Learning Common GIS Workflows

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Scenario

- Hamilton County Land Trust
- GIS Staff and volunteers
- Remotely located
- Working on a special project
Common GIS workflows
Getting things done

• Geodata
  - Geodatabase design
• Geoprocessing
  - Sharing geoprocessing packages
• Cartography & editing
  - Designing for GIS services
• Creating services
• Web map design
  - Symbology & functionality
• Web app design
• Field use
**Geodatabase design**

**Geodata workflow**

![Geodata workflow diagram](image)

**PeopleTracker Project — Geodatabase Design**

**Purpose:** HCLT management wishes to know where people who work for, volunteer for, and visit the Land Trust are located. Management requires this to be available online in a web application that allows anyone (staff, volunteers, visitors) to add a point to a map showing their home location and, if possible, upload a picture of themselves (selfie).

**Assessment:** No data structure currently exists which could support this project. Interviews with HCLT executive director, operating officer, and technology officer identified the following basic structure:

For staff: track employment date, employment status (full-time or part-time, permanent or temporary), and employment classification (Professional, Staff, Field, Technical).

For volunteers: track start date, volunteer assignment (Guide/Docent, Technical support, Admin support), commitment hours (<100 hours, 100-300 hours), and.

For Visitors: track date of visit, 1st time-visitor or repeat visitor, interests (wildlife, birds, nature).

All should allow for comments and or name.

**Design:**

- Single point feature class, Web Mercator

**Attribute fields:**

- Role, Integer, Subtype (100—Staff, 200—Volunteer, 300—Visitor)
- Comments, text (contain comments or name)
- Function, Text — domains for each subtype
- Interests, Text — domains for each subtype
- Date, Date — value depends on subtype
Design
Geodatabase workflows

PeopleTracker
Point
Web Mercator

Fields
ROLE, Int
DATE, Date
FUNCTION, Text
INTERESTS, Text
COMMENTS, Text

Subtypes
Staff
Volunteer
Visitor

Domains
Staff employment
Staff role
Volunteer hours
Volunteer assignment
Visits
Visitor interests
Geoprocessing
Sharing a geoprocessing model
Geoprocessing workflow

Author content
Specify package location
Include additional files
Analyze content
Share package
Cartography & Editing
Designing service functionality
Cartography & editing

Planning
Data
Symbology
Share
Configure
Web Map Design
Creating a web map
Web map design

Choose Basemap → Add Layers → Symbolize Layers/Configure Pop-ups → Save as Web Map → Share & Configure
Web App Design
Web app design

Purpose

Assess

Test

Build

Release

Design

Start
Create a web app
Web app design

Create New App → Pick Style → Select Map → Add Widgets → Configure Attributes → Preview & Publish
Conclusion
GIS workflows covered
Learning common GIS workflows

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Resources
Learning common GIS workflows

- Geodatabase design
  - ArcGIS Desktop Help > Designing a geodatabase
- Geoprocessing
  - Sharing data through packaging
- ArcGIS Enterprise tutorials
  - Publishing a map service
- ArcGIS Online
  - Create maps
  - Publish hosted feature layers
- Web AppBuilder