Lake sturgeon restoration: information needs

1. status and distribution of sturgeon stocks across the GL basin

2. relationship btwn. habitat quantity & quality and its use by different populations

3. population-scale movements and dispersal patterns at ecologically relevant time scales

Lake sturgeon metapopulation structure: migration pathways, spawning fidelity, and survival in a complex river-lake ecosystem

Chuck Krueger (GLFC), Darryl Hondorp (USGS), Chris Holbroook (USGS), Jim Boase (USFWS), Mike Thomas (MDNR), Edward F. Roseman (USGS), Rich Drouin (OMNR)
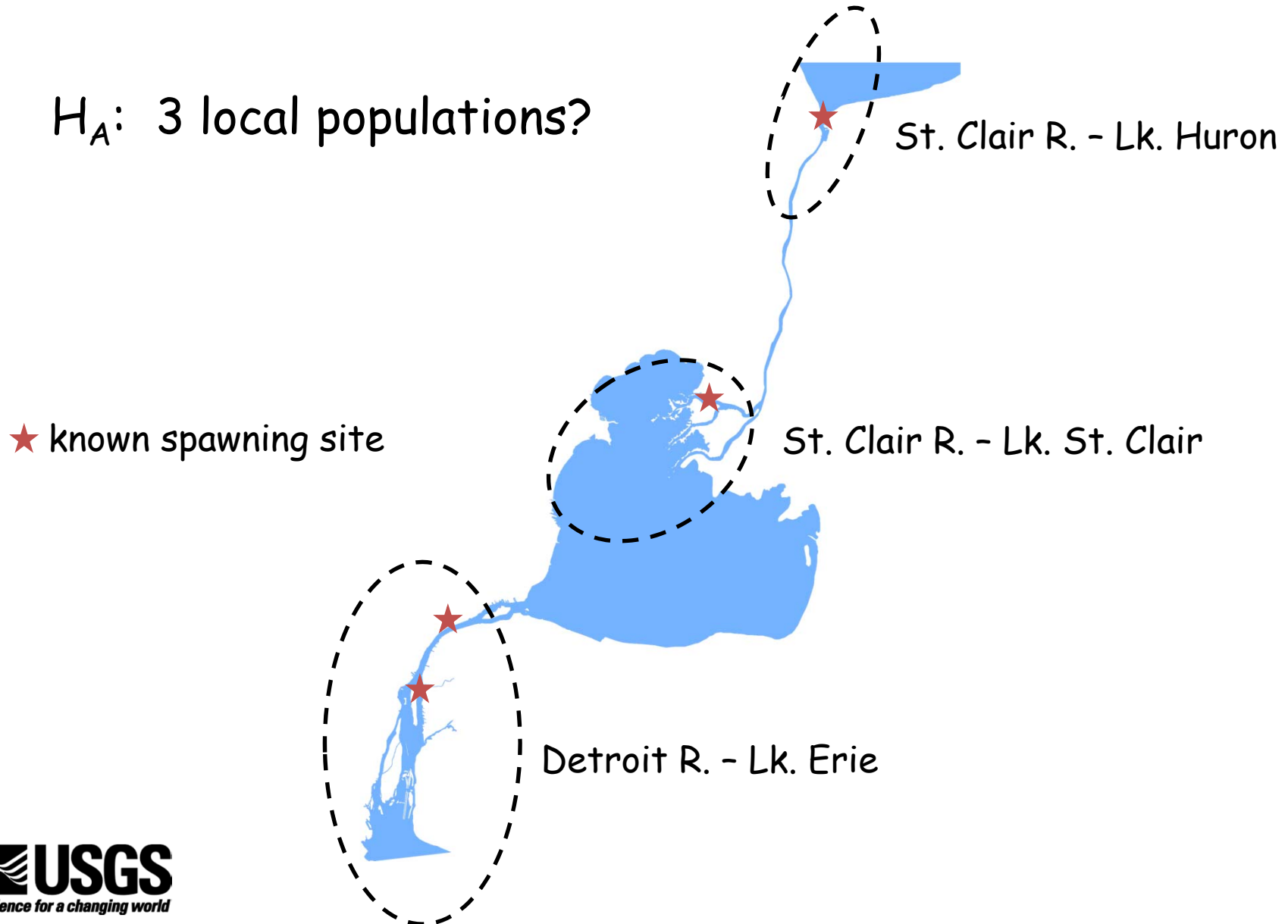
Sturgeon population structure in the HEC

tagging and short-term telemetry studies

H_A: 3 local populations?

