CHRISTOPHER PRENER, PH.D.
SPRING, 2017

INTRO TO GIS$_C$

GEOPROCESSING (2)

AGENDA

1. Follow-up
2. GISc & Public Policy
3. Tables
4. Customizing Symbols
5. Merge
6. Intersect
7. Union

1 FOLLOW-UP

2 GISc & PUBLIC POLICY

3 TABLES

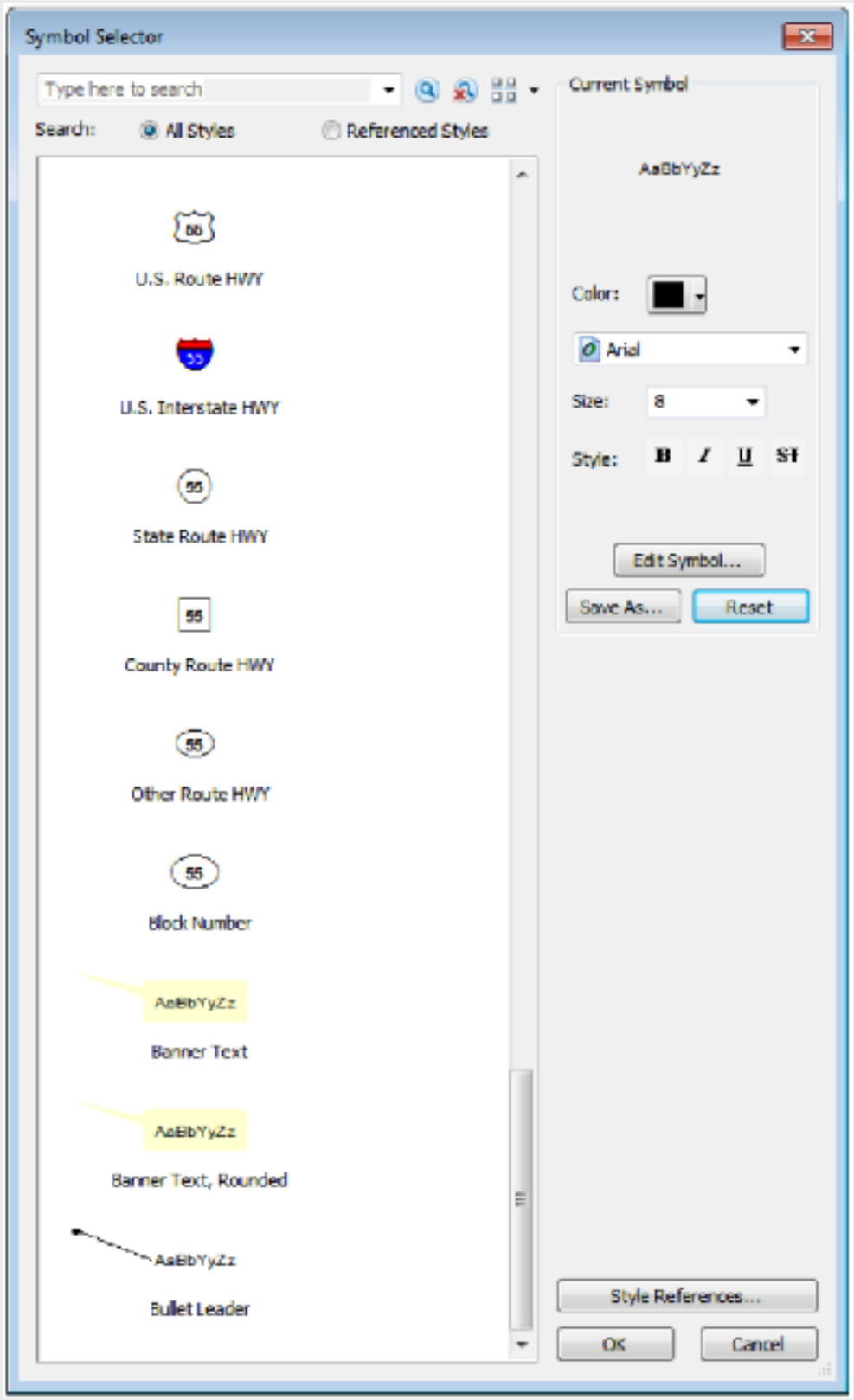
Table 1 - Frequency of Observations by Year

Year	Count*	Percent
2009	120	7.95%
2010	240	15.90%
2011	365	24.19%
2012	784	51.95%

Note: * - Count covers "VACANT BLDG" observations in the CSB data.

4 CUSTOMIZING SYMBOLS

SPECIAL SYMBOLS



5 MERGE

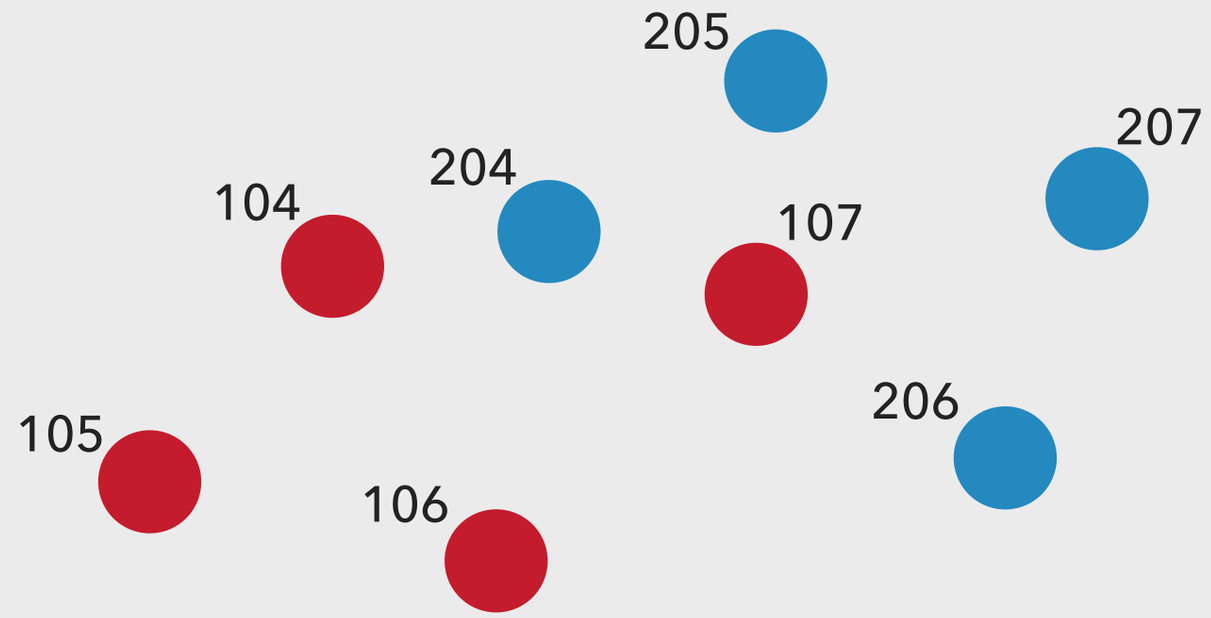
HOW TO COMBINE FEATURE CLASSES WITH RELATED DATA?

MERGE

Input Datasets

ID	Shape	Type
104	Point	A
105	Point	A
106	Point	A
107	Point	A

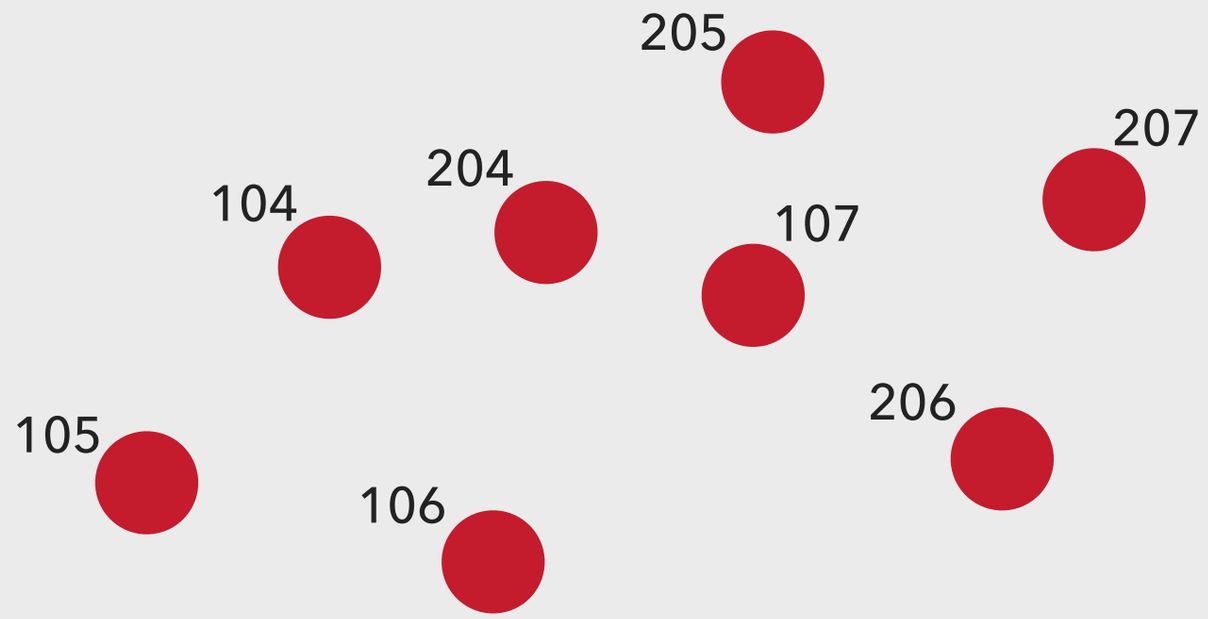
ID	Shape	Type
204	Point	B
205	Point	B
206	Point	B
207	Point	B



MERGE

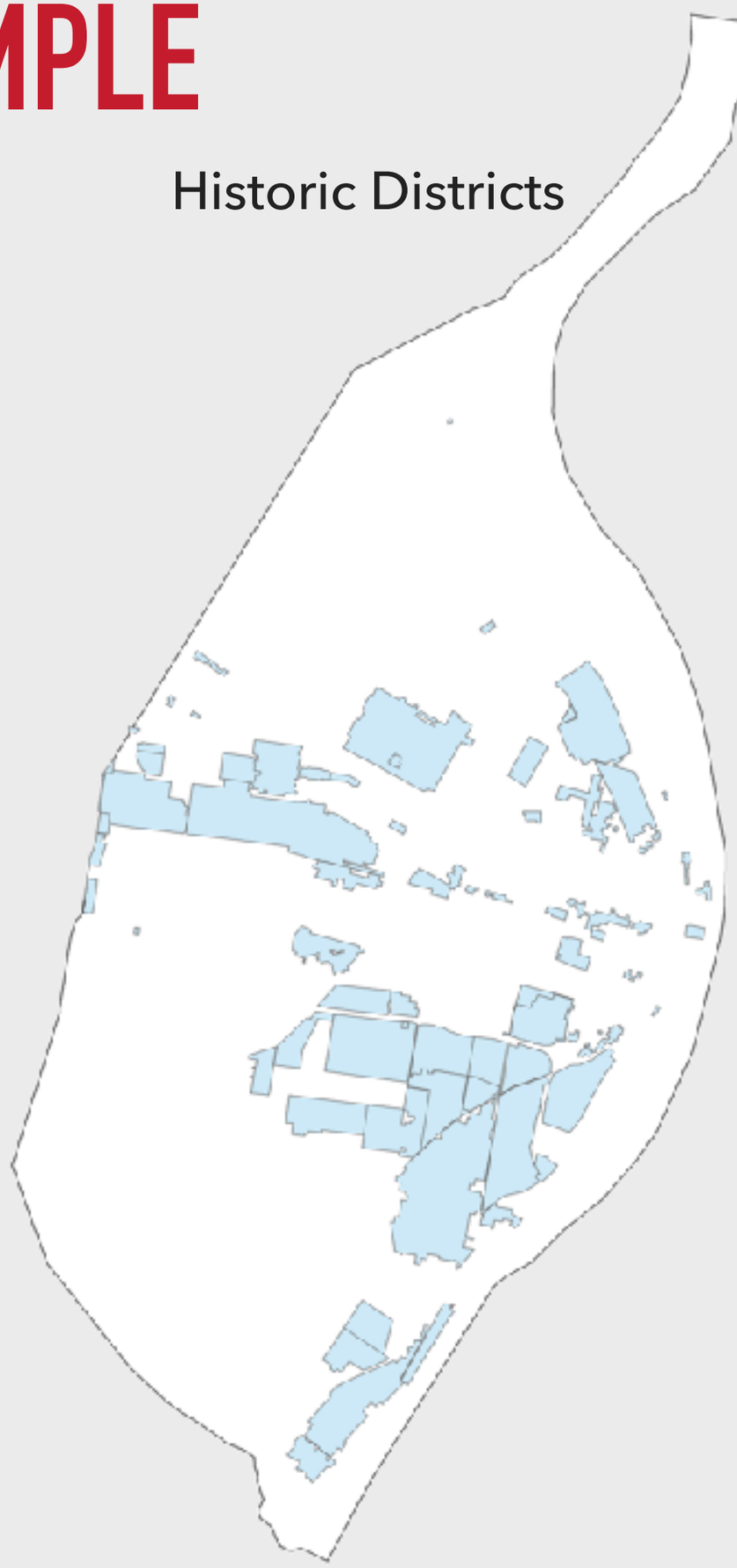
Output Dataset

ID	Shape	Type
104	Point	A
105	Point	A
106	Point	A
107	Point	A
204	Point	B
205	Point	B
206	Point	B
207	Point	B

