

Site 61

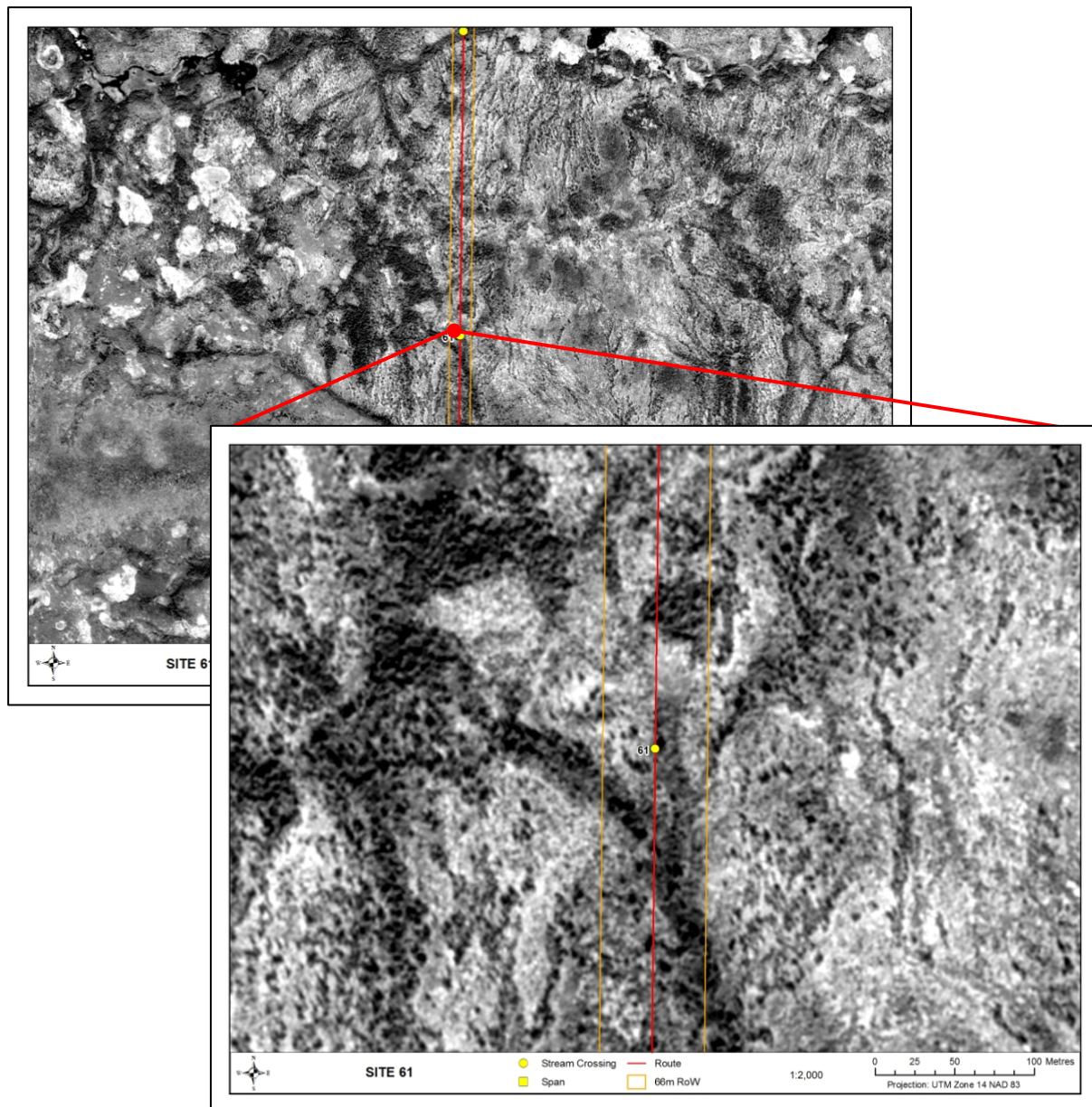
Unnamed Tributary of Clay River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 643376
Northing: 6232830
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: -
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 0.2 km²
Distance to Receiving Water: Clay River 3 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|------------|
| Right Bank | 22 (total) |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW crosses the headwaters of this unnamed tributary of the Clay River. It likely provides marginal habitat for forage fish, with low overwintering potential. It appears to have a soft floodplain.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Likely soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.

Site 62

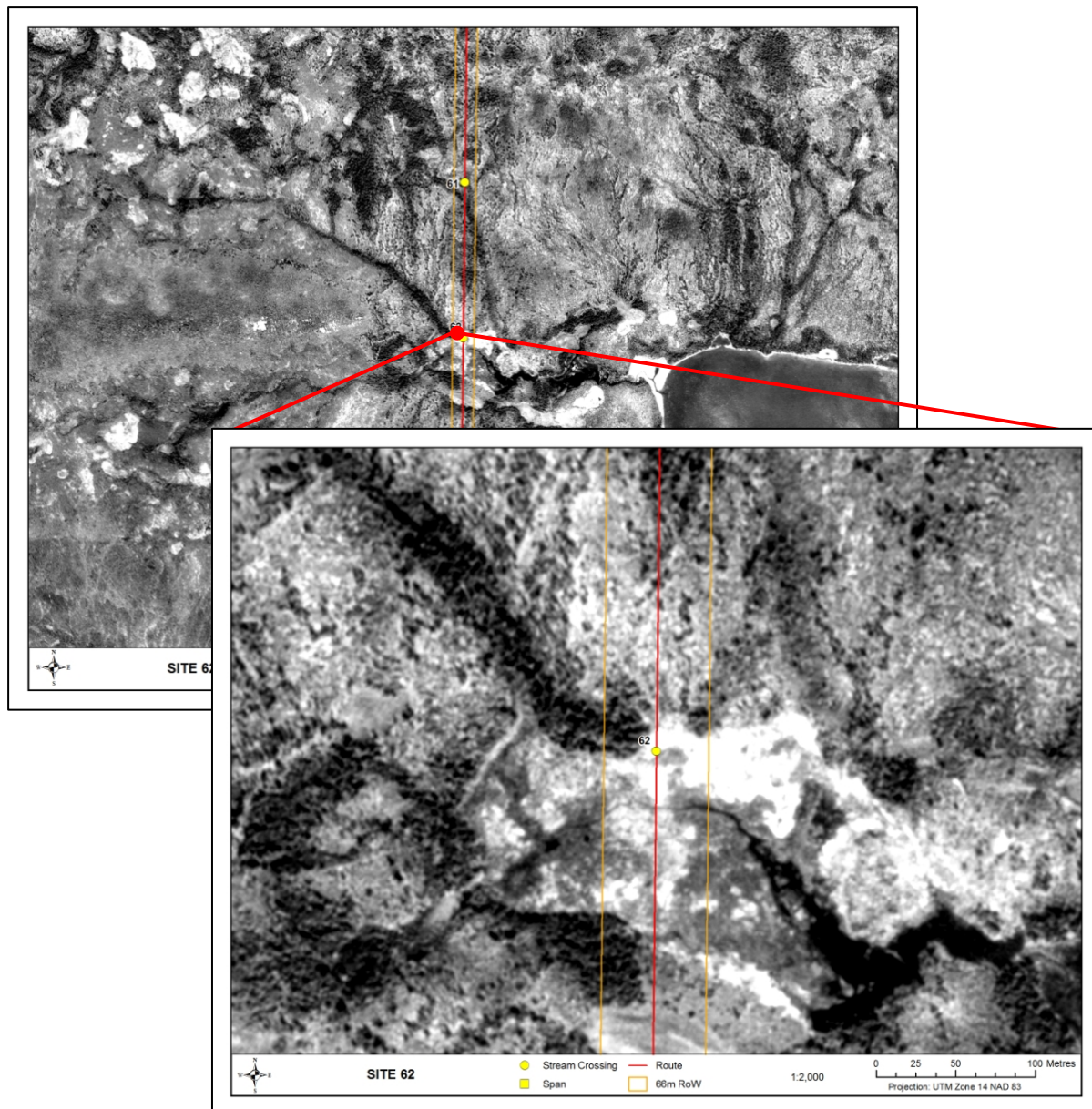
Unnamed Tributary of Clay River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 643370
Northing: 6232351
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: IM
Confinement: UN
Stage: -
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 1.6 km²
Distance to Receiving Water: Clay River 2.68 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 2 |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|-----|
| Right Bank | 55 |
| Left Bank | 169 |

Riparian Distance (m)

| | |
|------------|-----|
| Right Bank | 74 |
| Left Bank | 194 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

-

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Important

Fish Presence: N/A

Comments:

This unnamed tributary of the Clay River likely provides important habitat for indicator and forage fish, with moderate overwintering potential. It is surrounded by a large soft grass floodplain.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Soft floodplain and important fish habitat result in a moderate sensitivity rating.

Site 63

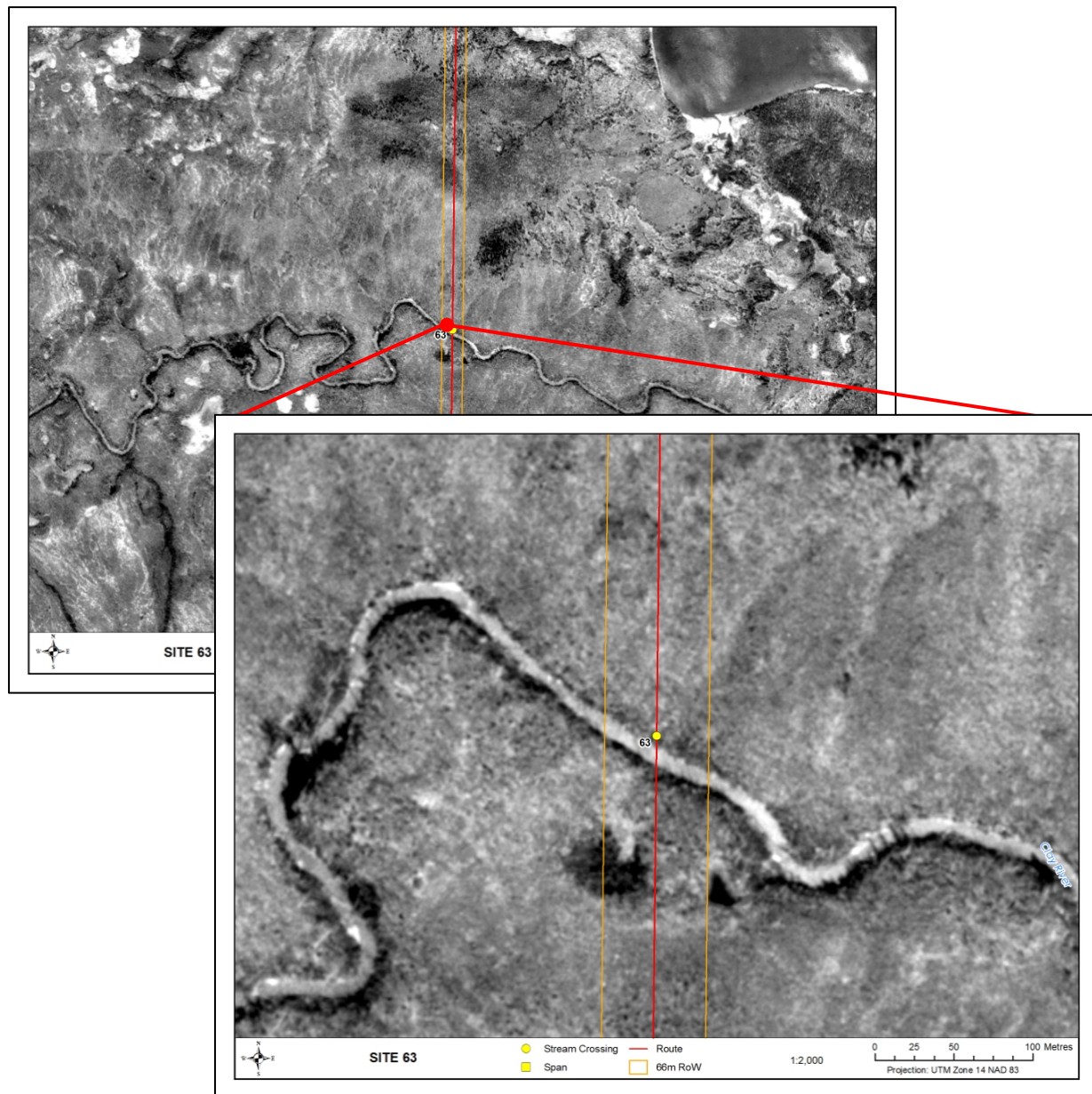
Clay River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 643357
Northing: 6231167
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: IM
Confinement: UN
Stage: -
Flow Regime: Perennial
Morphology: -
U/S Drainage: 260.1 km²
Distance to Receiving Water: Assean Lake 5.78 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | 10 |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | 7 |
| Left Bank | 7 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Important

Fish Presence: N/A

Comments:

The Clay River is a major river that provides important habitat for indicator and forage fish, with high overwintering potential. Bank stability at the RoW is unknown.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Unknown bank stability and important fish habitat result in a moderate sensitivity rating.

Site 64

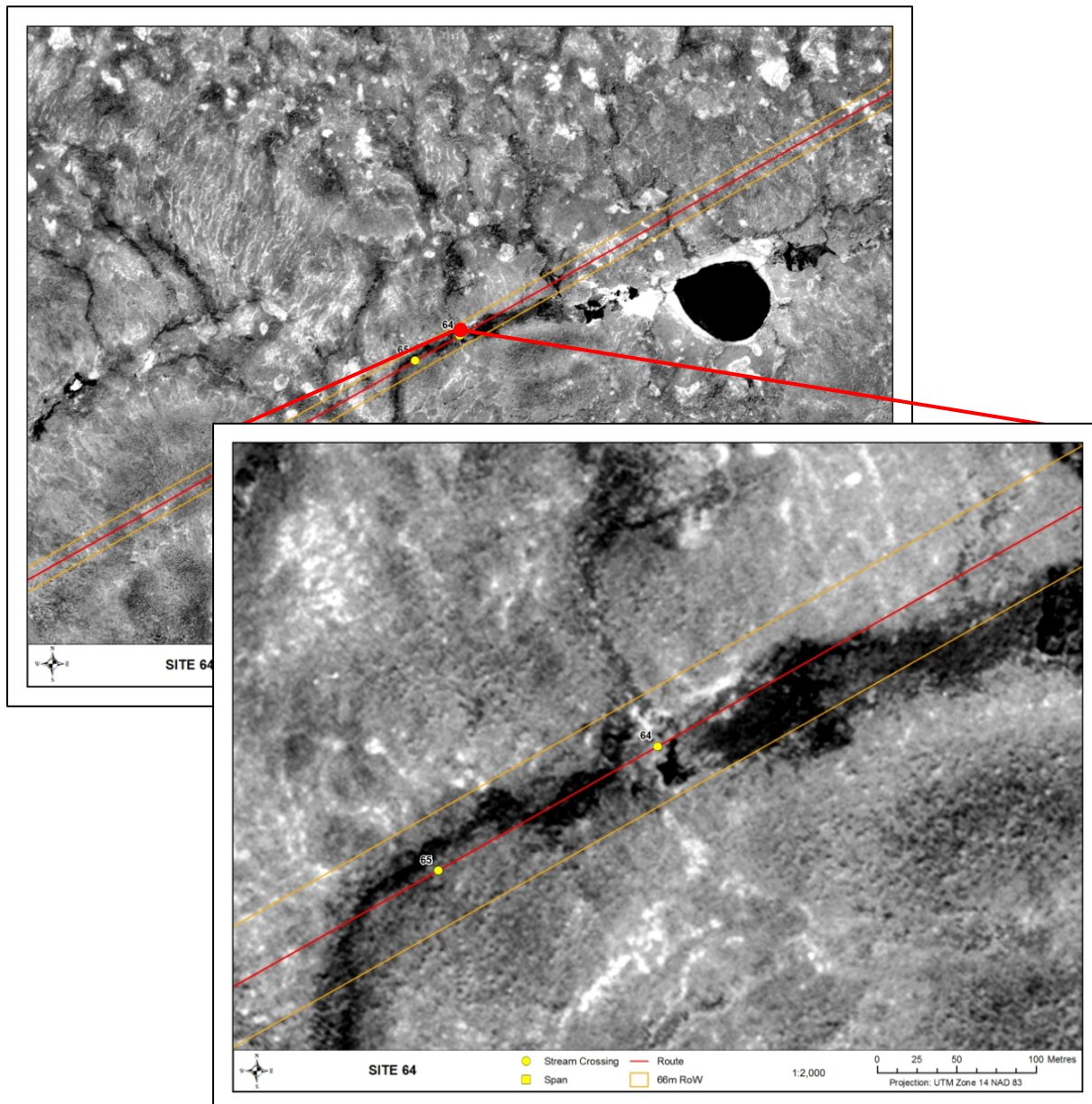
Unnamed tributary of Burntwood River

Location

Datum: NAD 83
UTM: *Zone:* 14N
Easting: 641963
Northing: 6227980
Data Source: DOI

General Morphology

| | |
|-------------------------------------|-------------------------|
| Stream/Lake: | Stream |
| Pattern: | SI |
| Confinement: | UN |
| Stage: | - |
| Flow Regime: | Intermittent |
| Morphology: | - |
| U/S Drainage: | 1.1 km ² |
| Distance to Receiving Water: | Burntwood River 4.22 km |



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------------------|
| Wetted Width (m) | 24 (pooled area) |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 0 |
| Left Bank | 34 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 21 |
| Left Bank | 45 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

This unnamed tributary of the Burntwood River likely provides marginal habitat for forage fish, with low overwintering potential. The RoW follows the channel for 300m upstream and 231m downstream of the site. There is a channel meeting the tributary on the left bank at the site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.

Site 65

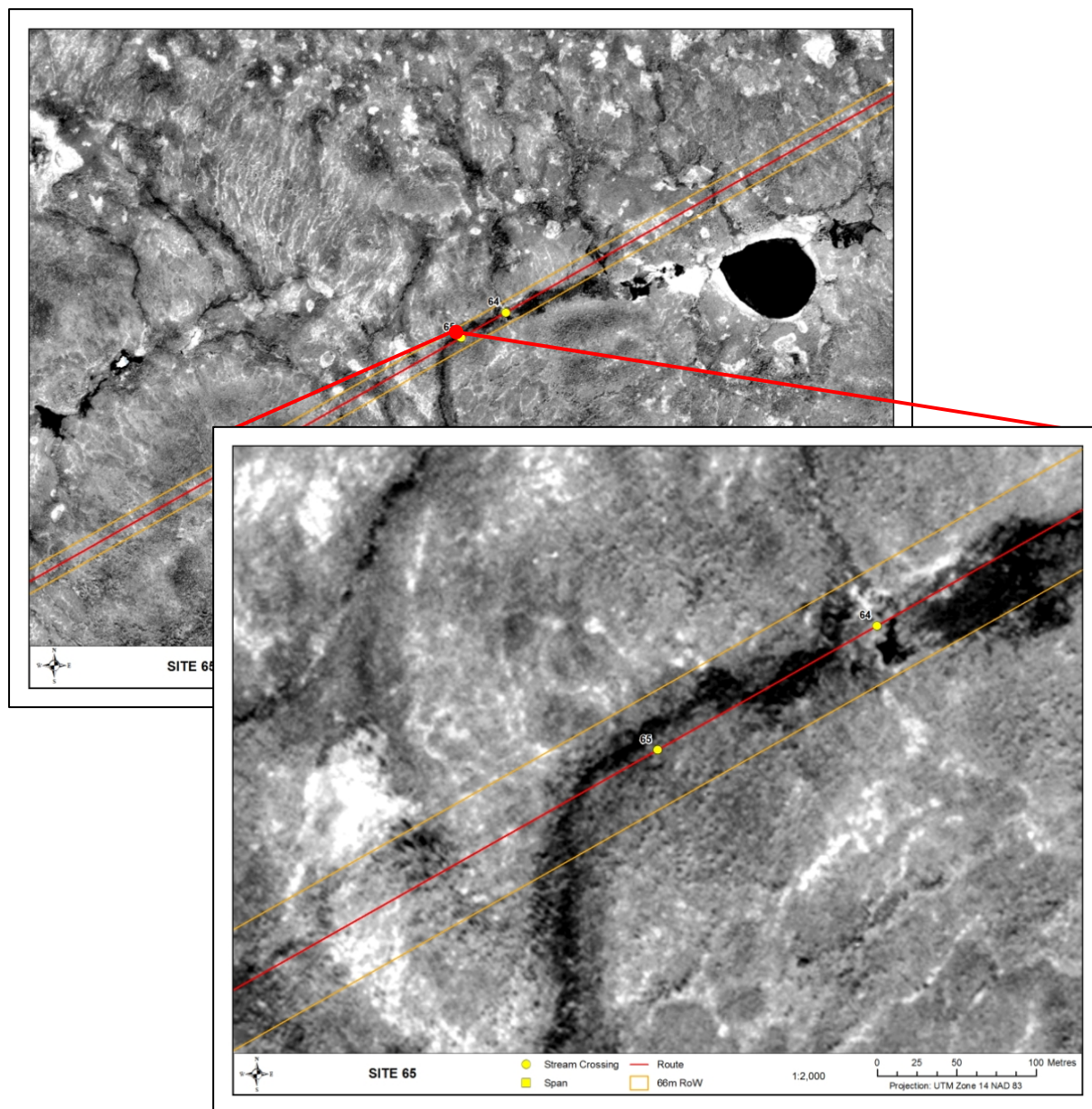
Unnamed tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 641825
Northing: 6227902
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: -
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 1.2 km²
Distance to Receiving Water: Burntwood River 4.06 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|------------|
| Right Bank | 13 (total) |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|------------|
| Right Bank | 42 (total) |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

This unnamed tributary of the Burntwood River likely provides habitat for forage fish, with low overwintering potential. It is surrounded by a soft floodplain.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Soft floodplain results in moderate sensitivity, despite marginal fish habitat.

Site 66

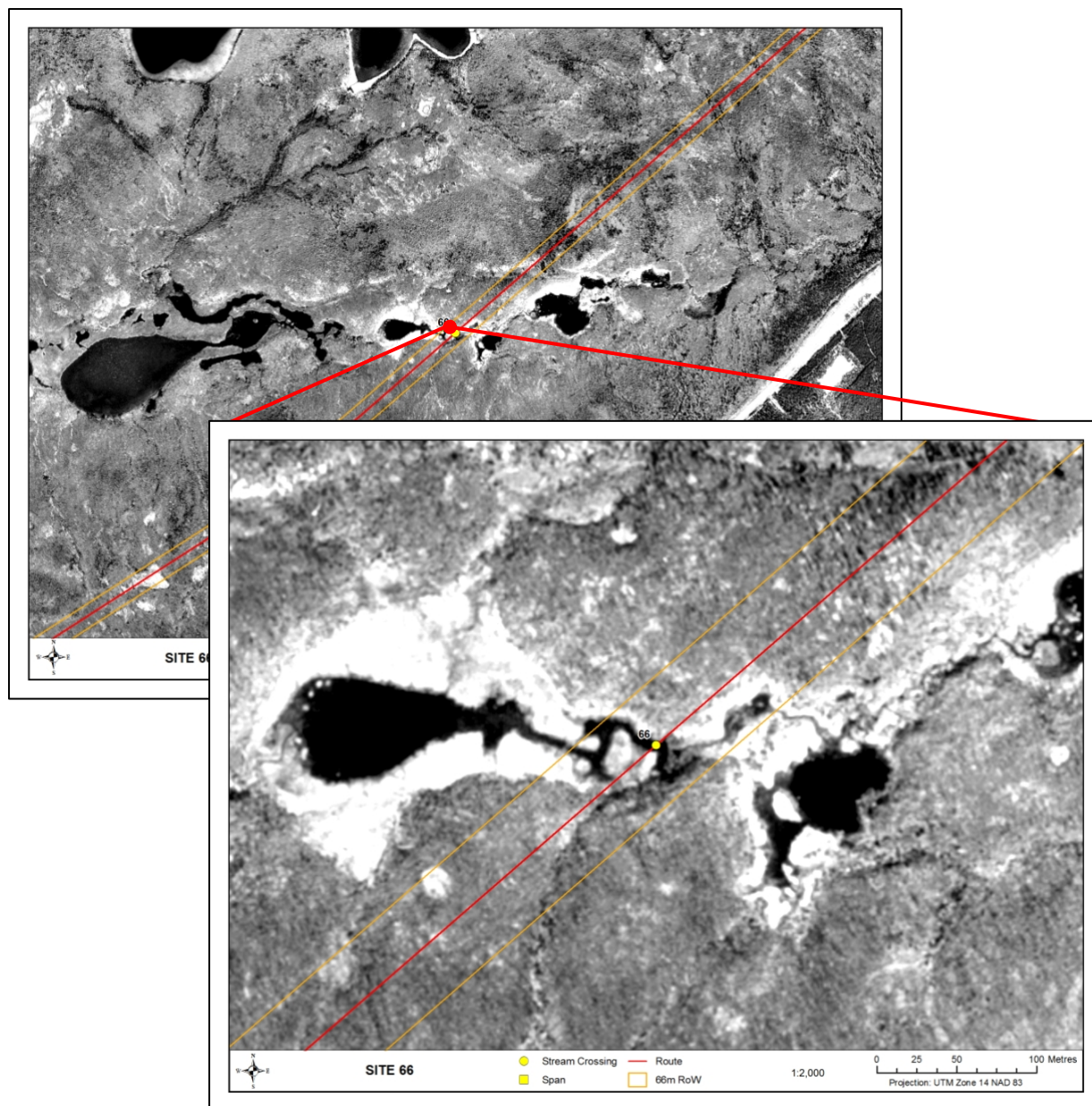
Unnamed tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 635356
Northing: 6223851
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: -
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 4.8 km²
Distance to Receiving Water: Burntwood River 3.46 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | 10 |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 9 |
| Left Bank | 20 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 30 |
| Left Bank | 37 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

This unnamed tributary of the Burntwood River likely provides marginal habitat for indicator and forage fish, with low overwintering potential. It is surrounded by a soft floodplain, and there are pooled areas 90m upstream and 121m downstream of the site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.

Site 67

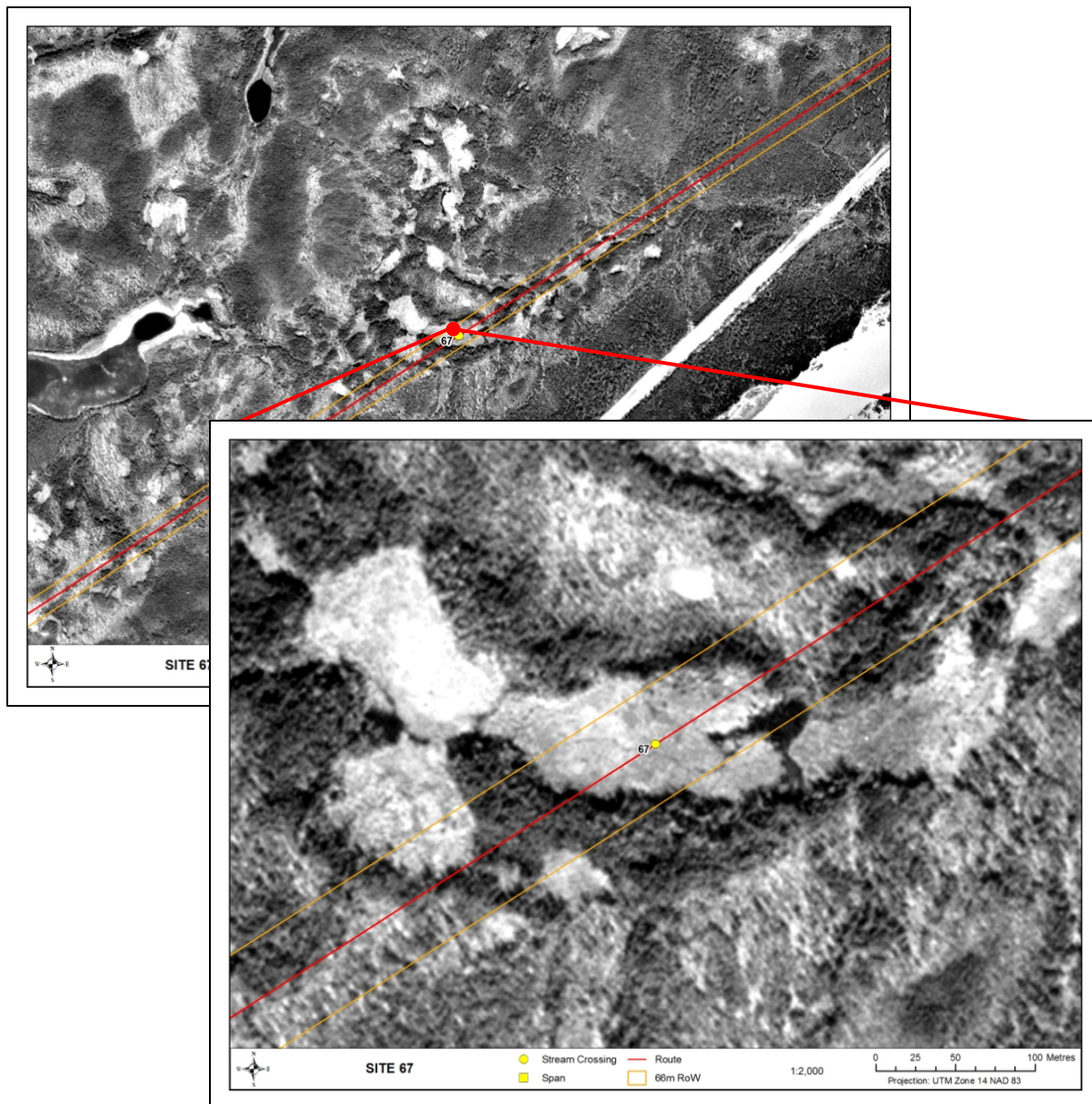
Unnamed tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 632129
Northing: 6221631
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: -
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 1.3 km²
Distance to Receiving Water: Burntwood River 1.7 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|------------|
| Right Bank | 64 (total) |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|------------|
| Right Bank | 97 (total) |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The crossing site lies within a peat wetland and has poor connection to downstream areas. A small upstream drainage area, indicating limited flows, and poor downstream connectivity likely limits fish use to forage fish species.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Soft floodplain and important fish habitat result in a moderate sensitivity rating.

