



# Development Classification System Improvements

## Meeting #1

*Presented by:*

**Andy Taylor**

November 15, 2016



# Agenda

- Introductions
  - Name
  - Jurisdiction
  - Role
- Meeting objectives
- Issues with the DRCOG Board-adopted process
  - Development Classification System
  - Mapping rules



# Meeting objectives

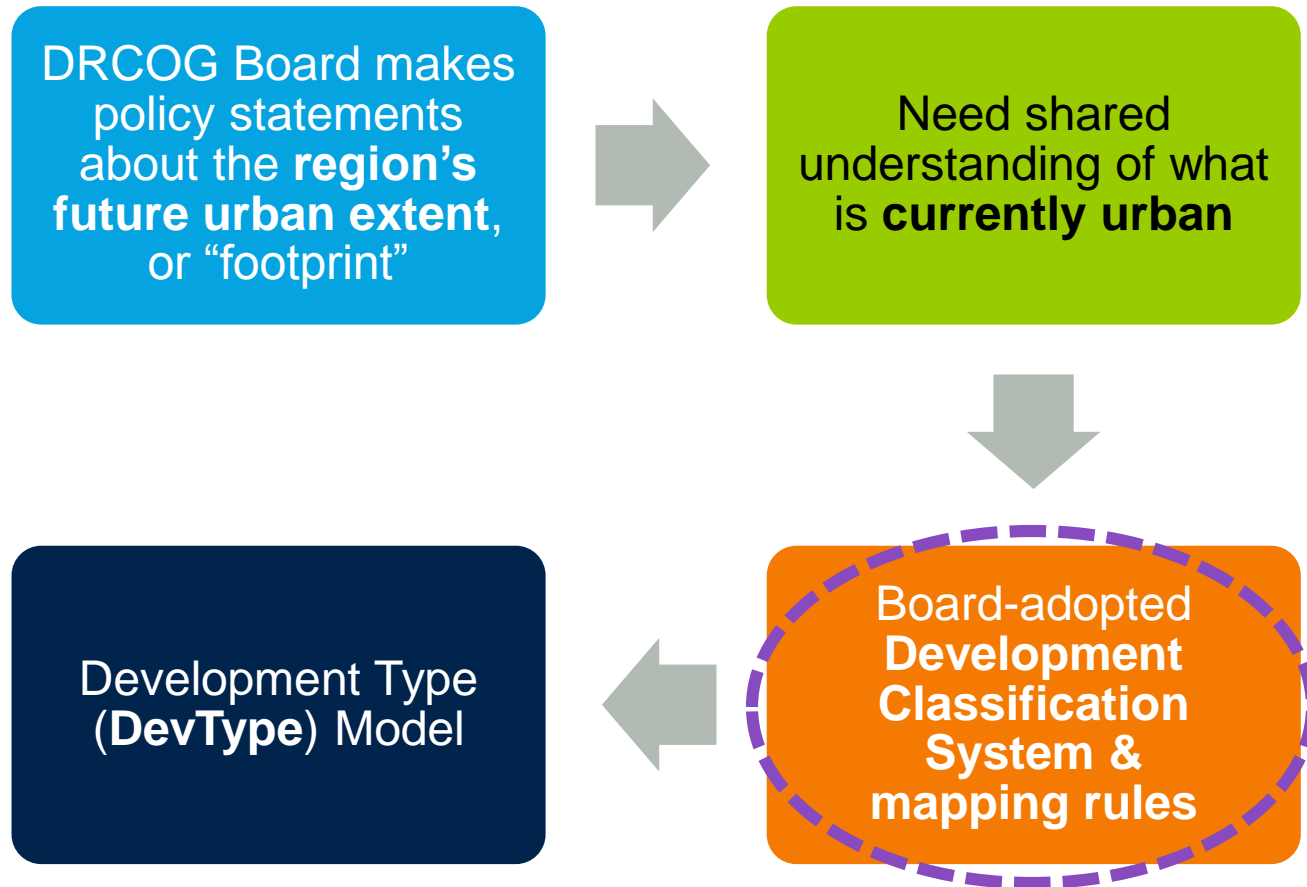
- Understand the Board-adopted process for identifying what's currently urban
  - Development Classification System
  - Mapping rules
- Observe issues with implementing Board-adopted process
- Provide feedback on potential solutions to DRCOG staff

# WHAT IS THE BOARD-ADOPTED PROCESS?





# From Board policy to computer model





# Development Classification System

**Urban**

**Semi-  
urban**

**Semi-  
rural**

**Rural**

**Open  
space**

“The definitions provide a consistent, region-wide classification system to support regional planning activities.... Many local governments use different development type classification systems to support local planning activities.”

*Metro Vision 2035 Growth and Development Supplement, Extent of Urban Development – Overview (Page 4)*



# Development Classification System

Urban

Semi-urban

Semi-rural

Rural

Open space

- a. Residential subdivisions or groupings of 10 or more residential parcels with an **average residential lot size of less than 1 acre**.
- b. Commercial and industrial subdivisions.
- c. Commercial activity on isolated parcels, not within platted subdivisions, with more than 50 employees. Example: large agricultural-related sales or manufacturing operations in outlying areas.
- d. Includes enclaves of semi-urban and other development, smaller than 80 acres in total area, surrounded by urban development. This includes rights-of-way, schools, and other tracts of land that are within separate filings, or not within a platted subdivision.
- e. Includes all of the area within a platted subdivision (that has been classified as urban), including rights-of way and utility easements, regardless of size, and parks, schools, protected open space and other undevelopable land, less than 160 acres (per individual parcel or tract). Does not include open space and other types of undevelopable land larger than 160 acres.
- f. Excludes enclaves of urban development smaller than 10 acres in total area that are surrounded by non-urban development.



# Development Classification System

Urban

Semi-  
urban

Semi-  
rural

Rural

Open  
space

- ▶ Residential subdivisions or groupings of 10 or more residential parcels with an average residential lot size **greater than or equal to 1 acre and less than 10 acres.**
- ▶ Residential subdivisions or groupings of 10 or more residential parcels with an average residential lot size **greater than or equal to 10 acres and less than 35 acres.**



# Development Classification System

Urban

Semi-  
urban

Semi-  
rural

Rural

Open  
space

- a. Parcels that are not part of an urban, semi-urban, or semi-rural subdivision and that are **35 acres or larger**.
- b. Any undevelopable parcel **160 acres or larger**



# Development Classification System

Urban

Semi-  
urban

Semi-  
rural

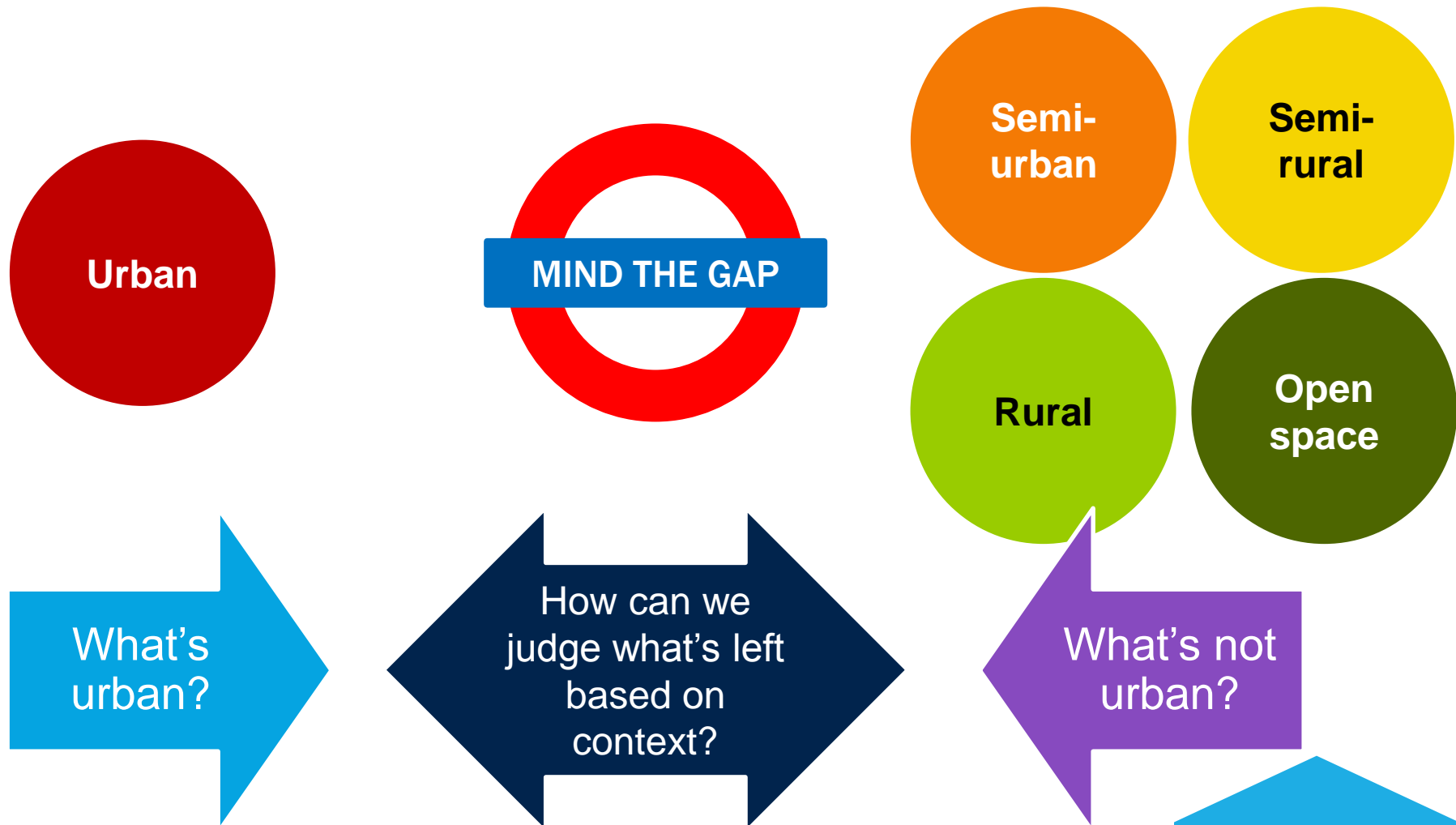
Rural

Open  
space

- a. Protected open space (from DRCOG's most recent inventory).
- b. Excludes parcels that are part of a subdivision and less than 160 acres.



# 3 ways the mapping rules work





# Mapping rules “cheat sheet”

Later  
rules  
cannot  
override

Rule	Topic	Way it works
1	Open space parcels	◀ What's not urban?
2	Large undevelopable parcels	◀ What's not urban?
3a	Small parcel residential subdivisions	▶ What's urban?
3b-c	Larger parcel residential subdivisions	◀ What's not urban?
4a	Commercial/industrial subdivisions	▶ What's urban?
4b	Non-subdivision commercial/industrial	▶ What's urban?
5	Non-subdivision, previous inventory	▶ What's urban?
6	Large parcels	◀ What's not urban?
7a	Small parcel groupings	▶ What's urban?
7b-c	Larger parcel groupings	◀ What's not urban?
8	Unclassified in previous rules	◀ ▶ Judge on context
9a	Interior enclaves	▶ What's urban?
9b	Exterior enclaves	◀ What's not urban?

overrides  
all above





Any questions so far?

