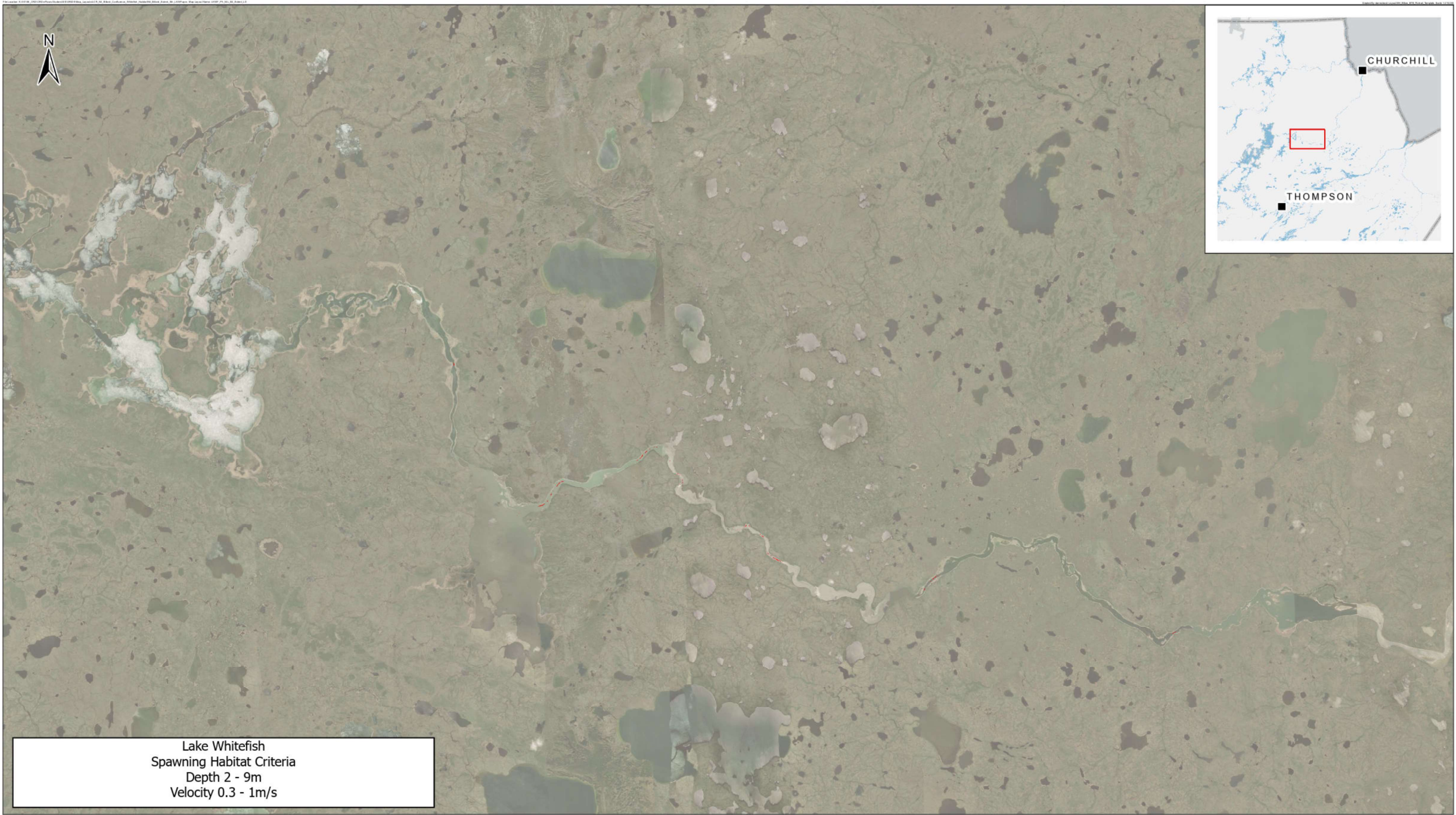


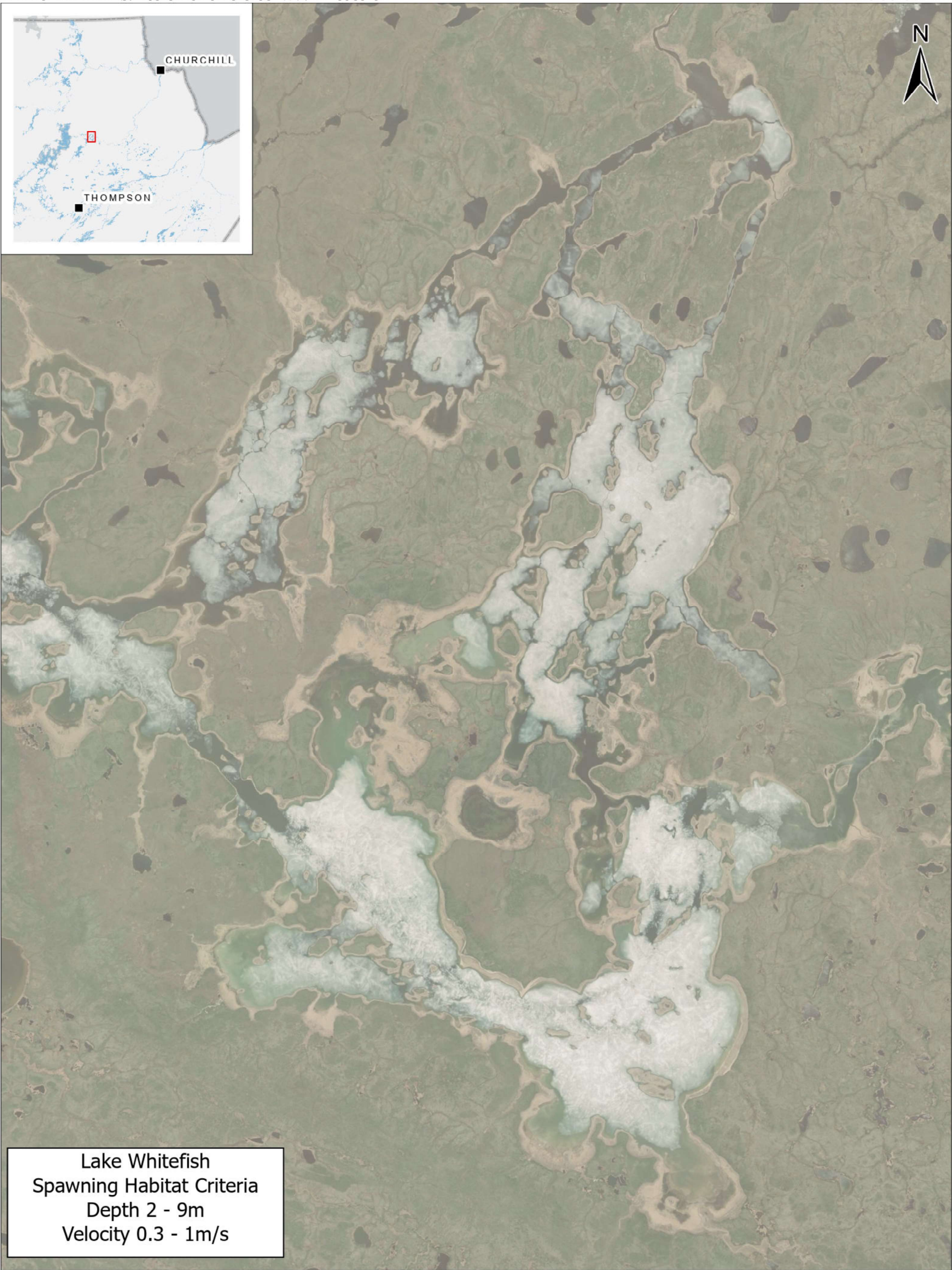




|                                                                                                               |  |                            |                             |
|---------------------------------------------------------------------------------------------------------------|--|----------------------------|-----------------------------|
| DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Base Map: ArcGIS Map Service 2025 06 16 |  |                            |                             |
| CREATED BY:<br>Energy Operations and Water Planning                                                           |  |                            |                             |
| COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                   |  | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                           |  | VERSION NO:                | QA/QC:                      |

**Northern Indian Lake to Billard Lake**  
**Whitefish Spawning Habitat**  
5th Percentile  
54 m<sup>3</sup>/s





|  |                                                                                                                |                            |                             |
|--|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|  | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|  |                                                                                                                | VERSION NO:                | QA/QC:                      |

**Northern Indian Lake**  
**Whitefish Spawning Habitat**  
5th Percentile  
54 m<sup>3</sup>/s







DATA SOURCE:  
Modelling Data: Manitoba Hydro - Hydraulic Modelling  
Basemap: ArcGIS Map Service 2025 06 16

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM:  
WGS 1984 UTM Zone 14N

DATE CREATED:  
28-May-26

REVISION DATE:  
22-JUL-26

00.851.7 Kilometers

00.81.6 Miles

VERSION NO:  
QA/QC:

Northern Indian Lake to Fidler Lake

Whitefish Spawning Habitat

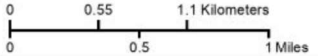
5th Percentile

54 m<sup>3</sup>/s

M1-LKWF-P5-NILFL





|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                                                                                    |                             | VERSION NO:                | QA/QC:                      |

