



Washington
State Department of
Agriculture



Washington Climate Smart Estimator (WaCSE)

Using ArcGIS Dashboards and Experience Builder



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2022 WAGISA Conference



Introduction



TACOMA  WATER



Presentation Overview

Sustainable Farms & Fields Grant Program (SFF)

Spatial Datasets

Live Demo WaCSE

Workflow and Insights



SFF: Overview



Voluntary grant program to make it easier and more affordable to implement climate-smart practices

Free services such as on-farm consultations, climate-smart farm plans, technical expertise, and financial assistance

Mission: Incentivize farmers and ranchers to adopt sustainable practices to sequester carbon, reduce greenhouse gas emissions, and enhance soil health



WASHINGTON STATE
UNIVERSITY



United States
Department of
Agriculture

Natural Resources Conservation Service

SFF: Eligible applicants and practices



Conservation districts
and other public
entities may apply



Technical assistance
(*Potato Field Day, WSU*)



Purchasing seeds
(*Crimson clover
cover crop, King CD*)



Purchasing shared-
use equipment
(*Direct seeder, Foster Creek CD*)



Cost sharing
(*Riparian planting,
Palouse CD*)

SFF: Prioritization

Geographic
distribution

Commodity
distribution

Partnerships

Reduce
CO₂e
emissions

Farm
size

