

# Washington Location Finder Project

Partners:

Washington Department of Ecology  
Washington Department of Health  
Environmental Information Exchange Network  
(US Environmental Protection Agency &  
Environmental Council of the States)

WaGIC

April 17, 2008

# Topics

- Background, Objectives, Scope
- Brief Description Of Services
- GML 101
- Testing Application Demonstration
- Next Steps
- Questions

# Background

**AGENCY USE ONLY**

Agency Reference #: \_\_\_\_\_ Date Received: \_\_\_\_\_  
Calculated by: \_\_\_\_\_ (local govt. or agency)

**JOINT AQUATIC RESOURCES PERMIT APPLICATION FORM (JARPA)**  
(for use in Washington State)  
**PLEASE TYPE OR PRINT IN BLACK INK**

Application for a Fish Habitat Enhancement Project per requirements of RCW 77.55.290. You must submit a copy of this completed JARPA application form and the (Fish Habitat Enhancement JARPA Addition) to your local Government Planning Department and Washington Department of Fish & Wildlife Area Habitat Biologist on the same day.  
**NOTE: LOCAL GOVERNMENTS – You must submit any comments on these projects to WDFW within 15 working days.**

Based on the instructions provided, I am sending copies of this application to the following: (check all that apply)

<input checked="" type="checkbox"/> Local Government for shoreline: <input checked="" type="checkbox"/> Substantial Development <input type="checkbox"/> Conditional Use <input type="checkbox"/> Variance <input type="checkbox"/> Exemption <input type="checkbox"/> Revision
<input type="checkbox"/> Floodplain Management <input type="checkbox"/> Critical Areas Ordinance
<input checked="" type="checkbox"/> Washington Department of Fish and Wildlife for HPA (Submit 3 copies to WDFW Region)
<input checked="" type="checkbox"/> Washington Department of Ecology for 401 Water Quality Certification (to Regional Office-Federal Permit Unit)
<input checked="" type="checkbox"/> Washington Department of Natural Resources for Aquatic Resources Use Authorization Notification
<input checked="" type="checkbox"/> Corps of Engineers for: <input checked="" type="checkbox"/> Section 404 <input checked="" type="checkbox"/> Section 10 permit
<input type="checkbox"/> Coast Guard for General Bridge Act Permit
<input type="checkbox"/> For Department of Transportation projects only. This project will be designed to meet conditions of the most current Ecology/Department of Transportation Water Quality Implementing Agreement

**SECTION A – Use for all permits covered by this application. Be sure to ALSO complete Section C (signature block) for all permit applications.**

**1. APPLICANT**  
Port of Seattle, Attn: George Blomberg (Environmental Services) and Michael McLaughlin (Project Manager)

**MAILING ADDRESS**  
Port of Seattle  
PO Box 1209  
Seattle, WA 98111

WORK PHONE	E-MAIL ADDRESS	HOME PHONE	FAX #
(206) 728-3194	<a href="mailto:blomberg@portseattle.org">blomberg@portseattle.org</a>		(206) 728-3188
(206) 728-3453	<a href="mailto:mclaughlin.m@portseattle.org">mclaughlin.m@portseattle.org</a>		(206) 728-3280

**If an agent is acting for the applicant during the permit process, complete #2. Be sure agent signs Section C (signature block) for all permit applications.**

**2. AUTHORIZED AGENT**

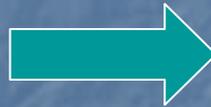
**MAILING ADDRESS**

**WORK PHONE**      **E-MAIL ADDRESS**      **HOME PHONE**      **FAX #**

**3. RELATIONSHIP OF APPLICANT TO PROPERTY:**  OWNER     PURCHASER     LESSEE     OTHER  
The Port of Seattle is the fee owner of the upland area. Washington Department of Natural Resources is owner and manager of adjacent aquatic area and tideland. The Port and WDNR implement a joint management agreement for aquatic area adjacent to Port-owned marine terminal facilities. (Please refer to the attached property description including Legal Description for Terminal 37, 42, 46. A list of King County tax lots comprising the Terminal 37, 42, 46 marine/industrial cargo facility is found below in Section 5).

