

# USACE – ST PAUL DISTRICT CHANNELS & HARBORS PROJECT

Presentation for

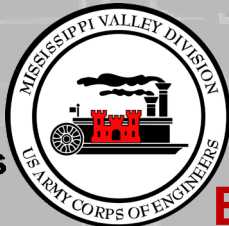
MISSISSIPPI MANAGERS MEETING

By Steve Tapp

2 February 2021



US Army Corps  
of Engineers®



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# OUTLINE



- Staff
- 2020 Channel Activities
- 2020 Projects
- 2021 Dredging Projections
- 2021 Projects
- Impacts to Navigation



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# CHANNELS & HARBORS STAFF



Steve Tapp

Chief, Channels & Harbors

Dan Cottrell

Dredging Manager

- \* Channel & Harbor Management
- \* Dredge Cut Layout

Paul Machajewski

Dredged Material Manager

- \* Long-term Placement Site Planning
- \* Placement Site Excavations

( *Vacant* )

Channel Maintenance Coordinator

- \* Placement Site Implementation/Management
- \* Beneficial Use Coordination

Al VanGuilder

Chief, Hydro-Survey Unit

- \* Hydrographic Surveys
- \* Topographic Surveys



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# 2020 CHANNEL ACTIVITIES



- **Early Start to Dredging Season**

- Concerns over the continued high water in 2019 and leaving marginal conditions at the end of last season.
- MAR 31: Contract Mechanical Plant 2 (Coulters Island in Pool 3)
- APR 01: Contract Mechanical Plant 1 (Above Mt Vernon Light in Pool 5)
- APR 22: Contract Mechanical Plant 3 (Beef Slough in Pool 4)
- MAY 03: Dredge Goetz (Grand Encampment in Pool 4)
- MAY 11: Government Mechanical (McMillan Island in Pool 10)

**\*By MAY 11, five dredges were operating, in 2019 on that date we had 2 dredges operating.\***

- JUN 18: Dredge Goetz went to MVR for higher priority work
- JUN 29: Contract Mechanical Unload channel work (Diamond Bluff in Pool 3)
- JUL 07: Government Mechanical went to MVR for higher priority work
- NOV 02: McGregor HREP Contract Mechanical (McMillan in Pool 10)
- Consistent progress all season with several plants (7 different plants)

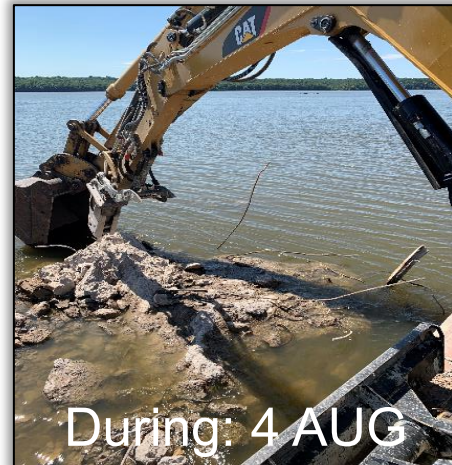
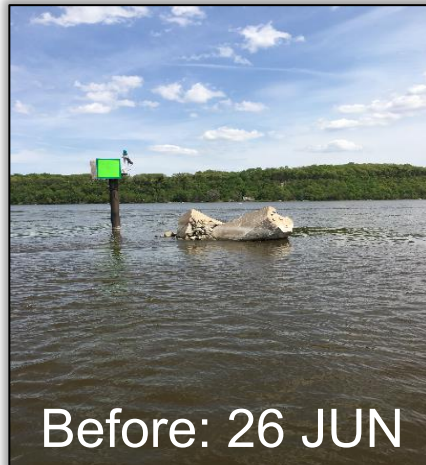


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# 2020 CHANNEL ACTIVITIES

- **Pool 2 Channel Modification Project – Phase 2 (Dredging)**
  - Extensive dredging in 2020 (136K CY)
- **Boulanger Towhead Light Removal**
  - Corps Maintenance & Repair removed Boulanger Towhead Light
  - USCG requested and funded removal due to navigation impacts
  - Channels & Harbors supported with hydrographic surveys before, during and after removal
  - Work dates: JUL 27 – AUG 21
  - More difficult than expected to remove the concrete portion
  - Industry seemed happy with the outcome.



