BRITISH COLUMBIA ENERGY REGULATOR

Application Management System (AMS) Spatial Data Submission Standards Manual

Version 1.31

December 2024

About the Regulator

The BC Energy Regulator (Regulator or BCER) is the single-window regulatory agency with responsibilities for regulating energy resource activities in British Columbia, including exploration, development, pipeline transportation and reclamation.

The Regulator's core roles include reviewing and assessing applications for industry activity, consulting with First Nations, ensuring industry complies with provincial legislation and cooperating with partner agencies. The public interest is protected by ensuring public safety, protecting the environment, conserving petroleum resources and ensuring equitable participation in production.

Vision, Mission and Values

Vision

A resilient energy future where B.C.'s energy resource activities are safe, environmentally leading and socially responsible.

Mission

We regulate the life cycle of energy resource activities in B.C., from site planning to restoration, ensuring activities are undertaken in a manner that:

Protects public safety and the environment

Supports reconciliation with Indigenous peoples and the transition to low-carbon energy

Conserves energy resources

Fosters a sound economy and social well-being

Values

Respect is our commitment to listen, accept and value diverse perspectives.

Integrity is our commitment to the principles of fairness, trust and accountability.

Transparency is our commitment to be open and provide clear information on decisions, operations and actions.

Innovation is our commitment to learn, adapt, act and grow.

Responsiveness is our commitment to listening and timely and meaningful action.

Table of Revisions

The Regulator is committed to the continuous improvement of its documentation. The table below highlights the revisions to this draft version of the Application Management System (AMS) Spatial Data Submission Standards Manual. Once published, revisions to the current documentation are highlighted in this section and are posted to the documentation section of the Regulator's website. For more information about the Regulator's documentation processes, visit the Documentation Section of the Regulator's website. For more information on the Application Management System, visit the AMS page of the Regulator's website. Stakeholders are invited to provide input or feedback on the Regulator's documentation to servicedesk@bc-er.ca.

Version Number	Posted Date	Effective Date	Chapter	Summary of Revision(s)
1.30	Sep.20,2024	Sep.20,2024	App.1.8 &1.9	Addition of AS_TYPE OSET for Offset to Appendix 1.8 and 1.9
1.31	December 19, 2024	January 1, 2025	Section 2.8 Various	Updated Section 2.8 to provide clarity regarding area discrepancy Updated references and associations related to ERAA

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Preface

About

The Application Management System (AMS) Spatial Data Submission Standards Manual is intended to be a reference document for energy resource companies and contractors, and is meant to provide an overview of the requirements and procedures for preparing the spatial data packages required by AMS to apply for an energy resource activity. The manual has been prepared to be as comprehensive as possible; however, it is not all encompassing and may not cover all situations. This manual is meant to be used in conjunction with the Oil and Gas Activity Application Manual.

One of the expected outcomes of the Regulator's AMS Spatial Data Submission Standards Manual is to ensure that clients assemble their spatial data in a consistent and accurate manner. By doing so will maximize the Regulator's ability to incorporate both business and spatial data in the most efficient and accurate means possible. All companies and contractors working on behalf of those companies must adhere to the following criteria for spatial data standards.

The Regulator's GIS systems are based on the ESRI ArcGIS suite of software and as a result the following standards outline how spatial submissions must be prepared in order to be incorporated without issue.

This document will be revised annually but may be updated periodically during the year as well. If there are any changes or updates, release notes will be sent out at that time. Where circumstances or scenarios arise and are not covered by this manual, please contact the Regulator.

Manual Structure

Beginning with general spatial data submission requirements, this manual guides the client through the preparation of data for submission of applications in AMS. The manual is then broken into two sections, Section 1 specifies the submission standards for *New Applications* and Section 2 specifies the submission standards for *Amendment Applications*. Each submission standards chapter within these sections follows the same structure: data structure, mandatory attributes and specific topology rules for each activity or land submission type.

Appendices and/or links to other documentation included in this manual can be referenced when compiling information required by the Regulator.

Manual Scope

This manual is limited in scope to the submission of spatial data in AMS for permits and authorizations issued under regulation or specified enactments.

Additional Guidance

As this Spatial Data Submission Standards manual is supplemental to the Oil and Gas Activity Application Manual, please refer back to it where needed. Throughout these two documents there are references to guides, forms, tables, and definitions to assist in compiling all required information.

Additional resources include:

- Glossary and acronym listing on the Regulator's website.
- Documentation and guidelines on the Regulator's website.
- Frequently asked questions on the Regulator's website.
- Advisories, bulletins, reports and directives on the Regulator's website.
- Regulations and Acts listed on the Regulator's website.

Company Administration & Account Information for Regulator Information Systems

A user account with the Regulator is required to access the Regulator's Online Services including AMS, KERMIT, and eSubmission. Follow the steps outlined on the Web Log On site to create a new account. It is recommended that a Company Administrator be assigned. Companies must then designate authorized individuals with a security role on behalf of a company. More information about creating a Company Administrator can be found in the Company Administration in KERMIT document.

Application Analysis Tool Access Security Role

The **"Application Analysis Tool Access"** security role has been created to allow authorized individuals the ability to plan oil & gas activities by uploading spatial data and generating a report summarizing the land impacts associated with the activities represented by the spatial submission. Those users granted the **Application Analysis Tool**

Access role will also be able to validate uploaded spatial data packages to ensure that they are without error and adhere to the spatial data submission standards outlined in this document. Spatial data uploaded by users with the **Application Analysis Tool Access** role is unique to the user who uploaded it; other users will not be able to see the shapefiles uploaded by that user. Once the spatial data has been validated, users with this role must send the shapefile package to an authorized individual who has the **Application** Security role in order to start an application. Once an application has been started all users who have authority under the energy resource operator will be able to see the application and spatial information.

Application Security Role

"Application" security role grants users the ability to submit applications and access to the Application Analysis Tool. It is not until a user, with the Application security role, starts an application in AMS that other users who also have the Application security role for the same company will be able to see the uploaded spatial data package and the application form contents.

It is the responsibility of energy resource operator to assign and administer security roles. Please refer to the Requirements for First Time Applicants section of the Oil and Gas Activity Application Manual for more information on other roles that can be assigned in the AMS. More information can also be referenced from the Kermit Company Administration how to document.

1.0 Application Analysis Tool

1.1 Application Analysis Tool

The application analysis tool gives users the ability to plan energy resource activities by allowing
applicants to upload spatial data prior to submitting an application to the Regulator. Based on the spatial data uploaded, applicants will use the web enabled spatial tool to navigate, relocate, and determine the information required for the proposed project. The application analysis tool, gives the user the ability to execute the following functions.

Upload Spatial Data

Users of the Application Analysis Tool will have the ability to upload shapefiles in point, line, or polygon geometry.

View Uploaded Data in Webmap

Users will have the ability to view uploaded shapefiles in an interactive webmap alongside Regulator and Provincial spatial datasets.

Generate Report to identify Land Impacts

Users will have the ability to run a Report for each geometry feature, the report will indicate any overlapping or conflicting interests that may be considered in prepping an application (i.e.: consultation and notification, First Nations, and impacted lands).

Download Shapefile Templates

Users can download the shapefile templates to ensure the shapefile meets the Regulator's standards.

Validate Uploaded data to Create Application

Once users have uploaded spatial packages that conform to Regulator standards, users can validate uploaded data to start an application within AMS. Validation will notify users if there is an issue with the uploaded spatial data package.

Create an Application

Once validated, users with the appropriate security role will have the ability to create an application.

2.0 Spatial Data Submission Preparation

2.1 Spatial Data Package

The applicant is required to assemble a spatial data package containing a series of shapefiles representing energy resource activities being applied for or being amended. These shapefiles are used to pre-populate spatially derived application requirements in the AMS system.

Permits and authorizations granted by the Regulator that require spatial data include:

- Permits under the Energy Resource Activities Act (ERAA), including well, pipeline, facilities, roads and geophysical programs along with any ERAA associated s activity authorizations under the Land Act.
- Authorizations under the Water Sustainability Act, including authorizations for changes in and about a stream and short-term water use.
- Authorizations related to pipelines regulated under the Canada Energy Regulator (CER) Act.
- Non-farm use of lands included in the Agriculture Land Reserve (ALR), under delegated authority under the Agriculture Land Commission Act.

In order to upload data into the AMS system, all shapefiles must be contained within a .zip file. The following chapters of the Spatial Data Submission Standards outline the shapefile requirements for the individual activity types under these permit and authorization types.

