



Memorandum

To: CV-SALTS Executive Committee

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Date: June 9, 2014

Subject: Data Management Concept

Overview

Through its technical work, CV-SALTS has become a potential data source to the public. Currently, data can be made available to stakeholders through implementation of the CV-SALTS Data Access Request Procedure. Upon approval of a data request, arrangements are made to transfer the requested data. One of the challenges of this process has been providing information regarding what data are available for request and who should provide the data. Given the increasing number of data requests and the need to facilitate data sharing, CV-SALTS requested that CDM Smith evaluate data management options and develop a Data Management Concept for CV-SALTS. Accordingly, CDM Smith reviewed current open source geoportal software and software development options to determine a suitable solution for the management of spatial and tabular data for CV-SALTS.

The purpose of this memorandum is to summarize findings to date and provide a recommendation for next steps. A May 27th version of this memorandum was discussed at the May 30 Technical Advisory Committee (TAC) meeting. This memorandum has been updated based on that discussion.

ESRI Geoportal Software

The most practical and cost effective tool was determined to be ESRI's Geoportal software. The Basic Geoportal page – Live Web Application may be viewed here:

<http://gptogc.esri.com/geoportal/catalog/main/home.page>. Examples of a live Geoportal software-based website may be reviewed at this website: <http://www.esri.com/software/arcgis/geoportal/live-user-sites>. Key elements of this tool include:

- Software is an easy to install out-of-the box free open source solution, i.e., there would be no cost to CV-SALTS to acquire the software. However, if CV-SALTS wanted to have ESRI technical support, then this would incur costs. The need for ESRI support is optional.
- Software has a wide range of capabilities, including (a) data cataloging; (b) site administration; (c) data publishing; (d) data discovery; and (e) full data searches.
- Searches are completed based on metadata and allow for full keyword searches.

- Software will support Federal Geographic Data Committee (FGDC) compliant metadata which is specified for all GIS work completed for CV-SALTS.
- The search engine employed is fully configurable and provides a smart ranking to provide the best possible search results.
- Software includes a map previewer for spatial sources of data.
- A flexible security model is included that will accommodate a simple login or allow a more complex authentication model which utilizes external Lightweight Directory Access Protocol (LDAP).
- On the surface, this software is the least difficult of the open source solutions to implement.
- Since the software is developed by ESRI there is certainty that it will be compatible with the spatial data types required to be submitted to CV-SALTS.

The Live Geoportal-based sites webpage (see link above) provides examples of webpages that rely on ESRI's Geoportal software. One of the better examples that characterizes the CV-SALTS need best is the Canadian Saskatchewan GeoSask Portal (<https://www.geosask.ca/Portal/>). This website provides the following purpose for its web portal: *"GeoSask is a centralized public website that provides one clear online access point to different types of maps and geographic information related to Saskatchewan land from across various government sources."* Tailor the sentence to reflect CV-SALTS (in terms of organization and geography) and you have a similar need/application. Similarly, the State of Oregon has developed a publicly accessible Spatial Data Library to provide the means to find, access, and share geospatial data using the ESRI Geoportal software. A live implementation of the software is accessible from this link: <http://spatialdata.oregonexplorer.info/geoportal/catalog/main/home.page>. Example screenshots from this website are provided in Attachment A to this memorandum.

Additional Issues for CV-SALTS Consideration

If the ESRI Geoportal software were selected for use by CV-SALTS the following issues require further evaluation or discussion:

- *Compatibility with HostGator (CV-SALTS website host provider)* – After a technical review of HostGator, CDM Smith believes that the system utilized to host the CV-SALTS website is likely capable of hosting the ESRI Geoportal software. Our technical review included direct conversations with HostGator and compiling a list of current versioned software and comparing that information to the ESRI system requirements document to assure the HostGator Linux-based server can run the software. The overall conclusion is that the server appears to be equipped with all required elements listed as a part of the requirements document and therefore is capable of running the ESRI Geoportal software. However, CDM Smith is not privy to the complete layout of the current hosting server and therefore cannot completely guarantee an effective hosting environment for the Geoportal software. These findings could be evaluated fully as part of a pilot test (see below).

- *Data Administration* – If a geoportal data access site is developed for CV-SALTS, it will be necessary for CV-SALTS to establish administrative responsibilities and/or procedures regarding maintaining and administrating the data site, e.g., ensuring the data are kept current, providing access to files requested after completion of the data request approval process.

