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LOCATION

IMAGERY/BASE MAPS

INLAND WATERS

BOUNDARIES

GEOGRAPHIC INFORMATION SYSTEMS STRATEGIC PLAN:

Expanding Geospatial Collaboration and Transparency, 2015-2019

Final: September 2, 2014

Washington
Geographic
Information
Council

Washington State Geographic Information Council (WAGIC)

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WASHINGTON STATE GEOGRAPHIC INFORMATION COUNCIL (WAGIC)

GEOGRAPHIC INFORMATION SYSTEMS STRATEGIC PLAN
Expanding Geospatial Collaboration and Transparency, 2015-2019

Executive Summary

This Plan builds off Washington State's 2010 Geographic Information Systems (GIS) Strategic Plan. It addresses new needs, opportunities, and challenges that have emerged in geospatial technology. This Plan also supports the State Spatial Data Infrastructure (SSDI) by developing goals and strategies to facilitate the coordination of geospatial programs, policies, and technologies at all levels of government.

The Plan lays out each of the strategic goals in more detail, defines implementation objectives for each goal; outlines the action steps that can be accomplished in short- and long-term timeframe, and defines the desired outcomes to be achieved for each goal.

Strategic Planning Process

The strategic planning update process was conducted under the auspices of the GIT Committee and coordinated by the WAGIC Executive Committee. GIT and WAGIC members have been involved in the development of the draft plan by participating in a discussion around potential themes and priorities for the strategic plan. The State GIS Coordinator and Program Manager has been responsible for the management of outreach efforts; development of the draft plan; and interfacing with the GIT and WAGIC.

Statewide stakeholders were also engaged during the strategic planning update process. There were two regional listening sessions: one in Olympia, attended by representatives of state and local agencies from Western Washington, and one in George that drew good representation from mostly local jurisdictions from Central and Eastern Washington. Representatives from the private sector also attended these discussions. A total of 65 people attended, representing 24 agencies and organizations. The input from these forums shaped the goals and strategic actions included in this plan.

Vision and Mission

The vision and mission of the State's GIS community *emphasizes using* geospatial information to benefit the public through improved decision making at multi-jurisdictional levels and through the development of geospatial solutions. This Plan aligns with the recent state and federal efforts around open and transparent government.

Vision: Utilize geospatial technology to facilitate decision-making to benefit Washington State citizens.

Mission: Work in partnership with the public and private sectors statewide to provide accurate, consistent, accessible, and authoritative geospatial resources for decision-makers and the public.

Strategic Goals

The strategic goals and objectives implement the following concepts to fulfill the mission and vision of this Plan:

- Implement open data concepts that support wide sharing of Washington's geospatial data

- Enhance data development, sharing, and access through common standards and guidelines

- Facilitate coordination and communication across the geospatial community, at all levels of government and the public at-large

- Demonstrate the value of employing geospatial resources in decision-making

Based on these strategies which are the product of statewide outreach efforts, **four goals** and corresponding **objectives** have been established, which are described in detail below.

Goal 1:   Pursue Open Data Initiatives to Facilitate Sharing of Washington State's Geospatial Data

    A. Establish authoritative statewide datasets, including metadata on ownership, frequency of updates, file types, contacts, and others.

    B. Foster widespread use of statewide data standards and guidelines.

    C. Develop and provide access to a shared geospatial infrastructure for smaller state agencies with limited GIS capabilities, including server space and software licenses.

    D. Coordinate Next Generation (NG) 911 data requirements at the state level with input and support from local governments.

Goal 2:   Increase Understanding and Support for Geospatial Resources through Education and Outreach

    A. Define target groups of users, analysts, and decision-makers and develop a communication strategy for each group.

    B. Widely publicize existing map and data portals, data standards, and other relevant geospatial efforts in Washington State.

    C. Redesign WAGIC's web site to make it more accessible, user-friendly, and informative (include existing documentation).

    D. Conduct a Return on Investment case study to make the business case for GIS investments.

    E. Encourage the use of WAGIC list-serve or similar resources across the state and local government levels to promote relevant GIS news and opportunities (including conferences, trainings, and other).

