



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

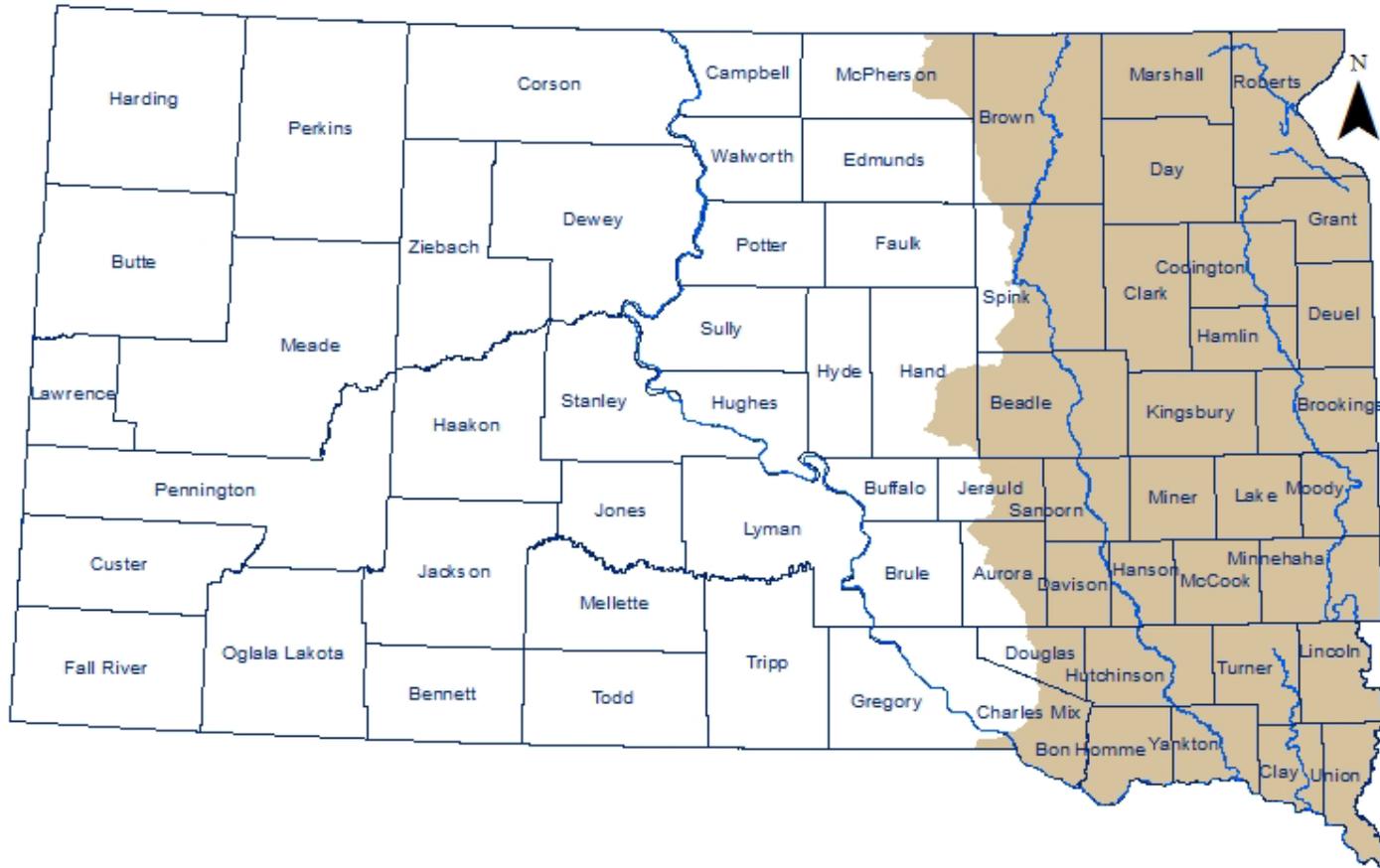