Site 68

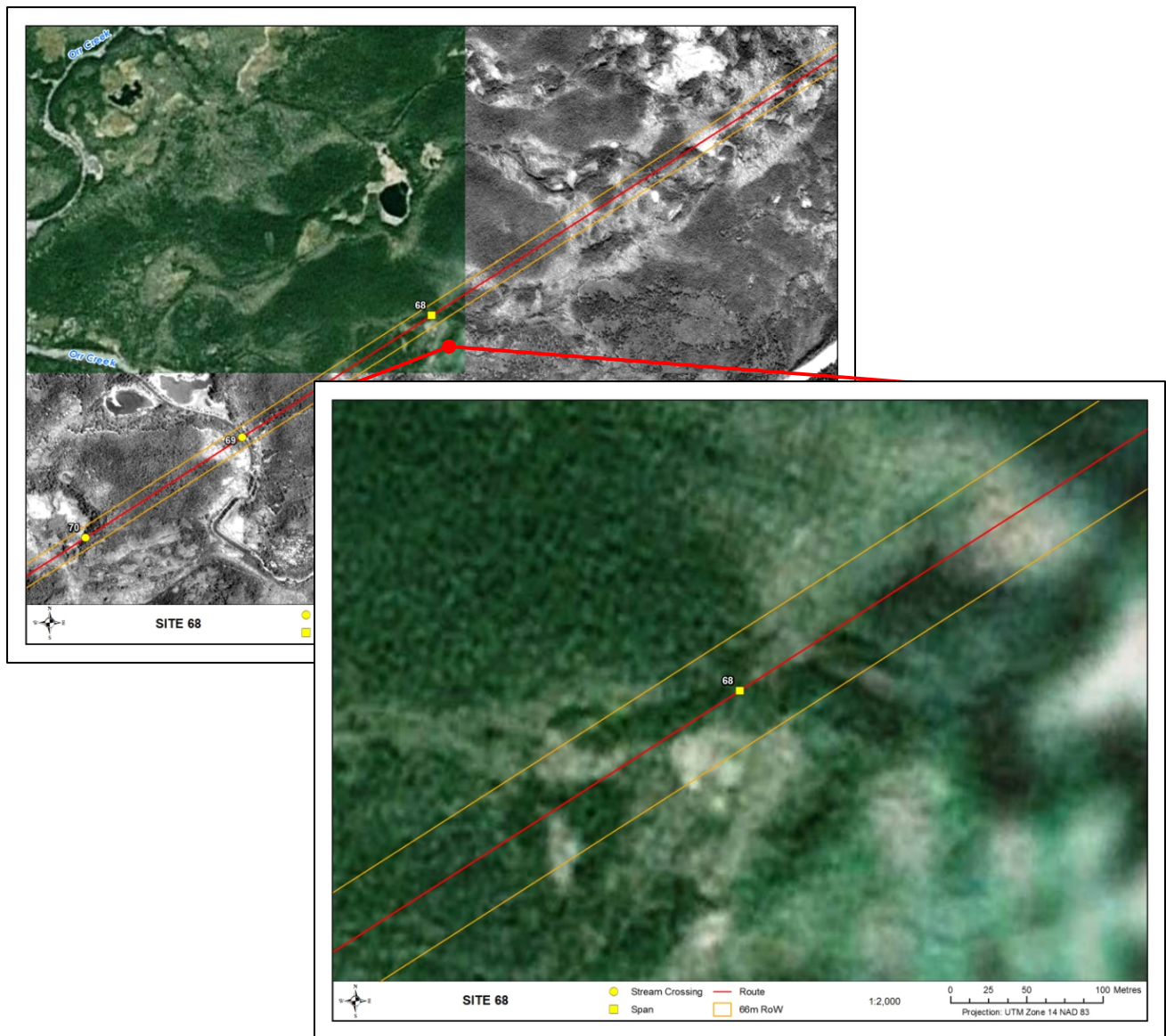
Unnamed tributary of Orr Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 629889
Northing: 6220190
Data Source: Google Earth

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: -
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 0 km²
Distance to Receiving Water: Orr Creek 1.01 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW crosses within the headwaters of this unnamed tributary of Orr Creek. Based aerial imagery, there appears to be no direct channel connection from the site to Orr Creek. Based on low flow conditions (upstream drainage area = 0 m²) and poor connectivity, any fish use at the site will be limited to forage fish species, tolerant of low oxygen levels.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Unknown bank stability and important fish habitat result in a moderate sensitivity rating.

Site 69

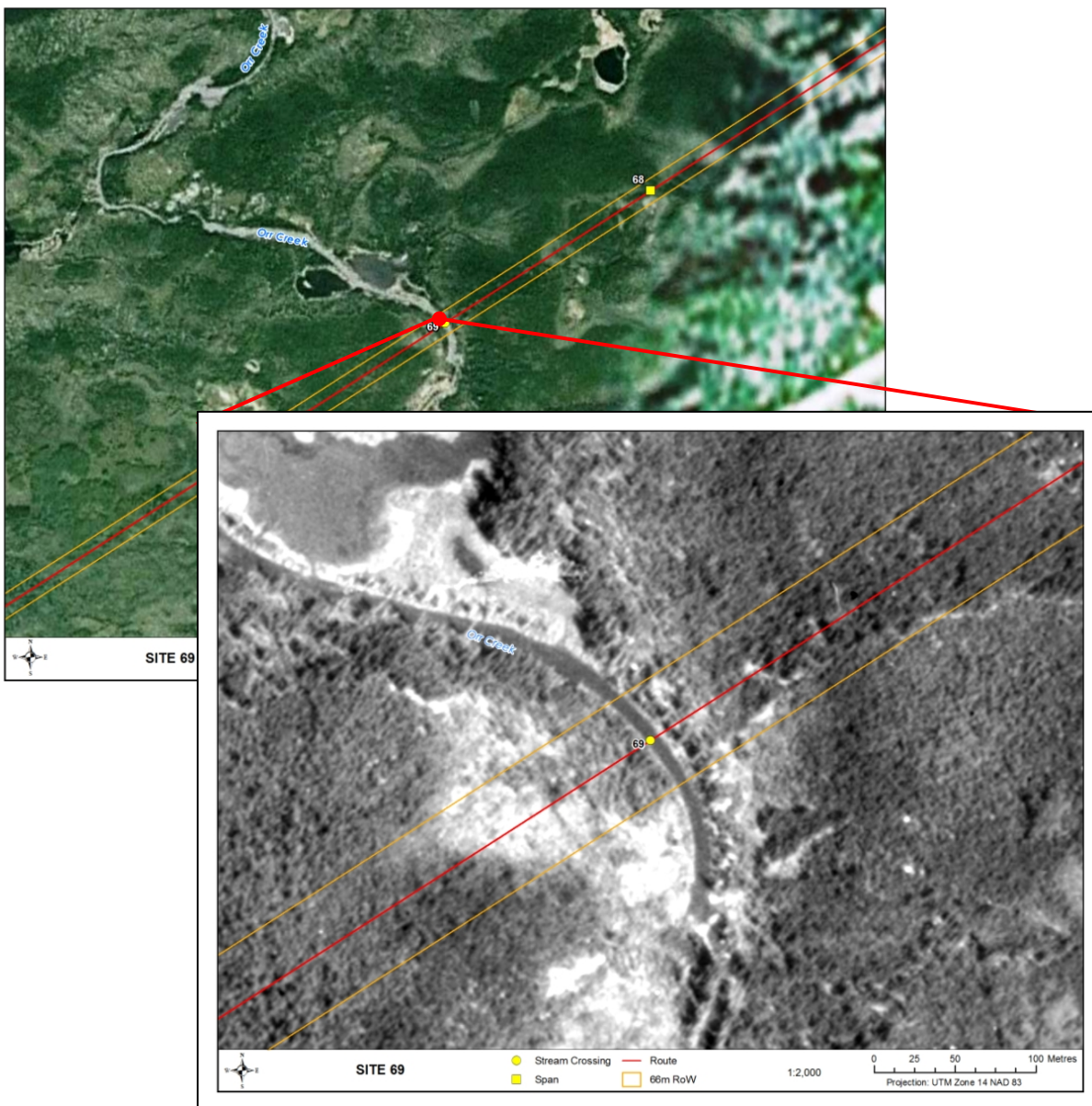
Orr Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 629264
Northing: 6219788
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: -
Flow Regime: Perennial
Morphology: -
U/S Drainage: 236.7 km²
Distance to Receiving Water: Burntwood River 1.64 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 9 |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|-----|
| Right Bank | 63 |
| Left Bank | 130 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Important

Fish Presence: N/A

Comments:

Orr Creek is a major river providing important habitat for indicator and forage fish, with high overwintering potential. Bank stability at the RoW is unknown.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Unknown bank stability and important fish habitat result in a moderate sensitivity rating.

Site 70

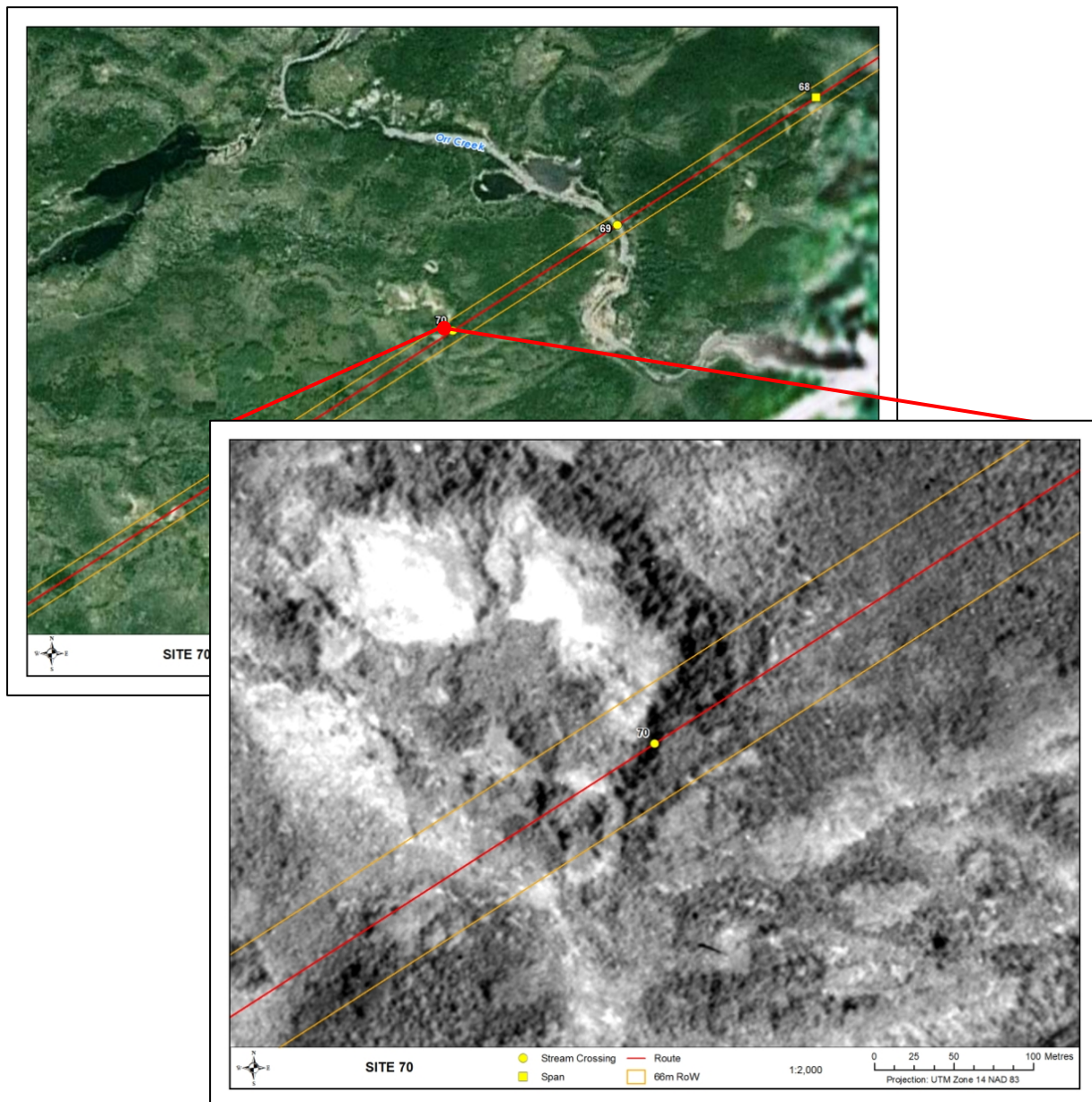
Unnamed tributary of Orr Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 628746
Northing: 6219456
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: -
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 0 km²
Distance to Receiving Water: Orr Creek 0.59 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|-------------|
| Right Bank | 101 (total) |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|-------------|
| Right Bank | 282 (total) |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW crosses the headwaters of this unnamed tributary of Orr Creek. It likely provides habitat for forage fish, with low overwintering potential. It is surrounded by a soft floodplain.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.

Site 71

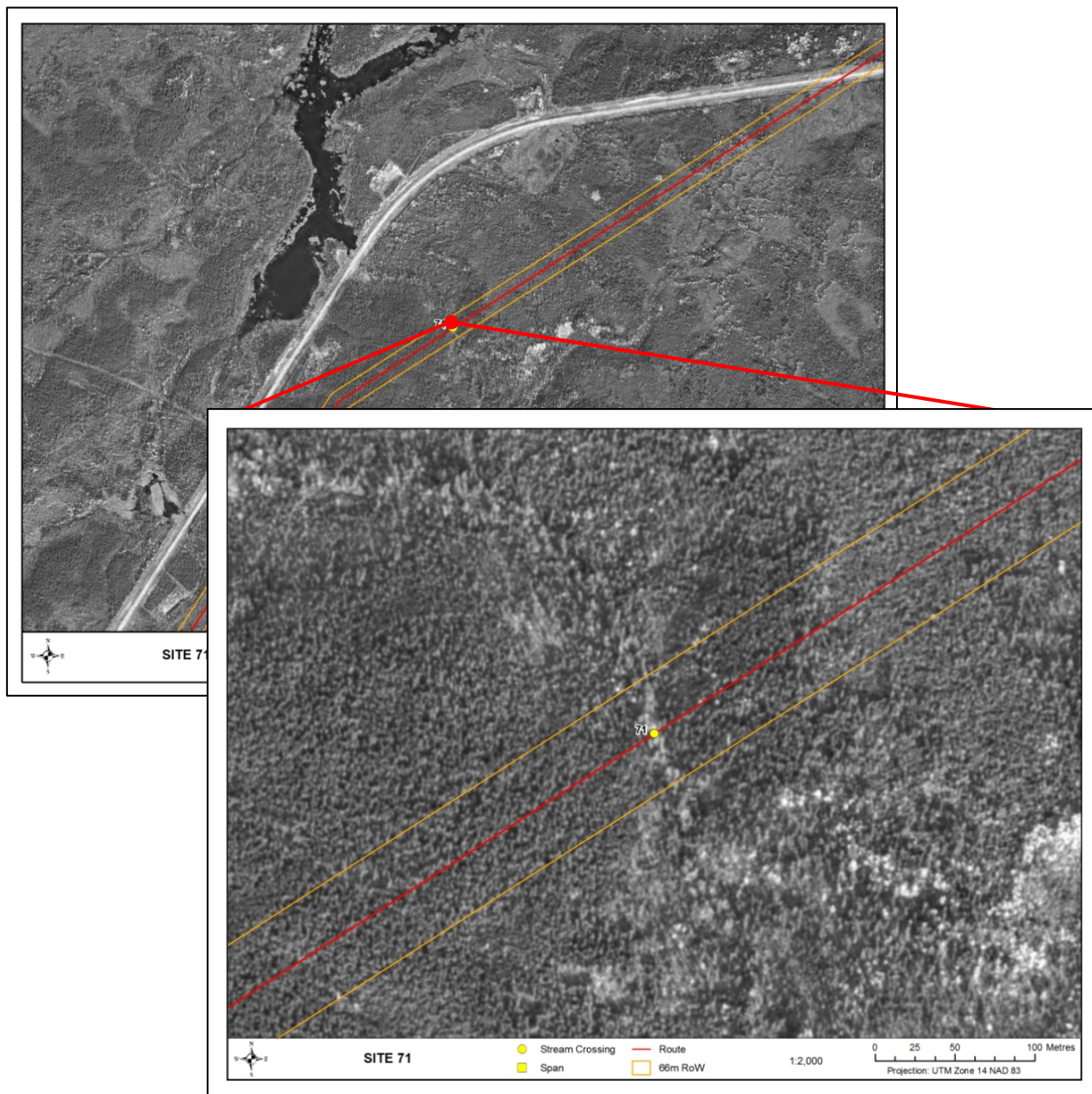
Unnamed tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 621924
Northing: 6215068
Data Source: DOL.

General Morphology

Stream/Lake: Stream
Pattern: IM
Confinement: UN
Stage: Low
Flow Regime: Intermittent
Morphology: -
U/S Drainage: 8.8 km²
Distance to Receiving Water: Burntwood River 0.7 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | Y |
| Conifers | - |
| Deciduous | Y |
| Mixed Forest | - |

Canopy Cover (%) 100

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

This unnamed tributary of the Burntwood River is an intermittent stream which likely provides habitat for forage fish, with low overwintering potential.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Unknown bank stability results in a moderate sensitivity rating, despite marginal fish habitat.

Site 72

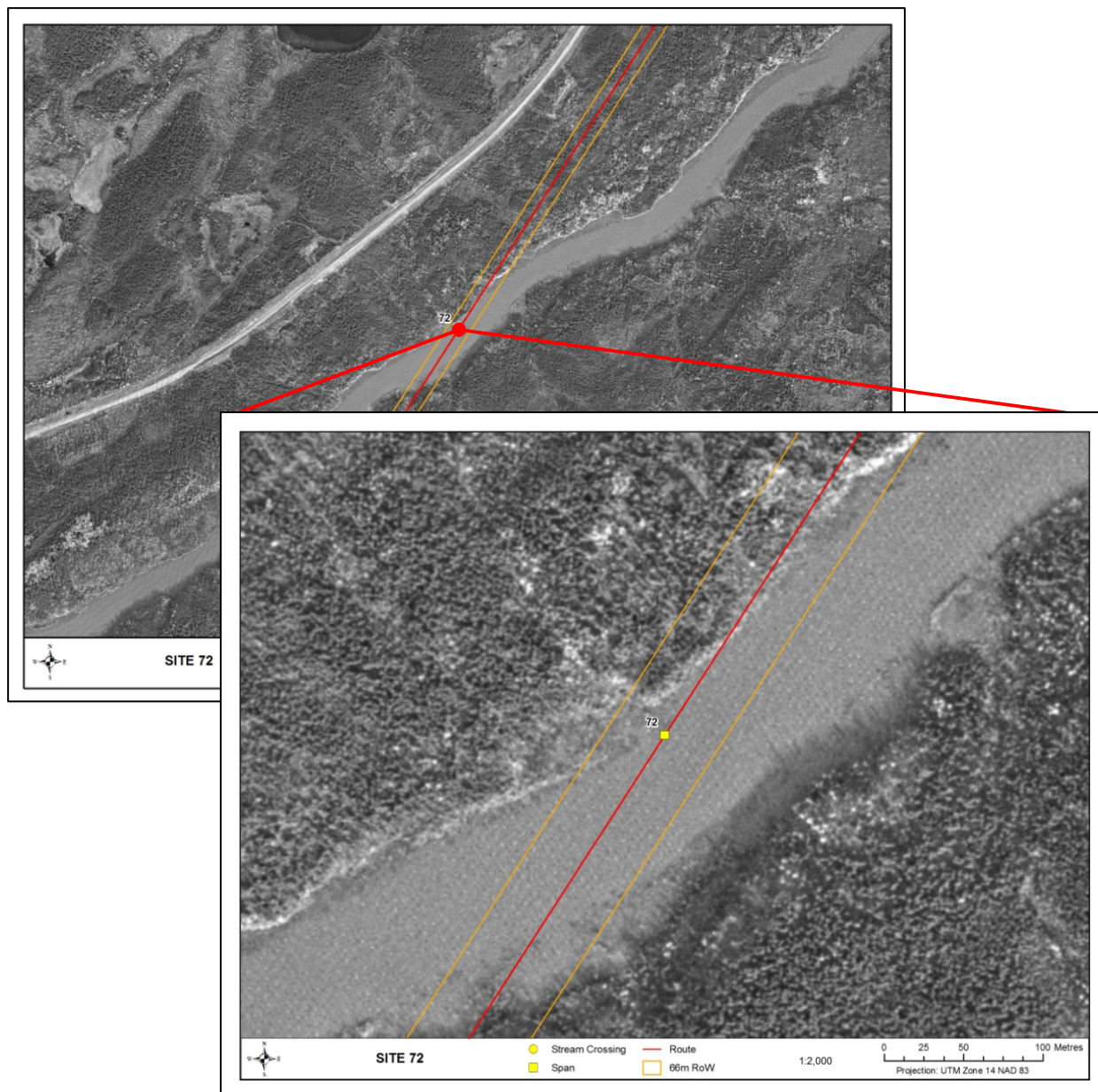
Odei River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 620228
Northing: 6212911
Data Source: DOI. Site Visit

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: CO
Stage: High
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 6259.7 km²
Distance to Receiving Water: Burntwood River
11 km



Site Conditions

+ Physical Data

Survey Date: 14 October 2010

Stage: High

Transect

| | 1 | 2 | 3 | 4 | 5 |
|----------------------------|----------|----------|----------|----------|----------|
| Distance from Crossing (m) | 0 | 33 US | 33 DS | 150 US | 150 DS |

Channel Profile

Channel and Flow

| | | | | | |
|-------------------|-----|---|---|---|---|
| Channel Width (m) | 119 | - | - | - | - |
| Wetted Width (m) | 119 | - | - | - | - |

Water Depths (m)

| | | | | | |
|-----|---|---|---|---|---|
| 25% | - | - | - | - | - |
| 50% | - | - | - | - | - |
| 75% | - | - | - | - | - |
| Max | - | - | - | - | - |

Banks

| | | | | | |
|--------------------------|-----|---|---|---|---|
| Right Bank Stability (%) | 95 | - | - | - | - |
| Left Bank Stability (%) | 95 | - | - | - | - |
| Right Bank Slope (°) | ~20 | - | - | - | - |
| Left Bank Slope (°) | ~50 | - | - | - | - |

Riparian

Floodplain Distance (m)

| | | | | | |
|------------|---|---|---|---|---|
| Right Bank | - | - | - | - | - |
| Left Bank | - | - | - | - | - |

Riparian Distance (m)

| | | | | | |
|------------|----|---|---|---|---|
| Right Bank | 53 | - | - | - | - |
| Left Bank | 48 | - | - | - | - |

Riparian Vegetation Type (Y/N)

| | | | | | |
|----------------|---|---|---|---|---|
| None | - | - | - | - | - |
| Grasses/sedges | Y | - | - | - | - |
| Shrubs | - | - | - | - | - |
| Conifers | Y | - | - | - | - |
| Deciduous | - | - | - | - | - |
| Mixed Forest | - | - | - | - | - |

Canopy Cover (%)

| | | | | | |
|----|---|---|---|---|---|
| Tr | - | - | - | - | - |
|----|---|---|---|---|---|

Substrate Type (%)

| | | | | | |
|--------------|---|---|---|---|---|
| Fines | - | - | - | - | - |
| Small Gravel | - | - | - | - | - |
| Large Gravel | - | - | - | - | - |
| Cobble | - | - | - | - | - |
| Boulder | - | - | - | - | - |

Habitat Type

Habitat Composition (%)

| | | | | | |
|--------|---|---|---|---|---|
| Pool | - | - | - | - | - |
| Run | - | - | - | - | - |
| Riffle | - | - | - | - | - |

Cover Types

Total Cover Available (%)

US DS

Cover Composition (% of Total)

| | | |
|------------------------|----|----|
| Large Woody Debris | 50 | 50 |
| Overhanging Vegetation | - | - |
| Instream Vegetation | 50 | 50 |
| Pool | - | - |
| Boulder | - | - |
| Undercut Bank | - | - |
| Surface Turbulence | - | - |





Overhead view of site 72.



Upstream view at site 72.



Downstream view at site 72.



Bank slope at site 72.

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|--|-----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Important |

Fish Presence: Walleye, sauger, northern pike, lake cisco (FIHCS 2009)

Comments:

The Odei River provides high habitat diversity for fish including habitat for spawning, rearing, feeding, overwintering and migration. Various species and life stages of fish are expected at this site. Photos and information on cover, bank stability, and bank slope were taken 129m upstream of crossing site; however conditions at the crossing appear similar.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Though important fish habitat, stable vegetated banks result in a low sensitivity rating.

Site 74

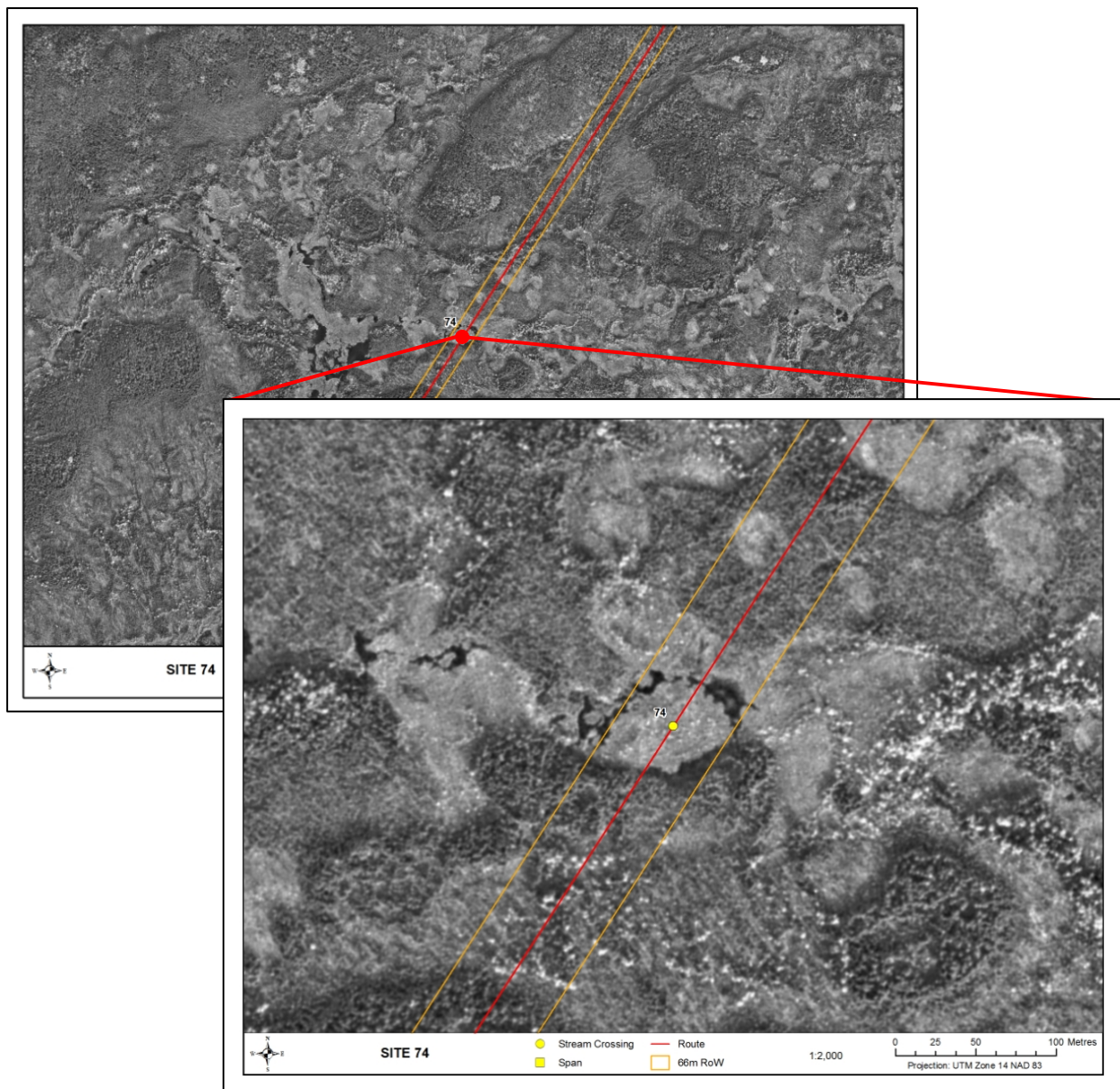
Unnamed Tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 618229
Northing: 6209674
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 0.3 km²
Distance to Receiving Water: Burntwood River
4.2km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | 12.8 |
| Channel Width (m) | 12.8 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 96.4 |
| Left Bank | 12.8 |

Riparian Distance (m)

| | |
|------------|-------|
| Right Bank | 143.9 |
| Left Bank | 63.1 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW crosses this unknown tributary of the Burntwood River approximately 4.2 km from the Burntwood River. The tributary is an ephemeral stream with low habitat diversity and low overwintering potential. Forage fish are expected at this crossing.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain region may be sensitive to damage during construction in an area with fish presence.