Goal 3:   Fully Staff Washington State Geospatial Program Office and Establish the Program Office within the OCIO's Enabling Act

    A. Fully staff the Washington State Geospatial Program Office.

    B. Develop dedicated funding for Washington State Geospatial Program Office.

    C. Establish clear legislative language for the Washington State Geospatial Program Office within the Office of the Chief Information Officer.

Goal 4:   Strengthen Coordination across Jurisdictions and Agencies

    A. Coordinate statewide GIS efforts, including data acquisition, development, and stewardship, to promote collaboration and data fidelity.

    B. Address the digital divide issues that exist in Washington where mutually needed data is non-existent or poorly maintained due to resource issues.

    C. Engage in partnerships with state higher education institutions and community and technical colleges.

GEOGRAPHIC INFORMATION SYSTEMS STRATEGIC PLAN
Expanding Geospatial Collaboration and Transparency, 2015-2019

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Expanding Geospatial Collaboration and Transparency, 2015-2019

1.0   INTRODUCTION

This Plan builds off Washington State's 2010 Geographic Information Systems (GIS) Strategic Plan. The Plan is based on extensive input from the statewide GIS community, reflects current business needs in Washington, and supports the State Spatial Data Infrastructure (SSDI).

Purpose of the 2014 GIS Strategic Plan

Some of the strategies and objectives from the 2010 GIS Strategic Plan have been successfully realized. It served a useful purpose in guiding statewide initiatives over the past five years. It also served as an important communication tool and provided guidance and justification for coordination. Since the implementation of the 2010 plan, technology has changed and the user community has grown and diversified its business uses and technology.

This updated Plan addresses new needs, opportunities, and challenges that have emerged in GIS. It outlines new goals, strategies, and objectives, based on stakeholder input and the state's role in GIS.

2.0   BACKGROUND AND PLANNING CONTEXT

2.1   Washington GIS Community

Washington's geospatial technology organizational structure is complex and includes an executive level coordinating body and statewide practitioners. Exhibit 1 below shows the current organizational structure of GIS in Washington.

Exhibit 1
Current Organizational Structure for Washington State GIS Community
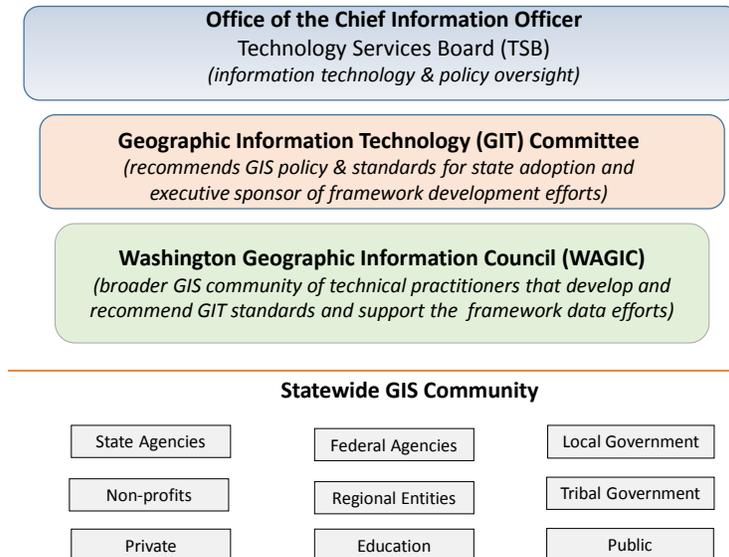
Source: Washington State Geospatial Program Office, 2014

Statewide Coordinating Entities

Office of the Chief Information Officer (OCIO) sets information technology (IT) policy and direction for the State of Washington. The State CIO is a member of the Governor's Executive Cabinet and advisor to the Governor on technology issues.

The Geographic Information Technology Committee (GIT) is the governing body for geospatial technology in Washington State. The Committee's membership includes state agency executives; and representatives from, federal and local jurisdictions; higher education; and Washington Geographic Information Council (WAGIC) Chair. The Committee provides leadership in geospatial technology and recommends state policy and standards to the State CIO for adoption.

