Washington State Department of Agriculture

Washington Climate Smart Estimator (WaCSE)

Using ArcGIS Dashboards and Experience Builder

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2022 WAGISA Conference

Introduction

Presentation Overview

- Sustainable Farms & Fields Grant Program (SFF)
- Spatial Datasets
- Live Demo WaCSE
- Workflow and Insights

WSDA

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 Conservation Commission

WSDA

WASHINGTON STATE UNIVERSITY

USDA United States Department of Agriculture

Natural Resources Conservation Service

SFF: Eligible applicants and practices

Conservation districts and other public entities may apply

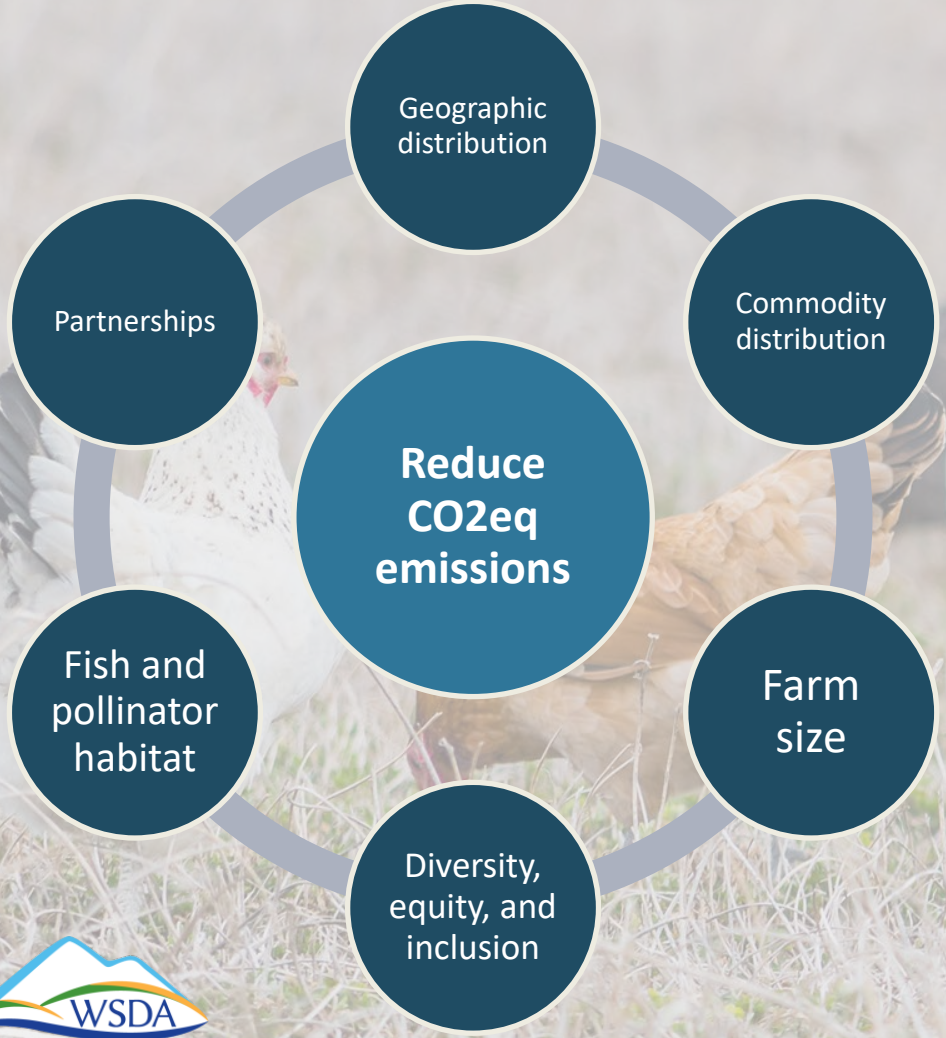
Technical assistance
(*Potato Field Day, WSU*)