Fidler Lake

Whitefish Spawning Habitat

5th Percentile

54 m<sup>3</sup>/s















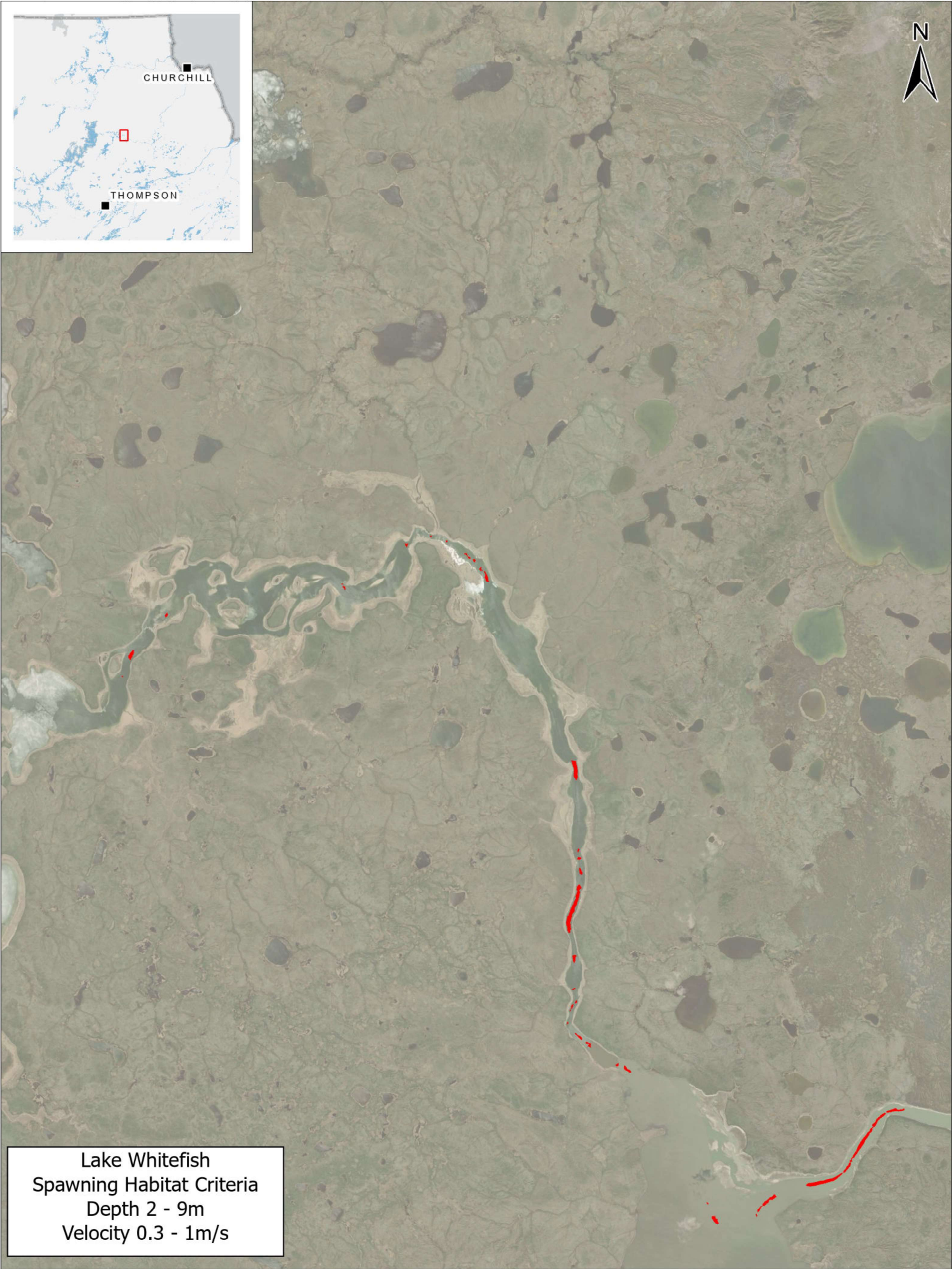


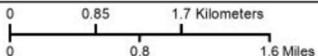
Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m/s

|  |                                                                                                                |                            |                             |
|--|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|  | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|  |                                                                                                                | VERSION NO:                | QA/QC:                      |

**Northern Indian Lake**  
**Whitefish Spawning Habitat**  
25th Percentile  
100 m<sup>3</sup>/s





|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                                                                                    |                             | VERSION NO:                | QA/QC:                      |

**Northern Indian Lake to Fidler Lake**  
**Whitefish Spawning Habitat**  
25th Percentile  
100 m<sup>3</sup>/s





|  |                                                                                                                |                            |                             |
|--|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|  | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|  |                                                                                                                | VERSION NO:                | QA/QC:                      |

**Fidler Lake**  
**Whitefish Spawning Habitat**  
25th Percentile  
100 m<sup>3</sup>/s

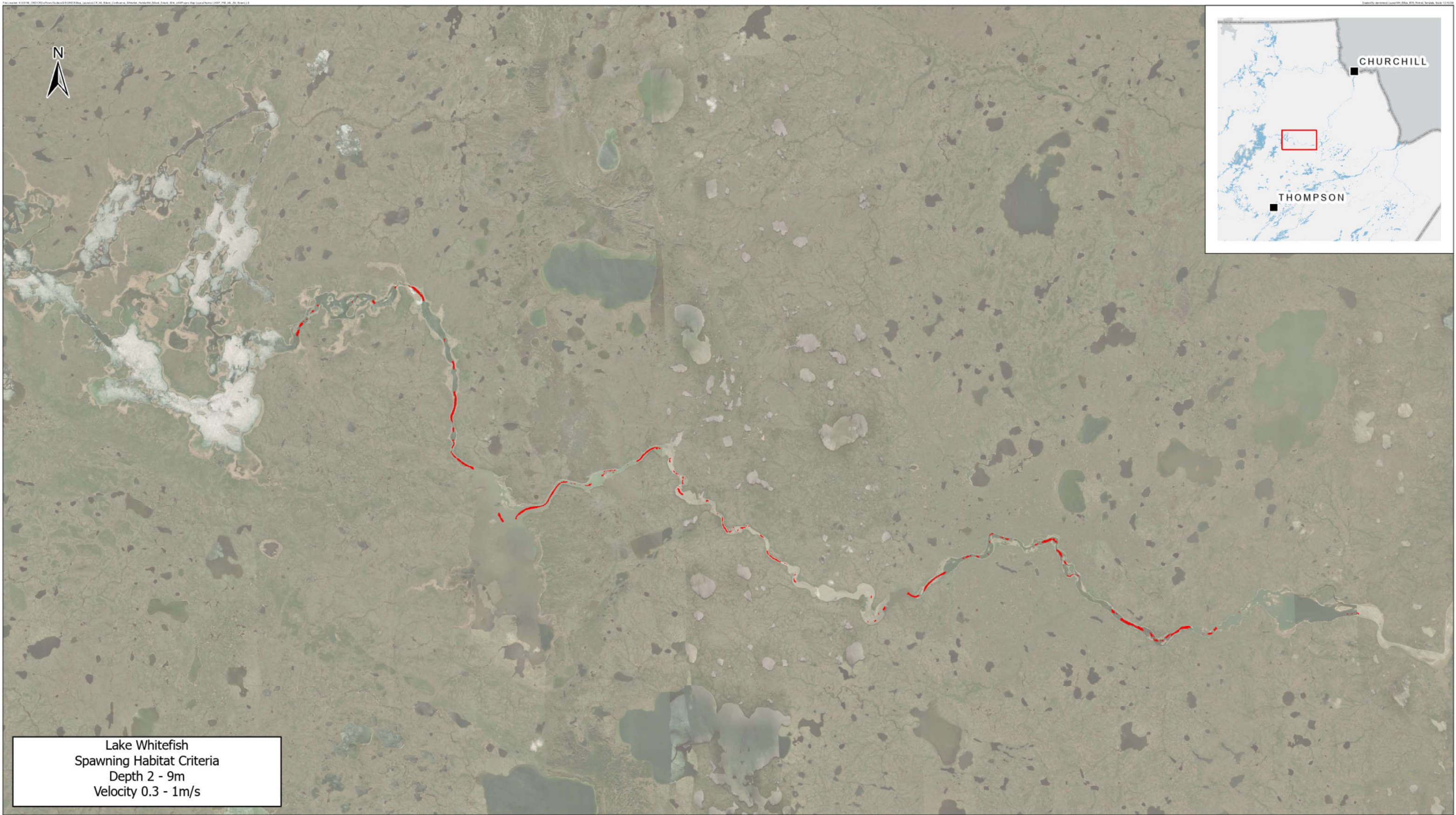














DATA SOURCE:  
Modeling Data: Manitoba Hydro - Hydraulic Modeling  
Basemap: ArcGIS Map Service 2025 06 16

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM:  
WGS 1984 UTM Zone 14N

010 Kilometers

00 Miles

DATE CREATED:  
28-May-26

REVISION DATE:  
23-JUL-26

VERSION NO:

GAUGE:

**Northern Indian Lake to Billard Lake**

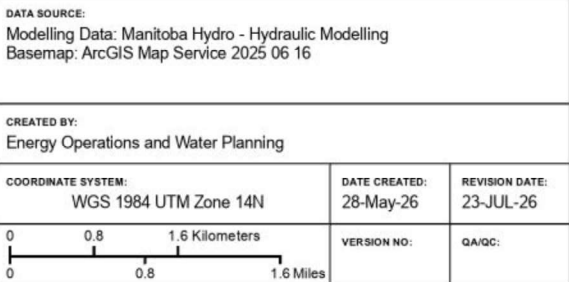
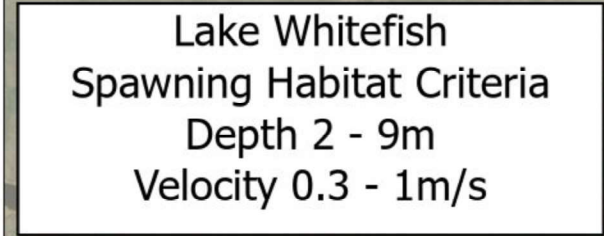
**Whitefish Spawning Habitat**

50th Percentile

164 m<sup>3</sup>/s

M1-LKWF-P50-ALL

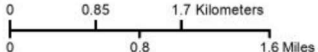




**M1-LKWF-P50-NIL**





|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>23-JUL-26 |
|                                                                                    |                             | VERSION NO:                | QA/QC:                      |

**Northern Indian Lake to Fidler Lake**  
**Whitefish Spawning Habitat**  
50th Percentile  
164 m<sup>3</sup>/s





|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>23-JUL-26 |
|                                                                                    |                             | VERSION NO:                | QA/QC:                      |