The GIT Committee was formed in 2001, chartered to... *"represent the strategic interest of a coordinated, enterprise approach to utilizing geographic information technology and provide leadership for implementation of cost effective, collaboratively developed, spatial data management solutions."*

Washington Geographic Information Council (WAGIC). Washington State has had a long history of GIS coordination at the state agency level. In the early 1980's the natural resource agencies formed the first coordination group called the Washington Geographic Group (WG2), which was soon followed by the Washington State Mapping Advisory Council. The 1990's saw the establishment of WAGIC with wide participation from the federal, tribal, state, and local levels. In 1994 this volunteer council was formally recognized and received staffing assistance from the Department of Information Services.

WAGIC is the state's multi-jurisdictional technical advisory group, working to facilitate GIS use around the state and coordinating technology and infrastructure development. WAGIC's chartered duties include identifying geospatial information needs, developing standards and policies, promoting information sharing, and assisting in geospatial partnerships.

State agency GIS managers and the Chair of WAGIC also serve as technical support to the ISB-GIT Committee.

The **Washington State Geospatial Program Office** within the Office of the CIO was established in November 2012. The primary role is to provide enterprise-wide leadership, governance, policy direction and standards oversight in state government.

GIS Stakeholders

Stakeholder groups in Washington include the user community in federal and state agencies, regional organizations, counties, cities, tribes, educational institutions, utilities, and the private sector.

2.2   Progress Since 2010-14 Strategic Plan

Over the course of the last several years the 2010-14 GIS Strategic Plan provided the user community and its leadership with a roadmap for moving GIS forward and has served as the primary guidance for many of the geospatial initiatives undertaken in state government. While much still remains to be done, it's important we acknowledge the accomplishments we have made. Since the adoption of the 2010-2014 GIS Strategic Plan, the Washington has…

- Launched the first geospatial one-stop for state level geospatial data with the establishment of geography.wa.gov resulting in the publication of over 400 data sets in its Data Catalog.
- Launched the first open data platform for geospatial data and application services with the establishment of geo-services.wa.gov resulting in the publication of over 600 new services and the training of more than 50 individuals from state and local government
- Established standards for surface water hydrography and geodetic control
- Established the Geospatial Program Office by executive order in the Office of the Chief Information Officer (OCIO)
- Sponsored the first state agency-wide GIS Day at the Capitol Rotunda
- Continued quarterly WAGIC WebEx meetings to encourage the sharing of technical knowledge
- Selected a GIS project as the first OCIO Innovations Lab pilot to showcased Lean principles and educated state GIS practitioners on the use of agile development techniques
- Established the first geospatial web (API) services for statewide addressing called WAMAS (WA Master Addressing Services)

2.3   Strategic Planning Process

The strategic planning update process was conducted under the auspices of the GIT Committee and coordinated by the WAGIC Executive Committee. GIT and WAGIC members have been involved in the development of the draft plan by participating in a discussion around potential themes and priorities for the strategic plan. The State GIS Coordinator and Program Manager has been responsible for the management of outreach efforts; development of the draft plan; and interfacing with the GIT and WAGIC.

Statewide stakeholders were also engaged during the strategic planning update process. There were two regional listening sessions: one in Olympia, attended by representatives of state and local agencies from Western Washington, and one in George that drew good representation from mostly local jurisdictions from Central and Eastern Washington. Representatives from the private sector also attended these discussions. A total of 74 people attended, representing over 50 agencies and organizations. The input from these forums shaped the goals and strategic actions included in this plan.

Key Themes from Stakeholder Outreach

During the stakeholder outreach efforts, several common themes emerged. Regardless of region or jurisdiction type, stakeholders and GIS users expressed similar issues and ideas on how the state could help address those issues. These themes include the following:

Need for Stronger Data Authority and Stewardship

Stakeholders indicated the need to create authoritative records for statewide datasets – the users need assurances that the data they are using has been vetted and is being updated. Many questions were raised, including: *Who is the ultimate authority for the data? Who is responsible for changes? How often is the data updated?* In addition, there is a need for local input to statewide layers.

Emphasis on Education and Outreach

Stakeholders indicated that there has been little progress on increasing awareness and support for geospatial information, even though education and outreach was called out as a goal in the 2010-14 Strategic Plan. Many stakeholders noted that outreach alone is not enough; there is a need to make a clear business case for GIS technology by calculating and demonstrating return on investment (ROI), as well as other impacts, of different GIS investments.

