

Vacant Buildable Lands Model

VBLM



Topics

- What is the Vacant buildable lands model?
- How does it work?
- VBLM results
- What's New with the VBLM



What does the model do?

- Meets the requirements of the Growth Management Act (GMA)
- Identifies the vacant and buildable land inside the UGAs
- Provides a measure of the remaining capacity in terms of jobs and people in Clark County.
- Provides a 23 year record of development in the County.



How does it work?

- Criteria are agreed upon by the Cities, County, and the Community during the Comprehensive Planning process.
- County's Geographic Information System (GIS) software is used to develop and run the model.
- Uses best available data
 - GIS map layers
 - Assessor/Treasurer records



How does it work?

- GIS Spatial Analysis
 - GIS map layers overlain and queried
 - Parcels
 - Comprehensive Plan
 - Wetlands
 - Steep Slopes
 - UGA and City Limits
 - Etc.
- Assessment and Taxation records
 - Building Value
 - Property Owner
 - Tax Status
 - Etc.



How does it work?

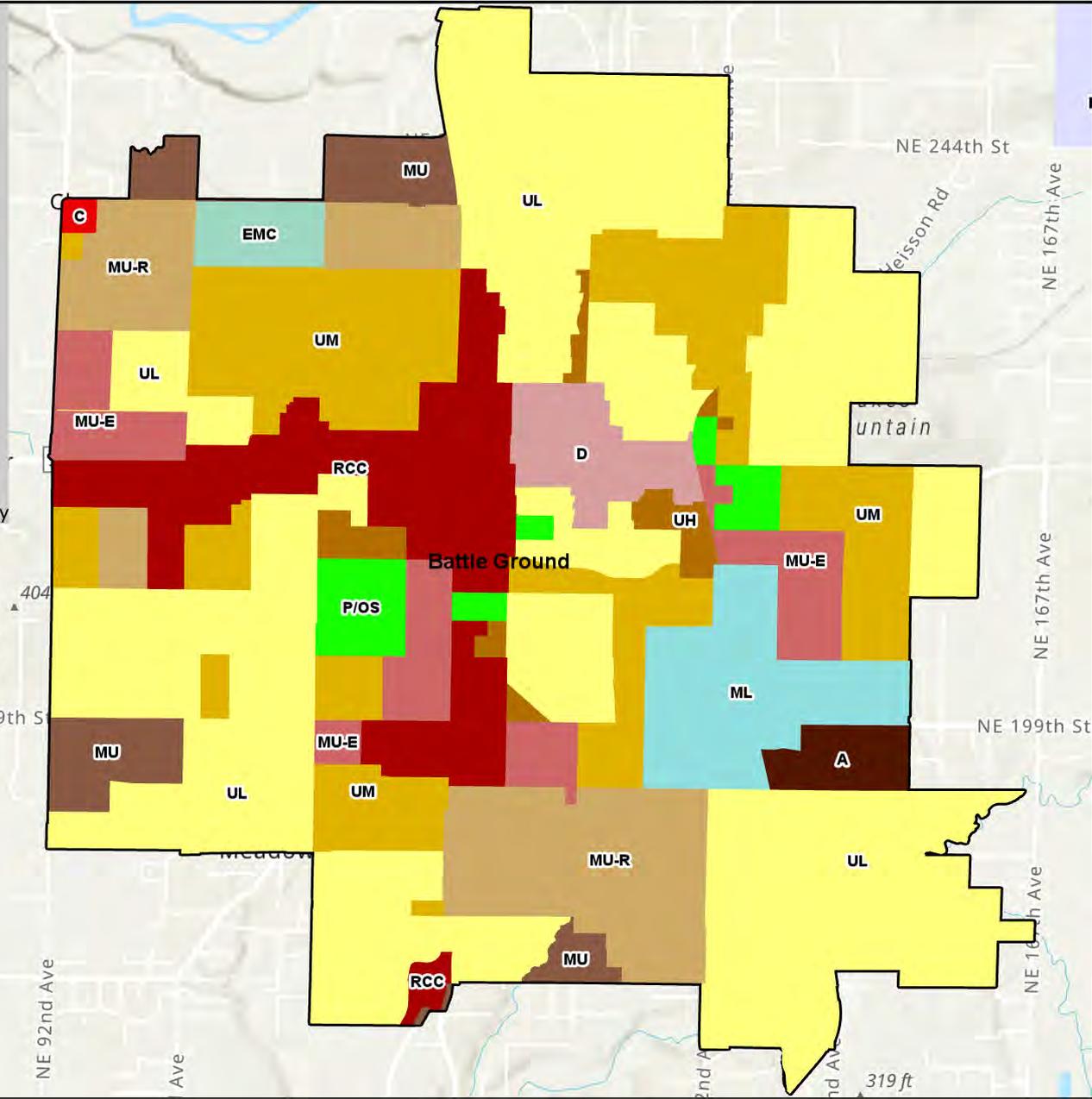
1. Cities submit a Comprehensive Plan
2. Comprehensive Plan classifications are aggregated into VBLM Land use classifications
3. VBLM is run based on VBLM Landuse classifications.

VBLM Landuse classifications define:

- VBLM Model (residential, commercial , industrial)
- Residential/Commercial split of mixed use
- Assumptions for conversion from Gross to Net Acres
- Housing units per net acre of vacant land
- Jobs per net acre of vacant land.

Comprehensive Plan

- Battle Ground GMA**
- DESCRIPTION**
- Airport
 - Commercial
 - Downtown
 - Employment Campus
 - Light Industrial
 - Mixed Use
 - Mixed use - Employment
 - Mixed use - Residential
 - Parks/Open Space
 - Public Facility
 - Regional Center
 - Urban High Density Residential
 - Urban Low Density Residential
 - Urban Medium Density Residential
 - Urban Growth Area (UGA) Boundary





Comprehensive Plan

Comprehensive Plan	VBLM Landuse	VBLM Model
Mixed Use (MU)	Mixed Use - Residential	Residential
Mixed use - Residential (MU-R)	Mixed Use - Residential	Residential
Urban High Density Residential (UH)	Urban High Density	Residential
Urban Medium Density Residential (UM)	Urban High Density	Residential
Urban Low Density Residential (UL)	Urban Low Density	Residential
Commercial (C)	Commercial	Commercial
Downtown (D)	Commercial	Commercial
Regional Center (RCC)	Commercial	Commercial
Mixed use - Employment (MU-E)	Mixed Use - Employment	Commercial
Employment Campus (EMS)	Office/Business Park	Commercial
Light Industrial (ML)	Industrial	Industrial
Parks/Open Space (P/OS)	Open Space/Parks	None
Public Facility (PF)	Public Facilities	None
Airport (A)	Airport	None



What is Vacant?