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# 2020 CHANNEL ACTIVITIES



- **Pool 7 – Upper Approach to LD7 Outdraft**
  - Extended 370 feet in OCT with 135 tons of rock
- **Pool 8 – Sand Slough**
  - Significant shoaling during the last few years
  - Dredged in MAY after completing sediment sampling and mussel surveys in 2019
- **Pool 10 – Channel Management Study**
  - No viable option to reduce dredging with structures without floodplain impacts
  - Final document with the modeling and findings expected this winter



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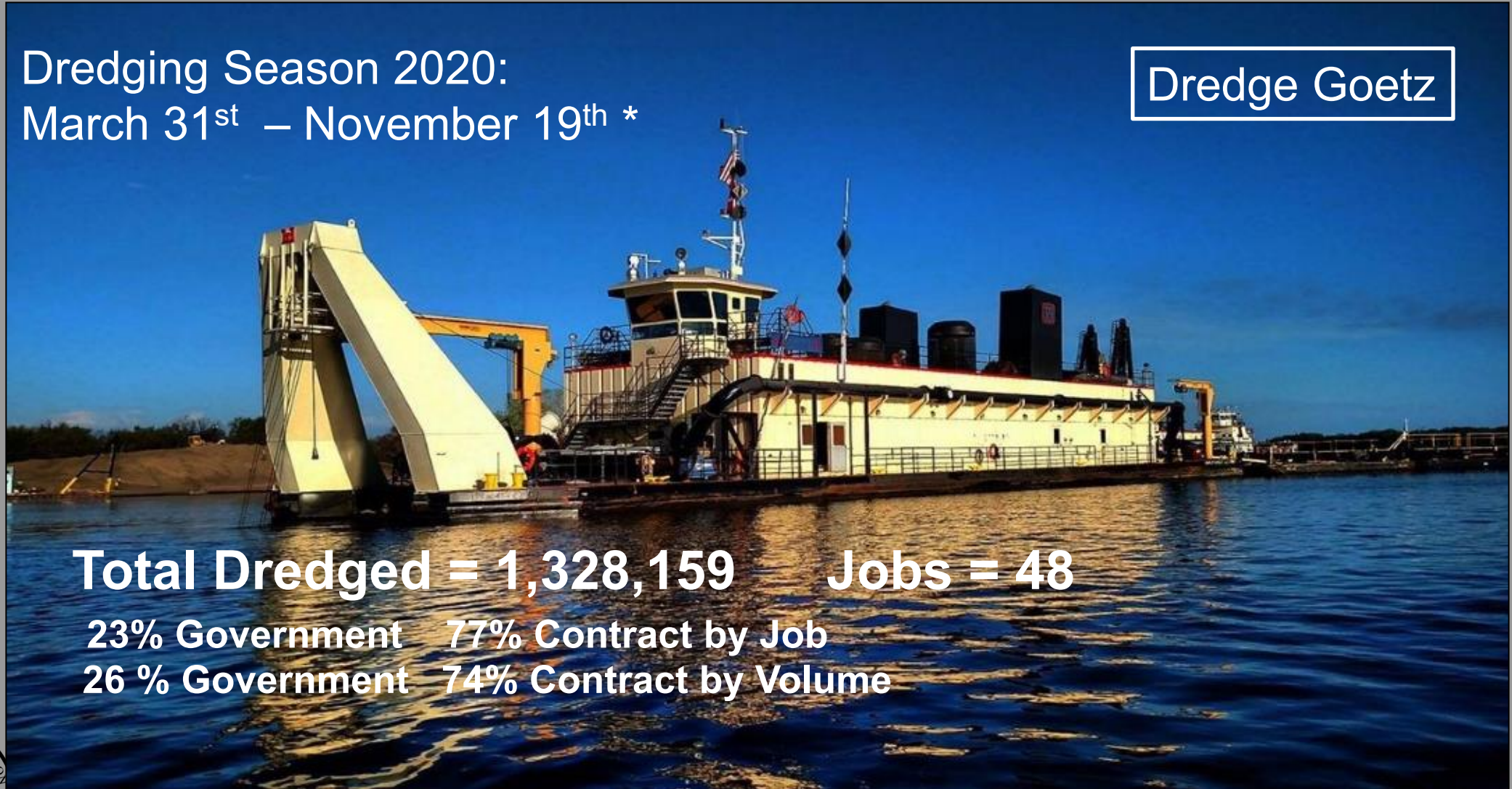


