File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat Bradshaw Region.mxd

Created By: snitowski - B Size Portrait BTB - MAR 2015 Scale: 1:750,000

N

Upper Churchill Terrestrial Region

Bradshaw Terrestrial Region

Legend

- Terrestrial Region
- RCEA Region of Interest

Off-system Habitat Quality

- Primary Habitat
- Secondary Habitat

On-system Deep Water Habitat Quality

- Secondary Habitat

Infrastructure

- Highway
- Rail
- Transmission Line (Existing)
- Transmission Line (Under Construction)

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE: Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY: ECOSTEM Ltd.

COORDINATE SYSTEM: NAD 1983 UTM Zone 14N

DATE CREATED: 07-OCT-15

REVISION DATE: 03-DEC-15

0 8.5 17 Kilometers

0 7 14 Miles

VERSION NO: 1.0

QA/QC:

Waterfowl Habitat Quality Post-Hydroelectric Development

Bradshaw Terrestrial Region

Map 6.4C-21

File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat Upper Churchill Region Pre.mxd

Created By: snitowski - B Size Portrait BTB - MAR 2015 Scale: 1:900,000

Upper Churchill Terrestrial Region

Southern Indian Terrestrial Region

Bradshaw Terrestrial Region

Kelsey G.S.

Keeyask G.S.

Kettle G.S.

Long Spruce G.S.

Legend

- Terrestrial Region
- RCEA Region of Interest

On-system Shallow Water Habitat Quality

- Primary Shore Zone Habitat
- Secondary Shore Zone Habitat
- Primary Offshore Habitat

On-system Deep Water Habitat Quality

- Secondary Habitat

Post-hydroelectric Development Infrastructure

- Generating Station (Existing)
- Generating Station (Under Construction)
- Highway
- Rail
- Transmission Line (Existing)
- Transmission Line (Under Construction)

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE: Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY: ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	07-OCT-15	04-NOV-15
0 10 20 Kilometers / 0 8 16 Miles	VERSION NO: 1.0	QA/QC:

Waterfowl Habitat Quality Pre-Hydroelectric Development

Upper Churchill Terrestrial Region

Map 6.4C-22

File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat Upper Churchill Region.mxd

Created By: snitowski - B Size Portrait BTB - MAR 2015 Scale: 1:900,000

Upper Churchill Terrestrial Region

Bradshaw Terrestrial Region

Southern Indian Terrestrial Region

Legend

- Terrestrial Region
- RCEA Region of Interest

Off-system Habitat Quality

- Primary Habitat
- Secondary Habitat

On-system Shallow Water Habitat Quality

- Primary Shore Zone Habitat
- Secondary Shore Zone Habitat
- Primary Offshore Habitat

On-system Deep Water Habitat Quality

- Secondary Habitat

Infrastructure

- Generating Station (Existing)
- Generating Station (Under Construction)
- Highway
- Rail
- Transmission Line (Existing)
- Transmission Line (Under Construction)

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE: Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY: ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	07-OCT-15	03-DEC-15
0 10 20 Kilometers / 0 8 16 Miles	VERSION NO: 1.0	QA/QC:

Waterfowl Habitat Quality Post-Hydroelectric Development

Upper Churchill Terrestrial Region

Map 6.4C-23

File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat Southern Indian Region Pre.mxd

Created By: snitowski - B Size Portrait BTB - MAR 2015 Scale: 1:750,000

N

Southern Indian Terrestrial Region

Upper Churchill Terrestrial Region

O-Pipon-Na-Piwin Cree Nation
South Indian Lake

Legend

- Terrestrial Region
- RCEA Region of Interest

On-system Shallow Water Habitat Quality

- Primary Shore Zone Habitat
- Secondary Shore Zone Habitat
- Primary Offshore Habitat

On-system Deep Water Habitat Quality

- Secondary Habitat

Post-hydroelectric Development Infrastructure

- Highway
- Transmission Line (Existing)

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE: Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY: ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	07-OCT-15	04-NOV-15
0 8.5 17 Kilometers 0 7 14 Miles	VERSION NO: 1.0	QA/QC:

Waterfowl Habitat Quality Pre-Hydroelectric Development

Southern Indian Terrestrial Region

Map 6.4C-24

File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat Southern Indian Region.mxd

Created By: snitowski - B Size Portrait BTB - MAR 2015 Scale: 1:750,000

N

Upper Churchill Terrestrial Region

Southern Indian Terrestrial Region

O-Pipon-Na-Piwin Cree Nation
South Indian Lake

Leaf Rapids

Legend

- Terrestrial Region
- RCEA Region of Interest

Off-system Habitat Quality
- Primary Habitat
- Secondary Habitat

On-system Shallow Water Habitat Quality
- Primary Shore Zone Habitat
- Secondary Shore Zone Habitat
- Primary Offshore Habitat