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

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

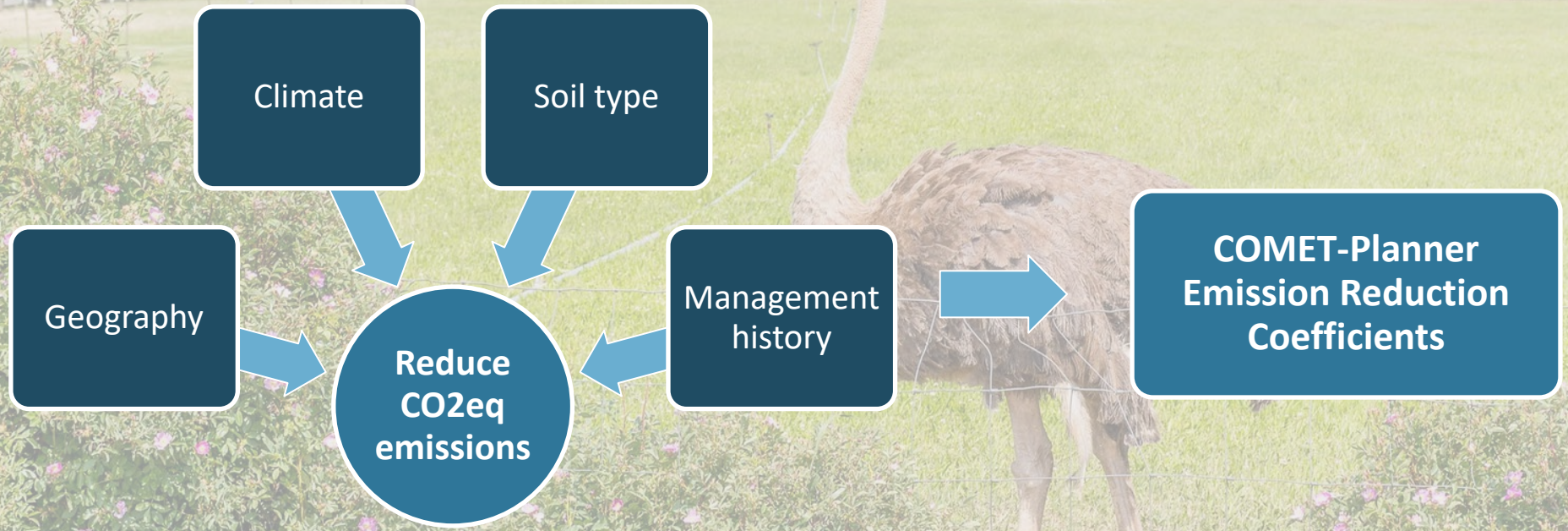
Cost sharing
(*Riparian planting, Palouse CD*)

SFF: Prioritization



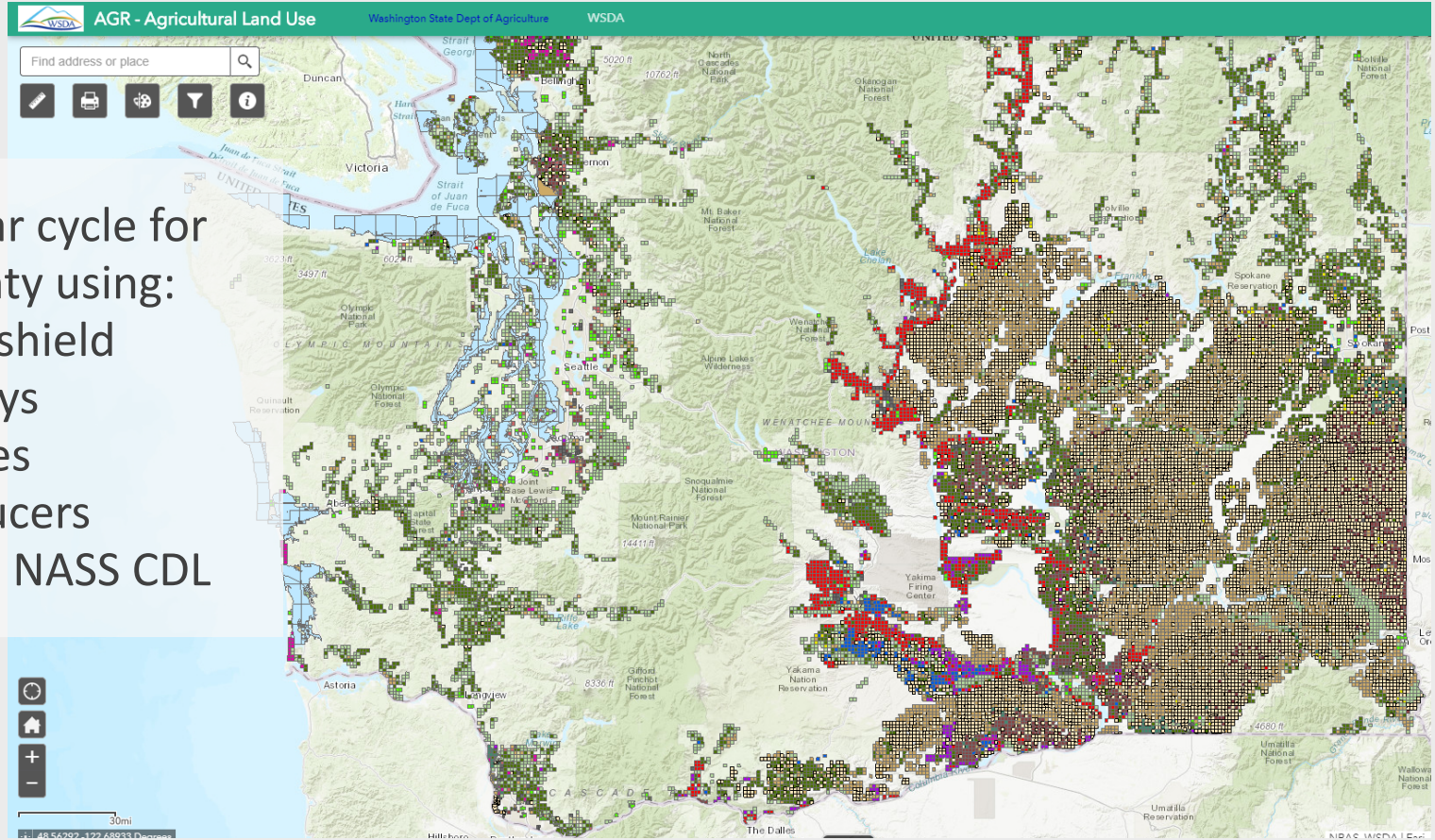
- **39** counties
- **725** named soil series
- **27** conservation practices
- **92** practice implementations

