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DATA CONTRIBUTORS

- City of Beaverton
- City of Cornelius
- City of Forest Grove
- City of Gresham
- City of Hillsboro
- City of Lake Oswego
- City of Milwaukie
- City of Newberg
- City of Oregon City
- City of Portland
- City of Sherwood
- City of Tigard
- City of Troutdale
- City of Tualatin
- City of West Linn
- City of Wilsonville
- Clean Water Services
- Port of Portland
- TriMet
- Tualatin Valley Water District
- Clackamas County
- Multnomah County
- Washington County
- Washington County Consolidated Communications Agency

Quick reference users' guide

Metro's Regional Land Information System is a compilation of more than 100 GIS data layers that serve as the spatial data infrastructure for the Portland metropolitan area. Since the inception of RLIS in the late 1980s, Metro's Data Resource Center staff have worked with regional partners to collect and combine a wide array of data into a seamless dataset for use in region-wide decision-making.

These layers are regularly updated and shared through RLIS Live, a suite of web services that provide users with access to this rich dataset. The work of partners and data contributors ensures that RLIS Live data is regularly updated and meets industry standards.

This guide provides instruction on accessing RLIS data through the RLIS Discovery site, where to find guidelines for the appropriate use of data layers, and answers to frequently asked questions.

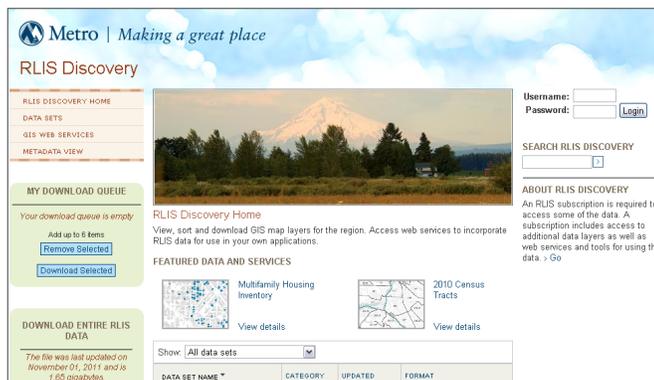
RLIS Live features

RLIS Live provides access to:

- a download service that lets you discover and gather specific spatial data layers to use in your own local applications
- a scalable base map web service that serves as a platform for displaying and exploring your own data and applications
- the most current map data for applications or GIS software without the need to store the data locally.

The RLIS Discovery website

Visit rlisdiscovery.oregonmetro.gov for your entry point to a wealth of data for the Portland region.



Accessing RLIS data

Search and download files

Through the RLIS Discovery site, download select RLIS layers or the entire current dataset and check for updates.

rlisdiscovery.oregonmetro.gov

Access free layers or subscribe to access all available layers.

The screenshot shows the RLIS Discovery website. On the left, a navigation menu includes 'RLIS DISCOVERY HOME', 'DATA SETS', 'GIS WEB SERVICES', and 'METADATA VIEW'. Below this is a 'MY DOWNLOAD QUEUE' section with a message 'Your download queue is empty' and buttons for 'Remove Selected' and 'Download Selected'. A callout box points to this section, stating 'Queued items will list here.' Below the queue is a 'DOWNLOAD ENTIRE RLIS DATA' section with a message 'The file was last updated on November 01, 2011 and is 1.65 gigabytes.' and a 'Subscribe to access' button. A callout box points to this section, stating 'Subscribers can download the entire RLIS dataset with one click.' The main content area features a 'RLIS Discovery Home' section with a description and a 'FEATURED DATA AND SERVICES' section with two featured items: 'Multifamily Housing Inventory' and '2010 Census Tracts'. Below this is a table of data sets. A callout box points to the 'Download' and 'Add to queue' links in the table, stating 'Download one layer at a time or add up to six items to your queue to download all at once.'

RLIS Discovery

RLIS DISCOVERY HOME
DATA SETS
GIS WEB SERVICES
METADATA VIEW

Username:
Password:

SEARCH RLIS DISCOVERY

MY DOWNLOAD QUEUE
Your download queue is empty
Add up to 6 items

DOWNLOAD ENTIRE RLIS DATA
The file was last updated on November 01, 2011 and is 1.65 gigabytes.

RLIS Discovery Home
View, sort and download GIS map layers for the region. Access web services to incorporate RLIS data for use in your own applications.