Residential

Building Value < \$13,000

Commercial

Building Value < \$67,000

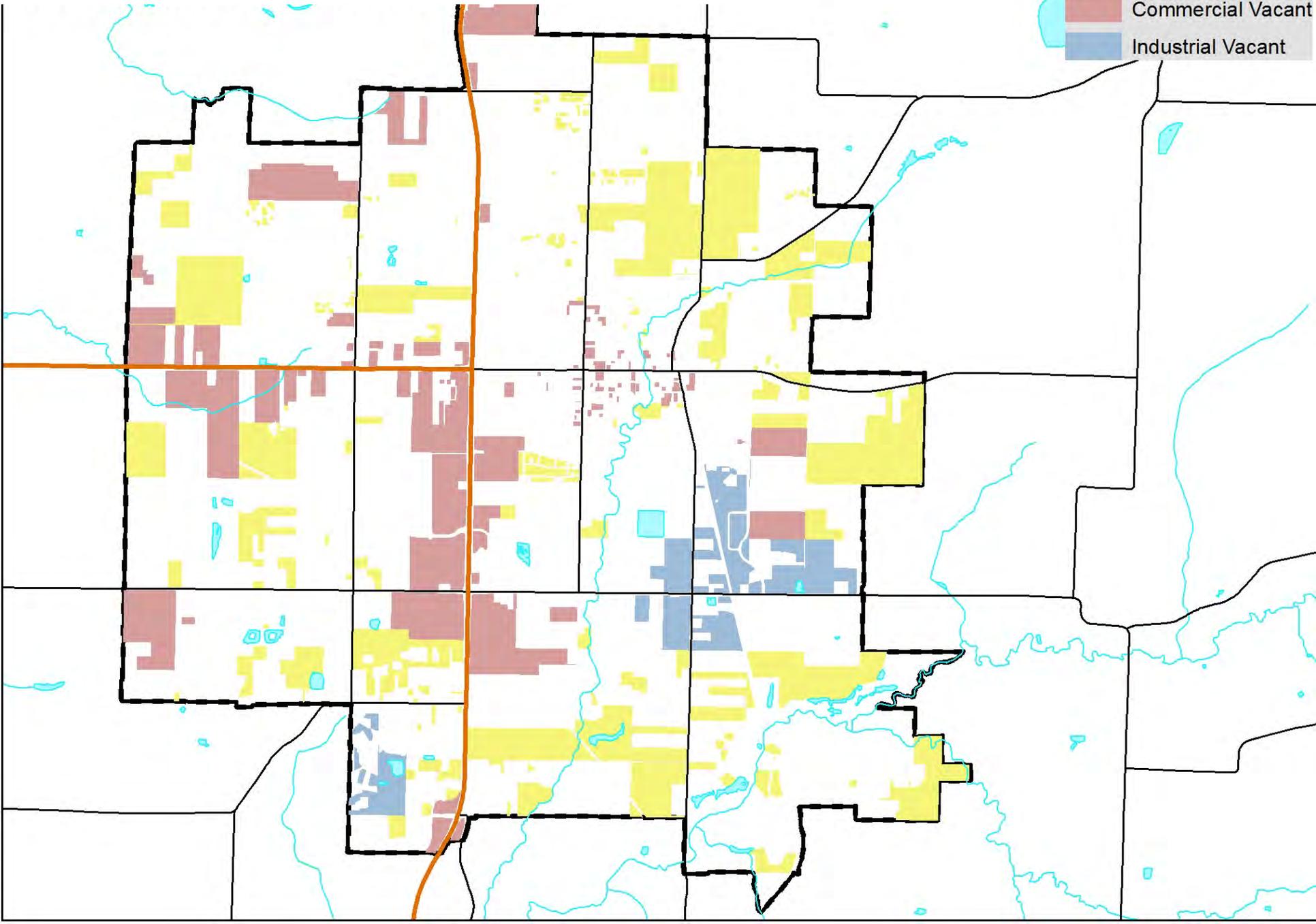
Industrial

Building Value < \$67,000

Source: Assessor

Battle Ground Vacant Land

- Residential Vacant
- Commercial Vacant
- Industrial Vacant





Underutilized Property

Larger parcels with a structure that could redevelop to a higher density

Building Value per Acre (BVA) = Building Value / Number of Acres

Residential

Minimum lot size 1 acre

Bottom 10th percentile of BVA

Less than \$534,000 for 2019 VBLM

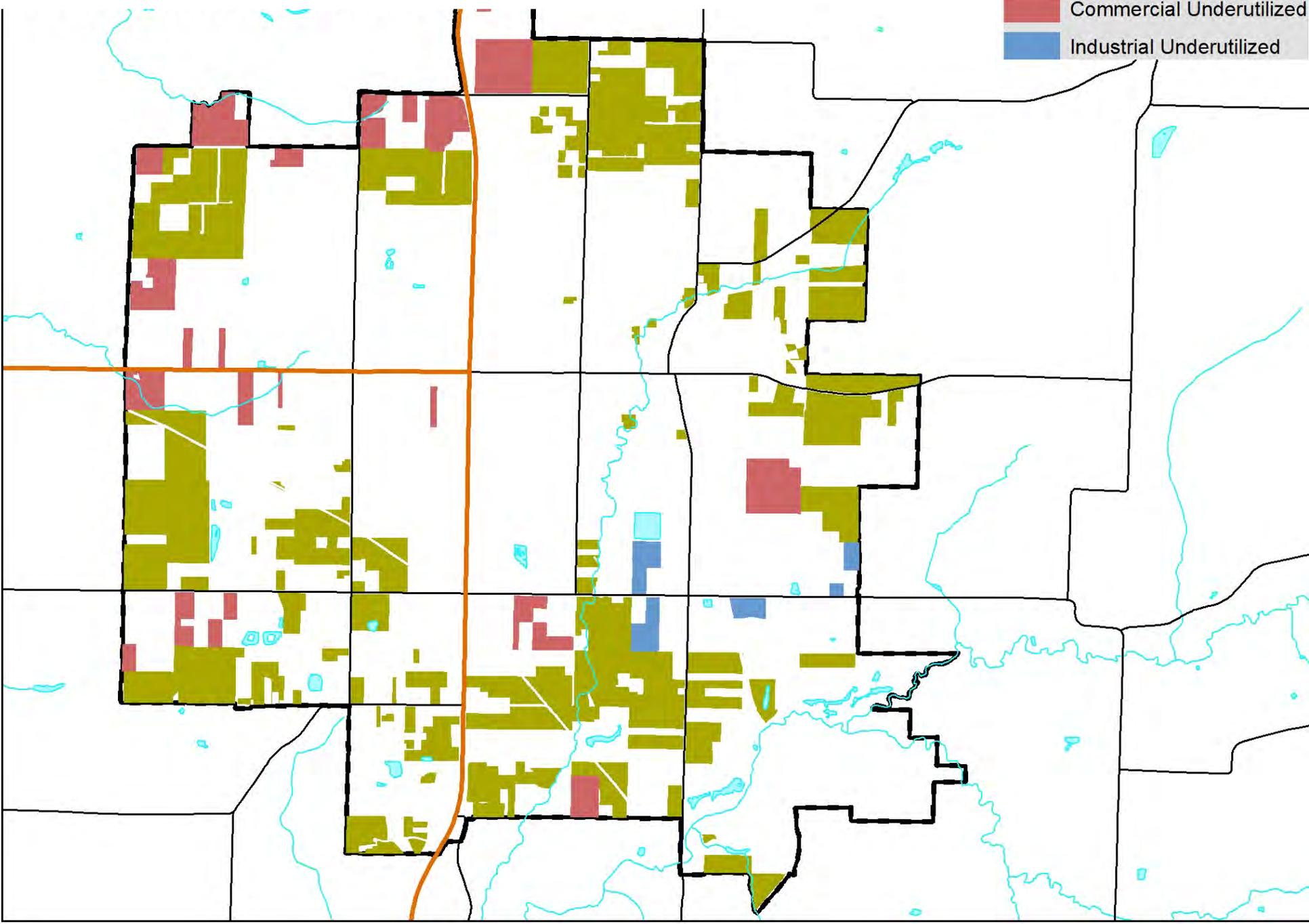
Commercial /Industrial

BVA less than \$50,000

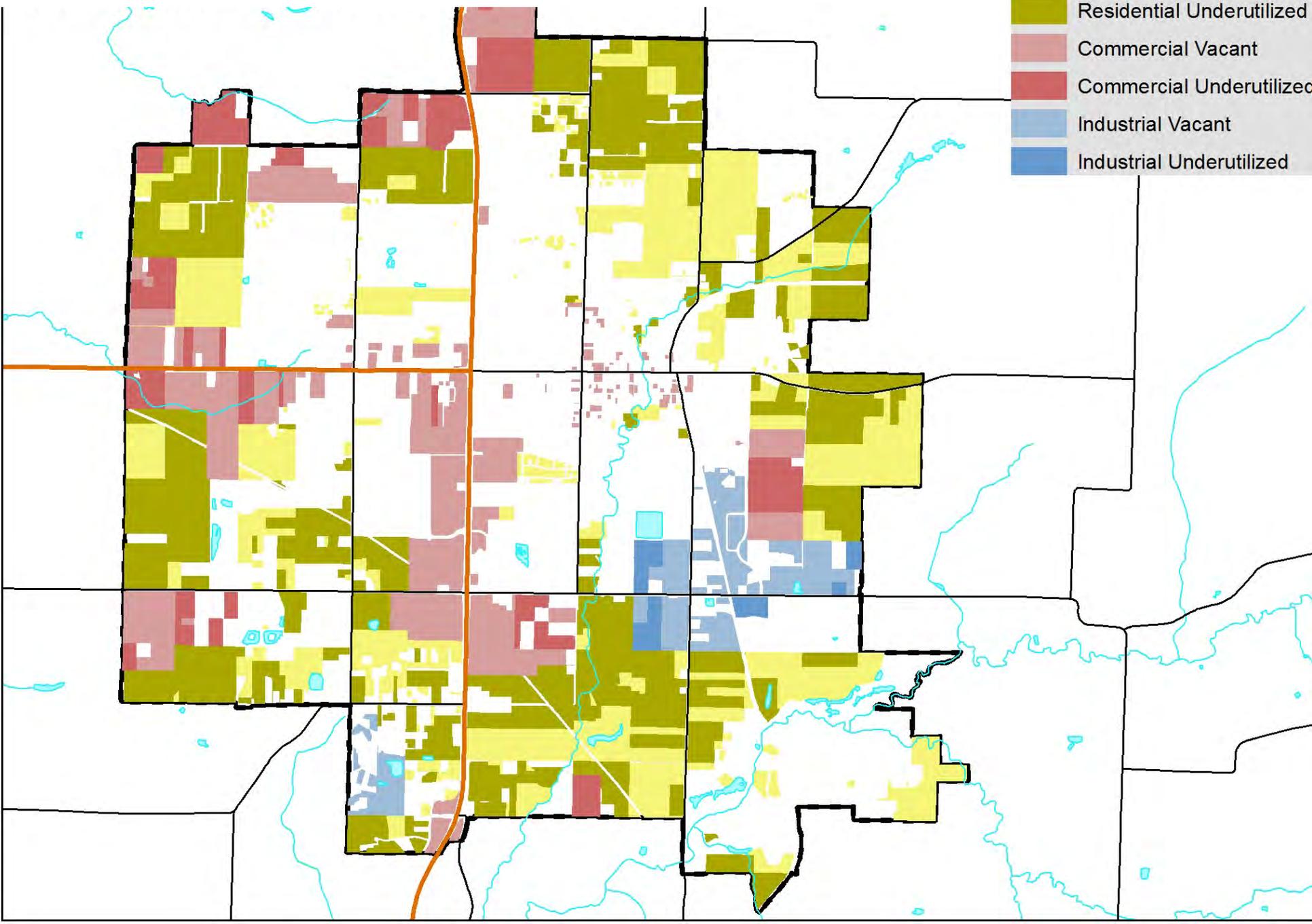
Source: Assessor

Battle Ground Underutilized

- Residential Underutilized
- Commercial Underutilized
- Industrial Underutilized



Battle Ground Vacant Lands Inventory





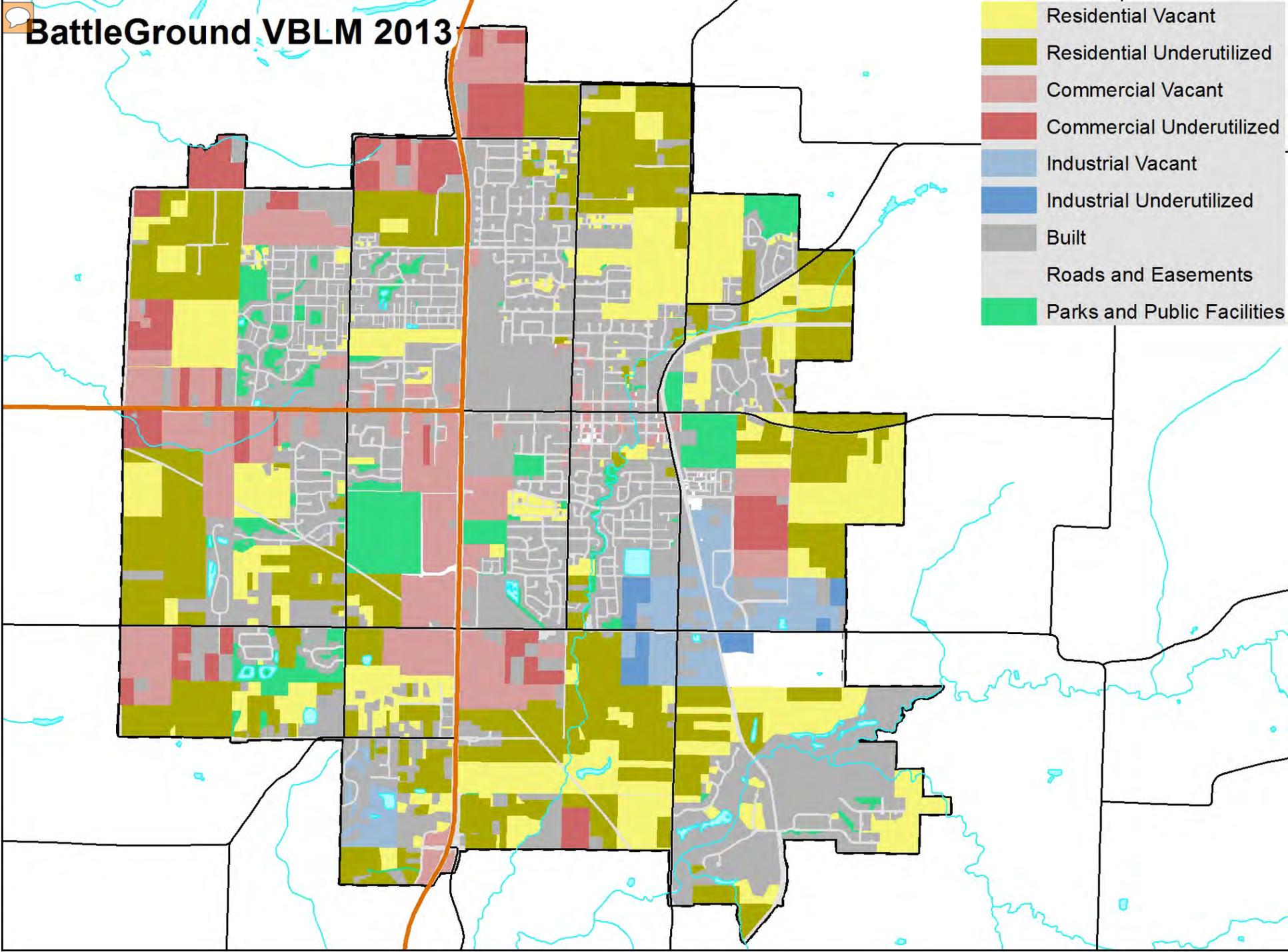
Not Vacant or Underutilized

Built Classifications

- Built (undifferentiated)
- Easements and Right of Way
- Parks
- Private Open space
- Public Facilities
- Exempt Properties
- Court Yards
- Mansions
- Condos

BattleGround VBLM 2013

- Residential Vacant
- Residential Underutilized
- Commercial Vacant
- Commercial Underutilized
- Industrial Vacant
- Industrial Underutilized
- Built
- Roads and Easements
- Parks and Public Facilities





Rates of Development

Assumptions...

