



# River Otter Status Update

# Topics Covered

- Species status review
- Delisting criteria
- Continued monitoring





# Status Review-Timeline

- Presented October 2017
- Public comment period
- Approved April 2018



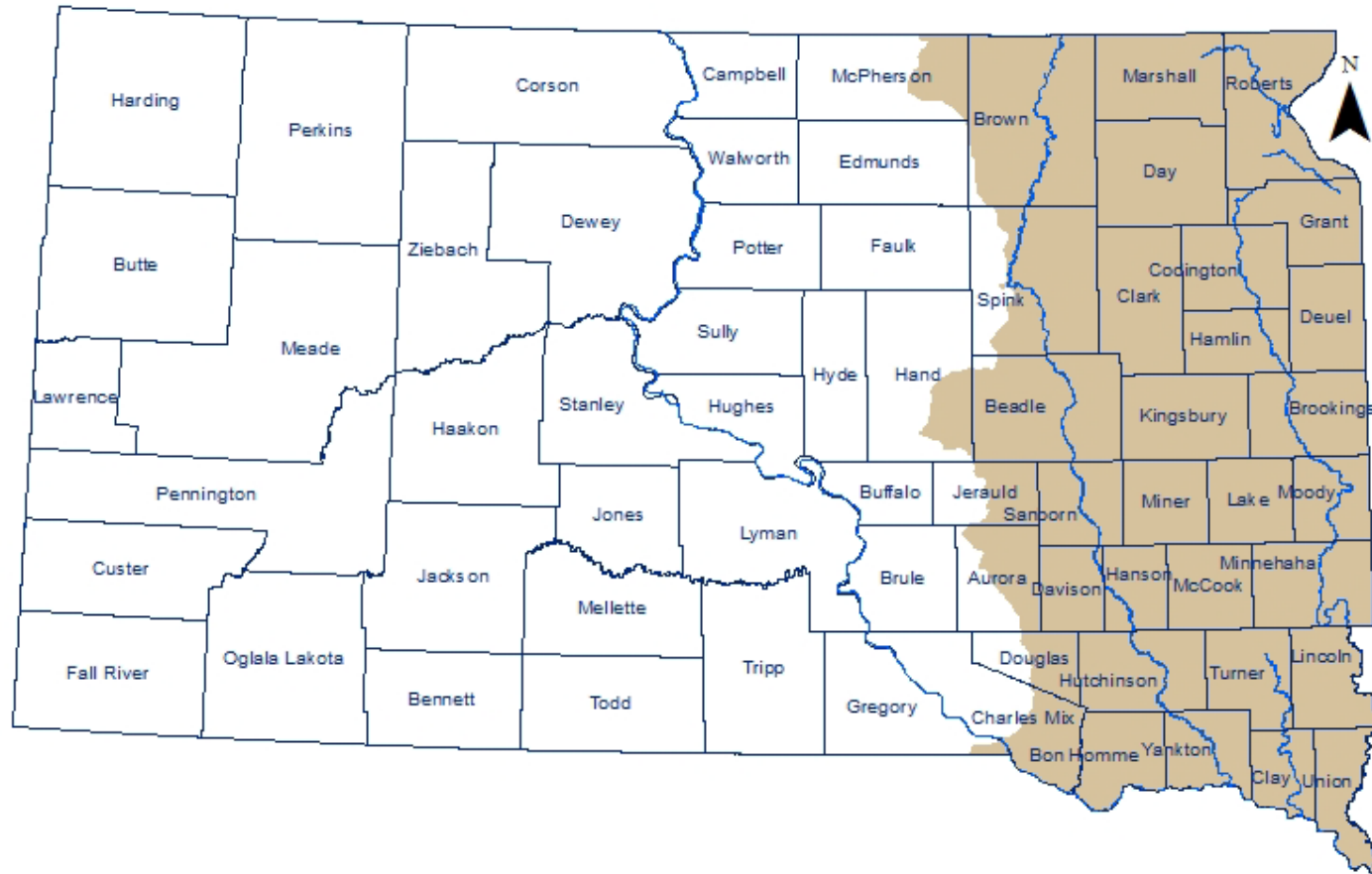




# Status Review-Highlights

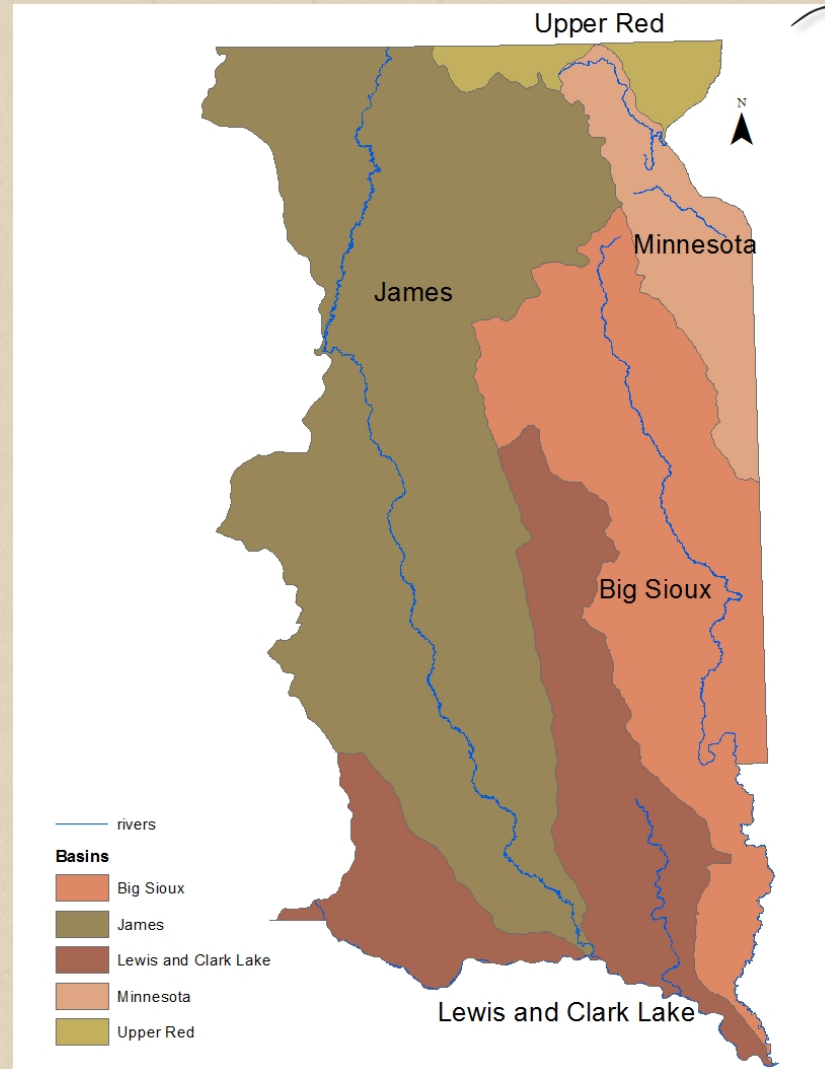
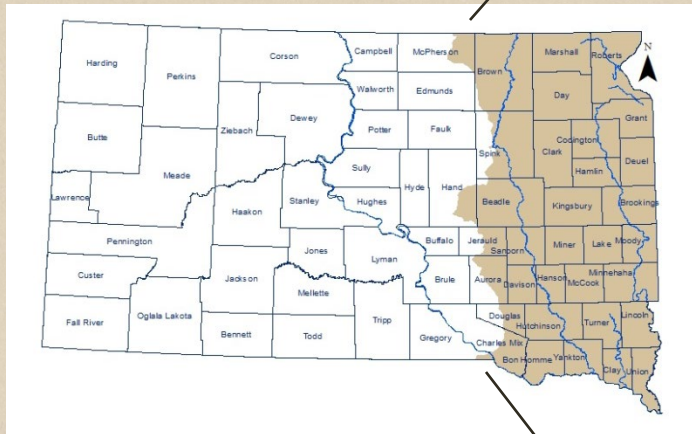
- State Threatened
- Species of Greatest Conservation Need
- Monitored by Natural Heritage Program
  - Sighting of live animal, sign, road kill or incidental capture
- Likely *extirpated* in SD (Kiesow and Dieter 2003)
- Flandreau Santee Sioux reintroduction
- Conservation and management plan in 2012
  - “Determination of river otter distribution and evaluation of potential sites for population expansion in South Dakota”
    - State Wildlife Grant T-55-R-1
  - Recovery area and delisting criteria

