How to use Join and Calculate Fields Tool

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Overview

The ArcGIS Python Script Tool "Join Fields and Calculate" may be used to update the destination values in a target feature layer field with the values in another table's fields using a common key (join). This script will perform similarly as if you joined a table to a feature class to calculate a certain field based on another field in the joined table.

Parameters

The tool has 8 parameters: 1. Transfer_From (data type: Table View) - Which table are do you want to transfer data from? This parameter must be the path to a table(e.g.: Comma-separated Values (.csv) file, Excel Workbook (.xlsx) Sheet, Esri geodatabase table, etc.). This table will act as 'source' data.

2. Using_Join_Field (data type: Field) - From the source table, which field should be used to joinwith another feature class' attributes? This will provide the 'key' to transfer data from the source table to the target table.
3. Source_Field (data type: Field) -From the source table, which field's data do you want to transfer to the target table? This field's data will be updated in the target feature class that have matching fields.
4. Destination_Feature (data type: Feature Layer or Feature Class) - Which feature class do you want to transfer data to? This parameter must be the path to a Esri Feature Class or Feature Layer. This table will act as 'target' data source.
5. Destination_Join_Field (data type: Field) - From the target table, which field should be used to joinwith another feature class' attributes? This will provide the 'key' to transfer data from the source table to the target table.
6. Destination_Field (data type: Field) - From the target table, which field's data do you want to transfer from the source table? This field's data will be updated from the source table that have matching fields using the join fields provided.
7. Where_Clause (data type: String) - How should the source values be filtered? Default is "IS NOT NULL", otherwise you will overwrite the target features will null values.
8. Remove_Leading_Zeros (data type: Boolean) - Do you want to remove leading zeros from the Source Join Field prior to 'joining' the tables?

