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STATE OF MVDs FLOOD RISK MANAGEMENT INFRASTRUCTURE

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MVD Regional Flood Risk Manager

14 February 2014



®

US Army Corps of Engineers
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Testing the Limits.....



OPERATION WATERSHED RECOVERY

Regional Risk Buy-Down As of 31 December 2013

Total Repair Items 367
Total Funded Items 335
Total Completed 208

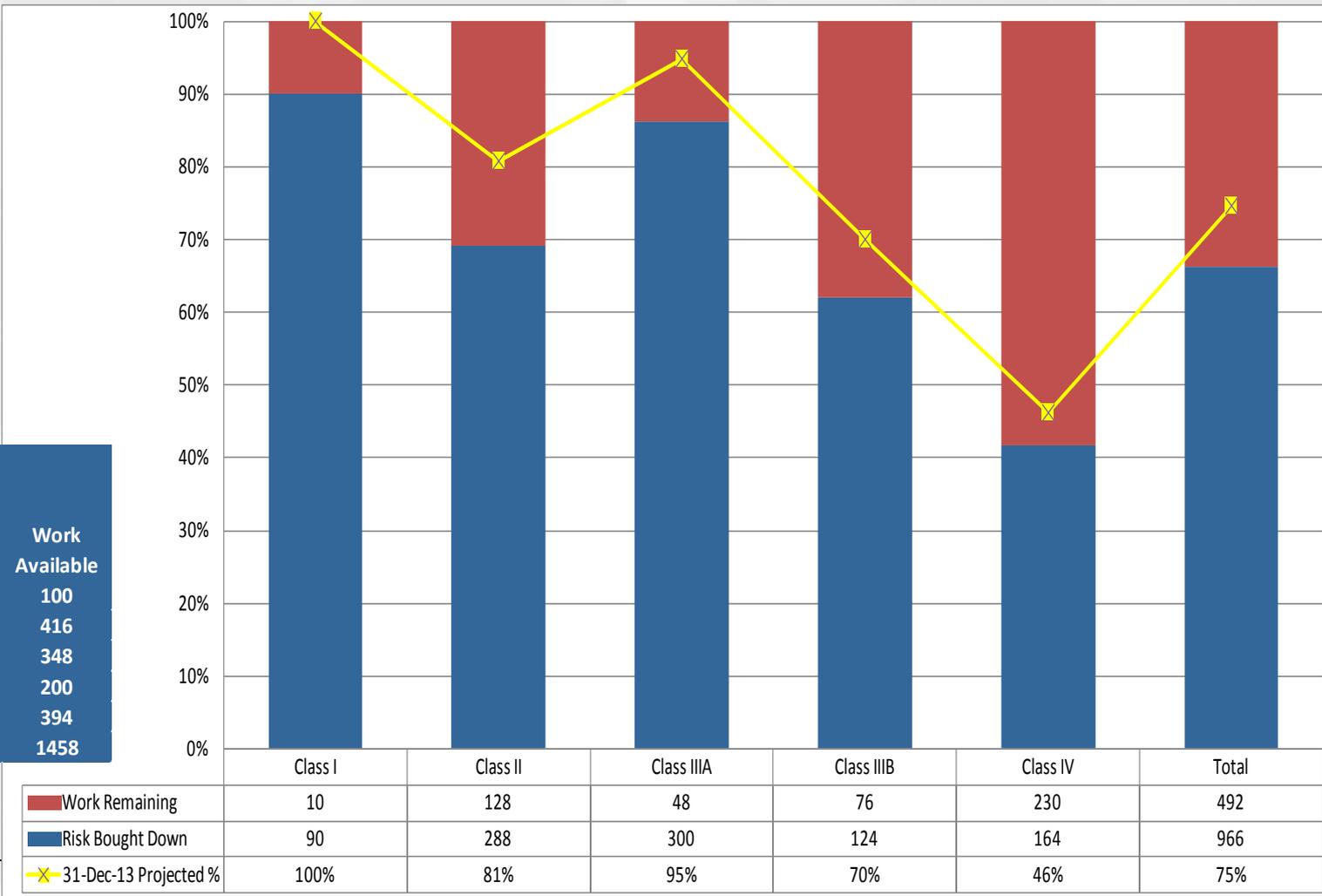
of Funded Items

- Class I 10
- Class II 52
- Class IIIA 56
- Class IIIB 49
- Class IV 168

LEGEND

- Class I 10 PTS
- Class II 8 PTS
- Class IIIA 6 PTS
- Class IIIB 4 PTS
- Class IV 2 PTS

	Risk Bought Down	Work Remaining	Work Available
Class I	90	10	100
Class II	288	128	416
Class IIIA	300	48	348
Class IIIB	124	76	200
Class IV	164	230	394
Total	966	492	1458



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MVDs FRM BUSINESS LINE:

➤ 36 flood control reservoirs:

- 3 in Arkansas
- 2 in Missouri
- 3 in Louisiana
- 4 in Mississippi
- 3 in Iowa
- 1 in Wisconsin
- 5 in Illinois
- 2 in North Dakota
- 13 in Minnesota

➤ 59 pumping stations (MR&T)

➤ 400 drainage structures

➤ ~6,400 mi of levee (3,486 mi MR&T)