Market Factors

- Vacant land will develop faster than Underutilized
- Some land will not develop during 20 year plan

Policy/Regulation Factors

- Environmental Constrained land is unlikely to develop

Environmental Constraints

Limits development

Steep Slopes

Landslide Areas

Riparian Areas

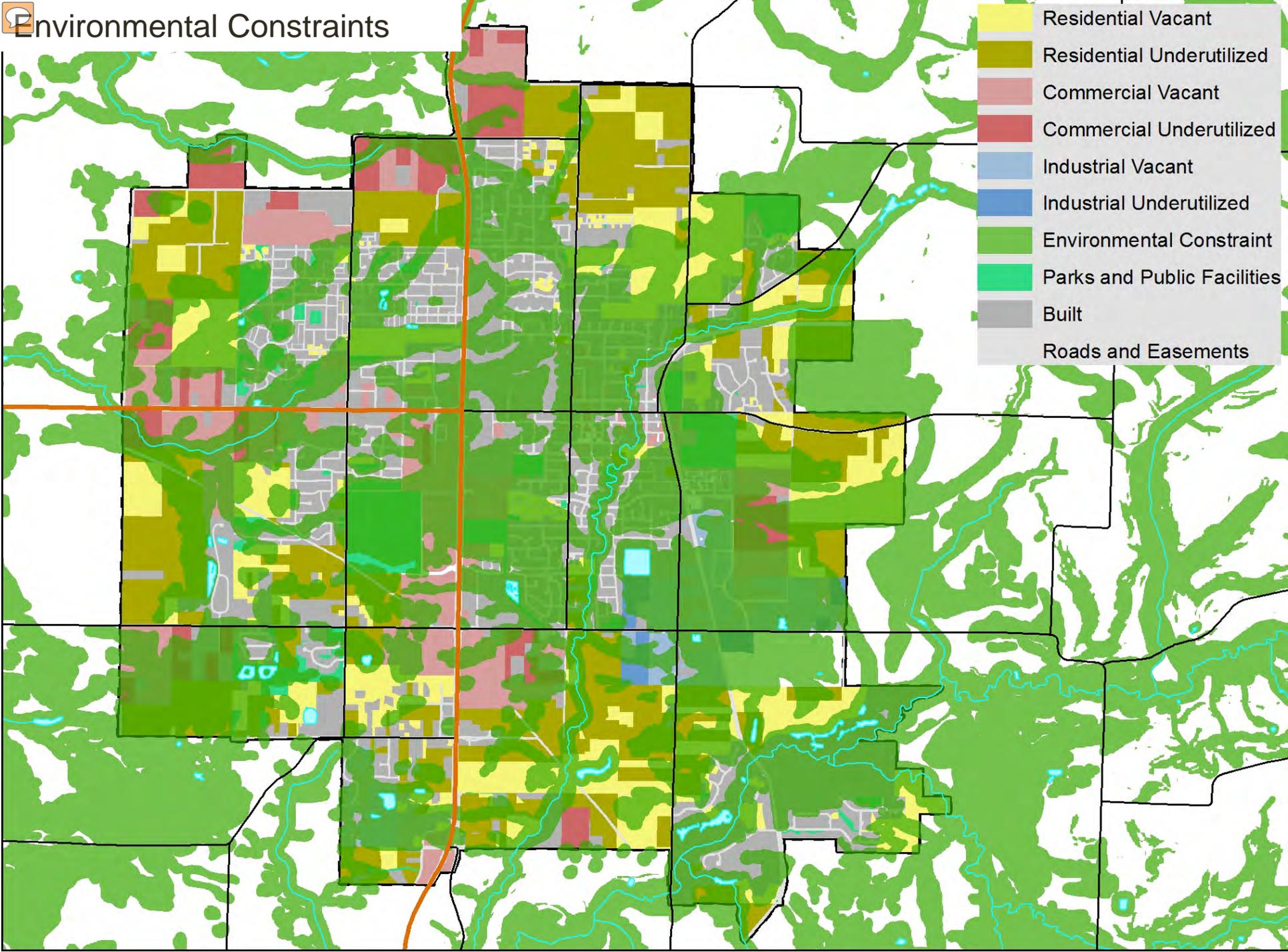
Flood plains

Wetlands

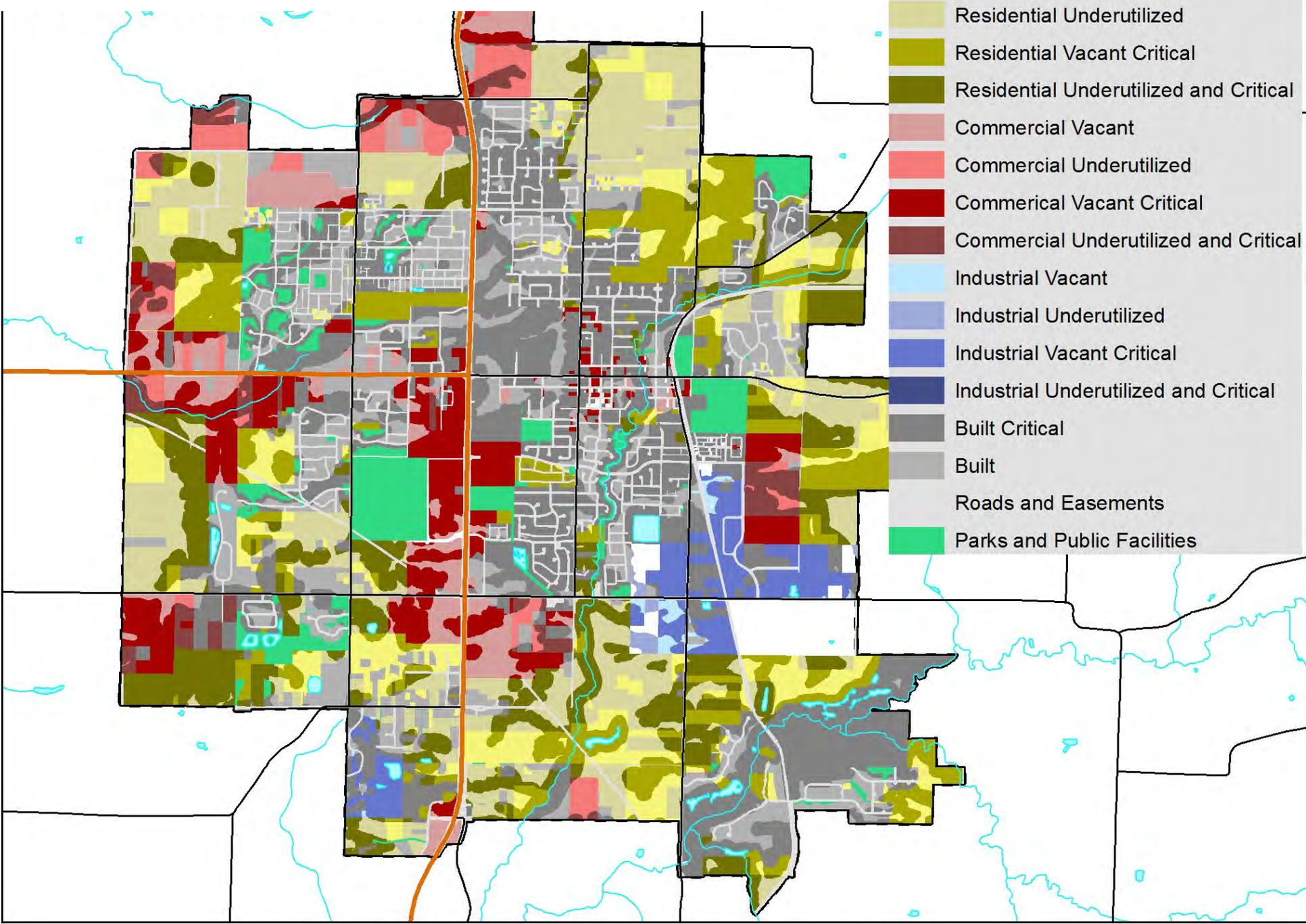
Habitat and Species

Source: GIS Layers

Environmental Constraints



All VBLM Classifications





Underutilized vs Vacant Constrained vs. Not Constrained

Impact of Classifications on Yield

Gross to Net Acres (Critical, Never to Develop, infrastructure)

Vacant (0, 10%, 27.7%)

Underutilized (0, 30%, 27.7%)

Vacant Constrained (50%, 10%, 27.7%)

Underutilized Constrained (50%, 30%, 27.7%)

Net Acres of Residential Vacant Buildable Land

Gross to Net Acres

Gross acres of buildable land are not equal in the number of houses (or jobs) they produce.

Net acres are equal.

