Spatial Data Submission Guidelines

GUIDELINES FOR SUBMITTING SPATIAL DATA AND MAPS TO THE ENVIRONMENTAL ASSESSMENT OFFICE

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Table of Contents

INTRODUCTION

Proponents of projects undergoing an Environmental Assessment (EA), and Holders of an Environmental Assessment Certificate (EAC) or Exemption Order, are required to submit spatial information to the Environmental Assessment Office (EAO) in the form of maps and shapefiles at various points in the process. Outlined below are the requirements, file types and best practices for submitting spatial information to the EAO.

It is important to ensure that there is an agreement to share any information received from First Nations before including it in spatial information submitted to the EAO. Please discuss with the EAO in advance of sharing any confidential information.

If there is a discrepancy between the information presented on this page and a guidance document, please follow the guidance document and/or speak with the project lead assigned to your file.

Questions and comments may be directed to gisservices.eao@gov.bc.ca.

BASIC REQUIREMENTS FOR ALL SPATIAL SUBMISSIONS

Spatial File Requirements

Proponents are required to submit spatial files at various phases of the Environmental Assessment Process. All project specific data that appears on maps included in the application process are required to be submitted.

Spatial data must be:

- If vector data, as a shapefile /feature class as points, lines, or polygons;
- If raster data as a Geo TIFF;
- In NAD 1983 BC Environment Albers projection;
- Geometry must be valid; no NULL geometry or self-intersecting polygons;
- Shapefiles/feature classes and their corresponding representation on all maps must be identical in shape, size, and location. All shapefiles that appear on a map must be submitted;
- Where different valued components (VC) have the same assessment boundaries, indicate this in the attribute table, and provide only one set of shapefiles for example, do not provide separate shapefiles for the soil and vegetation local assessment area (LAA) if they are identical;
- There is no need to submit individual polygons lines or point for each boundary; several polygons, points or lines maybe merged into a single shapefile or feature class; and
- The attribute table (.dbf) of the shapefiles must contain at minimum the following fields:

Table 1 Example attribute table

Column Name	Alias	Data Type	Comments
ProjectName	Project name	TXT	The name of the proposed project
Proponent	Proponent	TXT	The name of the proponent
Phase	Phase	TXT	Value must be one of the coded values see Table 2
Component	Component	TXT	Choose from options of Major, Value, Subcomponent see table2
Label	Label	TXT	Name of the component or existing condition or map label
Comment (optional)	Comment	TXT	May be used to indicate if the boundary is a temporary boundary or RAA or LAA
Sensitive data	Sensitive Data	TXT	Value must be one of the coded values see Table 2
DataRestrictions	Data restrictions	TXt	Describe how the sensitive data is restricted
SourceofSpatialData	Source of spatial data	TXT	Value must be one of the coded values see Table 2
Footprint	Footprint	TXT	Value must be one of the coded values see Table 2 (Polygon only)

Shapefile templates and Geodatabases are available for download

EAOShapeFiles

EAO_ESRI_FileGDB with domains (may be submitted as an alternative to individual shapefiles)

EOA_QGISGeopackage (with domains)

Table 2 Coded values.

Coded values	
Phase	
EE	Early engagement
N	Notification
RD	EA readiness decision
PP	Process planning
ADR	Application development and review
EAR	Effects assessment and recommendation
D	Decision
PCCE	Post certificate and post certificate compliance & enforcement.
CEAO	CEAO Designation
Component	
Major	Major Component
Value	Value Component
Sub	Subcomponent
Label	
Map Label	
Comment	
May be used to indicate if the boundary is a temporary boundary, or any other information	
Sensitive Data	
Is this sensitive data	
yes or no	

Data Restrictions

Provide comment about how the sensitive data is restricted

Source of spatial data

Proponent

BC data Catalogue

Or specify other source

Footprint

Does the polygon represent the project's footprint?