Site 75

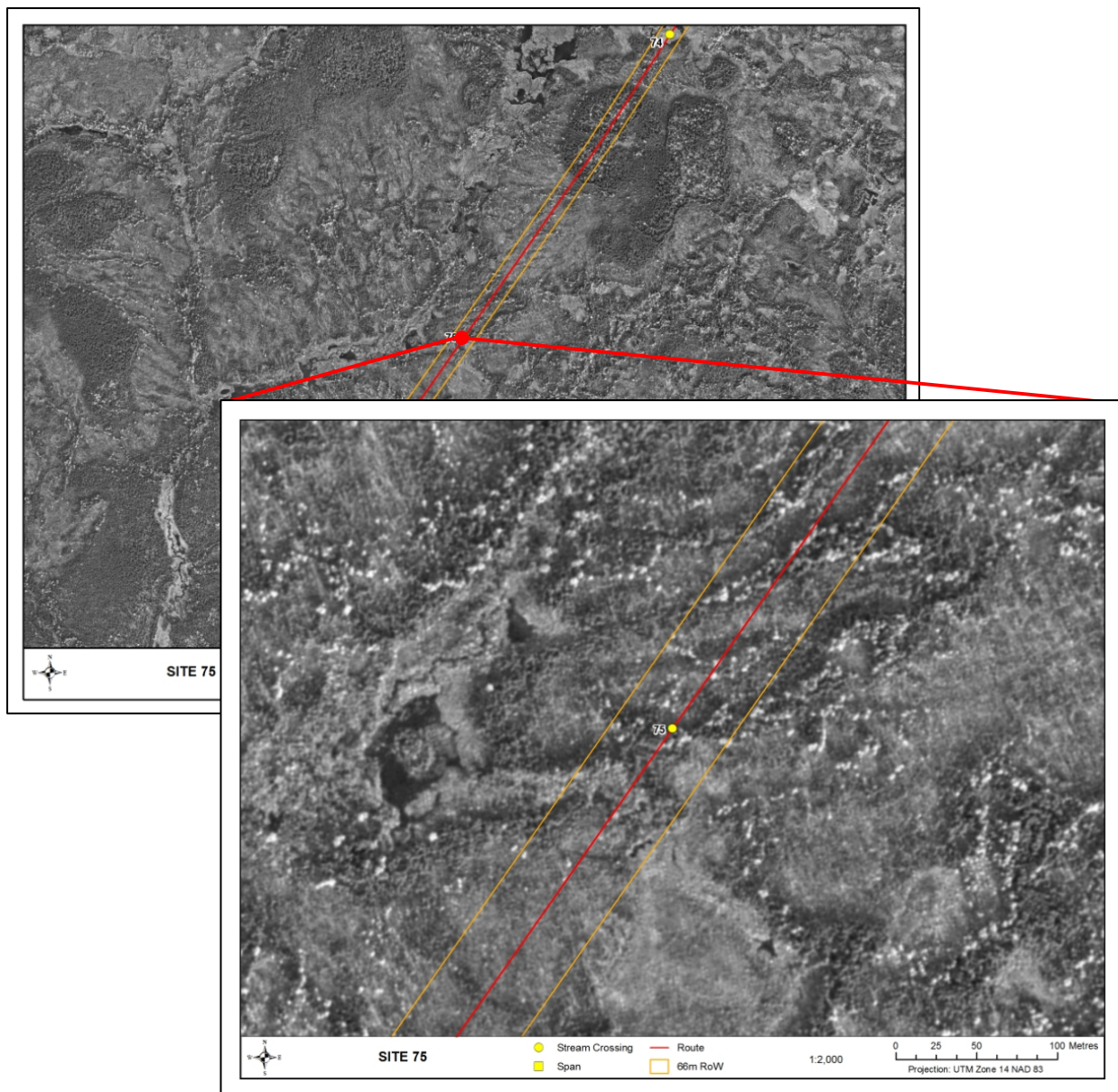
Unnamed Tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 617598
Northing: 6208747
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 0.5 km²
Distance to Receiving Water: Burntwood River
2.9km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | - |
| Channel Width (m) | 23.4 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 9.1 |
| Left Bank | 12.6 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 28.7 |
| Left Bank | 20.9 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW crosses this unknown tributary of the Burntwood River approximately 2.9 km from the Burntwood River. The tributary is an ephemeral stream with low habitat diversity and low overwintering potential and may support forage fish.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Marginal fish habitat result in a low sensitivity rating.

Site 76

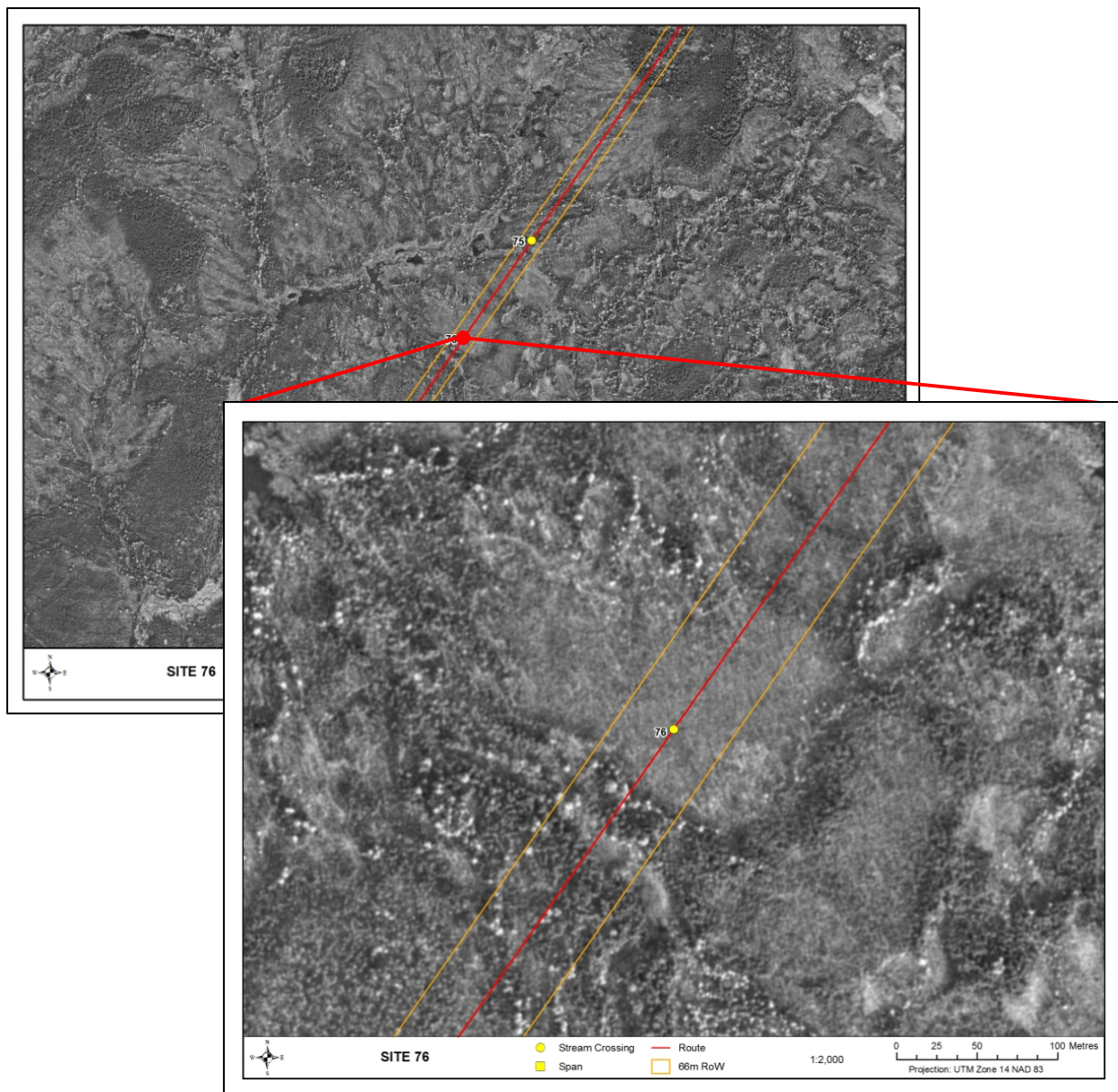
Unnamed Tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 617392
Northing: 6208452
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: ST
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: 0.2 km²
Distance to Receiving Water: Burntwood River
2.8km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|---|
| Right Bank Stability | - |
| Left Bank Stability | - |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

No

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

No Fish Habitat

Fish Presence: N/A

Comments:

This unnamed tributary of the Burntwood River has a weakly defined channel and no water is visible within the DOI. The connection to the Burntwood River is also weak. This tributary likely contains no fish habitat.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

No fish habitat results in a low sensitivity rating.

Site 77

Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 616211
Northing: 6206771
Data Source: DOI. Video. Site Visit

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: OC
Stage: Moderate
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 19103.2 km²
Distance to Receiving Water: Nelson River 55 km



Site Conditions

+ Physical Data

Survey Date: 14 October 2010

Stage: Moderate

Transect

| | 1 | 2 | 3 | 4 | 5 |
|----------------------------|---|-------|-------|--------|--------|
| Distance from Crossing (m) | 0 | 33 US | 33 DS | 150 US | 150 DS |

Channel Profile

Channel and Flow

| | | | | | |
|-------------------|------|---|---|---|---|
| Channel Width (m) | >100 | - | - | - | - |
| Wetted Width (m) | >100 | - | - | - | - |

Water Depths (m)

| | | | | | |
|-----|-----|---|---|---|---|
| 25% | 1.0 | - | - | - | - |
| 50% | - | - | - | - | - |
| 75% | - | - | - | - | - |
| Max | - | - | - | - | - |

Banks

| | | | | | |
|--------------------------|--------|---|---|---|---|
| Right Bank Stability (%) | 60 | - | - | - | - |
| Left Bank Stability (%) | 50 | - | - | - | - |
| Right Bank Slope (°) | ~30 | - | - | - | - |
| Left Bank Slope (°) | ~45-90 | - | - | - | - |

Riparian

Floodplain Distance (m)

| | | | | | |
|------------|---|---|---|---|---|
| Right Bank | - | - | - | - | - |
| Left Bank | - | - | - | - | - |

Riparian Distance (m)

| | | | | | |
|------------|-----|---|---|---|---|
| Right Bank | 9.4 | - | - | - | - |
| Left Bank | - | - | - | - | - |

Riparian Vegetation Type (Y/N)

| | | | | | |
|----------------|---|---|---|---|---|
| None | - | - | - | - | - |
| Grasses/sedges | Y | - | - | - | - |
| Shrubs | Y | - | - | - | - |
| Conifers | Y | - | - | - | - |
| Deciduous | - | - | - | - | - |
| Mixed Forest | - | - | - | - | - |

Canopy Cover (%)

| | | | | | |
|--|---|---|---|---|---|
| | 0 | - | - | - | - |
|--|---|---|---|---|---|

Substrate Type (%)

| | | | | | |
|--------------|-----|---|---|---|---|
| Fines | 100 | - | - | - | - |
| Small Gravel | - | - | - | - | - |
| Large Gravel | - | - | - | - | - |
| Cobble | - | - | - | - | - |
| Boulder | - | - | - | - | - |

Habitat Type

Habitat Composition (%)

| | | | | | |
|--------|-----|---|---|---|---|
| Pool | - | - | - | - | - |
| Run | 100 | - | - | - | - |
| Riffle | - | - | - | - | - |

Cover Types

Total Cover Available (%)

| | US | DS |
|---------------------------------------|-------|-------|
| Cover Composition (% of Total) | Trace | Trace |
| Large Woody Debris | 10 | 10 |
| Overhanging Vegetation | 80 | 80 |
| Instream Vegetation | 10 | 10 |
| Pool | - | - |
| Boulder | - | - |
| Undercut Bank | - | - |
| Surface Turbulence | - | - |



Overhead view of site 77.



Upstream view at site 77.



Downstream view at site 77.



Right bank to left bank at site 77.

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|--|-----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Important |

Fish Presence: Burbot, carp, emerald shiner, freshwater drum, goldeye, johnny darter, lake chub, lake sturgeon, lake whitefish, logperch, longnose sucker, mooneye, mottled sculpin (FIHCS 2009).

Comments:

The RoW at site 77 crosses the Burntwood River. This site provides high habitat diversity for fish including habitat for spawning, rearing, feeding, overwintering and migration. Many species of fish have been documented within the Burntwood River. Various species and life stages of fish are expected at this site

+ Habitat Sensitivity

Sensitivity Rating: High

Comments:

Unstable banks and important fish habitat result in a high sensitivity rating as construction may result in increased siltation into the waterbody.

Site 78

Unnamed Tributary of Burntwood River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 613794
Northing: 6201861
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IM
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 6.8 km²
Distance to Receiving Water: Burntwood River
6.5km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|-----|
| Wetted Width (m) | 3.0 |
| Channel Width (m) | 3.0 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|-----|
| Right Bank | 45 |
| Left Bank | 4.0 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 54 |
| Left Bank | 26 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

| | |
|--------------------------------|-----|
| Total Cover Available (%) | 20 |
| Cover Composition (% of Total) | - |
| Large Woody Debris | - |
| Overhanging Vegetation | 100 |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW of site 76 crosses this unknown tributary of the Burntwood River approximately 6.5 km from the Burntwood River. The tributary is an intermittent stream with moderate habitat diversity and low overwintering potential. Minnow species are anticipated at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The floodplain may be sensitive to damage during construction in an area with fish presence.

Site 79

Unnamed wetland

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 612275
Northing: 6199694
Data Source: DOI.Video

General Morphology

Stream/Lake: Lake
Pattern: -
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: -
Distance to Receiving Water: -



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-----------------------|-------|
| Lake size (ha) | 0.026 |
| Lake width at ROW (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

No

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

No Fish Habitat

Fish Presence: N/A

Comments:

The RoW at site 77 crosses this ponded area within a wetland. This is an isolated wetland that due to small size and shallow depth is not expected to support fish.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

No fish habitat results in a low sensitivity rating.

Site 80

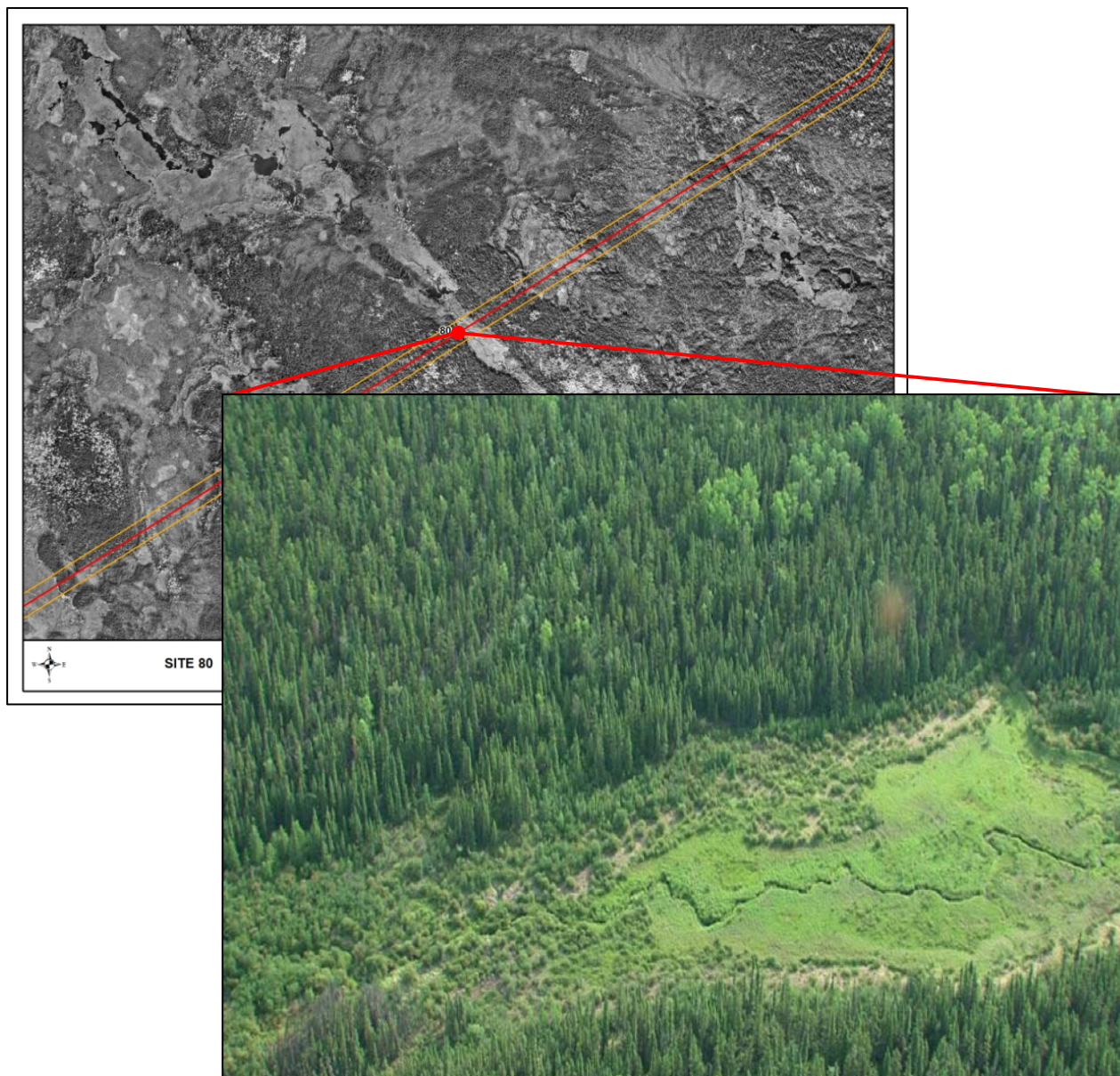
Unnamed Tributary of Brannigan Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 609670
Northing: 6196994
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 5.1 km²
Distance to Receiving Water: Brannigan Creek
3.1km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 2 |
| Channel Width (m) | 2 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 29 |
| Left Bank | 25 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 40 |
| Left Bank | 30 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

| | |
|--------------------------------|-----|
| Total Cover Available (%) | 30 |
| Cover Composition (% of Total) | - |
| Large Woody Debris | - |
| Overhanging Vegetation | 100 |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 78 crosses this unnamed tributary of Brannigan Creek. The area has moderate habitat diversity and low overwintering potential. Minnow species are anticipated at this site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating.



Site 81

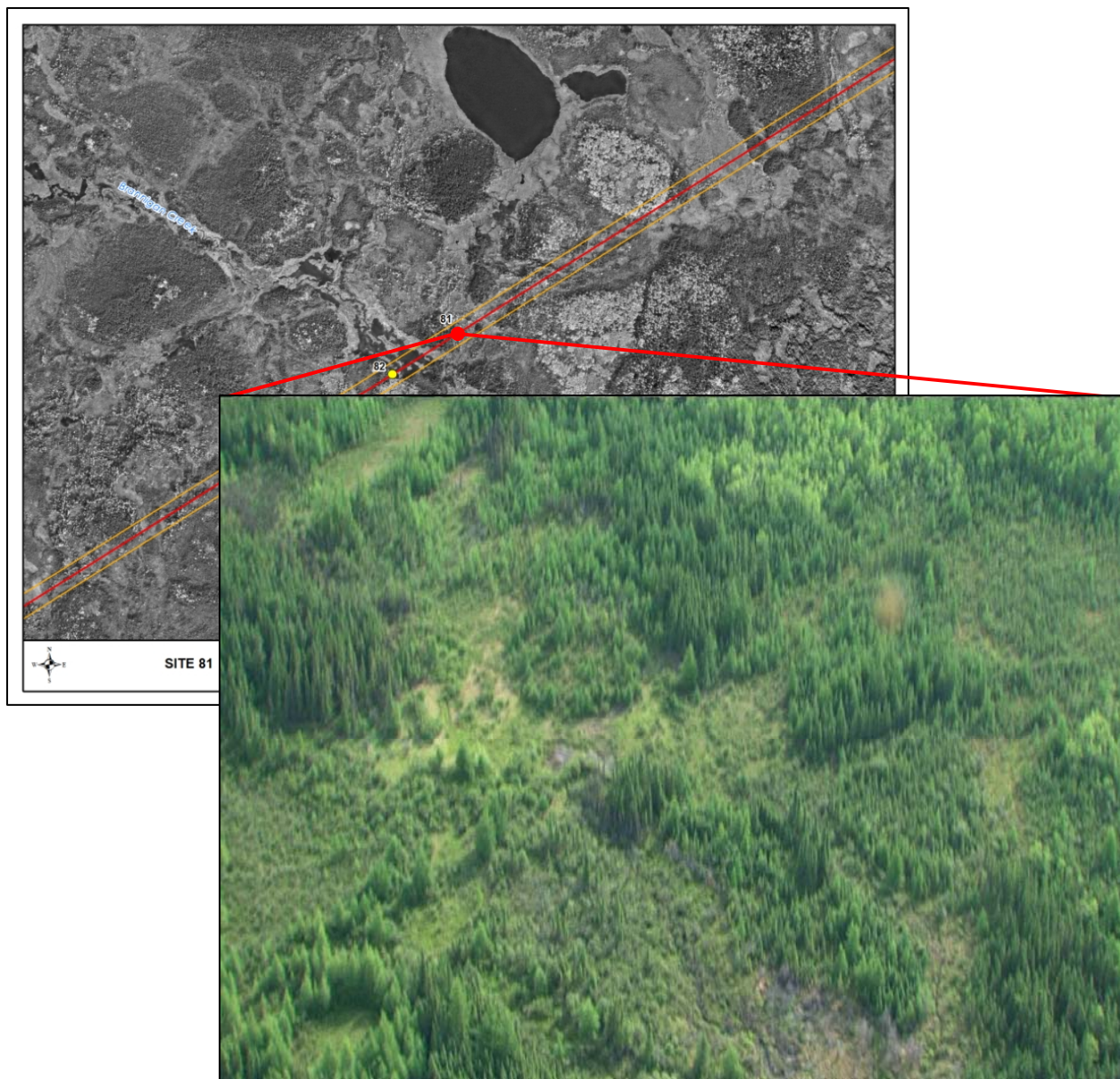
Unnamed Tributary of Brannigan Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 607525
Northing: 6195647
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 2.0 km²
Distance to Receiving Water: Brannigan Creek
0.2km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 3 |
| Channel Width (m) | 3 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 31 |
| Left Bank | 44 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 31 |
| Left Bank | 77 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | - |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

50

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | 50 |
| Instream Vegetation | 50 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | No |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 79 crosses this unnamed tributary of Brannigan Creek. The area has low habitat diversity and low overwintering potential. Forage fish may be found at this site considering its close proximity to Brannigan Creek.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Marginal fish habitat and stable shoreline areas result in a low sensitivity rating.

Site 82

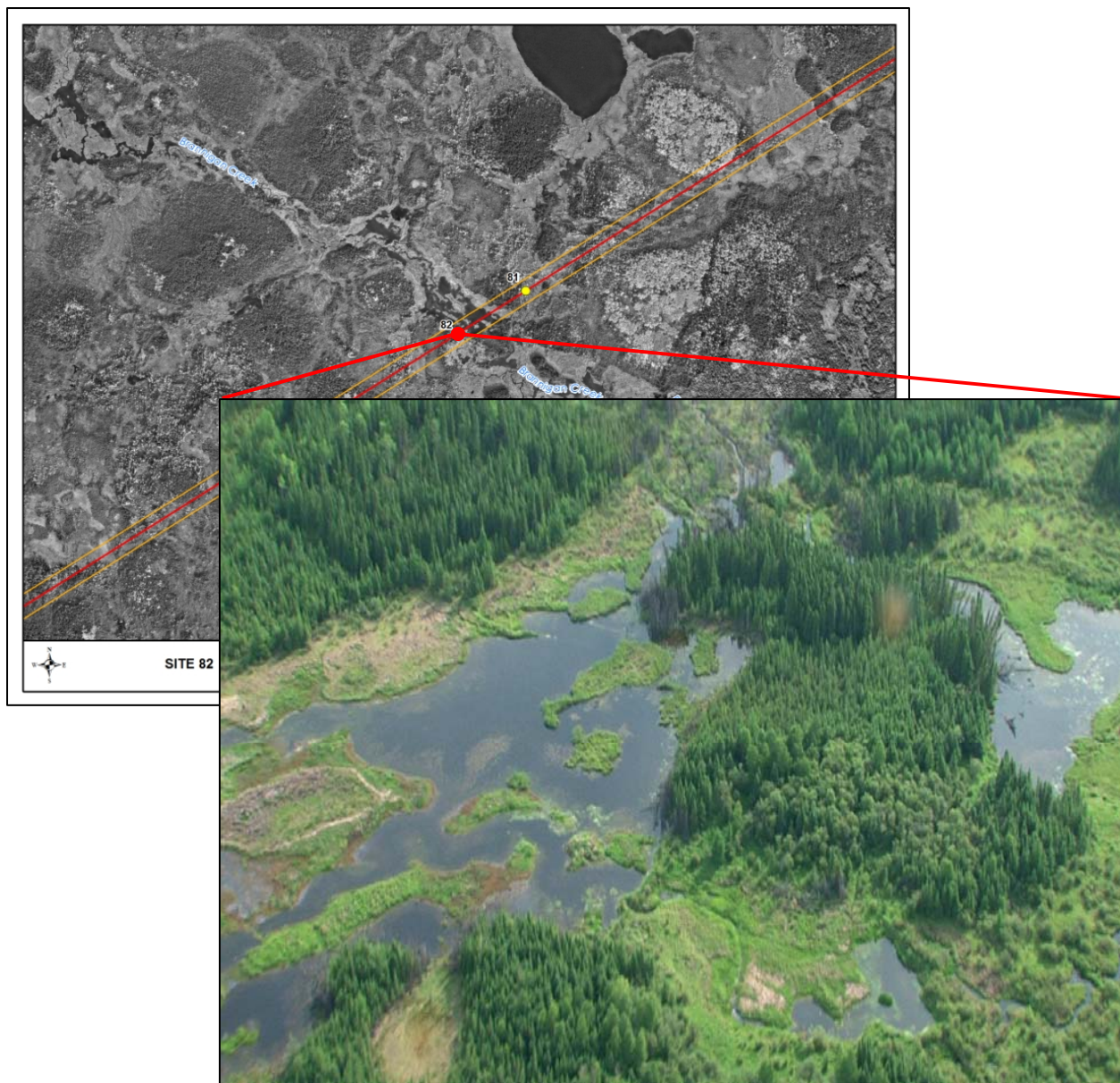
Brannigan Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 607318
Northing: 6195517
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 11.4 km²
Distance to Receiving Water: Brannigan Lake
27.6km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | 92 |
| Channel Width (m) | 92 |

Banks (%)

| | |
|----------------------|----|
| Right Bank Stability | 80 |
| Left Bank Stability | 80 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 43 |
| Left Bank | 38 |

Riparian Distance (m)

| | |
|------------|-----|
| Right Bank | 43 |
| Left Bank | 212 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

10

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | 50 |
| Instream Vegetation | 50 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 82 crosses Brannigan Creek. The area has moderate habitat diversity and low overwintering potential. Minnow species are anticipated at the site, and potential exists for the presence of large indicator species; however few fish are anticipated.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Unstable banks combined with a sensitive floodplain region and fish presence result in a moderate sensitivity rating.

Site 83

Unnamed Stream

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 603314
Northing: 6193001
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: -
Distance to Receiving Water: Unnamed lake



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | 25 |
| Channel Width (m) | 25 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 32 |
| Left Bank | 0 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 40 |
| Left Bank | 9 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

60

Cover Composition (% of Total)

| | |
|------------------------|-------|
| Large Woody Debris | Trace |
| Overhanging Vegetation | 25 |
| Instream Vegetation | 25 |
| Pool | 50 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 50 |
| Run | 50 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 81 crosses an unnamed stream. The area has low habitat diversity and low overwintering potential. Forage fish may occur at this site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Site 84

Unnamed Stream

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 603199
Northing: 6192929
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: -
Distance to Receiving Water: Unnamed lake



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | 29 |
| Channel Width (m) | 29 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 36 |
| Left Bank | 29 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 38 |
| Left Bank | 37 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

60

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | 10 |
| Pool | 90 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 50 |
| Run | 50 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 84 crosses an unnamed stream. The area has low habitat diversity and low overwintering potential. Forage fish may occur at this site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Very marginal fish habitat results in a low sensitivity rating.

