4.0 Data Validation

The majority of the data elements exchanged via IRWIN go through a validation process before being passed to other systems. These validation rules ensure the data is in an approved format and available for consumption by the other systems. These go hand in hand with the source system submit/update requirements noted in the data element pages. In other words, the data validation rules ensure the data is being spoken in the same language and adheres to data standards.

Most of the extended systems display the validation error message exactly as it is written in the code. It is important to note that these were originally written with the developer in mind so that they could easily troubleshoot any potential issues. Ambiguous messages have become more user friendly, and this section should help break them down and explain possible resolutions.

4.1 Validation Rules

- **CadRequired**: Field is required by CAD system.
- **Domain**: Value must be a value in a database domain.
- **Enum**: Value must be a value in a comma-delimited list of values.
- **FieldValuesAddToEquals**: All four FireStrategy*Percent field values must add up to 100.
- **Firecode**: Cannot edit an issued FireCode or request a FireCode more than once.
- **InactiveCondition**: Field has a condition in which IsValid is required to be FALSE.
- **IncidentFields**: Must be a valid Incident Field.
- **IrwinIdExists**: An IrwinID field must be a valid IrwinID in IRWIN.
- **MatchPOOState**: The first 2 characters of the given value match the POOState field.
- **MaxDate**: Value cannot exceed a certain date.
- **MaxLength**: Value’s character length cannot exceed length of the string field.
- **MinMax**: Value cannot be less than a certain date.
- **Minimum**: Value cannot be less than a certain value (this applies to number fields).
- **MinLength**: Value’s character length cannot be less than the length of the string field.
- **NotNullable**: Checks for “null”, ‘null’, or #.
- **NotNullNoConflict**: This is only used on the ConflictParentIrwinld field. If it is not null, InConflict must be false.
- **Required**: Value is required.
- **ResourceFields**: Must be a valid Resource field.
- **StartsWithStateCode**: The first 2 characters of the given value must be a valid state code.
- **Type**: Value must be of the type defined for the data element.

4.2 Validation Errors

In the following errors {{PARAMETER_NAME}} represents the data element where the error is occurring and {{PARAMETER_VALUE}} represents the specific piece of data. Examples of {{DOMAIN_VALUES}} can be found in the Source System Submit/Update Requirements. They might look like a bunch of gibberish, but the Resolution section should help explain some of the details.

- **CadRequired**
  - {{PARAMETER_NAME}}: a value is required by CAD systems.
- **Domain**
  - {{PARAMETER_NAME}}: value {{PARAMETER_VALUE}} must be an accepted value {{DOMAIN_VALUES}}.
- **Enum**
  - {{PARAMETER_NAME}}: value {{PARAMETER_VALUE}} must be a valid value {{DOMAIN_VALUES}}.
- **FieldValuesAddToEquals**
- **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** does not add up to 100 with fields **[PARAMETER_PEERS]**.

  - **FireCode**
    - FireCode cannot be changed once it is set.

  - **FireCodeRequested**
    - If FireCode is not null, a new FireCode cannot be requested.

  - **InactiveCondition**
    - **[PARAMETER_NAME]**: If value is not NULL, IsValid must be FALSE.

  - **IrwinIdExists**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must be an existing IrwinID.

  - **MatchPOOState**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must begin with Incident’s POOState Code (**[REFERENCE_VALUE]**).

  - **MaxDate**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must precede **[HUMANIZED_MAX_UNITS]** from now (**[MAX_VALUE]**).
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must precede **[HUMANIZED_MAX_UNITS]** after **[REFERENCE_NAME]** **[MAX_VALUE]**.
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must precede **[REFERENCE_NAME]** **[MAX_VALUE]**.

  - **Maximum**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must not exceed **[MAXIMUM_VALUE]**.

  - **MaxLength**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must not exceed **[MAXIMUM_VALUE]** characters.

  - **MinDate**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must succeed 2 years ago (**[MIN_VALUE]**).
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must succeed **[HUMANIZED_REFERENCE_UNITS]** before **[REFERENCE_NAME]** **[MIN_VALUE]**.
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must succeed **[REFERENCE_NAME]** **[MIN_VALUE]**.

  - **Minimum**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must exceed **[MINIMUM_VALUE]**.

  - **MinLength**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must exceed **[MINIMUM_VALUE]** characters.

  - **NotNullable**
    - **[PARAMETER_NAME]**: value is not nullable.

  - **NotNullNoConflict**
    - **[PARAMETER_NAME]**: when value is not NULL (**[PARAMETER_VALUE]**), InConflict must be FALSE (**REFERENCE_VALUE**).

  - **Required**
    - **[PARAMETER_NAME]**: a value is required.

  - **ResourceFields**
    - o

  - **StartsWithStateCode**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must begin with a valid state code.