Yes

No

Naming Spatial Files

Use the following naming convention for all spatial files submitted to the EAO to clearly describe their contents. Refer to *Table2* for abbreviations

Example: to submit spatial data for the early engagement phase for XYZ mine on the 13 of March 2024

Phase_Project_name_date

Example: EE_XYZ_Mine_20240313

To avoid errors related to file names, follow these best practices:

- Avoid starting names with a number;
- Add an underscore instead of a space or dash; and
- Do not include a symbol outside of the underscore.

Standard Map Elements and Attributes for All Maps

Title Block	All maps must include a discrete title block containing the following information: • Map title (be specific) • Your company/affiliation (name or logo) • Environmental assessment phase • Basemap source and date • Date (of map creation) • Projection
Legend	Include a discrete legend block that identifies all symbols used on the map. Do not include symbols in the legend that are absent from the map. Long lists of inapplicable symbols from development maps or other base mapping will not be accepted.
Grids	Include labeled National Topographic System (NTS) index. Include UTM Grid reference.
Landmark Labels	Clearly label significant landmarks (e.g., roads, rivers). All landmarks mentioned in the report must be labelled on the associated maps.
North Arrow	Include a north arrow to indicate true north. The north arrow must always point to the top of the page; landscape and portrait orientations are both acceptable, with the "top" being the upper edge of the page when page is oriented for reading.
Bar Scale, Scale Text	Include a bar scale and scale text inside the map area for all maps and map insets. Scale bar intervals should use whole numbers that are most logical for the scale of your map.
Final Copy Only	Submit the final copy The Application must be provided in an indexed, unlocked PDF format

REQUIREMENTS FOR SPECIFIC MAP TYPES

Certified Project Description (CPD) and Exemption Project Description (EPD) Maps

Basic Requirements	Consult the following sections on basic requirements for all maps: • *Standard Map Elements and Attributes for All Maps*
Scale	Use a scale appropriate so that the entire project is clear, with a minimum of 1:20,000 (with the exception of overview maps)
Base Mapping	Use a topographic base map that is conducive to presenting the project in a clear and accurate manner.
Required Elements	1. Project maximum disturbance footprint and polygons which would contain groups of Project components rather than specific locations, unless requested to do so; 2. UTM grid, NTS grid and labels 3. BCGS Map Sheet numbers for component maps only. 4. An inset map showing the project's area location within an outline of the province of B.C. (show entire province or north/south half). 5. List of data sources 6. Name of entity producing the map, but no company logo shown 7. If relevant for the CPD, Crown and private land ownership 8. Socio-political boundaries (e.g., provincial boundaries) 9. Any disclaimers

Overview Map

The purpose of this map is to illustrate the exact location of the project area within the surrounding landscape.

Basic Requirements	Consult the following sections on basic requirements for all maps: • *Standard Map Elements and Attributes for All Maps*
Scale	Use a scale appropriate so that the entire project is visible on one map.
Base Mapping	Use a topographic base map that is conducive to presenting the study area in a clear and accurate manner.
Required Elements	1. Delineate the maximum spatial extent of the project components. Use clearly labeled polygons on the map or in the legend to represent the project area. 2. Include the location of communities or locations of interest to the public, government, and key designated or protected areas such as parks or Wildlife Habitat Areas 3. An inset showing the project's area location within an outline of the province of B.C. (show entire province or north/south half). 4. Waterbodies, including intermittent and ephemeral streams and navigable waterways; Project access route and transportation corridors, including use of existing roads; current land and aquatic use in the area 5. Environmentally sensitive areas, such as national, provincial and regional parks, ecological reserves, marine protected areas, marine refuges, ecologically and biologically sensitive areas, old growth management areas, ungulate winter ranges, wetlands, estuaries, habitats of federally or provincially listed species at risk, provincially identified wildlife habitats and other identified sensitive areas identified through the EA process to date;

Detailed Maps

The purpose of this map is to illustrate the components of the project. One or more detailed maps should be included to show finer scale details of authorized project components. For a project that is geographically extensive, a series of detailed maps may be required.