100 Gross Residential Acres of:

Vacant = 65.07 net acres

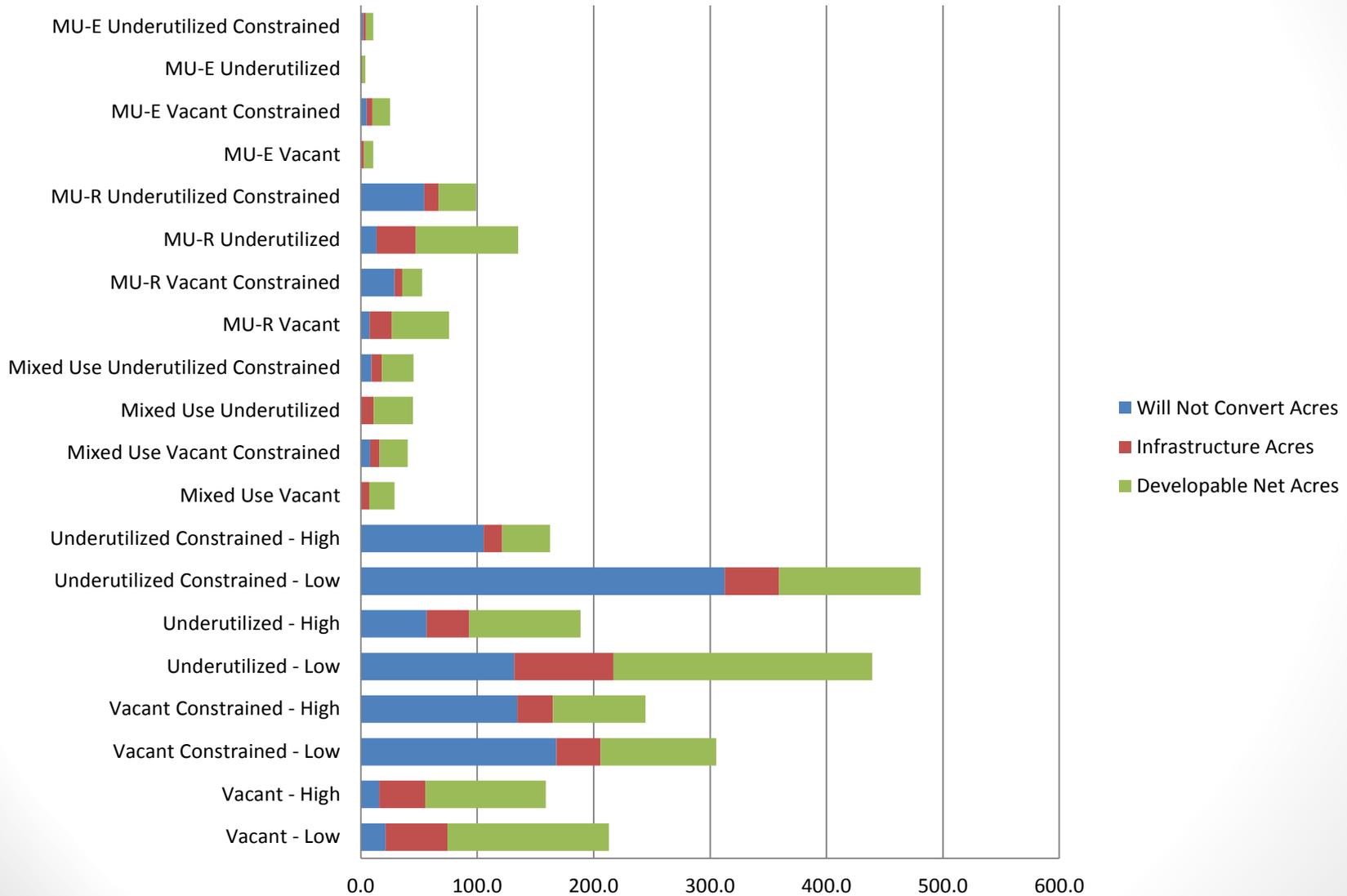
Underutilized = 50.6 net acres

Vacant Constrained = 32.5 net acres

Underutilized Constrained = 25.3 net acres

Gross Acres to Net Acres

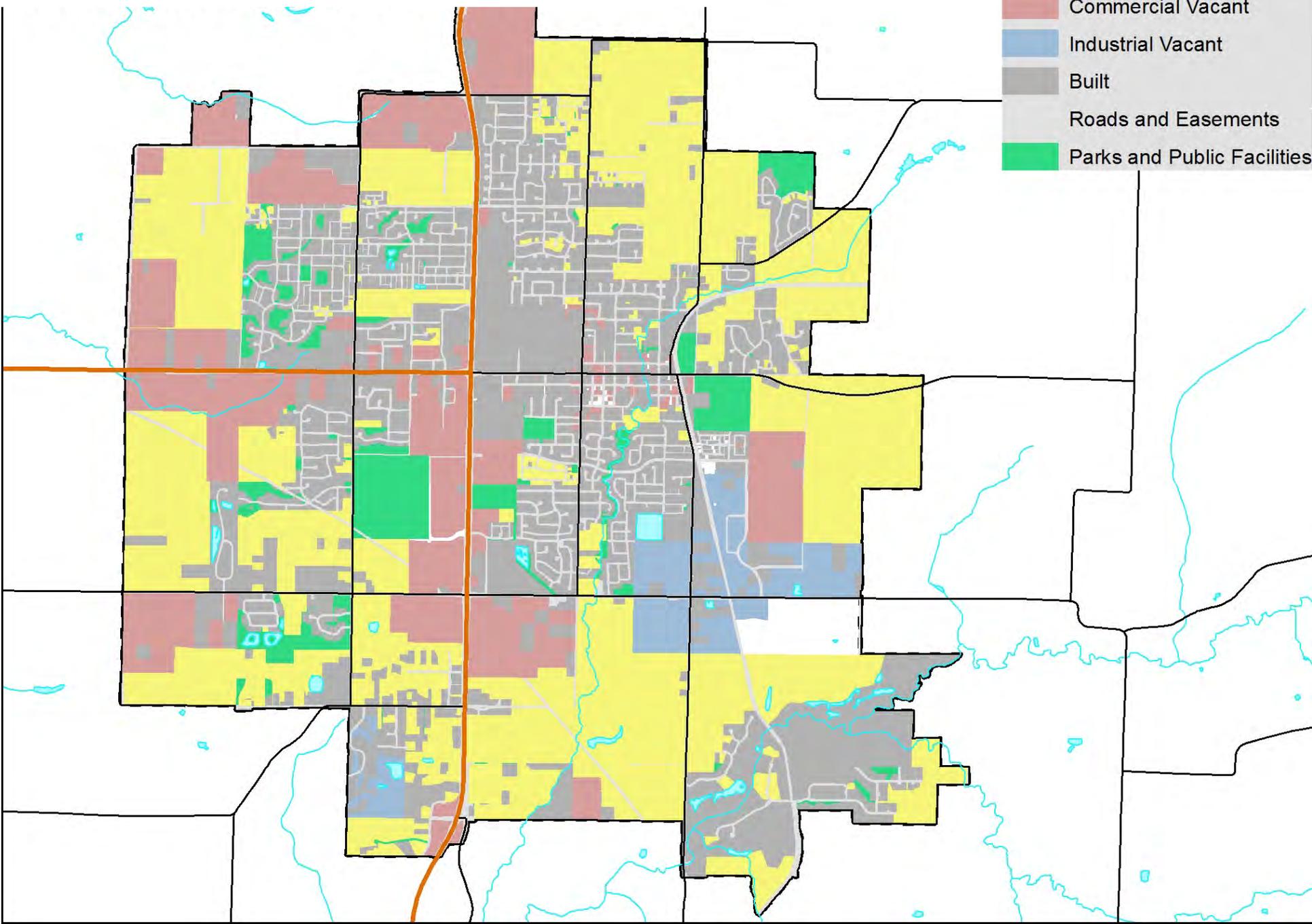
Residential



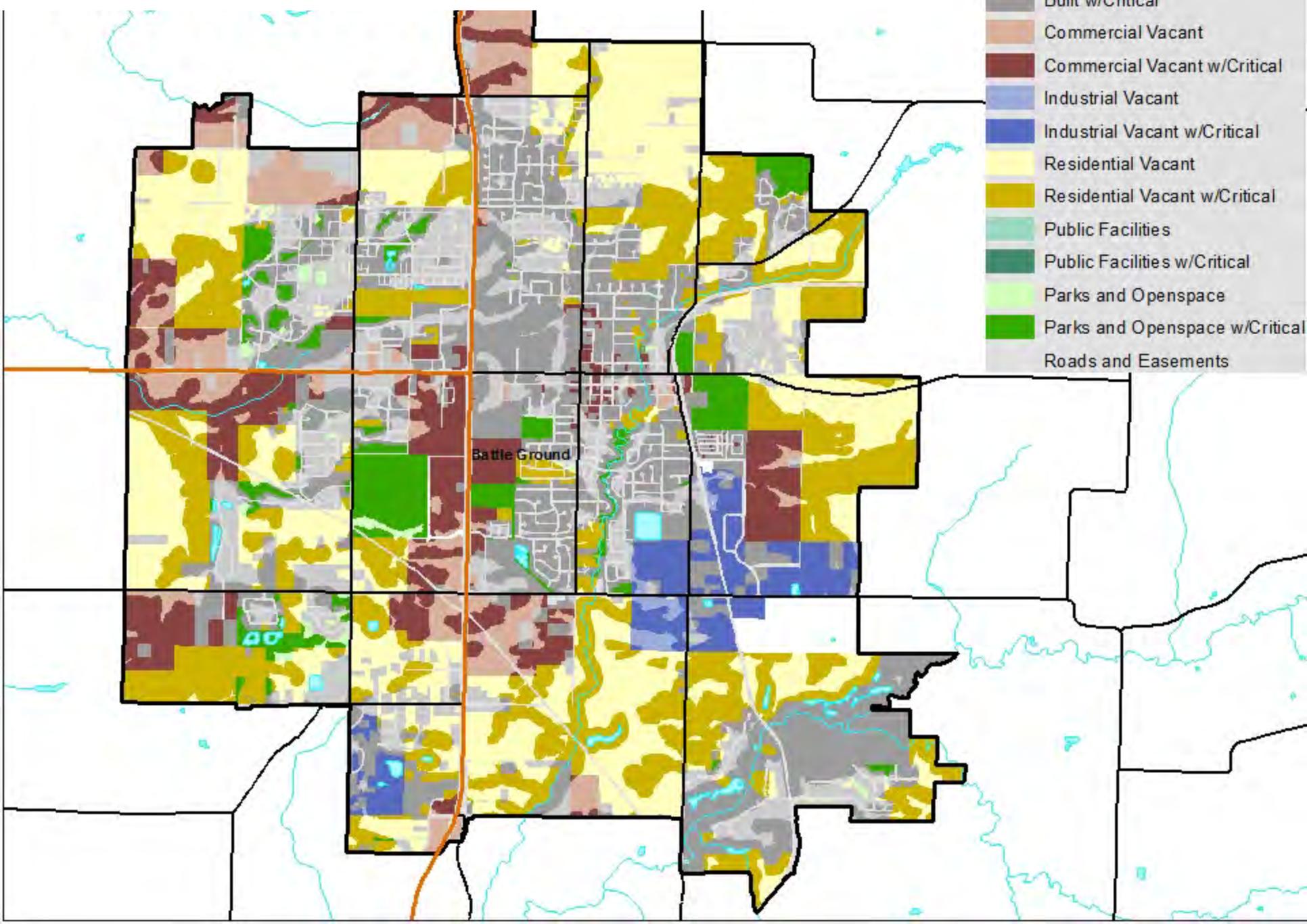
Viewing the Model through Time

BLM Classifications Collapsed

- Residential Vacant
- Commercial Vacant
- Industrial Vacant
- Built
- Roads and Easements
- Parks and Public Facilities



