

Legend

- NDGFD Boat Ramp
- Existing Facility
- Repurposed 8-inch-diameter Crude Oil Pipeline
- Proposed 12-inch-diameter Crude Oil Pipeline
- 200-foot-wide Corridor
- Desktop Analysis Area
- Piping Plover Critical Habitat
- Sensitive Plant or Plant Community Occurrence
- Match Line

Hawkeye Pipeline System Project

Figure F-1

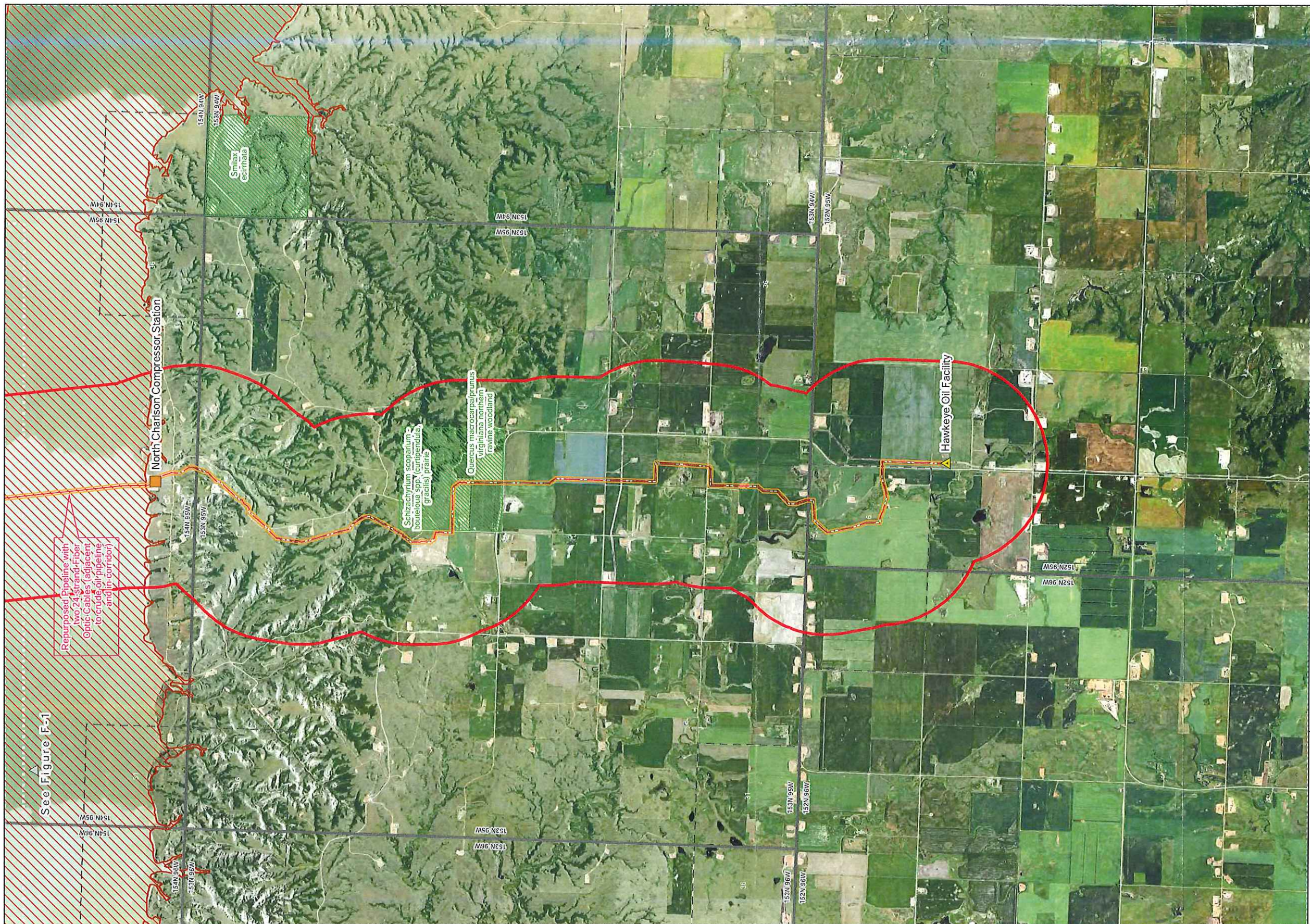
Crude Oil Pipeline Route Exclusion Areas

0 0.25 0.5 Miles

Repurposed Pipeline with two 24-strand Fiber Optic Cables (adjacent to crude oil pipeline and in corridor)

See Figure F-2

Sources: Hess 2014; NDNHI 2014; LWCF 2009; USFWS 2011.



