ArcGIS Pro 3.3 Overview

Anna Gonzalez | Solution Engineer

Administration

ArcGIS Pro 3.3 moves to .NET 8

Ensures latest security and performance improvements

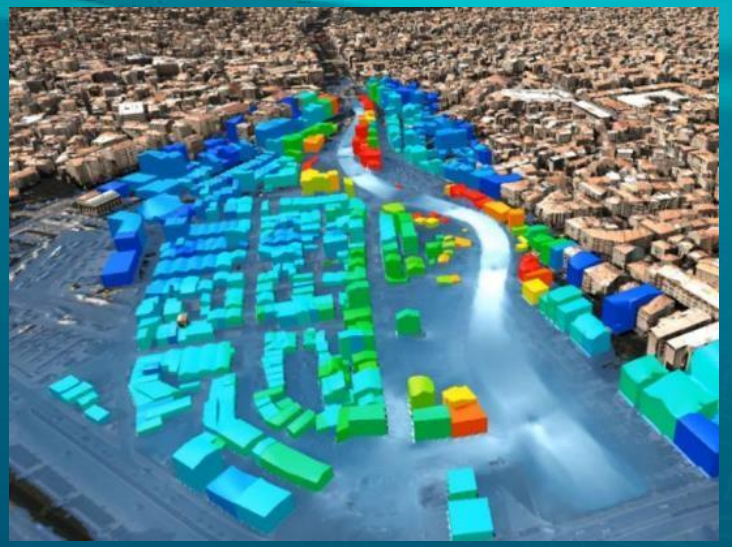
- **November 2020** - .NET Framework and .NET Core merged into a unified .NET
  - Unified divergent frameworks, reduced code complexity, advanced cross-platform reach
  - Even numbered .NET releases are Long Term Support (LTS - supported for 3 years)
- **ArcGIS Pro 3.0** - first release that moved to .NET 6 (first LTS .NET release)
  - Major release that entailed breaking changes to move to the unified .NET
- **ArcGIS Pro 3.3** - moves to .NET 8
  - Minor release that provides new functionality, but **NO BREAKING CHANGES**
    - Requires .NET 8 to be installed on machines before installing ArcGIS Pro 3.3
    - No breaking changes - continued compatibility with all ArcGIS Pro 3.x versions
    - Existing 3.x add-ins continue to work

Blog: ArcGIS Pro 3.3 Moves to .NET 8

Highlights

Flood Simulation

- Predict and plan for potential flooding events
- Fast and interactive simulation and playback



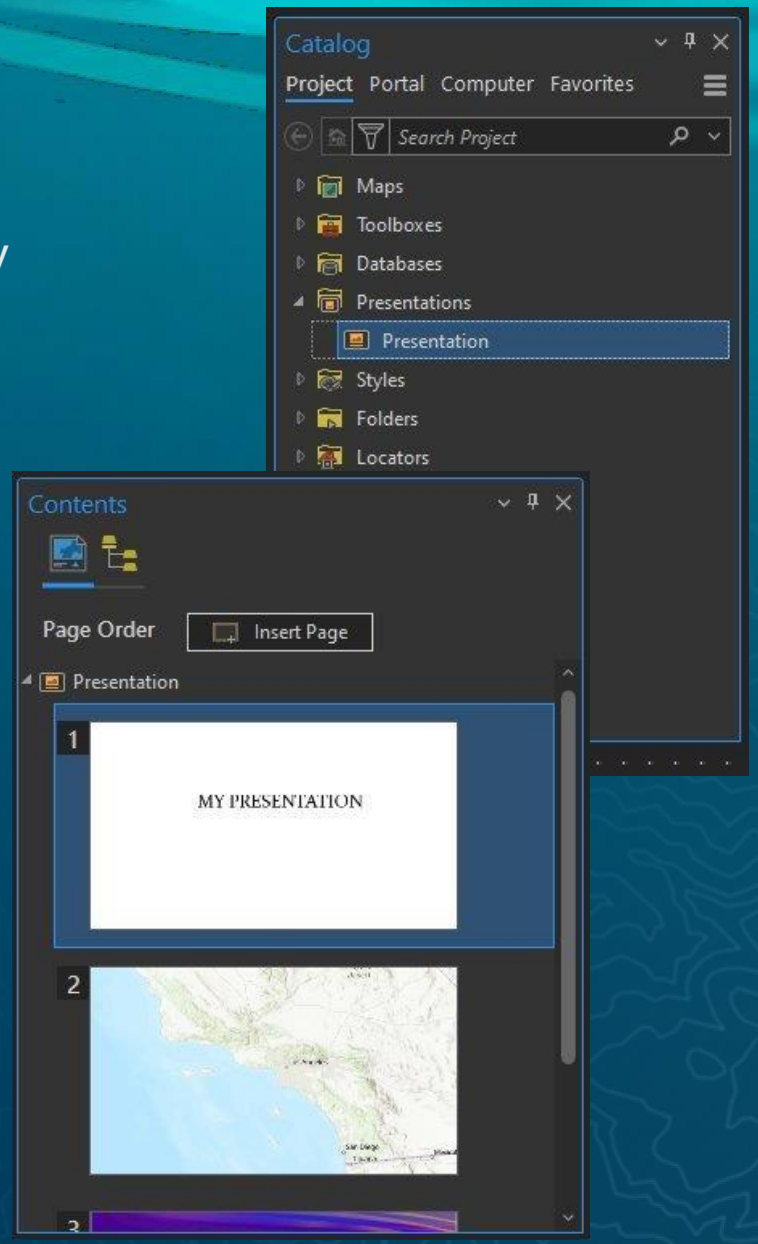
- Workflows
  - Define an AOI, configure, and run a simulation
  - Visualize results and review statistics
  - Compare 'what-if' scenarios
  - Test mitigation plans
  - Share analysis results

Highlights

Presentations

- Use maps, scenes, videos and text to interactively present a GIS story
- A new document type stored in a Pro project
- Interactively present in full-screen mode
- Share presentation as PDF, images, or video

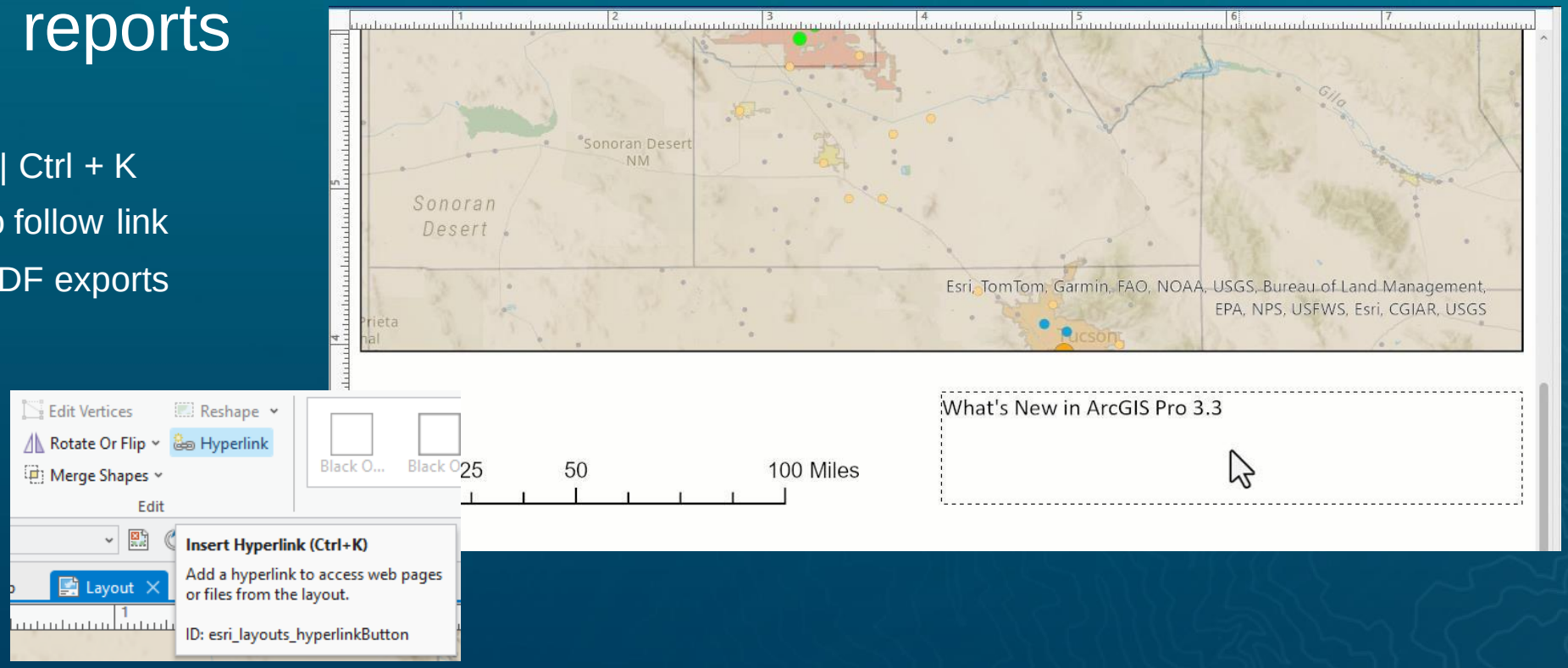
- Examples
  - Present analytical results to stakeholders
  - Show a proposed urban development
  - Describe events with a strong geographical component
  - Export as a video for wider viewing