Implementation Scenario

During the May 27th TAC meeting, a question was asked about how the data management concept might work in practice once it is implemented. Following is an implementation scenario that was generally described in response to that question (other scenarios could be developed; additional considerations may be warranted):

- An interested party wishes to see the data CV-SALTS has developed and potentially wants to request access. Two potential scenarios exist for how this could occur:
 - A request for access to the data is received via email or phone. In this case, the interested party would be referred to the location on the CV-SALTS website where the data are housed and available for review (assumes establishment of a data page on the CV-SALTS website).
 - An interested party goes to the CV-SALTS website, views the data page, and becomes interested in seeing what data have been developed and potentially making a request for access.
- The interested party views the data types and content through use of the GeoPortal software (this presumes that the available CV-SALTS data sets have been appropriately catalogued).
- The website includes a Data Request button that when clicked takes them to a screen that allows them to make a formal request for access to data of interest. This web page would include:
 - Data request instructions;
 - Access to a data request form which includes areas to provide (a) information as required by the CV-SALTS data sharing policy; and (b) information regarding the specific data to be requested; and
 - Ability to sign/submit CV-SALTS disclaimer policy with signature.
- Data administrator receives submittals for review and approval. Two potential outcomes:
 - Request is approved - requestor is sent an email with temporary password to access specific requested data for download.
 - Request is not approved, e.g., because of missing information, and an email is sent to the interested party requesting additional information. Interested party can provide the necessary information to complete the data request.

Recommendation for Next Steps

This data management concept was presented and discussed at the May 30th TAC meeting. The TAC recommended that this memorandum be moved forward for discussion with the Executive Committee regarding recommendations for next steps, as described below.

To assure that ESRI's Geoportal software will provide the necessary capability required by CV-SALTS and that it is fully compatible with the CV-SALTS website, CDM Smith highly recommends a pilot test of the software. We estimate that for a maximum of 10 hours of labor (recommended for execution under CDM Smith's Technical Project Manager Services contract), we can test installation and functionality to assure that this software will truly provide the needed capabilities and ease of use for internal and external users. Based on the outcome of this test, we would brief the TAC on the outcome of pilot test. If the test is successful, we could include a live demonstration as part of the briefing. Based on the outcome of the pilot test and TAC briefing, a recommendation would be made to the Executive Committee for discussion regarding potential implementation.

Attachment A – Oregon Spatial Data Library Screenshots – Example Use of the ESRI GeoPortal Software.

