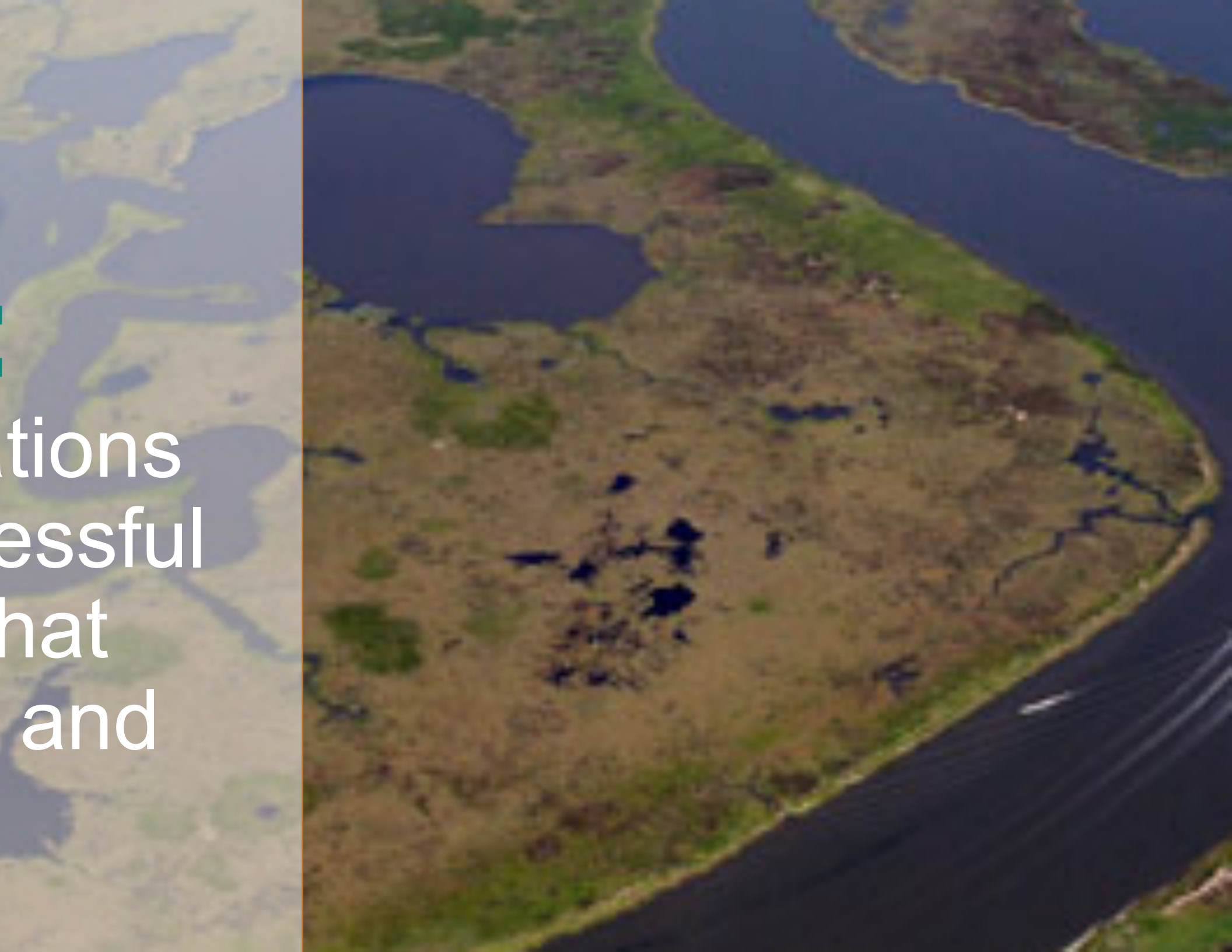
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STANDARDIZED ANI