➤ 700 miles of wing dams

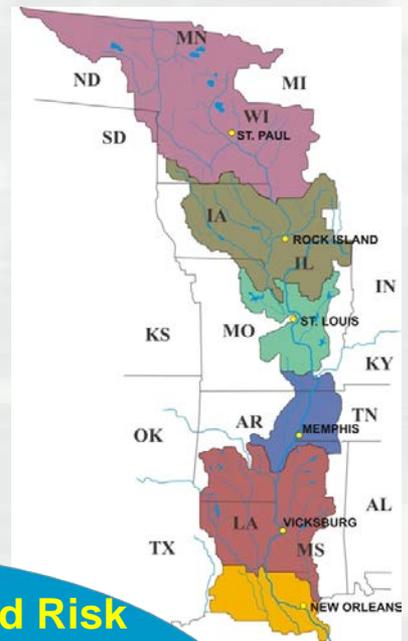
➤ 1,144 mi of revetment

➤ 326 mi of rock dikes

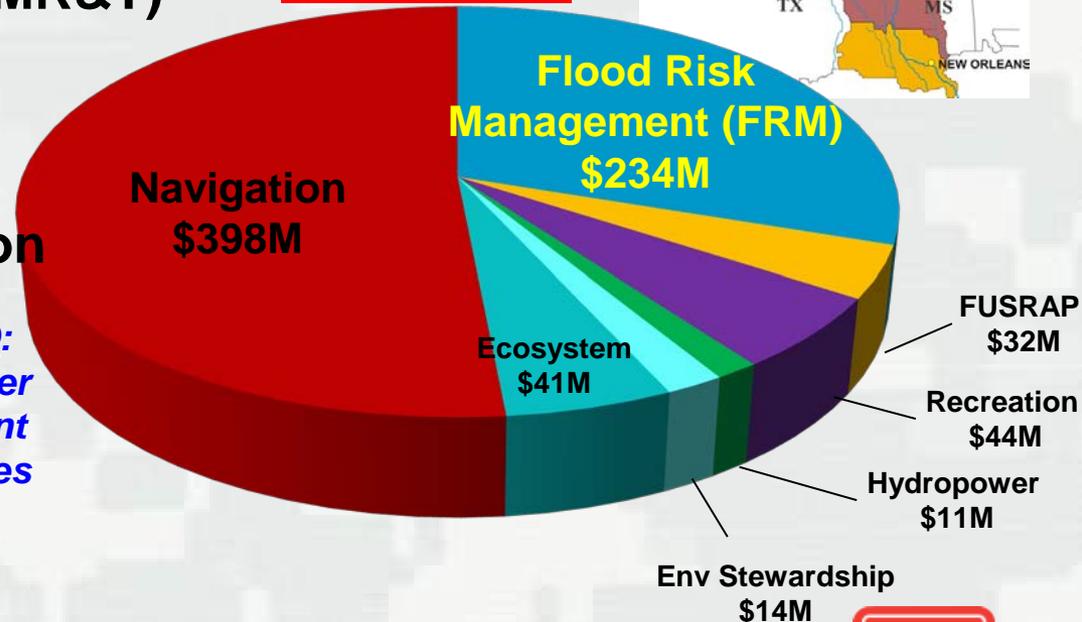
➤ 143 mi of foreshore protection

3rd LARGEST WATERSHED IN THE WORLD:

The 1.25 million-square-mile Mississippi River drainage basin gathers water from 41 percent of the continental United States. This includes all or parts of 31 states and two Canadian provinces via 250+ tributaries.



