

2025 CAPITAL INVESTMENT STRATEGY

Inland Waterways Users Board
Meeting No. 102

April 11, 2024



US Army Corps
of Engineers®





WHAT IS THE CIS?

- The CIS is a statutory requirement to develop ***a 20-year capital investment strategy*** for the inland and intracoastal, fuel taxed waterways.
- The CIS is a ***planning framework*** and ***informs*** the normal budget process. It does not represent a commitment to budget the amounts shown in the scenarios.
- Section 302(d) of WRDA 1986, as amended requires ***“coordination with the Users Board”*** in developing the CIS. USACE will collaborate with industry stakeholders to the maximum possible extent within the provisions of the Federal Advisory Committee Act requirements.
- Ultimately, the criteria, processes, procedures, and results in the ***CIS reflect the judgment of OMB, Army, USACE, and IW Users Board.***



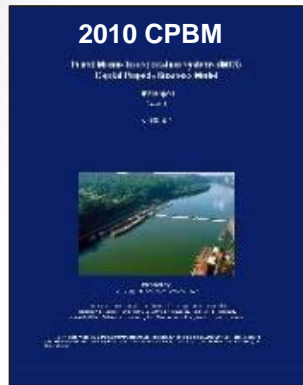
WHAT'S CHANGED SINCE 2020 CIS

- **BIL \$2.5B ... cost escalation.**
- **WRDA legislation**
 - Cost share change to 65% General Treasury / 35% IWTF
 - Brazos Floodgates & Colorado River Locks authorized for construction
- **Construction New Starts**
 - Upper Ohio (FY21 work plan)
 - NESP (FY22 BIL)
 - MKARNS Three Rivers (FY22)
 - TJ O'Brien (FY22 BIL)

HISTORY

2010 Capital Project Business Model

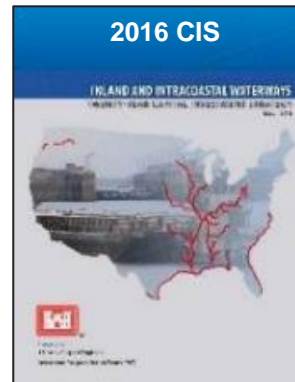
Report was in response **cost escalation & funding challenges**. Goals were to “identify ways to improve the Corps business model” & “developing an investment strategy”.



2016 CIS

1st Capital Investment Strategy

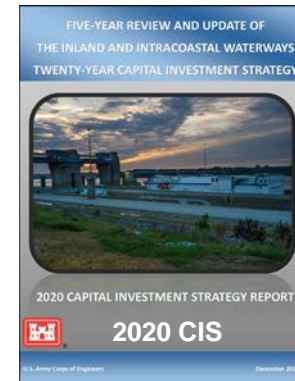
Report was drafted in May 2015 & cleared by OMB in March 2016



2020 CIS

2nd Capital Investment Strategy

5-yr Review & Update of 2016 Report. Report transmitted the report to Congress in January 2021.



2025 CIS

3rd Capital Investment Strategy

5-yr Review & Update of 2020 Report. Target completion in spring 2025.



2014 WRRDA Section 2002, “in coordination with the Users Board, to develop and submit to Congress a report describing a **20-year strategy** for making **capital investments** on the inland and intracoastal waterways based on the application of objective, national project selection prioritization criteria”

2020 WRDA Section 2002, changed cost share to 65% General Treasury / 35% IWTF.

IJA / BIL allocated \$2.5B for inland navigation construction.





PRIMARY OUTCOMES OF CIS 2020

- Filtered projects filtered into 4 categories:

Category	Description
1	Ongoing Construction
2	Authorized & Awaiting Construction Start
3	Ongoing studies
4	Future Potential Projects

Grouped
into priority
bands

The 2020 CIS was well received and provides a strong starting point for 2025 report

- Developed 3 funding scenarios
 - Baseline – base program (50%/50% cost share)
 - Enhanced – annual program of \$400m/year
 - Maximized – complete all projects in 10-years

Impact:

- Aligned stakeholders behind common message when lobbying Congress
- IIJA / BIL referenced 2020 CIS for allocation of \$2.5B
- USDA references CIS in multiple documents