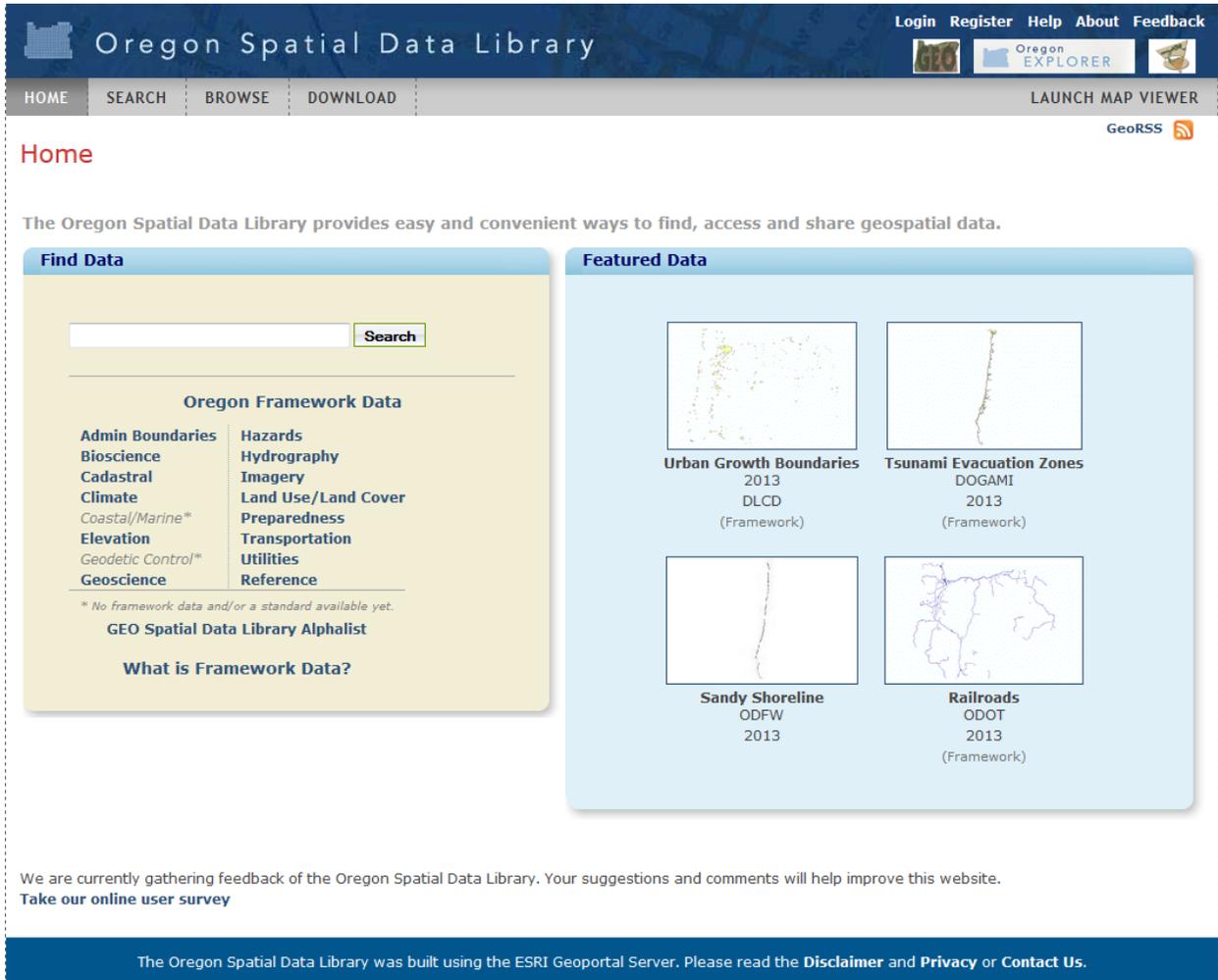


Figure 1. Home or Initial Screen view at Oregon Spatial Data Library