On-system Deep Water Habitat Quality
- Secondary Habitat

Infrastructure
- Highway
- Transmission Line (Existing)

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE: Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

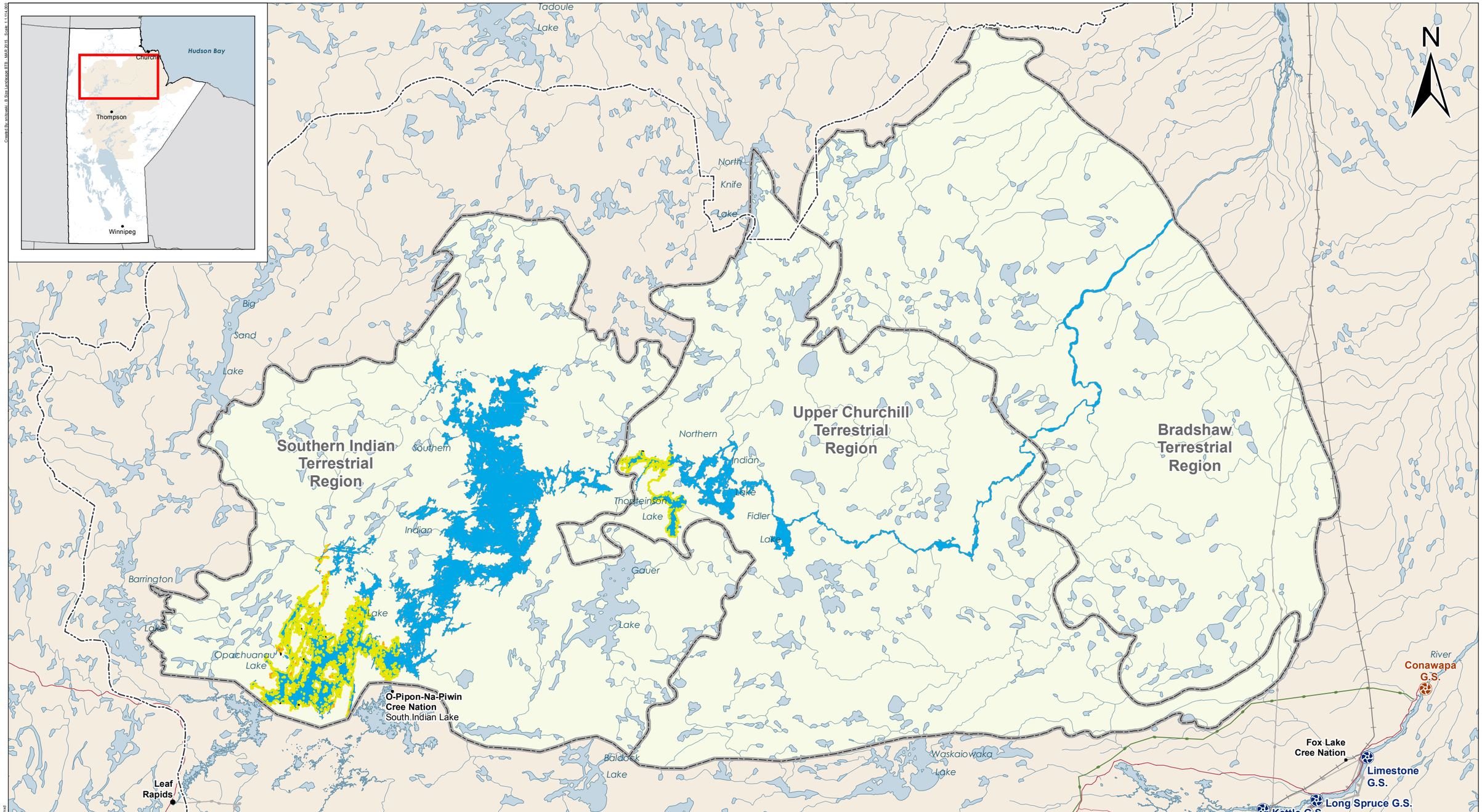
CREATED BY: ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	07-OCT-15	03-DEC-15
0 8.5 17 Kilometers 0 7 14 Miles	VERSION NO: 1.0	QA/QC:

Waterfowl Habitat Quality Post-Hydroelectric Development

Southern Indian Terrestrial Region

Map 6.4C-25



Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE:
Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY:
ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	07-OCT-15	04-NOV-15
0 10 20 Kilometres / 0 10 20 Miles	VERSION NO: 1.0	QA/QC:

Legend

- Terrestrial Region
- RCEA Region of Interest

On-system Shallow Water Habitat Quality

- Primary Shore Zone Habitat
- Secondary Shore Zone Habitat
- Primary Offshore Habitat

On-system Deep Water Habitat Quality

- Secondary Habitat

Post-hydroelectric Development Infrastructure

- Generating Station (Existing)
- Generating Station (Potential)
- Transmission Line (Existing)
- Transmission Line (Under Construction)
- Highway
- Rail

Waterfowl Habitat Quality Pre-Hydroelectric Development

Taiga Shield Ecozone

Map 6.4C-26

File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat HP Pre.mxd

Created By: snitowski - B Size Portrait BTB - MAR 2015 Scale: 1:801,000

N

Brown L
Mary Lake
Napper L
Hannah L
Creek
Ck
Sutton Lake
Steele Lake
Salmon
Fletcher Lake
Creek
River
Kelsey
Creek
Beale
Dog
Laforte
Broad
Skidmore Lake
Crosswell
River
Ck
Hoot
Lake
Moose
River
Deer
Lost
Turcotte L
Horn
Creek
Owl
Creek
Fly L
Owl Lake
Creek
Rupert
Creek
Bear
Creek
White
Creek
Noochewaywun
Black
Bear
Creek
North
Marsh Point
Menahook
Long Lake
Mistake L
Silcox
Dewar Lake
Creek
Seal
Port Nelson
Ck
Fountain
River
Creek
Machichi
Whiting L
Weir L
Strobus Lake
Cooper
River
Broten Lake
Shilling
Little Cygnet Lake
Myre L
Cygnet L
Weir
River
Ck
Ten
Creek
Creek
Pannebaker
River
Ck
Conawapa G.S.
Seal
Panco Lake
Merrick
River
Lake
River
French
Tawns
Creek
Caruso Lake
Robidoux Lake
Adie
Fox Lake Cree Nation
Angling
Limestone G.S.
Fifer Lake
River
Gods
Nelson
Fox Lake Cree Nation
Kettle G.S.
Long Spruce G.S.
River
Bastable Lake
Pennycutaway
Creek
Angling
Angling
R
Wilson
Ck
North
Kettle Lake
Atkinson
Hawes

280
290

Legend

- Terrestrial Region
- RCEA Region of Interest

On-system Shallow Water Habitat Quality

- Secondary Shore Zone Habitat

On-system Deep Water Habitat Quality

- Secondary Habitat

Post-hydroelectric Development Infrastructure

- Generating Station (Existing)
- Generating Station (Potential)
- Highway
- Rail
- Transmission Line (Existing)
- Transmission Line (Under Construction)

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE: Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY: ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	02-SEP-15	04-NOV-15
0 9.5 19 Kilometers 0 7.5 15 Miles	VERSION NO: 1.0	QA/QC:

Waterfowl Habitat Quality Pre-Hydroelectric Development

Hudson Plains Ecozone

Map 6.4C-27

File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat Warkworth and Fletcher Regions Pre.mxd

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N

Hubbart Point
River
Point of the Woods
Lake
Knife Delta
Eppler Lake
River
Dymond L
Button Bay
Cape Churchill
Christmas Lake
Norton L
Nowell Lake
Farnworth L
Twin Lakes
R
Langille Creek
Holcraft L
Warkworth L
Ritchie Lake
Mast
River
River
Knife
Teepee Falls
Knife
Lofthouse Lake
Creek
South
Dickens Lake
Heppell Creek
River
Creek
Bishop Lake
Creek
Rankine L
Skromeda
Munk
Herriot
Limestone Rapids
Running Landing Place Rapids
Red Head Rapids
River
Creek
Knight Lake
Wise Lake
Matonabee
Condie Lake
Mack L
Ck
River
Churchill River
Laforte
Dog
Braden Lake
Gersham Lake
Gyles Lake
Cache Rapids
Kilnabad Rapids
Bad
Crosswell
River
Ck
Bradshaw Lake
Comeau Lake
Moose
Hoot
River
Deer
Swallow Rapids
Minikwakunis Lake
Lost
Turcotte L
Deer Lakes
Horn
Creek
Owl
Fly L
The Fours
Beaver
River
Owl Lake
Creek
Mountain Rapids
Hogg L
Billard Lake
Embleton Lake
Long Lake
Mistake L
Whiting L
Weir L
Cooper
River
Strobus Lake
Recluse Lake
Churchill
Whitecap L
Little Cygnet Lake
Cygnet
Myre
R
R
Warkworth Terrestrial Region
Alston Warkworth
Klonn Lake
Whale
Brown L
White Mary Lake
Napper L
Hannah L
Creek
Creek
Ck
Sutton Lake
Steele Lake
Salmon
Fletcher Lake
Creek
River
Kelsey
Creek
Fletcher Terrestrial Region
Beale
Hudson Coast Terrestrial Region
Broad
Skidmore Lake
Ck
Rupert
Creek
Nopchewaywun
Black
Bear
Creek
North
Silcox
Dewar Lake
Creek
Seal
Port Nelson
Ck
River