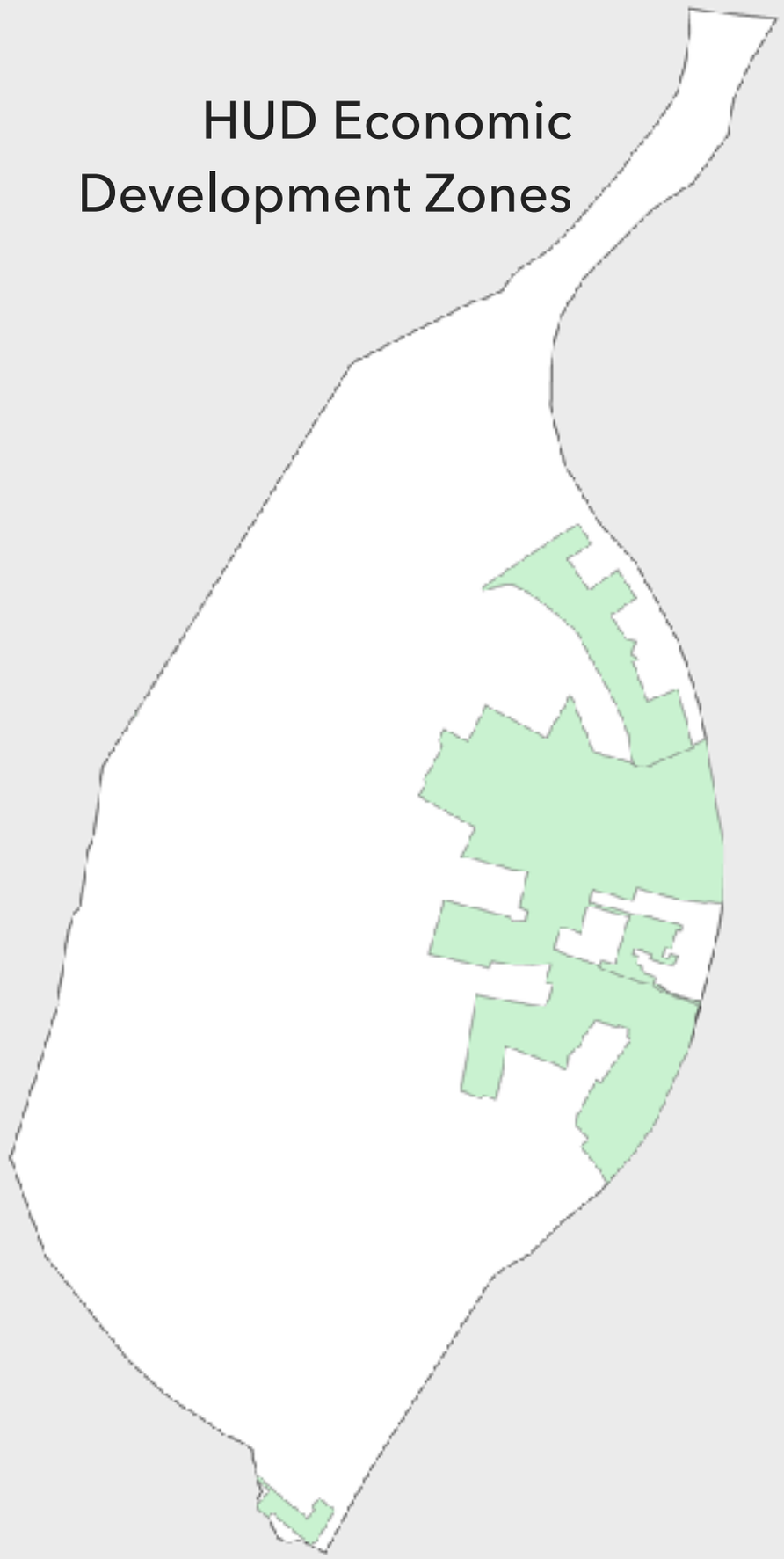


MERGE EXAMPLE

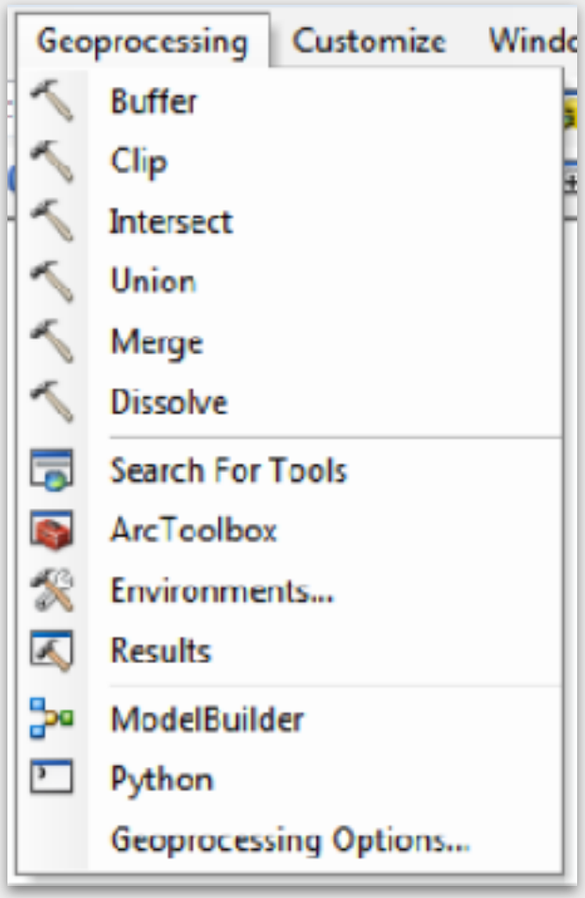
Historic Districts



HUD Economic Development Zones

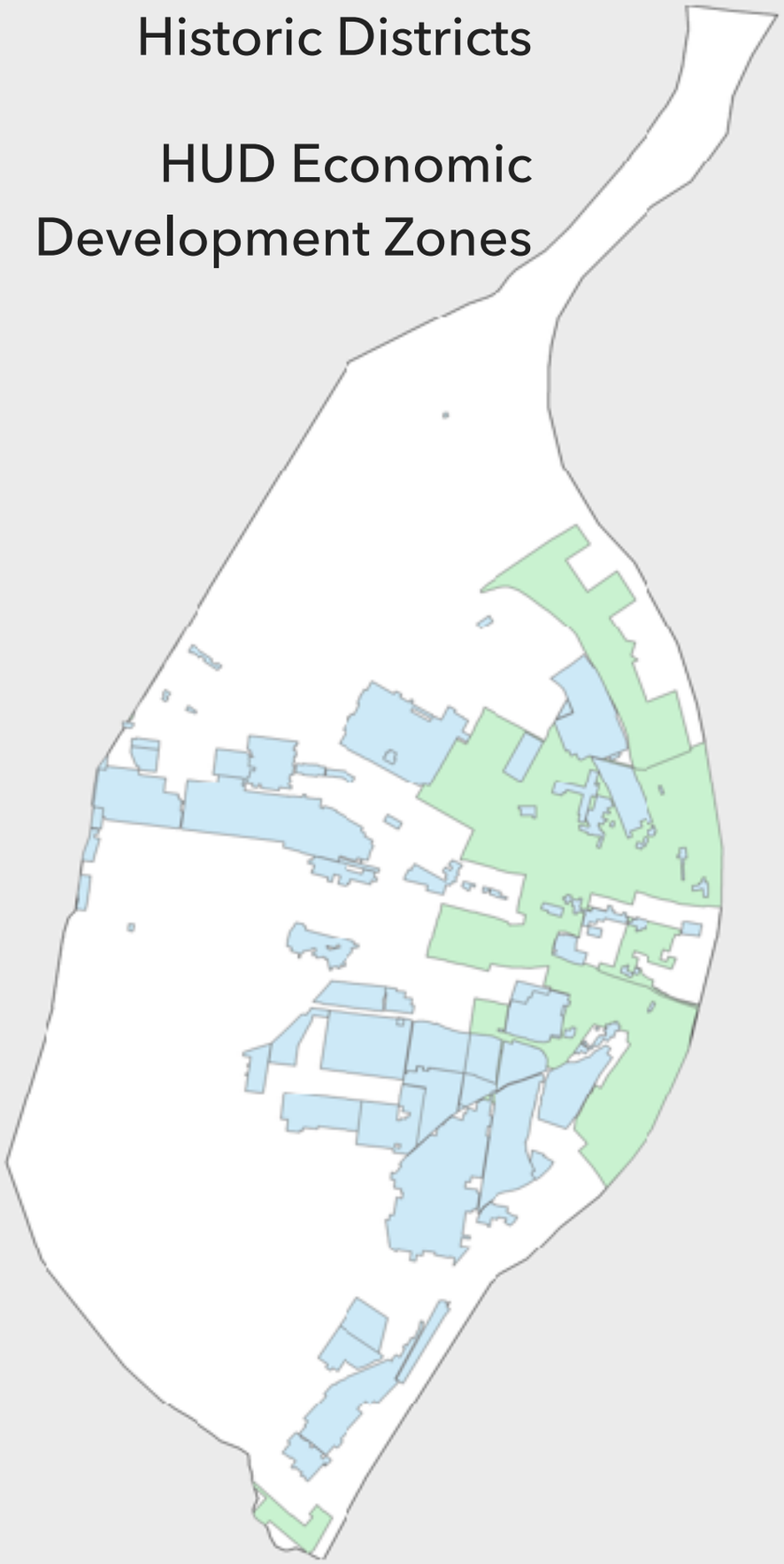


MERGE EXAMPLE

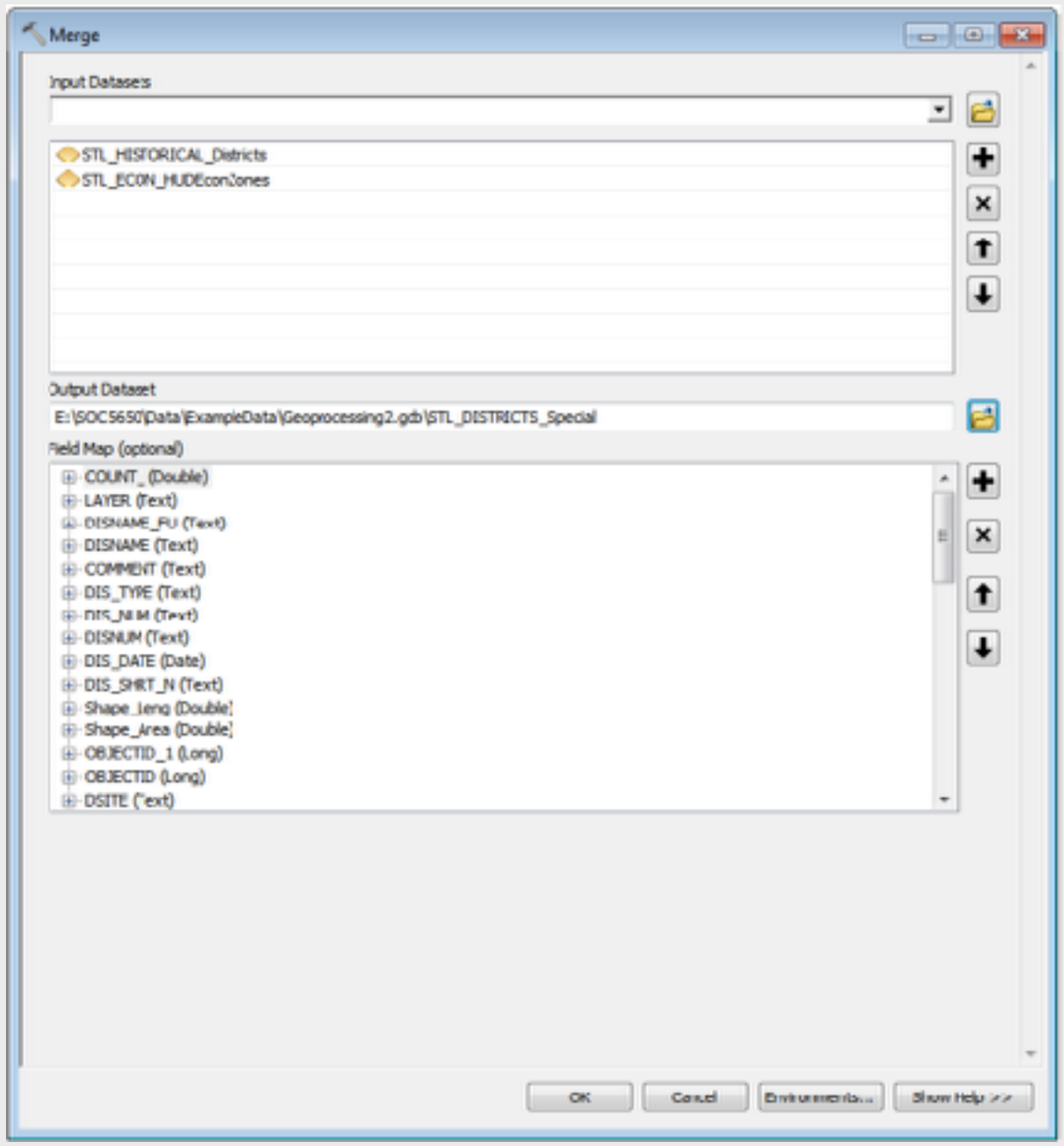


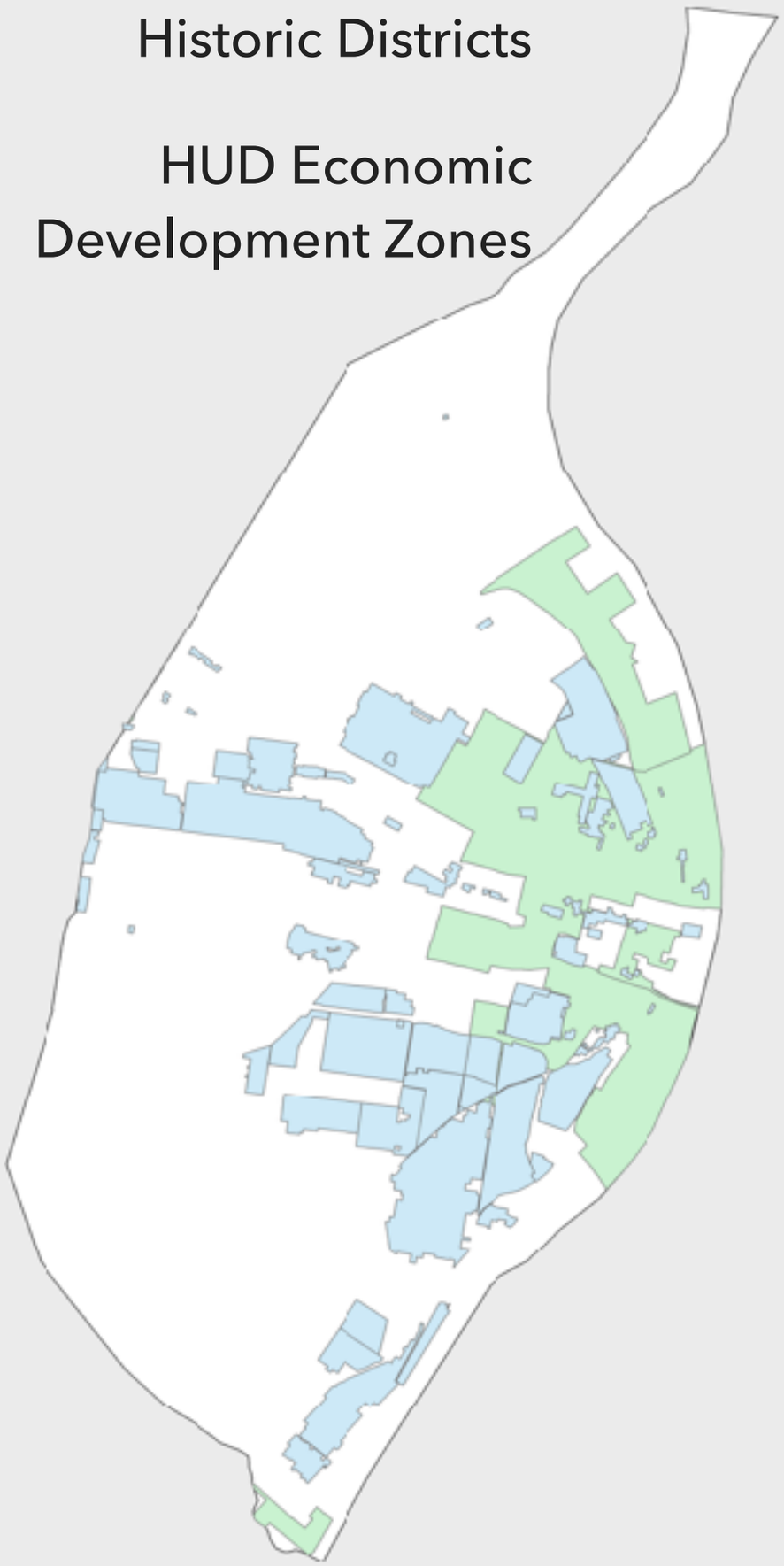
Historic Districts

HUD Economic Development Zones