Basic Requirements	Consult the following sections on basic requirements for all maps: • *Standard Map Elements and Attributes for All Maps*
Scale <1:2000	If needed, create a map series to cover the entire project area or increase the page size.
Base Mapping	Digital imagery is acceptable if it is sharp and informative.
Required Elements	1. Project maximum disturbance footprint and polygons which would contain groups of Project components rather than specific locations, unless requested to do so; 2. All waterbodies and their location 3. Local communities, international, provincial and territorial boundaries, where applicable 4. Parks and protected areas; legally protected or identified wildlife habitat 5. Clearly display specific areas where some or all project development is not permitted, for example, areas of environmental sensitivity such as a stream, wetland, or a buffered area to protect a cultural feature such as a petroglyph or sacred ceremonial place 6. Major existing infrastructure; proponent lands, tenures, properties, or leased lands; and adjacent land uses and any important environmental features

First Nations Map

The purpose of a First Nation interests map is to illustrate the exact location and extent of the study area

Basic Requirements	Consult the following sections on basic requirements for all maps: • *Standard Map Elements and Attributes for All Maps*
Scale	Use a midrange scale that allows inclusion of distinctive topographical or cultural features without compromising detail.
Base Mapping	Base mapping for First Nations map may use Topology Ortho photos or LiDAR imagery when available. If imagery is unclear, overly pixelated, or completely obscures the project area (unbroken forest/clouds), consider an informative alternative like DEM or DSM to illustrate base data such as elevation contours, water bodies, roads, or railways
Required Elements	1. Include and label all known communities, locations of interest, Indian Act reserve lands, lands subject to a Treaty, or other relevant agreements 2. Include all relevant administrative (cadastre, parks), project area, and development boundaries as scale allows. 3. An inset showing the project area location within an outline of the province of B.C. (show entire province or north/south half).

Valued Components Effects Assessment Maps

The purpose of the valued components maps is to illustrate the location and extent of both the local (LAA) and regional (RAA) valued component area in relation to natural setting characteristics.

Basic Requirements	Consult the following sections on basic requirements for all maps: • *Standard Map Elements and Attributes for All Maps*
Scale	Use a midrange scale that allows inclusion of distinctive natural setting characteristics without compromising detail.
Base Mapping	Base maps for the Valued Components Effects Assessment Maps may use Topology, Ortho photos or LiDAR imagery when available. If imagery is unclear, overly pixelated, or completely obscures the project area (unbroken forest/clouds), consider an informative alternative like DEM or DSM to illustrate base data such as elevation contours, water bodies, roads, or railways
Required Elements	1. Include and label natural setting characteristics, including coastal, foreshore, riparian, mountainous, watersheds, and agricultural land. 2. Include all relevant administrative (cadastre, parks), project area, and development boundaries as scale allows. 3. An inset showing the project area location within an outline of the province of B.C. (show entire province or north/south half).
Options	This data may be included on the detailed development map or the Indigenous Nation interest maps if it does not compromise clarity.

Cumulative Effects Maps

The purpose of a cumulative effects map is to illustrate the spatial and or temporal boundaries for assessing cumulative effects for each VC selected.

Basic Requirements	Consult the following sections on basic requirements for all maps: • *Standard Map Elements and Attributes for All Maps*
Scale	Use a midrange scale that allows inclusion of distinctive topographical or cultural features without compromising detail.
Base Mapping	Base mapping for the cumulative effects maps may use Topology, Ortho photos or LiDAR imagery when available. If imagery is unclear, overly pixelated, or completely obscures the project area (unbroken forest/clouds), consider an informative alternative like DEM or DSM to illustrate base data such as elevation contours, water bodies, roads, or railways.
Required Elements	1. Identify and label local governments administrative areas within which the proposed project is located 2. Project area, and development boundaries as scale allows. 3. An inset showing the project area location within an outline of the province of B.C. (show entire province or north/south half). 4. Important or sensitive community and natural places such as: municipal boundaries, parks, schools, hospitals, housing, water supplies, roads, railways, and protected and recreational areas identified in the Early engagement policy report