

How is GIS used at the City?

SnapMap is a customized GIS software application that has been developed, designed, and maintained by GIS staff specifically for the City of West Linn's needs. The staff continues to enhance the software as the City's business needs change.



City staff can quickly and easily view GIS map layers and make their own maps. SnapMap is available to the public at the front counter at City Hall to help with Planning, Building, and Engineering questions and by Code Enforcement Officers. Detailed utility system maps, property information, easements, environmental constraints, and more are available for viewing. Much of this information is only available in-house or to walk-in requests since it includes sensitive information (for instance owner names, water valve locations, etc.). SnapMap is installed on 100 computers throughout the City.



Quick & Easy user interface

Mobile-SnapMap

A mobile version of SnapMap is used in Police vehicles and Public Works uses SnapMap as an aid in utility locates.

Ortho-rectified aerial photography from 1996-2008 is one of the many things that can be viewed in SnapMap. This type of photography can be overlaid with parcel lines and utility systems and saves staff time by reducing field work.



GPS Program

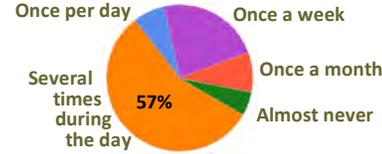
The City's GIS team is currently using GPS equipment to improve the accuracy of the utility mapping. Original map information was digitized from hand inked mylars in 1996 and is inaccurate by 40 feet in some areas. With the available map-grade GPS equipment GIS staff is able to improve map accuracy to greater than one foot. You may see our engineering staff in the field during this process. GPS is also used for special projects including trail mapping, street sign inventories, and engineering public improvement projects.

GIS as a Business Tool

A survey of GIS usage by City staff was conducted in Feb. 2009. Results are as follows:

57% of respondents use SnapMap several times per day
51% are using SnapMap to help the public on the phone or front desk.
Feedback from staff:

How often do you use GIS / SnapMap?



"Great product, great support, great personnel!"

"Wonderful helpful department"

"If I have questions I call GIS and they have always answered"

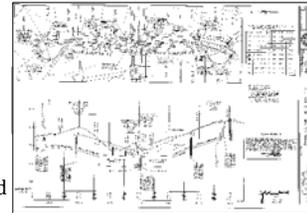
Web Usage Report

A new web site was developed in 2008 and allows the City to monitor hit rates on individual areas of the web site. There is an average hit rate is 3,000 per month on the GIS web pages. This graph illustrates the usage of GIS web mapping during the last year:



Large-Format Scanned & Printing

The City has scanned thousands of detailed large format engineering as-built utility drawings, plats, easement documents, and historic maps. These scanned images are saved in digital format. The scanner and plotter system allows City staff to duplicate drawings quickly and easily. GIS staff has set up this equipment and provides training & assistance to users of the system.



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The City of West Linn uses ESRI software products including ArcGIS Desktop, ArcGIS Server, and ArcPad.

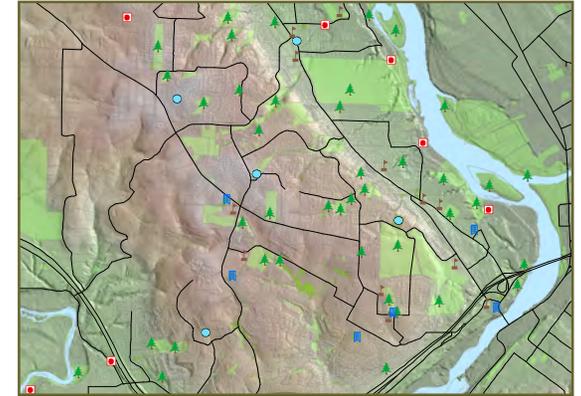
MapObjects software is used to develop SnapMap which has been an affordable solution to bring GIS to various city departments. This brochure has been designed and published by the West Linn GIS staff.

Standard State of Oregon GIS Map Disclaimer:

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

CITY OF WEST LINN

Geographic Information System



The GIS program at the City of West Linn uses state-of-the-art software to provide GIS services to City staff, external agencies, and citizens. It is an enterprise-wide system and is utilized by many departments in the City including:

Engineering	Public Works	Finance
Planning	Parks & Rec.	Administration
Building	Police	

GIS services are available to external agencies and citizens including:

Home Owners	Public Agencies
Realtors	(including C-COM, DEQ, post office, etc.)
Title Companies	Utility Companies
Private Contractors	(including PGE, QWest, cable, etc.)

Please read the information provided in this brochure to find out how the City of West Linn is using GIS and how GIS may be useful for you.

West Linn GIS is located at City Hall in the Engineering Division of the Public Works Department:
22500 Salamo Road, West Linn, Oregon 97068

For more information contact:
Kathy Aha, GIS Coordinator, (503) 722-5513
kaha@westlinnoregon.gov

What is GIS?

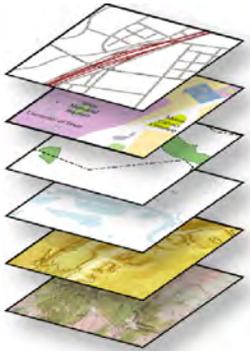
A GIS is a geographic information system. GIS helps people think spatially and approach problems from a geographic perspective.