Need for Stronger Statewide Coordination

Stakeholders expressed desire for more effective coordination across multiple agencies and jurisdictions, both in terms of sharing data and services and communication and collaboration. Digital divide still exists – many smaller communities lack the capabilities to use and improve geospatial information. Stakeholders suggested pursuing more purposeful coordination efforts between all levels of government, establishing more partnerships, and collaborating with universities and community colleges.

Desire to Increase Capacity of the State GIS Program Office

Many stakeholders stated their desire for fully funding additional GIS Program Office staff positions to ensure a sustainable program office with dedicated support staff. There is a limited capacity currently – the Program Office is staffed by one person. Additional staffing is needed to continue GIS coordination at the state level and to move this Strategic Plan forward.

3.0   VISION AND GOALS

3.1   Vision and Mission

The vision and mission of the State's GIS community *emphasizes using* geospatial information to benefit the public through improved decision making at multi-jurisdictional levels and through the development of geospatial solutions. This Plan aligns with the recent state and federal efforts around open and transparent government.

Vision: Utilize geospatial technology to facilitate decision-making to benefit Washington State citizens.

Mission: Work in partnership with the public and private sectors statewide to provide accurate, consistent, accessible, and authoritative geospatial resources for decision-makers and the public.

3.2   Strategic Goals and Objectives

The strategic goals and objectives implement the following concepts to fulfill the mission and vision of this Plan:

- Implement open data concepts that support wide sharing of Washington's geospatial data

- Enhance data development, sharing, and access through common standards and guidelines

- Facilitate coordination and communication across the geospatial community, at all levels of government and the public at-large

- Demonstrate the value of employing geospatial resources in decision-making

Based on these strategies which are the product of statewide outreach efforts, **four goals** and corresponding **objectives** have been established, which are described in detail below.

Goal #1: Pursue Open Data Initiatives to Facilitate Sharing of Washington State's Geospatial Data

Discussion

In May 2013 President Obama issued executive order 13642:, *Making open and machine-readable the new default for government information*. Following this lead, Washington's state Legislature considered House Bill 2202. While that Bill was not passed, the Office of the Chief Information Officer (OCIO) is working on implementing a policy similar in spirit.

Open data sites like geography.wa.gov help agencies become more efficient by enabling easy and low cost ways to make data available to the public. Open data initiatives also encourage private-sector innovation by providing public data in easily assessable and useable formats.

This goal aligns with the OCIO's 2014 State Strategic Technology Objective on open and transparent government, calling for the open data policy to facilitate the sharing and publication of government data.

Implementation Objectives

A. **Establish authoritative statewide datasets, including metadata on ownership, frequency of updates, file types, contacts, and others.**

- Implement "certification" process for data layers, to ensure that the data is authoritative, current, and had appropriate metadata.

B. **Foster widespread use of statewide data standards and guidelines:**

- Raise awareness of existing statewide standards and guidelines for commonly used and shared data and geography.wa.gov portal.

- Enforce existing policy and standards across Washington state agencies.

- Develop and implement incentives for adherence to existing standards and guidelines across all government levels.

C. **Develop and provide access to a shared geospatial infrastructure for smaller state agencies with limited GIS capabilities, including server space and software licenses.**

D. **Coordinate Next Generation (NG) 911 data requirements at the state level with input and support from local governments:**

- Establish standards for the NG-911 GIS base data sets.

- Establish a central GIS data repository (Spatial Information Function) to store NG-911 base GIS data sets and conflate into seamless statewide GIS data layers.

Goal #2:   Increase Understanding and Support for Geospatial Resources through Education and Outreach

Discussion

Education and outreach about geospatial technology and resources is currently accomplished within agencies on an ad hoc basis, thereby limiting its effectiveness. While included in Goal #5 in the prior Strategic Plan, there has been little progress in accomplishing this goal, primarily due to limited staffing and capacity of the Washington State Geospatial Program Office. However, attaining better awareness of and support for geospatial information can bring about many benefits to the field, including new users and a potential increase in future funding.

Implementation Objectives

A. **Define target groups of users, analysts, and decision-makers and develop a communication strategy for each group. These strategies will:**

- Increase awareness of geospatial capabilities and benefits, the Washington State Geographic Information Council (WAGIC), and ongoing coordination efforts through multiple channels, including presentations and compelling communication materials.