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

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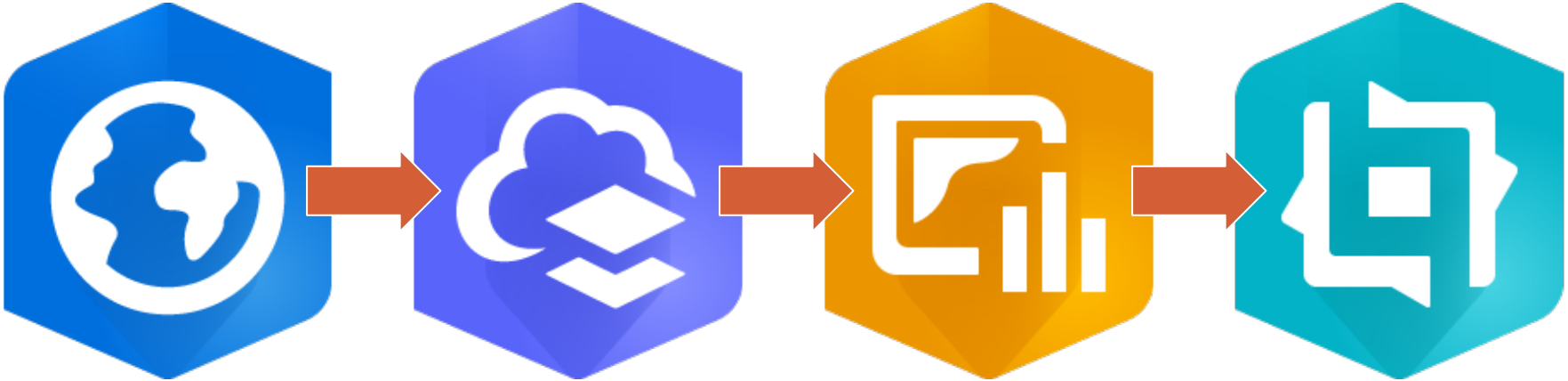

Benefits: intuitive UIs, very little code, quick to build, easy to deploy

Limitations and Future Work

Spatial R packages:
{sp}, {rgdal},
{leaflet}, {leaflet.esri},
{arcgisbinding}

- **Required features**:
  - Numeric input for calculations
  - Export reports
  - Error bars
  - Conditional filters
  - Full customization
  - Modularization

R Studio®

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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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