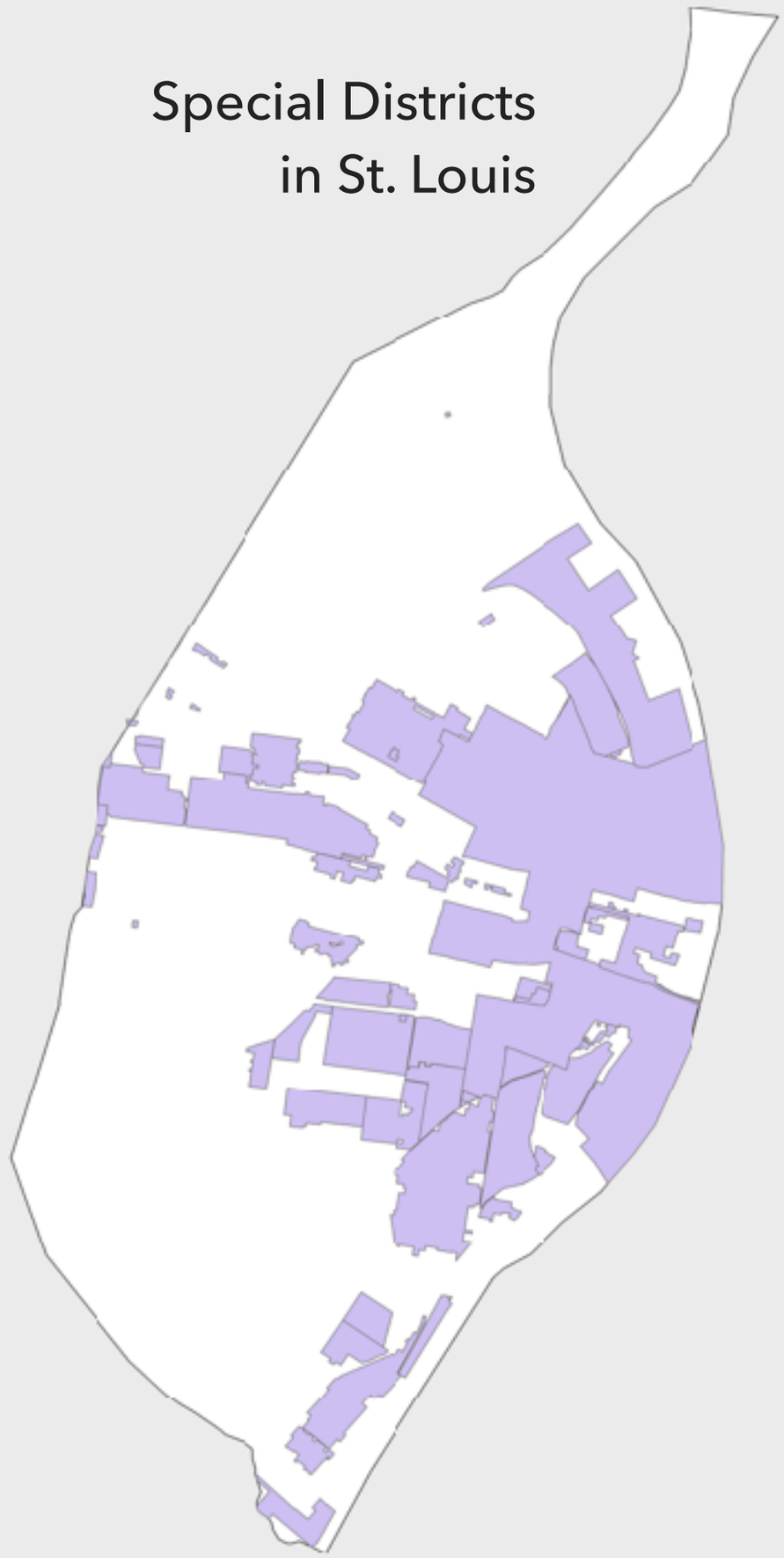


MERGE EXAMPLE





MERGE EXAMPLE

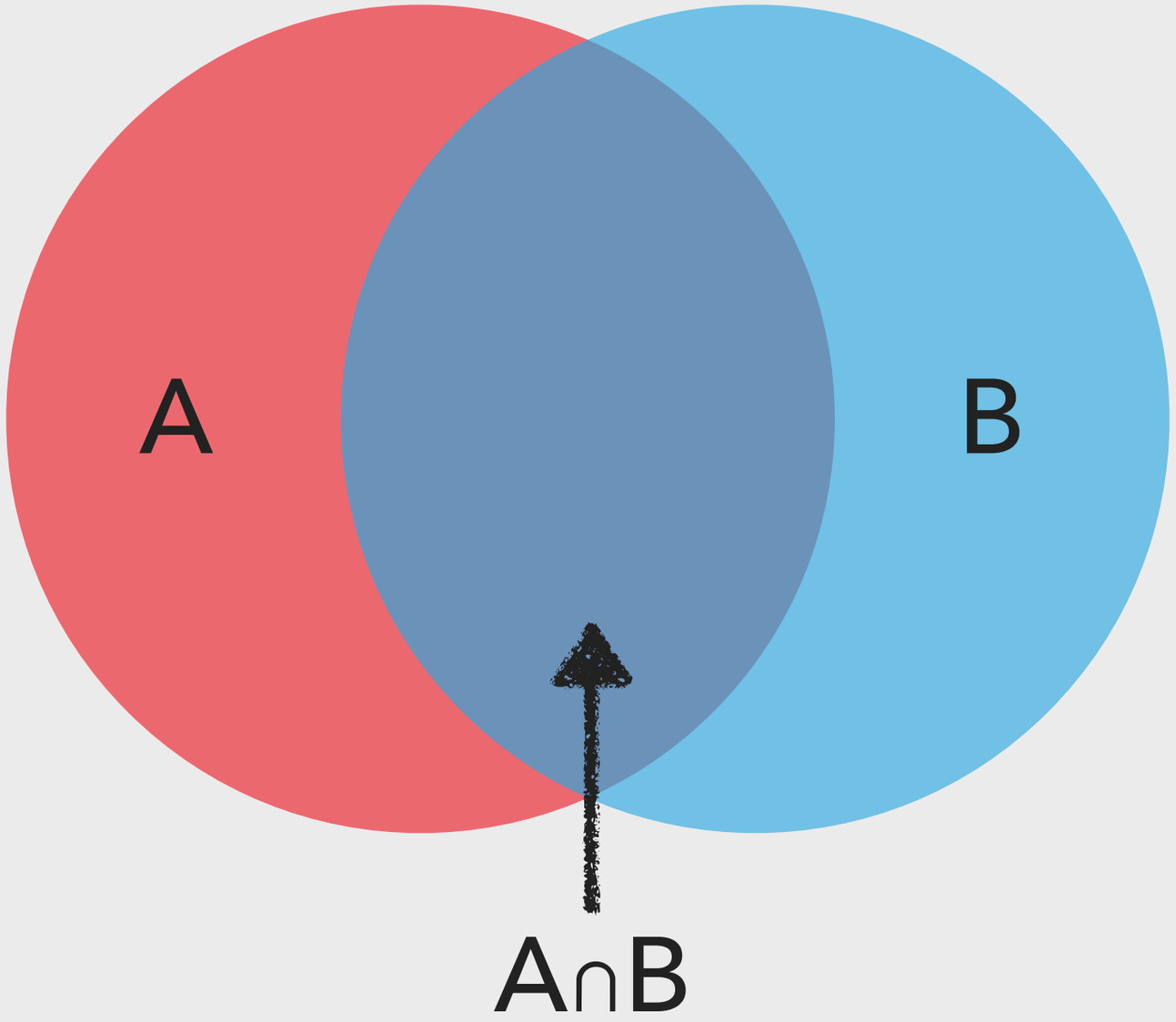


6 INTERSECT

HOW COMBINE OVERLAPPING DATA AND ATTRIBUTES FROM TWO LAYERS?

INTERSECT IN PROBABILITY THEORY

- "A intersect B" ...
- ... means "both A and B"
- In other words, the area of overlap between A and B