# Recovery Area

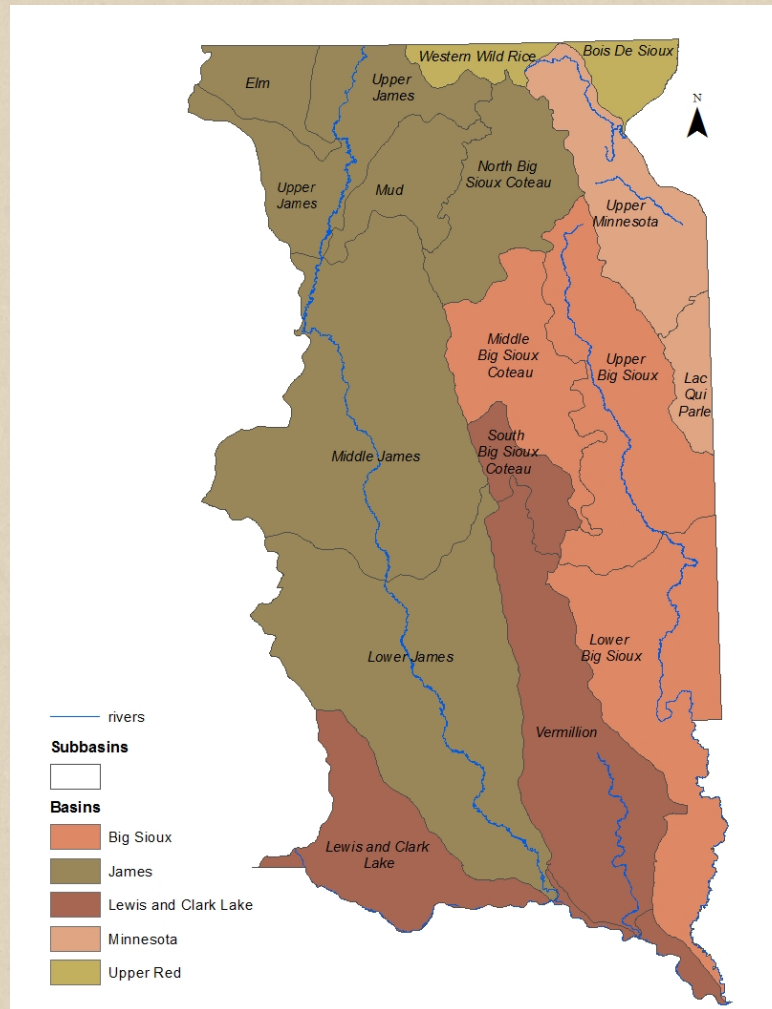




# Recovery Area-Basins

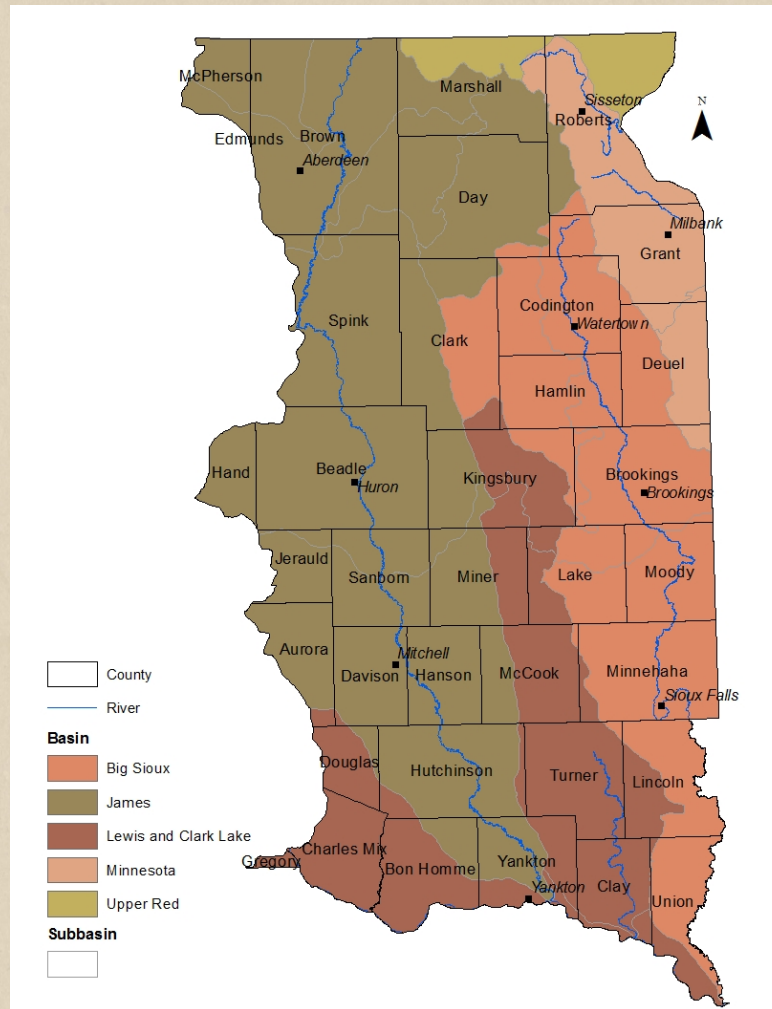


# Recovery Area-Subbasins





# Recovery Area-Counties







# Delisting Criteria

- Help ensure the species is secure in the recovery area and does not require threatened species status protection
- Distribution
  - Prevent species extirpation (i.e. catastrophic events)
  - Species adaptability to stressors (e.g. change in water quality)
- Reproduction
  - Presence  $\neq$  reproduction
  - Reproduction  $\neq$  population growth
- Persistence
  - Sustainability over time
  - 5 years

# Delisting Criterion-Reproduction



- Three (of the five) basins in the recovery area should have at least one *verified* report of *reproduction*
- 2 of the 5 years prior to recommended delisting