# 2020 CHANNEL ACTIVITIES



Dredging Season 2020:  
March 31<sup>st</sup> – November 19<sup>th</sup> \*

Dredge Goetz



**Total Dredged = 1,328,159      Jobs = 48**

23% Government      77% Contract by Job  
26 % Government      74% Contract by Volume



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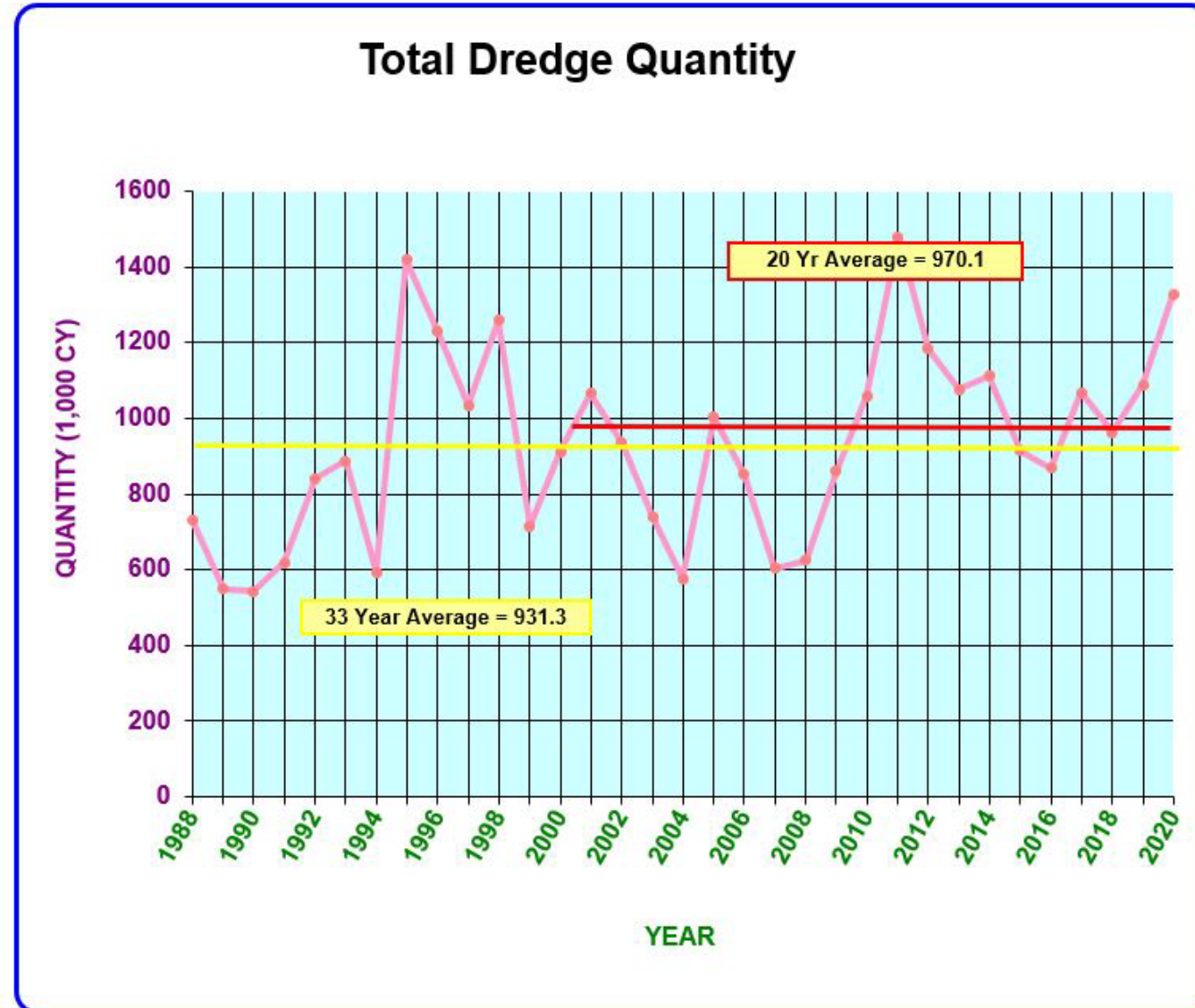


