



Land Use Land Cover for the Denver Region

October 3, 2018

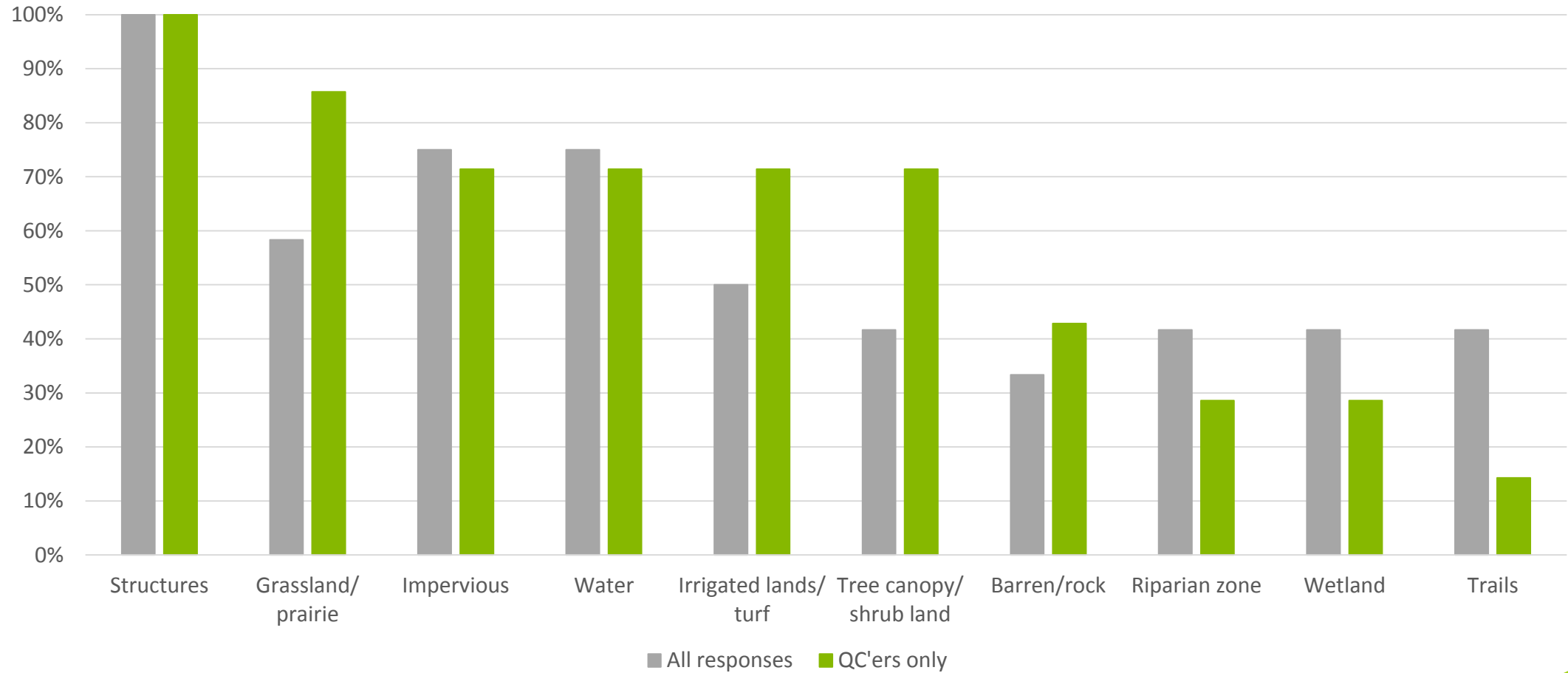


Use cases

- Determine tree canopy cover of urban areas that relates to species diversity and urban heat (i.e. tree canopy over impervious)
- Study urban growth and gentrification
- Evaluate sustainability of neighborhoods using rooftops gardens and community gardens
- Identify natural corridors and connectivity of natural areas
- Understanding yard composition
- Mapping micro-habitats
- Metrics over time
- Identifying barren/degraded landscapes
- Finding opportunities for parks/open space as it relates to social justice/equity
- Determining roof albedo related to Green Roof Initiative
- Identifying sidewalks
- Determine forest composition (tree species)
- South Platte reclamation studies
- Land planning
- Economic development
- Water quality/quantity studies
- Flood control
- Fire management
- Tree planting/lawn initiatives
- Understanding species habitat (e.g. prevalence of invasive)
- Recreational planning (e.g. trail placement)
- Modeling runoff to understand water quality
- Hydrologic analysis of impervious surface (understanding how impervious surface type changes flow pattern and quantity)
- Evaluate stream channel roughness and channel movement
- Reference data for other projects that characterize land cover at coarser resolution (but over many years).
- Characterize urban heat island effects
- Integrate with our broadband data to better understand potential natural barriers or obstacles of coverage.
- Identify areas for redevelopment, identify natural corridor fragmentation