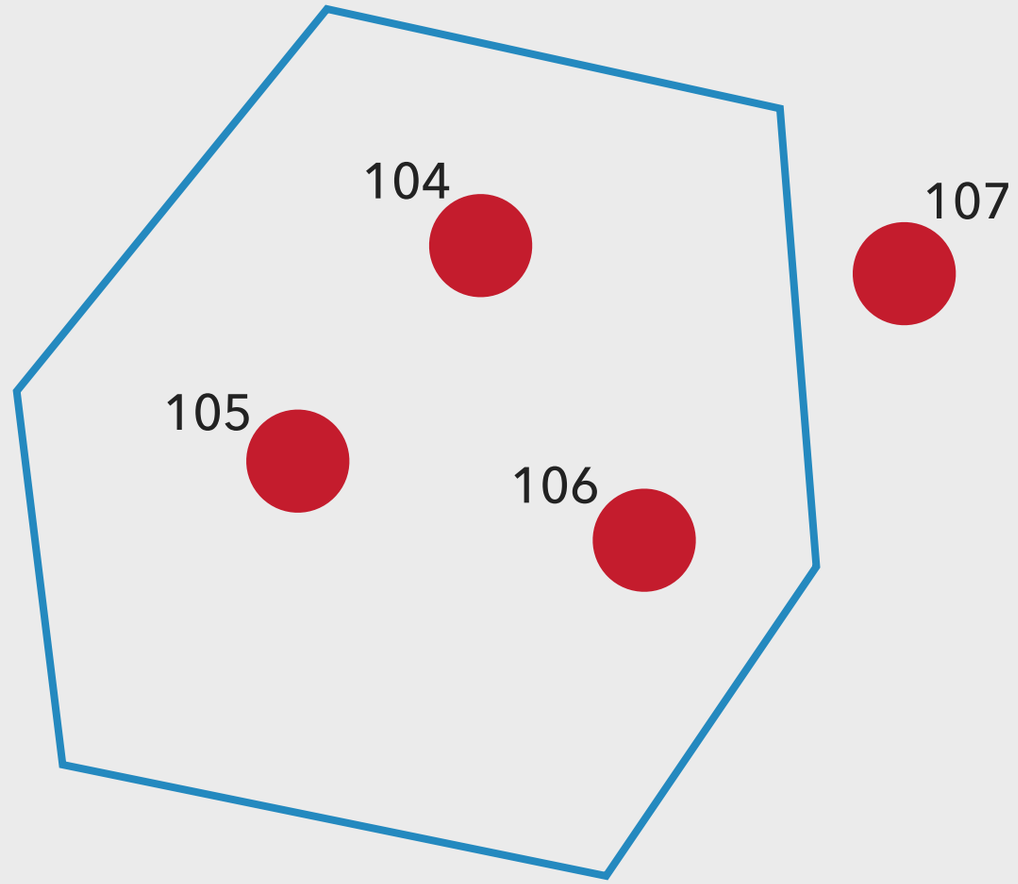
INTERSECT WITH POINT DATA

Input Features

ID	Shape	Type
104	Point	A
105	Point	B
106	Point	A
107	Point	B

Intersect Features

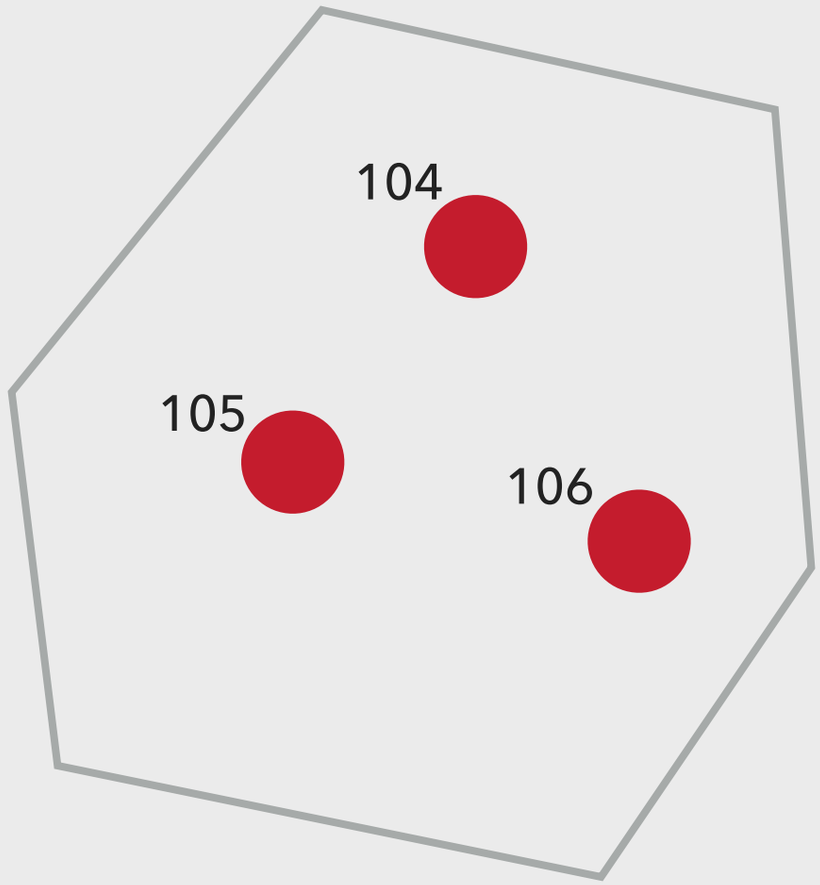
ID	Shape	Zone
23	Polygon	2



INTERSECT WITH POINT DATA

Output Features

ID	Shape	Type	Zone
104	Point	A	2
105	Point	B	2
106	Point	A	2



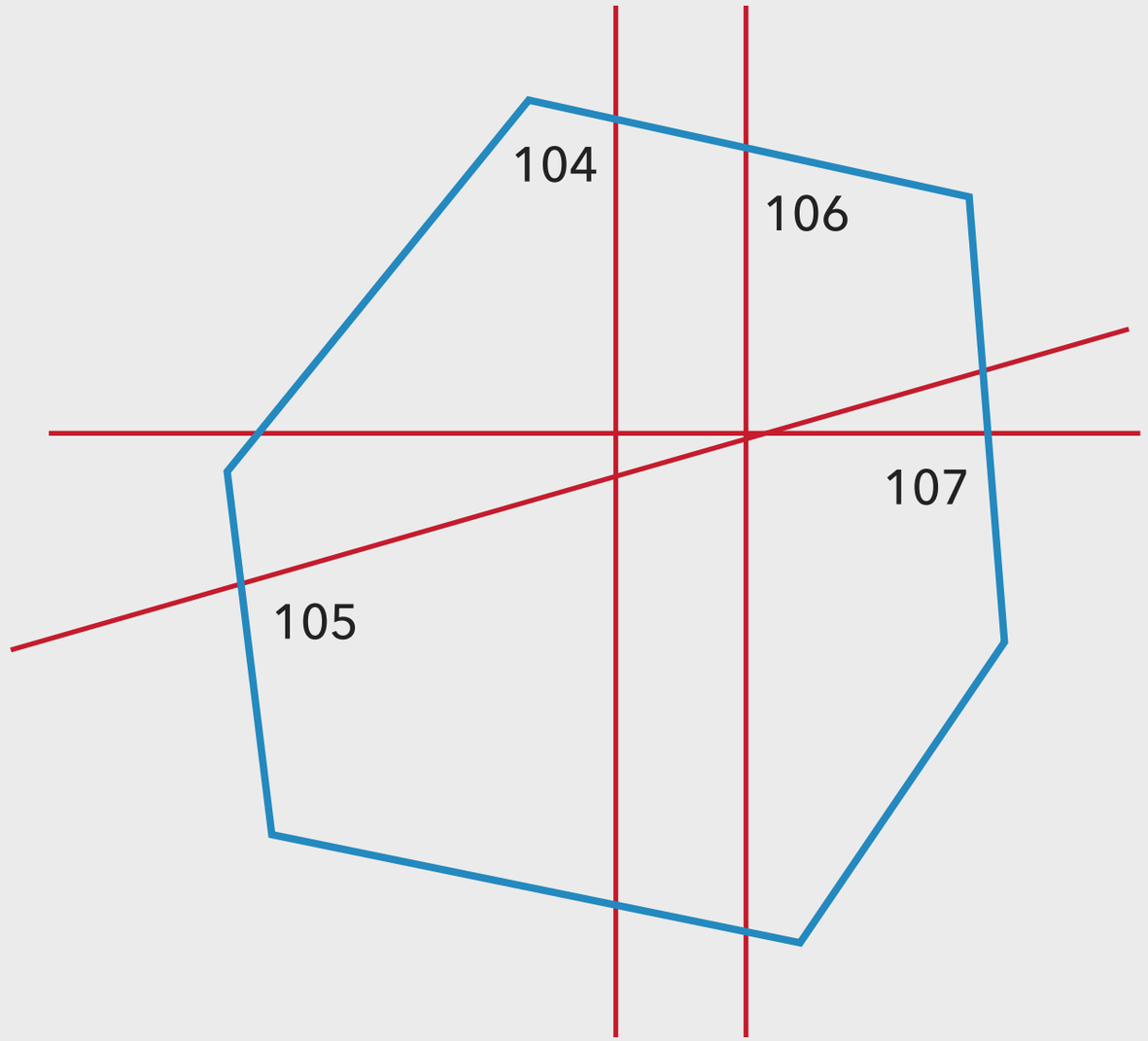
INTERSECT WITH LINE DATA

Input Features

ID	Shape	Type
104	Line	A
105	Line	B
106	Line	A
107	Line	B

Intersect Features

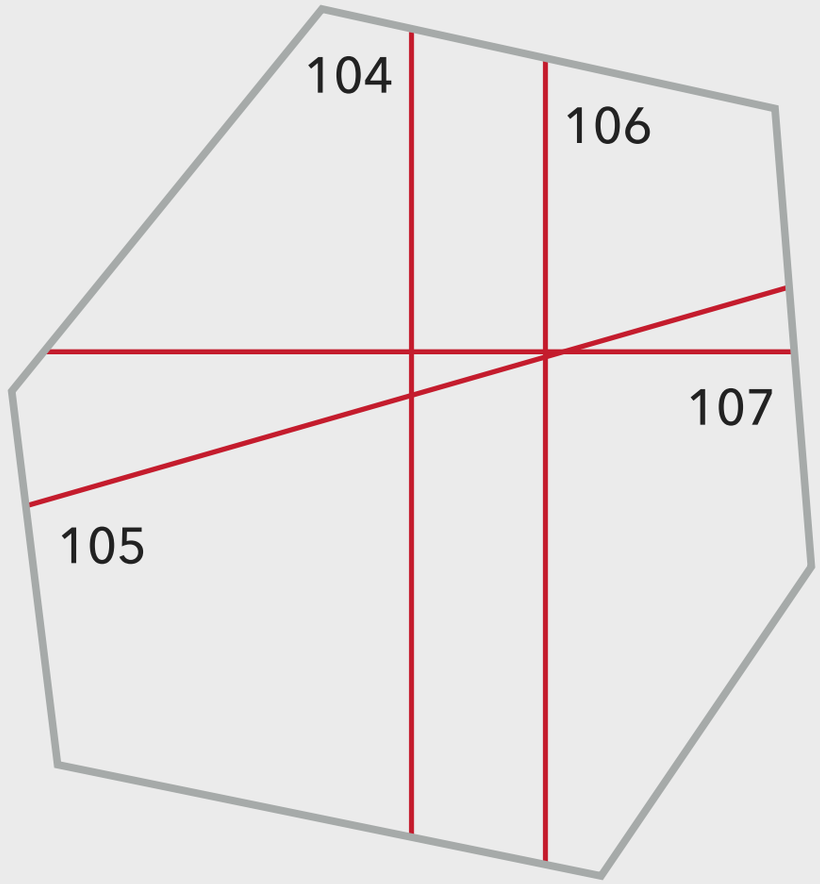
ID	Shape	Zone
23	Polygon	2