Fidler Lake

Whitefish Spawning Habitat

50th Percentile

164 m<sup>3</sup>/s





Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m/s



|                                                                                     |                                                                                                              |                            |                                                                                                          |  |                             |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------|--|-----------------------------|
|  | DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            | <b>Fidler to Billard Lake<br/>Whitefish Spawning Habitat</b><br>50th Percentile<br>164 m <sup>3</sup> /s |  |                             |
|                                                                                     | CREATED BY:<br>Energy Operations and Water Planning                                                          |                            |                                                                                                          |  |                             |
|                                                                                     | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                  | DATE CREATED:<br>28-May-26 |                                                                                                          |  | REVISION DATE:<br>23-JUL-26 |
|                                                                                     | 0 2.5 5 Kilometers<br>0 2 4 Miles                                                                            | VERSION NO:                |                                                                                                          |  | GAUGE:                      |















DATA SOURCE:  
Modelling Data: Manitoba Hydro - Hydraulic Modelling  
Basemap: ArcGIS Map Service 2025 06 16

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM:  
WGS 1984 UTM Zone 14N

DATE CREATED:  
28-May-26

REVISION DATE:  
22-JUL-26

0 0.8 1.6 Kilometers

0 0.8 1.6 Miles

Northern Indian Lake  
Whitefish Spawning Habitat  
75th Percentile  
519 m<sup>3</sup>/s

M1-LKWF-P75-NIL





|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                                                                                    | <div><div>00.851.7 Kilometers</div><div>00.81.6 Miles</div></div>                                              | VERSION NO:                | QA/QC:                      |

Northern Indian Lake to Fidler Lake  
Whitefish Spawning Habitat  
75th Percentile  
519 m<sup>3</sup>/s





|  |                                                                                                                |                            |                             |
|--|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|  | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|  | 0 0.55 1.1 Kilometers<br>0 0.5 1 Miles                                                                         | VERSION NO:                | QA/QC:                      |

**Fidler Lake**

**Whitefish Spawning Habitat**

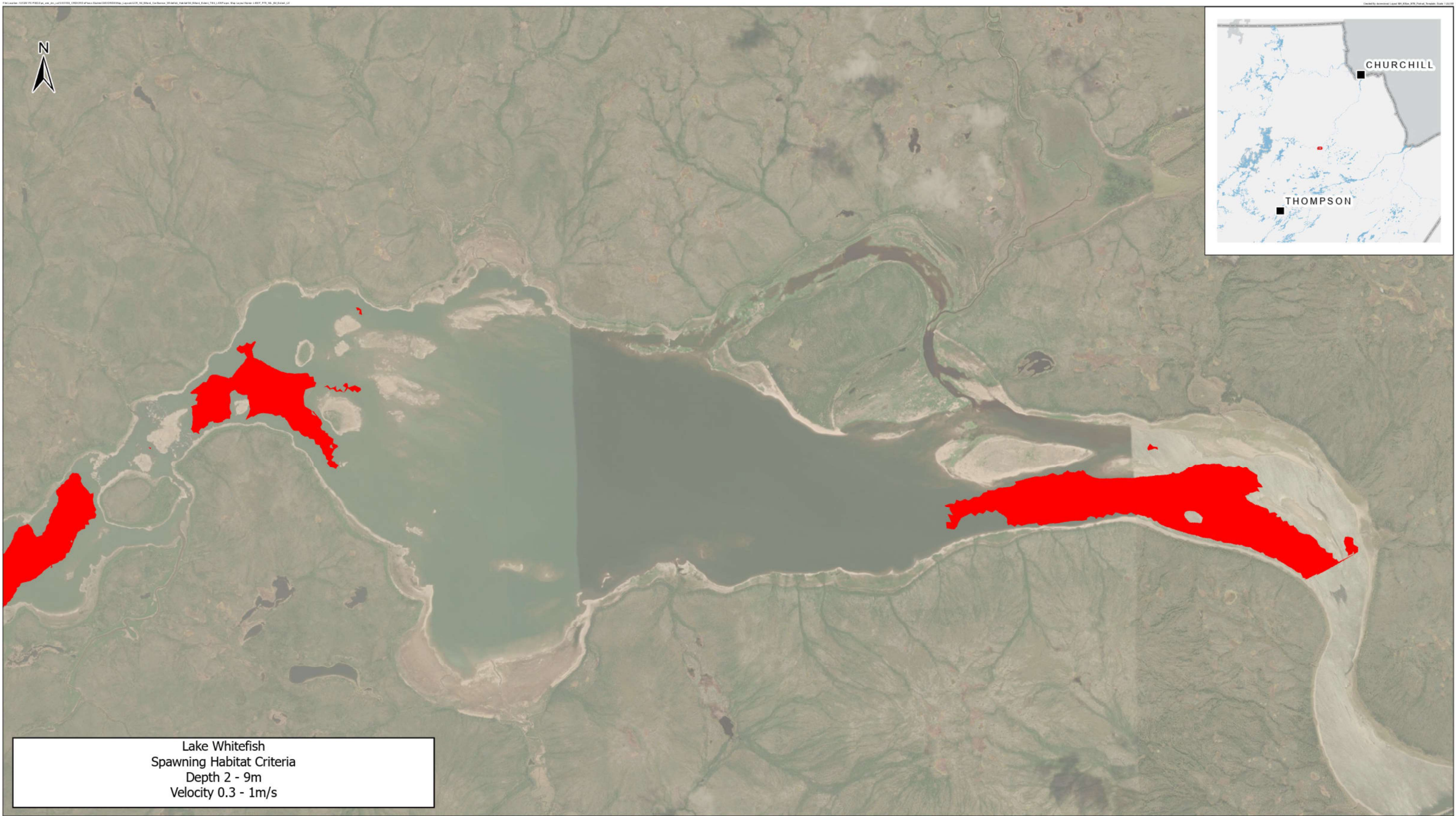
75th Percentile

519 m<sup>3</sup>/s



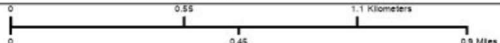






Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m/s



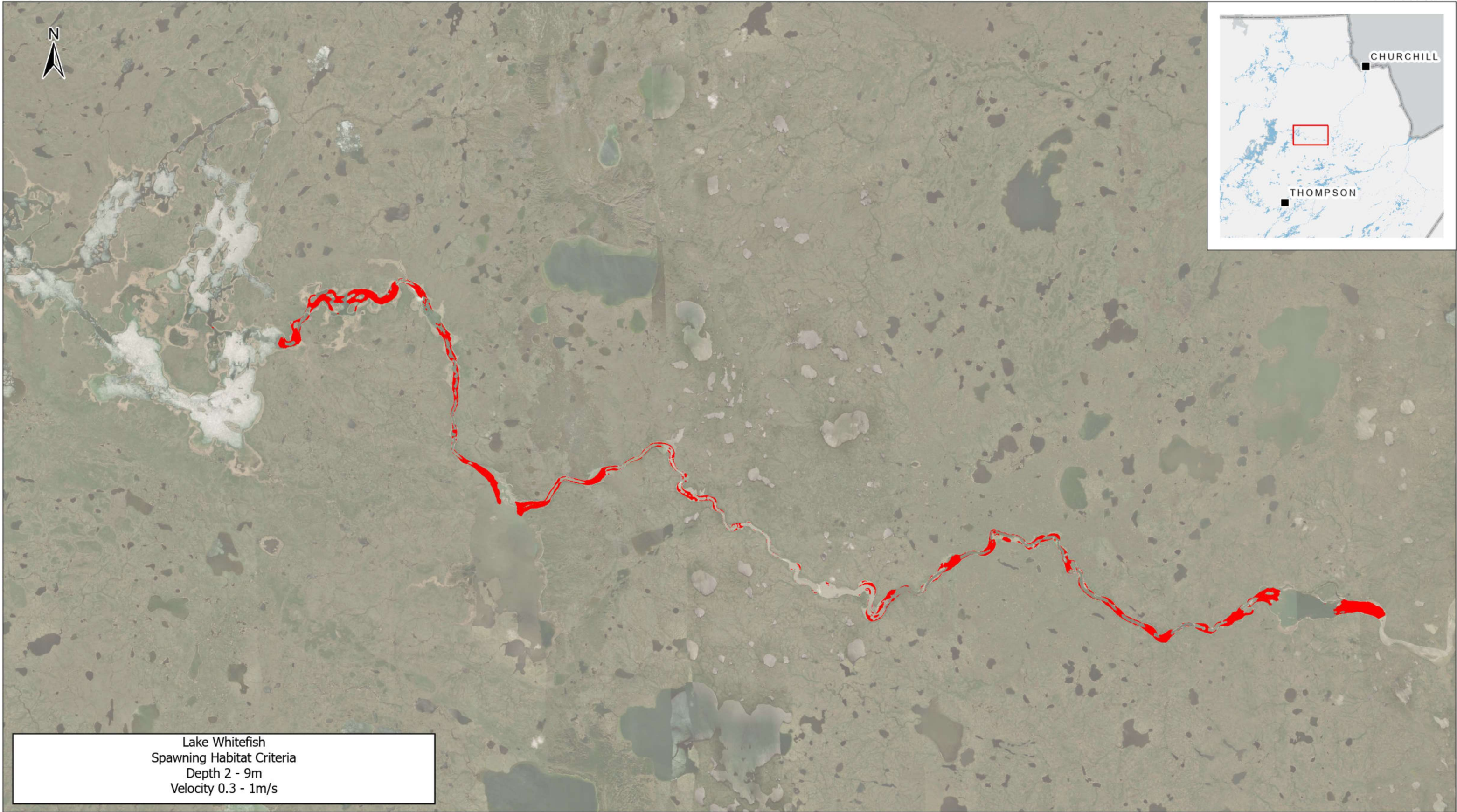
|                                                                                                              |  |                            |                             |
|--------------------------------------------------------------------------------------------------------------|--|----------------------------|-----------------------------|
| DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Basemap: ArcGIS Map Service 2025 06 16 |  |                            |                             |
| CREATED BY:<br>Energy Operations and Water Planning                                                          |  |                            |                             |
| COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                  |  | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                          |  | VERSION NO:                | QA/QC:                      |

