

Pallid Sturgeon Annual Reports

UNL Habitat and Spawning Research

SIU Genetic Research



Malinda Henry, PRRIP EDO

Technical Advisory Committee Meeting, January 16, 2024

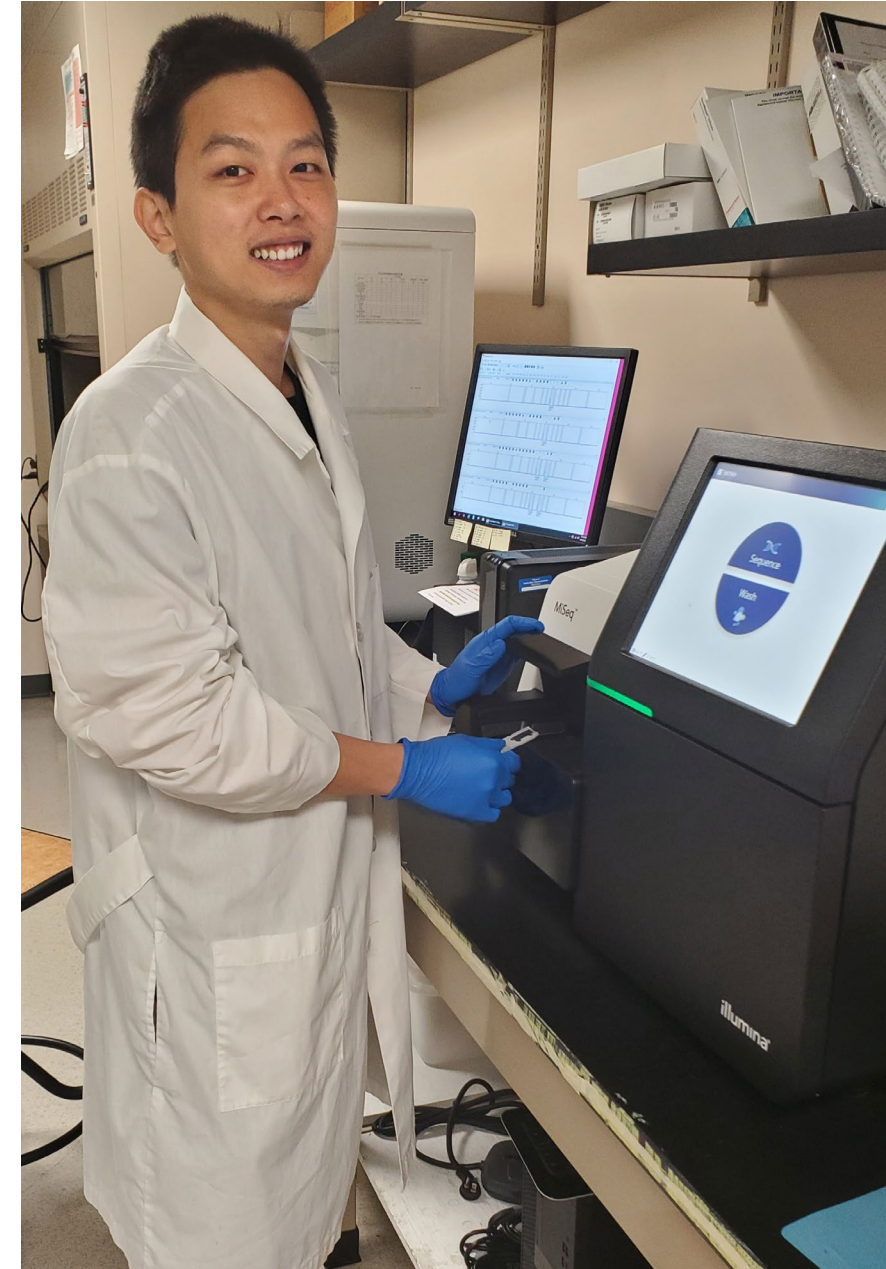


PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

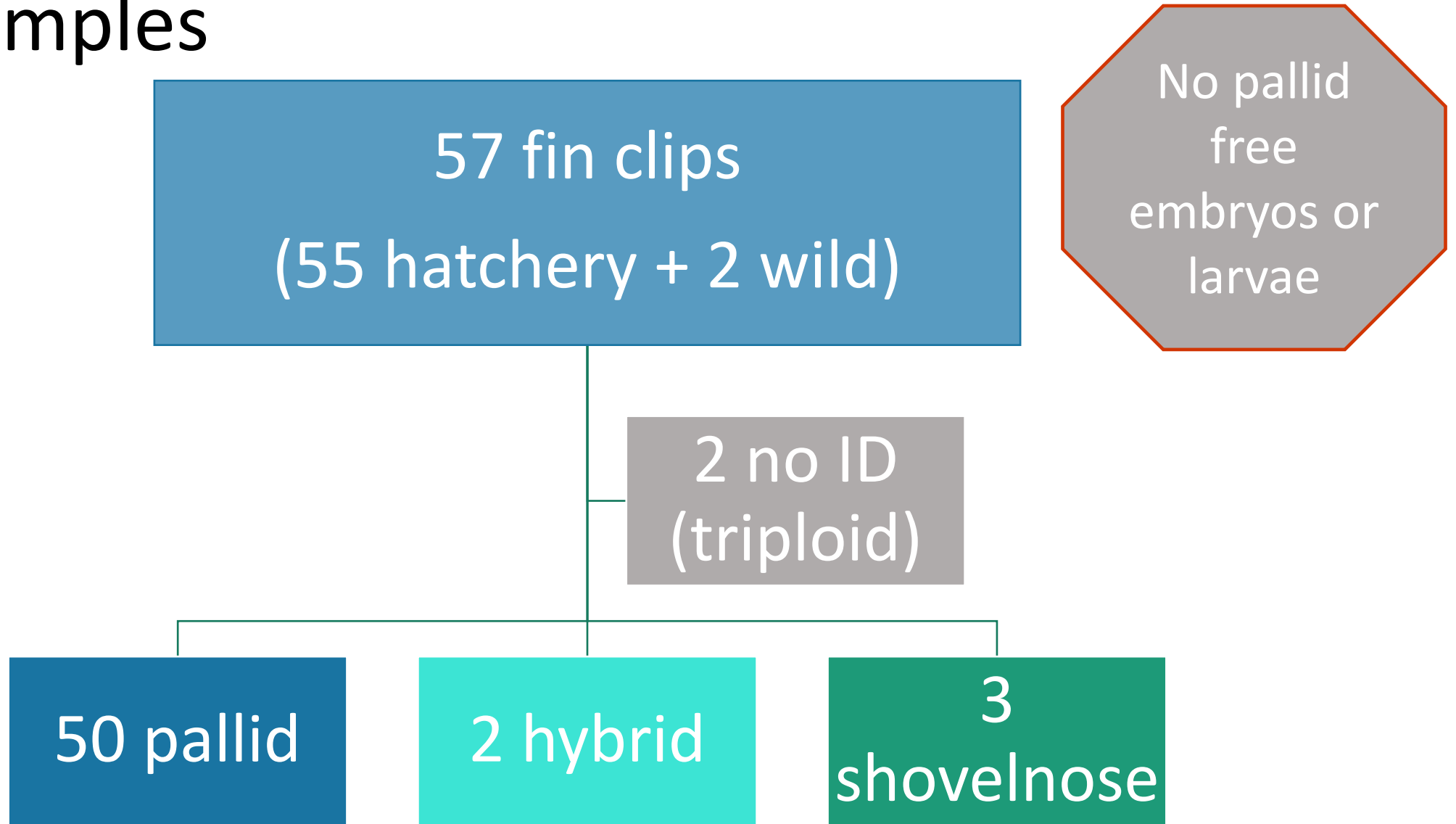
SIU Genetics Research

Objectives

1. Refine species ID and identify hybrids



Platte samples



EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?

Objectives

2. Population structure

