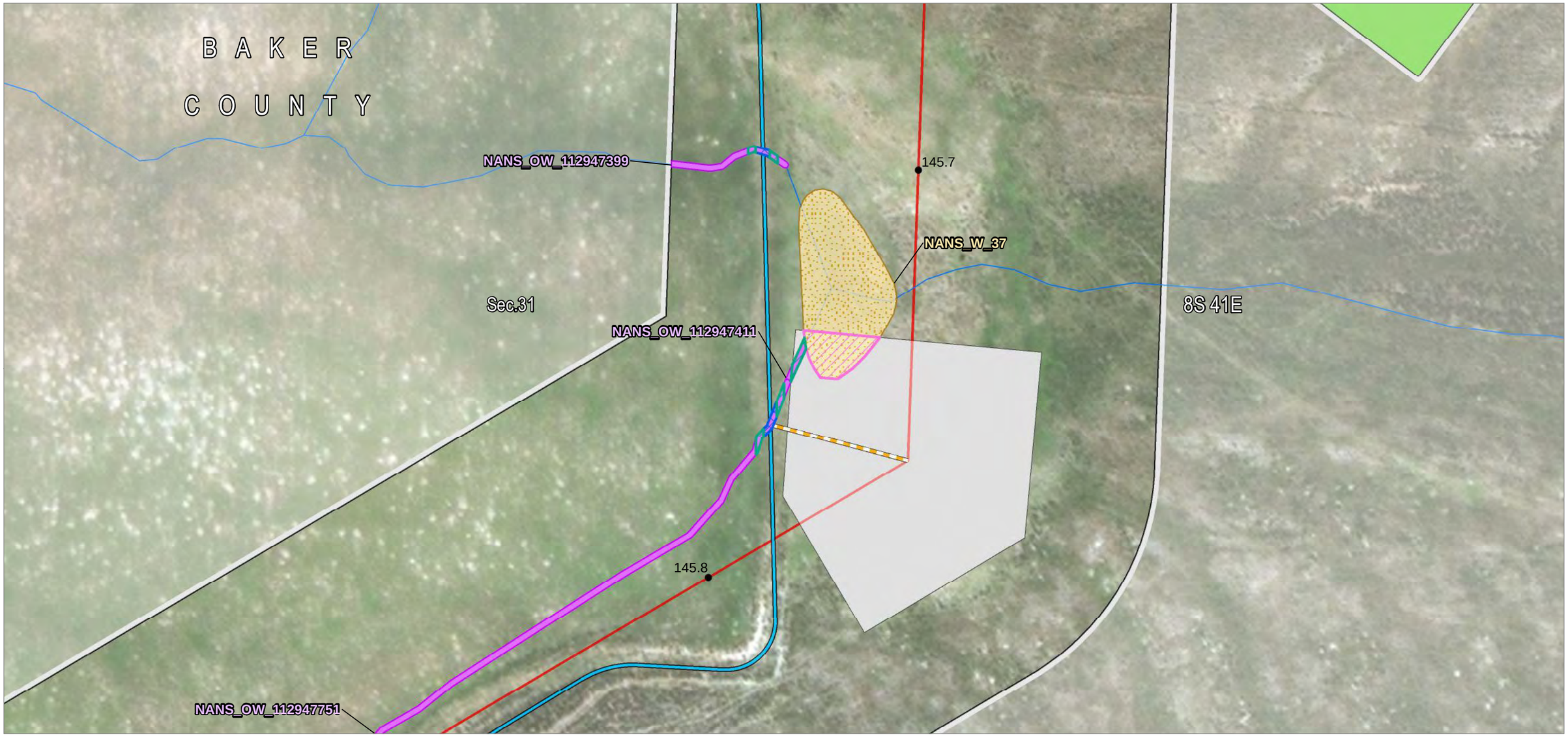

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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

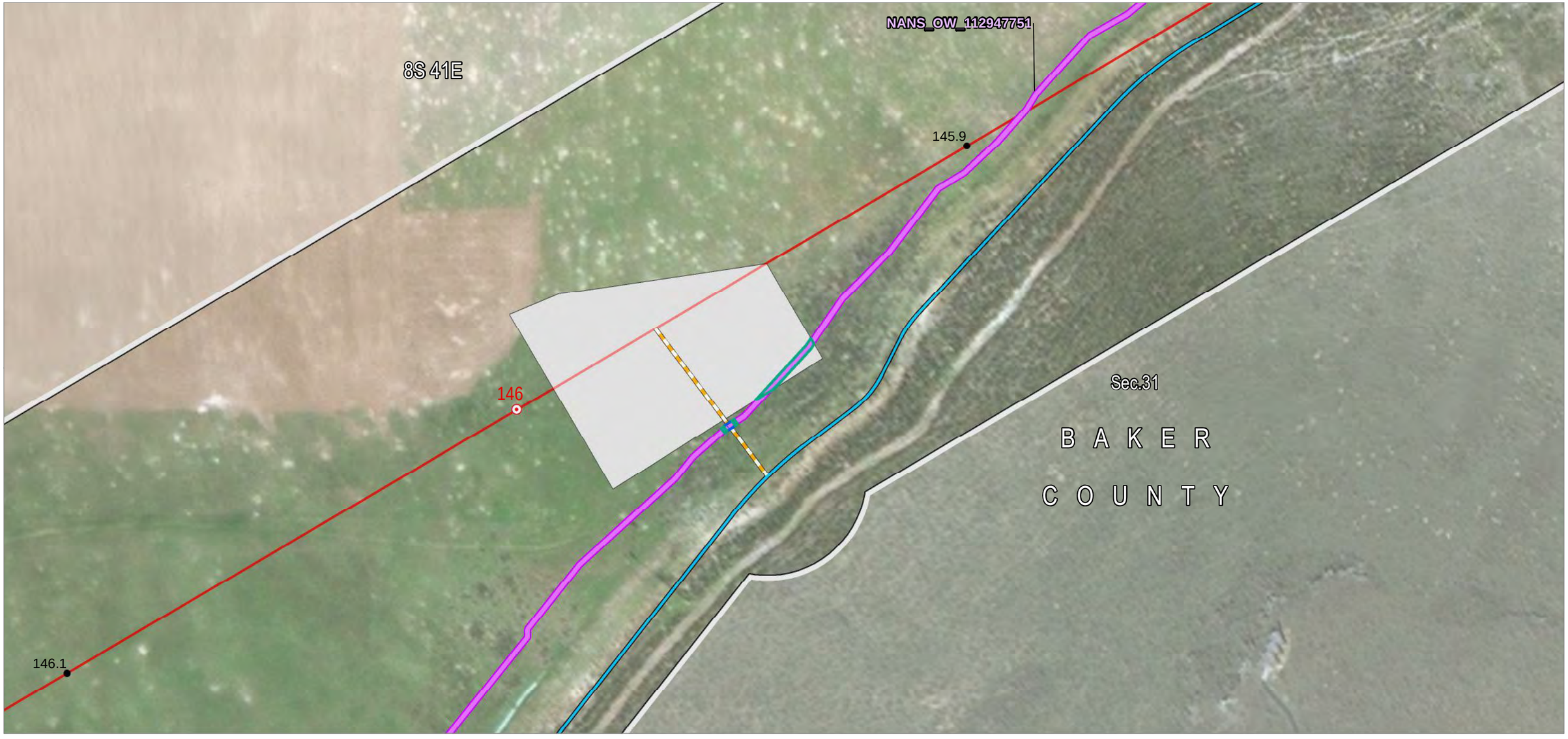
Stream Impact Type
- Temporary
- Permanent

Wetland
- NANS Wetland (NWI)

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-114
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

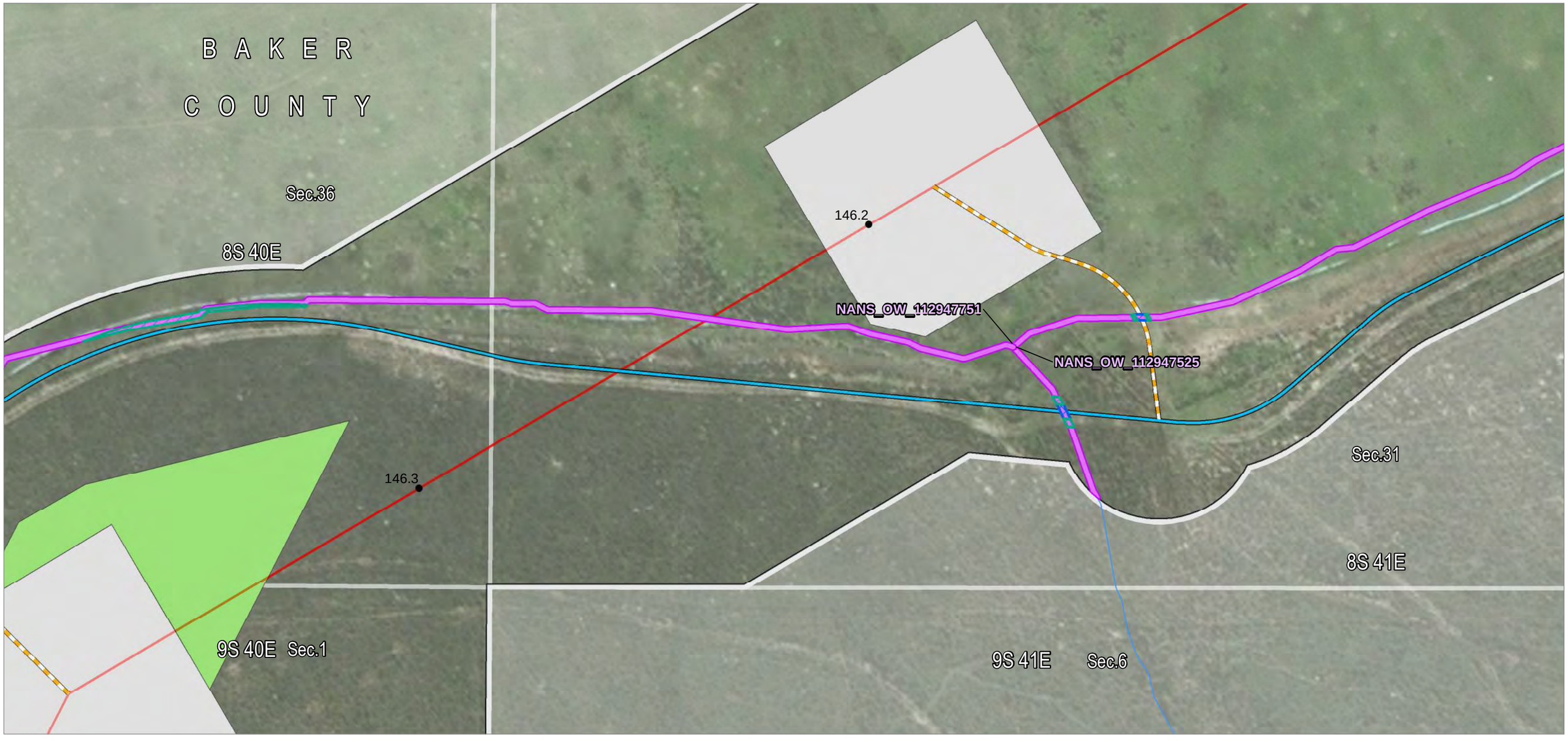
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-115
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

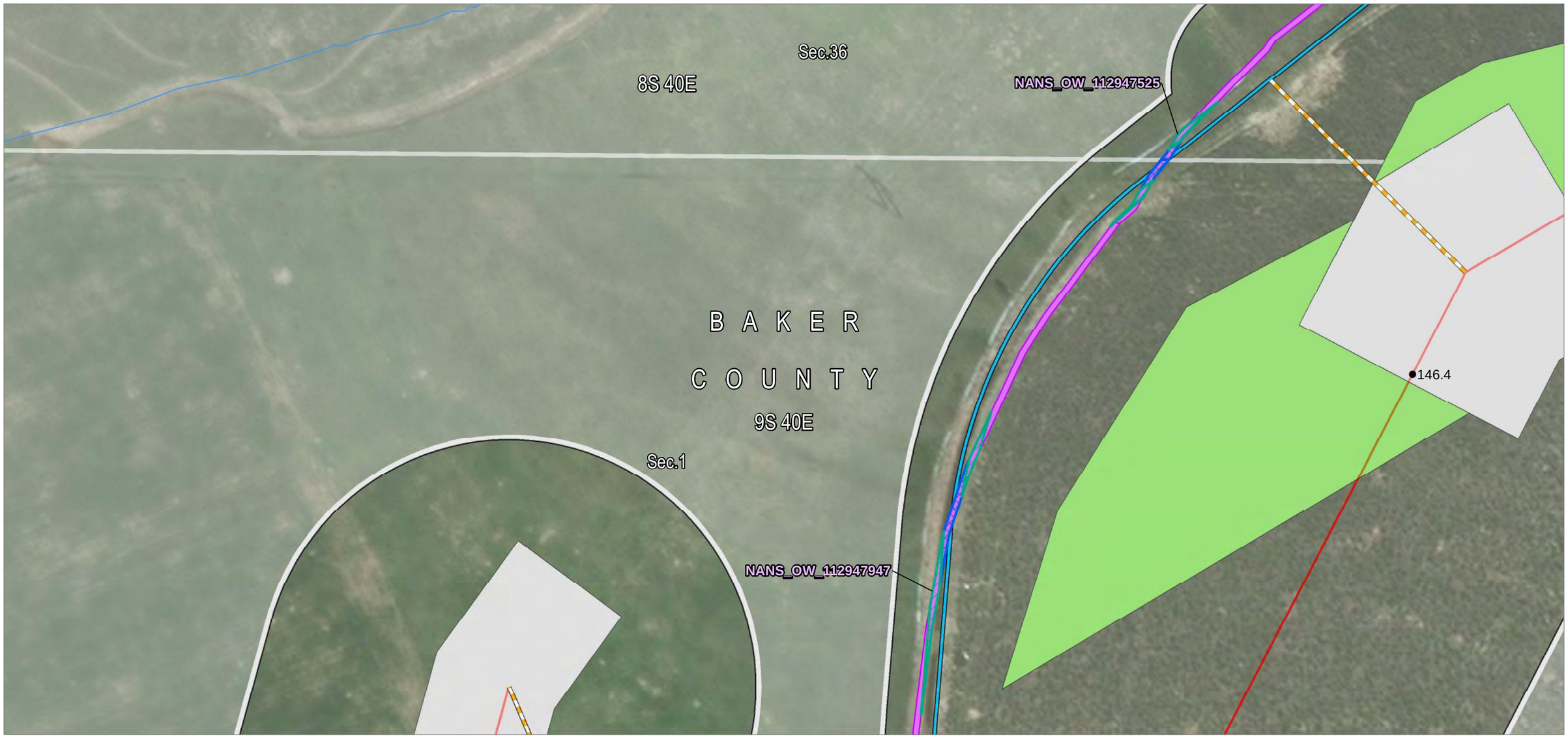
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-116
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

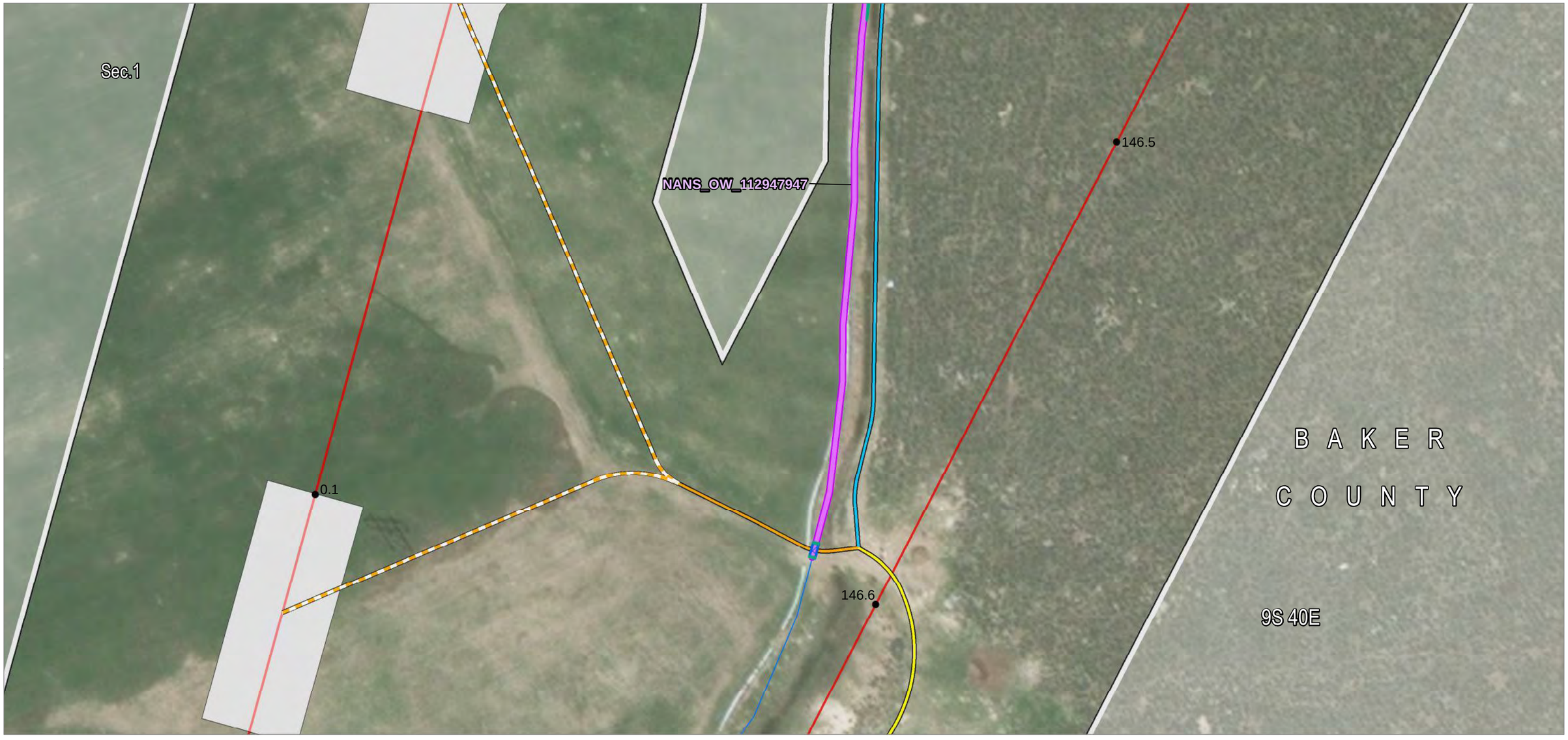
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-117
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-118
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Work Areas

Multi-Use Area

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-119
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Wetland

Field Survey Wetland

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-120
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

0 100
Feet

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

- Rivers, Streams, and Canals

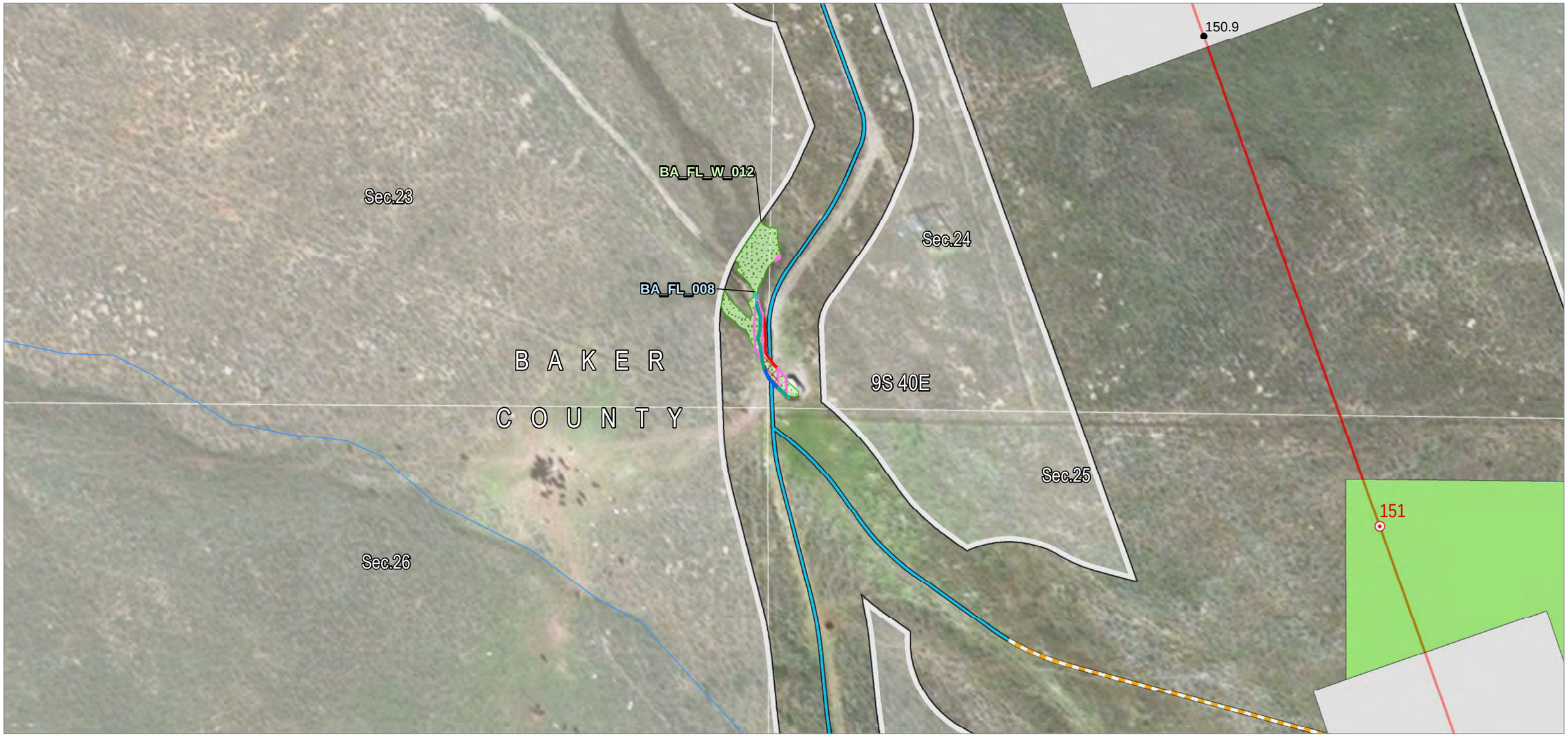
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-121
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

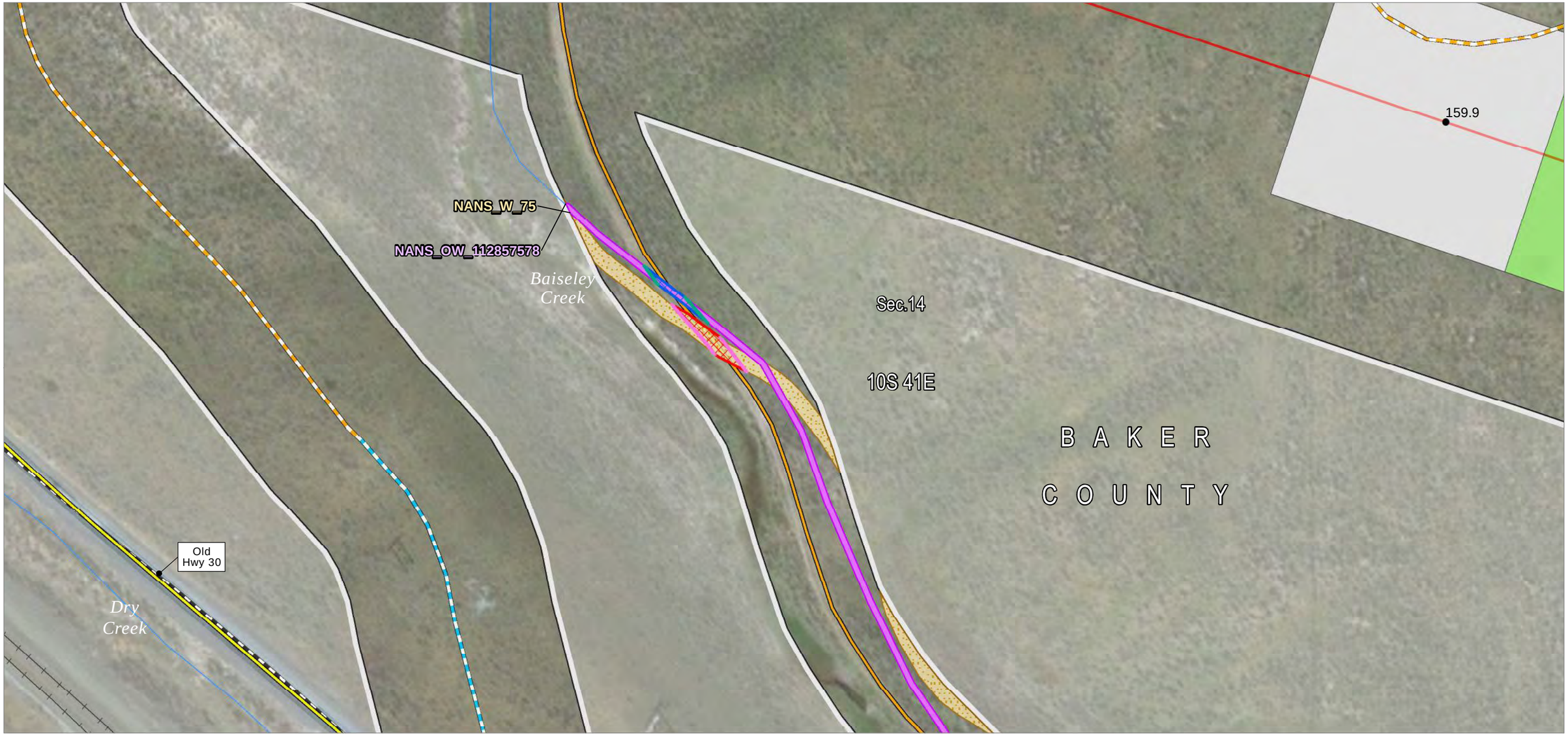
Stream Impact Type
- Temporary
- Permanent

Wetland
- Field Survey Wetland

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-122
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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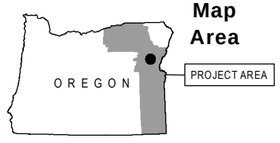
Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features
- Site Boundary
- Proposed Route
- Route Centerline
- Proposed Route
- Work Areas
- Pulling and Tensioning
- Structure Work Area
- Railroads
- Mileposts
- Tenth-mile
- Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

Transportation
- Other Major Roads

- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

Wetland
- NANS Wetland (NWI)

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-123
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County

BAKER

COUNTY

Old Hwy 30

Sec.14

10S 41E

Dry Creek

Baiseley Creek

NANS_W_75

NANS_OW_112857578

Sec.23

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Railroads

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 21-70% Improvements

New Road, Bladed

Transportation

Other Major Roads

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

Wetland

NANS Wetland (NWI)

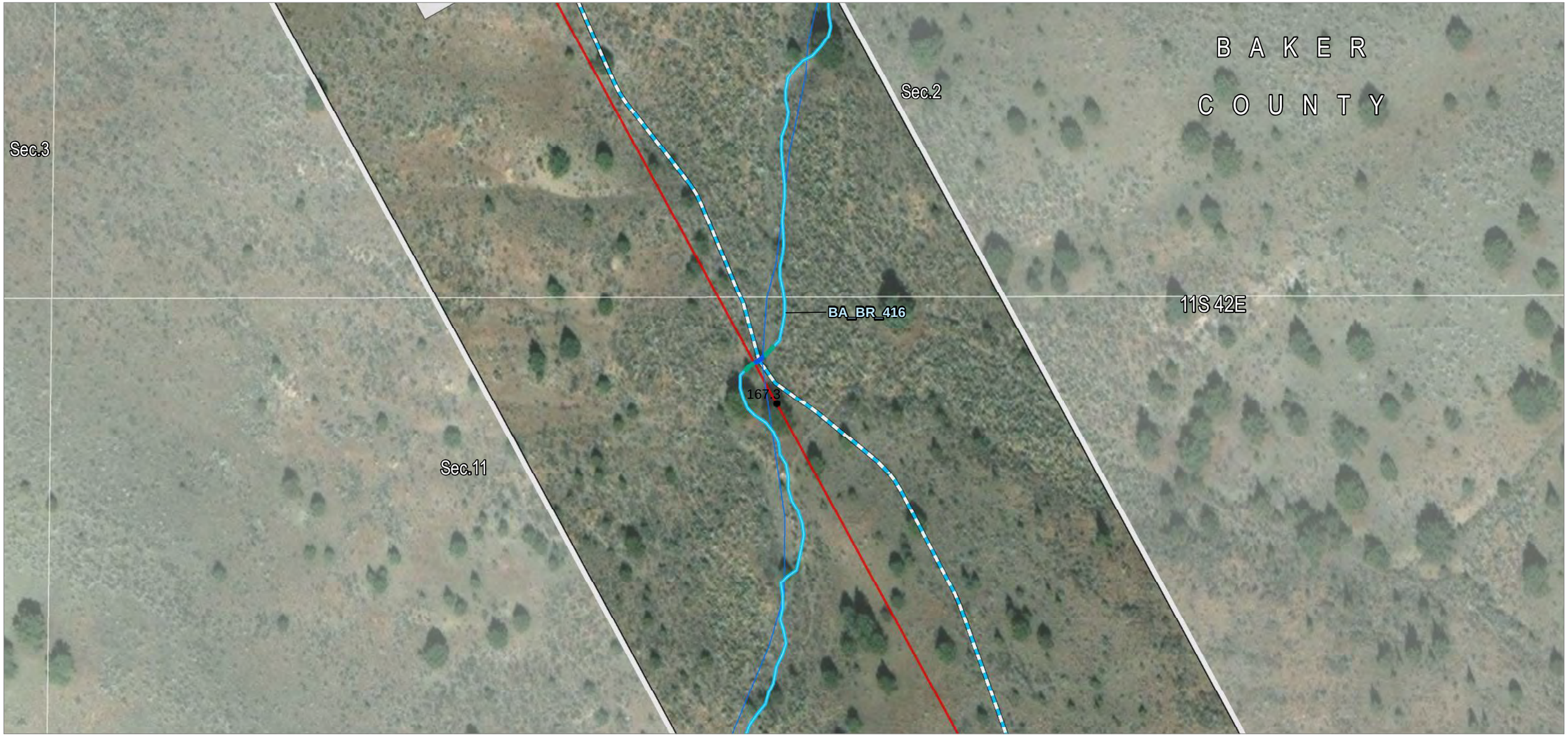
IDAHO POWER. An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-124

Wetland and Other Waters Joint Permit Application Detail Maps

Baker County



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Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

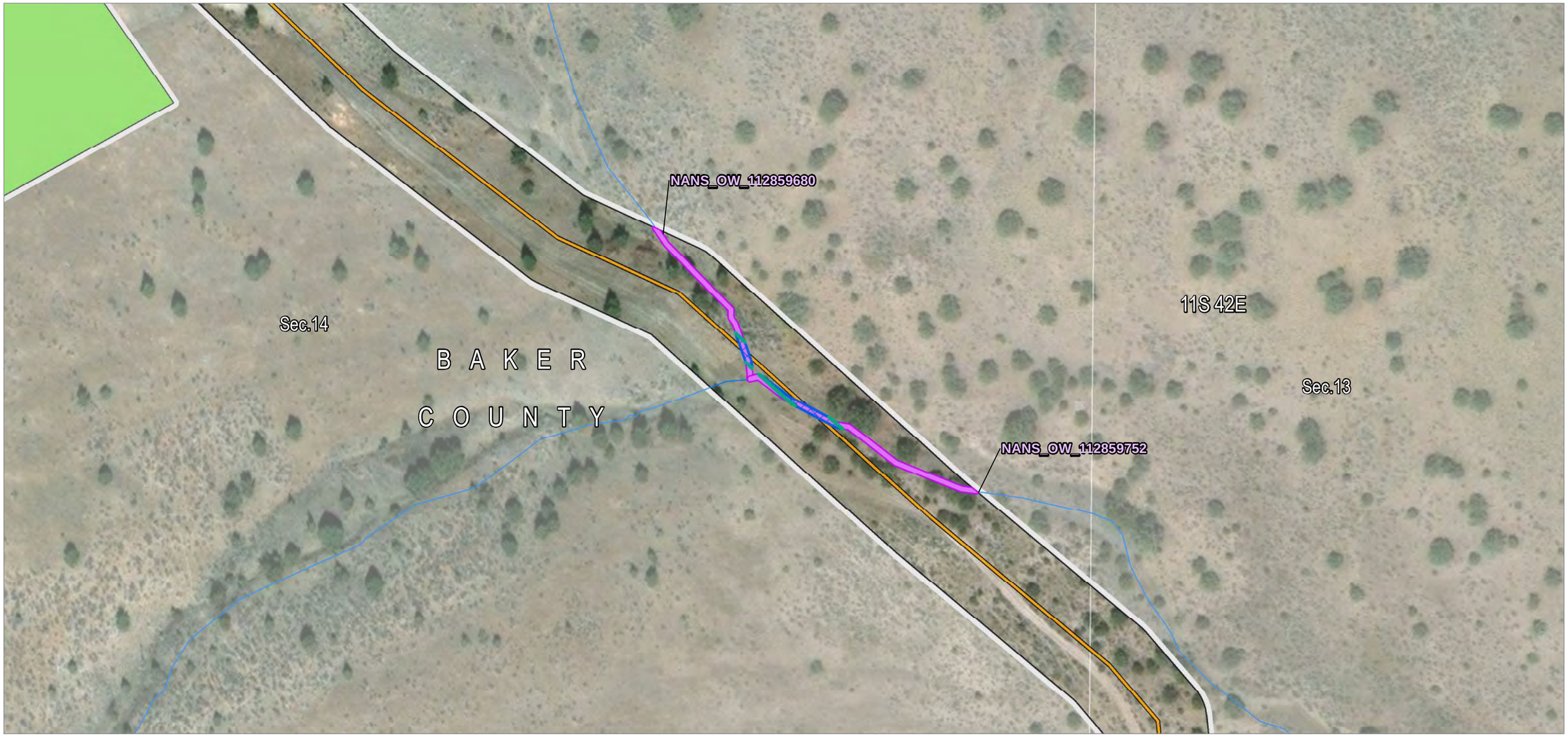
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-125
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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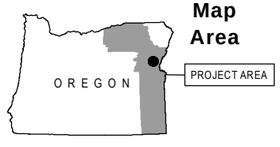
Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Work Areas

Pulling and Tensioning

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-126
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County

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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

- Proposed Route

Construction Access

- Existing Road, Substantial Modification, 21-70% Improvements
- Rivers, Streams, and Canals

Other Waters

- NANS Streams (NHD)

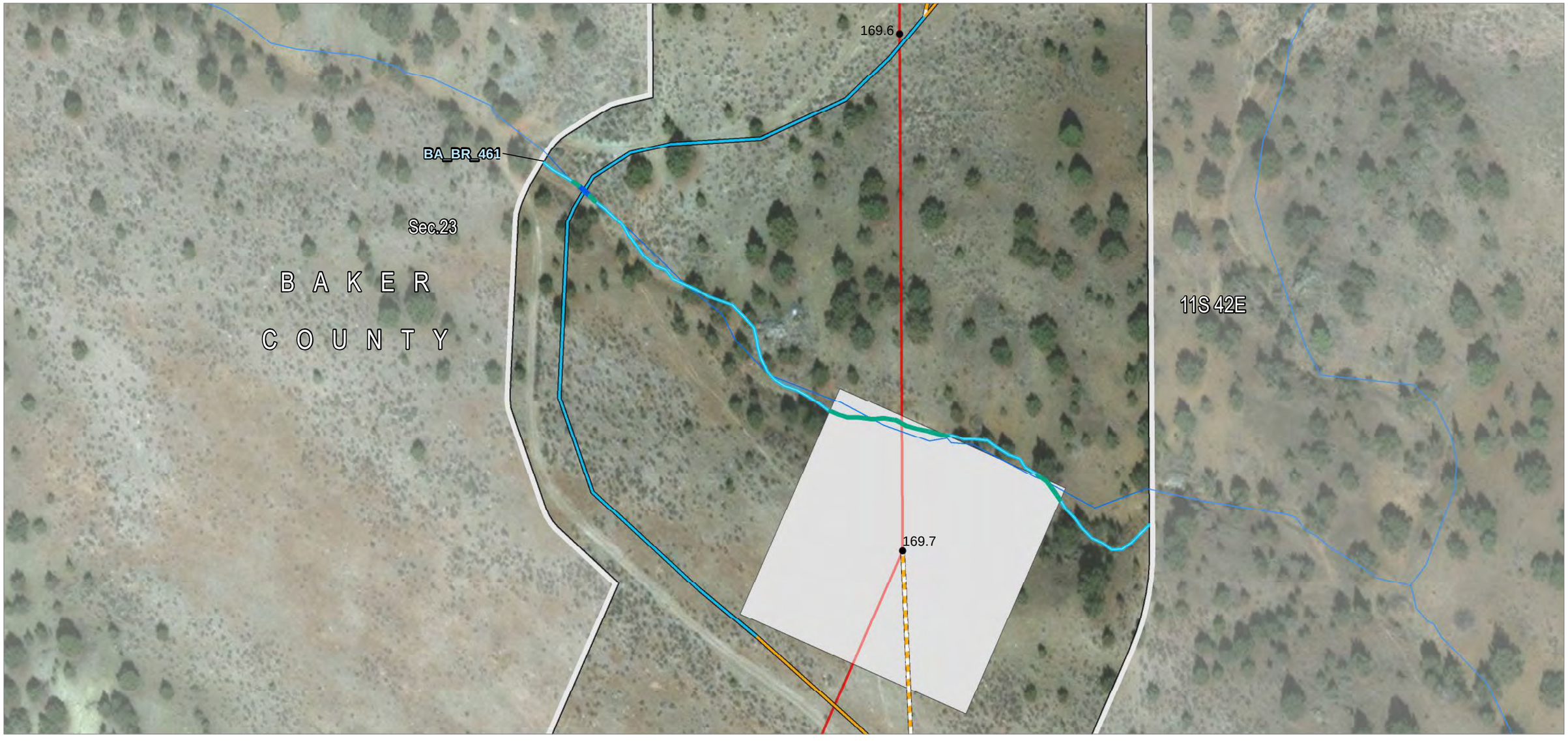
Stream Impact Type

- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-127
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive
- Rivers, Streams, and Canals

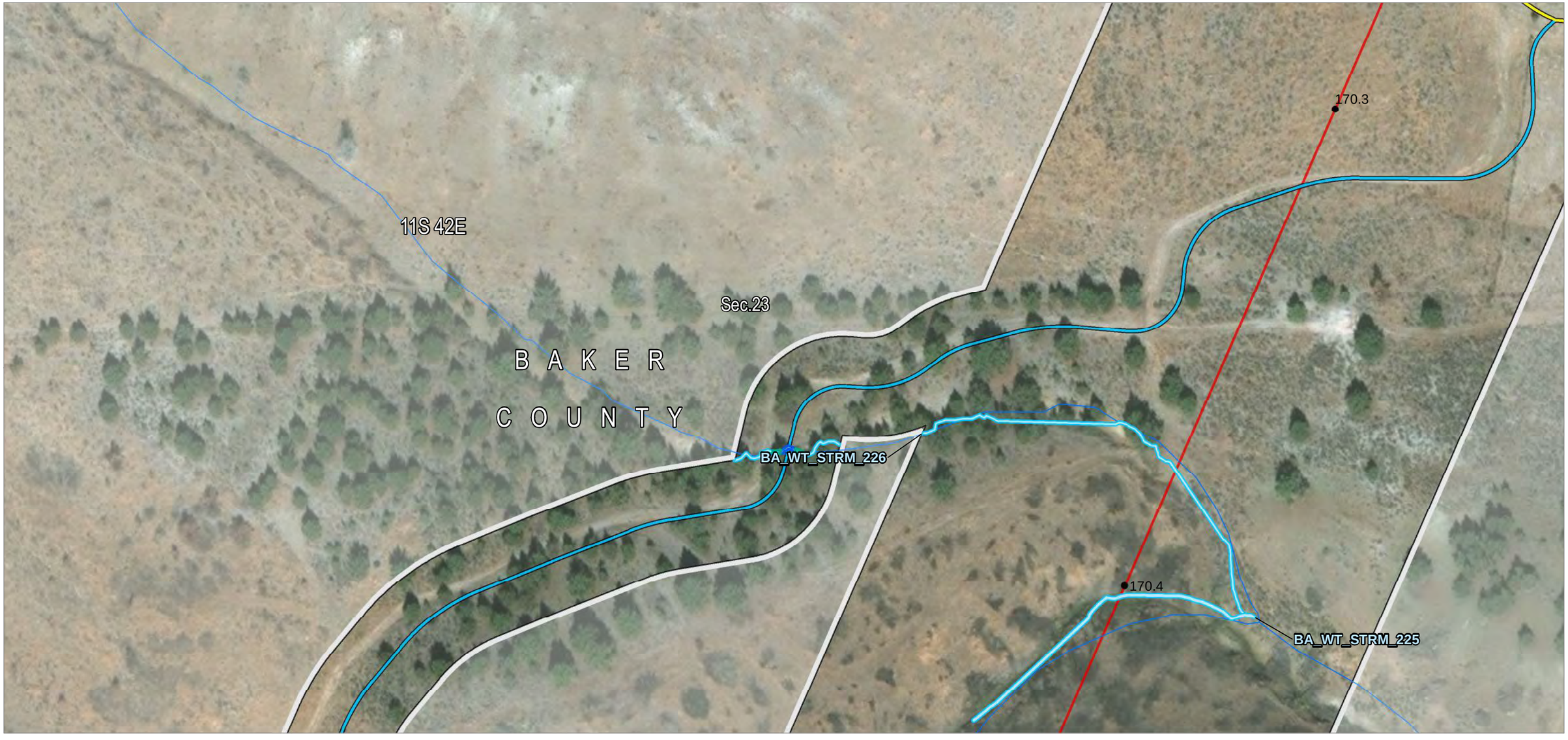
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-128
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

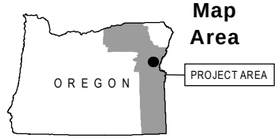
Attachment K-129
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

N

0 100

Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

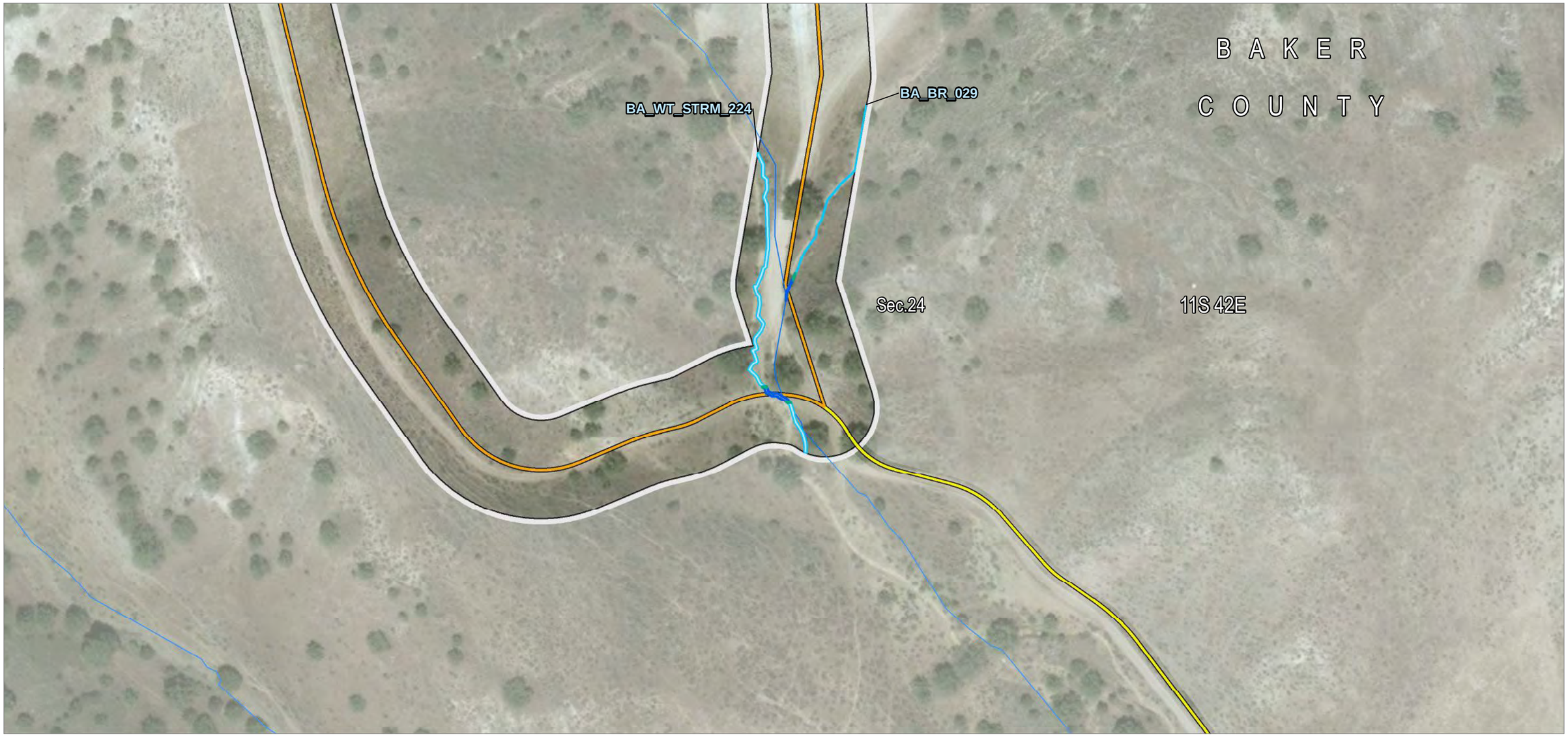
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-130
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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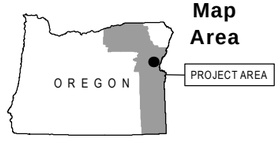
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

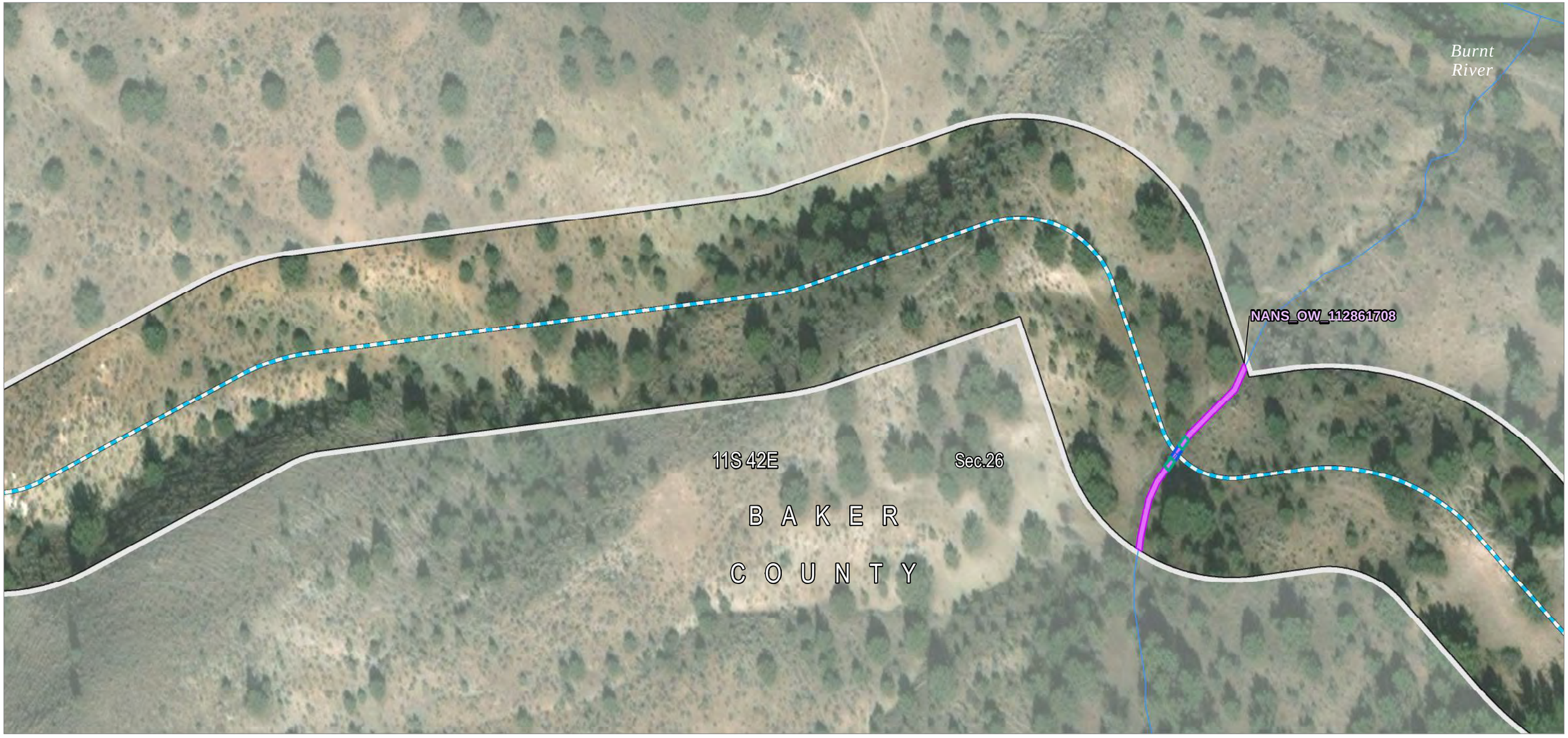
Temporary

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-131
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

New Road, Bladed

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-132
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-133
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

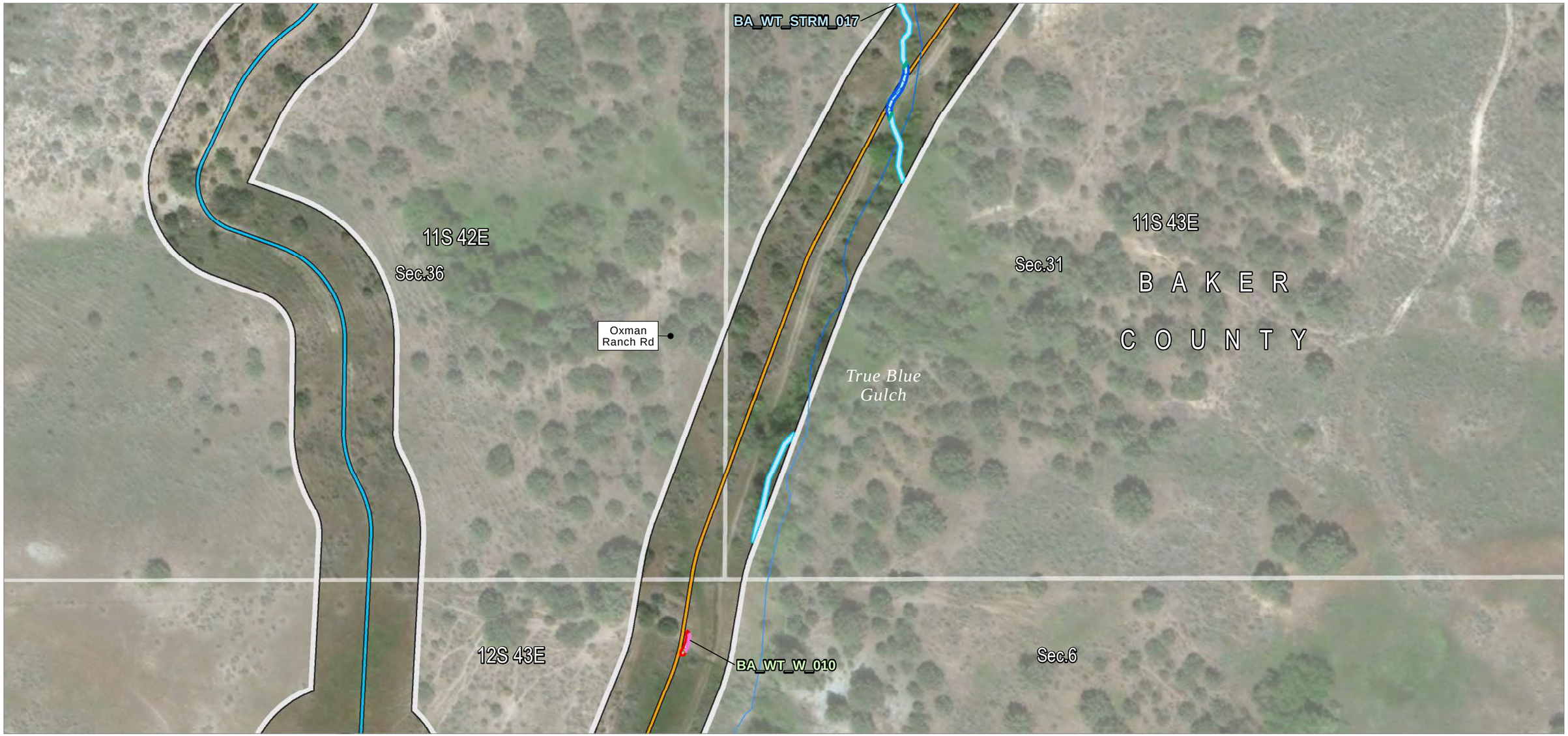
Wetland

Field Survey Wetland

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-134
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