INTERSECT WITH LINE DATA

Output Features

ID	Shape	Type	Zone
104	Line	A	2
105	Line	B	2
106	Line	A	2
107	Line	A	2



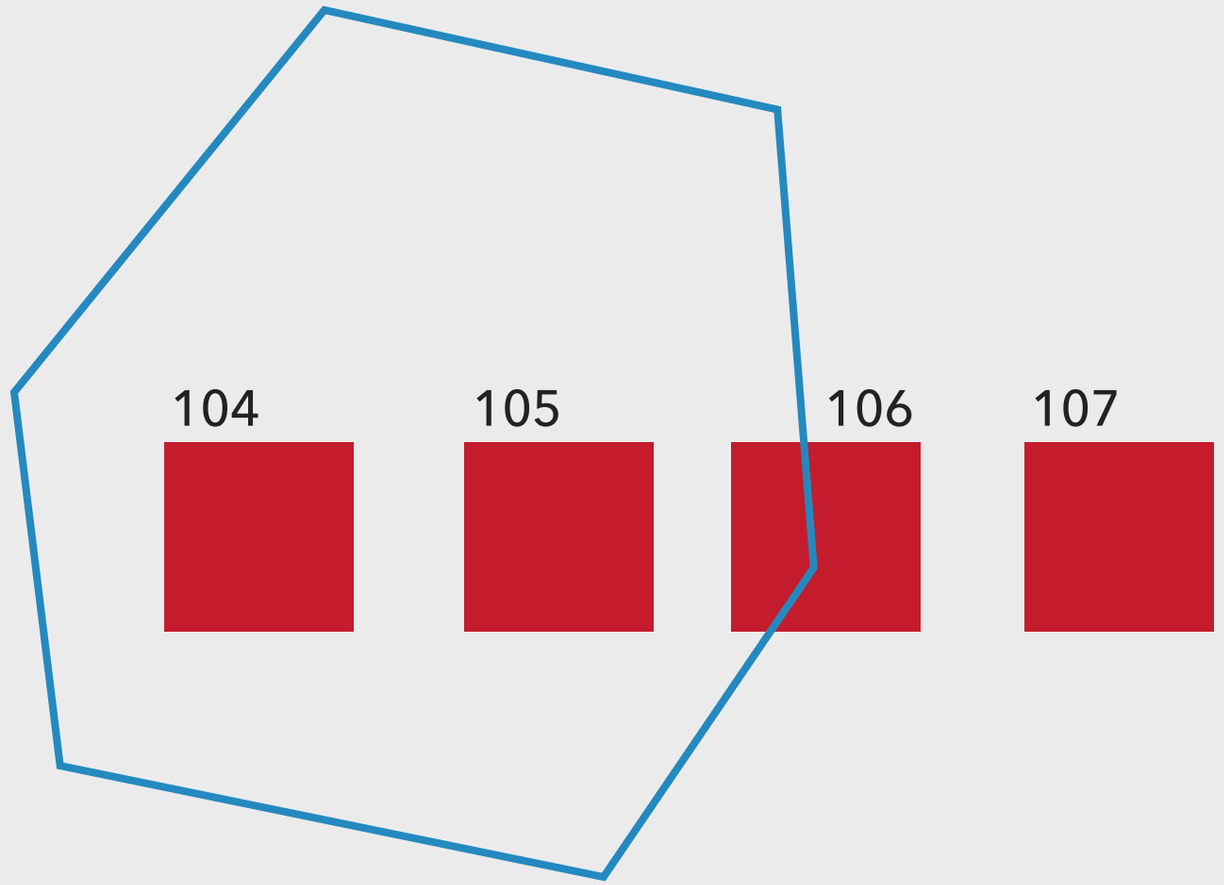
INTERSECT WITH POLYGON DATA

Input Features

ID	Shape	Type
104	Polygon	A
105	Polygon	B
106	Polygon	A
107	Polygon	B

Intersect Features

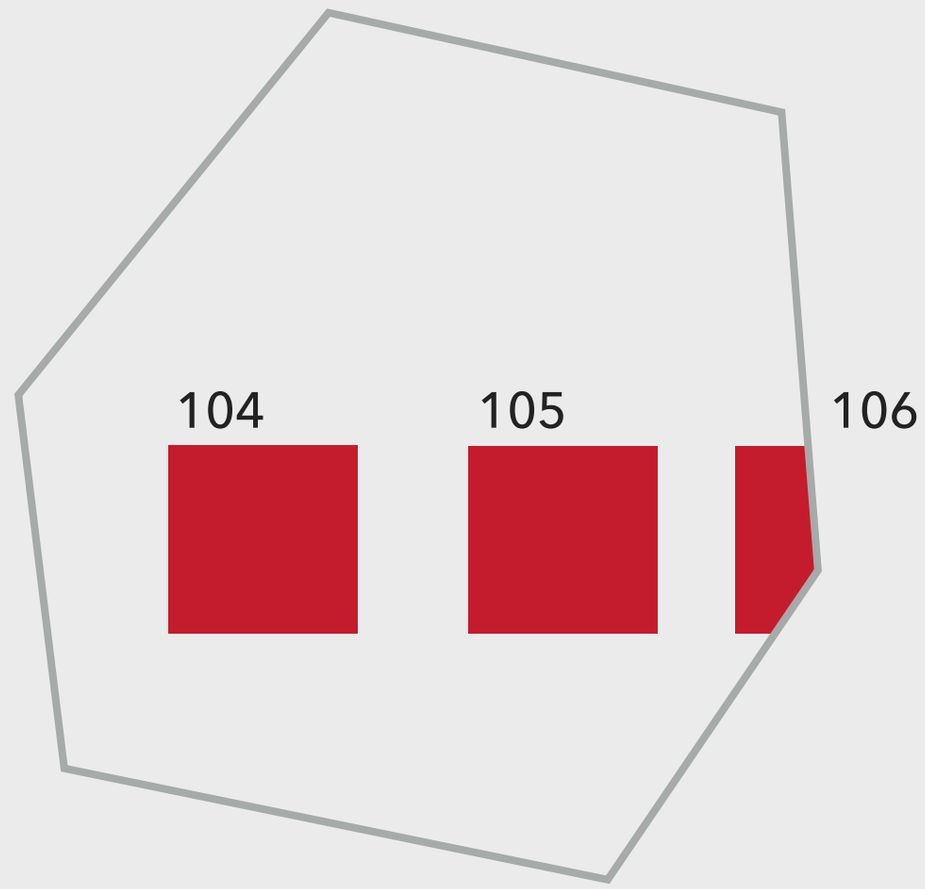
ID	Shape	Zone
23	Polygon	2



INTERSECT WITH POLYGON DATA

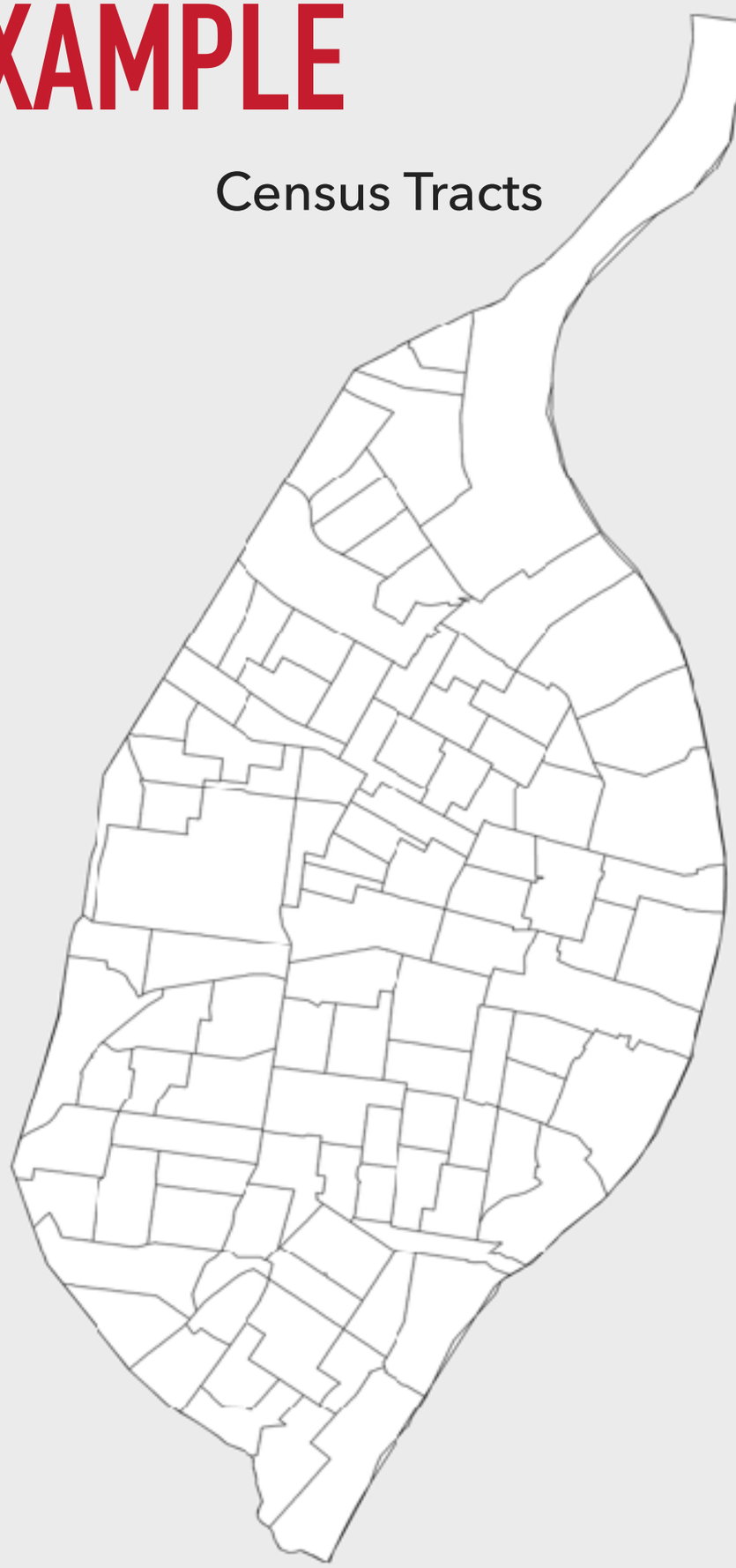
Output Features

ID	Shape	Type	Zone
104	Polygon	A	2
105	Polygon	B	2
106	Polygon	A	2

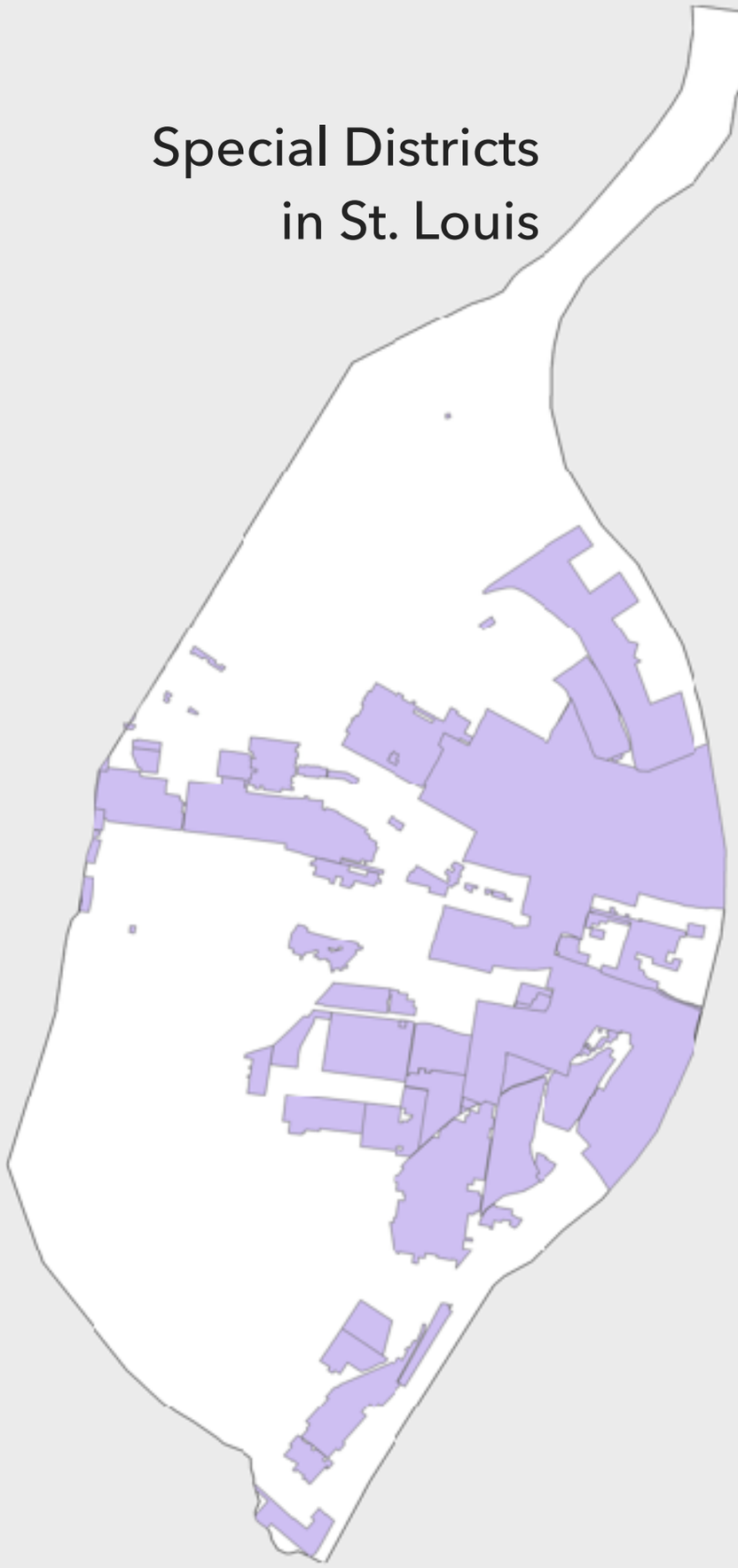


INTERSECT EXAMPLE