See Figure F-1

Repurposed Pipeline with two 24-strand fiber optic cables adjacent to crude oil pipeline and in corridor



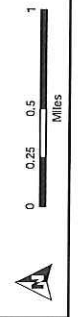
- Legend**
- Desktop Analysis Area
 - 200-foot-wide Corridor
 - Repurposed 8-inch-diameter Crude Oil Pipeline
 - Proposed 12-inch-diameter Crude Oil Pipeline
 - ▲ Proposed Facility
 - ▲ Existing Facility
 - Match Line

- Piping Plover Critical Habitat
- Sensitive Plant or Plant Community Occurrence

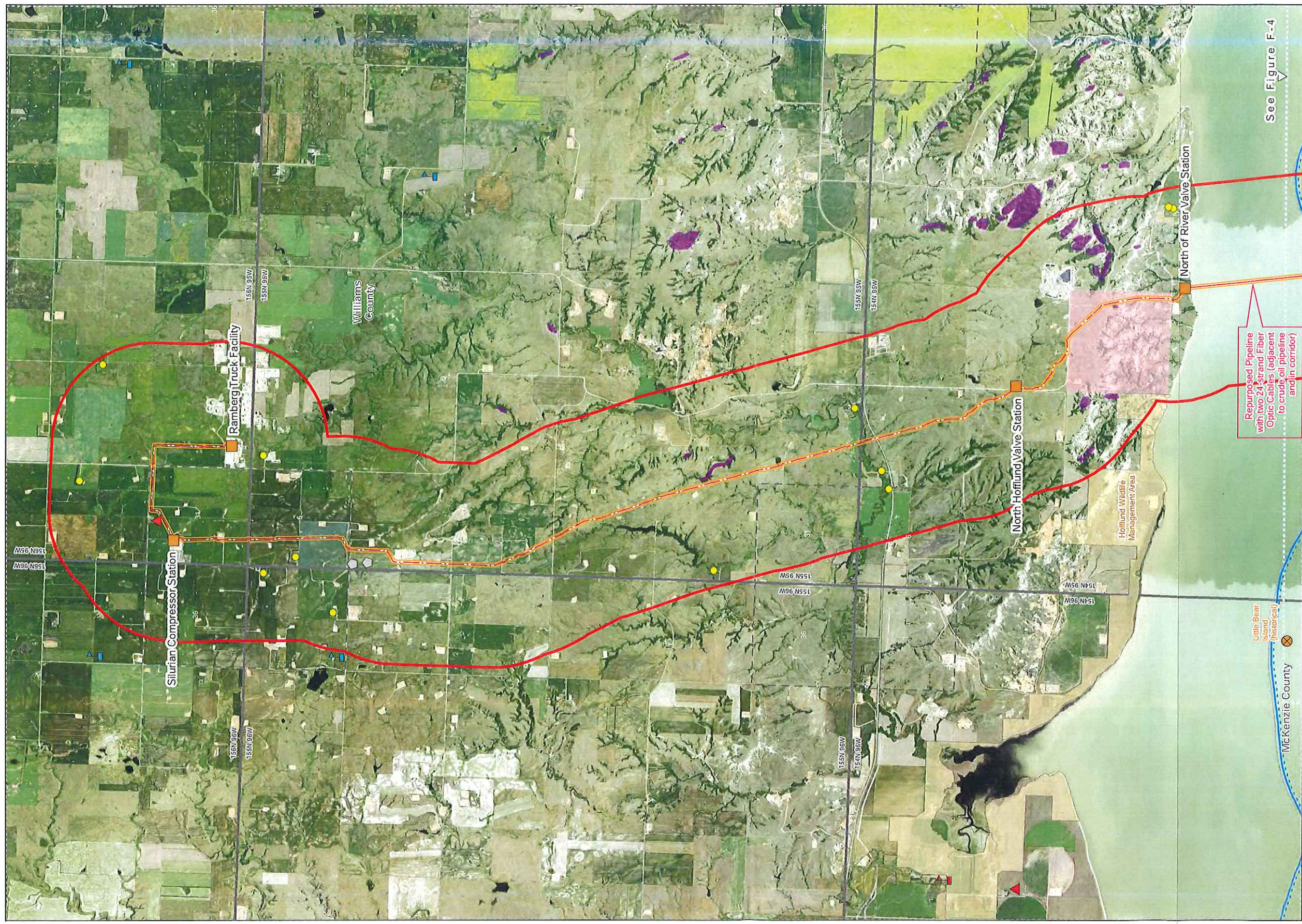
Hawkeye Pipeline System Project

Figure F-2

Crude Oil Pipeline Route Exclusion Areas