Highlights

Hyperlink management in layouts and reports

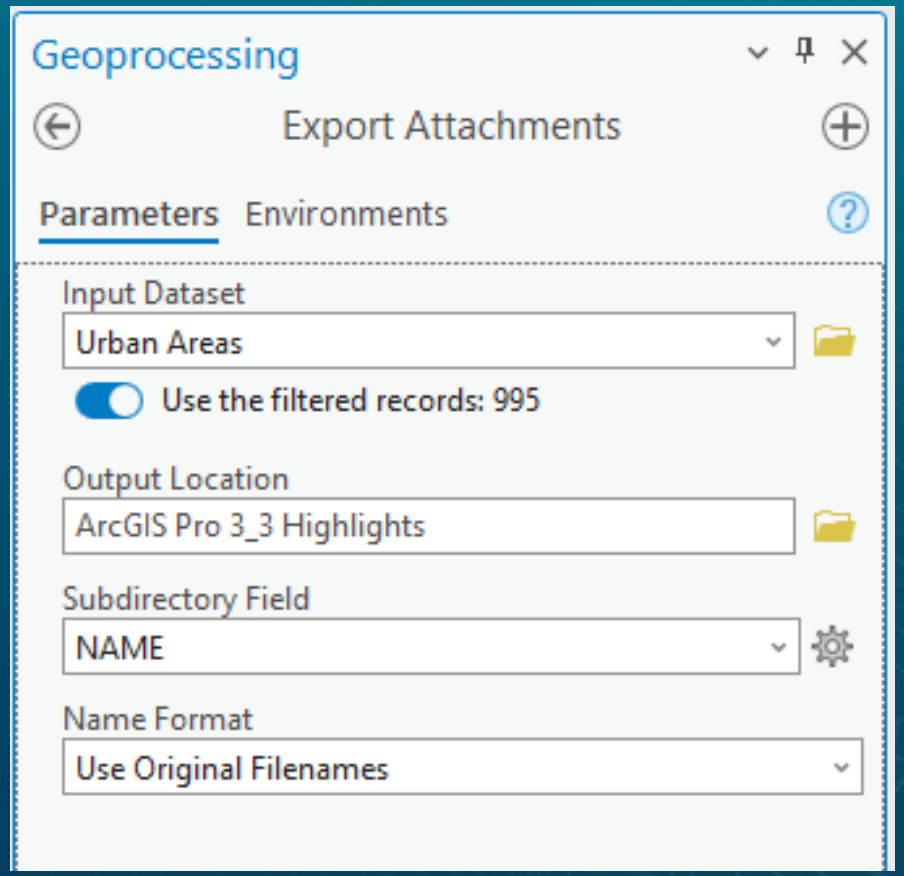
- Familiar UX
  - Highlight text | Ctrl + K
  - Ctrl + Click to follow link
  - Included in PDF exports



Highlights

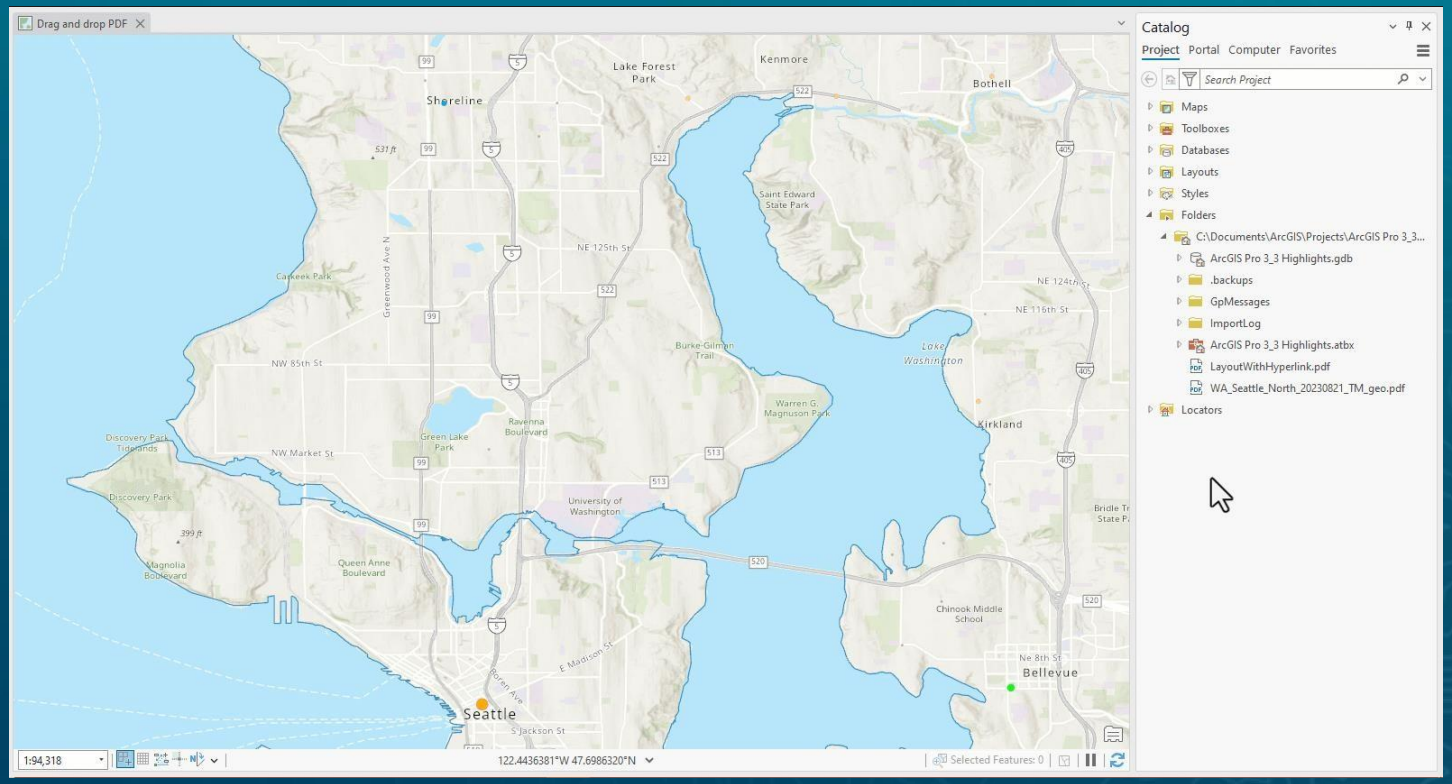
Export Attachments

- New geoprocessing tool
- Feature class/table to specified folder
- Export to subdirectories based on attribute value
- Rename exported files based on attribute value(s)



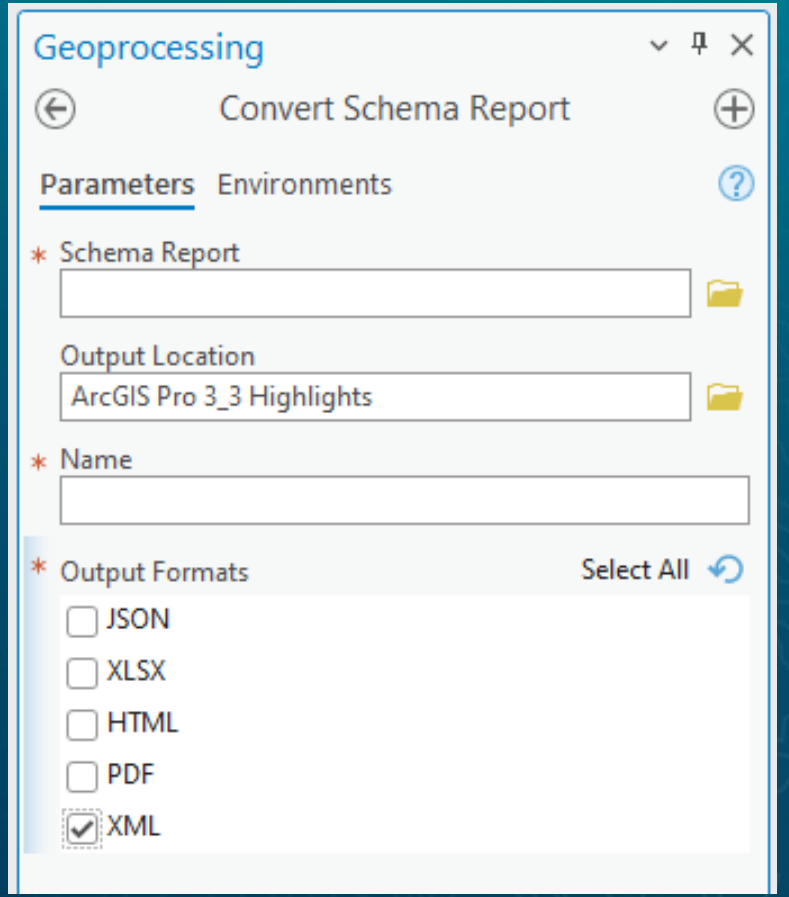
Highlights

- Add PDF directly as raster layer
  - No need to duplicate data and store as TIFF
  - Drag and drop from file system/Catalog
  - Select page from multipage document
  - Georeference if needed