**4. NAME, ADDRESS, AND PHONE NUMBER OF PROPERTY OWNER, IF OTHER THAN APPLICANT:**  
Not applicable.

JARPA, Revised 7/02 Contact the State of Washington Office of Permit Assistance for latest version, 360/407-7837 or 800/917-0043 1



One-Stop E-Permitting Service - Microsoft Internet Explorer provided by Dept of Ecology

File Edit View Favorites Tools Help

Address [http://jeppermitting.org/site/akas\\_resourcecenter/9993/default.aspx](http://jeppermitting.org/site/akas_resourcecenter/9993/default.aspx)

Access Washington  
Official State Government Web Site

One-Stop E-Permitting Service    Environmental Permitting Services

Today is Tuesday, April 10, 2007    Sign In    Site Map    Enter search text here

Welcome    **JARPA**    Resources    Contact Us    Transportation Pilots

Text Size: [A] [A+] [A-]

### JARPA Process

This is your one-stop for information to help you with the Joint Aquatic Resource Permits Application (JARPA) process.

**Introduction**  
Learn what JARPA is and what permits you can use it to apply for.

**Process Overview**  
Important information to consider when filling out your JARPA form and moving through the regulatory process.

**JARPA Form**  
Download an electronic version of the JARPA form with on-line assistance information available on a question-by-question basis. Additionally access other helpful handouts to help you fill out your JARPA.

**Examples of Completed JARPA Forms**  
See samples of completed JARPA forms.

**JARPA Contacts**  
Contact information for the agencies who can help you.

[Feedback](#)

Copyright © 2006 Washington State Office of Regulatory Assistance.

Joint Aquatic Resources Permit Application (JARPA)