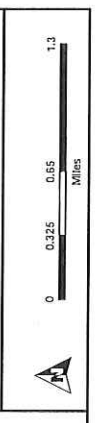
Sources: Hess 2014; NDNHI 2014; LWCF 2009; USFWS 2011.



- Legend**
- Desktop Analysis Area
 - 200-foot-wide Corridor
 - Repurposed 8-inch-diameter Crude Oil Pipeline
 - Proposed 12-inch-diameter Crude Oil Pipeline
 - Existing Facility
 - Match Line
 - Cemetery
 - Church
 - Schoolhouse
 - Vacant Schoolhouse
 - Residence
 - Historical Site
 - Landslide Area
 - School Trust Land
 - Rural Water Association
 - Wildlife Management Area

Hawkeye Pipeline System Project

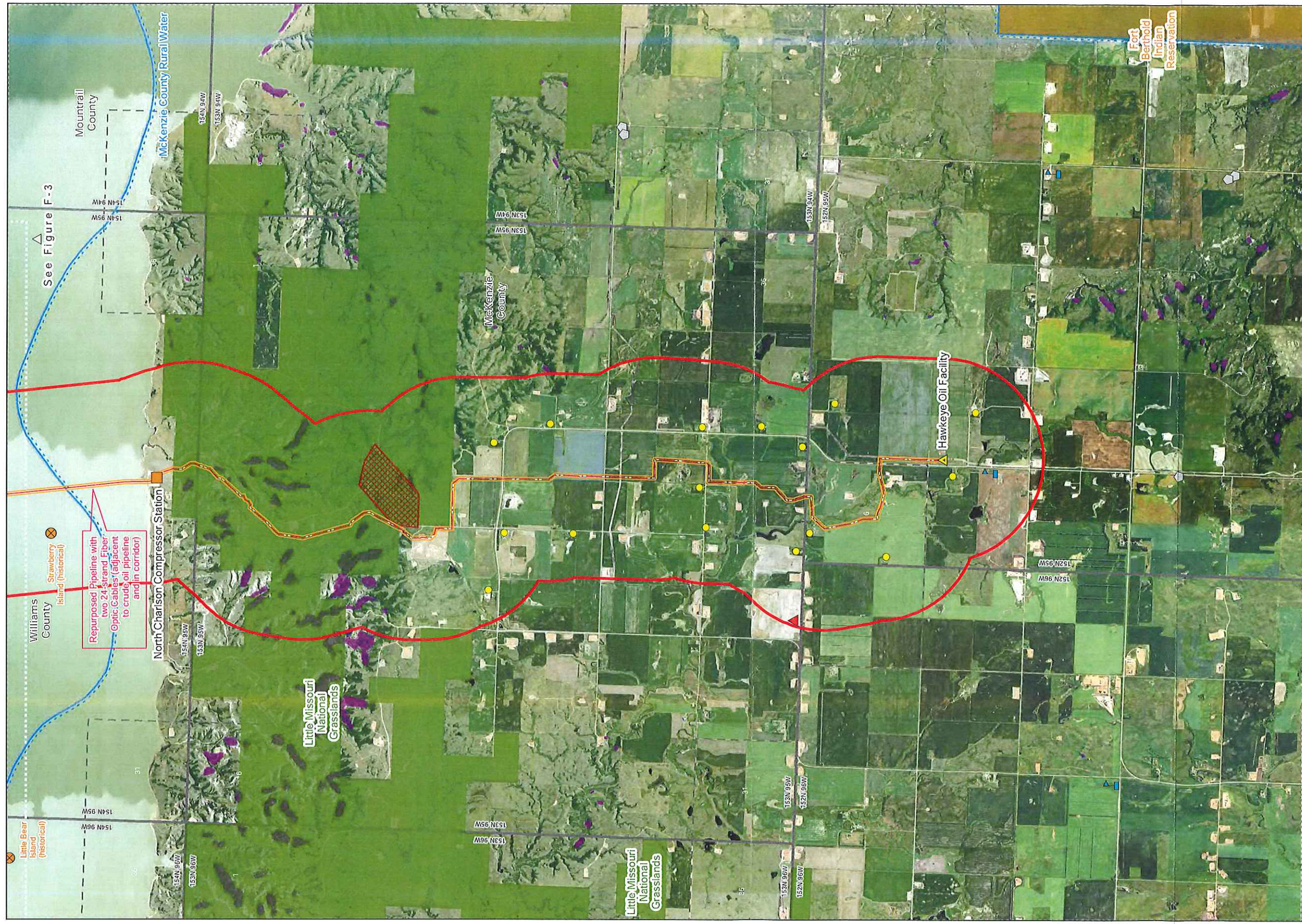
Figure F-3
Crude Oil Pipeline Route Avoidance Areas