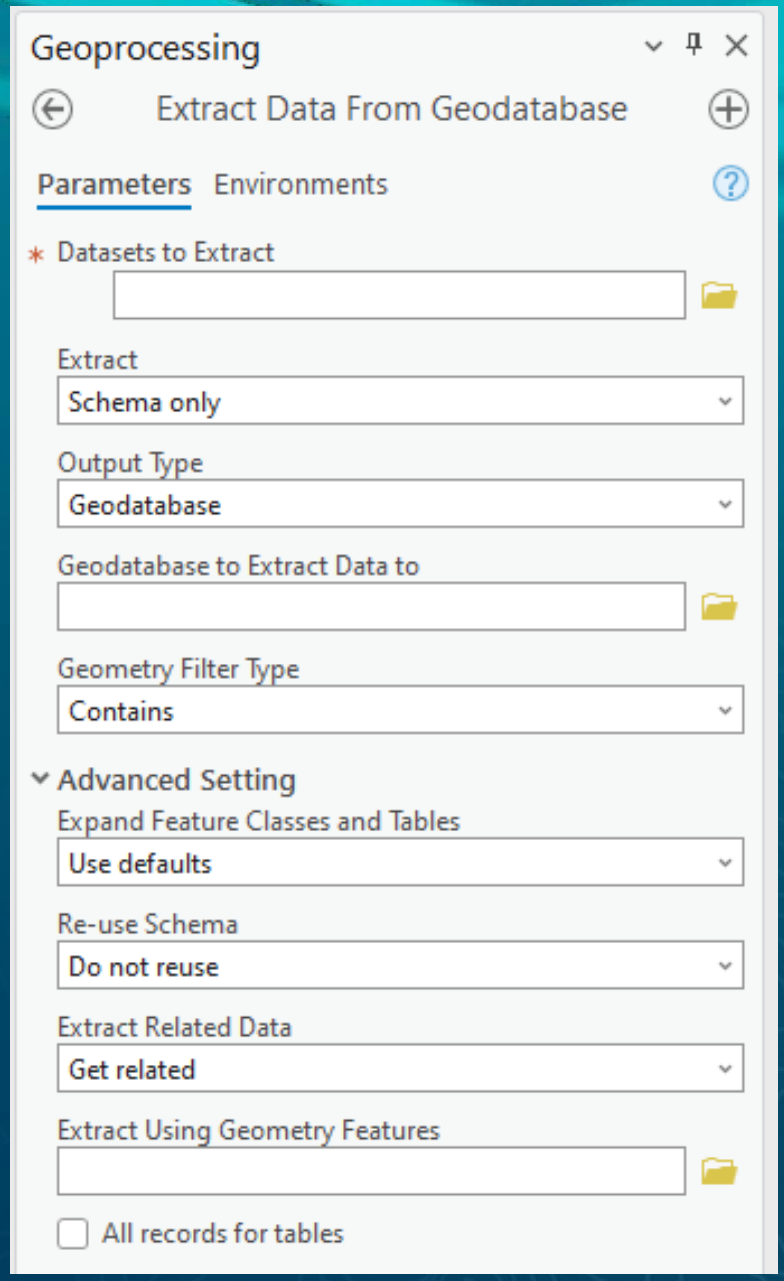
Highlights

- Convert Schema Report
  - Converts JSON or XLSX files created from Generate Schema Report tool (new in Pro 3.2) to XML workspace document
  - XML → create a geodatabase



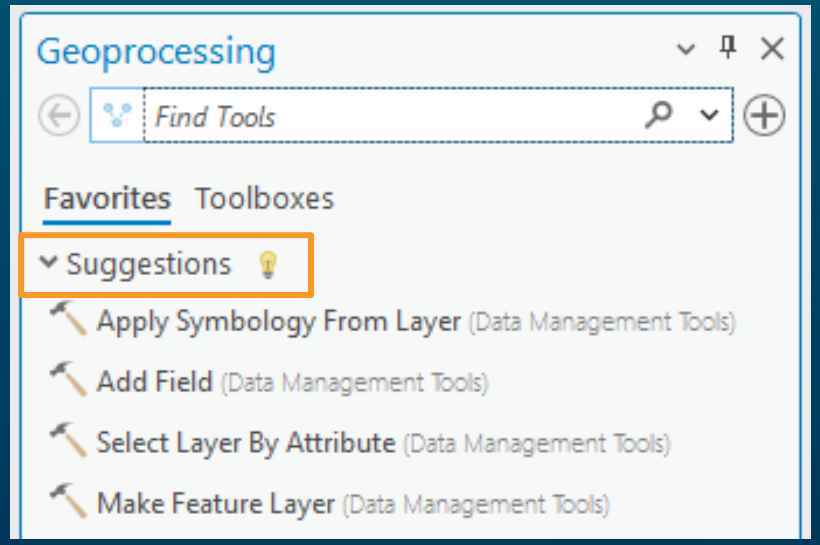
Highlights

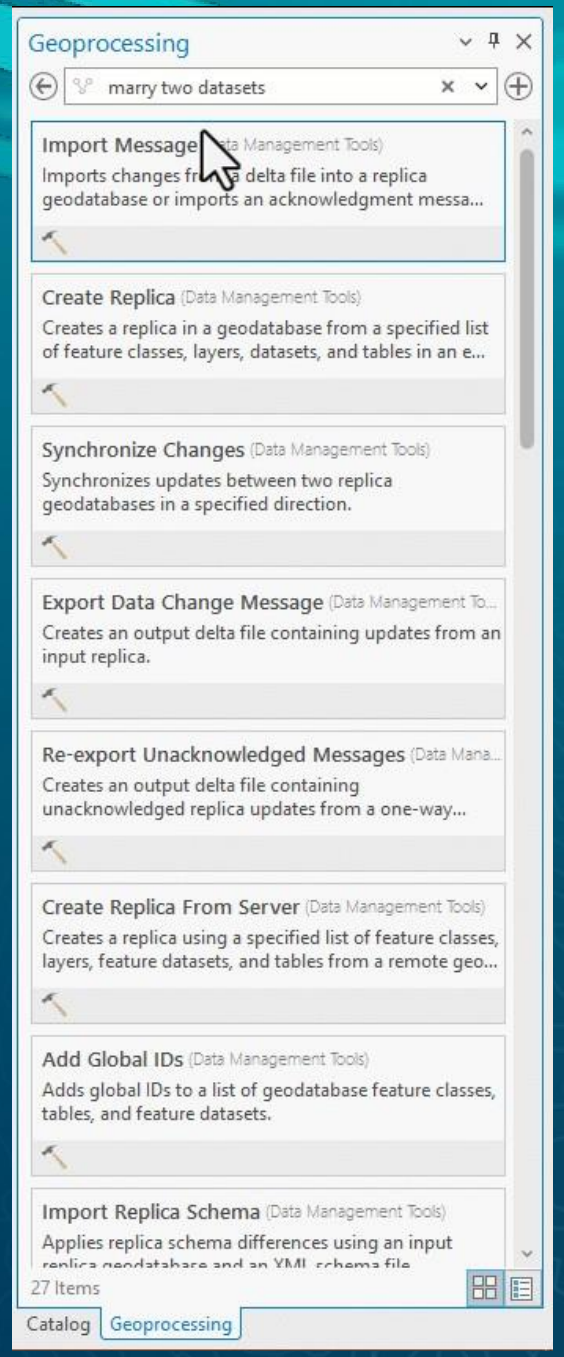
- Extract Data From Geodatabase
  - New geoprocessing tool (Extract Data Wizard equivalency)
  - Copy a subset of data by providing spatial extent, geometries or selection
  - Extract to existing geodatabase, XML, or new geodatabase
  - Extract schema and data, or schema only



Highlights

- Improved geoprocessing tool Search and Suggestions
  - Semantic search using conversational or plain-language queries
  - Suggestions in Favorites tab