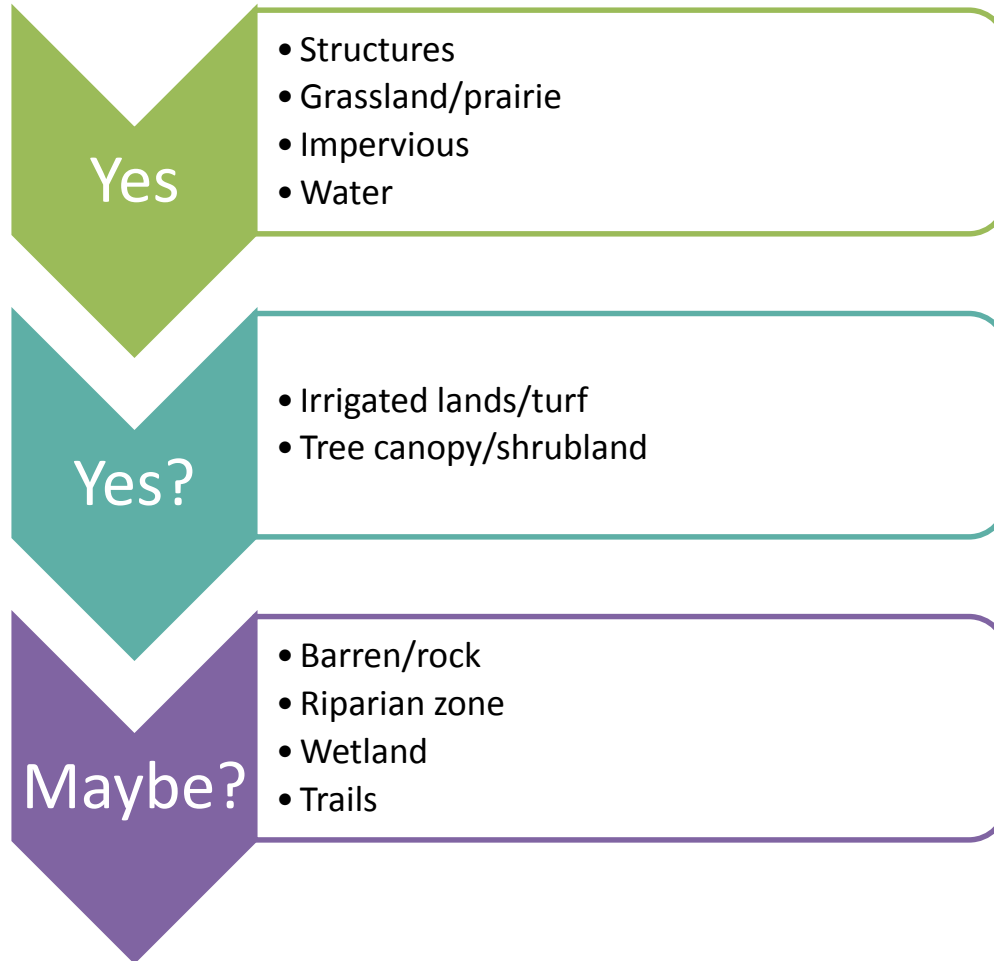


Voting for classes





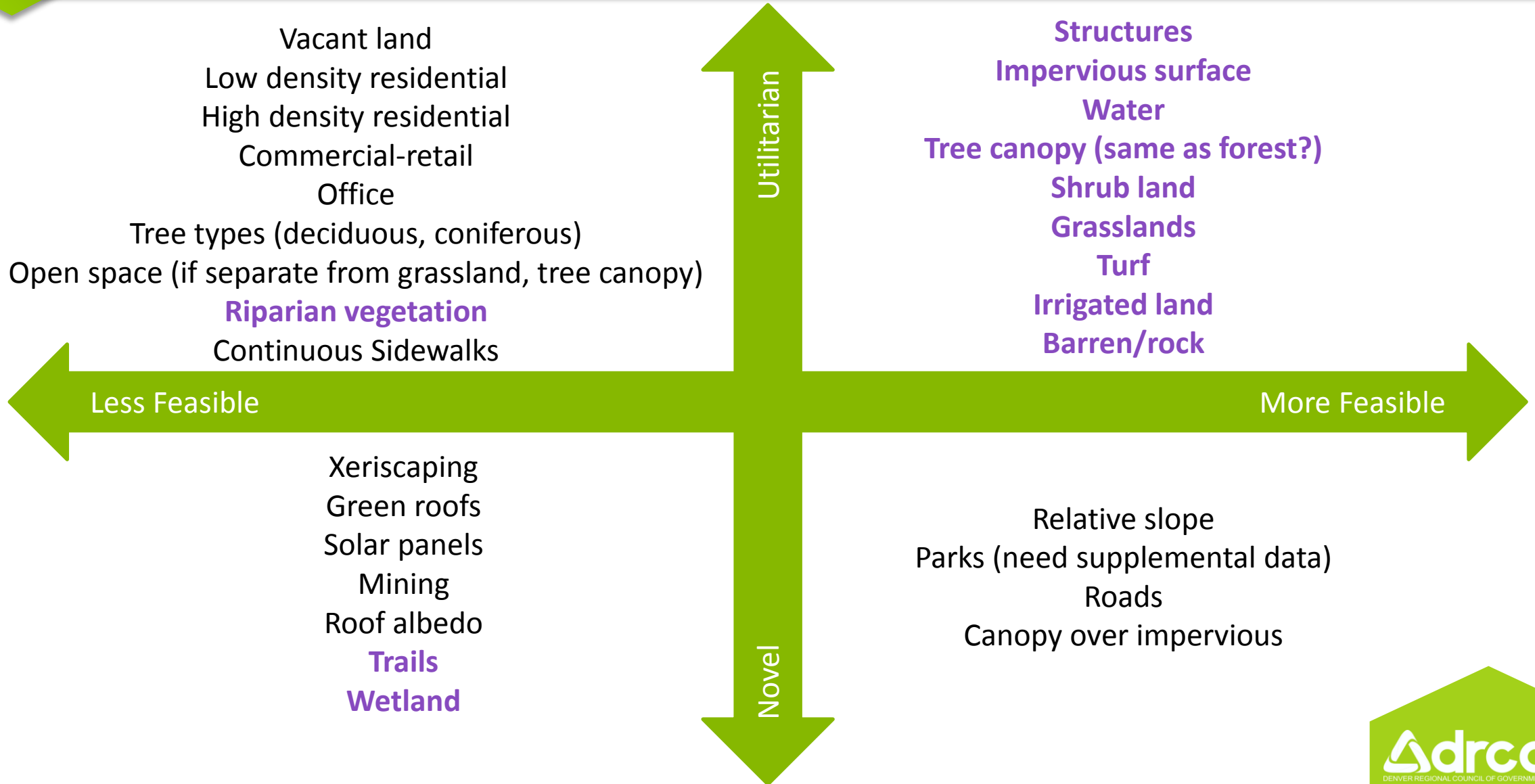
Class prioritization



- Are there other classes we should consider?
- Are there other experts we should talk to?
- Suggestions for how we settle on 8?