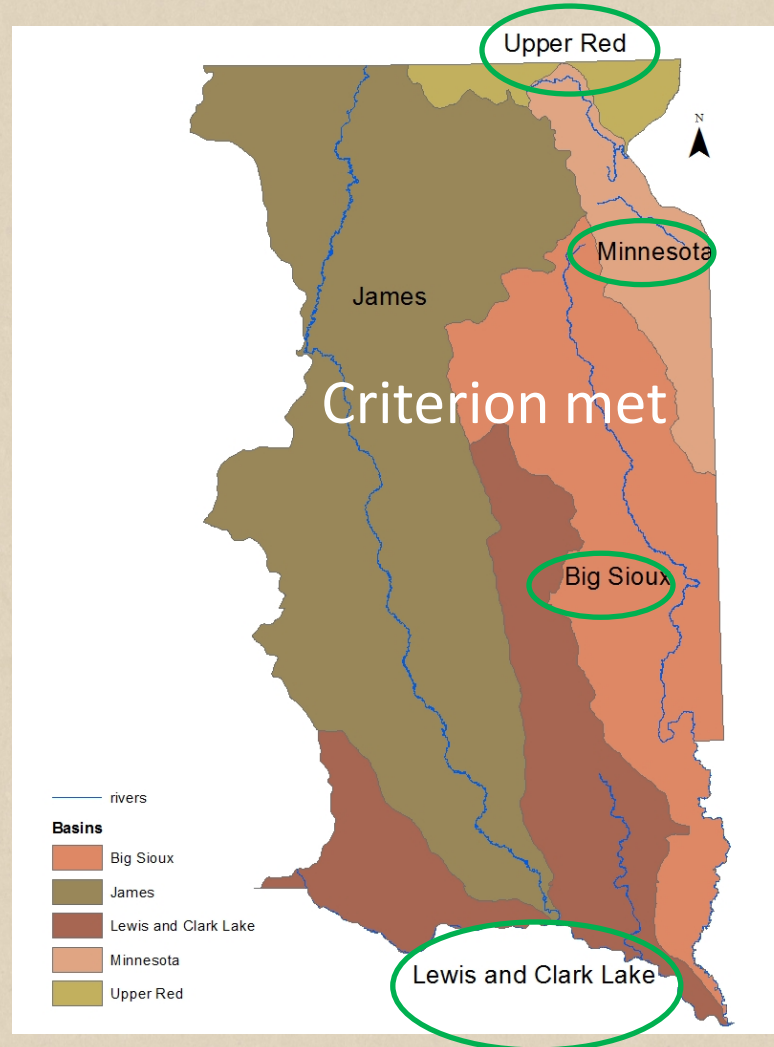


# Delisting Criterion-Definitions

- Report reliability
  - Verified, probable, unverified
- Reproduction
  - Reports of family group (3 or more animals)
  - Observation of *corpora lutea*
  - Evidence of lactation
  - 0 or 1 year old individuals