  - **Type**
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must be type string.
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must be type integer.
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must be type float.
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must be type Boolean [true, false].
    - **[PARAMETER_NAME]**: value **[PARAMETER_VALUE]** must be type datetime (YYYY-MM-ddTHH:mm:ssZ).
### 4.3 Validation and Errors by Specific Data Element

<table>
<thead>
<tr>
<th>IRWIN Data Element</th>
<th>IRWIN Validation</th>
<th>IRWIN Validation Failure Possible Errors</th>
</tr>
</thead>
</table>
| ContainmentDateTime         | Must be valid date/time format. Must be a valid date/time: Date is => FireDiscoveryDate AND year <= FireDiscoveryDate plus 1 year | Error: Invalid Date/Time format  
Error: Invalid Date/Time |
| ControlDateTime             | Must be valid date/time format. Must be a valid date/time: Date is => FireDiscoveryDate AND year <= FireDiscoveryDate plus 1 year | Error: Invalid Date/Time format  
Error: Invalid Date/Time |
| DailyAcres                  | Must be greater than zero.                                                        | Error: Acres must be >0                                                     |
| DiscoveryAcres              | Must be not null on Submit by CAD. Must be greater than zero.                     | Error: Required CAD Field Missing  
Error: Acres must be >0 |
| DispatchCenterID            | Must not be null on Submit by a CAD. Maximum Length 6. Minimum Length 5. SS must be valid 2-letter state code. | Error: Required Field Missing |
| FireCause                   | If not null, cannot be changed.                                                   | Error: Value cannot be edited.                                                |
| FireCode                    | Must be not null on Submit. Must match a valid value.                             | Error: Required Field Missing  
Error: Not a Valid Value |
| FireCodeRequested           | Must not be null on Submit or Update. Default on Submit is false. Valid values are true or false. Cannot be requested if not null. | Error: Required Field Missing  
Error: Not a Valid Value |
| FireDiscoveryDateTime       | Must not be null on Submit. Must be valid date/time format. On Submit:…           | Error: Required Field Missing  
Error: Invalid Date/Time Format  
Error: Invalid Date/Time |
| FireOutDateTime             | Must be valid date/time format. Must be a valid date/time: Date is => FireDiscoveryDate AND year <= FireDiscoveryDate plus 2 years | Error: Required Field Missing  
Error: Invalid Date/Time Format  
Error: Invalid Date/Time |
| FireStrategy*Percent        | Must total 100                                                                   | Error: Must total 100  
Error: Values total more than 100 |
| IncidentName                | Must be not null on Submit. Length must be => 2 alpha-numeric characters.        | Error: Required Field Missing  
Error: Must be at least 2 characters |
| IncidentTypeCategory        | Must be not null on Submit. Must match a valid value.                             | Error: Required Field Missing  
Error: Not a Valid Value |
| IncidentTypeKind            | Must be not null on Submit. Must match a valid value.                             | Error: Required Field Missing  
Error: Not a Valid Value |
| InitialLatitude             | Must not be null on Submit by CAD. Must be a valid latitude. Must be a valid lat/long combination. | Error: Required CAD Field Missing  
Error: Invalid Latitude  
Error: Invalid Lat/Long |
| InitialLongitude            | Must not be null on Submit by CAD. Must be a valid longitude. Must be a valid lat/long combination. | Error: Required CAD Field Missing  
Error: Invalid Longitude  
Error: Invalid Lat/Long |
| isComplex                   | Must be null, true or false. isComplex and ComplexIRWINParentID must form a valid combination: TRUE/NULL – is a complex  
FALSE/NotNull – is a participant in complex of given IRWIN ID  
FALSE/Null – is not a participant in a complex  
NULL/NULL – is not a participant in a complex. | Error: Not a Valid Value  
Error: Not a valid combination with ComplexIRWINParentID |
| isFSAssisted                | Must be null, true or false.                                                     | Error: Not a Valid Value                                                     |
| isMultiJurisdictional       | Must be null, true or false.                                                     | Error: Not a Valid Value                                                     |
| isReimbursable              | Must be null, true or false.                                                     | Error: Not a Valid Value                                                     |
| isTrespass                  | Must be null, true or false.                                                     | Error: Not a Valid Value                                                     |
| LocalIncidentIdentifier     | Must not be null on Submit. Must meet min/max length requirements. Maximum Length 10. Minimum Length 6. | Error: Required Field Missing  
Error: Data Element Length |
<table>
<thead>
<tr>
<th>IRWIN Data Element</th>
<th>IRWIN Validation</th>
<th>IRWIN Validation Failure Possible Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>POOJurisdictionalUnit</td>
<td>Maximum Length 6. Minimum Length 5. SS must be valid 2-letter state code.</td>
<td>Error: Data Element Length Error: Invalid State Code Error: POOState must be consistent</td>
</tr>
<tr>
<td>POOLatitude</td>
<td>Must be not null on Submit. Must be a valid latitude. Must be a valid lat/long combination.</td>
<td>Error: Required Field Missing Error: Invalid Latitude Error: Invalid Lat/Long</td>
</tr>
<tr>
<td>POOLongitude</td>
<td>Must be not null on Submit. Must be a valid longitude. Must be a valid lat/long combination.</td>
<td>Error: Required Field Missing Error: Invalid Longitude Error: Invalid Lat/Long</td>
</tr>
<tr>
<td>POOProtectingUnit</td>
<td>Must be not null on Submit. Maximum Length 6. Minimum Length 5. SS must be valid 2-letter state code.</td>
<td>Error: Required Field Missing Error: Data Element Length Error: Invalid State Code</td>
</tr>
<tr>
<td>UniqueFireIdentifier</td>
<td>The UniqueFireIdentifier (UFI) is populated by IRWIN by concatenating the year from the FireDiscoveryDateTime, the POOProtectingUnit, and the LocalIncidentIdentifier. If IRWIN finds the UFI is not unique to IRWIN, the incident record will be rejected.</td>
<td>Error: UniqueFireIdentifier already exists</td>
</tr>
</tbody>
</table>