# 2020 CHANNEL ACTIVITIES



YEAR	QUANTITY (1,000 CY)
1988	731.0
1989	548.6
1990	542.0
1991	618.1
1992	841.5
1993	888.0
1994	593.2
1995	1,417.4
1996	1,230.0
1997	1,033.9
1998	1,258.9
1999	715.3
2000	911.9
2001	1,066.5
2002	936.3
2003	740.2
2004	577.0
2005	1,003.2
2006	851.1
2007	604.1
2008	625.7
2009	860.9
2010	1,058.8
2011	1,479.0
2012	1,182.1
2013	1,075.2
2014	1,112.3
2015	915.5
2016	867.8
2017	1,068.1
2018	962.2
2019	1,087.7
2020	1,328.2

Average 931.3  
20 yr Avg 970.1



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# 2020 PROJECTS

- **Land Acquisition for Dredged Material Placement**
  - Pool 2: Non-Standard Estate agreement at Southport for 20 years
  - Pool 2: Completed appraisals and working on purchase of ~330 acres
  - Pool 4: Working on appraisals for ~320 acres
  - Pool 5: Corps purchased ~1000 acres
- **Placement Site Capacity Restored**
  - Pool 2: ~50K CY from Lower Boulanger Island
  - Pool 9: ~200K CY from Lansing Island
  - Pool 10: ~190K CY from McMillan Island
- **Dredged Material Management Plans**
  - Pool 2: Report Completed
  - Pool 4: Ongoing
  - Pool 5: Report Completed
  - Pool 6: Ongoing
  - Pools 9 & 10: Initiated



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# 2021 DREDGING PROJECTIONS

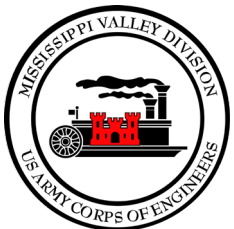


Deferred 2020 Dredging Jobs				
Pool	Dredge Cut Name	River Mile	Depth & Est. Quantity	
MN	Cargill Slip	12.6 - 12.9	12	3,960
SC	Kinnickinnic Bar	6.4 - 6.6	11	9,925
2	St. Paul Barge Terminal	837.3 - 837.6	12	35,488
2	Pine Bend Landing	824.0 - 824.5	12	22,950
2	Pine Bend	822.7 - 824.0	12	42,021
3	Lower Approach to LD 2	814.5 - 815.1	13	28,635
3	Prescott	810.1 - 810.5	12	34,181
3	Four Mile Island	807.1 - 807.6	12	11,877
3	Big River	805.2 - 805.3	12	3,594
3	Morgans Coulee	802.1 - 802.9	12	37,806
3	Coulters Island	801.6 - 802.0	12	20,513
3	Diamond Bluff	799.0 - 800.7	12	61,868
4	Red Wing Hwy Bridge	789.6 - 790.0	12	22,099
4	Head of Lake Pepin	784.5 - 785.5	12	86,473
4	Reads Landing	762.0 - 762.7	12	14,492
4	Crats Island	758.9 - 759.2	12	14,081
4	Teepeeota Point	757.3 - 757.6	12	15,140
4	Grand Encampment	755.8 - 756.8	12	64,600
4	Beef Slough	754.0 - 754.4	12	37,129
5	Upper Zumbro	749.3 - 749.6	12	10,045
5	Mule Bend	747.7 - 748.2	12	43,058