Wetland

Field Survey Wetland

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-135
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

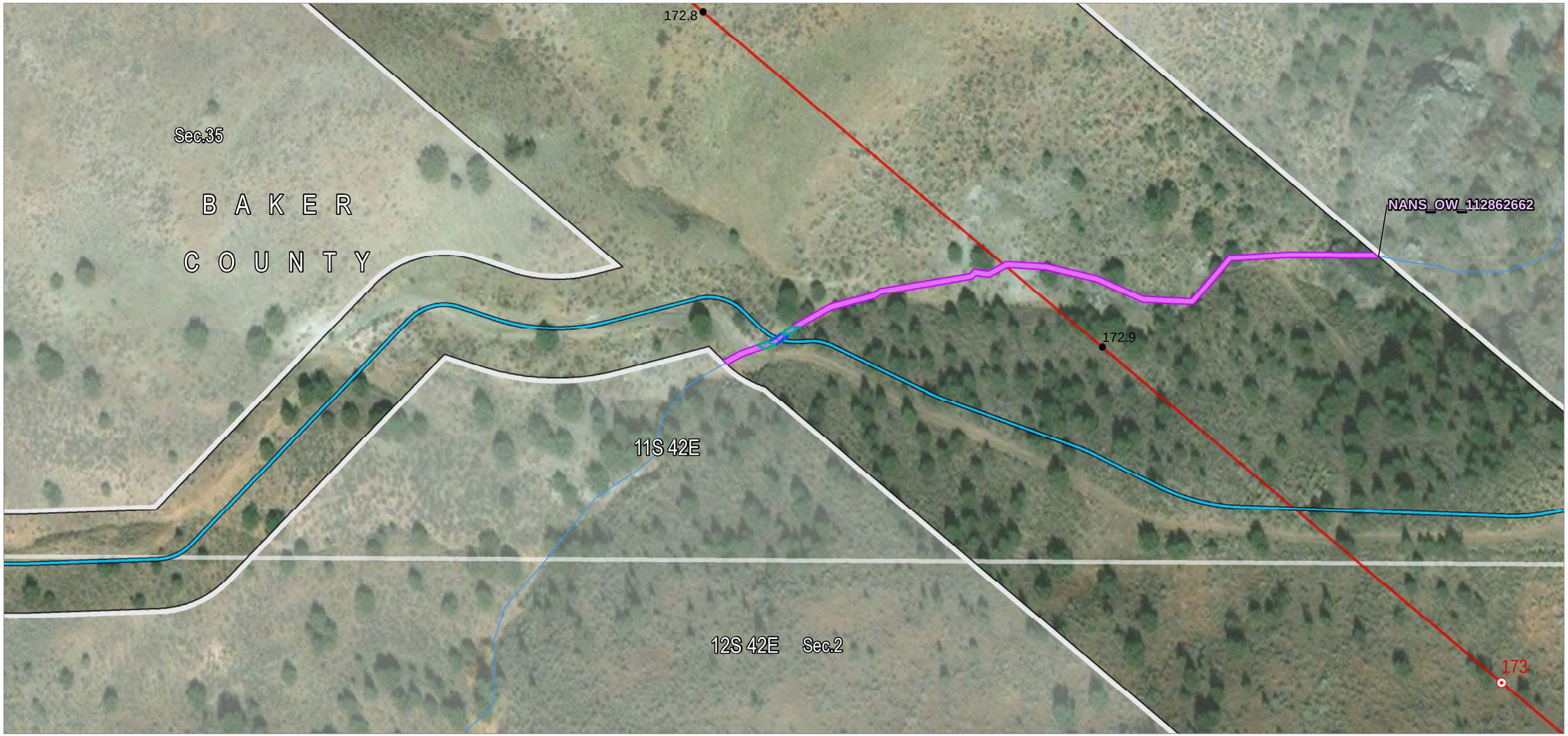
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-136
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Mile
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

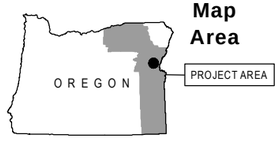
IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-137
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

0 100
Feet

Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-138
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

N

0 100

Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Wetland

Field Survey Wetland

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-139
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

BAKER

COUNTY

BA_WT_W_202

BA_WT_STRM_211

Sec.12

Oxman Ranch Rd

BA_WT_STRM_213

BA_WT_W_204

12S 42E

True Blue Gulch

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

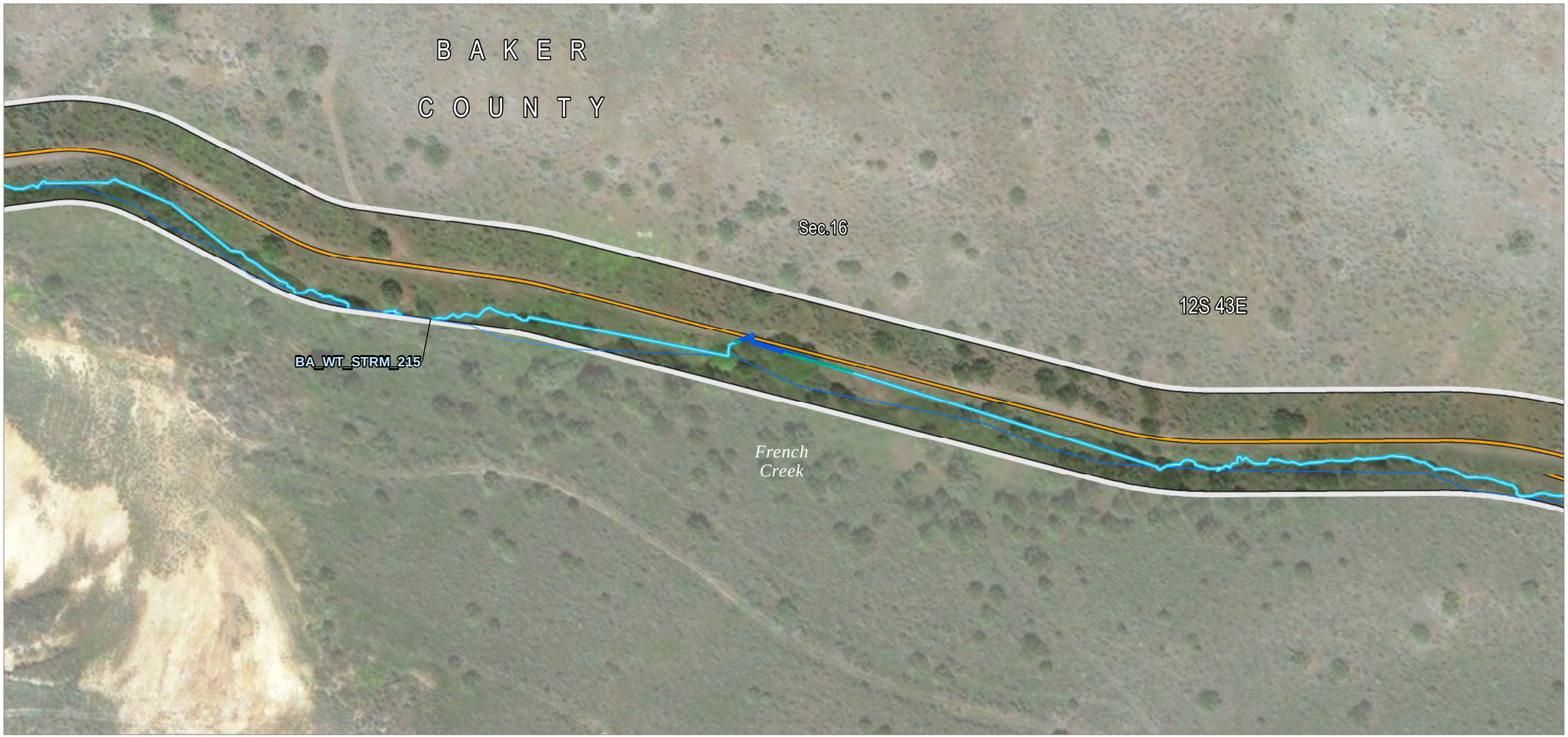
Wetland

Field Survey Wetland

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-140
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

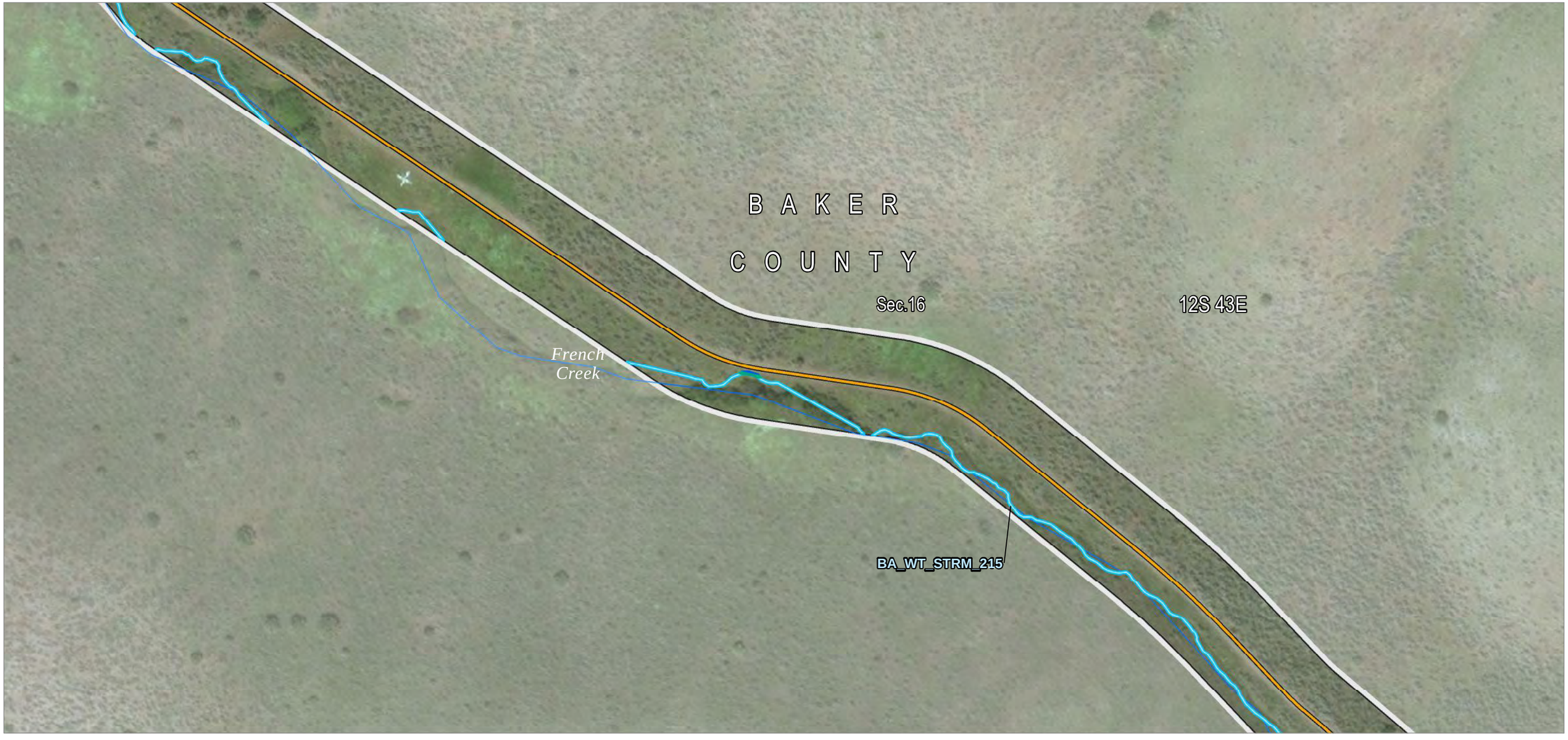
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-141
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-142
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

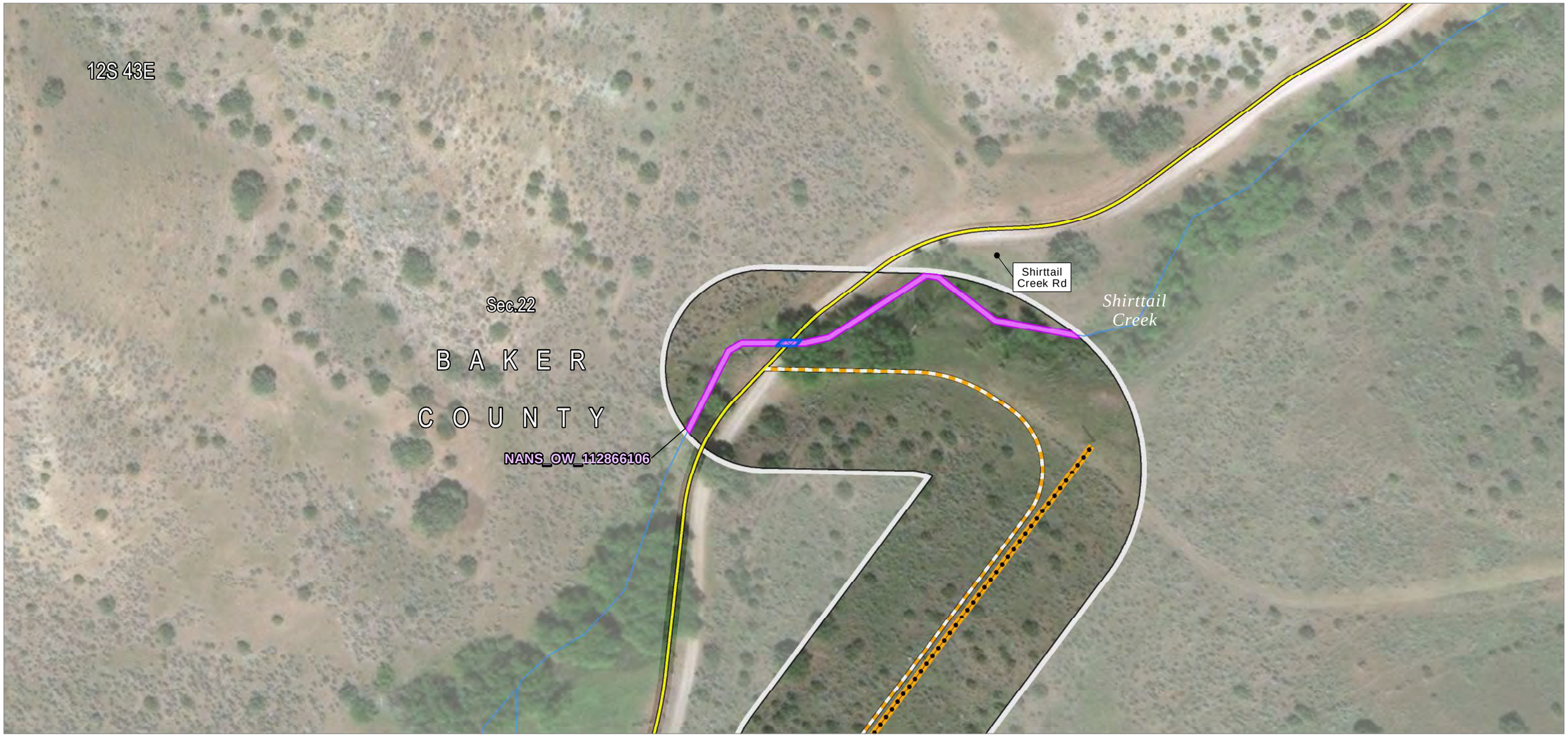
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-143
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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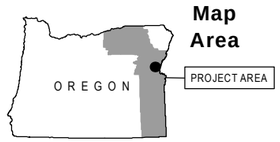
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route
- Distribution Line to Communication Station (IPC Service Territory Only)

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- New Road, Primitive
- Rivers, Streams, and Canals

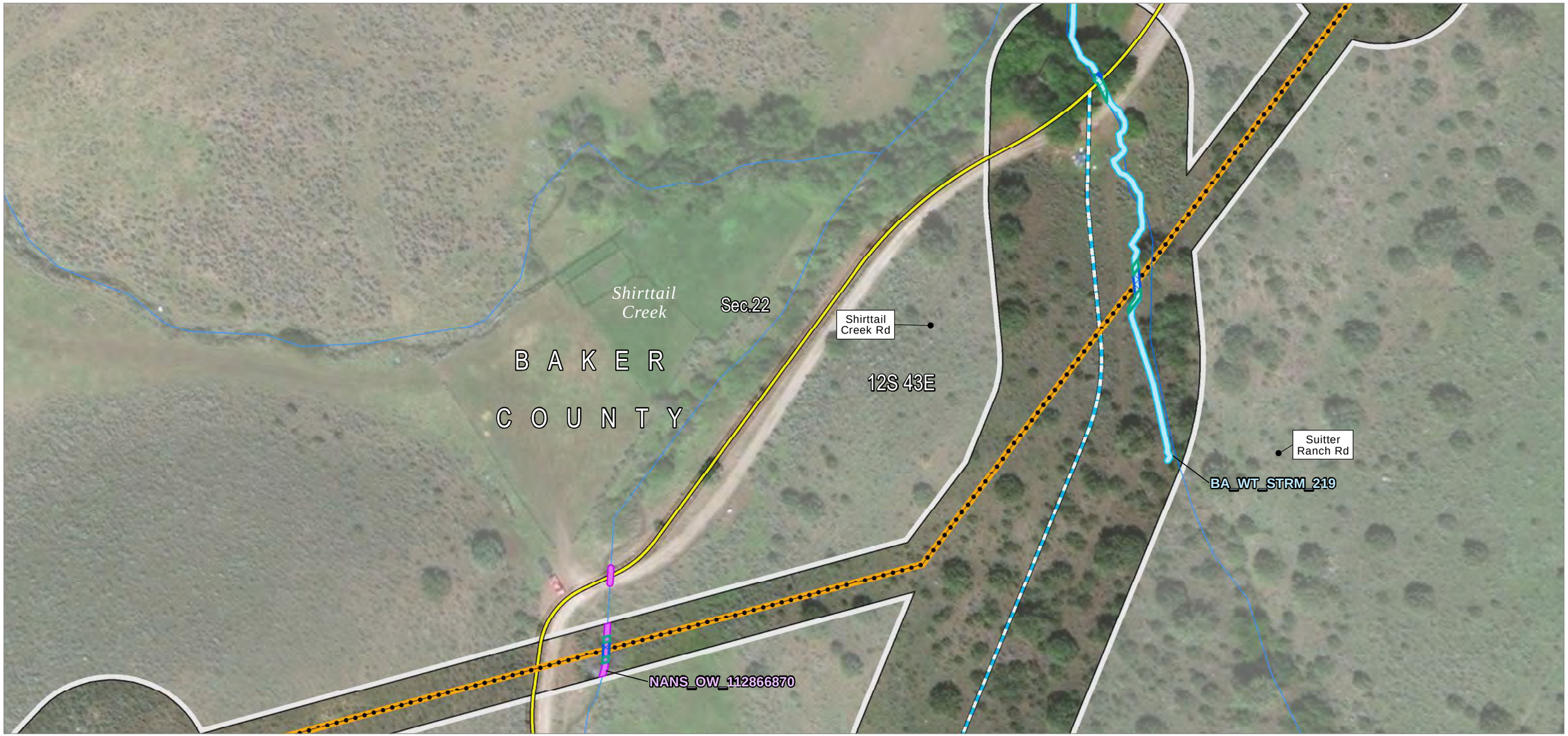
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-144
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route
- Distribution Line to Communication Station (IPC Service Territory Only)

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- New Road, Bladed
- Rivers, Streams, and Canals

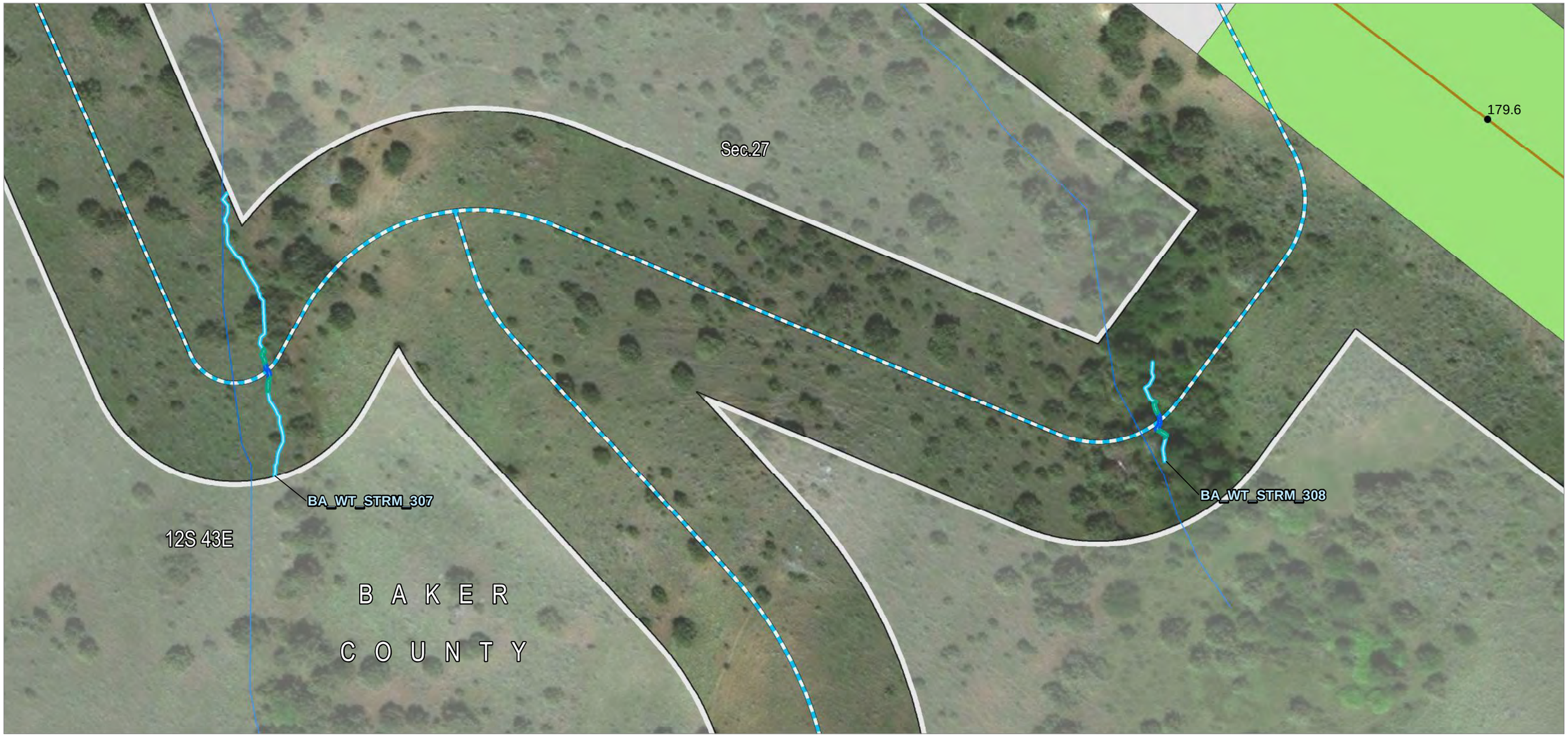
Other Waters
- Field Survey Streams
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-145
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

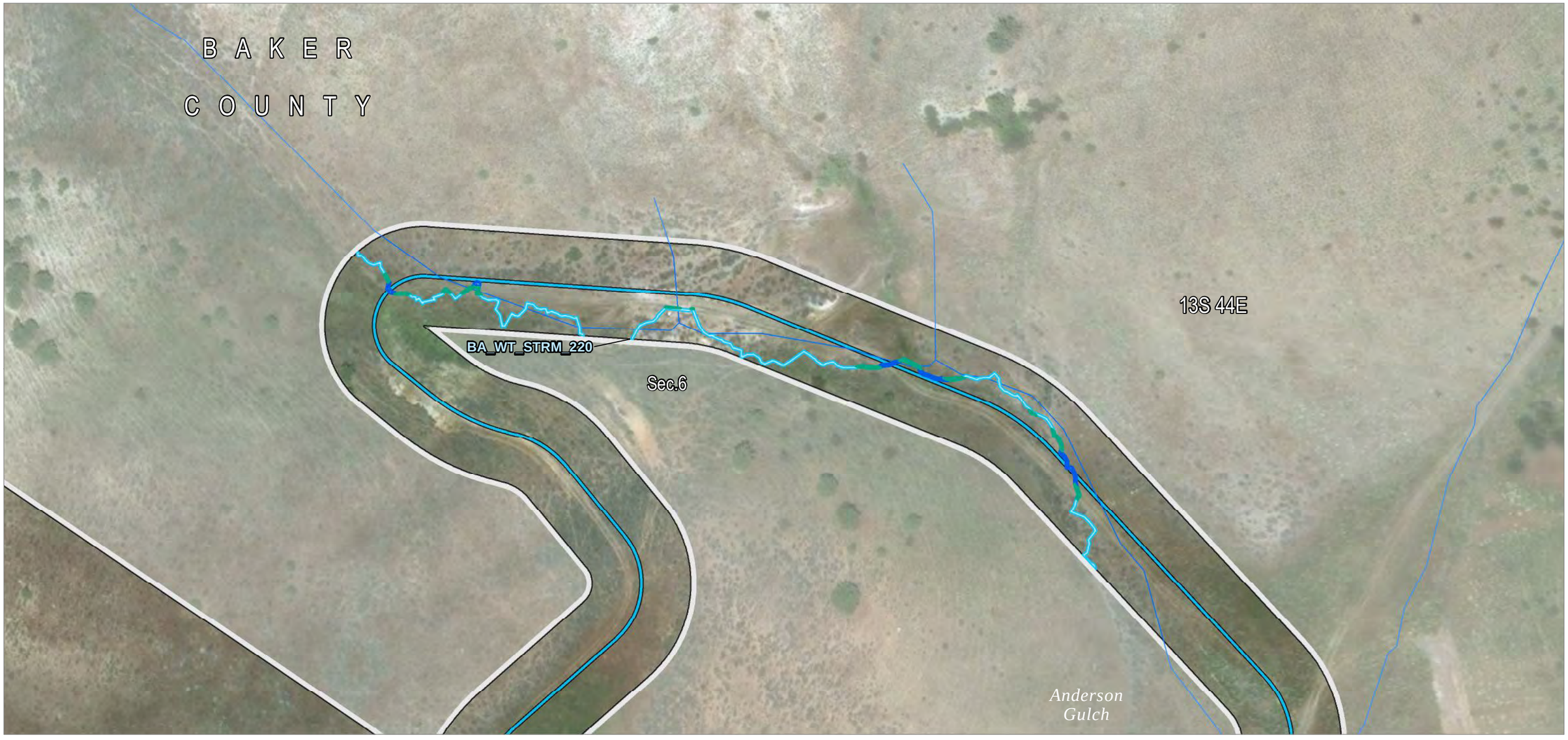
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-146
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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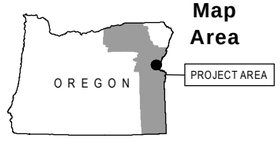
Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

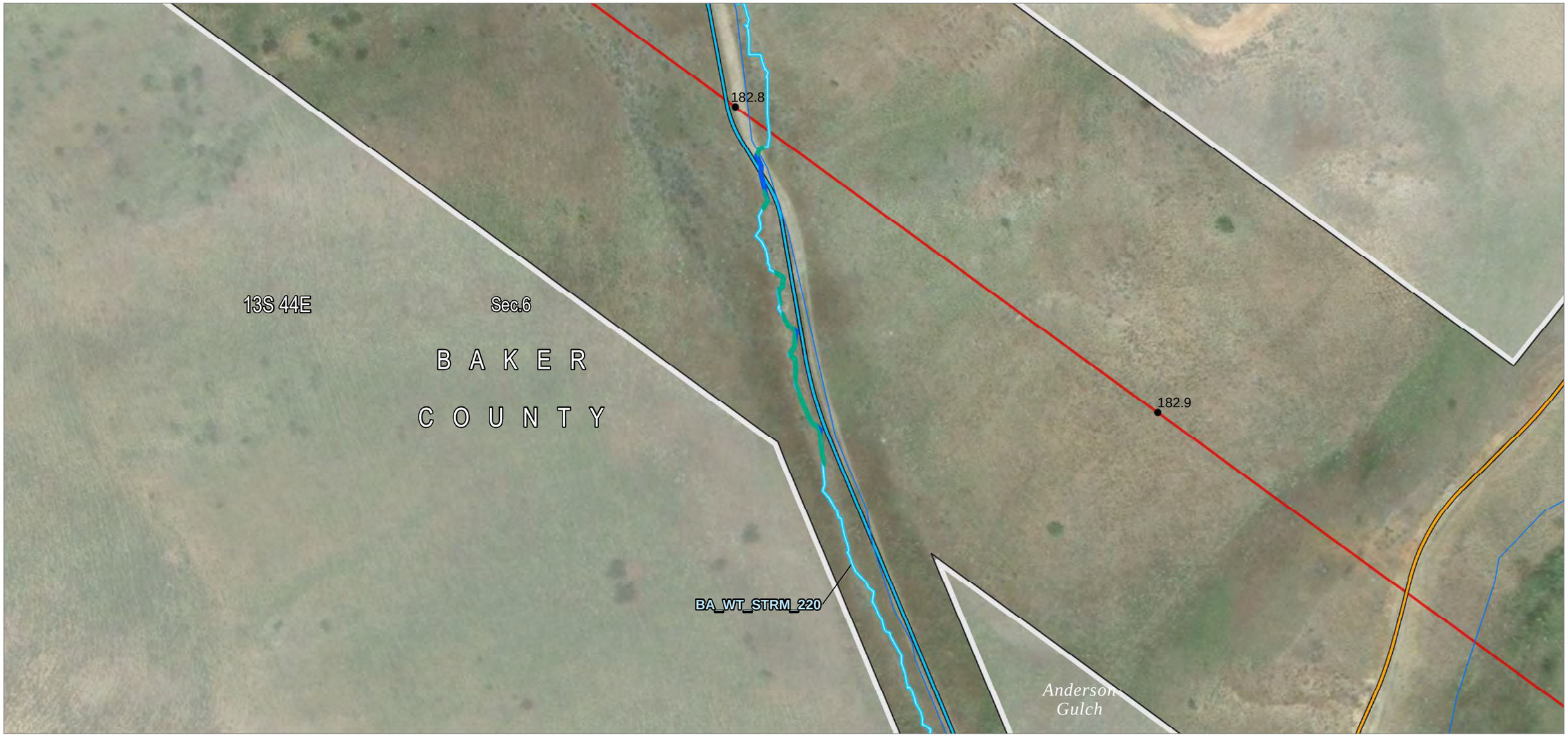
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-147
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- Rivers, Streams, and Canals

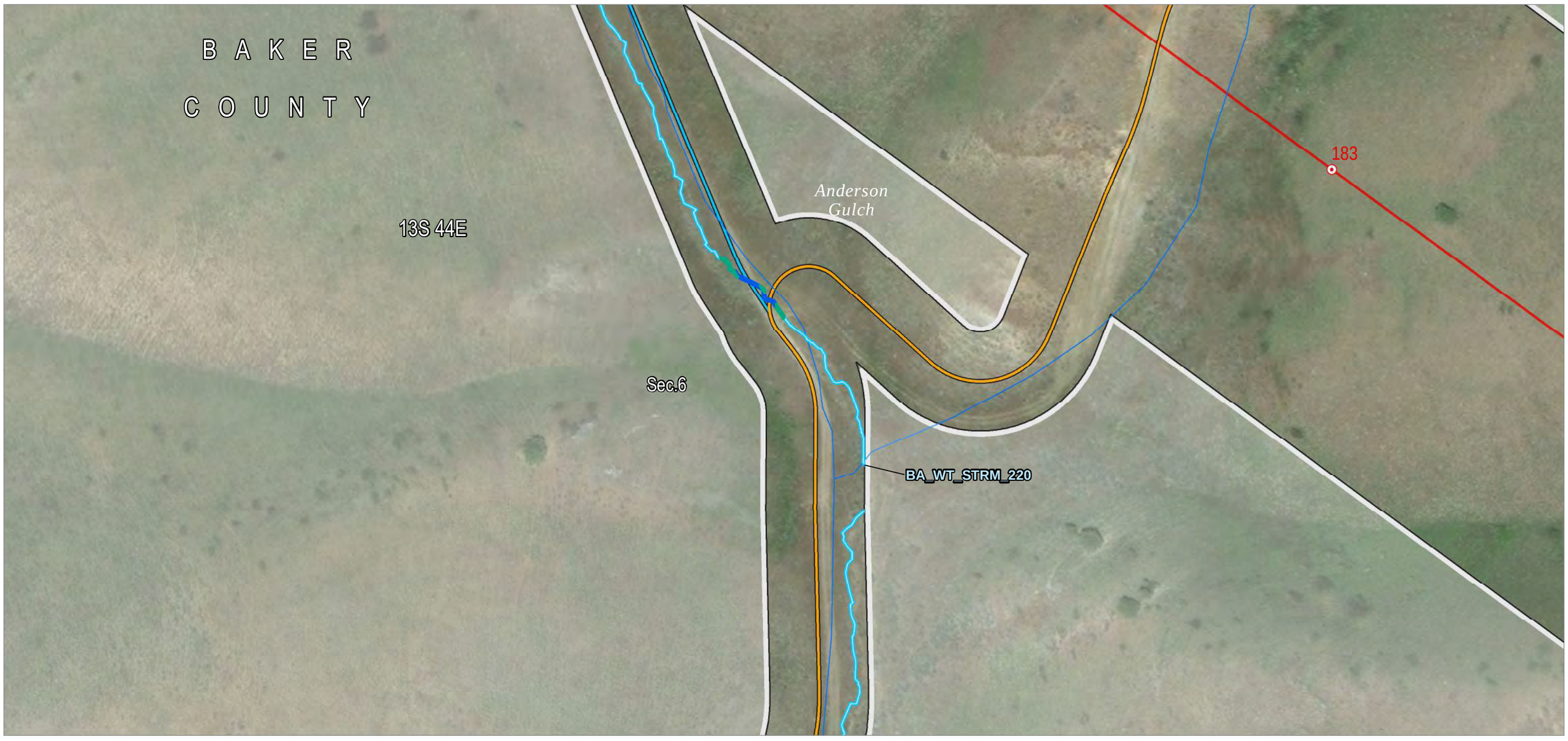
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-148
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- Rivers, Streams, and Canals

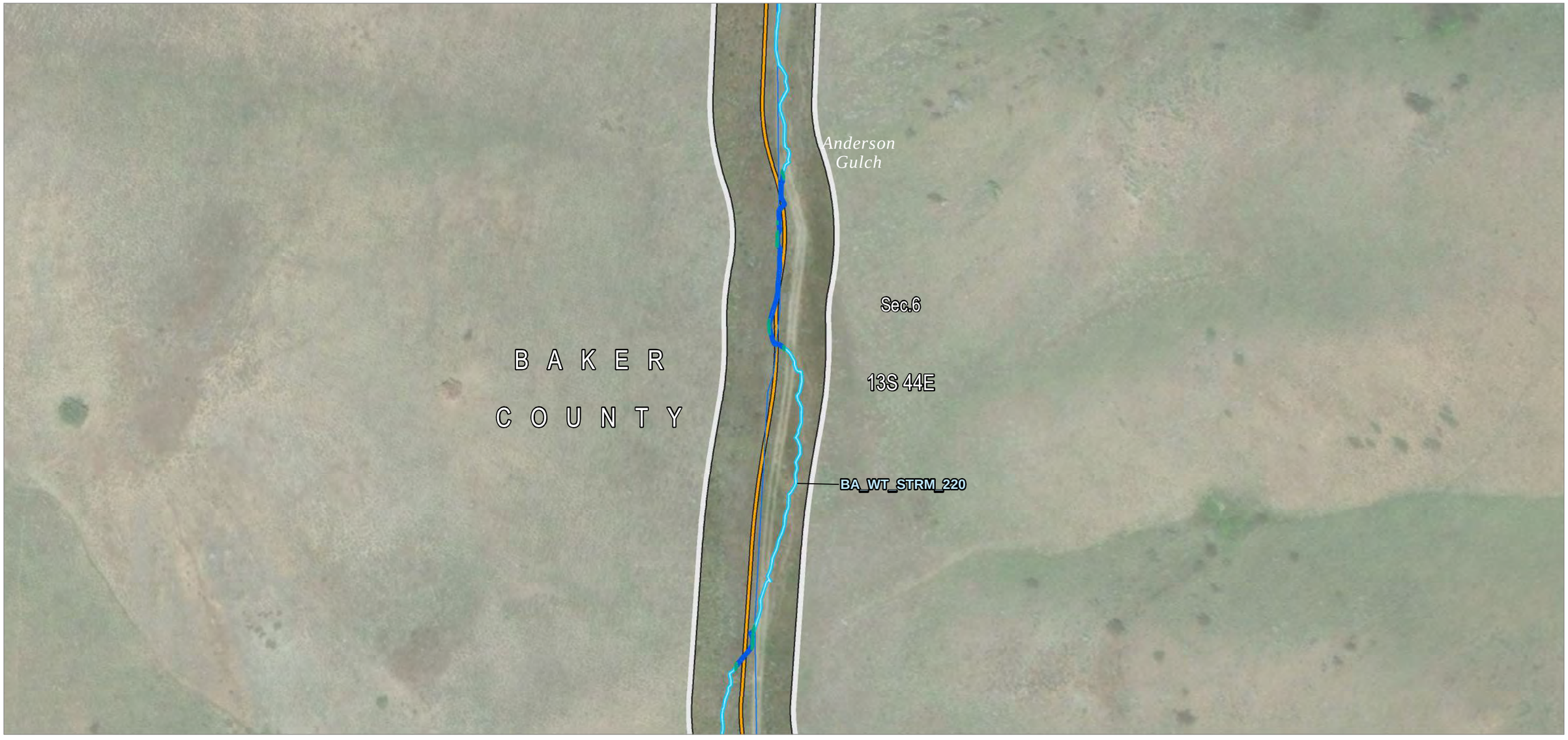
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-149
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-150
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County

Sec.6

B A K E R

C O U N T Y

13S 44E

BA_WT_STRM_220

Anderson Gulch

Sec.7

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

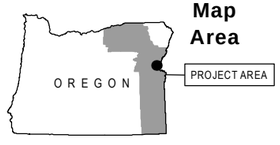
IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-151
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County

0 100
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

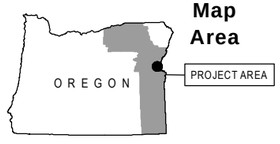
IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-152
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County

0 100
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Rivers, Streams, and Canals

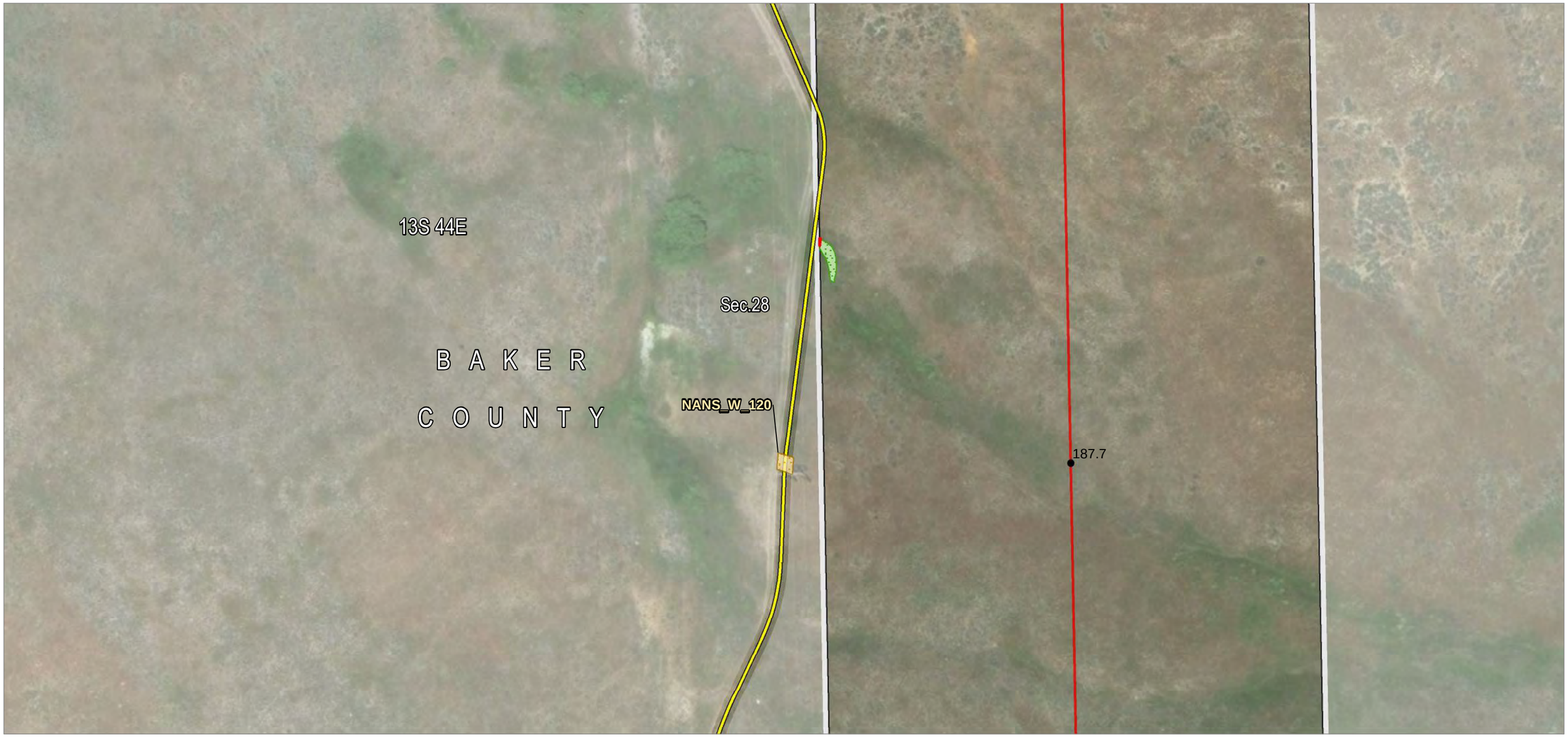
Other Waters
- Field Survey Streams

Stream Impact Type
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-153
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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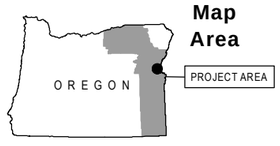
Feet



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

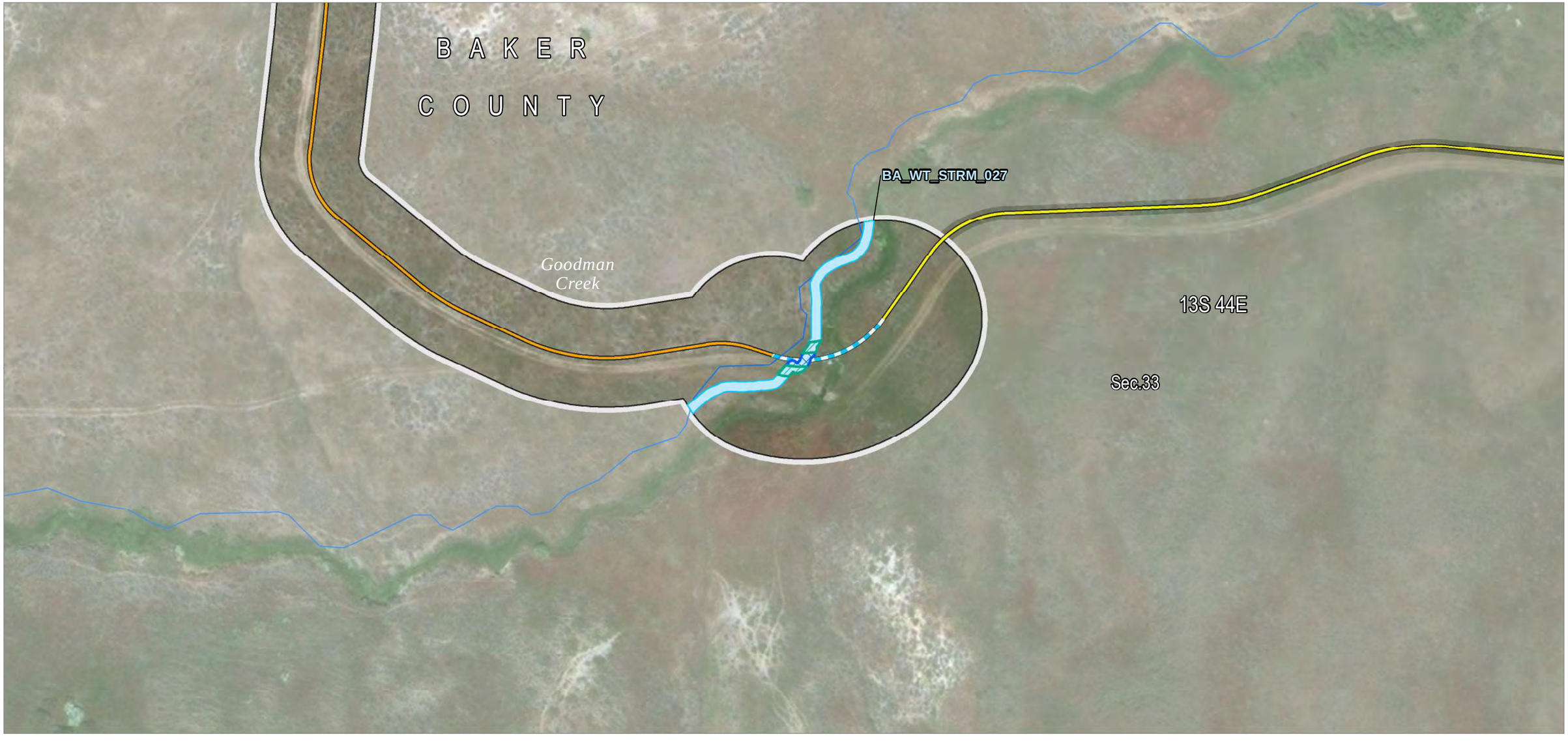
Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Rivers, Streams, and Canals

Wetland
- Field Survey Wetland
- NANS Wetland (NWI)

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-154
Wetland and Other Waters
Joint Permit Application
Detail Maps
Baker County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 21-70% Improvements

New Road, Bladed

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

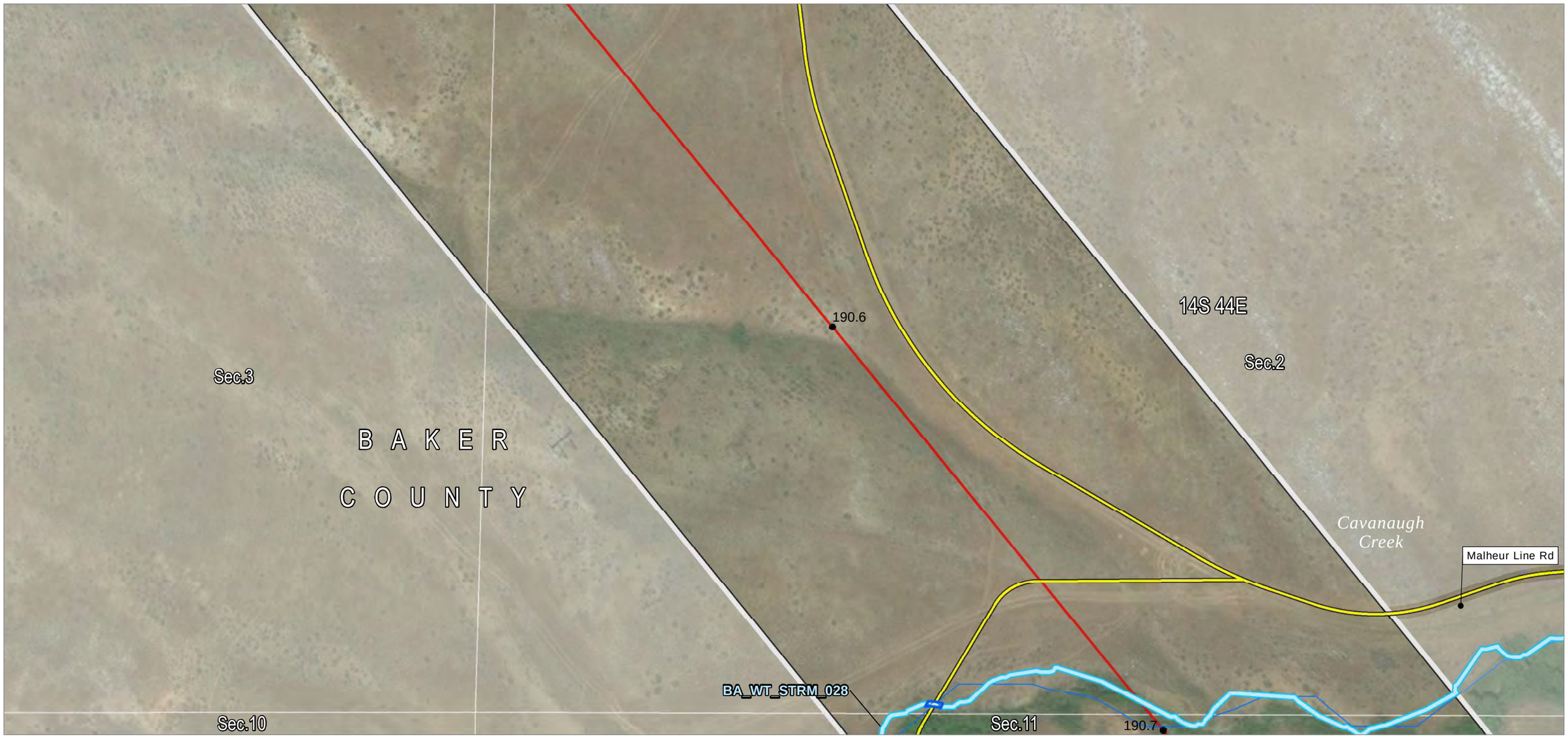
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-155
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Route Centerline