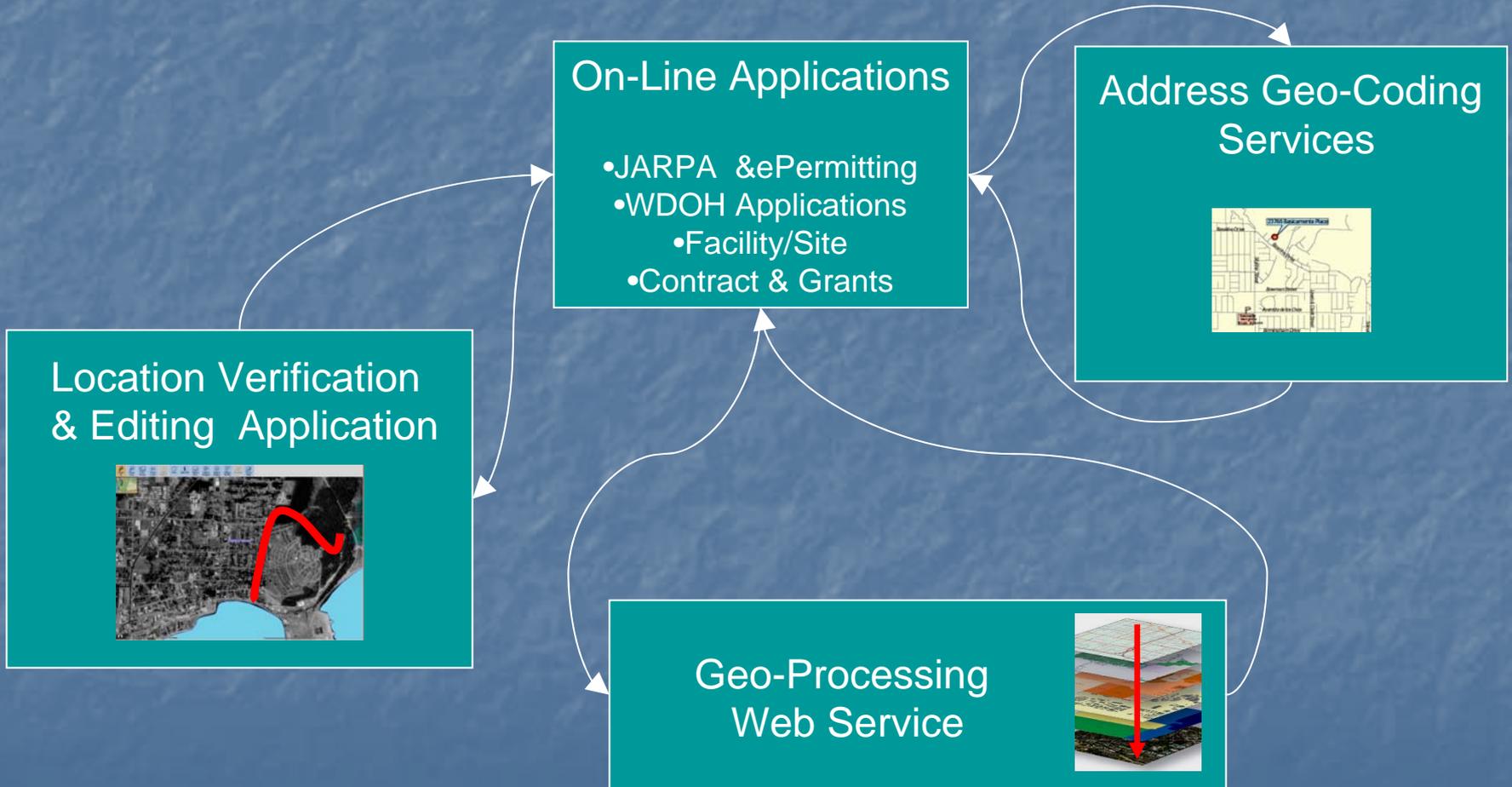
# Project Objectives

- Increase The Accuracy Of Data Submitted For Environmental Review
- Make On-line Applications Easier To Use
- Standardize Data Entry Methods For Capturing Location Information

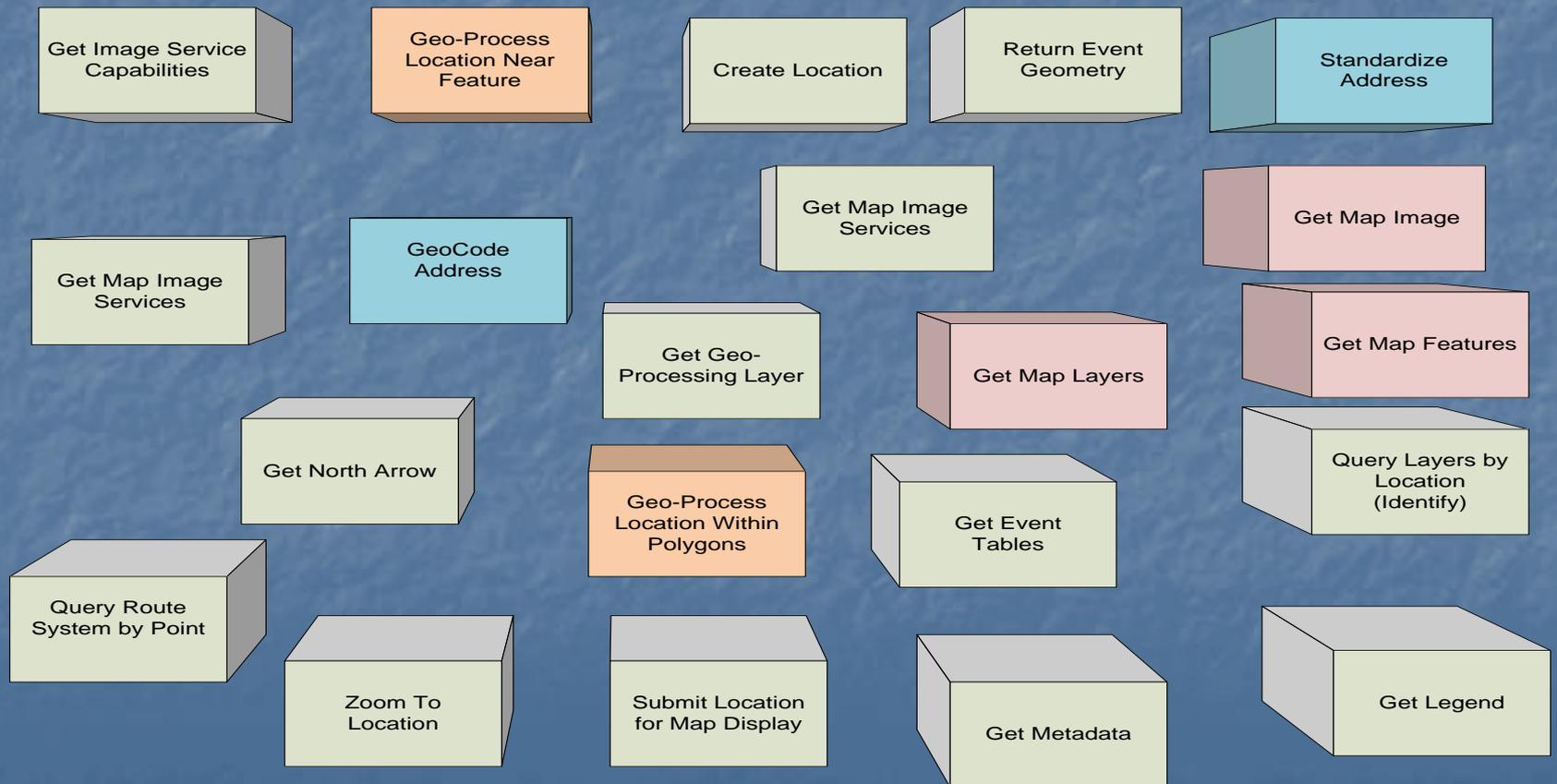
# Project Scope

- Develop An Interactive Map-Based Location Editor
- Develop Geo-Processing Services
- Develop Address Correction & Standardization Service
- Develop Address Geo-Coding Service
- Publish These Services to The Exchange Network
- Interface These Services with Selected Permitting and Reporting Applications