- Create non-technical communication materials and talking points highlighting merits and uses of geospatial resources.

- Explore new methods of outreach, including social media tools to keep in touch with GIS users.

B. **Widely publicize existing map and data portals, data standards, and other relevant geospatial efforts in Washington State.**

C. **Redesign WAGIC's web site to make it more accessible, user-friendly, and informative (include existing documentation).**

D. **Conduct a Return on Investment case study to make the business case for GIS investments.**

E. **Encourage the use of WAGIC list-serve or similar resources across the state and local government levels to promote relevant GIS news and opportunities (including conferences, trainings, and other).**

Goal #3:	Fully Staff Washington State Geospatial Program Office and Establish the Program Office within the OCIO's Enabling Act

Discussion

An effective statewide geospatial structure should include the following components:

1. A comprehensive statewide strategy and supporting policies;

2. Systems and processes to allow the implementation of statewide strategy; and

3. Organizational and governance framework to support the strategy.

Progress was made since the last GIS Strategic Plan: Mapping Washington's Future 2010-2014, in that the state established a Washington State Geospatial Program Office housed within the Office of the Chief Information Officer (OCIO) and staffed by the State GIS Coordinator and Program Manager. The State GIS Coordinator & Program Manager coordinates interagency and intergovernmental efforts and provides executive leadership for the state's GIS user community. However, two issues remain to be addressed:

- State GIS Coordinator & Program Manager is the sole staff of the Program Office. In order to implement this Strategic Plan and other statewide GIS initiatives, it is necessary to fully staff the Program Office.

- Washington State Geospatial Program Office needs to be clearly articulated within the OCIO legislative enabling act. This is essential to productive functioning of the Geospatial Program Office.

Implementation Objectives

A. **Fully staff the Washington State Geospatial Program Office, to enable the following actions:**

- Coordinate geospatial efforts across agencies and levels of government

- Spearhead outreach, education, and coordination efforts

- Provide technical assistance and resources

- Establish and enforce data policies and standards

- Research and recommend best practices and current technology

- Identify opportunities to consolidate efforts and minimize redundancy in data collection, management, distribution, and access

- Operate the geography.wa.gov

B. **Develop dedicated funding for Washington State Geospatial Program Office.**

C. **Establish clear legislative language for the Washington State Geospatial Program Office within the Office of the Chief Information Officer.**

Goal #4: Strengthen Coordination across Jurisdictions and Agencies

Discussion

Jurisdictions and agencies vary in their geospatial needs and capabilities. However, there are many opportunities for coordination that will allow each agency and jurisdiction to more efficiently acquire data, engage in professional development, and champion GIS programs. Efforts that may be costly for a single agency to undertake alone can be made feasible when coordinated across agencies or jurisdictions. In return, more agencies can both contribute to and benefit from full access to geospatial resources.

Implementation Objectives

A. **Coordinate statewide GIS efforts, including data acquisition, development, and stewardship, to promote collaboration and data fidelity.**

- Develop data coordination and sharing agreements between the State Geospatial Program Office and all interested county, city, and tribal levels of government for the following critical data: state, county and municipal boundaries; real property parcels; roads; and addressing information.

  o Leverage existing federal and state data standards.

  o Facilitate the identification of data creation and maintenance practices.

  o Set map accuracy guidelines for data creation and maintenance.

  o Provide access to the infrastructure needed to facilitate the storage, collection and integration of the data layers.

- Develop a robust data update and exchange mechanism between state, county, city, and tribal levels of government.

  o Partner with county assessors and IT departments to develop awareness of the importance of their work in regards to developing a statewide parcel layer.

  o Collaborate with city and county entities to continue collection of authoritative addressing information (Washington Master Addressing Services – WAMAS).

- Continue to urge closer coordination and communication across state agencies that employ geospatial resources, to improve efficiencies and eliminate duplication of efforts.

B. **Address the digital divide issues that exist in Washington where mutually needed data is non-existent or poorly maintained due to resource issues.**

- Identify and implement a workable approach to coordination and implementation of geospatial resources in rural areas.