Site 85

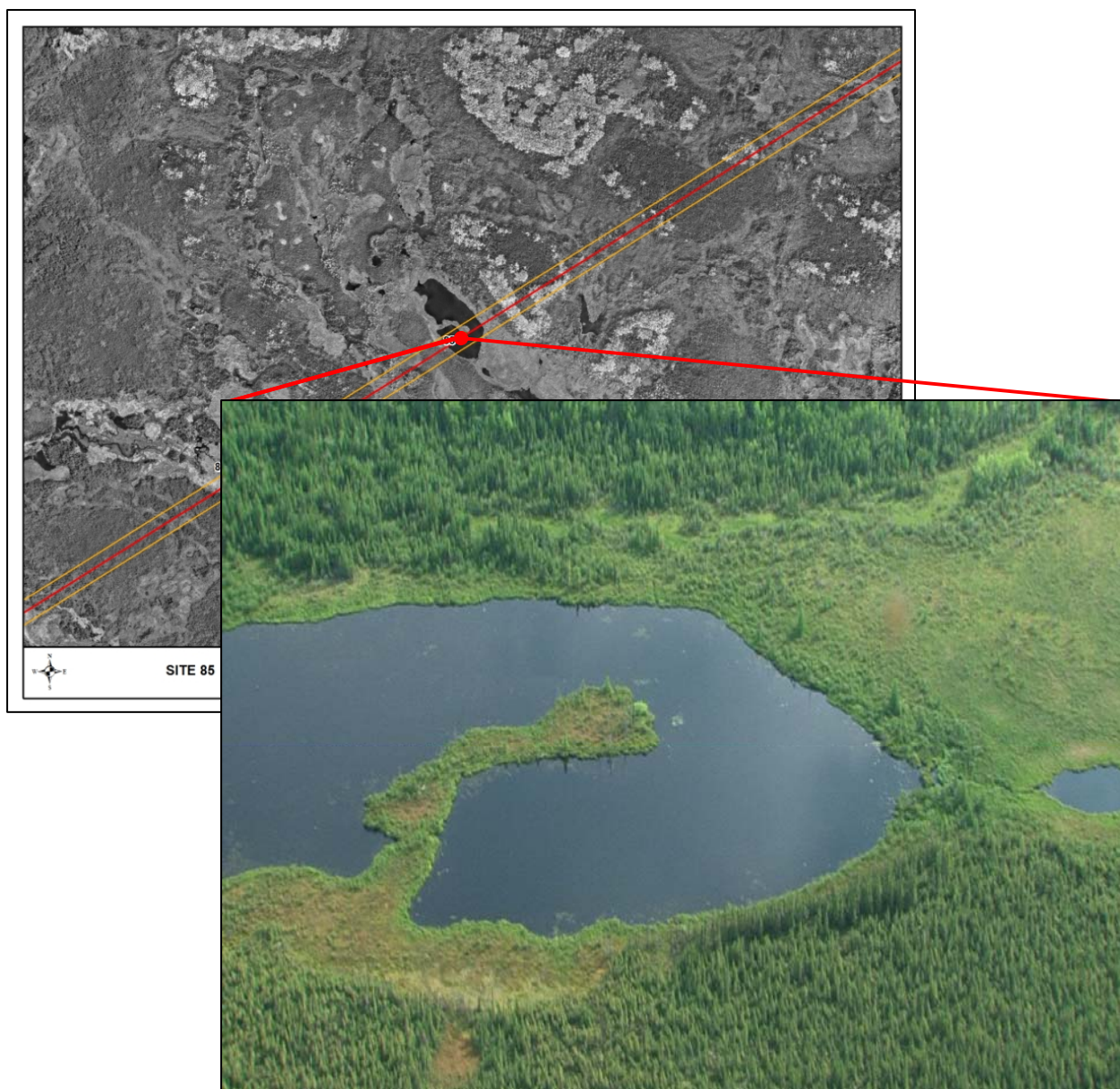
Unnamed Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 600543
Northing: 6191260
Data Source: DOI.Video

General Morphology

Stream/Lake: Lake
Pattern: -
Confinement: UN
Stage: Low
Flow Regime: Intermittent
Morphology: -
U/S Drainage: -
Distance to Receiving Water: Isbister Creek 8.6km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-----------------------|-----|
| Lake size (ha) | 2.5 |
| Lake width at ROW (m) | 123 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

-

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 85 crosses this unnamed lake. The area has moderate habitat diversity and potential for overwintering. Forage fish species and potentially large bodied fish are expected at this site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating.

Site 86

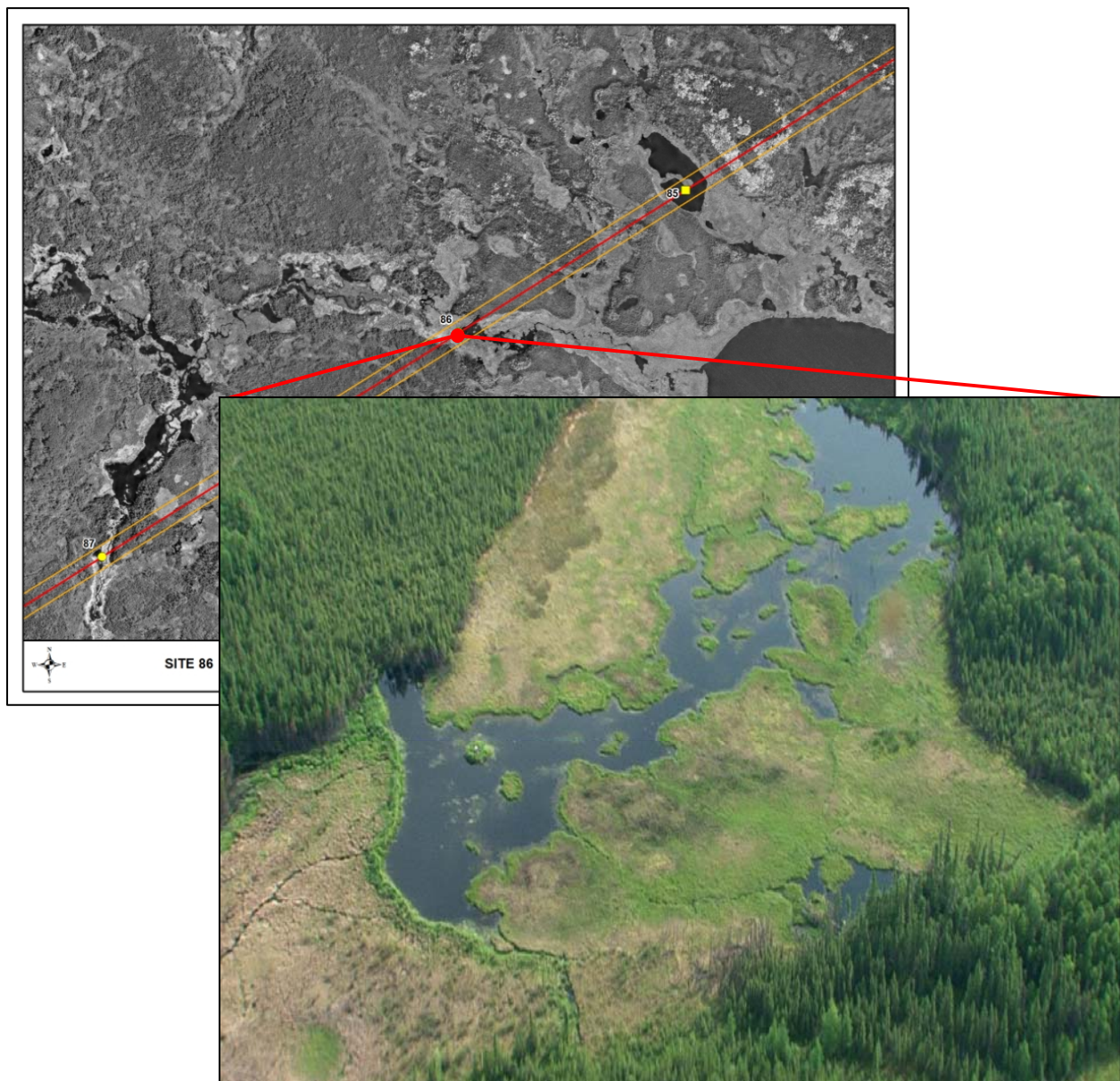
Unnamed Tributary of Isbister Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 599839
Northing: 6190817
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 7.3 km²
Distance to Receiving Water: Isbister Creek
7.0 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 2 |
| Channel Width (m) | 2 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 61 |
| Left Bank | 22 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 73 |
| Left Bank | 28 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

50

Cover Composition (% of Total)

| | |
|------------------------|-------|
| Large Woody Debris | Trace |
| Overhanging Vegetation | 25 |
| Instream Vegetation | 25 |
| Pool | 50 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 50 |
| Run | 50 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 86 crosses this unnamed tributary of Isbister Creek. The area has moderate habitat diversity. Minnows are expected at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The saturated floodplain may be sensitive to damage in an area with fish presence.

Site 87

Unnamed Tributary of Isbister Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 598731
Northing: 6190121
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 13.2 km²
Distance to Receiving Water: Isbister Creek
5.4 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 3 |
| Channel Width (m) | 3 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 40 |
| Left Bank | 18 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 63 |
| Left Bank | 28 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

10

Cover Composition (% of Total)

| | |
|------------------------|-------|
| Large Woody Debris | Trace |
| Overhanging Vegetation | - |
| Instream Vegetation | 100 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 87 crosses this unnamed tributary of Isbister Creek. The area has moderate habitat diversity and low overwintering potential. Minnows and possibly large bodied species such as northern pike are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The floodplain may be unstable and sensitive to damage in an area with fish presence.

Site 88

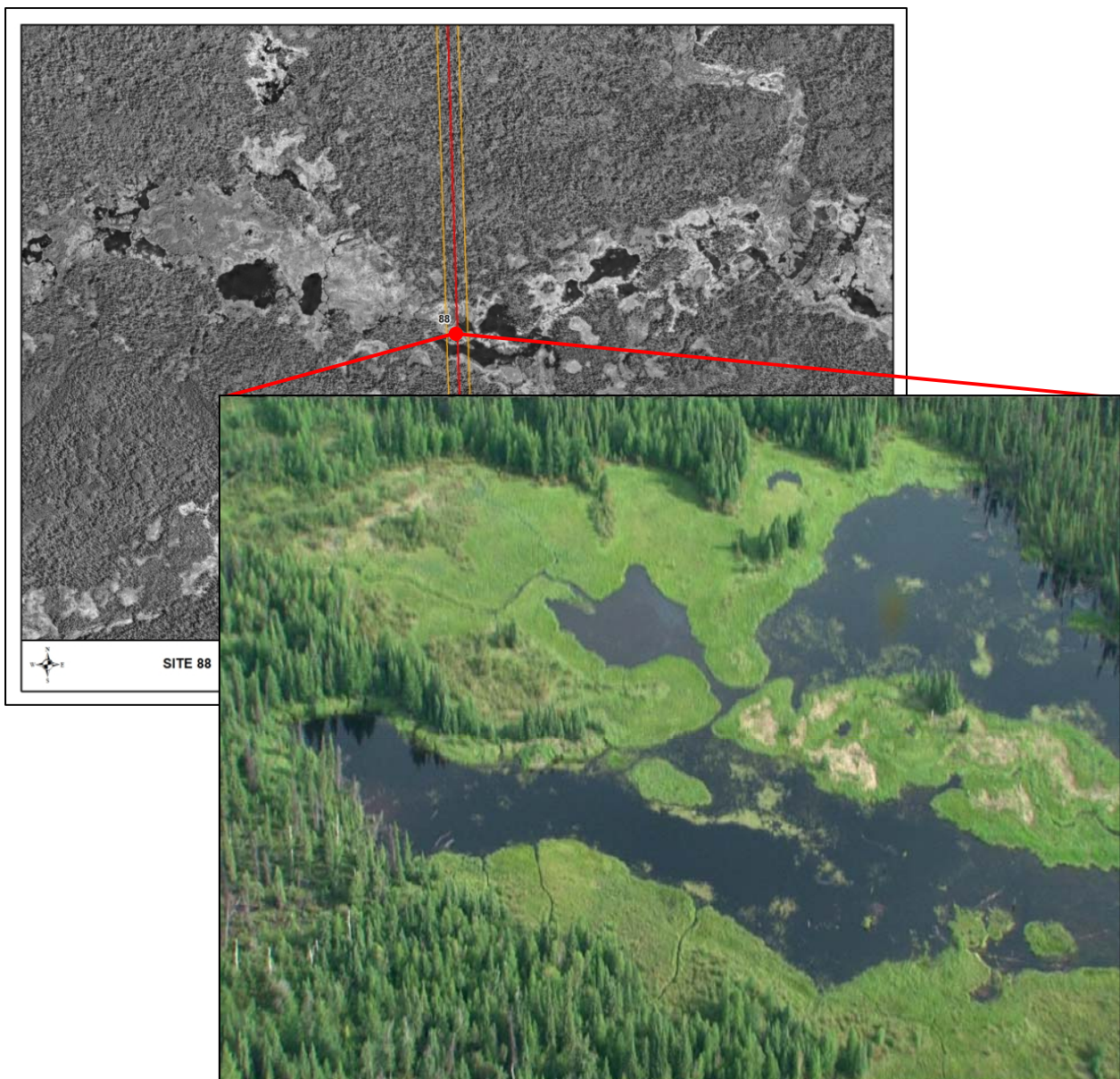
Unnamed Tributary of Isbister Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 596605
Northing: 6187282
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 1.7 km²
Distance to Receiving Water: Isbister Creek
4.0 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | 41 |
| Channel Width (m) | 41 |

Banks (%)

| | |
|----------------------|----|
| Right Bank Stability | 80 |
| Left Bank Stability | 80 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 55 |
| Left Bank | 32 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 55 |
| Left Bank | 32 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

30

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | 20 |
| Pool | 80 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 88 crosses this unnamed tributary of Isbister Creek. The area has moderate habitat diversity potential for overwintering. Forage and possibly large bodied species are expected at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The floodplain may be unstable and sensitive to damage in an area with fish presence.

Site 89

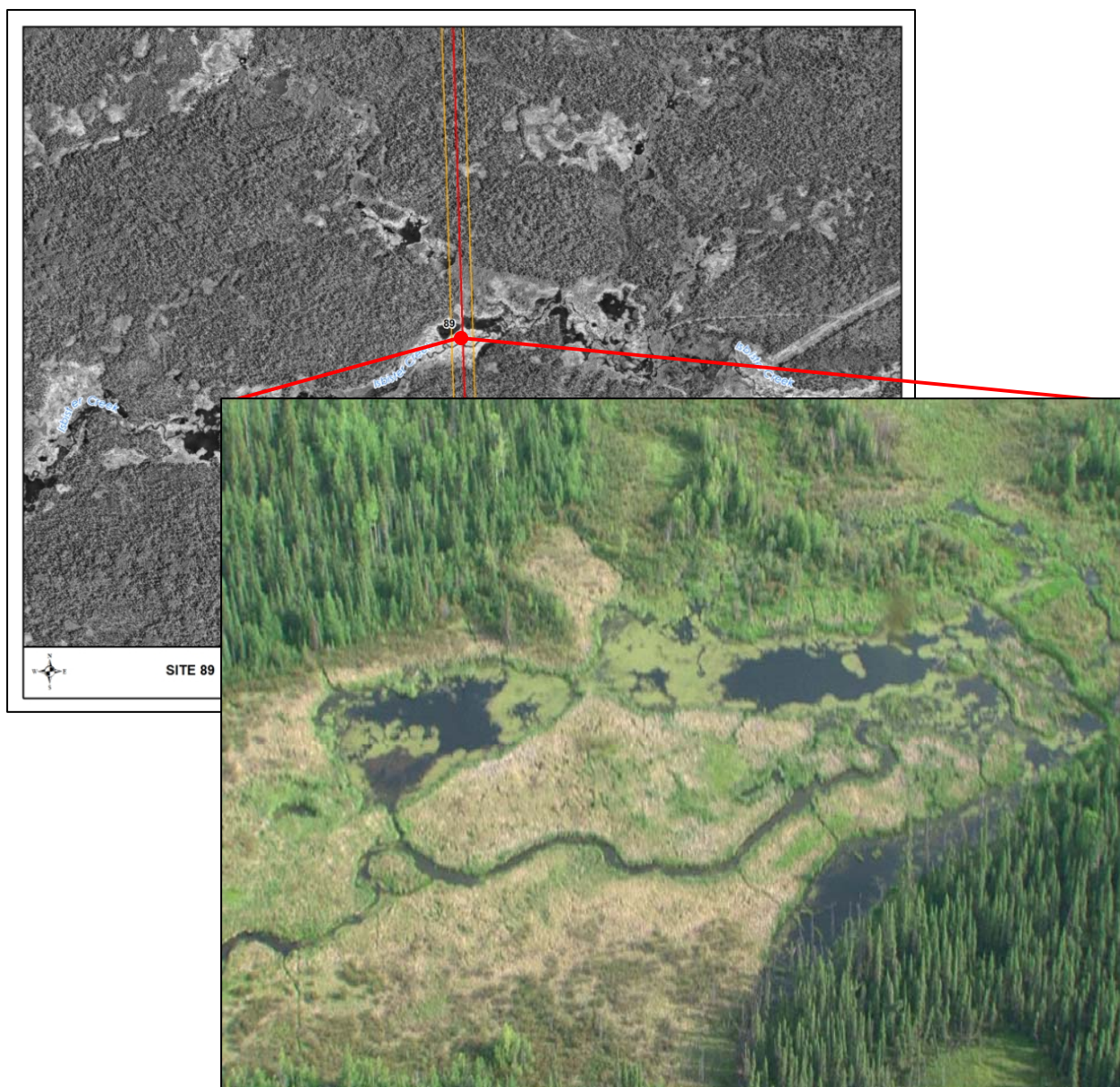
Isbister Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 596653
Northing: 6185774
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IM
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 24.6 km²
Distance to Receiving Water: Isbister Lake
11.3 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 5 |
| Channel Width (m) | 5 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 96 |
| Left Bank | 65 |

Riparian Distance (m)

| | |
|------------|-----|
| Right Bank | 253 |
| Left Bank | 65 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

20

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | 80 |
| Pool | 20 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 89 crosses Isbister Creek. The area has moderate habitat diversity. Minnows are expected at this site and possibly large bodied species such as northern pike.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The floodplain may be unstable and sensitive to damage in an area with fish presence.



Site 90

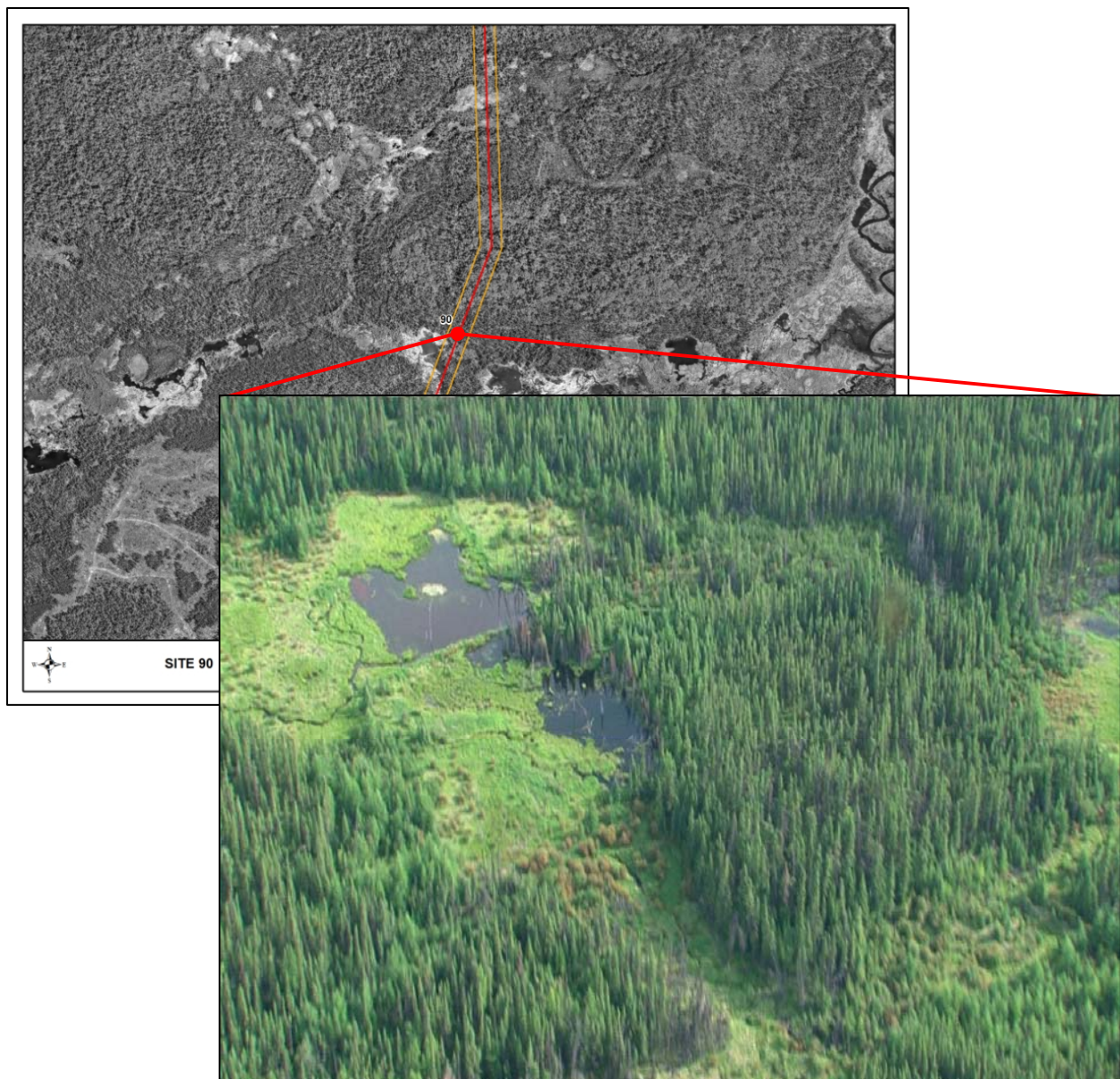
Unnamed Tributary of Isbister Creek

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 596631
Northing: 6183081
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 2.0 km²
Distance to Receiving Water: Isbister Creek
1.3 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 3 |
| Channel Width (m) | 3 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 8 |
| Left Bank | 24 |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | 8 |
| Left Bank | 6 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

20

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | 50 |
| Instream Vegetation | - |
| Pool | 50 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 90 crosses Isbister Creek. The area consists of a headwater wetland with only forage fish expected at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The floodplain may be unstable and sensitive to damage in an area with fish presence.

Site 91

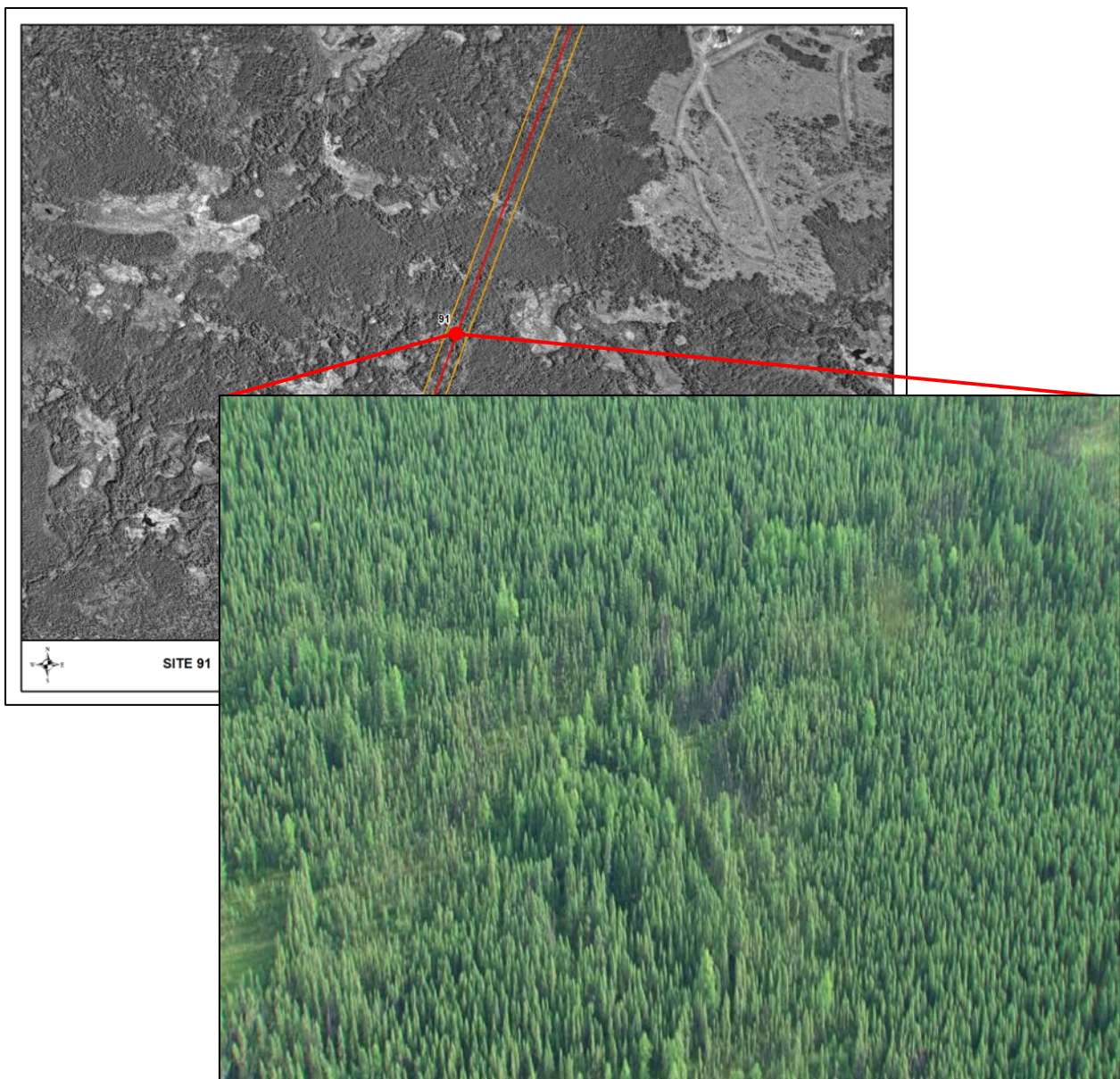
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 595145
Northing: 6179083
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: 0.1 km²
Distance to Receiving Water: Partridge Crop Lake
5.0 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

No

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

No Fish Habitat

Fish Presence: N/A

Comments:

This tributary of Partridge Crop Lake was hardly visible on the video, and likely does not contain fish habitat.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

No fish habitat results in a low sensitivity rating.

Site 92

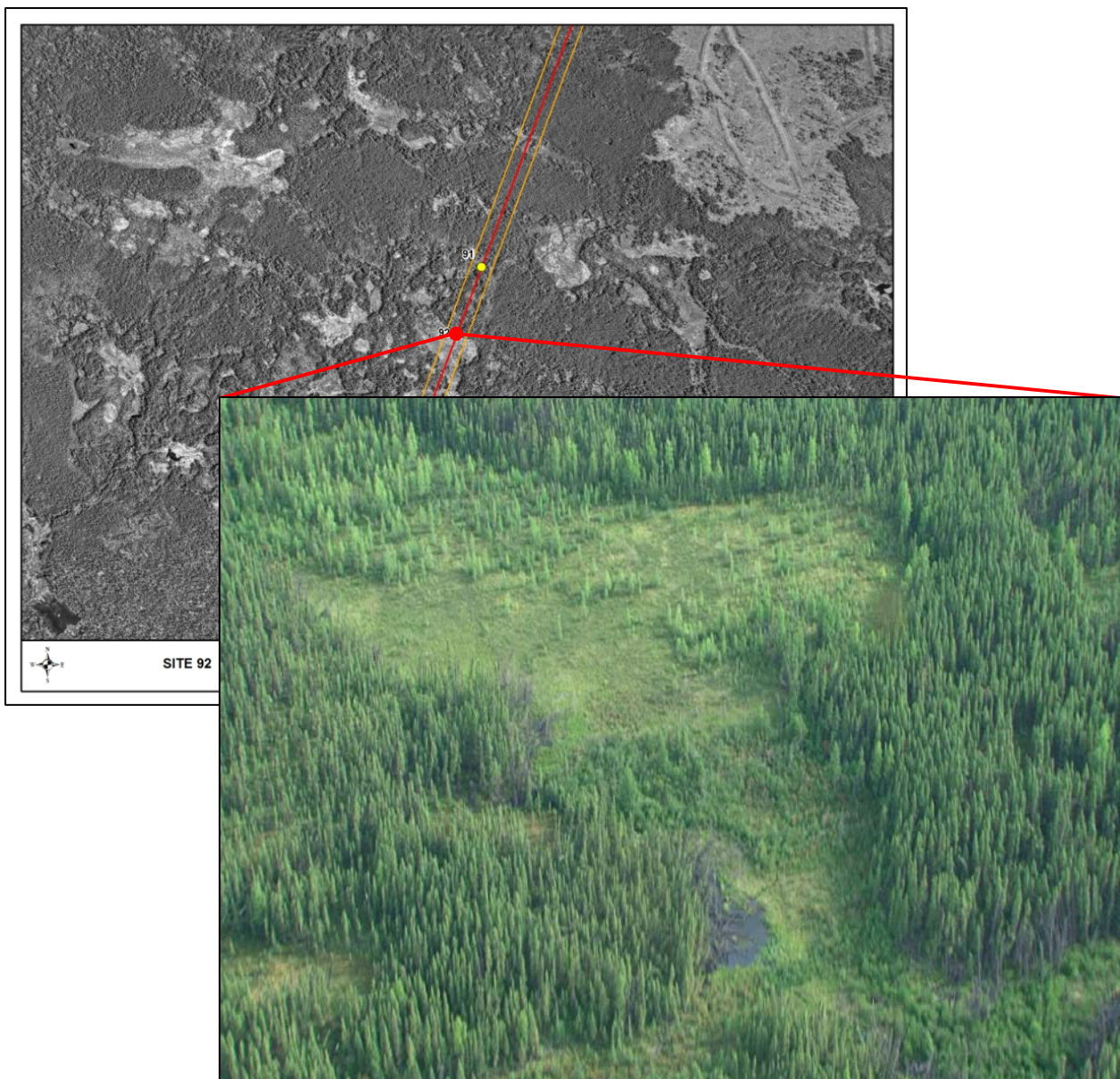
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 595069
Northing: 6178880
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: 0.2 km²
Distance to Receiving Water: Partridge Crop Lake
4.7 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------------|
| Right Bank | 84 (total) |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 92 crosses this unnamed tributary of Partridge Crop Lake. The area has low habitat diversity. Forage fish may be found at this site when water is present.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating.