# Location Finder Services

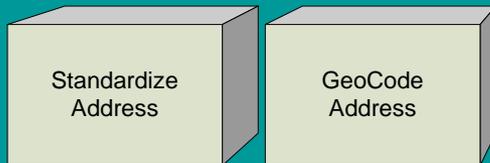


# Develop Elemental GIS Web Services As Building Blocks

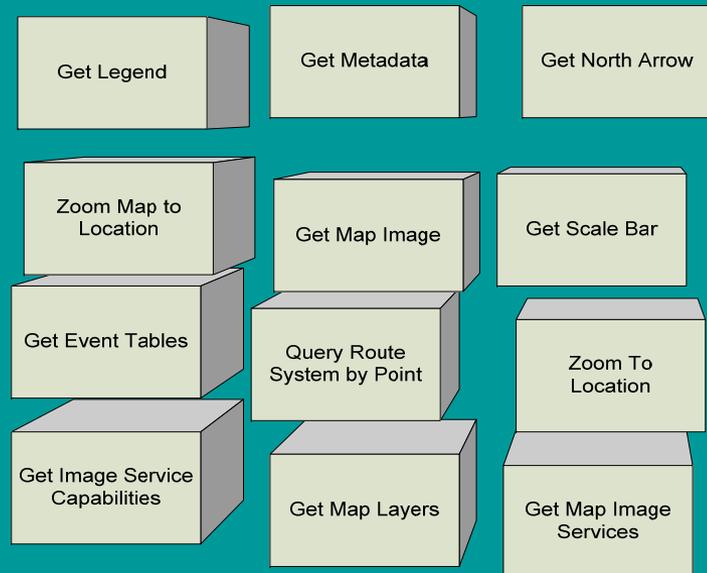


# Services Are Loosely Connected; Can Be Coupled To Meet Specific Needs

## Address Services



## Map Services



Geo-Process  
Location Near  
Feature

Geo-Process  
Location Within  
Polygons

Get Geo-  
Processing Layers

## Geo-Processing Services

# Address Standardization Service

## Input XML:

Address (PO Box, Street, Mailing,  
Military) required  
Zip (5 digit) required  
City (preferred)  
State (preferred)  
Zip4

XML

Address  
Standardization  
&  
Correction

XML

## XML containing:

Address  
Zip  
City  
State  
Zip4  
Address prefix direction  
Address house number  
Address street  
Address type  
Address suffix direction  
Address unit  
Address unit description  
Quality  
Deliverable

