 found site as required	04-Dec-15	NP-5 Clean NP-5 found site as required					
NP-5 Transfer vert load of NP-5 shell from Cat Barge to Landing Pile	12-Dec-15	NP-5 Transfer vert load of NP-5 shell from Cat Barge to Landing Pile					
NP-5 Load Out/Set Shell Complete	12-Dec-15	NP-5 Load Out/Set Shell Complete					
NP-5 Pour NP-5 Tremie Concr, 2,600 cy +/-	16-Dec-15	NP-5 Pour NP-5 Tremie Concr, 2,600 cy +/-					
M-12 Install Grout Mats (Ringer)	18-Dec-15	M-12 Install Grout Mats (Ringer)					
M-11 Inst Grout Mats with Equip NP-11 Footprint (Ringer)	23-Dec-15	M-11 Inst Grout Mats with Equip NP-11 Footprint (Ringer)					
NP-5 Attach & pick NP-5 Lift Frame with Cat Barge	23-Dec-15	NP-5 Attach & pick NP-5 Lift Frame with Cat Barge					
CIP UPS-5	24-Dec-15	CIP UPS-5					
M-8 Inst M&S Piles, US 91-102 (34 Barge)	30-Dec-15	M-8 Inst M&S Piles, US 91-102 (34 Barge)					
M-10 Inst Grout Mats with Equip NP-10 Footprint (Ringer)	31-Dec-15	M-10 Inst Grout Mats with Equip NP-10 Footprint (Ringer)					
LBA - As-Build Landing Pile, LBA	06-Jan-16	LBA - As-Build Landing Pile, LBA					

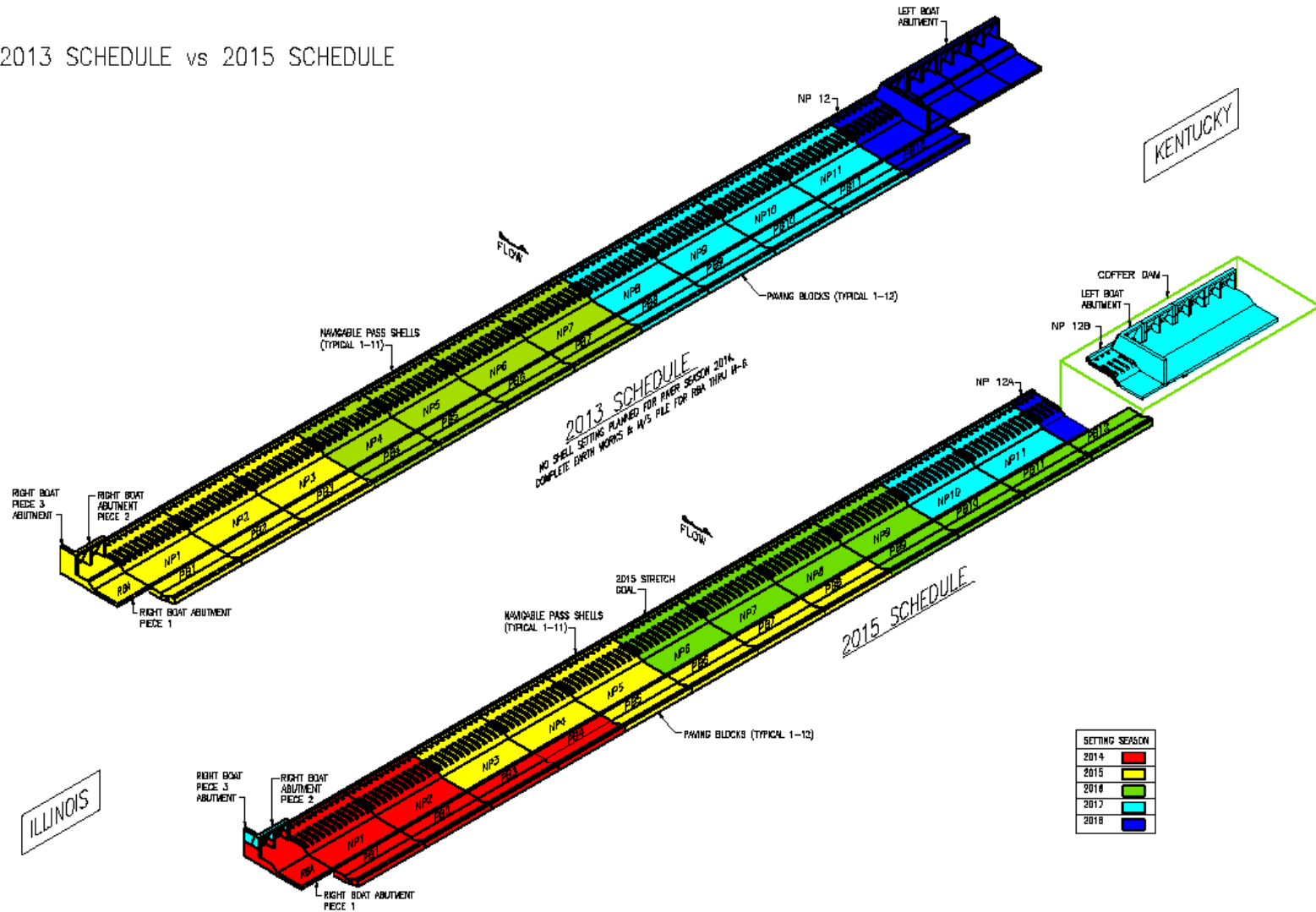
Olmsted L&D Project Earned Value Analysis (Based on DOD Gold Card)

Sept 2015



Capability Funding Alignment

2013 SCHEDULE vs 2015 SCHEDULE



In Summary

- ▶ Project cost (risk-informed) at completion is \$65M under the fully funded \$3.1B PACR Baseline
- ▶ Project completion schedule is 2 years ahead of the PACR baseline schedule, 2022 in lieu of 2024
- ▶ Capability funding (FY16 - \$268M) allows the team to actively mitigate risk aka buy down cost and reducing schedule.



Discussion



Funding Analysis