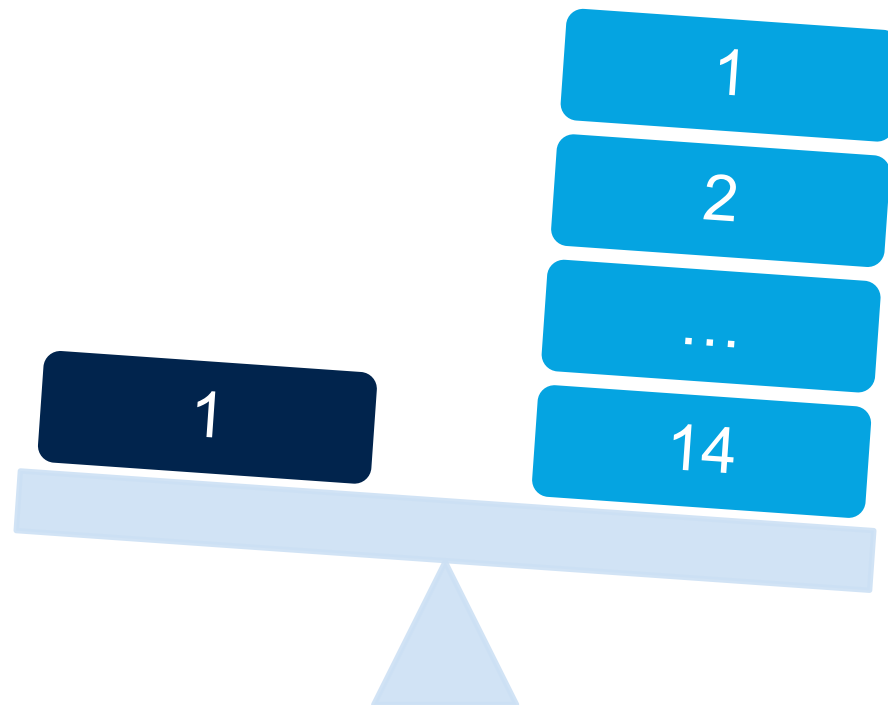
# ISSUES & PROPOSALS



# Types of issues

High  
level

Specific  
cases





# High-level issue: Mapping rules serve two masters poorly

## *Computer clarity vs. human readability*



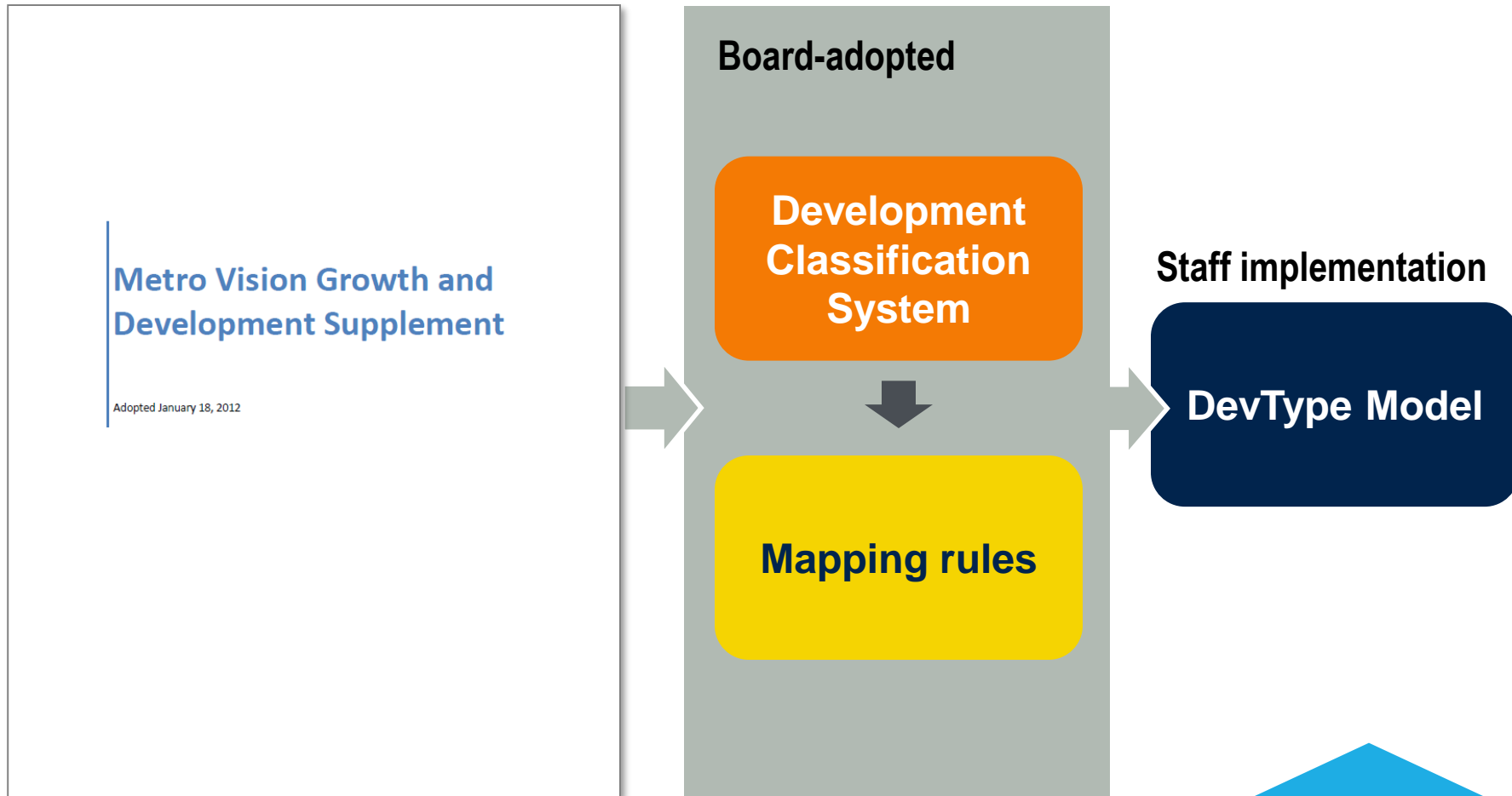
Computers



Humans

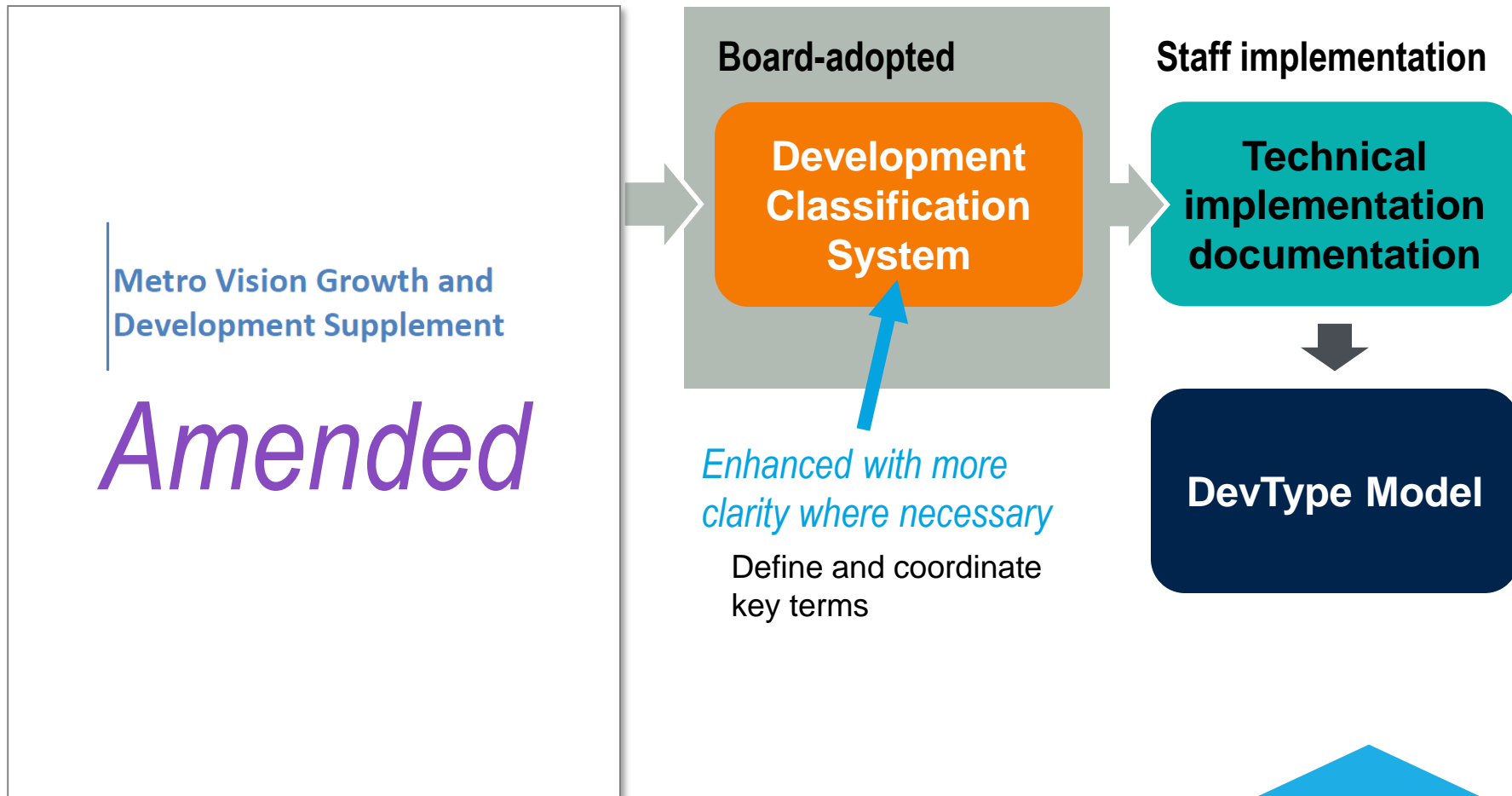


# Current arrangement





# Proposed arrangement







# Issue #0: Description

**Current** system context for issue

Issue with this type of case

***Does this fix make sense?***

## As adopted:

- Consider how the system/rules currently work

## Problem:

- Brief description of the problem that causes

## Potential fix:

- Possible way to address the problem







# Issue #1: Problematic open space definition

Rule involved: 1

## As adopted:

- Consider everything in open space inventory

## Problem:

- Jurisdictions may or may not include certain categories, such as:
  - Golf courses
  - Cemeteries
  - **Schools**
  - Recreation centers