2.2 Shapefile Data Format

All spatial data must be submitted as an ESRI™ polygon, line or point feature and must conform to the shapefile spatial data format. These shapefile standards are outlined in the ESRI White Paper, ESRI Shapefile Technical Description.

2.3 Shapefile Templates

Spatial data for AMS must meet stringent data standards in order to be accepted by the system. Templates representing the mandatory requirements for the shapefiles with the

correct structure of each activity type are available for download within AMS and on the Application Management System webpage to support spatial submissions.

2.4 Shapefile Naming Convention

Generic name strings for both shapefiles and .zip files submission packages must only include alphanumeric characters (letters and numbers) and the underscore character to separate words. Name strings must not include spaces, periods, dashes or any other special characters.

Spatial Data Submission Package (.zip)
In addition to the generic file name string requirements there are no naming convention standards for the .zip file, however, the name will be visible in the list of uploaded packages for the applicant company. It is recommended that a logical name is used for the files to represent the content, especially if the applicant company and contractors working on their behalf will be referencing the status of the spatial package uploaded.

Shapefiles (.shp, .dbf, .shx)
The purpose of the naming convention for the shapefiles is to allow for the AMS to correctly and consistently unpack the spatial data and derive the appropriate application requirements. The naming convention format should include a general descriptor representing an applicant defined reference to the data contained in the shapefile such as a company file reference. This descriptor must be concatenated with an underscore ('_') and the appropriate 'type' which is used to delineate specific activities and authorizations as per Regulator standards. The full list of types is contained in the following chapters.

Example: '*71712_wp.shp' <clientreference_type.shp>*

2.5 Projection

Upon upload of the spatial data package .zip file to AMS, clients are required to select the applicable projection from the dropdown menu. All data must be spatially referenced to GCS North American 1983 and projected in one of the following:

Universal Transverse Mercator (UTM) Zone 9, 10, 11
Or
BC Albers Equal Area, with the parameters of:
- Central meridian: -126.0 (126:00:00 West longitude)
- First standard parallel: 50.0 (50:00:00 North latitude)
- Second standard parallel: 58.5 (58:30:00 North latitude)

Latitude of projection origin: 45.0 (45:00:00 North latitude)
False northing: 0.0
False easting: 1000000.0 (one million metres)

Note: Shapefile submissions must not include the .prj file, as this will cause an error in the validation of the uploaded .zip file.

2.6 Data Capture Methods

All spatial data prepared for submission of application spatial data to the Regulator must use one of the following acceptable data capture methods. It is understood that capture methods will vary depending on the application and activity types.

GPSD	*GPS - Differential*
GPSND	*GPS - Non Differential*
ORTHO	*Ortho Photography*
CGWC	*Coordinate Geometry With Control*
SNK	*Source not Known*

2.7 Data Integrity

When shapefiles uploaded into AMS are validated, they are tested for geometry errors that would prevent the data in the shapefile from being accepted into the Regulator's spatial database. If geometry errors are identified the validation will fail and the system will return an error to the applicant. An example of a geometry error could be a self-intersecting line. It is recommended that applicants use tools such as 'Check Geometry' and 'Repair Geometry' in the ESRI Desktop suite or 'Geometry Validator' within Feature Manipulation Engine (FME) on prepared shapefiles to ensure the success of upload validation.

Specific topology rules are outlined as part of the following chapters.

2.8 Area Discrepancy

The AMS system will be automatically populated with measurements of area and length based on the uploaded spatial data.

As referenced in the Data Capture Methods section, the source of the spatial data submitted to the Regulator can vary significantly and during the process of direct translation from one spatial format to another or one projection to another, it is common to see a discrepancy in those measurements. With this in mind, the Regulator will accept a tolerance for differences in area of 1% of the actual measurement referenced on the Construction Plan.

For example, if the application area is for 500ha, the acceptable discrepancy would be up to 5ha or more commonly an application area of 5ha.
For very large applications the discrepancy may be greater than 1%. In these cases, please provide as much information as possible in the application to inform the reviewer of potential discrepancy related issues.

2.9 Revisions

If the Regulator finds minor and/or major deficiencies in the application, the Regulator contacts the applicant to clarify details, make revisions and/or provide additional information. In the case that a need for revision of application information or spatial data is identified during this process, the applicant company must request in AMS that the application status be set to revision which will allow the applicant company or contractor working on their behalf upload the revised spatial data package or application information. Applicants can upload attachments into AMS for applications with a status of 'in Review,' without a status change to 'in Revision.'

3.0 Spatial Data Submissions for Land Authorizations

3.1 ERAA and CER Activities Requiring Land

There are a number of energy resource activities that require land. These applications for land are submitted to the Regulator as a polygon and typically represent the right of way for road and pipeline activities, the site on which wells and/or facilities can occur, or the extent representing an ERAA associated activity or a CER related ancillary. There are many concepts related to land that are essential to understand for the successful submission of the spatial data package through AMS. A high level description of important attributes is included here and additional information to support submission of land authorization data is included in following sections.

Activity Type – ACT_TYPE

Application area polygons for land submitted through AMS are defined by the application activity types which will be occurring on the piece of land.

- Pipeline application area (ACT_TYPE = PAA) – Pipeline right of way area in which the segments will exist
- Road application area (ACT_TYPE = RAA) – Road right of way in which the segments will exist
- Well and/or facility application area (ACT_TYPE = WFAA) - The site on which well or facility activities will exist

Area Type – AREA_TYPE

A mandatory attribute of land polygons submitted in AMS is the area type, which informs AMS on how the polygon will be processed.

- New (AREA_TYPE = N) - New land polygon, not yet permissioned
- Permissioned (AREA_TYPE = P) – Previously permissioned and unchanged land polygon, **only valid in new applications**
- Replacement (AREA_TYPE = R) – Modification of existing permissioned land polygon, **only valid in amendment applications**
- Addition (AREA_TYPE = A) – Additional area land polygon adjacent to permissioned land polygon, **only valid in new applications for well and/or facility areas**

Land Identifier - LAND_ID

Once submitted to the Regulator, all land polygons are assigned a unique Land Identifier (LAND_ID). Once assigned, the LAND_ID persists throughout the lifecycle of the land polygon and reference to this LAND_ID is required with any subsequent upload of the unique land polygon in AMS and/or eSubmission.

NOTE: There will be situations where the Regulator does not have land polygons for applications made to the Regulator prior to mandatory ePass spatial data submissions in 2006. If referencing land permitted pre-ePASS that does not exist in the Regulator permitted data, the LAND_ID of the polygon must be left blank. A manual review will be completed by BCER staff prior to the generation of a LAND_ID for that polygon.

LAND_ID's for all permitted land polygons can be retrieved via the AMS map Viewer, Regulator's Geospatial Services page, the DataBC Data Catalog and/or via the eSubmission Portal.

Activity Reference Number – ACT_REF_NR

There are scenarios where the applicant must also reference the unique identifier of the activity that is currently permitted on a land polygon. This attribute is used to validate that the status and ownership of the referenced land. The activity reference number (ACT_REF_NR) can be one of the following depending on the activity type:

Activity Identifier Name	Attribute Character Requirements	Example
Road Number	VARCHAR2 (5 CHAR)	01234
Pipeline Project Number	VARCHAR2 (9 CHAR)	000123456
Facility Identifier	VARCHAR2 (8 CHAR)	00000012
Well Authority Number	VARCHAR2 (5 CHAR)	12345
Associated and Related Ancillary Number	VARCHAR2 (8 CHAR)	00001234

Land Status – LAND_STAT

Each unique polygon representing land submitted through AMS must be split at changes between Crown (LAND_STAT = CRWN) and Private (LAND_STAT = PRIV) land ownership. The area of each polygon uploaded is used within AMS workflows to calculate total area on Crown and Private land, to determine forestry requirements, and to inform decision makers throughout their reviews.

NOTE: AMS application workflows display spatially derived fields that use the Integrated Cadastral Information Society (ICIS) Cadastre data to determine crown vs. private land. This is the data used by the Regulator in the review of applications, as it is the best available spatial representation of land status; however, it is the responsibility of the client to supply the correct information. If the land status differs from the ICIS data the client should include a justification/explanation for review staff.

Group Identifier – GROUP_ID

There will be scenarios where polygons representing land areas for well and/or facility areas cross crown and private land but should be treated as a single site. When these scenarios occur the applicant must specify that the polygons should reviewed as one site using the GROUP_ID.