BLM and Environmental Classifications

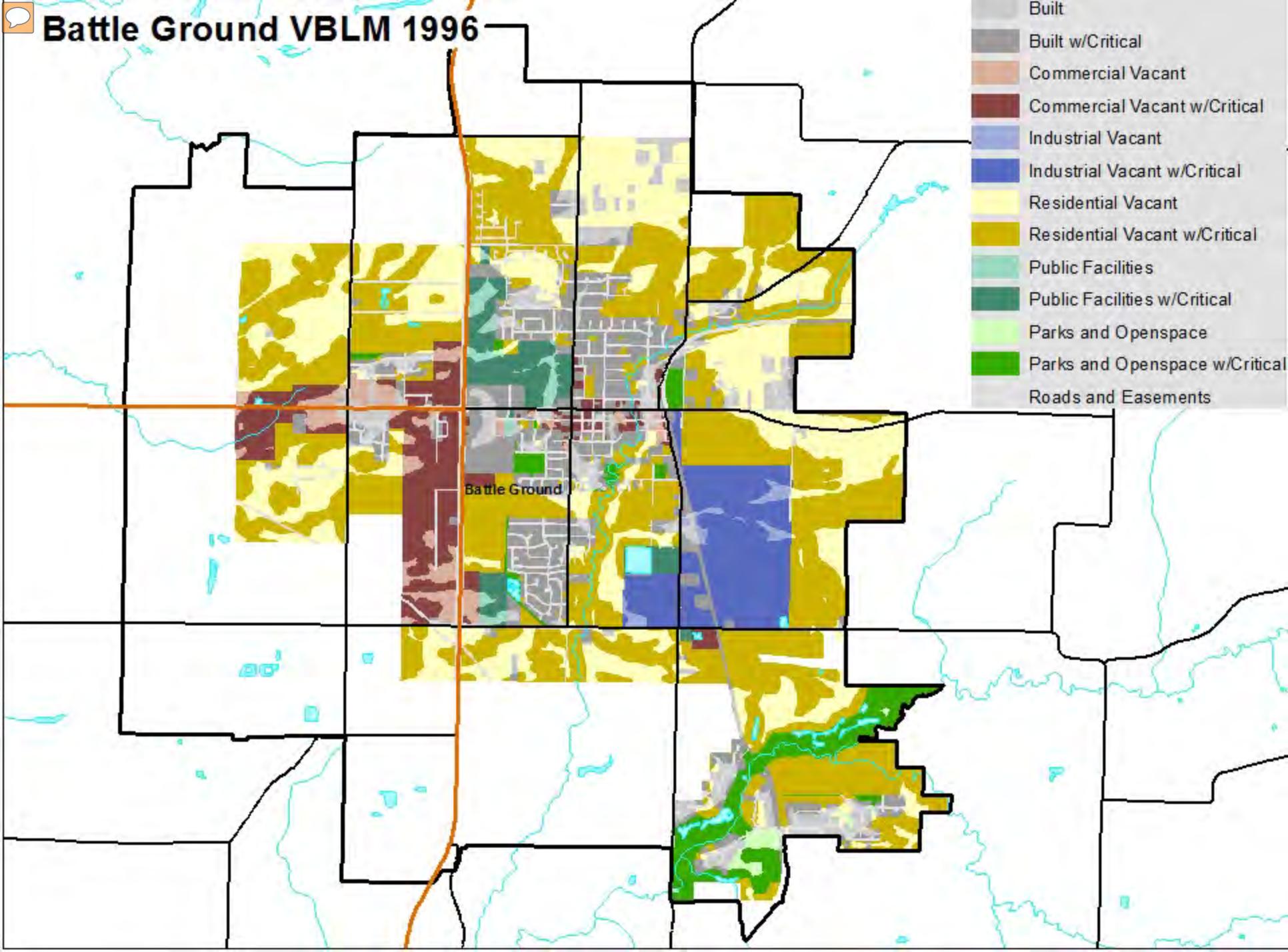




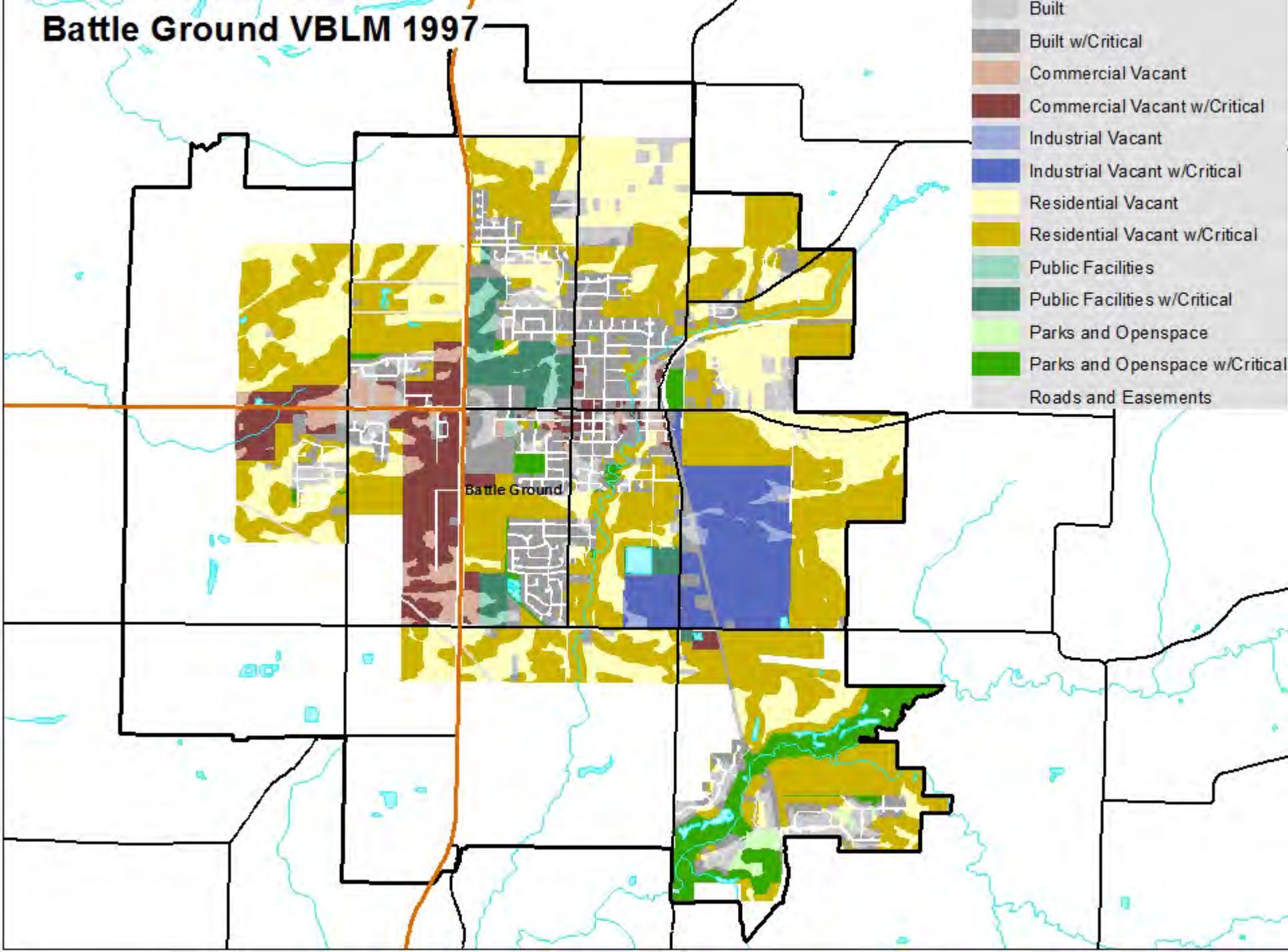
Viewing the model through time.