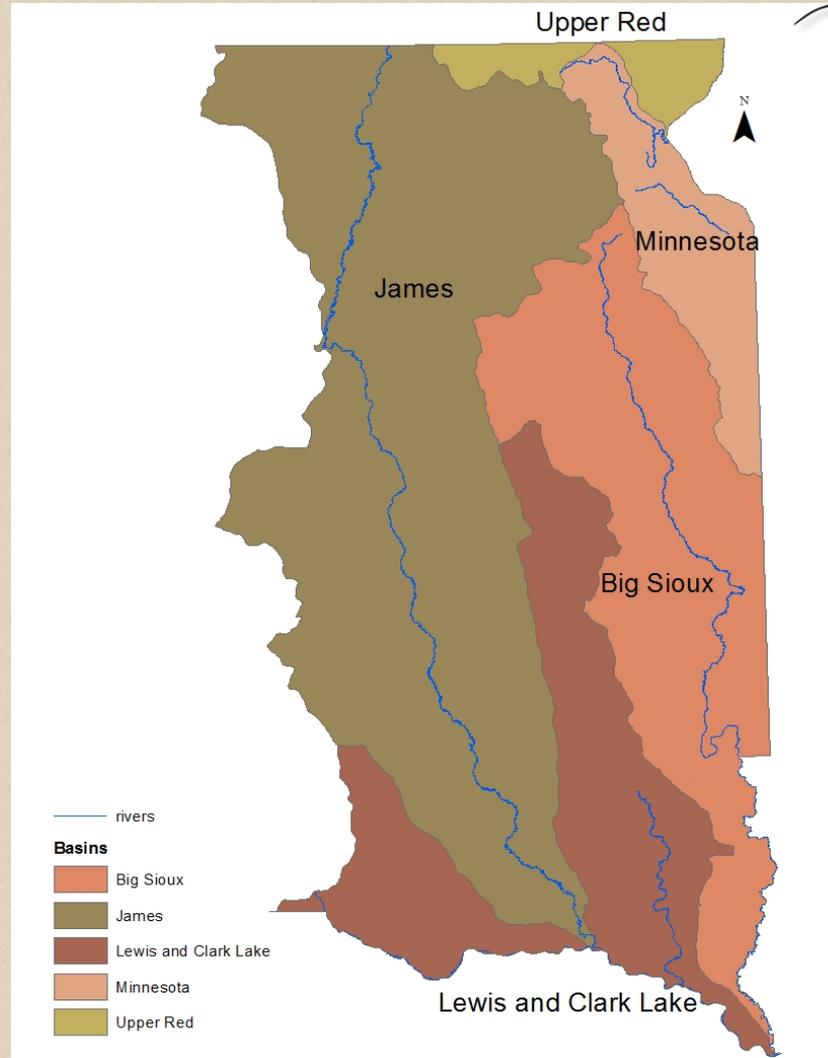
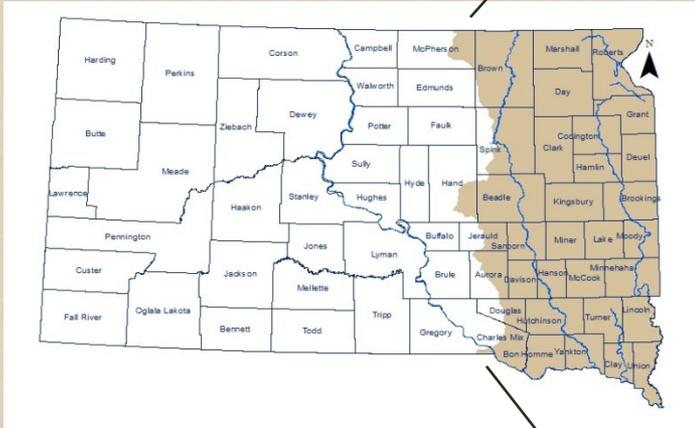
Status Review-Highlights

