

**USGS-NPS Vegetation Mapping Program
Final Project Product Guidelines, for Online Presentation and Retrieval**

June 2008

Check List

The following data files must be included in a final vegetation map data set.

1. **Technical Report**
2. **Plots Database**
3. **Vegetation Map Spatial Data & Metadata**
4. **Vegetation Plots Spatial Data & Metadata**
5. **Thematic Accuracy Assessment Points Spatial Data & Metadata**
6. **Park Boundary Spatial Data & Metadata**
7. **Digital Aerial Photo & Metadata**
8. **Vegetation Class (Dichotomous Field Key)**
9. **Photo Interpretation Signature Key**
10. **Accuracy Assessment Contingency Table**
11. **Final Vegetation Map Graphic**

Table of Contents

INTRODUCTION.....	4
1. PDF REPORT WEB PAGES	5
• ONE REPORT	5
2. PDF WEB PAGES	5
• AERIAL PHOTO FLIGHTLINE INDEX - PHOTOS.PDF	5
• PHOTO INTERPRETATION SIGNATURE KEY	5
• VEGETATION DESCRIPTIONS	5
• VEGETATION CLASS FIELD KEY.....	5
• METHODS FOR ACCURACY ASSESSMENT.....	5
• RESULTS FOR ACCURACY ASSESSMENT.....	5
• FIELD PHOTO ALBUM - FIELDPHOTOS.PDF	5
3. HTML & OTHER WEB PAGES	5
• CLASSIFICATION MATRIX	5
• FIELD DATA FOR PLOTS	5
▪ Vegetation Sampling Plots: Metadata for Field Data.....	6
▪ Physical Descriptive Data for Plots	6
▪ Species Listing Data for Plots	6
▪ Access Database: Field Data for Accuracy Assessment, Physical Descriptive and Species Listing Data	6
• AERIAL PHOTOMOSAIC METADATA - METAPARKNAMECIRMOSAIC.TXT	6
• GEOSPATIAL METADATA - METAPARKNAMESPATIAL.TXT	6
• PARK BOUNDARY METADATA - METAPARKNAMEBDY.TXT	6
• AA METADATA - METAPARKNAMEAA.TXT	6
• ACCURACY ASSESSMENT CONTINGENCY TABLE	6
4. SUBFOLDERS	6
• AERIALS.....	6
• IMAGES	7
• MAPCLASS	7
5. FTP SITE.....	7
• PARK FOLDER.....	7
▪ reports folder.....	7
6. EXE FILES.....	8
7. CONVERT WORD DOCUMENT (.DOC) TO PDF.....	8
8. FILE NAMING STANDARDS.....	9

Figures

NPSVEG Park Folder Directory Tree Structure.....	11
FTP Folder Directory Tree Structure.....	12

INTRODUCTION

The attached guidelines are designed to standardize and thus facilitate the rapid turn-around of Vegetation Mapping Program (VMP) final products and get them online as quickly and efficiently as possible.

They reflect the USGS-NPS decade-long experience on best practices of how to group and parse the VMP digital products for the current online environment maintained at the USGS Center for Biological Informatics in Denver, CO.

While it is recognized that there will always be exceptions that will have to be dealt with on a case by case basis, the USGS-NPS management team has discovered that adherence to this model of data organization and formatting of final products accelerates the turn-around for project data web posting and as such, makes the data available to NPS staff, natural resource scientists, federal agencies and the public in a timely manner.

We understand the degree of effort that is required to generate a high-quality, standardized vegetation map under the USGS-NPS Vegetation Mapping Program. We recommend you allow sufficient time and effort to produce final products adhering to the specified formats in this document for consistency and rapid availability of the data.

To develop final reports for vegetation mapping projects, investigators should consult with project key officials and follow the appropriate NPS guidelines. The final report will address vegetation classification and description, vegetation mapping, and accuracy assessment. It will include a full description of project methods, results and a summary discussion. If the report will be published within the NPS NRTR series or another technical report series, additional standards and guidelines may be applicable.

After the report, maps, databases, and other digital products have been reviewed and accepted as final by the project key official, they will be reviewed by the USGS/NPS National Vegetation Mapping Program (NVMP) and placed on the website. In order to facilitate this effort, please follow the file format and naming convention guidelines provided below. Many projects were initiated prior to the issuance of these guidelines by NVMP. In those cases, investigators should consult with park, network, and/or NVMP staff to determine how best to meet the new guidelines.