Site 93

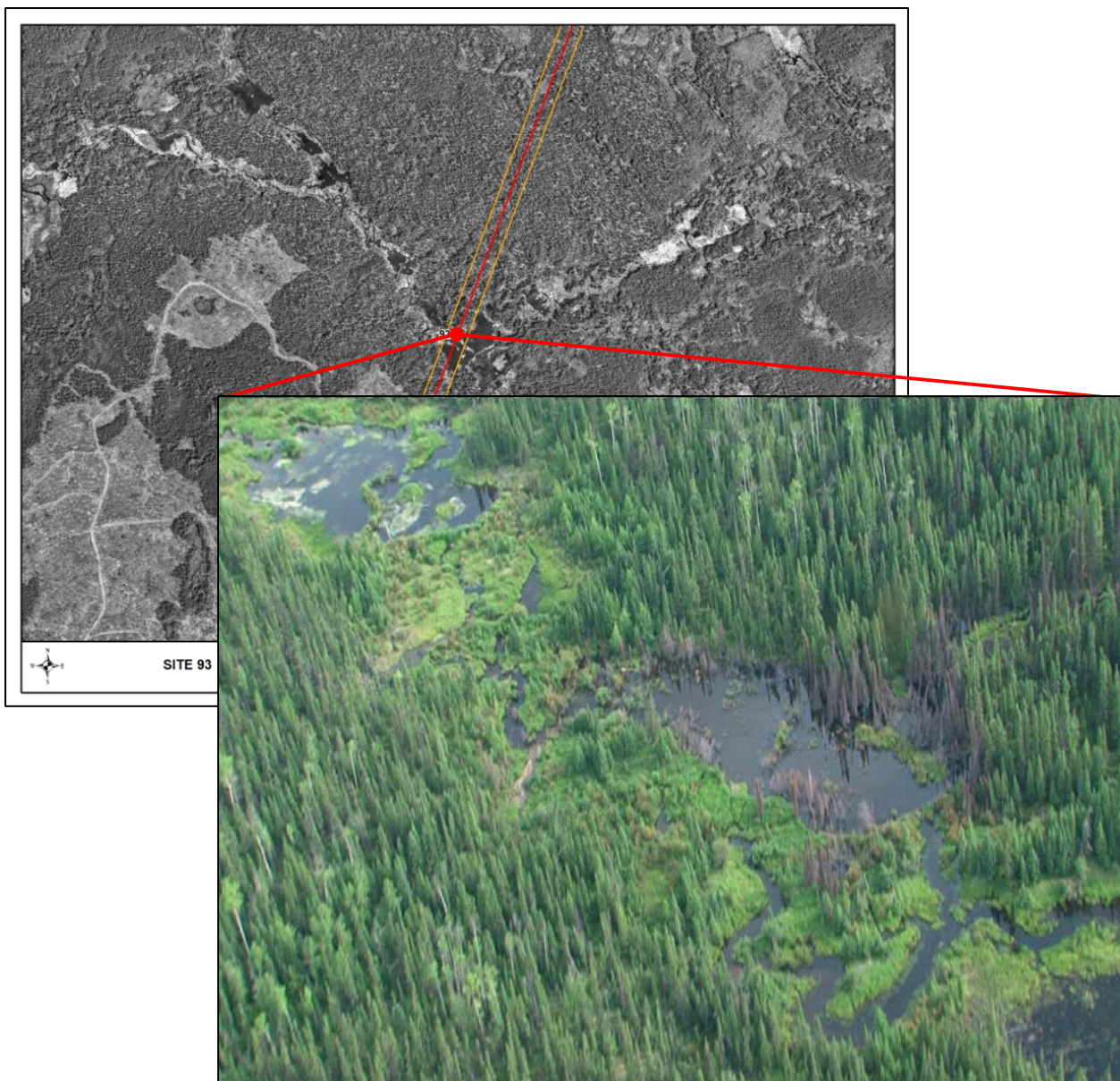
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 594469
Northing: 6177266
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 2.2 km²
Distance to Receiving Water: Partridge Crop Lake
2.4 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | 68 |
| Channel Width (m) | 68 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 15 |
| Left Bank | 20 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

30

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | 50 |
| Overhanging Vegetation | - |
| Instream Vegetation | 50 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 93 crosses this unnamed tributary of Partridge Crop Lake. The area has moderate habitat diversity and low overwintering potential. Minnows and potentially some large bodied species may be found at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain region may be sensitive to damage during construction, resulting in increased siltation into tributary.



Site 94

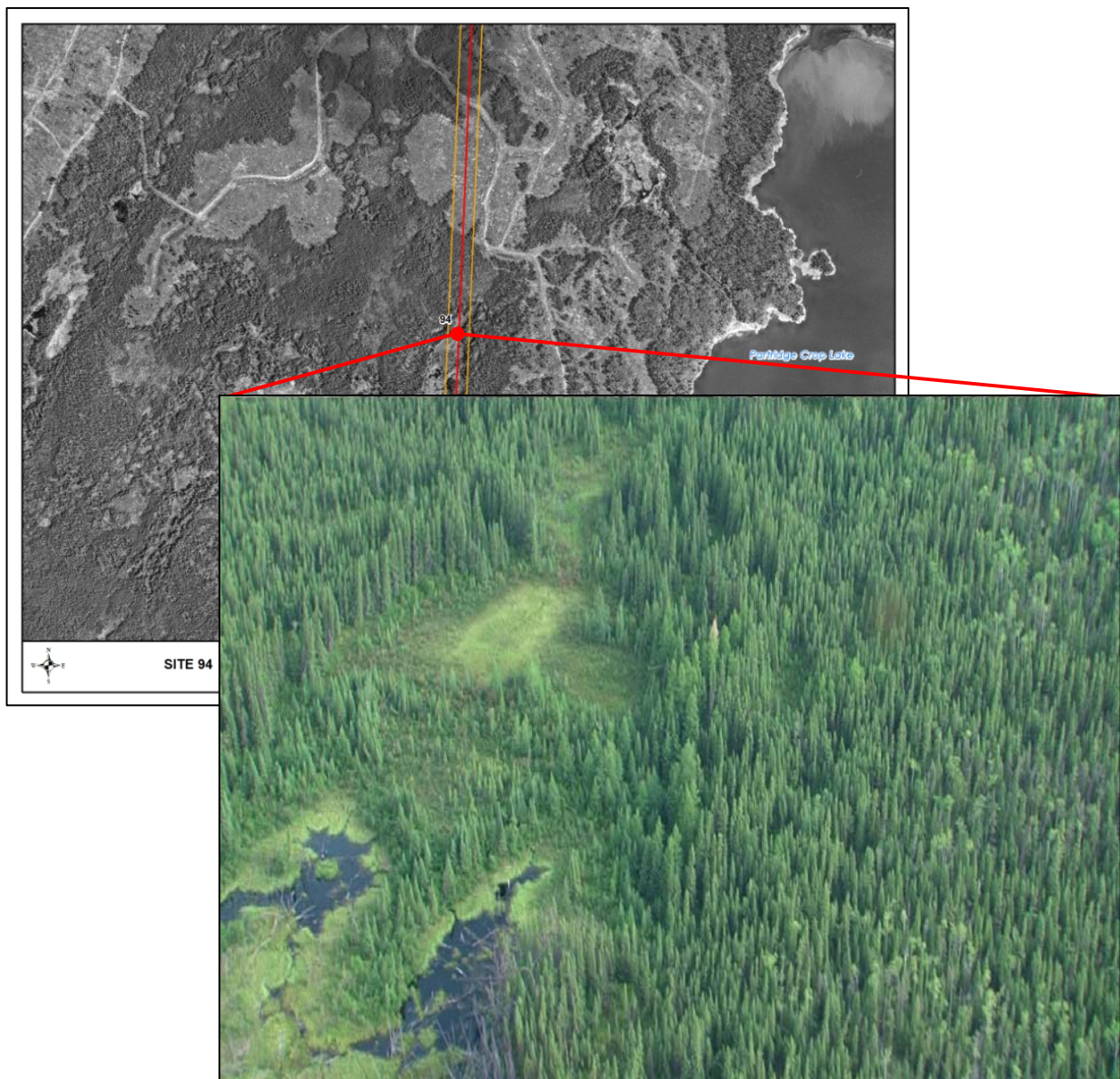
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 594220
Northing: 6174610
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: -
Distance to Receiving Water: Partridge Crop Lake
1.3 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------------|
| Right Bank | 14 (total) |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 23 |
| Left Bank | 23 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

20

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | 50 |
| Overhanging Vegetation | 50 |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 94 crosses this unnamed tributary of Partridge Crop Lake. The area has low habitat diversity and low overwintering potential. Forage fish may be present at this site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating.



Site 95

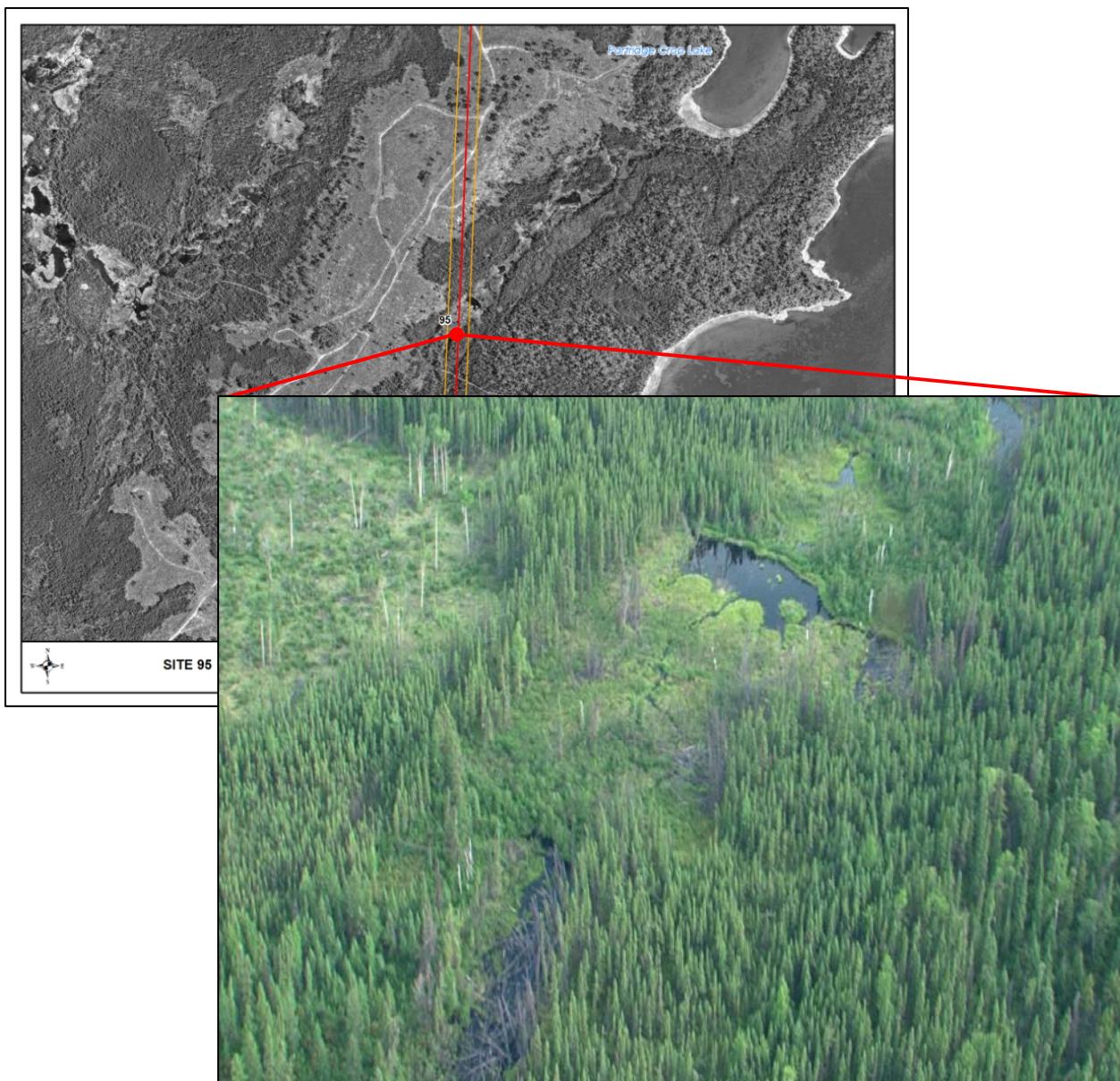
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 594113
Northing: 6172023
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 0.5 km²
Distance to Receiving Water: Partridge Crop Lake
0.98 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 3 |
| Channel Width (m) | 3 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 29 |
| Left Bank | 34 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 80 |
| Left Bank | 47 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

40

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | 20 |
| Overhanging Vegetation | 60 |
| Instream Vegetation | - |
| Pool | 20 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 95 crosses this unnamed tributary of Partridge Crop Lake. The area has moderate habitat diversity and low overwintering potential. Forage fish are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating.



Site 96

Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 594062
Northing: 6170794
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: 0.2 km²
Distance to Receiving Water: Partridge Crop Lake
0.99 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|----|
| Wetted Width (m) | - |
| Channel Width (m) | 14 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|-----|
| Right Bank | 117 |
| Left Bank | 53 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

No

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

No Fish Habitat

Fish Presence: N/A

Comments:

The RoW at site 96 crosses this unnamed tributary of Partridge Crop Lake. In this area the stream consists of a boreal wetland with no water visible.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Lack of fish presence results in a low sensitivity rating.



Site 97

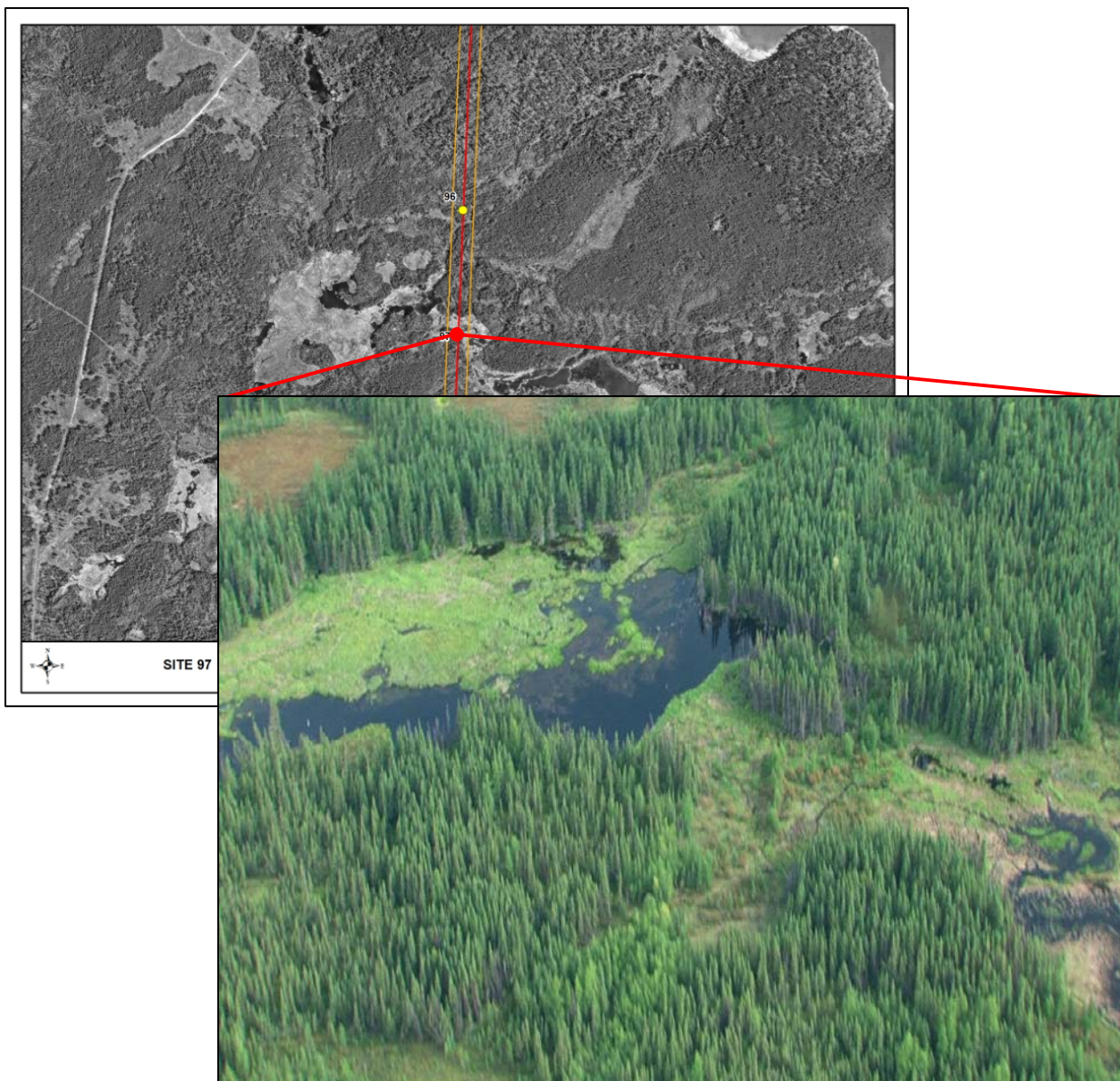
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 594046
Northing: 6170413
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 0.1 km²
Distance to Receiving Water: Partridge Crop Lake
0.61 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | 2 |
| Channel Width (m) | 2 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|----|
| Right Bank | 21 |
| Left Bank | 19 |

Riparian Distance (m)

| | |
|------------|----|
| Right Bank | 21 |
| Left Bank | 19 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

20

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | 30 |
| Instream Vegetation | 70 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 97 crosses this unnamed tributary of Partridge Crop Lake. The area has moderate habitat diversity and low overwintering potential. Forage fish and potentially large bodied fish species are expected at the site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain area may be sensitive to damage during construction.

Site 98

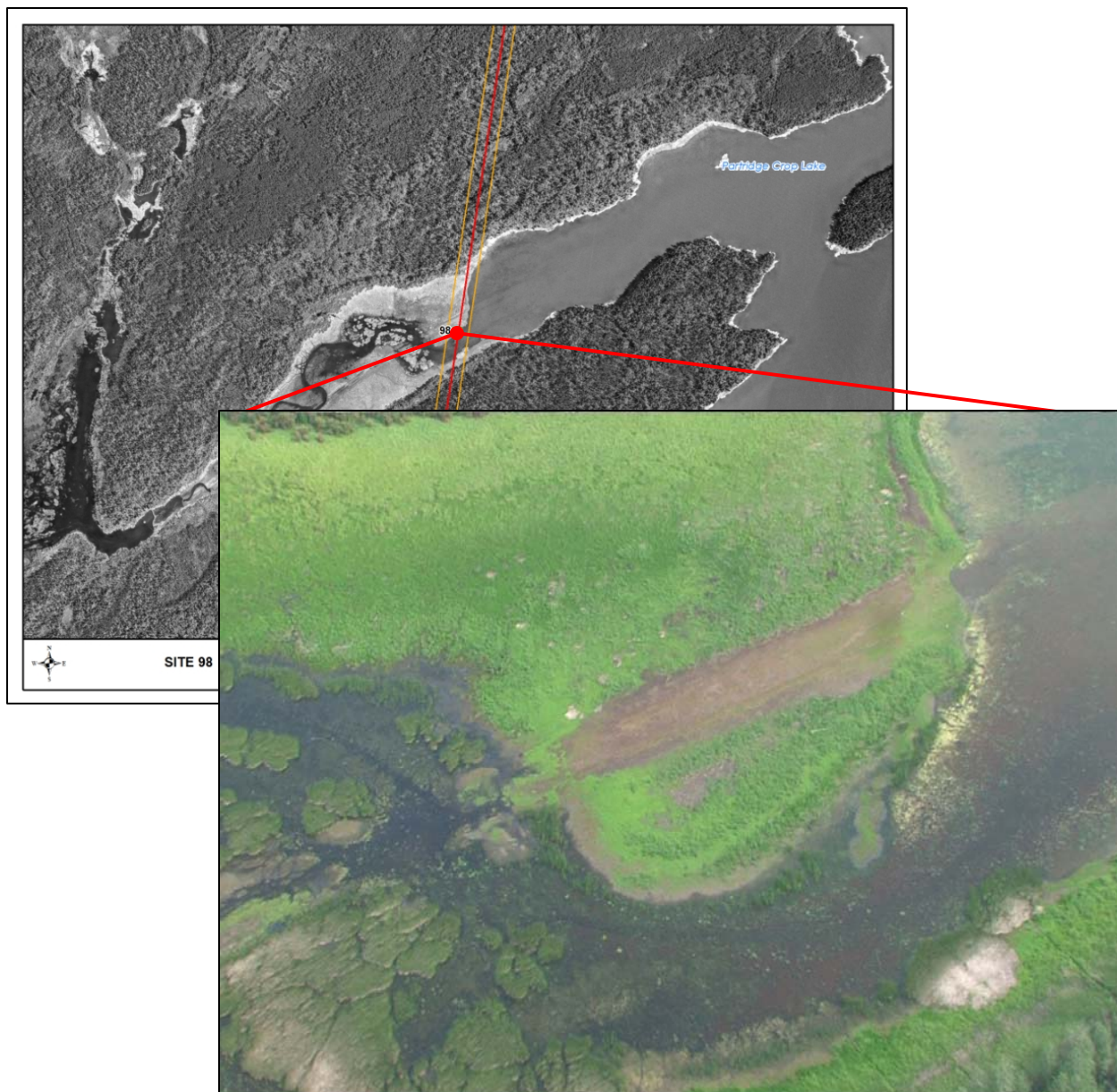
Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 593719
Northing: 6167671
Data Source: DOI. Video. Site Visit

General Morphology

Stream/Lake: Lake
Pattern: -
Confinement: UN
Stage: Moderate
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 4.1 km²
Distance to Receiving Water: Nelson River 98 km



Site Conditions

+ Physical Data

Survey Date: 14 October 2010

Stage: Moderate

Transect

| | 1 | 2 | 3 | 4 | 5 |
|----------------------------|---|-------|-------|--------|--------|
| Distance from Crossing (m) | 0 | 33 US | 33 DS | 150 US | 150 DS |

Channel Profile

Channel and Flow

| | | | | | |
|-------------------|------|---|---|---|---|
| Channel Width (m) | ~80 | - | - | - | - |
| Wetted Width (m) | ~120 | - | - | - | - |

Water Depths (m)

| | | | | | |
|-----|-----|---|---|---|---|
| 25% | 0.5 | - | - | - | - |
| 50% | - | - | - | - | - |
| 75% | - | - | - | - | - |
| Max | - | - | - | - | - |

Banks

| | | | | | |
|--------------------------|-----|---|---|---|---|
| Right Bank Stability (%) | 100 | - | - | - | - |
| Left Bank Stability (%) | 100 | - | - | - | - |
| Right Bank Slope (°) | ~1 | - | - | - | - |
| Left Bank Slope (°) | ~1 | - | - | - | - |

Riparian

Floodplain Distance (m)

| | | | | | |
|------------|-----|---|---|---|---|
| Right Bank | 50 | - | - | - | - |
| Left Bank | ~30 | - | - | - | - |

Riparian Distance (m)

| | | | | | |
|------------|-----|---|---|---|---|
| Right Bank | 66 | - | - | - | - |
| Left Bank | ~40 | - | - | - | - |

Riparian Vegetation Type (Y/N)

| | | | | | |
|----------------|---|---|---|---|---|
| None | - | - | - | - | - |
| Grasses/sedges | Y | - | - | - | - |
| Shrubs | - | - | - | - | - |
| Conifers | - | - | - | - | - |
| Deciduous | - | - | - | - | - |
| Mixed Forest | - | - | - | - | - |

Canopy Cover (%)

| | | | | | |
|--|---|---|---|---|---|
| | 0 | - | - | - | - |
|--|---|---|---|---|---|

Substrate Type (%)

| | | | | | |
|--------------|-----|---|---|---|---|
| Fines | 100 | - | - | - | - |
| Small Gravel | - | - | - | - | - |
| Large Gravel | - | - | - | - | - |
| Cobble | - | - | - | - | - |
| Boulder | - | - | - | - | - |

Habitat Type

Habitat Composition (%)

| | | | | | |
|--------|-----|---|---|---|---|
| Pool | - | - | - | - | - |
| Run | 100 | - | - | - | - |
| Riffle | - | - | - | - | - |

Cover Types

Total Cover Available (%)

| | US | DS |
|---------------------------------------|-----|----|
| Cover Composition (% of Total) | 10 | - |
| Large Woody Debris | - | - |
| Overhanging Vegetation | - | - |
| Instream Vegetation | 100 | - |
| Pool | - | - |
| Boulder | - | - |
| Undercut Bank | - | - |
| Surface Turbulence | - | - |



Overhead view of site 98.



Upstream view at site 98.



Downstream view at site 98.



Right bank to left bank at site 98

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|--|-----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Important |

Fish Presence: N/A

Comments:

The RoW at site 98 crosses Partridge Crop Lake. This site provides high habitat diversity for fish including habitat for spawning, rearing, feeding, overwintering and migration. Various species and life stages of fish are expected at this site. It is surrounded by a soft floodplain.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Soft floodplain and important fish habitat result in a moderate sensitivity rating.