GIS software and geographic databases (geo-databases) represent features on the earth, such as buildings, site addresses, utility systems, city boundaries, roads, etc. GIS helps people to visualize, question, analyze, and understand this data about the world and human activity. This data is typically viewed on a map, which provides an advantage because maps reveal patterns, point out problems, and show connections. In addition, this system can provide data summaries, reporting, and complex spatial analysis.

Maintenance & Updating of Geo-Databases

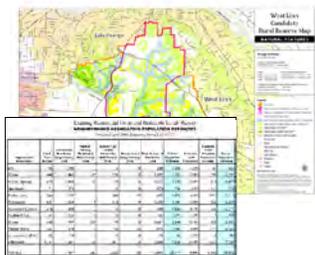
The most important component of a useful GIS is entering information into the system and keeping it updated with land use and infrastructure changes. The GIS staff use ArcInfo software to assure the data is accurate and up-to-date. There is a main computer server where data is centrally located and published for users of the system. There are also GIS data sharing agreements in place with both Clackamas County and Metro so we freely transfer data and maps between agencies. Additionally, GIS provides data to consultants on City projects. The City GIS maintains a master address file that is transferred into emergency dispatch centers to assure accurate location information and used in conjunction with meter locations for utility billing within the finance department.

GIS Data Layers



- Utilities**
(Sewer, Storm, Water, Streets, Street Signs)
- Land Use**
(City Owned Land, Parks, Openspace)
- Environmental**
(Contours, Slope, Wetlands, Streams)
- Planning**
(Zoning, Comp Plan, Buildable Land)
- Parcel Mapping**
(Taxlots, Easements, Property Info, Plat Info.)
- Boundaries**
(City Limits, Neighborhood Assoc., Special Districts)
- Site Addresses**
(Master Address File, Geocoding)
- Digital Imagery**
(Orthophotography, LIDAR, DEMs)

Special Applications of GIS



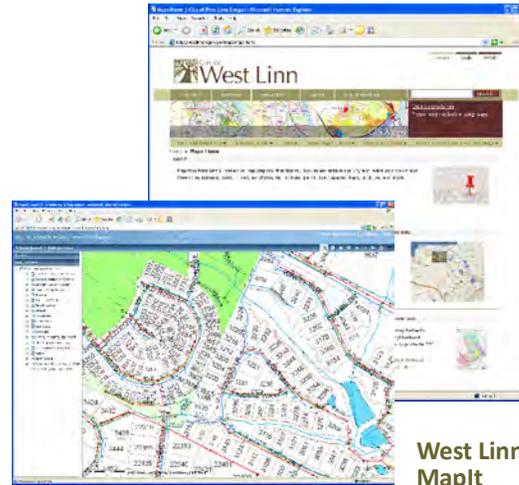
The GIS staff provides support services including ad-hoc maps, reporting, analysis, research, and geocoding to City staff working on special projects and Mayor, City Council and committees. Over 150 specialized GIS project requests are filled on a yearly basis.

Accessing West Linn's GIS From Your Home or Office

In addition to printed maps the City's GIS staff have developed an on-line interactive mapping application available to the general public.

Public Access to published GIS Maps are available at:

<http://westlinnoregon.gov/maps>

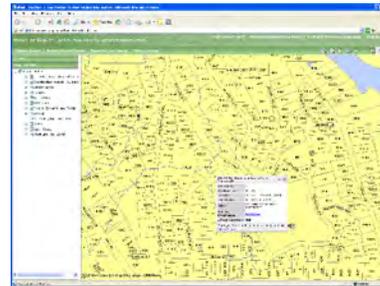


West Linn MapIt

Choose your map layers and make your own maps using Interactive Mapping! MapIt is especially useful for viewing the city utility systems, location addresses, zoning, and recent air photos.

West Linn PlantIt

View current building permit construction activity, contractor information, and links to land use application information.



Printed Maps

The City of West Linn GIS has developed many pre-printed maps and special project maps which are available for purchase.

In addition, many of the most popular maps are available for FREE on the City's web site.

Examples of popular pre-printed maps:

- City Atlas
- Road Map
- Zoning Map
- Neighborhood Associations
- Bicycle Map
- Aerial Photo



Examples of special project maps:

- Goal 5 Inventory Maps
- Key Facilities
- Snow Routes
- Parade Route
- Sandbag Locations
- Street Sweeping
- Park Location Maps
- Trail Maps



FREE GIS maps are available for viewing and download in Adobe PDF format on the city web site.

Price List

Pre-printed map products and standard pre-made maps:

- SnapMap Printouts 8-1/2"x11 First 5 free
- Over 11"x17 up to 24"x36" (C & D sized sheets) \$15
- 2'x3' up to 3'x4' (E sized sheets) \$20
- Oversized, including City Hall zoning wall map \$30

Custom map products for special project needs are based on staff hourly billing rate + map printout costs. Limited to staff availability.

GIS Coordinator

Input from citizens relating to map errors and corrections are greatly appreciated. Please contact GIS staff for any questions, comments, suggestions, or ideas you may have relating to the City's geographic information system.
Kathy Aha, GIS Coordinator, kaha@westlinnoregon.gov

GIS staff develops other custom applications for City business needs. An example is SnapNotify. The GIS staff has developed this custom ArcView application that is used by the City's Planning and Parks Departments to notify home owners within specific radiuses of land-use issues and for tree permitting.



An asset management software program at the City allows Public Works staff to track utility system



maintenance. For instance, the street division has just completed an inventory of street signs throughout the City. We are able to connect this system with the City's GIS to share information between the two systems and link with map displays.