

Ontario Imagery Web Map Service

Metadata Guide

Geospatial Ontario
Ministry of Natural Resources

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Additional Information

This document does not comply with all the applicable guidelines for accessible digital documents. For an alternative format please email the Land Information Ontario Imagery Program at imagery@ontario.ca.

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List of Acronyms

GEO: Geospatial Ontario

MNR: Ontario Ministry of Natural Resources

OIWMS: Ontario Imagery Web Map Service

PPI: Pixels Per Inch

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Abstract

This document provides additional information for the metadata record of the Ontario Imagery Web Map Service and Ontario Imagery Web Map Service Source, formerly known as the Ontario Image Service and Ontario Imagery Service Source respectively.

[Metadata Record](#)

(<https://geohub.lio.gov.on.ca/maps/lio::ontario-imagery-web-map-service-oiwms/about>)

[Ontario Imagery Web Map Service](#)

(https://intra.ws.lioservices.lrc.gov.on.ca/arcgis2/rest/services/LIO_Imagery/Ontario_Imagery_Web_Map_Service/MapServer)

[Ontario Imagery Web Map Service Source](#)

(https://ws.lioservices.lrc.gov.on.ca/arcgis2/rest/services/LIO_Imagery/Ontario_Imagery_Web_Map_Service_Source/MapServer)

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Introduction

The Ontario Imagery Web Map Service (OIWMS), formally known as the Ontario Imagery Service is an ArcGIS map service that combines the most recent sources of imagery available for web distribution into a single service. This is an open data service available to everyone free of charge. It provides instant online access to the most recent, highest quality, province wide imagery. GEOspatial Ontario (GEO) makes this data available as an Open Geospatial Consortium (OGC) compliant web map service or as an ArcGIS map service. The companion spatial data index (OIWMS-Source) is open to the public to assist data discovery and data orders.

Objectives

This technical document will provide a description of what data sources were used and how they were layered in the cached ArcGIS map service. This document will not discuss the steps taken to collect the data, build or publish the service. Please contact imagery@ontario.ca for more information.

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Imagery Included in the Service

The imagery sources currently included in the Ontario Imagery Service are:

- Algonquin 2015 Orthophotography
([metadata record](#))
- Central Ontario Orthophotography Project 2016 (COOP2016)
([metadata record](#))
- Central Ontario Orthophotography Project 2021 (COOP2021)
([metadata record](#))
- Digital Raster Acquisition Project East 2014 (DRAPE 2014)
([metadata record](#))
- Digital Raster Acquisition Project East 2024 (DRAPE 2024)
([metadata record](#))
- Forest Resource Inventory (FRI) Digital Aerial Imagery (2007-2011)
([metadata record](#))
- Forest Resource Inventory (FRI) Digital Aerial Imagery Term 2 (T2) (2018-2027)
([metadata record](#))
- MTO 2015 Far North Aerial Photo Acquisition.
(*Metadata is currently unavailable.*)
- MTO 2023 Remote Northern Airports Aerial Photo Acquisition.
(*Metadata is currently unavailable.*)
- Northwestern Ontario Orthophotography Project (2017)
([metadata record](#))
- Northwestern Ontario Orthophotography Project (2022)
([metadata record](#))
- Pleiades AFFES (Purchased 2015)
(*Metadata is currently unavailable.*)
- QuickBird Satellite Imagery for Far North Communities (2010)
(*Metadata is currently unavailable.*)
- Sentinel 2 Best Available Pixel 10-meter Surface Reflectance (2025)
(*Metadata is currently unavailable.*)
- South Central Ontario Orthophotography Project - 2023 (SCOOP 2023)
([metadata record](#))
- Southwestern Ontario Orthophotography Project (SWOOP 2025)
([metadata record](#))
- Worldview- 2 (AFFES Purchased 2014)
(*Metadata is currently unavailable.*)

* This dataset was pansharpened and orthorectified prior to inclusion in the Ontario Imagery service.

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Stacking Orthophotography Collections

The different data sources are stacked on top of each other to provide, where possible, a seamless coverage of imagery across the province. The datasets are also scale dependent so that imagery that has coarser resolution displays at small scale, and higher resolution imagery appears at larger scales (closer to ground).

The orthophotography stacking order was chosen based on 3 preferences:

1. Season – leaf-off imagery was given preference over-leaf on imagery;
2. Date of acquisition - more recent data is displayed over older imagery;
3. Appearance at scale – Satellite imagery is displayed over Aerial imagery at small scales and when best available. This is a subjective evaluation made by the creator of the service given relative clarity.

Scale dependency is implemented through the building of a compressed tile cache. As such, the scales at which the imagery becomes available may be referenced by either the “cache level” or as a scale ratio (the ratio is an approximation based on a computer monitor with a resolution 96ppi). In practice imagery may appear before its stated scale depending on the logic a particular application uses to request and display the imagery.