FEATURED DATA AND SERVICES

Multifamily Housing Inventory
2010 Census Tracts

Show: All data sets

DATA SET NAME	CATEGORY	UPDATED	FORMAT
 1970 Census Tracts The US Census Bureau census tracts. Tract boundaries are released from the Census Bureau every 10 years. more	Census	1970	Shapefile <input type="button" value="Download"/> <input type="button" value="Add to queue"/>
 1980 Census Tracts The US Census Bureau census tracts. Tract boundaries are released from the Census Bureau every 10 years. more	Census	1980	Shapefile <input type="button" value="Download"/> <input type="button" value="Add to queue"/>

The dataset list provides layer name, brief summary, category, format and date of last update for all datasets.

Show: All data sets

DATA SET NAME	CATEGORY	UPDATED	FORMAT
 1970 Census Tracts The US Census Bureau census tracts. Tract boundaries are released from the Census Bureau every 10 years. more	Census	1970	Shapefile <input type="button" value="Download"/> <input type="button" value="Add to queue"/>
 1980 Census Tracts The US Census Bureau census tracts. Tract boundaries are released from the Census Bureau every 10 years. more	Census	1980	Shapefile <input type="button" value="Download"/> <input type="button" value="Add to queue"/>

A variety of search options allow you to narrow your search to meet your immediate needs.

rlisdiscovery.oregonmetro.gov

Search for specific data or show what's been most recently updated.

The screenshot shows the RLIS Discovery website. On the left, there is a navigation menu with links for 'RLIS DISCOVERY HOME', 'DATA SETS', 'GIS WEB SERVICES', and 'METADATA VIEW'. Below this is a 'MY DOWNLOAD QUEUE' section indicating the queue is empty, and a 'DOWNLOAD ENTIRE RLIS DATA' section with a file size of 1.65 gigabytes. The main content area features a 'RLIS Discovery Home' banner, a search bar, and a 'FEATURED DATA AND SERVICES' section with thumbnails for 'Multifamily Housing Inventory' and '2010 Census Tracts'. A table below shows a list of data sets with a 'Show:' dropdown menu open, displaying options like 'All data sets', 'New/updated in last 30 days', 'New/updated in last 90 days', and 'New/updated in last 180 days'. The table has columns for 'DATA SET NAME', 'CATEGORY', 'UPDATED', and 'FORMAT'. A callout box points to the search bar with the text: 'Use the search box to find a specific theme or layer.' Another callout box points to the dropdown menu with the text: 'The drop-down menu lets you choose to show only recently updated data.'

About metadata

Metadata describe the content, quality, condition, time period and other characteristics of data. Metadata can help confirm:

- appropriate scale for use
- time period
- any data limitations or known issues
- geographic extent
- accuracy level
- date of update.

Metadata help ensure appropriate use of RLIS data. Thoroughly read the metadata for any layers that you plan to use.

DATA SET NAME	CATEGORY	UPDATED	FORMAT
 <p>Building Footprint Database Contains regional building footprint data including average building heights created and compiled by Watershed Sciences from regional ... more</p>	Land	November 01, 2011	Shapefile Web service Shapefile

To access metadata for a particular layer, click "more."

Dataset detail page

The detail page offers the full abstract and basic purpose of the dataset.

RLIS DISCOVERY HOME > VIEW DETAIL

BUILDING FOOTPRINT DATABASE

Abstract: Contains regional building footprint data including average building heights created and compiled by Watershed Sciences from regional Lidar data. In instances where Lidar point density was insufficient to establish a footprint, Watershed Sciences either 1) digitized footprint from 2008 Ortho photography or 2) used existing footprint data provided by the Jurisdiction.

Purpose: The data was collected to estimate building heights and serve as a repository for building footprint regional data.

Click "Show" to link to the metadata for a particular dataset.

Metadata: [Show](#)

Shapefile
[Subscribe to access](#)

Web service
[Subscribe to access](#)

The metadata screen provides the pertinent information for each layer and follows the Federal Geographic Data Committee standards and format.

Another option is to link to the metadata for all layers.

rlisdiscovery.oregonmetro.gov

Access metadata for all layers.