- 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

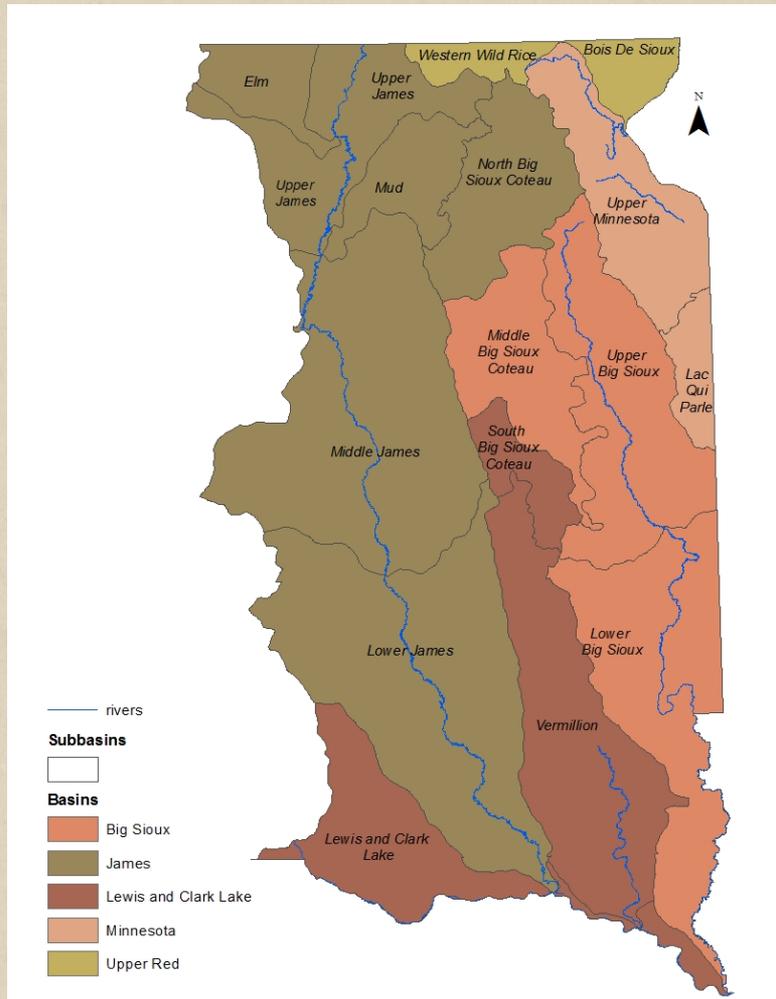
Recovery Area



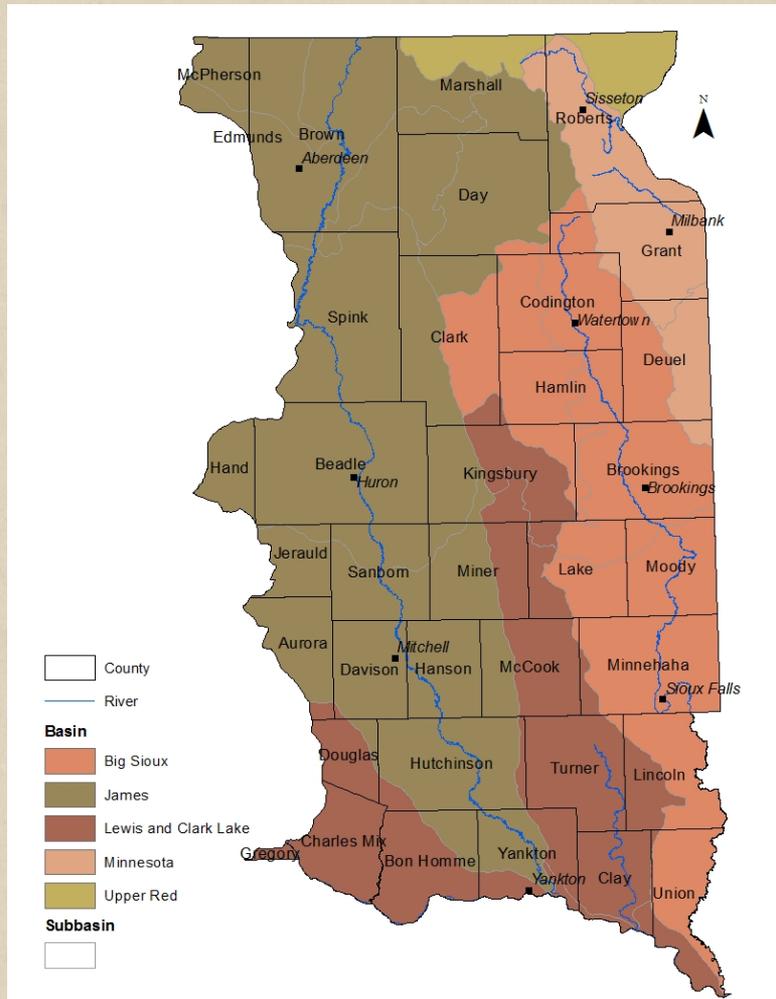
Recovery Area-Basins



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



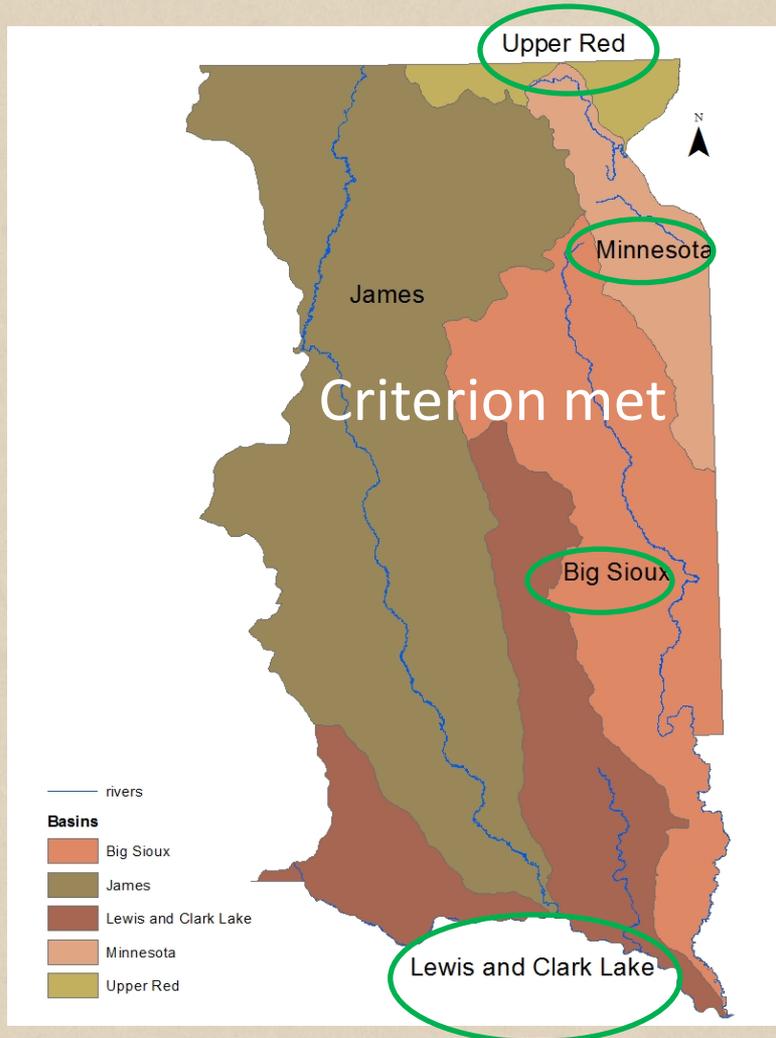


Delisting Criterion-Definitions

- 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

