

Oregon Geospatial Standards Development Guidelines

Version 1.1
OGIC Endorsed
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Purpose

The intent of this document is to revise the Oregon geospatial standards development guidelines as contained in “Oregon Geodata Compatibility Guidelines” October, 2002 and “Oregon Standards Development Effort” date not known. These documents are available on the GEO website (gis.oregon.gov)

Scope

The scope of the document is limited to the process for geospatial standards development. Guidelines for content and format of geospatial standards are outlined in “Oregon Geodata Compatibility Guidelines” October, 2002 and are not addressed here.

History

In the fall of 2000, a group of Oregon GIS practitioners met and discussed the future of GIS in Oregon. Outcomes from this event included a vision statement and objectives as well as the initial design for an inclusive data standards development process. By October 2002 these outcomes had been documented in “Oregon Geodata Compatibility Guidelines” and endorsed by the Oregon Geographic Information Council (OGIC). OGIC began formal development of geospatial standards with their announcement of the first GIS Standards Forum conducted December 4, 2002. At this event, draft standards for Elevation, Imagery and Metadata were presented and group consensus reached to forward two of the three to the OGIC. The Imagery and Metadata Standards were endorsed by OGIC at the December 18, 2002 meeting and became the first statewide geospatial standards in Oregon. Although these two standards essentially reflected their Federal counterparts, their development still marked two important milestones; the Oregon GIS community, acting through OGIC and the GIS Standards Forum, had reached consensus on their adoption, and a flow chart for the development process was developed, endorsed, and utilized.

In the years since that first Forum, OGIC has endorsed more than 20 new standards as well as numerous revisions. During this time the development process has remained largely unchanged with the exception of minor edits and the addition of a procedure to amend existing standards, which was developed in 2007. The process has enabled consistent and community inclusive collaborative action for more than nine years – a success by any measure.

Direction

At their December 2010 meeting OGIC directed the Geospatial Enterprise Office (GEO) to conduct a review of the standards development process acknowledging its robust and results oriented function but also recognizing that the documentation was outdated and that there may be room for process improvement. Items to be addressed included:

- Intent is to mandate standards for State agencies and strongly encourage adoption of the standard for others
- State CIO (OGIC Chair) has legislative authority to set standards
- Should CIOC be part of the endorsement process?
- Should some other State entity be included?
- What is the appropriate role for local/tribal/regional government?

Subsequently, GEO convened two meetings in early 2011. While the broad intent of these meetings was geospatial governance review, considerable attention was focused on the standards development process. See Appendix B for complete meeting notes. Key findings from these meetings include:

- The need to develop guidance on the scope and applicability of State CIO mandated standards prior to implementing them

- The need to review and potentially revise OWEB's involvement in the standards development process with the goal of honoring OWEB's statutory mandated role in coordinating natural resource geographic information as specified in is ORS 541.920 while managing workload
- Revision of the standards process to include peer review
- Update and combine the existing "Oregon Standards Development Effort" and Procedures for Amending GIS Standards in Oregon" documents.

As a result of the OGIC call for action and the governance review, the following revised standards development process was developed. At this time the process is considered draft, with review and editing encouraged. Once community review has occurred and input considered the process will be presented to OGIC for consideration.