## Potential fix:

- Use an open space definition



### Legend

- Urban
- Semi-Urban
- Semi-Rural
- Rural
- Open Space





# Issue #1: Problematic open space definition

Rule involved: 1



## As adopted:

- Consider everything in open space inventory

## Problem:

- Jurisdictions may or may not include certain categories, such as:
  - **Golf courses**
  - Cemeteries
  - Schools
  - Recreation centers

## Potential fix:

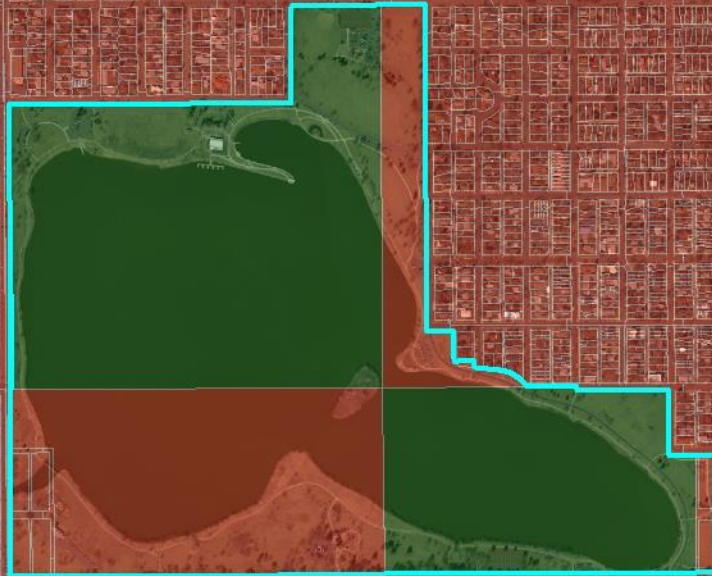
- Use an open space definition





## Issue #2: Open space parcels

Rule involved: 1



### Legend

- Urban
- Semi-Urban
- Semi-Rural
- Rural
- Open Space

0.25

Miles



### As adopted:

- Consider parcels in open space inventory
- Classify as open space unless in a subdivision and less than 160 acres

### Problem:

- Functional boundaries mismatch with parcel (and subdivision) boundaries

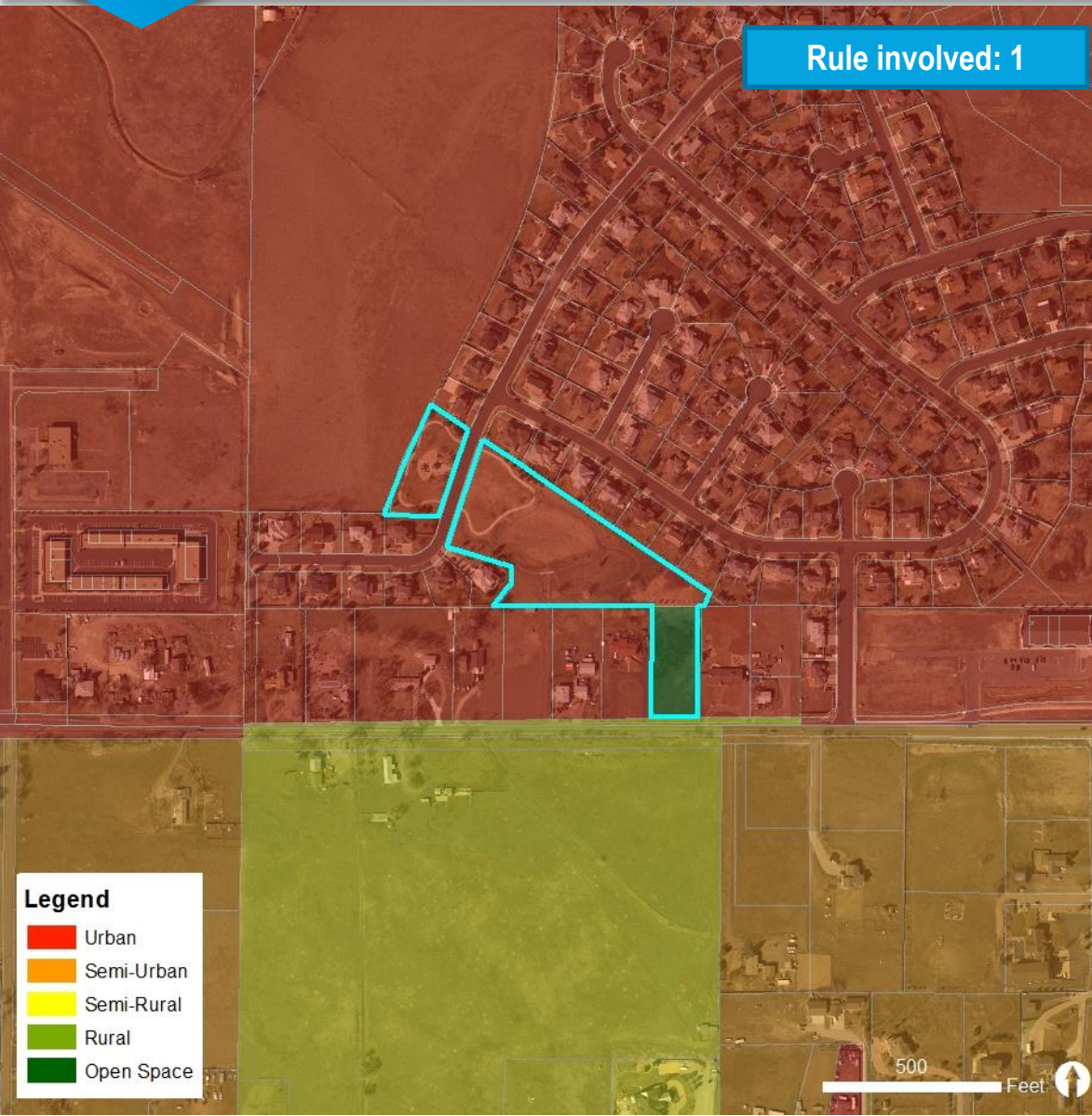
### Potential fix:

- Judge size by functional boundaries, not parcel boundaries





## Issue #3: Open space and subdivision relationship



Rule involved: 1

### As adopted:

- Consider parcels in open space inventory
- Classify as open space unless in a subdivision and less than 160 acres

### Problem:

- Small parks identified as open space

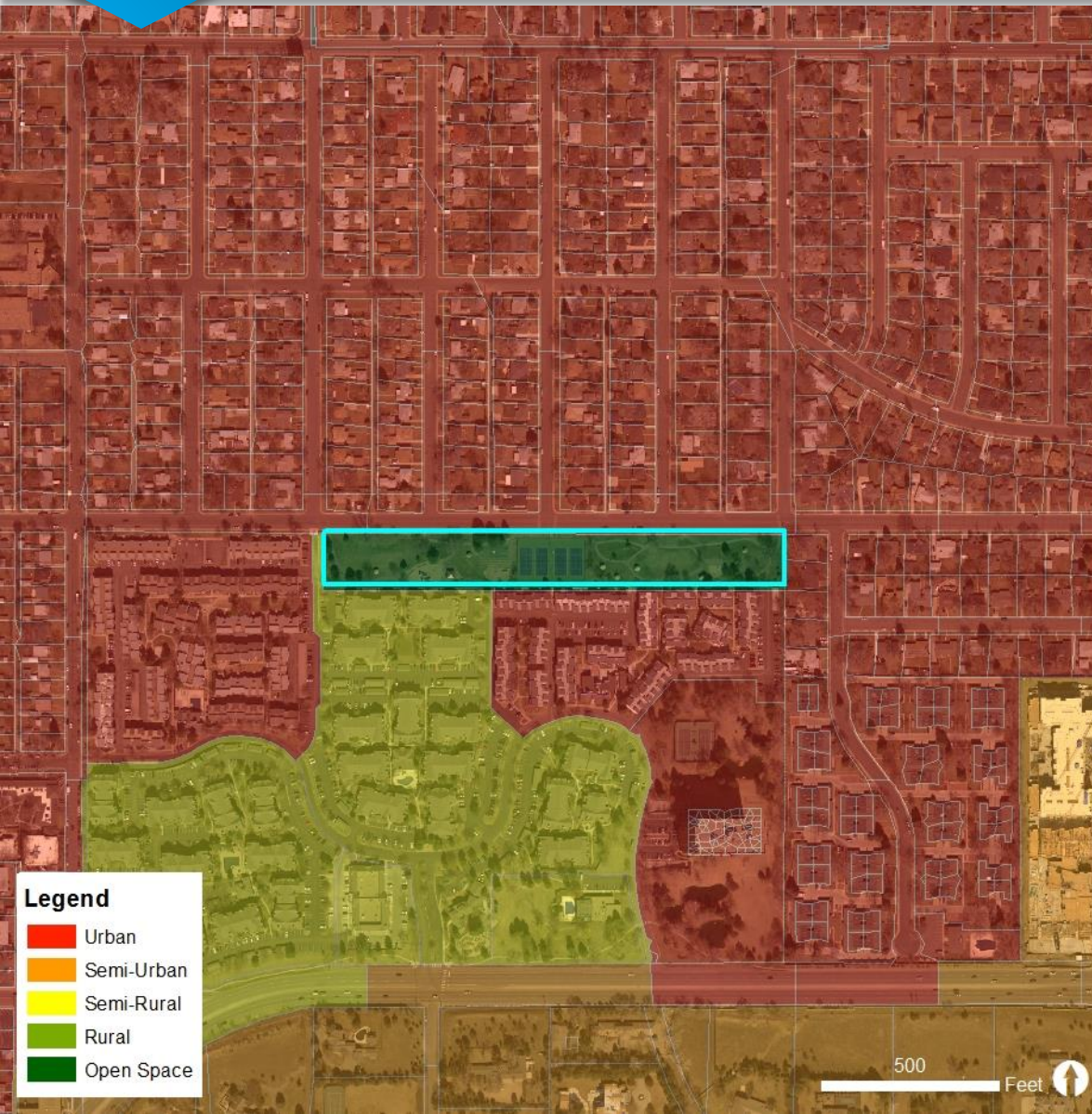
### Potential fix:

- Only consider regionally significant open space of 160 acres or larger, regardless of subdivision





## Issue #3: Open space and subdivision relationship



### As adopted:

- Consider parcels in open space inventory
- Classify as open space unless in a subdivision and less than 160 acres

### Problem:

- Small parks identified as open space

### Potential fix:

- Only consider regionally significant open space of 160 acres or larger, regardless of subdivision



# Potential open space definitions

**“Open space”** means areas protected for outdoor recreation; wildlife habitat; natural resources; prominent geographical, geologic, and cultural features; ranching; farming; visual buffering; and/or community separation.

- Adapted from past *Metro Vision* definitions
- Would inform model approach to querying and filtering inventory

**“Regionally significant open space”** means areas of open space delineated to include 160 acres or more within a single contiguous area.