GPMU ≠ (CLMU = IHMU)

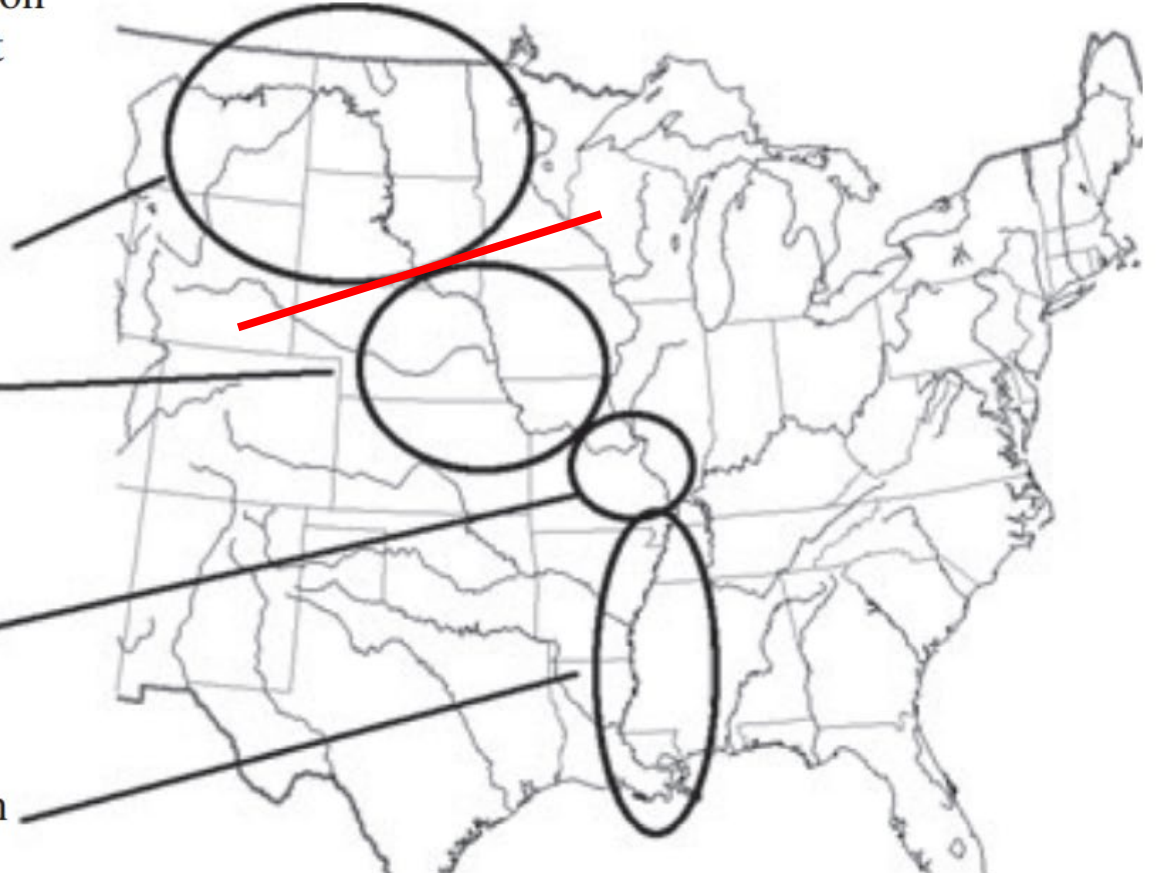
Pallid sturgeon
management
units

Great Plains
 $n = 139$

Central
Lowlands
 $n = 193$

Interior
Highlands
 $n = 315$

Coastal Plain
 $n = 124$



Schrey, Boley, Heist. 2011. J. Fish Biology 79(7):1828-50

SIU Genetics Research

Objectives

1. Refine species ID and identify hybrids - Completed
2. Population structure – June 2024
3. Population composition (pallid, shovelnose, hybrid spawned) – June 2025
4. Effective population size – Dec 2025