Legend

Terrestrial Region
RCEA Region of Interest

On-system Shallow Water Habitat Quality
Secondary Shore Zone Habitat

On-system Deep Water Habitat Quality
Secondary Habitat

Post-hydroelectric Development Infrastructure
Transmission Line (Existing)
Rail

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE:
Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY:
ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	05-OCT-15	04-NOV-15
0 10 20 Kilometers 0 7.5 15 Miles	VERSION NO: 1.0	QA/QC:

Waterfowl Habitat Quality Pre-Hydroelectric Development

Warkworth and Fletcher Terrestrial Regions

Map 6.4C-28

File Location: Z:\Workspaces\RCEA\Support\Mammal\Bird\Waterfowl Habitat Warkworth and Fletcher Regions.mxd

Created By: snitowski - B Size Portrait BTB - MAR 2015 Scale: 1:837,000

N

Hubbart Point
River
Point of the Woods
Knife Delta
Lake
River
Eppler Lake
Dymond
Cape Churchill
Christmas Lake
Button Bay
Norton L
Nowell Lake
Farnworth L
Twin Lakes
R
Langille Creek
Holcraft L
Warkworth L
Ritchie Lake
Mast
River
River
Knife
Teepee Falls
Alston Warkworth
Warkworth Terrestrial Region
Klonn Lake
Whale
Knife
Lofthouse Lake
Creek
South
Creek
Brown L
White Mary Lake
Dickens Lake
Heppell
River
Creek
Hannah L
Napper L
Bishop Lake
Creek
Ck
Rankine L
Sutton Lake
Skromeda
Munk
Steele Lake
Salmon
Herriot
Limestone Rapids
Fletcher Lake
Creek
Running Landing Place Rapids
River
Red Head Rapids
Kelsey
Creek
River
Wise Lake
Knight Lake
Matonabee
Condie Lake
Mack L
Ck
Fletcher Terrestrial Region
Beale
Churchill River
Laforte
Bad
Dog
Hudson Coast Terrestrial Region
Braden Lake
Gersham
Cache Rapids
Kilnabad Rapids
Broad
Skidmore
Lake
Gyles Lake
Lake
Crosswell
River
Ck
Ck
Bradshaw
Lake
Comeau Lake
Hoot
Moose
River
Deer
Lost
Swallow Rapids
Turcotte L
Minikwakunis Lake
Deer Lakes
Horn
Creek
Bear
Creek
Owl
White
Fly L
The Fours
Beaver
Owl Lake
River
Creek
Rupert
Creek
Mountain Rapids
Nopchewaywun
Black
Hogg L
Creek
Bear
Billard Lake
Embleton Lake
Long Lake
Silcox
North
Mistake L
Dewar Lake
Seal
Port Nelson
Creek
Whiting L
Weir L
Cooper
Strobus Lake
River
Recluse Lake
Churchill
Whitecap L
Little Cygnet Lake
Myre
Cygnet
R
R

Legend

Terrestrial Region
RCEA Region of Interest

Off-system Habitat Quality

Primary Habitat
Secondary Habitat

On-system Deep Water Habitat Quality

Secondary Habitat

Infrastructure

Transmission Line (Existing)
Rail

Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE:
Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