- Provides consistency i
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- Reduces computation t
- Easier to determine ca
  outcomes across multi
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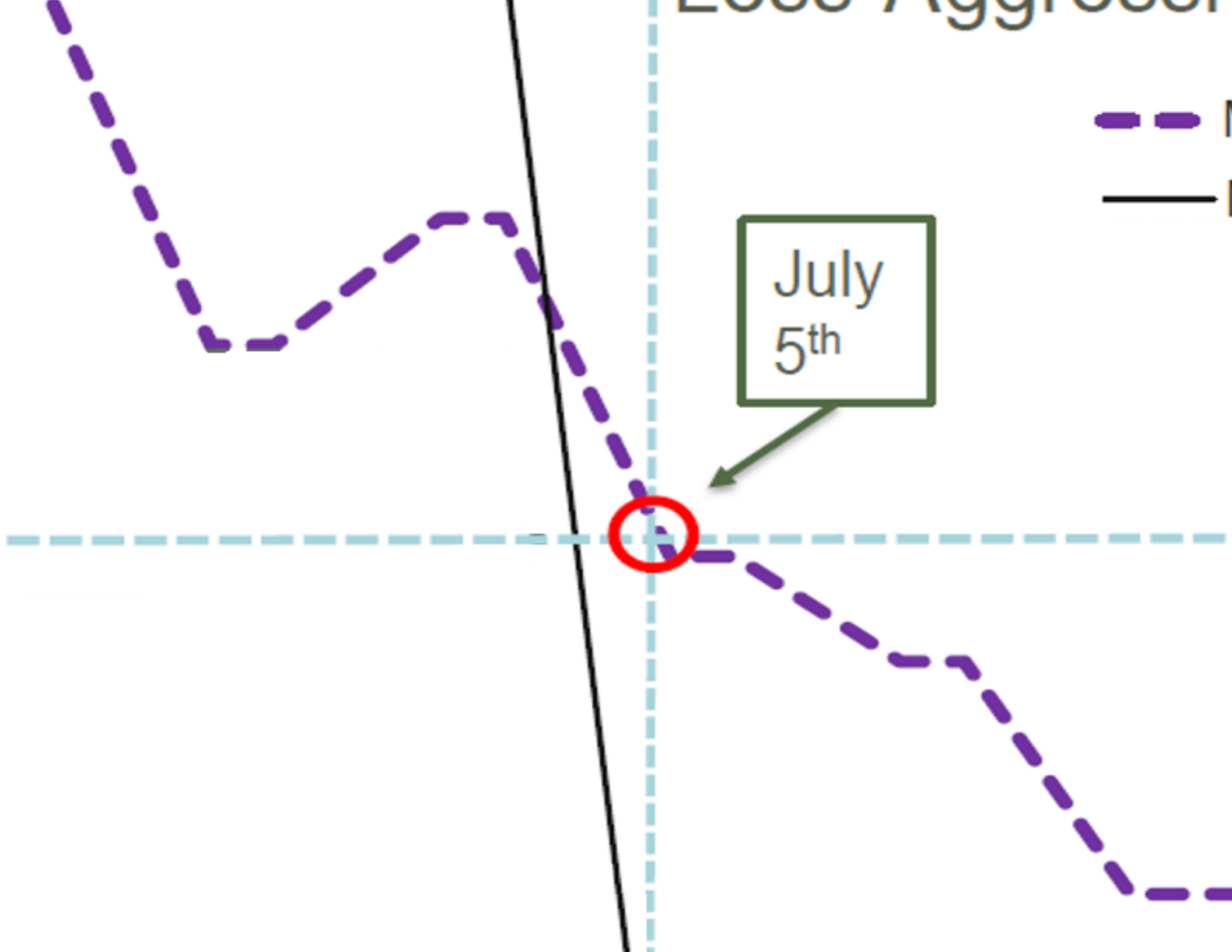
July
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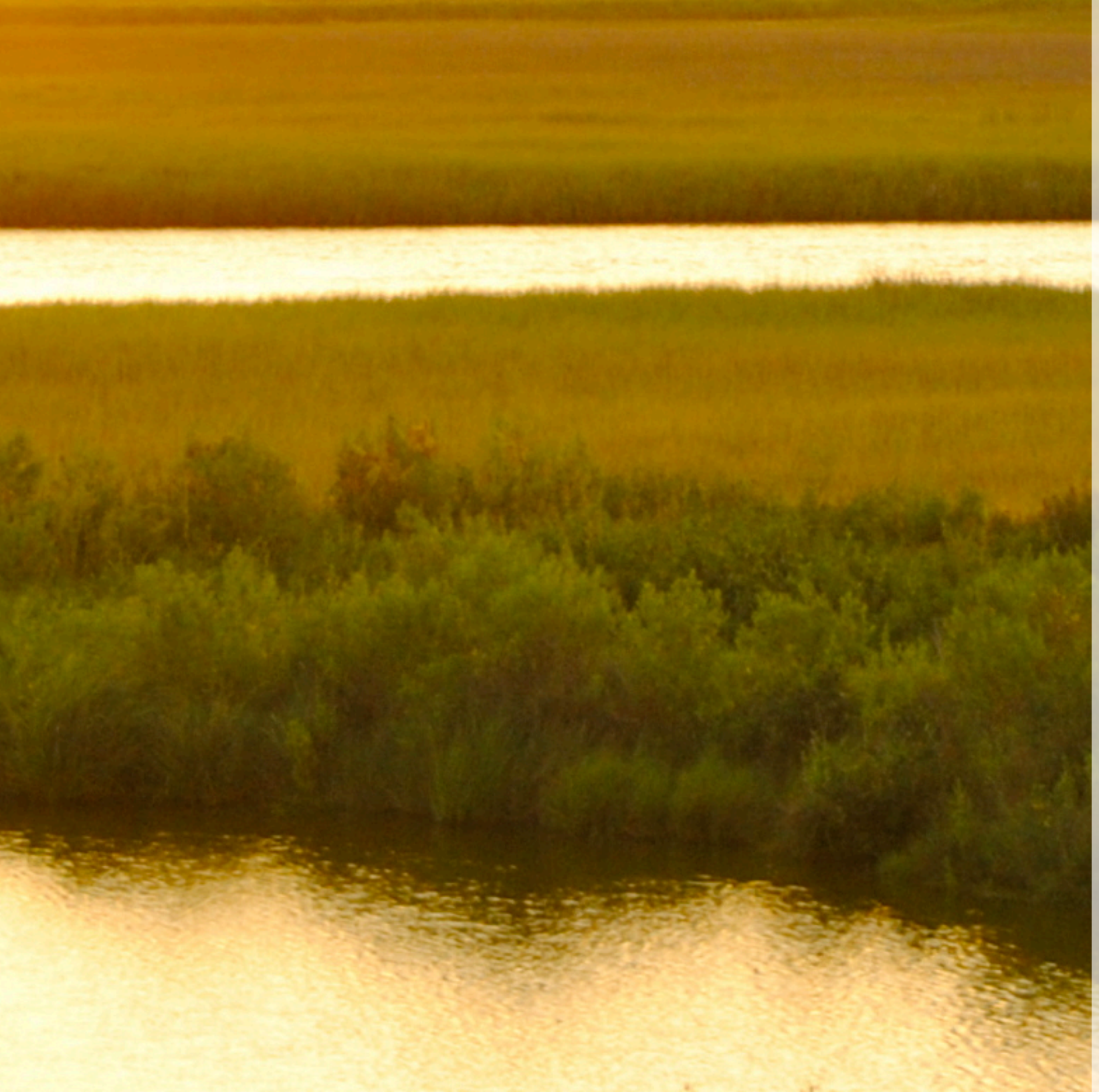

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  wetland
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RKING GROUP PUR

iment Diversion Operations Expert Working G
cument the complex environmental, social, ec
volved with the operation of a sediment divers

The WG does not attempt t
Operation Plan, but instead
on strategies and options to

Shirley Laska

Social Sciences

University of New Orleans
Lowlander Center

Earl Melancon, Jr.