Proposed Route

Mileposts

Tenth-mile

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

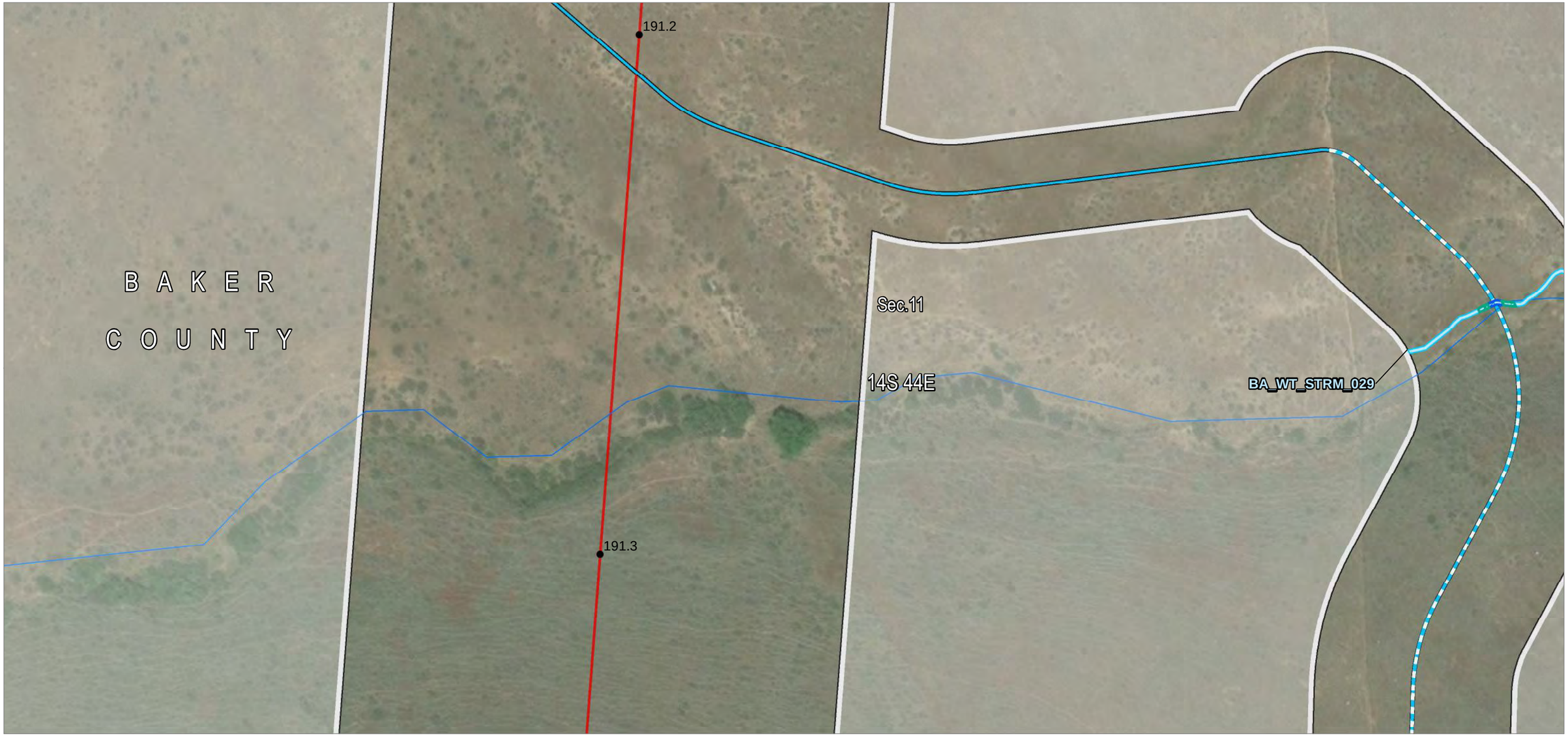
Stream Impact Type

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-156
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed
- Rivers, Streams, and Canals

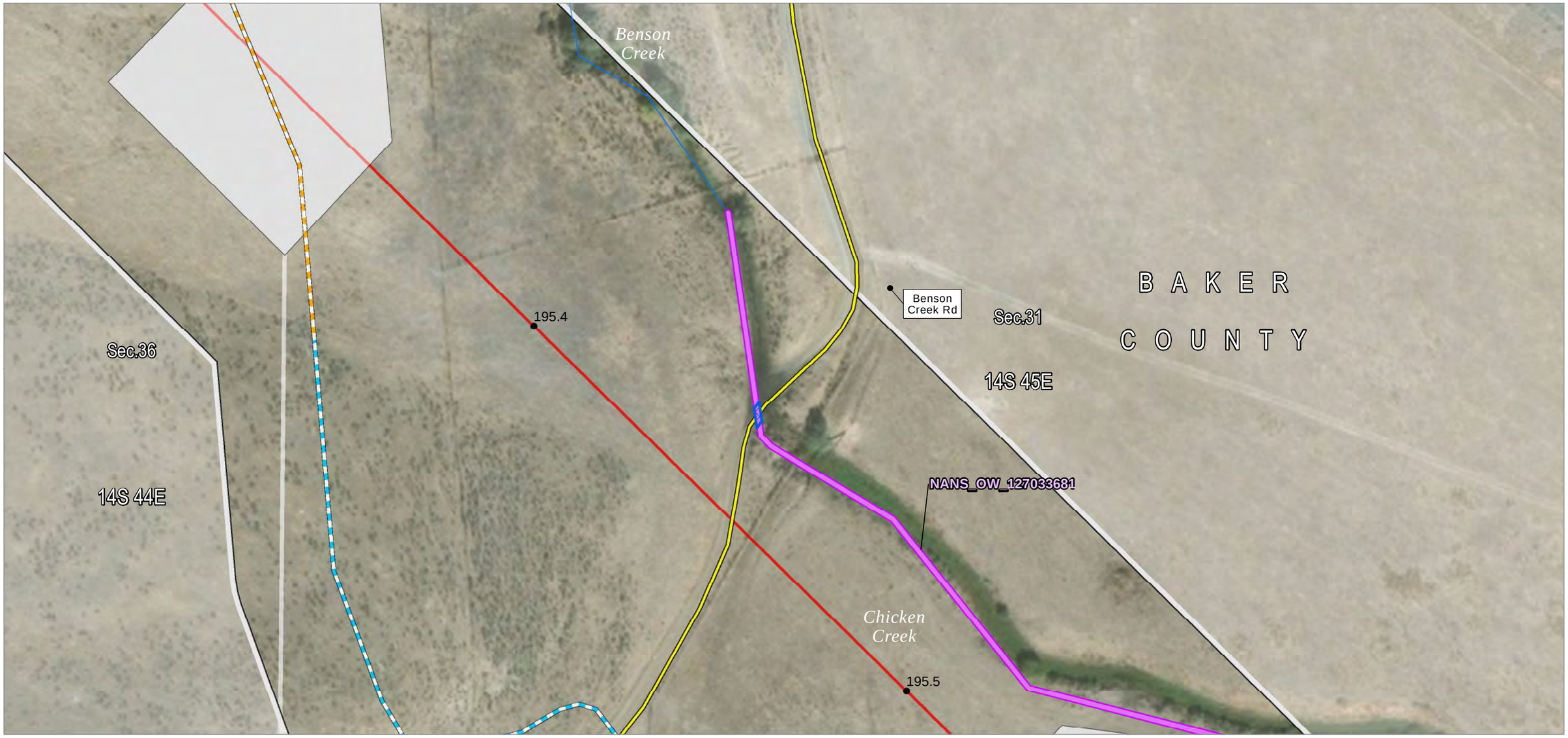
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-157
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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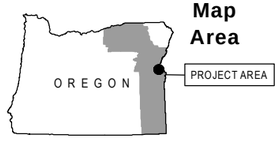
Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- New Road, Bladed
- New Road, Primitive

Rivers, Streams, and Canals

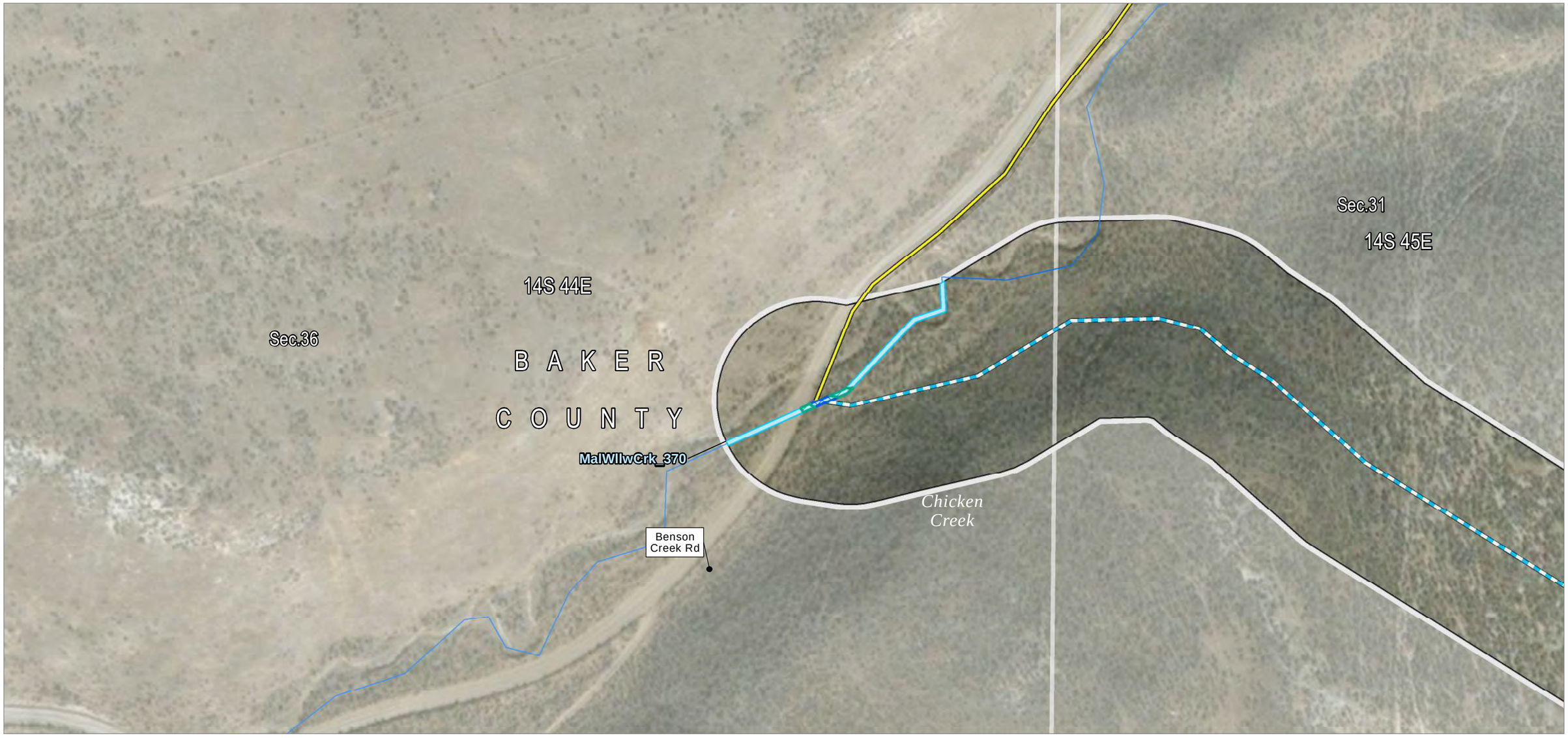
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-158
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

New Road, Bladed

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

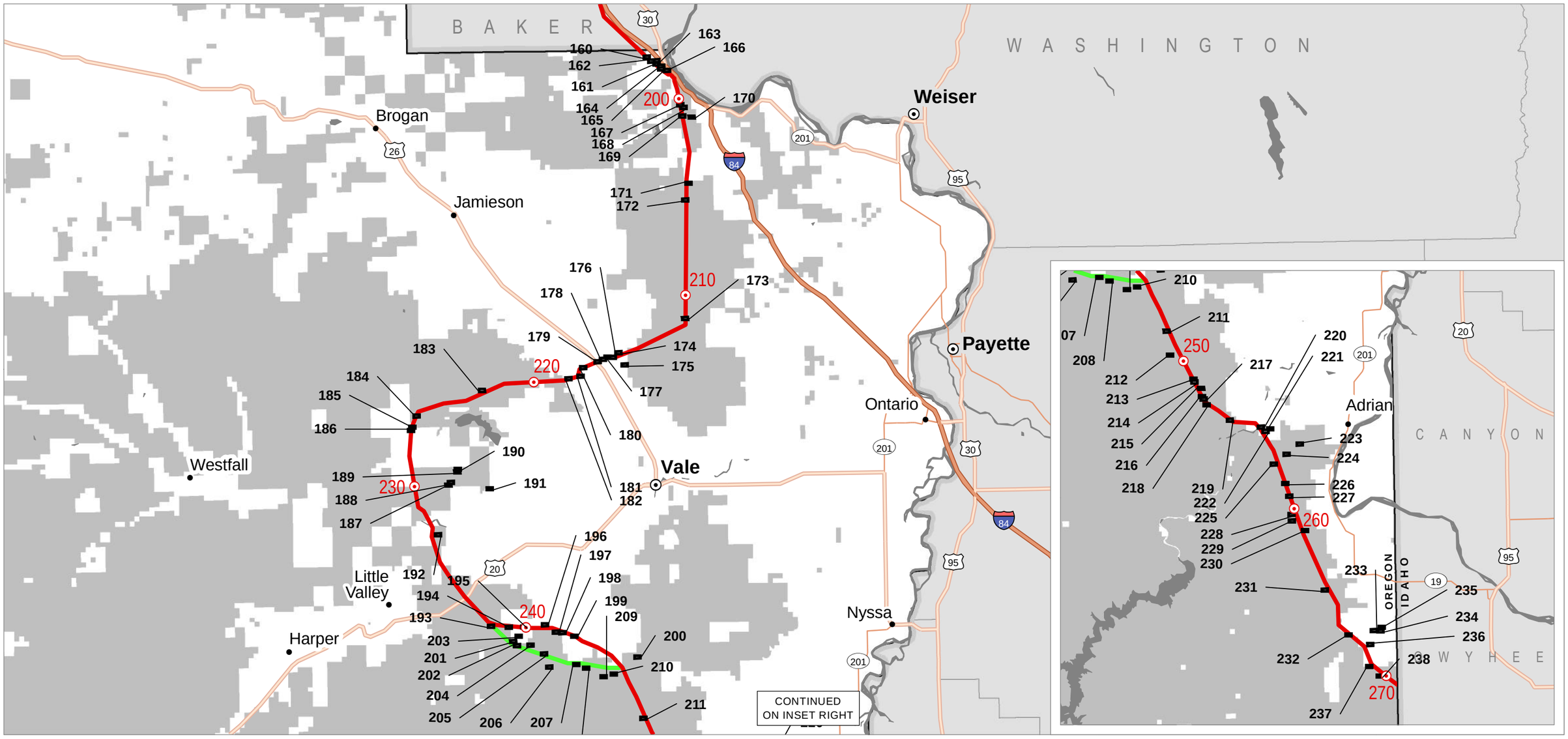
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-159
Wetland and Other Waters Joint Permit Application Detail Maps
Baker County



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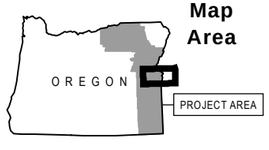
Map Area



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Project Features
- Proposed Route
- Alternative
- Ten Mile Marker

Map Index
- Map Tile (Map #)

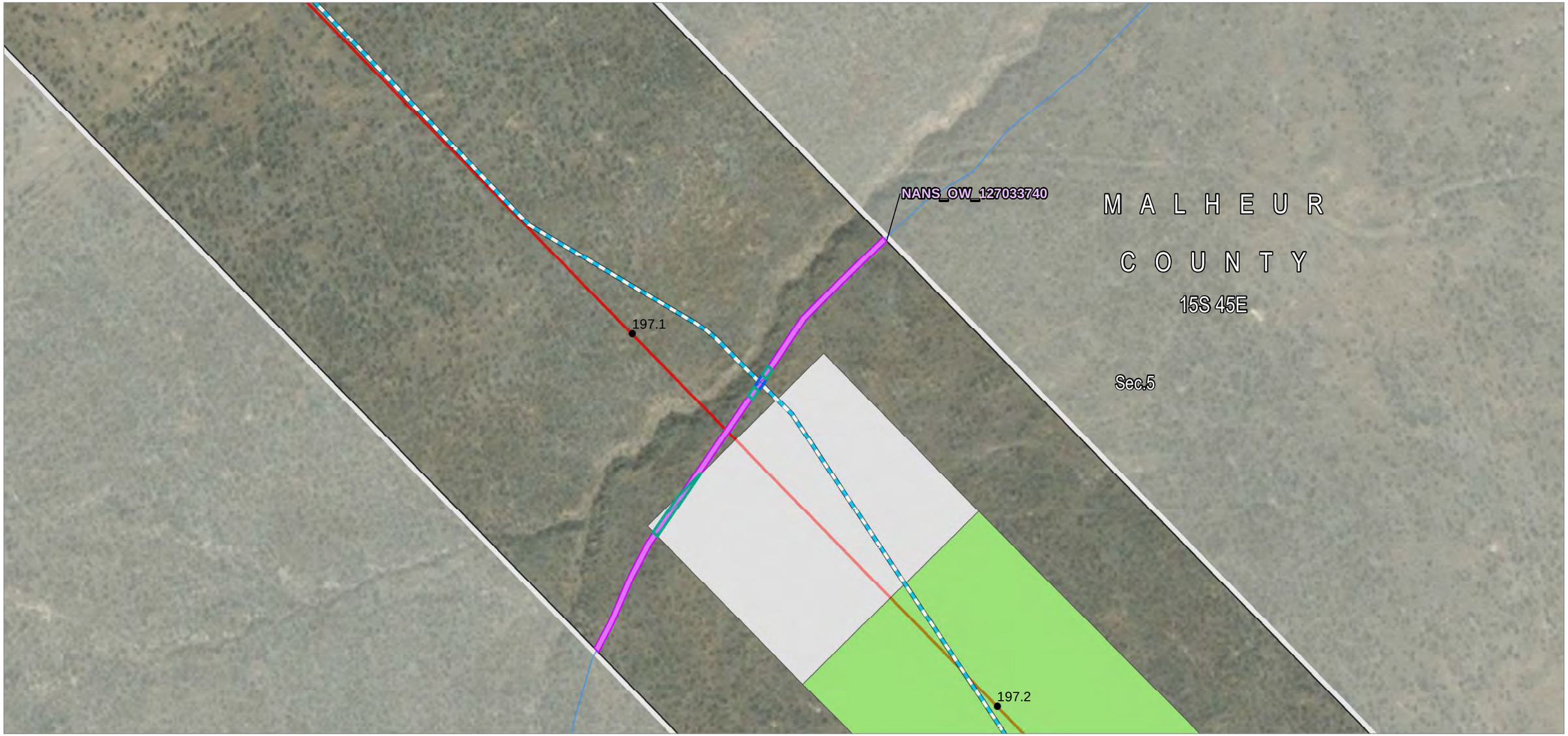
IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Appendix K
Joint Permit Application
Location Map

Malheur County

Map Index



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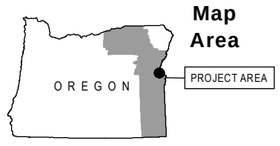
Feet

Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

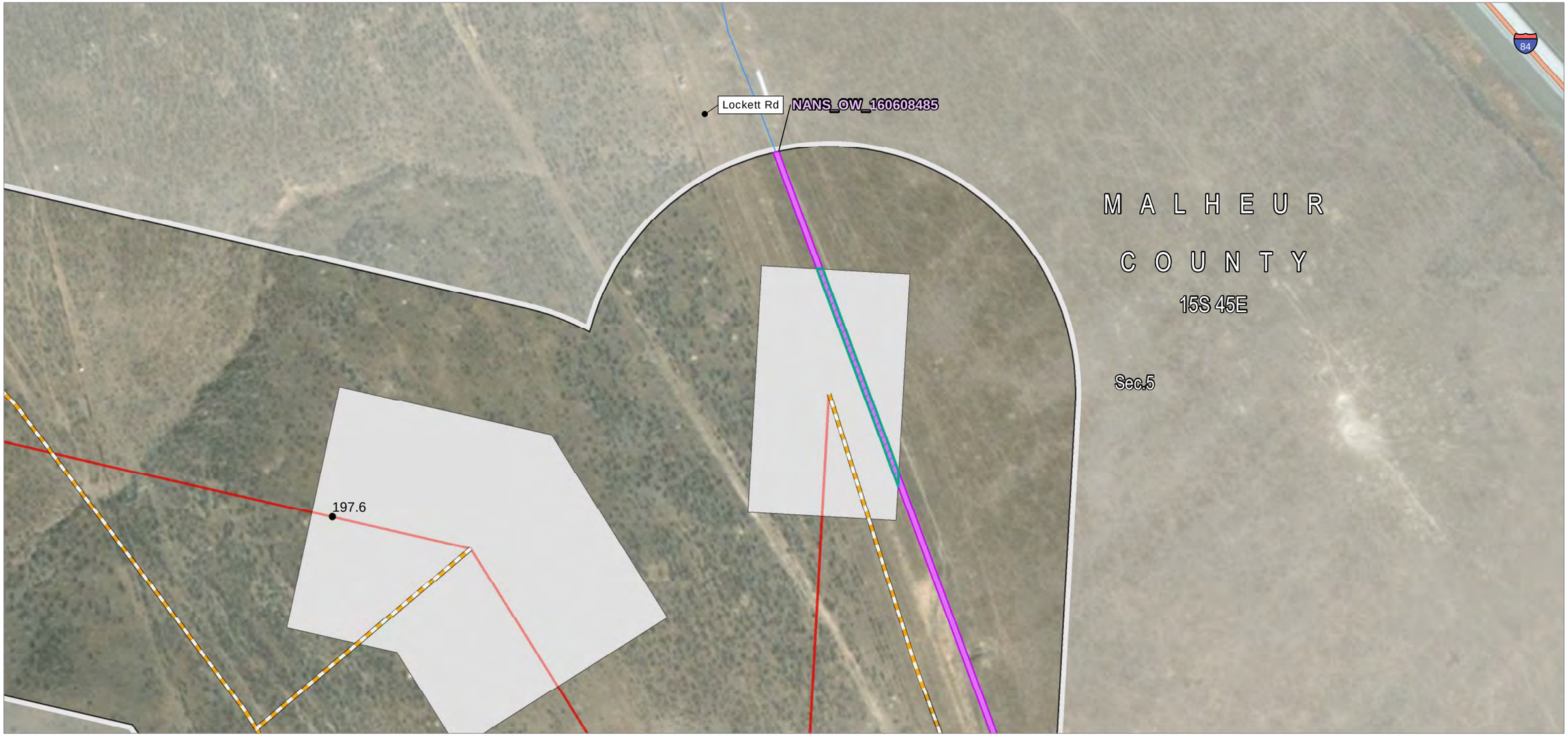
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-160
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features
Site Boundary
Proposed Route
Route Centerline
Proposed Route
Work Areas
Structure Work Area

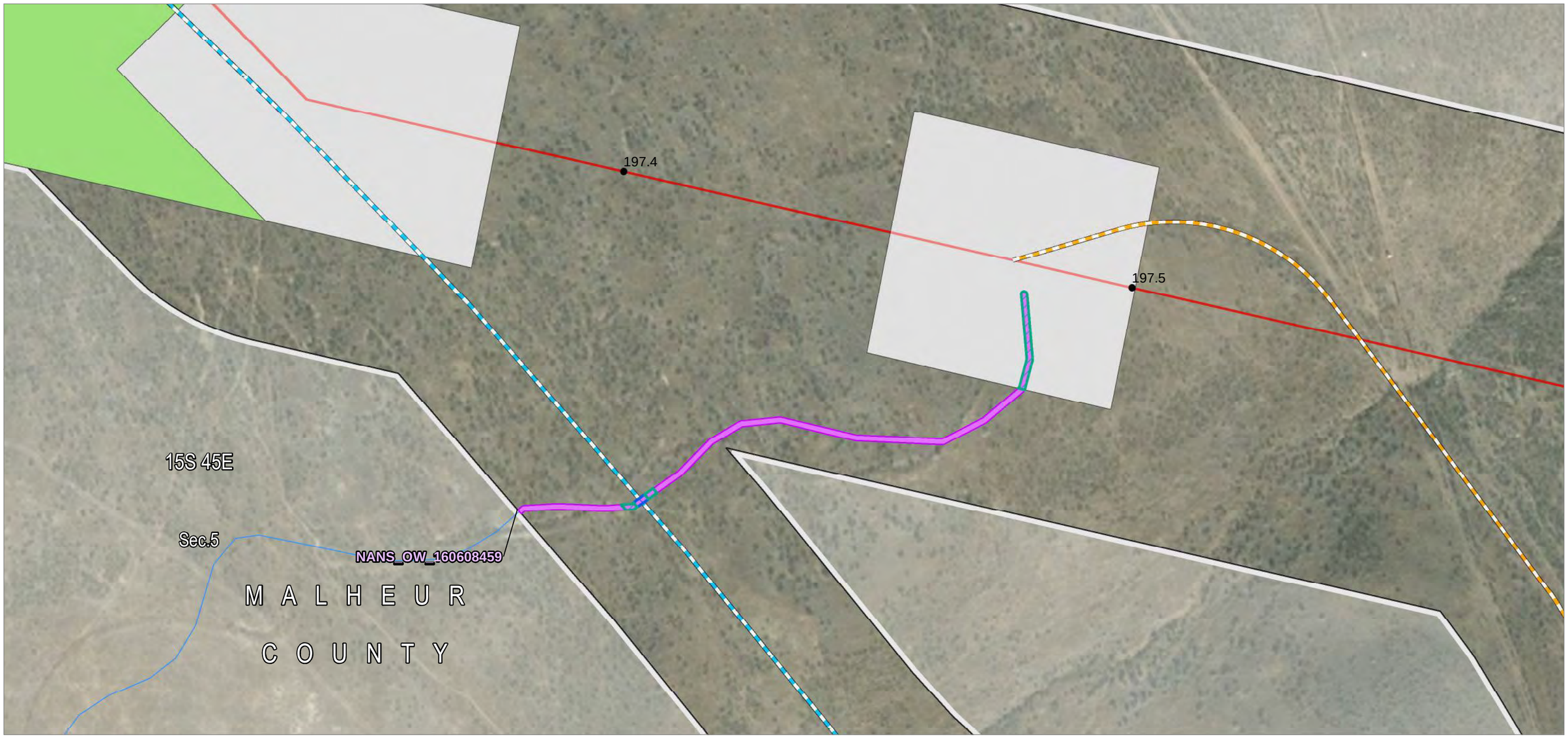
Mileposts
Tenth-mile
Construction Access
New Road, Primitive
Transportation
Interstates or Highways

Rivers, Streams, and Canals
Other Waters
NANS Streams (NHD)
Stream Impact Type
Temporary

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-161
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- New Road, Primitive
- Rivers, Streams, and Canals

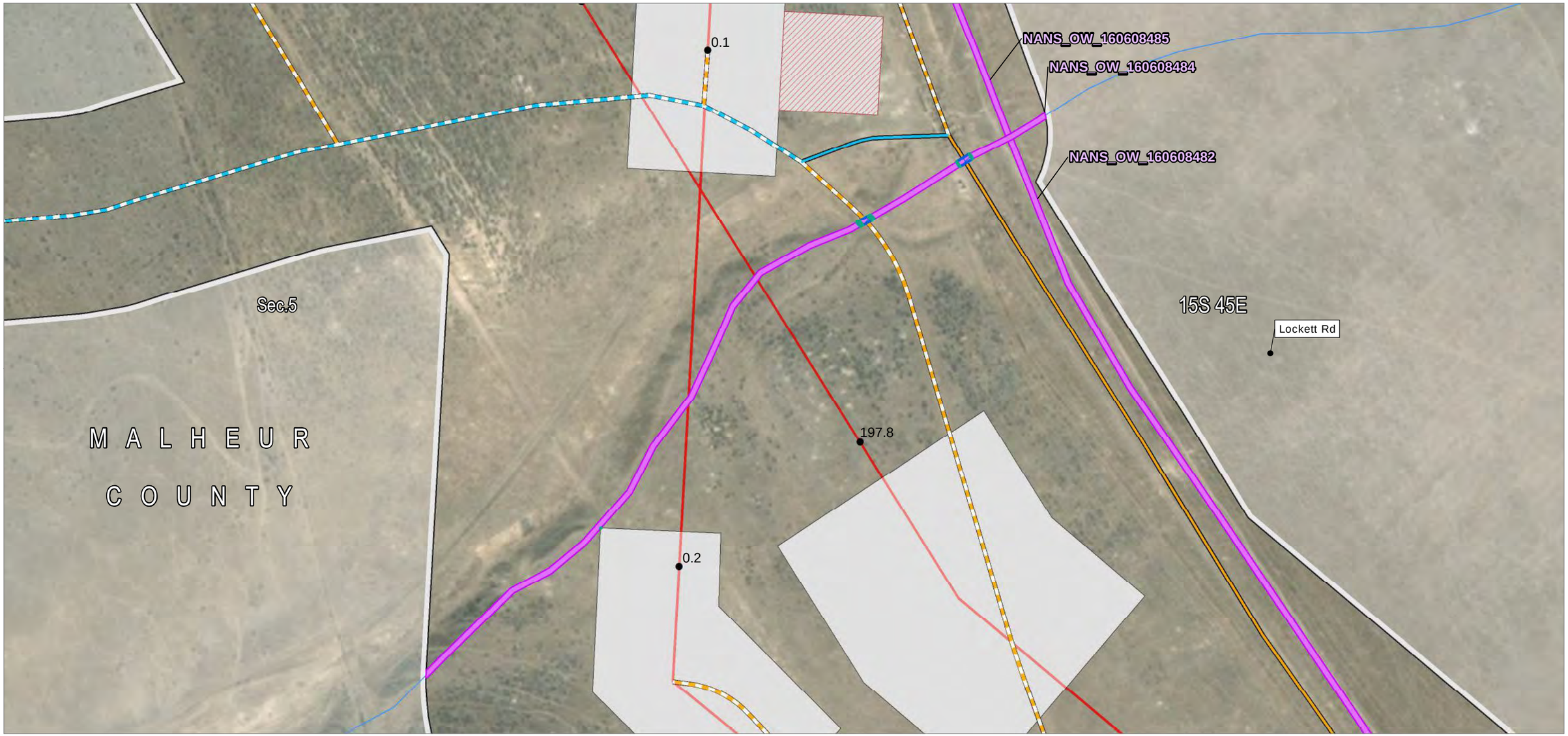
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-162
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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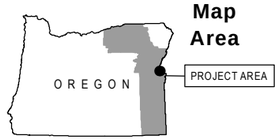
Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area
- Structure Work Area (Removal Only)

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed
- New Road, Primitive
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-163
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Primitive

Transportation
- Interstates or Highways
- Rivers, Streams, and Canals

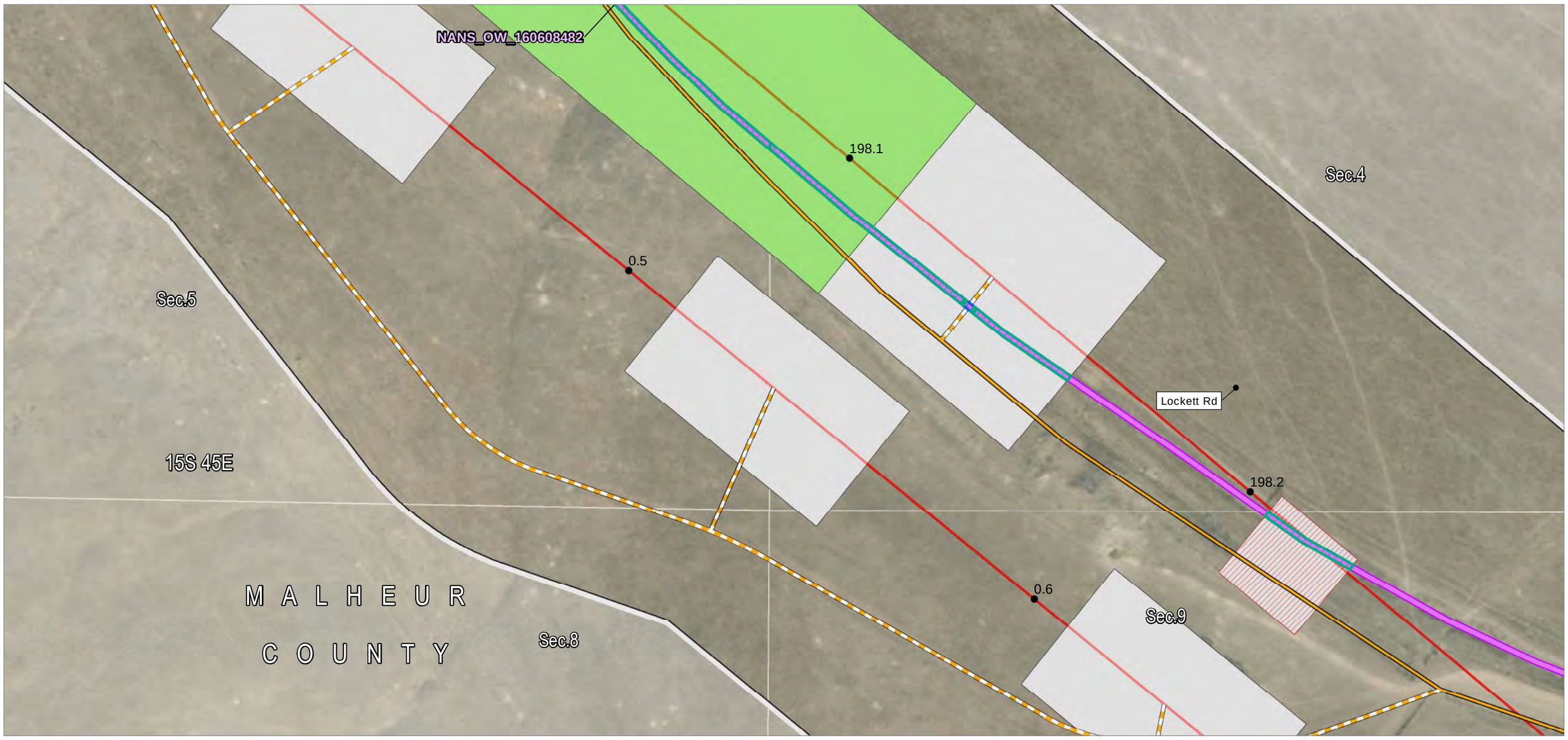
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-164
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area
- Structure Work Area (Removal Only)

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Primitive
- Rivers, Streams, and Canals

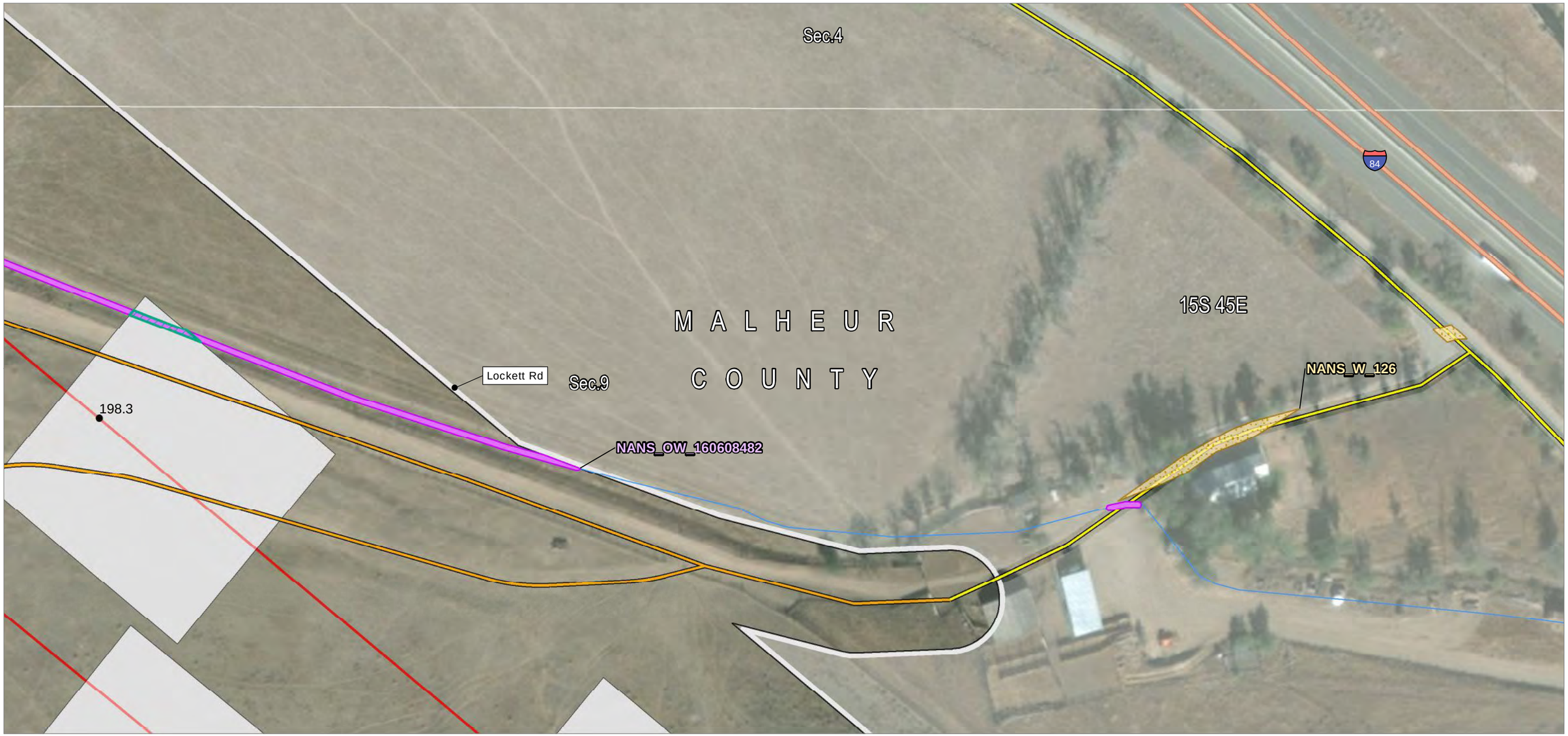
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-165
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 21-70% Improvements

Transportation
- Interstates or Highways
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

Wetland
- NANS Wetland (NWI)

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-166
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Primitive
- Rivers, Streams, and Canals

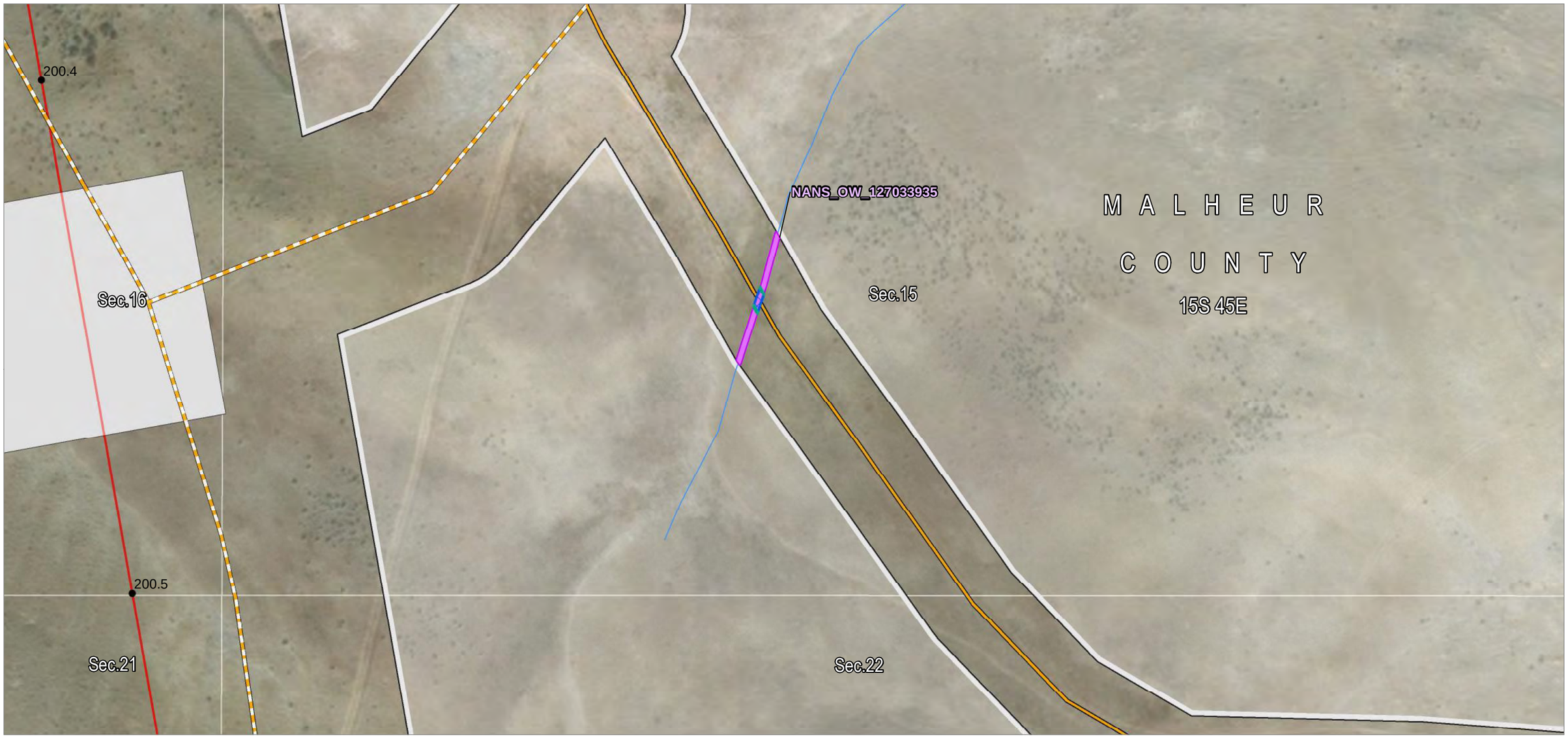
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-167
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

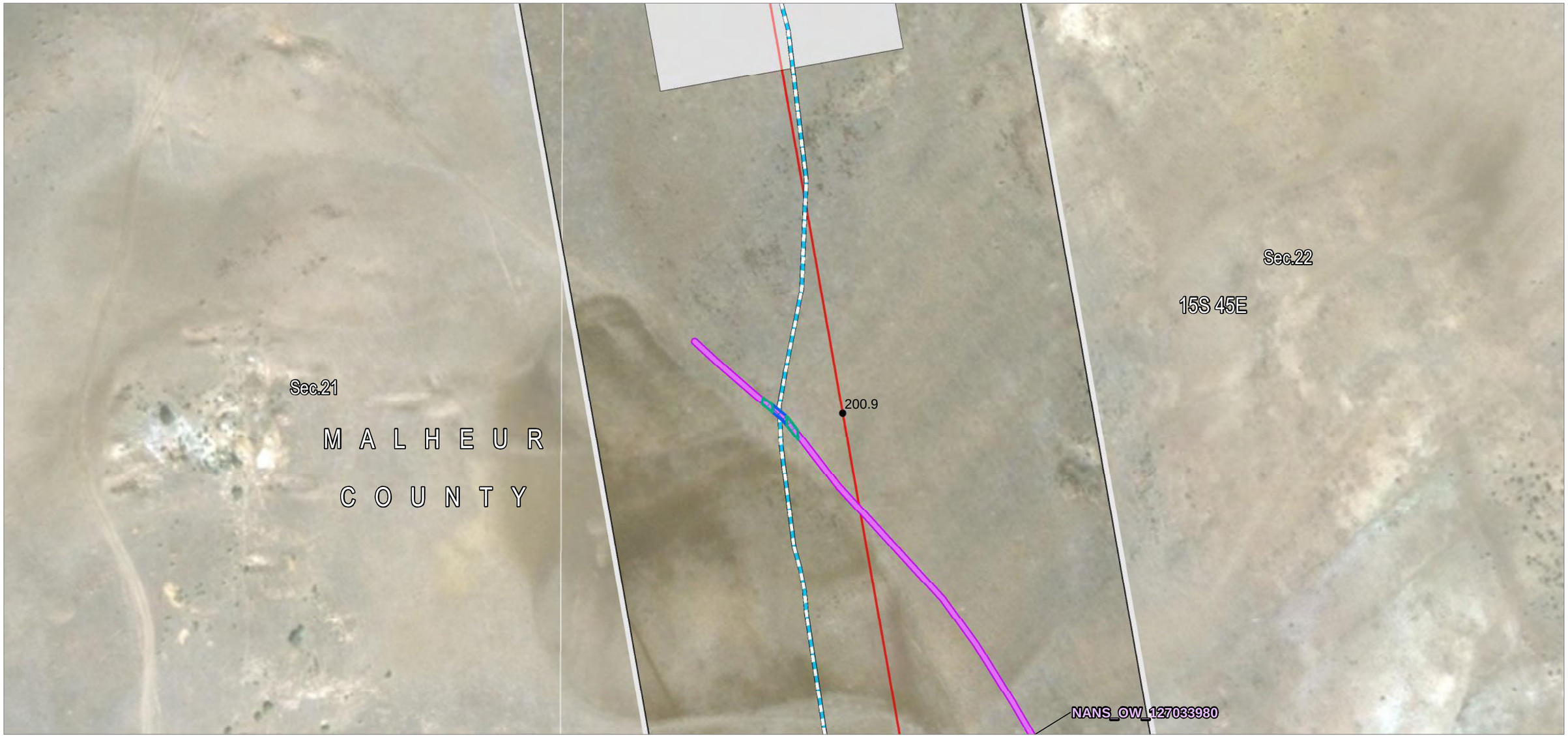
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-168
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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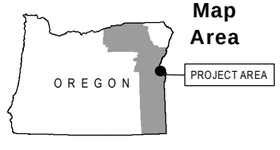

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-169
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

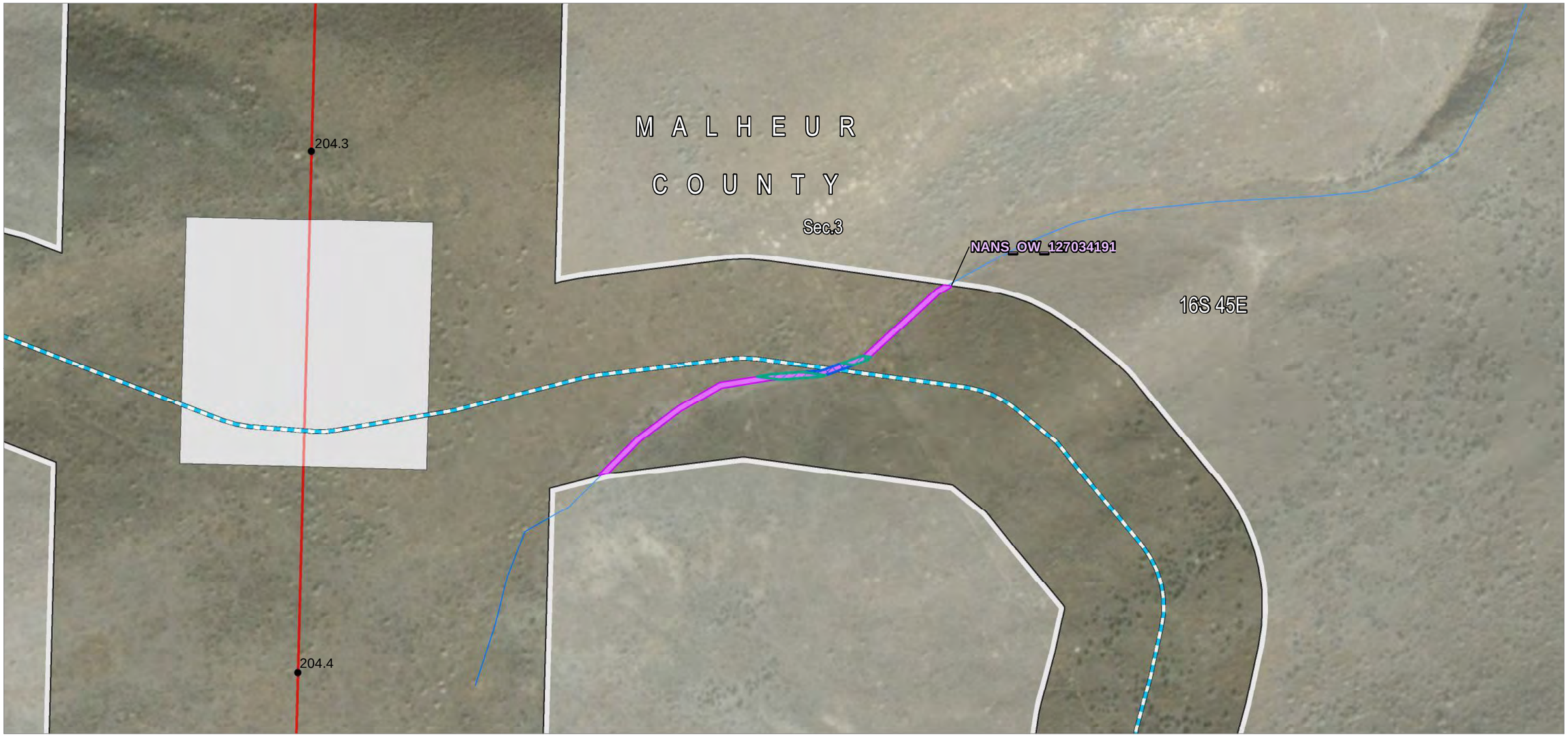
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-170
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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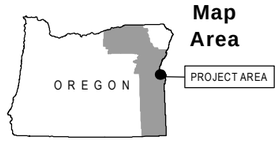
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