NOTE: The GROUP_ID is ONLY valid in new applications for Well and/or Facility areas. The GROUP_ID must be left blank for all other land polygon submissions

Area Activity Identifier for Additional Land - AREAACTID

In situations where an application for a new well and/or facility location occurs on an existing site, but some additional land is required, the applicant must specify that the additional land area is required for that new well and/or facility. This is done by entering the attribute "ID" of the new activity location being applied for in the AREAACTID attribute.

This would be used when a new well application is being applied for but additional (land) area is required. Rather than amending the original area to include additional area; the permit holder may choose to submit the new well application with additional area using this activity identifier

NOTE: The AREAACTID is ONLY valid in new applications for Well and/or Facility areas. The AREAACTID must be left blank for all other land polygon submissions

3.2 ERAA Associated Activities and CER Related Ancillaries

ERAA Associated Activities and CER Related Ancillaries are unique as they are activities that are represented by a polygon area. Land authorization concepts are consistent with those outlined above and further information is available in the following sections. Please refer to the land authorization section on these concepts and to the Oil and Gas Activity Application manual for more information.

3.3 Construction Corridors

Construction Corridors will be submitted as its own shapefile within the spatial submission package. Construction corridors are additional mapped areas around the proposed activities providing the applicant or permit with the flexibility to modify the proposed ERAA associated activities or CER ancillaries without having to submit an amendment. Submission standards are outlined below and please see the Oil and Gas Activity Application manual for more information.

3.4 Ministry of Transportation and Infrastructure Right of Way (MOTI)

The submission of a MOTI polygon in AMS is mandatory when an applicant requires new cut within a MOTI right-of-way. Applicants are required to submit polygons representing the area in which their proposed activity falls within the MOTI right of way (constructed or not constructed). The Regulator will not issue land tenure over MOTI right of ways; however, AMS requires this information for area calculations. Please see the Oil and Gas Activity Application Manual for more information. Submission standards are outlined in Appendix 1.0.

NOTE: If the application does not require new cut within a MOTI right-of-way in the application, it is not mandatory to include the MoTI polygon.

4.0 New ERAA and CER Applications

4.1 Spatial data for New Applications

Considerations for Preparing Spatial Data in Applications:

- Ensure you have collected all of the information for what the application is for, with this information in advance it will be easier to prepare the spatial packages
- Ensure that you have downloaded the most current shapefile templates
- Use the AMS Analysis Tool to review what is happening in and around the proposed application operating area, identify any business keys such as Land ID, or activity reference number that may be required in your submission

Additional Considerations for New Applications:

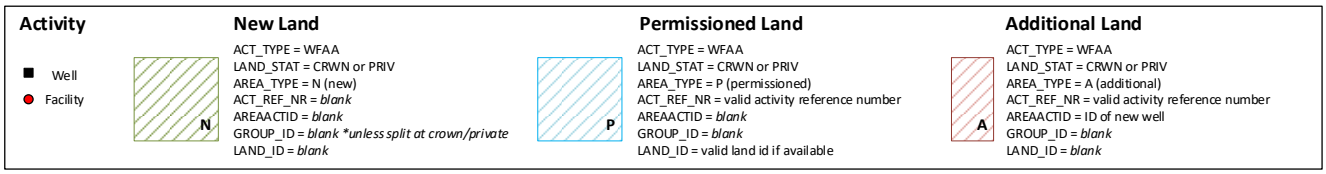
- All land polygons must be uploaded in the initial spatial upload package with the exception being additional ERAA associated activities and CER related ancillaries can be added after the initial upload if required
- All well locations, facility locations, road segments must be uploaded in the initial spatial upload package
- All pipeline segments should be uploaded in the initial spatial upload package but there is the option to upload these later in the application preparation
- Pipeline installation locations can be uploaded with the initial spatial upload package or later in the application preparation
- Application areas must be split at changes between crown and private land

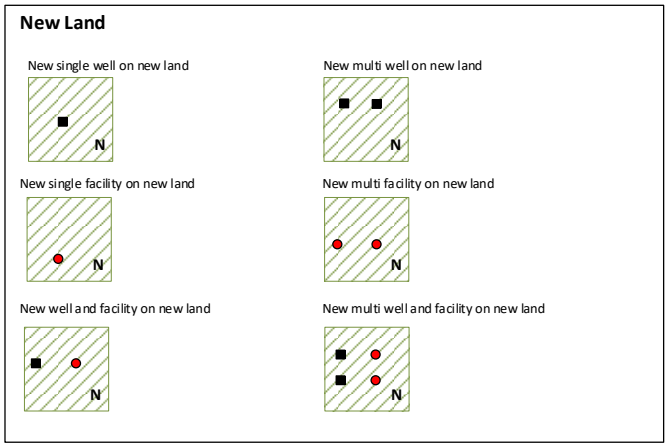
4.2 New Application Spatial Validations and Scenarios - Well and/or Facility

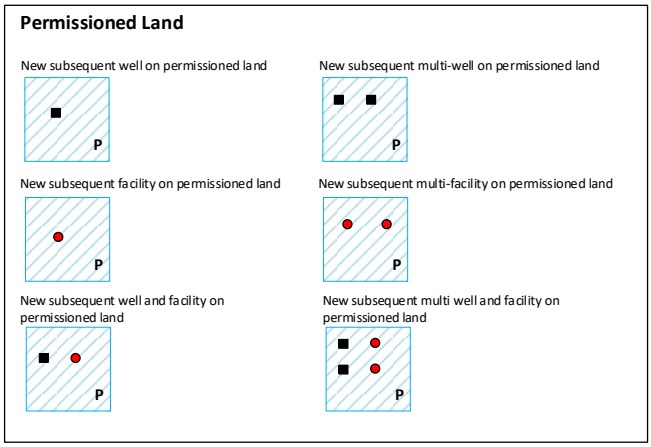
Validations

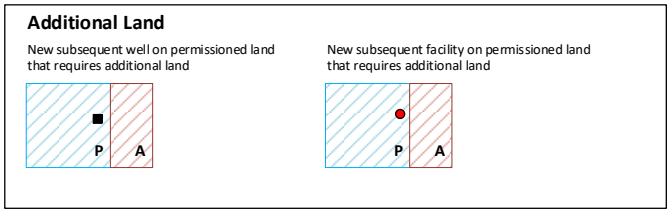
- All new well and/or facility locations must be uploaded within a land polygon
- Activity type must indicate well and/or facility application area (ACT_TYPE = WFAA)
- Area type must indicate new, permissioned, or additional (AREA_TYPE = N, P or A)
- Well and/or facility application area polygons and activity locations must not overlap with other application area polygons or activity locations in the same application or pending applications with the exception of pipelines
- Uploaded land polygons must not be multi-part
- Well and/or facility location points must not intersect with another well and/or facility location point

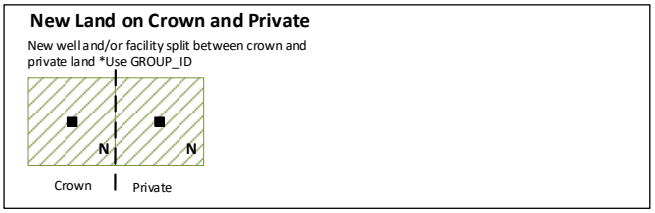
Land Scenarios











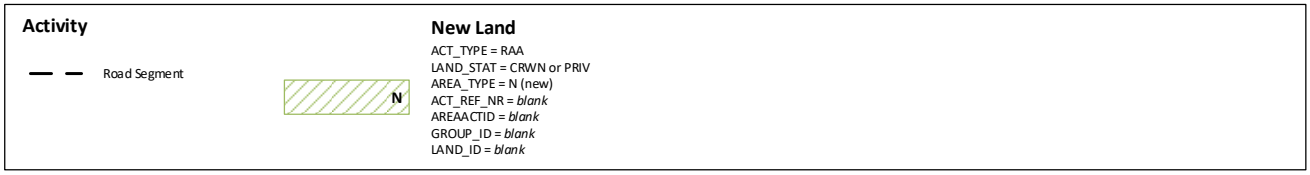
4.3 New Application Spatial Validations and Scenarios - Road

Validations

- Each unique road segment must be contained within a unique road right of way polygon
- Road application area polygons and segment locations must not overlap with other application area polygons or activity locations in the same application or pending applications with the exception of pipelines and geophysical lines
- ERAA road segments and right of way application areas must be split at changes in land status of crown and private
- CER road segments and right of way application areas can only be submitted for roads crown land
- Road segment numbers must be unique

- Uploaded land polygons must not be multi-part
- Road segment lines must be single part and not self-intersect or self-overlap

