

Whooping Cranes, 70,000 Tons of Sand, and The Platte River

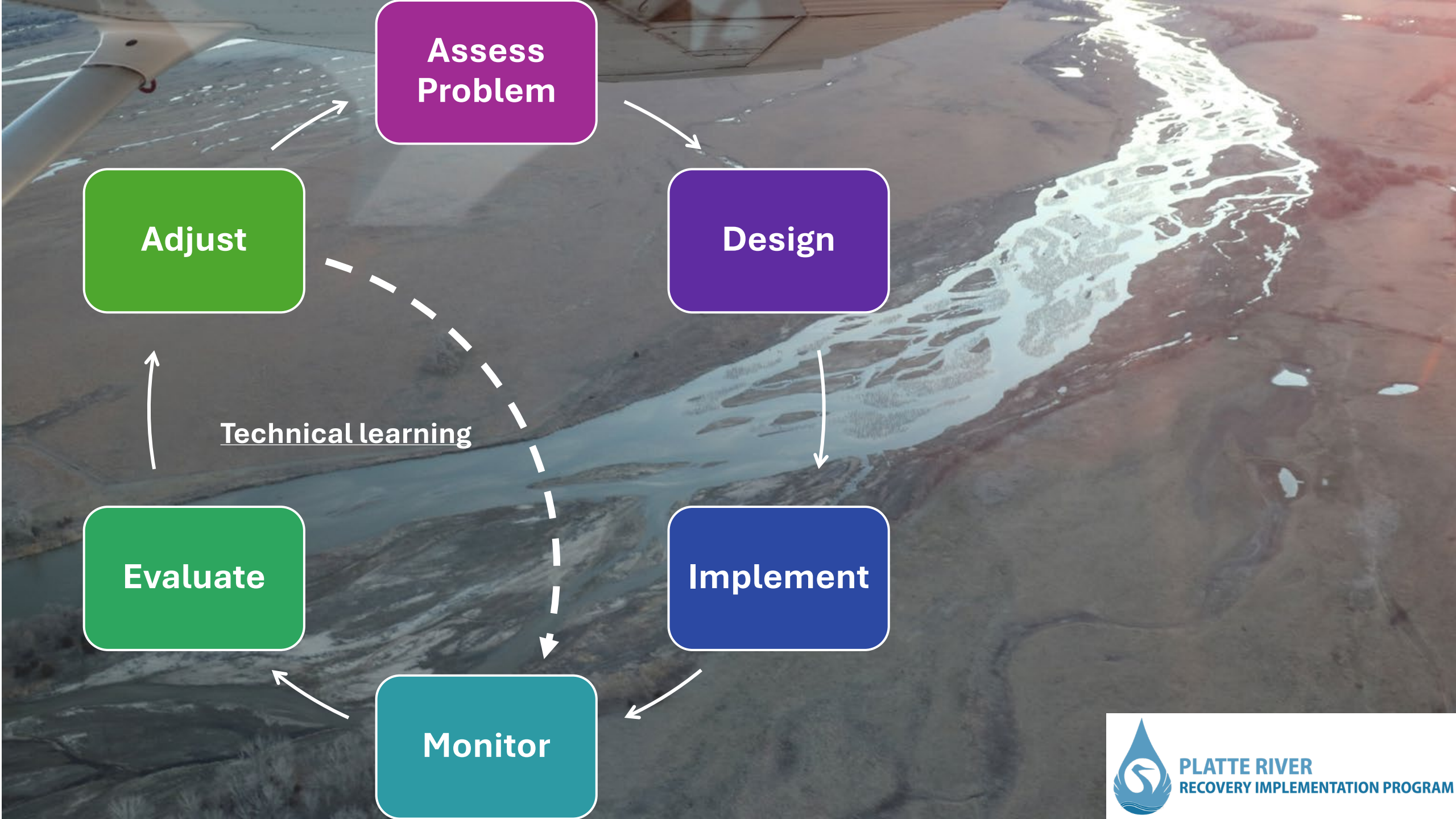
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Headwaters Corporation