Project	Project Description	Waterway	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	Project Design Total (FY21 - FY40)	Project Construction Total (FY21 - FY40)
Clinton Locks & Dam	New locks and dam	Ohio																					\$ -	\$ -
Locks & Dams 2, 3, & 4 Monongahela River Navigation Project	New lock	Monongahela																					\$ -	\$ -
Kentucky Lock Addition	New Lock	Tennessee	60	89	63	11	8																\$ -	\$ 230
Chickasaw Lock	New Lock	Tennessee	110	163	139	132	19																\$ -	\$ 562
NEP Upper Miss. River L&D 25	New 1200ft lock	Mississippi	4	101	104	107	110	113	20														\$ 6	\$ 555
Three Rivers channel protection	channel protection	MISSISSIPPI		5	5	68	82	85	11														\$ 11	\$ 246
Upper Ohio - Montgomery L&D	New 600 ft lock	Ohio	17	8	1	62	103	168	205	145	26												\$ 26	\$ 709
NEP FWW LaGrange L&D	New 1200ft lock	Illinois					9	15	13	99	102	105	109	112	37								\$ 37	\$ 564
NEP Upper Miss. River L&D 24	New 1200ft lock	Mississippi						9	16	16	123	127	130	134	138	41							\$ 41	\$ 694
MISSISSIPPI 17' Channel deepening	channel deepening	MISSISSIPPI						10	10	65	67	69	71	50	25								\$ 20	\$ 341
NEP Upper Miss. River L&D 22	New 1200ft lock	Mississippi							9	14	9	80	103	108	109	113	32						\$ 32	\$ 564
Upper Ohio - Emsworth L&D	New 600 ft lock	Ohio												19	20	22	117	190	246	201	60		\$ 60	\$ 834
NEP Upper Miss. River L&D 21	New 1200ft lock	Mississippi															12	23	23	146	173		\$ 54	\$ 337
NEP FWW Peoria L&D	New 1200ft lock	Illinois																12	23	22	112		\$ 56	\$ 112
Upper Ohio - Dashiels L&D	New 600 ft lock	Ohio																					\$ -	\$ -
NEP Upper Miss. River L&D 20	New 1200ft lock	Mississippi																					\$ -	\$ -
O'Brien	Major Rehabilitation	Illinois																					\$ -	\$ -

Baseline Scenario from FY 2021 – FY 2040



■ 2025 USACE

Tiffany Burroughs, HQUSACE Nav Chief	<i>Paul Clouse, IWR</i>	<i>Mark Pointon, IWR</i>	<i>Peter Dodgion, HQ Asset Management Chief</i>
<i>Kevin (Joe) Dziuk, Asset Management, HQ</i>	Michael Tarpey, HQ Team Leader	<i>Craig Moulton, HQ Inland Nav PM</i>	Mukesh Kumar, HQ Cost
Vincent Navarre, HQ PID	Chris Phillips, LRD	Cody Eckhardt, MVD	Doug Stamper, NAD
Jarod Norton, NWD	Candida Bronson, SAD	Heather Schlosser, SPD	Richard Turner, SWD
Michael Jacobs, Cost MCX	Charlie Thomason, INDC	PJ Donovan, PCXIN	MEGA project representatives & others as required

Names in *italics* are core team members

■ Stakeholders

Spencer Murphy, Canal Barge	Jeff Webb, Cargill	Damon Judd, Marquette Transportation	Marty Hettel, ACBL
Matt Woodruff, Kirby	Tracy Zea, WCI	Julie Ufner, NWC	Craig Montesano, AWO
Jeanine Hoey, Port of Pittsburgh			



WHAT WILL WE DO FOR CIS 2025 UPDATE

- Time Horizon: 2025 – 2044.
- Incorporate WRDA legislation changes (cost share changes 65%/35%)
- Refine Categories to Reflect Current Environment:
 - Category 1: From Ongoing Construction to (1a) Active construction and (1b) Active Design
 - Category 2: From Authorized & Awaiting Construction Start to Project authorized for construction & awaiting *design* funding
 - Category 3: from Ongoing Studies to (3a) Ongoing studies & re-evaluations and (3b) Ongoing major rehab reports
 - Category 4: Future Studies to Future Work
- Looking to the Future: Focus on identifying recapitalization of existing infrastructure and capacity expansion to prepare for future inland navigation.
- CIS is external communication '**document of record**' for Inland Navigation project funding & schedule with Congress, IWUB, and stakeholders



SCHEDULE

- **Key dates:**

- April 11, 2024 - CIS briefing at IWUB Meeting
- May 2024 – Incorporate IWUB comments and start drafting report
- Late June 2024 – Draft report review
- Mid July 2024 – USACE Sr. Leader IPR
- July/August 2024 – Briefing at IWUB Meeting
- August 2024 - Incorporate IWUB comments and finalize report
- September 2024 – Coordinate report with ASA(CW)

* Schedule does not include regular & reoccurring working meetings.