Illustrative MVD Budget \$774M



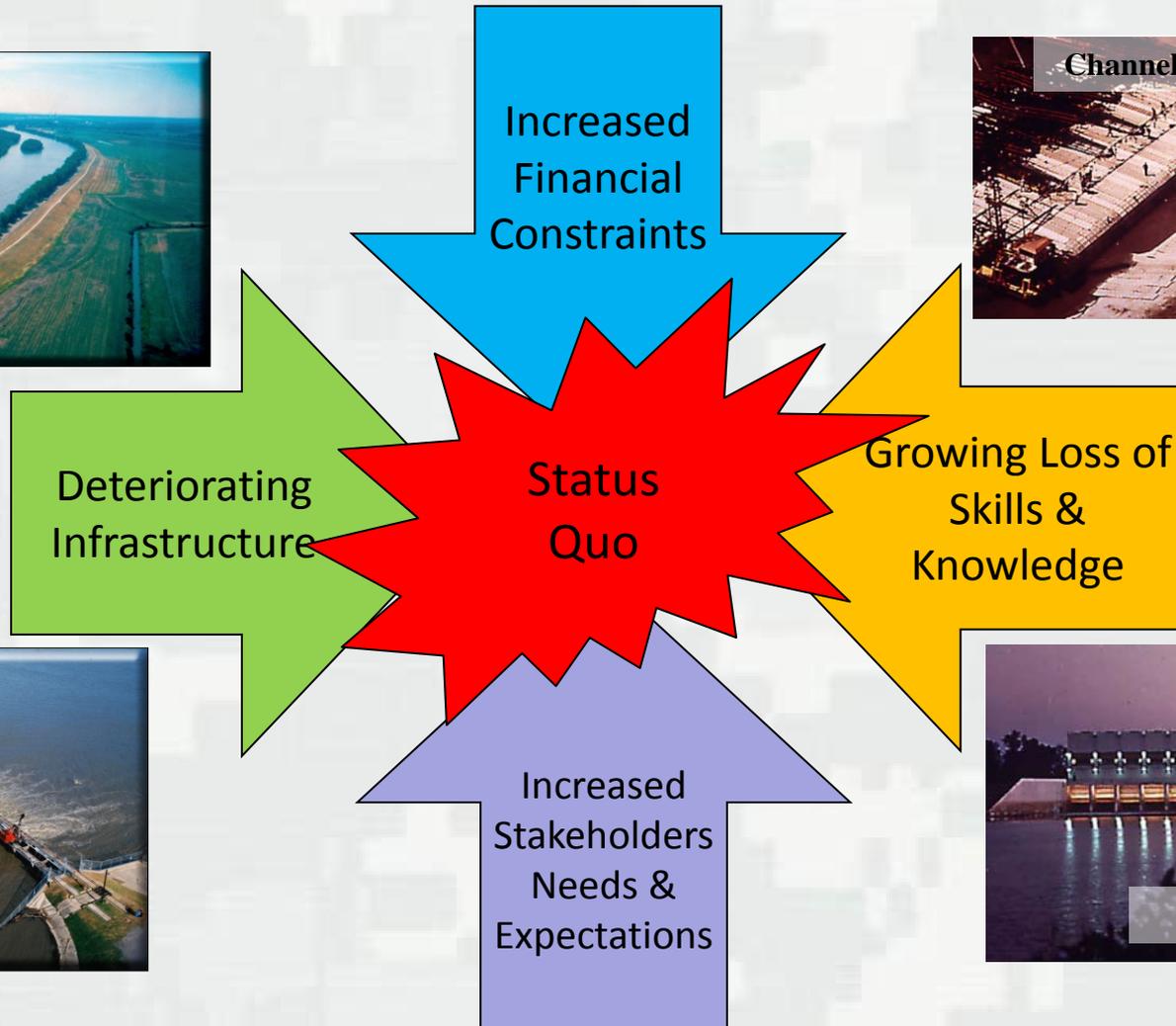
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VALUE TO NATION: Since inception in the early 1930s, MR&T is credited with \$612B cumulative flood damages prevented. At an investment level of \$14B, those savings result in a \$44 return on every \$1 invested.