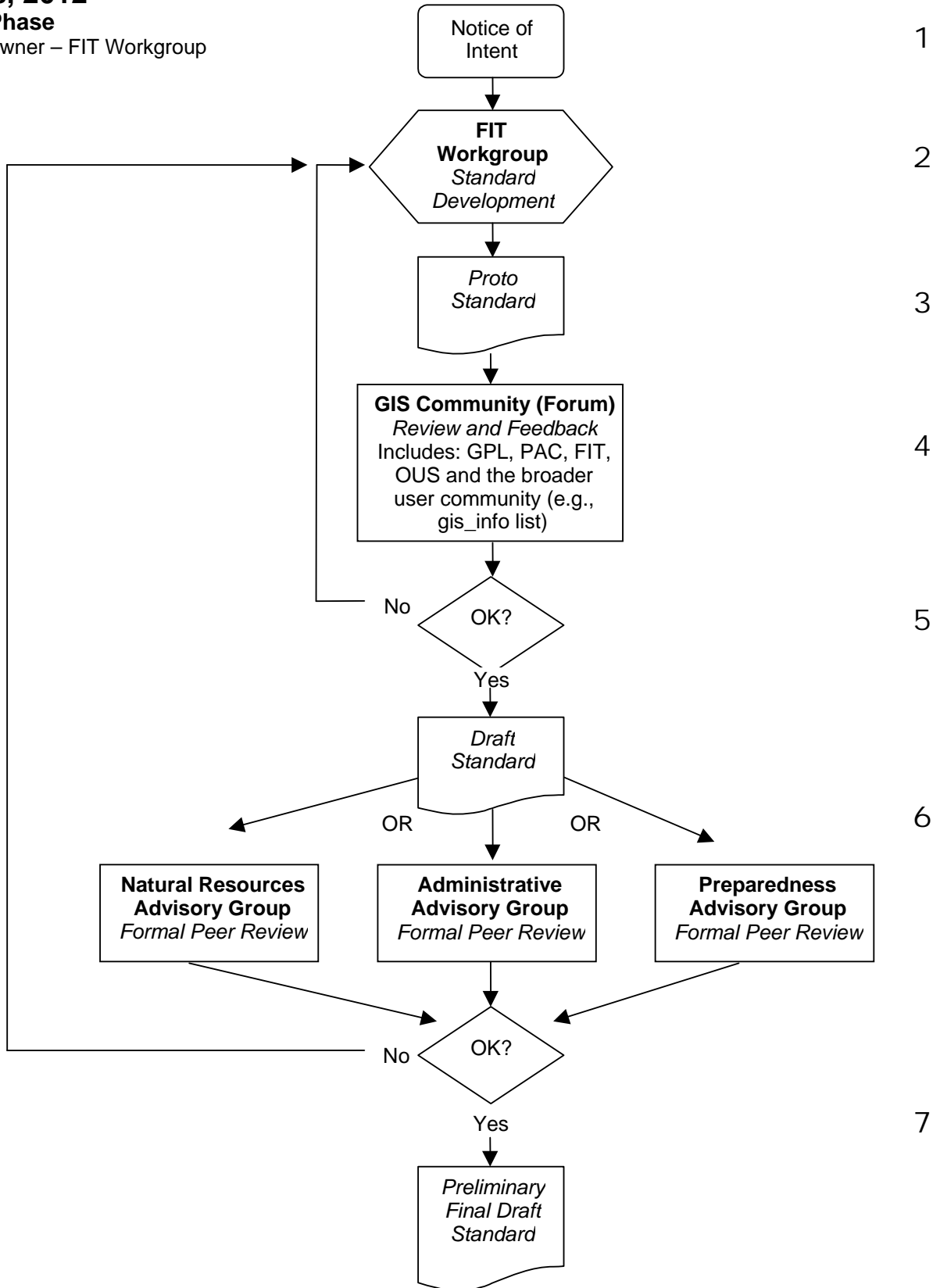
FIT Standard Development, Endorsement, and Authorization Process

The figures below illustrate the revised process. Numbers to the right of each process step reference narrative that outlines the expectations of each step.