- Could be expanded to exclude specific types if desired.





# Issue #4: Undevelopable parcels

Rule involved: 2



## As adopted:

- Consider all undevelopable parcels larger than 160 acres
- Classify as rural

## Problems:

- Mixes future state with observing current use
- No definition provided
- Such an extreme case – When would a parcel that large be completely undevelopable?

## Potential fix:

- Let other steps categorize large, currently undeveloped parcels.





# Issue #5: Lot size to calculate density

Rule involved: 3

## As adopted:

- Consider a residential subdivision
- Classify as urban if average **residential lot size** is less than 1 acre

## Problem:

- Some subdivisions include large parcels with multiple dwelling units
  - Manufactured home parks
  - **Apartment complexes**

## Potential fix:

- Consider number of units on residential lots

### Legend

- Urban
- Semi-Urban
- Semi-Rural
- Rural
- Open Space

500

Feet

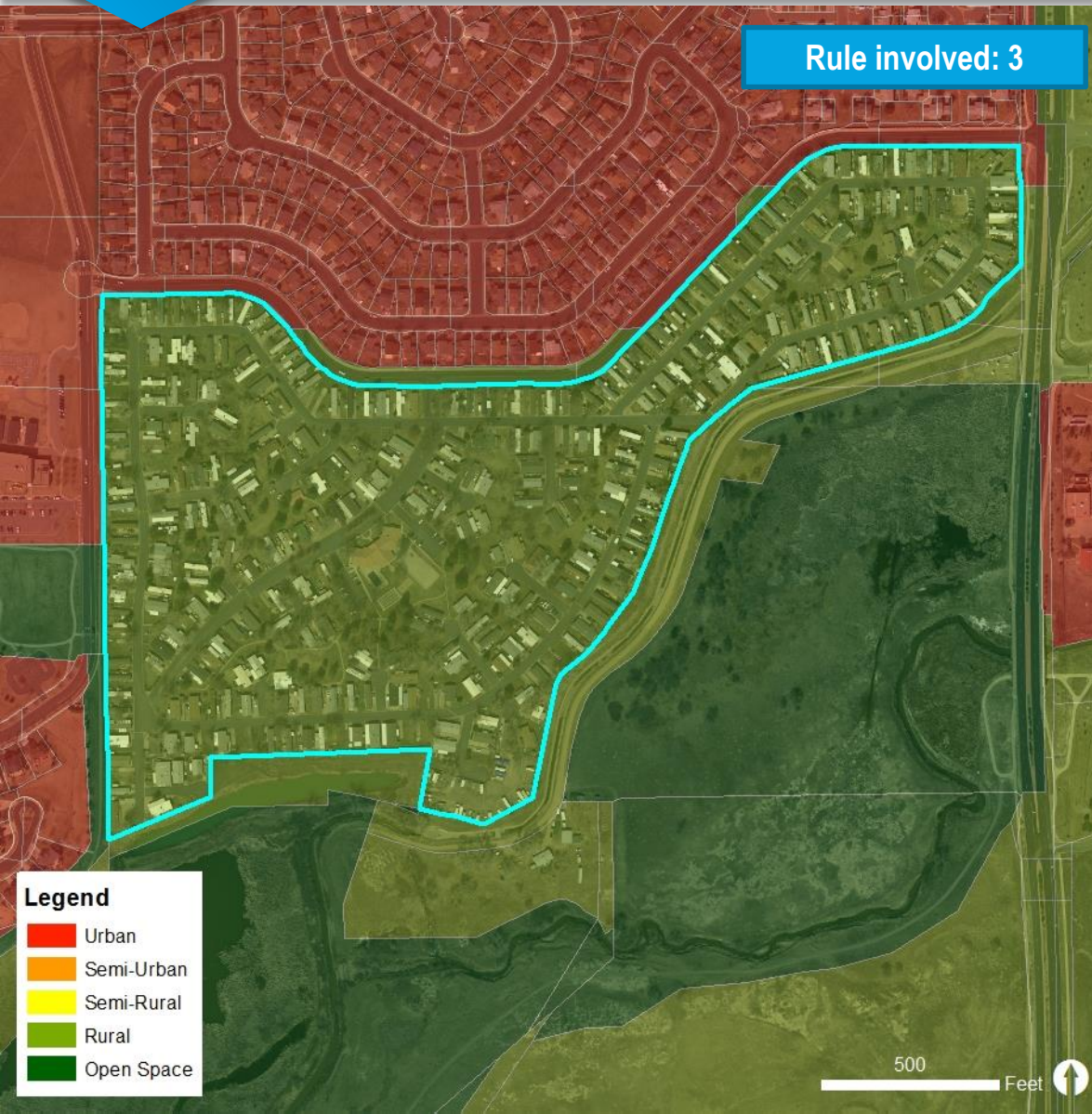






# Issue #5: Lot size to calculate density

Rule involved: 3



## As adopted:

- Consider a residential subdivision
- Classify as urban if average **residential lot size** is less than 1 acre

## Problem:

- Some subdivisions include large parcels with multiple dwelling units
  - **Manufactured home parks**
  - Apartment complexes

## Potential fix:

- Consider number of units on residential lots





# Issue #6: Treatment of subdivisions

Rules involved: 3 & 4

## As adopted:

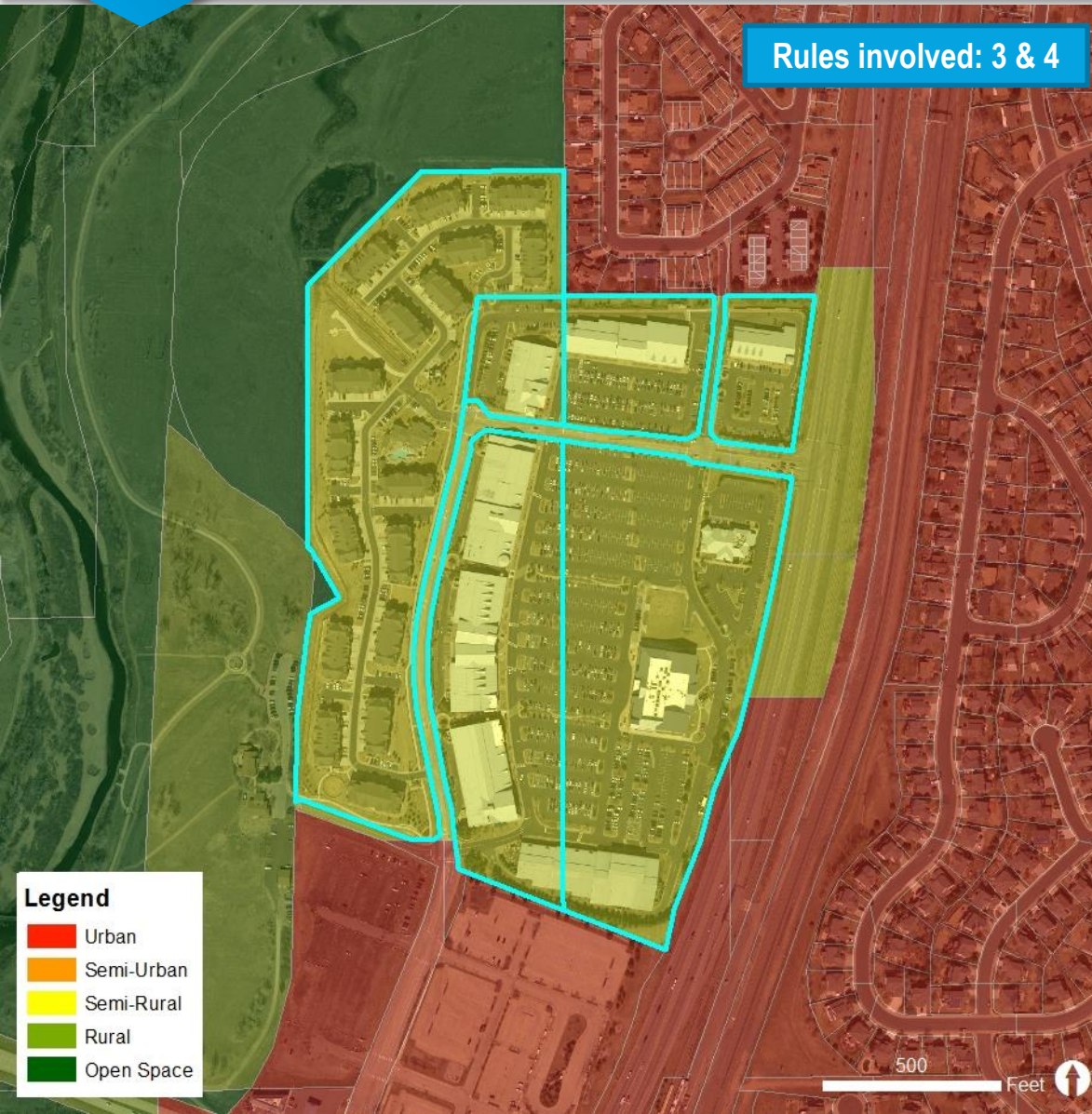
- Consider a residential subdivision
- Consider a commercial or industrial subdivision