**Billard Lake**  
**Whitefish Spawning Habitat**  
75th Percentile  
519 m<sup>3</sup>/s



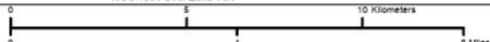
File path: C:\GIS\Map\2025\LakeWhitefish\LakeWhitefish.mxd, Layer: C:\GIS\Map\2025\LakeWhitefish\LakeWhitefish.mxd, Data: WGS 1984 UTM Zone 14N, EPSG:31470, Map Scale: 1:50,000, Date: 2025-06-16

Created by: [unintelligible] Layer: LakeWhitefish, EPSG:31470, Map Scale: 1:50,000



Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m/s



|                                                                                                               |  |                            |                             |
|---------------------------------------------------------------------------------------------------------------|--|----------------------------|-----------------------------|
| DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Base map: ArcGIS Map Service 2025-06-16 |  |                            |                             |
| CREATED BY:<br>Energy Operations and Water Planning                                                           |  |                            |                             |
| COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                   |  | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                           |  | VERSION NO.:               | QA/QC:                      |

**Northern Indian Lake to Billard Lake  
Whitefish Spawning Habitat**  
95th Percentile  
1792 m<sup>3</sup>/s





DATA SOURCE:  
Modelling Data: Manitoba Hydro - Hydraulic Modelling  
Basemap: ArcGIS Map Service 2025 06 16

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM:  
WGS 1984 UTM Zone 14N

DATE CREATED:  
28-May-26

REVISION DATE:  
22-JUL-26

00.81.6 Kilometers

00.81.6 Miles

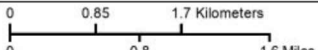
VERSION NO:  
QA/QC:

Northern Indian Lake  
Whitefish Spawning Habitat  
95th Percentile  
1792 m<sup>3</sup>/s

M1-LKWF-P95-NIL

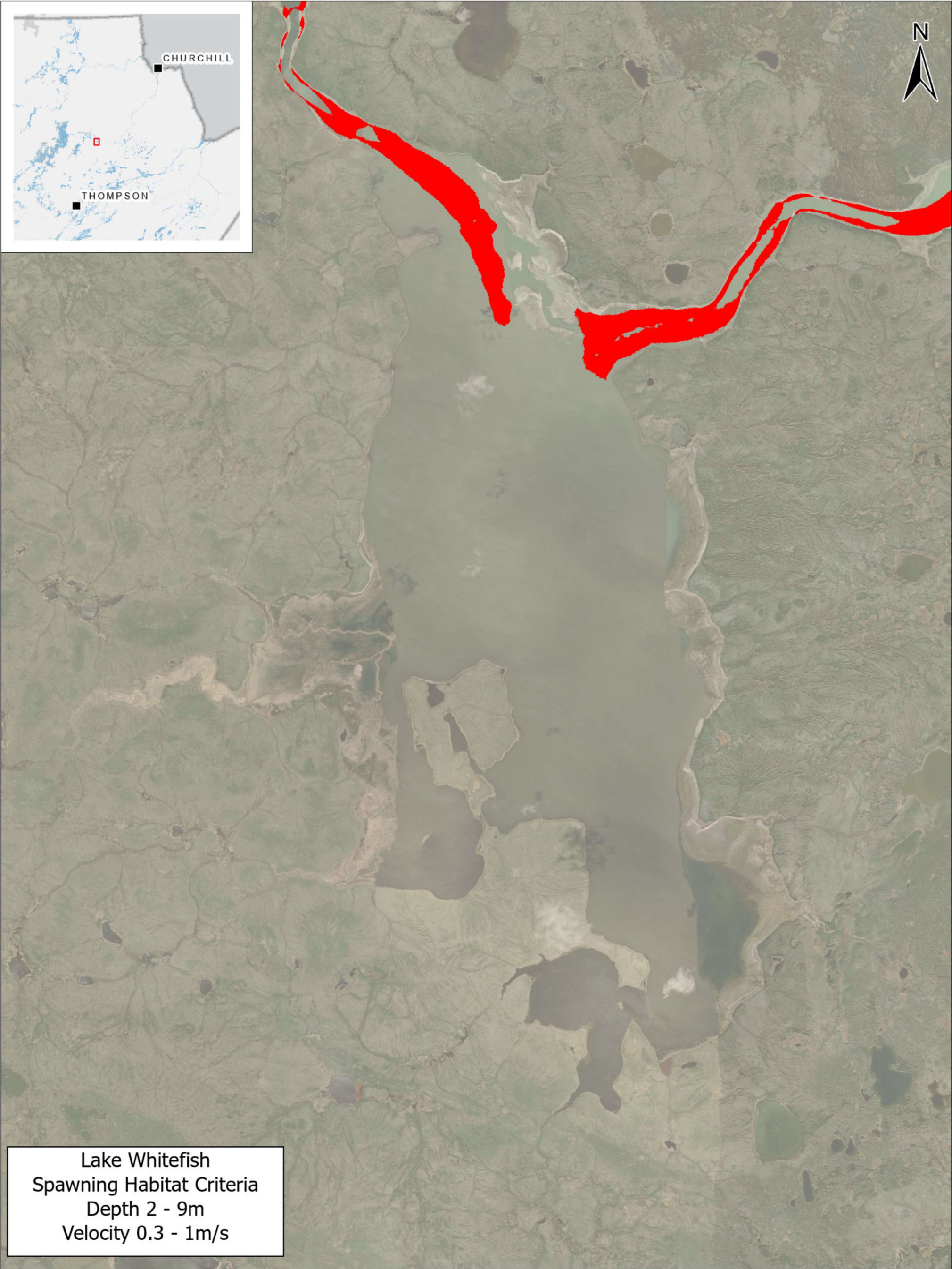


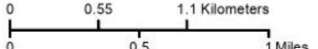


|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                                                                                    |                             | VERSION NO:                | QA/QC:                      |

**Northern Indian Lake to Fidler Lake**  
**Whitefish Spawning Habitat**  
95th Percentile  
1792 m<sup>3</sup>/s





|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2025 06 16 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>22-JUL-26 |
|                                                                                    |                             | VERSION NO:                | QA/QC:                      |

**Fidler Lake**  
**Whitefish Spawning Habitat**  
95th Percentile  
1792 m<sup>3</sup>/s

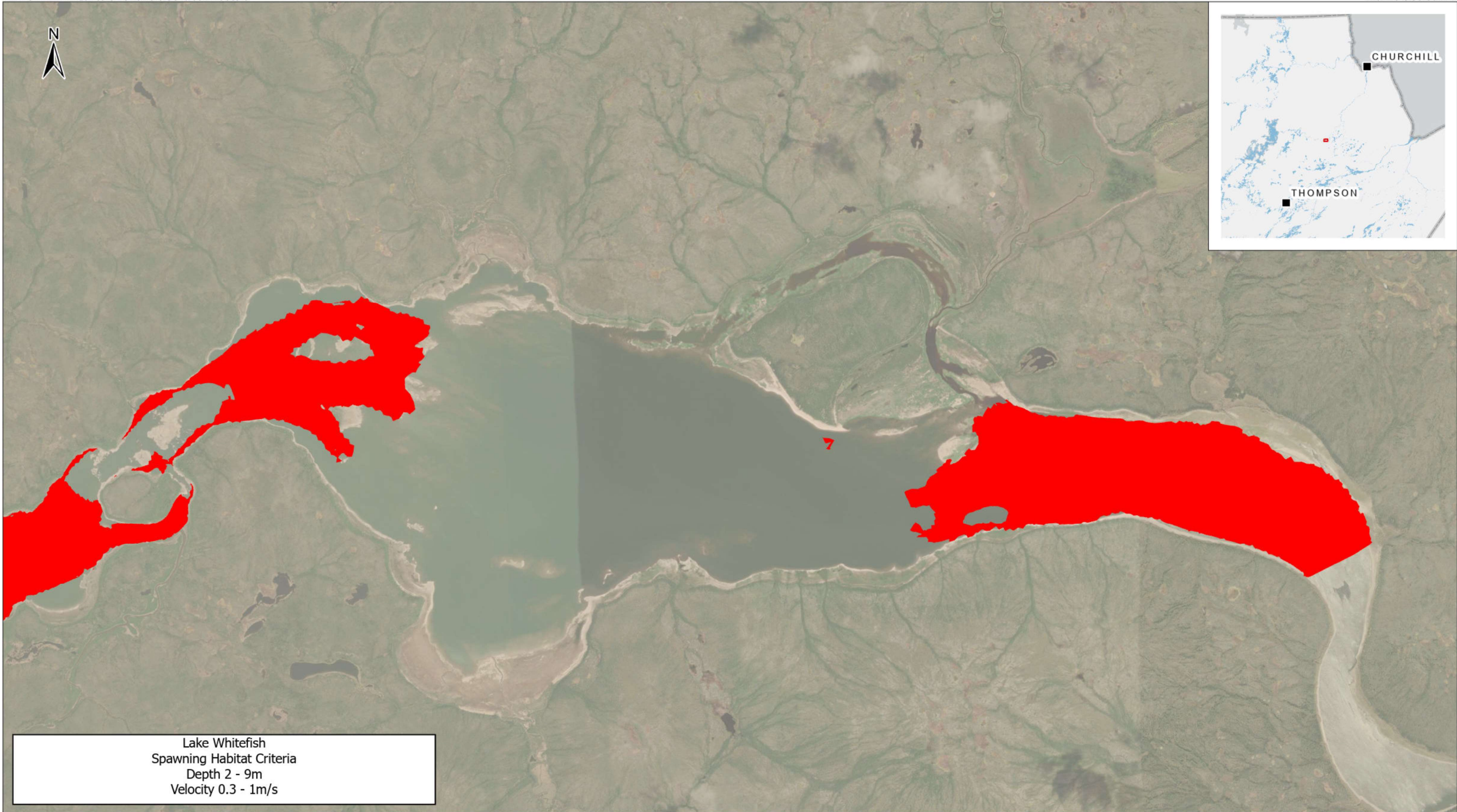






File name: C:\GIS\Map\BillardLake\BillardLake.mxd, Layer: C:\GIS\Map\BillardLake\BillardLake.mxd, Scale: 1:50,000, Map Date: 2025-06-16, Map Title: Billard Lake Whitefish Spawning Habitat Criteria, Map Author: M1-LKWF-P95-BL