Oysters and Shellfish

Nicholls State University

EXPERTS

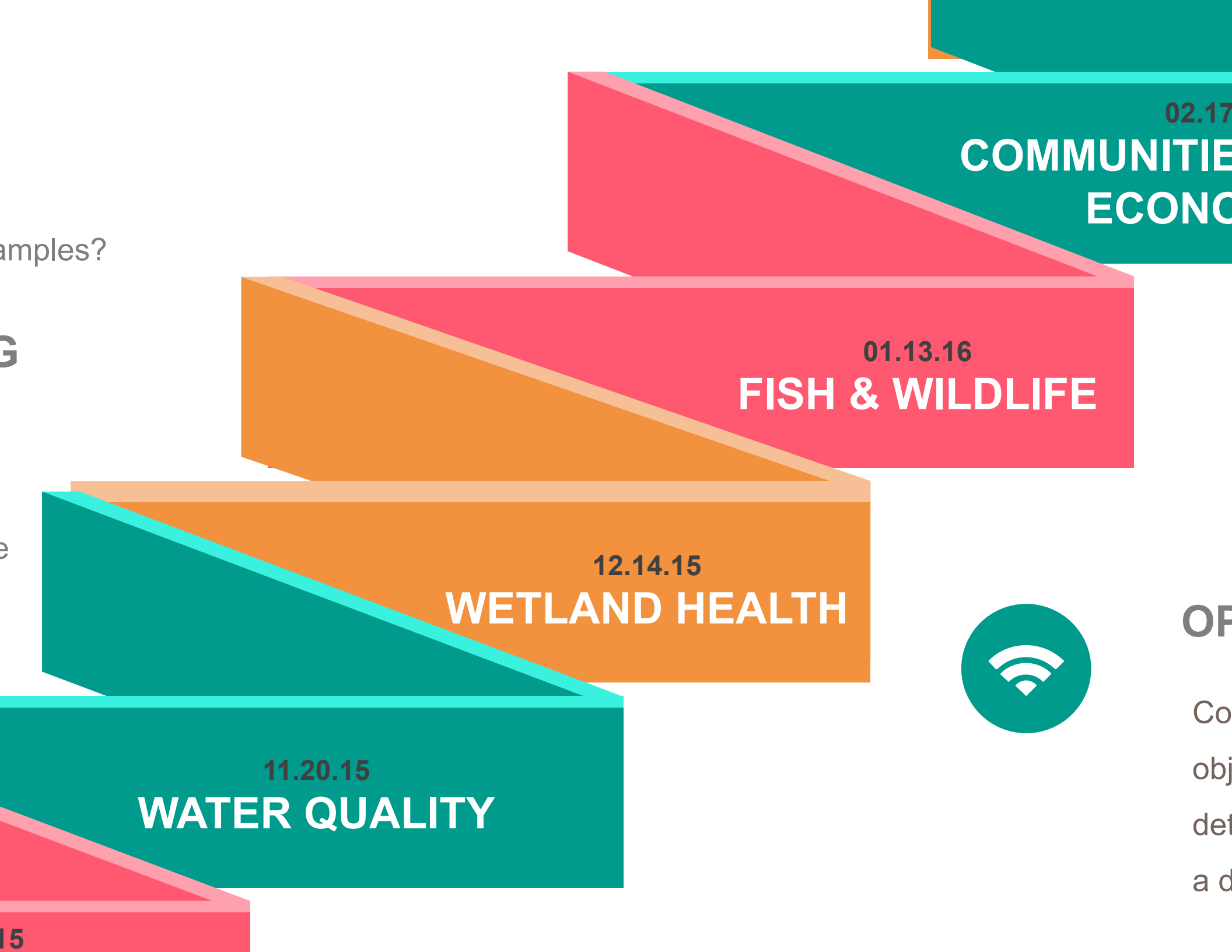
perts, selected
members,
n meetings
their expertise.

MEETINGS

An all-day meeting was held every month for 8 months (from Sept 2015 through April 2016). Each meeting focused on a key topic of importance to operating a sediment diversion.

CASE STU

The Mid-Barata
Sediment Diver
used as a case
it was the first c
begin the engin
design phase. V
that the diversio
to be constructe


02.17
COMMUNITIE
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FISH & WILDLIFE
12.14.15
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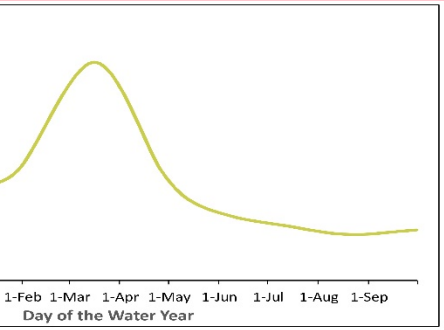
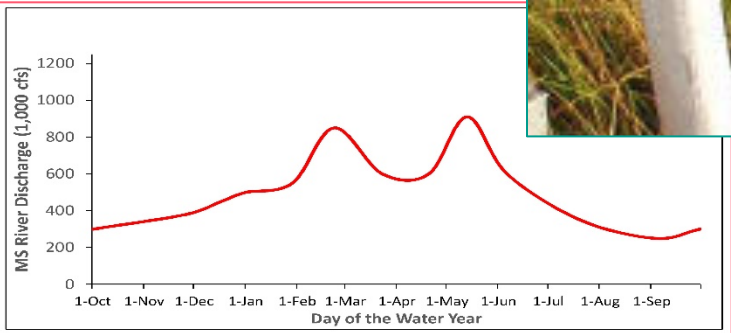
RECOMMENDATION

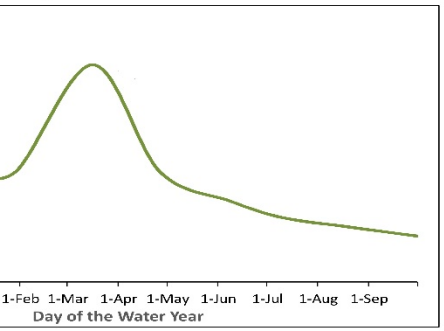
of operating a

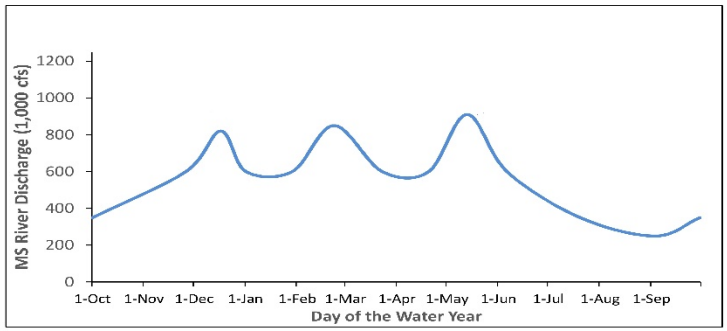
n other primary or
hould be developed.

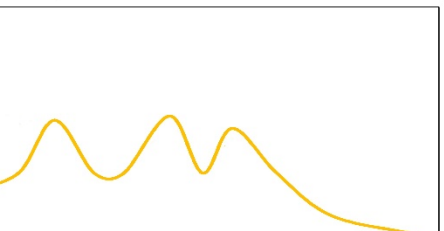
Science should heavily inform

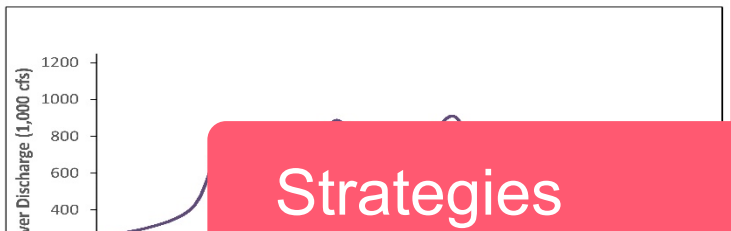

1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
Day of the Water Year


MS River Discharge (1,000 cfs)
1200
1000
800
600
400
200
0
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
Day of the Water Year