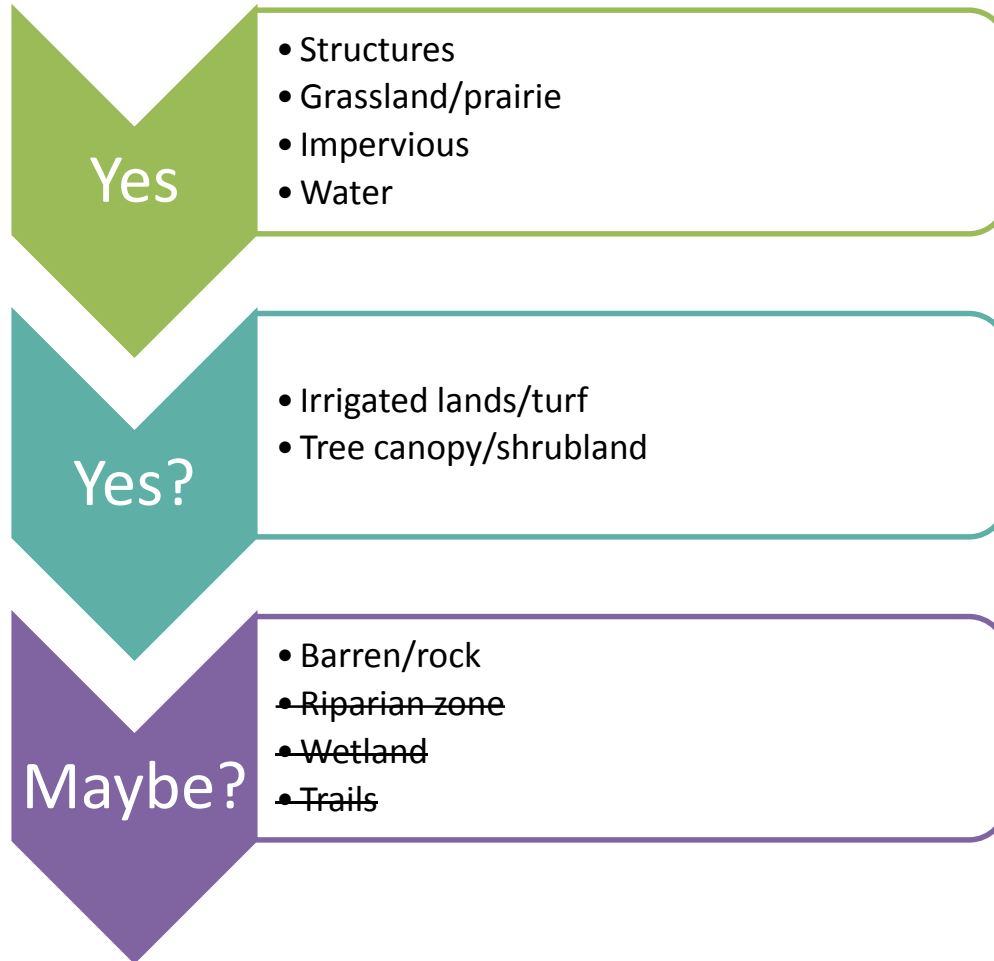


Class feasibility





Class prioritization



- Does this list look right?
- If so, let's talk about **minimum mapping units...**



MMU examples

Water

All areas of open water, generally with less than 25% cover of vegetation/land cover. This includes water-filled backyard pools, ponds, lakes, rivers, natural tidal pools in wetland areas, and boats that are not attached to docks. MMU = 25 square meters, approximately 5 meters wide

Structures

Human-constructed objects made of impervious materials that are greater than approximately 2 meters in height. Houses, malls, and electrical towers are examples of structures. MMU = 9 square meters

Impervious Surfaces

Human-constructed surfaces through which water cannot penetrate, and that are below approximately 2 meters in height. This includes asphalt, concrete, gravel, pavement, treated lumber (e.g. docks and decks), etc. MMU = 9 square meters, minimum 2 meters wide for linear features

Barren

Areas void of vegetation consisting of natural earthen material regardless of how it has been cleared. This includes beaches, mud flats, dirt roads, and bare ground in construction sites. MMU = 25 square meters