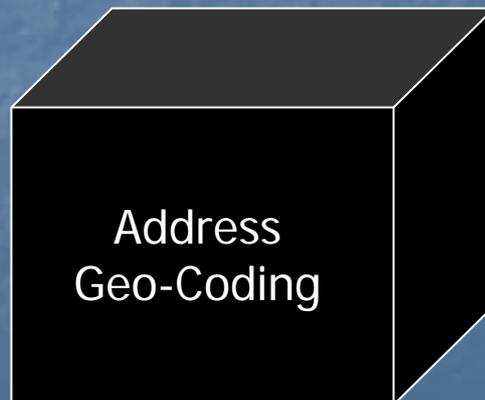
WDOH

# Address Geo-Coding Service

## Input XML:

Address Corrected or not (required)  
Zip (required)  
City  
State

XML



WDOH

## XML Containing:

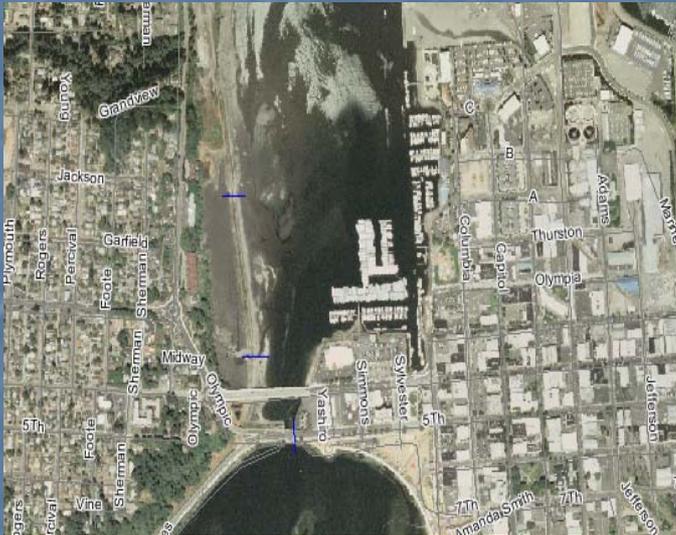
Address  
Zip  
Reference Address Used  
Accuracy (Close or Approximate Tolerances)  
Score (Numeric match score)  
Source  
Latitude  
Longitude  
Parcel Number (if a parcel centroid match)

XML

# Map Image Service

(map reference for location capture & location display)

URL with parameters



OGC Web Map Service

Get Capabilities

GetMap

GetFeature Info

URL

XML

XML

## Category 5: Polluted Waters/303(d) List

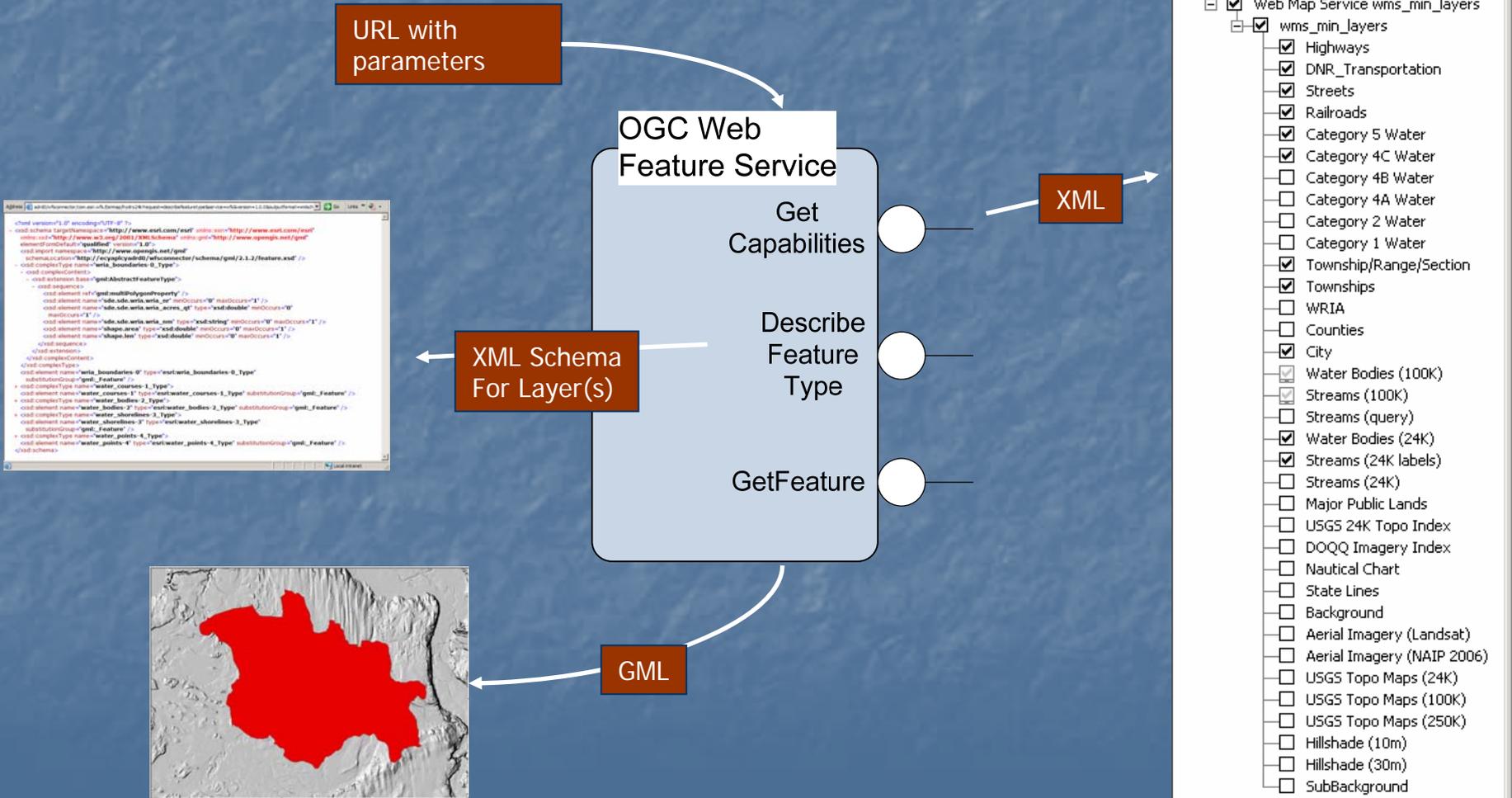
Rec	Listing ID	Name	Parameter	Medium	Listed in 98	Listed in 96	Waterbody ID
1	5862	Puget Sound	Dissolved oxygen	Water	Y	N	47122A9G0