Any questions, or request for clarification should be addressed to Ms Theresa Singh, VMP data content manager (tsingh@usgs.gov) at USGS CBI.

* The word *parkname* is the acronym used by the NPS.

* Please include the .e00 & SDTS files with the data deliverables.

1. PDF REPORT WEB PAGES :

- **ONE REPORT:** Create a PDF full report (*parknamerpt.pdf*).
 - Example: <http://biology.usgs.gov/npsveg/zion/zionrpt.pdf>

2. PDF WEB PAGES:

- Aerial Photo Flightline Index - photos.pdf
A PDF file of a flightline index linking the flightline numbers to the aerial photos and listing the aerial photos by numbers. Not all of the aerial photos are shown just every other one on each flightline. Example: <http://biology.usgs.gov/npsveg/zion/photos.pdf>.
- Photo Interpretation Signature Key
This should be imbedded into the map class photos. See Zion's Map Class Photographs (<http://biology.usgs.gov/npsveg/zion/vegphotos.html>).
- Vegetation Descriptions
This is linked to the *parknamerpt.pdf* via Adobe Acrobat using the destination tool. The URL is <http://biology.usgs.gov/npsveg/parkname/parknamerpt.pdf#descript>. Example: <http://biology.usgs.gov/npsveg/zion/zionrpt.pdf#descript>.
- Vegetation Class Field Key
This is linked to the *parknamerpt.pdf* via Adobe Acrobat using the destination tool. The URL is <http://biology.usgs.gov/npsveg/parkname/parknamerpt.pdf#vegkey>. Example: <http://biology.usgs.gov/npsveg/zion/zionrpt.pdf#vegkey>.
- Methods for Accuracy Assessment
This is linked to the report.pdf via Adobe Acrobat using the destination tool. The URL is <http://biology.usgs.gov/npsveg/parkname/parknamerpt.pdf#aamethod>. Example: <http://biology.usgs.gov/npsveg/zion/zionrpt.pdf#aamethod>.
- Results for Accuracy Assessment
This is linked to the report.pdf via Adobe Acrobat using the destination tool. The URL is <http://biology.usgs.gov/npsveg/parkname/parknamerpt.pdf#aareult>. Example: <http://biology.usgs.gov/npsveg/zion/zionrpt.pdf#aareult>.
- Field Photo Album - fieldphotos.pdf
This contains other field photos taken throughout the project. (OPTIONAL)
Example: <http://biology.usgs.gov/npsveg/voya/fieldphotos.pdf>.

3. HTML & OTHER WEB PAGES:

- Classification matrix - (OPTIONAL)
This classification matrix (*class_matrix.html*) should include the code description. Also need to create an Excel file called *class_matrix.xls*, which should include the code description.
Examples: http://biology.usgs.gov/npsveg/acad/class_matrix.html and http://biology.usgs.gov/npsveg/ftp/vegmapping/acad/class_matrix.xls.
- Field Data for Plots
This web page lists *parknameplots.pdf*, *parknameplot.exe*, *metaparknamefield.html*, *parknamedata.mdb*, *plots.html*, *plotst.html*, *plots.xls*, *plots.mdb*, *sp_cov.html*, *sp_covt.html*, *sp_cov.xls*, & *sp_cov.mdb*.
 - Vegetation Sampling Plots: Metadata for Field Data - metaparknamefield.txt
Metadata Web Page for Geospatial Vegetation Information (Text format only).
Example: <http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/metazionfield.txt>.