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM





Assess Problem

Adjust

Design

Evaluate

Implement

Monitor

Technical learning



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

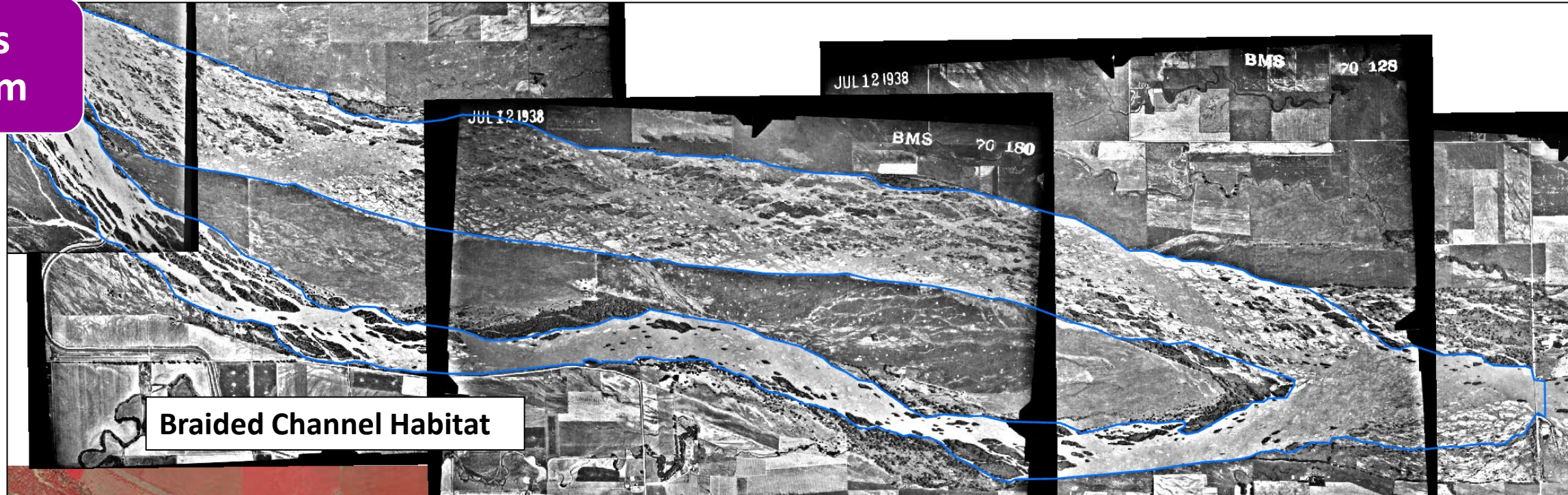
**Assess
Problem**



**Whooping Cranes Prefer Wide Shallow
Channels for Roosting**

**Assess
Problem**

1938

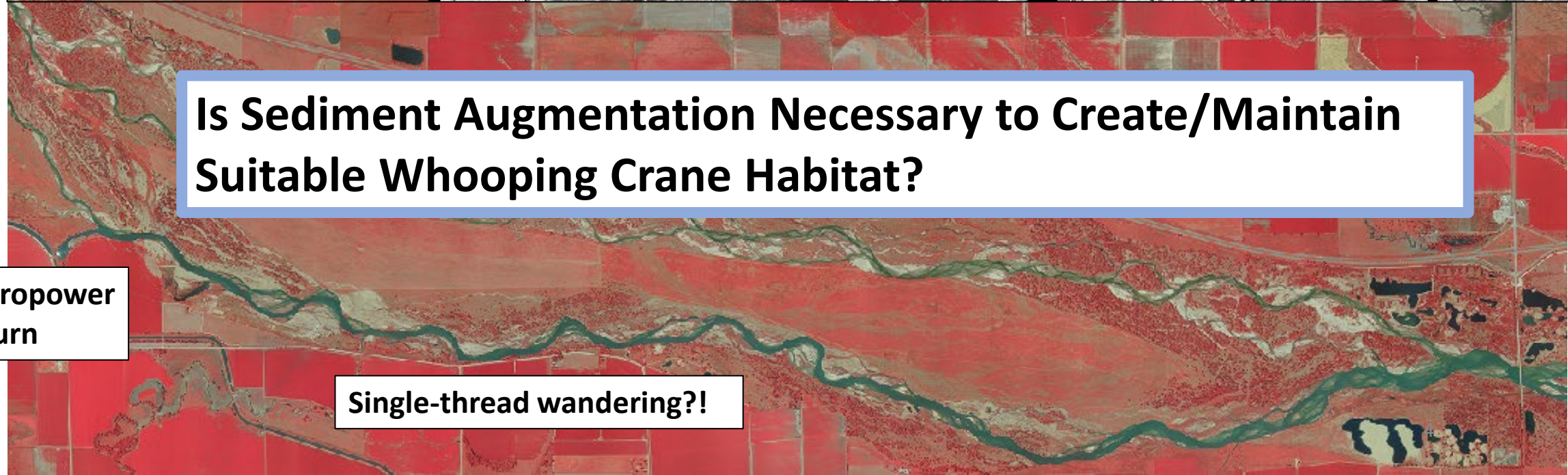


**Is Sediment Augmentation Necessary to Create/Maintain
Suitable Whooping Crane Habitat?**

Now

**Hydropower
Return**

Single-thread wandering?!