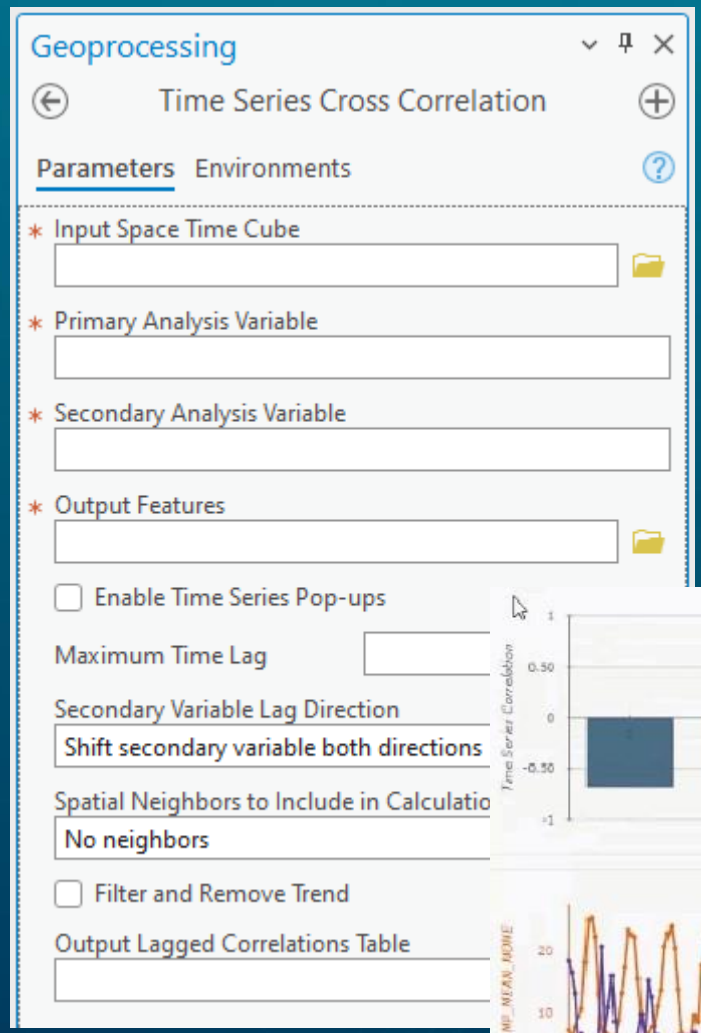


Highlights

Time Series Cross Correlation

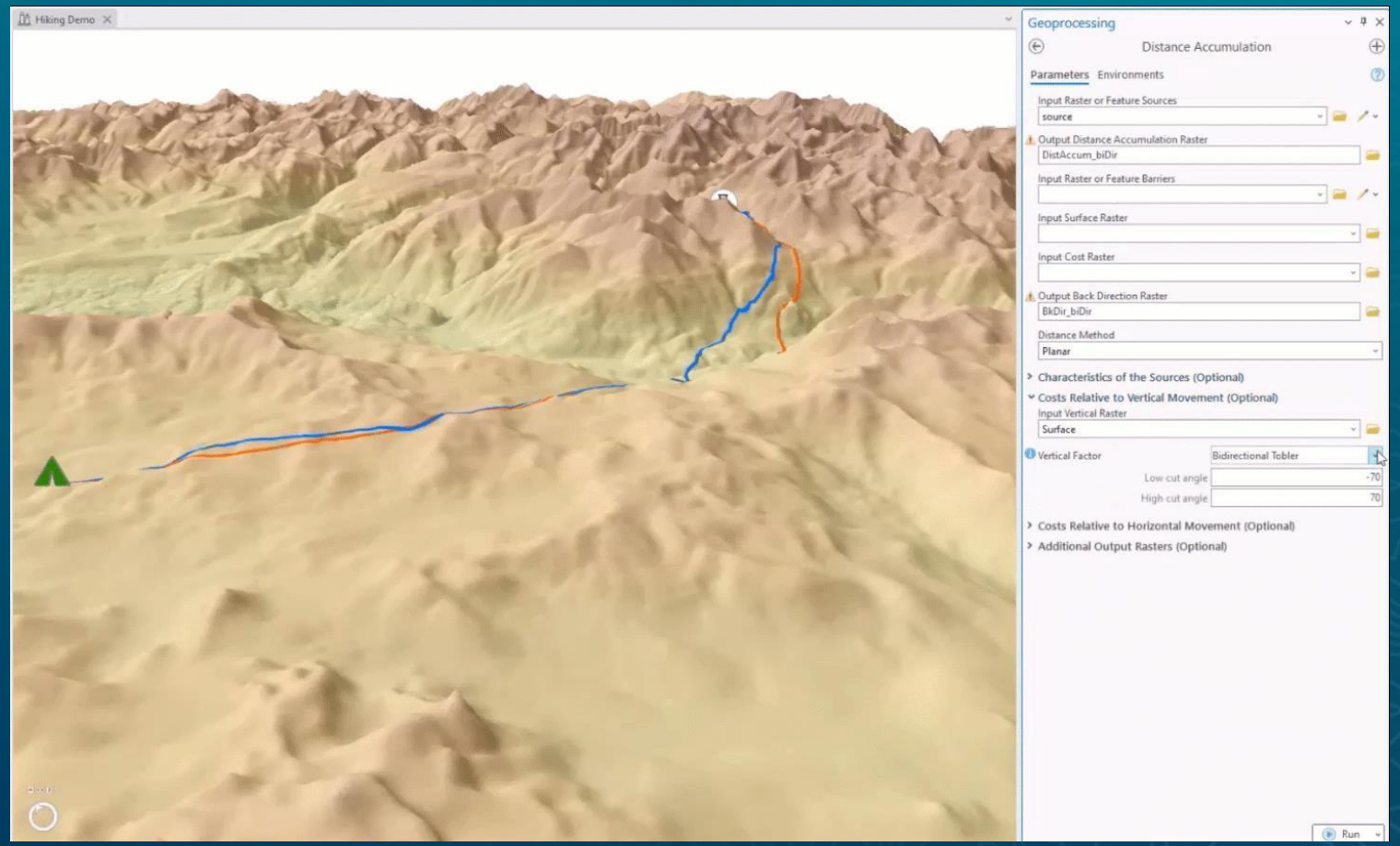
- Estimate delayed effects between primary and secondary analysis variables

- Potential applications
  - Compare hourly temperature to electricity usage
  - Estimate delay between increase in precipitation and increase in reservoir water volume
  - Estimate delay between marketing spending and customer purchases



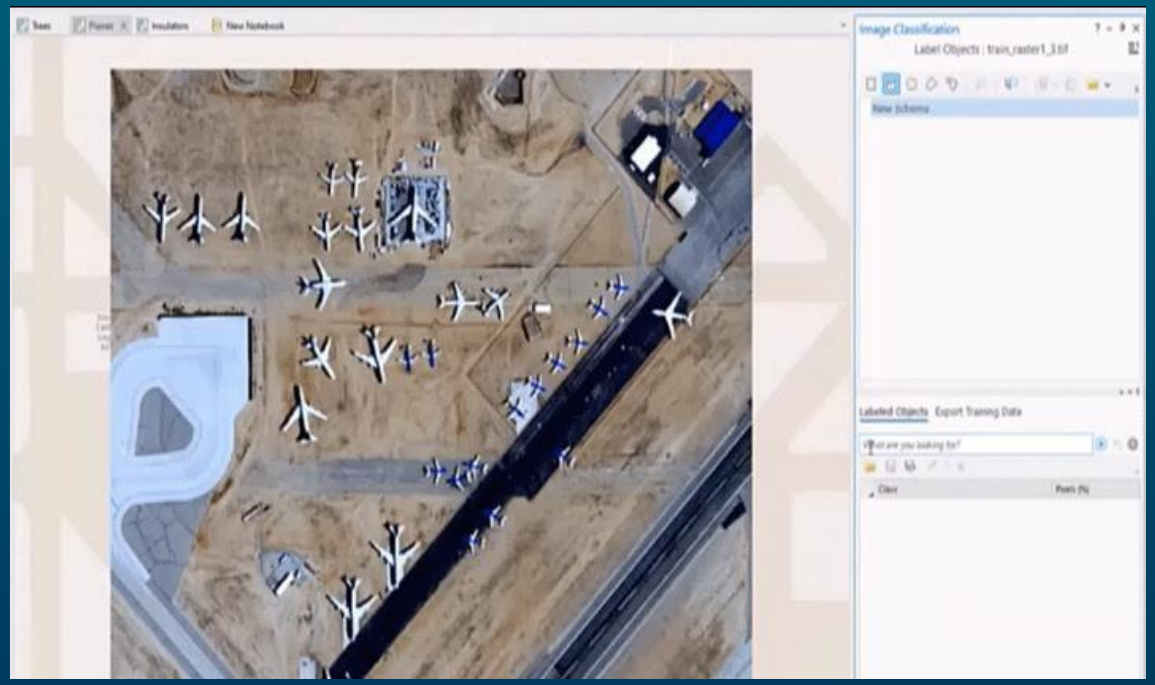
Highlights

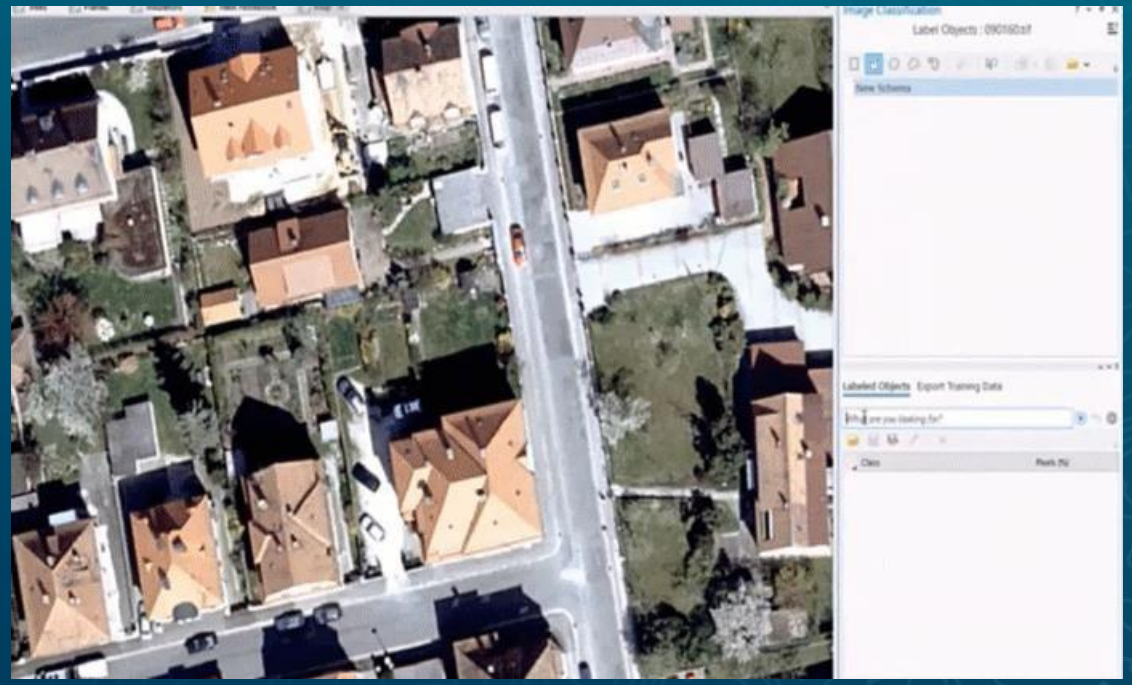
- Tobler's Hiking function
  - Added to Distance Accumulation
  - Also added Bidirectional Tobler function