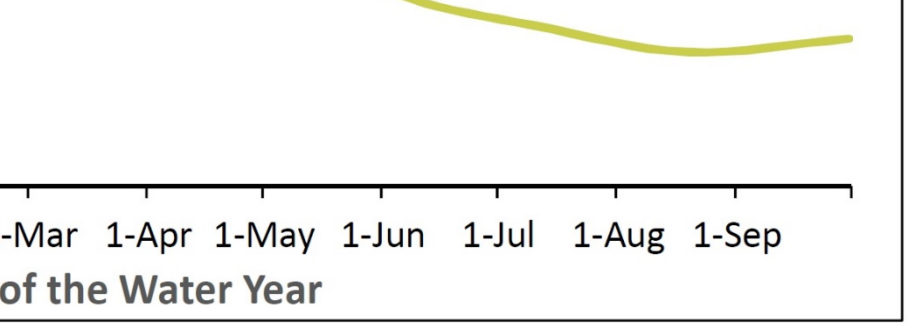

1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
Day of the Water Year

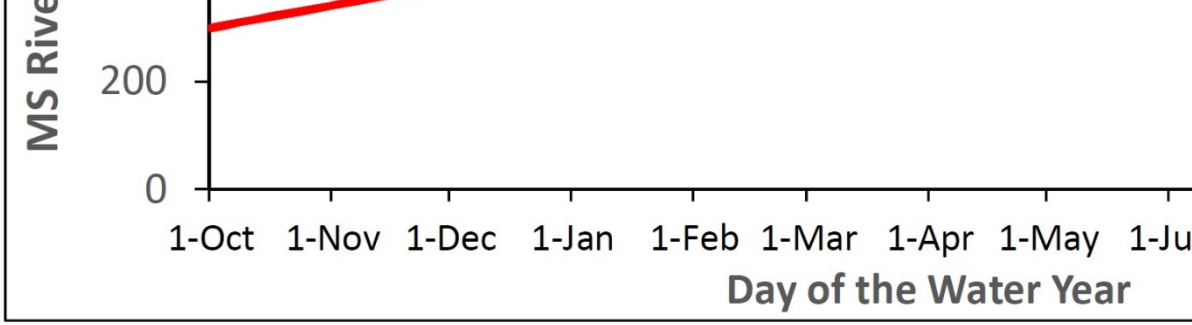

MS River Discharge (1,000 cfs)
1200
1000
800
600
400
200
0
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
Day of the Water Year