Created by: M1-LKWF-P95-BL, Date: 2025-06-16, Scale: 1:50,000



Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m/s

|                                                                                     |                                                                                                               |  |                            |                                                                                                       |  |                             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--|----------------------------|-------------------------------------------------------------------------------------------------------|--|-----------------------------|
|  | DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Base map: ArcGIS Map Service 2025-06-16 |  |                            | <b>Billard Lake</b><br><b>Whitefish Spawning Habitat</b><br>95th Percentile<br>1792 m <sup>3</sup> /s |  |                             |
|                                                                                     | CREATED BY:<br>Energy Operations and Water Planning                                                           |  |                            |                                                                                                       |  |                             |
|                                                                                     | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                   |  | DATE CREATED:<br>28-May-26 |                                                                                                       |  | REVISION DATE:<br>22-JUL-26 |
|                                                                                     | 0 0.25 0.5 1.0 Kilometers<br>0 0.25 0.5 Miles                                                                 |  | VERSION NO.:               |                                                                                                       |  | GAUGE:                      |





Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m<sup>3</sup>/s



|                                                                                                              |  |                            |                             |
|--------------------------------------------------------------------------------------------------------------|--|----------------------------|-----------------------------|
| DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Basemap: ArcGIS Map Service 2023 05 21 |  |                            |                             |
| CREATED BY:<br>Energy Operations and Water Planning                                                          |  |                            |                             |
| COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                  |  | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>27-JUL-26 |
| 0 2 4 Kilometers<br>0 1.5 3 Miles                                                                            |  | VERSION NO.:               | QA/QC:                      |

**Little Churchill River Confluence Area**  
**Lake Whitefish Spawning Habitat**  
5th Percentile  
95m<sup>3</sup>/s







DATA SOURCE:  
Modelling Data: Manitoba Hydro - Hydraulic Modelling  
Basemap: ArcGIS Map Service 2023 05 21

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM:  
WGS 1984 UTM Zone 14N

DATE CREATED:  
28-May-26

REVISION DATE:  
27-JUL-26

0 0.6 1.2 Kilometers

0 0.55 1.1 Miles

VERSION NO:  
QA/QC:

The Fours to Little Churchill River Confluence

Lake Whitefish Spawning Habitat

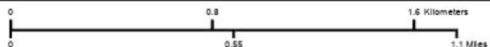
5th Percentile

95 m<sup>3</sup>/s

M2-LKWF-P5-FOURS

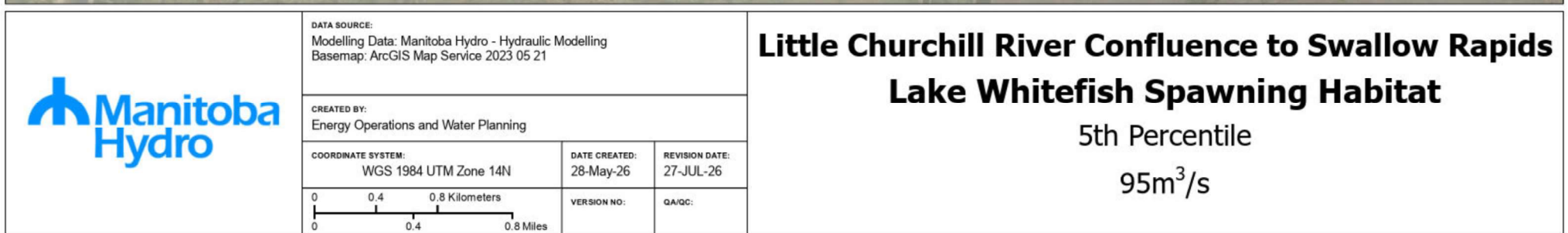




|                                                                                     |                                                                                                              |                            |                             |  |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|--|
|  | DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             |  |
|                                                                                     | CREATED BY:<br>Energy Operations and Water Planning                                                          |                            |                             |  |
|                                                                                     | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                  | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>27-JUL-26 |  |
|                                                                                     |                          | VERSION NO.:               | QA/QC:                      |  |

**Little Churchill River Confluence**  
**Lake Whitefish Spawning Habitat**  
5th Percentile  
95 m<sup>3</sup>/s















DATA SOURCE:  
Modelling Data: Manitoba Hydro - Hydraulic Modelling  
Basemap: ArcGIS Map Service 2023 05 21

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM:  
WGS 1984 UTM Zone 14N

DATE CREATED:  
28-May-26

REVISION DATE:  
24-JUL-26

00.61.2 Kilometers

00.551.1 Miles

VERSION NO:  
QA/QC:

**The Fours to Little Churchill River Confluence**

**Lake Whitefish Spawning Habitat**

25th Percentile

173 m<sup>3</sup>/s

M2-LKWF-P25-FOURS





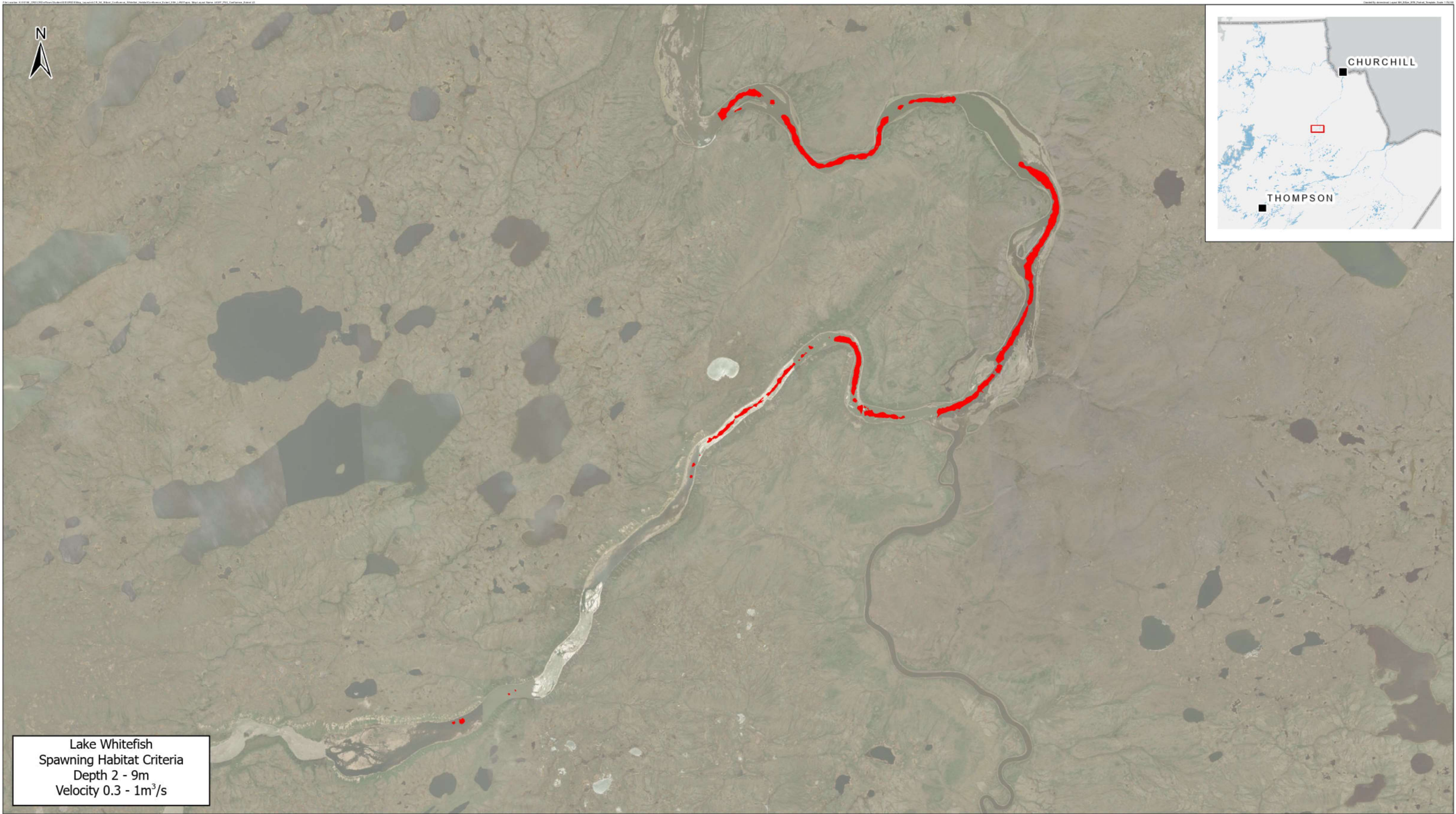




Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m<sup>3</sup>/s

|  |                                                                                                                |                            |                             |                                                                                                                                                  |  |
|--|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             | <b>Little Churchill River Confluence to Swallow Rapids</b><br><b>Lake Whitefish Spawning Habitat</b><br>25th Percentile<br>173 m <sup>3</sup> /s |  |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |                                                                                                                                                  |  |
|  | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>24-JUL-26 |                                                                                                                                                  |  |
|  | 0<br>0.4<br>0.8 Kilometers<br>0.8 Miles                                                                        | VERSION NO:                | QA/QC:                      |                                                                                                                                                  |  |







DATA SOURCE:  
Modeling Data: Manitoba Hydro - Hydraulic Modeling  
Basemap: ArcGIS Map Service 2023 05 21