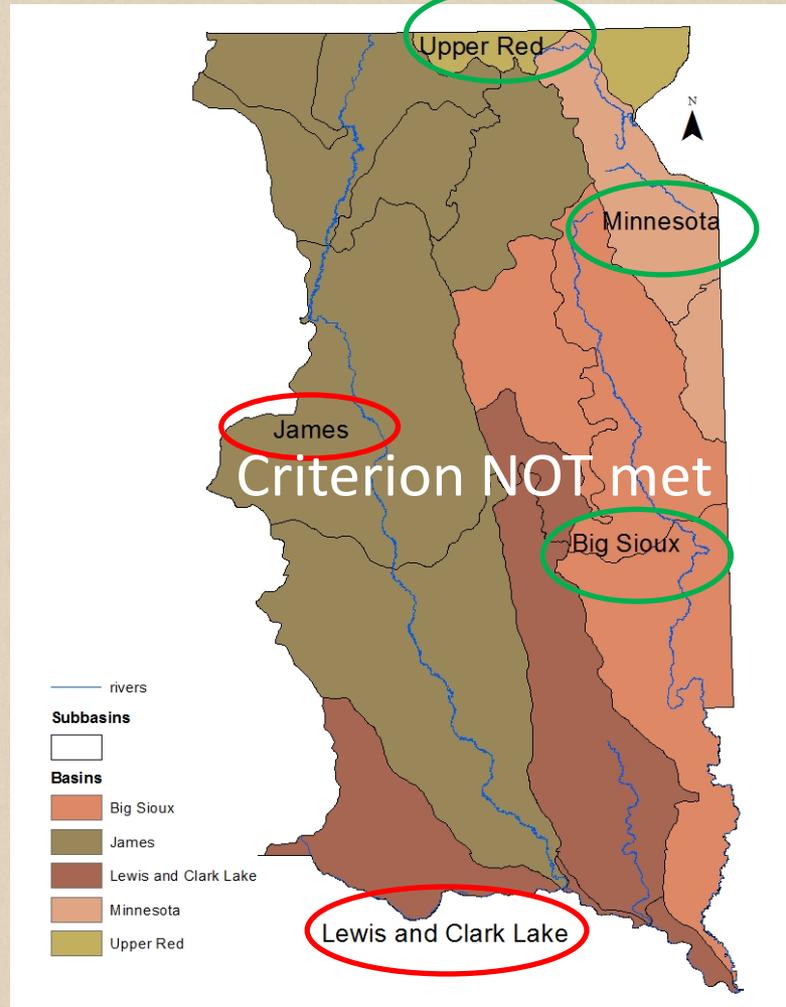
- For every basin (N=5) in the recovery area
- 40% of its subbasins should have at least one verified report of river otters
- for 2 of the 5 years prior to recommending delisting





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



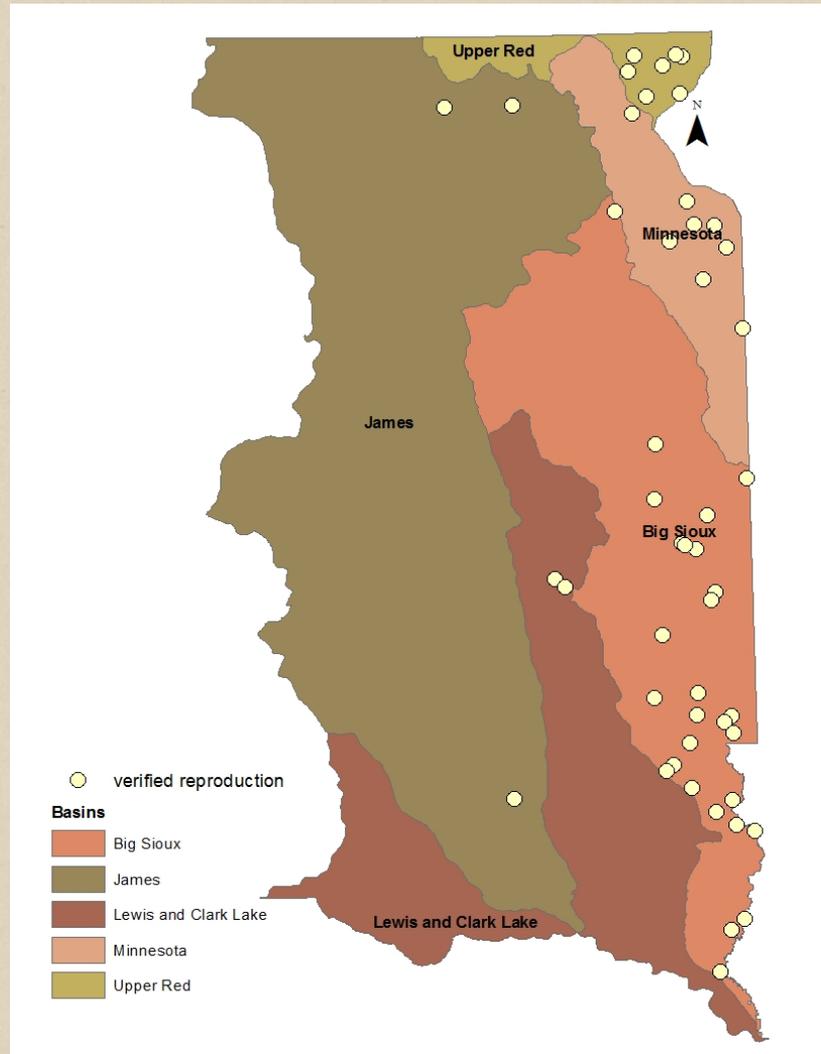
- Verified
 - animal in hand
 - photographs where the otter can be clearly identified
 - tracks associated with snow slides when reviewed by knowledgeable reviewers
- Probable
 - sighting reported from an experienced and knowledgeable observer
 - tracks and scat not in snow
- Unverified
 - No evidence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