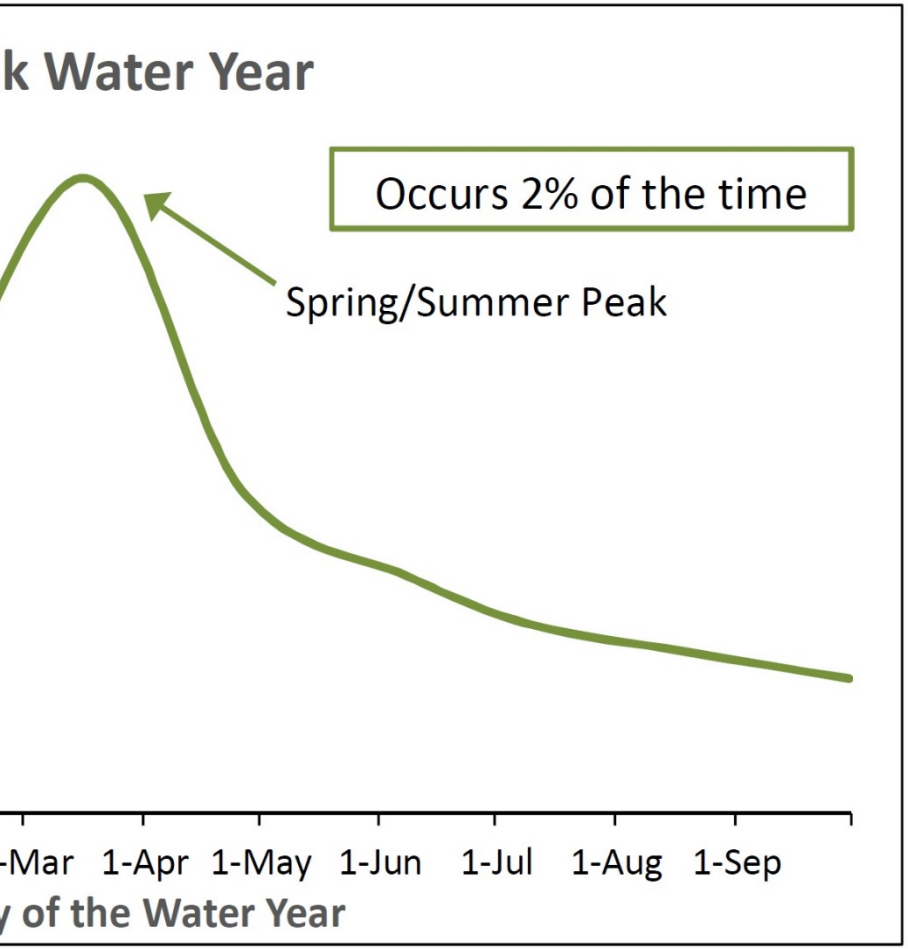


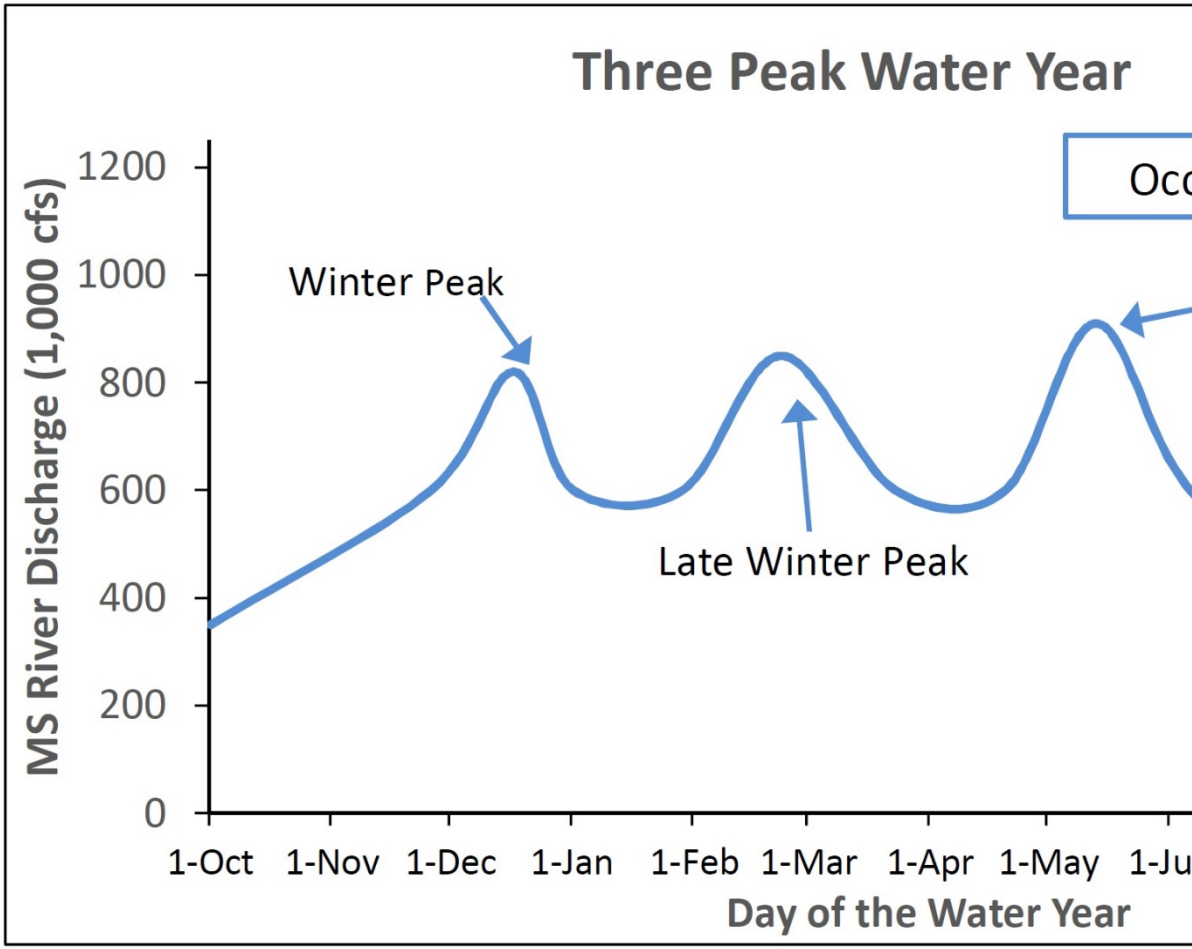

1200
1000
800
600
400

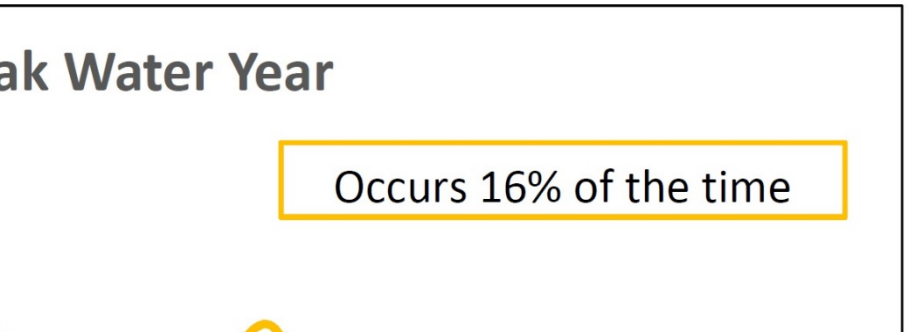
Strategies

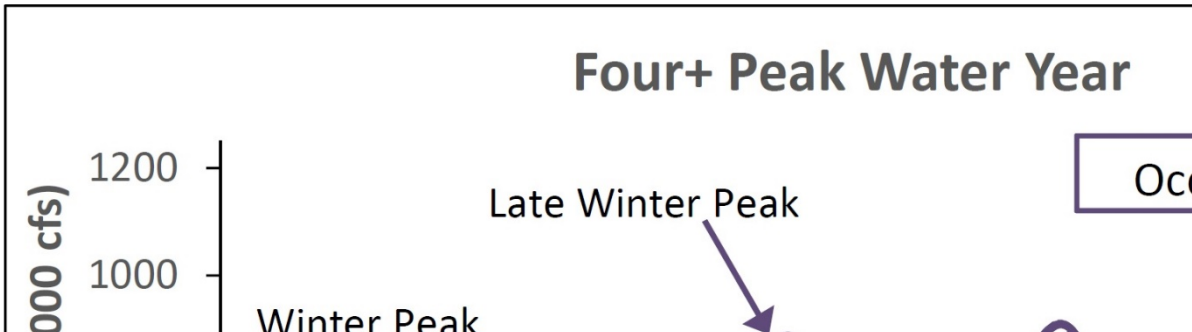

-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
of the Water Year


MS Rive
200
0
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Ju
Day of the Water Year


k Water Year
Occurs 2% of the time
Spring/Summer Peak
-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
y of the Water Year


Three Peak Water Year
Occ
MS River Discharge (1,000 cfs)
1200
1000
800
600
400
200
0
Winter Peak
Late Winter Peak
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Ju
Day of the Water Year


ak Water Year
Occurs 16% of the time


Four+ Peak Water Year
Occ
000 cfs)
1200
1000
Late Winter Peak
Winter Peak

DISTRIBUTARY CHANNEL NETWORK

An estimated 5-10 years is needed to develop a distributary channel network that can move 75,000 cfs through the basin without causing backwater flooding. Operations should ramp up to 75,000 cfs over time to

WATER LEVELS

The diversion channel will be flowing into already fragmented, degraded wetlands. In some of these areas, water levels are already high at certain times. Research is needed on how long it will take water levels to even out

EROSION

The outfall of the diversion consists of weak, highly erodible marshes. The jet plume that enters the basin will cause some scour in the channel and immediate outfall area. Efforts should be made to anticipate this erosion and limit it to areas

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OVER 600,000 CFS

41%

2+ WINTER PEAKS

3+

TER PEAK

BETWEEN 500,000 AND 600,000 CFS

79%

2+ WINTER PEAKS

3+

TER PEAK

LENGTH OF PEAKS

Denitrification

Operations during spring and summer
require a more intricate and balance o

Provide adequate dry period for
especially at the start of growing

Optimize denitrification – rates a
and concentrations in the river a

Minimize negative net effects on
Include predictions of effect, res
mitigation options and communi
(or actual effects) to the public.

Alligators, once estab
and can be impacted

Blue crab spawn in M

erating on the rising limb would result in:

56%

he water diverted

72%

of the sediment diverte

compared to operating on both the rising and falling limbs o

flood p

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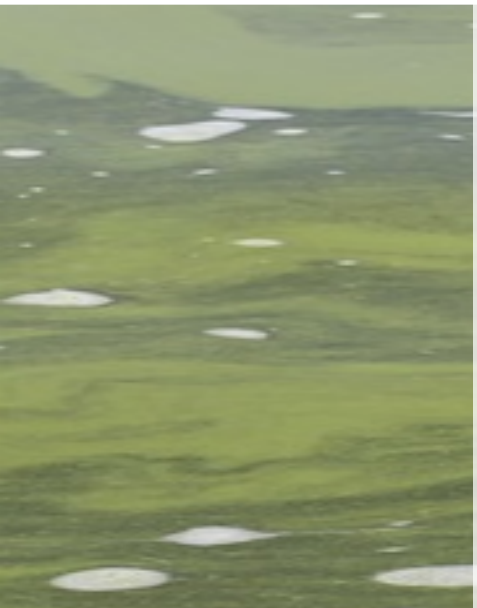
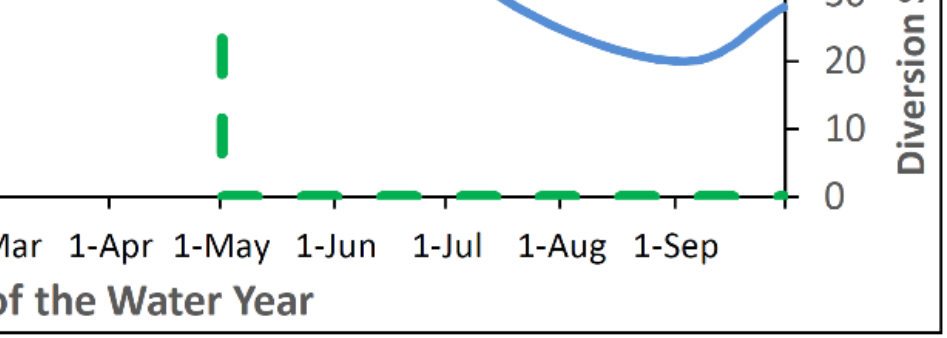
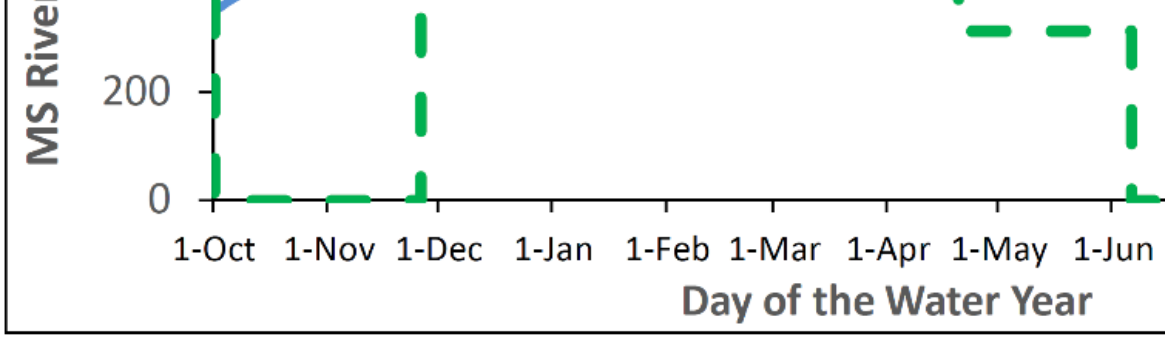
IN BARATARIA BASIN