★ known spawning site

St. Clair R. – Lk. Huron

St. Clair R. – Lk. St. Clair

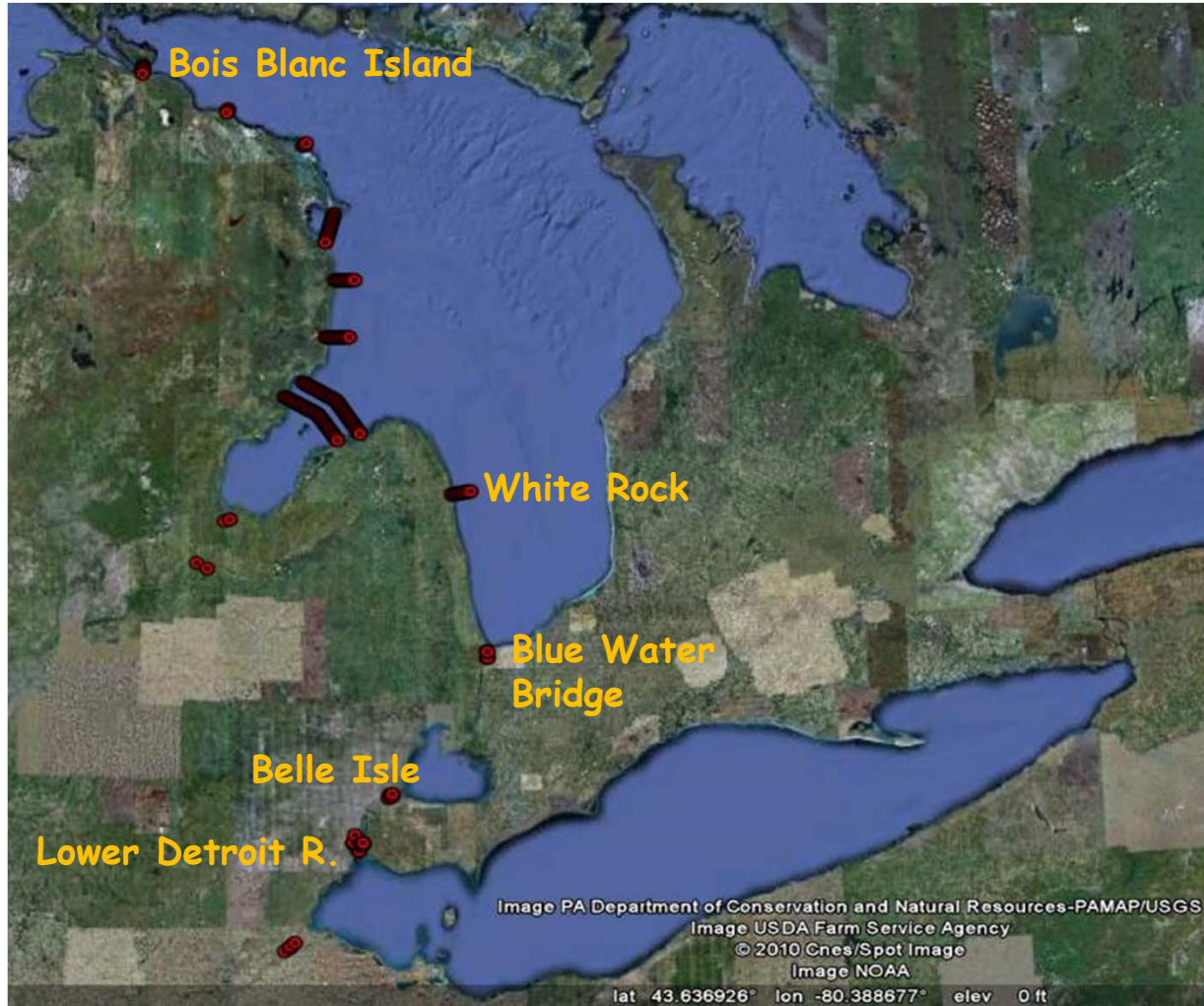Detroit R. – Lk. Erie

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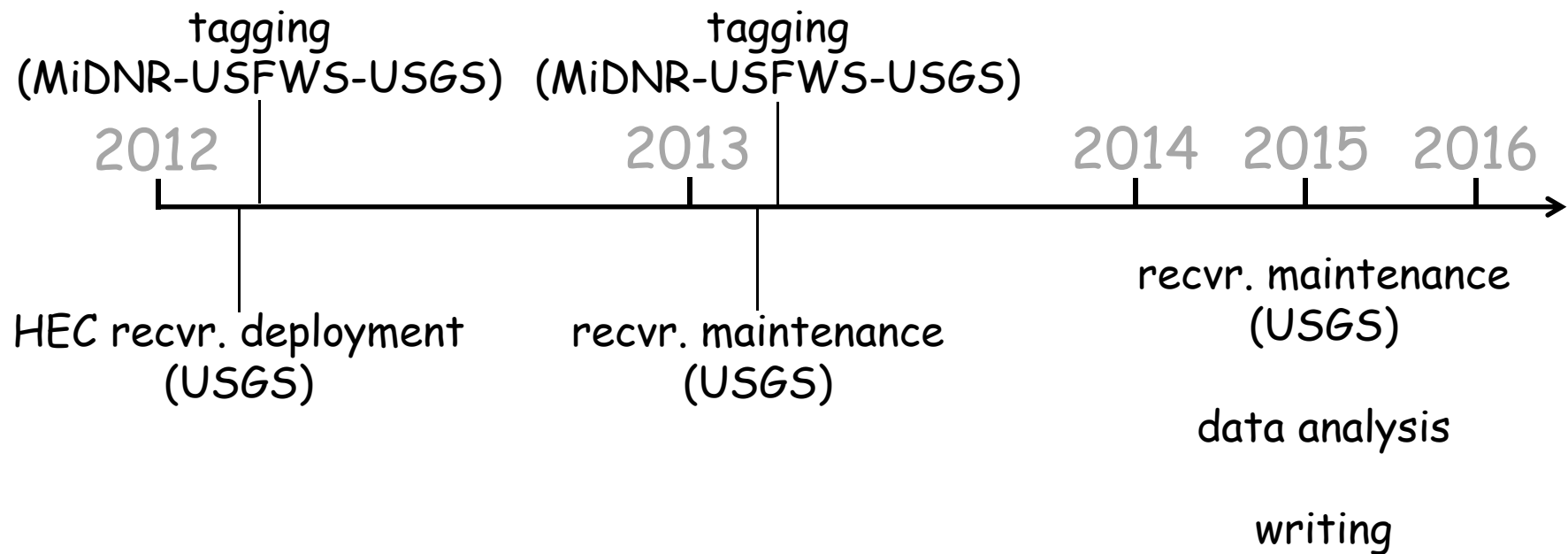# Methods: acoustic telemetry

- Implant sturgeon with acoustic tags (10-year battery life)

- Track fish movements using strategically-placed receiver arrays

Walleye project receiver array

Bois Blanc Island

White Rock

Blue Water Bridge

Belle Isle

Lower Detroit R.

Image PA Department of Conservation and Natural Resources-PAMAP/USGS
Image USDA Farm Service Agency
© 2010 Cnes/Spot Image
Image NOAA
lat 43.636926° lon -80.388677° elev 0 ft

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Work plan & time line

tagging
(MiDNR-USFWS-USGS)

tagging
(MiDNR-USFWS-USGS)

2012   2013   2014 2015 2016

HEC recvr. deployment
(USGS)

recvr. maintenance
(USGS)

recvr. maintenance
(USGS)

data analysis

writing

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Funding

- $359k

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