# Delisting Criterion-Reproduction

Need 3 basins with reproduction for 2 years







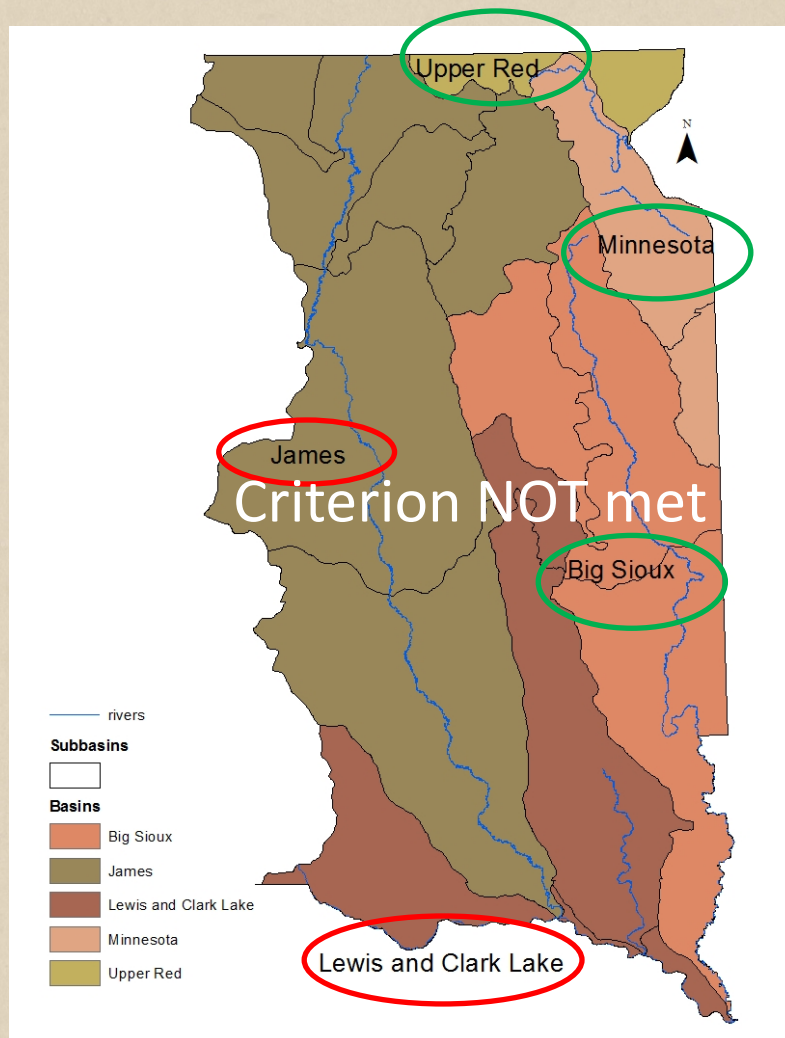
# Delisting Criterion-Distribution

- For every basin (N=5) in the recovery area
- 40% of its subbasins should have at least one verified report of river otters
- for 2 of the 5 years prior to recommending delisting