C. **Engage in partnerships with state higher education institutions and community and technical colleges.**

- Support relationship building between higher education institutions engaged in geospatial education and agencies and governments in rural areas.

- Engage with higher education institutions to develop and implement staff/faculty/agency geospatial projects and collaborations.

- Consider establishing regional geospatial resource centers in coordination with higher educational institutions aimed at supplementing geospatial capabilities for agencies and governments with limited geospatial resources.

4.0   IMPLEMENTATION PLAN

4.1   Phasing and Milestones

Action Items	Implementation Timeline					Responsibility		DESIRED OUTCOME/RESULTS
	2015	2016	2017	2018	2019	Lead	Support	
Goal #1: Pursue Open Data Initiatives to Facilitate Sharing of Washington State's Geospatial Data								
A. Establish authoritative statewide datasets, including metadata on ownership, frequency of updates, file types, contacts, and others.	✦	✦	✦			GIT Committee	OCIO and WAGIC	
B. Foster widespread use of statewide data standards and guidelines.	✦	✦	✦	✦	✦	GIT Committee	OCIO and WAGIC	
C. Develop and provide access to a shared geospatial infrastructure for smaller state agencies with limited GIS capabilities, including server space and software licenses.	✦	✦				GIS Committee	DES	Infrastructure & services are in place for entities to purchase
D. Coordinate Next Generation (NG) 911 data requirements at the state level with input and support from local governments.	✦	✦				Military	OCIO, WAGIC, Local Gov't	Shared data development environment in place to support spatial information
GOAL #2: Increase Understanding and Support for Geospatial Resources through Education and Outreach								
A. Define target groups of users, analysts, and decision-makers and develop a communication strategy for each group.	✦	✦	✦	✦		WAGIC		
B. Widely publicize existing map and data portals, data standards, and other relevant geospatial efforts in Washington State.	✦	✦	✦	✦		WAGIC	OCIO	

Action Items	Implementation Timeline					Responsibility		DESIRED OUTCOME/RESULTS
	2015	2016	2017	2018	2019	Lead	Support	
C. Redesign WAGIC's web site to make it more accessible, user-friendly, and informative (include existing documentation).	✦					OCIO	WAGIC	
D. Conduct a Return on Investment case study to make the business case for GIS investments.				✦	✦	GIT	OCIO and WAGIC	Establish new portfolio mgmt. reporting environment for GIS
E. Encourage the use of WAGIC list-serve or similar resources across the state and local government levels to promote relevant GIS news and opportunities (including conferences, trainings, and other).	✦	✦	✦	✦	✦	OCIO	WAGIC	Establish and use alternate information feeds like Twitter
Goal #3: **Fully Staff Washington State Geospatial Program Office and Establish the Program Office within the OCIO's Enabling Act**								
A. Fully staff and provide dedicated funding for the Washington State Geospatial Program Office.			✦	✦	✦	OFM	GIT Committee	Phased approach and funding will be subject to fiscal outlook in WA state government
B. Establish clear legislative language for the Washington State Geospatial Program Office within the Office of the Chief Information Officer.	✦					OFM	OCIO	Requires legislative change – look to opportunities that may arise with IT consolidation
Goal #4: Strengthen Coordination across Jurisdictions and Agencies								
A. Coordinate statewide GIS efforts, including data acquisition, development, and stewardship, to promote collaboration and data fidelity.	✦	✦	✦	✦	✦	OCIO	GIT and WAGIC	

Action Items	Implementation Timeline					Responsibility		DESIRED OUTCOME/RESULTS
	2015	2016	2017	2018	2019	Lead	Support	
B. Address the digital divide issues that exist in Washington where mutually needed data is non-existent or poorly maintained due to resource issues.			✦	✦	✦	WAGIC	OCIO	
C. Engage in partnerships with state higher education institutions and community and technical colleges.			✦	✦	✦	WAGIC	OCIO	

4.2   Monitoring and Measuring Success

In order to keep this Strategic Plan relevant to the needs of the Washington GIS community, progress should be reviewed and the plan revisited at least once a year. The progress toward goals and implementation objectives should be assessed against the corresponding desired outcomes. Depending on this evaluation, strategic direction may be adjusted or new action plan may be called for.