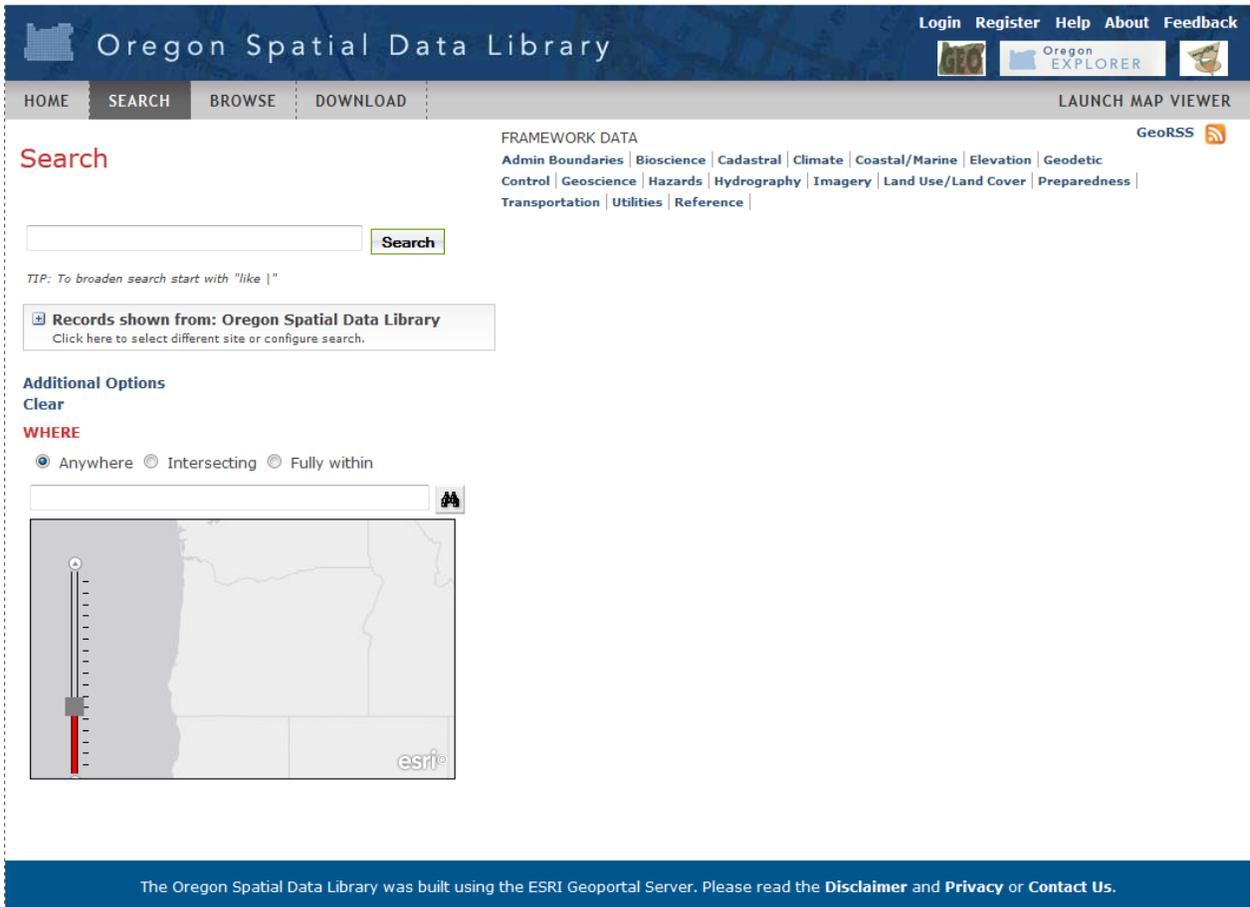


Figure 2. Data Search Screen

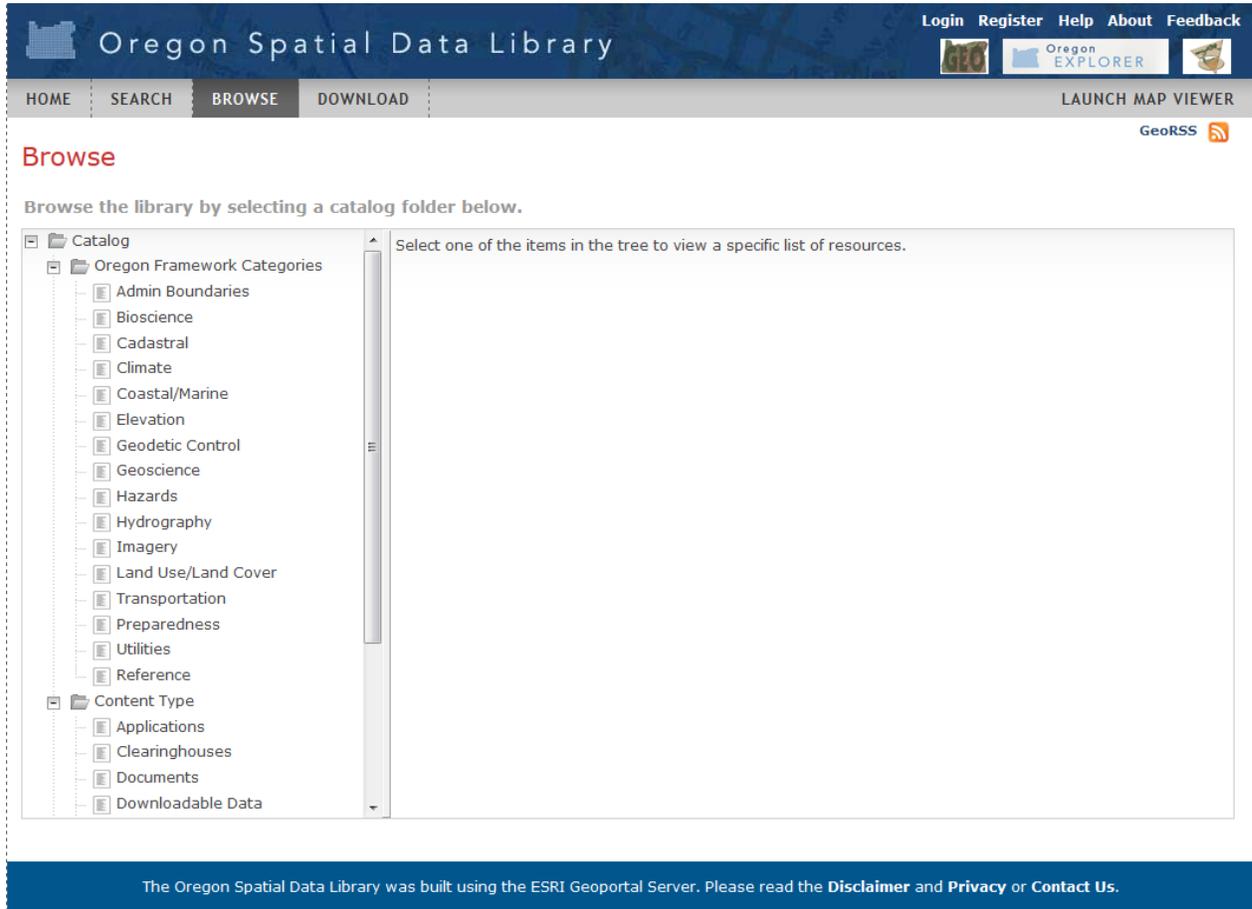


