

# Spatial/Map Submissions – Common Pitfalls and Reasons for Rejection

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Since 2013, when the SWPI program implemented significant changes to the spatial and map requirements, there have been a number of common problems that have caused spatial and/or map submissions to be rejected. The purpose of this document is to highlight these issues and provide additional information to help avoid them, thereby improving submission success. Other additional, useful information is also contained in the ReadMeFirst document at the root of the [FTP site](#) mentioned below. A checklist that asks general questions related to the problems described below is also included at the end of this document.

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## Contents

- Problem #1 – The GIS Template Was Not Used..... 1
- Problem #2 – The Wrong GIS Template Was Used..... 2
- Problem #3 – The Domains Were Not Used In the Template..... 2
- Problem #4 – The Domains Were Used but the Combination of Values Were Not Valid ..... 2
- Problem #5 – The Submission Contains Geometry or Topology Errors..... 3
- Problem #6 – The Submission Did Not Reflect the Net Area..... 3
- Problem #7 – The Spatial Shapes, Attribute Values, and/or Hectares Do Not Match the Submitted Maps, Report or Other Documentation ..... 3
- Problem #8 – Required Maps Were Missing From the Submission or Did Not Include All the Required Content..... 4
- Spatial / Map Pre-Submission Checklist..... 5

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## Problem #1 – The GIS Template Was Not Used

The GIS geodatabase (GDB) templates are available on the BCWS FTP site [here](#) and are organized by funding year and program funding stream. These templates contain blank layers and associated attributes that conform to the spatial requirements including domains, which allow users to choose from a set of pre-defined acceptable values as a drop-down for certain attributes. These domains have been set-up to match the SWPI Guides exactly, to reduce the chance of a user entering an invalid value.

**These templates should be used as the starting point for all submissions.** Make sure to check the FTP site often to ensure you are using the latest version as sometimes errors are found and fixed within the templates, or retroactive changes are made.

## Problem #2 – The Wrong GIS Template Was Used

There is a different template for each funding year and program funding stream and each one is specific to the requirements of that year/funding stream. Double check the year in which the application was made to the SWPI program to confirm which year is applicable to your project. For example, if a CWPP SWPI application was made on January 5<sup>th</sup>, 2015, then the January 2015 CWPP Guide and spatial/map standards would apply.

There are often Prescription submissions that have used the Operational template and Operational submissions that have used the Prescription template. **Remember to double check your funding year and program stream and use the applicable template.**

## Problem #3 – The Domains Were Not Used In the Template

In Problem #1 we explained that the domains in the templates have been set-up to match the SWPI Guides exactly, to reduce the chance of users entering an invalid value. Often times when users copy/paste features into the template or manually 'Calculate' attribute values, the domains are not used. If the pasted or calculated values do not match the domain values exactly (ex. C-1 vs C1, High vs HIGH), this can cause the submission to fail.

**To find these problems run the [Validate Features](#) command from the Editor Toolbar on each layer while in an ArcMap edit session and correct any errors. Or, more simply, use the drop-downs when adding features to set the attribute values.**

To switch between seeing the Domain Coded value (ex 'High') and the Domain Description value (ex '*Landscapes or stands that: are forested with continuous surface fuels that will support regular candling, intermittent crown and/or continuous crown fires; often include steeper slopes, rough or broken terrain with generally southerly and/or westerly aspects; can include a high incidence of dead and downed conifers; are areas where fuel modification does not meet an established standard.*'), see the instructions in the ReadMeFirst document at the root of the [FTP site](#).

## Problem #4 – The Domains Were Used but the Combination of Values Were Not Valid

The Debris Management and Stand Treatment layers for Operational and Demonstration projects have a specific set of Treatment Type / Treatment Method combinations that are acceptable. Valid combinations can be found in the Attribute Value Reference Tables section of the Spatial Requirements Appendix in the applicable Operational or Demonstration SWPI Program Guide (see Problem #2 note about using the proper funding year).

**Double check your Treatment Type / Treatment Method combinations prior to submission to ensure the combinations are valid.**

## Problem #5 – The Submission Contains Geometry or Topology Errors

The spatial requirements for all program years clearly state that *“Submitted data must meet general data quality guidelines to ensure corporate data quality standards are met. Data with slivers, gaps between adjacent polygons, and geometry errors will not be accepted.”* Overlaps in some layers are also not accepted.