Highlights

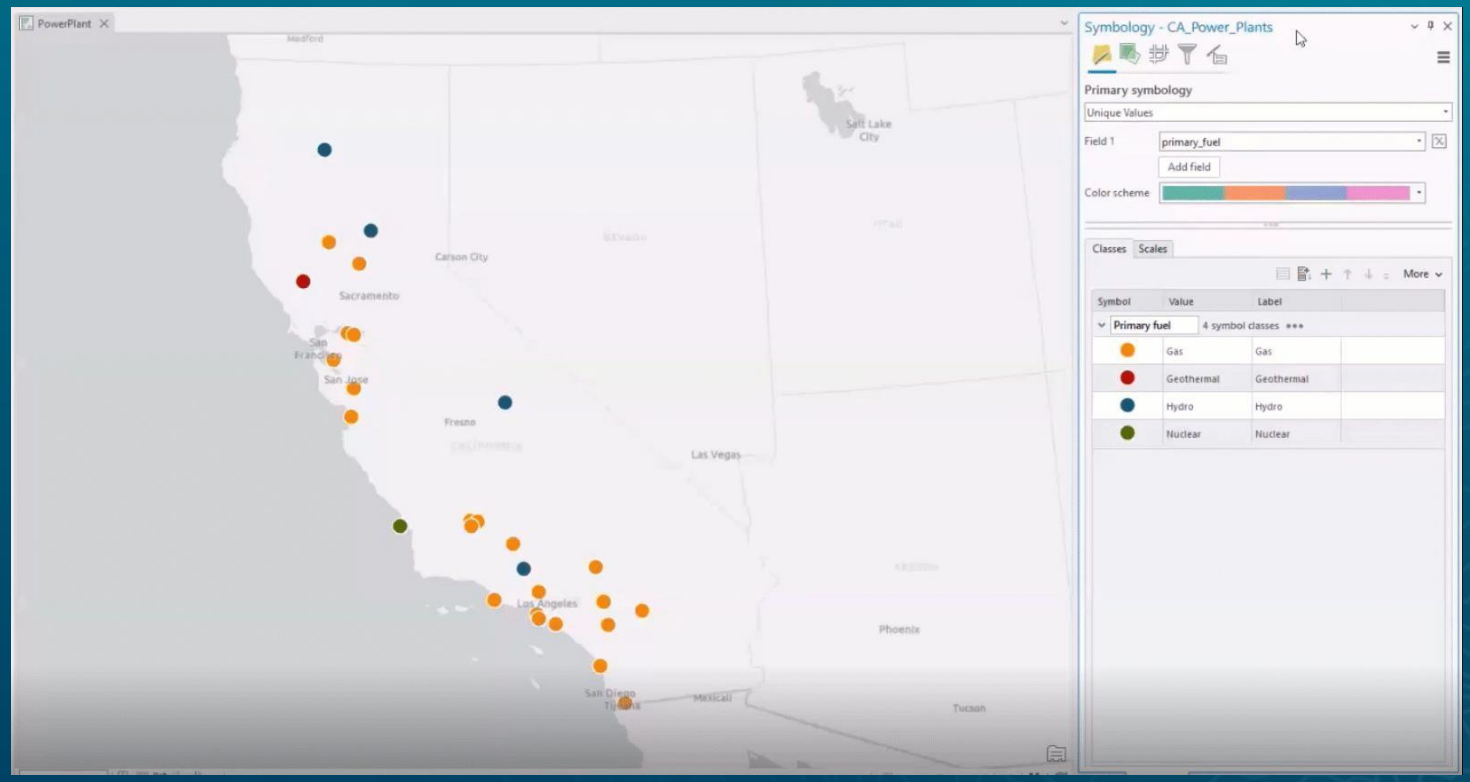
- AI assisted labeling for deep learning training
  - Text prompt to automatically detect objects for labeling





Highlights

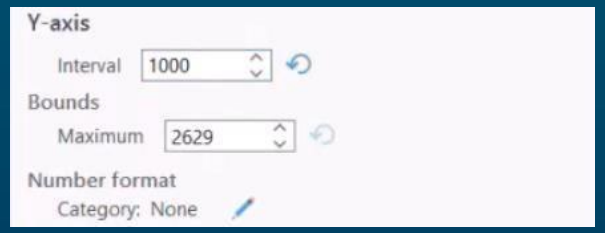
- “Quantity by Category” renderer
  - Unique value renderer → Vary symbology by attribute
  - Classify data to specify method, number of classes, histogram