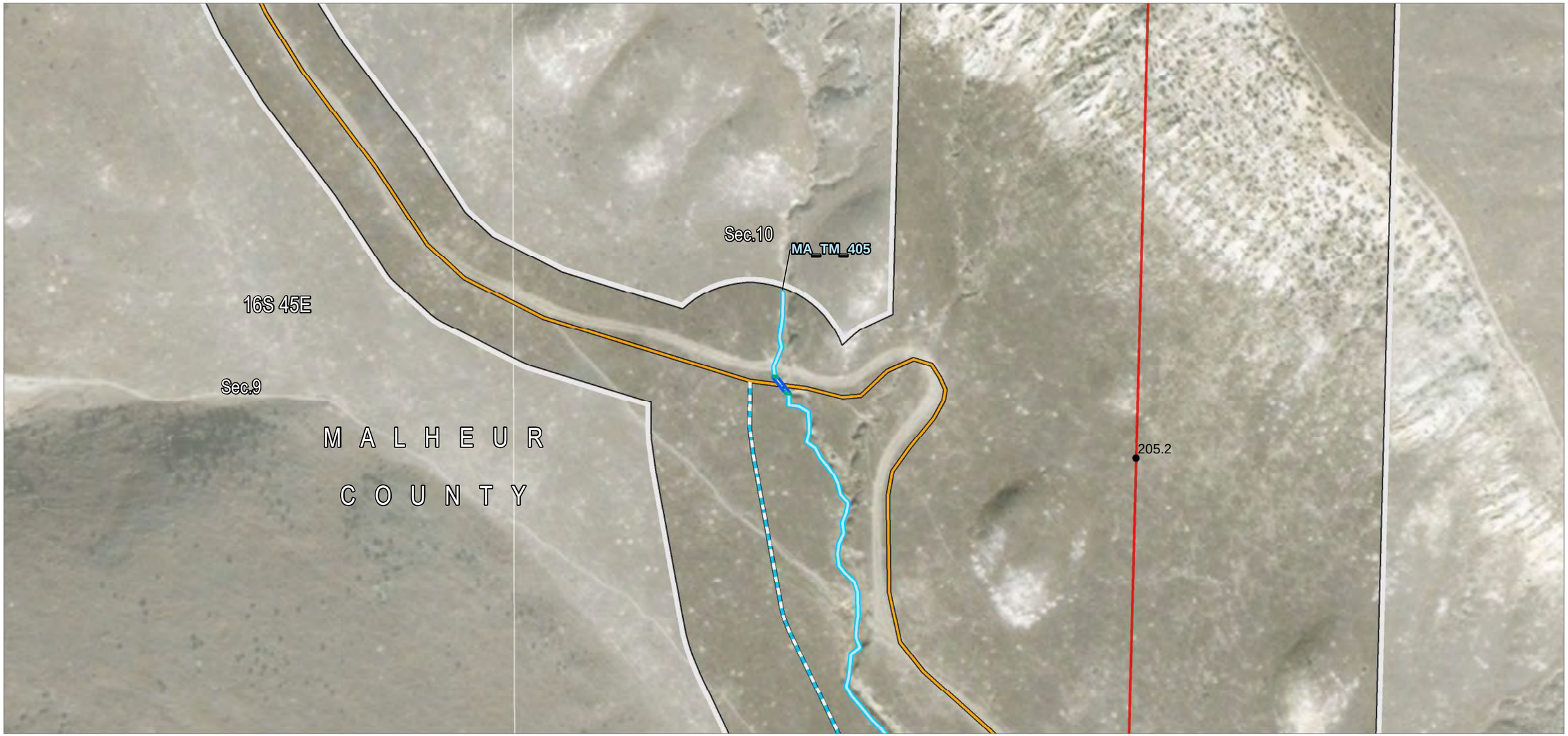
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-171
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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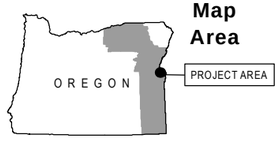

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- Rivers, Streams, and Canals

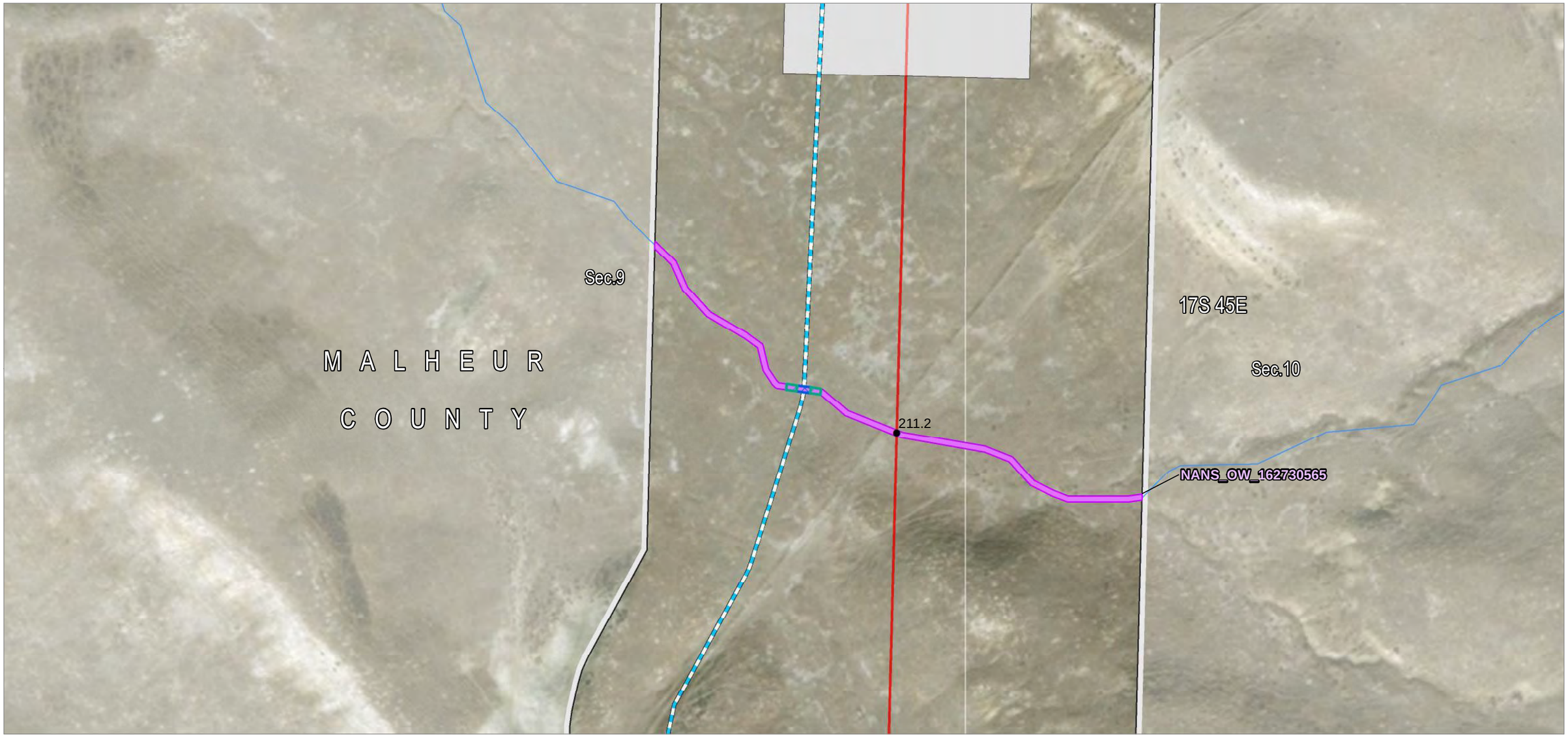
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-172
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

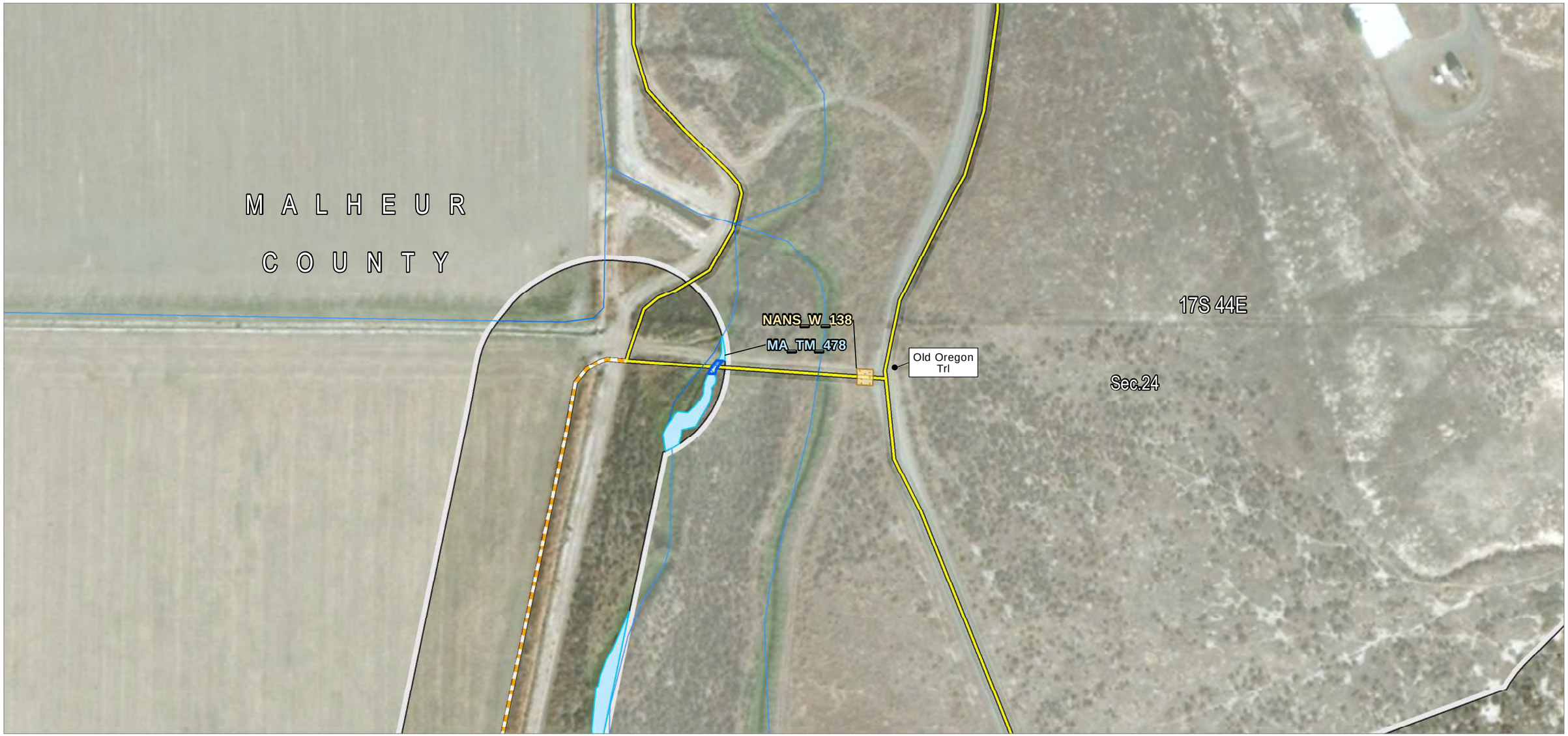
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-173
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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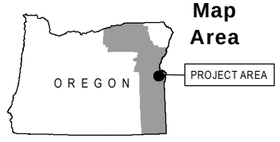

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

New Road, Primitive

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Permanent

Wetland

NANS Wetland (NWI)

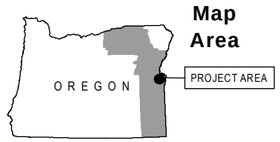
IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-174
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Work Areas

Multi-Use Area

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-175
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

215.6

215.5

215.4

17S 44E

MA_TM_483

NANS_OW_144341464

Sec.24

MALHEUR

COUNTY

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Primitive

Rivers, Streams, and Canals

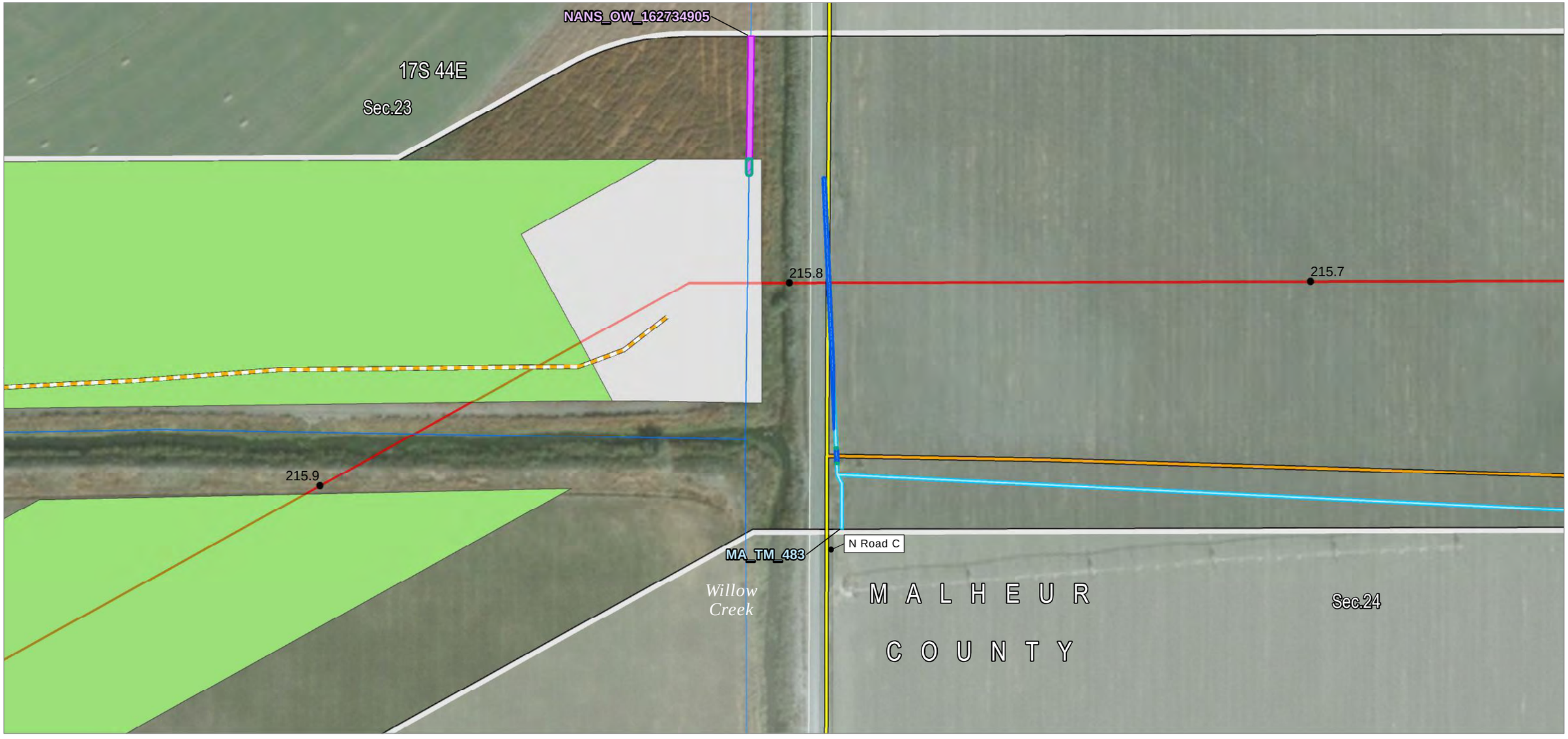
Other Waters
- Field Survey Streams
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-176
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Primitive
- Rivers, Streams, and Canals

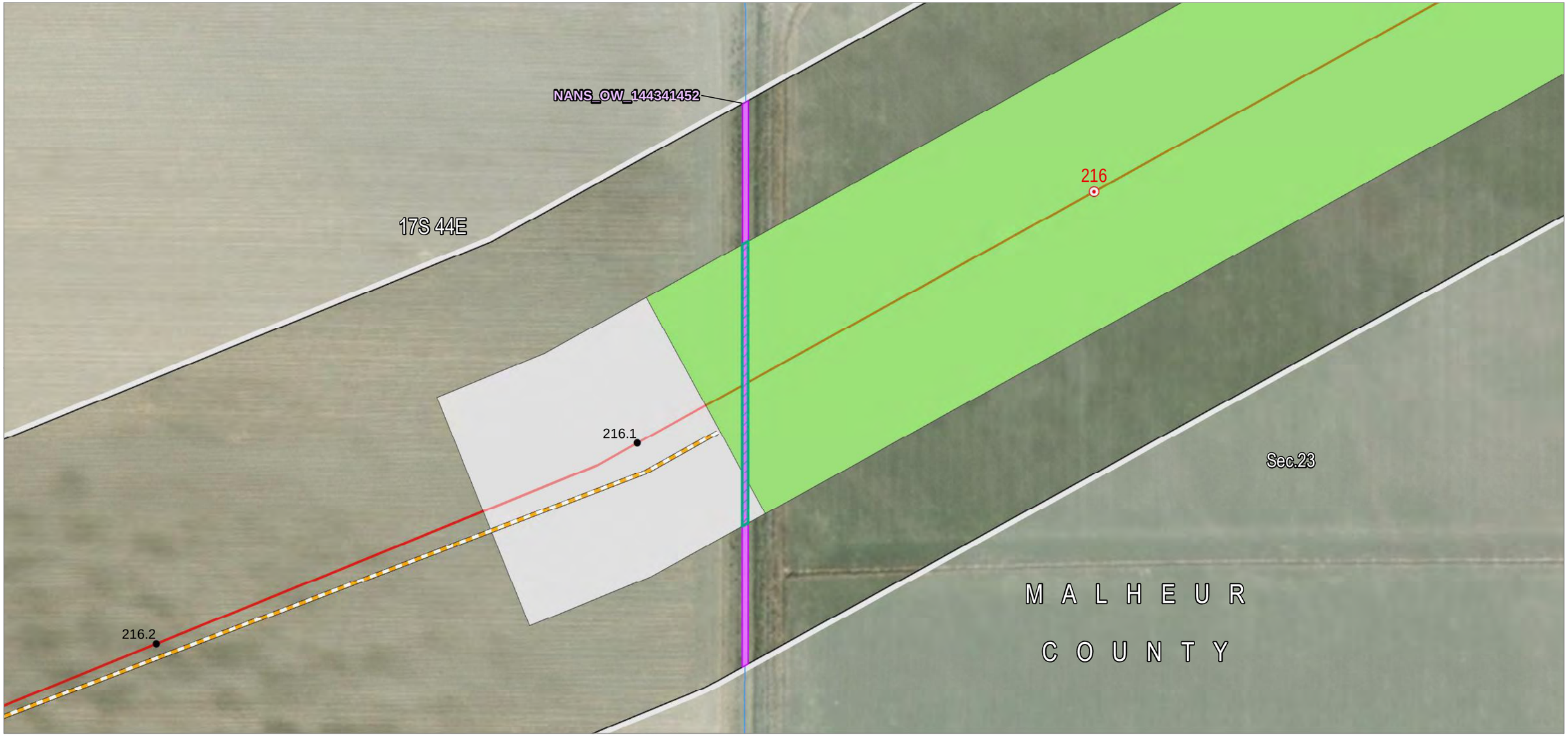
Other Waters
- Field Survey Streams
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-177
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- New Road, Primitive
- Rivers, Streams, and Canals

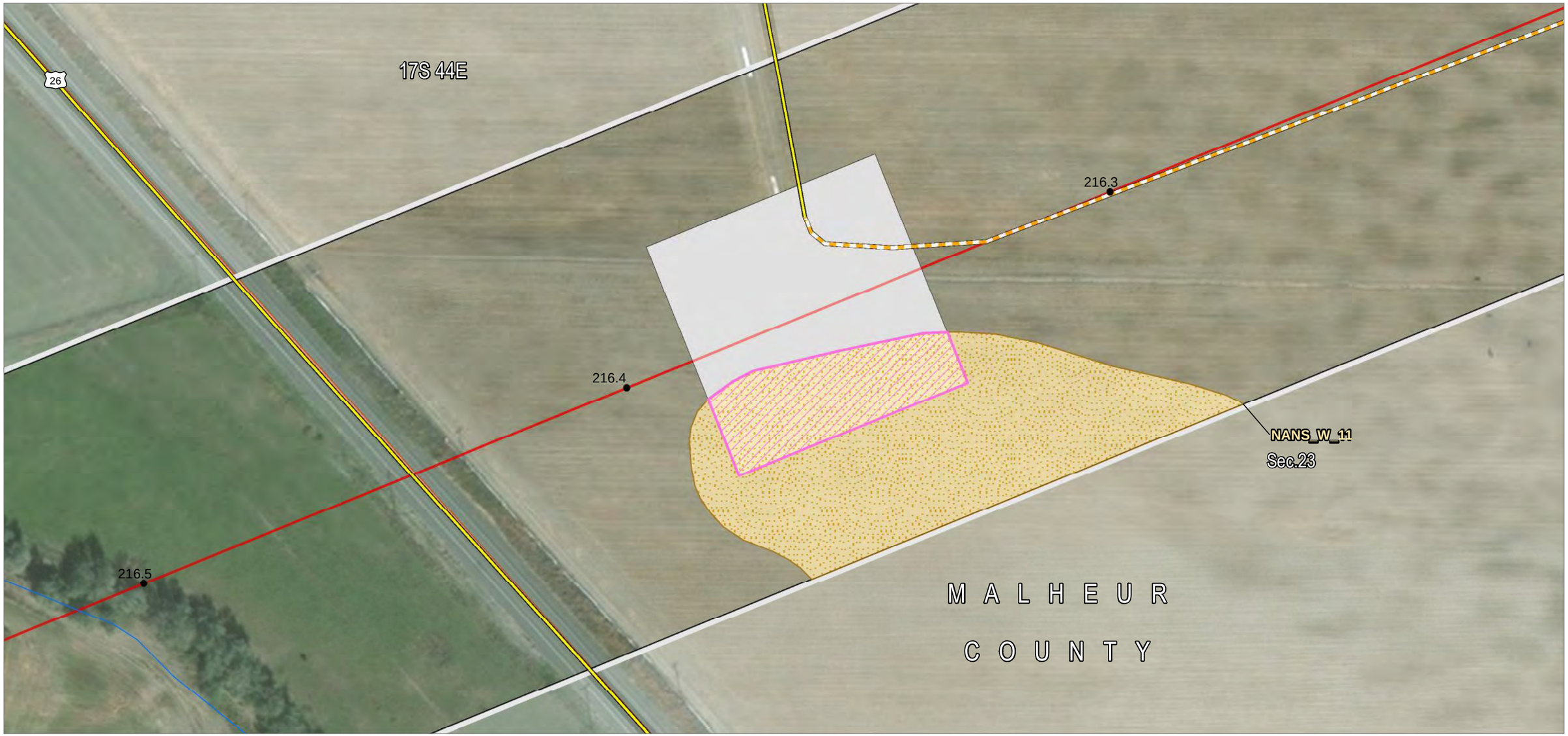
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-178
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- New Road, Primitive

Transportation
- Interstates or Highways
- Rivers, Streams, and Canals

Wetland
- NANS Wetland (NWI)

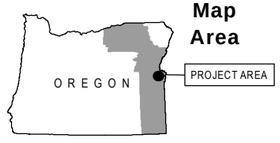
IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-179
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Communication Station
- Pulling and Tensioning
- Structure Work Area
- Distribution Line to Communication Station (IPC Service Territory Only)

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- New Road, Bladed
- New Road, Primitive
- Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary

IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-180
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary

IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-181
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Rivers, Streams, and Canals

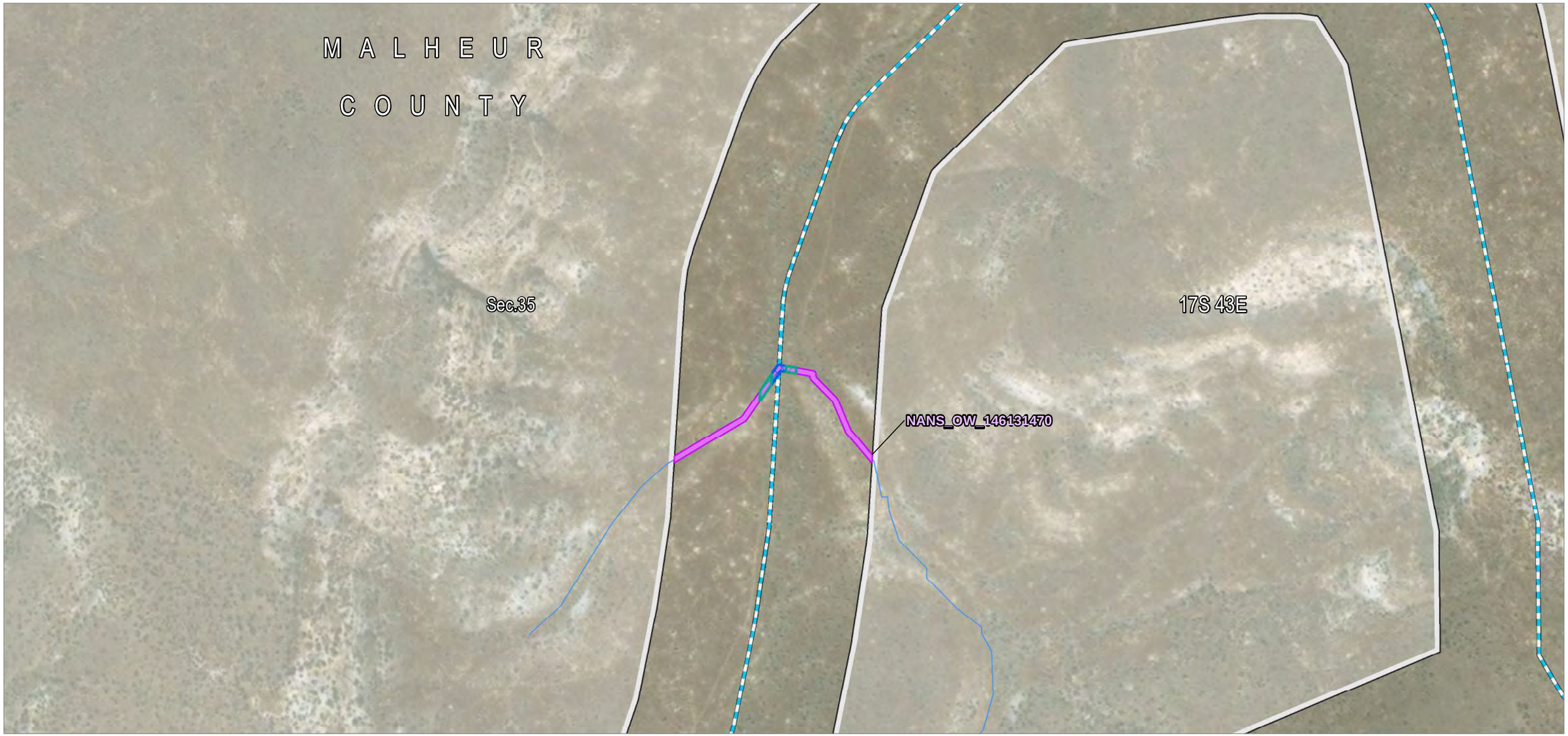
Other Waters
- Field Survey Streams

Stream Impact Type
- Permanent

IDAHO POWER. An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-182
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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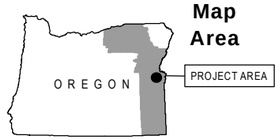
Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

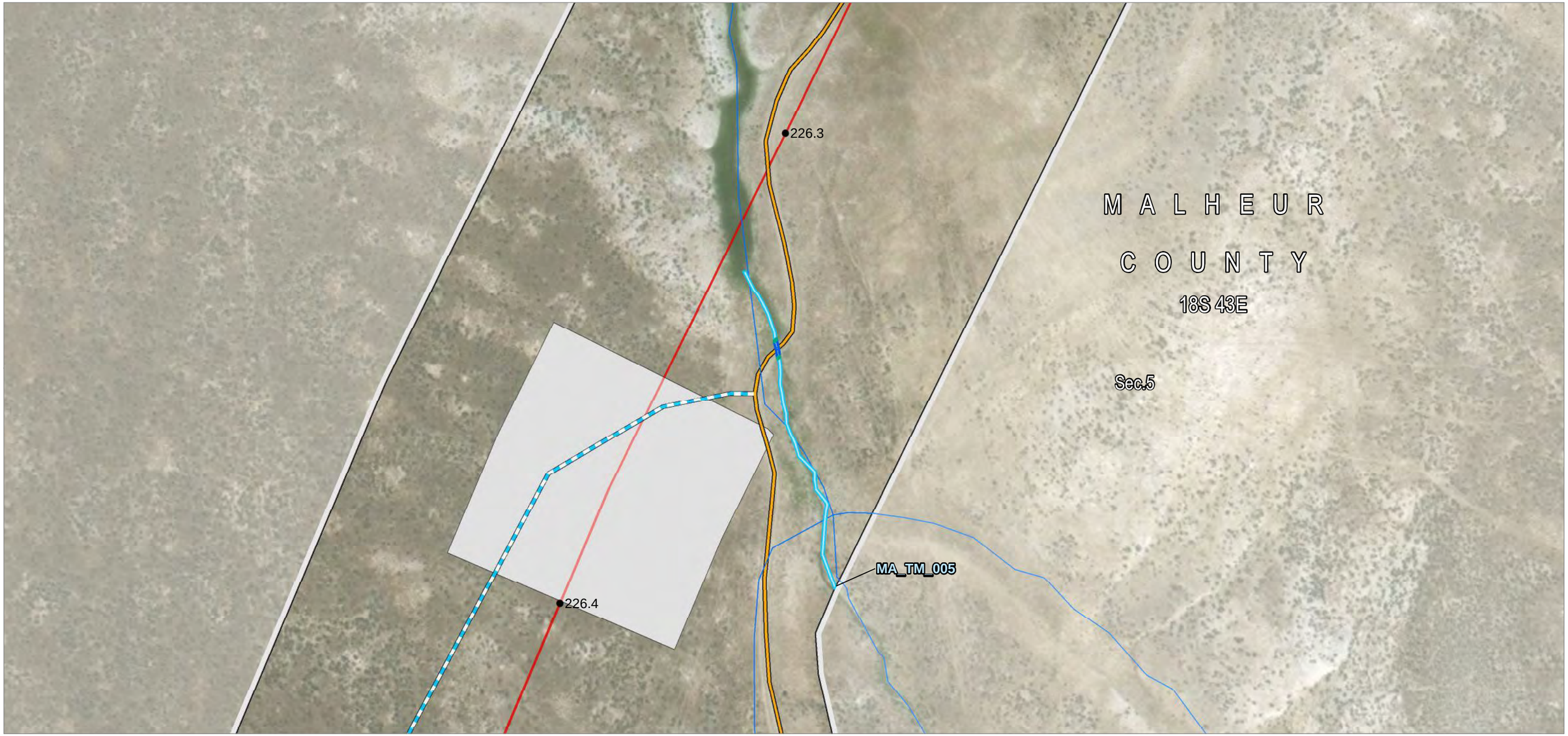
Project Features
Site Boundary
Proposed Route
Construction Access
New Road, Bladed
Rivers, Streams, and Canals

Other Waters
NANS Streams (NHD)
Stream Impact Type
Temporary
Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-183
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed

Rivers, Streams, and Canals

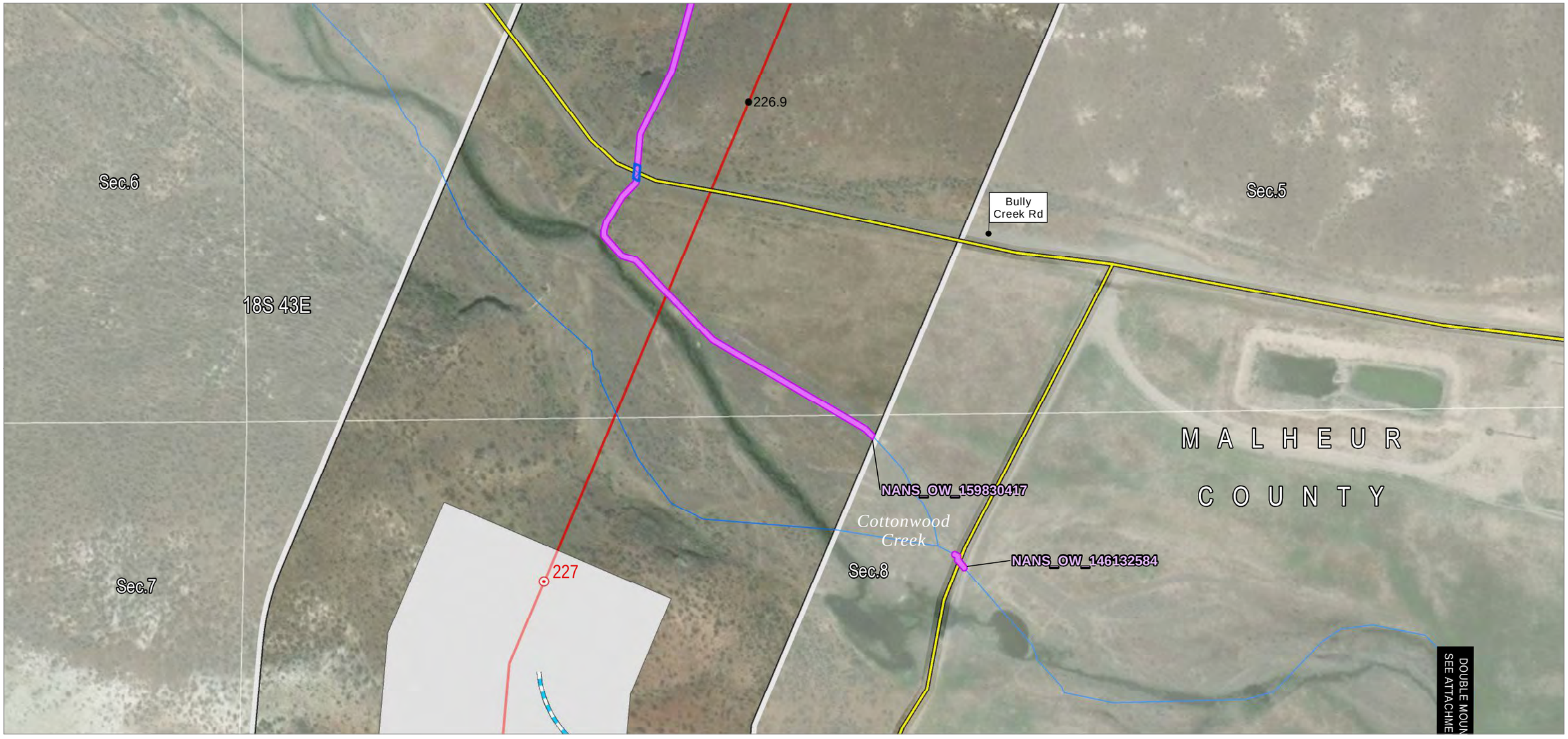
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-184
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Route Centerline

Proposed Route

Work Areas

Structure Work Area

Mileposts

Mile

Tenth-mile

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

New Road, Bladed

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

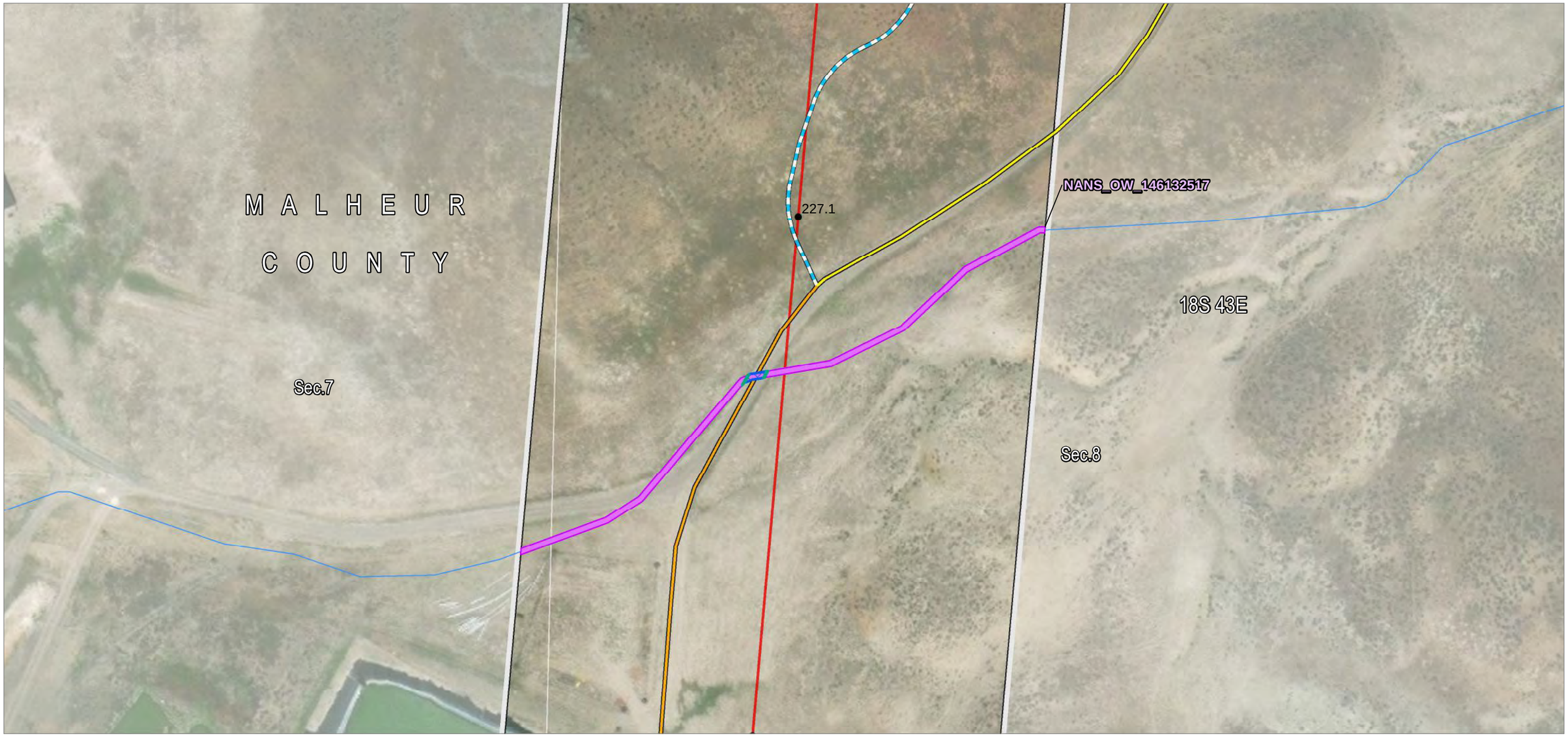
Stream Impact Type

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-185
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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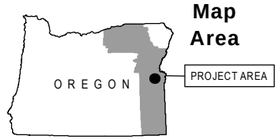
Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed

- Rivers, Streams, and Canals

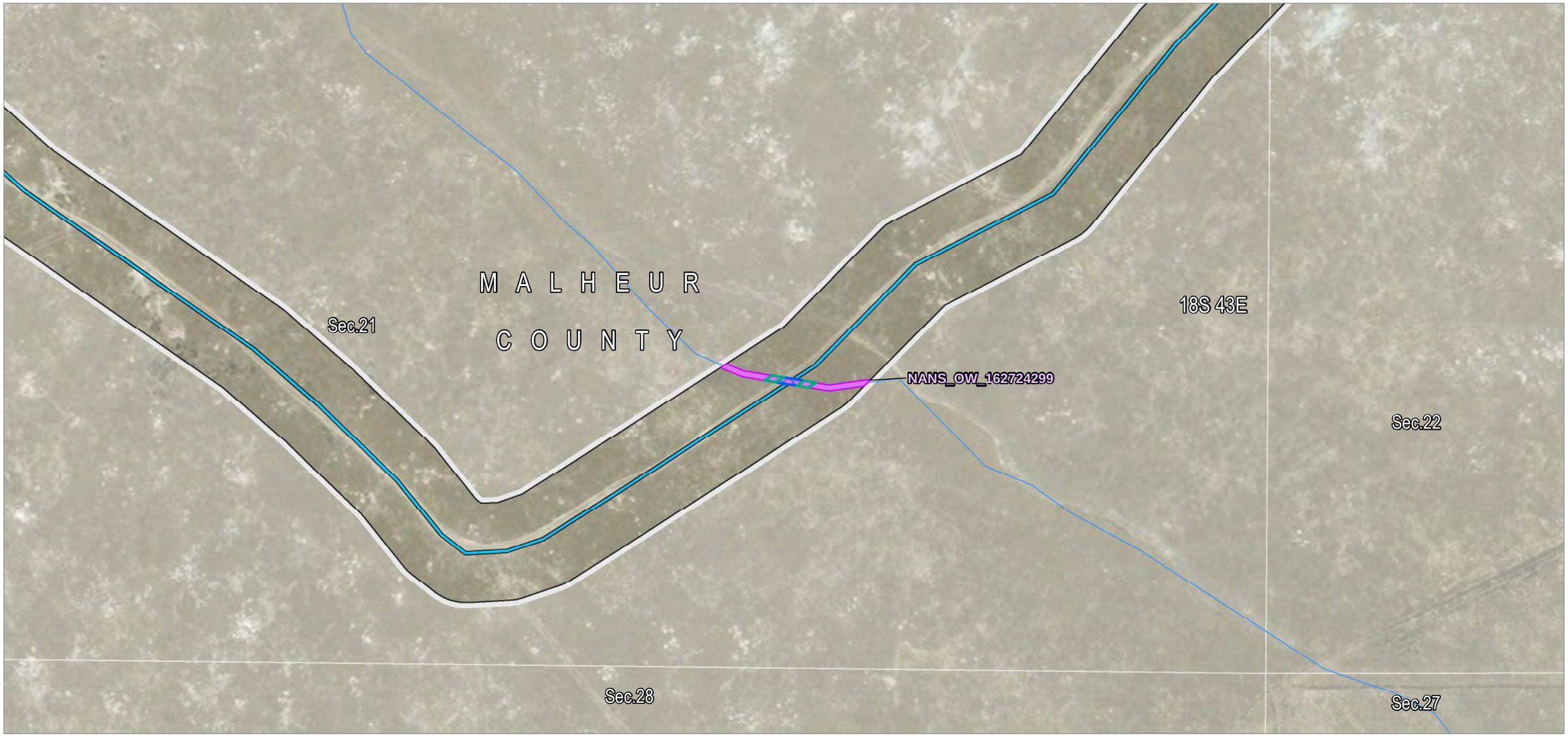
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-186
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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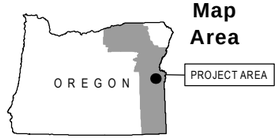
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

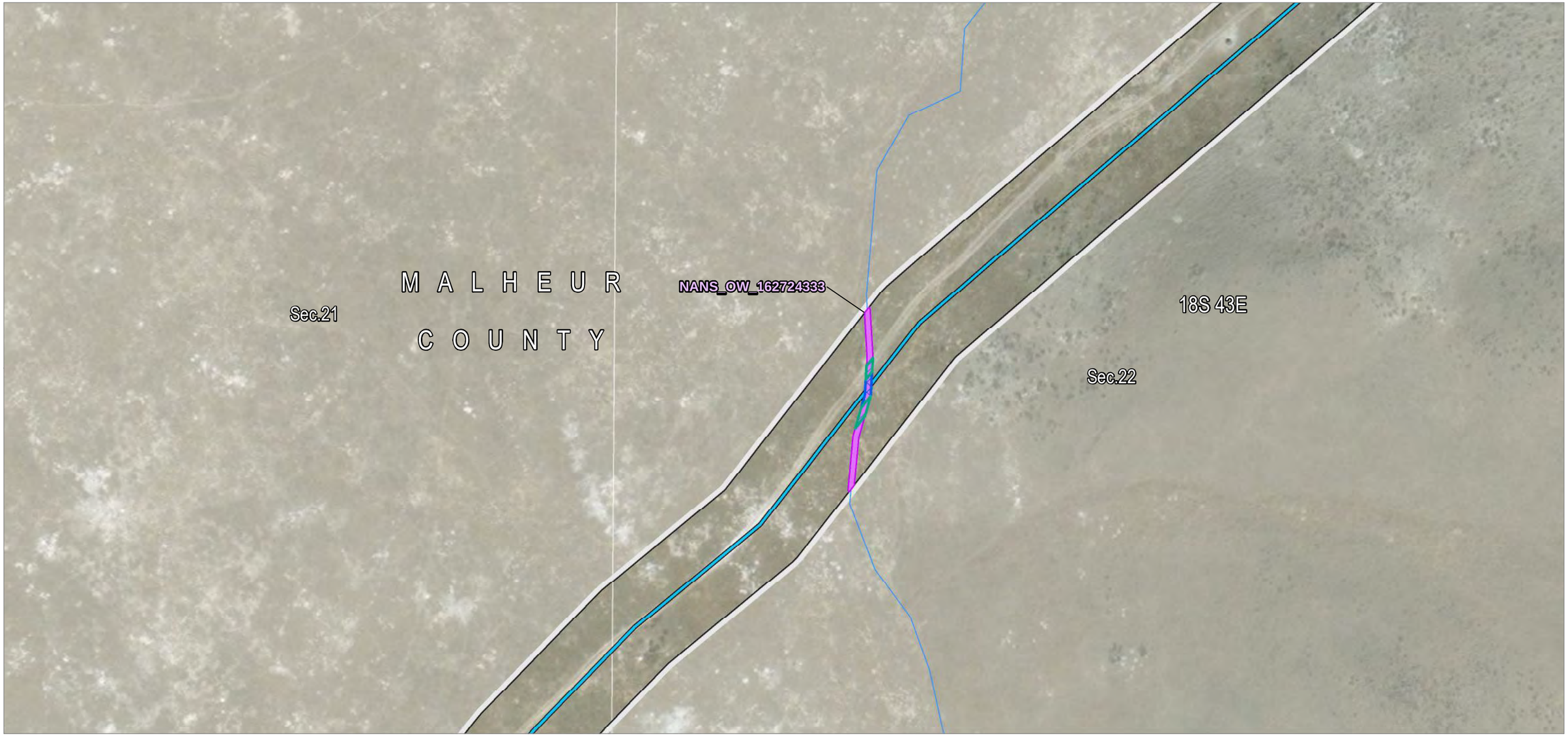
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-187
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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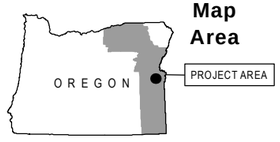
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-188
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

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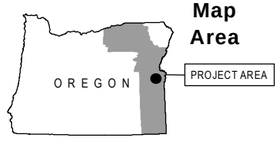
Feet



Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-189
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

MALHEUR COUNTY

NANS_OW_162724333

Sec.22

18S 43E

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-190
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

N

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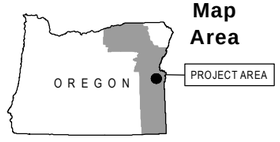
Feet

Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

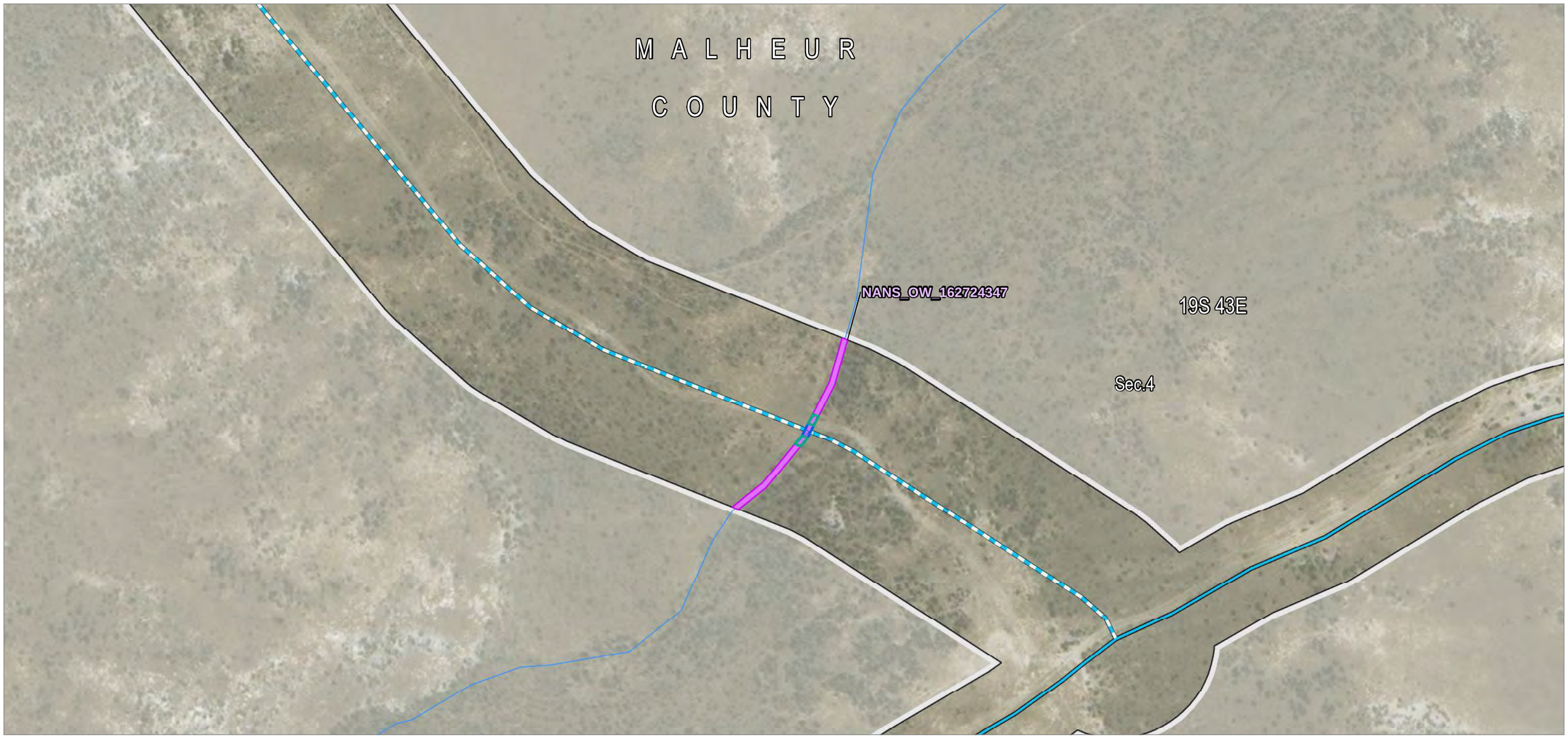
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-191
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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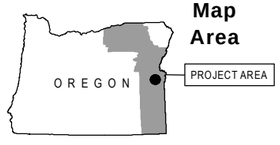
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

New Road, Bladed

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

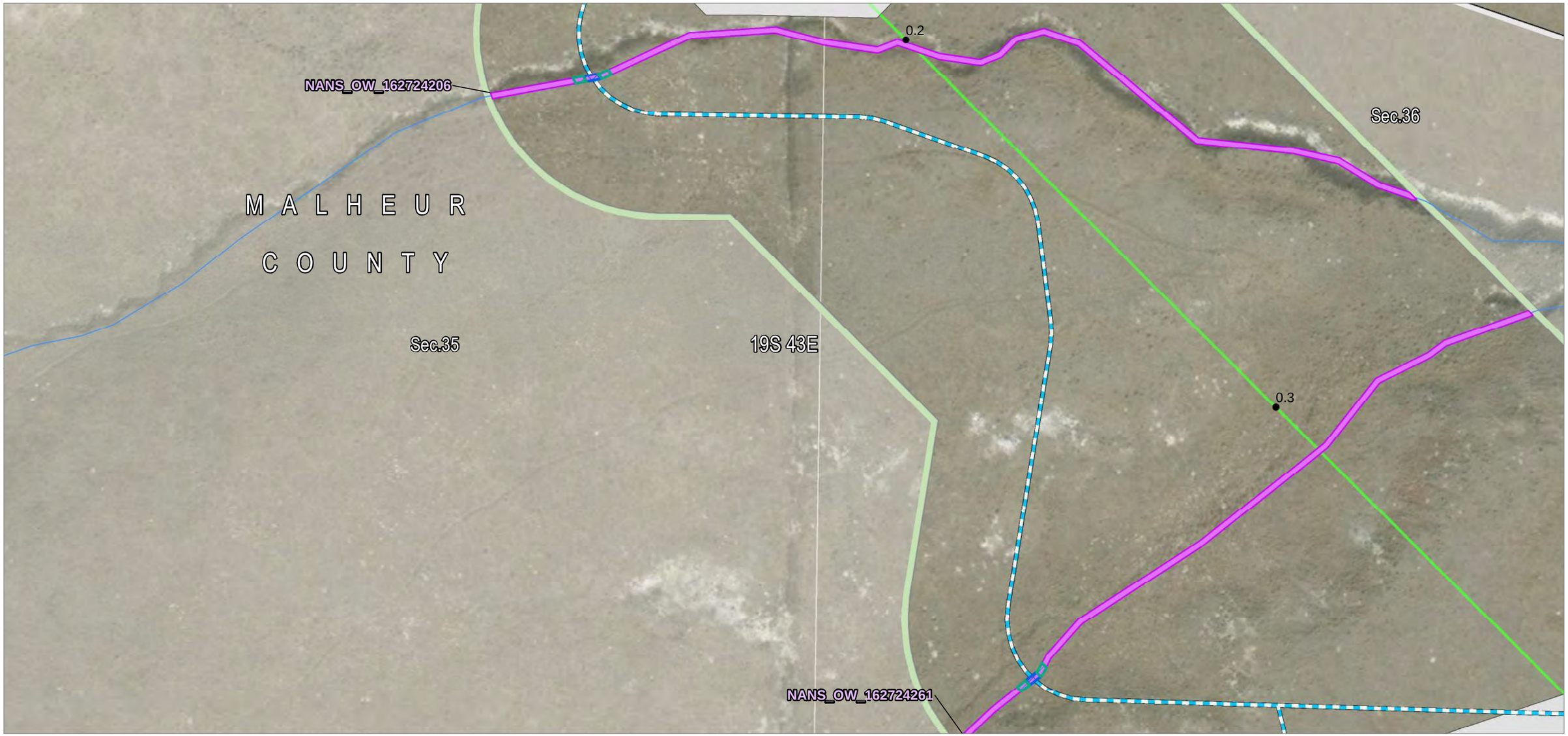
Temporary

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-192
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Map Area