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM: WGS 1984 UTM Zone 14N

DATE CREATED: 28-May-26

REVISION DATE: 24-JUL-26

VERSION NO:

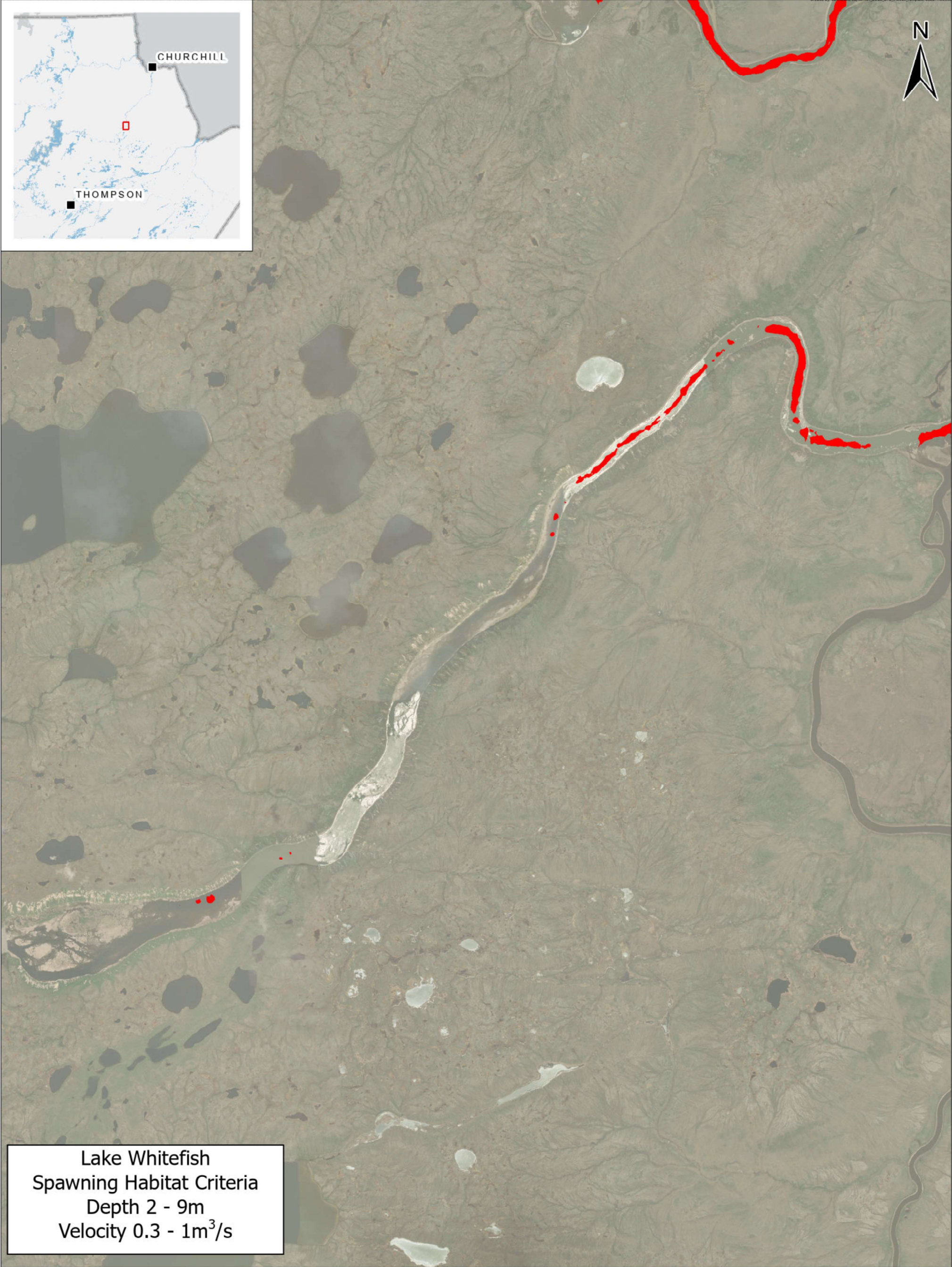
QA/QC:

0 2 4 Kilometers

0 1.5 3 Miles

**Little Churchill River Confluence Area**  
**Lake Whitefish Spawning Habitat**  
50th Percentile  
302 m<sup>3</sup>/s





|  |                                                                                                                |                            |                             |
|--|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|  | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>29-JUL-26 |
|  |                                                                                                                |                            | VERSION NO:<br>QA/QC:       |

**The Fours to Little Churchill River Confluence**

**Lake Whitefish Spawning Habitat**

50th Percentile

302 m<sup>3</sup>/s





|  |                                                                                                              |  |                         |                          |
|--|--------------------------------------------------------------------------------------------------------------|--|-------------------------|--------------------------|
|  | DATA SOURCE:<br>Modeling Data: Manitoba Hydro - Hydraulic Modeling<br>Basemap: ArcGIS Map Service 2023 05 21 |  |                         |                          |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                          |  |                         |                          |
|  | COORDINATE SYSTEM: WGS 1984 UTM Zone 14N                                                                     |  | DATE CREATED: 28-May-26 | REVISION DATE: 24-JUL-26 |
|  |                                                                                                              |  | VERSION NO:             | QA/QC:                   |

**Little Churchill River Confluence  
Lake Whitefish Spawning Habitat**

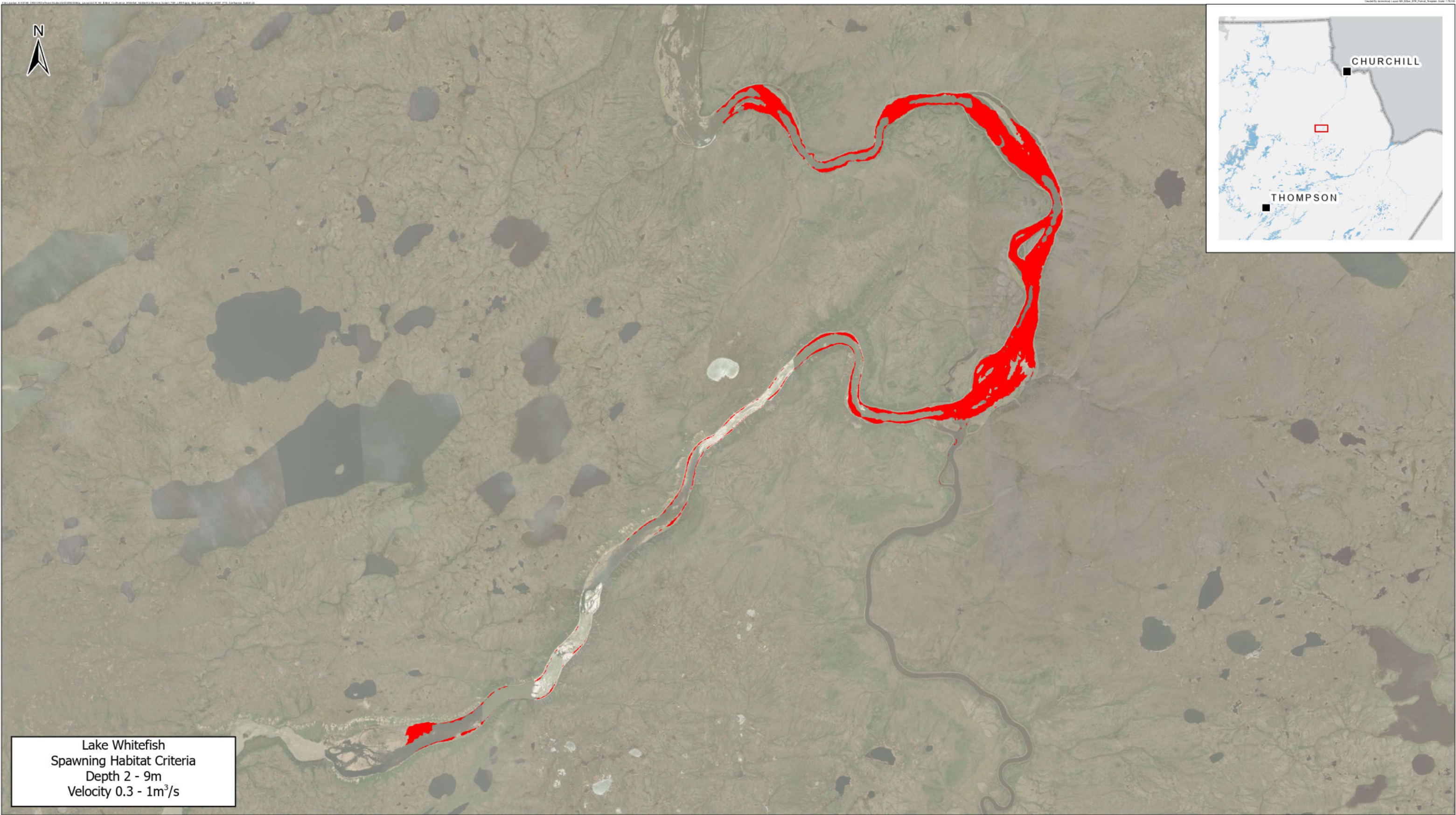
50th Percentile  
302 m<sup>3</sup>/s





|                                                                                    |                                                                                                                |                            |                             |                                                                                                                                                                                   |  |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             | <div><b>Little Churchill River Confluence to Swallow Rapids</b></div> <div><b>Lake Whitefish Spawning Habitat</b></div> <div>50th Percentile</div> <div>302 m<sup>3</sup>/s</div> |  |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |                                                                                                                                                                                   |  |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>29-JUL-26 |                                                                                                                                                                                   |  |
|                                                                                    | <div><div>00.40.8 Kilometers</div><div>00.40.8 Miles</div></div>                                               | VERSION NO:                | QA/QC:                      |                                                                                                                                                                                   |  |







DATA SOURCE:  
Modeling Data: Manitoba Hydro - Hydraulic Modeling  
Basemap: ArcGIS Map Service 2023 05 21