The GIS templates available include a version that contains some general pre-built Topology rules. **If the Standard or Advanced ArcGIS licensing level is available in your organization you should this version of the GIS template as your starting point.** Once the GDB has been populated with your submission features validate the Topology to check for errors and resolve any that are found.

**Make sure to run the Check Geometry and Repair Geometry tools on each layer prior to submission to find/repair any errors.**

**If past submissions have been rejected due to slivers or gap issues, you can also add “Must Not Have Gaps” Rules to the Topology for specific polygon layers in the GDB** (examples of layers where this might be useful are the CWPP FIRE\_THREAT and FUEL\_TYPE layers). When validated, these rules will help you find gaps which may be otherwise hard to spot when panning or zooming around the data within your submission.

**Adding “Must Not Overlap” Rules for other specific layers might also be helpful in finding errors.** Examples of layers where this might be useful are the CWPP PROPOSED\_TREATMENT layer, and Prescription/Operational/Demonstration TREATMENT\_UNIT layers

## Problem #6 – The Submission Did Not Reflect the Net Area

Prescription, Operational and Demonstration projects require that the submitted spatial information reflect only the NET area (ie NET area under prescription or NET area that was treated). **This means that any no-work zones or areas of no treatment (or no prescribed treatment for Prescription projects) must be excluded from ALL layers in the spatial submission.** A common problem is when these areas are removed from one of the layers (ie TREATMENT\_UNIT layer) but not others (ie PROJECT\_BOUNDARY layer).

**Prior to submission, double check that ALL spatial layers exclude any no-work zones or no treatment areas.**

## Problem #7 – The Spatial Shapes, Attribute Values, and/or Hectares Do Not Match the Submitted Maps, Report or Other Documentation

Part of the review includes checking the submitted spatial shapes, attribute values, and hectares (in areas where they are required to be stated) against the same information on the maps, in the final report, and any other supporting documentation (ie CWPP document for CWPP projects, prescription document for Prescriptions). When there is a discrepancy in this information, the spatial and/or map submission will be rejected.

For Operational and Demonstration projects, the treatment activities described in the 'Description of Completed Project' and 'Actual Fuel Treatment Costs' sections of the final report are also reviewed against the maps and spatial information.

**Prior to submission, double check that the information in the final report, other supporting documents, maps and spatial information are all in alignment. If updates are made to one of these components, make sure the other components are in agreement or update and resubmit them as necessary.**

It is also important to make sure the same information is in alignment between maps (ex for Prescription, Operational and Demonstration projects make sure the PROJECT\_BOUNDARY hectares are in alignment on all submitted maps where this information is required).

**For projects where THREAT\_PLOT spatial information is submitted, make sure the information on the submitted Threat Plot Worksheet matches the information in the spatial data (ie PLOT\_NUMBER and FIRE\_BEHAVIOUR\_THREAT\_CLASS).**

## **Problem #8 – Required Maps Were Missing From the Submission or Did Not Include All the Required Content**

Each funding year and program funding stream has specific map requirements including number of maps and map content. **Prior to submission, review the map requirements for your applicable funding year and program stream to make sure all the required maps and map content are included.**

For Operational and Demonstration projects it is important to note that the Stand Treatment and Debris Management maps require that each unique type of treatment activity and method must be listed separately in a table on the map (with associated net hectares) and have unique symbology on the map and depicted in the legend. For simple examples of what these maps might look at, please check out the Sample maps within the 2013 and 2014 funding years on the [FTP site](#). Note that the Stand Treatment and Debris Management maps also require the project boundary shapes to be included on the map, symbolized in the legend, and hectares included in the summary table.

## Spatial / Map Pre-Submission Checklist

*(the most common reasons for spatial/map submissions to be rejected)*

| Yes | No |  |
|-----|----|--|
|     |    | Was the GIS template on the FTP site used?   |
|     |    | Was the GIS template corresponding to the proper funding year and program stream used?   |
|     |    | Were the domains in the template used to set the attribute values, and were the features validated using the Validate Features tool for all the layers within the GDB? |
|     |    | Were the combination of attribute values double-checked (Operational and Demonstration projects only)?   |
|     |    | Were all geometry and topology errors checked and resolved? Was the data checked for gaps and slivers?   |
|     |    | Did all the layers within the submission reflect the NET area (Operational, Prescription, and Demonstration projects only)?  |
|     |    | Did the spatial shapes, attribute values, and hectares match the submitted maps, report and other supporting documentation?  |
|     |    | Were all the maps with the required content included?  |