Stacking Order of Orthophotography Collections

Layer Order	Cache Level	Level 0	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11	Level 12	Level 13	Level 14	Level 15	Level 16	Level 17	Level 18	Level 19
1	South Western Ontario Orthophotography Project 2025																				
2	Digital Raster Acquisition Project Eastern Ontario 2024																				
3	South Central Ontario Orthophotography Project 2023																				
4	MTO 2023 Remote Northern Airports Aerial Photo Acquisition																				
5	North Western Ontario Orthophotography Project 2022																				
6	Central Ontario Orthophotography Project 2021																				
7	North Western Ontario Orthophotography Project 2017																				
8	Central Ontario Orthophotography Project 2016																				
9	Pleiades Satellite Imagery 2015																				
10	Algonquin 2015 Orthophotography																				
11	Digital Raster Acquisition Project Eastern Ontario 2014																				
12	Forest Resource Inventory(FRI)T2 Digital Aerial Imagery 2018-2027																				
13	MTO 2015 Far North Aerial Photo Acquisition																				
14	Worldview 2 Satellite Imagery 2014																				
15	Forest Resource Inventory (FRI) Digital Aerial Imagery 2007-2011																				
16	QuickBird Satellite Imagery for Far North Communities (2010)																				
17	Sentinel 2 - Best Available Pixel 10-meter Surface Reflectance (2025)																				
~Scale (96PPI Monitor)		1 : 591,658,710	1 : 295,829,355	1 : 147,914,677	1 : 73,957,338	1 : 36,978,669	1 : 18,489,334	1 : 9,244,667	1 : 4,622,333	1 : 2,311,166	1 : 1,155,583	1 : 577,791	1 : 288,895	1 : 144,447	1 : 72,223	1 : 36,111	1 : 18,055	1 : 9,028	1 : 4,514	1 : 2,257	1 : 1,128

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Companion Index Service

A companion web service has been created for use with the Ontario Imagery Web Map Service. It provides a scale-dependent overlay that informs the user where the different imagery datasets are used within the service. Attribute data describes basic information and at what scales (based on a computer screen) the different imagery datasets are visible.

The Ontario Imagery Web Map Service Source formally known as the Ontario Imagery Source can be accessed at this address:

http://intra.ws.gisdynamic.lrc.gov.on.ca/public/rest/services/LIO/Ontario_Imagery_Web_Map_Service_Source/MapServer

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Imagery Copyright Notice

Algonquin 2015 Orthophotography (2015). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2015 King's Printer for Ontario. All Rights Reserved.

Central Ontario Orthophotography Project (2016). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2016 King's Printer for Ontario. All Rights Reserved.

Central Ontario Orthophotography Project (2021). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2021 King's Printer for Ontario. All Rights Reserved.

Digital Raster Acquisition Project Eastern Ontario (2014). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2014 King's Printer for Ontario. All Rights Reserved.

Digital Raster Acquisition Project Eastern Ontario (2024). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2024 King's Printer for Ontario. All Rights Reserved.

Forest Resource Inventory (FRI) Digital Aerial Imagery. Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2010 King's Printer for Ontario. All Rights Reserved.

Forest Resource Inventory (FRI) Term 2 (T2) Digital Aerial Imagery. Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2023 King's Printer for Ontario. All Rights Reserved.

Northwestern Ontario Orthophotography Project (2017). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2017 King's Printer for Ontario. All Rights Reserved.

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QuickBird Satellite Imagery for Far North Communities. Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2005 DigitalGlobe Inc. All Rights Reserved.

Sentinel 2 Surface Reflectance Best Available Pixel 2024 Satellite Imagery Product (2025). Source: Data created by DDIBS using a process created by Ian Smyth, Remote Sensing Specialist with the Forest Resource Inventory program, Remote Sensing Unit, Ontario Ministry of Natural Resources. © Copyright: 2022 King's Printer for Ontario. All Rights Reserved.

South Central Ontario Orthophotography Project (2023). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2023 King's Printer for Ontario. All Rights Reserved.

Southwestern Ontario Orthophotography Project (2020). Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2020 King's Printer for Ontario. All Rights Reserved.

Worldview 2 Satellite imagery. Source: Data provided by Ontario Ministry of Natural Resources. © Copyright: 2014, 2015 DigitalGlobe Inc. All Rights Reserved.

Retired Data

This is a list of data sets that were previously included within the service.

- Greater Toronto Area (GTA) Orthophotography Project 2005
([metadata record](#))
Removed Oct 2014
- Greater Toronto Area (GTA) Orthophotography Project 2013
([metadata record](#))
Removed Feb 2022
- County of Simcoe, Muskoka and Dufferin (SMD) 2008 Orthophotography
([metadata record](#))
Removed Oct 2015
- Digital Raster Acquisition Project Eastern Ontario (2008)
([metadata record](#))
Removed Oct 2015
- Digital Raster Acquisition Project Eastern Ontario (2019-2020)
([metadata record](#))

Removed May 2025

- South Central Ontario Orthophotography Project (2013)
([metadata record](#))
Removed Feb 2020
- South Central Ontario Orthophotography Project (2018)
([metadata record](#))
Removed May 2025
- Southwestern Ontario Orthophotography Project (2010)
([metadata record](#))
Removed Oct 2016
- Southwestern Ontario Orthophotography Project (SWOOP 2015)
([metadata record](#))
Removed Feb 2022
- U.S. Mexico and Canadian Border Special Acquisition Imagery (2008)
USGS High Resolution Orthoimagery for the U.S. Canada Border
(Manitoulin Island, Ontario AOI38)
Removed Oct 2017

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