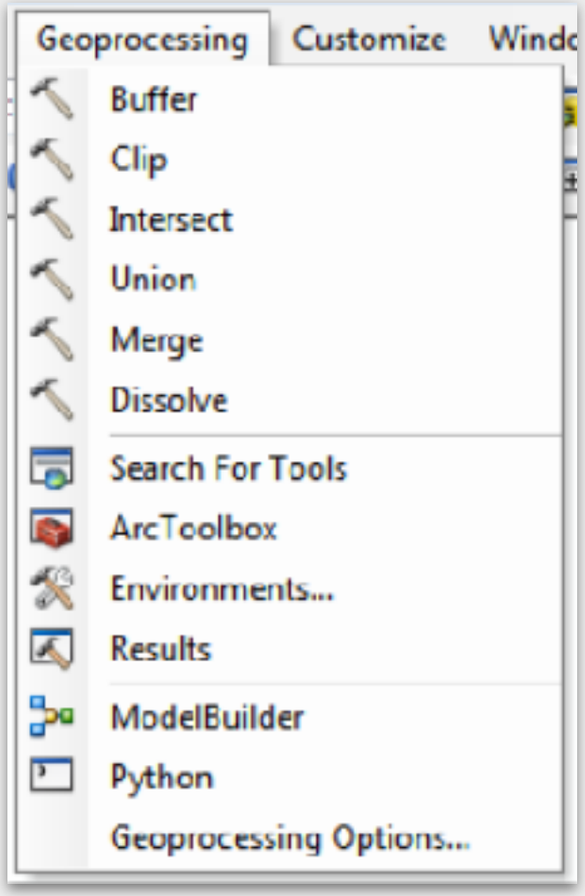
Census Tracts

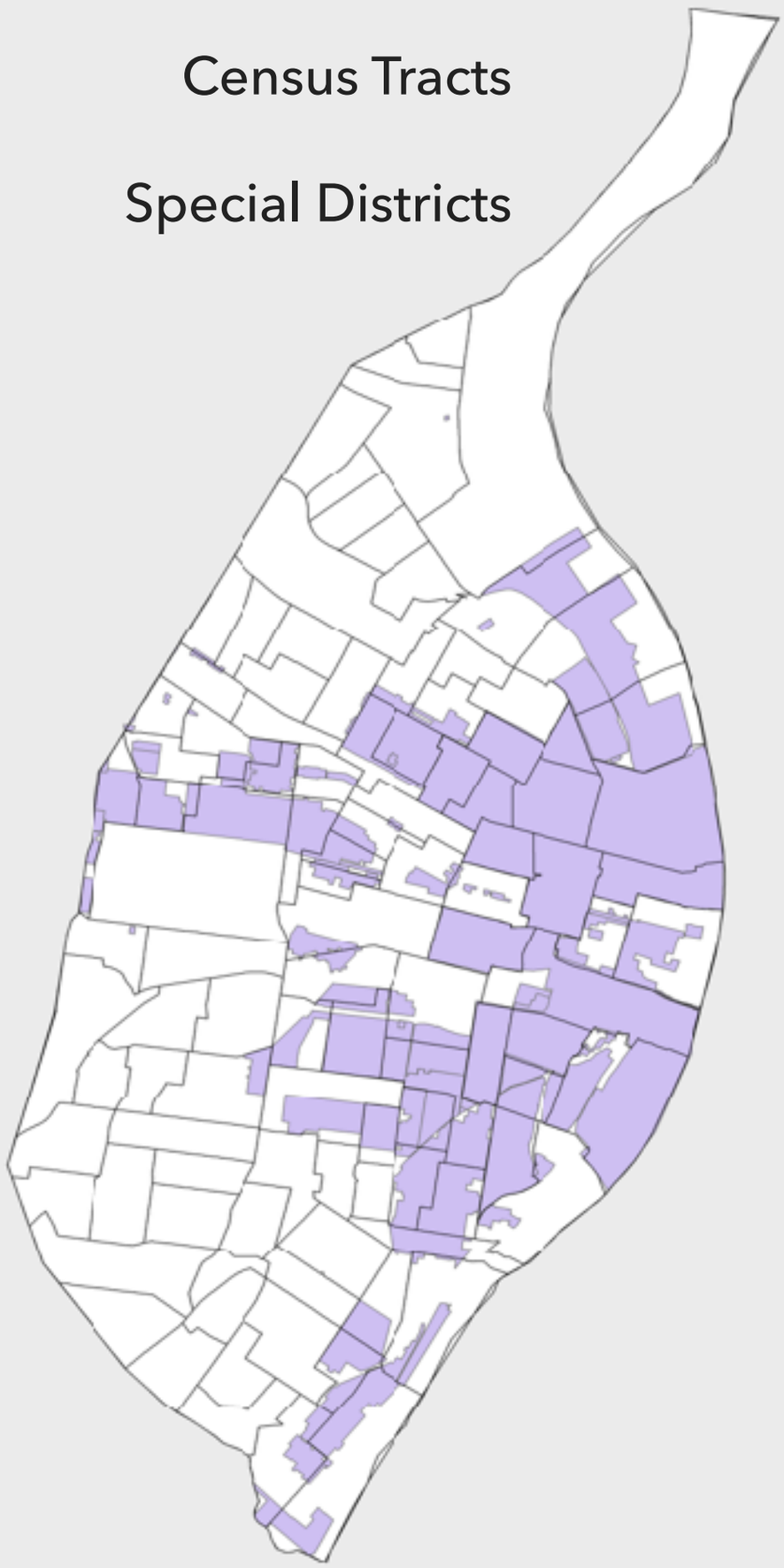


Special Districts
in St. Louis

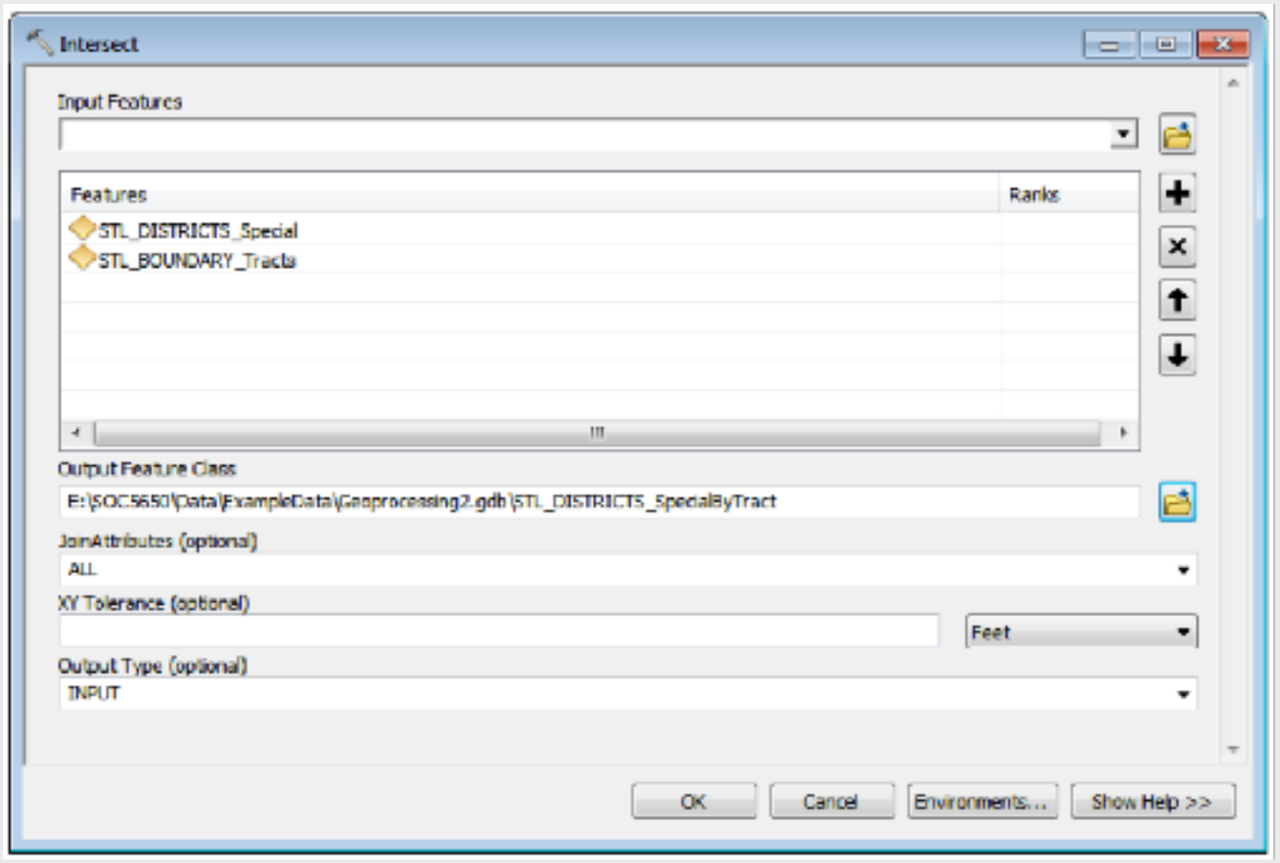


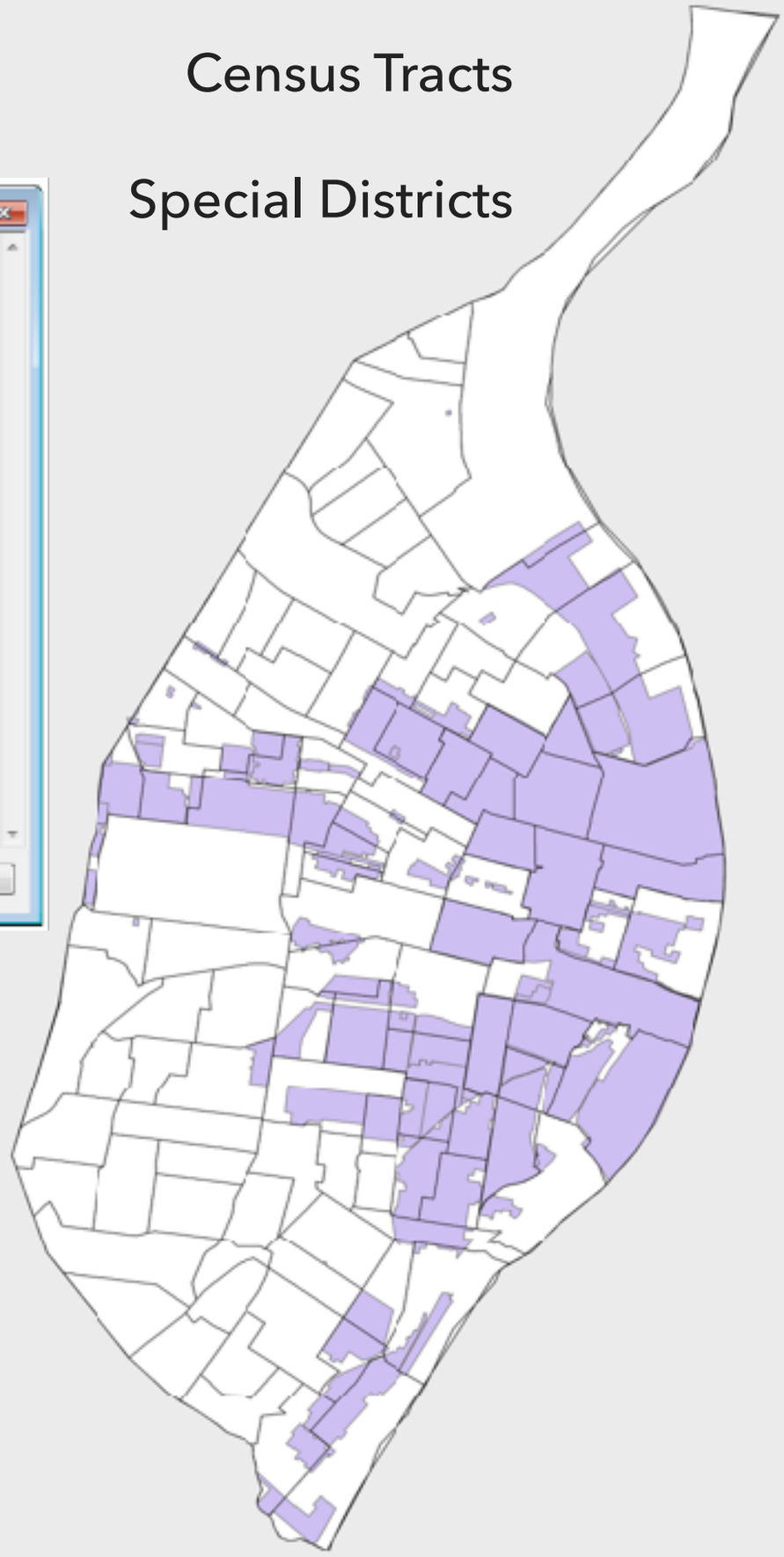
INTERSECT EXAMPLE



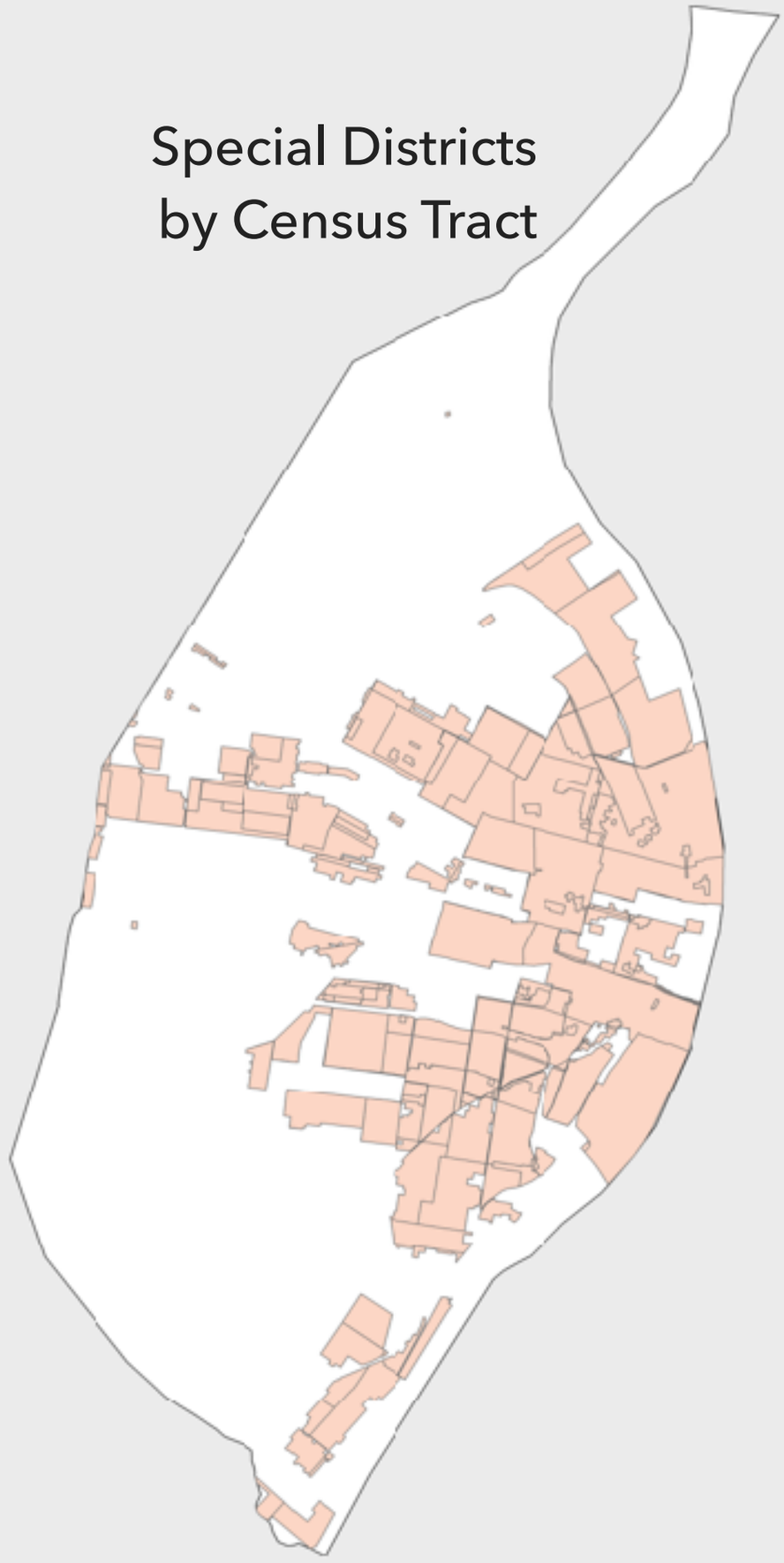


INTERSECT EXAMPLE



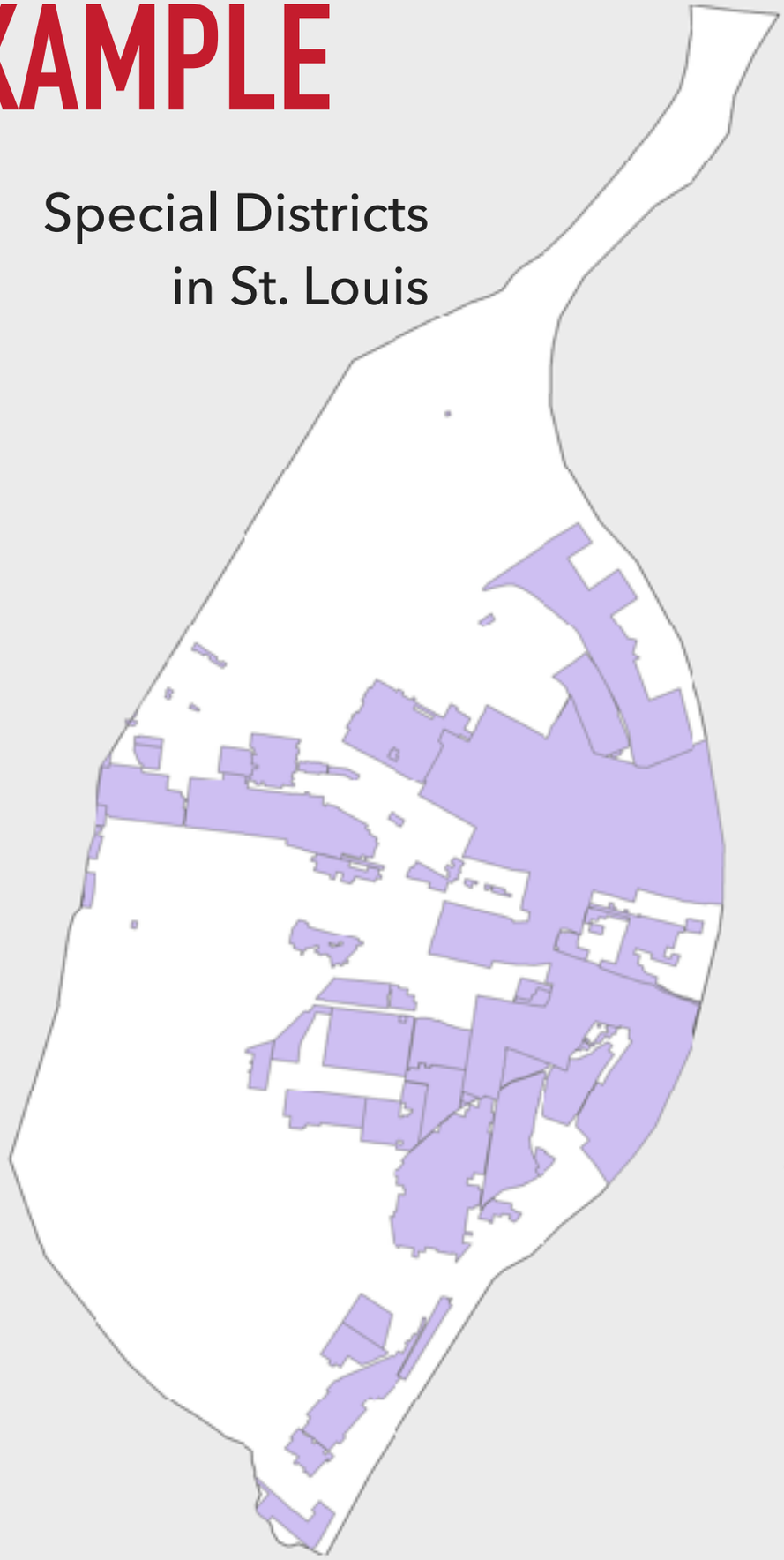


INTERSECT EXAMPLE

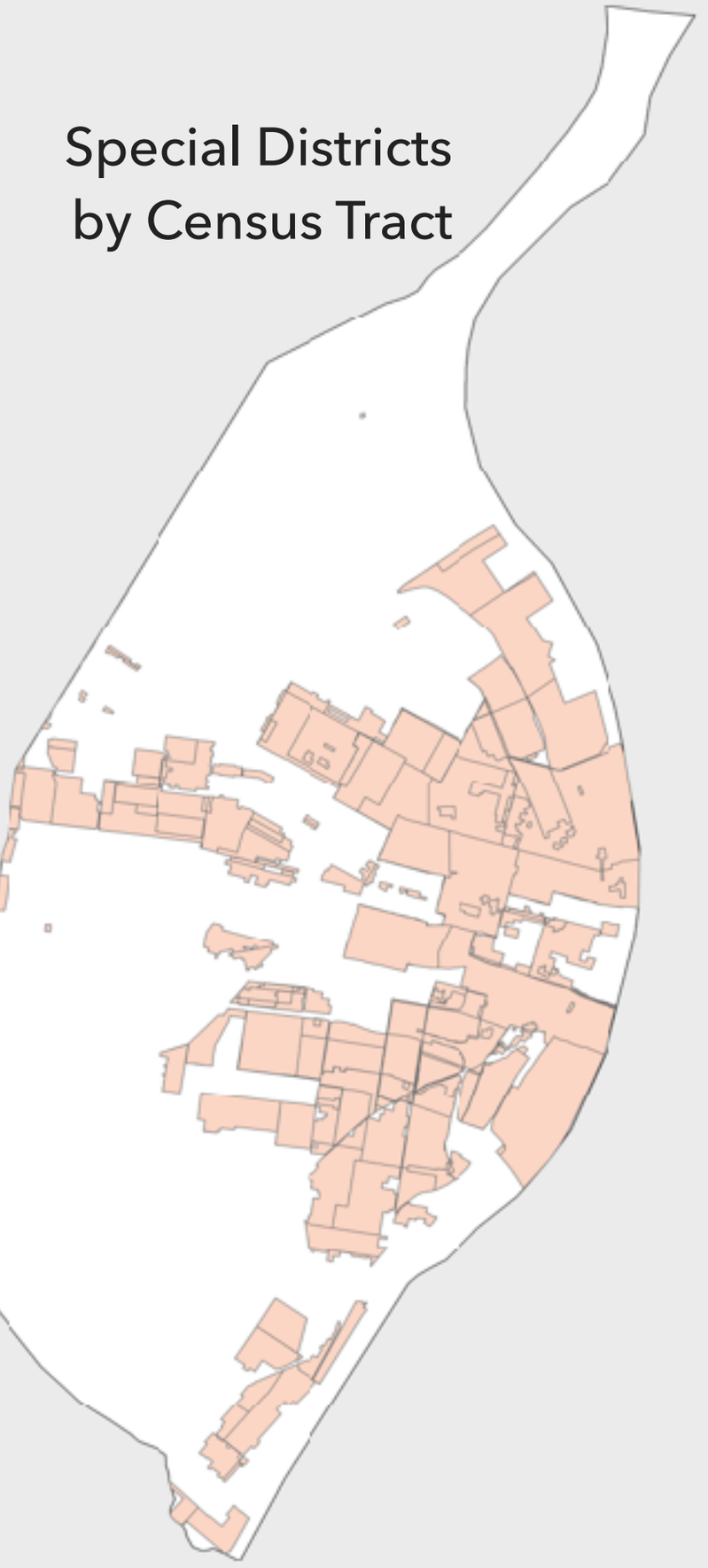


INTERSECT EXAMPLE

Special Districts
in St. Louis



Special Districts
by Census Tract

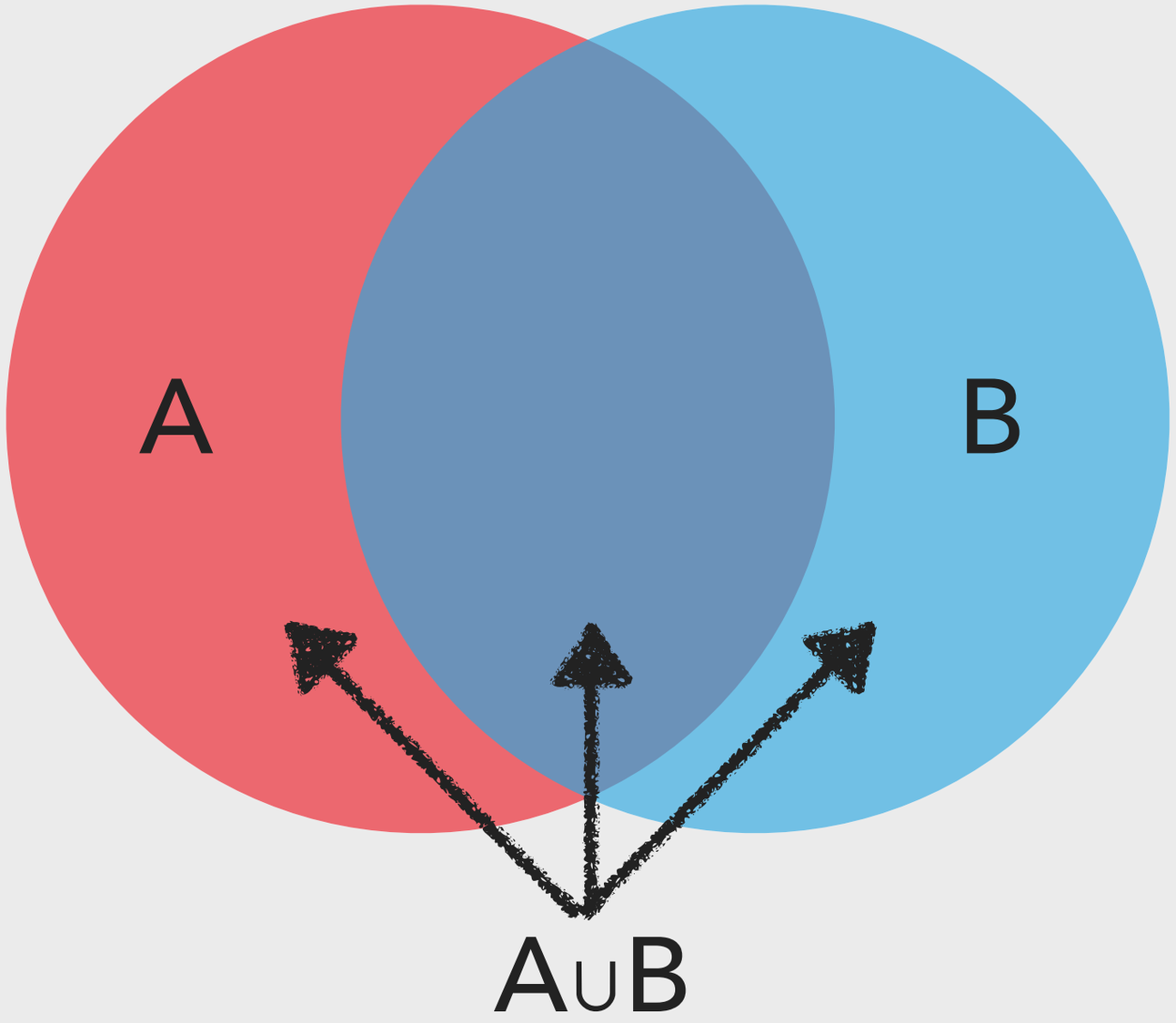


7 UNION

HOW TO COMBINE ALL DATA AND ATTRIBUTES FROM TWO POLYGON LAYERS?