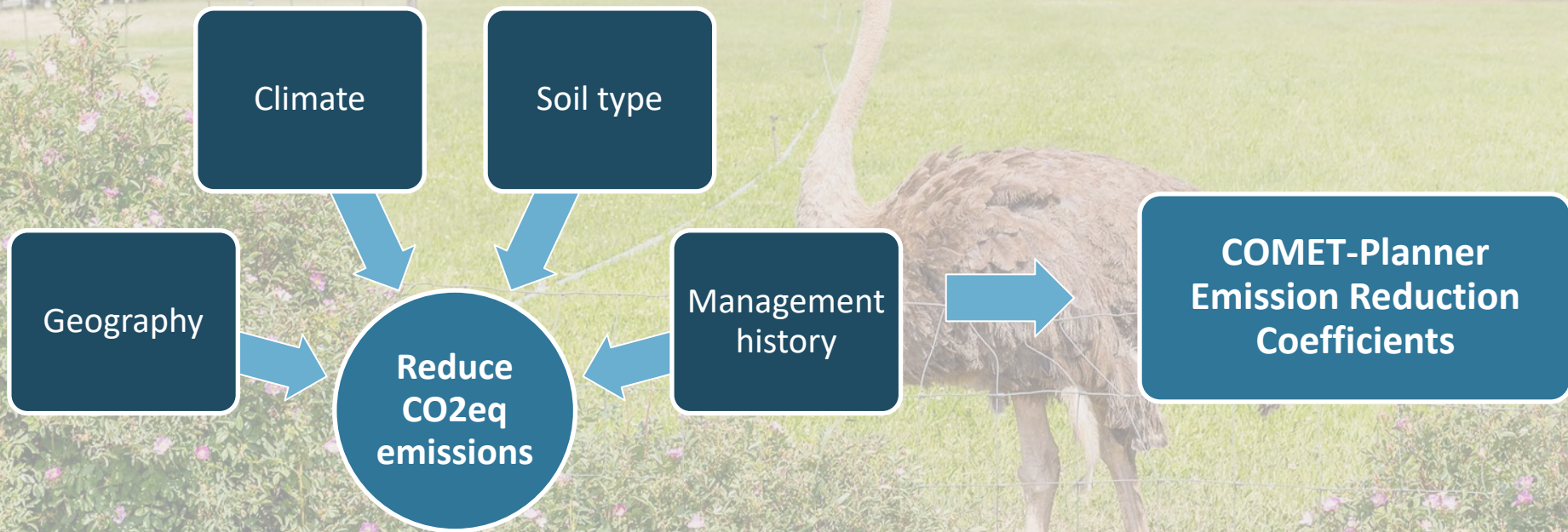
Fish and
pollinator
habitat

Diversity,
equity, and
inclusion

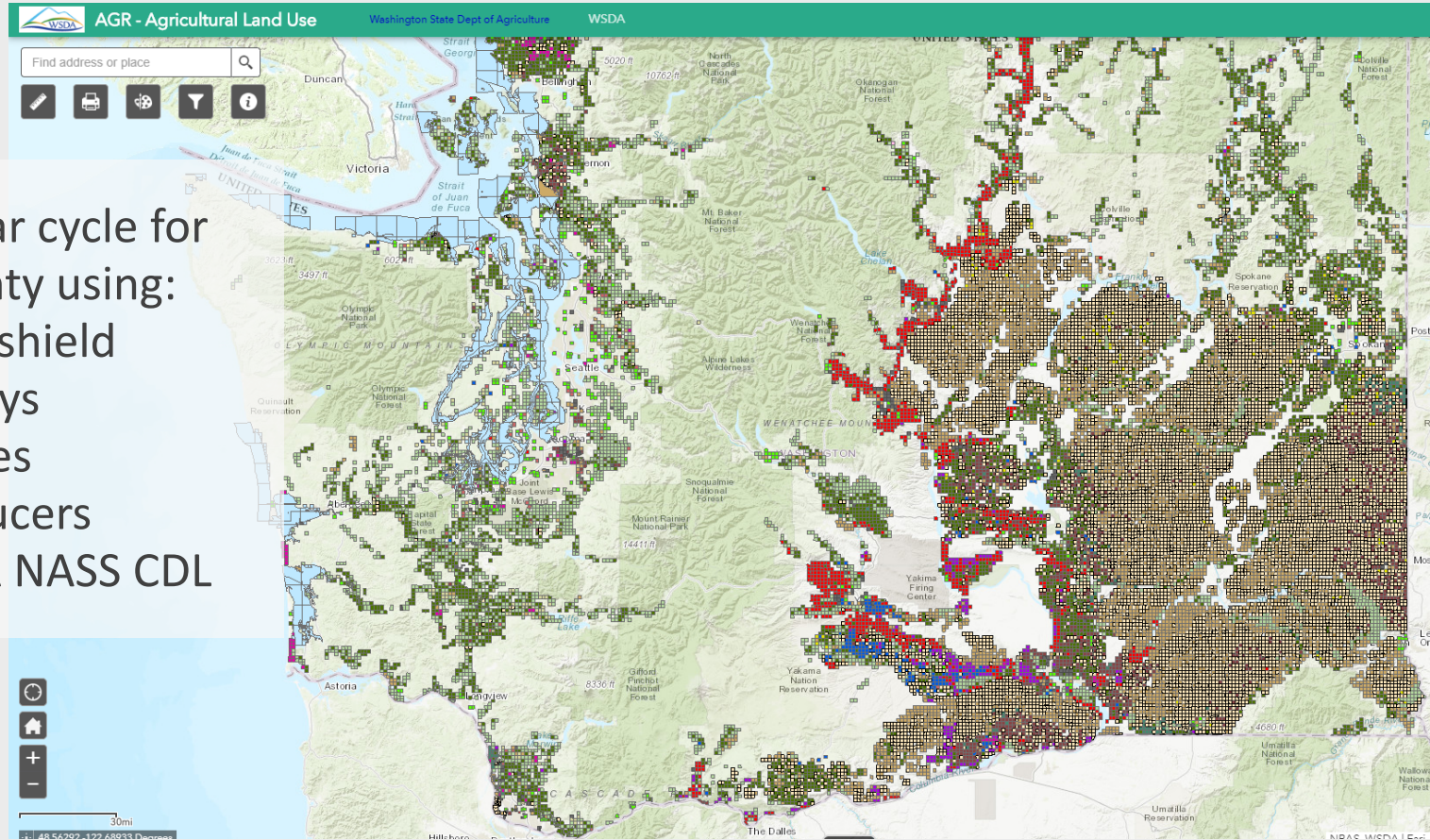
- **39** counties
- **725** named soil series
- **27** conservation practices
- **92** practice implementations



Spatial datasets: NRCS COMET



Spatial datasets: WSDA agricultural land use



- 2-to-3-year cycle for each county using:
 - Windshield surveys
 - Images
 - Producers
 - USDA NASS CDL



Live Demo



Workflow and Benefits

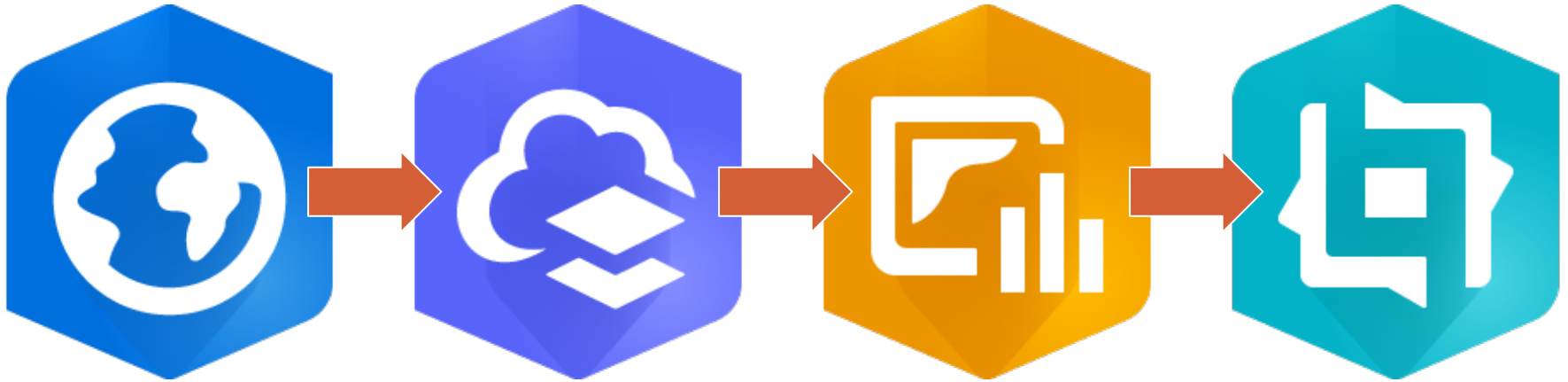


**COMET
Planner**

USDA United States Department of Agriculture
Natural Resources Conservation Service

Colorado
State
University

**AGRICULTURAL
LAND USE** 



Benefits: intuitive UIs, very little code, quick to build, easy to deploy

Limitations and Future Work

Required features:

- Numeric input for calculations
- Export reports
- Error bars
- Conditional filters
- Full customization
- Modularization

Spatial R packages:

{sp}, {rgdal},
{leaflet}, {leaflet.esri},
{arcgisbinding}



Contact & Links

- jryan@agr.wa.gov
- WaCSE: <https://experience.arcgis.com/experience/1982f8e8d9fb4be196b83502f9e6bc28/>
- WSDA Ag Land Use: <https://agr.wa.gov/departments/land-and-water/natural-resources/agricultural-land-use>
- NRCS COMET-Planner: <http://comet-planner.com/>

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