1996 - 2013

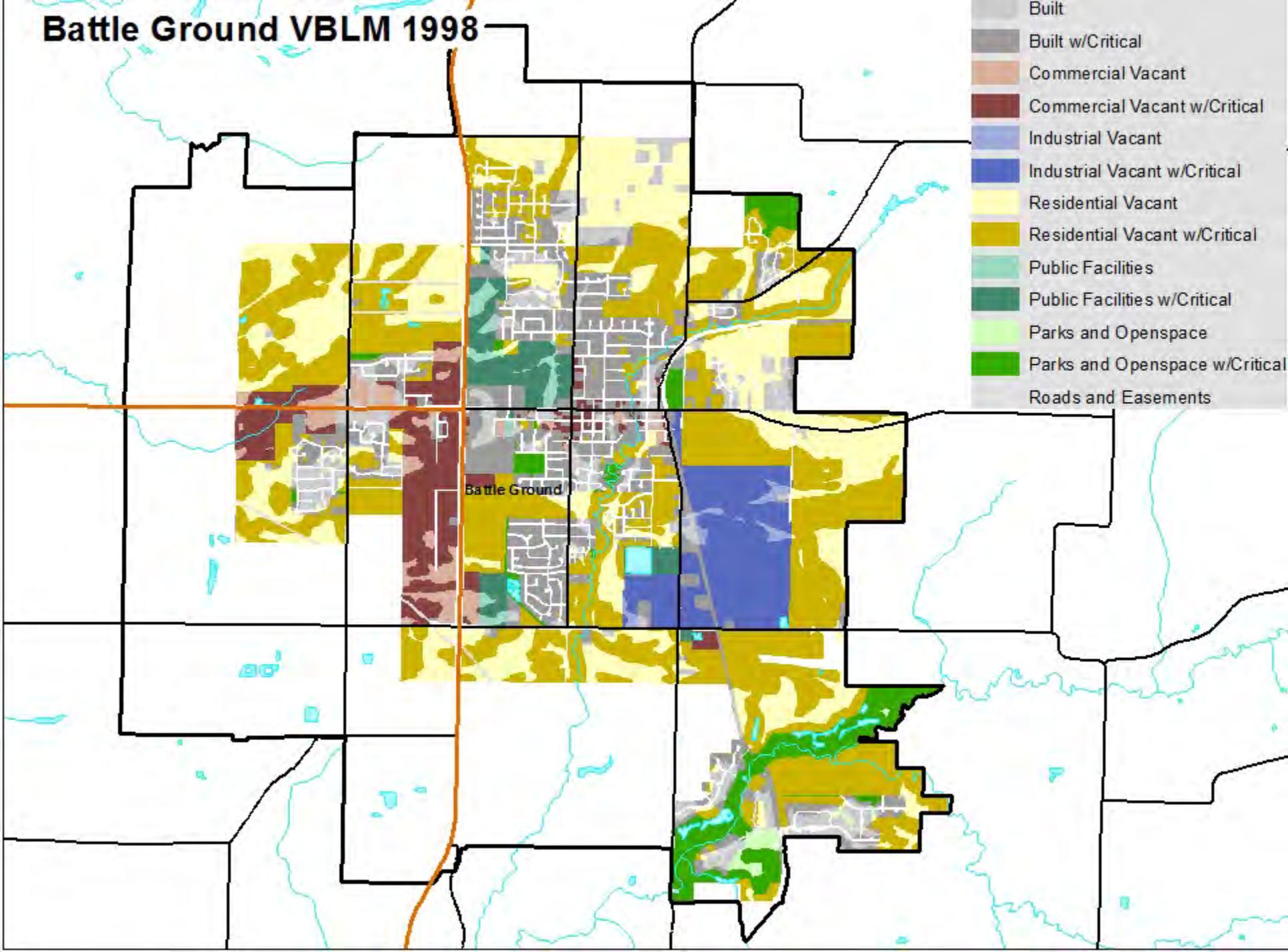
Battle Ground VBLM 1996



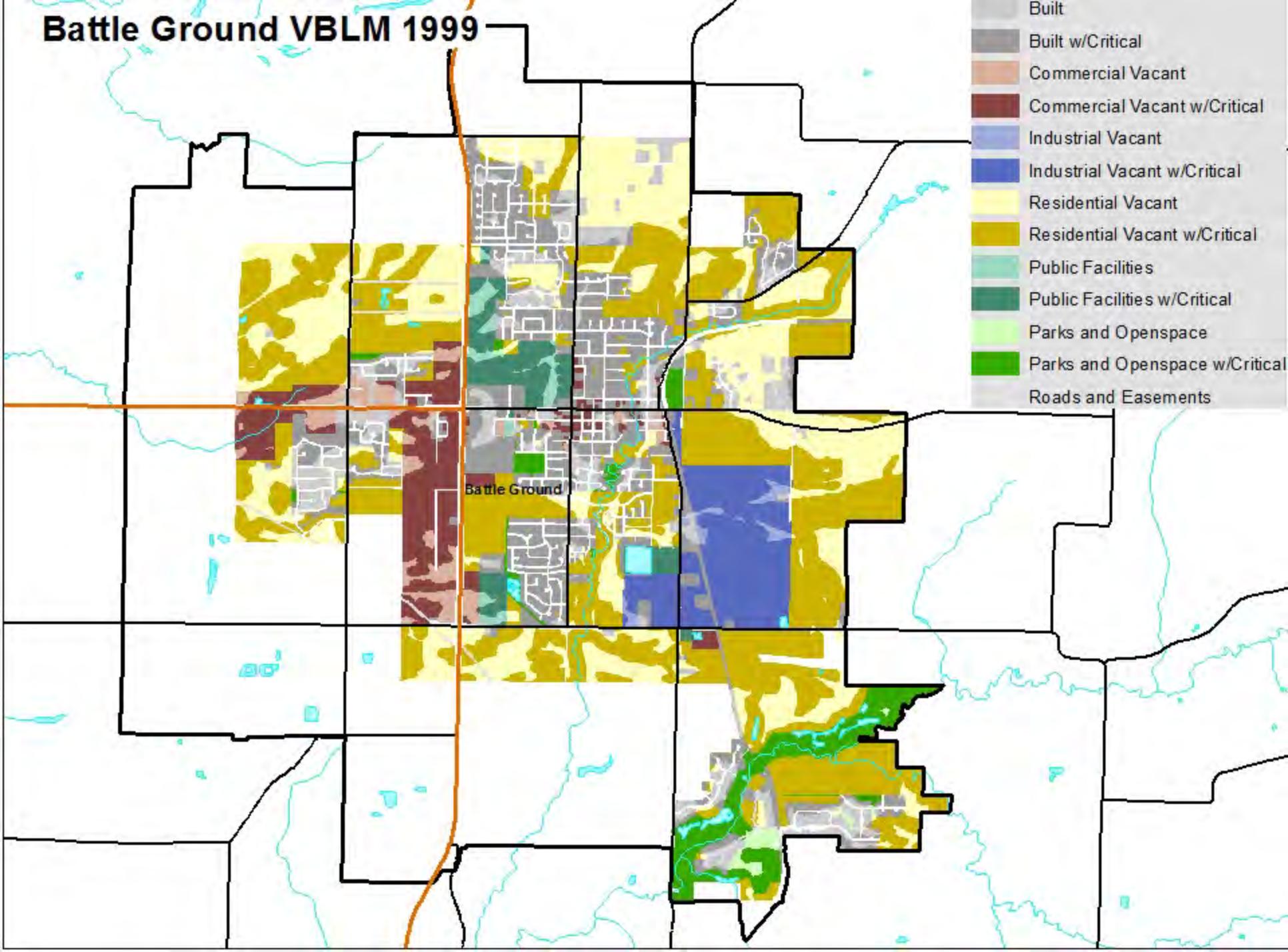
Battle Ground VBLM 1997



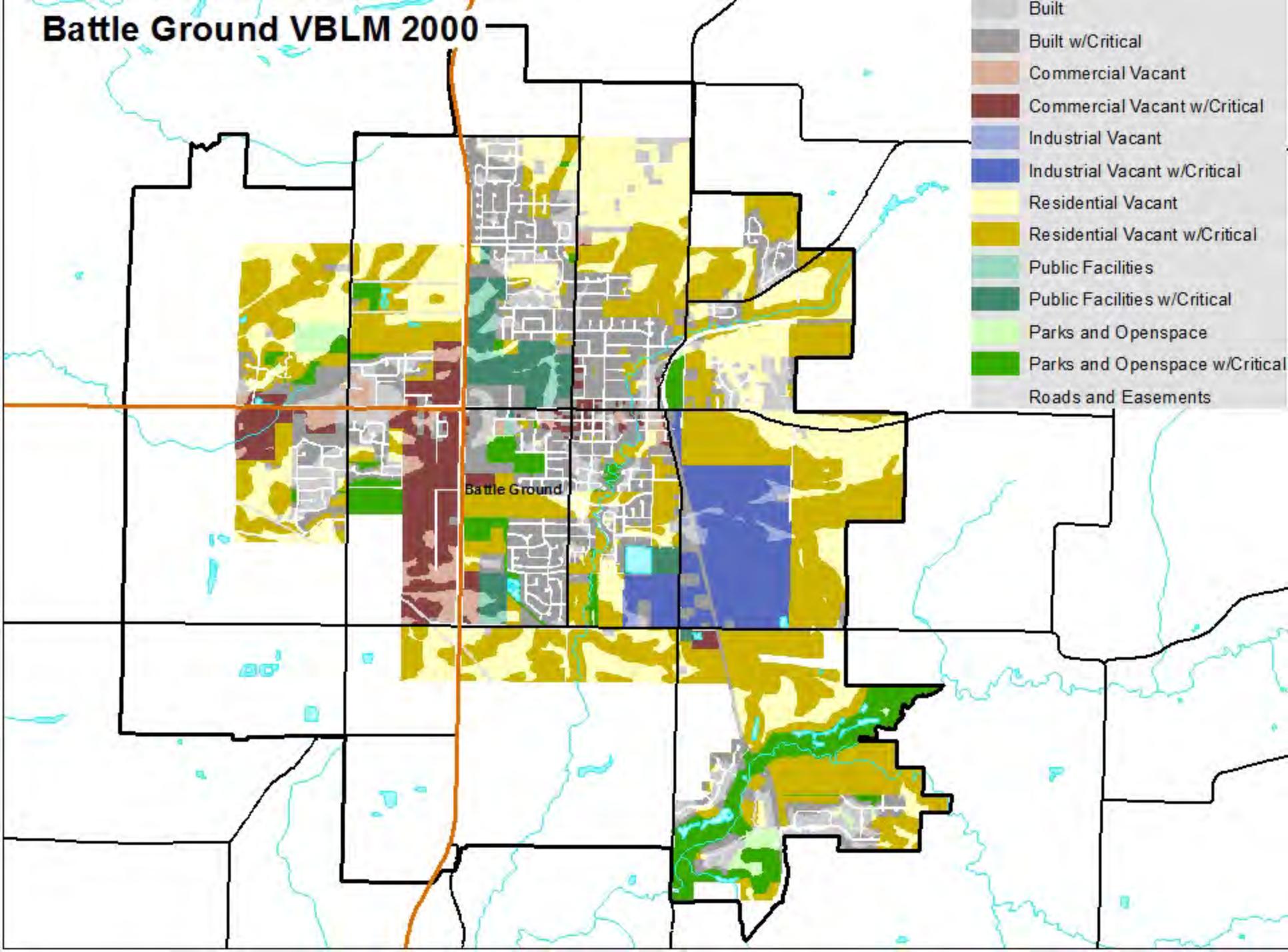
Battle Ground VBLM 1998



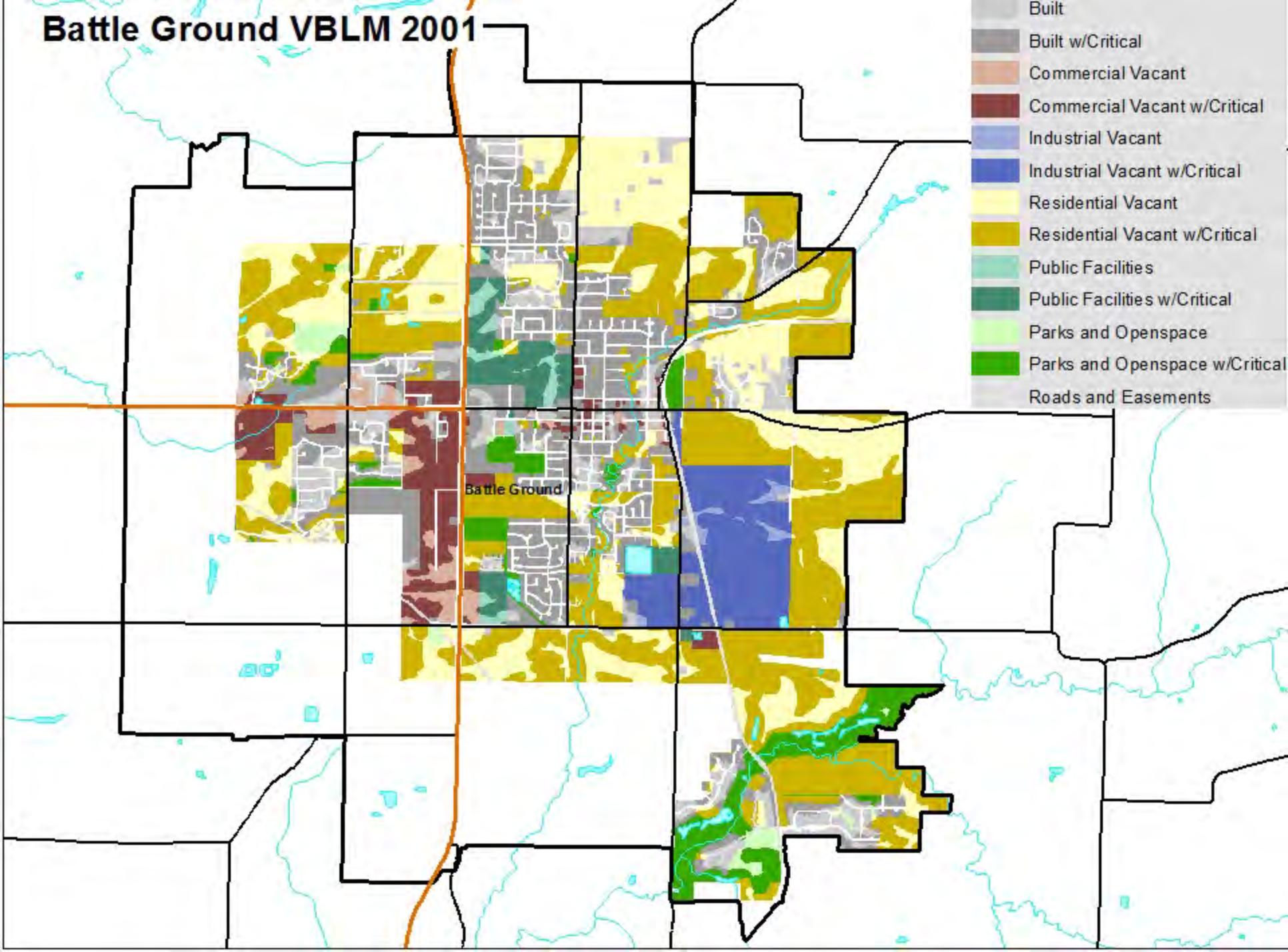
Battle Ground VBLM 1999



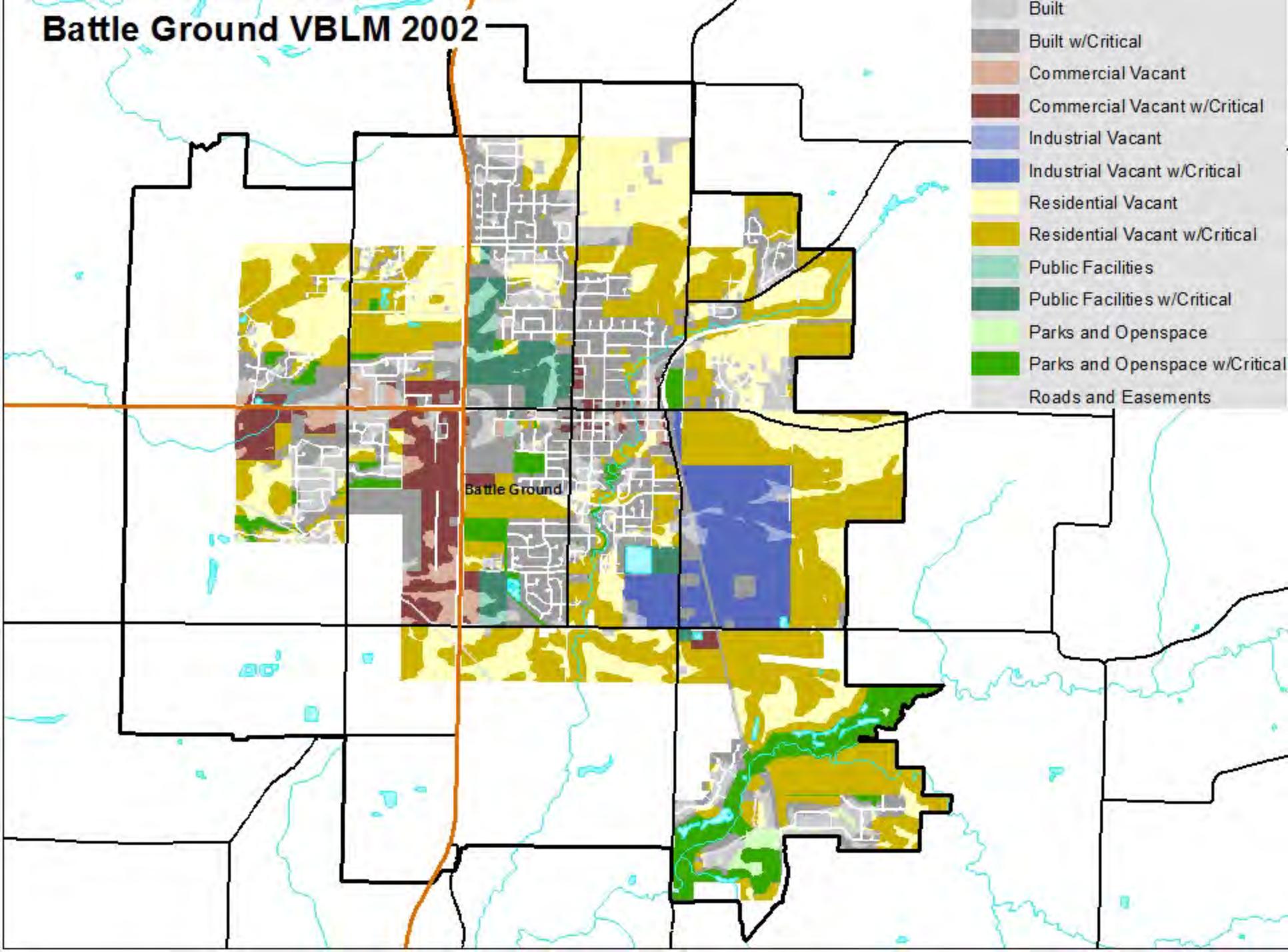