Deferred 2020 Dredging Jobs				
Pool	Dredge Cut Name	River Mile	Depth & Est. Quantity	
5	West Newton	747.5 - 747.7	12	11,921
5	Below West Newton	746.4 - 746.6	12	8,956
5	Fisher Island	744.7 - 745.2	12	49,468
5	Lower Zumbro	743.1 - 744.5	12	66,937
5	Abv Mt Vernon Light	741.1 - 741.4	12	10,950
5A	Island 58	734.1 - 734.4	12	7,660
6	Below Winona RR Bridge	722.9 - 723.7	12	37,264
6	Homer	720.1 - 720.8	12	12,644
7	Head of Richmond Island	712.7 - 712.9	12	10,780
7	Winters Landing	707.5 - 708.1	12	23,683
7	Dakota	706.0 - 706.4	12	27,730
8	Lower Approach to LD 7	702.2 - 702.4	13	2,384
8	Below LaCrosse RR Bridge	698.5 - 698.9	12	8,532
8	Picayune Island	690.8 - 691.5	12	51,910
9	Abv Atchafalaya Bluff	660.0 - 660.8	12	38,723
10	Jackson Island	644.0 - 645.0	12	24,384
10	Mississippi Gardens	642.8 - 643.4	12	46,250
10	Hovie Island	621.7 - 622.4	12	32,203
10	McMillan Island	617.7 - 619.0	12	95,681
10	Upper Approach to LD 10	615.5 - 615.6	13	8,794

**TOTAL Quantity Deferred = 1,196,789**

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# 2021 PROJECTS

- **Land Acquisition for Dredged Material Placement**
  - Pool 2: Potential purchase of ~330 acres
  - Pool 4: Potential purchase of ~320 acres
- **Planned Placement Site Unloading**
  - Pool 2: ~380K CY from Pine Bend, Upper & Lower Boulanger Islands
    - Pigs Eye Lake Habitat Project
  - Pool 6: ~50K CY from Homer
  - TBD: ~100K CY from site TBD using Mechanical Unloading Contract
- **Dredged Material Management Plans**
  - Pool 4: Complete Plan
  - Pool 6: Complete Plan
  - Pool 9: Continue Planning
  - Pool 10: Continue Planning



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# 2021 PROJECTS

- **Dredging**

- Continue to regain channel width and depth lost in 2019
- Pool 2: Identify amount of widening needed to meet project objectives and expand as placement capacity becomes available
- Pool 10: McGregor Lake HREP contractor expected to dredge another 240K CY from channel cuts in Lower Pool 10

- **AIS AtoNs**

- Continue use where appropriate
- Reminder to remove old AtoNs loaded (not AIS)

- **Channel Management Plan**

- Pool 3: Study will kickoff this winter to evaluate ways to reduce dredging in Pool 3