Layers

- Web Map Service wms\_min\_layers
  - wms\_min\_layers
    - Highways
    - DNR\_Transportation
    - Streets
    - Railroads
    - Category 5 Water
    - Category 4C Water
    - Category 4B Water
    - Category 4A Water
    - Category 2 Water
    - Category 1 Water
    - Township/Range/Section
    - Townships
    - WRIA
    - Counties
    - City
    - Water Bodies (100K)
    - Streams (100K)
    - Streams (query)
    - Water Bodies (24K)
    - Streams (24K labels)
    - Streams (24K)
    - Major Public Lands
    - USGS 24K Topo Index
    - DOQQ Imagery Index
    - Nautical Chart
    - State Lines
    - Background
    - Aerial Imagery (Landsat)
    - Aerial Imagery (NAIP 2006)
    - USGS Topo Maps (24K)
    - USGS Topo Maps (100K)
    - USGS Topo Maps (250K)
    - Hillshade (10m)
    - Hillshade (30m)
    - SubBackground

# Map Feature Service

(zoom-to, display selected feature location, transaction)



# Geo-Processing Service

GeoRSS GML feature  
+ Layer List - Buffer Distance List



XML  
Response  
With  
Intersected  
Layer  
Attributes  
Reported

```
<?xml version="1.0" encoding="UTF-8" ?>
- <GeoprocessingResults>
- <Layer LayerName="City">
- <IntersectedFeature>
  <CITY_NM>Auburn</CITY_NM>
</IntersectedFeature>
</Layer>
- <Layer LayerName="County">
- <IntersectedFeature>
  <COUNTY_NM>King</COUNTY_NM>
</IntersectedFeature>
</Layer>
+ <Layer LayerName="Tribal_Lands">
+ <Layer LayerName="Parcels2006">
+ <Layer LayerName="dnr_arc">
- <Layer LayerName="HUC_6th_field">
- <IntersectedFeature>
  <SUBWAT_NM>LOWER GREEN RIVER</SUBWAT_NM>
  <CATCHMENT>171100130399XX</CATCHMENT>
</IntersectedFeature>
- <IntersectedFeature>
  <SUBWAT_NM>WHITE RIVER/BOISE CREEK</SUBWAT_NM>
  <CATCHMENT>171100140204XX</CATCHMENT>
</IntersectedFeature>
</Layer>
+ <Layer LayerName="sections">
- <Layer LayerName="wq_303d_2004">
- <IntersectedFeature>
  <WB_GNIS_NM />
  <ECOLOGY_ID>LY34GL12.450</ECOLOGY_ID>
</IntersectedFeature>
</Layer>
- <Layer LayerName="WRIA">
- <IntersectedFeature>
  <WRIA_NR>9</WRIA_NR>
</IntersectedFeature>
- <IntersectedFeature>
  <WRIA_NR>10</WRIA_NR>
</IntersectedFeature>
</Layer>
</GeoprocessingResults>
```

# What Is GML?

- XML Specification For Geospatial Data
- Non-Proprietary Standard Developed By Open Geospatial Consortium ([OGC](#))
- Offers Several Levels Of 'Profiles' With A Range Of Complexity (GML Point, GeoRSS GML, GML Simple Feature, GML 3.1.1)

# GeoRSS GML Polygon Example

```
<gml:Polygon>  
  <gml:exterior>  
    <gml:LinearRing>  
      <gml:posList>  
        45.256 -110.45 46.46 -109.48 43.84 -109.86 45.256 -110.45  
      </gml:posList>  
    </gml:LinearRing>  
  </gml:exterior>  
</gml:Polygon>
```

# Demonstration Of Services

Open Layers / GIS Web Services Demo - Microsoft Internet Explorer provided by Dept of Ecology

File Edit View Favorites Tools Help

Address <http://ecyaplcyadrd0/OpenLayersDemo/Default.aspx> Go Links

WASHINGTON STATE  
Department of Ecology  
Intranet

Open Layers / GIS Web Services Demo TEST

Home BERS

Map Controls: Web Services:

View GML TOC Search Map Tool Settings

Base Layer:  Orthophoto  Hillshade

Data Layers:

- Political Boundaries
  - Cities
  - Counties
- Hydrographic Features
  - Water Bodies
  - Streams
- Anthropogenic Features
  - Facilities
- Cartographic Elements

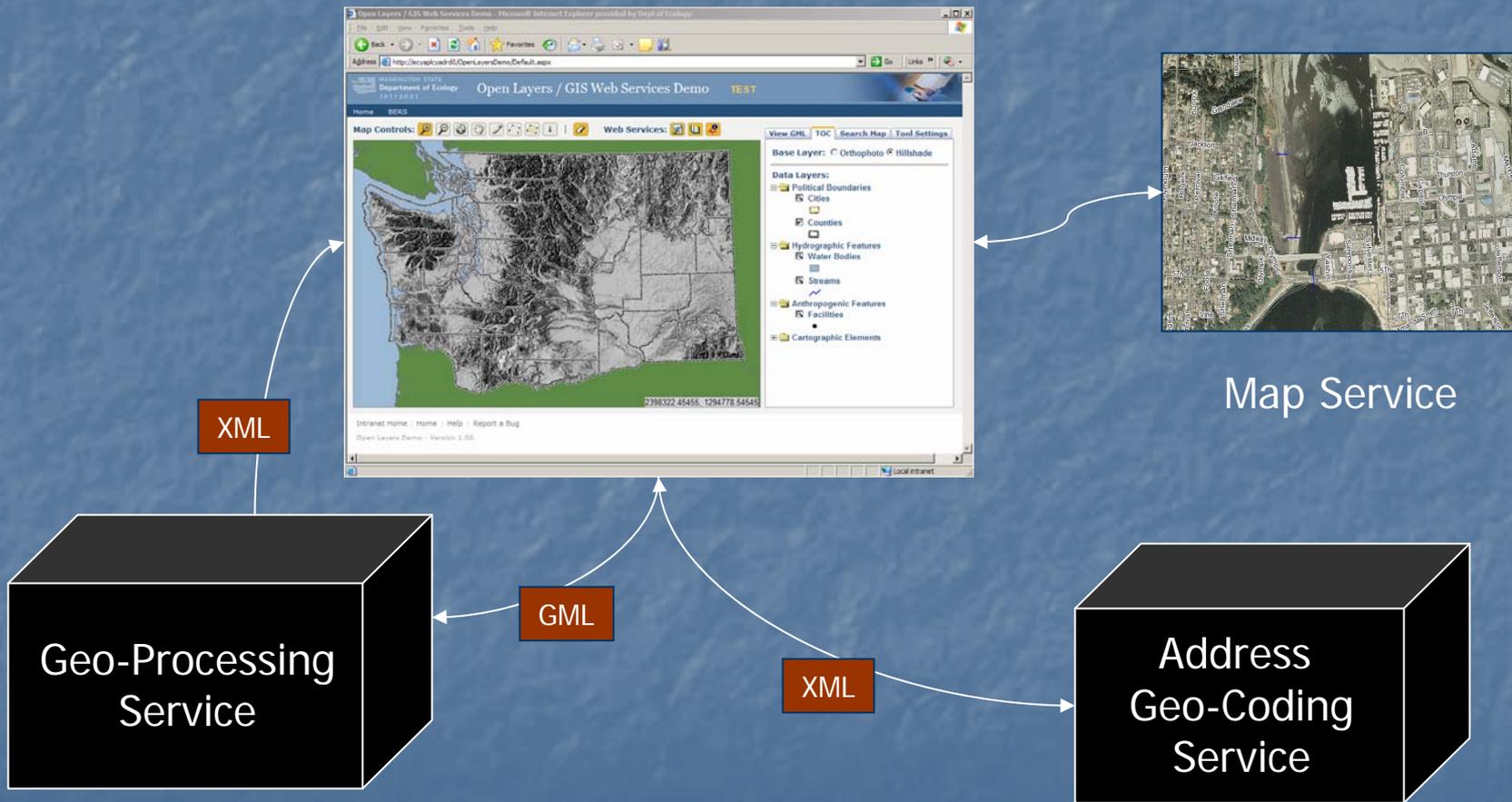
2398322 45455, 1294778 54545

Intranet Home | Home | Help | Report a Bug

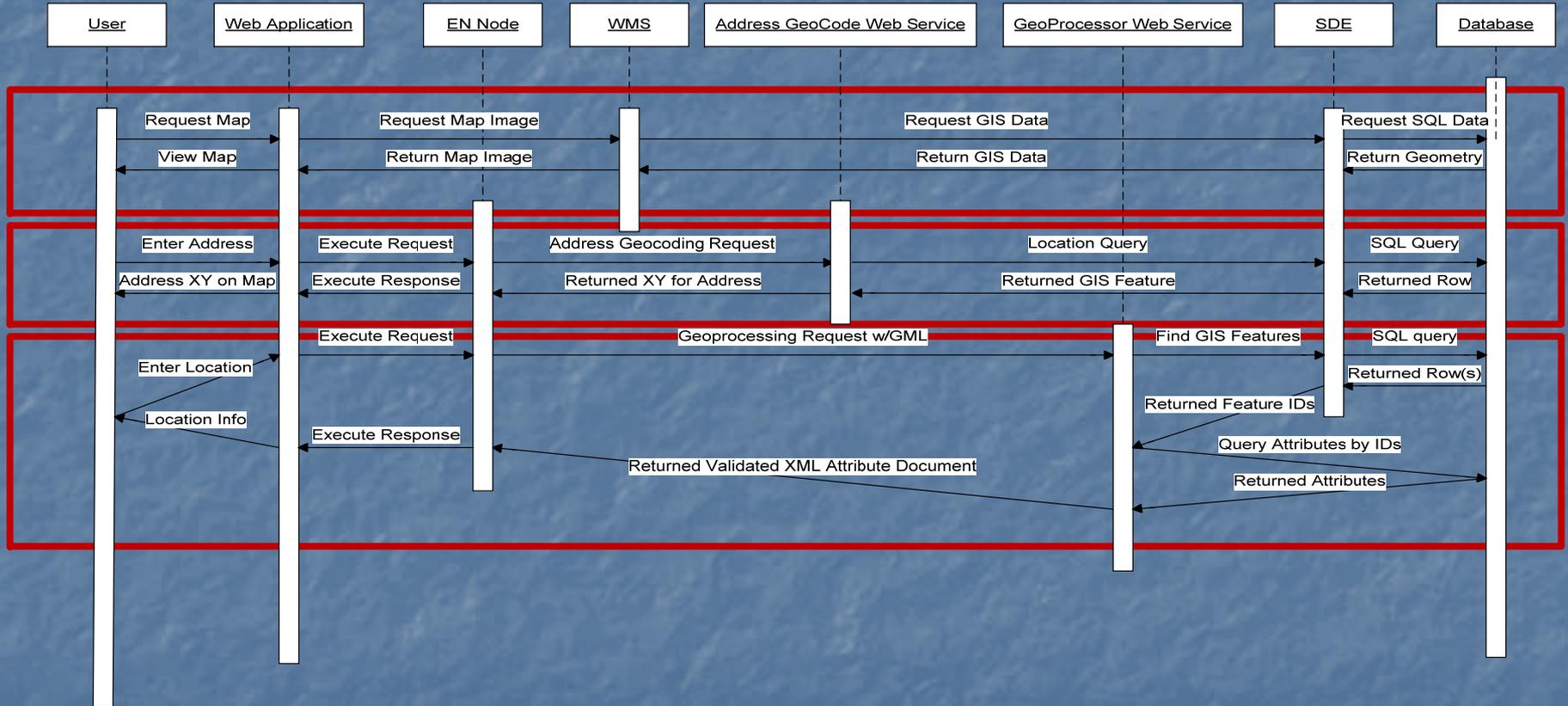
Open Layers Demo - Version 1.00.

Local intranet

# What Just Happened?



# Location Finder Sequence Diagram



Washington Location Finder Sequence Diagram

# Status:

## Current Prototype Services

- Map Image Services (Being Developed @ Ecology OGC WMS)
- Map Feature Service (Being Developed @ Ecology custom code)
- Address Standardization Service (In Production @ WDOH)
- Address Geocoding Service (In Testing @ WDOH)
- Geo-Processing Service (Being Developed @ Ecology)
- Testing Applications (Being Developed @ Ecology & WDOH)
- Consuming Applications (Being Developed @ WDOH, Ecy, OFM & DIS-ORA)

# Some Next Steps

- Deploy Services to Production Servers
- Contracts Grants Loans Management (GCLM) Integration (June 2008)
- Integrated Project Review & Mitigation Tools Project (IPRMT) Integration (May - July 2008)
- WDOH Applications Integration (Ongoing)
- Ecology Facility / Site Integration (May - October 2008)
- Exchange Network Access via Node 2.0 (September 2008)

# Questions