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM: WGS 1984 UTM Zone 14N

0 2 4 Kilometers  
0 1.5 3 Miles

DATE CREATED: 25-May-26  
REVISION DATE: 24-JUL-26

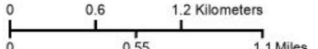
VERSION NO:  
DACC:

**Little Churchill River Confluence Area**  
**Lake Whitefish Spawning Habitat**  
75th Percentile  
610 m<sup>3</sup>/s

M2-LKWF-P95-ALL

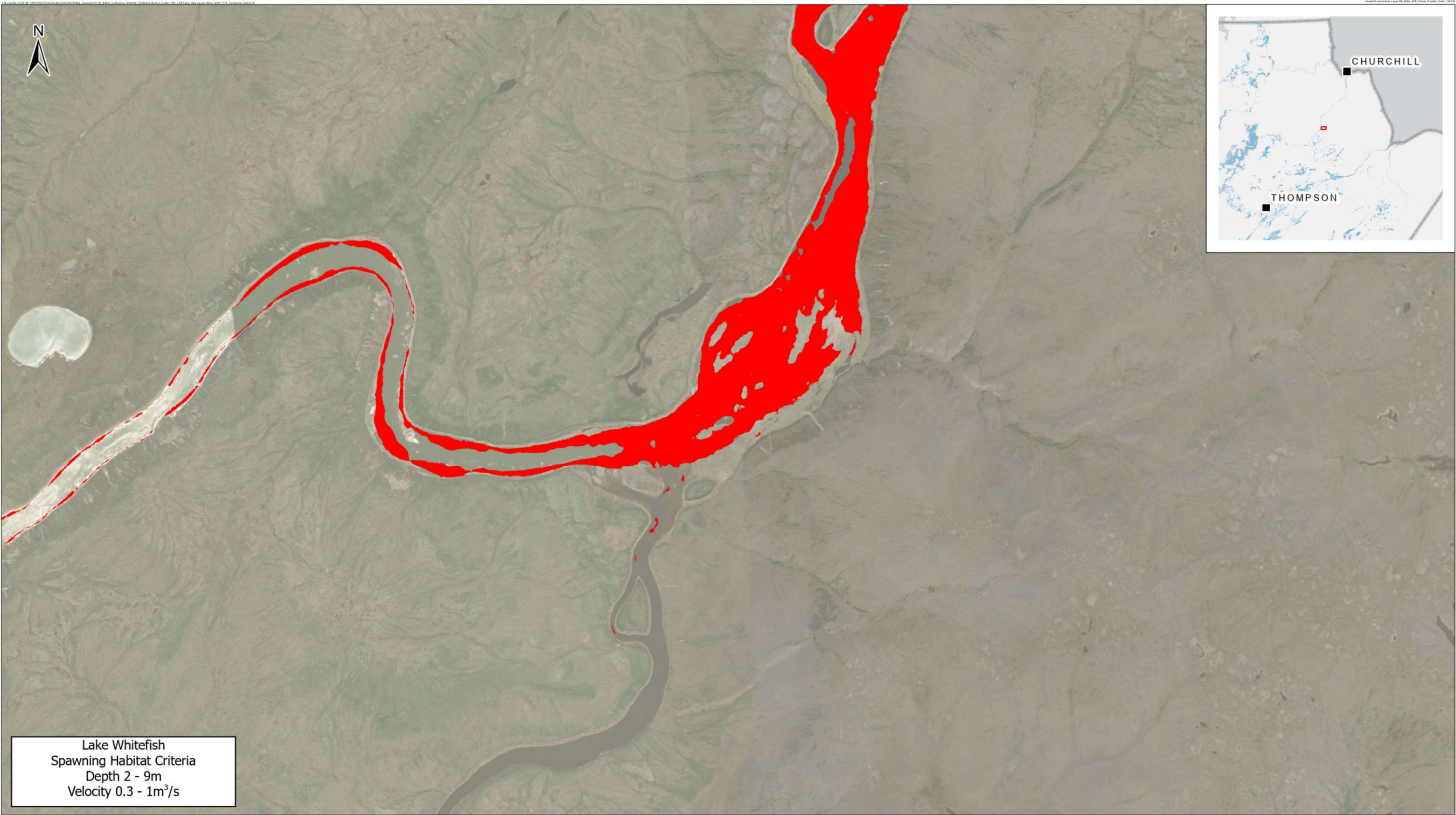




|                                                                                    |                                                                                                                |                            |                             |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>24-JUL-26 |
|                                                                                    |                             | VERSION NO:                | QA/QC:                      |

**The Fours to Little Churchill River Confluence**  
**Lake Whitefish Spawning Habitat**  
75th Percentile  
610 m<sup>3</sup>/s







DATA SOURCE:  
Modeling Data: Manitoba Hydro - Hydraulic Modeling  
Basemap: ArcGIS Map Service 2023 05 21

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM: WGS 1984 UTM Zone 14N

0 0.8 1.6 Kilometers  
0 0.55 1.1 Miles

DATE CREATED: 25-May-26

REVISION DATE: 24-JUL-26

VERSION NO:

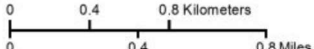
GAUGE:

**Little Churchill River Confluence**  
**Lake Whitefish Spawning Habitat**  
75th Percentile  
610 m<sup>3</sup>/s

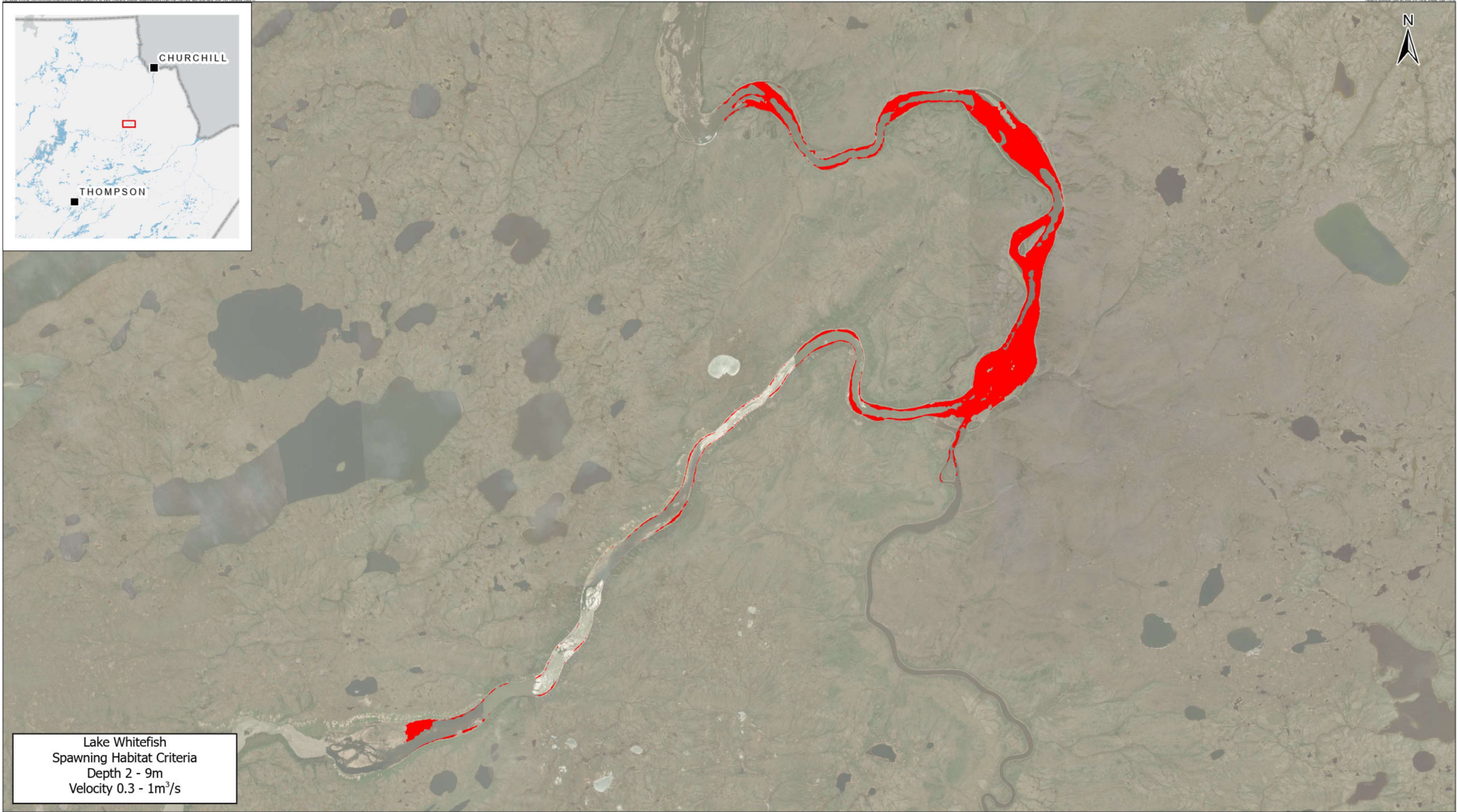
M2-LKWF-P95-LCRC





|                                                                                    |                                                                                                                |                            |                             |                                                                                                                                                  |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             | <b>Little Churchill River Confluence to Swallow Rapids</b><br><b>Lake Whitefish Spawning Habitat</b><br>75th Percentile<br>610 m <sup>3</sup> /s |
|                                                                                    | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |                                                                                                                                                  |
|                                                                                    | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>24-JUL-26 |                                                                                                                                                  |
|                                                                                    |                             | VERSION NO.:               | QA/QC:                      |                                                                                                                                                  |





Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m<sup>3</sup>/s



DATA SOURCE:  
Modelling Data: Manitoba Hydro - Hydraulic Modelling  
Basemap: ArcGIS Map Service 2023 05 21