- Physical Descriptive Data for Plots - The plots files are files that were extracted from the *parknamedata.mdb* database. The file names are plots.html (with tables), plotst.html (without tables), plots.xls and plots.mdb. Examples:
<http://biology.usgs.gov/npsveg/zion/plots.html>,
<http://biology.usgs.gov/npsveg/zion/plotst.html>,
<http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/plots.xls> and
<http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/plots.mdb>.
- Species Listing Data for Plots - The sp_cov files are files that were extracted from the *parknamedata.mdb* database. The file names are sp_cov.html (with tables), sp_covt.html (without tables), sp_cov.xls and sp_cov.mdb. Examples:
http://biology.usgs.gov/npsveg/zion/sp_cov.html,
http://biology.usgs.gov/npsveg/zion/sp_covt.html,
http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/sp_cov.xls and
http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/sp_cov.mdb.
- Access Database: Field Data for Accuracy Assessment, Physical Descriptive and Species Listing Data - *parknamedata.mdb*
This is a Microsoft Access Database of the entire park field data, such as accuracy assessment, accuracy assessment species, observation points, plots, plot-species, geology classes, locations, jurisdictions and any other park field data. Example:
<http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/ziondata.mdb>.
- Aerial PhotoMosaic Metadata - *metaparknamecirmosaic.txt* (OPTIONAL)
Metadata for aerial photo mosaic (Text format only). Example:
<http://biology.usgs.gov/npsveg/ftp/vegmapping/hofu/metahofucirmosaic.txt>.
- Geospatial Metadata - *metaparknamespatial.txt* – Metadata Web Page for Geospatial Vegetation Information (Text format only). Example:
<http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/metazionspatial.txt>.
- Park Boundary Metadata - *metaparknamebdy.txt* – Metadata Web Page for Park Boundary (Text format only). Example: <http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/metazionbdy.txt>.
- AA Metadata - *metaparknameaa.txt* – Metadata Web Page for Accuracy Assessment Information (Text format only). Example:
<http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/metazionaa.txt>.
- Accuracy Assessment Contingency Table – This accuracy assessment matrix (*aa_matrix.html*) should include the code description below the matrix. Also need to create an Excel file called *aa_matrix.xls*, which should include the code description below the matrix. Examples:
http://biology.usgs.gov/npsveg/zion/aa_matrix.html and
http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/aa_matrix.xls.

4. SUBFOLDERS:

- **aerials:**
This is PDF file for each aerial photograph, using a unique photo number on each photo. Example: 2-3.pdf, 6-11.pdf, 18-20.pdf, and 23-36.pdf. Examples:
<http://biology.usgs.gov/npsveg/zion/aerials/2-3.pdf>,
<http://biology.usgs.gov/npsveg/zion/aerials/6-11.pdf>,
<http://biology.usgs.gov/npsveg/acad/aerials/18-20.pdf> and
<http://biology.usgs.gov/npsveg/acad/aerials/23-36.pdf>.

- **images:**
These are graphic files (.pdf). The pdf file name is the *parkname* and the type of imagery that is being shown. Examples: <http://biology.usgs.gov/npsveg/zion/images/zionaa.pdf>, <http://biology.usgs.gov/npsveg/zion/images/zionplots.pdf>.

Final Map Graphics: Map layouts need to follow NPS standards. For NPS standard map templates, see: <http://imgis.nps.gov/templates.html>. These are graphic files (.pdf). The pdf file name is the parkname. We would like a low resolution for viewing and a high resolution PDF for reprinting maps. Examples: <http://biology.usgs.gov/npsveg/zion/images/zionveg.pdf>, http://biology.usgs.gov/npsveg/zion/images/zionmap_large.pdf.

- **mapclass:**
This folder contains separate PDF files of each map class photo and description. See Zion's Map Class Photographs (<http://biology.usgs.gov/npsveg/zion/vegphotos.html>).
 - **NAMING CONVENTIONS:**
 - MAP CODES: Preferably use the text map codes if they are assigned to the association or alliance. If numbers are assigned or no map codes assigned than use the naming convention below.
 - ◆ ONE ASSOCIATION OR ALLIANCE: Use the first letter of the first and second scientific name. Example: *Abies concolor* Forest Alliance = ac.pdf.
 - ◆ TWO ASSOCIATION OR ALLIANCE: Use the first letter of each scientific name. Example: *Acer grandidentatum* / *Quercus gambelii* Forest = aq.pdf.
 - ◆ THREE ASSOCIATION OR ALLIANCE: Use the first letter of each scientific name. Example: *Arctostaphylos patula* - *Quercus gambelii* - (*Amelanchier utahensis*) Shrubland = aqa.pdf.
 - ◆ FOUR ASSOCIATION OR ALLIANCE: Use the first letter of each scientific name. Example: *Acer rubrum* - *Fraxinus* spp. - *Betula papyrifera* / *Cornus canadensis* Forest = afbc.pdf.
 - ◆ FIVE ASSOCIATION OR ALLIANCE: Use the first letter of each scientific name. Example: *Betula papyrifera* - *Picea glauca* / *Acer spicatum* - *Alnus viridis* / *Polypodium vulgare* Talus Woodland [Provisional] = bpaap.pdf.
 - ◆ NOTE: If there are two different alliance or association names that have the same first and second scientific letters or the same name but different alliance or association than add another letter to the name. Example: *Pinus albicaulis* Forest Alliance = paf.pdf and *Populus angustifolia* Temporarily Flooded Woodland Alliance = paw.pdf or *Quercus gambelii* Shrubland Alliance = qgs.pdf and *Quercus gambelii* Woodland (Alliance) = qgw.pdf.