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route
- Alternative Route

Route Centerline
- Alternative

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

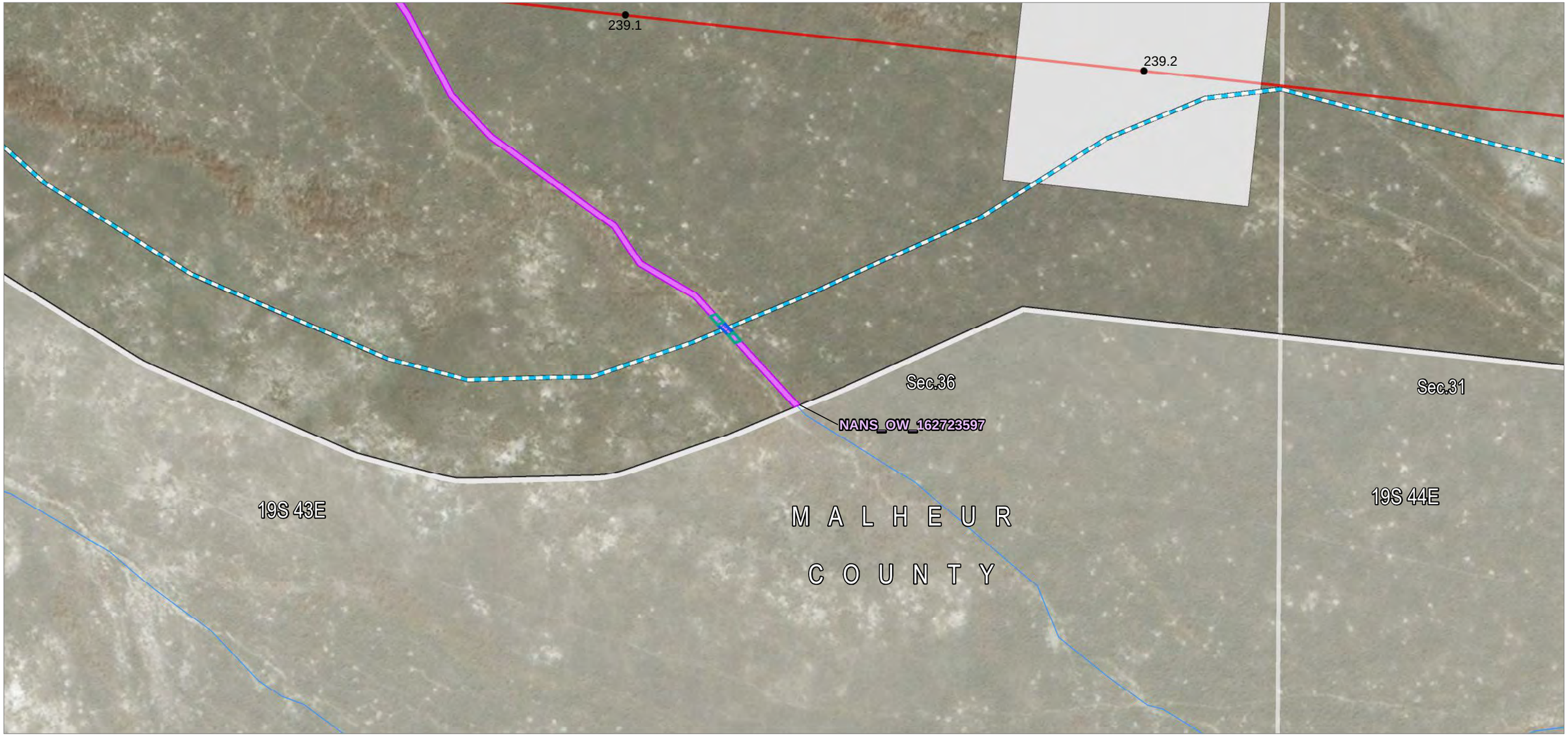
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER. An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-193
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

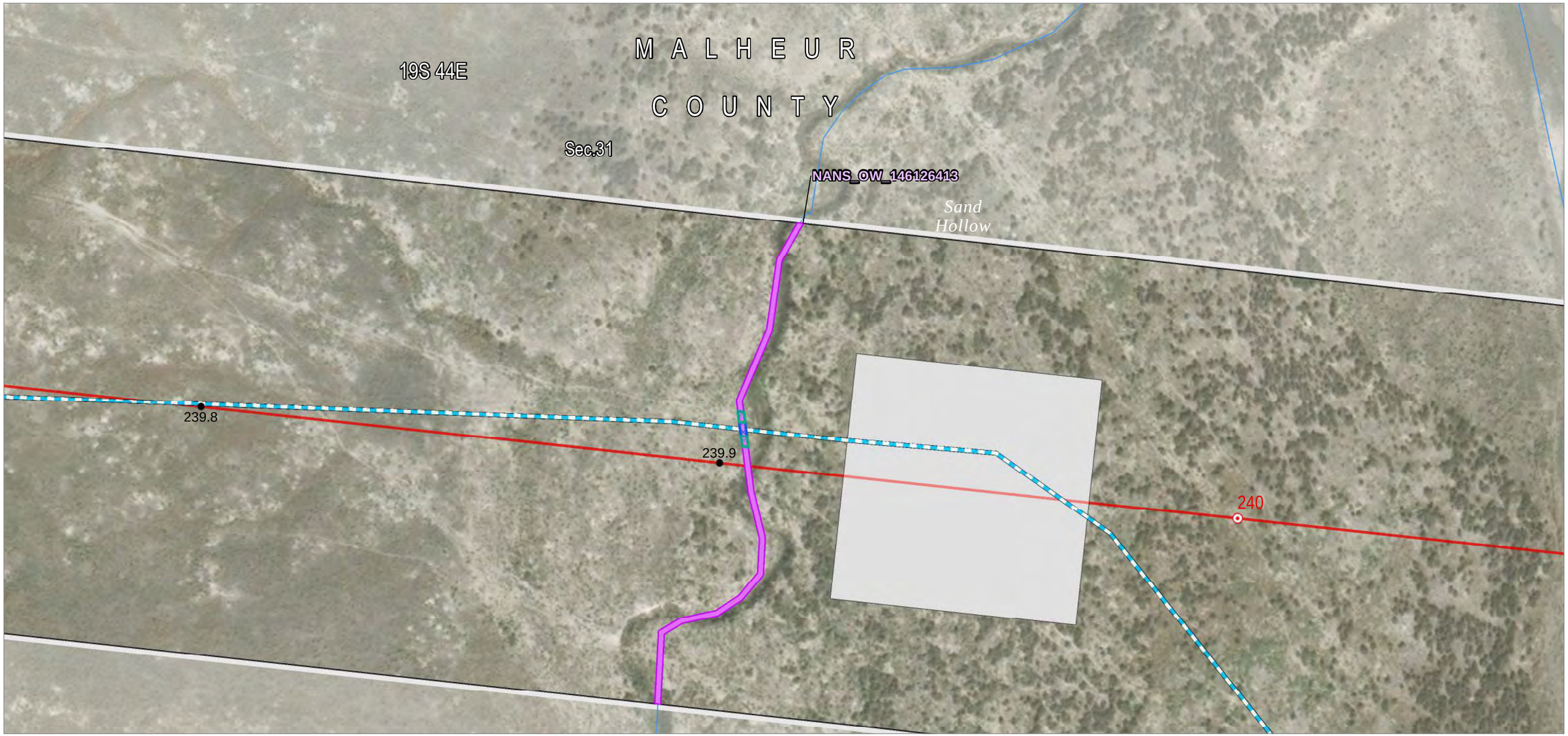
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-194
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

Other Waters

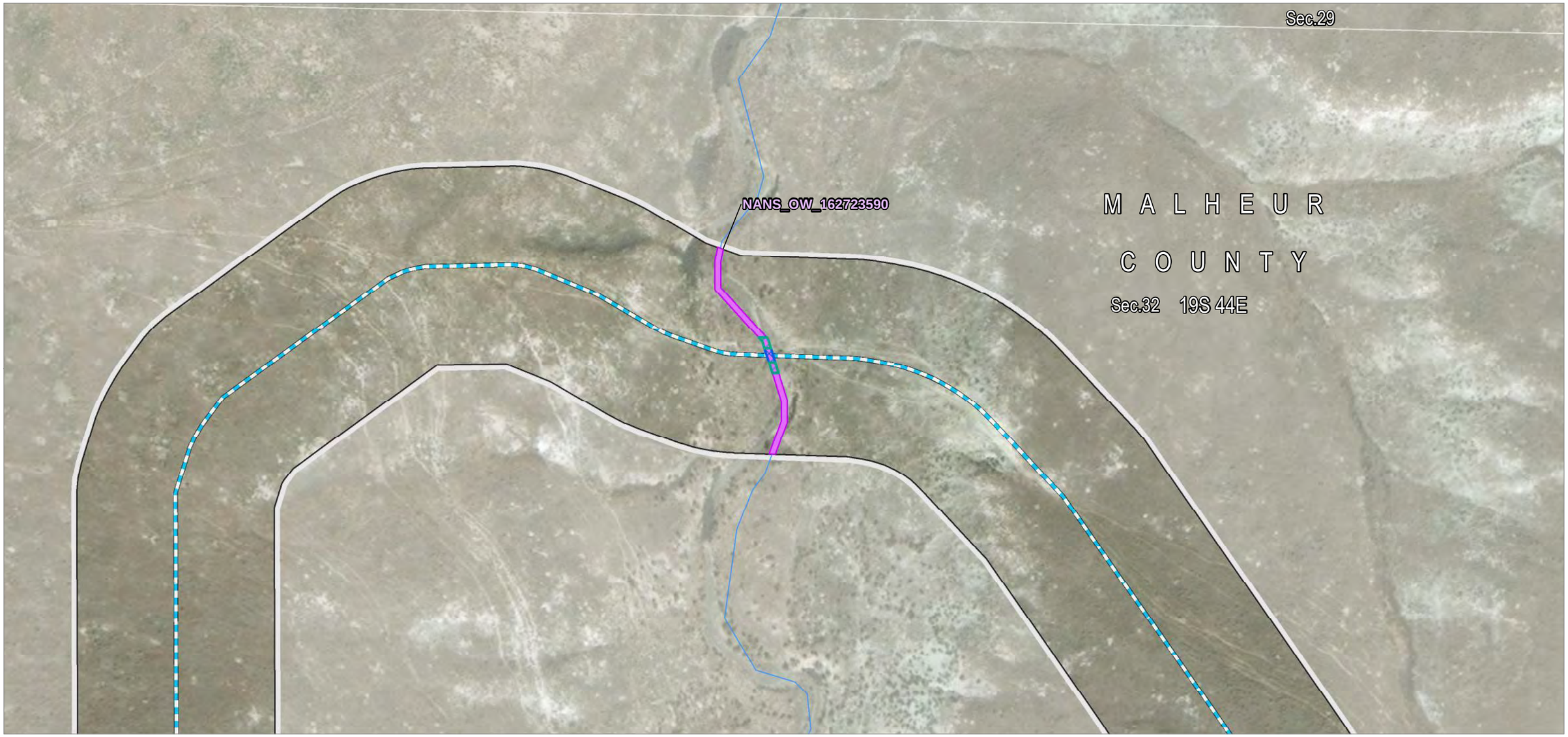
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-195
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

New Road, Bladed

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-196
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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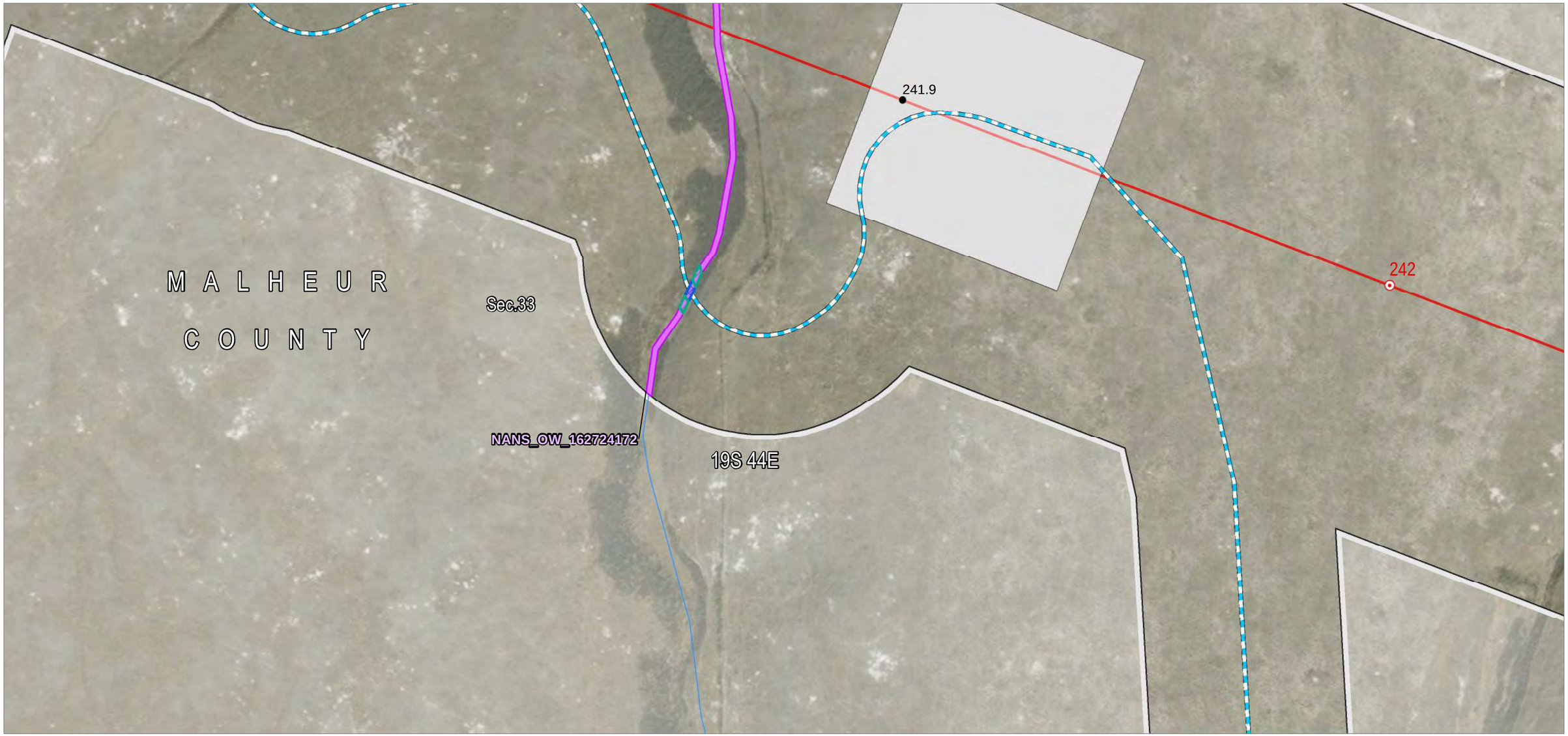
Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features
Site Boundary
Proposed Route
Work Areas
Structure Work Area
Construction Access
New Road, Bladed
Rivers, Streams, and Canals
Other Waters
NANS Streams (NHD)
Stream Impact Type
Temporary
Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-197
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-198
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed

Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-199
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

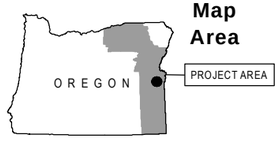
IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-200
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Alternative Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

New Road, Primitive

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

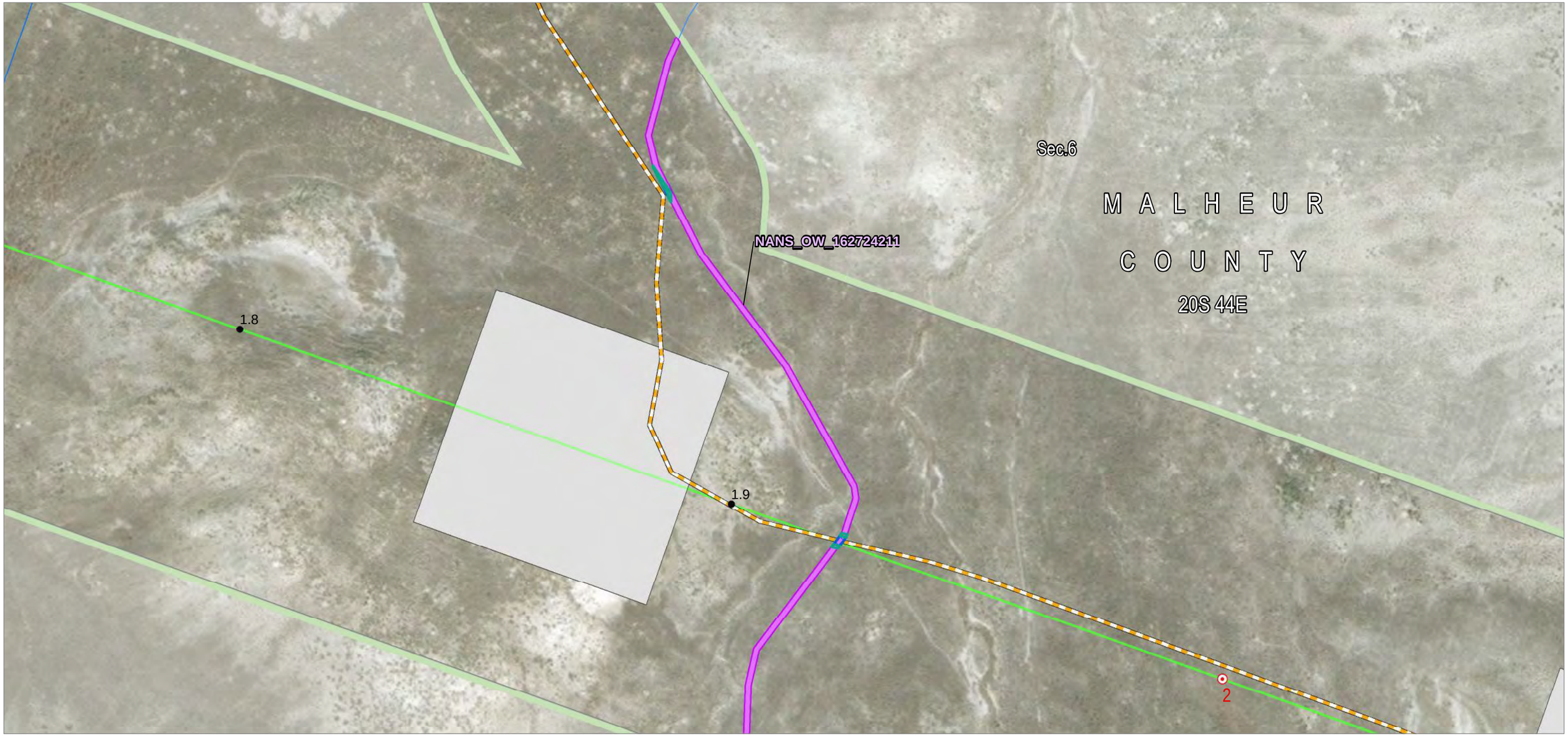
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-201
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Alternative Route

Route Centerline
- Alternative

Work Areas
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- New Road, Primitive
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-202
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Alternative Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-203
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

MALHEUR

COUNTY

Sec.5

20S 44E

NANS_OW_162724202

Rock Canyon Rd

Negro Rock Canyon

0 100

Feet

OREGON

PROJECT AREA

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Alternative Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

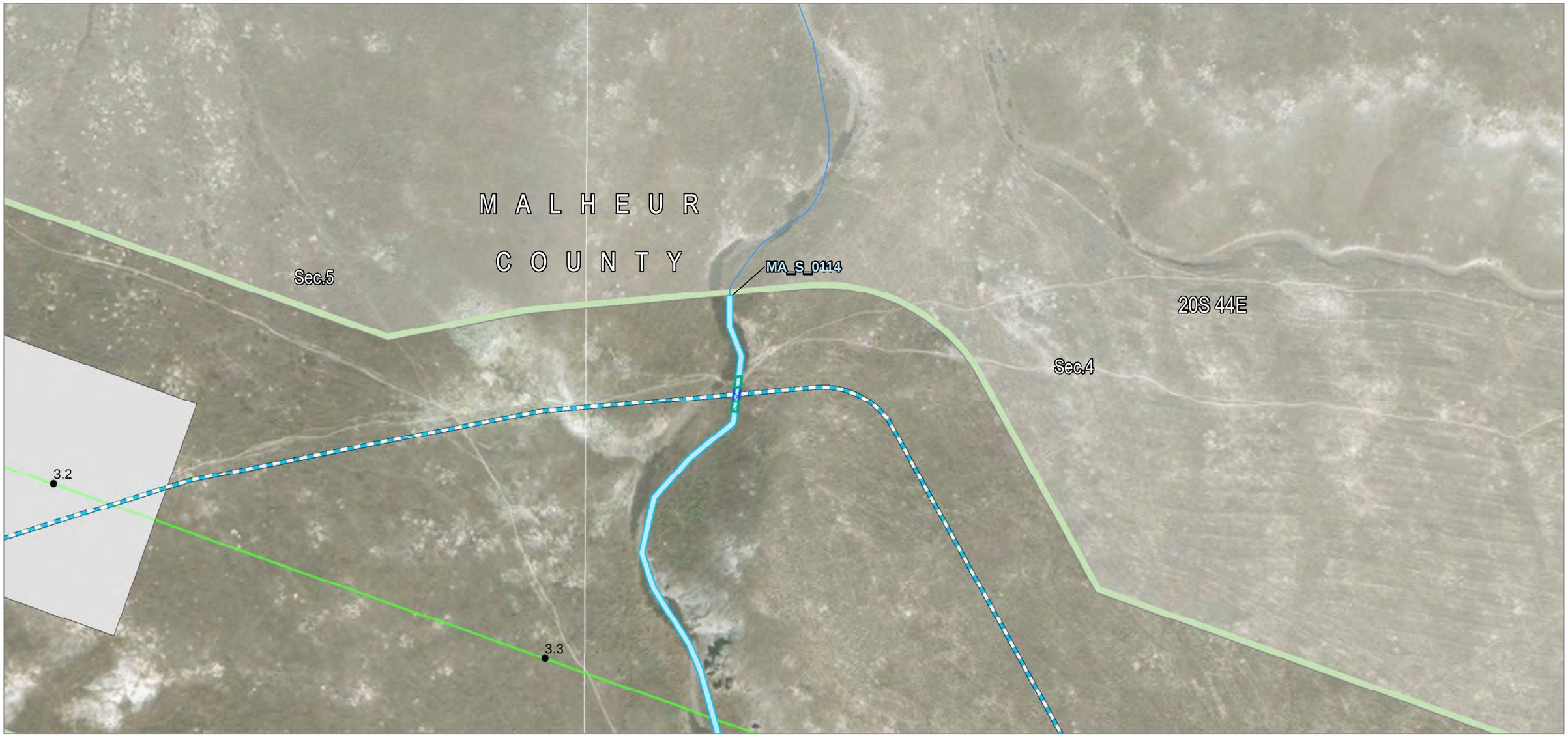
Temporary

Permanent

IDAHO POWER. An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-204
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Alternative Route

Route Centerline
- Alternative

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

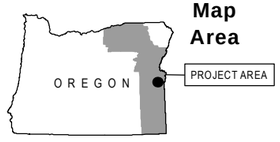
IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-205
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Alternative Route

Construction Access

New Road, Bladed

New Road, Primitive

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

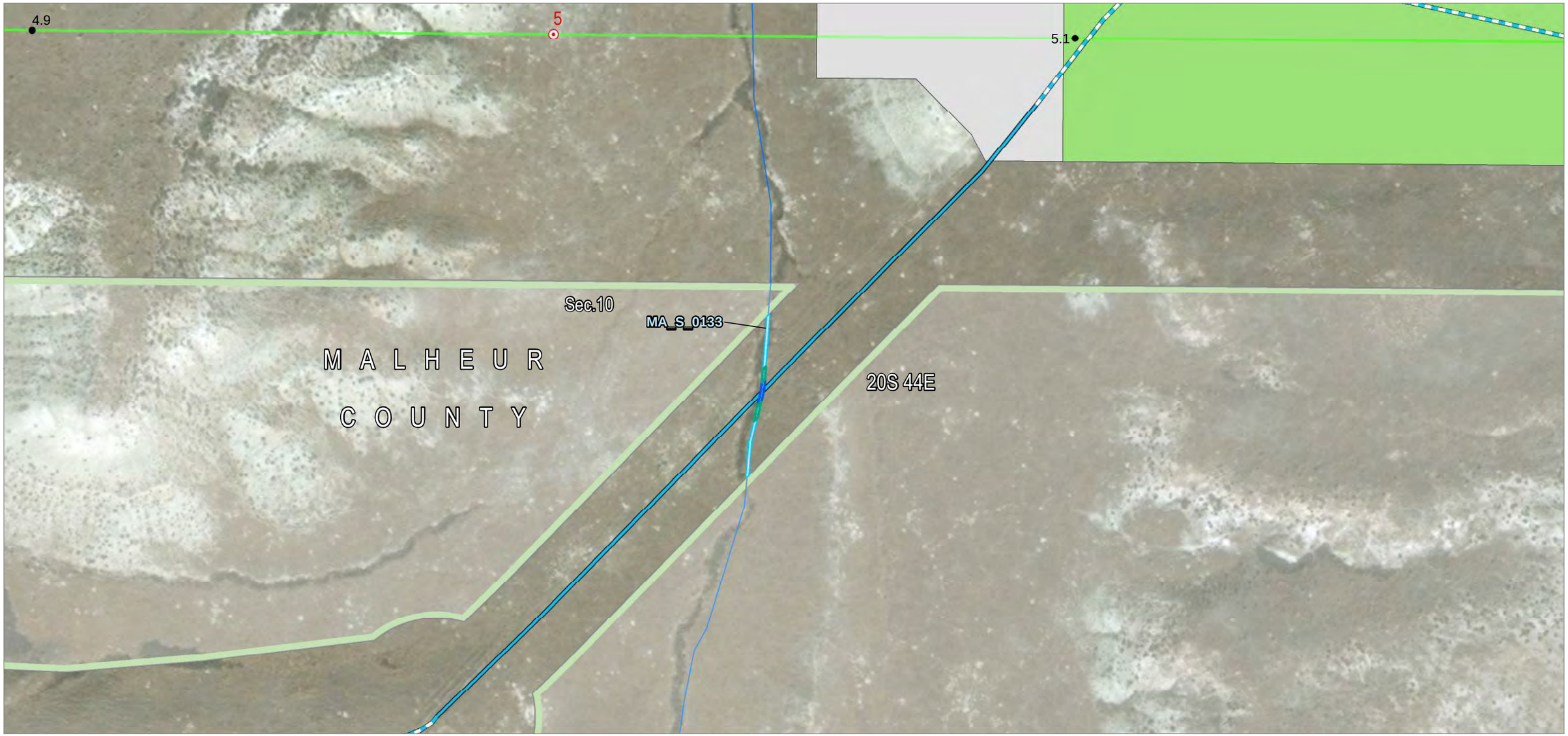
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-206
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Alternative Route

Route Centerline
- Alternative

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 71-100% Improvements
- New Road, Bladed

Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-207
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Alternative Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

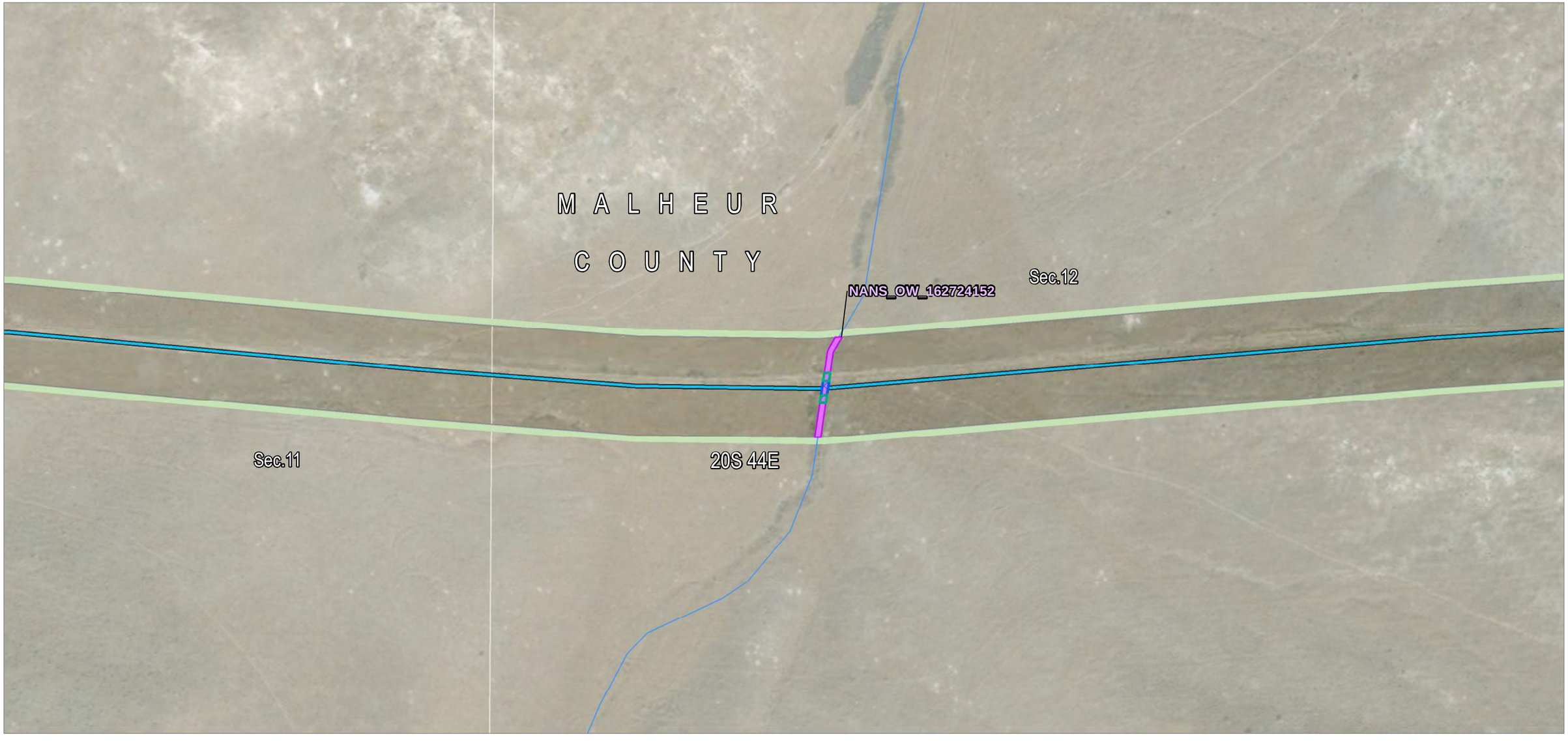
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-208
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Alternative Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-209
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Alternative Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

New Road, Primitive

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

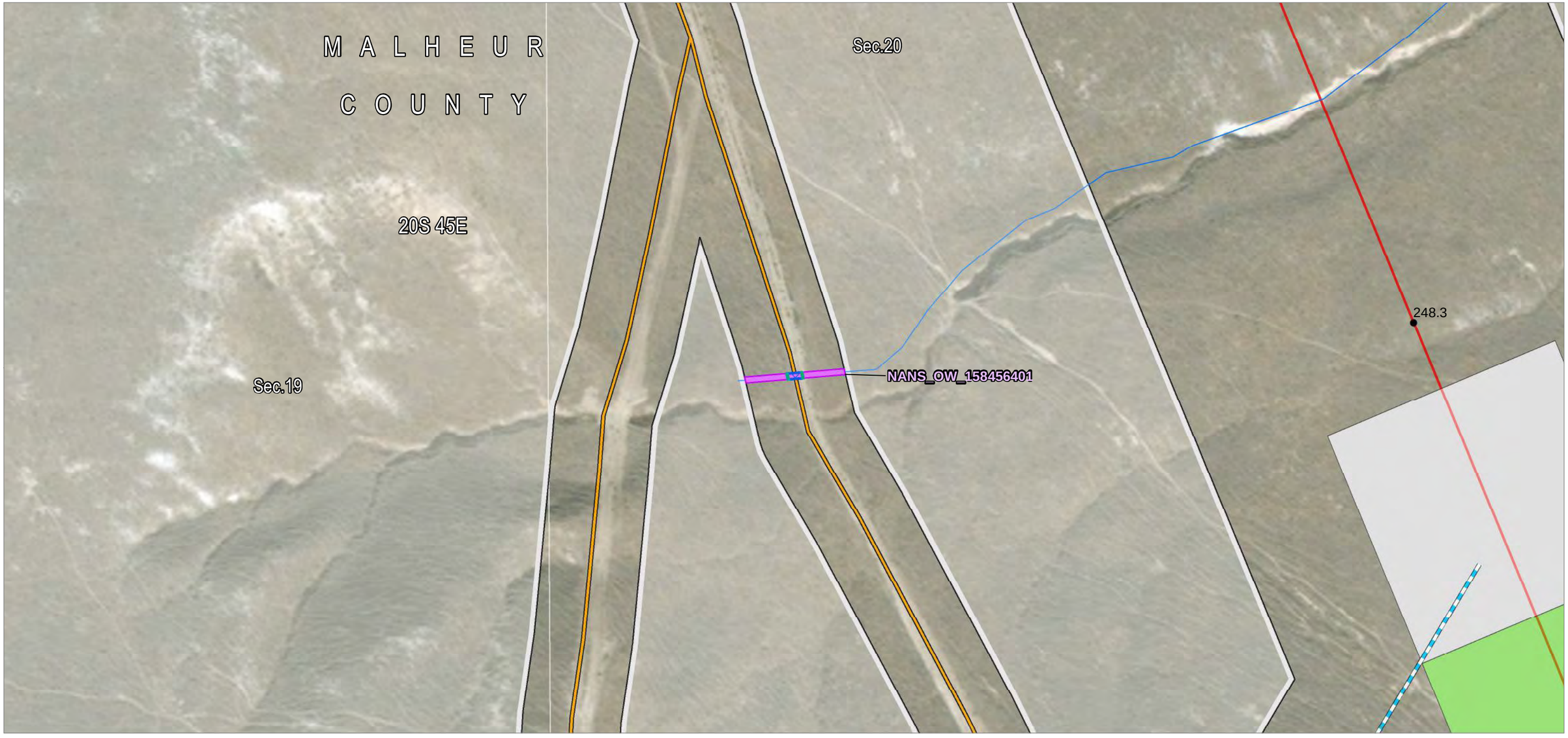
Temporary

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-210
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed

Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-211
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

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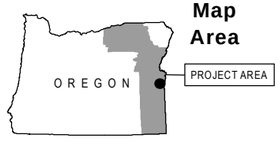
Feet

Map Area



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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-212
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Mile
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

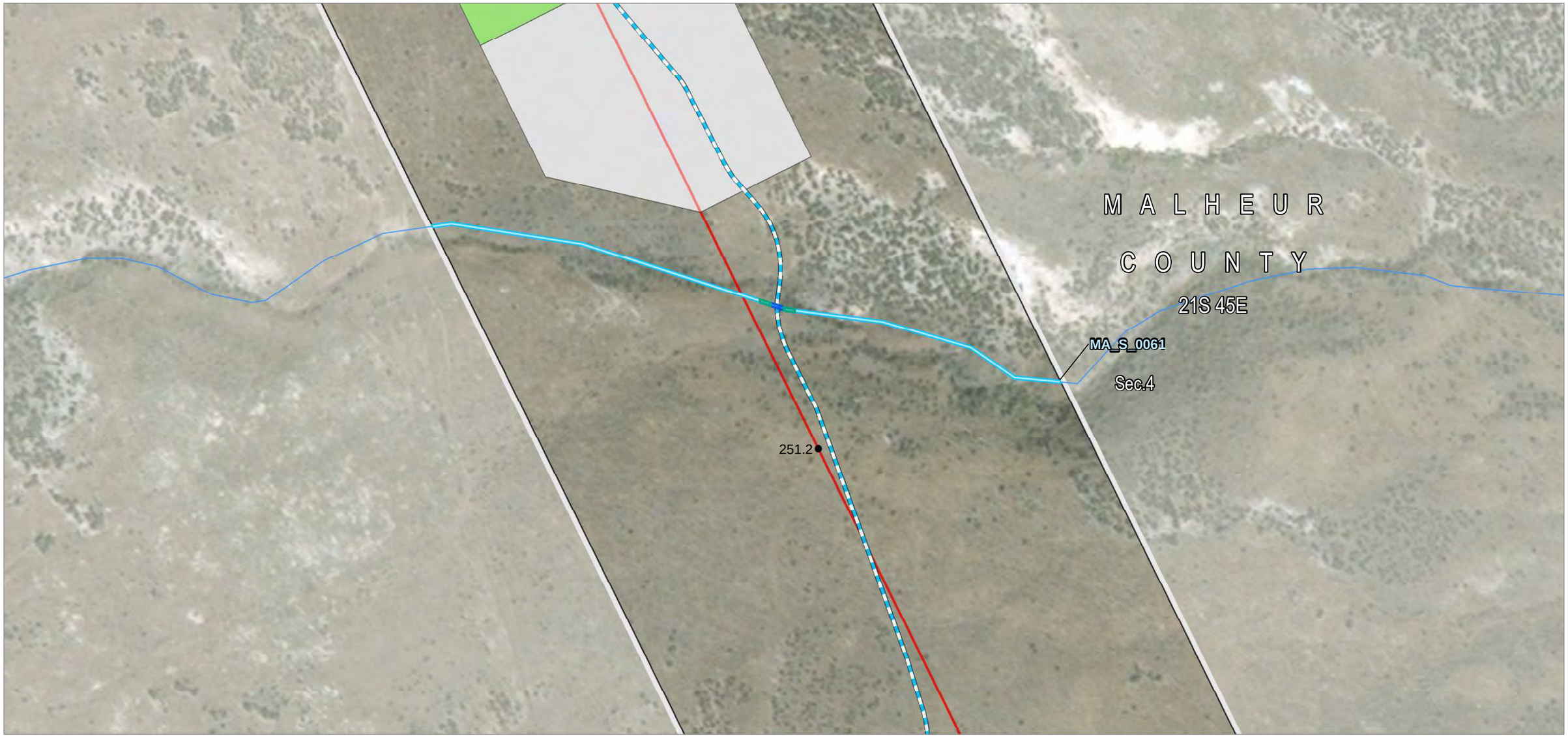
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-213
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-214
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed

Rivers, Streams, and Canals

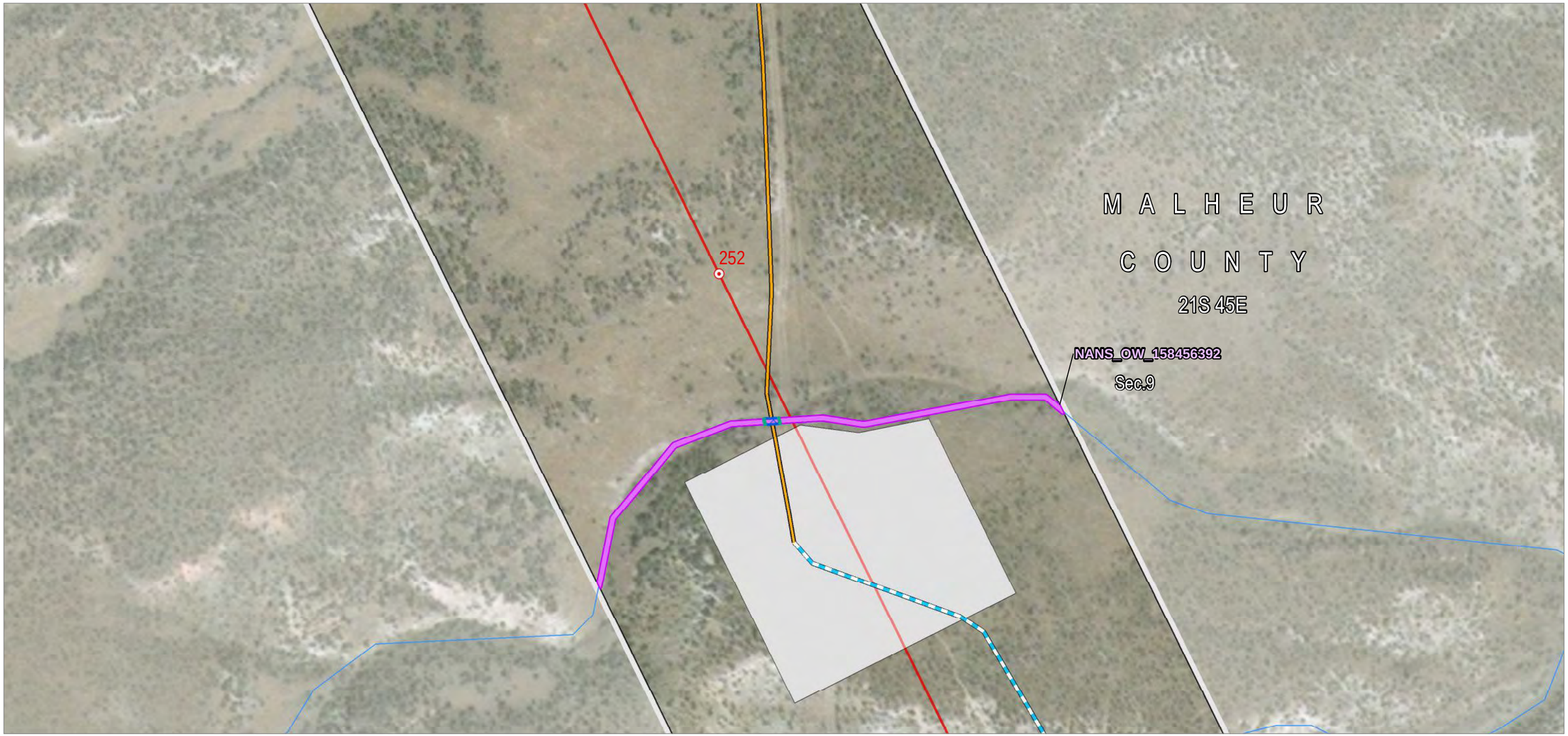
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-215
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Map Area

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed

Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-216
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features
Site Boundary
Proposed Route
Route Centerline
Proposed Route
Work Areas
Pulling and Tensioning
Structure Work Area

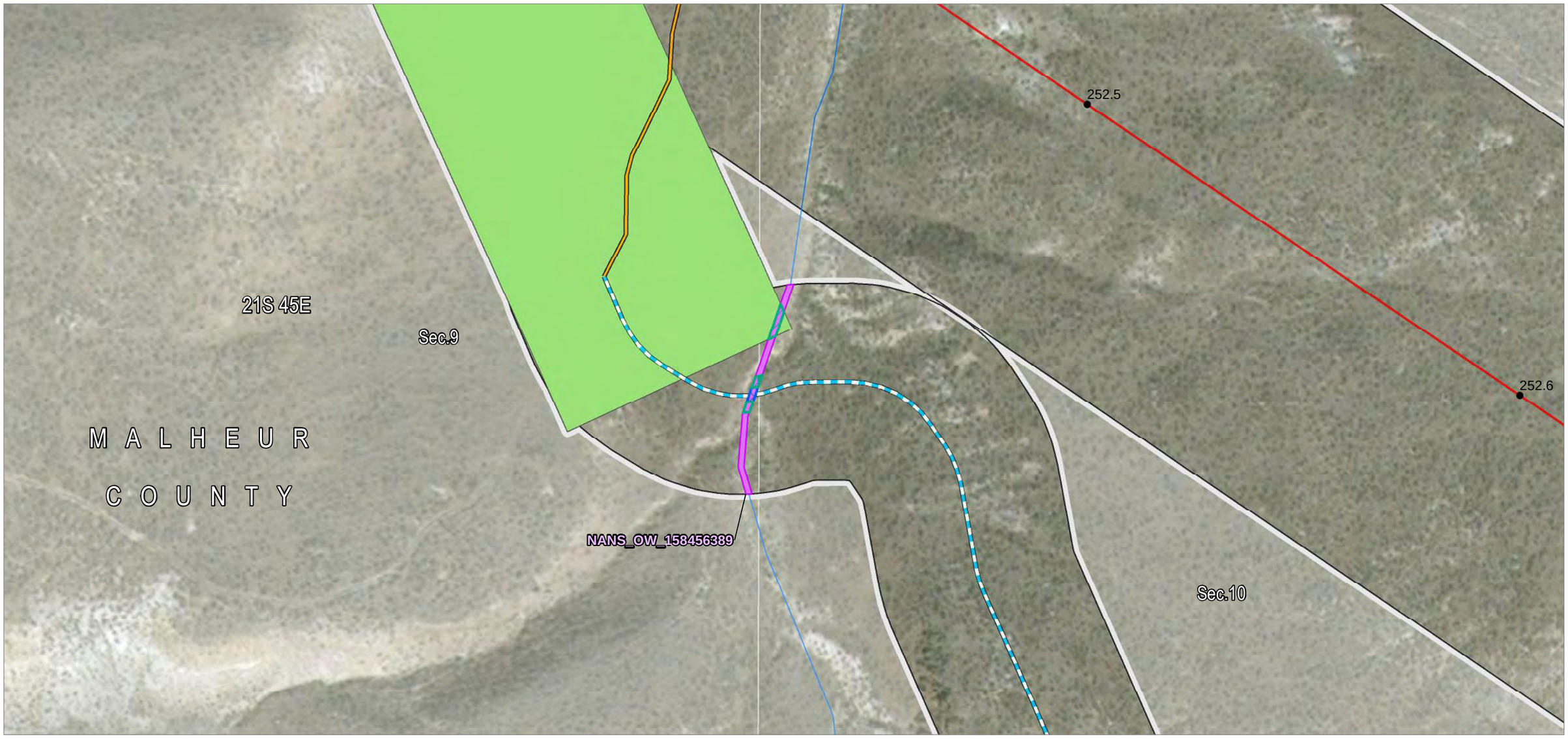
Mileposts
Tenth-mile
Construction Access
New Road, Bladed
Rivers, Streams, and Canals

Other Waters
NANS Streams (NHD)
Stream Impact Type
Temporary
Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-217
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed

Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

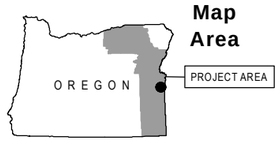
IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-218
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning

Mileposts
- Mile
- Tenth-mile

Construction Access
- New Road, Bladed
- Rivers, Streams, and Canals

Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-219
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- New Road, Bladed
- New Road, Primitive

- Rivers, Streams, and Canals

Wetland
- NANS Wetland (NWI)

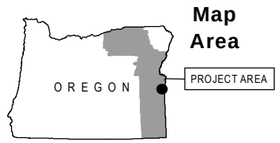
IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-220
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Wetland

NANS Wetland (NWI)

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-221
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Work Areas

Structure Work Area

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

New Road, Primitive

Rivers, Streams, and Canals

Wetland

NANS Wetland (NWI)

IDAHO POWER
An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-222
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-223
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-224
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

N

0 100

Feet

Map Area

OREGON

PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, No Substantial Modification, 0-20% Improvements

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

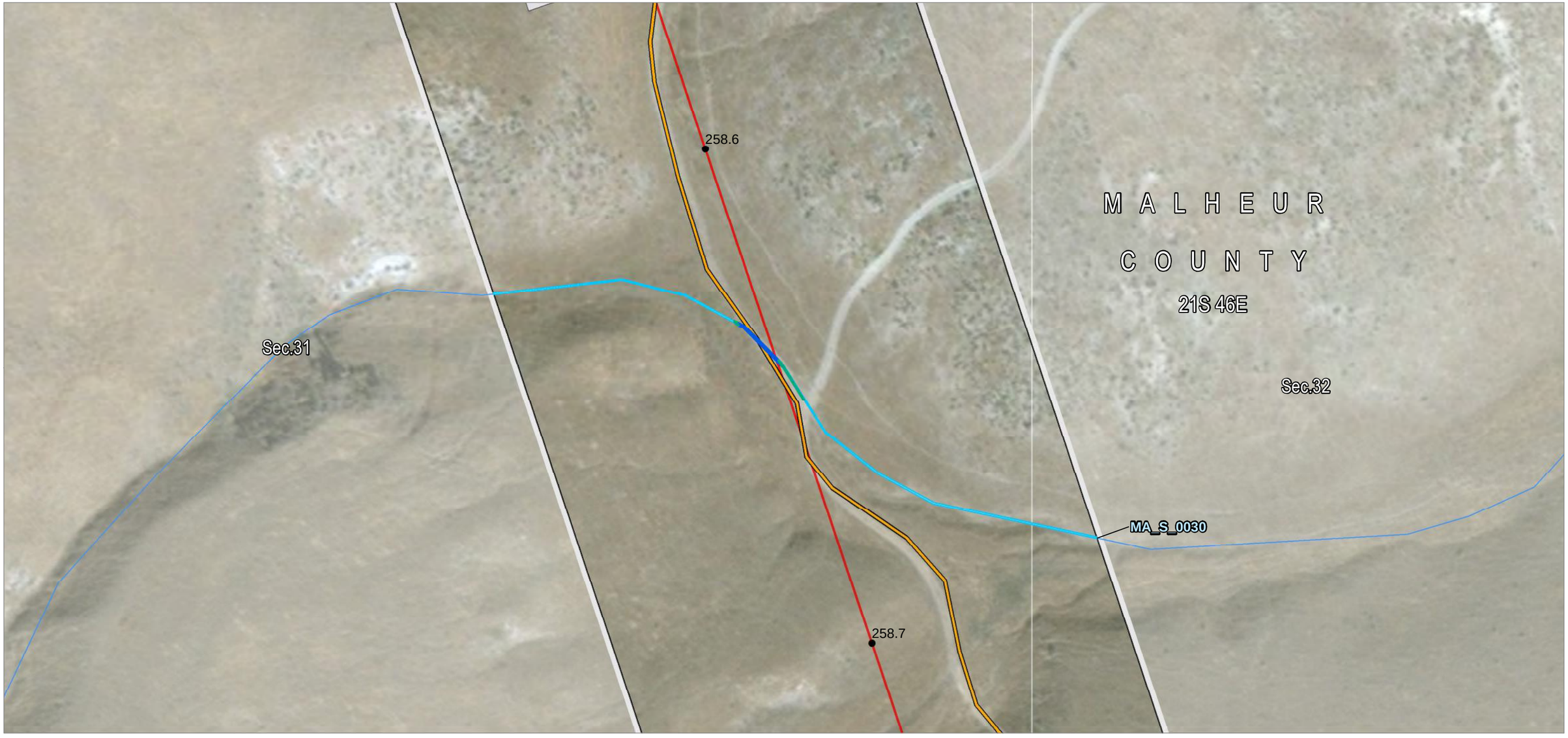
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-225
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- Rivers, Streams, and Canals