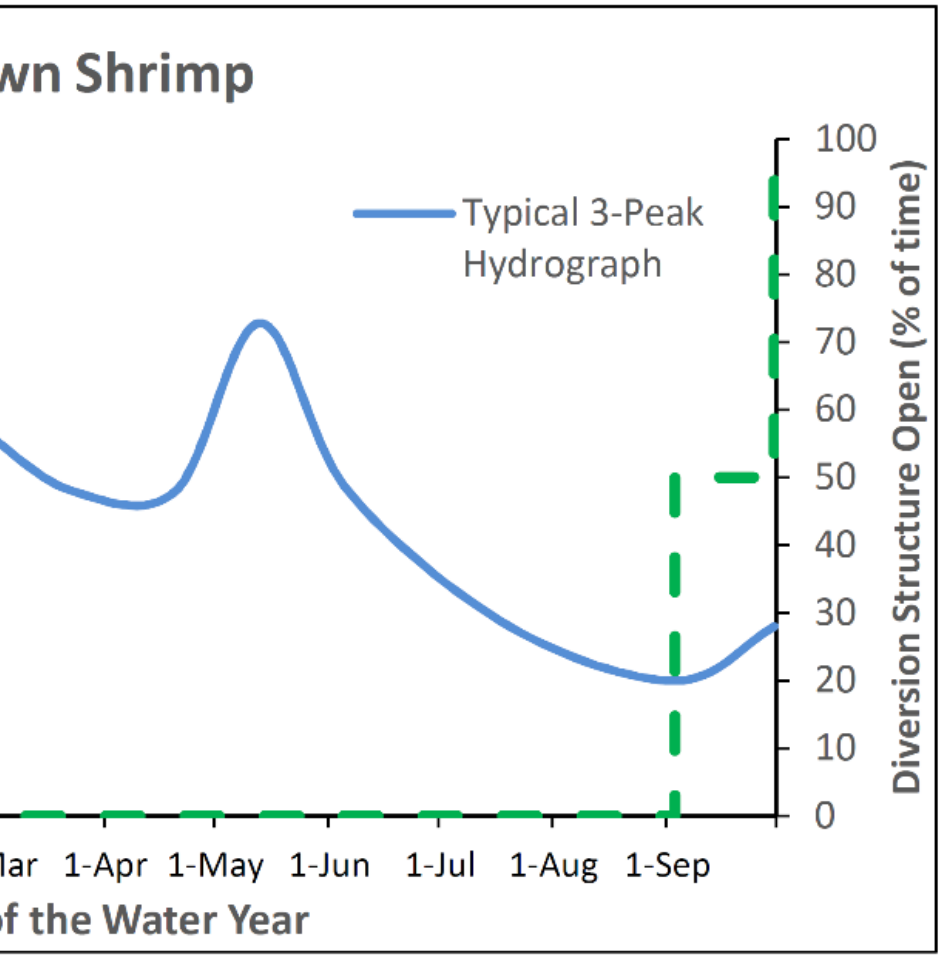


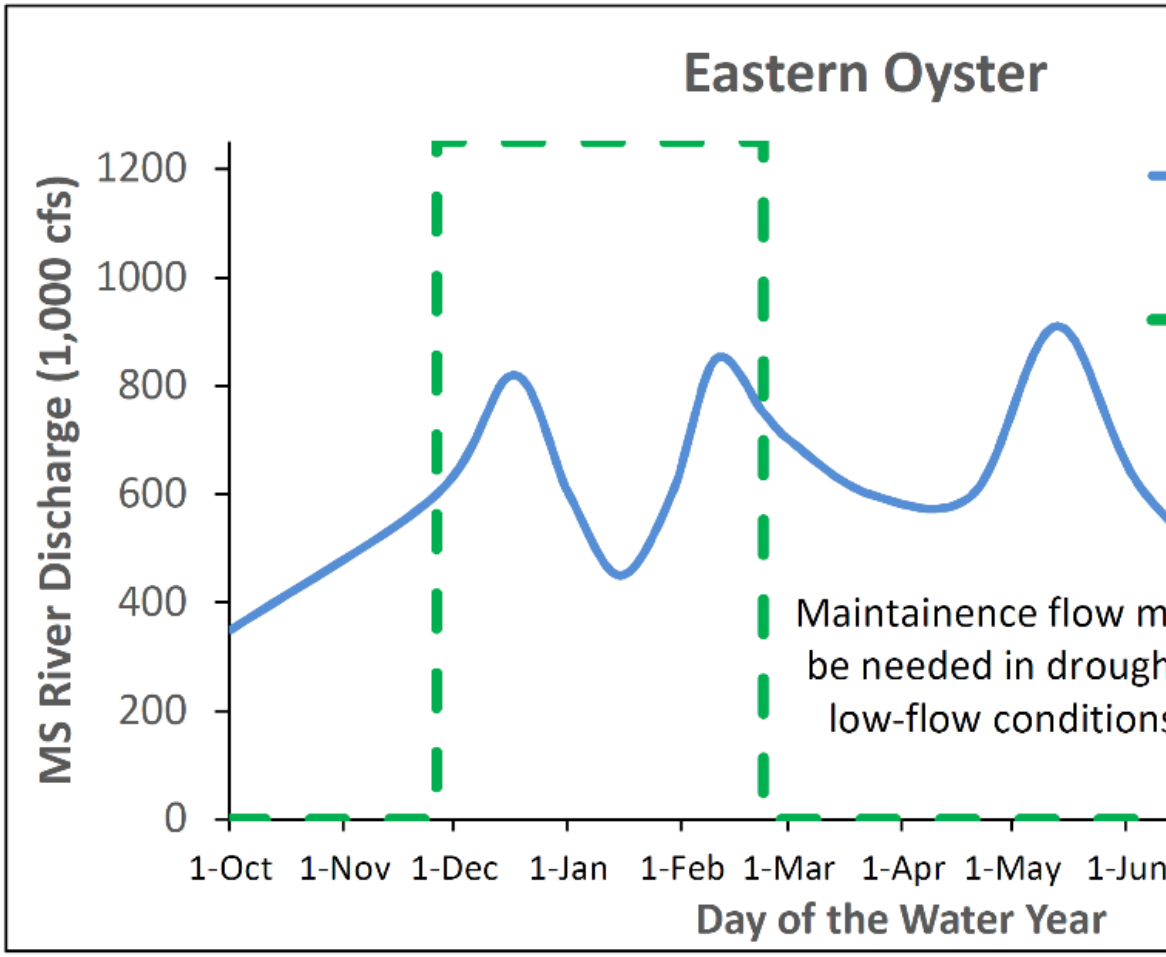
Water Quality

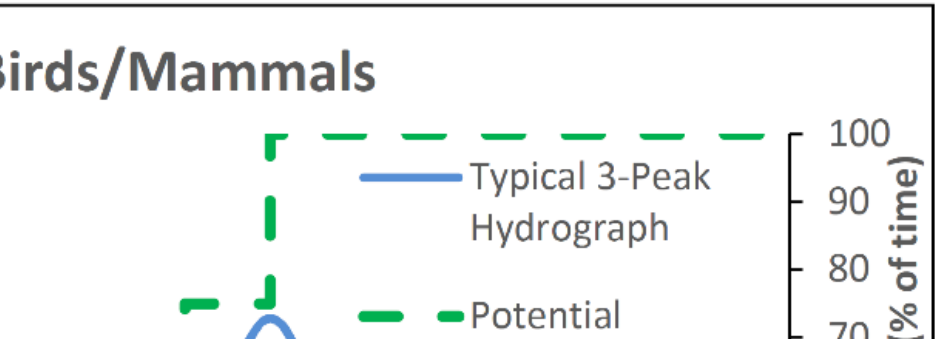
Salinity, temperature, nutrients and suspended sediment are all key variables to a healthy ecosystem. How quickly water is moving

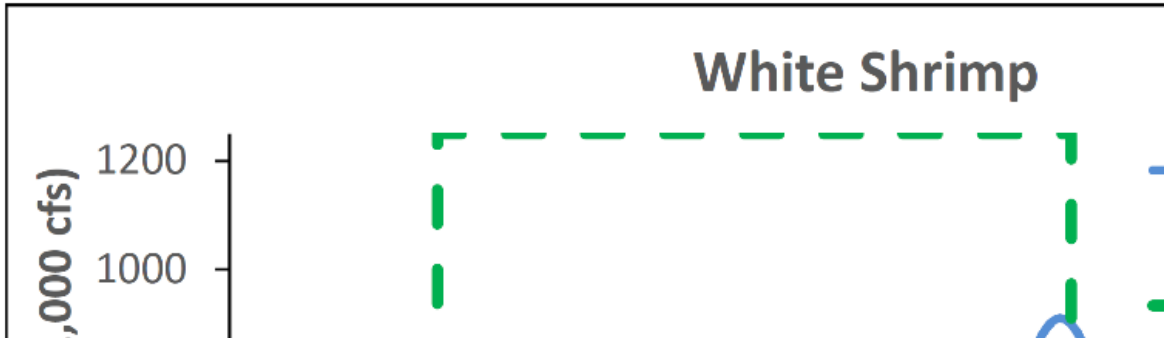

20
10
0
Diversion
Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
of the Water Year