Site 99

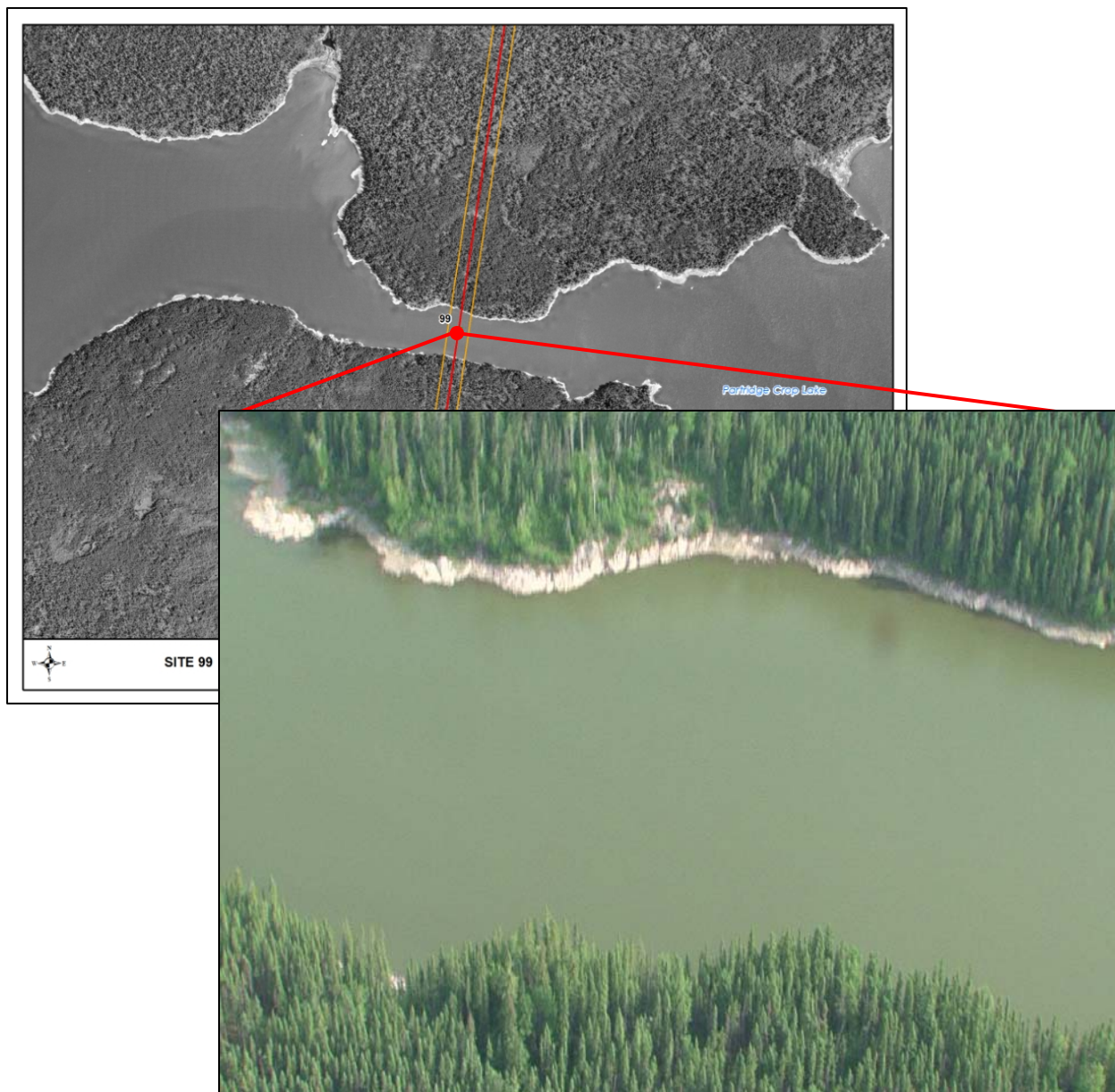
Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 593115
Northing: 6163661
Data Source: DOI. Video. Site Visit

General Morphology

Stream/Lake: Lake
Pattern: -
Confinement: UN
Stage: Moderate
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 12,764 km²
Distance to Receiving Water: Nelson River 110 km



Site Conditions

+ Physical Data

Survey Date: 14 October 2010

Stage: Moderate

Transect

| | 1 | 2 | 3 | 4 | 5 |
|----------------------------|---|-------|-------|--------|--------|
| Distance from Crossing (m) | 0 | 33 US | 33 DS | 150 US | 150 DS |

Channel Profile

Channel and Flow

| | | | | | |
|-------------------|------|---|---|---|---|
| Channel Width (m) | ~130 | - | - | - | - |
| Wetted Width (m) | ~130 | - | - | - | - |

Water Depths (m)

| | | | | | |
|-----|-----|---|---|---|---|
| 25% | 1.0 | - | - | - | - |
| 50% | - | - | - | - | - |
| 75% | - | - | - | - | - |
| Max | - | - | - | - | - |

Banks

| | | | | | |
|--------------------------|-----|---|---|---|---|
| Right Bank Stability (%) | 100 | - | - | - | - |
| Left Bank Stability (%) | 100 | - | - | - | - |
| Right Bank Slope (°) | ~45 | - | - | - | - |
| Left Bank Slope (°) | ~45 | - | - | - | - |

Riparian

Floodplain Distance (m)

| | | | | | |
|------------|---|---|---|---|---|
| Right Bank | - | - | - | - | - |
| Left Bank | - | - | - | - | - |

Riparian Distance (m)

| | | | | | |
|------------|-----|---|---|---|---|
| Right Bank | 9.7 | - | - | - | - |
| Left Bank | - | - | - | - | - |

Riparian Vegetation Type (Y/N)

| | | | | | |
|----------------|---|---|---|---|---|
| None | - | - | - | - | - |
| Grasses/sedges | Y | - | - | - | - |
| Shrubs | - | - | - | - | - |
| Conifers | - | - | - | - | - |
| Deciduous | - | - | - | - | - |
| Mixed Forest | - | - | - | - | - |

Canopy Cover (%)

| | | | | | |
|-------|---|---|---|---|---|
| Trace | - | - | - | - | - |
|-------|---|---|---|---|---|

Substrate Type (%)

| | | | | | |
|--------------|-----|---|---|---|---|
| Fines | 100 | - | - | - | - |
| Small Gravel | - | - | - | - | - |
| Large Gravel | - | - | - | - | - |
| Cobble | - | - | - | - | - |
| Boulder | 20 | - | - | - | - |
| Bedrock | 80 | - | - | - | - |

Habitat Type

Habitat Composition (%)

| | | | | | |
|--------|-----|---|---|---|---|
| Pool | 100 | - | - | - | - |
| Run | - | - | - | - | - |
| Riffle | - | - | - | - | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | | |
|------------------------|-------|-------|
| Large Woody Debris | Trace | Trace |
| Overhanging Vegetation | - | - |
| Instream Vegetation | - | - |
| Pool | - | - |
| Boulder | - | - |
| Undercut Bank | - | - |





Overhead view of site 99.



West view at site 99.



East view at site 99.



North bank to south bank at site 99.

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Important

Fish Presence: N/A

Comments:

The RoW at site 99 crosses Partridge Crop Lake. This site provides high habitat diversity for fish including habitat for spawning, rearing, feeding, overwintering and migration. Various species and life stages of fish are expected at this site

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Though important fish habitat, stable banks result in a low sensitivity rating.

Site 100

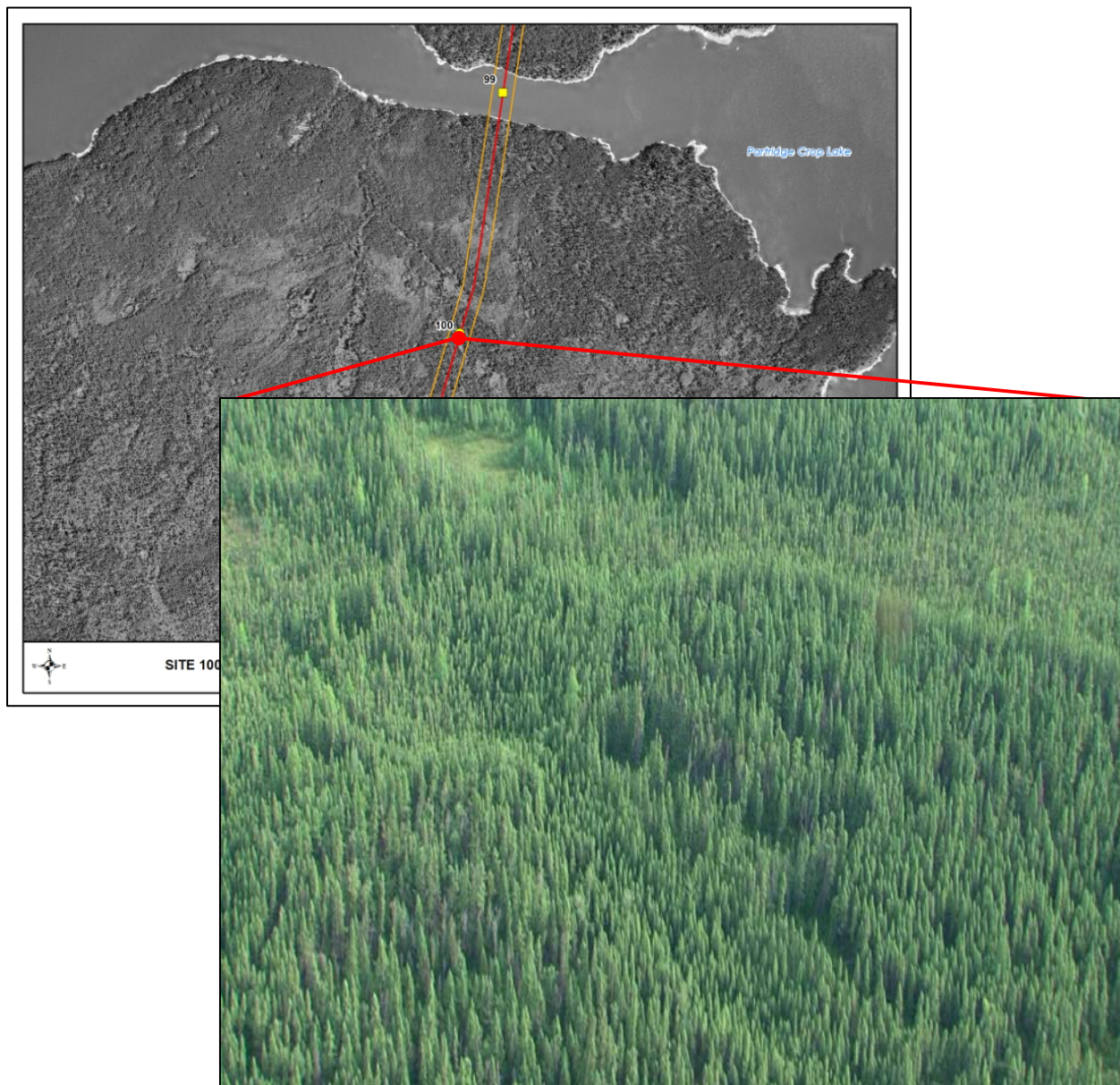
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 592983
Northing: 6162918
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: 0.2 km²
Distance to Receiving Water: Partridge Crop Lake
0.7 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 100 crosses this unnamed tributary of Partridge Crop Lake. The small stream area has low habitat diversity and low overwintering potential. Forage fish may occur in this stream when sufficient water exists.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Poor quality fish habitat and abundant vegetation result with a rating of low.



Site 101

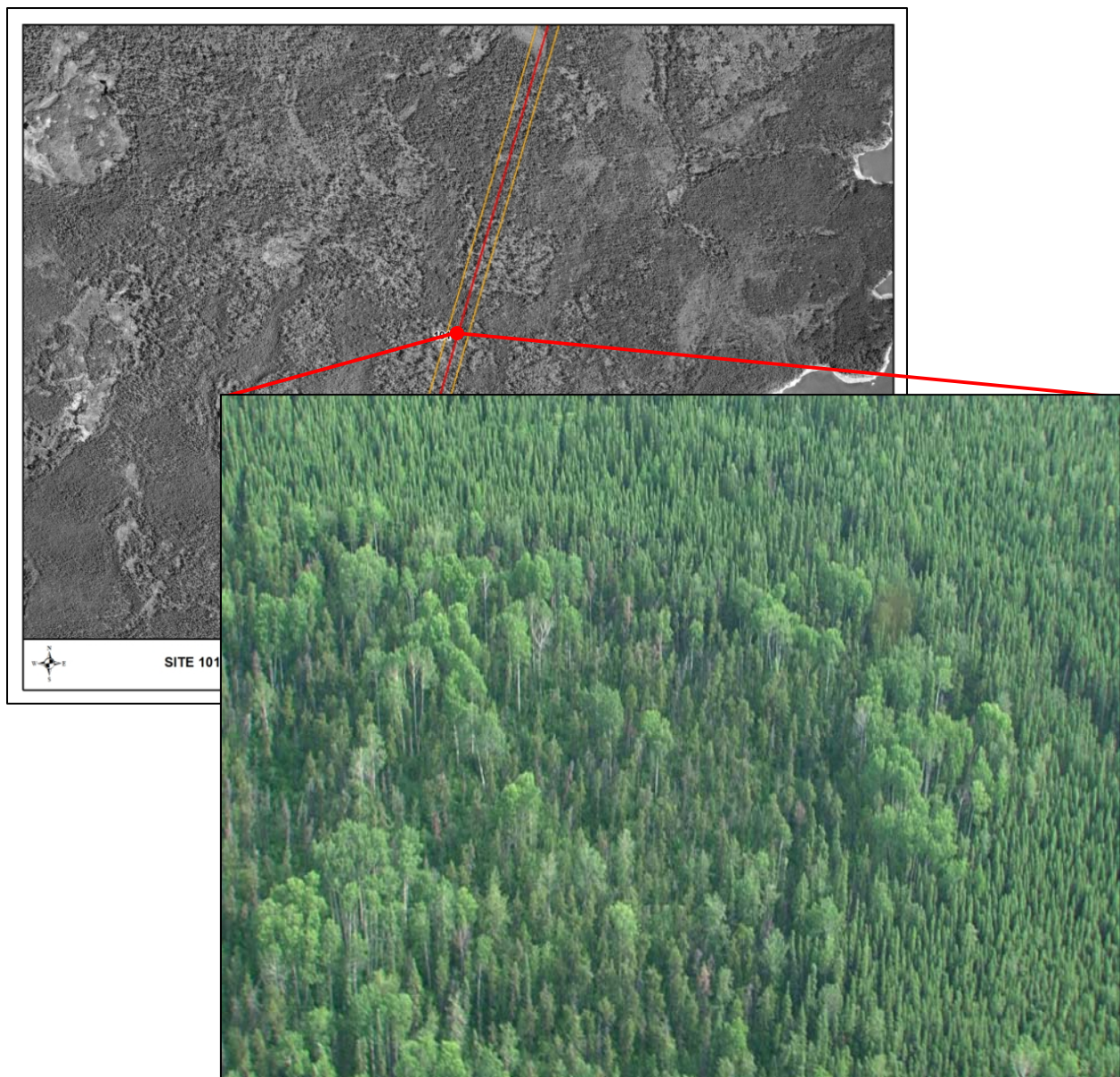
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 592552
Northing: 6161442
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: 0.2 km²
Distance to Receiving Water: Partridge Crop Lake
1.6 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | - |
| Shrubs | - |
| Conifers | Y |
| Deciduous | Y |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

No

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

No Fish Habitat

Fish Presence: N/A

Comments:

This unnamed tributary of Partridge Crop Lake is hardly visible on the video, and likely contains no fish habitat.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating.

Site 102

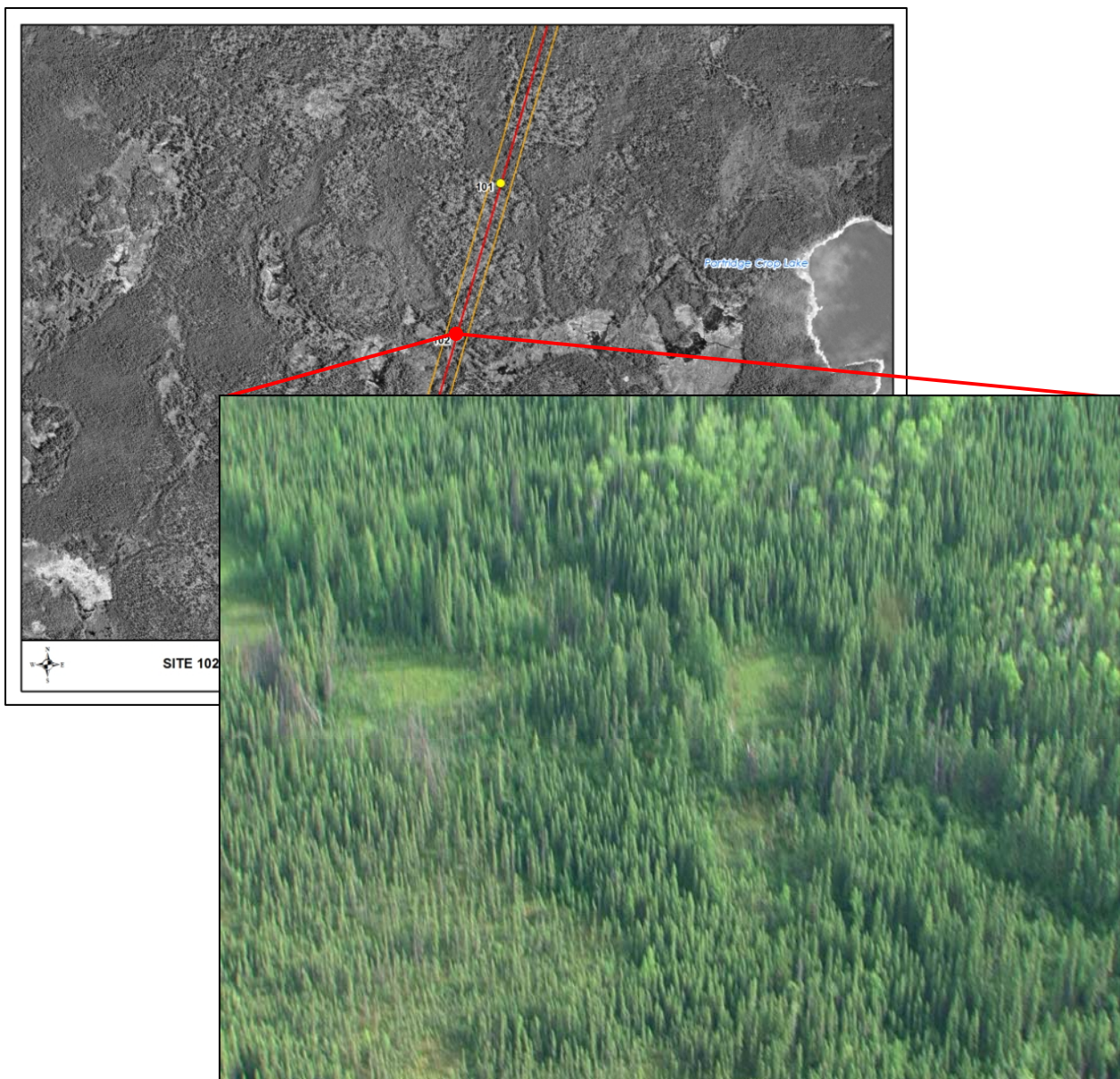
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 594062
Northing: 6170794
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: 0.2 km²
Distance to Receiving Water: Partridge Crop Lake
1.5 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 102 crosses this unnamed tributary of Partridge Crop Lake. The area consists of wetland habitat with little channel formation. Forage fish may occur at this site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Marginal fish habitat and abundant vegetation results in a low sensitivity rating.



Site 103

Unnamed Pond

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 591937
Northing: 6159336
Data Source: DOI.Video

General Morphology

Stream/Lake: -
Pattern: -
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: -
U/S Drainage: -
Distance to Receiving Water: -



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

No

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

No Fish Habitat

Fish Presence: N/A

Comments:

This unnamed pond does not appear to be connected to other waterbodies, and likely contains no fish habitat.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and no fish habitat result in a low sensitivity rating.



Site 104

Unnamed Tributary of Partridge Crop Lake



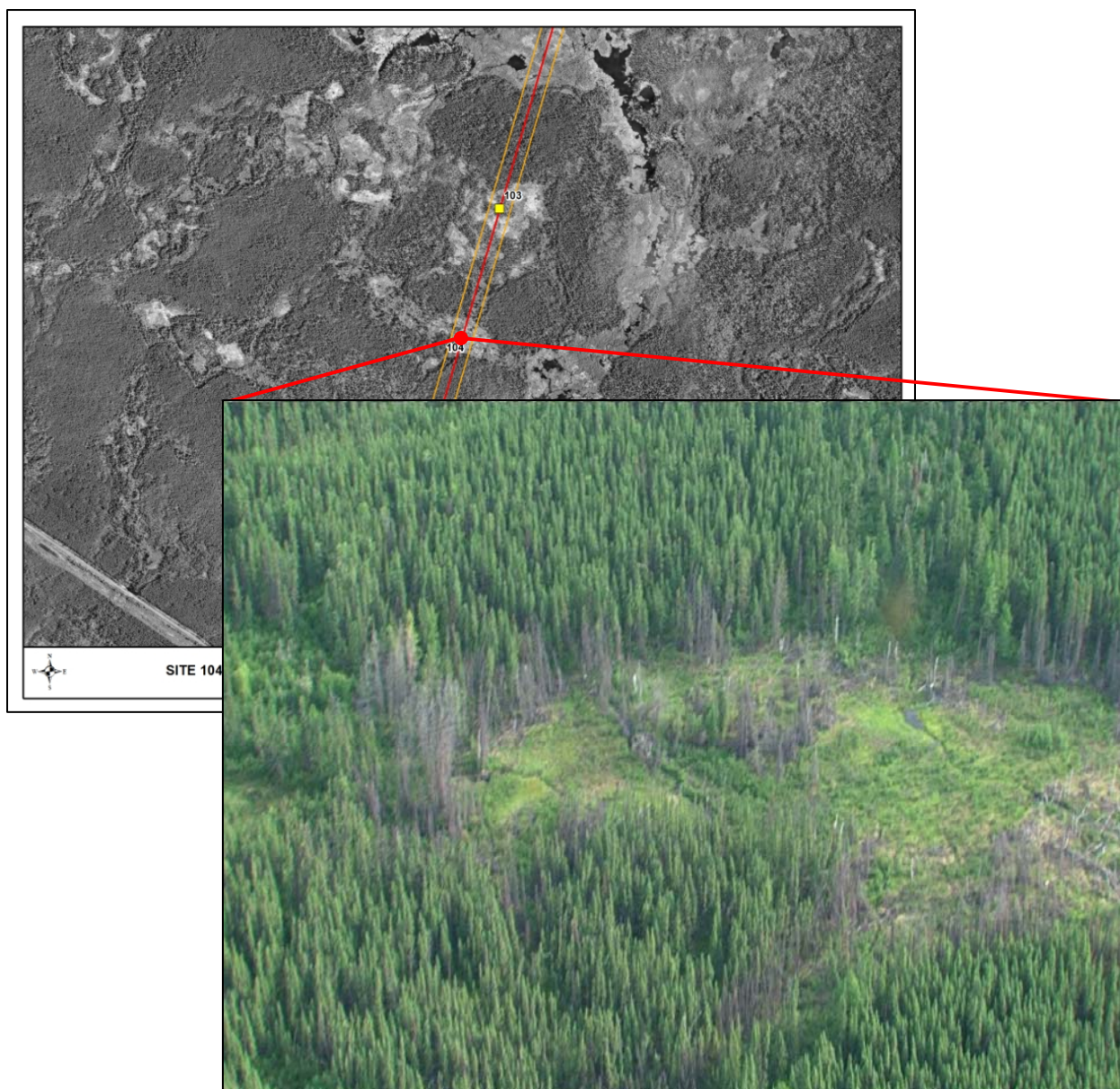
Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 591822
Northing: 6158940
Data Source: DOI.Video



General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 0.2 km²
Distance to Receiving Water: Partridge Crop Lake
3 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 104 crosses this unnamed tributary of Partridge Crop Lake. The area is in the headwaters of a small stream and habitat consists of boreal wetland with poor channel formation. Forage fish may be found at this site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating.

Site 105

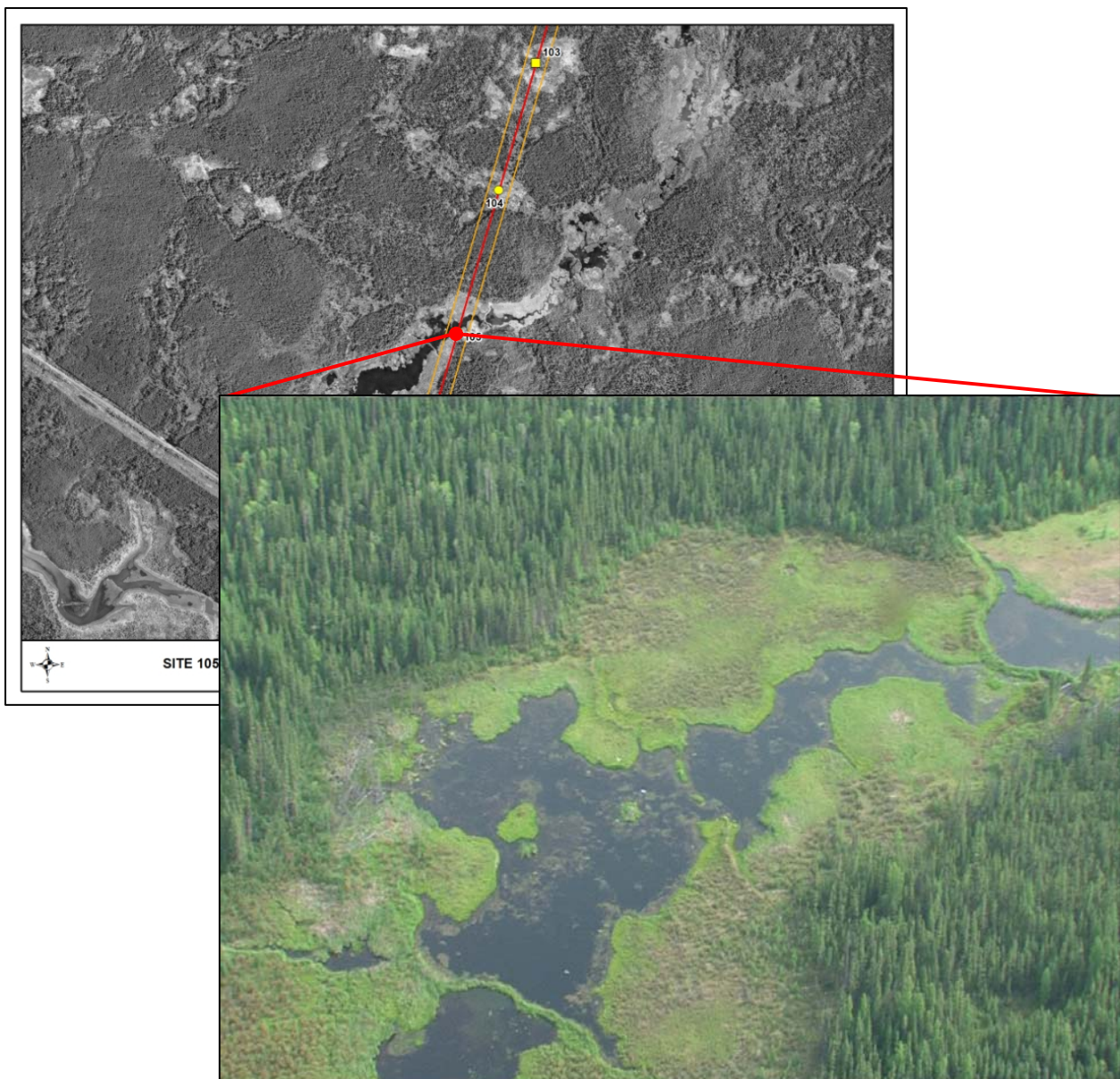
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 591693
Northing: 6158498
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Perennial
Morphology: LC
U/S Drainage: -
Distance to Receiving Water: Partridge Crop Lake
2 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|-------|
| Wetted Width (m) | 31.7 |
| Channel Width (m) | 142.5 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 31.8 |
| Left Bank | 80.2 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 76.4 |
| Left Bank | 84.9 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

10

Cover Composition (% of Total)

| | |
|------------------------|-----|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | 100 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 105 crosses this unnamed tributary of Partridge Crop Lake. The area has moderate habitat diversity and overwintering potential. Minnows are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain area may be sensitive to damage during construction in an area with fish presence.

Site 106

Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 591527
Northing: 6157930
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 0.7 km²
Distance to Receiving Water: Partridge Crop Lake
1 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|-----|
| Wetted Width (m) | 4.7 |
| Channel Width (m) | 4.7 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|-----|
| Right Bank | 9.7 |
| Left Bank | 8.4 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 28.2 |
| Left Bank | 17.8 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | 50 |
| Instream Vegetation | 50 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 109 crosses this unnamed tributary of Partridge Crop Lake. The area has moderate habitat diversity and overwintering potential and is within close unimpeded distance of Partridge Crop Lake. Both forage and large bodied species are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable vegetated banks result in a low sensitivity rating.



Site 107

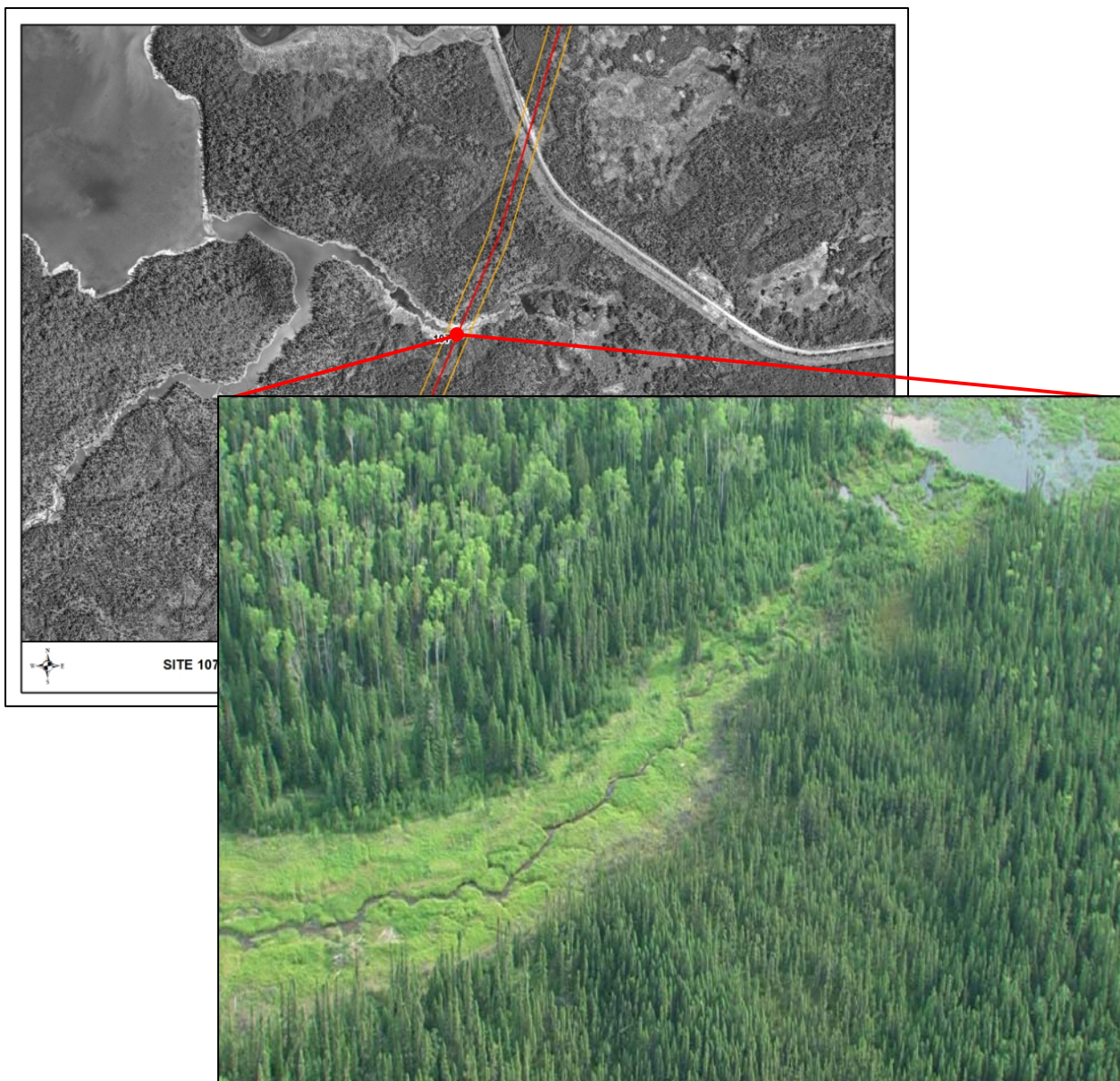
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 591129
Northing: 6156698
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 0.9 km²
Distance to Receiving Water: Partridge Crop Lake
0.5 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|-----|
| Wetted Width (m) | 9.6 |
| Channel Width (m) | 9.6 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 20.2 |
| Left Bank | 25.9 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 38.8 |
| Left Bank | 68.6 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

20

Cover Composition (% of Total)

| | |
|------------------------|-----|
| Large Woody Debris | - |
| Overhanging Vegetation | 100 |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 107 crosses this unnamed tributary of Partridge Crop Lake. The area has moderate habitat diversity and is close to Partridge Crop Lake. Forage fish as well as large bodied species are expected at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Saturated floodplain is susceptible to rutting and erosion and therefore a moderate sensitivity rating.