FIT Standards Development Process, 2012

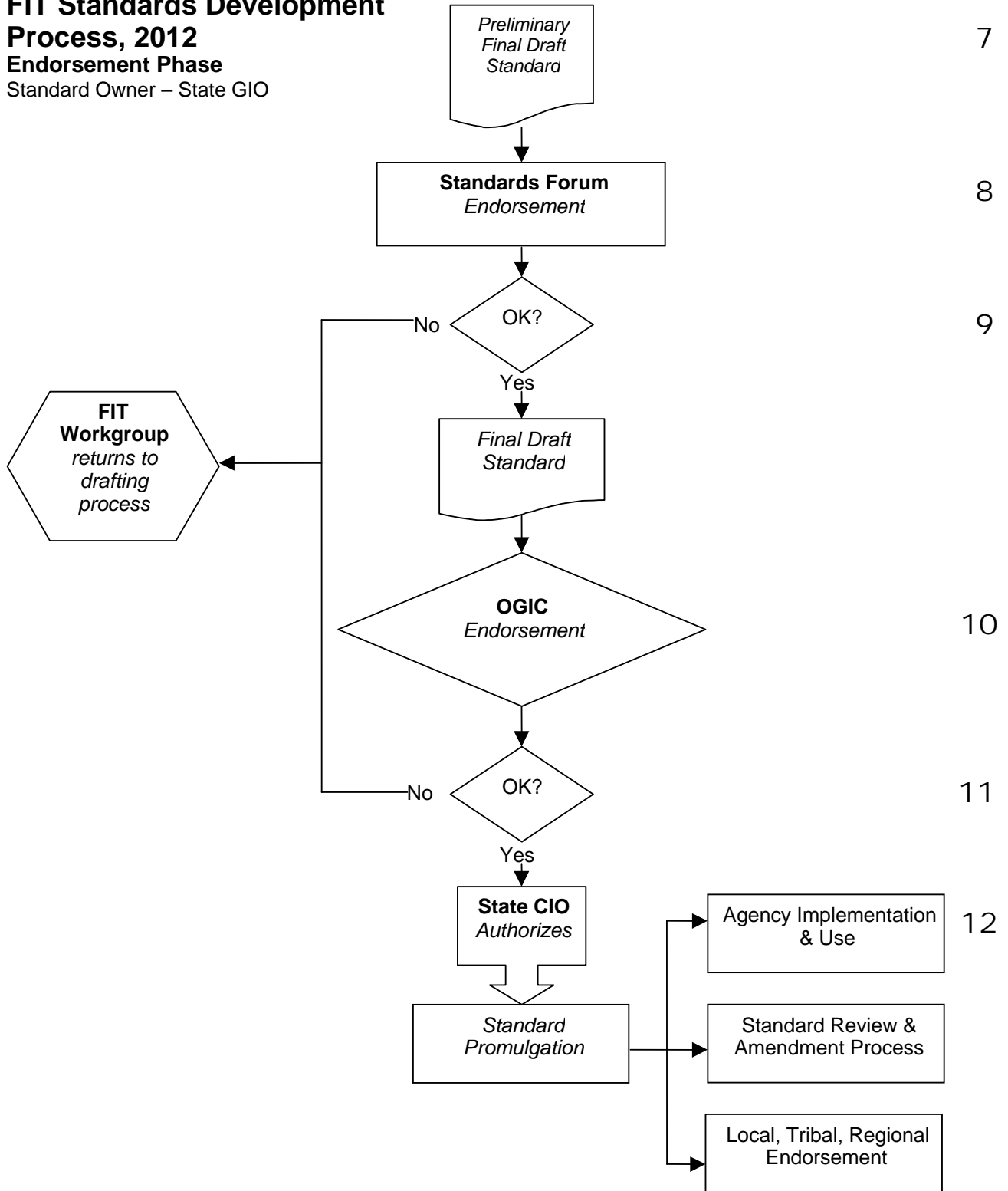
Drafting Phase

Standard Owner – FIT Workgroup



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**FIT Standards Development
Process, 2012**
Endorsement Phase
Standard Owner – State GIO



1: Notice of Intent: Upon initiating work on a standard notice shall be communicated to the GIS community. This is accomplished via email and established listservers (gpl_list, fit, pac, etc). The purpose of this step is to inform others and uncover and avoid parallel or redundant efforts.

2: A workgroup convenes and begins drafting or revising the document. Typically this workgroup is small (2-6 members) and is formed and works under the auspices of one or more FITs. The workgroup is the owner of the document through the Drafting Phase and is also responsible for incorporating changes that might arise during the Endorsement Phase.

3: The first product or draft released by the FIT Workgroup is termed a Proto Standard. Depending on the subject matter the Proto Standard may range from a **straw** document to relatively finished document. It's expected that the Proto Standard will elicit feedback and suggestions resulting in an improved product.

4: The Proto Standard is presented to the GIS Community. The intent of this step is twofold, first, to continue and expand the notice of intent and second, to allow interested parties to review the document and identify potential issues or omissions at an early stage. A representative from the workgroup shall discuss the document at a Standards Forum. GPL, PAC, and FIT shall be given the opportunity to review the document either at a meeting or via email and the broader GIS community shall be invited to review and comment via the gis_info list.

5: If serious fault, major omission, strong opposition, or other problem is identified by the GIS Community review then the document is returned to the workgroup for revision. If feedback can be incorporated into the document without major restructuring the workgroup does so and the Proto Standard becomes a Draft Standard.

6: The Draft Standard is then passed to one of three advisory groups for formal peer review. FIT Leads are notified of this step via email. The purpose of the advisory groups is to provide a non-exhaustive list of potential experts in the field for the FIT elements assigned to that group. The workgroup shall use the advisory groups as a resource to obtain a diverse set of peer reviews. The Statewide Framework Coordinator shall provide support to the workgroup as needed. The advisory groups will convene virtually.