UNION IN PROBABILITY THEORY

- "A union B" …
- … means "either A, B, or both"
- In other words, the area of overlap between A and B as well as the area only covered by A and the area only covered by B



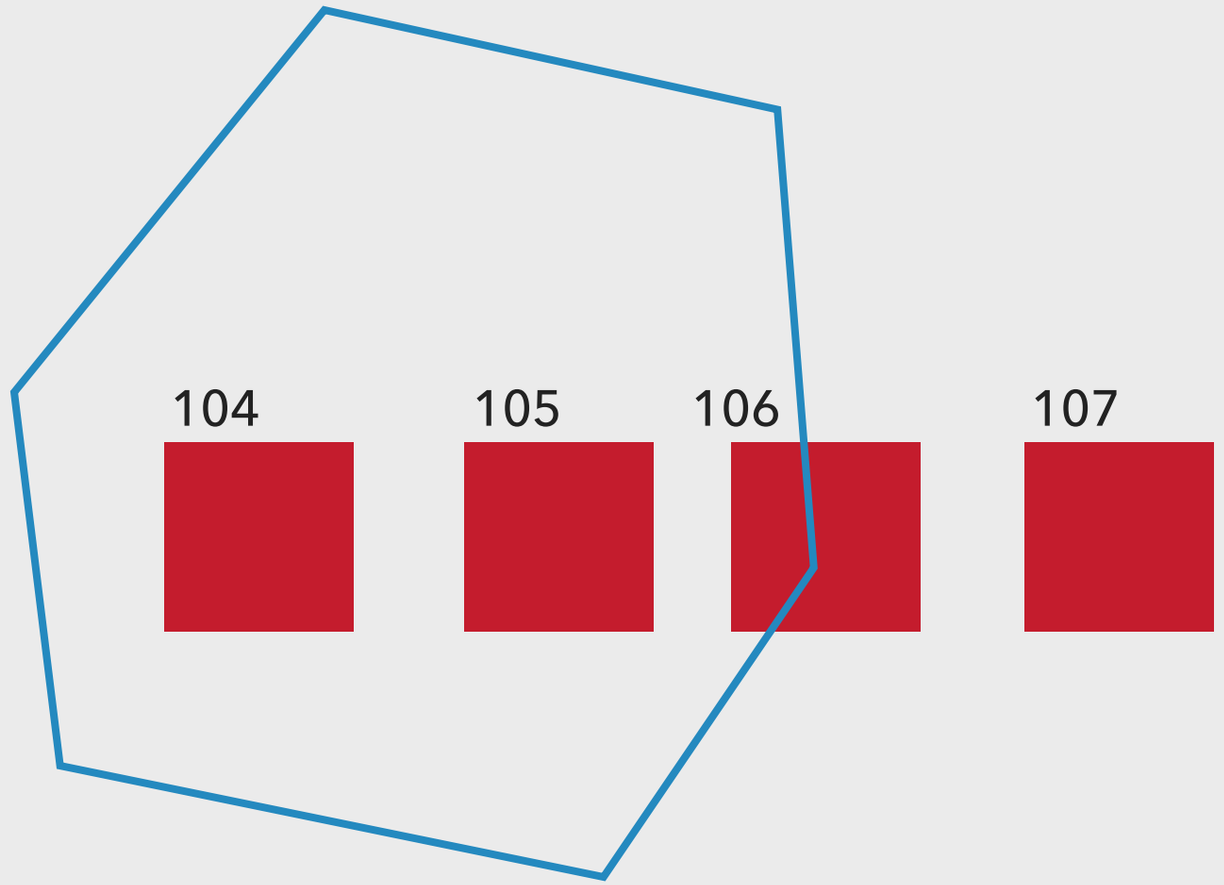
UNION

Input Features

ID	Shape	Type
104	Polygon	A
105	Polygon	B
106	Polygon	A
107	Polygon	B

Union Features

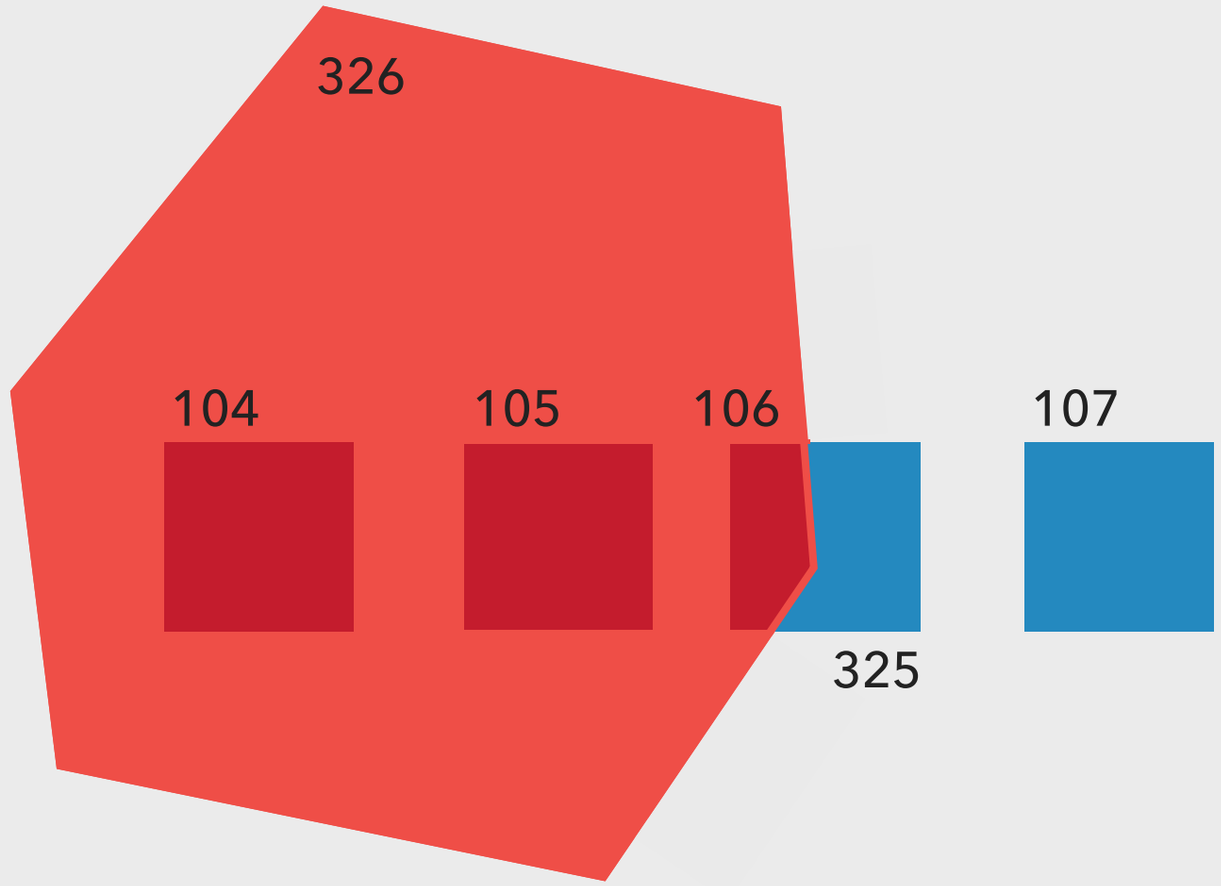
ID	Shape	Zone
23	Polygon	2



UNION

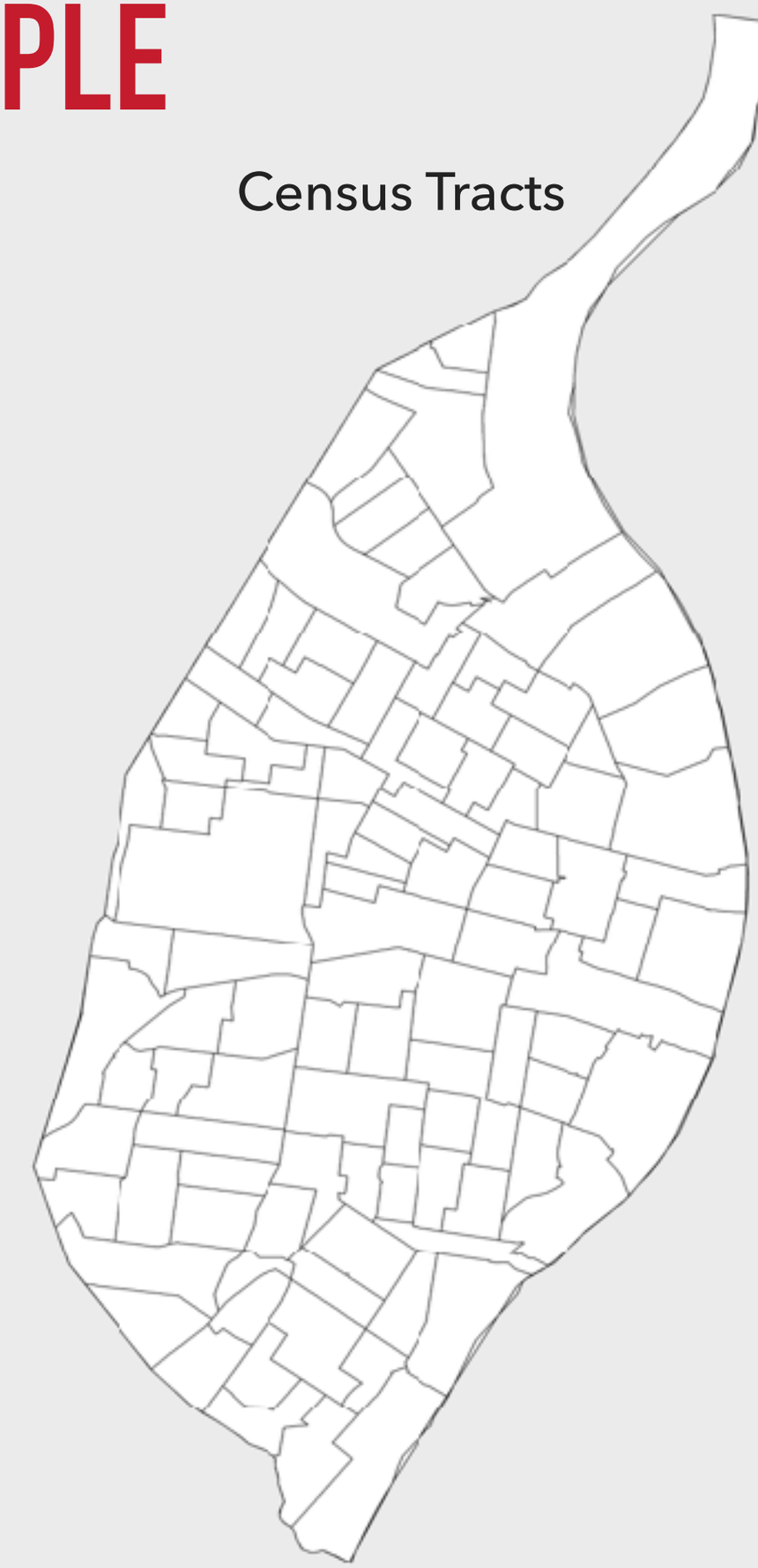
Output Features

ID	Shape	Type	FID_Zone
104	Polygon	A	2
105	Polygon	B	2
106	Polygon	A	2
107	Polygon	A	-1
325	Polygon		-1
326	Polygon		2