Design

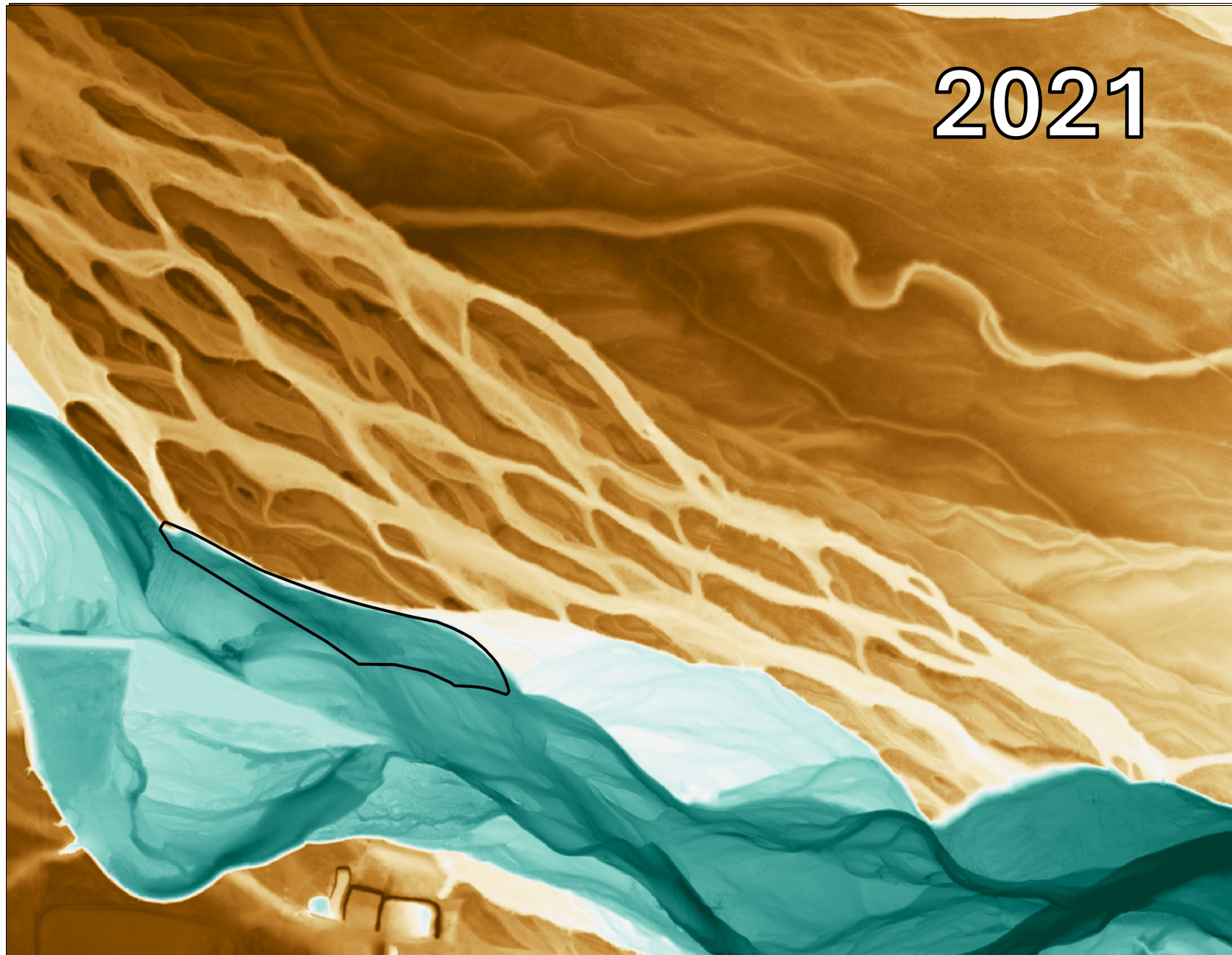
&

Implement

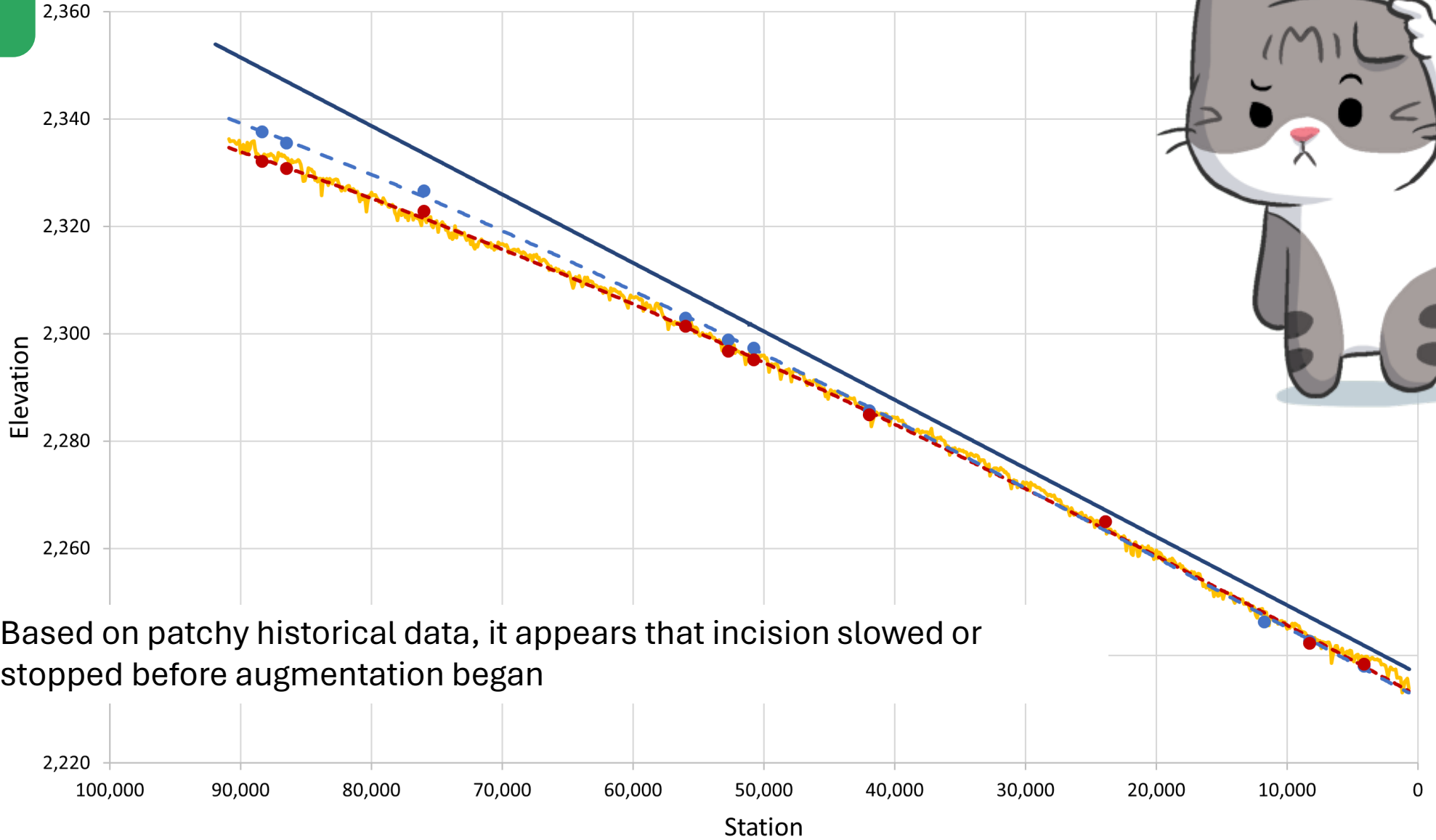


60 – 80K tons sediment/ year, mechanically removed from high terraces and spread over channel.