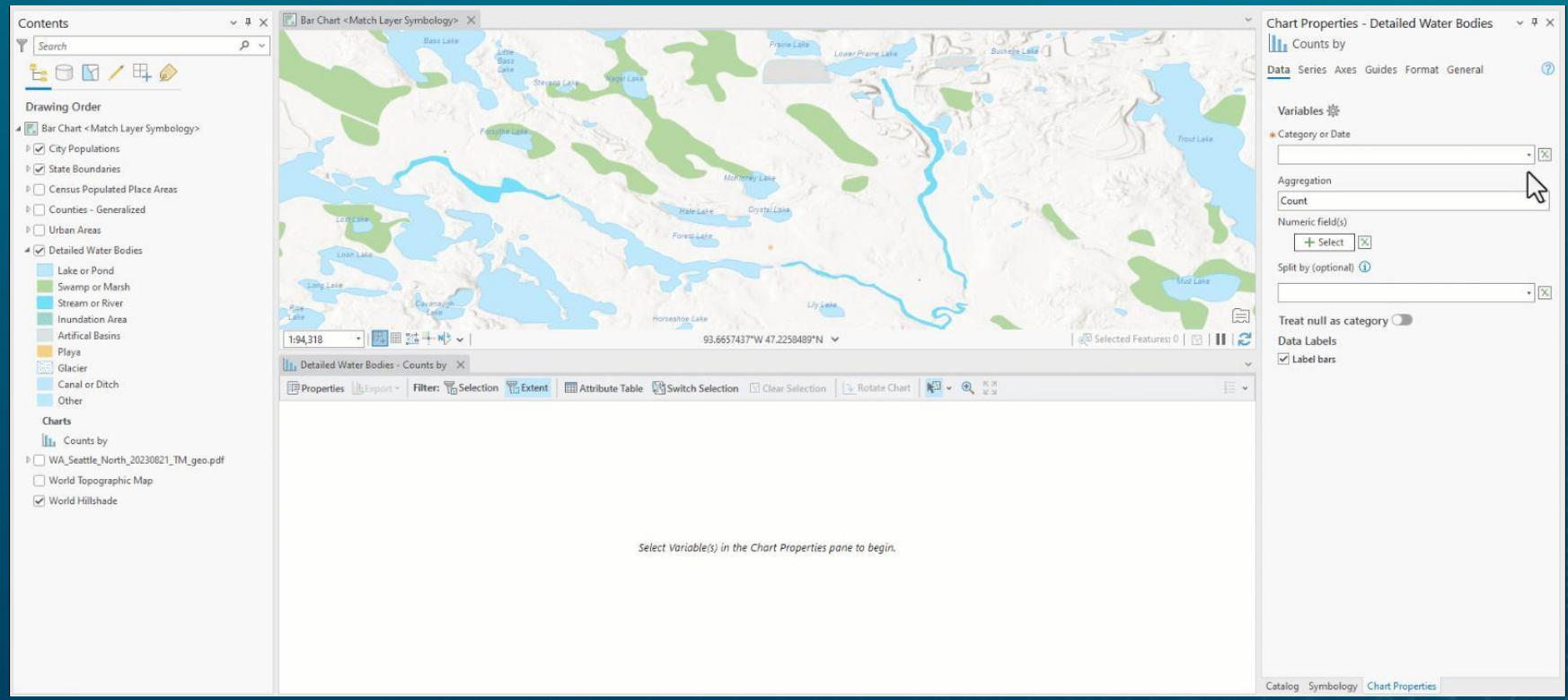


Highlights

Chart improvements

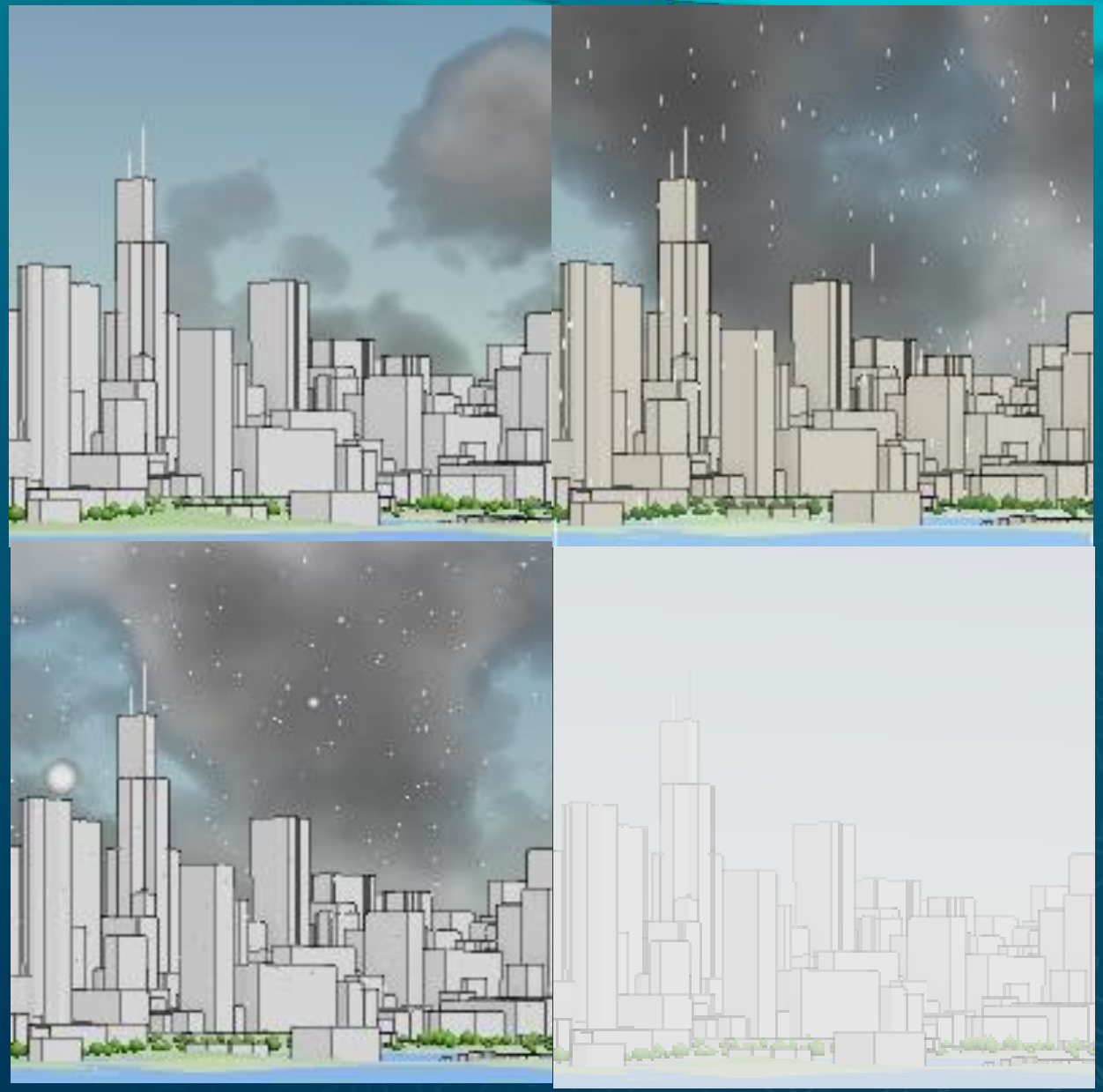
- Match layer symbology for bar charts
- Treat null as category
- Custom intervals





Highlights

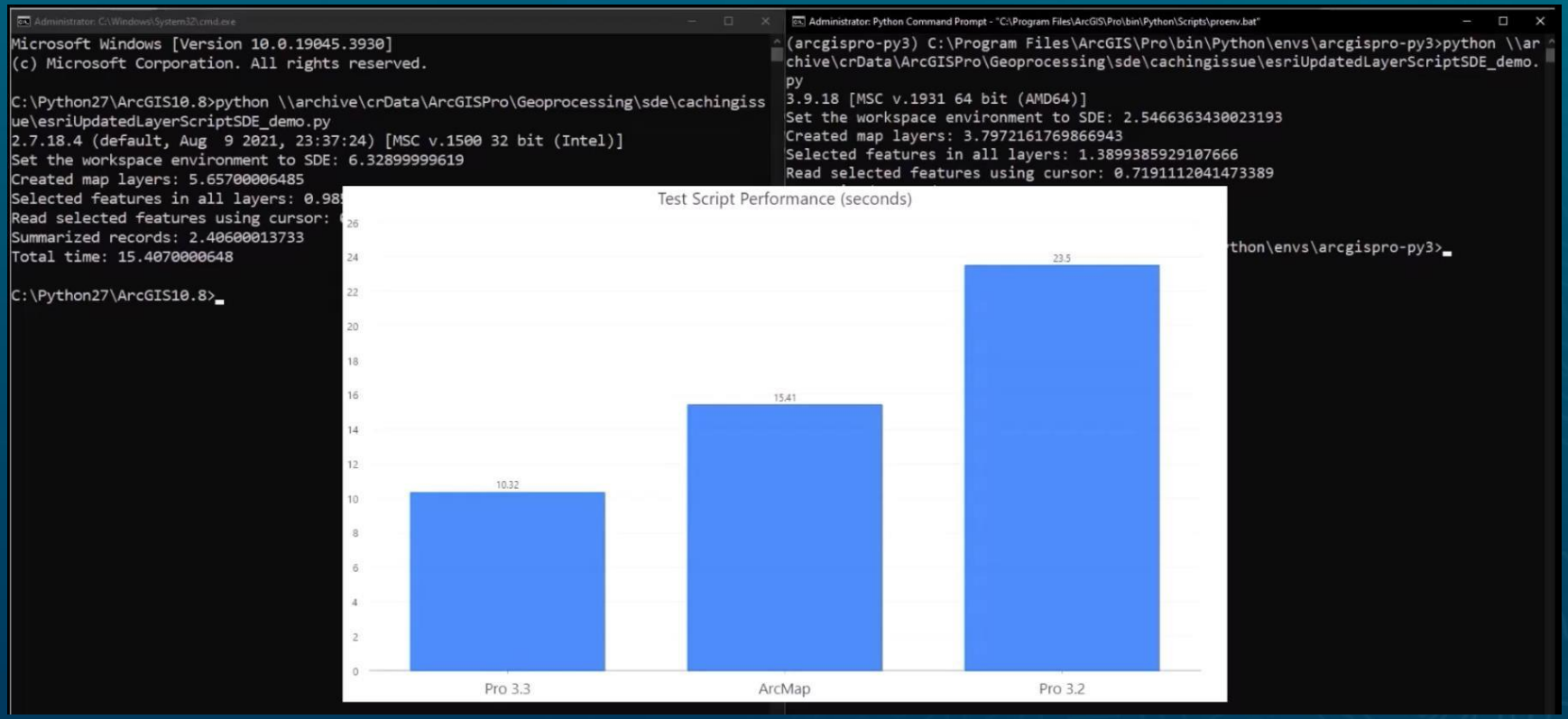
- Weather in global scenes (clouds, rain, snow, fog)



