

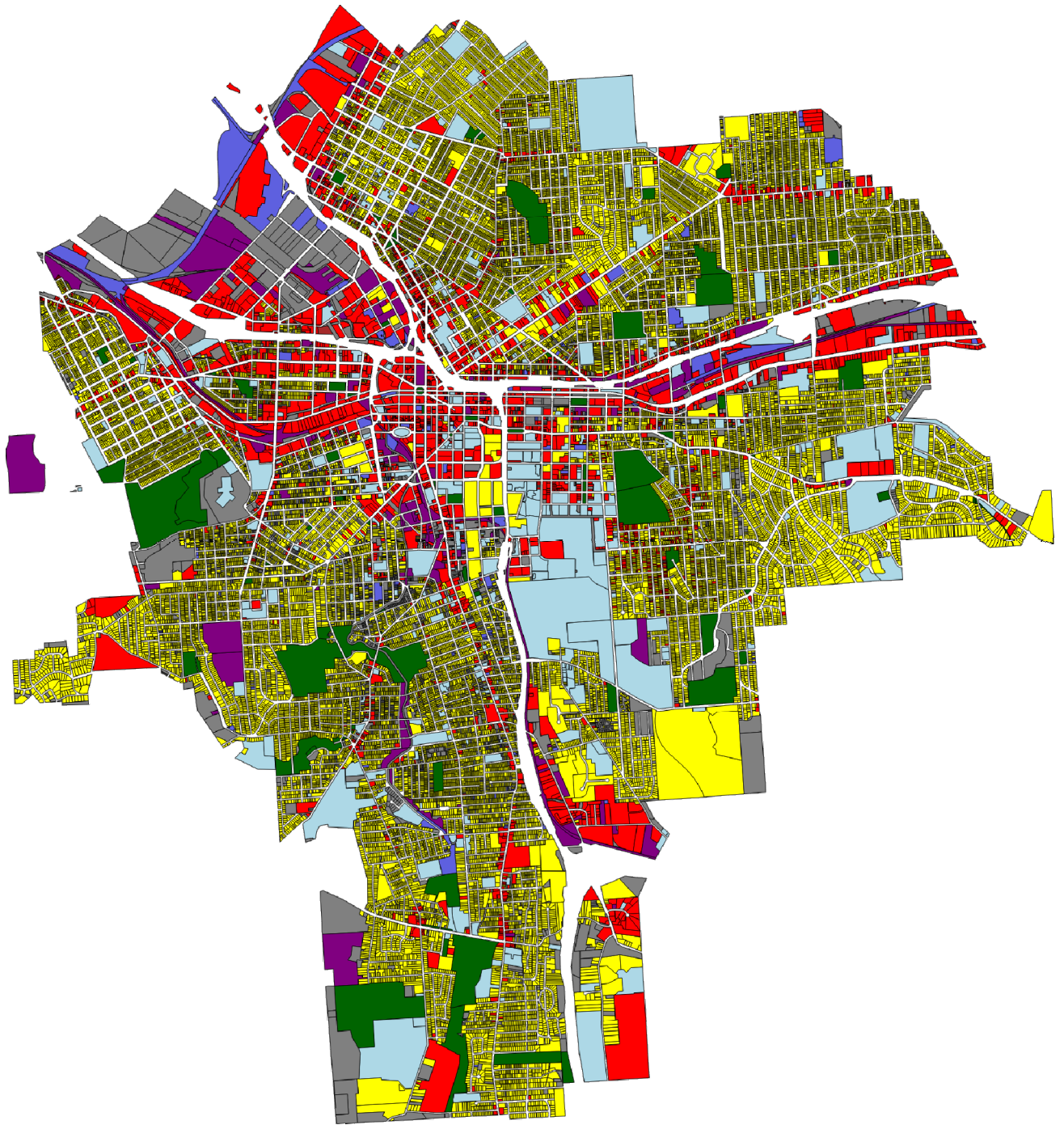
# C: Tax parcels, centroids, and multi-ring buffers