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FRM Infrastructure



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State of FRM Infrastructure:

- Inventory
- Condition
- Consequences
- Requirements
- Prioritization
- Execution

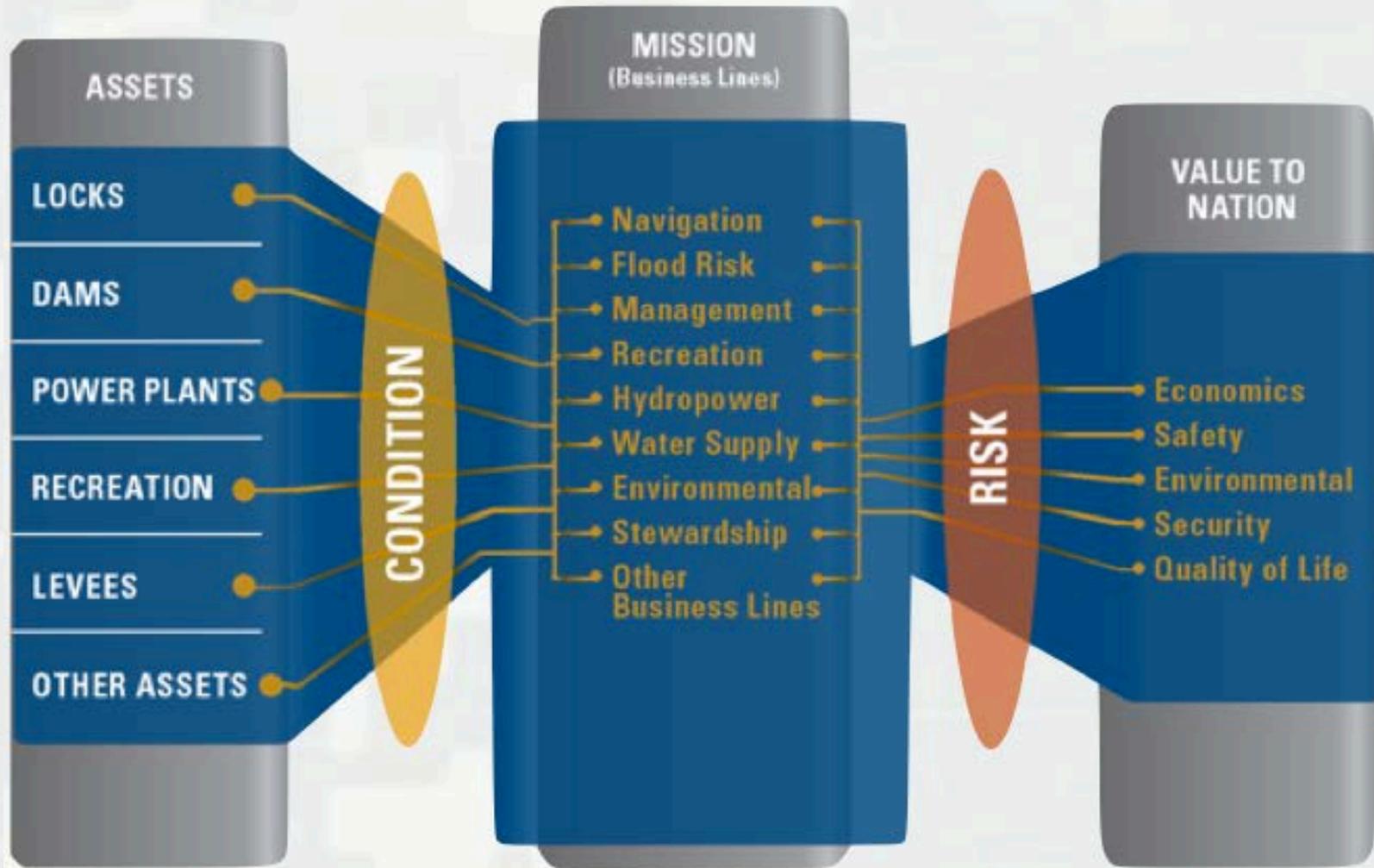