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM: WGS 1984 UTM Zone 14N

DATE CREATED: 28-May-26

REVISION DATE: 24-JUL-26

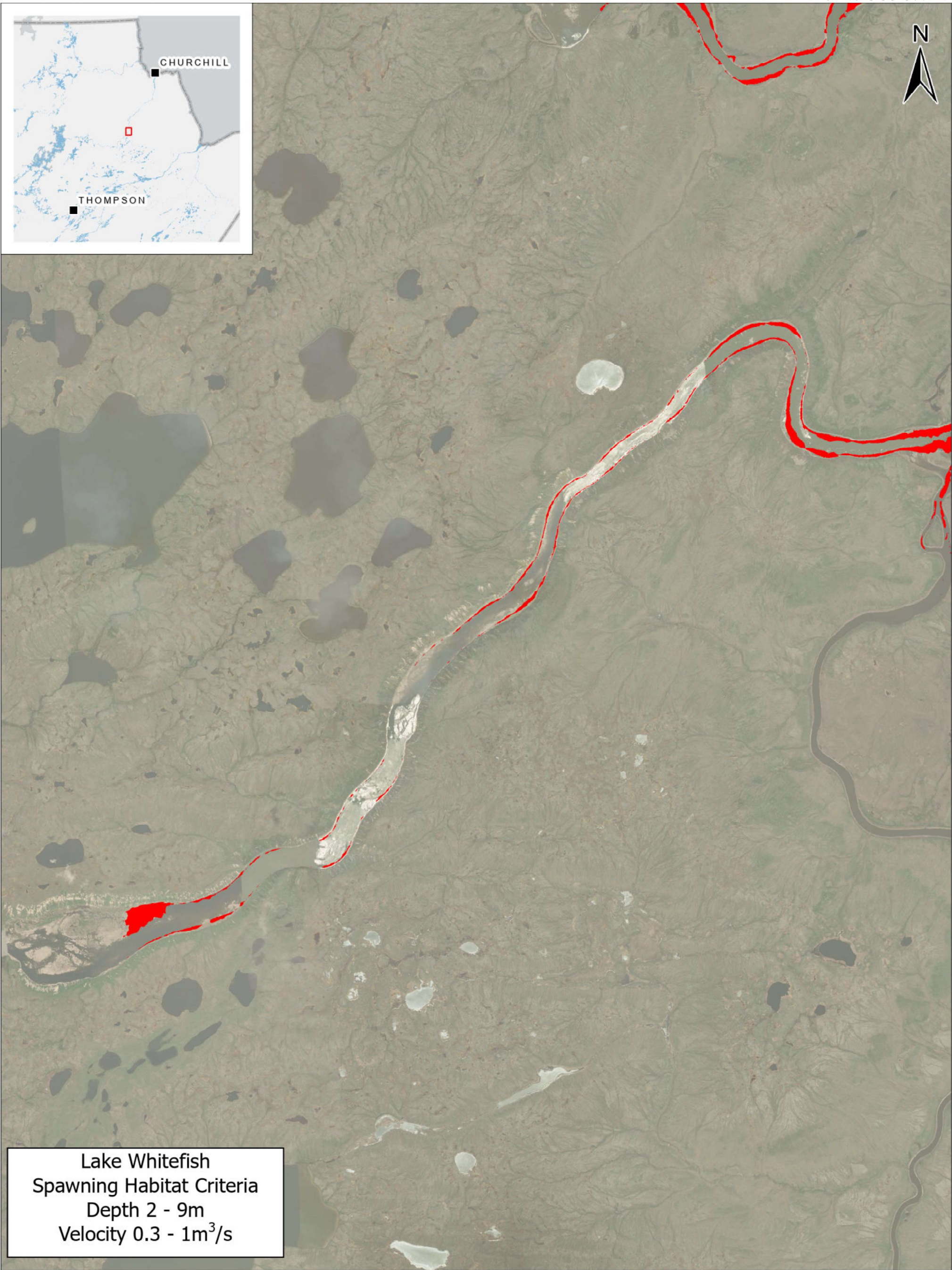


VERSION NO:

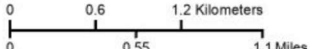
QA/QC:

**Little Churchill River Confluence Area**  
**Lake Whitefish Spawning Habitat**  
95th Percentile  
1950 m<sup>3</sup>/s





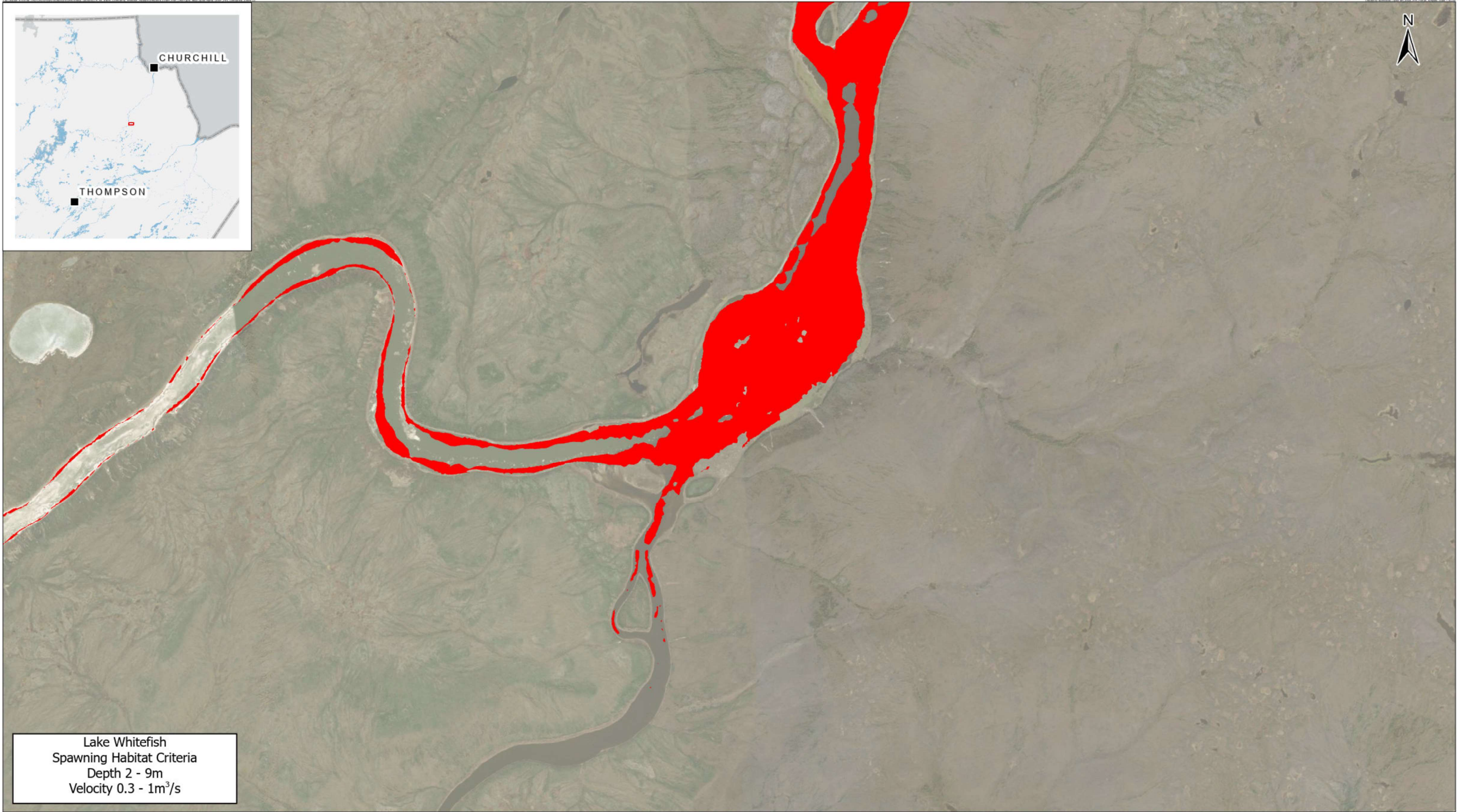


|                                                                                                                |                            |                             |
|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
| DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             |
| CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |
| COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>24-JUL-26 |
|                             | VERSION NO:                | QA/QC:                      |

**The Fours to Little Churchill River Confluence  
Lake Whitefish Spawning Habitat**

95th Percentile  
1950 m<sup>3</sup>/s





Lake Whitefish  
Spawning Habitat Criteria  
Depth 2 - 9m  
Velocity 0.3 - 1m<sup>3</sup>/s



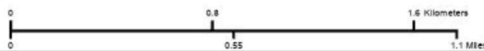
DATA SOURCE:  
Modeling Data: Manitoba Hydro - Hydraulic Modeling  
Basemap: ArcGIS Map Service 2023 05 21

CREATED BY:  
Energy Operations and Water Planning

COORDINATE SYSTEM: WGS 1984 UTM Zone 14N

DATE CREATED: 28-May-26

REVISION DATE: 24-JUL-26



VERSION NO:

QA/QC:

**Little Churchill River Confluence  
Lake Whitefish Spawning Habitat**

95th Percentile  
1950 m<sup>3</sup>/s





|  |                                                                                                                |                            |                             |                                                                                                                                                 |  |
|--|----------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | DATA SOURCE:<br>Modelling Data: Manitoba Hydro - Hydraulic Modelling<br>Basemap: ArcGIS Map Service 2023 05 21 |                            |                             | <b>Little Churchill River Confluence to Swallow Rapids<br/>Lake Whitefish Spawning Habitat</b><br><br>95th Percentile<br>1950 m <sup>3</sup> /s |  |
|  | CREATED BY:<br>Energy Operations and Water Planning                                                            |                            |                             |                                                                                                                                                 |  |
|  | COORDINATE SYSTEM:<br>WGS 1984 UTM Zone 14N                                                                    | DATE CREATED:<br>28-May-26 | REVISION DATE:<br>24-JUL-26 |                                                                                                                                                 |  |
|  | 0 0.4 0.8 Kilometers<br>0 0.4 0.8 Miles                                                                        | VERSION NO:                | QA/QC:                      |                                                                                                                                                 |  |