## Problem:

- Uses mix

## Potential fix:

- Add and improve definitions



### Legend

- Urban
- Semi-Urban
- Semi-Rural
- Rural
- Open Space





# Issue #6: Treatment of subdivisions

Rule involved: 4

## As adopted:

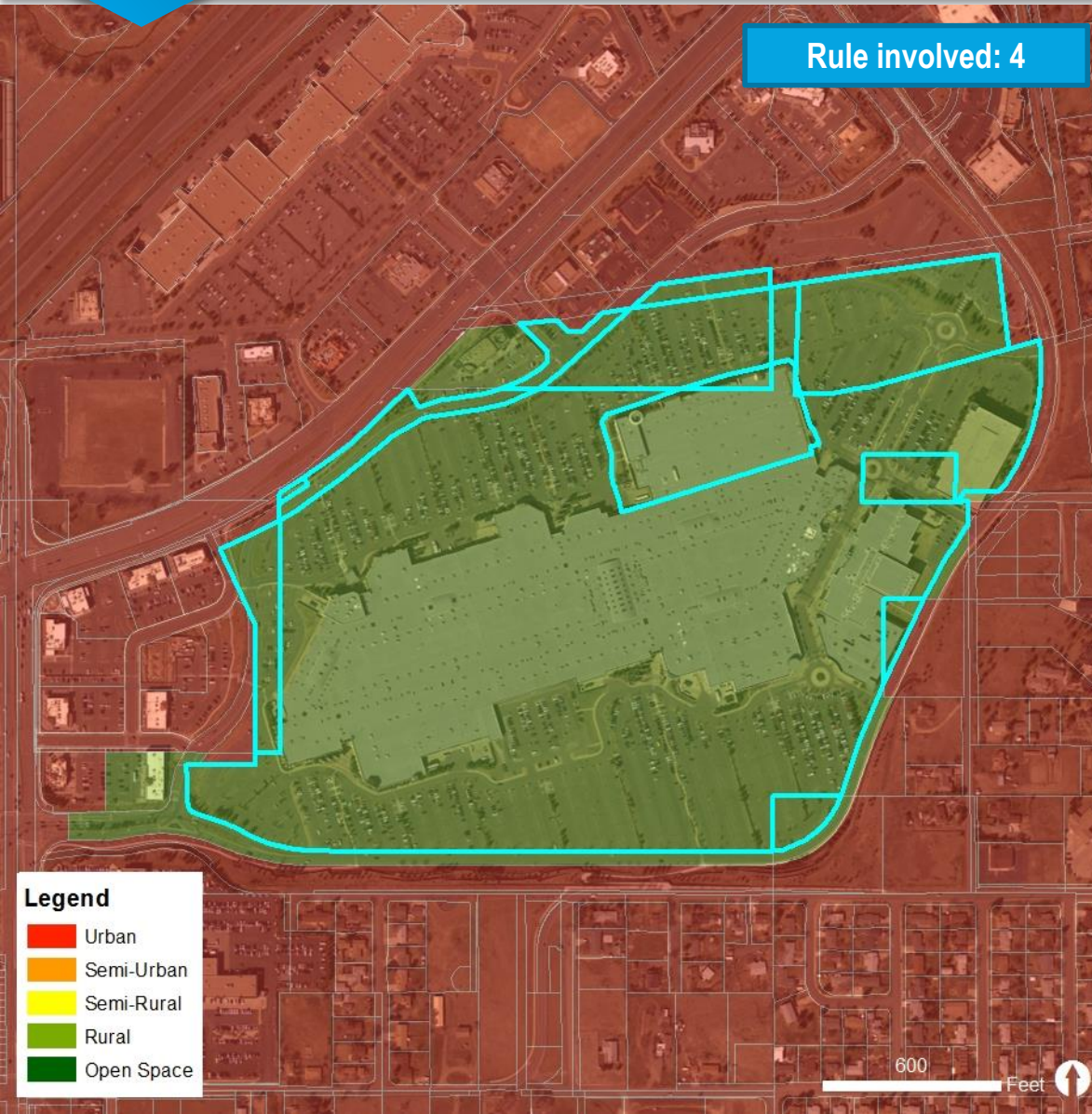
- Consider a commercial or industrial subdivision
- Current definition: subdivision where more than half of the parcels are used for commercial or industrial activities

## Problem:

- Vacant parcels

## Potential fix:

- Calculate share based on parcels with a property improvement





# Potential subdivision definitions

**“Subdivision”** means a collection of parcels and other land dedications platted and recorded as a set with the county.

**“Commercial and/or industrial subdivisions”** means any subdivision where half or more of the parcels with a property improvement host commercial or industrial uses.

**“Residential subdivision”** means a subdivision with less than half of the parcels with a property improvement hosting commercial or industrial uses and *[at least] [more than one (1)]* residential parcel.





# Issue #7: Non-commercial/industrial employment

Rule involved: 4



## Legend

- Urban
- Semi-Urban
- Semi-Rural
- Rural
- Open Space

500

Feet



## As adopted:

- Consider parcels with commercial or industrial uses
- Classify as urban if parcel has more than 50 employees

## Problem:

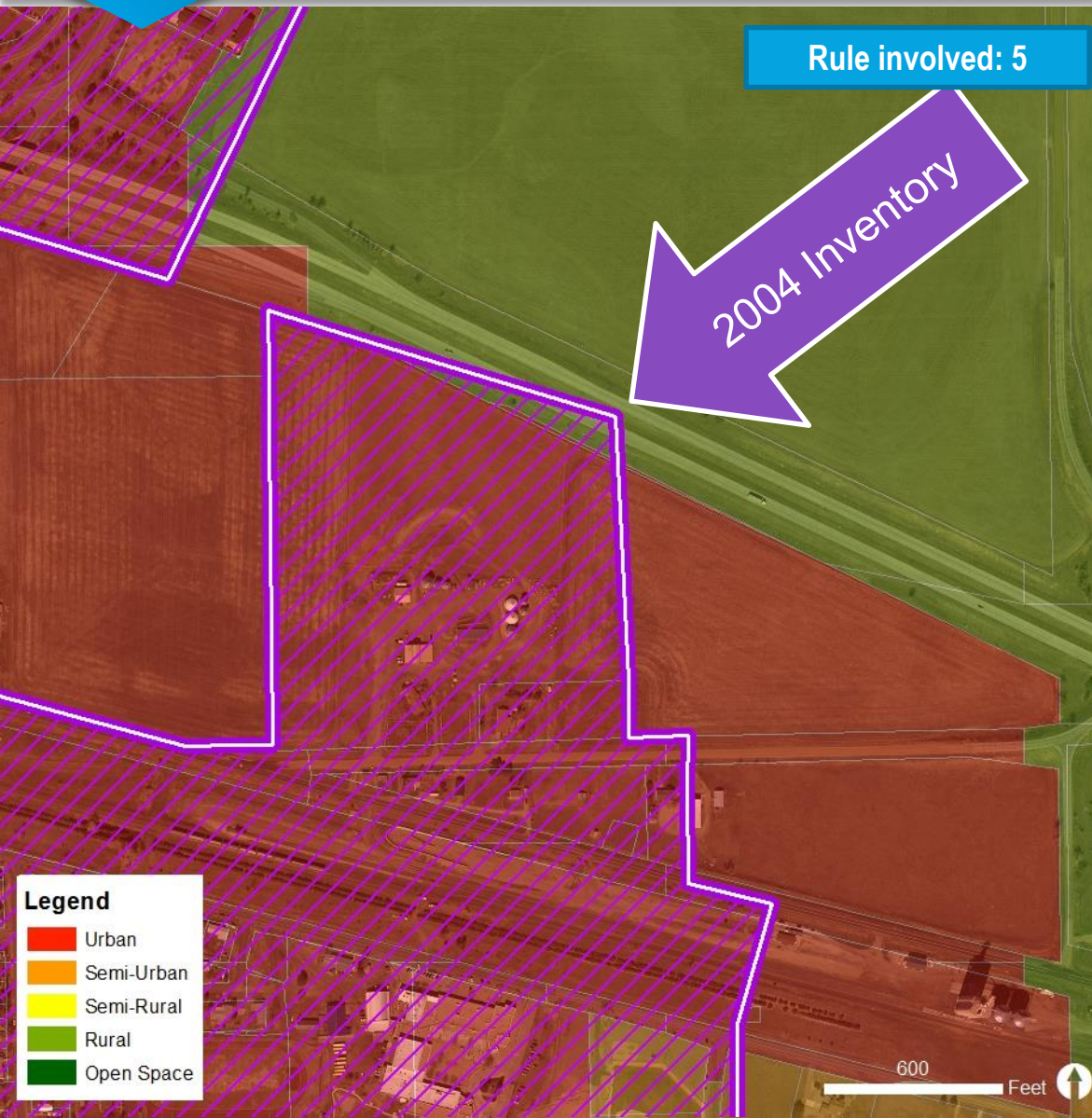
- Ignores schools, government offices, and other “exempt” properties

## Potential fix:

- Consider parcels with other uses for employment calculation



# Issue #8: Reliance on previous inventories



## As adopted:

- Consider parcels not within a platted subdivision
- Classify as urban if included in a previous inventory

## Problem:

- Captures land that does not meet the Development Classification System description

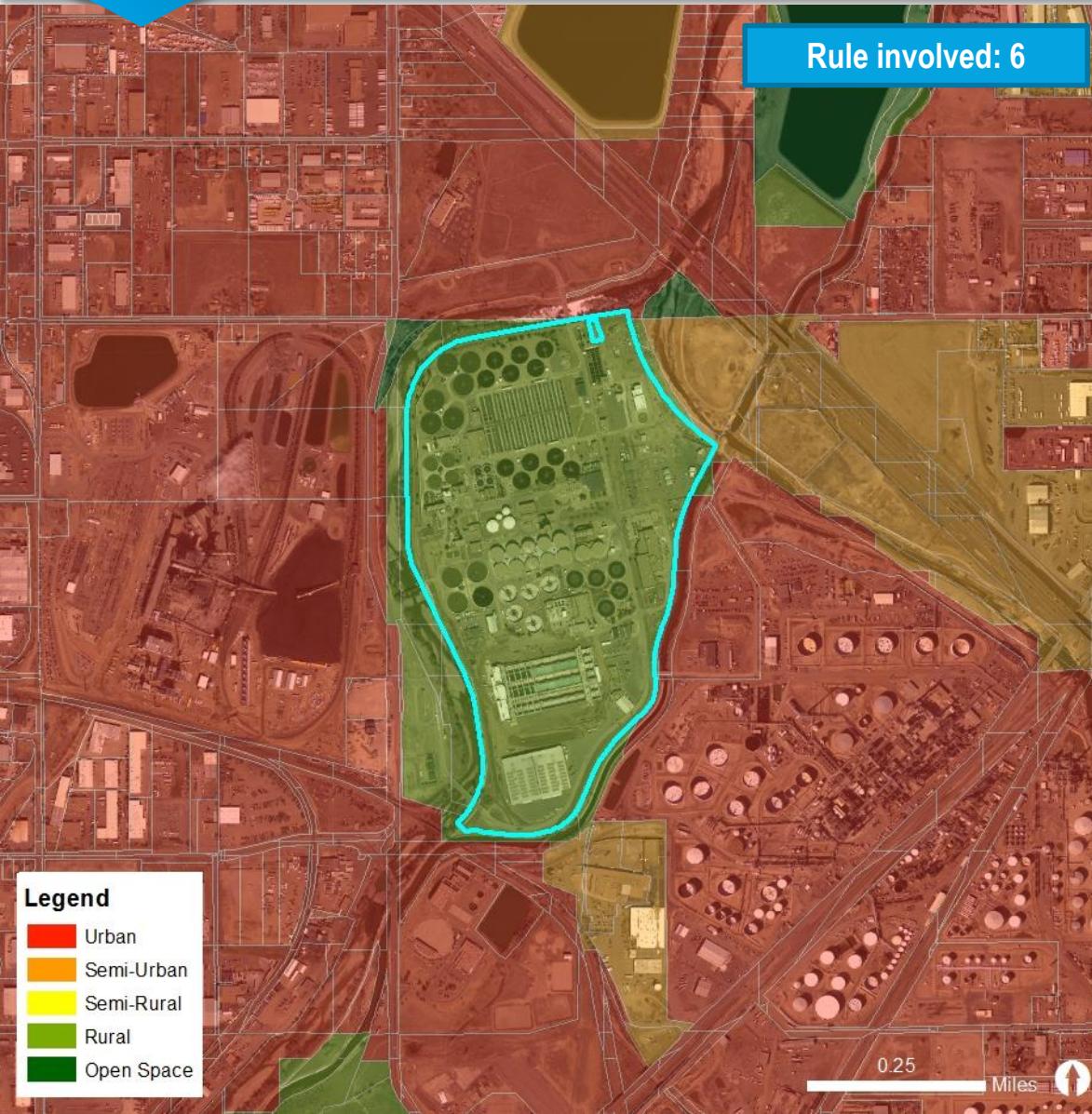
## Potential fix:

- Consider other steps to capture land similar to other urban land, but without subdivision data





# Issue #9: Rural loopholes



## As adopted:

- Consider parcels outside a subdivision classified in previous steps
- Classify as rural if 35 acres or larger

## Problem:

- Some host urban-serving uses, such as:
  - **Utilities**
  - Airports
  - Rights-of-way (ROW)
  - Open space 80-160 ac.