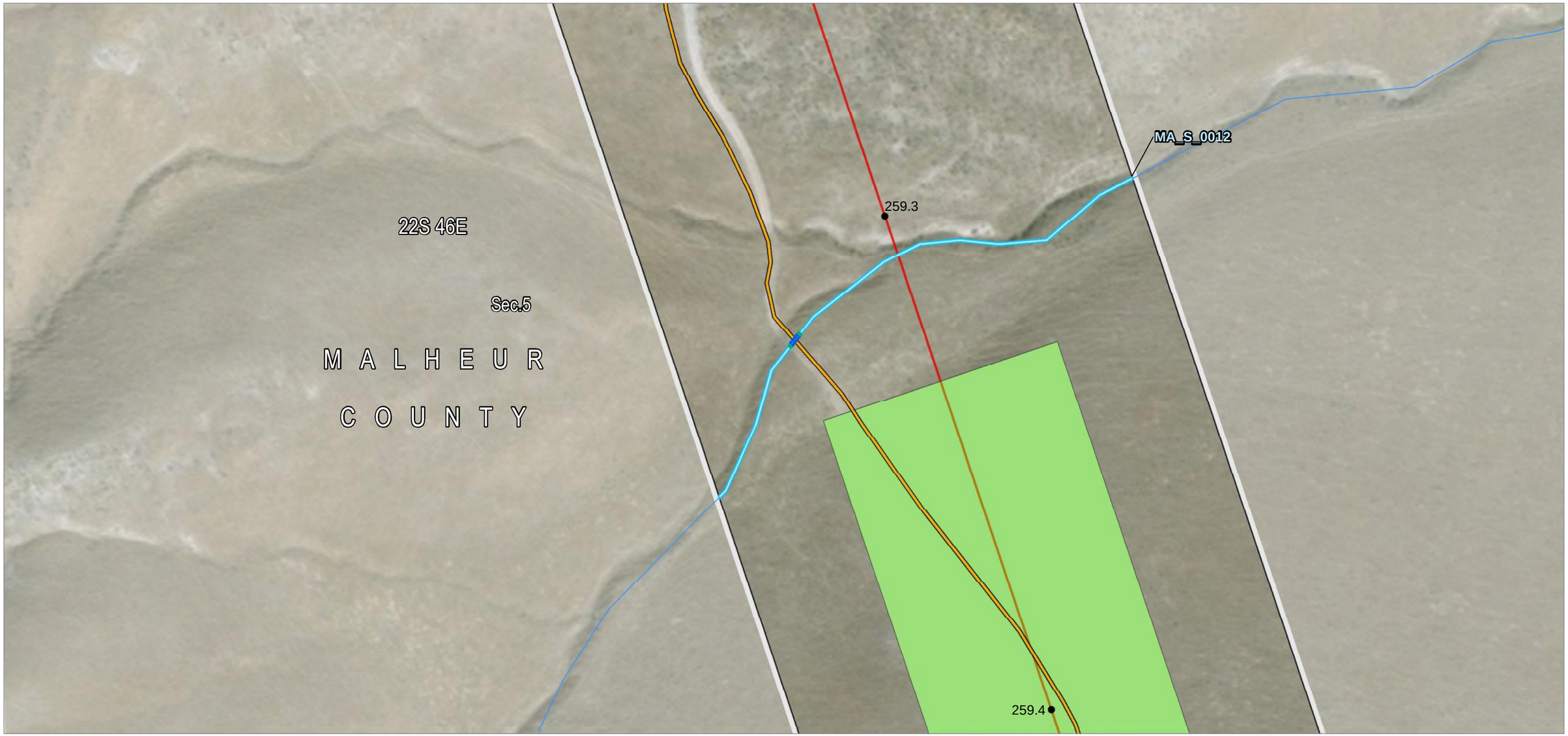
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-226
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County



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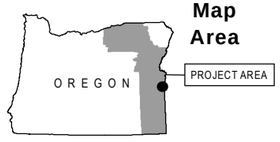
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Pulling and Tensioning

Mileposts
- Tenth-mile

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- Rivers, Streams, and Canals

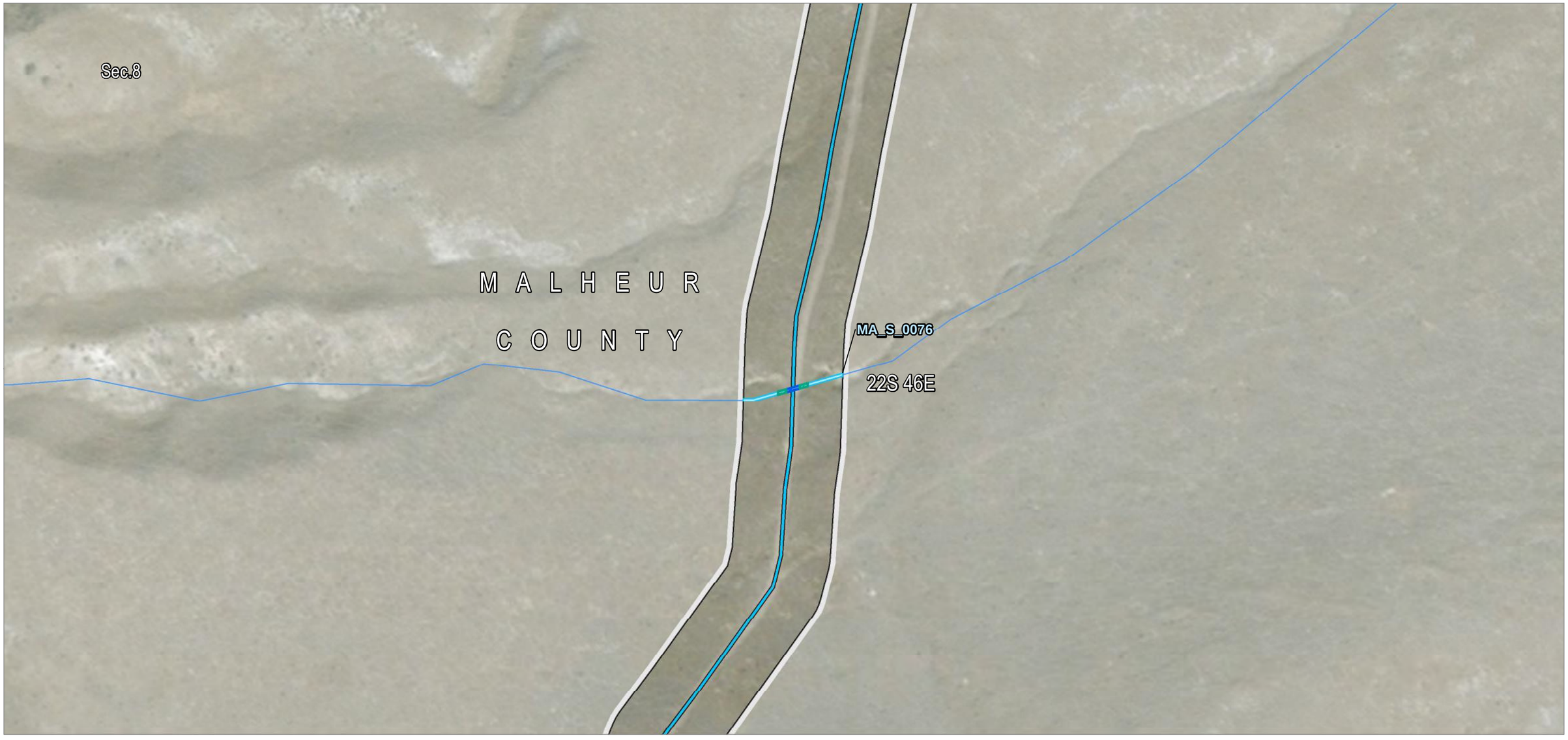
Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-227
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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0 100

Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

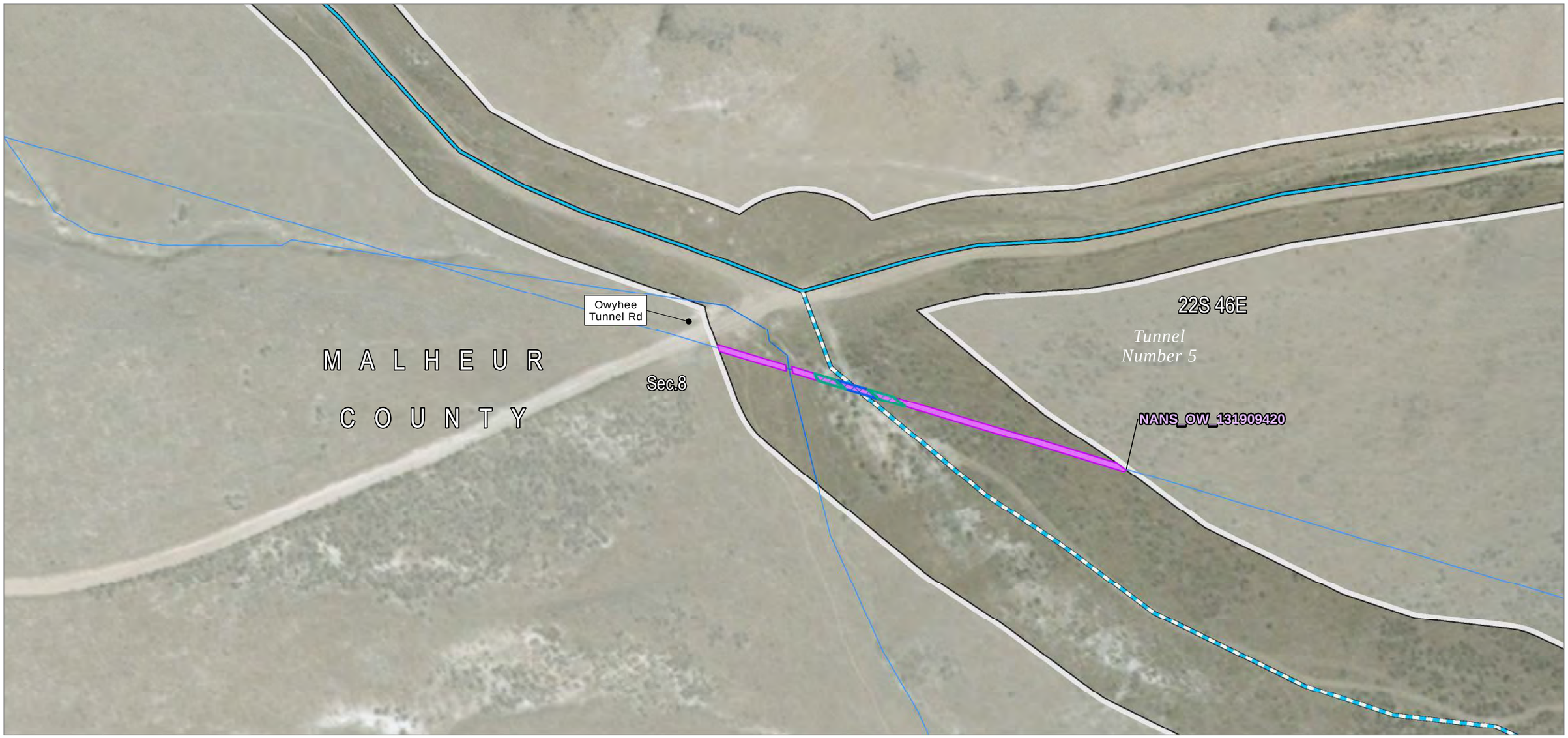
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-228
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 71-100% Improvements

New Road, Bladed

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

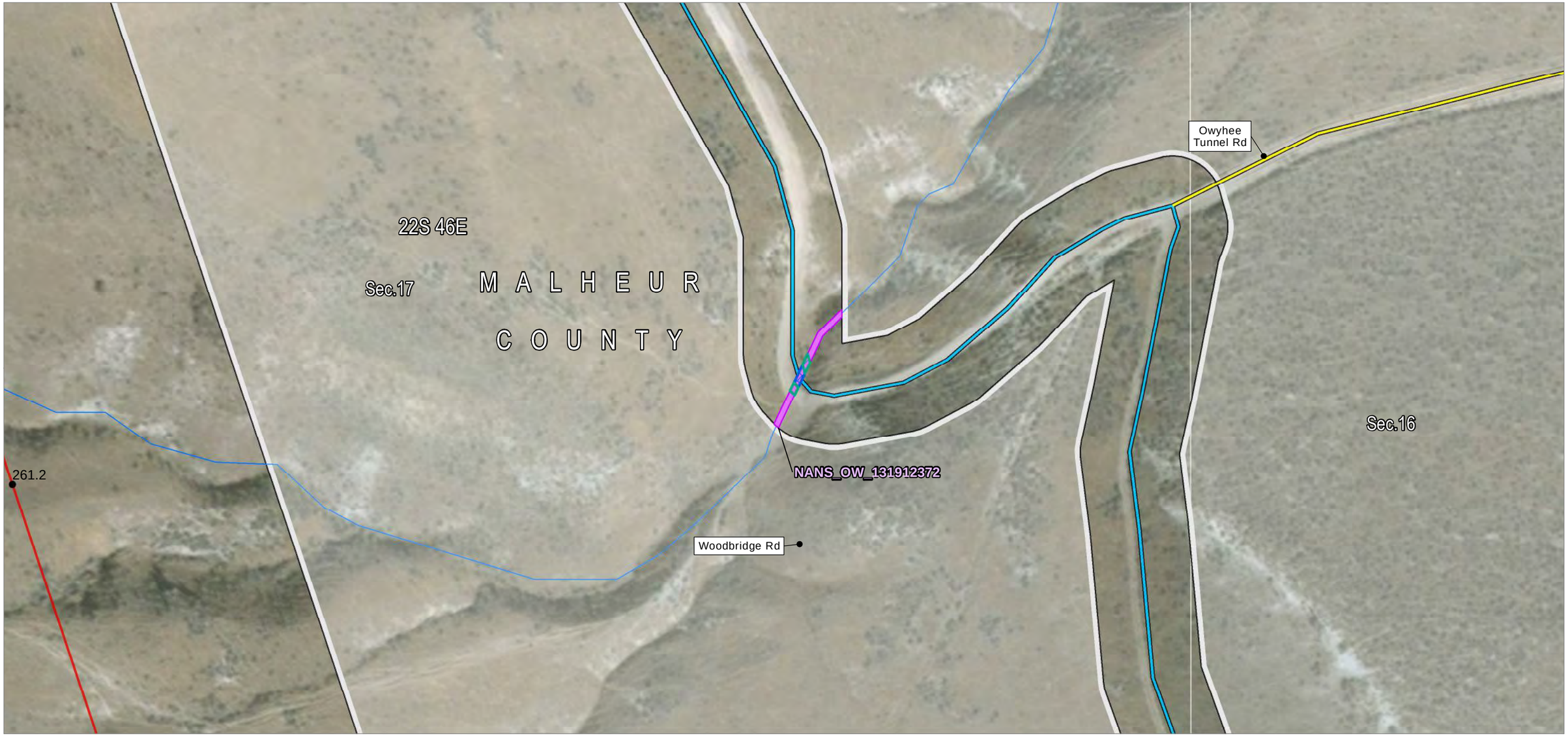
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-229
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- Rivers, Streams, and Canals

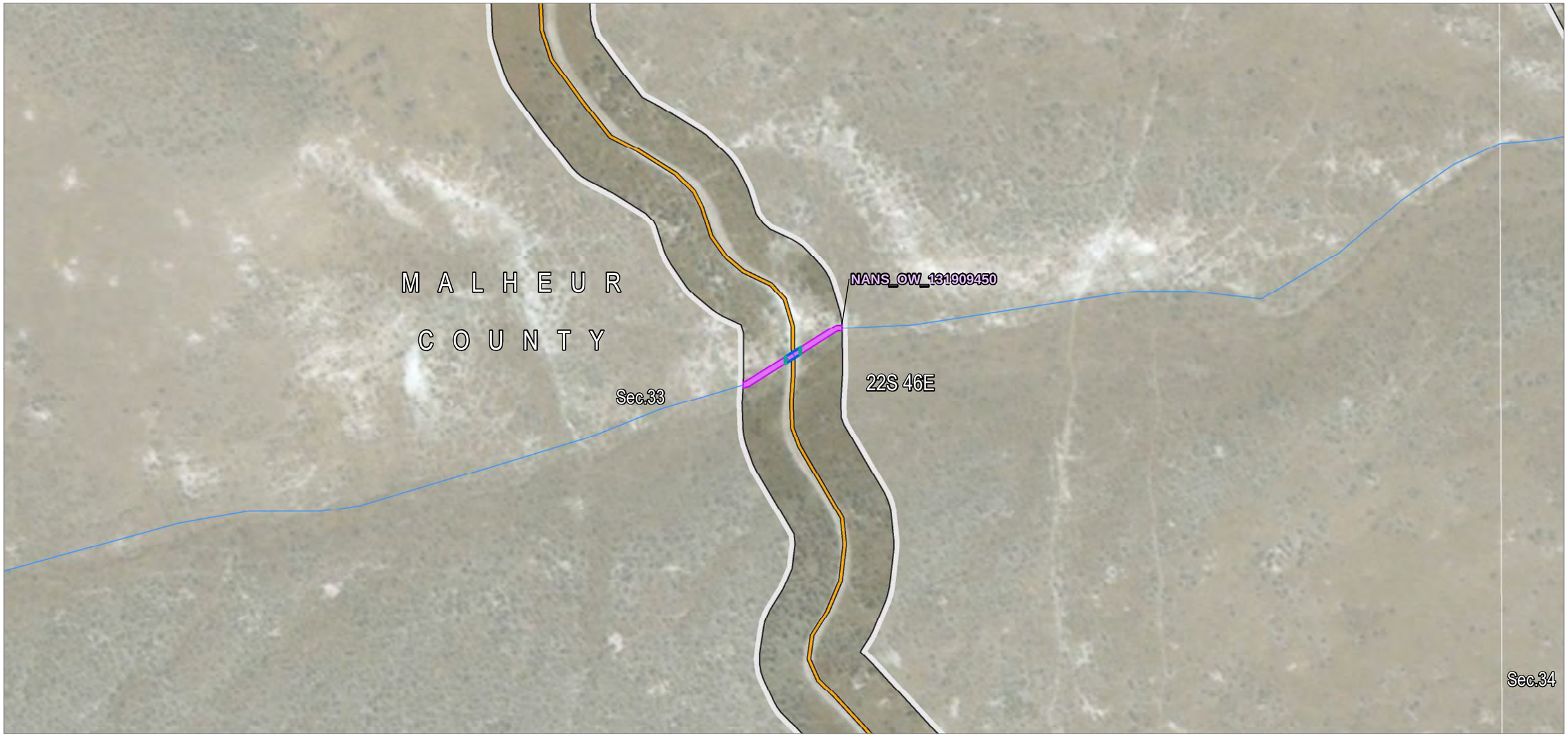
Other Waters
- NANS Streams (NHD)

Stream Impact Type
- Temporary
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-230
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



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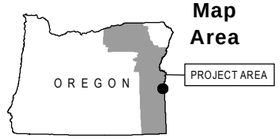
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-231
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route

Route Centerline
- Proposed Route

Work Areas
- Structure Work Area

Mileposts
- Tenth-mile

Construction Access
- Existing Road, No Substantial Modification, 0-20% Improvements
- New Road, Bladed
- New Road, Primitive

Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

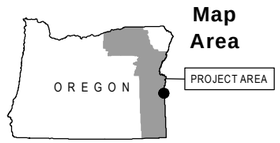
Stream Impact Type
- Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-232
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet



Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

Temporary

Permanent

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Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-233
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

N

0 100

Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Wetland

NANS Wetland (NWI)

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-234
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

0 100
Feet

Map Area
OREGON
PROJECT AREA

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features
Site Boundary
Proposed Route
Construction Access
Existing Road, Substantial Modification, 21-70% Improvements
Rivers, Streams, and Canals

Wetland
NANS Wetland (NWI)

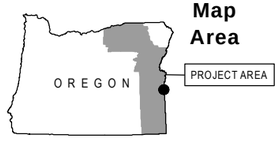
IDAHO POWER An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-235
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area



Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

New Road, Primitive

Rivers, Streams, and Canals

Other Waters

NANS Streams (NHD)

Stream Impact Type

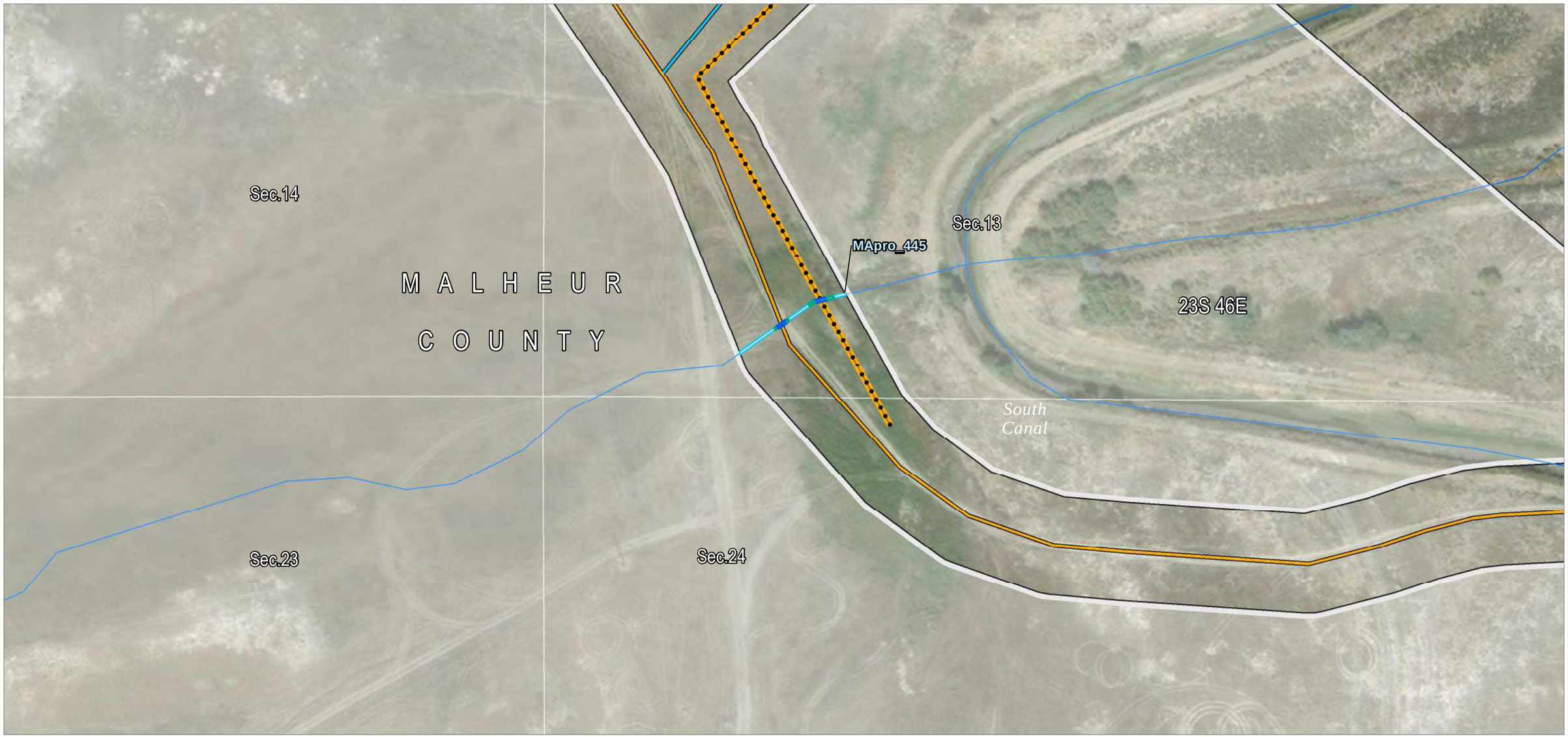
Temporary

Permanent

IDAHO POWER
An IDACORP Company

Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-236
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County



0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary
- Proposed Route
- Distribution Line to Communication Station (IPC Service Territory Only)

Construction Access
- Existing Road, Substantial Modification, 21-70% Improvements
- Existing Road, Substantial Modification, 71-100% Improvements
- Rivers, Streams, and Canals

Other Waters
- Field Survey Streams

Stream Impact Type
- Temporary
- Permanent

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Boardman to Hemingway
Transmission Line Project
Application for Site Certificate

Attachment K-237
Wetland and Other Waters
Joint Permit Application
Detail Maps
Malheur County

0 100
Feet

Map Area

Source(s): BLM, IPC, ODFW, ODOT, NPS, USDA, USFS, USGS, Ventyx, Esri, DigitalGlobe, GeoEys, Earthstar Geographics, CNES/Airbus DS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo

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Notes: Elevation contour lines are not available at this time and will be added at a later date.

Project Features

Site Boundary

Proposed Route

Construction Access

Existing Road, Substantial Modification, 21-70% Improvements

Rivers, Streams, and Canals

Other Waters

Field Survey Streams

Stream Impact Type

Temporary

Permanent

IDAHO POWER An IDACORP Company

Boardman to Hemingway Transmission Line Project
Application for Site Certificate

Attachment K-238
Wetland and Other Waters Joint Permit Application Detail Maps
Malheur County

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Appendix L, Measures to Minimize Impacts

IPC is actively engaged in avoiding and minimizing impacts to wetlands and waters.

IPC will use BMPs to minimize impacts to wetland and streams. Typical BMPs for stream crossings are listed below.

Typical BMP's for Stream Crossings:

- No streams will be dewaterd.
- Avoid crossing streams when practical.
- Cross at right angles at a point where the stream bed is straight and uniform.
- Minimize the use of equipment in the stream bed.
- Limit construction activity to periods of low flow or when streams are dry
- Avoid activity in streams outside of preferred in-stream work windows.
- Minimize excavation and fill at stream crossings and other disturbances to stream banks and channels.
- Use materials that are clean, non-erodible and non-toxic.
- Avoid using soil as fill except when installing culverts.
- Avoid altering stream flow.
- Divert runoff from roads and trails leading to stream crossings into undisturbed vegetation. Avoid directing runoff directly into streams, including ephemeral streams.
- Stabilize approaches to stream crossings with aggregate or other suitable material.
- Stabilize exposed soil as soon as practicable.
- Maintain crossings in safe, functional condition.
- Restore natural stream flow as soon as temporary crossings are no longer needed.
- The use of a temporary matting may be considered to accommodate construction traffic.

Appendix M Erosion and Sediment Control Plan

The Project's Erosion and Sediment Control Plan will be provided in Exhibit I, Attachment I-3 of the ASC, and is included in the Supplemental Reference Documents section of the JPA.

Appendix N Fill Material and Disposal Locations

Fill material will consist of gravel, silt, clay, sand, loam, rock, and crushed rock, depending on the construction site and job to be accomplished. No material will be excavated from waters of the state specifically for use as fill material. Balanced cut and fill practices will likely be used during construction, with excavated material being used as fill as close to the excavation site as necessary and practicable. Excavated material will only be placed in waters of the state as permitted based on this application. BMPs will be implemented to prevent runoff of sediment to wetlands and streams. Soils excavated to create footings and foundations for facilities will be temporarily stockpiled in upland areas near the construction sites and used as backfill at the completion of the footing or facility. While the material is stockpiled, perimeter controls such as silt fencing or equivalent control measures will be established and the stockpiled material will be covered as necessary with mulch, by plastic sheeting and other methods to prevent erosion and sedimentation.

Appendix O Removal and Fill Volumes and Dimensions

Table O-1A provides removal and fill area and permanent fill volume for temporary and permanent impacts for each delineated wetland. Table O-2A provides removal and fill area and permanent fill volume for temporary and permanent impacts for each delineated water. Table O-3 (for USACE jurisdiction only) provides removal and fill area and permanent fill volume for temporary and permanent impacts for each ephemeral water. These tables include features delineated in 2011, 2012, 2013, and 2016. Impact areas for un-delineated NWI and NHD features with preliminary boundaries are provided in Tables O-1B and Table O-2B and are used only for mitigation planning. Temporary removal and fill volume amounts will be provided in the final JPA after final engineering design is complete.

Table O-1A. Temporary and Permanent Impacts to Delineated Wetlands

Feature ID	County	Appendix K Crossing Type	R F Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal	Permanent Fill
BA_BR_W446	Baker	K239	Variable	0.003	0.008	8	8
BA_FL_W_011	Baker	K239	Variable	0.006	0.008	16	17
BA_FL_W_012	Baker	K239	Variable	0.008	0.019	21	22
BA_WT_W_010	Baker	K239	Variable	0.002	0.002	5	6
BA_WT_W_202	Baker	K239	Variable	0.003	0.008	8	8
BA_WT_W_204	Baker	K239	Variable	0.015	0.037	39	41
BA_WT_W_206	Baker	K239	Variable	0.006	0.013	16	17
UN_MC_W_018	Union	K239	Variable	0.151	0.177	390	413
UN_MC_W_019	Union	K239	Variable	0.010	0.099	26	28
UN_ML_W_004	Union	K239	Variable	0.003	0.006	8	8
UN_ML_W_015	Union	K239	Variable	0.003	0.008	8	8
Grand Total				**0.211**	**0.386**	**545**	**576**

Table O-1B. Temporary and Permanent Impacts to Wetlands (Not Accessed/Not Delineated)

Feature ID	County	Appendix K Crossing Type	Permanent Impacts	Temporary Impacts	Permanent Removal	Permanent Fill
NANS_W_104	Morrow	K239	0.000	0.131	TBD	TBD
NANS_W_105	Morrow	K239	0.009	0.098	TBD	TBD
NANS_W_118	Morrow	K239	0.000	0.237	TBD	TBD
NANS_W_119	Morrow	K239	0.000	0.078	TBD	TBD
NANS_W_108	Umatilla	K239	0.000	0.004	TBD	TBD
NANS_W_109	Umatilla	K239	0.000	0.006	TBD	TBD
NANS_W_112	Umatilla	K239	0.001	0.004	TBD	TBD
NANS_W_115	Umatilla	K239	0.000	0.114	TBD	TBD
NANS_W_18	Umatilla	K239	0.004	0.006	TBD	TBD
NANS_W_22	Umatilla	K239	0.007	0.015	TBD	TBD
NANS_W_68	Umatilla	K239	0.011	0.012	TBD	TBD
NANS_W_85	Umatilla	K239	0.004	0.013	TBD	TBD
NANS_W_86	Umatilla	K239	0.004	0.011	TBD	TBD
NANS_W_87	Umatilla	K239	0.008	0.018	TBD	TBD
NANS_W_89	Umatilla	K239	0.010	0.020	TBD	TBD
NANS_W_96	Umatilla	K239	0.000	0.001	TBD	TBD
NANS_W_98	Umatilla	K239	0.000	0.002	TBD	TBD
NANS_W_99	Umatilla	K239	0.012	0.028	TBD	TBD
NANS_W_26	Union	K239	0.016	0.018	TBD	TBD
NANS_W_51	Union	K239	0.029	0.034	TBD	TBD
NANS_W_55	Union	K239	0.016	0.018	TBD	TBD
NANS_W_80	Union	K239	0.079	0.411	TBD	TBD
NANS_W_36	Baker	K239	0.000	25.203	TBD	TBD
NANS_W_37	Baker	K239	0.000	0.055	TBD	TBD
NANS_W_75	Baker	K239	0.056	0.064	TBD	TBD
NANS_W_03	Malheur	K239	0.005	0.006	TBD	TBD
NANS_W_11	Malheur	K239	0.000	0.454	TBD	TBD
NANS_W_61	Malheur	K239	0.005	0.011	TBD	TBD
NANS_W_62	Malheur	K239	0.008	0.009	TBD	TBD
NANS_W_91	Malheur	K239	0.034	0.039	TBD	TBD
NANS_W_92	Malheur	K239	0.007	0.008	TBD	TBD
Grand Total			**0.327**	**27.127**		

Table O-2A. Temporary and Permanent Impacts to Delineated Other Waters

Feature ID	County	Appendix K Crossing Type	RF Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal (Cubic Yards)	Permanent Fill (Cubic Yards)	Permanent Stream Length (Feet)	Temporary Stream Length (Feet)
BA_FL_008	Baker	K-241	Variable	0.001	0.002	0	0	25.67	102.34
BA_FL_STRM_023	Baker	K-241	Variable	0.002	0.003	4	3	20.85	29.26
BA_FL_STRM_024	Baker	K-241	Variable	0.000	0.004	0	0	0.00	14.80
BA_WT_STRM_017	Baker	K-240	Variable	0.006	0.007	12	8	55.08	57.87
BA_WT_STRM_020	Baker	K-240	Variable	0.002	0.002	4	3	15.19	17.40
BA_WT_STRM_027	Baker	K-240	Variable	0.005	0.012	4	6	22.03	54.65
BA_WT_STRM_029	Baker	K-240	Variable	0.001	0.004	1	1	15.22	38.35
BA_WT_STRM_211	Baker	K-240	Variable	0.001	0.002	2	1	15.64	33.45
BA_WT_STRM_213	Baker	K-240	Variable	0.001	0.002	2	1	15.23	31.52
BA_WT_STRM_214	Baker	K-240	Variable	0.001	0.001	2	1	14.38	16.43
BA_WT_STRM_215	Baker	K-240	Variable	0.007	0.009	14	9	120.06	150.03
BA_WT_STRM_225	Baker	K-240	Variable	0.002	0.004	4	3	17.53	43.48
MA_TM_005	Malheur	K-240	Variable	0.001	0.001	2	1	16.22	18.56
MA_TM_465	Malheur	K-240	Variable	0.000	0.000	0	0	0.00	1.12
MO_SW_STRM_300	Morrow	K-240	Variable	0.007	0.015	14	9	14.79	31.60
UM_SW_STRM_004	Umatilla	K-240	Variable	0.013	0.027	26	17	28.04	60.27
UM_SW_STRM_008	Umatilla	K-241	Variable	0.000	0.000	0	0	0.00	0.01
UM_SW_STRM_013	Umatilla	K-240	Variable	0.011	0.013	22	15	14.32	16.33
UN_MC_STRM_001	Union	K-240	Variable	0.002	0.004	4	3	28.33	29.69
UN_MC_STRM_005	Union	K-240	Variable	0.004	0.006	8	5	40.98	57.87
UN_MC_STRM_006	Union	K-240	Variable	0.001	0.001	2	1	15.03	16.03
UN_MC_STRM_300	Union	K-240	Variable	0.000	0.000	0	0	2.69	12.18
UN_MC_STRM_301	Union	K-240	Variable	0.001	0.002	2	1	14.58	16.68
UN_ML_STRM_300	Union	K-240	Variable	0.002	0.005	0	0	14.23	37.52
Grand Total				**0.071**	**0.125**	**129**	**88**	**526.08**	**887.42**

Note: Project impacts currently listed at streams with fish presence will be avoided after final design, before the project is completed.

Table O-2B. Temporary and Permanent Impacts to Other Waters (Not Accessed/Not Delineated)

Feature ID	County	Crossing Type	RF Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal (Cubic Yards)	Permanent Fill (Cubic Yards)	Permanent Stream Length (Feet)	Temporary Stream Length (Feet)
NANS_OW_145365444	Morrow	TBD	Variable	0.002	0.002	TBD	TBD	15.13	17.29
NANS_OW_152904366	Morrow	TBD	Variable	0.001	0.003	TBD	TBD	10.48	2.04
NANS_OW_152904546	Morrow	TBD	Variable	0.005	0.006	TBD	TBD	36.31	41.57
NANS_OW_152906926	Morrow	TBD	Variable	0.000	0.039	TBD	TBD	0.00	281.95
NANS_OW_160621028	Morrow	TBD	Variable	0.001	0.002	TBD	TBD	10.16	16.26
NANS_OW_160621034	Morrow	TBD	Variable	0.001	0.002	TBD	TBD	10.27	16.43
NANS_OW_160621220	Morrow	TBD	Variable	0.001	0.002	TBD	TBD	10.67	16.93
NANS_OW_160621288	Morrow	TBD	Variable	0.002	0.003	TBD	TBD	11.65	18.65
NANS_OW_167136398	Morrow	TBD	Variable	0.006	0.007	TBD	TBD	66.44	25.46
NANS_OW_145365948	Umatilla	TBD	Variable	0.003	0.006	TBD	TBD	20.01	42.87
NANS_OW_145367254	Umatilla	TBD	Variable	0.002	0.002	TBD	TBD	14.22	16.25
NANS_OW_145367832	Umatilla	TBD	Variable	0.002	0.002	TBD	TBD	14.73	16.83
NANS_OW_160620715	Umatilla	TBD	Variable	0.002	0.002	TBD	TBD	14.49	16.56
NANS_OW_160620752	Umatilla	TBD	Variable	0.009	0.012	TBD	TBD	46.28	84.56
NANS_OW_160621909	Umatilla	TBD	Variable	0.001	0.002	TBD	TBD	11.77	15.72
NANS_OW_160622367	Umatilla	TBD	Variable	0.044	0.049	TBD	TBD	332.27	360.29
NANS_OW_160622394	Umatilla	TBD	Variable	0.002	0.004	TBD	TBD	14.02	30.09
NANS_OW_160630009	Umatilla	TBD	Variable	0.003	0.004	TBD	TBD	23.51	27.31
NANS_OW_160630041	Umatilla	TBD	Variable	0.002	0.002	TBD	TBD	14.25	16.28
NANS_OW_160630259	Umatilla	TBD	Variable	0.008	0.017	TBD	TBD	57.51	124.39
NANS_OW_160630306	Umatilla	TBD	Variable	0.005	0.006	TBD	TBD	38.64	44.16
NANS_OW_160630366	Umatilla	TBD	Variable	0.005	0.005	TBD	TBD	32.75	37.53
NANS_OW_160630515	Umatilla	TBD	Variable	0.013	0.093	TBD	TBD	93.04	576.25
NANS_OW_160630894	Umatilla	TBD	Variable	0.001	0.002	TBD	TBD	10.10	16.16
NANS_OW_160631202	Umatilla	TBD	Variable	0.017	0.019	TBD	TBD	14.60	16.76
NANS_OW_160631236	Umatilla	TBD	Variable	0.002	0.002	TBD	TBD	15.06	17.21
NANS_OW_160631504	Umatilla	TBD	Variable	0.001	0.002	TBD	TBD	10.49	16.79
NANS_OW_160631595	Umatilla	TBD	Variable	0.000	0.035	TBD	TBD	0.00	252.55
NANS_OW_160631666	Umatilla	TBD	Variable	0.010	0.011	TBD	TBD	71.87	82.14
NANS_OW_160631674	Umatilla	TBD	Variable	0.002	0.002	TBD	TBD	14.04	16.05
NANS_OW_160631692	Umatilla	TBD	Variable	0.004	0.007	TBD	TBD	29.82	47.44
NANS_OW_109319883	Union	TBD	Variable	0.002	0.002	TBD	TBD	14.80	16.91
NANS_OW_109322453	Union	TBD	Variable	0.003	0.003	TBD	TBD	20.57	23.50

Feature ID	County	Crossing Type	RF Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal (Cubic Yards)	Permanent Fill (Cubic Yards)	Permanent Stream Length (Feet)	Temporary Stream Length (Feet)
NANS_OW_109324275	Union	TBD	Variable	0.002	0.003	TBD	TBD	17.23	19.70
NANS_OW_109324277	Union	TBD	Variable	0.002	0.003	TBD	TBD	14.97	19.28
NANS_OW_109324431	Union	TBD	Variable	0.004	0.005	TBD	TBD	30.54	34.90
NANS_OW_109325279	Union	TBD	Variable	0.004	0.005	TBD	TBD	28.99	33.13
NANS_OW_109325311	Union	TBD	Variable	0.006	0.007	TBD	TBD	42.69	48.88
NANS_OW_109327743	Union	TBD	Variable	0.038	0.045	TBD	TBD	291.41	357.78
NANS_OW_112935185	Union	TBD	Variable	0.002	0.002	TBD	TBD	14.28	16.31
NANS_OW_112936335	Union	TBD	Variable	0.005	0.006	TBD	TBD	37.59	43.35
NANS_OW_112936337	Union	TBD	Variable	0.002	0.003	TBD	TBD	17.05	19.49
NANS_OW_112936437	Union	TBD	Variable	0.005	0.006	TBD	TBD	35.79	40.92
NANS_OW_112936455	Union	TBD	Variable	0.002	0.044	TBD	TBD	12.09	302.67
NANS_OW_160026464	Union	TBD	Variable	0.000	0.037	TBD	TBD	0.00	267.29
NANS_OW_160026869	Union	TBD	Variable	0.002	0.003	TBD	TBD	16.78	19.17
NANS_OW_160027377	Union	TBD	Variable	0.002	0.002	TBD	TBD	14.05	16.05
NANS_OW_160027389	Union	TBD	Variable	0.020	0.023	TBD	TBD	144.22	169.94
NANS_OW_160028467	Union	TBD	Variable	0.002	0.003	TBD	TBD	15.91	18.48
NANS_OW_160030655	Union	TBD	Variable	0.003	0.003	TBD	TBD	19.37	22.13
NANS_OW_160030657	Union	TBD	Variable	0.004	0.004	TBD	TBD	27.01	30.88
NANS_OW_160030712	Union	TBD	Variable	0.002	0.002	TBD	TBD	14.22	16.25
NANS_OW_160559766	Union	TBD	Variable	0.007	0.037	TBD	TBD	53.82	205.00
NANS_OW_160559774	Union	TBD	Variable	0.002	0.047	TBD	TBD	12.22	322.89
NANS_OW_160559782	Union	TBD	Variable	0.003	0.003	TBD	TBD	20.79	23.76
NANS_OW_160559783	Union	TBD	Variable	0.002	0.002	TBD	TBD	14.52	16.59
UN_S_0021	Union	TBD	Variable	0.001	0.002	1	1	45.09	102.23
UN_S_0043	Union	TBD	Variable	0.000	0.000	0	0	14.14	16.15
BA_LM_STRM_208	Baker	TBD	Variable	0.001	0.002	2	1	16.13	18.45
BA_S_0010	Baker	TBD	Variable	0.001	0.001	2	1	32.19	36.48
MalWllwCrk_370	Baker	TBD	Variable	0.003	0.006	TBD	TBD	24.64	53.27
NANS_OW_112857578	Baker	TBD	Variable	0.030	0.034	TBD	TBD	217.61	250.79
NANS_OW_112859680	Baker	TBD	Variable	0.004	0.004	TBD	TBD	27.81	31.39
NANS_OW_112859752	Baker	TBD	Variable	0.009	0.010	TBD	TBD	60.85	74.12
NANS_OW_112859912	Baker	TBD	Variable	0.003	0.003	TBD	TBD	21.11	24.05
NANS_OW_112861708	Baker	TBD	Variable	0.002	0.005	TBD	TBD	14.42	36.12
NANS_OW_112862662	Baker	TBD	Variable	0.002	0.006	TBD	TBD	17.97	40.39

Feature ID	County	Crossing Type	RF Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal (Cubic Yards)	Permanent Fill (Cubic Yards)	Permanent Stream Length (Feet)	Temporary Stream Length (Feet)
NANS_OW_112862680	Baker	TBD	Variable	0.002	0.004	TBD	TBD	14.10	30.18
NANS_OW_112866870	Baker	TBD	Variable	0.002	0.004	TBD	TBD	14.76	26.36
NANS_OW_112944499	Baker	TBD	Variable	0.003	0.004	TBD	TBD	23.03	26.41
NANS_OW_112947391	Baker	TBD	Variable	0.002	0.046	TBD	TBD	16.87	300.03
NANS_OW_112947399	Baker	TBD	Variable	0.002	0.005	TBD	TBD	15.10	33.41
NANS_OW_112947411	Baker	TBD	Variable	0.000	0.005	TBD	TBD	0.00	33.16
NANS_OW_112947525	Baker	TBD	Variable	0.007	0.036	TBD	TBD	49.65	248.83
NANS_OW_112947751	Baker	TBD	Variable	0.009	0.028	TBD	TBD	65.55	72.17
NANS_OW_112947947	Baker	TBD	Variable	0.014	0.034	TBD	TBD	99.47	240.14
MA_S_0012	Malheur	TBD	Variable	0.001	0.001	2	1	14.25	16.29
MA_S_0016	Malheur	TBD	Variable	0.001	0.023	TBD	TBD	15.22	296.95
MA_S_0030	Malheur	TBD	Variable	0.002	0.003	4	3	59.25	65.94
MA_S_0061	Malheur	TBD	Variable	0.001	0.003	1	1	14.66	36.41
MA_S_0076	Malheur	TBD	Variable	0.001	0.002	2	1	14.67	31.43
MA_S_0114	Malheur	TBD	Variable	0.002	0.005	1	3	14.31	35.77
MA_S_0133	Malheur	TBD	Variable	0.002	0.004	4	3	24.60	52.42
MApro_445	Malheur	TBD	Variable	0.002	0.003	2	1	14.51	25.75
MApro_447	Malheur	TBD	Variable	0.002	0.003	4	3	16.03	18.32
NANS_OW_127033740	Malheur	TBD	Variable	0.002	0.013	TBD	TBD	14.24	61.61
NANS_OW_127033915	Malheur	TBD	Variable	0.001	0.002	TBD	TBD	10.02	16.03
NANS_OW_127033935	Malheur	TBD	Variable	0.003	0.003	TBD	TBD	18.81	21.50
NANS_OW_127033980	Malheur	TBD	Variable	0.029	0.037	TBD	TBD	216.30	275.21
NANS_OW_127034191	Malheur	TBD	Variable	0.005	0.014	TBD	TBD	33.20	104.05
NANS_OW_131909420	Malheur	TBD	Variable	0.005	0.012	TBD	TBD	35.97	87.42
NANS_OW_131909450	Malheur	TBD	Variable	0.002	0.003	TBD	TBD	16.37	18.71
NANS_OW_131909460	Malheur	TBD	Variable	0.002	0.002	TBD	TBD	14.65	16.74
NANS_OW_131909466	Malheur	TBD	Variable	0.002	0.003	TBD	TBD	16.96	19.37
NANS_OW_131912372	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	17.70	38.47
NANS_OW_144341452	Malheur	TBD	Variable	0.000	0.039	TBD	TBD	0.00	285.54
NANS_OW_144341464	Malheur	TBD	Variable	0.002	0.003	TBD	TBD	16.52	20.79
NANS_OW_146126413	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.39	35.97
NANS_OW_146127958	Malheur	TBD	Variable	0.002	0.004	TBD	TBD	14.03	30.06
NANS_OW_146131470	Malheur	TBD	Variable	0.003	0.007	TBD	TBD	21.04	51.76
NANS_OW_146132517	Malheur	TBD	Variable	0.003	0.003	TBD	TBD	18.97	21.83

Feature ID	County	Crossing Type	RF Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal (Cubic Yards)	Permanent Fill (Cubic Yards)	Permanent Stream Length (Feet)	Temporary Stream Length (Feet)
NANS_OW_146136922	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.23	37.07
NANS_OW_158456326	Malheur	TBD	Variable	0.003	0.004	TBD	TBD	23.49	26.72
NANS_OW_158456344	Malheur	TBD	Variable	0.004	0.004	TBD	TBD	27.33	31.59
NANS_OW_158456345	Malheur	TBD	Variable	0.003	0.003	TBD	TBD	21.27	24.31
NANS_OW_158456389	Malheur	TBD	Variable	0.002	0.010	TBD	TBD	15.80	32.05
NANS_OW_158456390	Malheur	TBD	Variable	0.002	0.002	TBD	TBD	14.46	16.52
NANS_OW_158456392	Malheur	TBD	Variable	0.002	0.002	TBD	TBD	14.10	16.12
NANS_OW_158456401	Malheur	TBD	Variable	0.002	0.002	TBD	TBD	14.16	16.18
NANS_OW_158456415	Malheur	TBD	Variable	0.002	0.004	TBD	TBD	14.38	30.94
NANS_OW_158456448	Malheur	TBD	Variable	0.002	0.004	TBD	TBD	14.22	30.57
NANS_OW_158456510	Malheur	TBD	Variable	0.002	0.002	TBD	TBD	14.06	16.07
NANS_OW_158456533	Malheur	TBD	Variable	0.002	0.002	TBD	TBD	14.81	16.99
NANS_OW_158456538	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	15.23	37.97
NANS_OW_160608459	Malheur	TBD	Variable	0.002	0.019	TBD	TBD	14.08	97.25
NANS_OW_160608482	Malheur	TBD	Variable	0.004	0.182	TBD	TBD	10.00	1,288.25
NANS_OW_160608484	Malheur	TBD	Variable	0.003	0.004	TBD	TBD	24.25	32.41
NANS_OW_160608485	Malheur	TBD	Variable	0.000	0.031	TBD	TBD	0.00	226.62
NANS_OW_162723408	Malheur	TBD	Variable	0.003	0.008	TBD	TBD	21.90	55.43
NANS_OW_162723589	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.81	36.51
NANS_OW_162723590	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.86	37.90
NANS_OW_162723597	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.91	37.29
NANS_OW_162724152	Malheur	TBD	Variable	0.002	0.004	TBD	TBD	14.37	30.79
NANS_OW_162724156	Malheur	TBD	Variable	0.003	0.007	TBD	TBD	22.38	47.96
NANS_OW_162724172	Malheur	TBD	Variable	0.002	0.006	TBD	TBD	18.12	45.53
NANS_OW_162724176	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.28	35.71
NANS_OW_162724202	Malheur	TBD	Variable	0.002	0.003	TBD	TBD	15.81	18.18
NANS_OW_162724206	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	15.36	37.36
NANS_OW_162724211	Malheur	TBD	Variable	0.004	0.009	TBD	TBD	24.94	62.93
NANS_OW_162724225	Malheur	TBD	Variable	0.002	0.004	TBD	TBD	14.53	31.14
NANS_OW_162724261	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.09	35.62
NANS_OW_162724299	Malheur	TBD	Variable	0.003	0.006	TBD	TBD	20.92	44.83
NANS_OW_162724333	Malheur	TBD	Variable	0.044	0.105	TBD	TBD	317.14	796.39
NANS_OW_162724347	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.06	35.65
NANS_OW_162730565	Malheur	TBD	Variable	0.002	0.005	TBD	TBD	14.00	35.01

Feature ID	County	Crossing Type	RF Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal (Cubic Yards)	Permanent Fill (Cubic Yards)	Permanent Stream Length (Feet)	Temporary Stream Length (Feet)
NANS_OW_162730612	Malheur	TBD	Variable	0.000	0.020	TBD	TBD	0.00	144.57
NANS_OW_162730678	Malheur	TBD	Variable	0.000	0.008	TBD	TBD	0.00	56.92
NANS_OW_162734905	Malheur	TBD	Variable	0.000	0.002	TBD	TBD	0.00	13.81
Grand Total				**0.586**	**1.628**	**TBD**	**TBD**	**4,305.05**	**11,496.67**

Table O-3. Temporary and Permanent Impacts to Delineated Other Waters (Ephemeral)

Feature ID	County	Appendix K Crossing Type	RF Dimensions	Permanent Impacts	Temporary Impacts	Permanent Removal (Cubic Yards)	Permanent Fill (Cubic Yards)	Permanent Stream Length (Feet)	Temporary Stream Length (Feet)
MO_SW_STRM_001	Morrow	N/A	Variable	0.000	0.003	0	0	0.00	40.93
MO_SW_STRM_301	Morrow	K-241	Variable	0.000	0.001	0	0	0.00	7.66
UM_SW_STRM_002	Umatilla	K-241	Variable	0.000	0.008	0	0	0.00	132.61
UM_SW_STRM_009	Umatilla	K-240	Variable	0.004	0.007	3	5	30.25	47.54
UM_SW_STRM_010	Umatilla	K-241	Variable	0.005	0.006	10	7	16.40	18.83
UM_SW_STRM_016	Umatilla	K-241	Variable	0.000	0.154	0	0	0.00	420.92
UN_LM_STRM_209	Union	K-240	Variable	0.002	0.003	1	3	94.45	127.62
UN_LM_STRM_226	Union	K-241	Variable	0.003	0.003	6	4	45.52	50.90
UN_LM_STRM_227	Union	K-241	Variable	0.001	0.001	2	1	16.96	19.56
UN_LM_STRM_228	Union	K-241	Variable	0.001	0.001	2	1	19.33	22.09
UN_LM_STRM_300	Union	K-241	Variable	0.004	0.008	8	5	27.58	48.59
UN_LM_STRM_301	Union	K-240	Variable	0.001	0.003	1	1	15.10	36.47
UN_MC_STRM_002	Union	K-241	Variable	0.001	0.001	2	1	14.41	17.31
UN_MC_STRM_003	Union	K-241	Variable	0.002	0.003	4	3	35.26	41.58
UN_MC_STRM_004	Union	K-241	Variable	0.001	0.001	2	1	7.34	8.49
UN_ML_STRM_007	Union	K-241	Variable	0.000	0.029	8	5	0.00	207.21
BA_BR_029	Baker	K-241	Variable	0.001	0.001	2	1	23.86	27.40
BA_BR_416	Baker	K-240	Variable	0.001	0.002	1	1	14.85	37.49
BA_BR_461	Baker	K-241	Variable	0.001	0.008	2	1	14.27	152.61
BA_LM_STRM_202 [1/]	Baker	N/A	Variable	0.000	0.005	0	0	0.00	22.13
BA_LM_STRM_205	Baker	K-241	Variable	0.001	0.001	2	1	14.30	16.38
BA_LM_STRM_206	Baker	K-241	Variable	0.004	0.016	8	5	56.80	169.65
BA_WT_STRM_219	Baker	K-241	Variable	0.003	0.010	0	0	20.75	48.63
BA_WT_STRM_220	Baker	K-241	Variable	0.029	0.053	61	40	500.10	922.18
BA_WT_STRM_224	Baker	K-241	Variable	0.002	0.002	4	3	29.06	32.13
BA_WT_STRM_226	Baker	K-241	Variable	0.001	0.002	2	1	16.65	33.42
BA_WT_STRM_307	Baker	K-240	Variable	0.001	0.003	1	1	16.02	45.74
BA_WT_STRM_308	Baker	K-240	Variable	0.001	0.003	1	1	19.21	45.00
MA_TM_405	Malheur	K-240	Variable	0.002	0.002	4	3	20.29	22.86
MA_TM_483	Malheur	K-240	Variable	0.001	0.001	2	1	14.03	16.03
Grand Total				**0.072**	**0.339**	**139**	**96**	**1,082.79**	**2,839.97**

1. Temporary impacts listed for stream BA_LM_STRM_202 will likely be avoided after final design for the project is completed.