Performance and Productivity

Geoprocessing

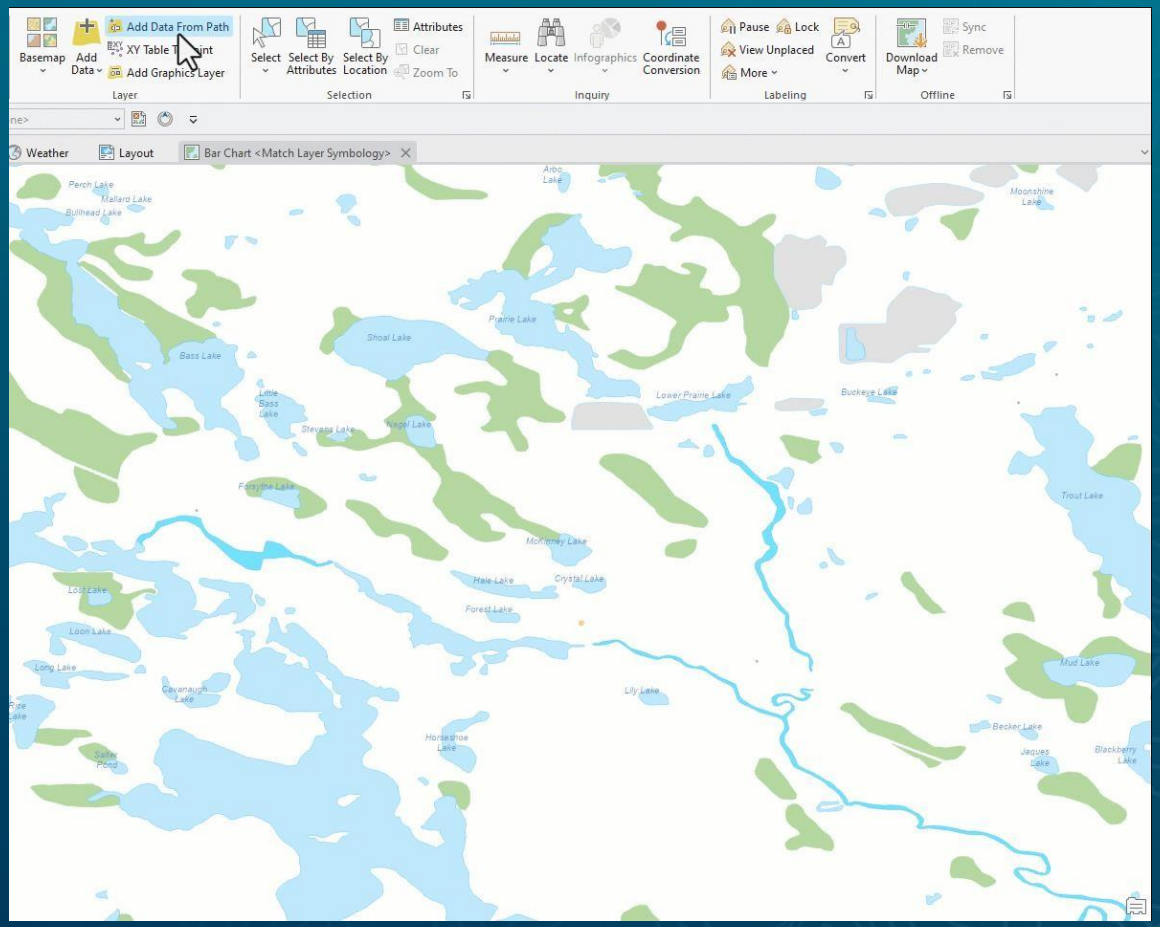
- Geoprocessing **workspace caching**



Performance and Productivity

Application

- **Configure Shortcut** – new option to get directly to an appropriate context when setting up contextual keyboard shortcuts