Sources: Hess 2014; NDDOT 2008; NDDTL 2014; NDGF 2011; NDSWC 2008; USGS 2008.

Repurposed Pipeline with two 24-strand Fiber Optic Cables (adjacent to crude oil pipeline and in corridor)

See Figure F-4



See Figure F-3

Repurposed Pipeline with two 24-strand Fiber Optic Cables (adjacent to crude oil pipeline and in corridor)



Legend

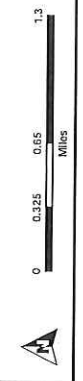
- Desktop Analysis Area
- 200-foot-wide Corridor
- Repurposed 8-inch-diameter Crude Oil Pipeline
- Proposed 12-inch-diameter Crude Oil Pipeline
- Proposed Facility
- Existing Facility
- Match Line

- Cemetery
- Church
- Schoolhouse
- Vacant Schoolhouse
- Residence
- Historical Site

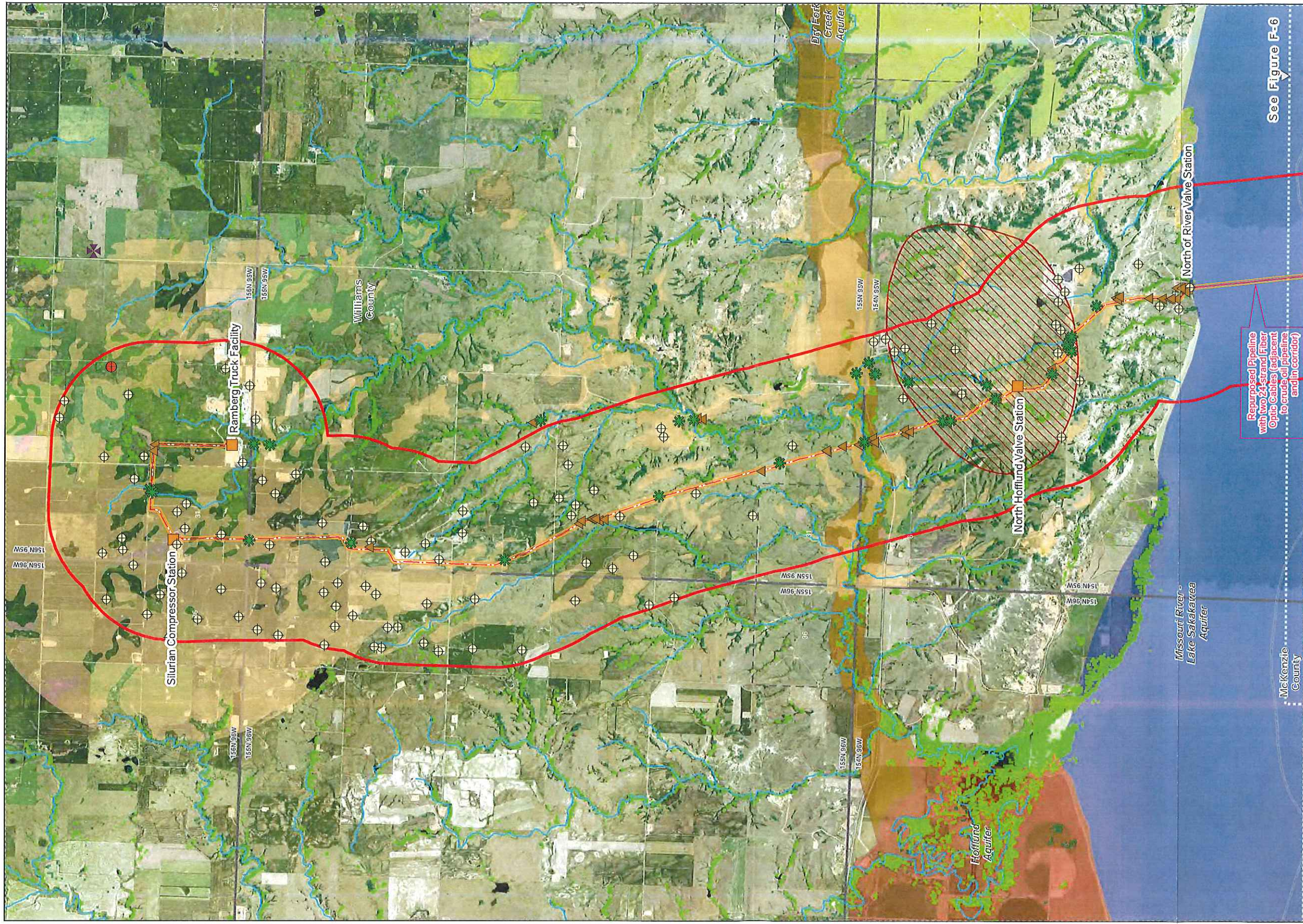
- Landslide Area
- Rural Water Association
- Elm Tree Historic Archaeological District
- U.S. Forest Service Land
- Tribal Land