UNL Habitat and Spawning Research

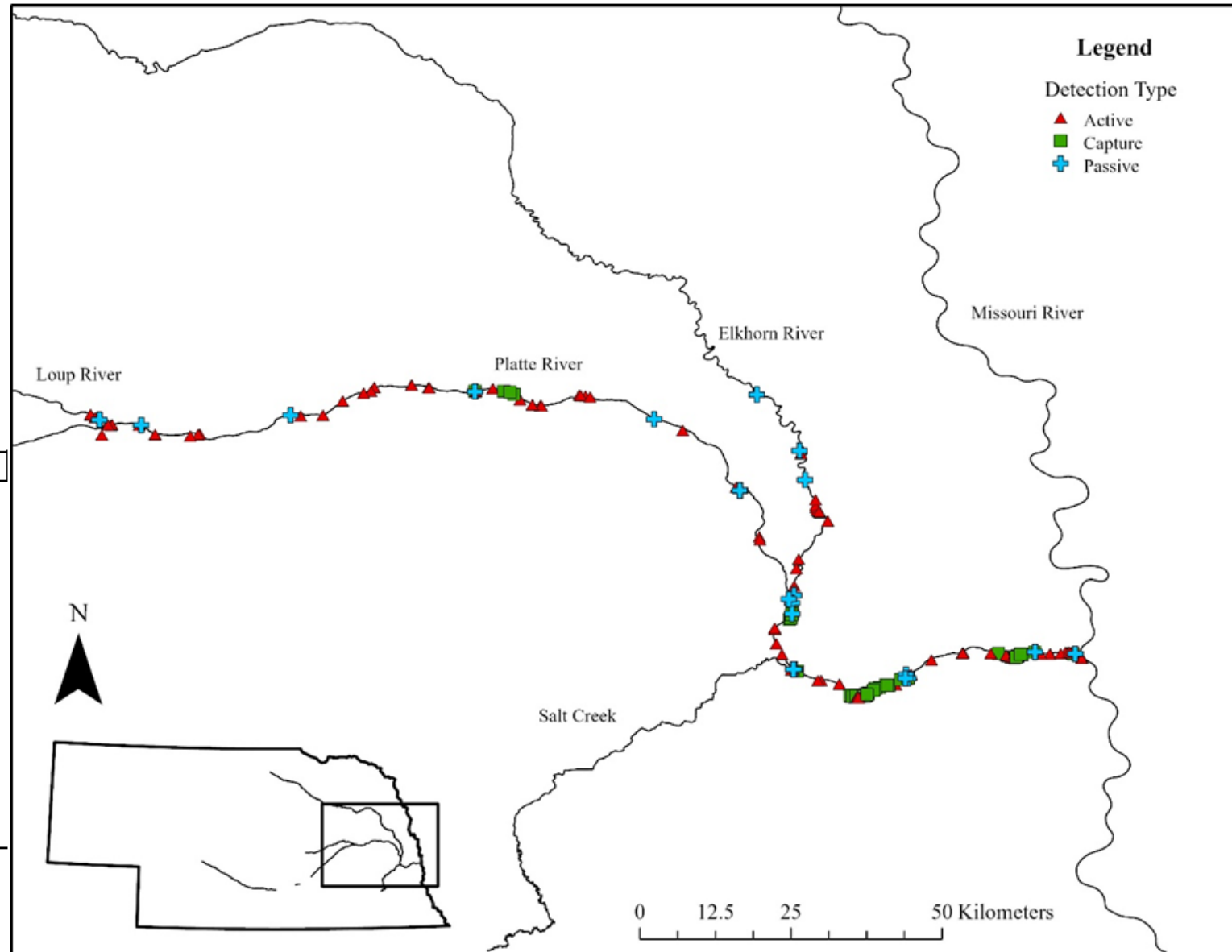
Objectives

- 1. Identify relations among environmental conditions with the timing and extent of Pallid Sturgeon movement into and within the LPR**
2. Identify Pallid Sturgeon spawning habitat in LPR
3. Verify successful spawning in LPR
4. Collect Pallid Sturgeon genetic samples for further population and hybridization assessment

EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?

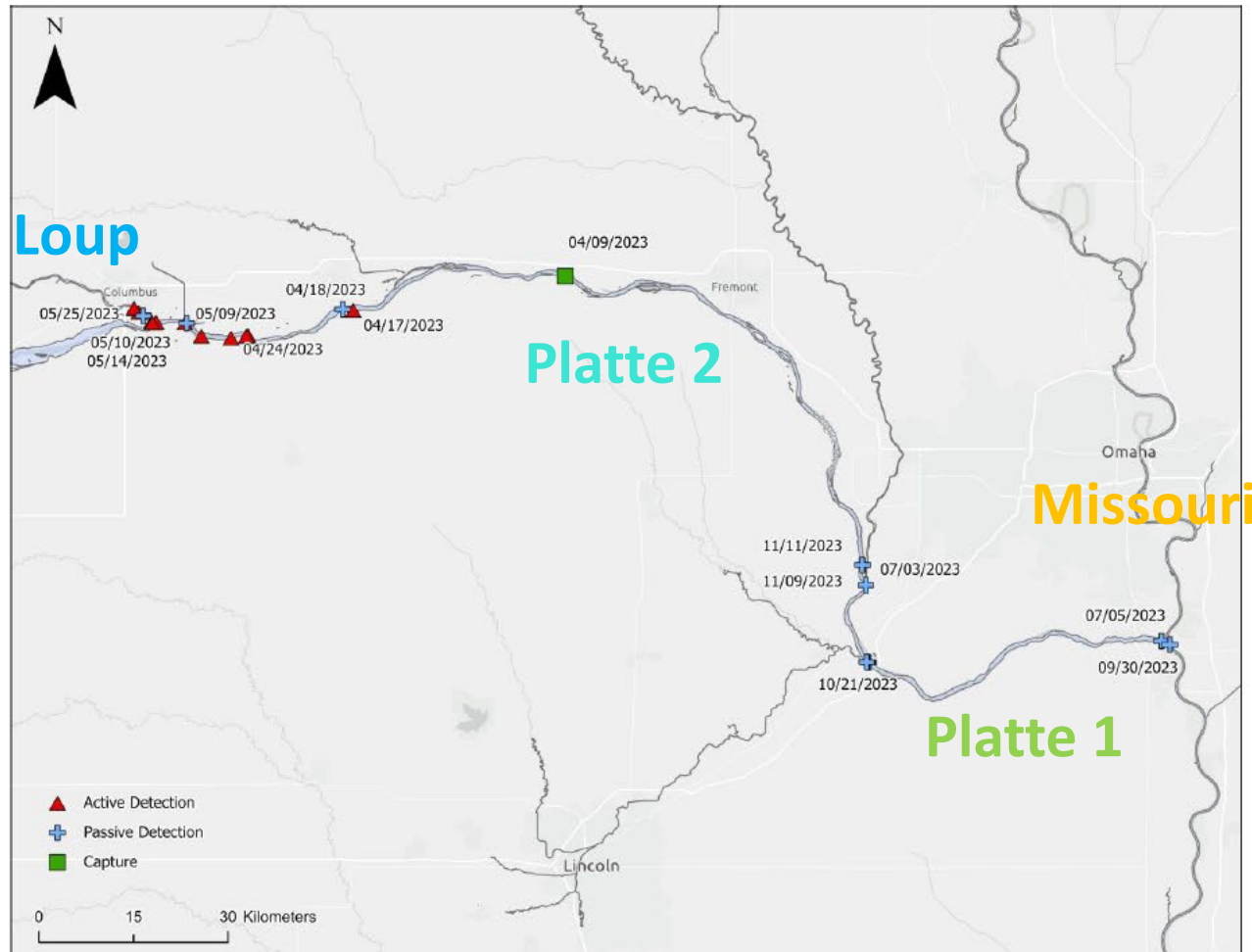
- 94 Pallid Sturgeon
- Extent of movements
 - 164 km of the lower Platte River
 - 5 km of the Loup River
 - 50+ km of the Elkhorn River