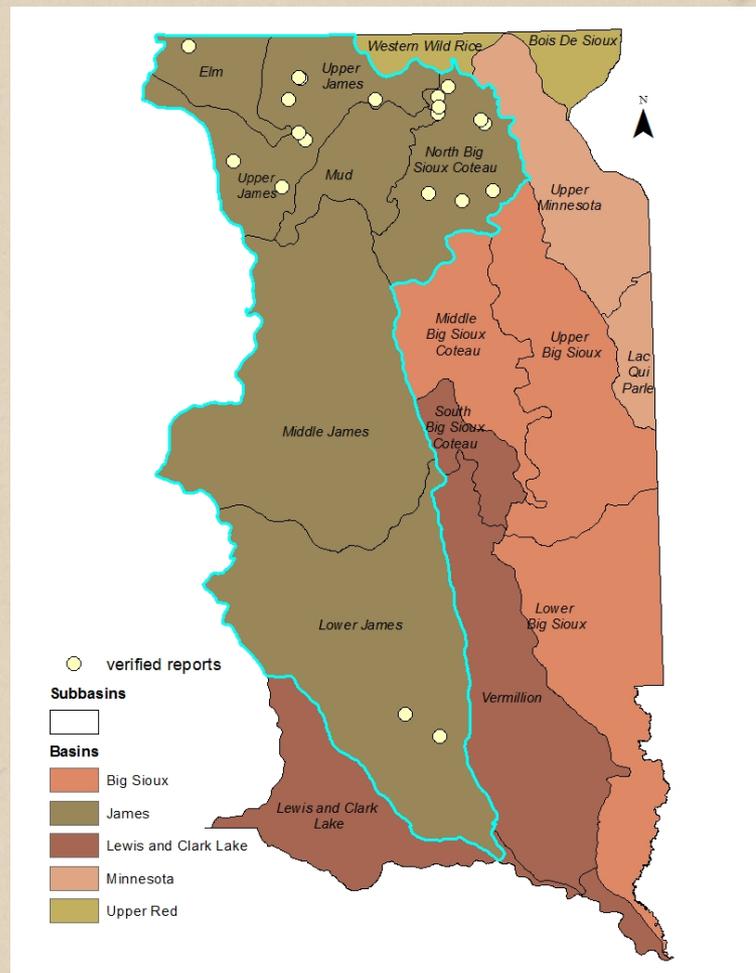
- Within each basin in the recovery area
 - 40% of its subbasins should have at least one verified report of river otters
 - for 2 of the 5 years prior to recommending delisting



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				