## Tax parcels:

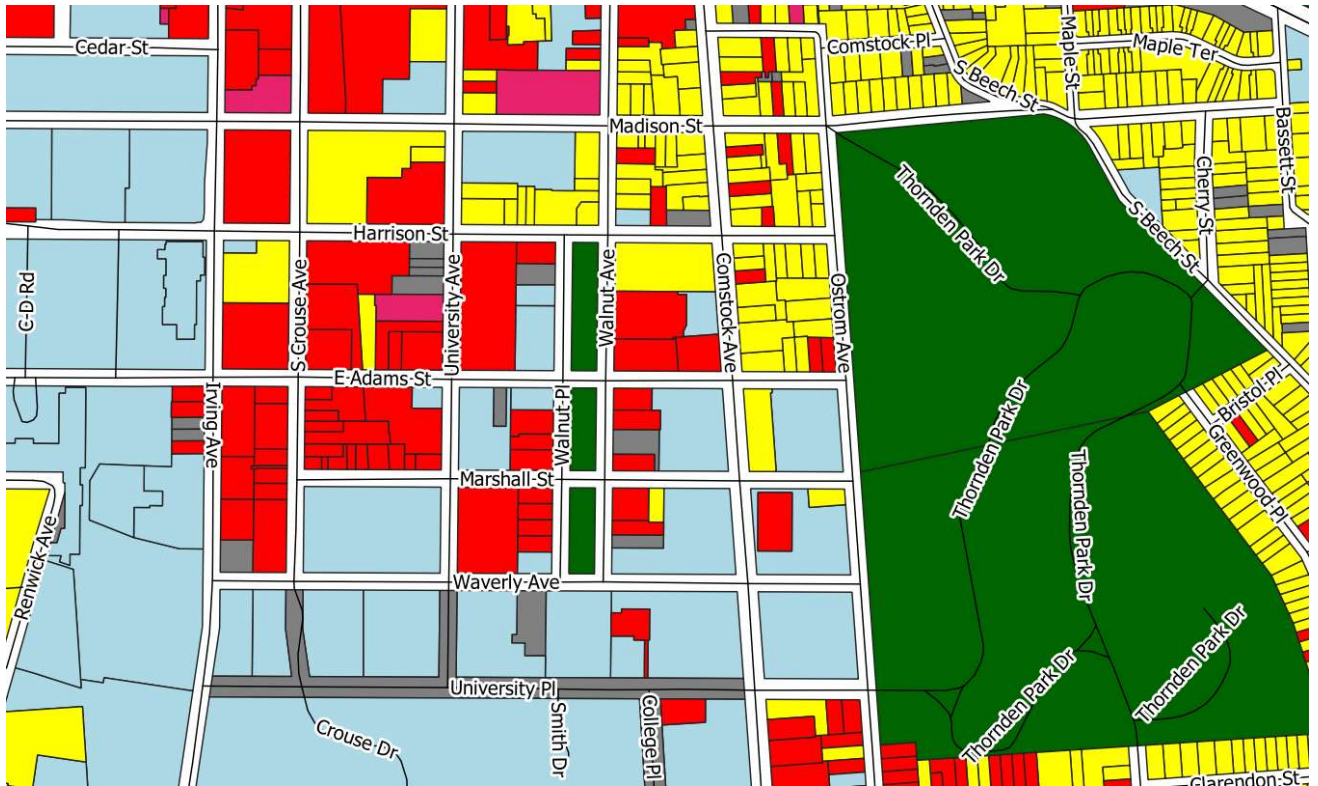
City of Syracuse

- polygons for all tax parcels
- color-coded by land use

<b>Color</b>	<b>Use</b>	<b>Color</b>	<b>Use</b>
Yellow	= Residential	Light blue	= Public service
Gray	= Vacant	Purple	= Industrial & utility
Red	= Commercial	Dark green	= Parks & open space



- Zooming in on Marshall Street area:
- Street layer added for clarity



Extensive attributes:

- Two dozen in the local file
- Even more in the NYS file

fid	OBJECTID	TAX_ID	PRINTKEY	ACRES	STREET	CITY_STATE	SWIS_CODE	CODE	
1	137482	137482 31150000100100010010000000	001.1-01-01.0	0.58	650 HIAWATHA BLVD W	SYRACUSE NY	311500	330	VACANT COI
2	137483	137483 31150000100100010020000000	NULL	0	NULL	NULL	311500	0	NULL
3	137484	137484 31150000100100010030000000	001.1-01-03.0	40.79	*****	HOUSTON TEXAS	311500	474	BILLBOARD
4	137485	137485 31150000100100010040000000	001.1-01-04.0	4.54	*****	MATTYDALE NY	311500	449	DISTRIBUTIC
5	137486	137486 31150000100100010050000000	001.1-01-05.0	0.03	935 HIAWATHA BLVD E & SIX	SYRACUSE NY	311500	330	VACANT COI
6	137487	137487 31150000100100010060000000	001.1-01-06.0	0.38	1015 HIAWATHA BLVD E	SYRACUSE NY	311500	449	DISTRIBUTIC
7	137488	137488 31150000100100010070000000	001.1-01-07.0	0.35	1015 HIAWATHA BLVD E	CLAY NY	311500	710	MANUFACTU
8	137489	137489 31150000100100010080000000	001.1-01-08.0	0.34	5235 BEAR RD	N SYRACUSE NY	311500	484	1 OCCUPAN
9	137490	137490 31150000100100010090000000	001.1-01-09.0	0.56	233 PULASKI ST	SYRACUSE NY	311500	330	VACANT COI
10	137491	137491 31150000100100010100000000	001.1-01-10.0	3.26	3500 COURT ST RDQ	SYRACUSE NY	311500	449	DISTRIBUTIC
11	137492	137492 31150000100100010110000000	001.1-01-11.0	0.86	380 SIXTHNORTH ST	SYRACUSE NY	311500	330	VACANT COI
12	137493	137493 31150000100100010120000000	001.1-01-12.0	3.39	369-79 SIXTH NORTH ST	SYRACUSE NY	311500	651	HIGHWAY G
13	137494	137494 31150000100100010130010000	001.1-01-13.1	2.54	*****	WILMINGTON OHIO	311500	447	TRUCKING T
14	137495	137495 31150000100100010140010000	001.1-01-14.1	1.44	925 SEVENTH NORTH ST	LIVERPOOL NY	311500	484	1 OCCUPAN
15	137496	137496 31150000100100010150010000	001.1-01-15.1	5.33	40 RICHARDS AVE	NORWALK CT	311500	710	MANUFACTU
16	137497	137497 31150000100100010210000000	001.1-01-21.0	0.07	*****	SYRACUSE NY	311500	311	RESIDENTIA
17	137498	137498 31150000100100010220000000	001.1-01-22.0	0.07	649 OLD LIVERPOOL RD	LIVERPOOL NY	311500	210	SINGLE FAM
18	137499	137499 31150000100100010230000000	001.1-01-23.0	0.11	649 OLD LIVERPOOL RD	LIVERPOOL NY	311500	210	SINGLE FAM
19	137500	137500 31150000100100010240000000	001.1-01-24.0	0.07	649 OLD LIVERPOOL RD	LIVERPOOL NY	311500	330	VACANT COI
20	137501	137501 31150000100100010250000000	001.1-01-25.0	0.07	819 HIAWATHA BLVD E REAR	SYRACUSE NY	311500	210	SINGLE FAM