Battle Ground VBLM 2000



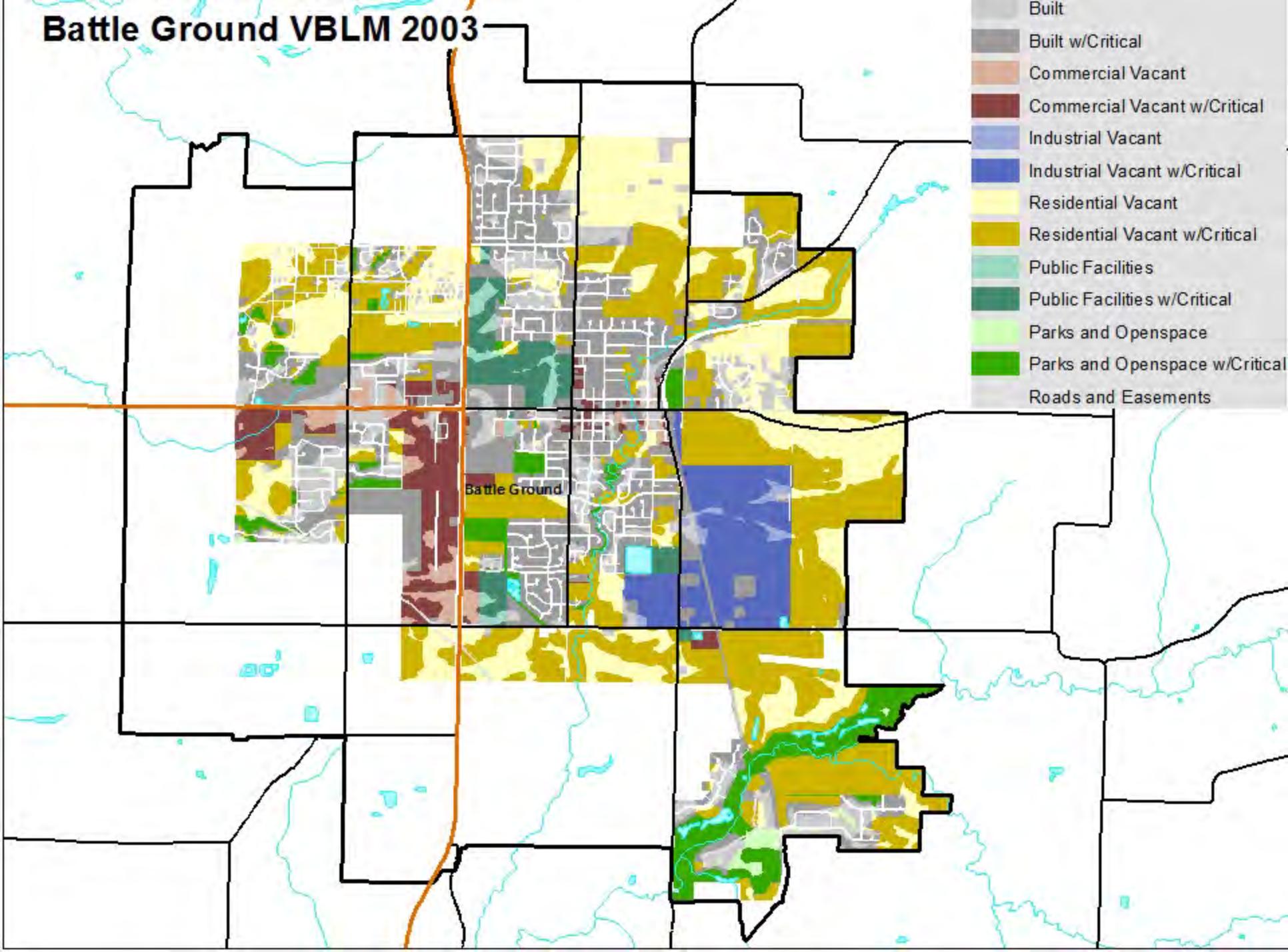
Battle Ground VBLM 2001



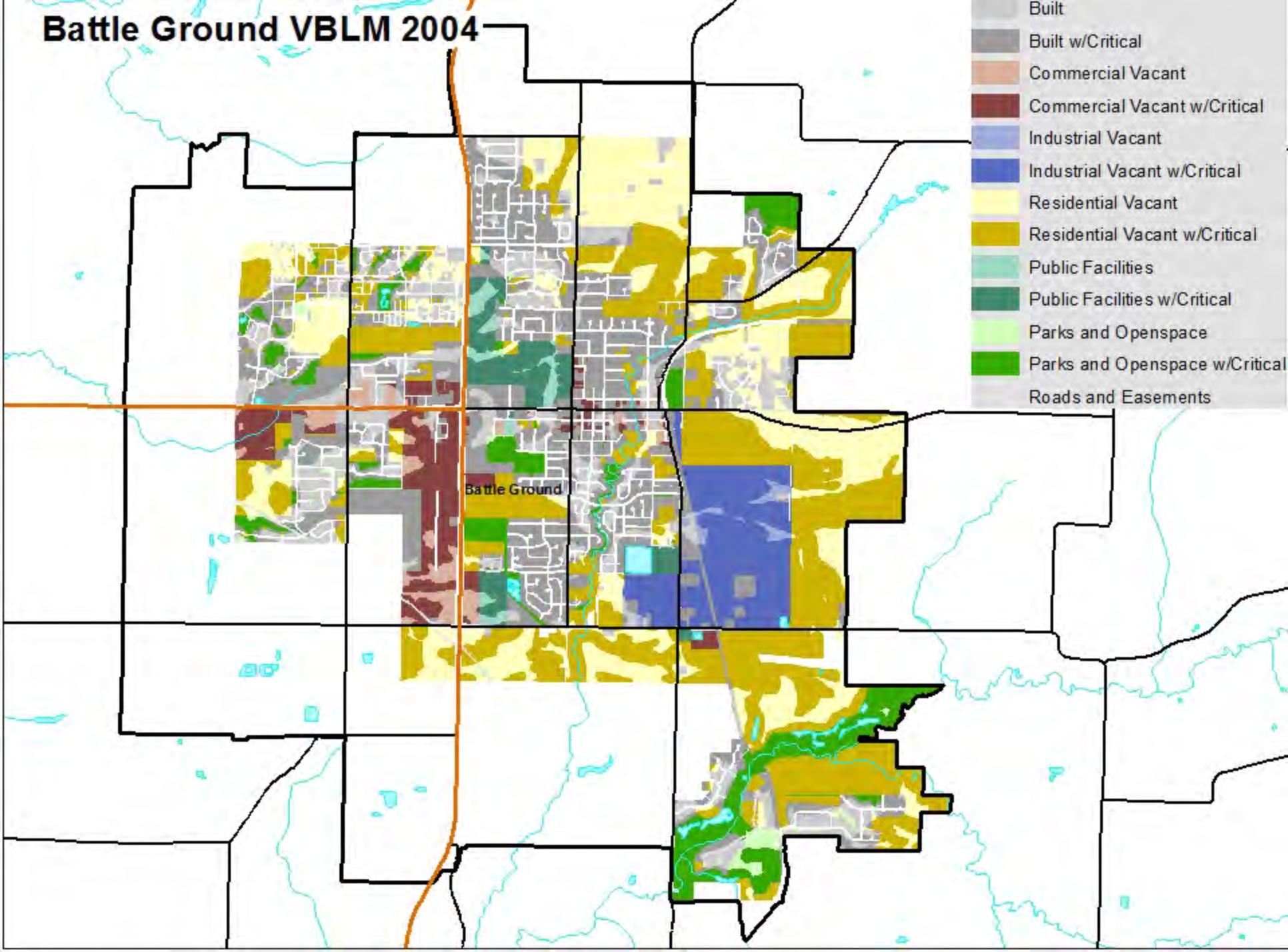
Battle Ground VBLM 2002



Battle Ground VBLM 2003

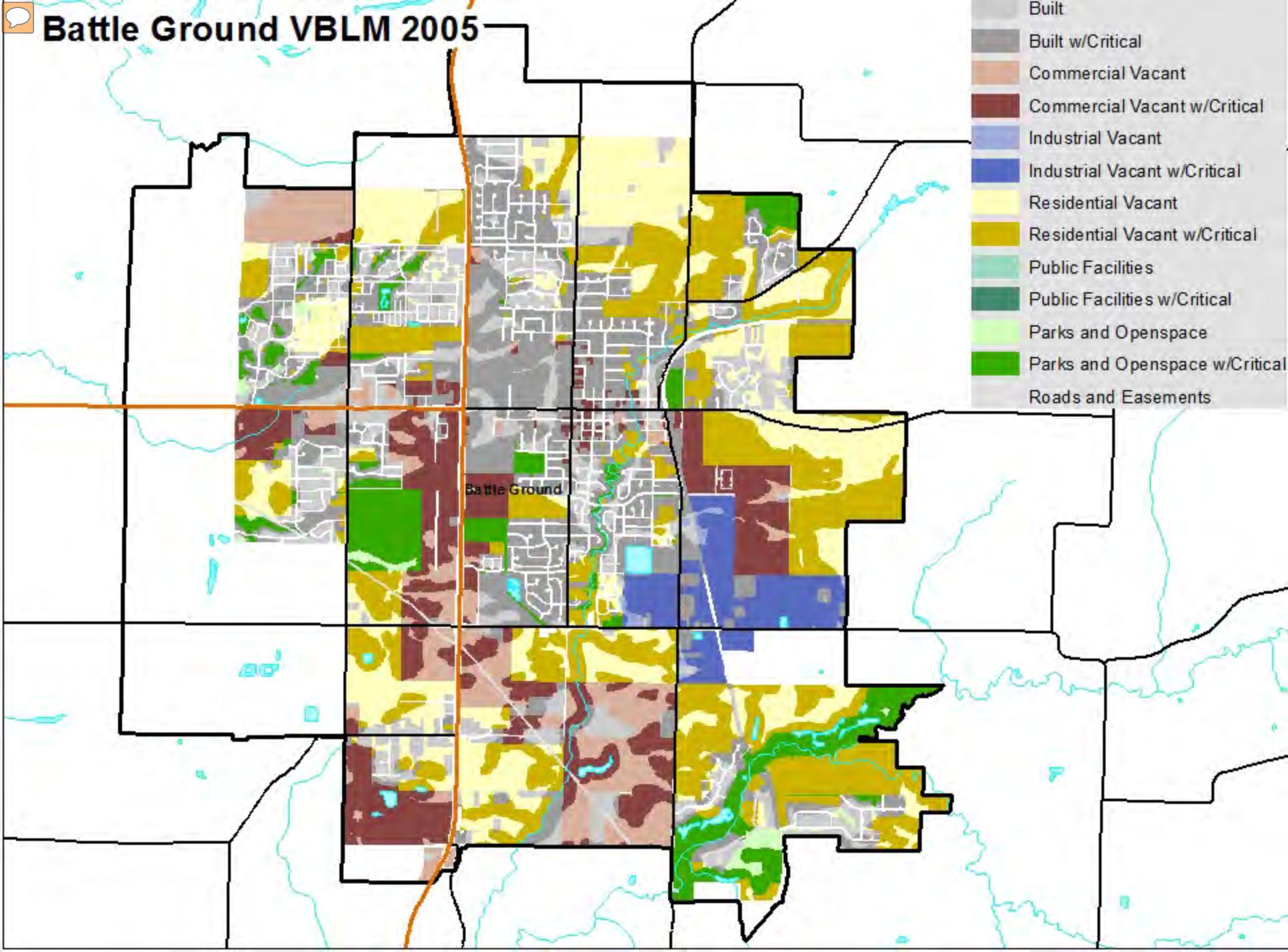


Battle Ground VBLM 2004

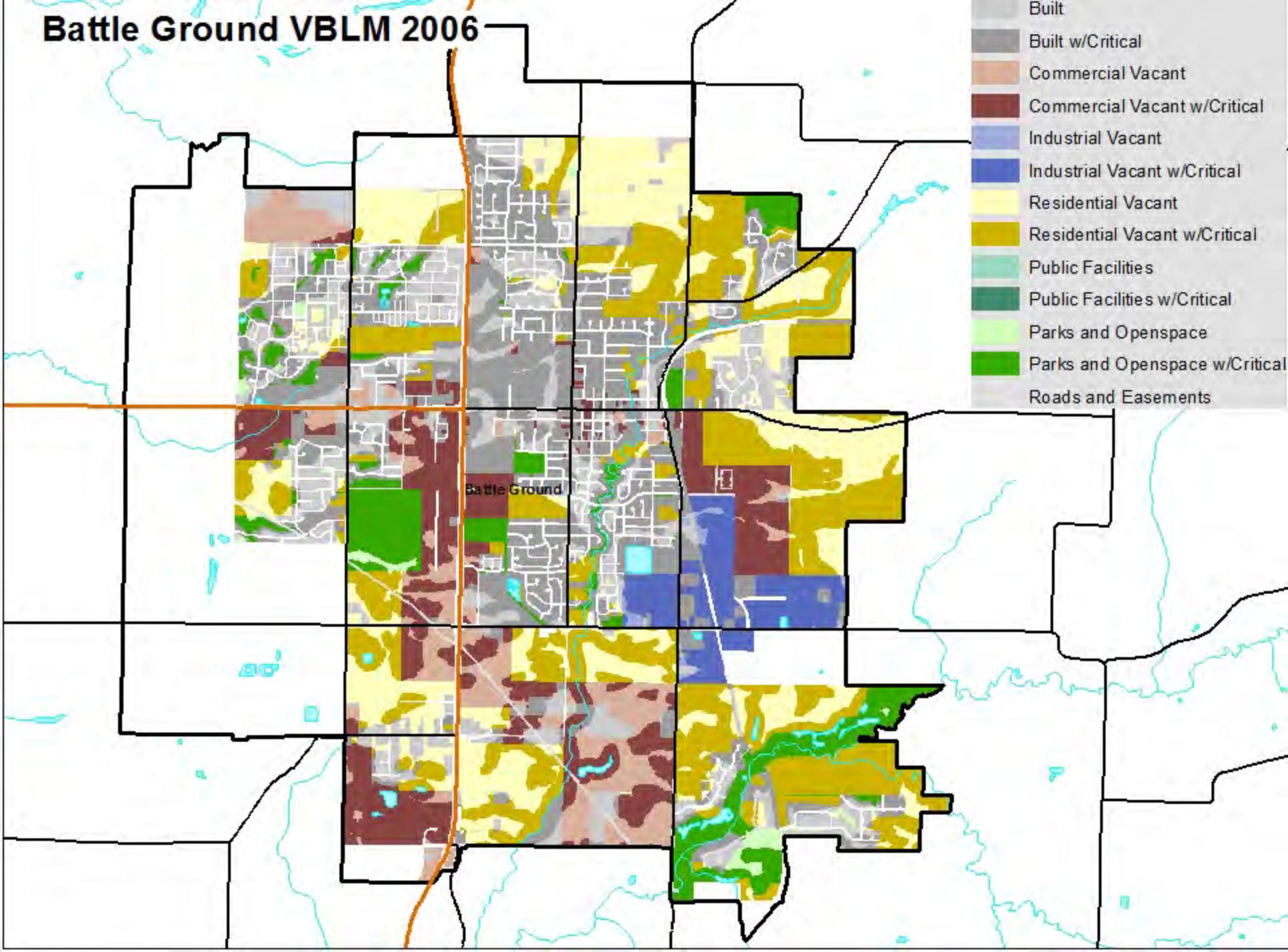


Battle Ground VBLM 2005