River Segment	Year	Transmitters
Platte Segment 1 (Plattsmouth – Elkhorn Confluence)	2022	49
	2023	66
Platte Segment 2 (Elkhorn Confluence – Loup Confluence)	2022	9
	2023	15
Elkhorn	2022	10
	2023	15
Loup	2022	0
	2023	2

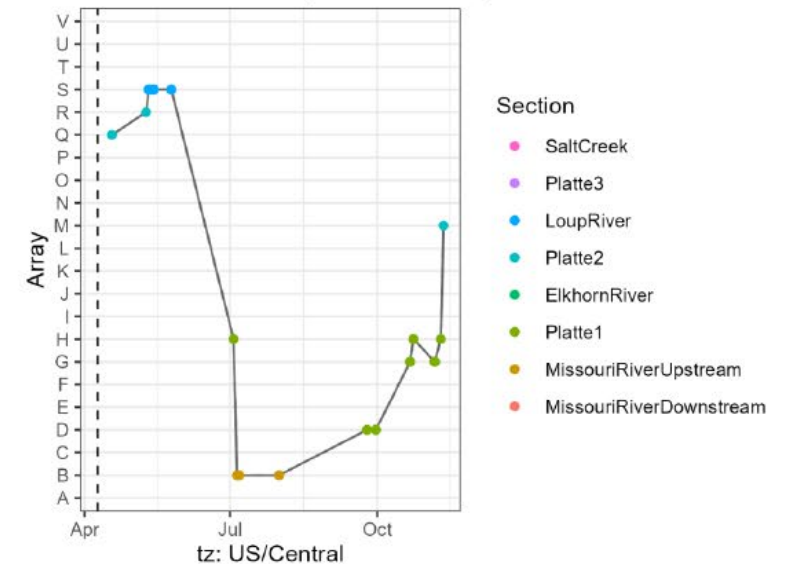


EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?

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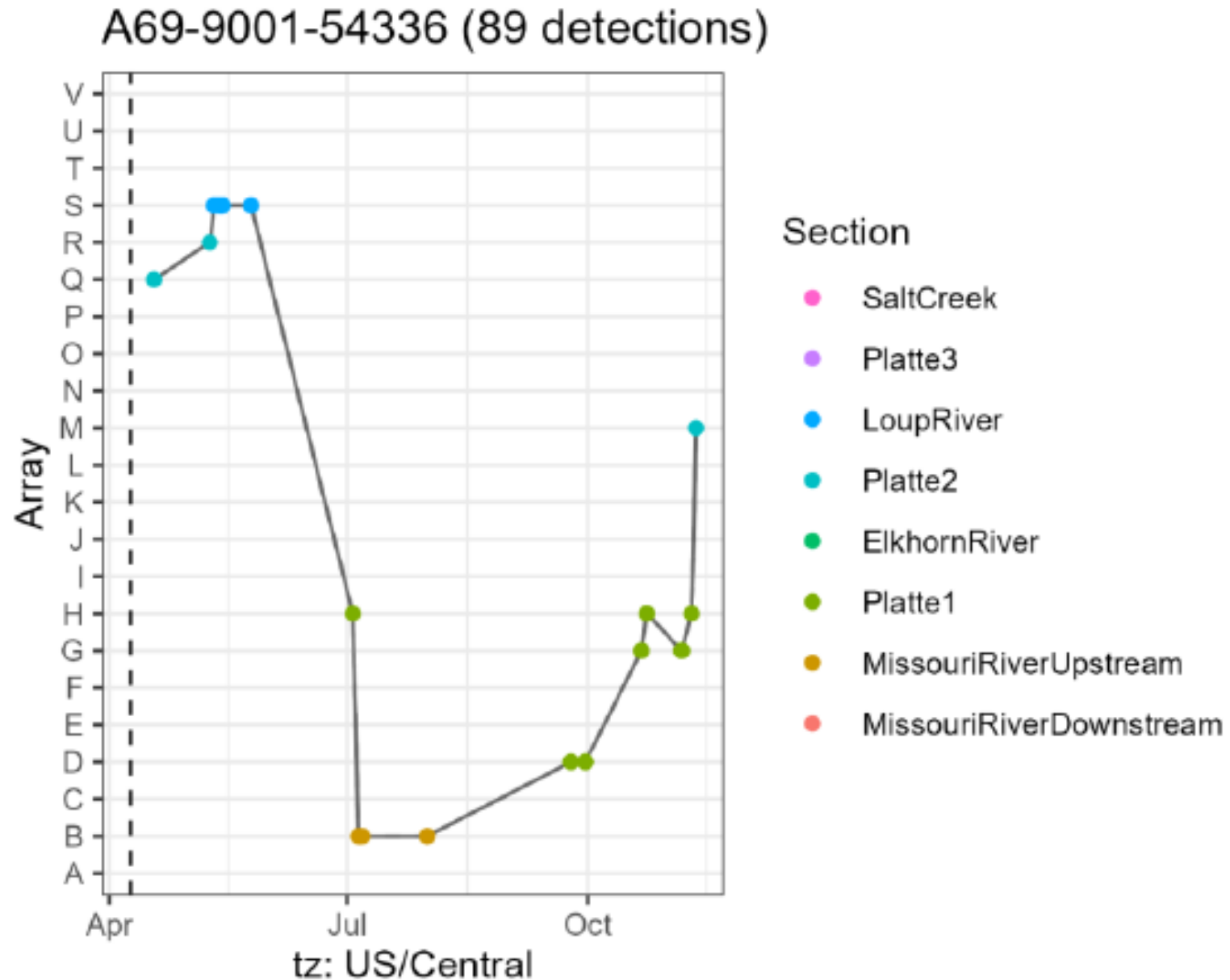


A69-9001-54336 (89 detections)



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?



EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?

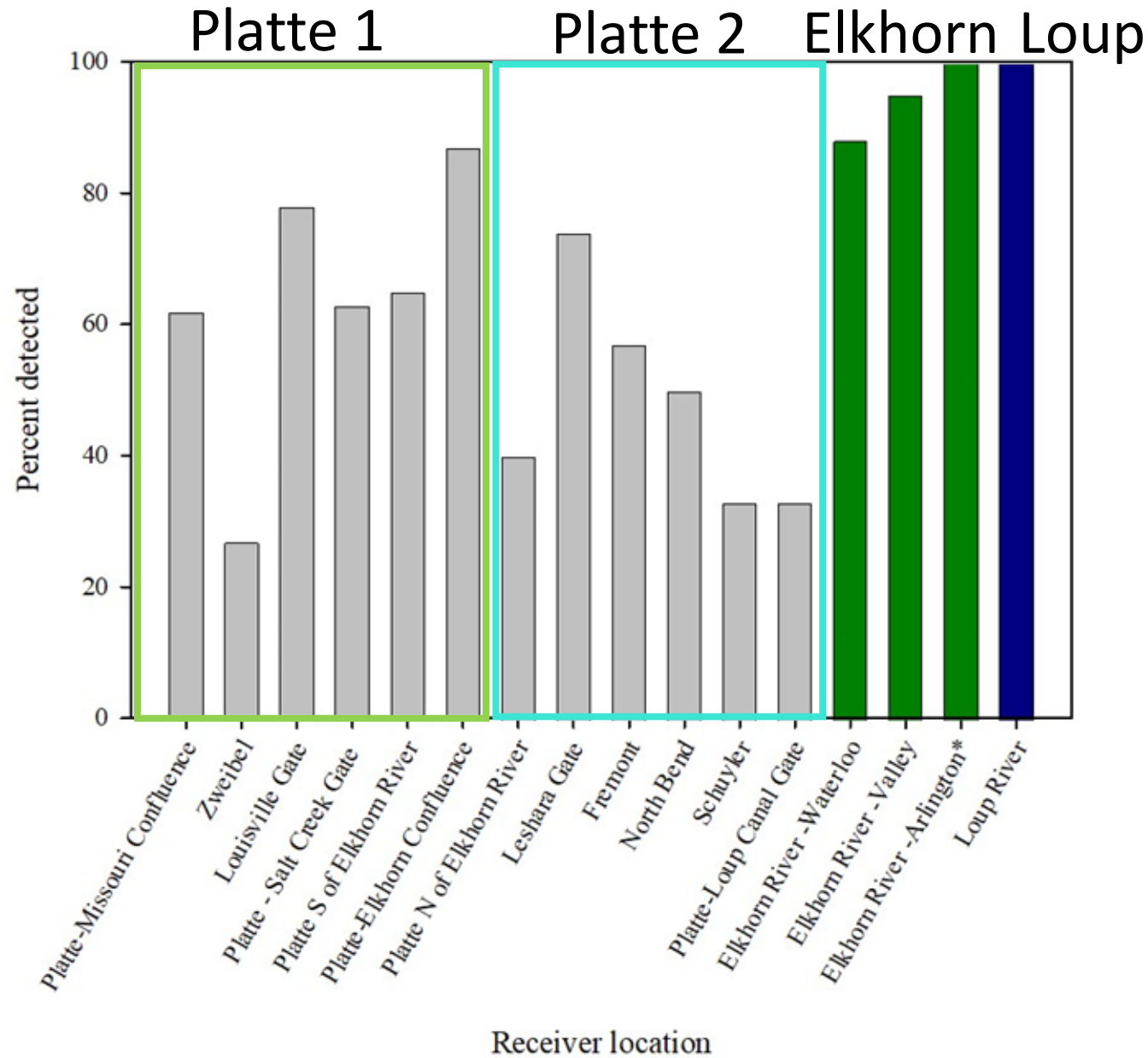
Expectations

1. Identify relations among environmental conditions with the timing and extent of Pallid Sturgeon movement into and within the LPR

River Segment	Year	Transmitters
Platte Segment 1		
(Plattsmouth –	2022	49
Elkhorn Confluence)	2023	66
Platte Segment 2		
(Elkhorn Confluence –	2022	9
Loup Confluence)	2023	15
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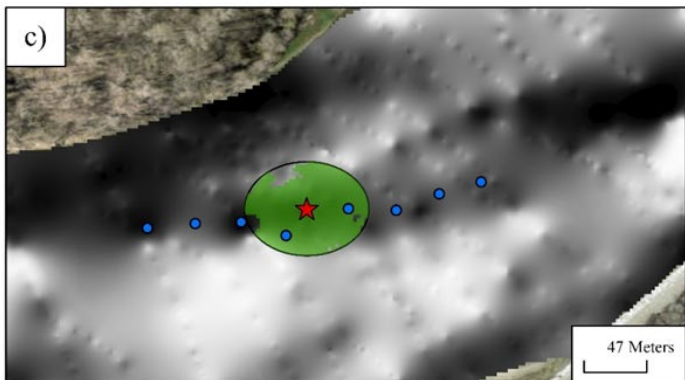
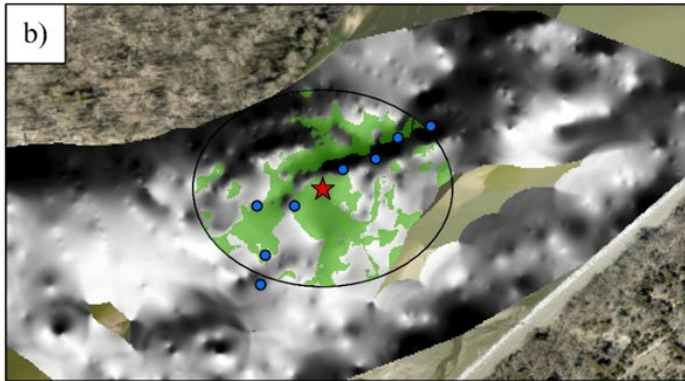
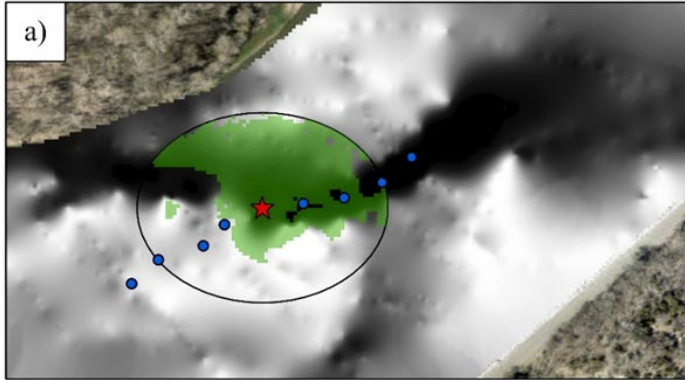