# Delisting Criterion-Distribution

In every basin, 40% of it's subbasins have otter for 2 years







# Delisting Criteria-Summary

- Reproduction criterion met
- Distribution criterion NOT met
  - Sub basins of James and Lewis and Clark basins
- How often we check
  - Report data entered continually
  - Results summarized every six months
    - July 2018
    - Nov 2018
    - Annual summary (as per species status review)



# Monitoring

- Continue collecting reports, carcasses and conducting necropsies
- Target surveys in subbasins that likely have otter, but data are lacking
- Establish long-term, statewide monitoring protocol
  - Test feasibility of field cameras









# Report Reliability

- Verified
  - animal in hand
  - photographs where the otter can be clearly identified
  - tracks associated with snow slides when reviewed by knowledgeable reviewers
- Probable
  - sighting reported from an experienced and knowledgeable observer
  - tracks and scat not in snow
- Unverified
  - No evidence to support or reject the report

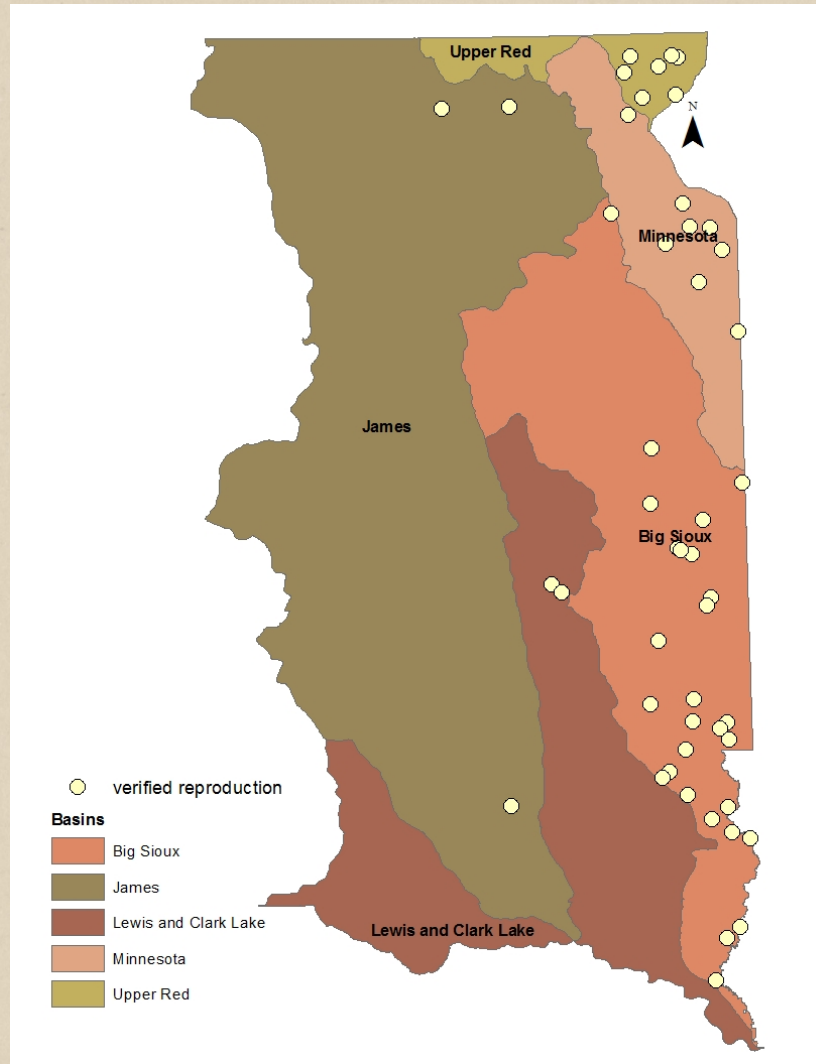


# Delisting Criterion-Reproduction



- Three basins in the recovery area should have at least one verified report of reproduction
- 2 of the 5 years prior to recommended delisting