### 4.4 Resolution

Table 2. IRWIN Error Resolution by Data Element

<table>
<thead>
<tr>
<th>IRWIN Data Element</th>
<th>Error Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>ContainmentDateTime</td>
<td>Enter the containment date and time no earlier than the discovery date and time. The containment date and time cannot be more than one year older than the discovery date. The seconds, which are not visible to the user, can cause this error to appear.</td>
</tr>
<tr>
<td>ControlDateTime</td>
<td>Enter the containment date and time no earlier than the discovery date and time. The control date and time cannot be more than one year older than the discovery date. The seconds, which are not visible to the user, can cause this error to appear.</td>
</tr>
<tr>
<td>DailyAcres</td>
<td>Populate the daily acres with a value other than zero.</td>
</tr>
<tr>
<td>DiscoveryAcres</td>
<td>Populate the discovery acres with a value other than zero.</td>
</tr>
<tr>
<td>DispatchCenterID</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or unit id.</td>
</tr>
<tr>
<td>FireCause</td>
<td>Choose a value, even if it changes, this has to be populated.</td>
</tr>
<tr>
<td>FireCode</td>
<td>Do not attempt to edit an issued FireCode.</td>
</tr>
<tr>
<td>FireCodeRequested</td>
<td>This element has a default value, which means if a user gets an error there is something wrong with the field at the database level and a developer needs to be involved. If a user has already requested a FireCode and attempts to request again, this error will occur – do not select more than once.</td>
</tr>
<tr>
<td>FireDiscoveryDateTime</td>
<td>Enter the discovery date and time if this error occurs.</td>
</tr>
<tr>
<td>FireEndDate</td>
<td>Enter the out date and time no earlier than the discovery date and time. The out date and time cannot be more than two years older than the discovery date. The seconds, which are not visible to the user, can cause this error to appear.</td>
</tr>
<tr>
<td>FireStrategyPercent</td>
<td>Ensure that all four values equal 100. IRWIN will automatically add zeroes in fields left empty.</td>
</tr>
<tr>
<td>IncidentName</td>
<td>Enter a fire name using at least two characters.</td>
</tr>
<tr>
<td>IncidentTypeCategory</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or value being passed.</td>
</tr>
<tr>
<td>IncidentTypeKind</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or value being passed.</td>
</tr>
<tr>
<td>InitialLatitude</td>
<td>Enter a valid latitude.</td>
</tr>
<tr>
<td>InitialLongitude</td>
<td>Enter a valid longitude.</td>
</tr>
<tr>
<td>isComplex</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or value being passed.</td>
</tr>
<tr>
<td>isFSAssisted</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or value being passed.</td>
</tr>
<tr>
<td>isMultiJurisdictional</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or value being passed.</td>
</tr>
<tr>
<td>IRWIN Data Element</td>
<td>Error Resolution</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>isReimbursable</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or value being passed.</td>
</tr>
<tr>
<td>isTrespass</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or value being passed.</td>
</tr>
<tr>
<td>LocalIncidentIdentifier</td>
<td>Enter the Local Incident Identifier, making sure to use no less than 6 characters and no more than 10.</td>
</tr>
<tr>
<td>POOJurisdictionalUnit</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or unit id being passed.</td>
</tr>
<tr>
<td>POOLatitude</td>
<td>Enter a valid latitude.</td>
</tr>
<tr>
<td>POOLongitude</td>
<td>Enter a valid longitude.</td>
</tr>
<tr>
<td>POOProtectingUnit</td>
<td>If an error is received on this data element, it is necessary to resolve at the developer level. This would indicate an issue with the data mapping and/or unit id being passed.</td>
</tr>
<tr>
<td>UniqueFireIdentifier</td>
<td>Double check existing incidents to ensure the correct record is being created.</td>
</tr>
</tbody>
</table>