Guidance for how the advisory groups are to be utilized

- E-mail notification to the entire group that a standard is in review and at the advisory group step - seeking mandatory reviews
- Require minimum of three responses from the group, the standard cannot move forward in the process unless this is documented
- Require certain review criteria, e.g. grammar, usability, etc.
- Require a review from a non-Oregon State agency, e.g. tribe, local government, or other state
- Strive to include subject matter experts (SME) as well as GIS practitioners
- Identify that the advisory groups are not exhaustive, if a known expert is not on the advisory list, that person can be a reviewer and potentially added to the advisory group

Natural Resources Advisory Group – FIT Themes

<i>FIT Themes</i>	<i>Representative Organizations</i>
Bioscience Elevation Geoscience Hydrography	Oregon Water Resources Department Oregon Watershed Enhancement Board Oregon State Parks Department Oregon Department of Forestry Department of Geology and Mineral Industries Oregon Department of Environmental Quality Department of State Lands Oregon Department of Fish and Wildlife United States Geological Survey Oregon Department of Agriculture Local and Regional Governments Oregon Tribes Oregon University System

Administrative/Cadastral/Transportation Advisory Group – FIT Themes

<i>FIT Themes</i>	<i>Representatives Organizations</i>
Administrative Boundaries Cadastral Geodetic Control Reference Transportation Land Use/Land Cover	Oregon Department of Agriculture Oregon Department of Forestry Oregon Department of Transportation Oregon Department of Revenue Oregon Geospatial Enterprise Office Oregon State University University of Oregon Department of Land Conservation Bureau of Land Management United States Geological Survey Port of Portland Department of Human Services Local and Regional Governments Oregon Tribes Oregon University System

Preparedness/Hazards/Utilities Advisory Group – FIT Themes

<i>FIT Themes</i>	<i>Representatives Organizations</i>
Preparedness Utilities Hazards Climate Imagery	Oregon Department of Environmental Quality Oregon Emergency Management Department of Geology and Mineral Industries Land Conservation and Development Department of State Lands United States Geological Survey Port of Portland Local and Regional Governments Oregon Tribes Oregon University System

7: If serious fault, major omission, strong opposition, or other problem is identified by the Advisory Group review then the document is returned to the workgroup for revision. If feedback can be incorporated into the document without major restructuring the workgroup does so and the Draft Standard becomes a Preliminary Final Draft

Standard. This step moves the document from the Drafting to the Endorsement Phase and ownership of the documents shifts from the workgroup to the State GIO.

8: The Preliminary Final Draft Standard is presented for a second time to a Standards Forum by either a representative from the workgroup or the State GIO (or designee). The intent of this step is to obtain endorsement from the GIS Community to move the standard to OGIC for their consideration.

9: If serious fault, major omission, strong opposition, or other problem is identified by the Standards Forum then the document is returned to the workgroup for revision. If feedback can be incorporated into the document without major restructuring the workgroup or the State GIO (or designee) does so and the Preliminary Final Draft Standard becomes a Final Draft Standard.

10: The State GIO (or designee) presents the Final Draft Stand to OGIC for consideration and endorsement.

11: If serious fault, major omission, strong opposition, or other problem is identified by OGIC then the document is returned to the workgroup for revision. If feedback can be incorporated into the document without major restructuring the workgroup or the State GIO (or designee) does so and the Final Draft Standard is passed to the State CIO with a recommendation for Authorization.

12: The State CIO, acting under authority of ORS 291.038 Section 2 may authorize the Standard for State Agency use. The intent of the authorization is that the Standard be mandatory for those State Agency use in producing and sharing Framework data for which the Standard is applicable. Adherence to the standard shall not be mandatory for data held internally to State Agencies or for non-Framework applications.

At this step the endorsed and authorized Standard is formally published on the GEO web site and announced via regular communication channels. State agencies shall implement its use in accordance with CIO authorization. Although the CIO authorization does not apply beyond the State it's anticipated that local, Tribal, and Regional Governments will find value in adopting the standard.

Periodic review and amendment of the Standard shall be the joint responsibility of the State GIO and the FIT that hosted the workgroup. Procedures for amending existing Standards follow below.