## Potential fixes:

- Consider including certain uses as urban
- Consider excluding certain uses from rural test, let context determine





# Issue #9: Rural loopholes

Rule involved: 6

## Legend

- Urban
- Semi-Urban
- Semi-Rural
- Rural
- Open Space

## As adopted:

- Consider parcels outside a subdivision classified in previous steps
- Classify as rural if 35 acres or larger

## Problem:

- Some host urban-serving uses, such as:
  - Utilities
  - Airports
  - Rights-of-way (ROW)
  - *Open space 80-160 ac.*

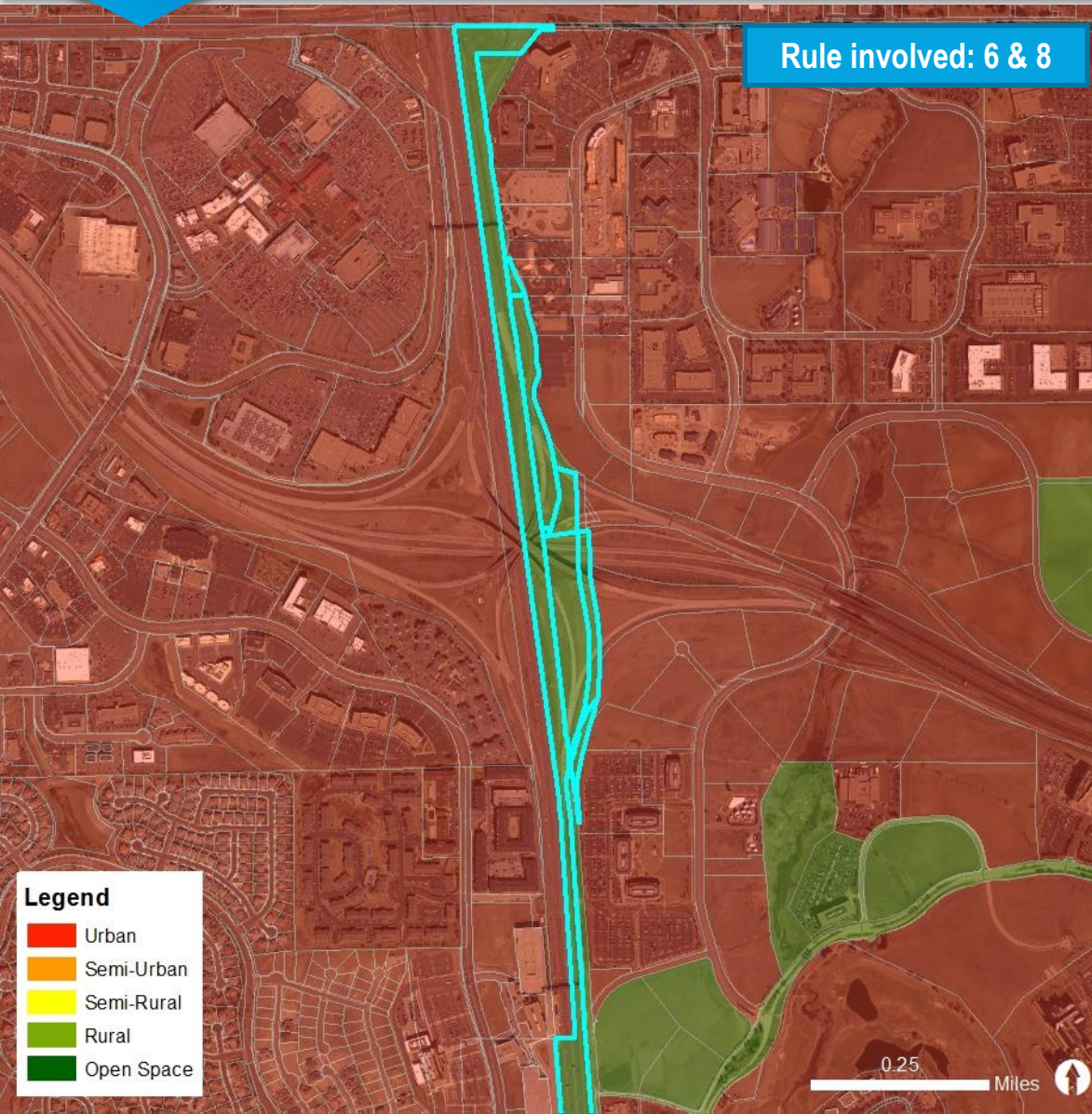
## Potential fixes:

- Consider including certain uses as urban
- Consider excluding certain uses from rural test, let context determine





# Issue #9: Rural loopholes



## As adopted:

- Consider parcels outside a subdivision classified in previous steps
- Classify as rural if 35 acres or larger

## Problem:

- Some host urban-serving uses, such as:
  - Utilities
  - Airports
  - **Rights-of-way (ROW)**
  - Open space 80-160 ac.

## Potential fixes:

- Consider including certain uses as urban
- Consider excluding certain uses from rural test, let context determine





# Issue #10: Airports and subdivision

Rules involved: 4 & 6

## As adopted:

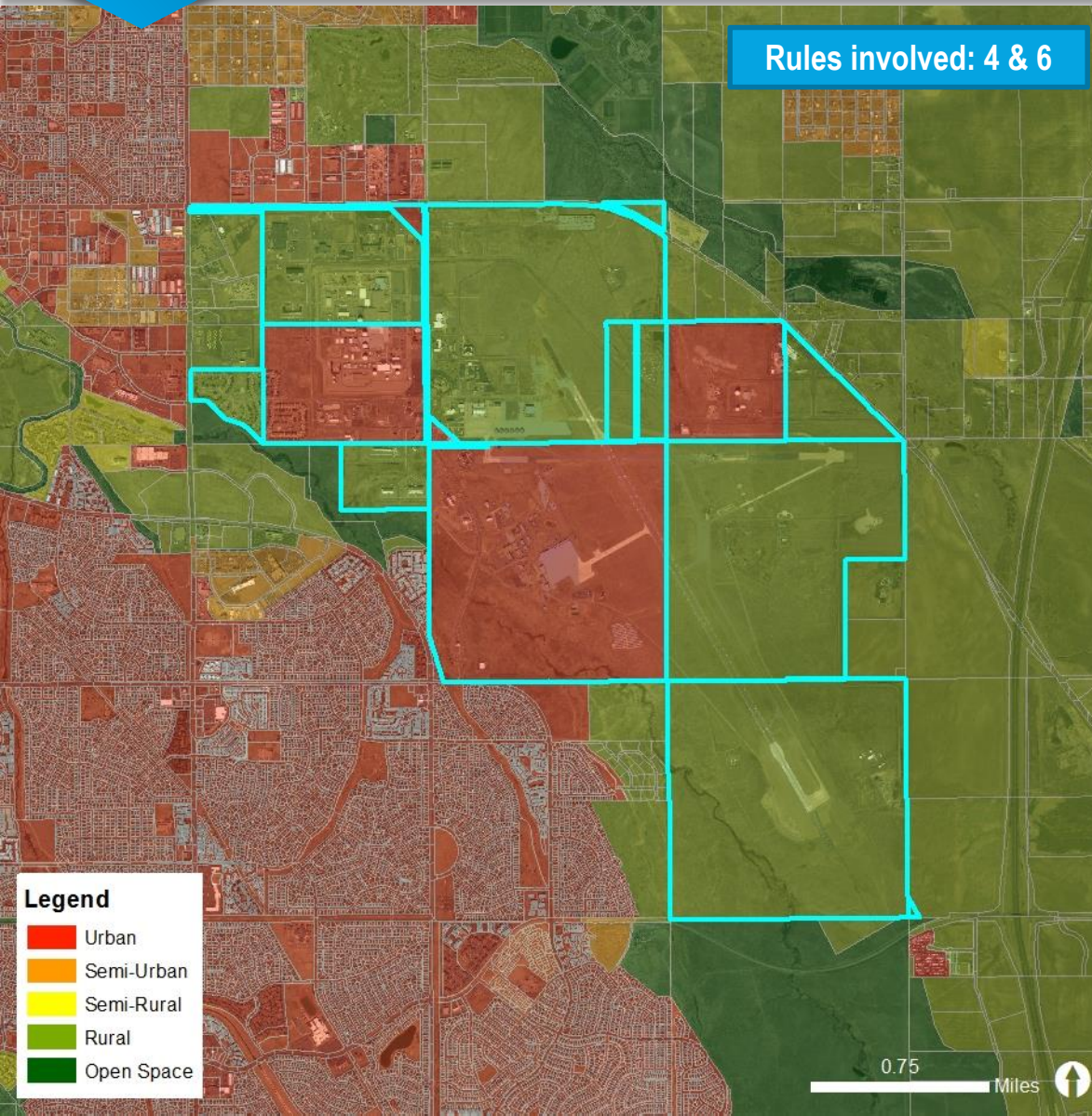
- Considers uses on parcels
- Considers subdivisions

## Problem:

- Airports rarely take parcels through the subdivision process
- Parcel boundaries do not match uses

## Potential fix:

- Custom delineation of airport properties





# Major airport treatment

**“Major airport”** means general aviation or commercial air carrier airports, as identified in the National Plan of Integrated Airport Systems (NPIAS), as well as military airports.

## **Major airports:**

May not include the airfield (runways, safety areas/zones) and other contiguous, non-developable areas in and around these airports, unless such areas constitute all of a contiguous area surrounded by urban development or part of a contiguous area smaller than 80 acres in total, surrounded by urban development.

Does include terminal/concourse area and supporting uses/areas, airport/airline support, and other on-site commercial, residential, or industrial development.