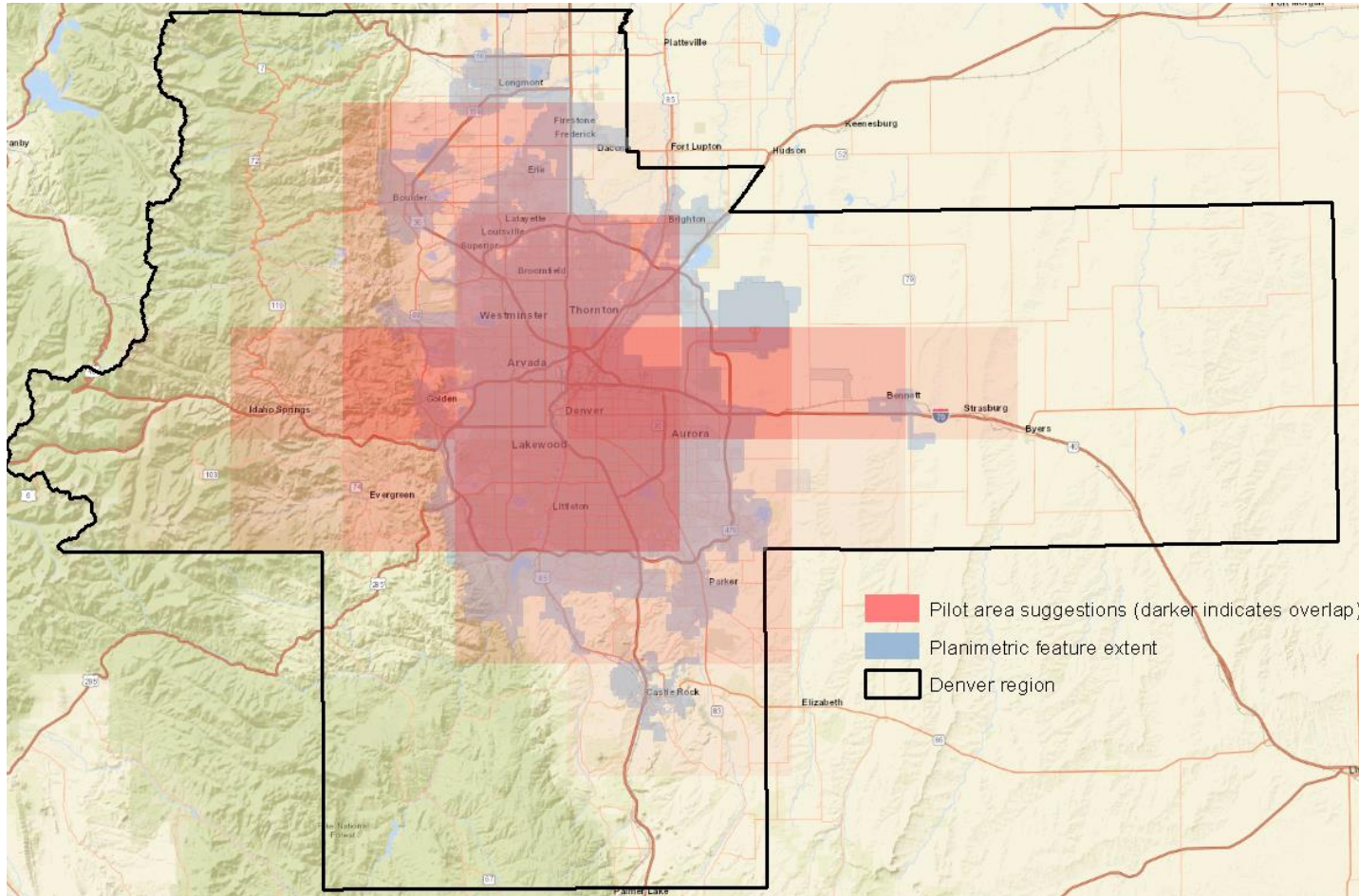
Quality control volunteers

1. Littleton
2. Westminster
3. Commerce City
4. Denver Parks and Recreation
5. University of Denver
6. Office of Information Technology
7. Five Points Geoplanning LLC