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Strategic Infrastructure Investment Framework



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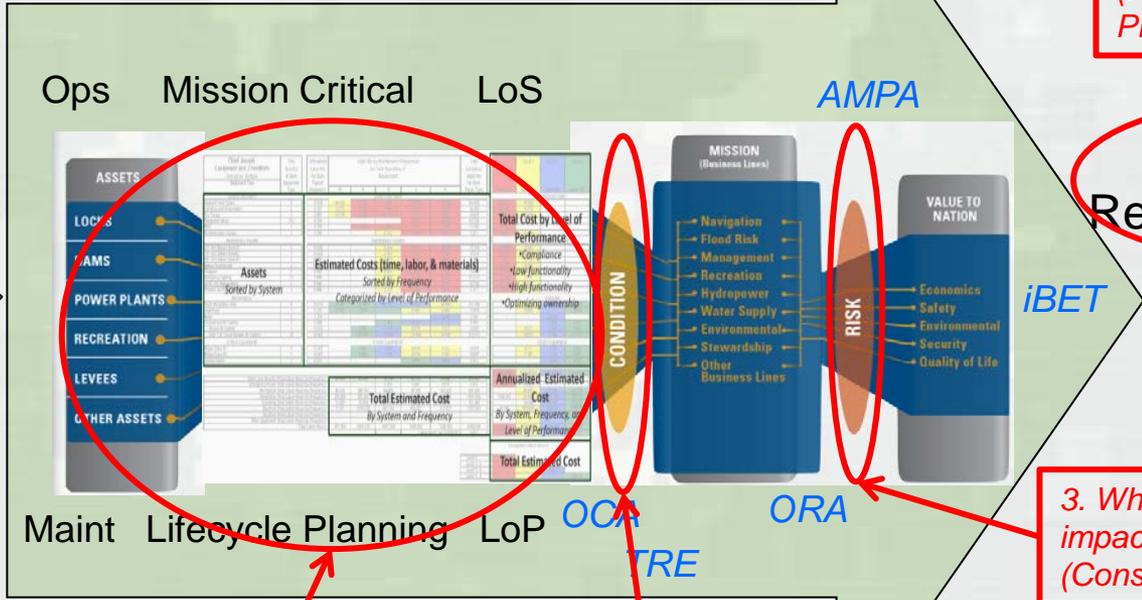
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Budget Development