RLIS Discovery

- RLIS DISCOVERY HOME
- DATA SETS
- GIS WEB SERVICES
- METADATA VIEW

MY DOWNLOAD QUEUE

Your download queue is empty

Add up to 6 items

[Remove Selected](#)

[Download Selected](#)

Click "Metadata View" to link to metadata for all layers.

RLIS Discovery Home

View, sort and download GIS map layers for the region. Access web services to incorporate RLIS data for use in your own applications.

FEATURED DATA AND SERVICES

[Multifamily Housing](#) [2010 Census](#)

Metadata View page

Click the metadata links to see the metadata for the individual layers.

Metadata View
View metadata for the data sets

DATA SET NAME ▼	CATEGORY	UPDATED	FORMAT
1970 Census Tracts	Census	1970	Metadata
1980 Census Tracts	Census	1980	Metadata
1990 Block Groups	Census	1990	Metadata
1990 Census Tracts	Census	1997	Metadata
20 Districts	Census	2008	Metadata
2000 Block Groups	Census	2008	Metadata
2000 Census Tracts	Census	2008	Metadata
2001 10 ft. Aerial photo	Photo	July 23, 2001	Metadata
2006 10 foot Regional Orthophoto	Photo	July, 2006	Metadata
2010 Block Groups	Census	2010	Metadata

RLIS Live web services

RLIS Live web services allow subscribers access to the most current map data for applications or GIS software without the need to store the data locally. With Metro’s web services, developers can be confident that the most current data is always available. Some of the RLIS web services available from Metro’s servers include:

- base map services
- building footprint database service
- urban growth boundary service
- zoning service.

Integrating ‘locally grown’ data into a seamless, regionally-coordinated fabric ensures RLIS data is authoritative, accurate and useable.

Preston Beck, GISP
GIS coordinator, City of Tigard

Frequently asked questions

What software do I need to use the files available for download through the RLIS Discovery site?

Any software that can use shapefile format, either directly or through an import function.

What layers are included in RLIS?

RLIS includes over 100 layers. For a complete list, visit www.oregonmetro.gov/rlislayers.

What geographic area does RLIS data cover?

RLIS data primarily cover the Portland metropolitan region. Many layers cover the extent of the three Metro area counties: Multnomah, Washington and Clackamas.

Why can I download some layers, but not all?

While many layers are free, a subscription is required to download all layers.



What RLIS has enabled this region to do is phenomenal. This is an astounding service for planning and for policymaking.

Ethan Seltzer, professor, urban studies and planning,
Portland State University

Why aren't all of the layers free?

The current pricing structure provides some of the funding necessary to continue to coordinate the collection of data and provide timely updates.

How do I subscribe?

To subscribe, email drc@oregonmetro.gov or call 503-797-1742.

What do I get as a subscriber?

Subscribers enjoy twenty-four hour access to RLIS Live services, all RLIS Live layers and select historical datasets.

How often is the data updated?

Many of the layers are updated quarterly; some are updated less frequently and others more frequently. Refer to the metadata for the update frequency by layer.

Why is the data not in latitude/longitude coordinates?

Latitude/longitude is a coordinate system that is designed to describe locations on the earth. These are typical for GPS tracks and applications like Google Earth. RLIS data are defined in State Plane Coordinates, which is a local solution defined by the state and local survey community.

Why is it important to read the metadata before using RLIS data layers?

Understanding the metadata is important to ensure appropriate use of the data layers.

Who should use RLIS web services?

RLIS web services are appropriate for anyone wanting to develop their own custom applications on top of RLIS base maps or data. If you have desktop GIS software, you can also pull these services into your own local mapping applications.

Concepts

Accuracy is the degree to which information on a map or in a digital database matches true or accepted values. Accuracy is an issue pertaining to the quality of data and the number of errors contained in a dataset or map.

Generalization is the abstraction, reduction and simplification of features for change of scale or resolution.

Geocoding is the process of assigning geographic coordinates (e.g. latitude/longitude) to street addresses, as well as other points and features. With geographic coordinates, the features can then be mapped and entered into a geographic information system.

GIS is the abbreviation for geographic information system. GIS is a special-purpose digital database in which a common spatial coordinate system is the primary means of reference and includes hardware and software used for storage, retrieval, mapping and analysis of geographic data.

Metadata is the term for data about data and describes the content, quality, condition, time period and other characteristics of data.

Precision refers to the level of measurement and exactness of description in a GIS database. Precise locational data measures position to a fraction of a unit. Precise attribute information specifies the characteristics of features in detail.