Land Scenarios

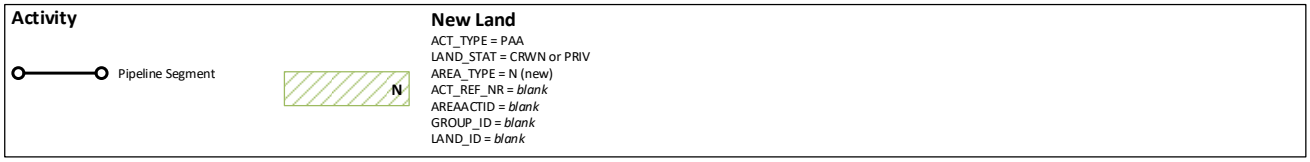


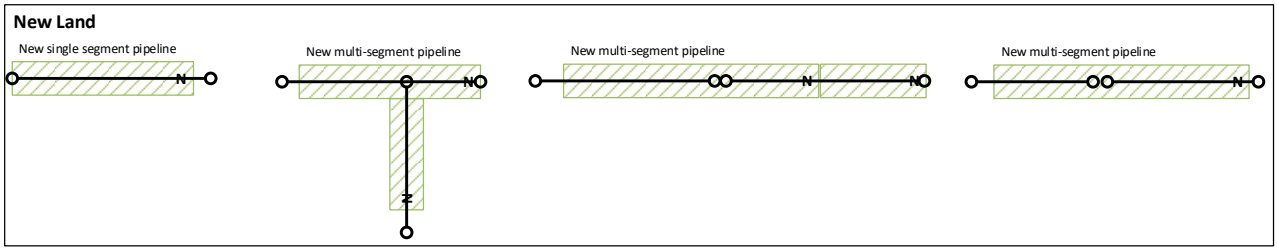
4.4 New Application Spatial Validations and Scenarios - Pipeline

Validations

- Pipeline segments must intersect with but DO NOT need to be contained within with a pipeline right of way application area polygon
- Pipeline application area polygons and segment locations must not overlap with other application area polygons or activity locations in the same application with the exception of geophysical lines and roads
- Pipeline application area polygons must be split at changes in land status from crown to private but pipeline segments DO NOT need to be split at changes in land status from crown to private
- Pipeline segment numbers must be unique
- Uploaded land polygons must not be multi-part
- Pipeline segment lines must be single part and not self-intersect or self-overlap

Land Scenarios





4.5 New Application Spatial Validations and Scenarios - ERAA Associated Activity or CER Related Ancillary

Validations

- Each ERAA Associated Activity and CER Related Ancillary polygon will be assigned a unique ERAA Associated Activity and CER Related Ancillary number
- ERAA Associated Activities must be split at changes in land status from crown to private land
- CER Related Ancillaries can only be submitted for ancillaries on crown land
- ERAA Associated Activities and CER Related Ancillaries must not overlap with other application area polygons or activity locations with the exception of geophysical lines and pipelines
- Uploaded land polygon must not be multi-part

Land Scenarios

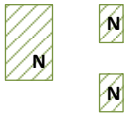
Activity/New Land

AS_TYPE = valid associated/ancillary type
LAND_STAT = CRWN or PRIV
AREA_TYPE = N (new)
ACT_REF_NR = *blank*
GROUP_ID = *blank*
LAND_ID = *blank*

New Land

New single associated or ancillary activity on new land

New multi associated or ancillary activity on new land



5.0 Amendment Applications

5.1 Spatial data for Amendment Applications

Considerations for Preparing Spatial Data in Applications:

- Ensure you have collected all of the information for what the application is for, with this information in advance it will be easier to prepare the spatial packages
- Ensure that you have downloaded the most current shapefile templates
- Use the AMS Analysis Tool to review what is happening in and around the proposed application operating area, identify any business keys such as Land ID, or activity reference number that may be required in your submission

Additional Considerations for Amendment Applications:

- AMS amendment application workflow allows:
    - The **modification of existing activities** (and associated land) for permitted wells, facilities, pipelines, and roads, which includes the addition of road and/or pipeline segments.
    - The **addition of new activities** including short term water use, changes in and about a stream and/or ERAA associated activities or CER related ancillaries
- In Amendment Applications there is the option there is the option to do a land only amendment, a technical only amendment or a land and technical amendment
- Depending on the amendment type (land, technical, land and technical, or addition of activities) spatial data packages can be uploaded at various stages in the application workflow including: on the initial spatial upload page, on the individual activity page (update location), or on the application overview page (add activities)
- The addition of ERAA activities (wells, facilities, roads, or pipeline projects) to an existing ERAA permit is not accepted
- The addition of CER activities (pipeline projects or roads) to an existing CER permit is not accepted

Land Only Amendment

- Applicants must only upload spatial data for the land that they are going to amend.
- Permissioned land is no longer accepted in amendment applications
- Modifications to permitted road right of way polygons must also include an updated road segment line
- Application areas must be split at changes between crown and private land

- All land polygons representing modified areas must be uploaded in the initial upload package

Technical Only Amendment

- If technical only amendment for an activity is selected an initial upload spatial data package is not required
- Depending on the scope of the technical amendment spatial data may or may not be uploaded into the application
- If the technical amendment requires an update to an activity location this can be done on the individual activity pages using the update location function
    - A technical amendment can be done to move the point location of a facility or in certain circumstances a well
    - A technical amendment can be done to amend the location of a short term water use or changes in about a stream location
    - A technical only amendment can be done to split a pipeline segment
    - A technical only amendment can be done to amend an existing location or add additional installation locations to a pipeline
    - A technical only amendment can be done to add an additional pipeline segment
    - Client must ensure that technical amendments do not require changes to the land and if so a land and technical amendment application is done

Land and Technical Amendment

- Combination of the above validations must occur depending on the amendment type selected for the modifications of each activity

Addition of New Activities

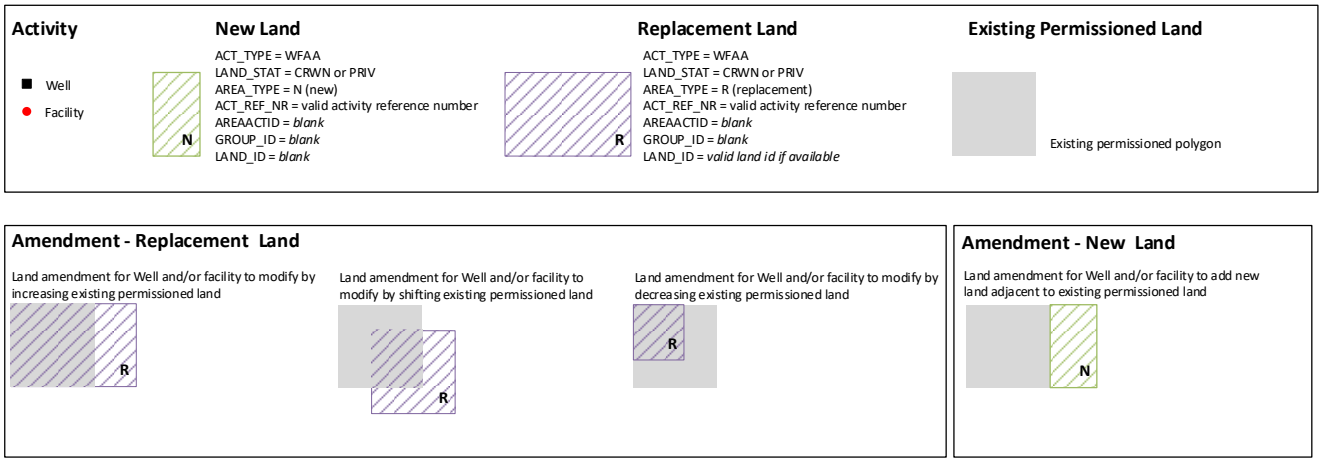
- Can only select to add short term water use, changes in and about a stream and/or ERAA associated activities or CER related ancillaries to an existing permit
- All new short term water use, changes in and about a stream and/or ERAA associated activities or CER related ancillaries must be uploaded in the initial spatial upload package, and additional activities can then be added later in the application preparation if required

5.2 Amendment Spatial Validations and Scenarios - Well and/or Facility

Validations

- Modifications to the permitted land area for wells and facilities are submitted using a *replacement* polygon for the entire area or adding a *new* polygon for the additional area only.
- All polygons referenced as *replacement* or *new* must include a valid ACTIVITY_REFERENCE_NUMBER
- Polygons referenced as *replacement* must include the correct LAND_ID if available. *New* polygons will be assigned a LAND_ID upon submission
- Areas referenced as *Permissioned* in the spatial data will no longer be accepted via an amendment