# Issue #11: Including rights-of-way (ROW)

Rules involved: 3, 6 & 9

## As adopted:

- Consider a residential subdivision
- Include rights-of-way (ROW) and utility easements, regardless of size

## Problem:

- ROW often voids in assessor data
- If included, not well attributed
- Issues with other rules:  
5, 6, 8, 9

## Potential fix:

- Work to identify ROW
- Consider excluding from 5 & 6 test, let context determine
- – OR – Consider treating the same throughout all counties

### Legend

- Urban
- Semi-Urban
- Semi-Rural
- Rural
- Open Space

500

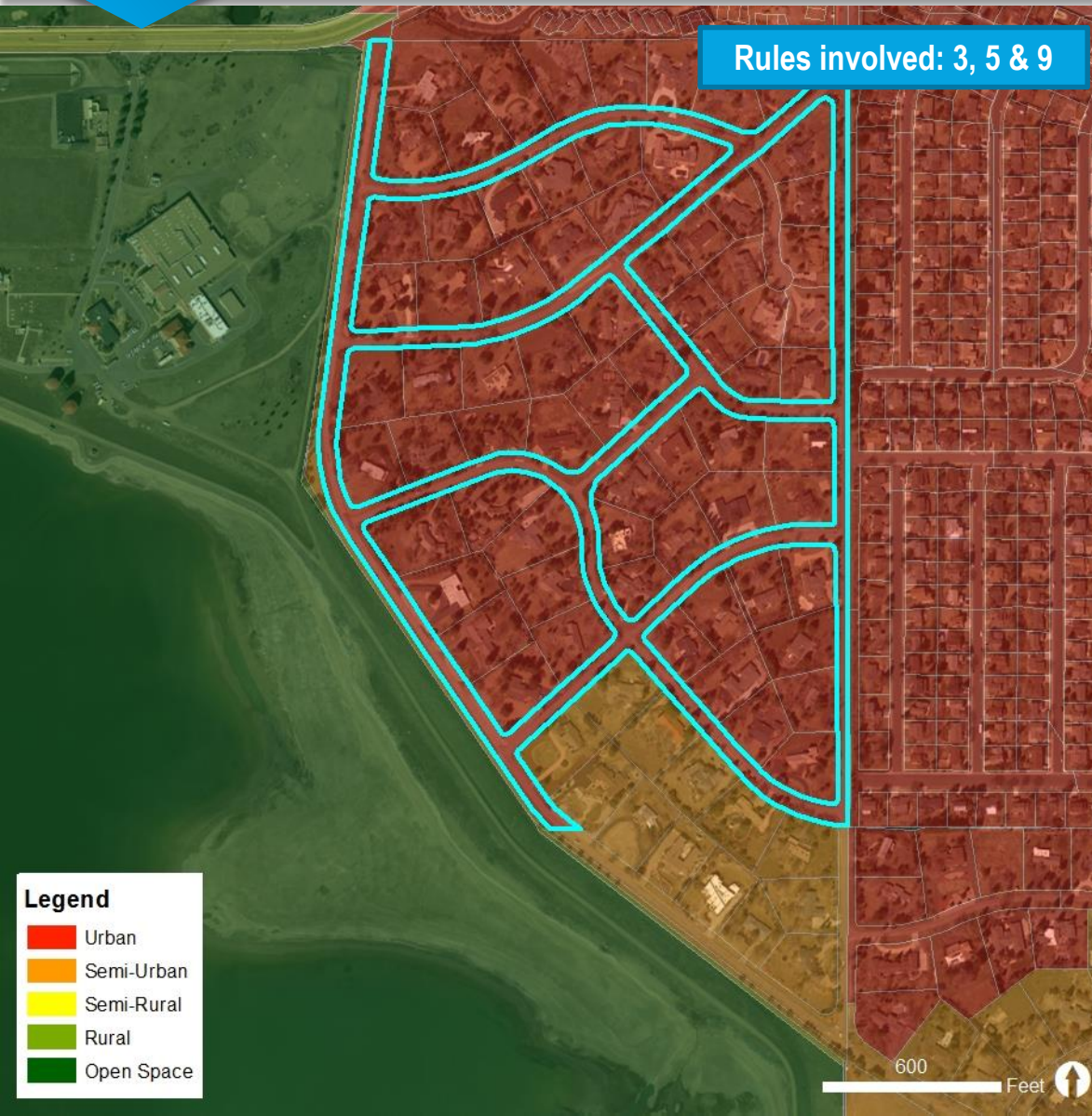
Feet







# Issue #11: Including rights-of-way (ROW)



## As adopted:

- Consider a residential subdivision
- Include rights-of-way (ROW) and utility easements, regardless of size

## Problem:

- ROW often voids in assessor data
- If included, not well attributed
- Issues with other rules:  
**5, 6, 8, 9**

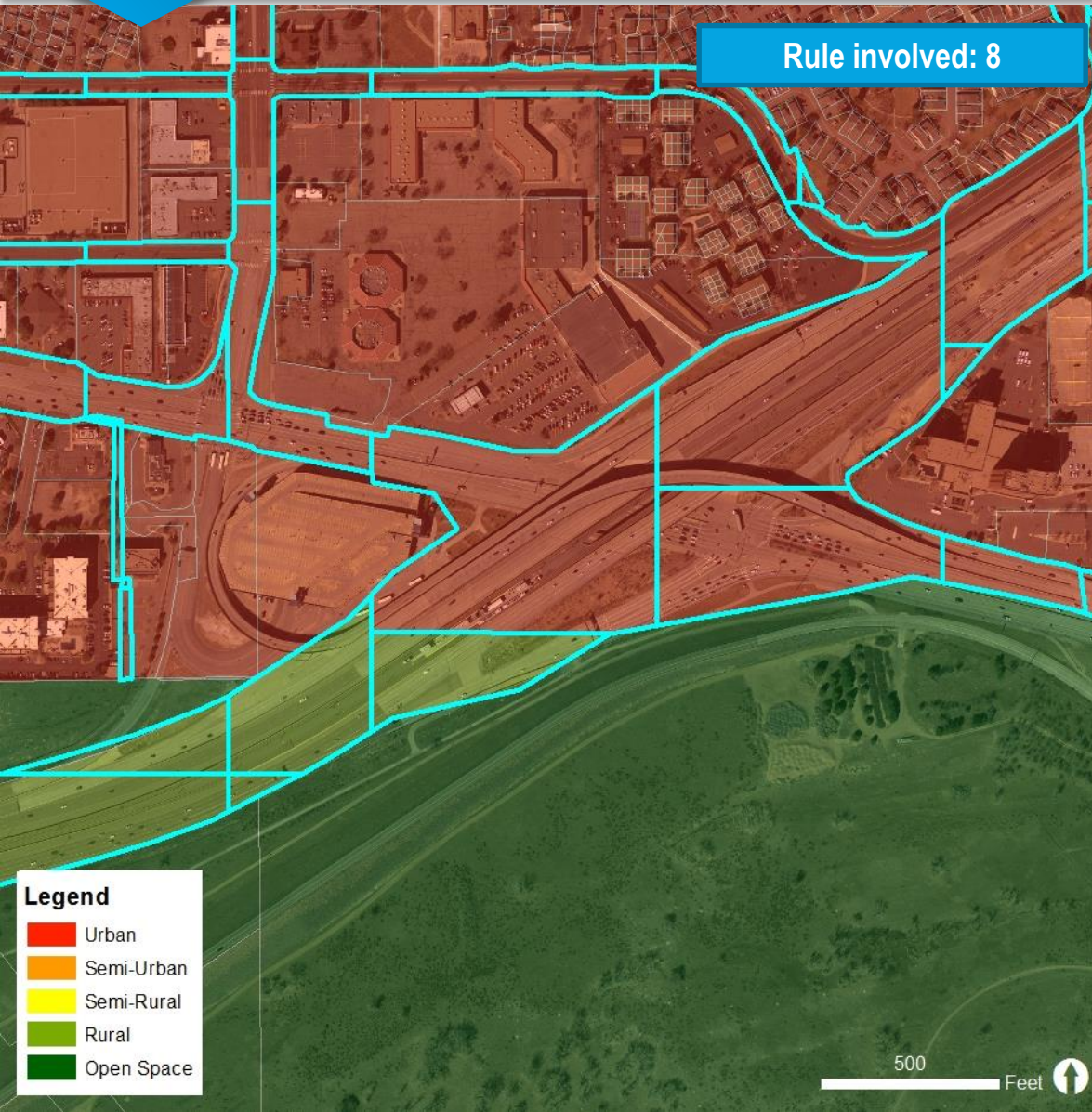
## Potential fix:

- Work to identify ROW
- Consider excluding from 5 & 6 test, let context determine
- – OR – Consider treating the same throughout all counties





# Issue #11: Including rights-of-way (ROW)



## As adopted:

- Consider remaining parcels after first 7 rules
- Classify based on surroundings

## Problem:

- ROW often voids in assessor data
- Must fill in the voids to successfully run other rules: 8 & 9

## Potential fix:

- Fill in voids using Euclidean allocation
- Consider treating the same throughout all counties





# Issue #12: Treatment of groupings

Rule involved: 7

## As adopted:

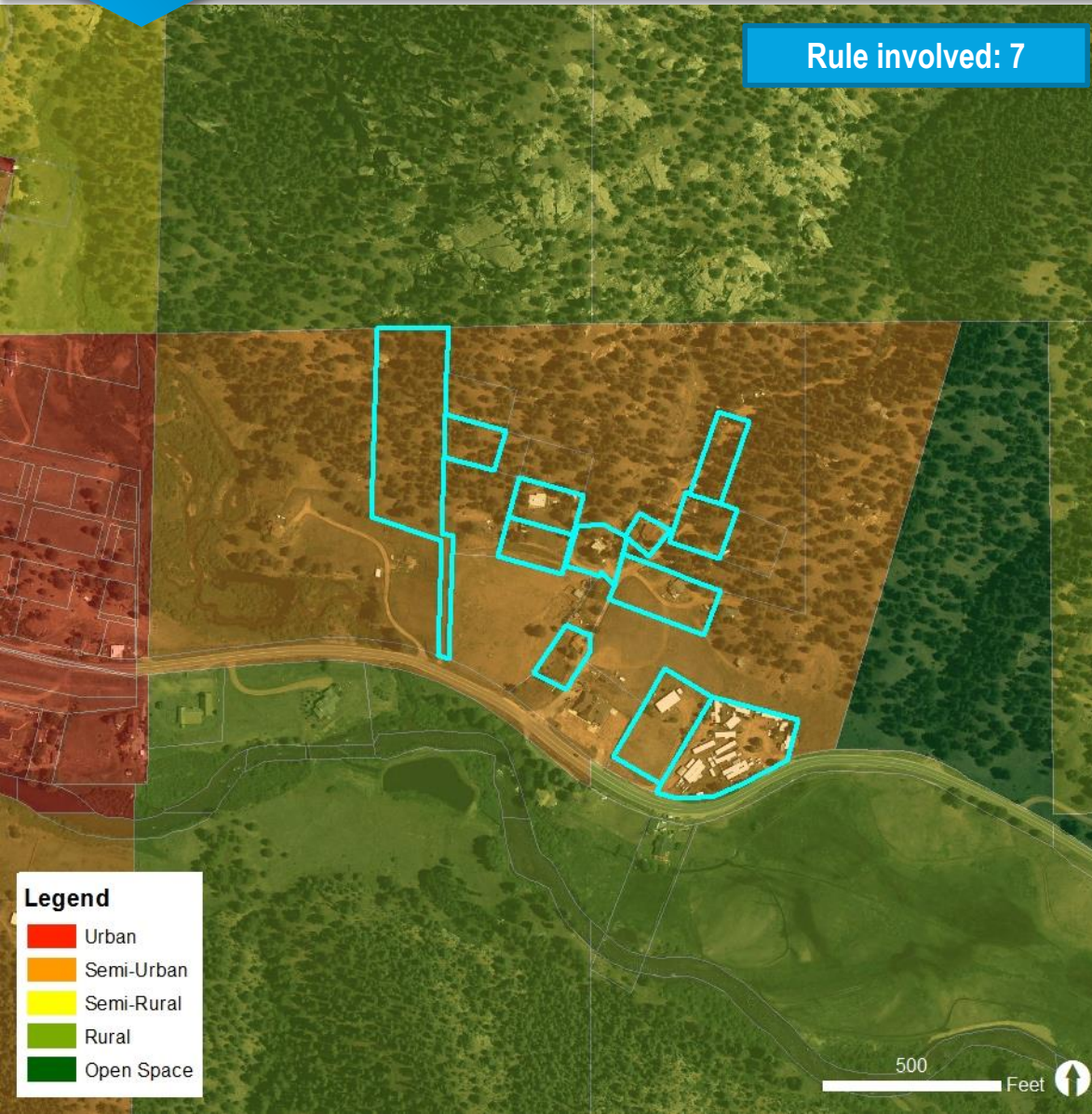
- Consider groupings of 10 or more residential parcels
- Classify by average parcel size