Site 108

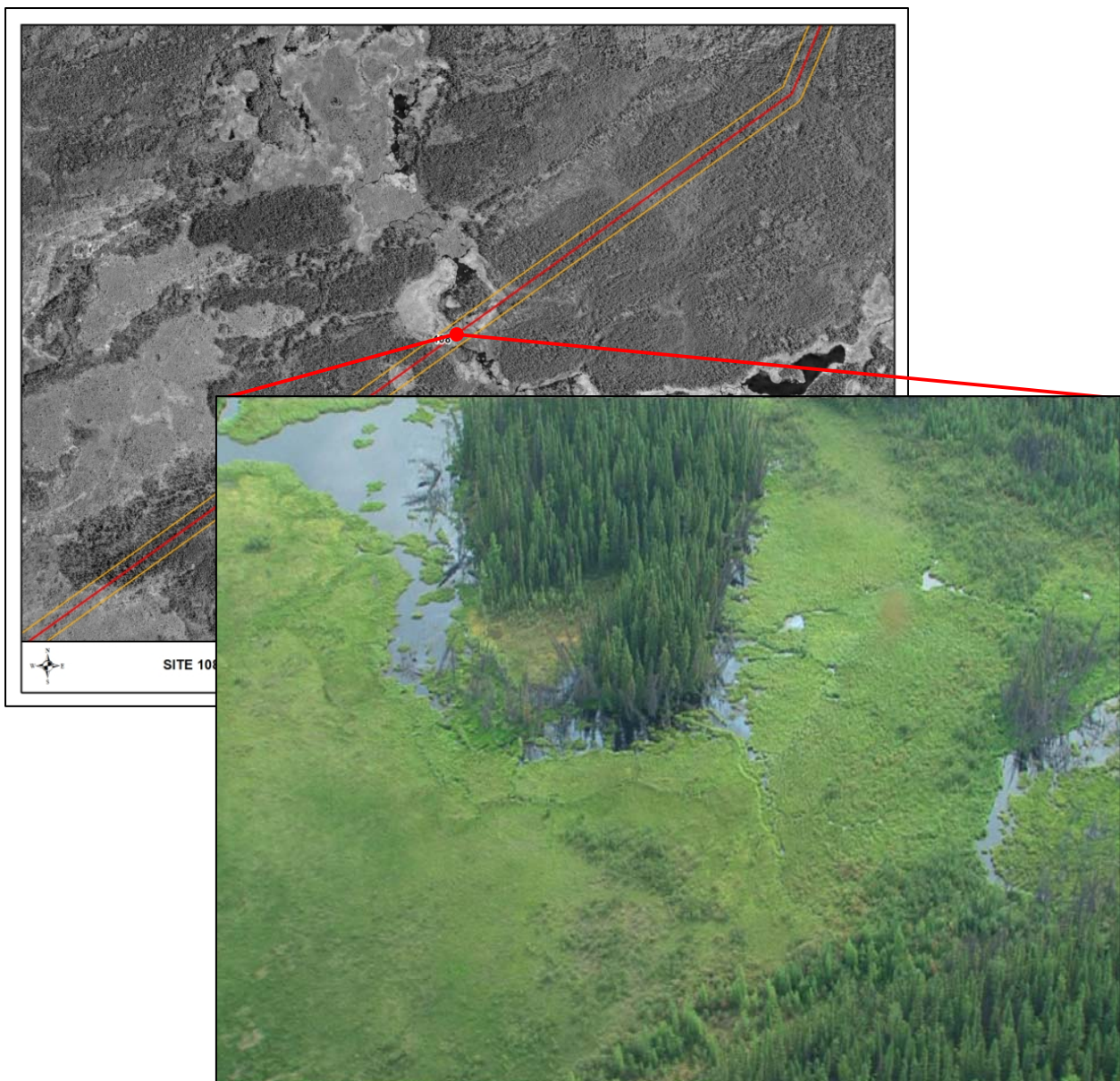
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 589219
Northing: 6153875
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 4 km²
Distance to Receiving Water: Partridge Crop Lake
4.1 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|-------|
| Wetted Width (m) | - |
| Channel Width (m) | 239.1 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|-------|
| Right Bank | 156.1 |
| Left Bank | 88.9 |

Riparian Distance (m)

| | |
|------------|-------|
| Right Bank | 217.1 |
| Left Bank | 105.1 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%) 0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%) 51

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | 5 |
| Overhanging Vegetation | 45 |
| Instream Vegetation | 50 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 108 crosses this unnamed tributary of Partridge Crop Lake. The small stream contains boreal wetland habitat with poor channel formation. Access from downstream areas limits large bodied fish access. Forage fish are expected at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The broad saturated floodplain is susceptible to rutting and erosion.



Site 109

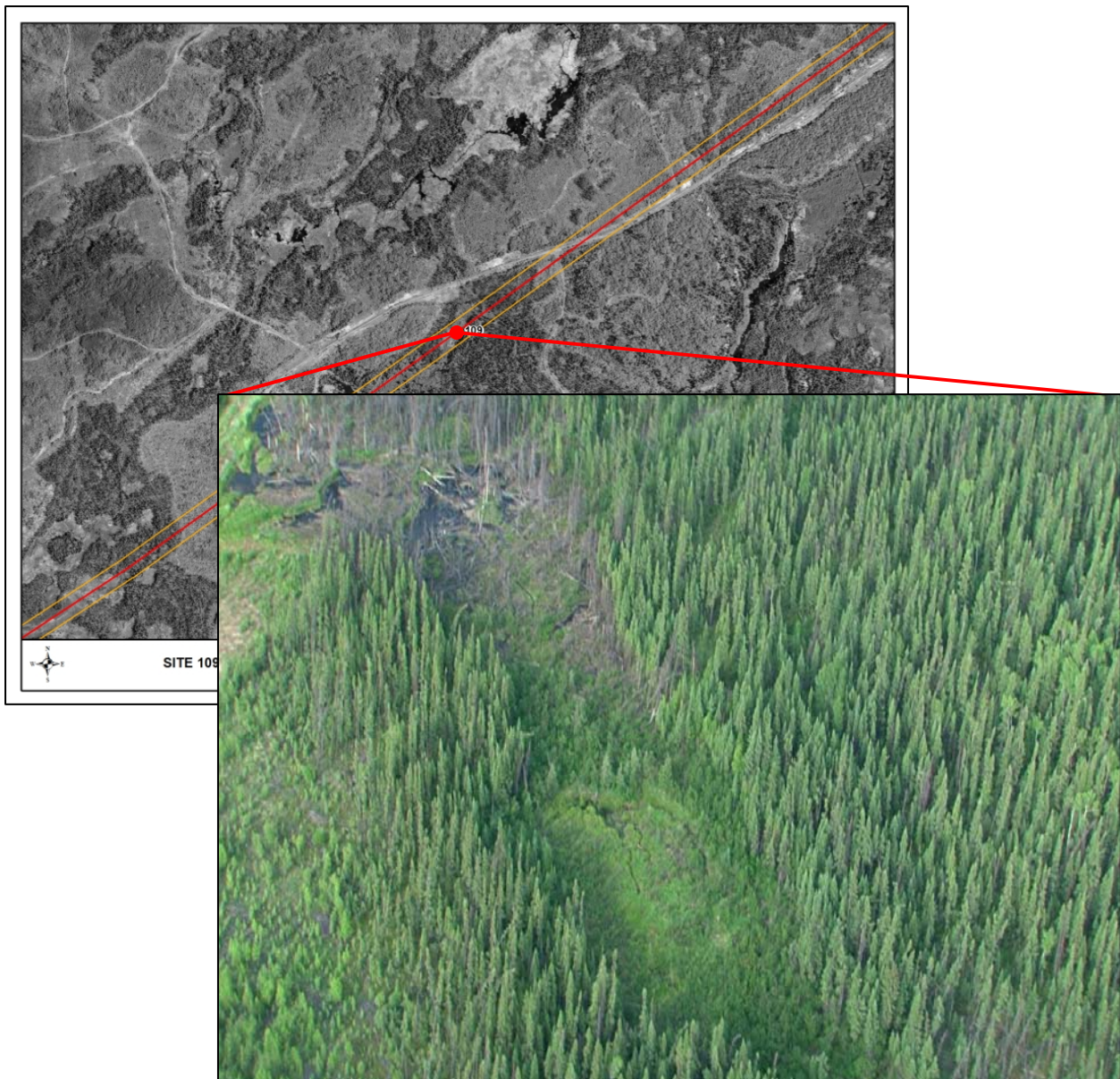
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 583153
Northing: 6149524
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 0.8 km²
Distance to Receiving Water: Partridge Crop Lake
1.5 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|---|
| Wetted Width (m) | - |
| Channel Width (m) | - |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 109 crosses this unnamed tributary of Partridge Crop Lake. The site is at the headwaters of a small stream with little flow or water. Forage fish may be found in the area where sufficient water exists.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Stable banks and marginal fish habitat result in a low sensitivity rating



Site 110

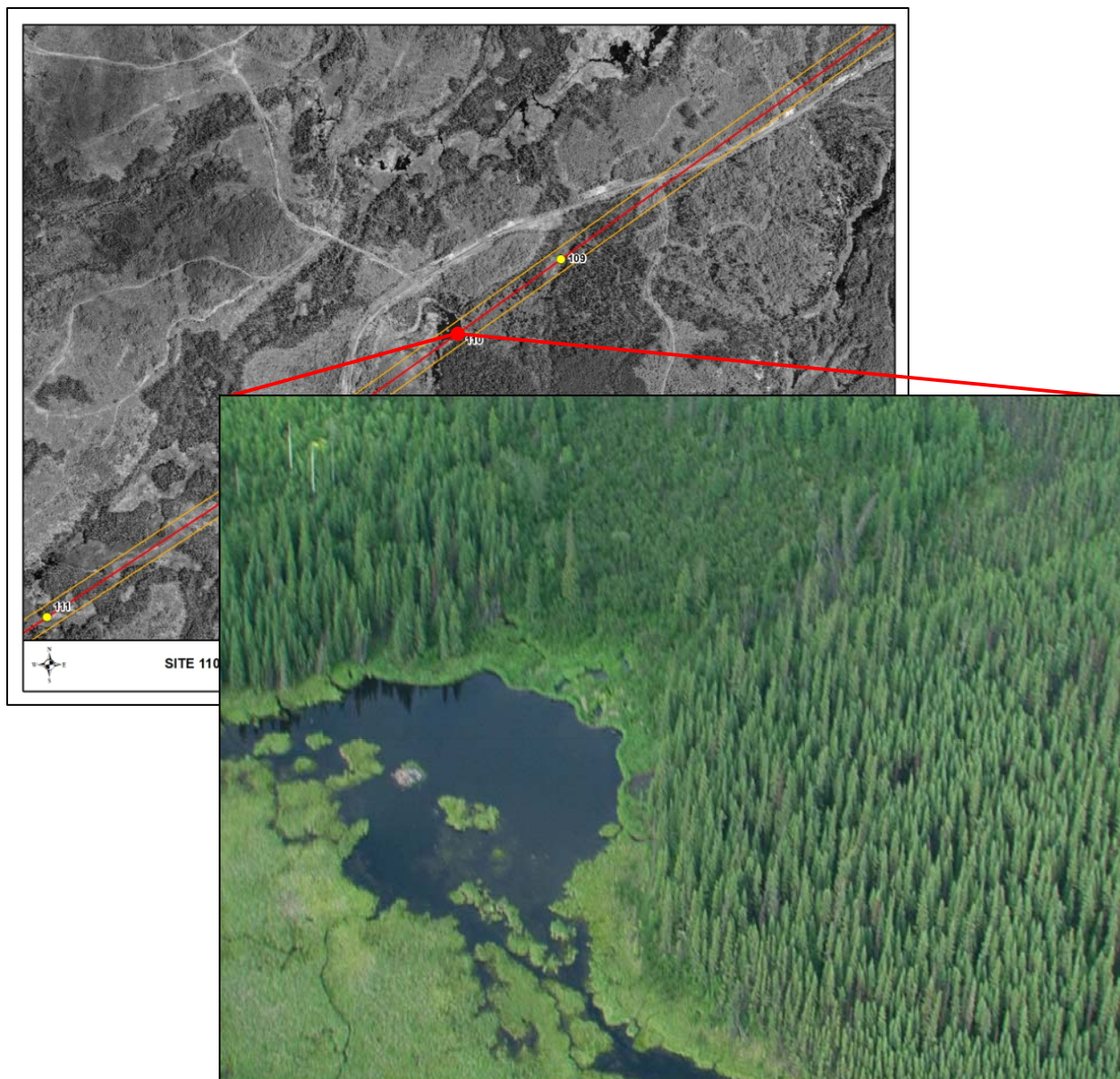
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 582835
Northing: 6149296
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 0.5 km²
Distance to Receiving Water: Partridge Crop Lake
2 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | 72.3 |
| Channel Width (m) | 72.3 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 12.1 |
| Left Bank | 76.1 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 41.6 |
| Left Bank | 87.6 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

70

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | 80 |
| Pool | 20 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 50 |
| Run | 50 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 110 crosses this unnamed tributary of Partridge Crop Lake. The site is in the headwaters of a small stream characterized by boreal wetland habitat. Forage fish species are expected.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain may be unstable and sensitive to damage within an area with fish presence.

Site 111

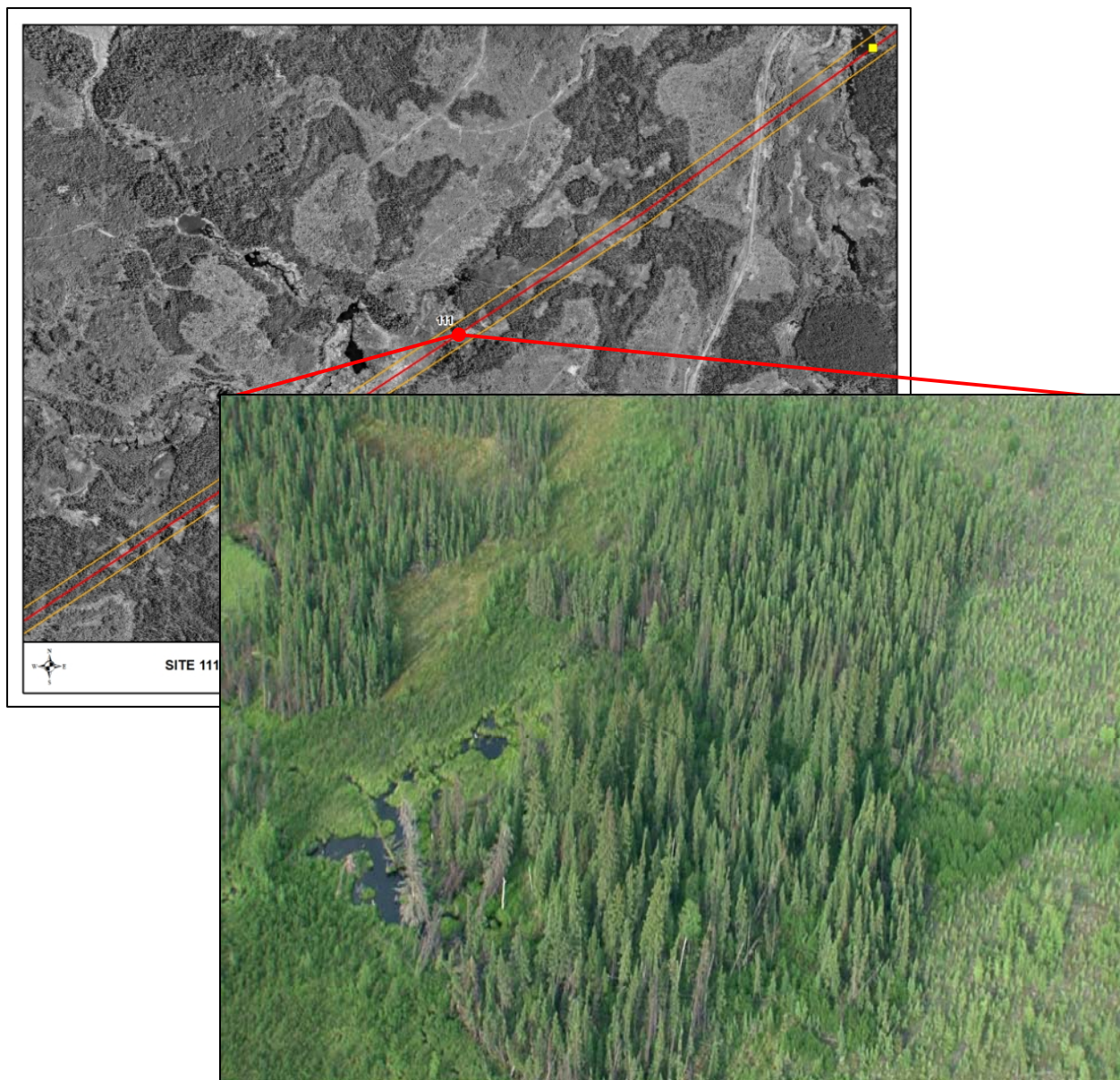
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 581555
Northing: 6148411
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 0.1 km²
Distance to Receiving Water: Partridge Crop Lake
1.6 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | - |
| Channel Width (m) | 32.8 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Distance (m)

| | |
|------------|---|
| Right Bank | - |
| Left Bank | - |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

| | |
|--|---|
| | - |
|--|---|

Substrate

Substrate Type (%)

| | |
|--------------|---|
| Fines | - |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|---|
| Pool | - |
| Run | - |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|---|----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Marginal |

Fish Presence: N/A

Comments:

The RoW at site 111 crosses this unnamed tributary of Partridge Crop Lake. The site is in the headwaters of a small stream characterized by boreal wetland habitat. Forage fish species are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain may be unstable and sensitive to damage within an area with fish presence.



Site 112

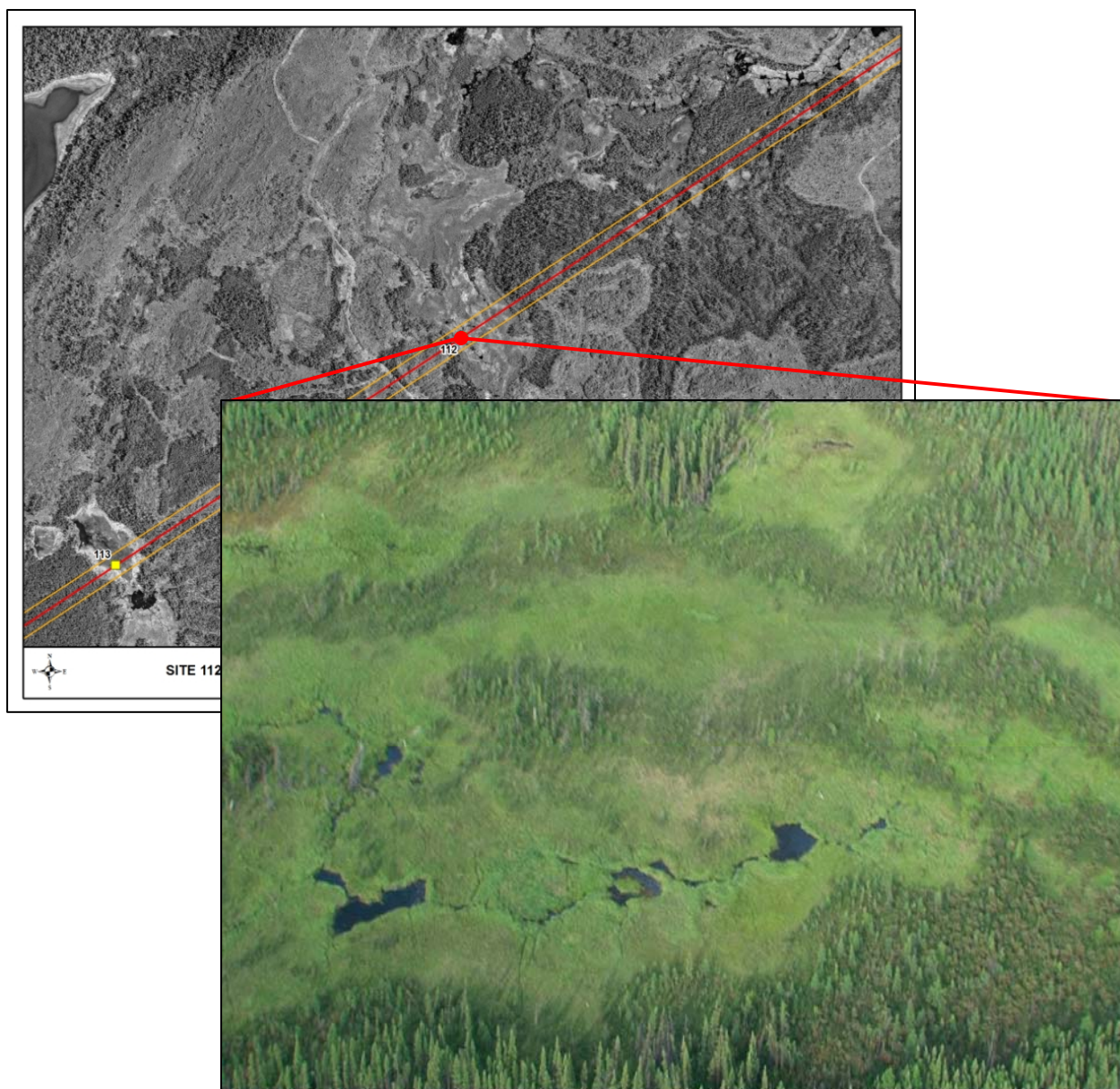
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 579961
Northing: 6147362
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: -
Distance to Receiving Water: Partridge Crop Lake
3 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|-----|
| Wetted Width (m) | 5.0 |
| Channel Width (m) | 5.0 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|-------|
| Right Bank | 161.9 |
| Left Bank | 40.9 |

Riparian Distance (m)

| | |
|------------|-------|
| Right Bank | 199.9 |
| Left Bank | 61.8 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 112 crosses this unnamed tributary of Partridge Crop Lake. The site is in the headwaters of a small stream characterized by boreal wetland habitat. Forage fish species are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain may be unstable and sensitive to damage within an area with fish presence.

Site 113

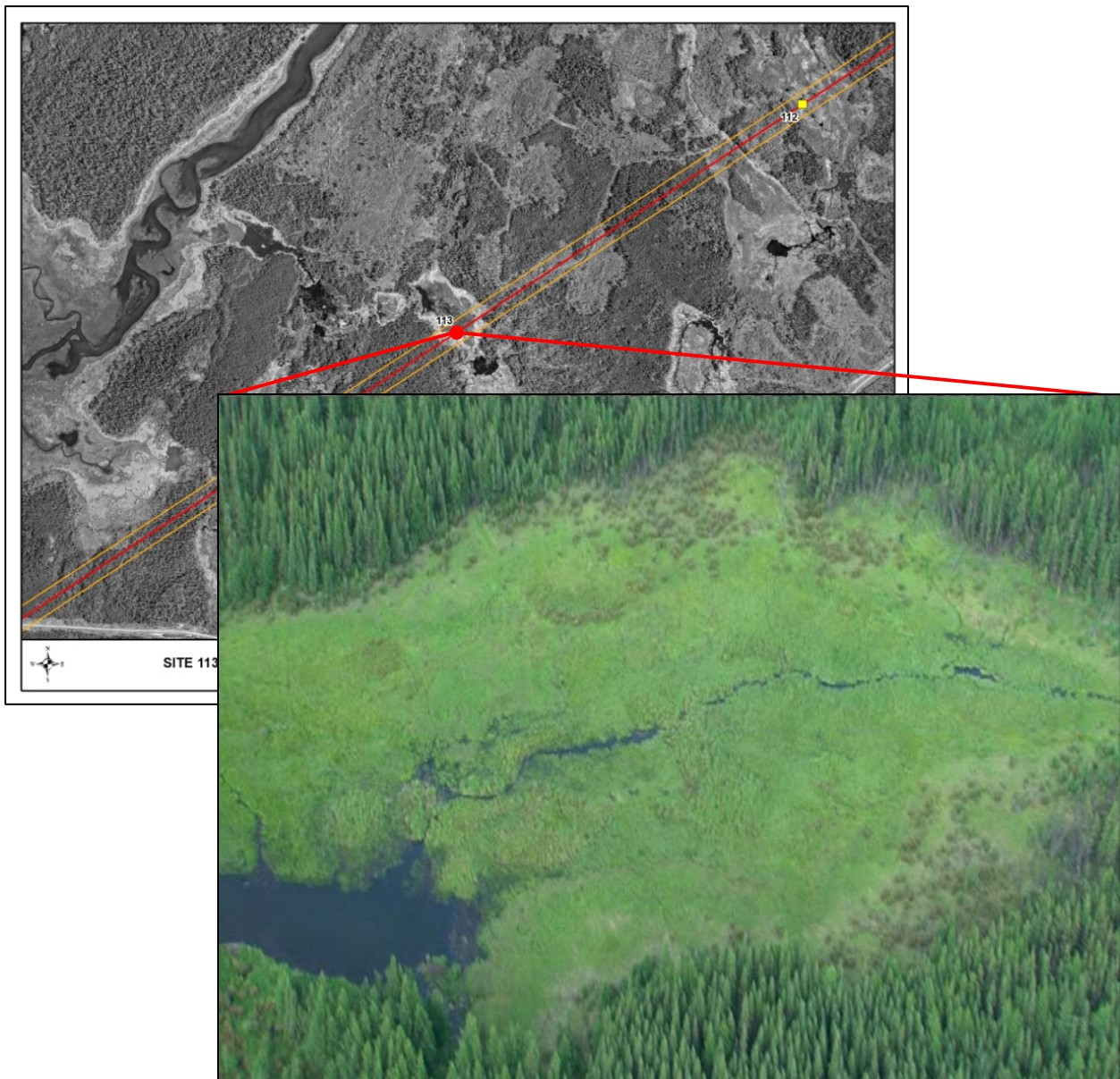
Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 578892
Northing: 6146658
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: -
Distance to Receiving Water: Partridge Crop Lake
0.5 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|-----|
| Wetted Width (m) | 2.8 |
| Channel Width (m) | 2.8 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|-------|
| Right Bank | 105.2 |
| Left Bank | 86.8 |

Riparian Distance (m)

| | |
|------------|-------|
| Right Bank | 168 |
| Left Bank | 104.3 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

20

Cover Composition (% of Total)

| | |
|------------------------|-----|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | 100 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 10 |
| Run | 90 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 113 crosses this unnamed tributary of Partridge Crop Lake. The site is in the headwaters of a small stream characterized by boreal wetland habitat. Forage fish species are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain may be unstable and sensitive to damage within an area with fish presence.



Site 114

Unnamed Tributary of Partridge Crop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 577301
Northing: 6145610
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Moderate
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 7.9 km²
Distance to Receiving Water: Partridge Crop Lake
0.5 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | 47.7 |
| Channel Width (m) | 47.7 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 41.6 |
| Left Bank | 94.2 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 59.3 |
| Left Bank | 158 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

30

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | 90 |
| Pool | 10 |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 20 |
| Run | 80 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Important

Fish Presence: N/A

Comments:

The RoW at site 114 crosses this unnamed tributary of Partridge Crop Lake close to the lake. The area has moderate habitat diversity and overwintering potential. Minnow and large bodied fish such as pike are expected at site

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Within an area of fish presence, the floodplain region is unstable and sensitive to damage during construction.

