1   ### Overview

2   All <u>feature layer attributes</u> in either an **ArcMap** *Map Document* or an **ArcGIS Pro** *Project* that are published to
3   **ArcGIS Online** (AGOL) as a hosted feature layer for "required entry" (*Allow NULLS = No*) should require a user
4   selection (i.e. from a drop-down) or entry in *Collector*. However, current versions of **ArcMap** and **ArcGIS Pro** do
5   not properly publish this "required" property. The **ArcCatalog** and **AGOL** workflow (i.e. steps) to correct this
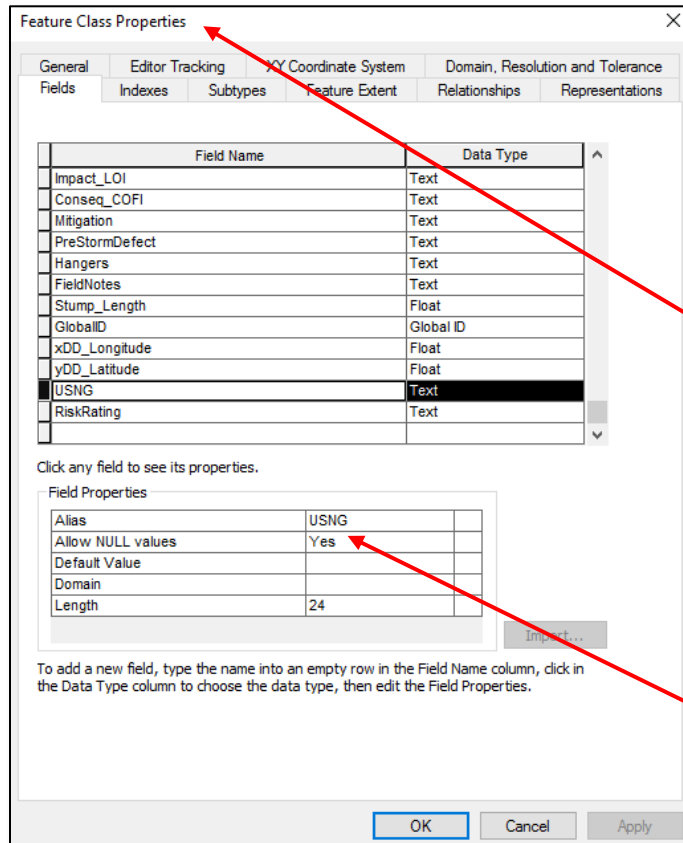6   publishing error are discussed in this document[1].

7   ### UFST Attribute Properties for Required Entry

8   In **ArcCatalog**, an attributes *Allow NULL Values*
9   property can be set for each attribute as needed for
10 "required entry" in *Collector*. The standard UFST
11 attributes (*PublicTree, Species, DBH, TreePart,*
12 *FEMAGuide, Failure_LOF, Impact_LOI, Conseq_COFI, Mitigation, PreStormDefect, Hangers, and StumpLength*) are
13 all set as required and editable *Allow NULL Values = No* and *Read-Only = No* respectfully).

> In this document, the following are synonymous:
> - *attribute* and *field*
> - *editable* equates to and *Read-Only = **No***
> - *required* equates to *Allow NULL Values = **No***
>
> In **ArcGIS Pro**, the menu symbol is

Feature Class properties from **ArcCatalog**

Yes, **NULLS** are acceptable (i.e. **NOT** required entry).