Figure 3. Data Browser Screen

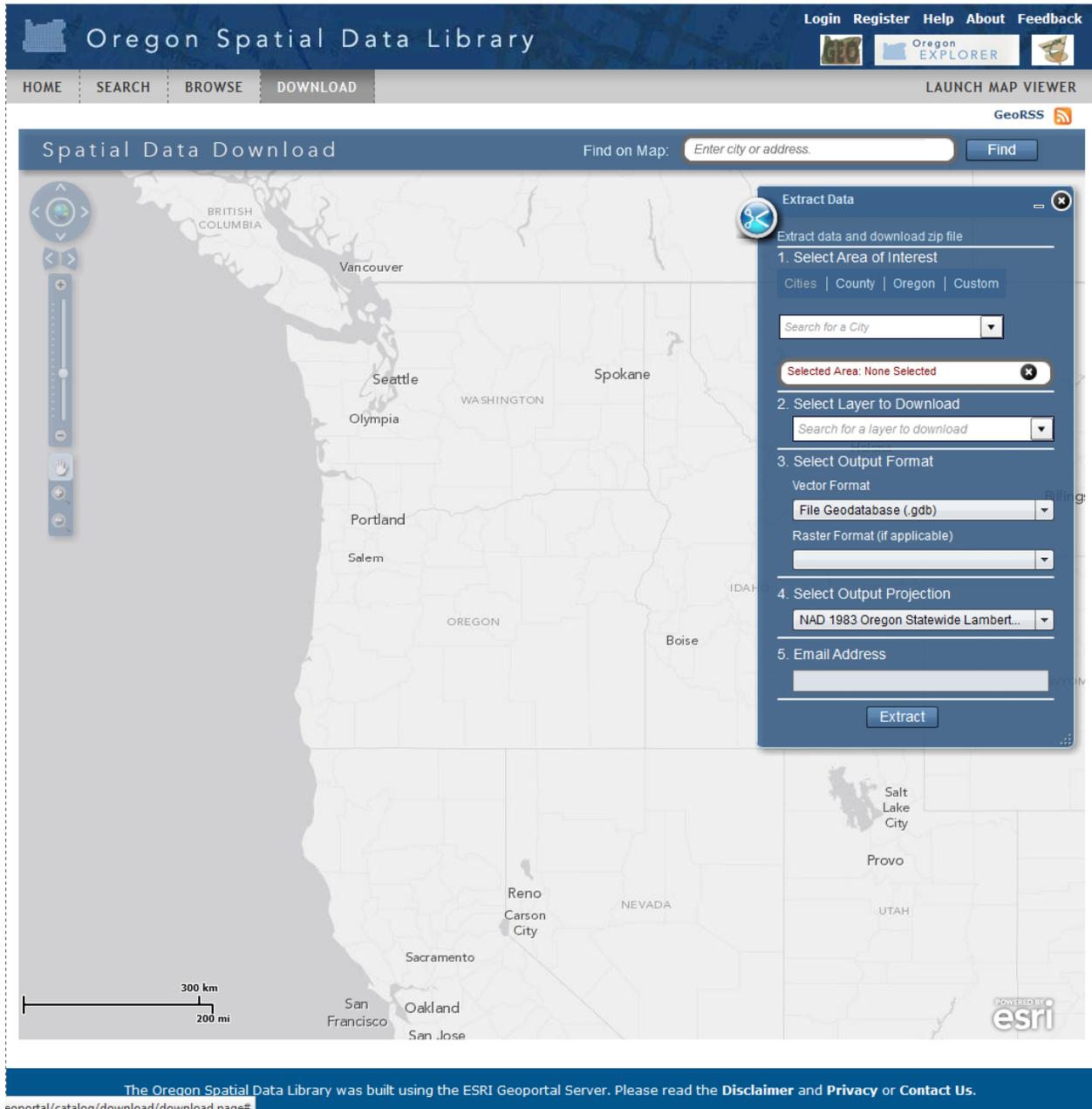


Figure 4. Data Download Screen