**Thank
you!!!**



Pilot area

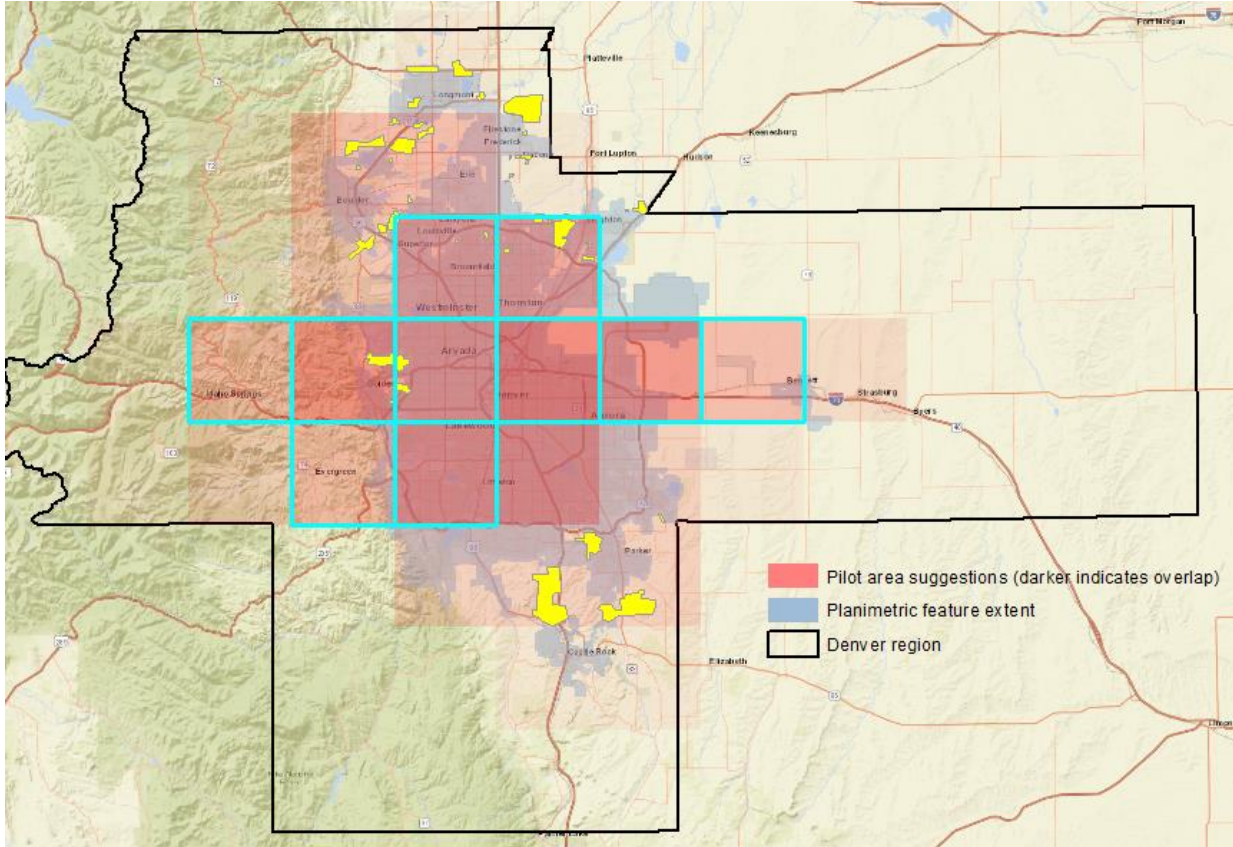


Pilot area delineations from our first brainstorm

- 1000 square miles (preferably square and contiguous, *but up to 3 sections are doable*)
- Representative of:
 - Urban/Semi-urban (with and without associated planimetric data)
 - Rural mountains
 - Rural plains
- Location is contingent on where QAQC volunteers exist



Pilot area



- Don't have to adhere to this arbitrary grid
- Selections show areas where QC'ers are available/interested & where tiles meet the criteria



Next steps

- Finalize specs (classes, MMUs, extent) – *by mid November 2018*
- Finalize agreements with QC'ers – *by mid November 2018*
- CIC reviewing imagery samples – *by end of December 2018*
- DRCOG/Babbitt Center drafting agreement – *by end of December 2018*
- Classification begins – *by January 2019*
- QAQC begins - *by mid-February? 2019*
- Project ends – *June 2019*

The background of the slide is a blurred image. The top half shows green leaves, possibly from a plant, and the bottom half shows a blurred face of a person. A solid green horizontal bar is overlaid on the bottom half of the image.

QUESTIONS?