Landing a Big Fish:
The NWRS Landsmapper

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Mission of the National Wildlife Refuge System

To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.
The Big Catch: The FWS Cadastral Geodatabase

FWS Authoritative Real Estate Parcel Data

* Refuge Land Status (fee, easement, etc.)
* Approved Acquisition Boundaries
* Wilderness and other Special Designations
A Brief History - LandsMapper

- 1903-present: Refuge Land Acquisition
- 2005-2009: FWS Cadastral Geodatabase
- 2010-11: Adobe Flex-based mapper
The Big Challenge: Rebuild The LandsMapper with Web App Builder

* Efficient Discovery and Rendering of:
  * 50,000+ Parcels (30,000+ coming soon)
  * 566 Wildlife Refuge Boundaries
    * Vary in scale from Alaska to Mille Lacs
  * Base data: PLSS, Counties
  * Do it myself
NWRS Mapper – Portal (Enterprise) Based Version
What could possibly go wrong?
REST & HFS bogged down our server
Alaska Refuges have up to 1 million vertices
Couldn’t do wide release to FWS
Considered “scuttling” the App
The Rescue Strategy: The Fish “Sandwich”

- Re-publish all visible content as Vector Tiles
- Publish 100% transparent “Ghosted Feature Services” for features with Pop-ups
- Use ESRI Vector Basemaps v2
“Captain Jack” Dangermond pirated my thunder by announcing:

“Vector Feature Services are on the horizon.”

Use my approach until ESRI’s solution is released
Never fear sailing beyond the edge of the map.
-30,000 foot view - Workflow

Data -> ArcGIS Pro -> Web Map -> Web App
The Big Release II: The NWRS Lands Mapper

arcg.is/1Si1O1
The Net Benefits: The NWRS Lands Mapper

- Public Access to parcel data and records
- Any device – Responsive Design
- Updates can be shared in minutes
- Add your own data or any ArcGIS Online content
- Limited only by ESRI App Development
  New features coming soon!
Teach someone to Fish...best practices

- Vector Tiles – learn more this week
- Set zoom scale dependencies for your data
- Find workarounds - Like ghosted feature services
- Use end user - focused Widgets
- Test thematic colors across all base choices provided
Thank you! Any Questions?

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NWRS Mapper http://arcg.is/1Si1O1

Download the Cadastral Geodatabase:
www.fws.gov/gis/data/CadastralDB/index_cadastral.html