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BLOCK 7 ADDITIONAL INFORMATION

Appendix P, Fish Passage

The Project has demonstrated compliance with ODFW fish passage requirements. IPC has completed the ODFW Fish Passage Approval process and both IPC and ODFW have concluded that designs comply with fish passage parameters.

Compliance may be achieved by meeting the requirements of some or all of OAR 635-412-0020(3)(a), (b), (d) or (e).

> *OAR 635-412-0020*
>
> *(3) If the Department determines, or the owner or operator assumes, that native migratory fish are or were historically present in the waters, prior to construction, fundamental change in permit status, or abandonment of the artificial obstruction the person owning or operating the artificial obstruction shall either:*
>
> *(a) Obtain from the Department an approval determination of a fish passage plan that meets the requirements of OAR 635-412-0035 for the specific artificial obstruction.*
>
> *(b) obtain from the Department a programmatic approval of a fish passage plan for multiple artificial obstructions of the same type…*
>
> *(d) obtain a waiver from fish passage requirements for the artificial obstruction as provided in OAR 635-412-0025, or*
>
> *(e) obtain an exemption from fish passage requirements for the artificial obstruction as provided in OAR 635-412-0025.*

The project design team met with representatives of the ODFW and ODOE on October 28, 2014 to discuss the agencies' review of the Tetra Tech report, Fish Habitat and Stream Crossing Assessment Summary Report (Tetra Tech 2014). During the meeting, the applicable federal, state, and local design criteria and guidelines, as well as the identified crossing types and alternatives for fish-bearing streams were discussed.

In January 2015, the ODFW informed IPC they had reviewed and approved the results and analysis of materials in the Tetra Tech (2014) report, as well as the information presented at the meeting regarding identified preferred and alternative crossing types (Seidel personal comm. 2015a). As part of the approval process, IPC agreed to work with the ODFW in their review of Fish Passage Plans and design drawings for fish-bearing road-stream crossings to ensure that all designs satisfy the ODFW fish passage requirements.

For additional information of IPC's analysis for compliance with the Fish Passage requirements see Exhibit BB of the ASC.

Appendix Q, Cultural and Historic Resources

Surveys of historic, cultural and archaeological resources have been conducted for the Project in compliance with Section 106 protocols and in consultation with the Native American tribes and the Oregon State Historic Preservation Office. Exhibit S provides information about historic, cultural and archaeological resources.

BLOCK 8 IMPACTS, RESTORATION/REHABILITATION, COMPENSATORY MITIGATION

Appendix R Unavoidable Project Impacts

WOS features that will be impacted by the Project are itemized in Tables G-1A, G-1B, G-2A, G-2B, O-1A, O-1B, O-1C, and O-1D and exhibited in Appendix K, Figures K-1 through K-238.

Appendix S, Restoration and Rehabilitation of Temporary Impacts

A restoration plan for rehabilitation of temporary impacts has been prepared and is attached as a separate document. This plan is based on the Project's vegetation management plan and is separate from the compensatory wetland and non-wetland mitigation plan.

Site Rehabilitation Plan

Boardman to Hemingway Transmission Line Project

Prepared by:

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April 2018

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1.0 INTRODUCTION

Idaho Power Company (IPC) is proposing to construct and operate approximately 296.6 miles of new transmission line known as the Boardman to Hemingway Transmission Line Project (Project). The Project will include a 500-kilovolt (kV) single-circuit line, rebuilding of a portion of a 230-kV transmission line, rebuilding of a 138-kV transmission line, and a removal of a portion of an existing 69-kV transmission line between Boardman, Oregon, and the Hemingway Substation (located approximately 30 miles southwest of Boise, Idaho). The Project includes ground-disturbing activities associated with the construction of above-ground, single- and double-circuit transmission lines involving towers, access roads, multi-use areas, light-duty fly yards, pulling and tensioning sites as well as associated stations, communication stations, and electrical supply distribution lines.

The Project area, or Site Boundary, as defined in Oregon Administrative Rule (OAR) 345-001-0010(55) includes "the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all corridors and micrositing corridors proposed by the applicant." The Site Boundary for this Project includes the following facilities in Oregon:

- The Proposed Route, consisting of 270.8 miles of new 500-kV electric transmission line, removal of 12 miles of existing 69-kV transmission line, rebuilding of 0.9 mile of a 230-kV transmission line, and rebuilding of 1.1 miles of an existing 138-kV transmission line;
- Four alternatives that each could replace a portion of the Proposed Route, including the West of Bombing Range Road Alternative 1 (3.7 miles), West of Bombing Range Road Alternative 2 (3.7 miles), Morgan Lake Alternative (18.5 miles), and Double Mountain Alternative (7.4 miles);
- One proposed 20-acre station (Longhorn Station);
- Ten communication station sites of less than ¼ acre each and two alternative communication station sites;
- Permanent access roads for the Proposed Route, including 206.3 miles of new roads and 223.2 miles of existing roads requiring substantial modification, and for the Alternative Routes, including 30.2 miles of new roads and 22.7 miles of existing roads requiring substantial modification; and
- Thirty-one temporary multi-use areas and 299 pulling and tensioning sites of which four will have light-duty fly yards within the pulling and tensioning sites.

Construction of the Project will result in temporary impacts to waters of the state. This site rehabilitation plan presents goals and objectives, jurisdictional authority, implementation, and follow-through methods for restoring temporary wetland impacts. Temporary impacts to wetlands include construction activities that do not result in permanent removal or fill, such as construction of laydown areas, staging areas, or temporary contouring allowing for access of equipment.

1.1 Purpose

Rules regulating the rehabilitation of temporary wetland impacts are provided in OAR 141-085-0715: Mitigation for Temporary Impacts (ODSL 2011).

This OAR provides that a rehabilitation plan should be designed to:

- Re-establish the pre-existing contours of the site;

- Re-establish the pre-existing vegetation community; and
- Provide for rapid site stabilization to prevent erosion.

The Oregon Department of State Lands (ODSL) further provides rehabilitation guidelines for temporary impacts in *A Guide to the Removal-Fill Permit Process* (ODSL 2016). The rehabilitation plan should include a grading plan and list of seeds and plants to be utilized, as applicable. A monitoring plan (including monitoring method, criteria and duration) must also be included to confirm successful re-establishment of the wetland and vegetation. Temporary impacts that are rectified within 24 months from the date the impacts generally occurred do not require compensatory mitigation; however, site rehabilitation and monitoring is required (ODSL 2011b).

1.2 Goals and Objectives

The primary goal of the Plan is to assist IPC and its contractors in restoring wetland habitat affected by temporary impacts within 24 months of disturbance. This goal is established pursuant to the definitions of OAR 141-085-0510, which states:

- “Temporary Impacts” are adverse impacts to waters of this state that are rectified within 24-months from the date the impact occurred; and
- "Wetland Restoration" means to re-establish a former wetland.

The Plan provides measures that will be implemented prior to and during construction with the objective of minimizing wetland habitat impacts. It also provides details and measures that will be implemented following construction with the objectives of reestablishing, maintaining and monitoring wetlands temporarily impacted by construction.

2.0 REHABILITATION PLAN

IPC will begin rehabilitation of disturbed sites as soon as practicable after construction is completed. The Plan is applicable to all temporary wetland impacts along the transmission ROW, laydown areas, staging areas, temporary construction areas, and access roads in Oregon. Measures to be implemented to ensure successful rehabilitation include topsoil and subsoil segregation and stockpiling during construction, cleanup, appropriate surface recontouring, soil erosion control, seedbed preparation, application of ecologically site-specific seed mixes, planting, weed abatement, and monitoring.

2.1 Site Preparation

As part of the reclamation process, IPC will prepare the seedbed to facilitate the restoration of vegetation to pre-construction conditions. Construction activities within sites identified as temporary impacts shall not exceed two construction seasons, and rehabilitation of temporary impacts will be completed within 24 months of the initiation of impacts.

Initial construction activities include marking wetland boundaries clearly with high visible flagging and signs, installing temporary sediment controls, segregating and stockpiling topsoil, and grading for safe construction passage. Dense stands of noxious and invasive weeds will be treated with approved herbicides prior to vegetation clearing.

Prior to construction, topsoil will be stockpiled and separated from subsoil. IPC will minimize the length of time that topsoil is stockpiled. Surface soil thickness will vary throughout the construction area, depending on soil type; however, the top 1 foot of wetland topsoil shall be

preserved to the greatest extent feasible. Surface topsoil containing the seed reservoir and existing vegetation will be scraped and stored. The topsoil/vegetation mixture will not be mixed with underlying subsoil horizons. Oregon-certified weed-free erosion control blankets and/or certified weed-free straw bales will be used to contain and limit erosion at the stockpiles as needed. Surface soil and sub-surface soils will be replaced in the proper order during cleanup and final grading operations.

2.2 Site Restoration

Restoration will include cleanup, soil decompaction, topsoil replacement, surface grading/contouring, installation of soil erosion and sediment control measures, and seedbed preparation. Compacted soils would typically be associated with the access roads and along the transmission ROW, staging areas, laydown areas, temporary construction areas, and access roads. Subsoil decompaction will occur prior to surface soil replacement as necessary to reduce soil bulk density. Identified locations will be decompacted to a minimum depth of 6–12 inches.

The stockpiled topsoil/vegetation mixture will be re-spread after re-contouring is completed. In wetlands, the segregated top 1 foot of topsoil will be restored to its original location. The topsoil/vegetation mixture will provide seeds, vegetative propagules, and soil microbiota to facilitate vegetation establishment in temporary construction areas.

The transmission ROW, staging areas, laydown areas and other temporary construction areas, will be graded and contoured to blend within the surrounding landscape. Temporary roads used for pulling and tensioning of conductors and other construction activities and structure construction pads will be revegetated but not re-contoured unless they were subject to temporary fill or removal. Topsoil will be blended across the construction corridor, creating a roughened surface to capture precipitation, decrease erosion, and provide micro-habitats for plant establishment. Contouring will emphasize restoration of existing drainage and landform patterns, to the greatest extent practicable.

Seedbed preparation will consist of grading/contouring, decompacting soils, and restoring surface soil as described above. Specific wetland Best Management Practices (BMPs) referenced in this plan will be employed in wetland areas to avoid rutting and damage from equipment. The seedbed will be firm but not compacted.

Soil erosion and sediment control will occur through establishing desirable wetland vegetation and adjacent upland/riparian vegetation using measures such as mulch, erosion and control blankets. The Project will establish a desirable wetland plant cover as quickly as possible to minimize soil erosion and control sedimentation. Mulch, certified weed-free erosion control blankets and sediment logs, and certified weed-free straw bales, and/or water bars may also be used as appropriate.

In general, the following construction BMPs for erosion and sediment control shall be followed:

- Exposed soils shall be stabilized during and after construction in order to prevent erosion and sedimentation.
- Filter bags, sediment fences, sediment traps or catch basins, leave strips or berms, or other measures shall be used to prevent movement of soil into waterways and wetlands.
- Compost berms, impervious materials or other equally effective methods, shall be used to protect stockpiled soil during rain events or when the stockpile site is not moved or reshaped for more than 48 hours.

- Where vegetation is used for erosion control on slopes steeper than 2:1, a tackified seed mulch shall be used so the seed does not wash away before germination and rooting.
- Dredged or other excavated material shall be placed on upland areas having stable slopes and shall be prevented from eroding back into waterways and wetlands.
- Erosion control measures shall be inspected and maintained as necessary to ensure their continued effectiveness until soils become stabilized.
- All erosion control structures shall be removed when the project is complete and soils are stabilized and vegetated.

A specific list of the type and timing for each BMP is described in the Erosion and Sediment Control Plan included as an attachment to Exhibit I.

Soil amendments are intended to minimize soil erosion and subsequent sedimentation, conserve soil moisture, provide cover, and moderate temperatures to facilitate the germination of seeds.

2.3 Seed Planting Methods

Each site scheduled for rehabilitation will be evaluated to determine the most cost-effective means of establishing a suitable suite of plants as rapidly as possible. This evaluation will include a determination of how the site needs to be prepared to receive seeds and live plants, as well as what species to plant on the site. Planting will be done at the appropriate time of year to facilitate seed germination, based on weather conditions and the time of year when construction-related ground disturbance occurs. Choice of planting methods will be based on site-specific factors such as slope, erosion potential and the size of the site in need of revegetation. Disturbed ground may require chemical or mechanical weed control before weeds have a chance to go to seed.

Drill and broadcasting seeding techniques will be used. Seeding will be done after ground-disturbing activities are complete and at the appropriate time of year (preferably in the fall or, if fall is not an option, the spring). If there is a lag time between the end of ground-disturbing activities and seeding, BMPs from the SWPPP will be implemented. Drill seeding will be the primary method for seeding. Drill seeding uses specialized equipment such as a rangeland seeder. The advantages of drill seeding are efficiency at placing seed at the proper soil depth and economy of bulk seed. Its disadvantages are terrain limitations such as slopes greater than 15 percent and rocky soils. Slopes that cannot be drill seeded will be broadcast seeded. Broadcast seeding distributes the seed on top of the soil surface using a hand-held spreader, all-terrain vehicle–mounted cyclone-type seed spreader, or seed blower. Broadcast seed is not as efficient as drill seeding because in this method seeds are not buried in the soil, and it requires approximately twice the bulk seed. Area where broadcast seeding is used will be hand-raked, or a harrow will be used to cover the seed.

Hydro-seeding and hydro-mulching will not be used in wetland areas or near water bodies. Should the water levels in the restoration areas rise above the hydro-seeded/mulched area prior to seed germination and establishment, the mulch, binder, and seed will float and wash away.

2.4 Seed and Plant Mixes by Ecoregion

The following sections provide information about each ecoregion crossed by the Project, and provide suggested species for use in planting mixes for each one. Each ecoregion has different

climate and soil characteristics, requiring seed mixes and plants that will thrive under the site conditions. Species lists for planting presented here are not intended to be either exhaustive or limiting. They represent only a small fraction of species that may be suitable for use in the ecoregions and on a site by site basis.

The Project, from Boardman to Hemingway, crosses four Level III ecoregions, which can be further divided into ten Level IV ecoregions (Thorson *et al.* 2003). Table 1 describes these ecoregions.

Table 1. Precipitation and Land Cover and Land Use for Study Area by Ecoregion

Ecoregion III	Ecoregion IV	Precipitation-Mean Annual (inches)	Land Cover and Land Use
Columbia Plateau	10e, Pleistocene Lake Basins	7 to 10	Mostly cropland; some grassland. Non-irrigated winter wheat is grown using the crop– fallow rotation method. Irrigated land grows winter wheat, alfalfa, and barley.
Columbia Plateau	10c, Umatilla Plateau	9 to 15	Mostly cropland; some grassland. Non-irrigated winter wheat is grown using the crop– fallow rotation method. Irrigated land grows winter wheat, alfalfa, and barley.
Columbia Plateau	10n, Umatilla Dissected Uplands	15 to 25	Mostly grass-covered rangeland and wildlife habitat; on higher elevation, north-facing slopes: forest.
Blue Mountains	11c, Maritime-Influenced Zone	20 to 40 97 to 116	Forested. Logging, grazing, wildlife habitat, and recreation.
Blue Mountains	11l, Mesic Forest Zone	30-60. Mostly snow. Snow persists late into spring.	Forested. Logging, woodland livestock grazing, wildlife habitat, and recreation.
Blue Mountains	11k, Blue Mountain Basins	Wallowa and Grande Ronde valleys: 13-25. Baker Valley: 10-16.	Irrigated pastureland, cropland, recreation, and commercial, residential, and rural residential development. Principal crops: alfalfa, peas, winter wheat, and grass seed. Most wetlands on floodplains have been drained for agriculture.
Blue Mountains	11i, Continental Zone Foothills	9 to 18	Shrub- and grass-covered. Livestock grazing and wildlife habitat.
Snake River Plain	12j, Unwooded Alkaline Foothills	9 to 12	Shrub- and grass-covered rangeland and wildlife habitat; some irrigated hayland and pastureland near rivers.
Snake River Plain	12a, Treasure Valley	8 to 11	Irrigated cropland, pastureland, shrubland, grassland, and residential and commercial development. Primary crops: wheat, sugar beets, potatoes, onions, and alfalfa.

Ecoregion III	Ecoregion IV	Precipitation-Mean Annual (inches)	Land Cover and Land Use
Northern Basin and Range	80f, Owyhee Uplands and Canyons	8 to 14	Mostly brush- and grass-covered rangeland and wildlife habitat; some hay and small grain farming. Cheatgrass has replaced depleted bunchgrasses in overgrazed areas.

Adapted from Thorson et al. 2003.

Note: For the purpose of this table, which is to summarize climatic and vegetation information on a broad scale, study area can be considered synonymous with site boundary.

In Morrow County, nearly 80 percent of the study area is contained in ecoregion 10e, the Pleistocene Lake Basins of the Columbia Plateau. While roughly 20 percent of the eastern portion of the project is contained in ecoregion 10c, Umatilla Plateau.

In Umatilla County, the majority (approximately 60 percent) of the study area is contained in 10c, Umatilla Plateau of the Columbia Plateau, while 15 percent is in 10n, Umatilla Dissected Uplands of the Columbia Plateau, 15 percent is in 11c, Maritime-Influenced Zone of the Blue Mountains and less than 10 percent is in 11l, Mesic Forest Zone of the Blue Mountains.

In Union County, the study area is located entirely in the Level III Blue Mountains Ecoregion. The majority (approximately 49 percent) of the study area is contained in 11c, Maritime-Influenced Zone, 20 percent is in 11l, Mesic Forest Zone, 18 percent is in 11i, Continental Zone Foothills, and 13 percent is in 11k, Blue Mountain Basins.

In Baker County, the study area is located within the Level III Blue Mountains Ecoregion and the Level III Snake River Plain Ecoregion. The majority (approximately 93%) of the study area is contained in 11i, Continental Zone Foothills, and 3 percent is in 11k, Blue Mountain Basins of the Blue Mountains Ecoregions, while 4 percent in in 12j, Unwooded Alkaline Foothills of the Snake River Plain Ecoregion.

In Malheur County, the study area is located within the Level III Blue Mountains Ecoregion, Level III Snake River Plain Ecoregion, and the Level III Northern Basin and Range Ecoregion. Approximately 25 percent of the study area is contained in 11i, Continental Zone Foothills of the Blue Mountains Ecoregions, while 10 percent is in the 12a Treasure Valley and 35 percent is in 12j, Unwooded Alkaline Foothills of the Snake River Plain Ecoregion. The remaining 30 percent of the study area in Malheur County is located within 80f, Owyhee Uplands and Canyons of the Northern Basin and Range Ecoregion.

Table 2 shows the native shrubs and herbs that were documented during the 2012 wetland delineations by county that may be used for site revegetation. The choice of seed mixtures will be dependent on the existing vegetation types, the availability of commercial, weed-free live seed at the time of seeding, and landowner approval.

Table 2. Native Plants Documented During Delineations

Scientific Name	Common Name	Stratum	Wetland Indicator Status	County
Salix exigua	narrow-leaf willow	Shrub	OBL	Umatilla
Bidens cernua	nodding burr-marigold	Herb	FACW	Baker
Calamagrostis canadensis	bluejoint	Herb	FACW	Baker, Umatilla
Carex nebrascensis	Nebraska sedge	Herb	OBL	Union, Baker, Umatilla
Deschampsia cespitosa	tufted hairgrass	Herb	FACW	Baker
Distichlis spicata	coastal saltgrass	Herb	FACW	Malheur
Eleocharis palustris	common spike-rush	Herb	OBL	Union, Baker, Malheur, Umatilla
Hordeum brachyantherum	meadow barley	Herb	FACW	Malheur
Hordeum jubatum	fox-tail barley	Herb	FAC	Malheur
Juncus balticus	baltic rush	Herb	OBL	Union, Baker, Malheur
Juncus patens	spreading rush	Herb	FACW	Umatilla
Juncus torreyi	Torrey's rush	Herb	FACW	Baker, Malheur
Mimulus guttatus	seep monkey flower	Herb	OBL	Malheur
Ranunculus aquatilis	white water-crowfoot	Herb	OBL	Baker
Ranunculus sceleratus	cursed buttercup	Herb	OBL	Baker
Schoenoplectus acutus	hard-stem club-rush	Herb	OBL	Malheur
Schoenoplectus americanus	chair-maker's club-rush	Herb	OBL	Baker
Schoenoplectus maritimus	saltmarsh club-rush	Herb	OBL	Malheur
Schoenoplectus tabernaemontani	soft-stem club-rush	Herb	OBL	Morrow

2.5 Best Management Practices

Pertinent BMPs for wetland rehabilitation are included here for reference.

- Minimize the length of time that topsoil is segregated.
- Limit the operation of construction equipment within wetlands to that needed for clearing, facility installation, and restoration.
- Limit pulling of tree stumps and grading activities in wetlands to directly over the transmission line, except where necessary to ensure safety.

- Limit grading impacts in saturated or standing-water wetlands and/or in wetlands where rutting may occur by using low ground-weight construction equipment or by operating normal equipment on prefabricated timber or terra mats.
- Segregate the top 1 foot of topsoil from the area disturbed, except in areas where standing water is present or soils are saturated or frozen. Immediately after cleanup, restore the segregated topsoil to its original location.
- Prohibit storage of hazardous materials, chemicals, fuels, and lubricating oils within 100 feet of a wetland boundary unless infeasible.
- Prohibit the refueling of equipment within 100 feet of wetlands unless infeasible.
- Establish stable surface and drainage conditions and the use of erosion control devices to minimize soil erosion and sedimentation. Sediment barriers shall be installed prior to initial disturbance in wetlands and adjacent uplands to prevent sediment transport into the wetland.
- Re-establish terrain compatible with the surrounding landscape.
- Use native plant species for revegetation.

3.0 DRAFT MONITORING PLAN

The purpose of monitoring is to evaluate vegetative survival and establishment, soil moisture, sustaining hydrology, and occurrence of noxious weeds and to identify corrective measures that may be required to ensure successful restoration

3.1 Performance Standards for Rehabilitation

Goal 1: Restore wetland hydrology.

- **Objective 1:** Restore pre-construction soil contours.
- **Performance standard 1:** Restored soil contours match existing contours of undisturbed soil surface adjacent to the disturbance site.
- **Objective 2:** Restore pre-construction soil texture.
- **Performance standard 1:** Restored soil has drainage characteristics like undisturbed soil adjacent to the disturbance site; e.g., does not exhibit inappropriate ponding characteristic of compacted soil.

Goal 2: Establish wetland vegetation similar to the native plant component of the temporarily impacted wetlands.

- **Objective 1:** Achieve similar densities of native vegetation at the temporary impact site as were present pre-construction.
- **Performance standard 1:** Meet or exceed woody stem counts per acre as determined from pre-disturbance conditions.
- **Performance standard 2:** Three years post-construction, vegetation communities will have relative cover of tree, shrub and herbaceous species within ten percent of similar adjacent or nearby wetlands.

3.2 Monitoring Schedule and Methodology

IPC will monitor temporary impact sites for three years. In years 1, 2, and 3, vegetation will be monitored using guidance described in the ODSL's *Routine Monitoring Guidance for Vegetation*. Monitoring events will occur annually during the growing season.

3.3 Reporting and Documentation

IPC will provide a post-construction report demonstrating as-built conditions 90 days from Project completion. It will include representative photographs of completed restoration areas demonstrating pre-impact conditions have been reestablished, documentation of plant and seed materials received from the commercial sources, documentation of soil amendments used, and a summary of pertinent issues encountered during the implementation of the Plan.

For annual reporting, IPC will document the monitoring results in an annual report. Annual reports are described in Section 6.0, below.

4.0 MAINTENANCE PLAN

Maintenance of plantings and seeded areas during the establishment period (i.e., the 24 months following construction) is an essential component of the rehabilitation plan, especially for areas receiving less than 20 inches of average annual precipitation. The objectives of post-installation maintenance are to prevent soil erosion, ensure establishment of trees and shrubs, and remove non-native vegetation that could inhibit native herbaceous plant establishment.

After each monitoring visit, a qualified investigator will report to the Project proponent regarding the revegetation progress of each restored site. The investigator will make recommendations for reseeding or other remedial measures for sites that are not showing sufficient progress toward achieving revegetation success. Appropriate action to meet the objectives of this revegetation plan will be made.

5.0 CONTINGENCY PLAN

Where initial restoration and plant establishment efforts fail to meet plant establishment standards, reseeding, replanting, live cuttings, and/or transplanting may be required to ensure restoration success. Contingency measures that may be implemented include:

- Harvesting and transplanting herbaceous plugs, shrubs, and trees;
- Live cutting collection, storage, and planting; and
- Planting of commercially grown herbaceous plugs or potted shrubs and trees.

Given the 24-month timeframe associated with rehabilitation of temporary impacts, IPC will make a determination of the requirement for contingency measures at the end of the first growing season based on monitoring results.

6.0 REPORTING

IPC will document the monitoring results in an annual report. It is expected that a single annual report will be prepared for the entire Project length, and that this report will be submitted to each of the applicable federal or state agencies. The reports will provide a summary of Project reclamation activities and observations, progress towards or achievement of success, identify

any specific problem areas along the Project, and will include recommendations for additional corrective actions if necessary.

7.0 PLAN UPDATES

Once IPC has received a Site Certificate from the State of Oregon and necessary authorizations from the federal agencies, it will do final engineering on the final Project location. At this time, IPC will prepare a final Site Rehabilitation Plan for submittal to state and federal agencies. The final Site Rehabilitation Plan will be updated prior to the submittal of the JPA.

8.0 REFERENCES

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Appendix T, Compensatory Wetland and Non-Wetland Mitigation Plan

A draft compensatory wetland and non-wetland mitigation plan is attached as a separate document.

The Stream Functional Assessment Methodology is attached to the draft Compensatory Wetland and Non-Wetland Mitigation Plan.

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Boardman to Hemingway Transmission Line Project

Compensatory Wetland and Non-Wetland Mitigation Plan

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ACRONYMS

ASC	Application for Site Certificate
CWNWMP	Compensatory Wetland and Non-Wetland Mitigation Plan
DSL	Oregon Department of State Lands
ESA	Endangered Species Act
GRMW	Grande Ronde Model Watershed
HGM	hydrogeomorphic
HMS	Hassinger Mitigation Site
HUC	Hydrologic Unit Code
IPC	Idaho Power Company
JPA	Joint Permit Application
ODOE	Oregon Department of Energy
ORWAP	Oregon Rapid Wetland Assessment Protocol
PEM	Palustrine Emergent
PFO	Palustrine Forested
PSS	Palustrine Scrub-Shrub
Project	Boardman to Hemingway Transmission Line Project
USACE	U.S. Army Corps of Engineers

1.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN OVERVIEW

1.1 Introduction and Background

Idaho Power Company (IPC) proposes to construct the Boardman to Hemingway Transmission Line Project (Project). In Oregon, Project will extend 296.6 miles from near Boardman, in Morrow County, Oregon, to the vicinity of the City of Nyssa, in Malheur County, Idaho. The Oregon portion of the Project is 270.8 miles in length. As described in detail in IPC's Application for Site Certificate (ASC) to the Oregon Energy Facility Siting Council, IPC anticipates small-scale wetland and non-wetland impacts from the Project across various wetland and waterway types, and in a number of hydrologic units. IPC is preparing a Joint Permit Application (JPA) for submission to the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (USACE) to obtain removal/fill permits for impacts to wetland and non-wetland features associated with the Project.

The Project is anticipated to permanently impact approximately 0.538 acres of wetlands at 32 locations, and 5,914 linear feet (0.72 acres) of stream frontage at 175 locations. A summary of the wetland and non-wetland impact sites is provided in Appendix A.

See Figure 1, Location and Vicinity Maps; Figure 2, Tax Lot Map; Figure 3, Aerial Photograph; Figure 4, Site Photographs; and Figure 5, Oregon Rapid Wetland Assessment Protocol (ORWAP) Sites Location Map.

1.2 Description of Compensatory Wetland and Non-Wetland Mitigation Plan

The purpose of this Compensatory Wetland and Non-Wetland Mitigation Plan (CWNWMP) is to provide mitigation for wetland and non-wetland impacts, which will occur at various sites along the Project's Proposed Route, through the creation of similar functioning wetlands and enhancement of existing wetlands at a single mitigation site in Union County, Oregon, referred to as the Hassinger Mitigation Site (HMS). A portion of the HMS area will be graded to increase hydrologic connectivity with Catherine Creek, covered with topsoil, seeded, and planted with native wetland species such as grasses, sedges, rushes, and woody wetland/riparian species adapted to site physical properties, soils, and hydrologic conditions.

Non-wetland habitat will be enhanced by constructing a high flow side channel between Catherine Creek and the existing oxbow located adjacent to the new wetlands, and by installing wood habitat structures in the oxbow. The side channel will allow for increased flow into the oxbow and will provide an off-channel velocity refuge during high flows, while the woody material structures will create additional fish habitat. The entire 8.54 acres will be protected from grazing and farming under a conservation easement.

1.3 Ecological Goals and Objectives

The HMS encompasses approximately 8.54 acres adjacent to Catherine Creek in Union County, Oregon (see Figure 1, Location and Vicinity Maps). The HMS will involve creation of approximately 4.76 acres of seasonally flooded wetland habitat immediately adjacent to 1,080 linear feet of Catherine Creek, enhancement of 1.51 acres of existing wetland habitat, and construction of 810 linear feet of side channel that will provide an additional intermittent connection between Catherine Creek and the oxbow. Four woody debris structures will be

strategically located and constructed along approximately 432 feet of the existing oxbow to provide instream fish habitat.

The HMS will increase local wetland and non-wetland habitat, giving 3.66 acres of wetland mitigation credit and 2,322 linear feet (0.90 acres) of stream mitigation credit. These habitats are critical to many wetland and freshwater aquatic species, including Endangered Species Act (ESA)-listed spring Chinook salmon, summer steelhead, and bull trout that utilize the channel at various stages of their life cycles. Juvenile Chinook salmon and steelhead utilize Catherine Creek reaches for overwintering habitat where the HMS is located. Overwintering habitat has been identified in the *Draft Northeast Oregon Management Unit Plan for Spring/Summer Chinook and Steelhead Recovery Plan (2010)* as a habitat limitation. Due to their low survival rates during the winter months, overwintering habitat for juvenile Chinook salmon in Catherine Creek has recently become a high priority for the Grande Ronde Model Watershed (GRMW), which coordinates habitat restoration projects on both public and private lands within the Grande Ronde Basin. The reach of Catherine Creek for the HMS is also a migratory corridor for juvenile and adult fish of all three ESA-listed fish species.

The HMS will provide backwater and rearing habitat for aquatic species, an off-channel velocity refuge, and critical wetland habitat for a variety of bird species that utilize wetland habitat for breeding, rearing, nesting, and migratory rest stops. Local aquatic and terrestrial biodiversity will increase, improving resilience of the local ecosystem in response to disturbance (e.g., invasive species).

Ecological goals and objectives are categorized as wetland or non-wetland, and are summarized on Table 1.

Table 1. Wetland and Non-Wetland Mitigation Goals and Objectives

Component	Goal(s)	Objectives
Wetland	Create at least 4.76 acres of wetland and enhance approximately 1.45 acres of wetland at the HMS to replace lost functions and values of impacted wetlands.	Create a channel between Catherine Creek and the oxbow through the HMS to provide hydrologic connection at 1.5-year flow events and greater.
		Excavate the HMS to the specified grade of the engineered site design to increase floodplain connectivity.
		Plant the HMS with a wetland seed mix and wetland shrub and tree species to mitigate erosion, enhance sediment trapping, provide future recruitment of large wood and cover, and provide shading to reduce stream temperature.
Non-Wetland	1) Increase fish habitat. 2) Reduce stream temperature at or near the HMS. 3) Mitigate sedimentation of Catherine Creek.	Create a channel through the HMS connecting Catherine Creek and the oxbow, providing a high flow refuge for juvenile fish.
		Install four large wood structures in the oxbow to increase habitat complexity.
		Plant the HMS with a wetland seed mix and wetland shrub and tree species to mitigate erosion, enhance sediment trapping, provide future recruitment of large wood and cover, and provide shading to reduce stream temperature. This is also anticipated to increase volume and duration of cool water release during low flow periods typically observed during the late summer season, mitigating warmer stream temperatures.

1.4 Summary of Impacts and Mitigation

This section summarizes the anticipated impacts to wetland and non-wetland resources occurring from construction and operation of the Project. Impacts associated with the Project will also be described in the JPA. Wetland mitigation associated with this CWNWMP is intended to meet federal and state regulatory requirements developed under the guidance of the DSL. As stated in *Chapter 8: Compensatory Mitigation for Wetlands and Tidal Waters of DSL's Guide to the Removal/ Fill Permit Process*, DSL rules and regulations meet USACE standards for wetland mitigation, which are based on the 2008 federal mitigation rule (33 Code of Federal Regulations). Oregon's stream mitigation regulations are currently under development by the USACE, U.S. Environmental Protection Agency, and Willamette Partnership. Non-wetland mitigation associated with this CWNWMP is intended to meet the DSL's interim draft guidance standards for stream mitigation.

1.4.1 Summary of Wetland Impacts and Mitigation

The Project is anticipated to permanently impact approximately 0.538 acres of wetland habitat, encompassing 32 different sites ranging in size from approximately 0.001 acres to approximately 0.15 acres, averaging approximately 0.015 acres per site, thus requiring compensatory mitigation of this impact by creation, enhancement, and/or restoration of wetland habitat at another location (see Appendix A for impacted wetland data). Temporary wetland impacts associated with the Project are anticipated to be rectified within 24 months from the initial impact date and, therefore, are presumed not to require mitigation.

To mitigate for permanent impacts, approximately 6.21 total acres of wetlands will be created and enhanced adjacent to Catherine Creek in the Grande Ronde Basin of Union County, Oregon. This total will consist of creation of approximately 0.57 acres of Palustrine Forested (PFO), 1.69 acres of Palustrine Scrub-Shrub (PSS), and 2.50 acres of Palustrine Emergent (PEM) wetlands, and enhancement of approximately 1.45 acres of existing PEM wetland. Additionally, the construction of a side-channel between Catherine Creek and the oxbow will improve hydrologic connectivity, and the removal of invasive species is anticipated to improve the wetlands. Utilizing DSL's compensatory wetland mitigation ratios for created and enhanced wetlands, the combined acreages equate to 3.66 acres of wetland mitigation credit. Table 2 summarizes impacted wetland site acreages by hydrogeomorphic (HGM) and Cowardin classifications, along with mitigation acreages and credits.

Currently, the existing wetlands within the HMS have an over-abundance of weedy species such as reed canarygrass (*Phalaris arundinacea*), and a decreased presence of woody species. Establishment of surface flow hydrologic processes will reverse degraded hydrology and allow self-sustaining recruitment of native woody species at the site. These processes, in combination with invasive species removal and control measures, as well as planting and seeding of native wetland stock, will enhance the site by increasing wetland functions and values (see Section 6.0 for a functions and values assessment).

Table 2. Wetland Mitigation Summary

	Permanent Impact			Mitigation					
Site	**Cowardin**	**HGM**	**Acres**	**Mitigation Method**	**Cowardin**	**HGM**	**Acres**	**Mitigation Ratio**	**Credits Gained**
Impact Sites	PABFh	Unknown	0.029						
	PUSCh	Unknown	0.016						
		Unknown	0.049						
		RFT	0.016						
		Slope	0.162						
		Unknown	0.049						
	PEMA	Unknown	0.020						
	PEMB	Slope	0.029						
		Unknown	0.005						
	PEMC	Unknown	0.156						
	PEMFh	Depressional	0.004						
	PEMKx	Unknown	0.007						
	PFOA	Unknown	0.034*						
	PFOC	Unknown	0.011*						
HMS				create	PEM	RI	2.50	1.5:1	1.67
					PSS	RFT	1.69	1.5:1	1.13
					PFO	RFT	0.57	1.5:1	0.38
				enhance	PEM	RI	1.45	3:1	0.48
Total			0.538				6.21		3.66

PABFh = Palustrine Aquatic Bed, Semipermanently Flooded, Diked/Impounded
PEM=Palustrine Emergent
PEMA=Palustrine Emergent, Temporarily Flooded
PEMB=Palustrine Emergent, Saturated
PEMC=Palustrine Emergent, Seasonally Flooded
PEMKx=Palustrine Emergent, Artificially Flooded, Excavated
PFOA=Palustrine Forested, Temporarily Flooded
PFOC=Palustrine Forested, Seasonally Flooded
PSS=Palustrine Scrub-Shrub
PUSCh = Palustrine Unconsolidated Shoreline, Seasonally Flooded, Diked/Impounded
RFT = Riverine Flow-Through
RI = Riverine Impounding
*Note, PFO wetland impact acreages are based on NWI mapping for two sites that have not been delineated on the ground. Based on desktop analysis, it is likely that these sites do not contain PFO wetlands, and that they will not be impacted.

1.4.2 Summary of Non-Wetland Impacts and Mitigation

The Project construction and implementation is anticipated to permanently impact approximately 5,914 linear feet (0.72 acres) of stream habitat at 175 sites throughout the entire project corridor and associated transmission line access infrastructure (see Appendix A for impacted stream data).

To mitigate for these anticipated impacts, the HMS will incorporate in-stream aquatic habitat improvements along approximately 432 linear feet of stream channel within the oxbow at the

project site to create additional fish habitat, riparian planting along approximately 1,080 feet of Catherine Creek, and a high flow side channel (810 linear feet, 0.19 acres) will be constructed between Catherine Creek and the oxbow.

Table 3 provides a summary of permanently impacted non-wetland sites, and Appendix A provides specific site summary information for non-wetland impacts.

Table 3. Non-Wetland Mitigation Summary

Site	Permanent Impact				Mitigation			
	Stream Type	Number of Sites	Acres	Linear Feet	Stream Type		Acres[1]	Linear Feet
Project	Ephemeral	39	0.09	1402.48				
	Intermittent	111	0.47	3516.49				
	Perennial	25	0.16	994.95				
HMS					Intermittent		0.19	810
					Perennial	In-stream	0.71	432
						Riparian	n/a	1,080
Total		175	0.72	5914			0.90	2,322

[1] Assumed width of 10 feet for created intermittent side channel

The side channel will allow for increased connectivity between Catherine Creek, the oxbow, and the wetlands, as well as providing an off-channel velocity refuge for fish during high flows. The engineered log jams will be constructed of appropriately sized trees along with other woody debris, and will be designed to withstand flood flow events. The structures will protrude into the channel and create cover for fish from predators and will act as a food supply for fish by providing an environment in which macroinvertebrates can thrive. Trees will be pinned together and anchored with ballast rocks to ensure stability (see Plan Sheets in Appendix B for further details).

In addition to the direct physical improvements of in-stream habitat, the forested/scrub-shrub wetlands paralleling approximately 1,080 linear feet of Catherine Creek and the oxbow will improve the existing riparian habitat and provide additional shading and terrestrial nutrient inputs to the aquatic system.

These habitat improvements will provide essential habitat for ESA-listed spring Chinook salmon, summer steelhead, and bull trout. Adults and/or juveniles of all three species utilize the Catherine Creek system for spawning, overwintering habitat, and as a migratory corridor.

1.5 Summary of Functions and Values Gains and Losses

This section summarizes the function and value gains and losses anticipated for both wetland and non-wetland components of the Project construction and operation.

1.5.1 Summary of Wetland Functions and Values Gains and Losses

The project traverses four Hydrologic Unit Code (HUC) 6 basins, each having ORWAP data collected at a representative impacted wetland site. The HMS was also evaluated using ORWAP (see Appendix C). There will be a loss of wetland functions and values as a result of the proposed construction of the Project, with these losses offset by the anticipated gain in functions and values from the HMS.

The anticipated outcome of the HMS is to have no net loss of wetland function as a result of the proposed construction. The impacted sites total approximately 0.538 acres of wetland and 5,914

linear feet (0.72 acres) of non-wetland. The HMS provides approximately 3.66 acres of wetland mitigation credit and 2,322 linear feet (0.90 acres) of stream mitigation credit. For details of each attribute's function and value, please see Section 5.0.

1.5.2 Summary of Non-Wetland Functions and Values Gains and Losses

There will be a loss of stream functions and values as a result of the proposed construction of the Project, with these losses offset by the anticipated gain in functions and values from the HMS. A draft functional assessment of streams proposed for permanent impacts is included in Appendix D. The anticipated outcome of the HMS is to have no net loss of stream function as a result of the proposed construction.

Stream function at the HMS is anticipated to be improved over the existing condition and provide a net gain in function on a regional scale. This improvement and gain is anticipated to be achieved by the following:

- Improved in-stream habitat, specifically benefiting ESA-listed spring Chinook salmon, summer steelhead, and bull trout.
- Improved hydrologic function of Catherine Creek with reconnection of the stream and floodplain, improved sediment trapping, surface water filtration, and riparian/wetland species recruitment to the site.
- Mitigation of sedimentation due to enhancement and creation of forested and scrub-shrub wetlands, thereby improving riparian function and bank stability.
- Improved thermal regulation of the stream channel due to increased channel shading provided from wetland tree and shrub species.

The Project traverses four HUC 6 basins and benefits of the above-listed functions are anticipated to be of greater ecological value than what would be produced with comparatively small, spatially isolated stream improvement projects completed over the large landscape of eastern Oregon. Stream values, such as the ecological benefit to ESA-listed spring Chinook salmon, summer steelhead, and bull trout, are also anticipated to increase. Again, values of the overall stream mitigation are likely to be greater than the net change in value associated with relatively small, isolated stream improvement and restoration projects. Additionally, since anadromous fish species do not occur in many of the impacted streams, the HMS is anticipated to provide a substantial net gain in both function and value of the non-wetland component for the region as a whole.

2.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION SITE INFORMATION

2.1 Site Landowner Information

The HMS is located on Tax Lot 3200 of Township 2 South, Range 40 East, Section 19 NW/SW in Union County, Oregon, (see Figure 1, Location and Vicinity Maps, and Figure 2, Tax Lot Map). Landowner information is as follows:

Owner: John and Trudy Hassinger
68333 Kerns Loop
Cove, Oregon 97824
Phone: (541) 975-5600

IPC will enter into a long-term (perpetual) lease with the owner for the use of the property as part of IPC's long-term maintenance plan (see Section 9.3). Based on a cooperative agreement, GRMW or another non-profit or non-governmental organization will be responsible for operation of the site and maintenance of the mitigation area. Contact information for IPC is as follows:

Contact: Zach Funkhouser
Phone: 208-388-5375
Fax: 208-388-6902
E-mail: zfunkhouser@idahopower.com

2.2 Physical Location Information

The HMS is located approximately 6.5 miles east of Oregon State Route 82, and 0.8 mile north of Booth Lane. The legal description is Township 2 South, Range 40 East, Section 19 NW/SW, in Tax Lot 3200. The center of the mitigation wetland is latitude 45.3775 and longitude -117.8878. Location and vicinity maps are shown on Figure 1, and an aerial photo of the proposed project site is shown on Figure 3.

3.0 DESCRIPTION OF HOW THE CWNWMP ADDRESSES THE PRINCIPAL OBJECTIVES

3.1 Functions and Values Replacement

The HMS will provide similar functions and values as the impacted wetlands and provide critically valuable habitat for ESA-listed spring Chinook salmon, summer steelhead, and bull trout. This section describes the replacement of impacted wetlands and non-wetland functions and values with the construction of the HMS.

3.1.1 Wetland Function and Value Replacement

The impacted wetlands are classified in the Cowardin system as Palustrine (Emergent, , Forested, Aquatic Bed, and Unconsolidated Shore) and in the HGM system as Depressional, Riverine, Slope, and unknown. Refer to Table 2 in Section 1 for a summary of specific impact site classifications and acreages.

The functions and values of the HMS are anticipated to be generally similar to the impacted areas, as the proposed created and enhanced wetlands at the HMS will be Palustrine (PES, PSS, and PFO), and Riverine. Refer to Table 2 for HMS wetland type and acreage summaries. The hydrologic regime under the proposed CWNWMP is anticipated to produce a period of inundation of at least 14 days, occurring approximately between April and June, during high flow and water table periods typically observed in early spring during the growing season.

3.1.2 Non-Wetland Function and Value Replacement

A total of 175 stream sites will be permanently impacted by the Project construction. Of these, 39 are ephemeral (0.09 acre, 1,402.48 linear feet), 111 are intermittent (0.47 acre, 3,516.49 linear feet), and 25 are perennial (0.16 acre, 994.95 linear feet), for a total impact of approximately 0.72 acres and 5914 linear feet.

The HMS will provide approximately 0.90 acres and 2,322 linear feet of stream mitigation to Catherine Creek, which is a perennial anadromous fish-bearing stream and a major tributary of the Grande Ronde River. ESA-listed spring Chinook salmon, summer steelhead, and bull trout are known to inhabit this stream system.

3.2 Local Replacement of Locally Important Functions and Values

While the mitigation site is not located at the site of the wetland and non-wetland impacts, it is expected that improvements to stream habitat and wetland function of the HMS will provide greater benefit to the region in terms of overall watershed and stream health.

By consolidating the mitigation features into one larger site, the overall gain in value for the proposed wetland and non-wetland mitigation is likely to be greater than the net change in value that would occur with individual, relatively small and isolated mitigation projects along the Project alignment. Additionally, anadromous fish species do not occur in some of the impacted streams; thus, the HMS is anticipated to provide a substantial net gain for the region, in both function and value of the non-wetland component.

3.3 Self-Sustaining/Minimum Maintenance Needs

This section describes the maintenance needs and requirements of wetland and non-wetland CWNWMP components.

3.3.1 Wetland Self-Sustaining/Minimum Maintenance Needs

The HMS will receive water input that currently sustains the existing wetlands; it will be graded so it will receive adequate surface and subsurface water to be self-sustaining. Additionally, the excavated channel between Catherine Creek and the oxbow through the HMS will provide a hydrologic connection at 1.5-year flow events and greater, providing for natural wetland vegetation recruitment and appropriate hydrology (seasonal flooding) for the created wetland types at the HMS during seasonal high flow events. Future maintenance needs may include periodic weed control.

3.3.2 Non-Wetland Self-Sustaining/Minimum Maintenance Needs

Stream and aquatic habitat improvements will require no maintenance, as the woody debris structures are designed to be maintenance-free and long-lasting. The excavated channel between Catherine Creek and the oxbow through the HMS will also be maintenance-free and will re-establish surface hydrologic connectivity that will provide for natural riparian vegetation recruitment. Future maintenance needs may include periodic weed control.

3.4 Siting Considerations

The HMS has been sited and designed to maximize stream and wetland processes, functions, and existing ecological enhancement to the extent possible at a comparatively large mitigation site relative to impact sites.

IPC explored several mitigation options available to them, including an 80-acre parcel located in the Middle Snake HUC 4 watershed, a parcel located in Baker County, Oregon, and multiple restoration opportunities with the GRMW in the Upper Grande Ronde River Subbasin. The 80-acre parcel located in the Middle Snake HUC 4 watershed had potential as a floodplain restoration and water quality improvement project. The Baker County parcel is located in the Lower Snake HUC 4 watershed near Baker City, Oregon. Both of these properties are privately owned and mitigation plan development would lack the needed guidance of watershed scale needs, planning, and project implementation experience, such as that provided by an organization like the GRMW. In addition, neither site would provide benefit for ESA-listed fish species due to their location upstream of the Oxbow Dam on the Snake River. The Oxbow Dam blocks migration corridors historically utilized by native ESA-listed fish species.

The GRMW began coordinating restoration projects in 1994 within the Grande Ronde Basin. Projects have addressed nearly every component of watershed health including water quality, water quantity, in-stream habitat complexity, riparian condition, streambank stability, and fish passage. With this valuable resource available to aid in project planning, implementation, and management, IPC selected one of several mitigation project options through the GRMW. The preferred alternative was selected based on stream habitat and water quality enhancement potential and cost/benefit returns. This site provides ample mitigation opportunities for both wetland and non-wetland impacts associated with the construction of the Project and it will be implemented and managed with local watershed knowledge and experience provided by the GRMW.

3.5 Minimize Temporal Loss

The mitigation area is anticipated to be created prior to or concurrently with construction of the Project, thereby, minimizing temporal loss of wetlands as a result of the project.