Monitor

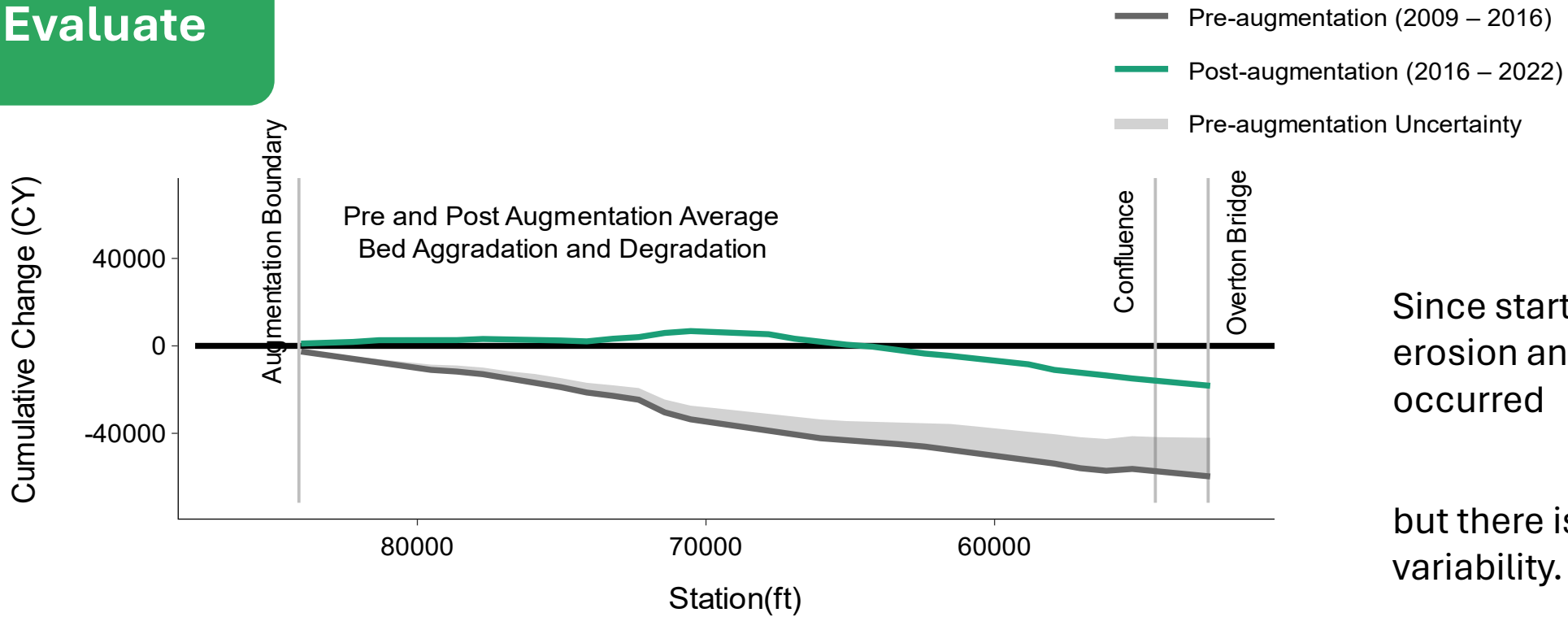


Evaluate



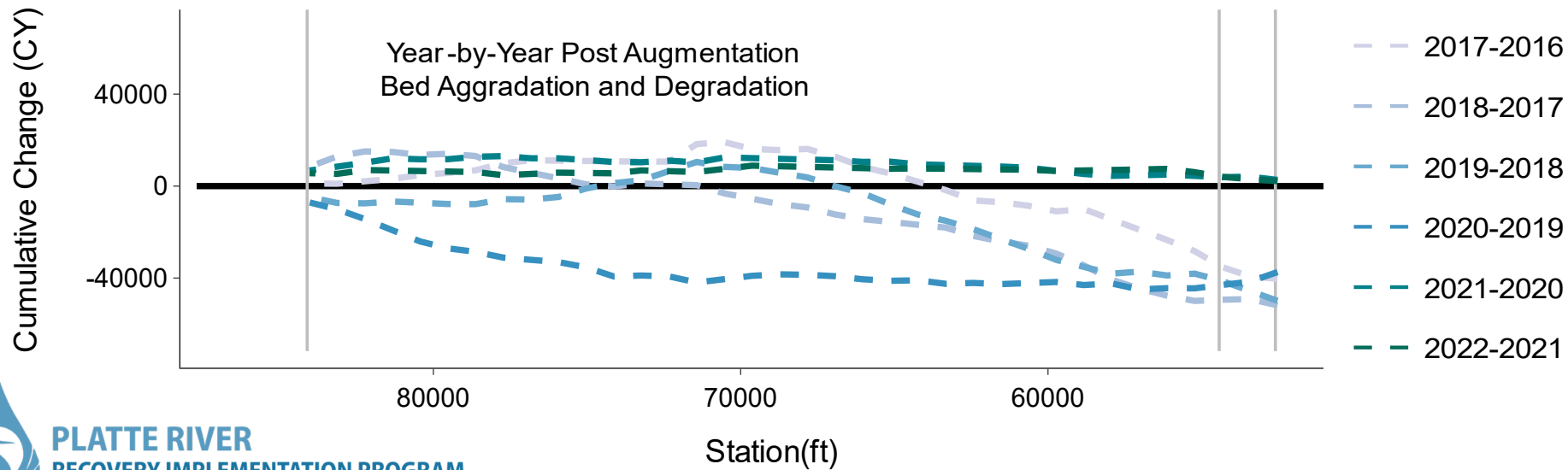
Based on patchy historical data, it appears that incision slowed or stopped before augmentation began

