

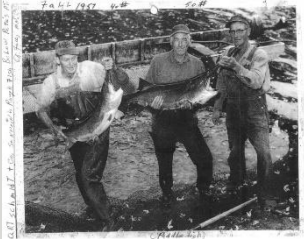
# PROJECT SUMMARY—

## ENHANCING UNDERSTANDING OF MINNESOTA RIVER AQUATIC ECOSYSTEM

### ACTIVITY 4B: EVALUATE ABUNDANCE AND MOVEMENT OF MINNESOTA RIVER PADDLEFISH

The objective was to better understand use of the Minnesota River by the state threatened Paddlefish, a species recognized for its large paddle-like rostrum and migratory nature.

#### History—



Paddlefish were historically abundant in Minnesota's large rivers, but populations declined during the early 1900's after the construction of dams, discharge of urban and industrial waste, and over-fishing. The oldest photograph evidence of Paddlefish in the Minnesota River is from 1957. From then until 2016, relatively few Paddlefish were reported in the Minnesota River.

#### More abundant than perceived—

Targeted sampling efforts during the project captured 81 different Paddlefish from the Minnesota River and identified several reaches of river inhabited by large congregations of likely more than 50 fish.



#### Acoustic telemetry—

Acoustic telemetry revealed that while some Paddlefish move very little, other Paddlefish are extremely mobile, migrating up to 150 miles and traveling between the Minnesota, St. Croix, and Mississippi Rivers.



The paddle-like rostrum is an electro-sensory organ used for detecting plankton

DNR staff captured Paddlefish by drifting gill nets through "slack-water" habitats of the Minnesota River.



All Paddlefish were measured and tagged so they could be identified if re-captured in the future

#### Invasive species implications—

If invasive carp become established in the Minnesota River they may compete with Paddlefish for plankton food resources and habitat space.



*invasive carp*



**Important outcome—**Unveiled an abundance of Paddlefish inhabiting the Minnesota River and provided insight into habitat use and movement patterns.



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M.L. 2016, Chp. 186, Sec. 2, Subd. 03ib

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