# Delisting Criterion-Reproduction





# Delisting Criterion-Reproduction



	2014	2015	2016	2017	2018
Upper Red	x		x	X	
Minnesota	x	x	x		
Big Sioux	x	x	x	x	
Lewis & Clark	x	x			
James			x		



# Delisting Criterion-Distribution

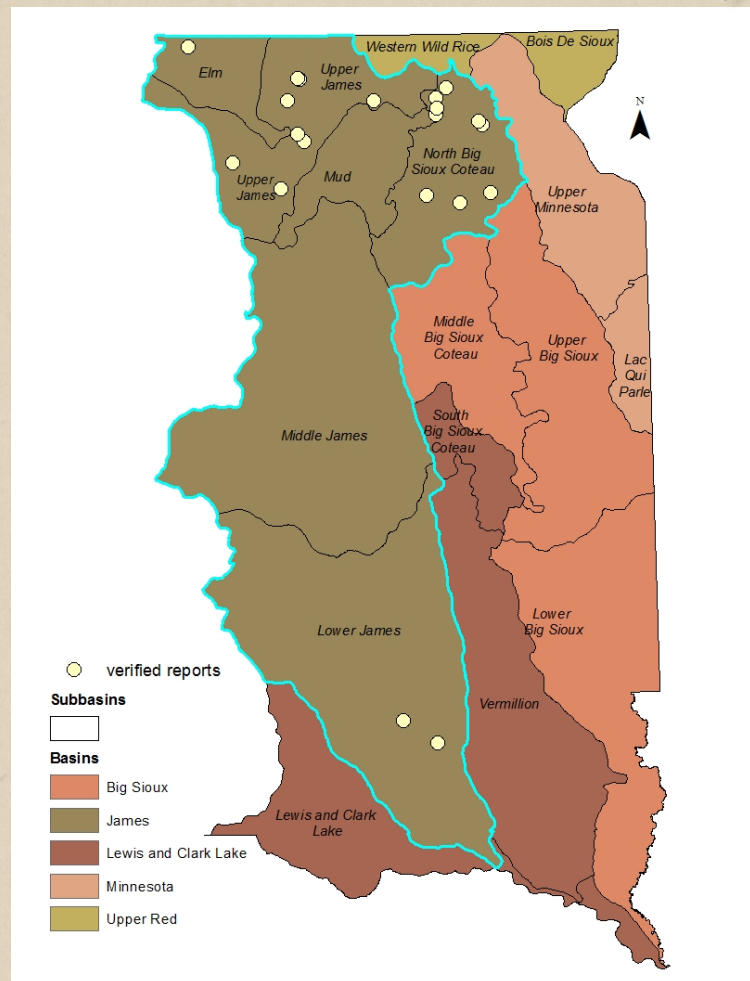
- Within each basin in the recovery area
  - 40% of its subbasins should have at least one verified report of river otters
  - for 2 of the 5 years prior to recommending delisting



# Delisting Criterion-Distribution

- James
  - Need at least 3 of 6 (50%) subbasins
  - Only in 2016

Subbasin	2014	2015	2016	2017	2018
Elm			x		
Upper James	x	x	x		x
Middle James					
Lower James	x		x		
Mud*					
North Big Sioux Coteau*		x	x	x	x



# Delisting Criterion-Distribution

- Lewis and Clark
  - Need at least 2 of 3 (67%) subbasins
  - Only in 2014

Subbasin	2014	2015	2016	2017	2018
South Big Sioux Coteau*	x				
Vermillion	x	x			x
Lewis and Clark Lake	x				