Hawkeye Pipeline System Project

Figure F-4
Crude Oil Pipeline Route Avoidance Areas



Sources: Hess 2014; NDDOT 2008; NDDTL 2014; NDGF 2011; NDSWC 2008; USGS 2008.



See Figure F-6

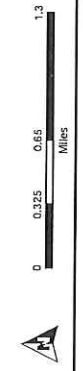


- Legend**
- Desktop Analysis Area
 - 200-foot-wide Corridor
 - Repurposed 8-inch-diameter Crude Oil Pipeline
 - Proposed 12-inch-diameter Crude Oil Pipeline
 - Existing Facility
 - Match Line
 - Mineral Deposits/Development
 - Mineable Lignite
 - Surficial Aquifers
 - Dry Fork Creek
 - Hofflund
 - Missouri River - Lake Sakakawea

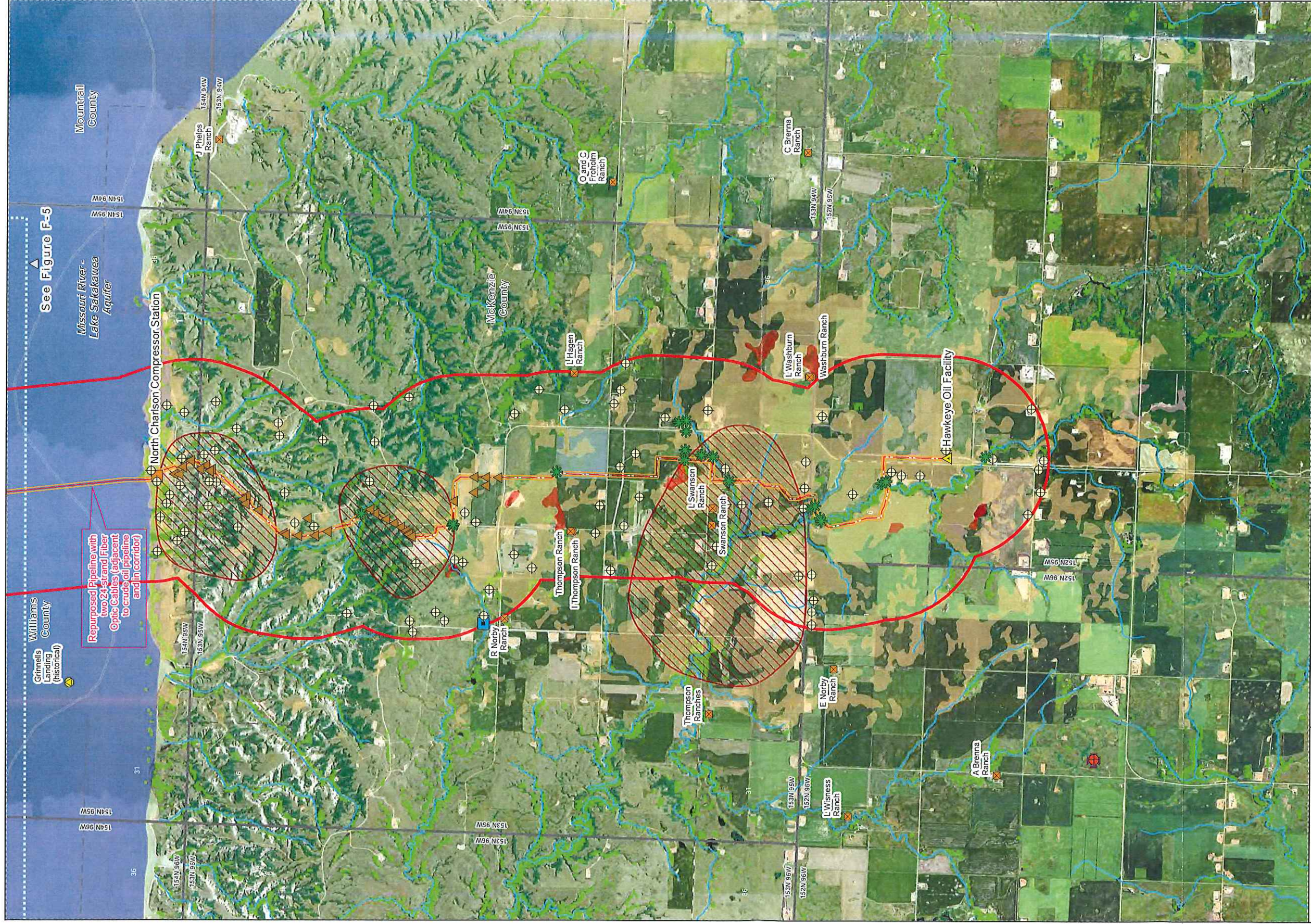
- * Wetland (Field Surveyed)
 - ▲ Woodland (Field Surveyed)
 - Stream
 - Wetland
 - Woodland
- Farmland Class**
- Prime Farmland
 - Farmland of Statewide Importance
- Other Features**
- Antenna
 - ⊕ Oil/Gas Well Pad
 - ⊗ Microwave

Hawkeye Pipeline System Project

Figure F-5
Crude Oil Pipeline Route Selection Criteria



Sources: Hess 2014; NDGS 1980; SSURGO 2003; USGS 2008, 2010.