Land Scenarios



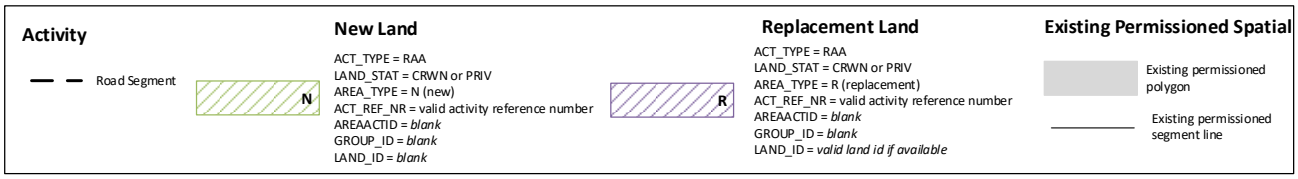
5.3 Amendment Spatial Validations and Scenarios - Road

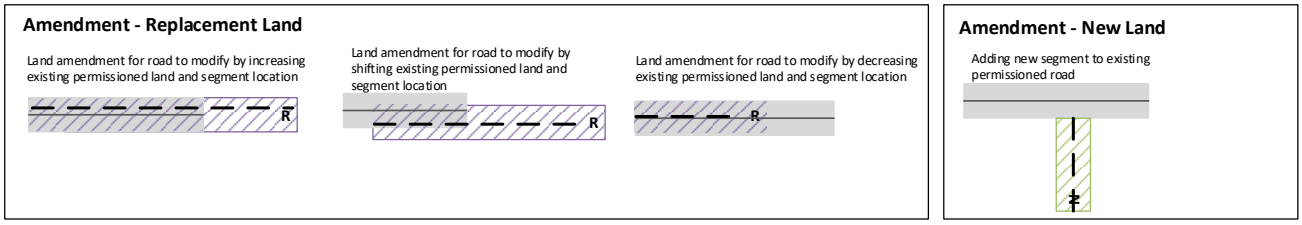
Validations

- Each unique road segment must be contained within a unique road right of way polygon.
- Modifications to a permitted road segment are submitted using a *replacement* polygon for the entire segment area and must include an updated segment line.
- To add a new segment, an applicant must submit a n*ew* polygon and include a new segment line.

- All polygons referenced as r*eplacement* or *new* must include a valid ACTIVITY_REFERENCE_NUMBER.
- Areas referenced as *replacement* must also include the correct LAND_ID if available. *New* areas will be assigned a LAND_ID upon submission.
- Areas referenced as *permissioned* in the spatial data will no longer be accepted via an amendment.

Land Scenarios



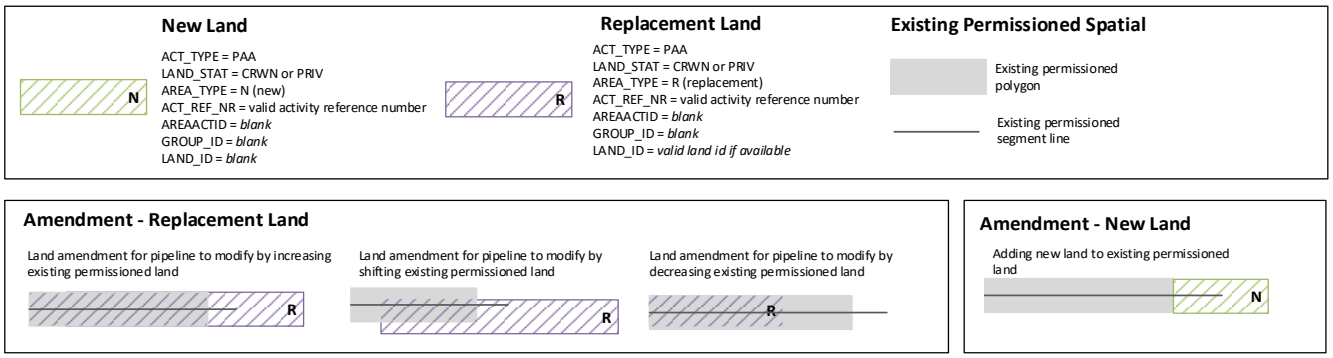


5.4 Amendment Spatial Validations and Scenarios - Pipeline

Validations

- Modifications to the permitted land area for wells and facilities are submitted using a *replacement* polygon for the entire area or adding a *new* polygon for the additional area only.
- All polygons referenced as r*eplacement* or n*ew* must include a valid ACTIVITY_REFERENCE_NUMBER.
- Polygons referenced as r*eplacement* must include the correct LAND_ID if available. *New* polygons will be assigned a LAND_ID upon submission.
- Areas referenced as *permissioned* in the spatial data will no longer be accepted via an amendment.

Land Scenarios

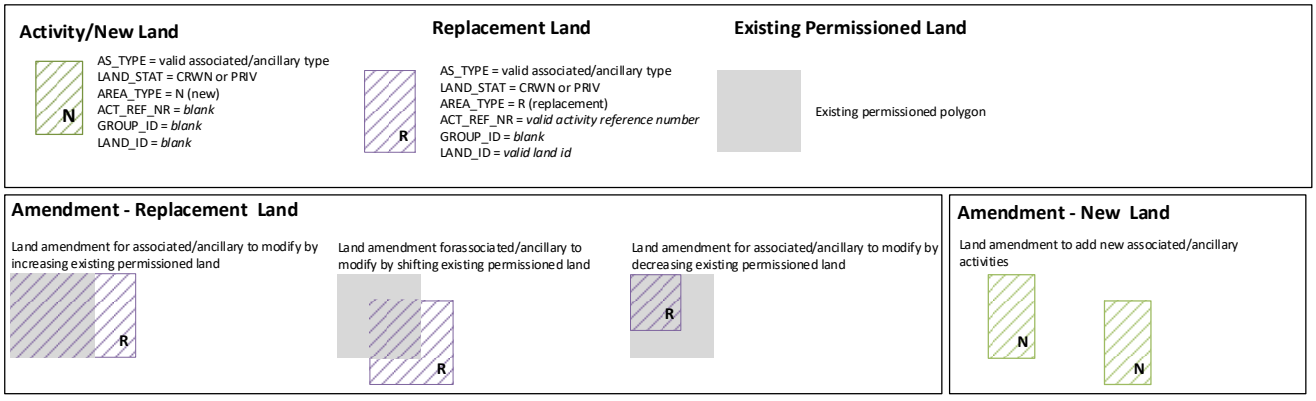


5.5 Amendment Spatial Validations and Scenarios - ERAA Associated Activities and CER Related Ancillaries

Validations

- Modifications to permitted associated activities or CER ancillaries must use a *replacement* polygon for the entire area. The *replacement* polygon must include the correct ACTIVITY_REFERENCE_NUMBER and LAND_ID
- All associated activities or CER ancillaries submitted as *new* (AREA_TYPE = N) in an amendment will be treated as new activities
- Areas referenced as *permissioned* in the spatial data will no longer be accepted via an amendment

Scenarios



6.0 Forest Act Applications

6.1 Spatial data for Forest Act Applications

Considerations for Preparing Spatial Data in Applications:

- Forest act applications are amendments to existing ERAA and CER permits that a require new cutting permit(s) or new cut on existing cutting permit(s), please see the Oil and Gas Activity Application manual for more information.
- The upload of Ministry of Transportation and Infrastructure (MOTI) polygons are the only spatial data accepted in this application type where new cut is required within MOTI

7.0 Agricultural Land Reserve (ALR) Assessment Applications

7.1 Spatial data for ALR Assessment Applications

Considerations for Preparing Spatial Data in Applications:

- ALR Assessment applications are required where the proponent plans to use private land within the ALR for the purpose of an ERAA associated activity and the application is being made separately from an ERAA application. Please see the Oil and Gas Activity Application manual for more information.
- ALR assessment areas are not issued a permit, therefore a proponent cannot amend an ALR assessment area
- Applicants must submit a polygon(s) representing the area within the ALR on private land that they are applying for following the standards outlined in Appendix 1.0.