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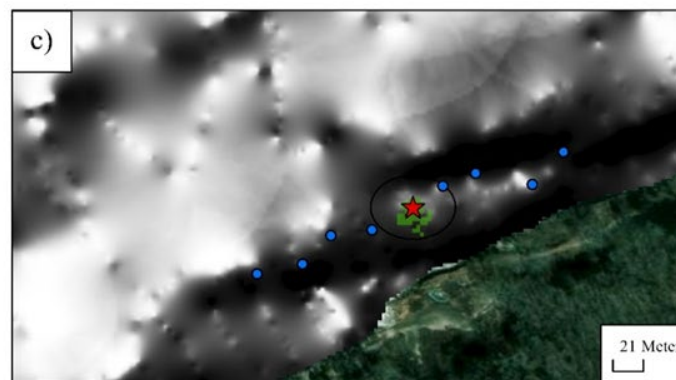
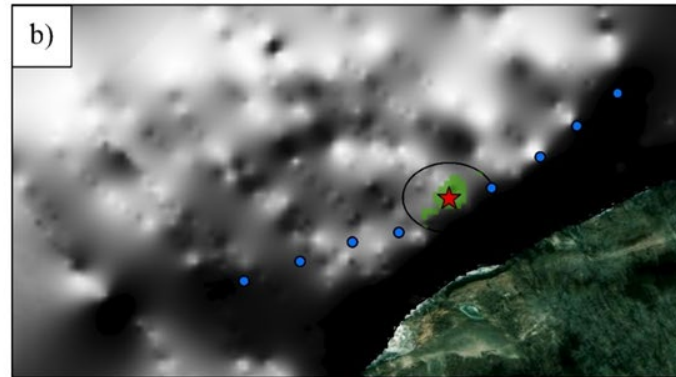
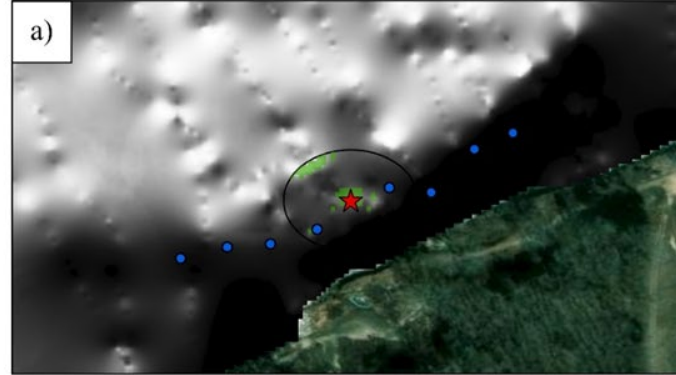


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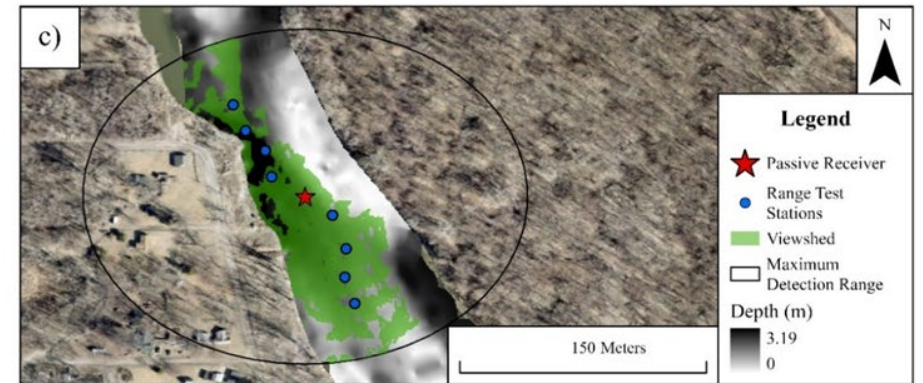
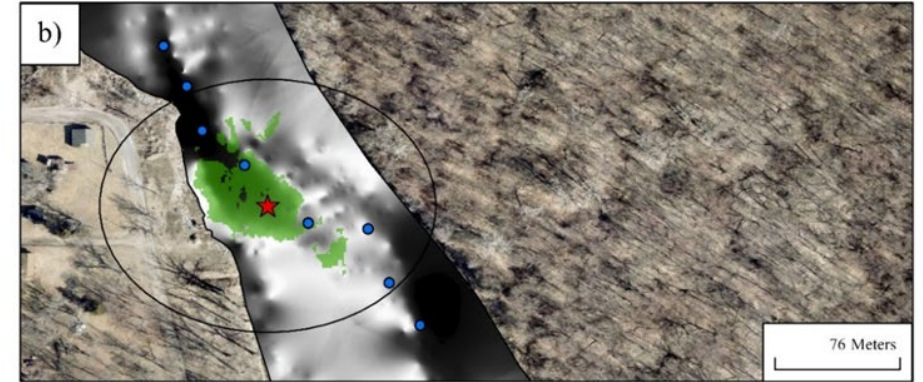
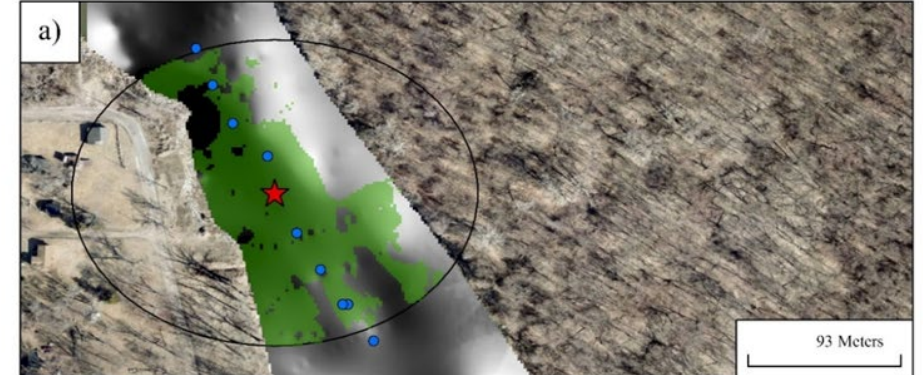
Louisville