Amending Existing Standards

Introduction

As standards are endorsed and implemented, they become living documents needing periodic review by the community of data sources and consumers. Each aspect must remain fully relevant, workable and serving the intended purpose. This document describes the process for amending a GIS standard in Oregon. Guidelines for preserving revision history (attached) supplement the process.

Initiating an Amendment

An issue or improvement for the existing standard will usually be identified by someone in the particular community of interest to the appropriate Framework Implementation Team (FIT), through the overall FIT Chair, or through another member of the Geospatial Enterprise Office (GEO). Depending on the nature or number of changes identified, two approaches are available.

Process for Minor Amendments

What is a minor amendment? Here are some examples:

1. Clerical changes providing clarity, correction, or consistency.
2. One or two details of process or data model designed to improve existing product or result.
3. Changes in organization, paragraph headings, terminology or legal or bibliographic reference.

The process for a minor amendment is set forth below:

1. Discuss issues and proposed changes with the appropriate FIT group.
2. Incorporate recommended changes into existing standard, indexing the version number (minor update would index the number after the dot, e.g., v1.3 to v1.4), with a notation in the revision history. Preserve changes or describe them with sufficient specificity.
3. The revised Standard will then be published on GEO's standards Web page. GEO and the relevant FIT group will announce the publication by posting messages to all the relevant listservers for a period of at least 30 days. During this period, comments and suggestions will be collected by the contact listed on the standard, usually the FIT theme lead. If none are submitted, the standard will be posted without further process.
4. If comments or suggestions are received, they will be brought to the relevant FIT group for consideration and possible incorporation. Any changes trigger another publication and comment period. Repeat as necessary until consensus is reached. At this time, the updated standard will be posted without further process.

Process for Major Amendments

A substantive update encompasses all updates that cannot be categorized as minor. Examples include changing exchange formats, making significant changes to a data model, adding to the list of minimum attributes or changing optional items to required items.

When making substantive changes to a standard, follow the process set forth below:

1. Discuss issues and proposed changes with the appropriate FIT group. Make an effort to include additional participants from under-represented groups. This step will result in recommended changes.
2. Incorporate changes into existing standard, indexing the version number (major update would index the number before the dot, e.g., v1.3 to v2.0), with a notation in the revision history. Preserve changes for ease of review.
3. Publish the revised standard on GEO's standards Web page. GEO and the relevant FIT group will announce the publication by posting messages to all the relevant listservers for a period of at least 45 days. During this period, comments and suggestions will be collected by the contact listed on the standard, usually the FIT theme lead.
4. Any comments or suggestions will be brought to the relevant FIT group for consideration and possible incorporation. If further changes are made, this triggers another publication and comment period. Repeat as necessary.
5. When consensus is reached, the updated standard will be presented to the GIS community for approval. After approval, it will be placed on the Oregon Geographic Information Council's (OGIC) consent agenda for endorsement at the next quarterly meeting.

Guidelines for Reciting Revision History

As standards have been developed and endorsed, most efforts have recorded the date and occasion of revisions to the standard on the coversheet. This practice can provide valuable information but will benefit from consistent practices. The guidelines below will assist the preservation of revision history and clarify the implementation details.

Pre-endorsement Revision History

When developing a standard for the first time, track revisions to the draft on the coversheet. Begin with version 0.1, which is frequently a straw man. Preface the revision history list with "Pre-endorsement Revision History" on the cover sheet. It is strongly preferred that the list of revisions coincide with the version number of the draft standard document (0.2, 0.3, etc.). Use the pre-endorsement revision history

to describe the development of the standard in the appropriate paragraph of the document (usually section 1.5).

Post-endorsement Revision History

After OGIC endorses a standard for the first time, the version becomes 1.0. A statement reflecting endorsement replaces the pre-endorsement revision history on the coversheet: “Endorsed by Oregon Geographic Information Council on [date].”

Subsequent amendments (minor or major) will index the version number as set forth in the *Procedures for Amending GIS Standards in Oregon*. Capture the revision history for major updates on the coversheet. Revision history for minor amendments may be captured on the coversheet but should be identified as such. Add additional date(s) of endorsement to the coversheet whenever renewed endorsement occurs. Describe the process for major amendments in the standard development paragraph to keep it current.

Future Considerations

It may be necessary to sweep or consolidate revision history on the coversheet as histories lengthen. Alternatively, revision history may be preserved in an appendix to the standard.