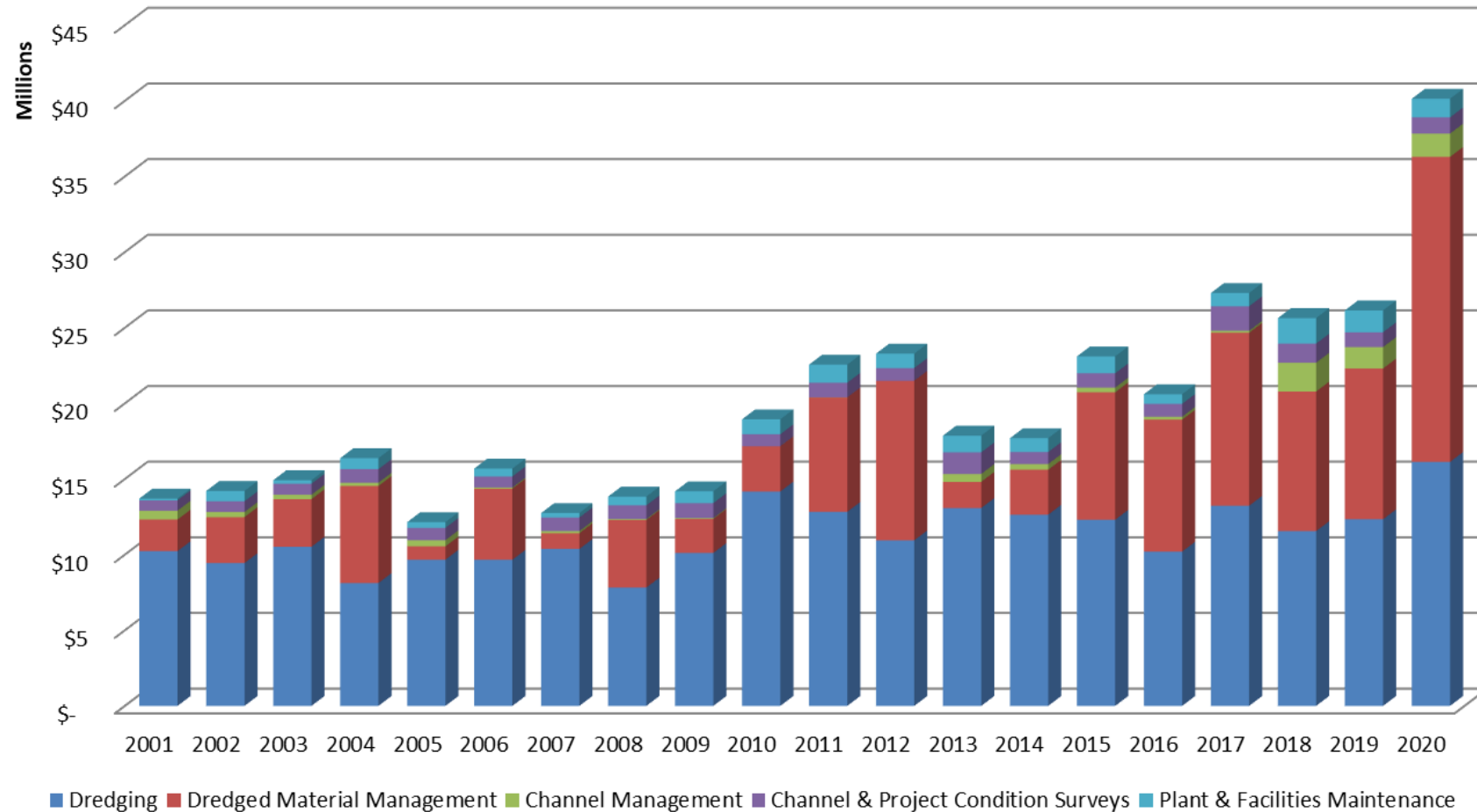


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# CHANNEL MAINTENANCE EXPENDITURES