14
15 Figure 1: ArcCatalog – Feature Class Properties Dialog

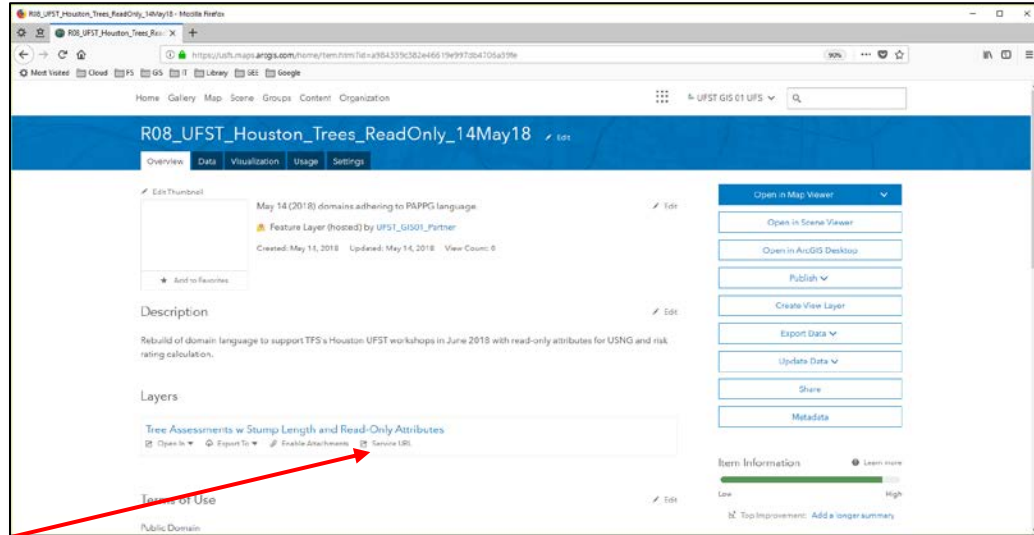16 In this example the *USNG* attribute (needed for post-processing) has been set as *Allow NULL Values = YES*;
17 that is, **NOT** required.

---

[1] Based on the original work by Carl Beyerhelm, Circle-5 GeoServices, LLC, circle5geo@gmail.com, 928.607.3517 (Retired USDA FS), May 2018

Dudley R. Hartel
Science Delivery/Technology Coordinator   706-410-5568 cell ✉ DHARTEL@FS.FED.US
@UFS_CUIF ✉ LEAVESOFCHANGEWEEKLY.ORG

v1.23

Page: 1

C:\USERS\DHARTEL\DOCUMENTS\UFST\UFST AGOL\UFST MANUALS AND INSTRUCTIONS\20180522_UFST CORRRECTING REQUIRED ATTRIBUTE SETTINGS (23MAY18).DOCX

18   ***ArcGIS Online Service Definition - URL (/Admin Instructions)***

19   After publishing to **ArcGIS Online** (AGOL), open the layer definition from the hosted feature layer details
20   page and the layer *Service URL* link.

Service URL link

Figure 5: Service URL Link on Details Page

23   When the URL opens, change the URL in your browser by adding **/Admin** between **/rest** and **/services** to
24   enable updating for required fields and to review *Read-Only* status.

25   e.g.

26   https://services1.arcgis.com/gGHDlz6USftL5Pau/arcgis/**rest**/**ADMIN**/**services**/R08_UFST_Houston_Trees_ReadOnly_14May18/FeatureServer/0

Dudley R. Hartel
Science Delivery/Technology Coordinator
706-410-5568 cell DHARTEL@FS.FED.US
@ufs_cuif LeavesOfChangeWeekly.org

v1.23

Page: 2

C:\Users\dhartel\Documents\ufst\UFST AGOL\UFST Manuals and Instructions\20180522_UFST Corrrecting Required Attribute Settings (23May18).docx

27   The service definition for the feature layer at **AGOL** indicates which attributes have been set to "required"

28   **nullable:false** (i.e. *Allow NULL Values = No*). Templates, listed below the *Fields* list, are created for all

29   attributes that have domains.

Type ID Field:

Fields:

- OBJECTID *(type: esriFieldTypeOID, alias: OBJECTID, SQL Type: sqlTypeOther, length: 0, nullable: false, editable: false)*
- PublicTree *(type: esriFieldTypeString, alias: Public Tree, SQL Type: sqlTypeOther, length: 24, nullable: false, editable: true)*
- Species *(type: esriFieldTypeString, alias: Species, SQL Type: sqlTypeOther, length: 8, nullable: false, editable: true)*
- DBH *(type: esriFieldTypeSmallInteger, alias: DBH, SQL Type: sqlTypeOther, nullable: false, editable: true)*
- TreePart *(type: esriFieldTypeString, alias: Tree Part , SQL Type: sqlTypeOther, length: 24, nullable: false, editable: true)*
- FEMAGuide *(type: esriFieldTypeString, alias: FEMA Guide, SQL Type: sqlTypeOther, length: 42, nullable: false, editable: true)*
- Failure_LOF *(type: esriFieldTypeString, alias: Failure (LOF), SQL Type: sqlTypeOther, length: 24, nullable: false, editable: true)*
- Impact_LOI *(type: esriFieldTypeString, alias: Impact (LOI), SQL Type: sqlTypeOther, length: 32, nullable: false, editable: true)*
- Conseq_COFI *(type: esriFieldTypeString, alias: Consequence (COFI), SQL Type: sqlTypeOther, length: 24, nullable: false, editable: true)*
- Mitigation *(type: esriFieldTypeString, alias: Mitigation, SQL Type: sqlTypeOther, length: 30, nullable: false, editable: true)*
- PreStormDefect *(type: esriFieldTypeString, alias: PreStorm Defect, SQL Type: sqlTypeOther, length: 24, nullable: false, editable: true)*
- Hangers *(type: esriFieldTypeString, alias: Hangers, SQL Type: sqlTypeOther, length: 24, nullable: false, editable: true)*
- FieldNotes *(type: esriFieldTypeString, alias: Field Notes, SQL Type: sqlTypeOther, length: 36, nullable: true, editable: true)*
- Stump_Length *(type: esriFieldTypeSingle, alias: Stump Length (Ft), SQL Type: sqlTypeOther, nullable: true, editable: true)*
- GlobalID *(type: esriFieldTypeGlobalID, alias: GlobalID, SQL Type: sqlTypeOther, length: 38, nullable: false, editable: false)*
- xDD_Longitude *(type: esriFieldTypeSingle, alias: xDD_Longitude, SQL Type: sqlTypeOther, nullable: true, editable: true)*
- yDD_Latitude *(type: esriFieldTypeSingle, alias: yDD_Latitude, SQL Type: sqlTypeOther, nullable: true, editable: true)*
- USNG *(type: esriFieldTypeString, alias: USNG, SQL Type: sqlTypeOther, length: 24, nullable: true, editable: true)*
- RiskRating *(type: esriFieldTypeString, alias: Risk Rating, SQL Type: sqlTypeOther, length: 18, nullable: true, editable: true)*
- MapID *(type: esriFieldTypeSmallInteger, alias: MapID, SQL Type: sqlTypeOther, nullable: true, editable: true)*
- CreationDate *(type: esriFieldTypeDate, alias: CreationDate, SQL Type: sqlTypeOther, length: 8, nullable: true, editable: false)*
- Creator *(type: esriFieldTypeString, alias: Creator, SQL Type: sqlTypeOther, length: 128, nullable: true, editable: false)*
- EditDate *(type: esriFieldTypeDate, alias: EditDate, SQL Type: sqlTypeOther, length: 8, nullable: true, editable: false)*
- Editor *(type: esriFieldTypeString, alias: Editor, SQL Type: sqlTypeOther, length: 128, nullable: true, editable: false)*

nullable:false

Indexes:

- PK__TREES_ED__F4B70D85D935D63F *(Fields: OBJECTID, IsAscending: True, IsUnique: True, Description:)*
- user_4481.TREES_EDITATTRIBUTES_TREES__ADDED_FIELDS__Shape_sidx *(Fields: SHAPE, IsAscending: True, IsUnique: False, Description:)*
- FDO_GlobalID *(Fields: GlobalID, IsAscending: True, IsUnique: True, Description:)*
- CreationDateIndex *(Fields: CreationDate, IsAscending: True, IsUnique: False, Description: CreationDate Field index)*
- CreatorIndex *(Fields: Creator, IsAscending: False, IsUnique: False, Description: Creator Field index)*
- EditDateIndex *(Fields: EditDate, IsAscending: True, IsUnique: False, Description: EditDate Field index)*
- EditorIndex *(Fields: Editor, IsAscending: False, IsUnique: False, Description: Editor Field index)*

Templates:

        Name: Trees (Added Fields)
        Description:
        Drawing Tool: esriFeatureEditToolPoint
        Prototype:
                Attributes:
                - *PublicTree*: Yes
                - *Species*: AGOLSS
                - *DBH*: 0
                - *TreePart*:
                - *FEMAGuide*:
                - *Failure_LOF*:
                - *Impact_LOI*:
                - *Conseq_COFI*:
                - *Mitigation*:
                - *PreStormDefect*: None Selected
                - *Hangers*: None Selected