Site 115

Unnamed Tributary of Partridge Crop Lake



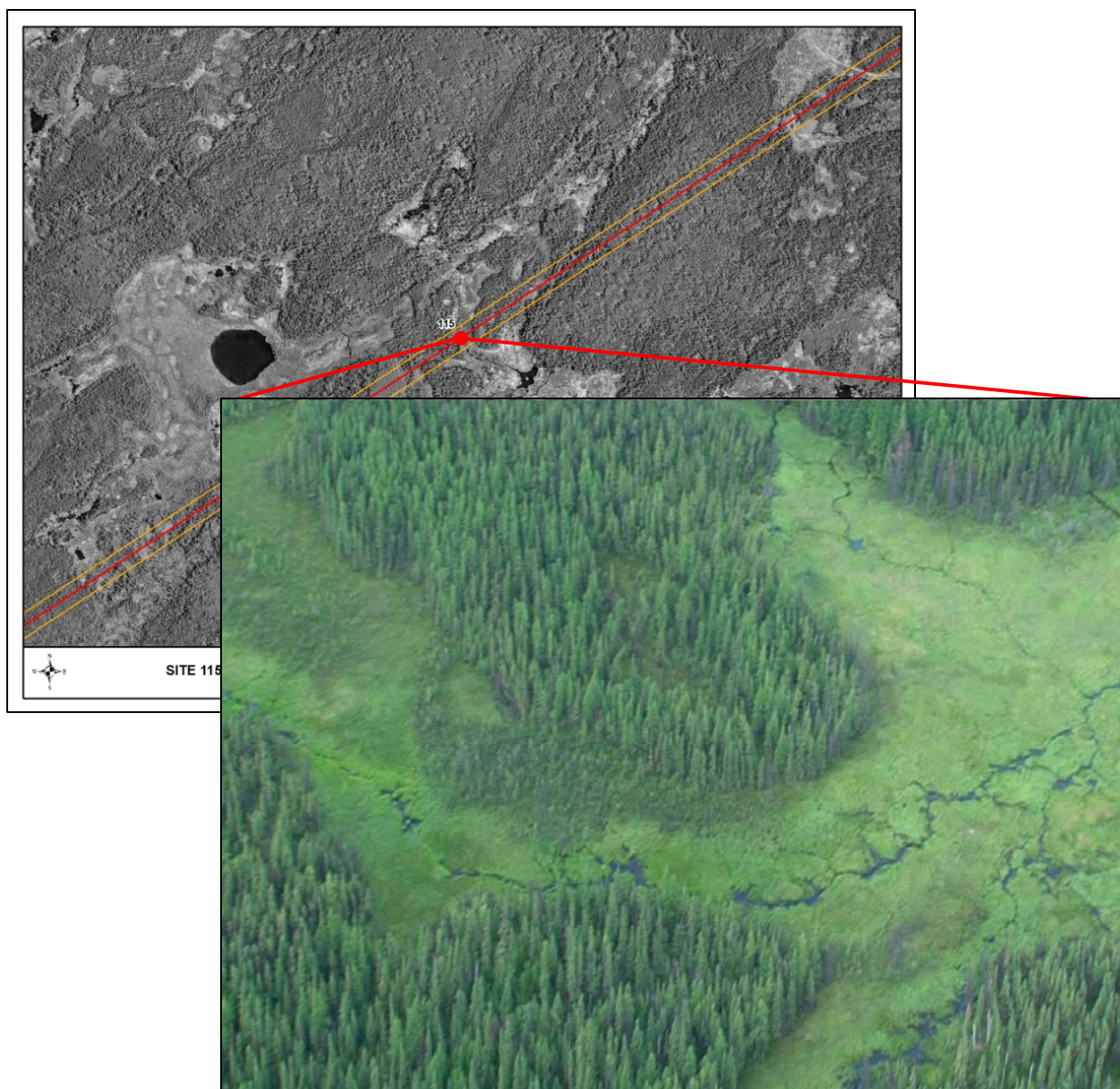
Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 574802
Northing: 6143965
Data Source: DOI.Video



General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 0.7 km²
Distance to Receiving Water: Partridge Crop Lake
5 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | 1.86 |
| Channel Width (m) | 1.86 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 77.5 |
| Left Bank | 15.3 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 59.5 |
| Left Bank | 35 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

0

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|-----|
| Pool | - |
| Run | 100 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 115 crosses this unnamed tributary of Partridge Crop Lake. The site is in the headwaters of a small stream characterized by boreal wetland habitat. Forage fish species are expected at site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain may be unstable and sensitive to damage within an area with fish presence.

Site 116

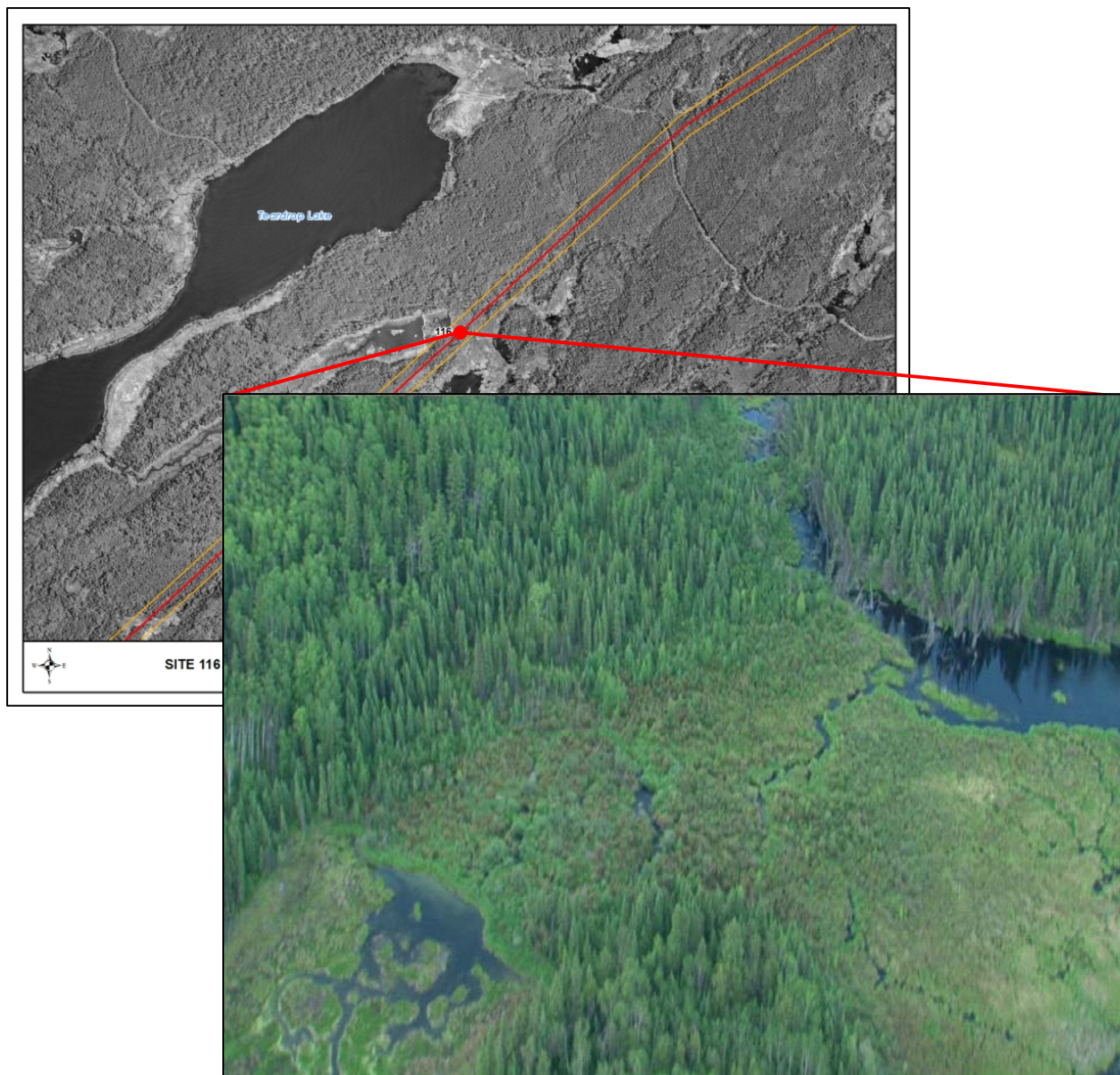
Unnamed Tributary of Teardrop Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 571920
Northing: 6141885
Data Source: DOI.Video

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 4.7 km²
Distance to Receiving Water: Teardrop Lake 1.4 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | 4.74 |
| Channel Width (m) | 4.74 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 61.0 |
| Left Bank | 10.9 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 80.8 |
| Left Bank | 33.9 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | - |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

20

Cover Composition (% of Total)

| | |
|------------------------|----|
| Large Woody Debris | - |
| Overhanging Vegetation | 60 |
| Instream Vegetation | 40 |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 5 |
| Run | 95 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present Yes

DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

Comments:

The RoW at site 116 crosses this unnamed tributary of Teardrop Lake. The small stream consists of a small channel within a broad saturated floodplain with limited fish potential. Forage fish and possibly large bodied species such as pike from Teardrop Lake are expected at this site.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The floodplain region is sensitive to damage during construction.

Site 117

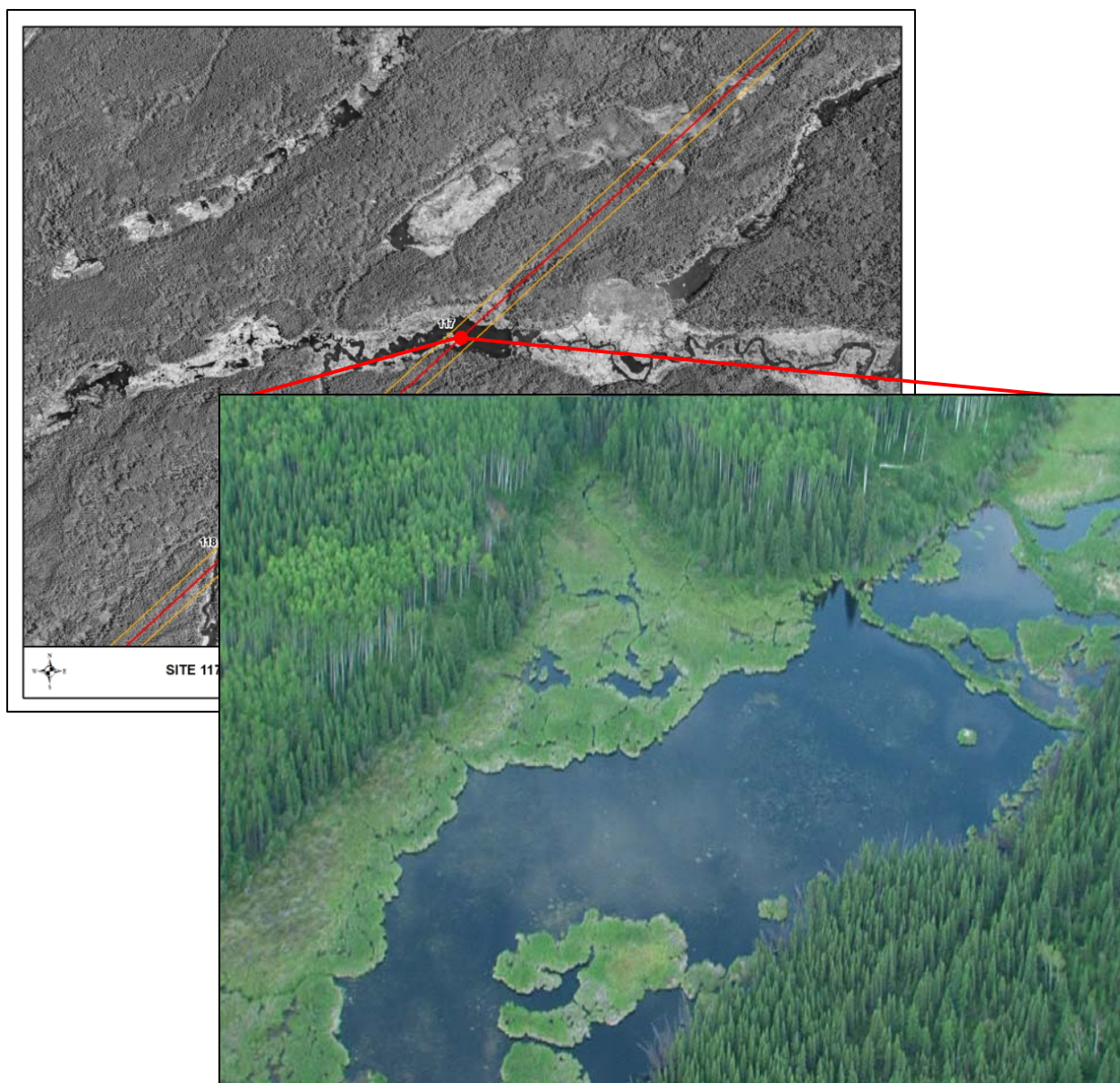
Unnamed Tributary of Wintering Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 570089
Northing: 6140201
Data Source: DOI.Video. Site Visit

General Morphology

Stream/Lake: Stream
Pattern: IM
Confinement: UN
Stage: Low
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 26.5 km²
Distance to Receiving Water: Wintering Lake
2.5 km



Site Conditions

+ Physical Data

Survey Date: 14 October 2010

Stage: High

Transect

| | 1 | 2 | 3 | 4 | 5 |
|----------------------------|---|-------|-------|--------|--------|
| Distance from Crossing (m) | 0 | 33 US | 33 DS | 150 US | 150 DS |

Channel Profile

Channel and Flow

| | | | | | |
|-------------------|------|---|---|---|---|
| Channel Width (m) | ~120 | - | - | - | - |
| Wetted Width (m) | ~120 | - | - | - | - |

Water Depths (m)

| | | | | | |
|-----|-----|---|---|---|---|
| 25% | 0.5 | - | - | - | - |
| 50% | - | - | - | - | - |
| 75% | - | - | - | - | - |
| Max | - | - | - | - | - |

Banks

| | | | | | |
|--------------------------|-----|---|---|---|---|
| Right Bank Stability (%) | 100 | - | - | - | - |
| Left Bank Stability (%) | 100 | - | - | - | - |
| Right Bank Slope (°) | ~20 | - | - | - | - |
| Left Bank Slope (°) | ~20 | - | - | - | - |

Riparian

Floodplain Distance (m)

| | | | | | |
|------------|---|---|---|---|---|
| Right Bank | - | - | - | - | - |
| Left Bank | - | - | - | - | - |

Riparian Distance (m)

| | | | | | |
|------------|------|---|---|---|---|
| Right Bank | ~2.0 | - | - | - | - |
| Left Bank | 2.0 | - | - | - | - |

Riparian Vegetation Type (Y/N)

| | | | | | |
|----------------|---|---|---|---|---|
| None | - | - | - | - | - |
| Grasses/sedges | - | - | - | - | - |
| Shrubs | - | - | - | - | - |
| Conifers | Y | - | - | - | - |
| Deciduous | - | - | - | - | - |
| Mixed Forest | - | - | - | - | - |

Canopy Cover (%)

| | | | | | |
|--|---|---|---|---|---|
| | 5 | - | - | - | - |
|--|---|---|---|---|---|

Substrate Type (%)

| | | | | | |
|--------------|----|---|---|---|---|
| Fines | 80 | - | - | - | - |
| Small Gravel | - | - | - | - | - |
| Large Gravel | - | - | - | - | - |
| Cobble | - | - | - | - | - |
| Boulder | 20 | - | - | - | - |
| Bedrock | - | - | - | - | - |

Habitat Type

Habitat Composition (%)

| | | | | | |
|--------|-----|---|---|---|---|
| Pool | - | - | - | - | - |
| Run | 100 | - | - | - | - |
| Riffle | - | - | - | - | - |

Cover Types

| | | |
|--------------------------------|----|----|
| Total Cover Available (%) | US | DS |
| Cover Composition (% of Total) | 60 | 60 |
| Large Woody Debris | 10 | 10 |
| Overhanging Vegetation | - | - |
| Instream Vegetation | 90 | 90 |
| Pool | - | - |
| Boulder | - | - |
| Undercut Bank | - | - |





Overhead view of site 117.



West view at site 117.



East view at site 117.



Beaver lodge at site 117.

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 117 crosses the unnamed tributary of Wintering Lake. This site provides moderate habitat diversity for fish including habitat for spawning, rearing, feeding, and migration. Habitat consists of a broad flooded channel with a saturated floodplain and slow velocity conditions. Beaver dams may impede fish movements, especially indicator fish species, which results in marginal fish habitat.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

The saturated floodplain is susceptible to rutting and erosion.

Site 118

Unnamed Tributary of Wintering Lake



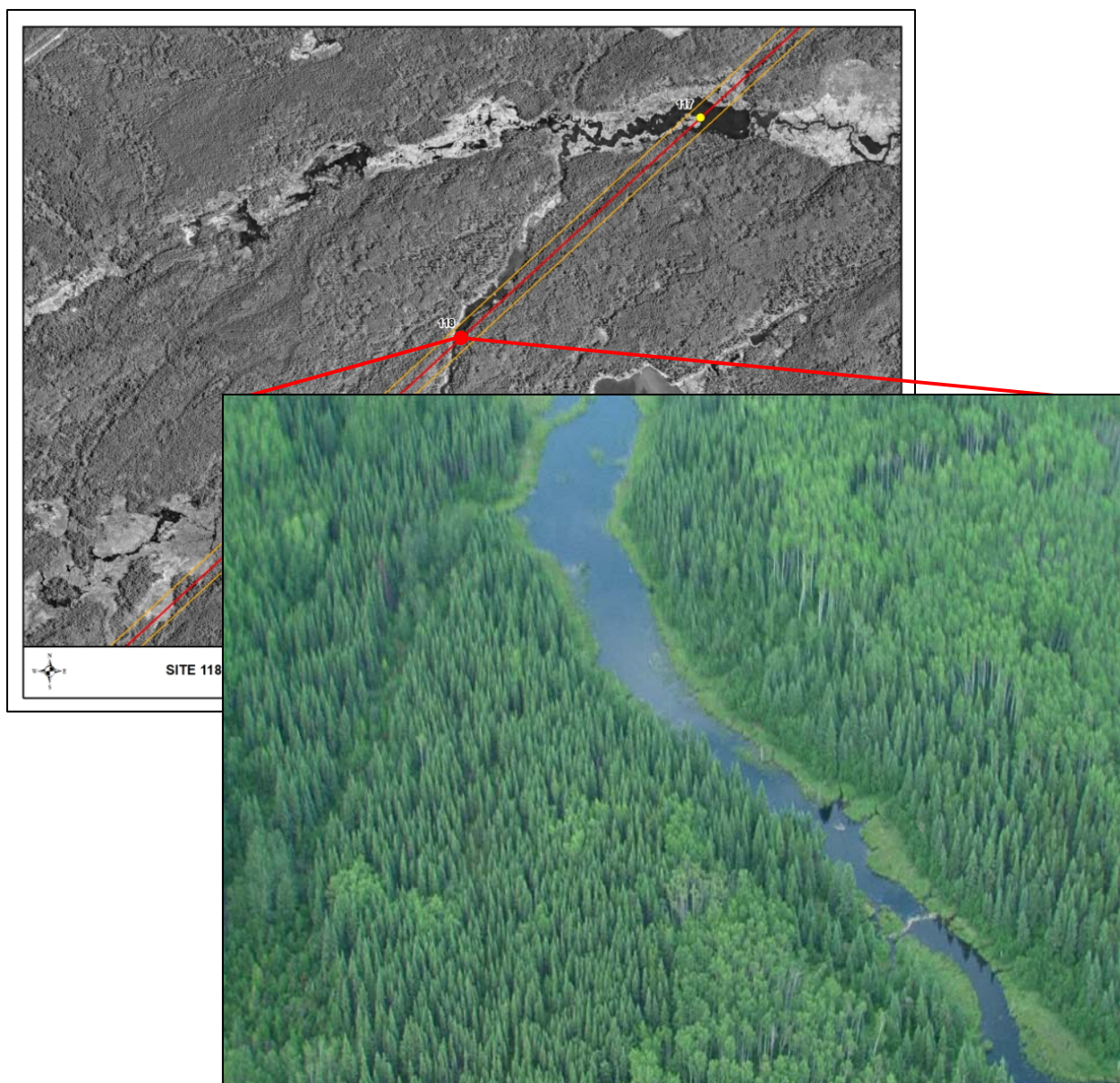
Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 569354
Northing: 6139525
Data Source: DOI.Video. Site Visit



General Morphology

Stream/Lake: Stream
Pattern: IR
Confinement: UN
Stage: Low
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 20.5 km²
Distance to Receiving Water: Wintering Lake
4.5 km



Site Conditions

+ Physical Data

Survey Date: 14 October 2010

Stage: High

Transect

| | 1 | 2 | 3 | 4 | 5 |
|----------------------------|----------|----------|----------|----------|----------|
| Distance from Crossing (m) | 0 | 33 US | 33 DS | 150 US | 150 DS |

Channel Profile

Channel and Flow

| | | | | | |
|-------------------|------|---|---|---|---|
| Channel Width (m) | 11.8 | - | - | - | - |
| Wetted Width (m) | 11.8 | - | - | - | - |

Water Depths (m)

| | | | | | |
|-----|---|---|---|---|---|
| 25% | - | - | - | - | - |
| 50% | - | - | - | - | - |
| 75% | - | - | - | - | - |
| Max | - | - | - | - | - |

Banks

| | | | | | |
|--------------------------|-----|---|---|---|---|
| Right Bank Stability (%) | 100 | - | - | - | - |
| Left Bank Stability (%) | 100 | - | - | - | - |
| Right Bank Slope (°) | - | - | - | - | - |
| Left Bank Slope (°) | - | - | - | - | - |

Riparian

Floodplain Distance (m)

| | | | | | |
|------------|------|---|---|---|---|
| Right Bank | - | - | - | - | - |
| Left Bank | 17.6 | - | - | - | - |

Riparian Distance (m)

| | | | | | |
|------------|------|---|---|---|---|
| Right Bank | 37.6 | - | - | - | - |
| Left Bank | 31.2 | - | - | - | - |

Riparian Vegetation Type (Y/N)

| | | | | | |
|----------------|---|---|---|---|---|
| None | - | - | - | - | - |
| Grasses/sedges | Y | - | - | - | - |
| Shrubs | - | - | - | - | - |
| Conifers | Y | - | - | - | - |
| Deciduous | - | - | - | - | - |
| Mixed Forest | - | - | - | - | - |

Canopy Cover (%)

| | | | | | |
|---|---|---|---|---|---|
| 0 | - | - | - | - | - |
|---|---|---|---|---|---|

Substrate Type (%)

| | | | | | |
|--------------|-----|---|---|---|---|
| Fines | 100 | - | - | - | - |
| Small Gravel | - | - | - | - | - |
| Large Gravel | - | - | - | - | - |
| Cobble | - | - | - | - | - |
| Boulder | - | - | - | - | - |
| Bedrock | - | - | - | - | - |

Habitat Type

Habitat Composition (%)

| | | | | | |
|--------|-----|---|---|---|---|
| Pool | - | - | - | - | - |
| Run | 100 | - | - | - | - |
| Riffle | - | - | - | - | - |

Cover Types

| | | |
|---------------------------------------|----|----|
| Total Cover Available (%) | US | DS |
| Cover Composition (% of Total) | 5 | 5 |
| Large Woody Debris | 50 | 50 |
| Overhanging Vegetation | - | - |
| Instream Vegetation | 50 | 50 |
| Pool | - | - |
| Boulder | - | - |
| Undercut Bank | - | - |





Overhead view of site 118.



Aerial upstream (South) view at site 118.



Aerial downstream (North) view at site 118.



Beaver dam upstream of site 118.

Fish Habitat Classification and Sensitivity

+ Fish Habitat

| | |
|--|-----------|
| Fish Habitat Present | Yes |
| DFO Manitoba Agricultural Watershed Classification: | - |
| Fish Habitat Classification: | Important |

Fish Presence: N/A

Comments:

The RoW at site 118 crosses the unnamed tributary connects Gordon Brown Lake with Wintering Lake. This site provides high habitat diversity for fish including habitat for spawning, rearing, feeding, and migration. Various species and life stages of fish are expected at this site. Beaver dams may seasonally impede fish movements.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Though important fish habitat, stable banks result in a low sensitivity rating.

Site 119

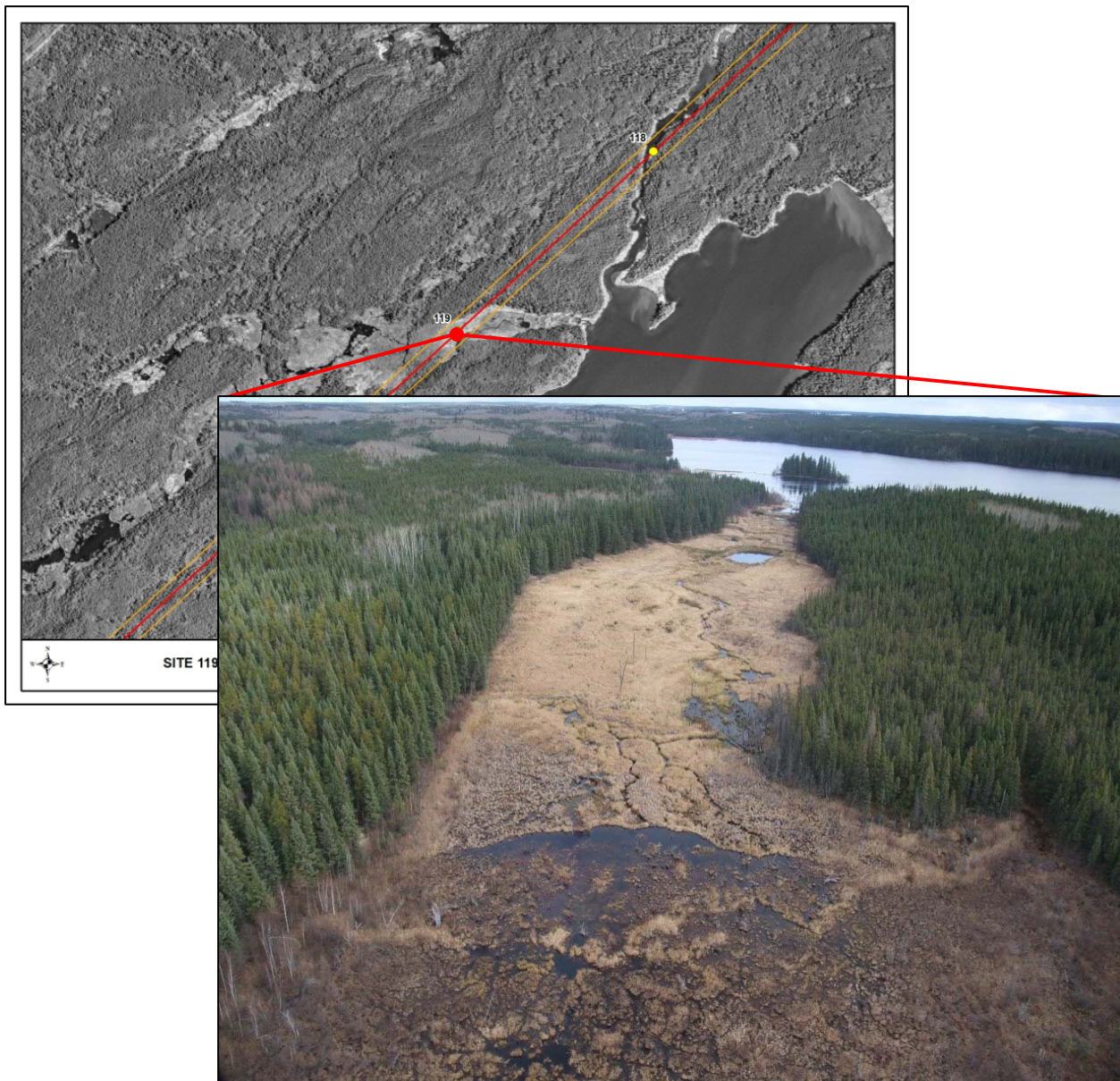
Unnamed Tributary of Gordon Brown Lake

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 568747
Northing: 6138967
Data Source: DOI.Video. Site Visit

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: FC
Stage: Low
Flow Regime: Intermittent
Morphology: LC
U/S Drainage: 1.3 km²
Distance to Receiving Water: Gordon Brown Lake
0.3 km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

| | |
|-------------------|------|
| Wetted Width (m) | - |
| Channel Width (m) | 62.6 |

Banks (%)

| | |
|----------------------|-----|
| Right Bank Stability | 100 |
| Left Bank Stability | 100 |

Riparian

Floodplain Distance (m)

| | |
|------------|------|
| Right Bank | 31.6 |
| Left Bank | 31.5 |

Riparian Distance (m)

| | |
|------------|------|
| Right Bank | 55.6 |
| Left Bank | 42.9 |

Riparian Vegetation Type (Y/N)

| | |
|----------------|---|
| None | - |
| Grasses/sedges | Y |
| Shrubs | Y |
| Conifers | Y |
| Deciduous | - |
| Mixed Forest | - |

Canopy Cover (%)

Trace

Substrate

Substrate Type (%)

| | |
|--------------|-----|
| Fines | 100 |
| Small Gravel | - |
| Large Gravel | - |
| Cobble | - |
| Boulder | - |

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

| | |
|------------------------|---|
| Large Woody Debris | - |
| Overhanging Vegetation | - |
| Instream Vegetation | - |
| Pool | - |
| Boulder | - |
| Undercut Bank | - |
| Surface Turbulence | - |
| Turbidity | - |

Habitat Type

Habitat Composition

| | |
|--------|----|
| Pool | 10 |
| Run | 90 |
| Flat | - |
| Riffle | - |
| Rapid | - |

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW at site 119 crosses this unnamed tributary of Gordon Brown Lake close to Gordon Brown Lake proper. The tributary is an intermittent stream with a broad saturated floodplain. Minnow species are expected at this site and possibly large bodied species during spring spawn.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Floodplain region is sensitive to damage during construction.