Channel Maintenance Expenditures  
Adjusted for 2% Annual Inflation

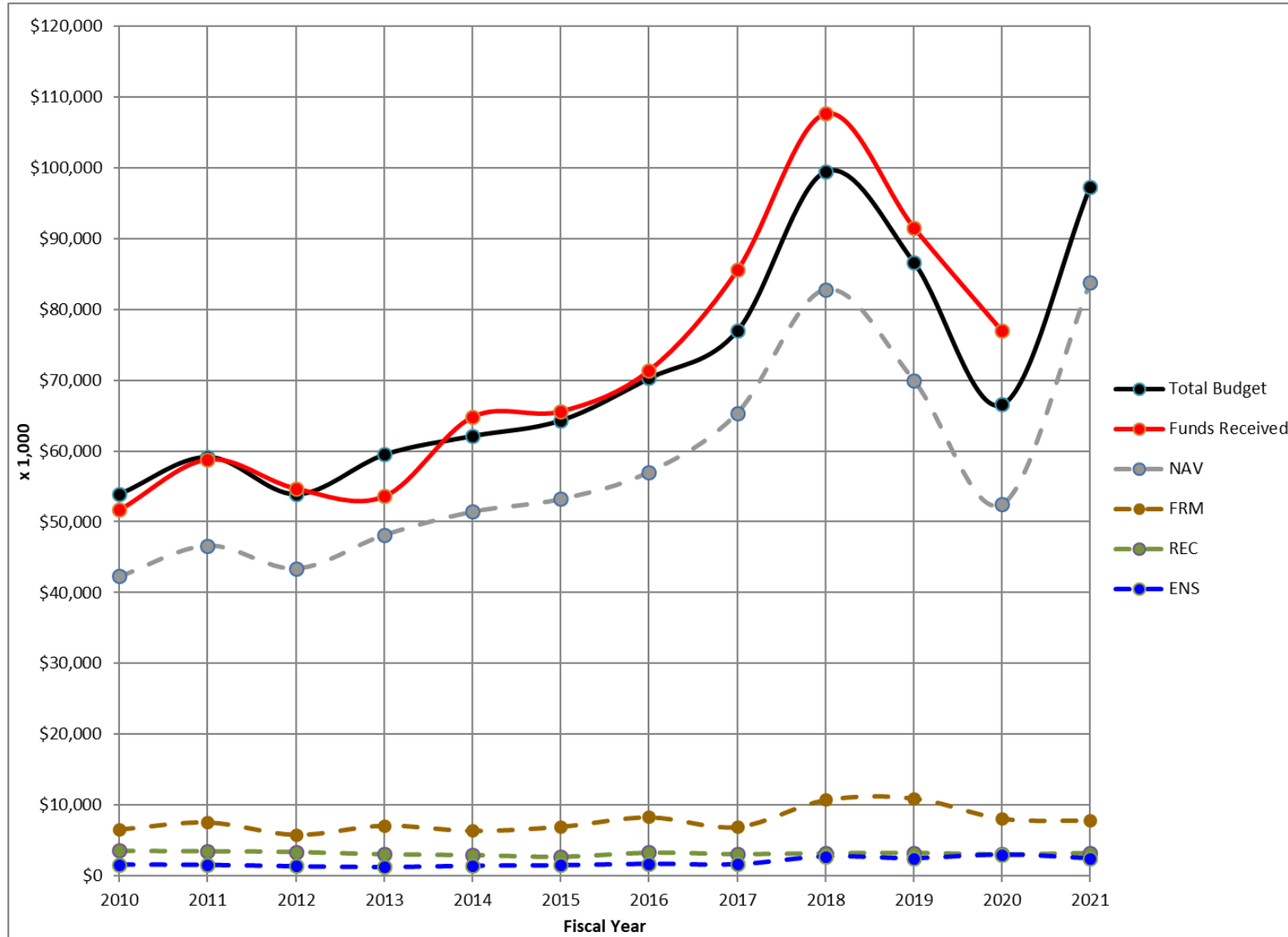


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# O&M BUDGET OVERVIEW



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# IMPACTS TO NAVIGATION

- Budget
  - Good Budget in FY21 (Up From FY19-20 and Above 5-Year Average)
  - Received Flood Damage Supplemental Funding from 2019
  - FY21 Work Plan received last week (\$4.455M for Lake Pepin Beneficial Use)
  - FY22 Presidents Budget Expected Mid-February
- Pool 2 Channel Improvement
  - Monitor changes related to structures
  - Outfall Structure Issue
  - Phase 2 Dredging
- Contracts Moving Dredged Material
  - Equipment Working in Pool 2 (Pine Bend, Upper & Lower Boulanger)
  - Equipment Working in Pool 10 (McMillan Island)
- General Channel Conditions
  - Normal Flows in 2020 = Better Conditions in 2021???



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# RESILIENT NAVIGATION: *PARTNERSHIPS*



## River Resources Forum

*An interagency partnership on the Upper Mississippi River*

The River Resources Forum, or RRF, is a state and federal agency partnership for addressing resource issues concerning the Upper Mississippi River system within the St. Paul District jurisdiction. Participating agencies include: the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the U.S. Coast Guard, the Environmental Protection Agency, the Natural Resources Conservation Service, the National Park Service, the Minnesota Pollution Control Agency and the departments of natural resources and transportation from Minnesota, Wisconsin and Iowa.



# RIAC

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*The End*