5. FTP SITE:

- **park folder**
The following is a list of files that should be housed in this folder: aa_matrix.xls – include the code description in the Excel file, *parknamedata.mdb*, *plots.mdb*, *plots.xls*, *sp_cov.mdb*, *sp_cov.xls*, *metaparknameaa.txt*, *metaparknamefield.txt*, *metaparknamespatial.txt*, *parkname.exe*, *parknameaaexe*, *parknameplot.exe*, & *parknamebdy.exe*. The following are OPTIONAL: *class_matrix.xls*, *parknamecirmosaic.exe*, & *metaparknamecirmosaic.txt*.

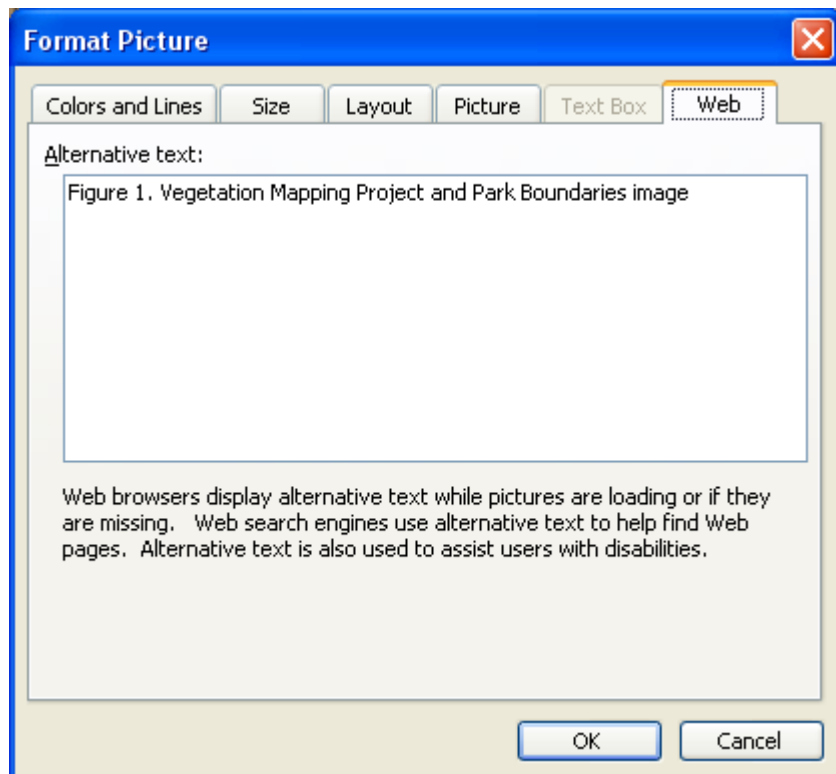
6. EXE FILES:

- The executable files should contain the following:
 - The shapefile of the data and the metadata (text version) that goes with that particular shapefile. All data must be in NAD83.

- Depending on the WinZip version:
 - For the Full Advance Version: Create the zip file than under file name Actions, scroll down to Make .EXE File and click on it to create an .EXE file.
 - For a Limited Version: Create the zip file, close the zip file and go to file of where it located and right click on the file and scroll down to WinZip and than scroll down to Create Self-Extractor (.EXE) and click on it to create an .EXE file.
 - If unable to do either one of these process as described above than create a ZIP file only.
- Examples: <http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/zion.exe>, <http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/zionbdy.exe>, <http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/zionaa.exe> and <http://biology.usgs.gov/npsveg/ftp/vegmapping/zion/zionplot.exe>. Also <http://biology.usgs.gov/npsveg/ftp/vegmapping/hofu/hofucirmosaic.exe> - OPTIONAL.