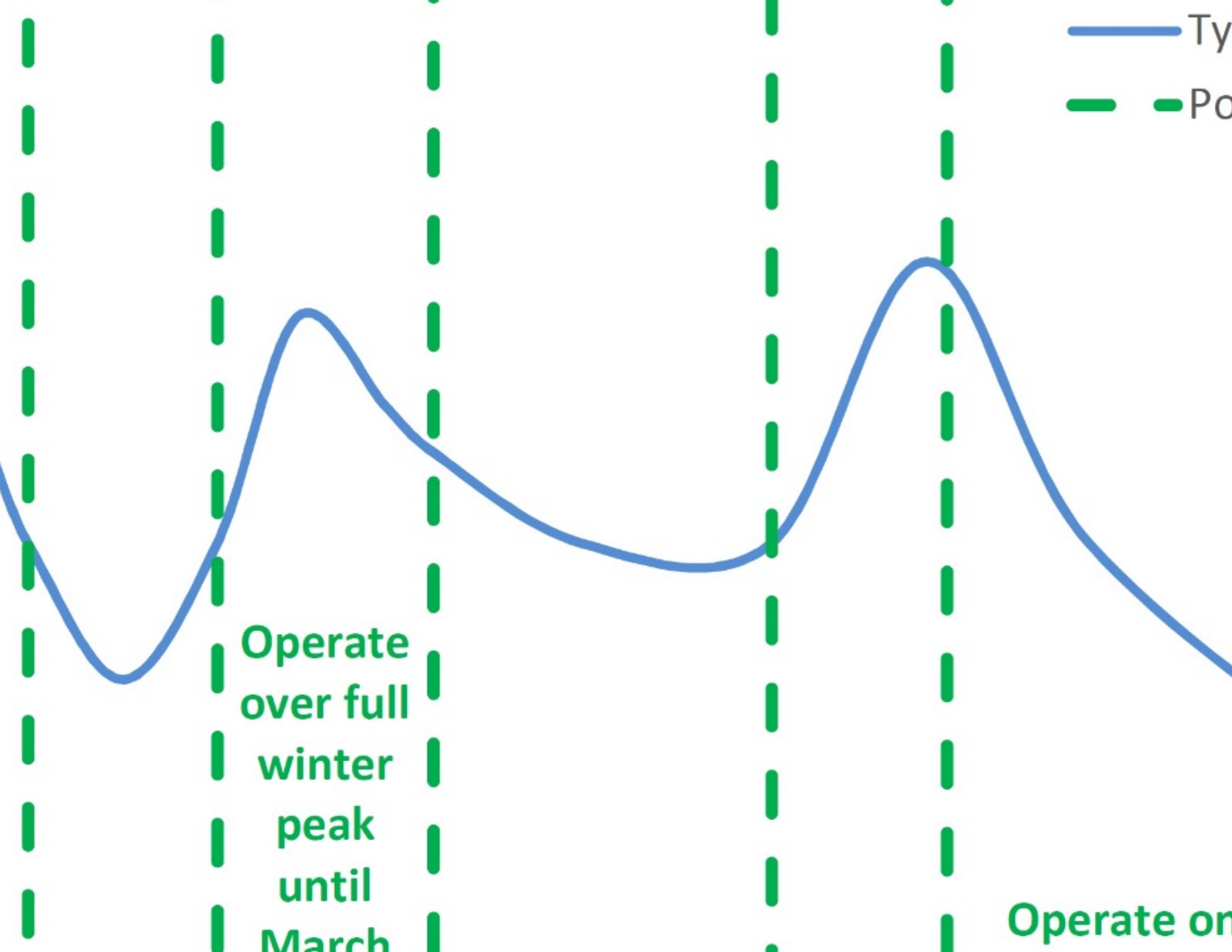

MS River
200
0
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun
Day of the Water Year

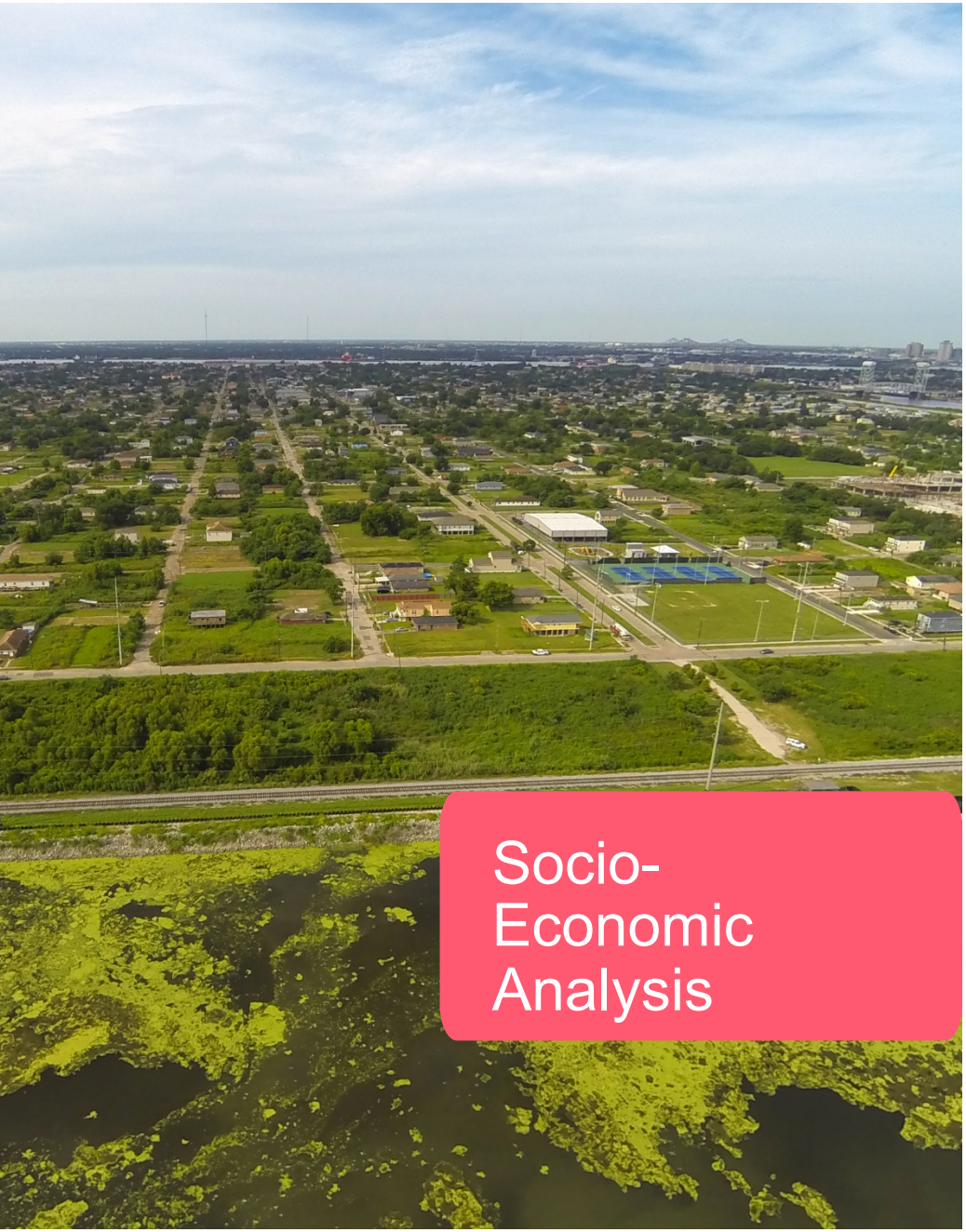

wn Shrimp
Typical 3-Peak Hydrograph
100
90
80
70
60
50
40
30
20
10
0
Diversion Structure Open (% of time)
Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep
of the Water Year


Eastern Oyster
MS River Discharge (1,000 cfs)
1200
1000
800
600
400
200
0
Maintainence flow m
be needed in drough
low-flow conditions
1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun
Day of the Water Year


Birds/Mammals
Typical 3-Peak Hydrograph
Potential
100
90
80
70
(% of time)


White Shrimp
1200
1000
,000 cfs)


Ty
Po
Operate over full winter peak until March
Operate on



Accelerate Studies

Dialogue with Affected Partie

FISH & WILDLIFE SPECIES

HYDROLOGY & GEOLOGY


ississippiriverdelta.org/diversio