Projection is a system in which locations on the curved surface of the earth are displayed on a flat sheet or surface according to some set of rules. RLIS data are projected in the State Plane coordinate system for Oregon and use U.S. feet as the map units.

Raster databases and displays build all geographic features from grid cells in a matrix. A raster display builds an image from pixels, pels, or elements of coarse or fine resolution.

A **shapefile** is a standard file format for digital spatial data. It was introduced in 1992 by Esri and has become a standard format for the storage and distribution of vector geographic data.

Vector databases and displays build geographic features from points with discrete X-Y locations. Lines are constructed from strings of points, and polygons (regions) are built from lines that close.

Web service describes a standardized way of integrating web-based applications using the XML, SOAP, WSDL and UDDI open standards over an Internet protocol backbone.



I go to the RLIS Discovery site and with one click, download the complete set of RLIS map layers in about 30 minutes. I liked it on DVD, but I love the direct download service.”

Ryan Campbell, GIS analyst, Port of Portland

Subscribe

Access to many of the layers is free via the RLIS Discovery site, however an annual subscription provides unlimited access to all layers and web services. A flat annual rate allows access for any number of users. Contact the Data Resource Center at drc@oregonmetro.gov or 503-797-1742.

Contact

For more information or to provide feedback on these services, contact Metro's Data Resource Center at drc@oregonmetro.gov. or 503-797-1742.

Additional resources

www.gis.com

The guide to Geographic Information Systems offers an introduction to GIS, including definitions and use examples.

www.esri.com

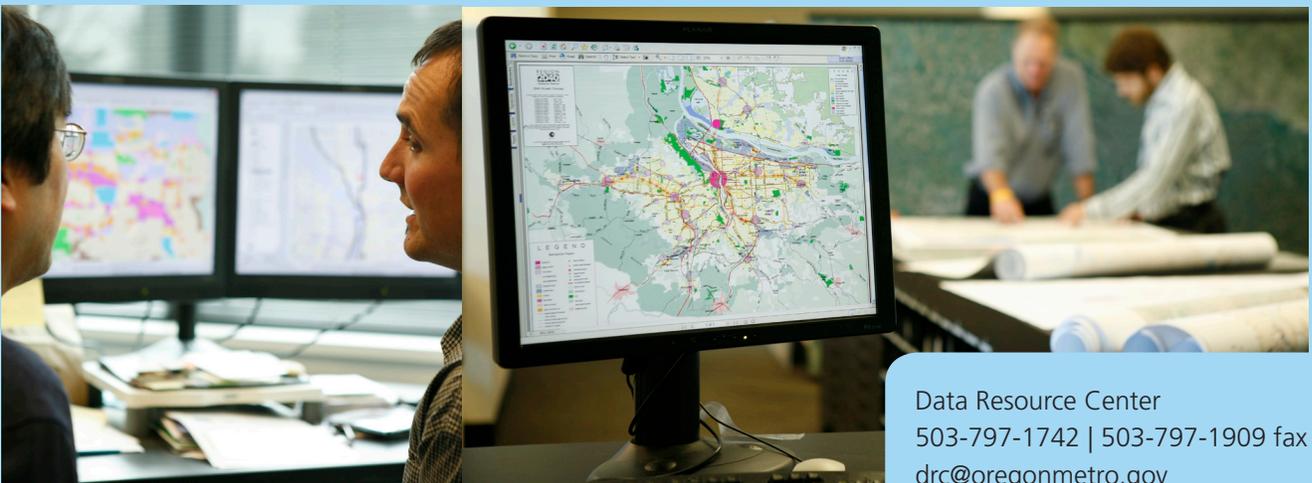
Esri offers help and support for using their suite of ArcGIS products, which includes applications for desktop, server, mobile and online functionality and interface.

Data Resource Center

For more than 20 years, Metro's Data Resource Center has collaborated with regional partners to develop, use and distribute data collected from across the region.

Known as the Regional Land Information System, RLIS provides data delivered in a common format that can be used to display spatial information and perform complex queries.

Through RLIS Live, Metro's Data Resource Center provides easy access to current data that is constantly evolving to meet client needs. RLIS Live is the definitive source for the region's land information.



Data Resource Center
503-797-1742 | 503-797-1909 fax
drc@oregonmetro.gov