Evaluate

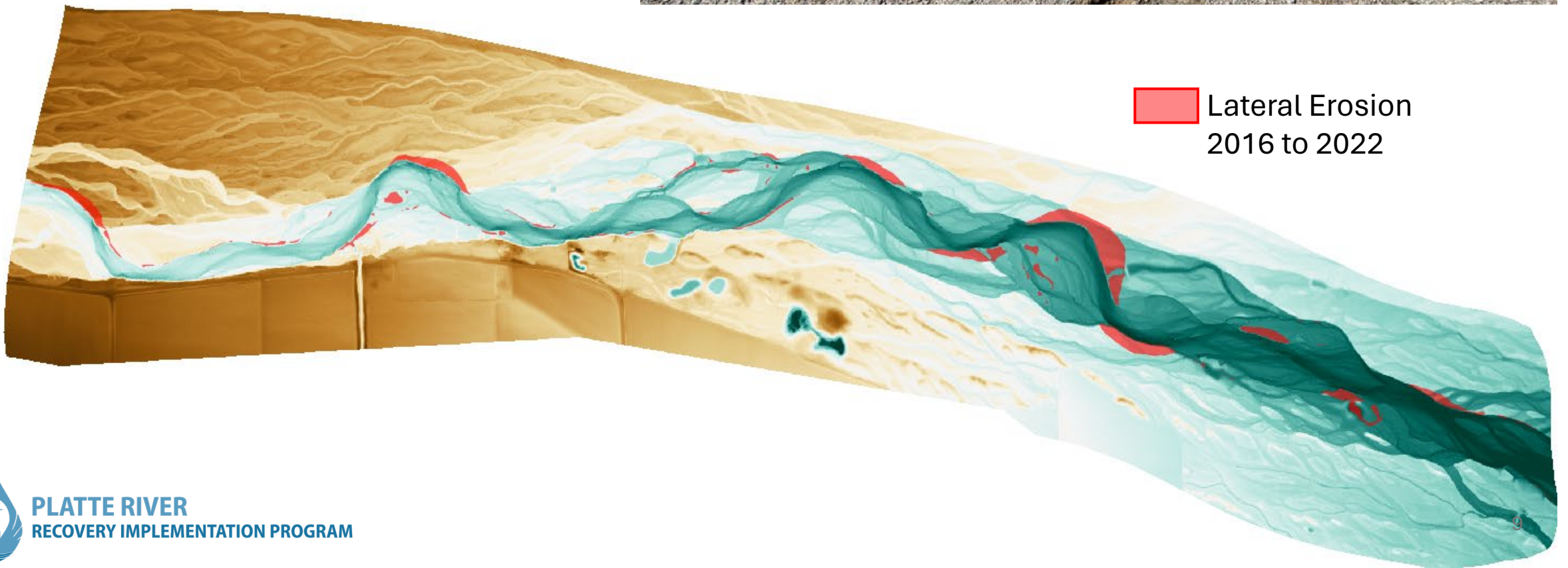


Since starting augmentation, less erosion and some aggradation has occurred

but there is a lot of year-to-to year variability.