See Figure F-5

Repurposed Pipeline with two 24-strand Fiber Optic Cables (adjacent to crude oil pipeline and in corridor)



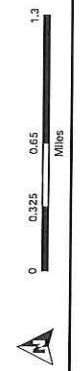
- Legend**
- Desktop Analysis Area
 - 200-foot-wide Corridor
 - Repurposed 8-inch-diameter Crude Oil Pipeline
 - Proposed 12-inch-diameter Crude Oil Pipeline
 - Proposed Facility
 - Existing Facility
 - Match Line
 - Mineral Deposits/Development
 - Mineable Lignite
 - Surficial Aquifers
 - Missouri River - Lake Sakakawea

- Farmland Class**
- Prime Farmland
 - Farmland of Statewide Importance
 - Prime Farmland if Drained
 - Other Features
 - Antenna
 - Ranch
 - Oil/Gas Well Pad
 - Microwave
 - Mobile Radio
 - Historical Site

- Wetland (Field Surveyed)**
- * Wetland (Field Surveyed)
 - ▲ Woodland (Field Surveyed)
 - Stream
 - Wetland
 - Woodland

Hawkeye Pipeline System Project

Figure F-6
Crude Oil Pipeline Route Selection Criteria



Sources: Hess 2014; NDGS 1980; SSURGO 2003; USGS 2008, 2010.