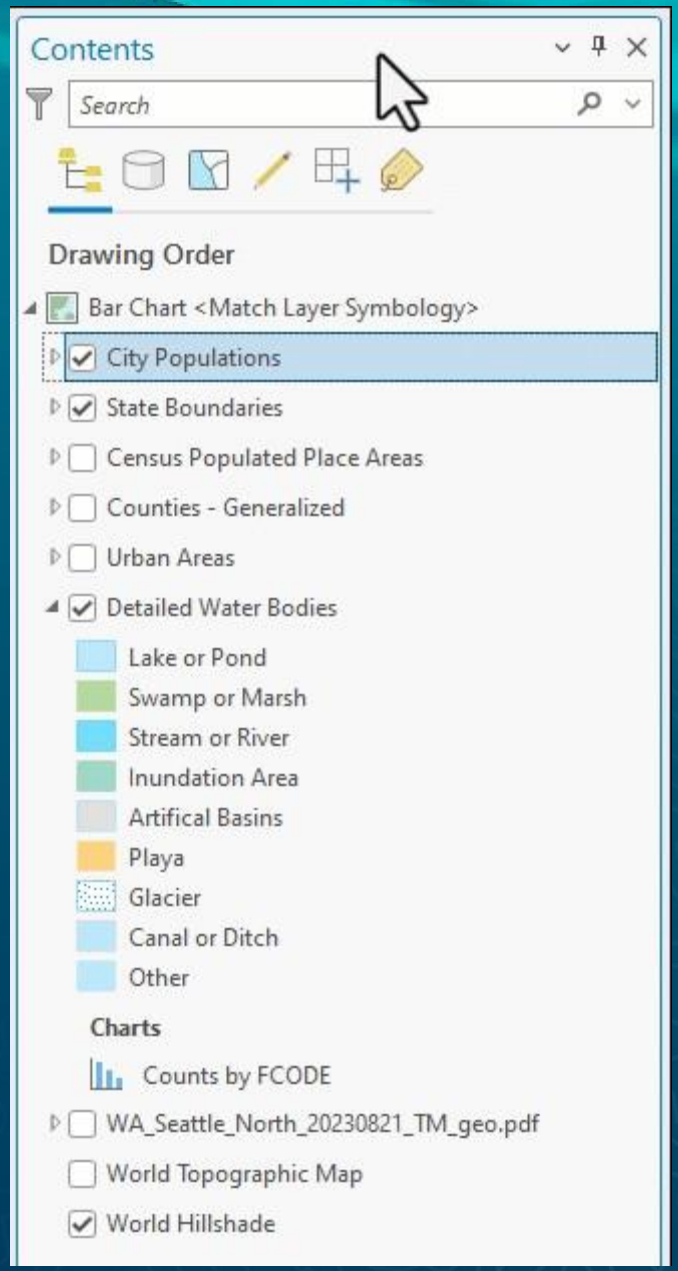


Performance and Productivity

Mapping

- **Navigate through Contents** pane using first letter

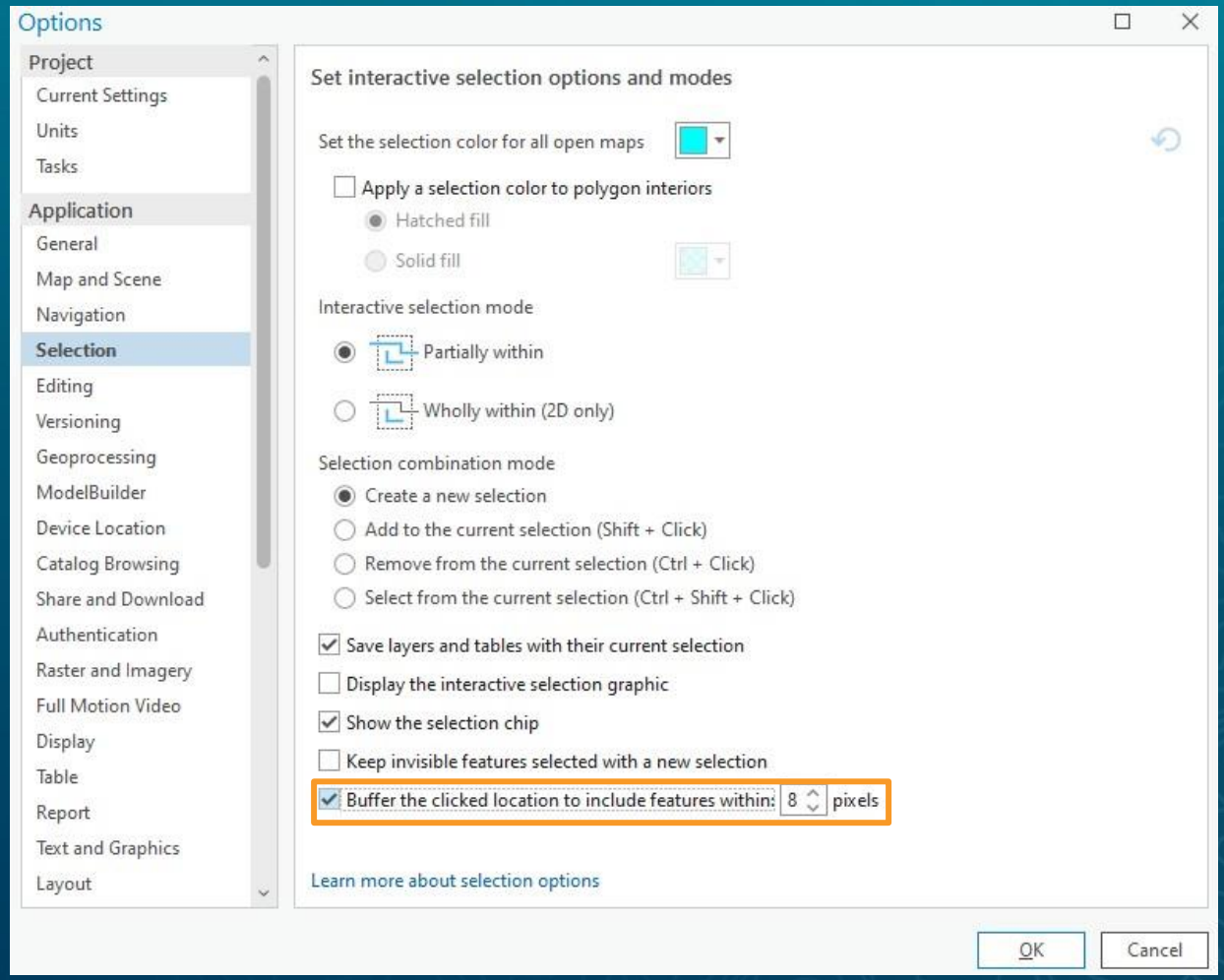
  For example, C key



Performance and Productivity

Mapping

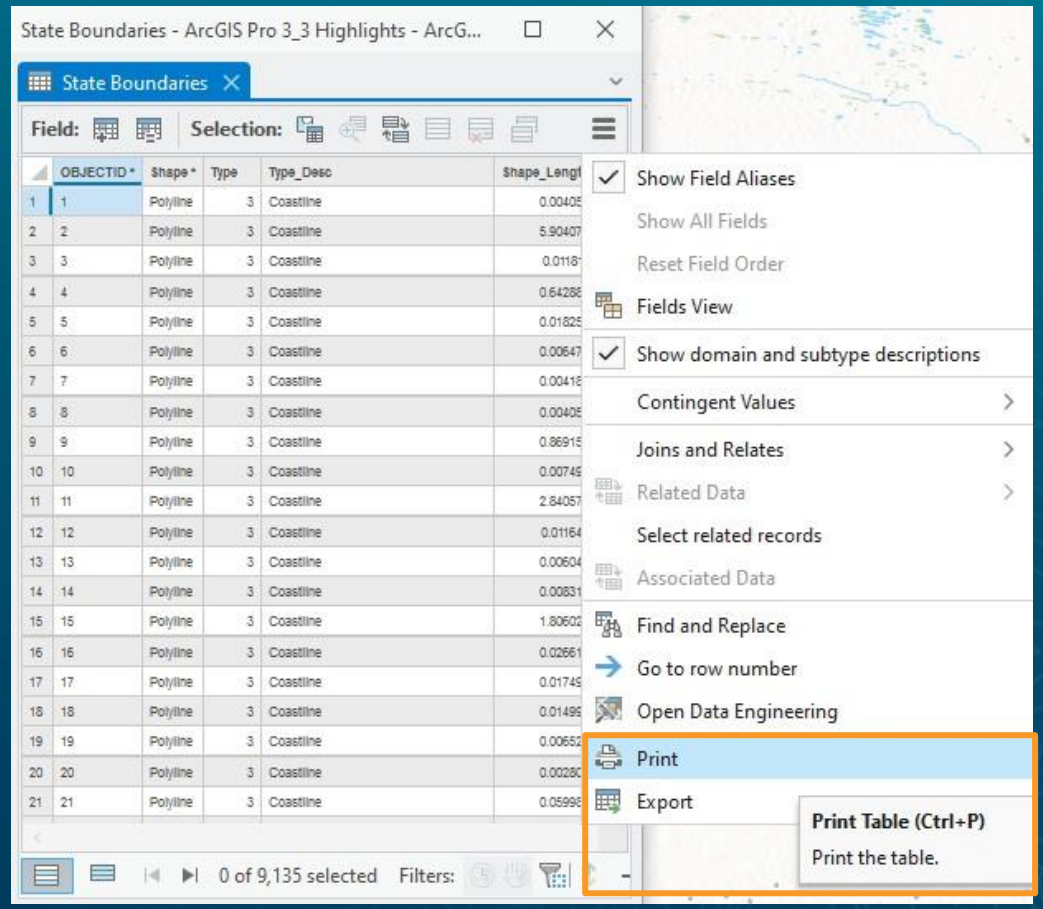
- **Click tolerance** for selections and popups



Performance and Productivity

Mapping

- **Print** attribute table



Performance and Productivity

Automation

- Arcpy **type hinting**
  - Example: show arcpy.da class, function and member args
  - String literals
  - Dictionary keys
  - Result objects

type-hinting.py 1 ●

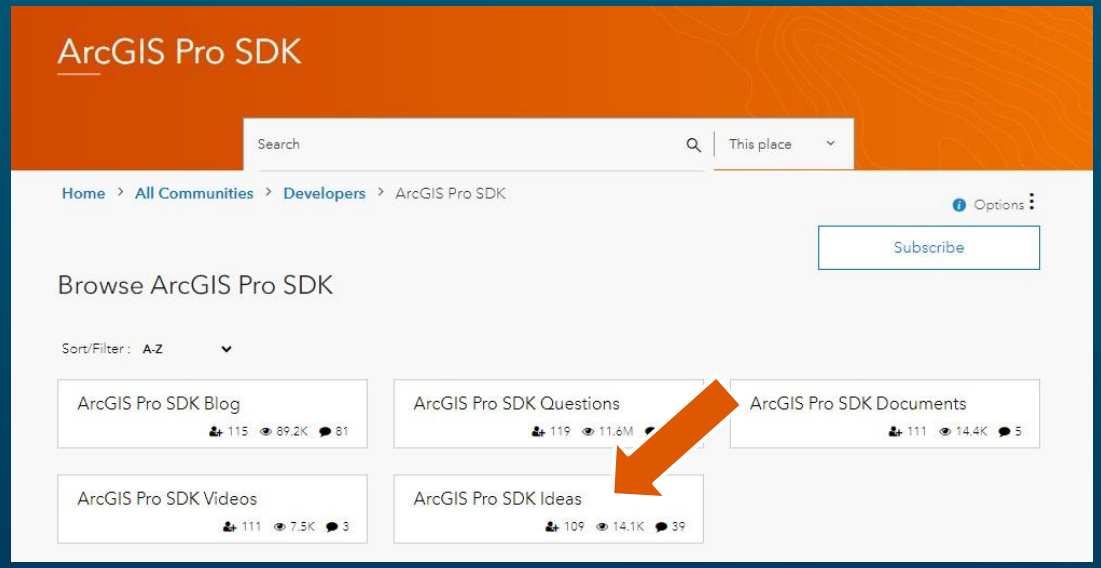
type-hinting.py > ...

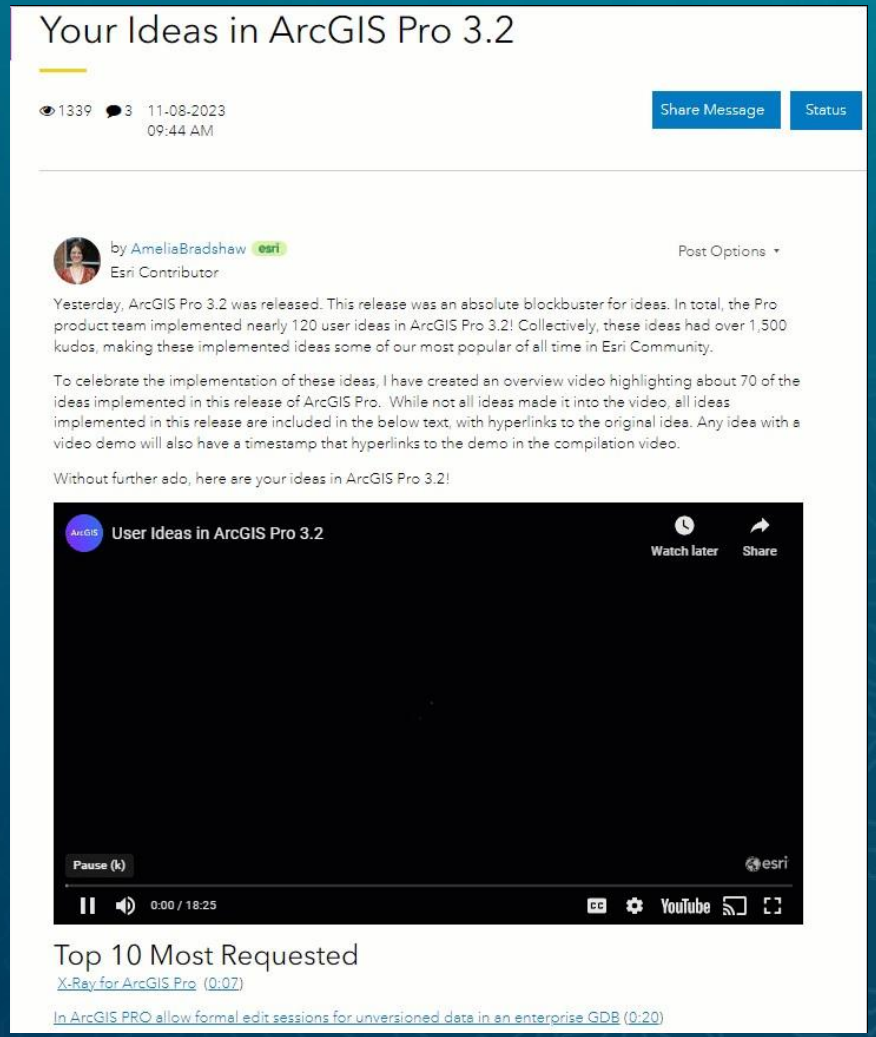
```
1   # type hints
2   # don't affect runtime code (ignored)
3   #   IDEs: VSCode but also PyCharm
4   #   static code analysis (mypy)
5   # help you generate better code
6   # impose some consistency
7
8   import arcpy
9   # arcpy.da has members and args on each
10  fc = r"c:\temp\f.gdb\cities"
11
12  # show arcpy.da class & function
13  # show arcpy.da member's args
14  arcpy
15
16
17  # works nicely at 3.2 without type hints
18  arcpy.Buffer_analysis
19  # did not work at 3.2
20  arcpy.analysis.Buffer
21
22  # literals
23  arcpy
24
25  # you don't have to guess at the keys
26  ii = arcpy.GetInstallInfo()
27  ii
28
29  # result objects
30  res = arcpy.analysis.Buffer(fc, buffer_distance_or_field=1)
31  # used to get nothing here
32  res
33
34  # NOT DONE/FUTURE RESEARCH
35  #  no literals on gp tool wrappers (future research)
36  arcpy.analysis.Buffer(line_side)
37
38  # future research: adding other sub-modules and gp tool return
39  ras = arcpy.sa.Aspect()
40  ras
```

Engaged ArcGIS Pro User Community

Our users' contributions make ArcGIS Pro better

- 1,000+ new ideas in the past year
- 60+ ideas implemented in ArcGIS Pro 3.3
- New dedicated ArcGIS Pro SDK idea exchange





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