Update Definition

Is Data Versioned: false

Supports Rollback On Failure Parameter: true

Last Edit Date: 5/16/2018 8:21:54 PM

Supported Operations: <u>Refresh</u>   <u>Add To Definition</u>   <u>Update Definition</u>   <u>Delete From Definition</u>

30
31   Figure 6: Hosted Layer Definition

32   Click on the *Update Definition* link at the bottom of the page to allowing editing of required fields.

Dudley R. Hartel
Science Delivery/Technology Coordinator   706-410-5568 cell   DHARTEL@FS.FED.US
@UFS_CUIF   LEAVESOFCHANGEWEEKLY.ORG

v1.23

Page: 3

C:\USERS\DHARTEL\DOCUMENTS\UFST\UFST AGOL\UFST MANUALS AND INSTRUCTIONS\20180522_UFST CORRRECTING REQUIRED ATTRIBUTE SETTINGS (23MAY18).DOCX

33   While in *Definition Update*, set required fields to **NULL** *and update the layer definition*.

34
35   Figure 7: Hosted Layer Definition – Required Fields after Changes

36   Critical updates are to replace "DBH" : 0 with "DBH" : null, and "Species" : "AGOLSS" and all attributes
37   with " " to null so that the required fields will function correctly. *PublicTree*, *PreStormDefect*, and
38   *Hangers* will usually have a default.

What exactly is this doing?

The AGOL publication process does not properly configure required fields.

For fields that have not been assigned a default value, the publication process adds a " " (i.e. blank string) for text fields and a 0 (i.e. zero) for numeric fields.

Default values in the feature definition, whether they are desired (like "PublicTree" : "Yes") or the blank string or zero satisfy the "required" criteria and users are able to open the data form (in *Collector*) and save the form without entering **ANY** data! Not the desired result.

Placing the **NULL** after every required field in the definition will create a data form in *Collector* that **WILL** require an actual drop-down selection or entry before the tree (i.e. point feature) can be saved.

The symbol ⚠ on Android devices and the word Required on iOS devices *and* a blank field (except for attributes with an assigned default value) indicates that the field has been properly configured in *Collector*.

Dudley R. Hartel
Science Delivery/Technology Coordinator
706-410-5568 cell ✉ DHARTEL@FS.FED.US
@UFS_CUIF ✉ LEAVESOFCHANGEWEEKLY.ORG

v1.23

Page: 4

C:\USERS\DHARTEL\DOCUMENTS\UFST\UFST AGOL\UFST MANUALS AND INSTRUCTIONS\20180522_UFST CORRRECTING REQUIRED ATTRIBUTE SETTINGS (23MAY18).DOCX

39   Before saving your definition changes, set the keyword *lastEditDate* to " " (you'll find it near the top of
40   the definition code). Replace any number (e.g. 1527086417129) that appears after the colon (:) with " ".

41
42   Figure 8: Hosted Layer Definition – lastEditDate Changed

43

44   Figure 9: Hosted Layer Definition – Update Layer Definition Button (i.e. Save Changes)

45   **CTRL-F** can be used to search for *Templates* and *lastEditDate* while in *Update Definition*.

46   After changing the last edit date, click on the *Update Layer Definition* link at the bottom of the page.
47   Watch for error messages (in red) just below the *Update Layer Definition* link; typically you have
48   probably inadvertently deleted a comma (,) after the **NULL** entry.

49   When you open the web map in *Collector*, the "required" characteristics should function as desired.

50   See Carl Beyerhelm's *EnforceRequiredFields_CollectorForArcGIS (Highlight).pdf* for the complete
51   definition update process if you are not familiar with it.

Dudley R. Hartel
Science Delivery/Technology Coordinator   706-410-5568 cell ✂ DHARTEL@FS.FED.US
@UFS_CUIF ✂ LEAVESOFCHANGEWEEKLY.ORG

v1.23

Page: 5

C:\USERS\DHARTEL\DOCUMENTS\UFST\UFST AGOL\UFST MANUALS AND INSTRUCTIONS\20180522_UFST CORRRECTING REQUIRED ATTRIBUTE SETTINGS (23MAY18).DOCX