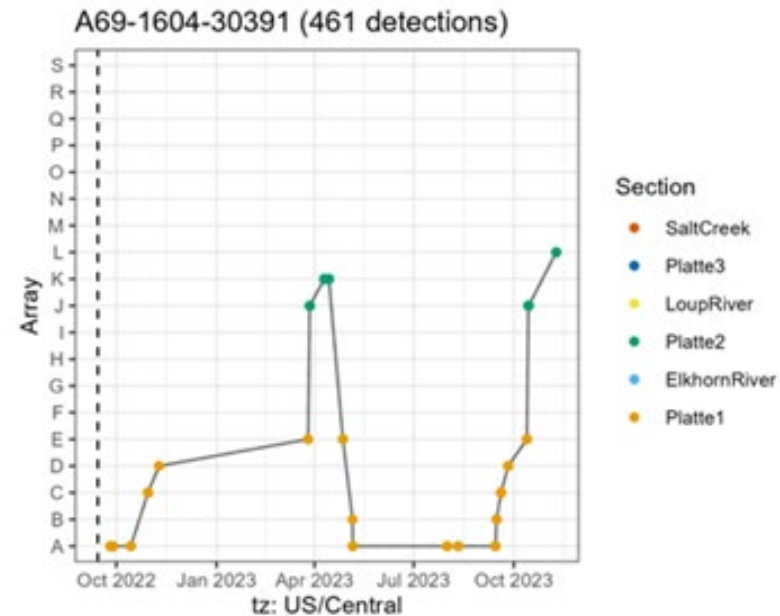
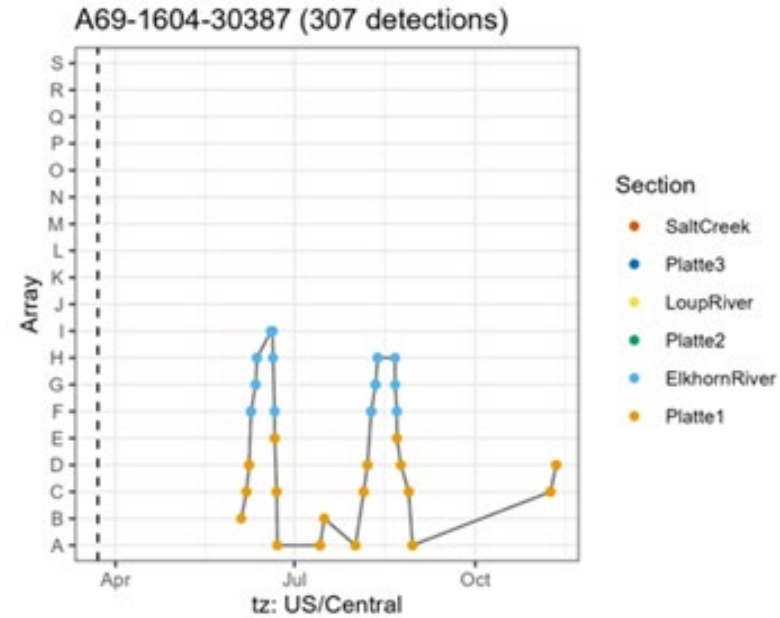
North Bend



Waterloo

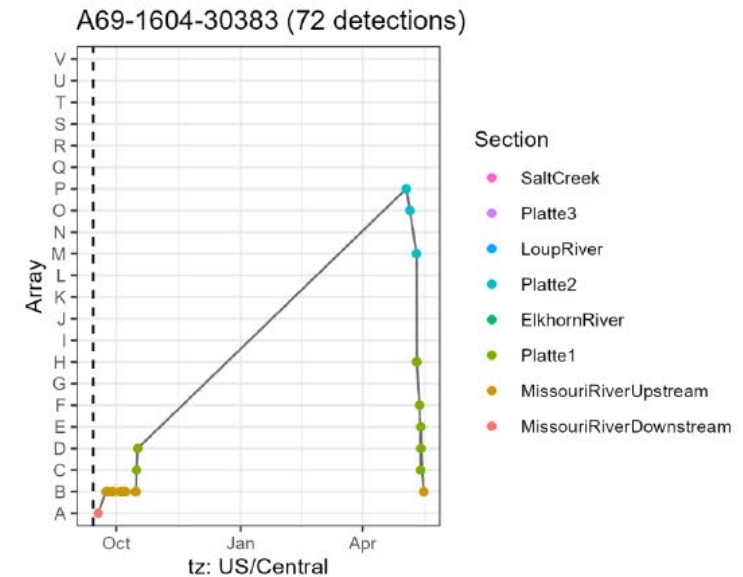
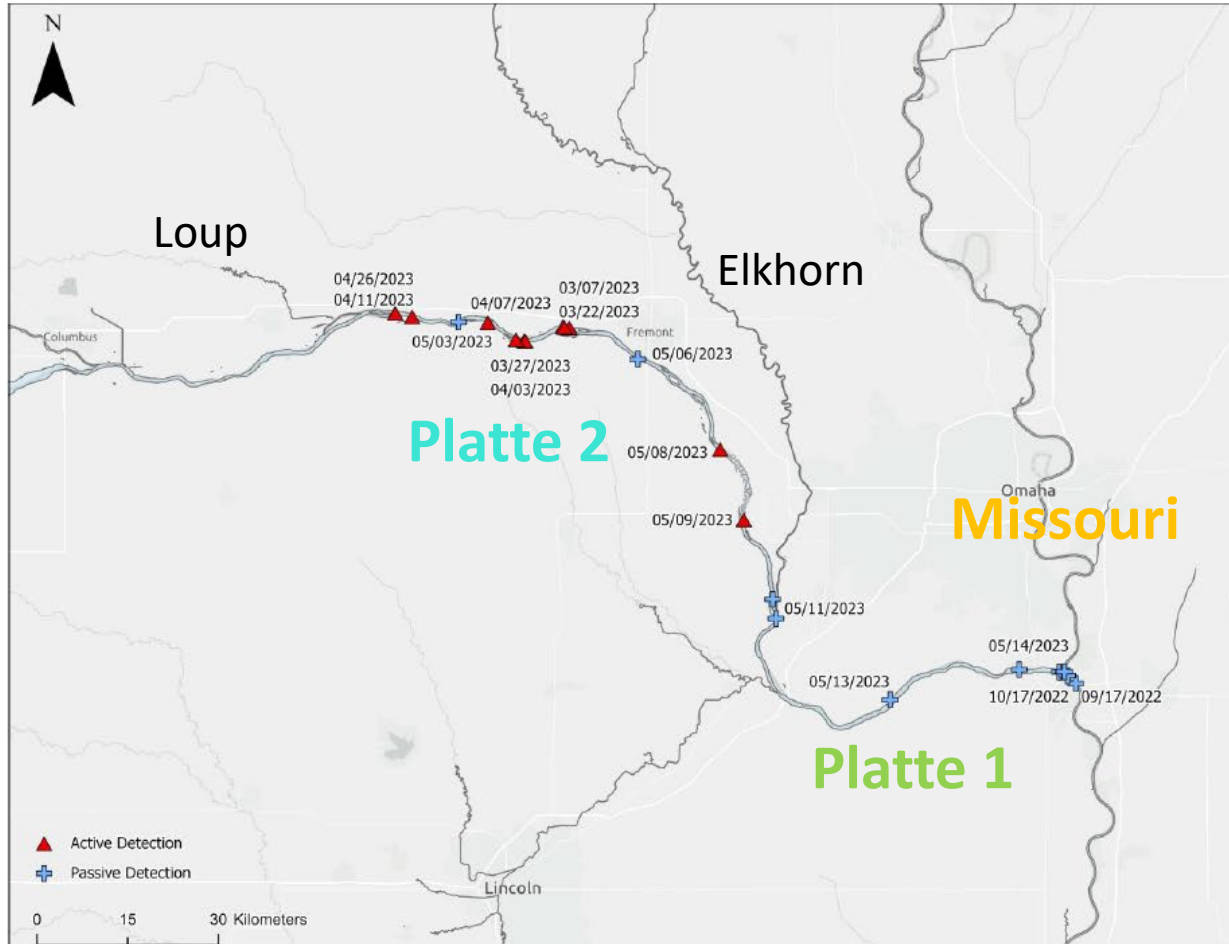