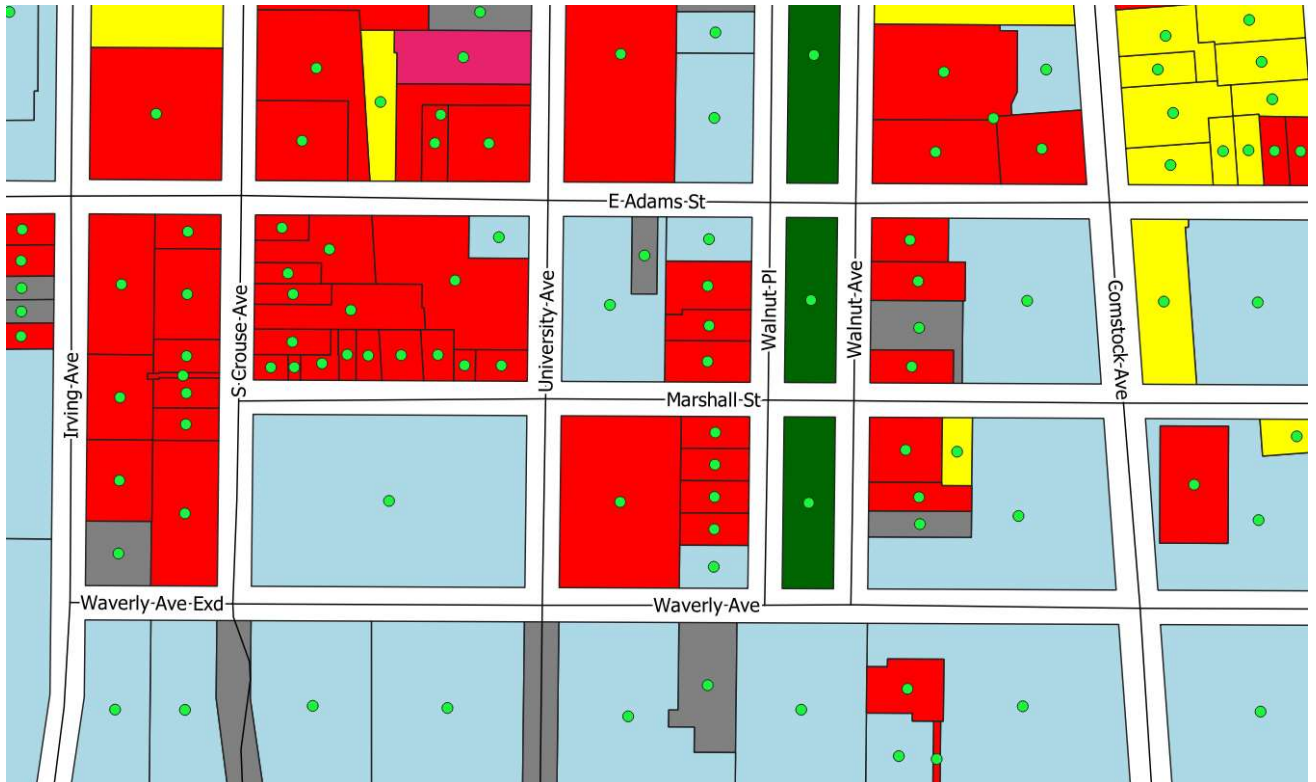
Show All Features

## Centroids:

**Centroid:** mean position of all points in a geometric feature

- Intuition: point where the shape would balance

Centroids for Marshall Street parcels



Centroids: single point per feature

- Smaller file size than full polygons
- Often available when polygons are not (e.g., NYS tax data)
- Faster and easier to work with in some situations

Best applications:

- Most parcels are small
- Within-parcel precision not needed

Less useful applications:

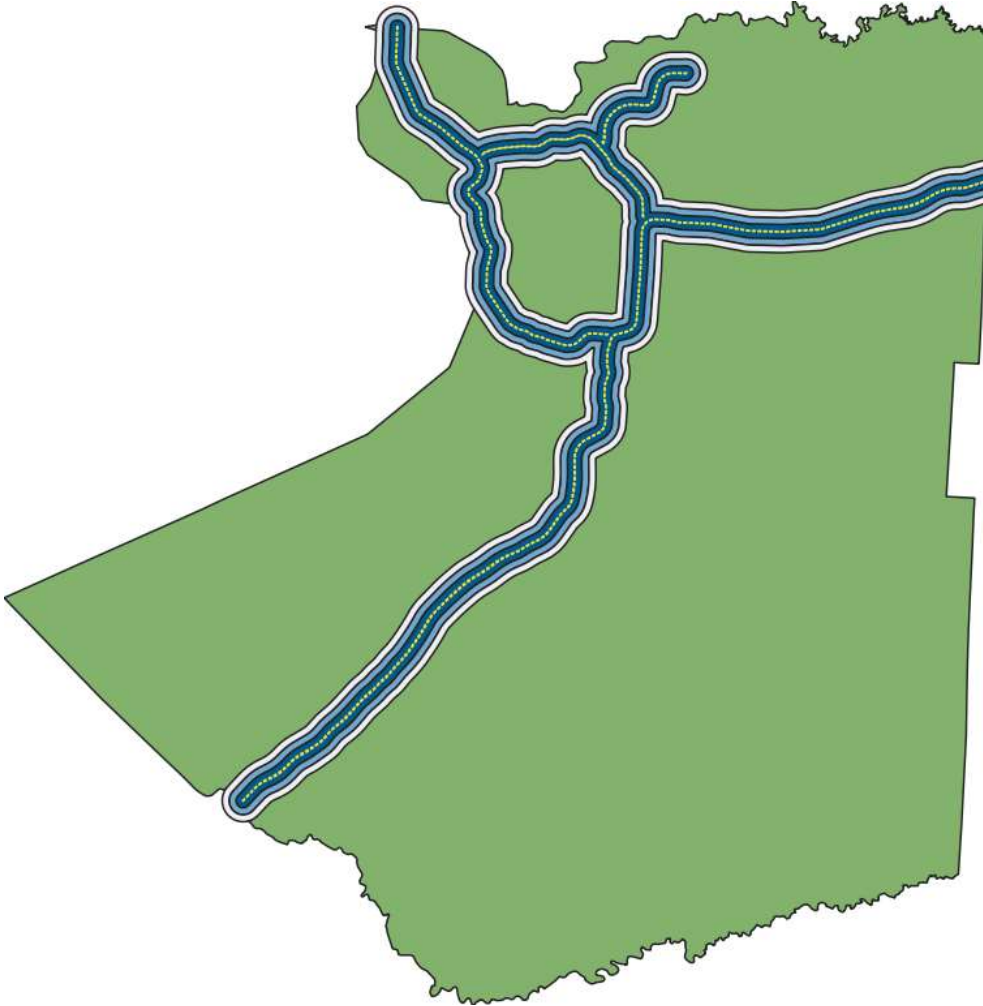
- Many parcels are large
- Need location within parcel, such as buildings vs. floodplain

Multi-ring buffers:

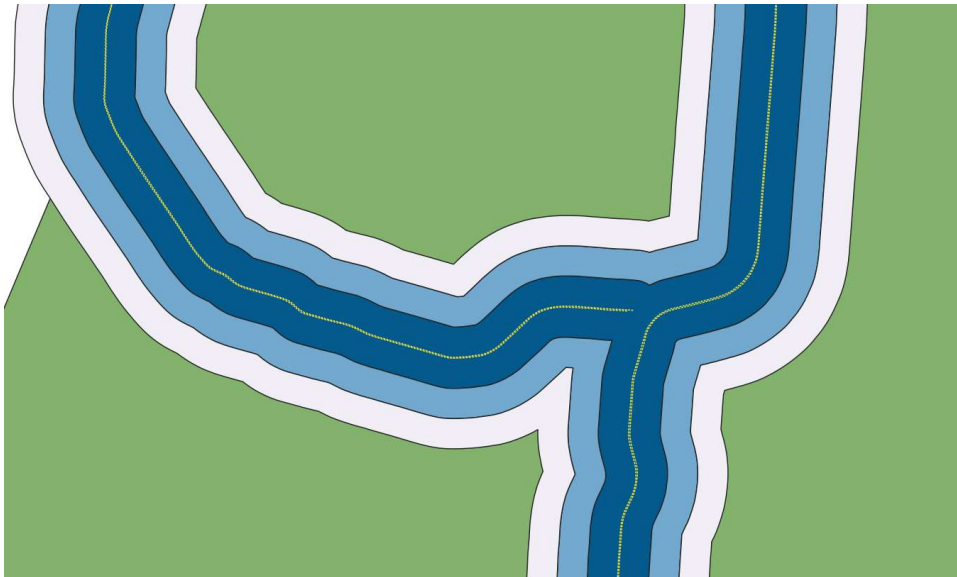
## Concentric buffers at increasing radii

Interstates in Erie County:

- Three buffers with 500 m width
- Radii are 500 m, 1000 m, 1500 m

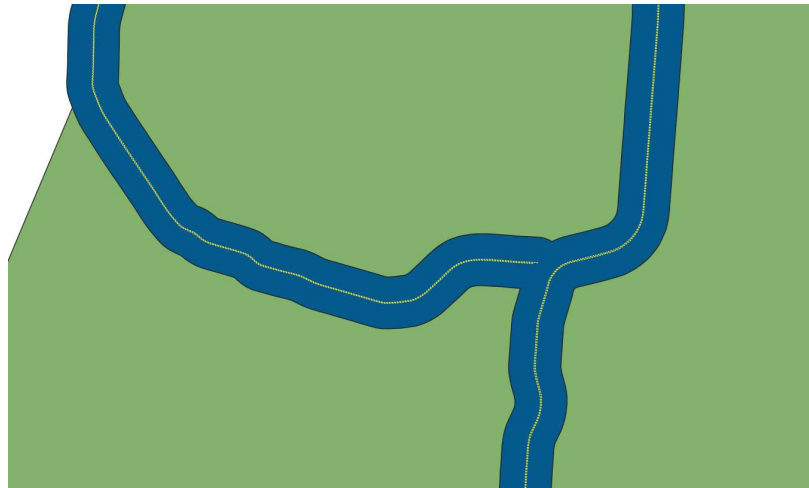


Zooming in:

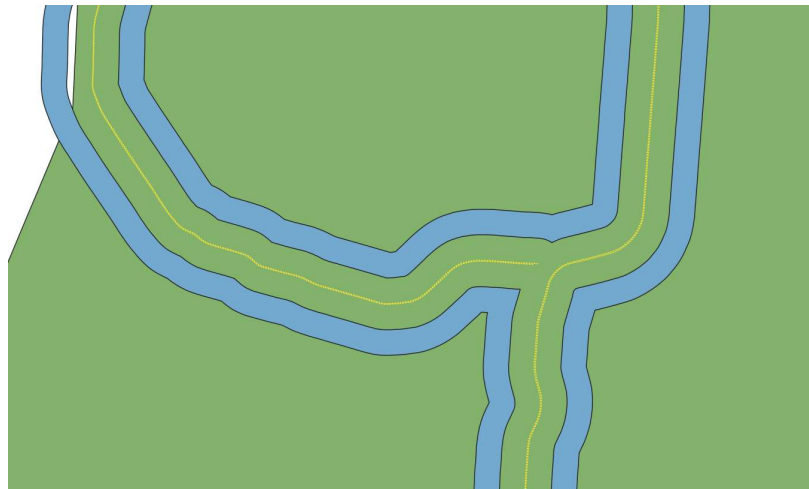


Rings are concentric, not overlapping:

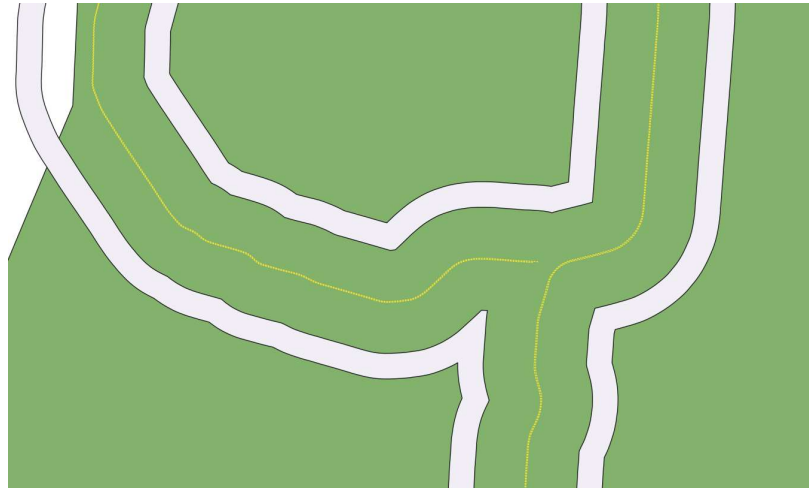
Ring 1:  
0-500m



Ring 2:  
500-1000m



Ring 3:  
1000-1500m



- Ring layer attributes: **ring id, radius**

Spatial join of rings onto parcels:

- New attributes for each parcel: ring id, radius
- Can compare characteristics by zone
- E.g., could color by id or distance