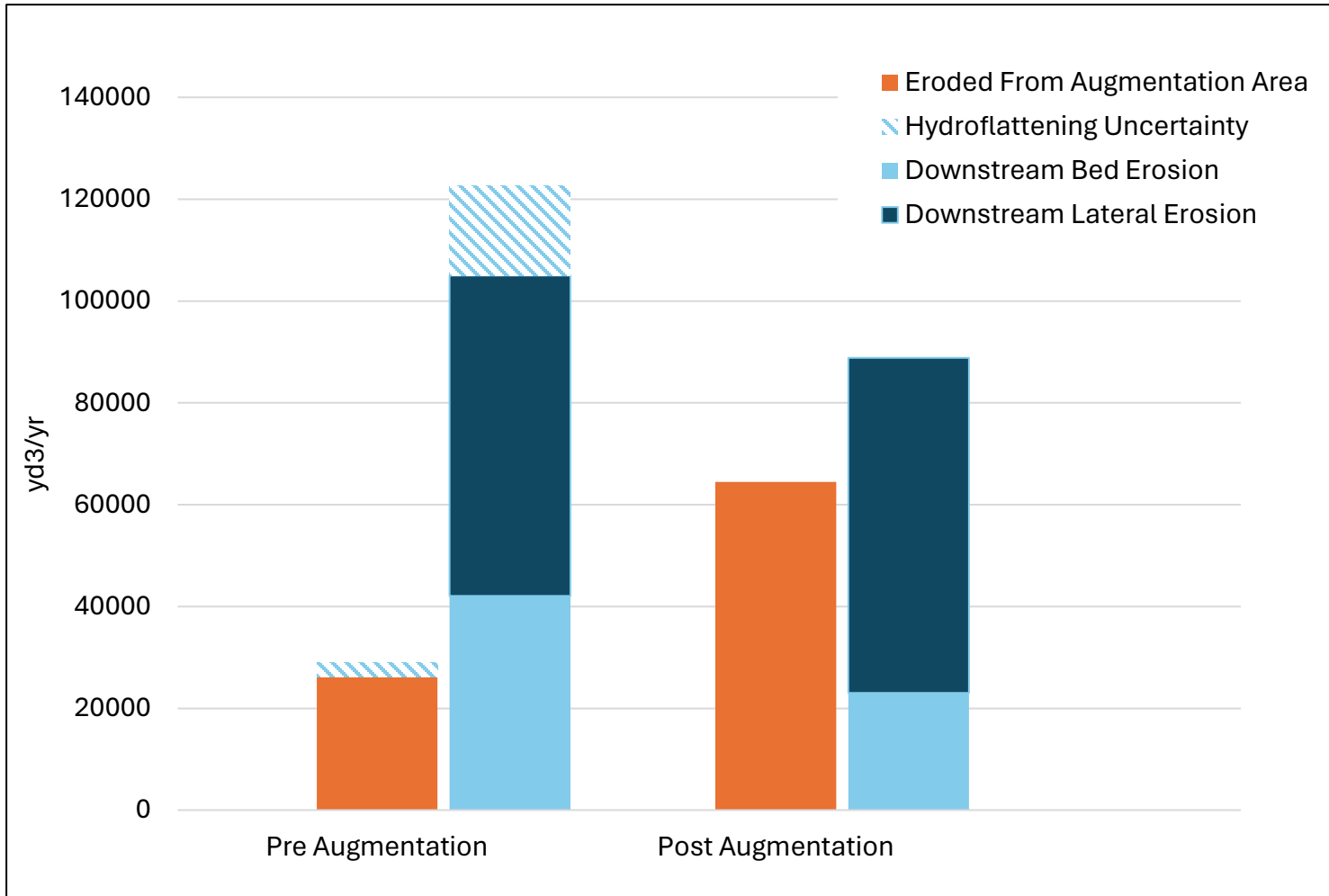


Evaluate



PLATTE RIVER
RECOVERY IMPLEMENTATION PROGRAM

Evaluate



Since 2009, lateral erosion has been made up over half of total erosion.