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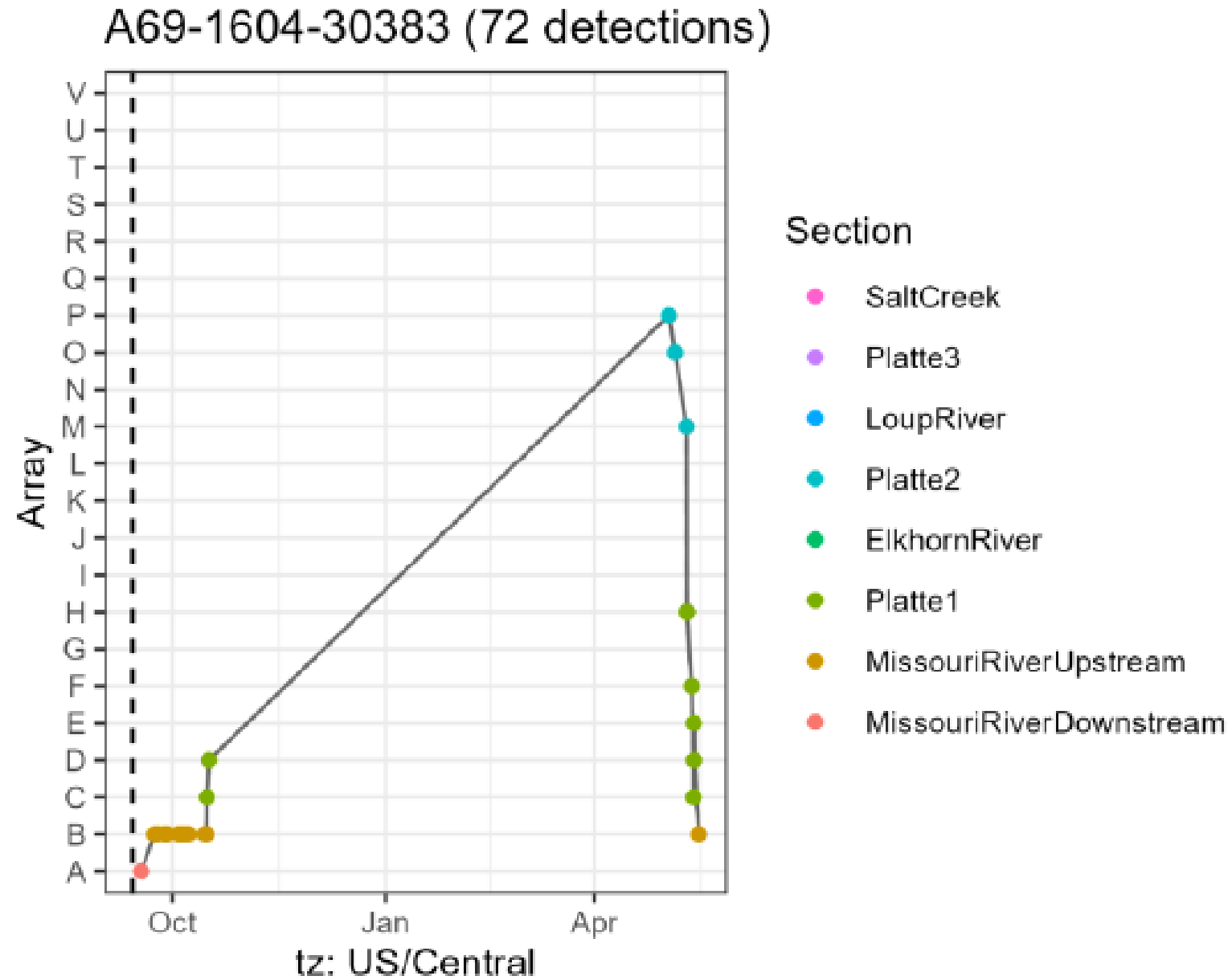


EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?

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EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?



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Expectations

2. Identify Pallid Sturgeon spawning habitat in LPR
3. Verify successful spawning in LPR



EBQ #7: Effects of flow management to benefit WC, PP, LT in CPR on PS in LPR?

Changes to Consider

1. Fortify receiver system
2. Narrow our scope to the Platte/Missouri confluence
3. Stop larval trawling
4. Others?