7. CONVERT WORD DOCUMENT (.DOC) TO PDF:

- The following are some guidelines in order to convert .doc to pdf file:
 - All images and figures must be tagged.
 - Right click on image or figure and scroll down and click on Format Picture. Within Format Picture menu box click on the tab called Web, this is where to type in the description of the image or figure.
- Example:



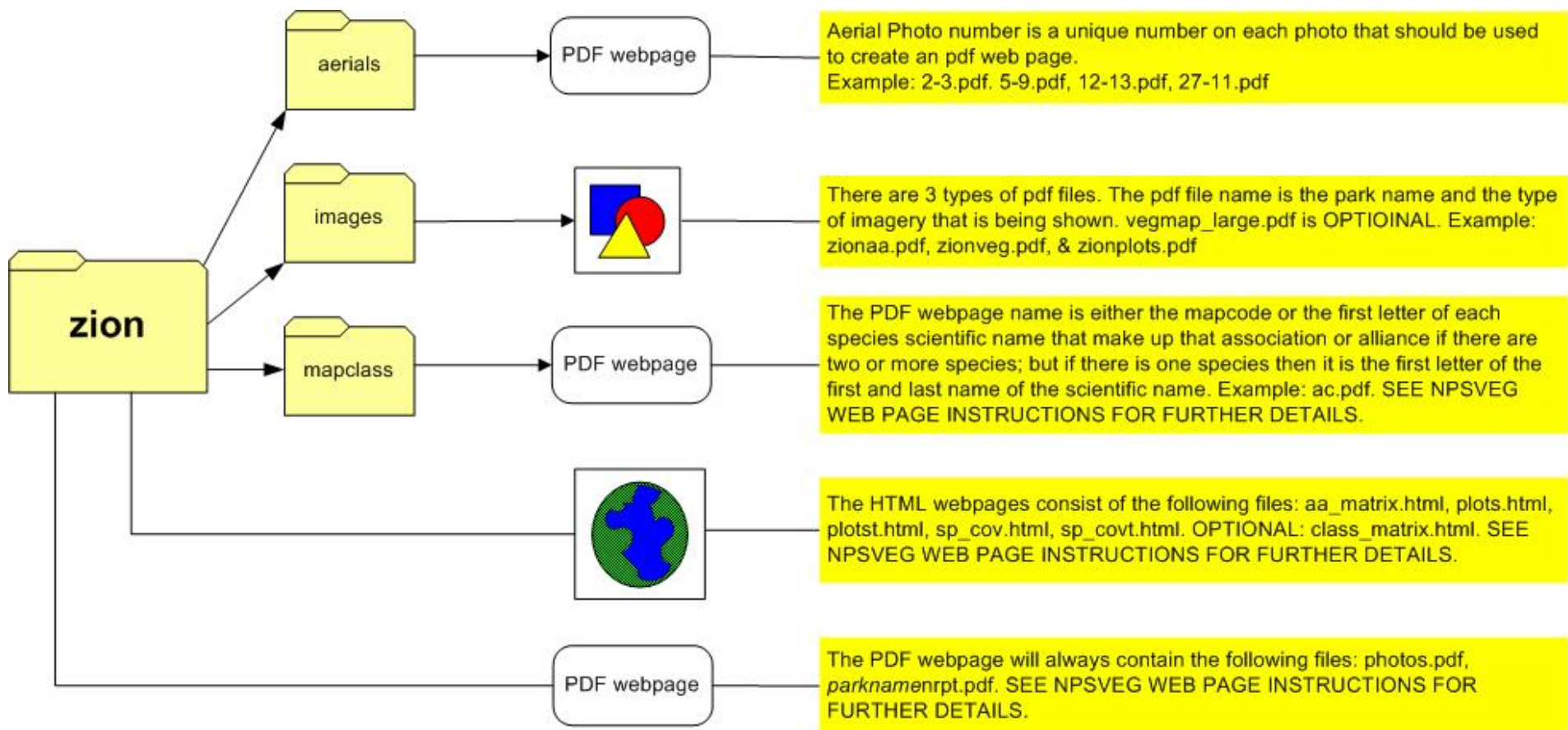
- The header (times new roman, font size 10, with a line under the park name) must contain:
 - USGS-NPS Vegetation Mapping Program
 - Parks Full Name
- The footer (times new roman, font size 10, with a line under the number) must contain:
 - 12 or F-26
- NO hyperlinks in tables of content, tables toc and figure toc.