Validations

- ALR assessment areas are only submitted on private land (where LAND_TYPE = PRIV)
- ALR assessment areas will always be new areas (AREA_TYPE = N)
- Activity Reference Number, Group Id, and Land ID (ACT_REF_NR, GROUP_ID and LAND_ID) must always be left blank

8.0 Historical Applications

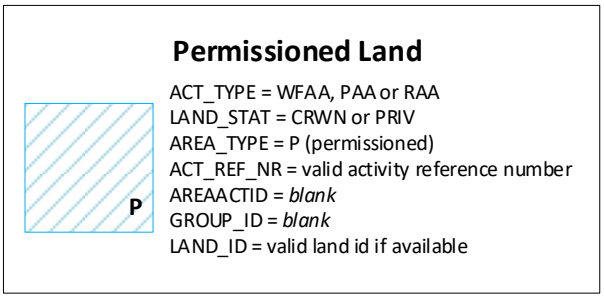
8.1 Spatial Data for Historical Applications

Considerations for Preparing Spatial Data in Applications:

- Ensure you have collected all of the information for what the application is for, with this information in advance it will be easier to prepare the spatial packages
- Ensure that you have downloaded the most current shapefile templates
- Use the AMS Analysis Tool to review what is happening in and around the proposed application operating area, identify any business keys such as Land ID, or activity reference number that may be required in your submission

Additional Considerations for Historical Applications:

- *** Note: The Regulator recommends all historical applications include both land and technical information**
- Historical applications are only valid for Facilities, Pipelines and Roads
- Depending on the historical application type (land, technical, land and technical) spatial data packages can be uploaded at various stages in the application workflow including: on the initial spatial upload page or on the individual activity page (update location)
- Spatial data is only uploaded for the specified historical permit activity, the addition of ERAA or CER activities is not allowed
- All land data must be uploaded as AREA_TYPE = P (*permissioned)* and include a valid ACTIVITY_REFERENCE_NUMBER
- Areas referenced as *permissioned* must also include the correct LAND_ID if available



Historical Pipeline Application Validation:

- The Regulator recommends all historical applications include both land (pipeline right of way - polygon) and technical (pipeline segment - line) information

Historical Facility Application Validation:

- The Regulator recommends all historical applications include both land (facility area - polygon) and technical (facility location - point) information

Historical Road Application Validation:

- Each unique road segment must be contained within a unique road right of way polygon and uploaded on the initial spatial upload page
- Upload package must contain all permitted road segments referencing the correct segment number and any missing or inaccurate segments to be added
- If changes in and about a stream (CIAS) exist in the permit, they must be uploaded with the spatial package, missing or inaccurate changes in and about a stream may be added

Appendix 1.0: Spatial Data Submission Standards

1.1 Application Areas

Feature Name: Application Area

Description: Polygon features defining the spatial extent of New, Permissioned, Additional or Replacement land required for road, well and/or facility or pipeline activity within an application. Please refer to the section on Land Authorizations and the New and Amendment Application sections for more information. Mandatory if present.

Geometry: Polygon

File Naming Convention: (*_aa.*)

Field Name	Type	Allowable Values	Value Description	Mandatory/Optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
ACT_TYPE	Text (4)	PAA	Pipeline Application Area	Mandatory	Indicates the type of energy resource activity that defines the polygon area.
		RAA	Road Application Area		
		WFAA	Well and/or facility Application Area		
LAND_STAT	Text (4)	CRWN	Crown	Mandatory	Indicates whether the application area is on Crown, or private land.
		PRIV	Private		
AREA_TYPE	Text (1)	A	Additional Land	Mandatory	Indicates whether the application area has been previously authorized - Permissioned (P), or requires authorization -
		N	New Land		

Field Name	Type	Allowable Values	Value Description	Mandatory/Optional	Definition
		P	Permissioned Land		New (N), or requires additional land area - Additional (A) **applicable only for well and/or facility areas**, or if the application area is shifting and/or reduced – Replacement (R) which can only be done through an amendment.
		R	Replacement Land		
ACT_REF_NR	Text(9)	A text string of length 9, or less	Activity Reference Number	Mandatory for New Application if AREA_TYPE = P, or R, or A. Mandatory for Amendment Application if AREA_TYPE = P, R or N	Indicates the activity number to reference a previously permitted activity.
AREAACTID	Short Integer (3)	1-NNN	Area Activity Identifier	Mandatory (if AREA_TYPE= A)	Indicates the activity ID that requires the additional land area. **Must be left blank where AREA_TYPE = N, P or R.**
GROUP_ID	Short Integer (2)	1-NN	Grouping Identifier	Optional	Indicates the well and/or facility areas that should be grouped for review.
LAND_ID	LongInt (9)	Any number	Land Identifier	Mandatory if available where AREA_TYPE = P or R	Indicates the unique land identifier of a previously permitted polygon
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		

Field Name	Type	Allowable Values	Value Description	Mandatory/Optional	Definition
		SNK	Source not Known		

1.2 Well Surface Hole Locations

Feature Name: Well Point

Description: Capture information on well surface hole point features. Mandatory if present.

Geometry: Point

File Naming Convention: (*_wp.*)

Field Name	Type	Allowable Values	Value Description	Mandatory/Optional	Definition
FID	Object ID	System Defined		Mandatory	Unique system generated identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	System generated field containing the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
WELL_ID	Short Integer (3)	1-NNN	Well identifier	Mandatory	A user entered unique identifier assigned by the applicant to identify each unique well surface hole location being applied for.
WELL_IND	Text (1)	P	Primary	Mandatory	Indicate if the well is a primary or subsequent.
		S	Subsequent		
RE_ENTRY	Text (1)	N	No	Mandatory (only in new applications)	Indicates if re-entry is required on a new well application. **This field MUST be left blank for all well surface hole locations**
		Y	Yes		

					submitted in an amendment.
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.3 Facility Locations

Feature Name: Facility Location (*_fl.*)

Description: Capture information on facility point features. Mandatory if present.

Geometry: Point

File Naming Convention: (*_fl.*)

Item	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
FACILITYID	Short Integer (3)	1-NNN	Facility Identifier	Mandatory	A user entered unique identifier assigned by the applicant to identify each unique facility location being applied for.
FAC_TYPE	Text (4)	AMM	Ammonia Manufacturing	Mandatory	Indicate the type of facility.
		B	Battery Site		
		B2	Processing Battery		
		CAR	Carbon Dioxide		
		CD	Compressor Dehydrator		
		CS	Compressor Station		
		DS	Disposal Station		
		GC	Gas Conversion		

Item	Type	Allowable Values	Value Description	Validation	Definition
		GD	Gas Dehydrator		
		GP	Gas Processing Plant		
		HYD	Hydrogen Manufacturing		
		IS	Injection Station		
		LNG	LNG Plant		
		MET	Methanol Manufacturing		
		OM	Oil Meter		
		PR	Petroleum Refinery		
		SB	Satellite Battery		
		SM	Sales Meter		
		TT	Tank Terminal		
		WF	Well Facility		
		WH	Water Hub		
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.4 Pipe Centre-Lines

Feature Name: Pipe Centre-lines

Description: Capture information on pipe center-line features. Mandatory if present.

Geometry: Line

File Naming Convention: (*_pl.*)

Item	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
SEGMENT_ID	Short Integer (3)	1 - NNN	Segment identifier	Mandatory	User entered unique pipeline segment identifier. Must be unique within a project, numerical ordered from 001
PHYS_LEN	Double (10,2)	Any Number	Physical Length	Mandatory	Physical length of the pipeline segment in meters.
LINE_TYPE	Text (4)	DI	Distribution	Mandatory	Indicate the pipeline type.
		FL	Flow		
		FG	Fuel Gas		
		GA	Gathering		
		IN	Injection		
		INST	Instrumentation		
		IM	Intermediate		
		SWB	Single Well Battery		
		TR	Transmission		
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.5 Pipeline Installations

Feature Name: Pipeline Installations

Description: Capture information on pipeline installation point features. Mandatory if present.

Geometry: Point

File Name Convention: (*_pin.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
INSTL_NUM	Short Integer (3)	1 – NNN	Installation Number	Mandatory – Value must be '0' for new installations. To amend an existing installation, INSTL_NUM must reference a valid Installation Number tied to the pipeline segment.	User entered unique pipeline installation identifier.
INSTL_TYPE	Text (4)	FLAR	Flaring	Mandatory	Indicate the installation type.
		FARM	Farm Taps		
		GENE	Generator		
		LNHT	Line Heater		
		PUMP	Pump		
		REGU	Regulator		
		RISE	Riser		
		TANK	Storage Vessel/Tank		
		VALV	Valve		
SEGMENT_ID	Short Integer (3)	1 – NNN	Segment Identifier	Mandatory	Indicate the associated segment number for the installation.

SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.6 Road Centre-Lines

Feature Name: Road Centre-lines

Description: Capture information on road center-line features. Mandatory if present.

Geometry: Line

File Naming Convention: (*_rl.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
SEGMENT_ID	Short Integer (3)	1 - NNN	Segment Identifier	Mandatory – must be unique within a project, numerical ordered from 001 except in the case of amendments where individual segments can be updated.	User entered unique road segment identifier.
ROW_WIDTH	Float (6,2)	Any number	*Should be road segment width (ROAD_WIDTH)	Mandatory	Width of road segment. **NOTE: Attribute should be ROAD_WIDTH, will be updated with subsequent enhancement release.
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.7 Geophysical Lines

Feature Name: Geophysical Lines

Description: Capture information on geophysical seismic line features. Mandatory if present.

Geometry: Line

File Naming Convention: (*_gl.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
LINE_TYPE	Text (6)	COMBO	Combination	Optional – indicate the line type	Describes the purpose of geophysical line.
		NONE	No Source/Receiver		
		REC	Receiver		
		SOURCE	Source		
CUT_TYPE	Text (5)	ECC	Existing Cat Cut	Mandatory	Describes the GAFA line type.
		EHC	Existing Hand Cut		
		EMC	Existing Mulcher Cut		
		EPO	Existing Push Out		
		GRAV	Gravity/Aeromagnetic		
		NCC	New Cat Cut		
		NCPO	New Cut Push Out		
		NHC	New Hand Cut		
		NMC	New Mulcher Cut		
LINE_WIDTH	Float (6, 2)	Any Number	Line Width	Mandatory	Width of the seismic line in meters.
LAND_STAT	Text (4)	CRWN	Crown	Mandatory	Indicates whether the application is on Crown, or private.
		PRIV	Private		
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
		SNK	Source not Known		

1.8 ERAA Associated Activity

Feature Name: Associated Activity

Description: Capture information on ERAA associated activity. Please see the Land Authorizations section for more information. Mandatory if present.

Geometry: Polygon

File Naming Convention: (*_anc.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
AS_TYPE	Text (4)	ACCS	Access	Mandatory	Describes the purpose of a feature.
		AGRO	Aggregate Operations / Borrow Pit		
		AGWL	Above Ground Fresh Water Line		
		AIR	Air Strip		
		CAMP	Campsite		
		COMS	Communication Site		
		CPAB	Cathodic Protection / Anode Bed		
		DECK	Deck Site		
		FWS	Fresh Water Storage Site		
		GATE	Gate Monitoring		
		HELI	Helipad		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
		INV	Investigative Use - General		
		INVW	Investigative Use - Water Well Testing		
		MONS	Monitoring Site		
		OSET	Offset		
		POWR	Powerline		
		REST	Restoration		
		SREM	Site Remediation		
		STAR	Staging Area		
		STOR	Storage Area		
		SUMP	Sump		
		WASD	Water Source Dugout		
		WSPC	Workspace		
LAND_STAT	Text (4)	CRWN	Crown	Mandatory	Indicates whether the application is on Crown, or private.
		PRIV	Private		
AREA_TYPE	Text (1)	N	New Land	Mandatory	Indicates whether the application area has been previously authorized - Permissioned (P), or requires authorization - New (N) or if the application area is shifting and/or reduced – Replacement (R) which can only be done through an amendment.
		R	Replacement		
ACT_REF_NR	Text(9)	A text string of length 9, or less	Activity Reference Number	Mandatory (if Area_Type = R)	Indicates the activity number to reference a previously permitted activity. **Must be left blank if AREA_TYPE = N.**
GROUP_ID	Short Integer (2)	1-NN	Grouping Identifier	Must be NULL	Must be left blank for associated and

Field Name	Type	Allowable Values	Value Description	Validation	Definition
					ancillary application areas
LAND_ID	LongInt (9)	Any number	Land Identifier	Mandatory if available where AREA_TYPE = R	Indicates the unique land identifier of a previously permitted polygon where AREA_TYPE = R.
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.9 CER Related Ancillary

Feature Name: CER Related Ancillary

Description: Capture information on CER related ancillary features. Mandatory if present.

Geometry: Polygon

File Naming Convention: (*_nanc.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
AS_TYPE	Text (4)	ACCS	Access	Mandatory	Describes the purpose of a feature.
		AGRO	Aggregate Operations / Borrow Pit		
		AGWL	Above Ground Fresh Water Line		
		AIR	Air Strip		
		CAMP	Campsite		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
		COMS	Communication Site		
		CPAB	Cathodic Protection / Anode Bed		
		DECK	Deck Site		
		FWS	Fresh Water Storage Site		
		GATE	Gate Monitoring		
		HELI	Helipad		
		INV	Investigative Use - General		
		MONS	Monitoring Site		
		OSET	Offset		
		CERF	CER – Facility Provincial Authorization		
		POWR	Powerline		
		SREM	Site Remediation		
		STAR	Staging Area		
		STOR	Storage Area		
		SUMP	Sump		
		WSPC	Workspace		
LAND_STAT	Text (4)	CRWN	Crown	Mandatory	Indicates whether the land status of the application **CER related ancillaries are only submitted for crown land.**
AREA_TYPE	Text (1)	N	New Land	Mandatory	Indicates whether the application area requires authorization - New (N) or if the application area is shifting and/or reduced – Replacement (R) which can only be
		R	Replacement		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
					done through an amendment.
ACT_REF_NR	Text(9)	A text string of length 9, or less	Activity Reference Number	Mandatory (if Area_Type = R)	Indicates the activity number to reference a previously permitted activity. **Must be left blank if AREA_TYPE = N**.
GROUP_ID	Short Integer (2)	1-NN	Grouping Identifier	Must be NULL	Must be left blank for associated and ancillary application areas
LAND_ID	LongInt (9)	Any number	Land Identifier	Mandatory if available where AREA_TYPE = R	Indicates the unique land identifier of a previously permitted polygon where AREA_TYPE = R.
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.10 Short Term Water Use – Point of Diversion

Feature Name: Short Term Water Use POD

Description: Capture information on short term water use points of diversion features. Mandatory if present.