Within the HMS, impacts to existing wetlands that are to remain undisturbed will be minimized by marking existing wetland boundaries to limit equipment intrusion during excavation of created and enhanced wetlands. If existing wetlands outside the creation/enhancement mitigation area are temporarily disturbed, they will be restored by returning them to original contours and reseeding.

Construction of the wood habitat structures will occur prior to the creation and enhancement of the wetlands, and live stakes will be planted within the structures to restore the disturbed PSS wetland. No long-term adverse impacts are anticipated to the existing wetlands in the vicinity of the wood habitat structures.

4.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION SITE EXISTING CONDITIONS

4.1 Wetland Delineation or Determination Results

Wetland delineations were conducted on the HMS on August 27 and 28, 2015, and October 21, 2015. A draft wetland delineation report describing 11 wetlands totaling 2.79 acres, and two waterways (Catherine Creek and an oxbow), was prepared on October 13, 2016. This final wetland delineation report was be submitted in 2017 to the DSL for review. DSL issued a letter of concurrence dated November 1, 2017, regarding the findings of the 2015 wetland delineation.

4.2 Existing HGM and Cowardin Classes On-Site

There are 11 existing wetlands in the wetland delineation study area, classified as PEM and PSS using the Cowardin classification system, and Depressional and Riverine using the HGM classification system.

Photographs of existing site conditions are shown on Figure 4.

4.3 Description of Existing and Proposed Hydrology

The existing site receives hydrologic input from Catherine Creek as well as from precipitation. The site is currently inundated at approximately the 2-year flood event when the water over-tops the banks of Catherine Creek. Catherine Creek parallels the north edge of the site, running generally east before turning south into the oxbow that parallels the east edge of the site. The proposed wetland mitigation area is on the south side of Catherine Creek and west of the

oxbow. Catherine Creek is a perennial stream and a main tributary of the Grande Ronde River in the Upper Grande Ronde Subbasin, providing year-round surface flow and seasonal flooding potential, conducive to wetland habitat construction and restoration.

The HMS will enhance the hydrologic regime, as the site will have direct connection to the main creek channel during periods of high flow. A portion of the HMS area will be graded to create hydrologic connectivity through the site, and a high flow side channel between Catherine Creek and the existing oxbow will be constructed. The side channel will allow for increased flow into the oxbow and will provide an off-channel velocity refuge during high flows. The HMS will be graded to elevations similar to the existing wetlands on site to produce a wetland hydrologic regime for the newly created wetlands. The hydrologic regime under the proposed CWNWMP is anticipated to produce a period of inundation, on average, of at least 14 days, occurring approximately between April and June, during high flow and water table periods typically observed in early spring during the growing season.

4.4 Existing Site Conditions

4.4.1 Existing Plant Communities

The majority of the HMS area is currently unfarmed grassland. The existing upland and wetland plant communities identified in IPC's wetland delineation report consists of a variety of herbaceous, grass, and shrub species, both native and invasive. The predominant existing plant community identified in the wetland delineation consists of herbaceous vegetation across most of the site, including primarily reed canarygrass (*Phalaris arundinacea*), meadow foxtail (*Alopecurus pratensis*), and Sheldon's sedge (*Carex sheldonii*). A narrow band of woody vegetation, including willows (*Salix amygdaloides, S. exigua*) and red osier (*Cornus alba*) is located in the riparian zone along Catherine Creek and the oxbow.

4.4.2 Existing Aquatic Communities

The site borders Catherine Creek, a major perennial tributary of the Grande Ronde River, in the Upper Grande Ronde River Subbasin. This stream, along with the Grande Ronde River, is classified as Essential Salmonid Habitat by the Oregon Department of Fish and Wildlife and Essential Fish Habitat under the Magnuson-Stevens Act. Additionally, Catherine Creek, along with much of the Grande Ronde River Basin, is designated critical habitat for bull trout, spring Chinook salmon, and summer steelhead. Anadromous salmonid species and bull trout are protected under the ESA. Recovery plans for listed bull trout and salmonid species have been developed that seek to restore fish populations and their habitat to sustainable levels.

The *Draft Northeast Oregon Management Unit Plan for Spring/Summer Chinook and Steelhead* and the *Grande Ronde Subbasin Plan* both identify lower Catherine Creek as an important reach for overwintering juvenile spring Chinook salmon and summer steelhead. Habitat quantity and quality are both considered key limiting factors in lower Catherine Creek, where the HMS is located. Overwintering juvenile spring Chinook salmon prefer deep, slow velocity water near cover. This type of habitat is lacking in lower Catherine Creek due to anthropogenic influences. Historical accounts by early settlers indicate that lower Catherine Creek was a slow, deep, and meandering river with abundant riparian cover for fish. These accounts will help to guide stream mitigation efforts at the proposed mitigation site.

Existing non-wetland site conditions are summarized on Table 4; the concept is derived from Oregon's stream mitigation framework currently under development by USACE, the Environmental Protection Agency, and the Willamette Partnership. Table 4 was developed using Oregon Department of State Land's *Guidance for Assessing Stream Functions and Values*

under the Oregon Removal/Fill Program. Absence of an attribute status indicator in specific function rows indicates the attribute is not associated with that specific function.

Catherine Creek is a perennial stream system, and as such, the inclusion of this attribute in the summary is intended to indicate its effect on stream systems and the functions with which it corresponds. The base flow of the system will not change with the implementation of the proposed CWNWMP.

Table 4. Summary of Existing Non-Wetland Attributes, Functions, and Status

Function Attribute		Overbank Flow	Effective Discharge	Base Flow	Groundwater Flux	Bed Mobility	Sediment Character	Bank Stability	Hydraulic Variability	Stream Habitat	Riparian Structure and Composition	Aquatic Species' Structure and Composition	Water Quality	Water Temperature	Sedimentation
Functional Group	**Function**	**Status**													
Hydrologic Functions	Surface water storage	L		P							L				
	Sub/surface transfer				A						L				
	Flow variation	L	A	P	A						L				
Geomorphic Function	Sediment continuity	L	A			L		L							
	Substrate mobility	L	A			L	L		L						
Biological Functions	Maintain biodiversity										L	A			
	Create habitat	L	A	P		L	L	L	L	L	L	A			L
	Sustain trophic structure										L	A	L		
Chemical and Nutrient Functions	Nutrient cycling	L			A			L			L		L		
	Chemical regulation												L		
	Thermal regulation		A								L			L	

A = Adequate; L = Limited; P = Perennial

The following is an explanation of the "Adequate" status ratings for effective discharge, groundwater flux, and aquatic species structure and composition attributes indicated on Table 4:

- Effective discharge is currently produced by the stream, indicated by the seasonal variation in stream flow where spring flows generally transport the greatest volume of sediment. The functions of sediment continuity, substrate mobility, creation of habitat, and thermal regulation are limited by anthropogenic modifications of the channel, while natural flow variations remain relatively undisturbed.
- Groundwater flux of the system is currently adequate to sustain perennial flow of the stream, meeting both anthropogenic demands and wildlife habitat requirements, and contributes to nutrient cycling, flow variations, and subsurface transfer.
- Aquatic species, structure, and composition are adequately maintained within the local system, as the functions of biodiversity, trophic structure, and habitat are influenced to a greater degree by regional anthropogenic impacts, such as dam construction.

It is anticipated the attributes currently considered "Adequate", as well as the attributes shown as "Limiting", will be improved upon with the implementation of the proposed CWNWMP, thus contributing to the improved function of the stream system as a whole.

4.5 Site Constraints or Limitations

There are few constraints to performing habitat enhancement at the mitigation site. Much of the land around the site is actively managed for agriculture; however, the site itself has not been used for active agricultural purpose for several years. Other potential constraints are related to habitat, such as the persistent local threat of invasive species such as reed canarygrass and the potential browsing impact on new plantings from the existing wildlife population in the area.

Site preparation, including mechanical and chemical treatments, should significantly reduce the existing weed population. As part of the mitigation plan requirement, the site will no longer be used for farming practices. Browsing is anticipated to be a challenge to overcome; however, with the myriad of deer repellent products available, some of these could potentially be utilized in concert with adaptive management strategies.

5.0 FUNCTIONS AND VALUES ASSESSMENT

This section describes the rationale behind functions and values assessments of wetland and non-wetland components of this CWNWMP.

5.1 Rationale for Method Used in Wetland Assessment

Since the project area is not tidal or located in the Willamette Valley, ORWAP was used, as required by the DSL.

This analysis was conducted by IPC on representative wetland sites within the Project site boundary during 2011-2013 wetland delineations. Table 5 provides a summary of representative wetland sites where ORWAP data were gathered. See Appendix C for representative impact and mitigation sites ORWAP data. See Figure 5, ORWAP Site Locations.

Table 5. Representative ORWAP Wetland ID

ORWAP ID	Delineated Acres	Cowardin	HGM
BAPRO_594	0.5	PEM	Riverine Flow-through
MAL1-Alkaline	0.6	PEM	Slope
MAWLLCK-370	0.02	PSS	Riverine
BA_G_115&117	0.15	PEM	Riverine
BA_G_145	0.10	PEM	Slope
BA_G_148	0.15	PEM	Riverine
BA_G_210.1	0.03	PEM	Riverine
CloverCreek_2012	4.50	PEM	Slope
MA_G_207	1.90	PEM	Depressional
MA_G_228	0.03	PFO	Slope
MA_G_232.2	0.10	PEM	Riverine
MA_G_269	0.01	PFO	Riverine; Slope Valley
MA_G_269.2	0.01	PEM	Riverine
UM_G_82	0.20	PEM	Riverine
UM_G_105	2.00	PEM	Slope

5.2 Summary of Expected Wetland Functions and Values Gains and Losses

The functions and values of the existing wetlands and the predicted condition were evaluated using ORWAP. Table 6 presents a summary of the expected wetland functions and values gains and losses for the representative impact sites and the mitigation site.

Table 6. Summary of Expected Wetland Functions and Values Gains and Losses

Grouped Services		Impact Sites		Hassinger Mitigation Site (HMS)				
		PEM Representative Sites	PFO/PSS Representative Sites	PEM				PSS/PFO
						Net Change		Net
		Net Change[1]	Net Change[1]	Existing	Predicted[2]	Create[3]	Enhance	Change[4]
Hydrologic Function	Function	-2.1	-0.9	3.8	3.5	3.5	-0.3	3.8
	Value	-3.3	-3.4	2.7	2.7	2.7	0.0	2.7
Water Quality	Function	-7.1	-7.6	5.3	5.1	5.1	-0.2	5.1
	Value	-5.5	-5.5	7.5	8.7	8.7	1.2	8.7
Carbon Sequestration	Function	-2.5	-2.6	2.4	2.8	2.8	0.4	2.8
Fish Support	Function	-3.7	-4.1	0.7	5.8	5.8	5.1	5.8
	Value	-4.1	-3.7	10.0	10.0	10.0	0.0	10.0
Aquatic Support	Function	-6.6	-6.8	7.3	7.6	7.6	0.3	7.7
	Value	-8.1	-8.0	8. 7	8.7	8.7	0.0	8.7
Terrestrial Support	Function	-5.8	-5.6	4.9	5.5	5.5	0.6	6.9
	Value	-7.7	-7.9	8.0	10.0	10.0	2.0	10.0
Public Use and Recognition	Value	-1.6	-1.5	0.5	1.9	1.9	1.4	1.9
Provisioning Services	Value	-2.0	-2.00	0.0	0.0	0.0	0.0	0.0

[1] Predicted functions and values of the representative wetland impact sites are assumed to be 0, as the impacted sites they represent will no longer be wetlands. Many of the representative sites, as with the actual impact sites, are very small portions of larger wetlands, which will continue to function at current levels.
[2]Predicted values for created and enhanced PEM wetlands are assumed to be similar.
[3]Existing functions and values associated with the **created** PEM wetlands at the HMS are assumed to be 0 since these areas are currently upland.
[4]Existing functions and values associated with the **created** PSS and PFO wetlands at the HMS are assumed to be 0 since these areas are currently upland.

The apparent net loss of functions for hydrologic function and water quality is a result of the construction of the side channel within the mitigation site, causing the scores for water retention and sediment retention and stabilization to decrease. That the overall outcome of the proposed mitigation project is expected to increase the function and value of the site as a whole.

5.3 Rationale for Method Used in Non-Wetland Assessment

Oregon's stream mitigation framework is currently under development by USACE, Environmental Protection Agency, and Willamette Partnership. As such, the professional judgment and local expertise provided by the GRMW were utilized in assessing the stream function and values of the impact sites and HMS.

5.4 Summary of Expected Non-Wetland Gains and Losses

A quantification of stream impacts compared to stream mitigation is summarized on Table 7. This provides a basis for comparison and assessment of non-wetland impacts and mitigation.

Table 7. Summary of Permanent Non-Wetland Impact and Mitigation

Stream Type	Impact Sites		HMS	
	Total Area (acres)	**Total Length (feet)**	**Area (acres)**	**Length (feet)**
Ephemeral	0.09	1,402.48	n/a	n/a
Intermittent	0.47	3,516.49	810	0.19
Perennial	0.16	994.95	432	0.71
Total	**0.72**	**5,914**		

Impact sites associated with the Project construction and operation are comparatively small and occur predominantly on intermittent stream systems that are non-fish bearing. Conversely, the HMS equates to approximately 2,322 linear feet (0.90 acres) of enhanced and created stream habitat in a major anadromous fish habitat watershed. Many of the impact sites occur above a point where anadromous fish passage is blocked by the Oxbow Dam on the Snake River. Tributaries above this point of the Snake River system cannot provide for endangered anadromous fish migration. The volume of enhanced and created habitat and its location provide a major benefit to endangered species.

Stream functional groups, including hydrologic, geomorphic, biological, and chemical/nutrient functions, and their associated attributes, will be impacted predominantly on a temporary basis and subsequently restored to at least pre-disturbance function. The permanent impacts to stream function and value will be mitigated by implementation of best management practices, and construction practices involving work below the ordinary high water elevation will follow Oregon Department of Fish and Wildlife's in-water work guidelines. The Draft Stream Functional Analysis for the Project, prepared by IPC, is provided in Appendix D. This document was developed under the DSL's interim stream mitigation framework and summarizes the analysis of anticipated permanent stream impacts associated with the Project.

In summary, the losses to stream function and value will be minimal at the impact sites, all of which have low functional ratings. The magnitude of stream mitigation relative to stream impacts of the Project, along with the benefits provided for ESA-listed spring Chinook salmon, summer steelhead, and bull trout, equates to a net gain in ecological process and function in the region.

5.5 Considerations to Address Expected Wetland and Non-Wetland Losses

All expected losses to the functions and values of the impacted wetlands and streams will be addressed at the HMS, through the creation and enhancement of similar wetland areas and enhancement of an anadromous fish-bearing stream.

6.0 COMPENSATORY WETLAND AND NON-WETLAND MITIGATION CONSTRUCTION MAPS AND DRAWINGS

6.1 Grading Plan Objectives

The Grading Plan's objectives are to grade HMS to an elevation sufficient to produce wetland hydrology, support wetland vegetation, and allow hydric soil preservation and development; and to construct a side channel to increase hydrologic connectivity between Catherine Creek, the oxbow, and the wetlands. A draft of the HMS design plans is provided in Appendix B. See Plan Sheet 3 for the wetland types, locations, and areas.

6.2 Planting List and Rationale

A planting plan has been prepared and includes seeding and various types of permanent plantings to restore the site. Methods used will include woody species plantings (live stakes and container plants), wetland area seeding, and upland area seeding. Using a variety of species will ensure a diverse community.

Full details about the planting list are in the Planting Plan (Appendix B).

6.3 Construction Schedule

The Project construction will begin once federal and state permitting processes have been completed. Project construction is anticipated to begin in 2020. The mitigation area is anticipated to be created prior to construction of the Project, or at the least, concurrently with construction impacts associated with transmission line wetland impacts.

Excavation of the HMS will be completed with excavators, dump trucks, and other heavy equipment, as appropriate, with excavated material stockpiled at an upland site for later use. Topsoil will be stockpiled separately to be reapplied before planting and seeding. Excess material will be disposed of on-site in an adjacent upland field as directed by the project engineer and landowner. The created wetlands will have substantial micro-topography to enhance biodiversity. A varied topography creates micro-habitat areas more suited to specific wetland vegetation.

When the desired subgrade elevation is achieved, the site will be covered with a minimum of 12 inches of topsoil, then seeded and planted. Site excavation will likely occur in the fall when water tables are at their lowest elevations to mitigate impacts of heavy equipment in saturated soil conditions, followed by seeding of grasses and planting of woody species. Sedge and rush species will be seeded in spring after high flows begin to subside.

Wood habitat structures will be constructed in the fall to coincide with lowest annual surface water elevations and the Oregon Department of Fish and Wildlife-recommended in-stream work window (July 1 to October 15) and before construction of the wetlands.

7.0 MONITORING PLAN

7.1 Proposed Performance Standards

The following criteria will be used to evaluate the success of the mitigation site:

PEM Wetlands

- The cover of native herbaceous species is at least 60 percent.
- The cover of invasive herbaceous species is no more than 10 percent.
- Bare substrate represents no more than 20 percent cover.
- By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5 percent average cover in the habitat class and occur in at least 10 percent of the plots sampled.
- The Prevalence Index total for all strata is less than 3.0.

PSS and PFO Wetlands

- The cover of native herbaceous species is at least 60 percent.
- The cover of invasive herbaceous species is no more than 10 percent. After the site has matured to the stage when desirable canopy species reach 50 percent cover, the cover of invasive understory species may increase but may not exceed 30 percent.
- The cover of invasive shrub or tree species is no more than 10 percent.
- Bare substrate represents no more than 20 percent cover.
- By Year 3 and thereafter, there are at least 6 different native species. To qualify, a species must have at least 5 percent average cover in the habitat class, and occur in at least 10 percent of the plots sampled.
- Prevalence Index total for all strata is less than 3.0.
- The cover of native woody vegetation on the site is at least 50 percent. Native species volunteering on the site may be included, dead plants do not count.

By the end of the fifth year following construction, a minimum of 6.21 acres of created/enhanced wetlands should be present on the site, as determined using the criteria stated in the 1987 USACE *Wetland Delineation Manual* and 2008 *Arid West Regional Supplement*.

7.2 Monitoring Methods

The following methods will be used to assess the condition of the mitigation site each year:

1. Permanent photo points will be established to provide an overall assessment of the created wetland. Additional photos may be taken as needed and included in the monitoring report.
2. Created and enhanced emergent wetland mitigation areas will be sampled using three 100-meter transects, each with ten 1-meter square meter plots. Plots will be evaluated for percent cover of all species present (Table 8).
3. Created scrub-shrub and forested wetland mitigation areas will be sampled with two 100-meter transects, each with five 50-square meter plots. Each of these large plots will also contain two additional randomly selected 1-square meter plots for sampling of herbaceous vegetation. Plots will be evaluated for percent cover of all species present.

4. Each year, a minimum of four test pits will be dug in the mitigation area (two in the emergent wetland area, and two in the created scrub-shrub and forested wetlands) and examined for the presence of saturation within the upper 12 inches, inundation, soil oxidation-reduction characteristics and other indicators of hydric soils and wetland hydrology, as outlined in the 1987 USACE *Wetland Delineation Manual* and the 2008 *Arid West Regional Supplement*.
5. The site will be delineated by the end of the fifth growing season following construction, to verify the size of the created/enhanced wetlands. This delineation will be conducted in accordance with the 1987 USACE *Wetland Delineation Manual* and the 2008 *Arid West Regional Supplement*.

Table 8. Sample Plot Summary

Vegetation Type	Acres	Number of Samples
Emergent	3.95	30
Shrub/Forested	2.26	10 plus 20 herbaceous

In addition to the above steps, an unobtrusive monitoring method of observation will be utilized to evaluate the use of created/restored habitat for ESA-listed spring Chinook salmon, summer steelhead, and bull trout fish species. Observations shall be conducted by the GRMW or other appropriate non-profit or non-governmental organization, who will prepare an annual report for submission to the Oregon Department of Fish and Wildlife and DSL on utilization and trends for a period of five years following project completion.

7.3 Monitoring Schedule

A post-construction report will be provided, documenting the as-built condition of the site and establishing permanent photo points.

A minimum 5-year monitoring program is proposed for the HMS. Once annually, during the spring or early summer, the site will be visited and the conditions will be compared to the success criteria. The vegetation and notable conditions of the overall site will be recorded, and an annual monitoring report will be submitted to the DSL and USACE by December 31 of each year.

To determine whether the minimum acreage of wetlands has been created/enhanced, the site will be delineated no later than the fifth growing season following construction.

7.4 Rationale for Plot and Photo-Documentation Locations

The sample plots will be located to provide a representative sampling of the vegetation in the mitigation areas, and the photo point locations will be placed to provide good views of the mitigation site as a whole, with closer details as needed. Chosen sampling methods, described in Section 7.2, meet the DSL Routine Monitoring Guidance for Vegetation standards for sample size based on vegetation type.

8.0 LONG-TERM PROTECTION AND FINANCIAL SECURITY INSTRUMENTS

8.1 Description of Proposed Protection Instrument

IPC will ensure long-term protection of the HMS through a conservation easement to provide perpetual protection and conservation of the mitigation wetlands' and waterways' functions and

values, and wetland habitat improvement management of the property. IPC is currently in negotiations with the Site Landowner (Section 2.1) for a possible option agreement.

8.2 Description of Proposed Financial Security Instruments

IPC's ASC for the Project includes evidence demonstrating that IPC has both the organizational expertise (ASC Exhibit D) and the financial capability (ASC Exhibit M) to construct and operate the facility in compliance with the terms of its Site Certificate, which will include a condition requiring implementation of the CWNWMP as approved by the Oregon Department of Energy (ODOE) and DSL. The GRMW or other appropriate non-governmental organization will provide for the long-term maintenance of the site with funding provided by IPC.

8.3 Long-Term Maintenance Plan

The HMS will be maintained and monitored by the GRMW or other appropriate non-profit or non-governmental organization as part of its agreement with IPC. As the site certificate holder, IPC is responsible for site certificate compliance, and will review the ongoing maintenance and monitoring activities at the HMS. IPC will review annual monitoring reports for completeness and will submit the reports to ODOE. IPC would reserve the right to terminate the arrangement with the non-profit organization if maintenance and monitoring activities are not in compliance with permit requirements.

The responsible third-party organization will be responsible for weed control or other remedial measures required at the HMS.

The restoration seeding and planting of the HMS is designed to mimic site conditions of local wetlands. It is expected the natural seed band will establish in Years 1 and 2 following construction.

Hydrology of the HMS will be the same as the flow that sustains the existing wetlands but will be enhanced by grading a portion of the site to create hydrologic connectivity through the site and by constructing a high flow side channel between Catherine Creek and the oxbow. Beneficial uses and functions of the site, including wildlife habitat and water quality, are anticipated to improve as a result of this project.

8.3.1 Noxious Weed and Invasive Species Management

The GRMW or other appropriate non-profit or non-governmental organization will be responsible for controlling weeds in the HMS. Each year the site will be monitored for noxious and invasive species. The responsible organization will follow the recommendations of a licensed applicator to control weeds within the area.

8.3.2 Compatible Uses/Protection

Due to the isolation and private ownership of the site, it will be accessible only to the landowner, the GRMW, and others with explicit landowner permission. There will be limited, if any, public access. Limited access provides protection from potential damage from trespassing. The landowner will maintain control of access to the site but will grant the DSL and ODOE access to the site to conduct review and monitoring activities when requested.

The landowner may use the site for general enjoyment, but may not use the HMS area for agricultural activities. This includes livestock grazing or any other activities not consistent with the goals of this CWNWMP. The site will provide ecological benefits including those related to water quality and wildlife habitat.

8.3.3 Maintenance and Monitoring

The GRMW or other appropriate non-profit or non-governmental organization will be responsible for all monitoring activities of the HMS, including providing annual monitoring reports (up to five years) to the DSL and Oregon Department of Fish and Wildlife and the delineation of the HMS area no later than Year 5. The Monitoring Plan and associated methods are outlined in Section 7.0 of this CWNWMP.

Similarly, the GRMW or other appropriate non-profit or non-governmental organization will be responsible for all maintenance activities at the HMS. Maintenance activities may include reseeding, replanting, and weed control.

All costs associated with maintenance activities that pertain to the HMS area are the responsibility of IPC.

8.4 Contingency Plan

In the event post-construction monitoring finds the HMS is not meeting identified restoration goals, corrective action will be implemented. IPC will be responsible for financing and implementing contingency plans in the event that wetland and non-wetland establishment is not meeting anticipated Project goals.

An investigation of the Project will be conducted to identify causes and appropriate mitigation action to meet Project goals. Analysis will include site factors and conditions such as soil, hydrology, variable climatic factors of the preceding year, stream flow characteristics, water table characteristics, and design and construction review including seeding and planting methods, condition of selected seed crop and planting sources, planting and seeding plan, and construction design and oversight during Project implementation. Corrective actions may include, but are not limited to:

1. Identifying limiting factor(s) in meeting Project goals.
2. Implementing appropriate mitigation measures to improve the Project's success, including but not limited to:
    a. Grading the site to a lower elevation to create hydrologic connectivity through the site.
    b. Constructing an additional high flow side channel between Catherine Creek and the existing oxbow to enhance hydrology.
    c. Replanting and/or seeding areas not meeting vegetation cover parameters.
    d. Implementing an irrigation system to improve successful wetland vegetation establishment.
    e. Implementing aggressive weed control methods.
    f. Constructing a water control structure between the oxbow and the main creek channel to sustain adequate water table elevations for wetland hydrology to persist throughout the growing season and during low flow periods.
3. Increasing the monitoring frequency to identify lingering issues and Project success after mitigation action has been implemented.

8.4.1 Possible Modes of Failure

Possible modes of failure include natural events beyond the control and liability of parties involved in the CWNWMP and implementation. An example of such an event would be

catastrophic flooding associated with extreme precipitation and/or spring snow melt (e.g., 25- to 100-year event) that could potentially scour all planted wetland vegetation or damage wood structures. Seasonal climatic factors such as extreme cold, heat, and/or precipitation during the growing season or post planting and seeding could cause irreparable damage to the seed and planting crop.

An appropriate budget strictly for the purpose of implementing contingency plans, developed in cooperation between the GRMW and IPC, will be included in the overall project budget. Financial assurance for contingency planning is from the same source as the entire Project.

FIGURES

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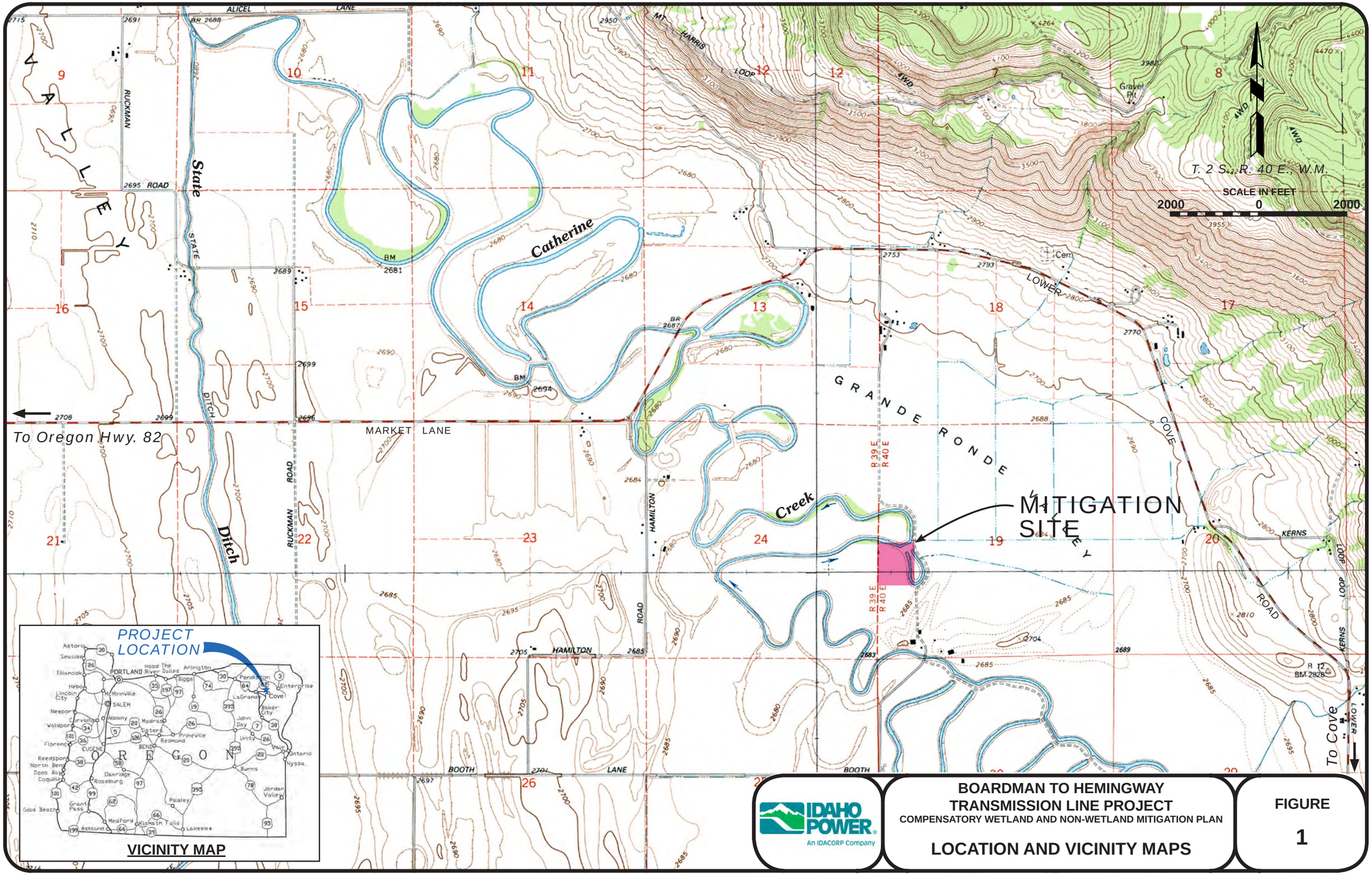

VICINITY MAP

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BOARDMAN TO HEMINGWAY TRANSMISSION LINE PROJECT
COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

LOCATION AND VICINITY MAPS

FIGURE 1

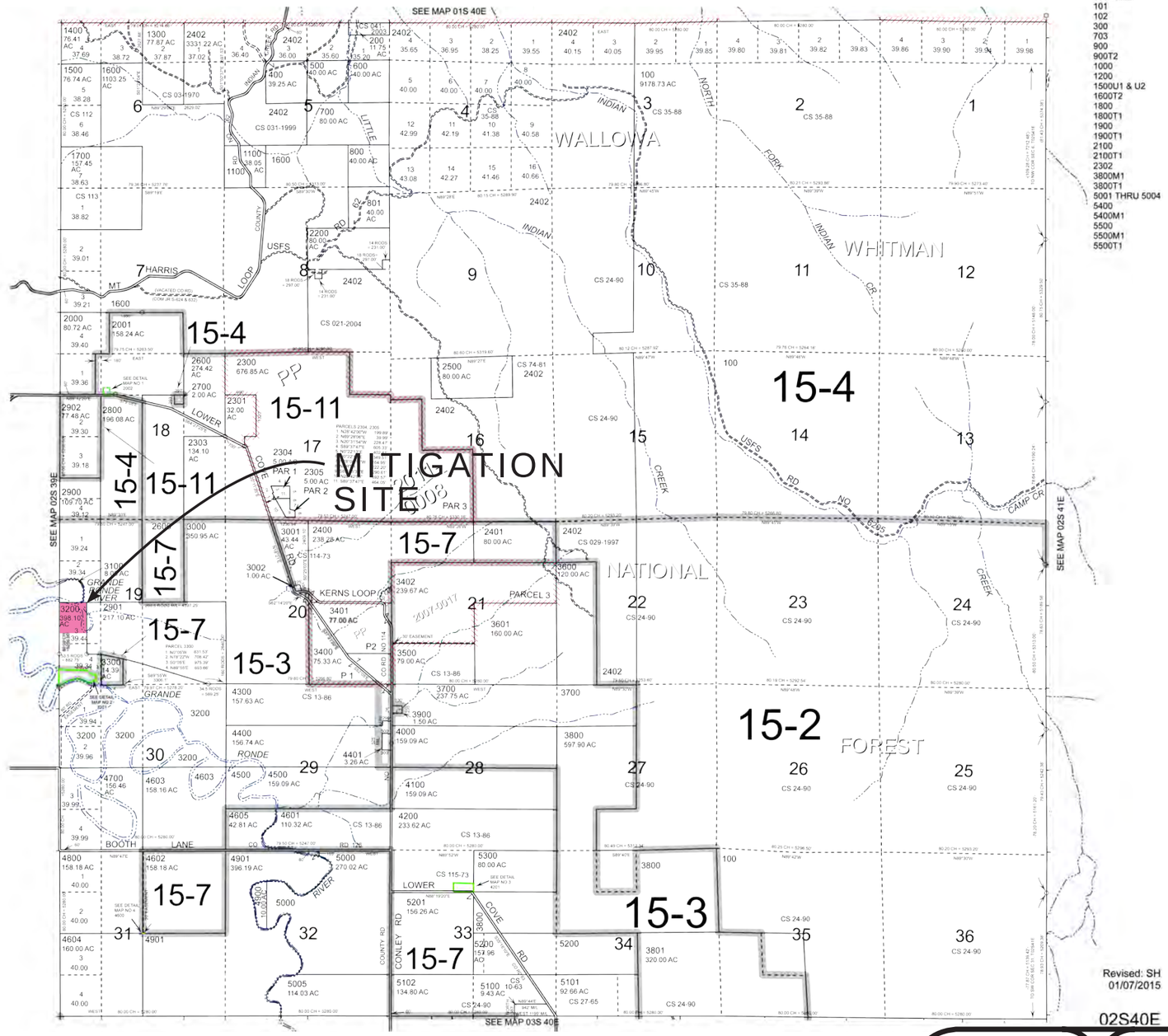
Job# 81-47-224 Jan. 20, 2017 lbauer

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY

0 1,000 2,000 3,000 4,000 Feet

T.2S. R.40E. W.M.
UNION COUNTY

02S40E



Cancelled
101
102
300
703
900
900T2
1000
1200
1500U1 & U2
1600T2
1800
1800T1
1900
1900T1
2100
2100T1
2302
3800M1
3800T1
5001 THRU 5004
5400
5400M1
5500
5500M1
5500T1

T. 2 S., R. 40 E., W.M.

SCALE IN FEET
4000 0 4000

Revised: SH
01/07/2015

02S40E

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COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

TAX LOT MAP

FIGURE
2

Catherine

Creek

HASSINGER
MITIGATION SITE

T. 2 S., R. 40 E., W.M.

SCALE IN FEET

200 0 200

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BOARDMAN TO HEMINGWAY TRANSMISSION LINE PROJECT

COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

AERIAL PHOTOGRAPH

FIGURE

3

Job# 81-47-224 Dec. 13, 2016 lbauer

PHOTOGRAPH 1 - Looking north to south. Photograph taken by Will Rice on October 23, 2015.

PHOTOGRAPH 2 - Looking east to west across the proposed mitigation site. Photograph taken by Will Rice on October 23, 2015.

PHOTOGRAPH 3 - Looking south to north along the west side of the oxbow. Photograph taken by Will Rice on October 23, 2015.

PHOTOGRAPH 4 - Looking northwest at the south bank of Catherine Creek. Photograph taken by Will Rice on October 23, 2015.

PHOTOGRAPH 5 - Monitoring Well No. 1. Photograph taken by Sue Brady on October 23, 2015.

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BOARDMAN TO HEMINGWAY
TRANSMISSION LINE PROJECT
COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

SITE PHOTOGRAPHS

FIGURE
4

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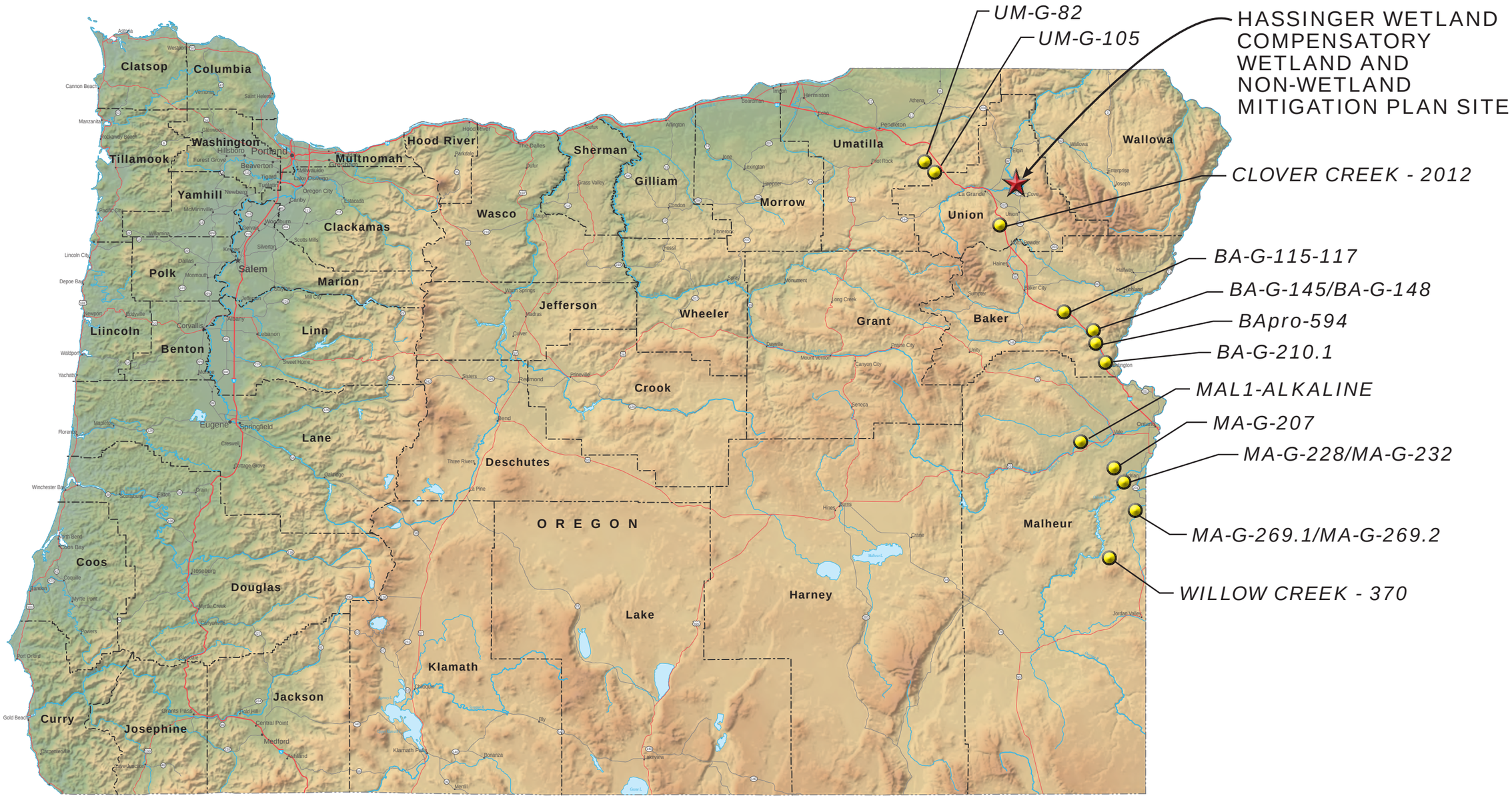

anderson perry & associates, inc.

BOARDMAN TO HEMINGWAY TRANSMISSION LINE PROJECT
COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

ORWAP SITES LOCATION MAP

FIGURE
5

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APPENDIX A
WETLAND AND NON-WETLAND IMPACTS SUMMARY

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Table A-1. Summary of Wetland Impacts

Wetland Type	HGM Class	Disturbance Type	
		Operation (Permanent Impacts)	Construction (Temporary Impacts)
PABFh	Unknown	0.0295	0.0336
PEM	Riverine Flow Through	0.0162	0.0371
	Slope	0.1623	0.2780
	Unknown	0.0486	0.7644
PEMA	Unknown	0.0199	0.4781
PEMB	Slope	0.0294	0.0647
	Unknown	0.0053	0.0061
PEMC	Unknown	0.1559	0.5101
PEMFh	Depressional	0.0030	0.0062
PEMKCx	Unknown	0.0068	0.0078
PFOA	Unknown	0.0339	0.0387
PFOC	Unknown	0.0108	0.0122
PSSA	Unknown	0.0000	25.2027
PUSAh	Unknown	0.0000	0.0552
PUSCh	Unknown	0.0159	0.0180
Grand Total		**0.5375**	**27.5136**

Table A-2. Summary of Permanent Stream Impacts

Flow Duration	Features Impacted	Total Acres	Stream Length Impacts (Feet)
Perennial	25	0.16	1,402.48
Intermittent	111	0.47	3,516.49
Ephemeral	39	0.09	994.95
Grand Total	**175**	**0.72**	**5,913.92**

APPENDIX B
OREGON RAPID WETLAND ASSESSMENT PROTOCOL DATA SHEETS

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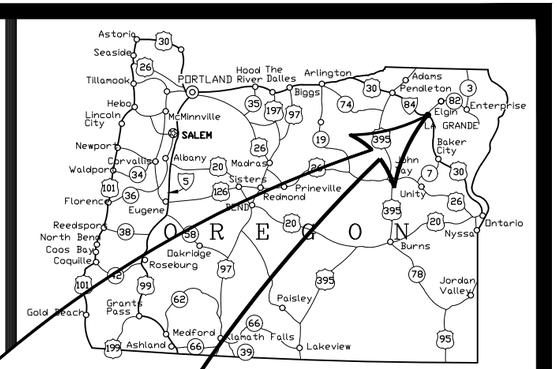
BOARDMAN TO HEMINGWAY TRANSMISSION LINE PROJECT

COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

UNION COUNTY, OREGON

T2S R39E SECTION 24 AND T2S R40E SECTION 19

2016



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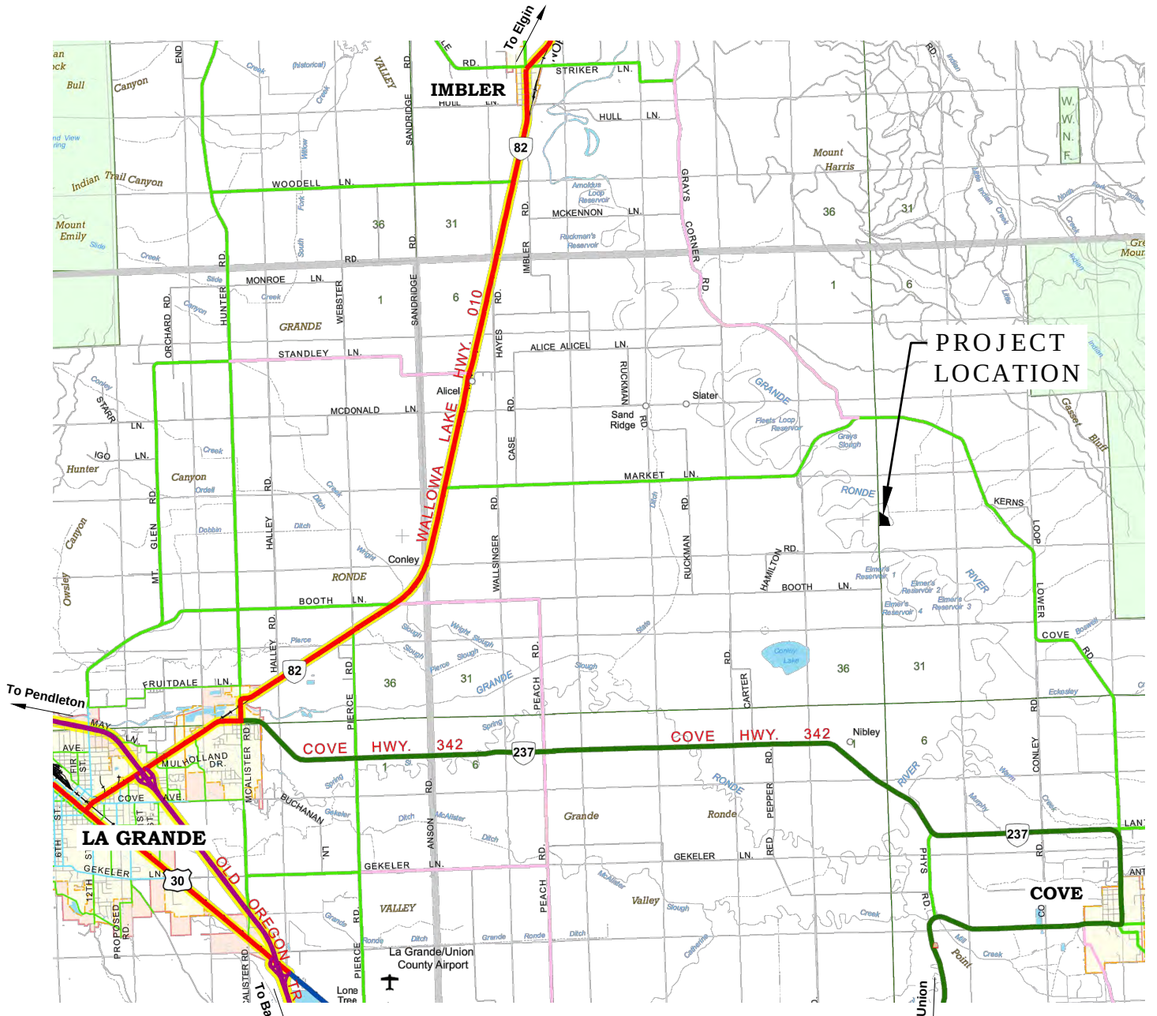

VICINITY MAP

N.T.S.

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PLAN LEGEND

	EXISTING	PROPOSED
INDEX CONTOUR	750	
INTERMEDIATE CONTOUR	749	
FENCE LINE/GATE		
SIDE CHANNEL CENTERLINE		
ORDINARY HIGH WATER		
CREEK CENTERLINE		
EDGE OF GRAVEL		
STUDY AREA		
TAX LOT BOUNDARY		
MONITORING WELL	W	
CULVERT		
PALUSTRINE EMERGENT WETLAND		
PALUSTRINE FORESTED WETLAND		
PALUSTRINE SCRUB-SHRUB WETLAND		
ENHANCED PALUSTRINE EMERGENT WETLAND		
WOOD HABITAT STRUCTURE		
FILL AREA		
CUT AREA		

DRAFTING

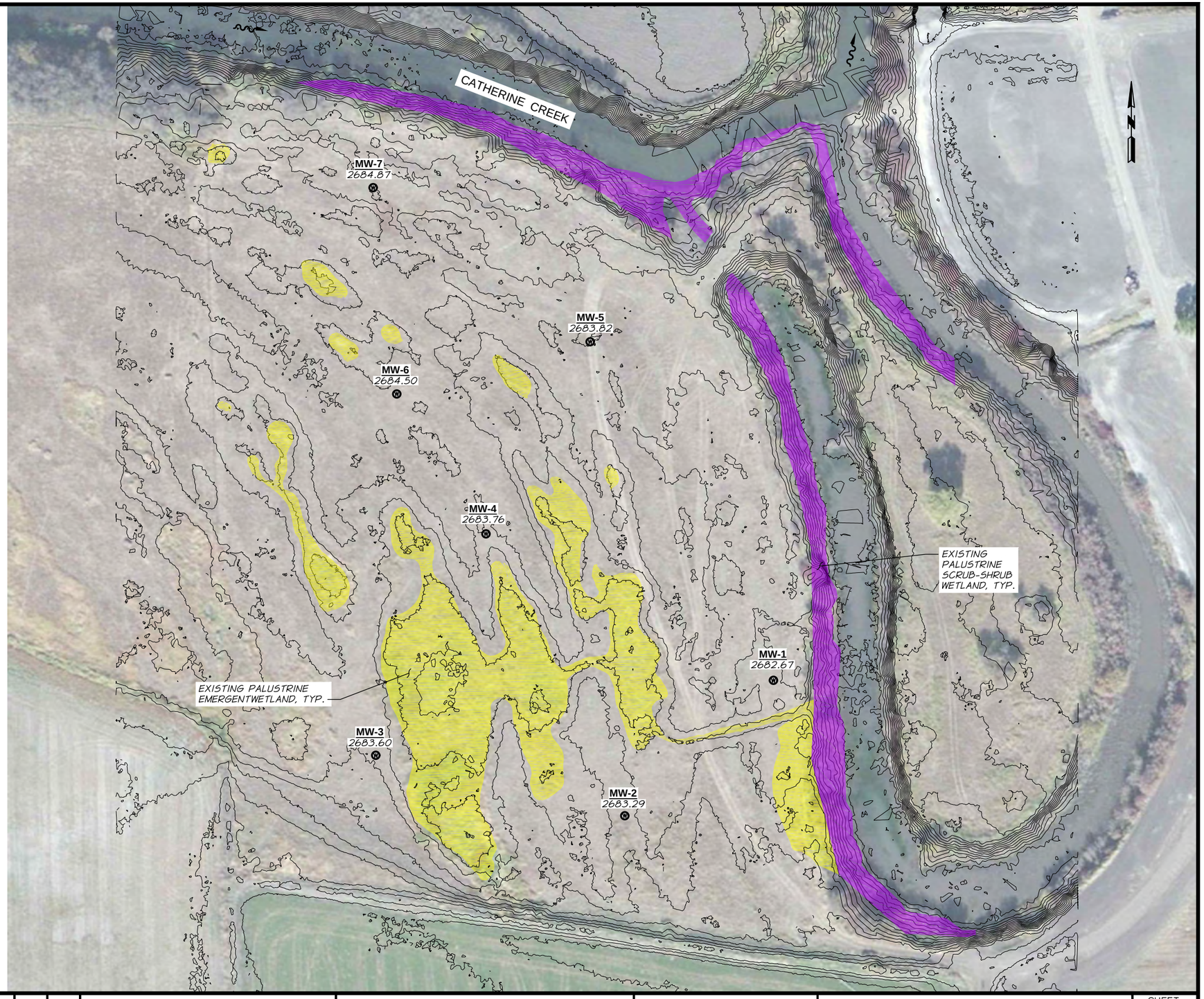
A / 2 — SECTION DESIGNATION; SHEET WHERE SECTION WAS TAKEN OR WHERE SECTION IS SHOWN.

WATER SURFACE ELEVATION

DESIGN CRITERIA

GRANDE RONDE RIVER OHW DEPTH* 2685.6

*OHW DEPTH IS BASED ON A HYDRAULIC MODEL PREPARED BY THE BUREAU OF RECLAMATION IN 2011 AND CORRESPONDS TO THE 1.5 YEAR FLOW EVENT.



REVISION	BY	DATE	HORZ. SCALE 1"=60'	VERT. SCALE	
DESIGNED BY W. RICE	XREFS: 81-47-060G-TBLOCK.DWG		JOB NUMBER 81-47	DATE 2016	
DRAWN BY L. WILLHITE			ACAD FILE: 81-40-060C-101xxx.dwg		
REVIEWED BY C. HUTCHINS					

60 0 60 120 180
SCALE IN FEET

THIS DRAWING HAS BEEN REDUCED 50%. ADJUST SCALE ACCORDINGLY. BARSCALE SHOWN IS ACCURATE.

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BOARDMAN TO HEMINGWAY TRANSMISSION LINE PROJECT
COMPENSATORY WETLAND AND NON-WETLAND MITIGATION PLAN

LEGEND AND EXISTING SITE PLAN

SHEET 1