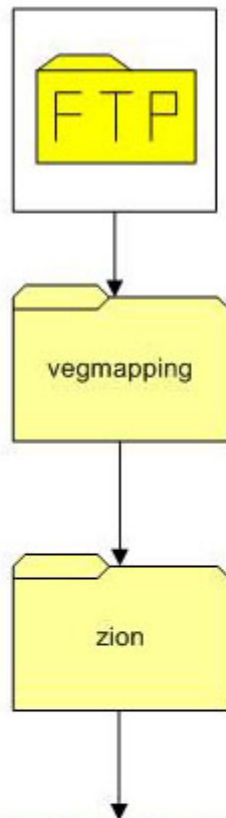
- NO blank pages, but exceptions will be made if you are writing for a technical series.
- Check the properties by clicking on File and scrolling down to Properties and clicking on Summary tag and checking the title of the file.
- Make sure the Markup tool is turned off.
- NOTE: If the .doc doesn't convert to pdf file than the .doc file must be broken apart into sections in order to convert to a pdf file. This is because the .doc file is too big to convert to a pdf file. Then put the pdf file back together as one file.
- The following are some guidelines after the pdf file has been created:
 - Be sure that the tags are included in the pdf file.
 - Create bookmarks.
 - In file menu under document properties check to make sure that the bookmark panel and page are chosen in the SHOW box.
 - The tag properties under the tag window should have a language of ENGLIS US.
 - FULL CHECK: click the Advance menu and click the Accessibility and Full Check. In the Full Check Window: click Create comments in document and turn off Create Accessibility Report, than turn off Tab order is consistent with the structure order and Reliable character encoding is provided, than click Start Checking.

8. FILE NAMING STANDARDS:

- NO capital letters used in naming each file.
- The following is a list of standard naming conventions:
 - Aerial Photography
 - *parkname*cirmosaic.exe (OPTIONAL)
 - *metaparkname*cirmosaic.html (OPTIONAL)
 - *metaparkname*cirmosaic.faq.html (OPTIONAL)
 - *metaparkname*cirmosaic.pdf (OPTIONAL)
 - *metaparkname*cirmosaic.txt (OPTIONAL)
 - photos.pdf
 - 1-02.pdf or 11-13.pdf or 4-5.pdf depending on the unique photo number.
 - Vegetation Information
 - *parkname*rpt.pdf
 - http://biology.usgs.gov/npsveg/parkname/parkname_rpt.pdf#descript
 - http://biology.usgs.gov/npsveg/parkname/parkname_rpt.pdf#vegkey
 - fieldphotos.pdf (OPTIONAL)
 - class_matrix.xls (OPTIONAL)
 - class_matrix.html (OPTIONAL)
 - Field Data
 - *parkname*plots.pdf
 - *parkname*plot.exe
 - *metaparkname*field.html
 - *metaparkname*field.faq.html
 - *metaparkname*field.pdf
 - *metaparkname*field.txt
 - *parkname*data.mdb
 - plots.html
 - plotst.html
 - plots.xls
 - plots.mdb
 - sp_cov.html
 - sp_covt.html

- sp_cov.xls
- sp_cov.mdb
- Geospatial Vegetation Information
 - *parknameveg.pdf*
 - *parknameveg_large.pdf*
 - *parkname.exe*
 - *metaparknamespatial.html*
 - *metaparknamespatial.faq.html*
 - *metaparknamespatial.pdf*
 - *metaparknamespatial.txt*
 - *parknamebdy.exe*
 - *metaparknamebdy.html*
 - *metaparknamebdy.faq.html*
 - *metaparknamebdy.pdf*
 - *metaparknamebdy.txt*
- Accuracy Assessment Information
 - <http://biology.usgs.gov/npsveg/parkname/parknamerpt.pdf#aamethod>
 - <http://biology.usgs.gov/npsveg/parkname/parknamerpt.pdf#aareult>
 - *parknameaa.pdf*
 - *parknameaa.exe*
 - *aa_matrix.html*
 - *aa_matrix.xls*
 - *metaparknameaa.html*
 - *metaparknameaa.faq.html*
 - *metaparknameaa.pdf*
 - *metaparknameaa.txt*





The webpages consist of the following files: aa_matrix.xls, plots.xls, plots.mdb, sp_cov.xls, sp_cov.mdb, parknamedata.mdb (complete dataset), metaparknameaa.txt, metaparknamefield.txt, metaparknamespatial.txt, parkname.exe, parknameaaexe, parknameplot.exe, parknamebdy.exe. The following are EXAMPLES: ziondata.mdb, metazionaa.pdf, metazionaa.txt, metazionfield.txt, metazionspatial.txt, zion.exe, zionaa.exe, zionplot.exe, zionbdy.exe. OPTIONAL: class_matrix.xls, parknamecirmosaic.exe, & metaparknamecirmosaic.txt. SEE NPSVEG WEB PAGE INSTRUCTIONS FOR FURTHER DETAILS.