How to Use

1. Begin by opening the toolbox
2. Fill out the parameters
3. View the update results

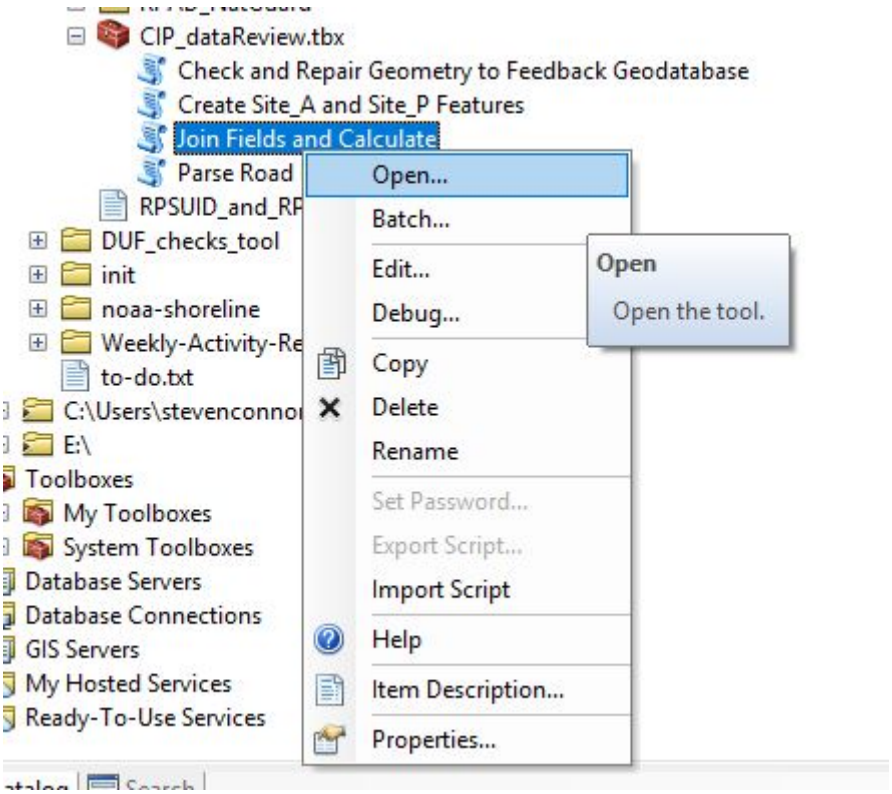

Figure 1: Open the 'Join Fields and Calculate' in the CIP_DataReview Toolbox

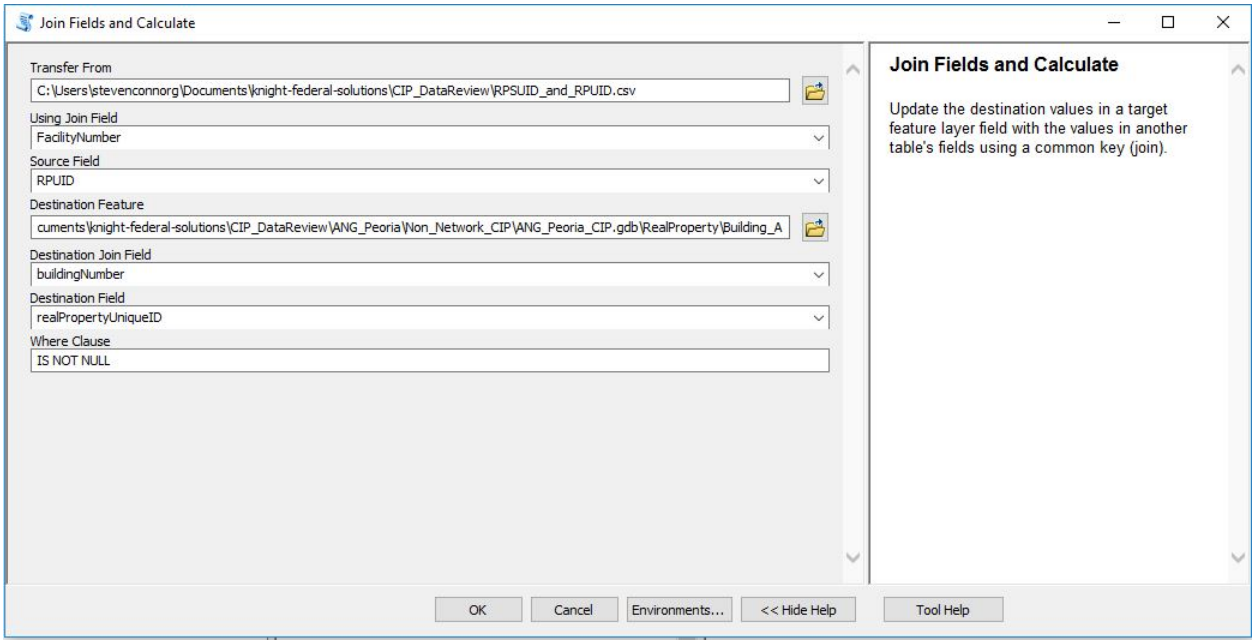

Figure 2: 'Join Fields and Calculate Tool Parameters'

buildingNumber	realPropertyUniqueID	FacilityNum	RPUID
4002	1316564	4002	386109
4003	1307748	4003	386110
6020	1280790	6020	393736
6013	1280783	6013	408137
6004	1280780	6004	386120
6001	1273764	6001	386117
5002	1182527	5002	386113
6010	1156972	6010	387834
6030	1124881	6030	414477
6012	1026568	6012	393734
5010	1019979	5010	247306
TBD		<Null>	<Null>

Figure 3: 'Output'

Production Info

For posterity, development information used to compile this report is listed below. .

```
## R version 3.4.1 (2017-06-30)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows >= 8 x64 (build 9200)
##
## Matrix products: default
##
## locale:
## [1] LC_COLLATE=English_United States.1252
## [2] LC_CTYPE=English_United States.1252
## [3] LC_MONETARY=English_United States.1252
## [4] LC_NUMERIC=C
## [5] LC_TIME=English_United States.1252
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
##  [1] bookdown_0.7    rmarkdown_1.9   knitr_1.20      tinytex_0.5
##  [5] devtools_1.13.4 backports_1.1.2 digest_0.6.15   anchors_3.0-8
##  [9] MASS_7.3-49     rgenoud_5.8-1.0 bibtex_0.4.2    purrr_0.2.4
## [13] Rcpp_0.12.16    ggmap_2.6.1     sf_0.6-1        markdown_0.8
## [17] stringr_1.3.0   DT_0.4          leaflet_1.1.0   dplyr_0.7.4
## [21] ggplot2_2.2.1   rprojroot_1.3-2 packrat_0.4.9-1
##
## loaded via a namespace (and not attached):
##  [1] xfun_0.1          reshape2_1.4.3    lattice_0.20-35
##  [4] colorspace_1.3-2  htmltools_0.3.6   yaml_2.1.18
##  [7] rlang_0.2.0       e1071_1.6-8       pillar_1.2.1
## [10] withr_2.1.2       glue_1.2.0        DBI_0.8
## [13] sp_1.2-7          bindrcpp_0.2.2    jpeg_0.1-8
## [16] bindr_0.1.1       plyr_1.8.4        munsell_0.4.3
## [19] gtable_0.2.0      htmlwidgets_1.0   RgoogleMaps_1.4.1
```

```
## [22] mapproj_1.2.6     evaluate_0.10.1   memoise_1.1.0
## [25] httpuv_1.3.6.2    crosstalk_1.0.0   class_7.3-14
## [28] proto_1.0.0       xtable_1.8-2      geosphere_1.5-7
## [31] udunits2_0.13     scales_0.5.0      classInt_0.1-24
## [34] mime_0.5          rjson_0.2.15      png_0.1-7
## [37] stringi_1.1.7     shiny_1.0.5       grid_3.4.1
## [40] tools_3.4.1       magrittr_1.5      maps_3.3.0
## [43] lazyeval_0.2.1    tibble_1.4.2      pkgconfig_2.0.1
## [46] assertthat_0.2.0  R6_2.2.2          units_0.5-1
## [49] compiler_3.4.1
```