KEY TENETS/ASSUMPTIONS

- The 2025 CIS objective is to fund projects to completion as soon as possible in order to minimize cost growth & expedite construction completion.
 - Driver: Deliver **benefits** as soon as possible.
 - Concept is to efficiently fund ongoing construction while seeking opportunities to start new construction if it can be efficiently funded.
- Goal: Lock construction completed in 8-years or less.
 - A project will not start design work until 3 - 5 years before planned construction start.
 - Split design & construction into separate 'phases' with separate investment decisions.
- In all scenarios, projects must have certified cost estimates within last two years (policy compliant).
- Seek geographic distribution of projects in compliance with WRRDA 2014.

KEY TENETS/ASSUMPTIONS CONTINUED

- Inflation assumed to be 4.2% per year (20-year average CWCCIS rate).
- FY24 appropriations ***funded to completion*** Chickamauga, Lower Mon 2, 3 & 4, & MKARNS Three Rivers
- FY25 funding assumptions: Kentucky funded to completion for \$332M
- USACE will seek to efficiently utilize IWTF available each fiscal year.
- The IWTF balance will not go below \$20M.
- IWTF revenue assumptions:
 - FY25 revenue = \$117M.
 - FY26 revenue = \$117M.
 - FY27 revenue = \$120M.
 - FY28 revenue = \$124M.
 - Assume that IWTF revenues after FY28 will grow annually at 3.0%.

KEY TENETS/ASSUMPTIONS CONTINUED

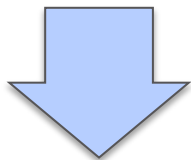
- Design cost assumed \$25M/year for 3 years (\$75M total).
- Lock operation assumed to be 3 years after project funded to completion.
- Cat 1A project priorities (based on amount to fund to completion):
Monongahela River L&Ds 2, 3 & 4 (Charleroi), MKARNS Three Rivers, Chickamauga, Kentucky, Montgomery, UMR Lock 25
- After current Cat 1A projects are funded to completion, the next lock construction project (i.e. MEGA project) will be LaGrange Lock followed by another lock to be determined in the future.
 - Will seek opportunities to efficiently fund smaller projects (Brazos or Major Rehabs).
- MEGA project after LaGrange (“Next Lock A”) construction first cost is assumed to be \$1.5B (2024 price level).



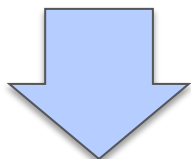
CATEGORIZE BASED ON PROJECT STATUS

Process

Categorize
based on project
status



Filter
Relative project
ranking



Prioritize
into bands of
relative priority

2020 Categories

CAT 1 – Ongoing construction

Olmsted (completed); Monongahela River 2, 3 & 4 (Charleroi); Kentucky; Chickamauga

CAT 2 – Authorized & awaiting construction start

Lock 25, MKARNS Three Rivers, Montgomery, LaGrange, Lock 24, MKARNS 12 ft Deepening, Emsworth, Lock 22, Lock 21, Dashields, Peoria, Lock 20, TJ O'Brien

CAT 3 – Ongoing studies

CAT 4 – Potential studies

Proposed 2025 Categories

CAT 1A – Active construction (in priority order)

Monongahela River 2, 3 & 4 (Charleroi), MKARNS Three Rivers, Chickamauga, Kentucky, Montgomery, Lock 25

CAT 1B – Active design (in priority order)

LaGrange (based on FY24 earmark), Brazos* (require new start), Emsworth, TJ O'Brien MR *(ongoing scoping)

CAT 2 - Project authorized for construction & awaiting design start

(in alphabetical order) Colorado, Dashields, Lock 20, Lock 21, Lock 22, Lock 24, Peoria, Winfield MR

CAT 3A – Ongoing studies & re-evaluations

(in alphabetical order) Bayou Sorrel, GIWW Brazoria & Matagorda (2023 Chief report), IHNC Lock, J. Bennett Johnson 12 ft Deepening (new start in FY24), MKARNS 12 ft Deepening* (ongoing rescoping & reevaluation), Tenn-Tom/BWT Deepening Study

CAT 3B – Ongoing major rehab reports

Major rehabilitation reports listed on slide 16.

CAT 4 – Future Work

Identify future recapitalization projects and future expansion studies



DRAFT SCENARIOS

■ Scenario 1 – Constrained.