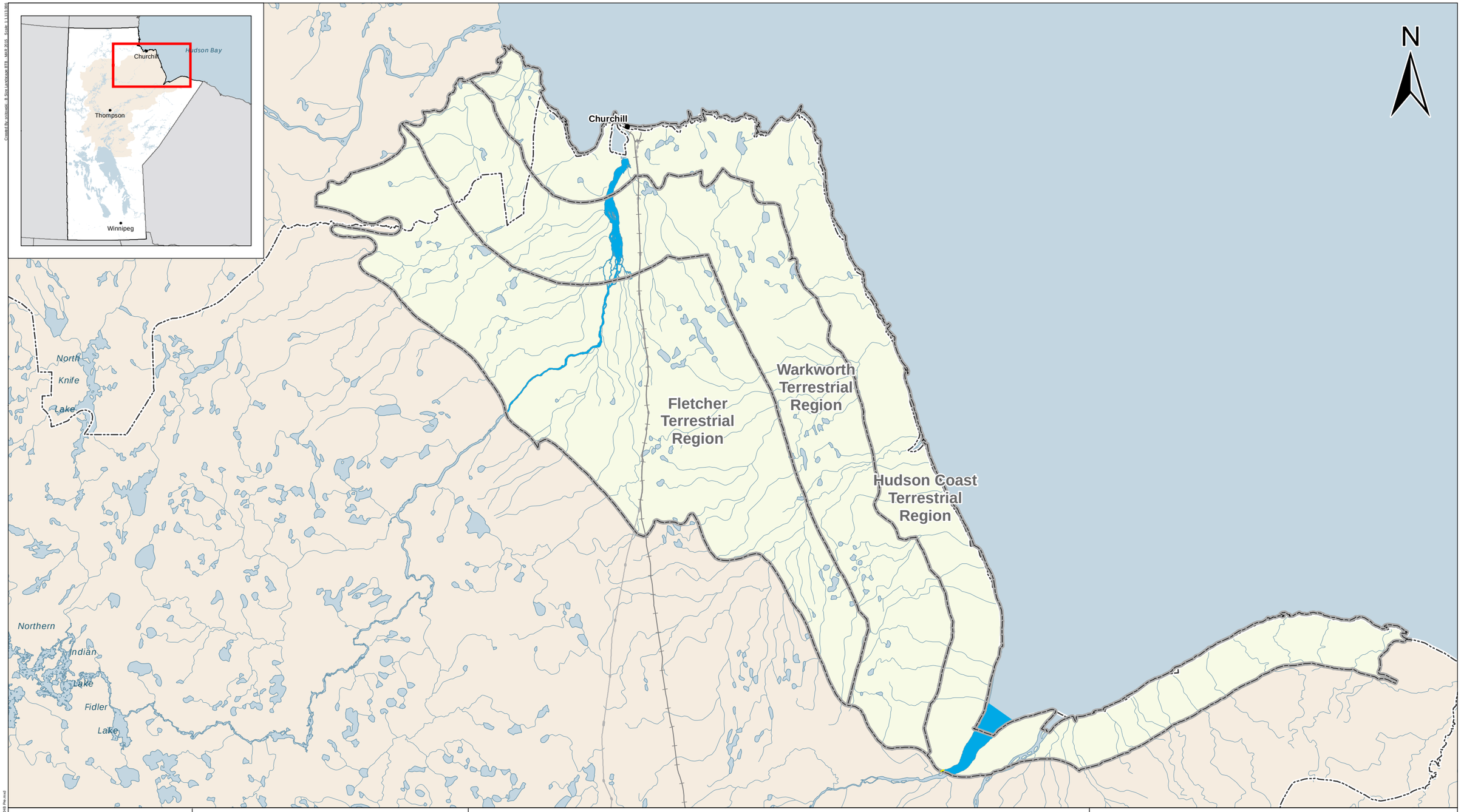
CREATED BY:
ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	05-OCT-15	03-DEC-15
0 10 20 Kilometers 0 7.5 15 Miles	VERSION NO: 1.0	QA/QC:

Waterfowl Habitat Quality Post-Hydroelectric Development

Warkworth and Fletcher Terrestrial Regions

Map 6.4C-29



Manitoba Hydro

Regional Cumulative Effects Assessment

DATA SOURCE:
Manitoba Hydro; Government of Manitoba; Government of Canada; ECOSTEM Ltd.

CREATED BY:
ECOSTEM Ltd.

COORDINATE SYSTEM:	DATE CREATED:	REVISION DATE:
NAD 1983 UTM Zone 14N	06-OCT-15	04-NOV-15
0 10 20 Kilometres / 0 10 20 Miles	VERSION NO: 1.0	QA/QC:

Legend

Terrestrial Region

RCEA Region of Interest

On-system Shallow Water Habitat Quality

Secondary Shore Zone Habitat

On-system Deep Water Habitat Quality

Secondary Habitat

Post-hydroelectric Development Infrastructure

Transmission Line (Existing)

Rail

Waterfowl Habitat Quality Pre-Hydroelectric Development

Coastal Hudson Bay Ecozone

Map 6.4C-30