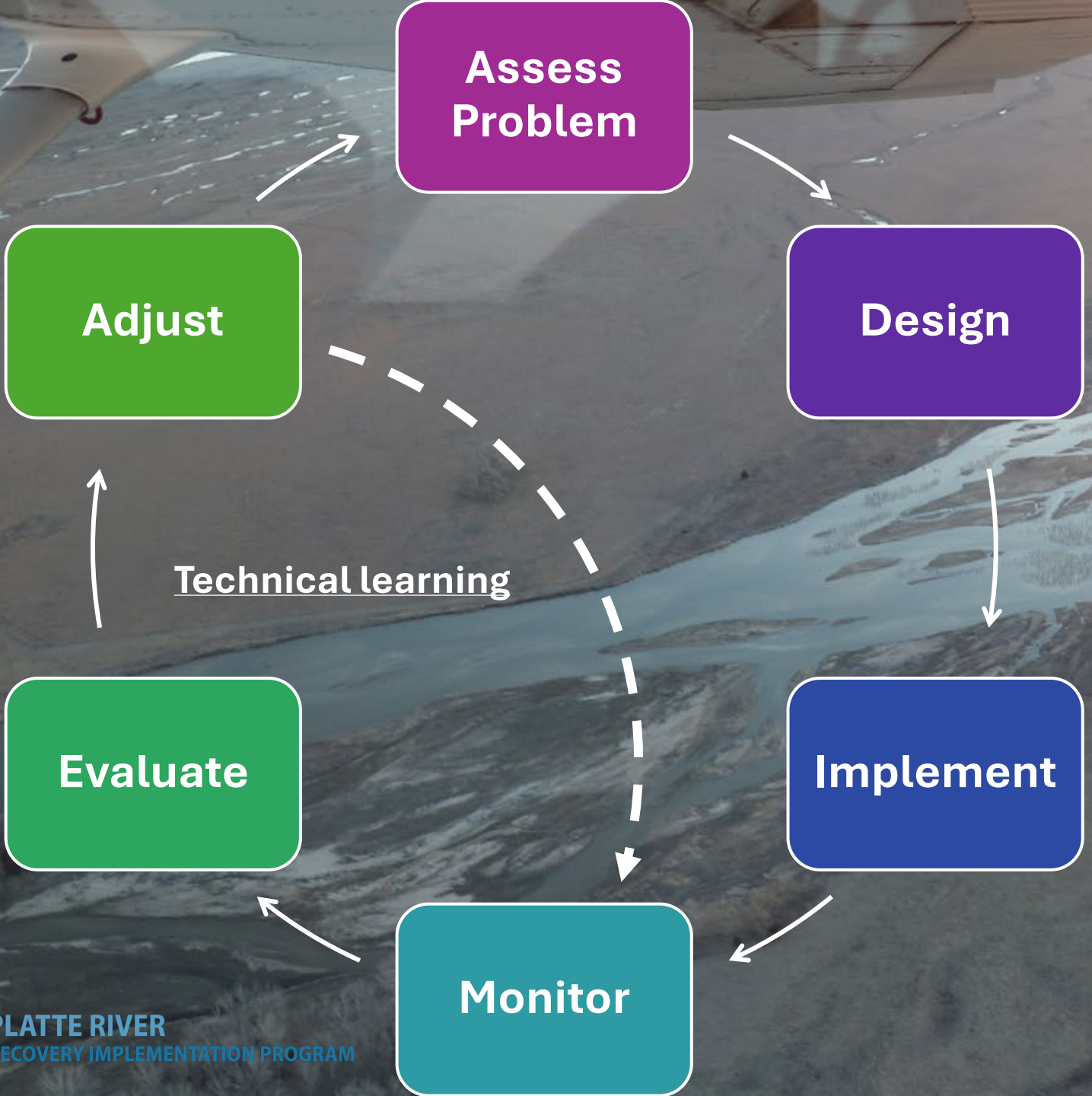
Adjust


Double or
Nothing!

Conclusion: It is very hard to separate how the river may be *naturally adjusting* from what our *augmentation* is doing.

So how do we evaluate the necessity of augmentation?

Is sediment augmentation necessary to create/maintain suitable whooping crane habitat?



An aerial photograph showing a large, winding body of water, likely a reservoir or a river bend, with a significant amount of sediment or silt. The water is a murky, brownish-grey color. The surrounding land is a mix of green grass and brown, eroded soil. There are several pieces of construction equipment, including a yellow excavator and a white truck, visible on the right side of the image. A semi-trailer is also parked nearby. The sky is overcast with grey clouds. A large, semi-transparent white box with dark blue text is overlaid on the center of the image.

Thank you! Questions?