Impacts on Condition & Risk:
Maintenance Performed vs. Deferred



4. What you need
(Requirements & Prioritization)

Budget Recommendation

3. What is the impact
(Consequences)

Together these calculate Risk

Budget Received

5. What you get
(Allocation)

Budget Execution

6. Manage the gap
(Execution)

1. What you have
(Inventory)

2. What shape it is in
(Condition)



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ORGANIZATION STRUCTURE FOR MVD'S REGIONAL FLOOD RISK MANAGEMENT

COMMAND
Provide regular decisions, guidance, and strategic leadership to USACE commands to ensure the efficient and effective execution of our missions.

DAM/LEEVE SAFETY
Develop and coordinate Dam Levee Safety Program standards, policies, and procedures.

EMERGENCY MANAGEMENT
Develop/coordinate pre- and post-disaster preparedness/response

FLOOD RISK MANAGEMENT POLICIES
Develop new initiatives and policy leading to integrated flood risk management.

OPERATIONS DIVISION
Operate and maintain FRM structures and Regulatory (Reg) review/approve FRM permits

FLOOD RISK MANAGEMENT AND PROGRAMS
FRM Business Line Manager. Coordinate and align program requirements and priorities

Dam and Levee Safety CoPs

Emergency Management CoP

Planning and Policy CoP

Operations and Regulatory CoP

Flood Risk Management

As of: 10 Feb 14

Project Management • Civil Works Integration Division (Programs Branch) • Water Control • Corporate Communications (PAO) • Office of Counsel

HQUSACE - CW
MG John W. Peabody
SES: Steve Stockton

SES: James Dalton
DSPM: Barbara Schuelke
LSPM: Tammy Conforti

SES: Karen Durham-Aguilera
Deputy: Mark Roupas
Chief: Robert K. Grubbs

SES: Tab Brown
Deputy: Harry Kitch
Chief: Jan Rasgus

SES: James Hannon
Deputy: Jonathan Davis
Reg: Meg Gaffney-Smith

SES: Karen Durham-Aguilera
Deputy: Ray Alexander
BLM: Jeff Jensen
SJ: Jennifer Dunn

CWID: Mark Mazzanti • WC: Jerry W. Webb • CC: Kevin Ropp • OC: Earl Stockdale

CEMVD
BG Peter A. Deluca
SES (Tech.): Thomas Holden*
SES (Prog.): Eddie Belk

DSO/LSO: Mike Turner
DSPM: Bradley Martin
LSPM: Melissa Mullen

Chief: Jared Gartman
Deputy: Carl Pigott

Chief: Rayford Wilbanks
Deputy: TBD

Chief: Dennis Norris
Deputy: Brian Chewing
Deputy (Nav): Steve Jones
Reg: Tonya Acuff

RFRM/BLM: Scott Whitney
MR&T: Kent Parrish*
SJ & FPMS: Scott Whitney

CWID: Glenda Jackson • WC: Chuck Shadie • CC: Robert Anderson • OC: G. Rogers Sloan

CEMVP
COL Dan Koprowski
DPM: Judith DesHarnais

DSO/LSO: Michael Bart
DSPM: Terry Jorgenson
LSPM: Rick Hauck

Chief: Mark Koenig
Deputy: Teri Alberico

Chief: Thomas Crump
Deputy: Terry Birkenstock

Chief: Bruce Boldon
Deputy: Kevin Baumgard
Reg: Tamara Cameron

BLM: Christopher Erickson
SJ: Terry Zien
FPMS: Terry Zien

Project Management: Chris Erickson • Programs: Amy Rothstein • WC: Ferris Chamberlin • PAO: Shannon Bauer • OC: Joseph Willging