- Constrained scenario based on historical funding & execution trends with construction contracts are base + options.
- Continuing contract (CC) or Incremental Funding Clause (IFC) **NOT** available.
- Assumptions/constraints:
 - Limit IWTF contribution to cost share to 90% of annual IWTF revenue.
 - Example - If IWTF revenue is \$117M, total program would be \$300M (\$105M IWTF, \$195M).
 - Montgomery is funded FY25 – FY30 and Lock 25 FY22 – FY33.
 - Construction funding for LaGrange and New Lock A is spread over 17 years.

Project	Prior Year Funding Through FY23 (\$M)	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041	FY2042	FY2043	FY2044	FY25-FY44 Funding (\$M)
Chickamauga Lock	\$ 717.60	236.80																					\$ -
MKARNS Three Rivers	\$ 270.62	186.12																					\$ -
Monongahela Locks & Dams 2, 3, & 4	\$ 1,124.36	41.00																					\$ -
NESP Mooring Cells		35.00																					\$ -
Kentucky Lock Addition	\$ 1,229.33		332																				\$ 332
Montgomery Lock	\$ 897.79		205	200	165	120		111															\$ 801
Brazos River Floodgates	\$ 23.60				1	96							19	20	171	183							\$ 490
NESP Lock 25	\$ 747.72				148	100	337	236	337	348	340	352											\$ 2,198
Major Rehabs									20	20	40	40	60	60	60	60	60	60	60	60	60	60	\$ 720
NESP LaGrange Lock	\$ 71.00	40.00									17	18	139	149	160	172	184	198	212	228	245	262	\$ 1,984
Next Lock A														41	43	45	164	176	189	202	217	233	\$ 1,309

LEGEND:

Design



Construction



Key Assumptions:

- 4.2% inflation
- 3 years after lock funded to completion to be operational
- Constrained / uncertain funding increases costs by 3%



DRAFT SCENARIOS CONTINUED

- Scenario 2 - Accelerated (8-year construction schedule).
 - Timely and certain funding to efficiently execute construction. Potential options:
 - Continuing contract (CC) or Incremental Funding Clause (IFC) available, Project funded annually PBud, or 5-year MILCON-like program.
 - Assumptions/constraints:
 - General Treasury funds available to match available IWTF. Seek to draw down available IWTF balance in FY25 – FY27.
 - Starting in FY26, split funding (50/50) between to finish Montgomery and Lock 25.
 - After Lock 25 & Montgomery funded to completion, LaGrange funded to continue construction.

LEGEND:

Design



Construction



Key Assumptions:

- 4.2% inflation
- 3 years after lock funded to completion to be operational

Project	Prior Year Funding Through FY23 (\$M)	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041	FY2042	FY2043	FY2044	FY25-FY44 Funding (\$M)
Chickamauga Lock	\$ 717.60	236.80																					\$ -
MKARNS Three Rivers	\$ 270.62	186.12																					\$ -
Monongahela Locks & Dams 2, 3, & 4	\$ 1,124.36	41																					\$ -
NESP Mooring Cells		35																					\$ -
Kentucky Lock Addition	\$ 1,229.33		332																				\$ 332
Montgomery Lock	\$ 897.79		205	460	136																		\$ 801
Brazos River Floodgates	\$ 23.60				1	96				277													\$ 374
NESP Lock 25	\$ 747.72				220	280	360	368	272														\$ 1,500
Major Rehabs									20	20	40	40	60	60	60	60	60	60	60	60	60	60	\$ 720
NESP LaGrange Lock	\$ 71.00	40						16	17	209	377	393	354	369	376	240							\$ 2,351
Next Lock A													38	41	43	178	445	464	433	430	448	504	\$ 3,025
Next Lock B																				52	55	57	\$ 164

DRAFT - FOR DISCUSSION



DRAFT SCENARIOS CONTINUED

- Scenario 3 BIL Projects 100% Federal:
 - IIJA/BIL funded projects are completed 100% General Treasury
 - Assumptions/constraints:
 - Total annual Construction funding is \$500M - \$600M.
 - Funding toward BIL projects is approximately \$350M/year.
 - Starting in FY26, split funding (50/50) between to finish Montgomery and Lock 25.
 - Seek to fully allocate IWTF annual revenues and draw down balance.