## Problem:

- Missing definitions
- Need to follow lot size density calculation fix

## Potential fixes:

- Add new definitions







# Grouping definitions

**“Grouping”** means adjacent parcels that are not recorded as part of a subdivision.

**“Residential grouping”** means a grouping of ten (10) or more residential parcels.

*- MAY ALSO TRY -*

**“Residential parcel”** means a parcel with a property improvement that hosts residential uses.

**“Rural grouping”** means a grouping of parcels without recorded property improvements greater than or equal to 35 acres.



# Issue #13: Surrounding parcels

Rule involved: 8

## As adopted:

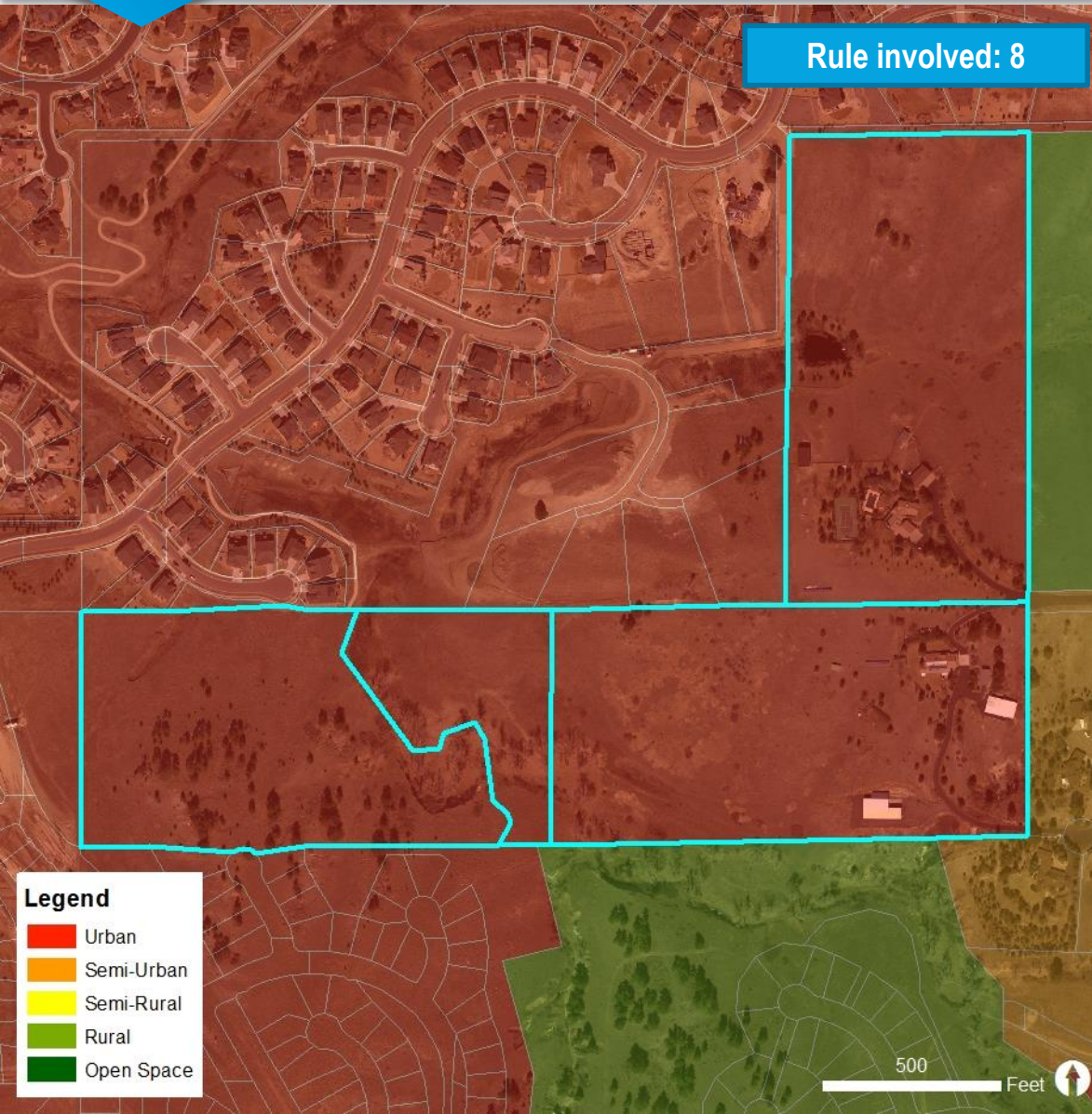
- Consider remaining parcels after first 7 rules
- Classify based on surroundings

## Problem:

- Unclear definition of “surrounding parcels”

## Potential fixes:

- Define “contiguous” and “adjacent areas”





# “Adjacent” instead of “surrounding”

## For “urban,” “semi-urban,” and “semi-rural”:

**Adjacent areas:** Areas not included in other classifications where the majority or plurality of its boundary is adjacent to areas classified as [urban, semi-urban, semi-rural]

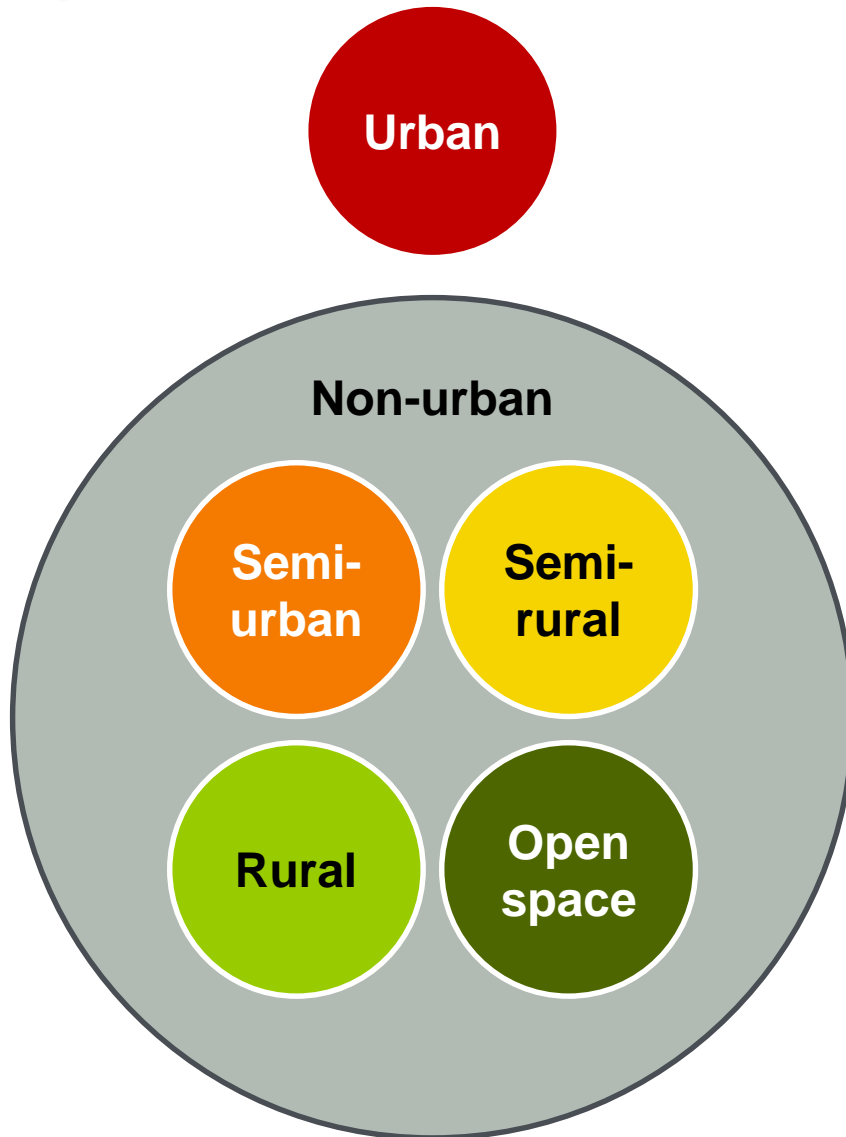
## For “rural”:

**Adjacent areas:** Areas not included in other classifications where the majority or plurality of its boundary is adjacent to areas classified as rural or open space.





# Issue #14: Unused classes create complication



## As adopted:

- Classify development as urban, semi-urban, semi-rural, rural, or open space

## Problem:

- Complicates contextual determination of “surrounding parcels”

## Potential fix:

- Group all non-urban:
  - Throughout
  - -OR- Just this step

# NEXT STEPS AND NEXT ACTIONS



# Next steps and next actions

- Before January meeting, DRCOG staff will attempt to test fixes
  - Check for feasibility
  - Incorporate new data, as necessary
  - Develop and run new test code
  - Check for new issues/errors introduced
  - Document and report back to group
- Local staff participants can contact me with questions or ideas at [ataylor@drcog.org](mailto:ataylor@drcog.org), 303-480-5636, such as:
  - Other commonly available data
  - Thoughts on other steps/techniques/approaches





# Data inputs

## Existing

- Parcels
- Subdivisions
- Open space
- Employment
- Old inventory

## Proposed Additions

- Housing

## Available

- Planimetrics (partial coverage)
- ?

## Needs

- ROW
- Road centerline
- Utility plants
- ?



# Longer timeline

January: Meeting #2

February: Meeting #3 (if needed)

Pilot testing of local review platform

Board adoption of a *Growth & Development Supplement* amendment

Local review of model results