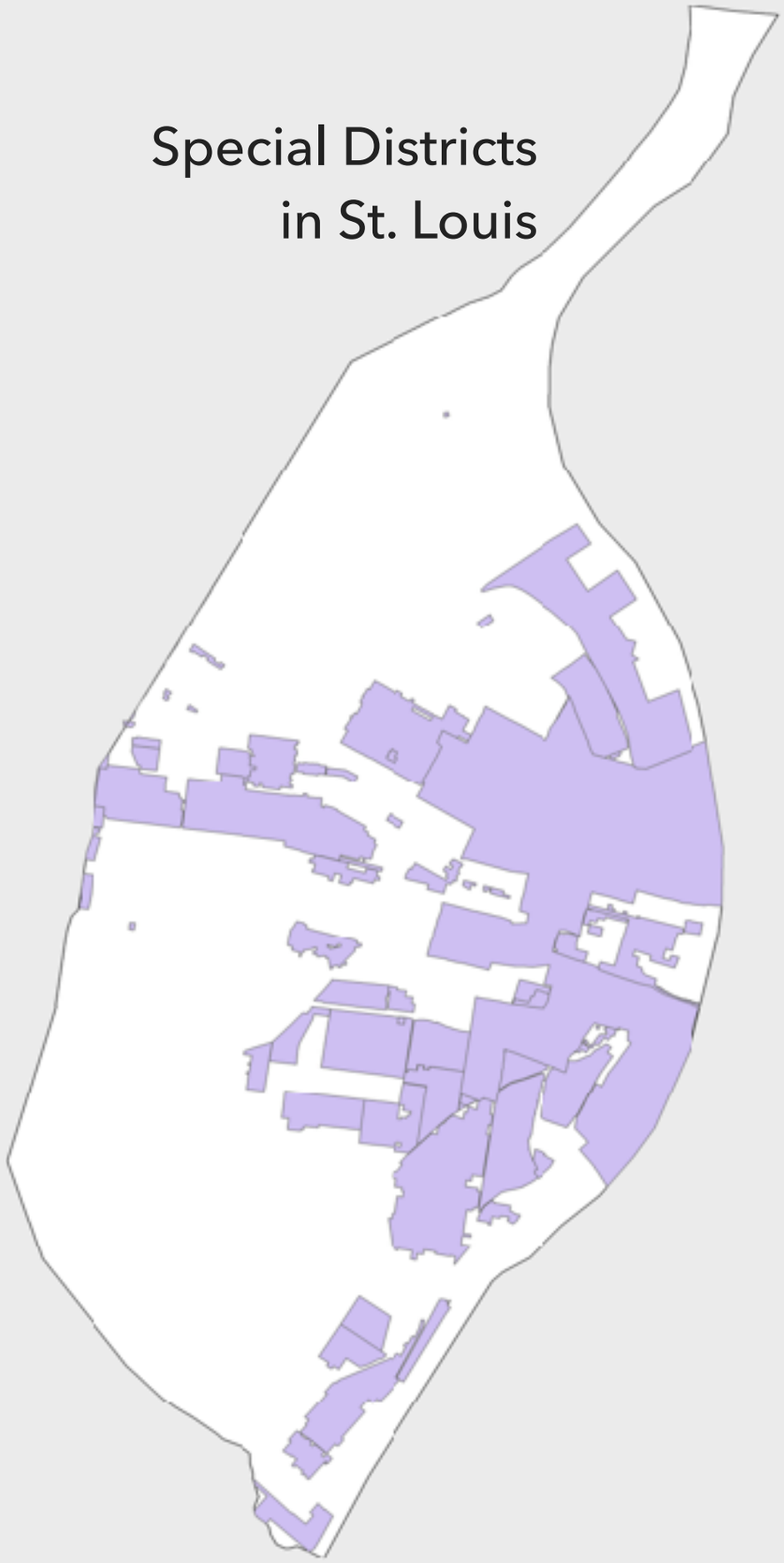


UNION EXAMPLE

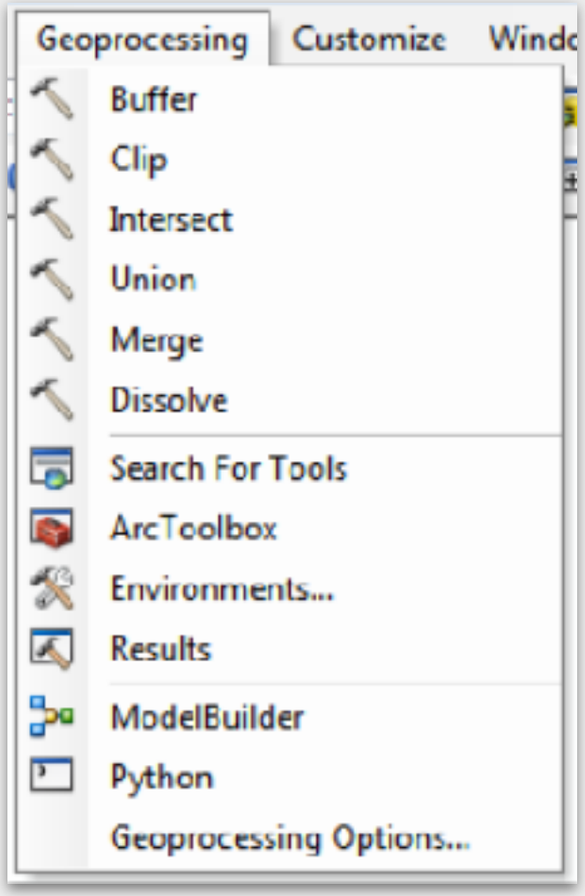
Census Tracts

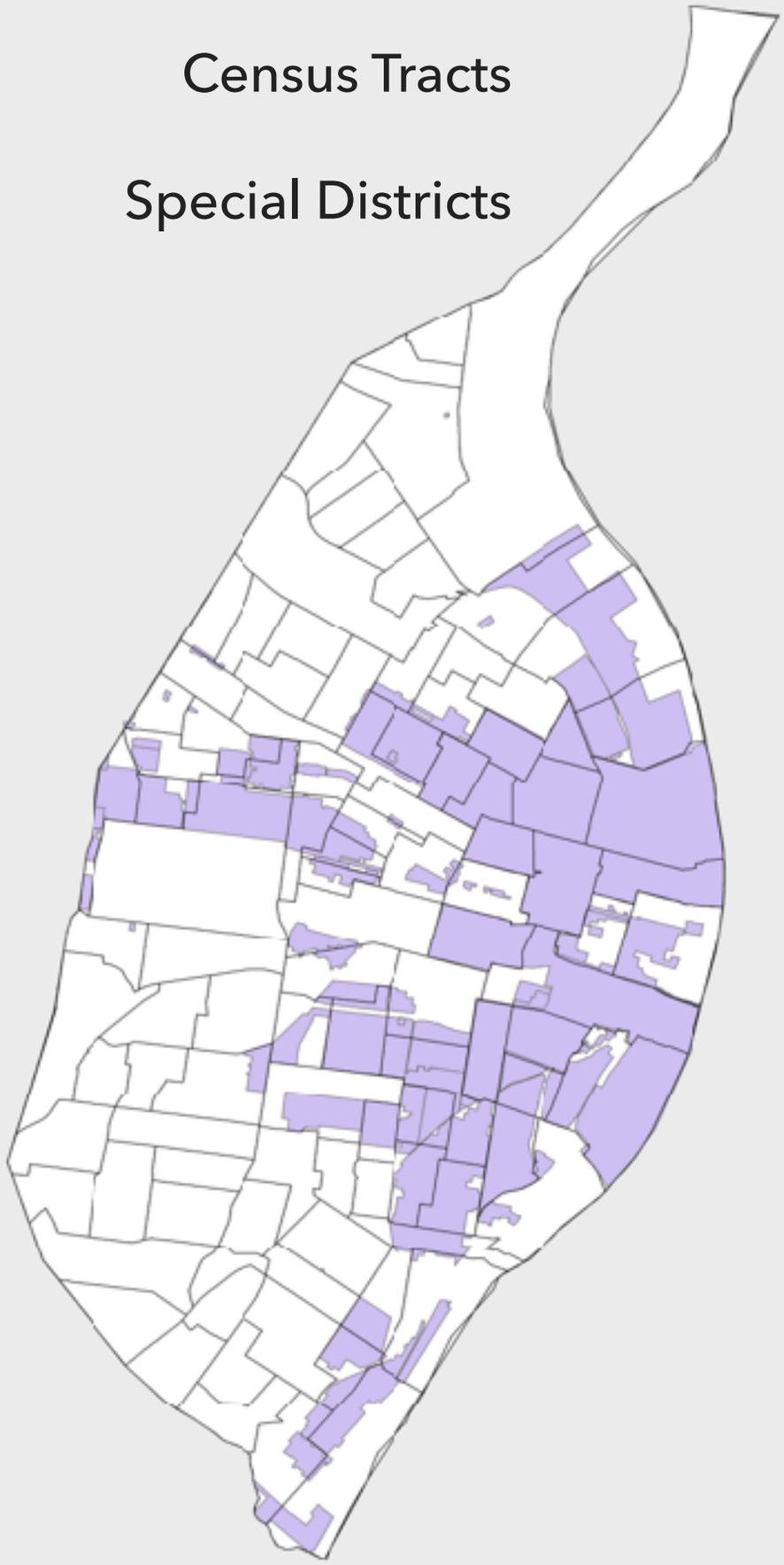


Special Districts
in St. Louis

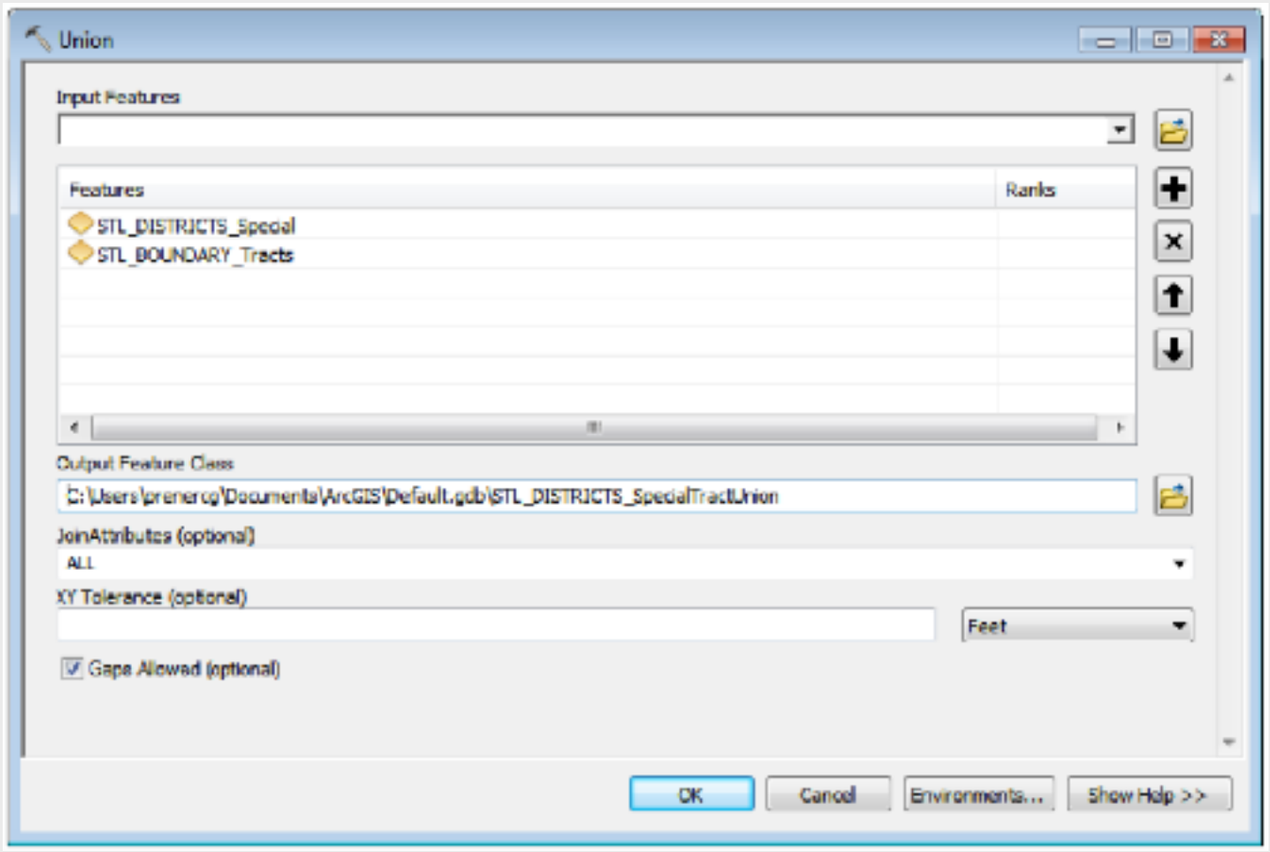


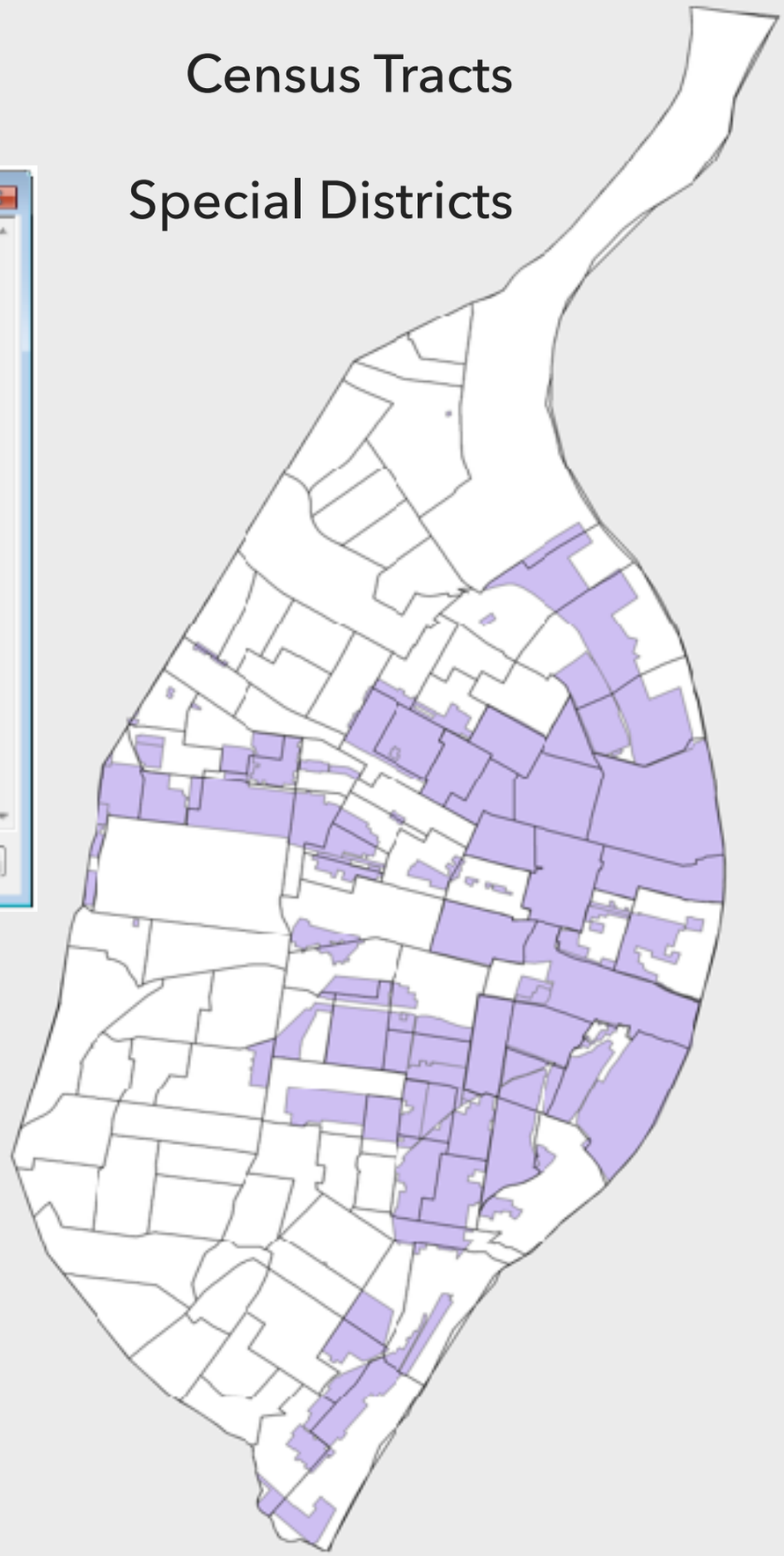
UNION EXAMPLE





UNION EXAMPLE





UNION EXAMPLE

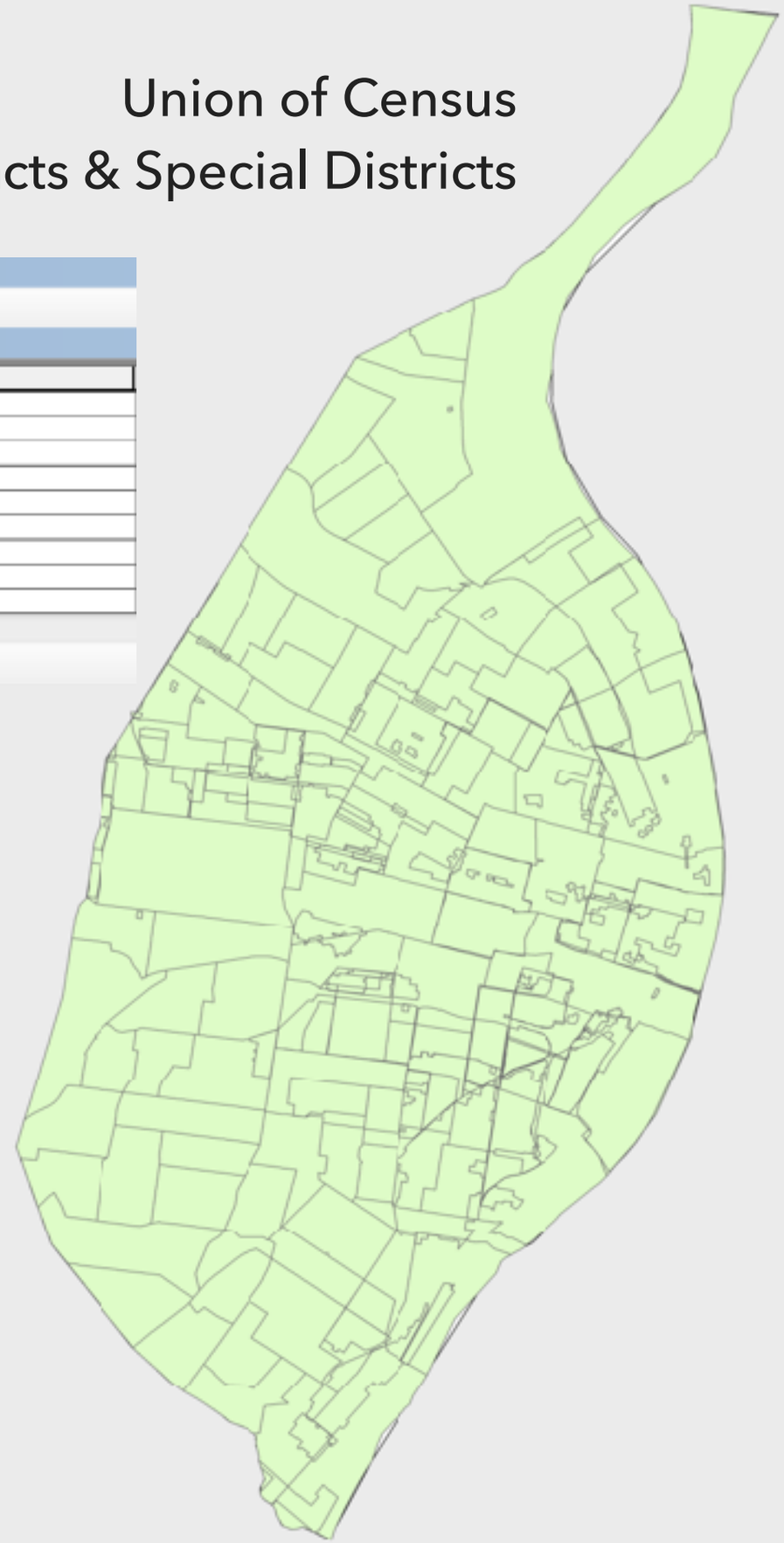
Union of Census
Tracts & Special Districts

Table

STL_DISTRICTS_SpecialTractUnion

OBJECTID_12 *	Shape *	FID_STL_DISTRICTS_Special	COUNT_	LAYER	DISNAME_FU
112	Polygon	-1	0		
113	Polygon	-1	0		
114	Polygon	-1	0		
115	Polygon	1	1	NATLHISTDIST	Holy Cross Parish
116	Polygon	6	1	NATLHISTDIST	Midtown
117	Polygon	6	1	NATLHISTDIST	Midtown
118	Polygon	7	1	NATLHISTDIST	Fullerton's Westminster Place
119	Polygon	8	1	NATLHISTDIST	Holy Corners
120	Polygon	8	1	NATLHISTDIST	Holy Corners

1 (0 out of 605 Selected)



UNION EXAMPLE

Union of Census
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Table

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OBJECTID_12 *	Shape *	FID_STL_DISTRICTS_Special	COUNT_	LAYER	DISNAME_FU
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1 (0 out of 605 Selected)