Geometry: Point

File Naming Convention: (*_pod.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
WD_TYPE	Text (4)	LKPD	Lake/Pond	Mandatory	Indicates the withdrawal type.
		WSD	Water Source Dugout		
		STR	Stream/River		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
LP_NAME	Text (50)	Any text	Lake/Pond Name	Mandatory if WD_TYPE = LKPD	Describes the lake/pond name
LP_DEPTH	Float (5,2)	Any Number	Lake/Pond Depth	Mandatory if WD_TYPE = LKPD	Describes the lake/pond average depth (m)
LP_SA5_IND	Text (1)	N	No	Mandatory if WD_TYPE = LKPD	Indicates whether the surface area for the lake/pond is less than 5 hectares.
		Y	Yes		
LP_SA	Float (9,2)	Any Number	Lake/Pond Surface Area	Mandatory if WD_TYPE = LKPD	Describes the surface area for all lakes/ponds (ha).
LP_VOL_DAY	Double (9,2)	Any Number	Lake/Pond Volume per Day	Mandatory if WD_TYPE = LKPD	Describes the proposed volume (m3) of water withdrawal per day
LP_APP_VOL	Long Integer (7)	Any number	Lake/Pond Total Volume	Mandatory if WD_TYPE = LKPD	Describes the proposed total volume (m3) of water withdrawal.
LP_PURPOSE	Text (4)	CAMP	Industrial: Work Camp	Mandatory if WD_TYPE = LKPD	Describes the purpose of the lake/pond.
		COOL	Industrial: Cooling		
		FIRE	Industrial: Fire Suppression		
		FRAC	Oil & Gas Purpose: Hydraulic Fracturing		
		OGPR	Oil & Gas Purpose: Other		
		OINJ	Oil & Gas Purpose: Oil Field Injection		
		PRST	Industrial: Pressure Testing		
		ROAD	Industrial: Road Maintenance		
		STOR	Storage Purpose		
		WORK	Waterworks Purpose		
		WELL	Oil & Gas Purpose: Well Drilling		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
LP_S26_IND	Text (1)	N	No	Mandatory if WD_TYPE = LKPD	Indicates if Section 26 is required for the lake/pond.
		Y	Yes		
SR_DATE	Date	Any date	Stream/River Measurement Date	Mandatory if WD_TYPE = STR	Describes the measurement date that was taken for the stream/river.
SR_NAME	Text (50)	Any text	Stream/River Name	Mandatory if WD_TYPE = STR	Describes the stream/river name.
SR_WIDTH	Float (5,1)	Any number	Stream/River Width	Mandatory if WD_TYPE = STR	Describes the stream/river wetted width (m).
SR_DEPTH	Float (5,2)	Any number	Stream/River Depth	Mandatory if WD_TYPE = STR	Describes the stream/river average depth (m).
SR_FLOW	Float (7,3)	Any number	Stream/River Flow	Mandatory if WD_TYPE = STR	Describes the stream/river velocity (flow m3/s).
SR_VOL_DAY	Double (9,2)	Any Number	Stream/River proposed Volume per day	Mandatory if WD_TYPE = STR	Describes the proposed volume (m3) of water withdrawal per day.
SR_TTL_VOL	Long Integer (7)	Any number	Stream/River total proposed volume	Mandatory if WD_TYPE = STR	Describes the proposed total volume (m3) of water withdrawal.
SR_PURPOSE	Text (4)	CAMP	Industrial: Work Camp	Mandatory if WD_TYPE = STR	Describes the purpose of the stream/river.
		COOL	Industrial: Cooling		
		FIRE	Industrial: Fire Suppression		
		FRAC	Oil & Gas Purpose: Hydraulic Fracturing		
		OGPR	Oil & Gas Purpose: Other		
		OINJ	Oil & Gas Purpose: Oil Field Injection		
		PRST	Industrial: Pressure Testing		
		ROAD	Industrial: Road Maintenance		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
		STOR	Storage Purpose		
		WORK	Waterworks Purpose		
		WELL	Oil & Gas Purpose: Well Drilling		
SR_S26_IND	Text (1)	N	No	Mandatory if WD_TYPE = STR	Indicates if Section 26 is required for the stream/river.
		Y	Yes		
SD_LENGTH	Float (4,1)	Any number	Source Dugout Length	Mandatory if WD_TYPE = WSD	Describes the water source dugout length (m).
SD_WIDTH	Float (4,1)	Any number	Source Dugout width	Mandatory if WD_TYPE = WSD	Describes the water source dugout width (m).
SD_DEPTH	Float (4,2)	Any number	Source Dugout Depth	Mandatory if WD_TYPE = WSD	Describes the water source dugout depth (m).
SD_VOL	Double (8,2)	Any Number	Source Dugout volume	Mandatory if WD_TYPE = WSD	Describes the water source dugout volume (m3).
SD_PURPOSE	Text (4)	CAMP	Industrial: Work Camp	Mandatory if WD_TYPE = WSD	Describes the purpose of the water source dugout.
		COOL	Industrial: Cooling		
		FIRE	Industrial: Fire Suppression		
		FRAC	Oil & Gas Purpose: Hydraulic Fracturing		
		OGPR	Oil & Gas Purpose: Other		
		OINJ	Oil & Gas Purpose: Oil Field Injection		
		PRST	Industrial: Pressure Testing		
		ROAD	Industrial: Road Maintenance		
		STOR	Storage Purpose		
		WORK	Waterworks Purpose		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
		WELL	Well Drilling		
SD_S26_IND	Text (1)	N	No	Mandatory if WD_TYPE = WSD	Indicates if Section 26 is required for the stream/river.
		Y	Yes		
LAND_STAT	Text (4)	CRWN	Crown	Mandatory	Indicates whether the application is on Crown, or private.
		PRIV	Private		
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.11 Changes In and About a Stream Impact Locations

Feature Name: Changes In and About a Stream Impact Locations

Description: Capture information on changes in and about a stream impact features. Mandatory if present.

Geometry: Point

File Naming Convention: (*_si.*)

Item	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier

Item	Type	Allowable Values	Value Description	Validation	Definition
LOC_ID	Short Integer (3)	1 – NNN	Location Identifier	Mandatory – must be unique within a project	Unique stream impact/crossing identifier.
WC_NAME	Text (40)	Any text	Water Course Name	Mandatory – check data type and format	Water Course name.
RIP_CLASS	Text (4)	S1	S1	Mandatory	Indicate the riparian class and lake classification.
		S2	S2		
		S3	S3		
		S4	S4		
		S5	S5		
		S6	S6		
		L1-A	L1-A		
		L1-B	L1-B		
		L2	L2		
		L3	L3		
		L4	L4		
		W1	W1		
		W2	W2		
		W3	W3		
		NCD	Non-Classified Drainage		
RIP_VER	Text (5)	DESK	Desk Top Verified	Mandatory	Indicates how the riparian class was verified.
		FIEL	Field Verified		
DURATION	Text (1)	T	Temporary	Mandatory	Describes the purpose duration of a feature.
		P	Permanent		
TYPE	Text (4)	AERL	Aerial	Mandatory	Describes the type of a feature.
		BEPR	Bank Erosion Protection		
		CBRD	Clearspan Bridge		
		CULV	Culvert		
		HDD	(HDD) Directional Drill		

Item	Type	Allowable Values	Value Description	Validation	Definition
		DEBR	Debris Removal		
		FLIS	Flow Isolation		
		GRVR	Gravel Removal		
		ICBR	Ice Bridge Crossing		
		MATT	Matting		
		MCUL	Major Culvert		
		BRDG	Bridge		
		MTUN	Micro Tunnelling		
		OCUT	Open Cut		
		PUBO	Punch and Bore		
		SNFL	Snow Fill Crossing		
		STRD	Stream Diversion		
		TFRD	Temporary Ford		
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.12 Construction Corridors

Feature Name: Construction Corridors

Description: Capture information on construction corridor features. Construction corridors are not mandatory features but can be submitted to allow the proponent to move

ERAA associated activities or CER related ancillaries submitted within the construction corridor area without having to do an amendment.

Geometry: Polygon

File Naming Convention: (*_cc.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.13 Ancillary Sites for ALR Assessment

Feature Name: Ancillary Sites for ALR Assessment

Description: Capture information on ancillary sites for ALR Assessment features. ALR assessment areas are submitted for single associated activities that occur entirely on private land within the ALR.

Geometry: Polygon

File Naming Convention: (*_alra.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.

Field Name	Type	Allowable Values	Value Description	Validation	Definition
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
AS_TYPE	Text (4)	ACCS	Access	Mandatory	Describes the purpose of a feature.
		AGRO	Aggregate Operations / Borrow Pit		
		AGWL	Above Ground Fresh Water Line		
		AIR	Air Strip		
		CAMP	Campsite		
		COMS	Communication Site		
		CPAB	Cathodic Protection / Anode Bed		
		DECK	Deck Site		
		FWS	Fresh Water Storage Site		
		GATE	Gate Monitoring		
		HELI	Helipad		
		INV	Investigative Use - General		
		INVW	Investigative Use - Water Well Testing		
		MONS	Monitoring Site		
		POWR	Powerline		
		SREM	Site Remediation		
		STAR	Staging Area		
		STOR	Storage Area		
		SUMP	Sump		
		WASD	Water Source Dugout		

Field Name	Type	Allowable Values	Value Description	Validation	Definition
		WSPC	Workspace		
LAND_STAT	Text (4)	PRIV	Private	Mandatory	Indicates that the application is on Private land. ALR Assessment applications only occur on private land within the ALR.
AREA_TYPE	Text (1)	N	New Land	Mandatory	Indicates that the ALR assessment area is new area
ACT_REF_NR	Text(9)	A text string of length 9, or less	Activity Reference Number	NA	Not applicable because ALR assessment areas cannot be amended.
GROUP_ID	Short Integer (2)	1-NN	Grouping Identifier	NA	Not applicable because ALR assessment areas cannot be amended.
LAND_ID	LongInt (9)	Any number	Land Identifier	NA	Not applicable because ALR assessment areas cannot be amended.
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		

1.14 MOTI Right of Way

Feature Name: MOTI Right of Way

Description: Capture information on MOTI Right of Way features. Submission of MOTI is only mandatory if application over Ministry of Transportation and Infrastructure constructed or unconstructed right of way requires new cut.

Geometry: Polygon

File Naming Convention: (*_moti.*)

Field Name	Type	Allowable Values	Value Description	Validation	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier for spatial feature.
Shape	Geometry	System Defined		Mandatory	Contains the spatial feature.
Id	LongInt (6)	Any Number	Unique user entered identifier	Mandatory	Any user specified unique identifier
SOURCE	Text (5)	CGWC	Coordinate Geometry With Control	Mandatory	Capture Method
		GPSD	GPS - Differential		
		GPSND	GPS - Non Differential		
		ORTHO	Ortho Photography		
		SNK	Source not Known		