CEMVR
COL Mark J. Deschenes
DPM: Gary Meden

DSO/LSO: Denny Lundberg
DSPM: Matt Stewart
LSPM: Alan Tamm

Chief: Rodney Delp
Deputy: Sarah Jones

Chief: Thomas Crump
Deputy: Terry Birkenstock

Chief: Michael Cox
Deputy: Thomas Heindold
Reg: Ward Lenz

BLM: Dennis Hamilton
SJ: J. Skalak & C. Haring
FPMS: Jerry Skalak

Project Management: Dennis Hamilton • Programs: Kent Stenmark • WC: Kevin Landwehr • CC: Ron Fournier • OC: Rian Hancks

CEMVS
COL Christopher G. Hall
DPM: Joseph Kellett

DSO/LSO: David Busse
DSPM: Amanda Sutter
LSPM: Jamie Mcvicker

Chief: Jake Scanlon
Deputy: Linda Werdebaugh

Chief: Thomas Crump
Deputy: Terry Birkenstock

Chief: Lou DelOrco
Deputy: Dennis Fenkse
Reg: Danny McClendon

BLM: Susan Wilson
SJ: Matt Hunn
FPMS: Hal Graef

Project Management/Development: Bruce Munholand/Deanne Strauser • Programs: June Jeffries • WC: Joan Stemler • PAO: Mike Petersen • OC: William Levins

CEMVM
COL Jeffery A. Anderson
DPM: James Bodron

DSO/LSO: Thomas Minyard
DSPM: Cory Williams
LSPM: Melissa Mullen

Chief: Steve Barry
Deputy: Kevin Woods

Chief: Troy Constance
Deputy: Gary Young

Chief: Russell Davis
Deputy: Richard Ott
Reg: Gregg Williams

BLM: Clyde Hunt
SJ: Don Davenport
FPMS: Jackie Whitlock

Project Management: James Lloyd • Programs: Linda Storey Ross • WC: David Berretta • PAO: James Pogue • OC: Suzanne Mitchem

CEMVK
COL John W. Cross
DPM: Patricia R. Hemphill

DSO/LSO: Charles Mendrop
DSPM: Sam Stacy
LSPM: Craig McRaney

Chief: Jonathan Pennington
Deputy: Gordon Watkins

Chief: Troy Constance
Deputy: Gary Young

Chief: James Ross
Deputy: David Jenkins
Reg: Michael McNair

BLM: Kent Parrish
SJ: Katy Breaux
FPMS: Brian LaBarre

Project Management: Jacob Brister • Programs: Rich Feibelman • WC: Michael Sorrels • PAO: Greg Raimondo • OC: Rymn Parsons

CEMVN
COL Richard L. Hansen
DPM: Gary L. Hawkins*

DSO/LSO: Mark Hoague
DSPM: Rich Varuso
LSPM: Rich Varuso

Chief: Michael Stack
Deputy: Jeffery Carroll

Chief: Troy Constance
Deputy: Gary Young

Chief: Christopher Accardo
Deputy: Joaquin Mujica
Reg: Martin Mayer

BLM: Mark Wingate
SJ: Nick Sims
FPMS: Nick Sims

Project Management: Mark Wingate • Programs: John Hess • WC: David Ramirez • PAO: Ken Holder • OC: Denise Frederick

* - acting backfills

MVDs Primary Watershed Regions

MVD's RFRM is best viewed first from the macro level of our four primary watershed regions, inclusive of their associated tributaries and varied FRM components:

- ▶ **Lower Mississippi River Valley (MR&T)**, from Ohio River confluence at Cairo, IL to the Gulf of Mexico;
- ▶ **Upper Mississippi River Valley**, from Lake Itasca, MN to Cairo, IL;
- ▶ **Red River of the North and Souris River**, in North Dakota, western Minnesota to Canadian border (draining to Hudson Bay) and
- ▶ **Greater New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS)**

These macro watershed regions have rather unique histories, demographics and intriguing FRM systems that have influenced engineering methodology, organizational structure, culture and resourcing of MVD's RFRM activities.



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