Project	Prior Year Funding Through FY23 (\$M)	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038	FY2039	FY2040	FY2041	FY2042	FY2043	FY2044	FY25-FY44 Funding (\$M)
Chickamauga Lock	\$ 718	236.80																					\$ -
MKARNS Three Rivers	\$ 271	186.12																					\$ -
Monongahela Locks & Dams 2, 3, & 4	\$ 1,124	41																					\$ -
NESP Mooring Cells		35																					\$ -
Kentucky Lock Addition	\$ 1,229		332																				\$ 332
Montgomery Lock	\$ 898		205	350	175	175	71																\$ 976
Brazos River Floodgates	\$ 24		1	88	226																		\$ 315
NESP Lock 25	\$ 748				175	175	240	315	380	215													\$ 1,500
Major Rehabs									20	20	40	40	60	60	60	60	60	60	60	60	60	60	\$ 720
NESP LaGrange Lock	\$ 71	40		293	147	378	350	352	227														\$ 1,748
Next Lock A							31	32	33	362	348	347	275	287	265	338							\$ 2,319
Next Lock B														41	43	45	315	309	504	378	394	365	\$ 2,393
Emsworth Lock	\$ 83.40						31	32	33	139	348	347	346	344	376	365							\$ 2,362
Next Lock C																45	46	48	363	378	350	262	\$ 1,492

LEGEND:

Design



Construction



Key Assumptions:

- 4.2% inflation
- 3 years after lock funded to completion to be operational



CAT3B – MAJOR REHABILITATION REPORTS

<u>Project Title</u>	<u>Waterway</u>	<u>Status</u>	<u>Report Scheduled Completion</u>
Dresden Island L&D	Illinois Waterway	Did not qualify for MRER. Transitioned to major maintenance (O&M).	N/A
Starved Rock L&D	Illinois Waterway	Did not qualify for MRER. Transitioned to major maintenance (O&M).	N/A
Winfield L&D	Kanawha River	Director's memo signed 14 December 2022	12/14/2022
David D. Terry L&D (No. 6)	MKARNS	Screening completed	Late 2024
Webbers Fall L&D	MKARNS	Screening underway	2025
Robert S. Kerr L&D	MKARNS	Screening underway	2025
New Cumberland Lock	Ohio River	Screening near complete; Decision Milestone (MRDM) to be scheduled; engineering and economics still need to be reviewed.	4thQ FY25
Pike Island L&D	Ohio River	Screening completed; Alt Evaluation and Analysis ongoing; screening documentation still needs to be completed	4thQ FY25
Greenup L&D	Ohio River	Alternatives IPR Complete; Alt Evaluation and Analysis ongoing	1stQ FY26
Marmet L&D	Kanawha River	Alternatives IPR Complete; Alt Evaluation and Analysis ongoing	1stQ FY26
Meldahl L&D	Ohio River	Alternatives IPR Complete; Alt Evaluation and Analysis ongoing	1stQ FY26
Racine L&D	Ohio River	MRDM Complete; Alt Evaluation and Analysis ongoing	TBD

BACKUP SLIDES



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2020 CIS PRIORITIZED CAT 1 & 2

Category 1

Group	Project Title	Project Location	State
A	Olmsted Locks and Dam	Ohio River	IL
B	Locks and Dams 2, 3, and 4, Monongahela River Navigation Project	Monongahela River	PA
C	Kentucky Lock Addition	Tennessee River	KY
D	Chickamauga Lock	Tennessee River	TN

Category 2

Group	Project Title	Project Location	State
A	Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)	Lock & Dam 25 (Mississippi River)	MO
A	Three Rivers	MKARNS	AR
A	Upper Ohio Navigation Locks & Dams Improvements	Montgomery Locks and Dam	PA
A	Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)	LaGrange Lock & Dam (Illinois Waterway)	IL
B	Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)	Lock & Dam 24 (Mississippi River)	MO
B	MKARNS 12 ft. channel	MKARNS	AR / OK
B	Upper Ohio Navigation Locks & Dams Improvements	Emsworth Locks and Dam	PA
B	Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)	Lock & Dam 22 (Mississippi River)	MO
C	Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)	Lock & Dam 21 (Mississippi River)	IL
C	Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)	Peoria Lock & Dam (Illinois Waterway)	MO
C	Upper Ohio Navigation Locks & Dams Improvements	Dashields Locks and Dam	PA
D	Upper Mississippi River - Illinois Waterway System Navigation and Ecosystem Sustainability Program (NESP)	Lock & Dam 20 (Mississippi River)	MO
D	Thomas O'Brien Lock & Dam major rehabilitation	Illinois Waterway	IL

Groups represent projects with similar priority