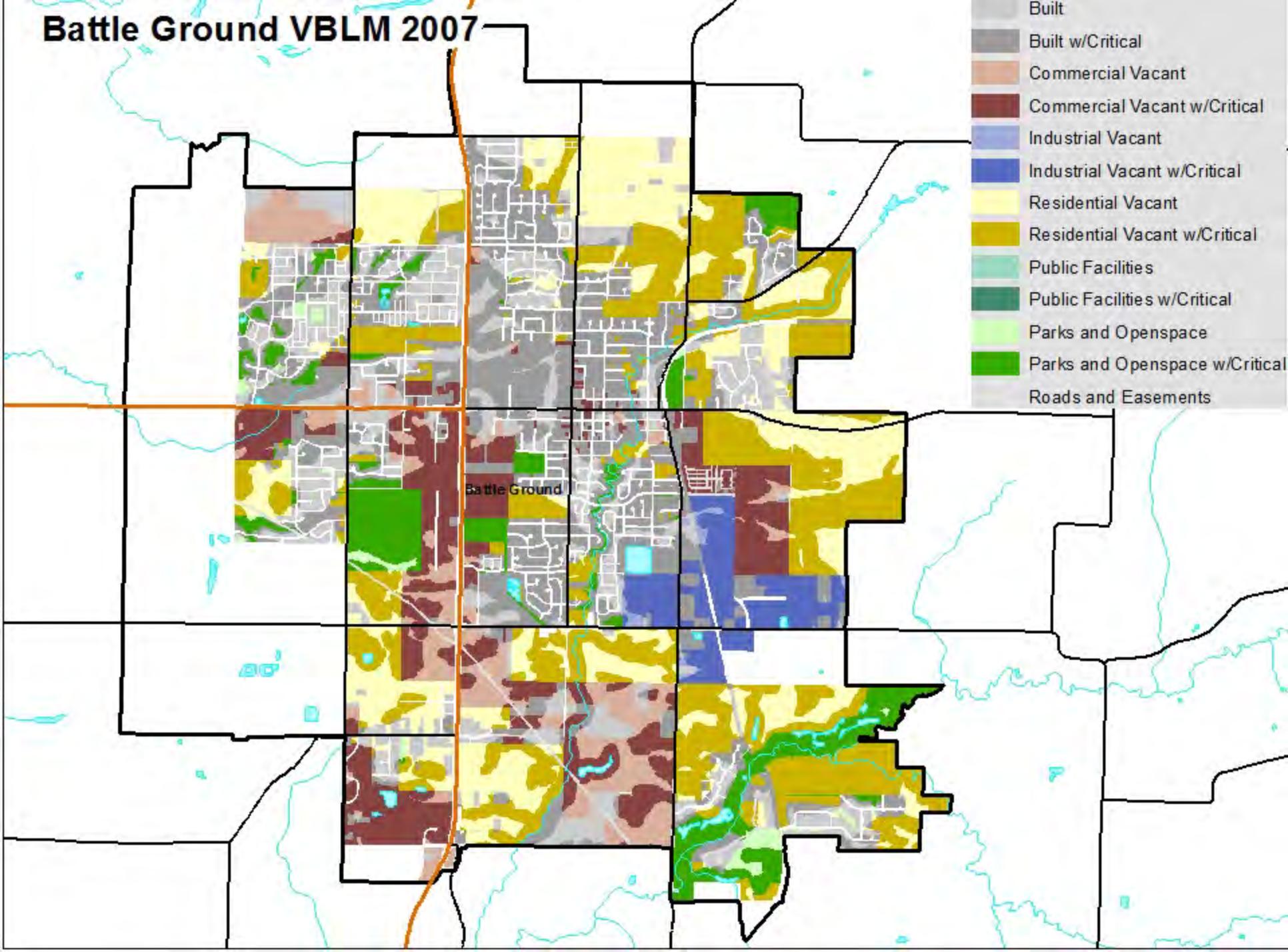
- Built
- Built w/Critical
- Commercial Vacant
- Commercial Vacant w/Critical
- Industrial Vacant
- Industrial Vacant w/Critical
- Residential Vacant
- Residential Vacant w/Critical
- Public Facilities
- Public Facilities w/Critical
- Parks and Openspace
- Parks and Openspace w/Critical
- Roads and Easements



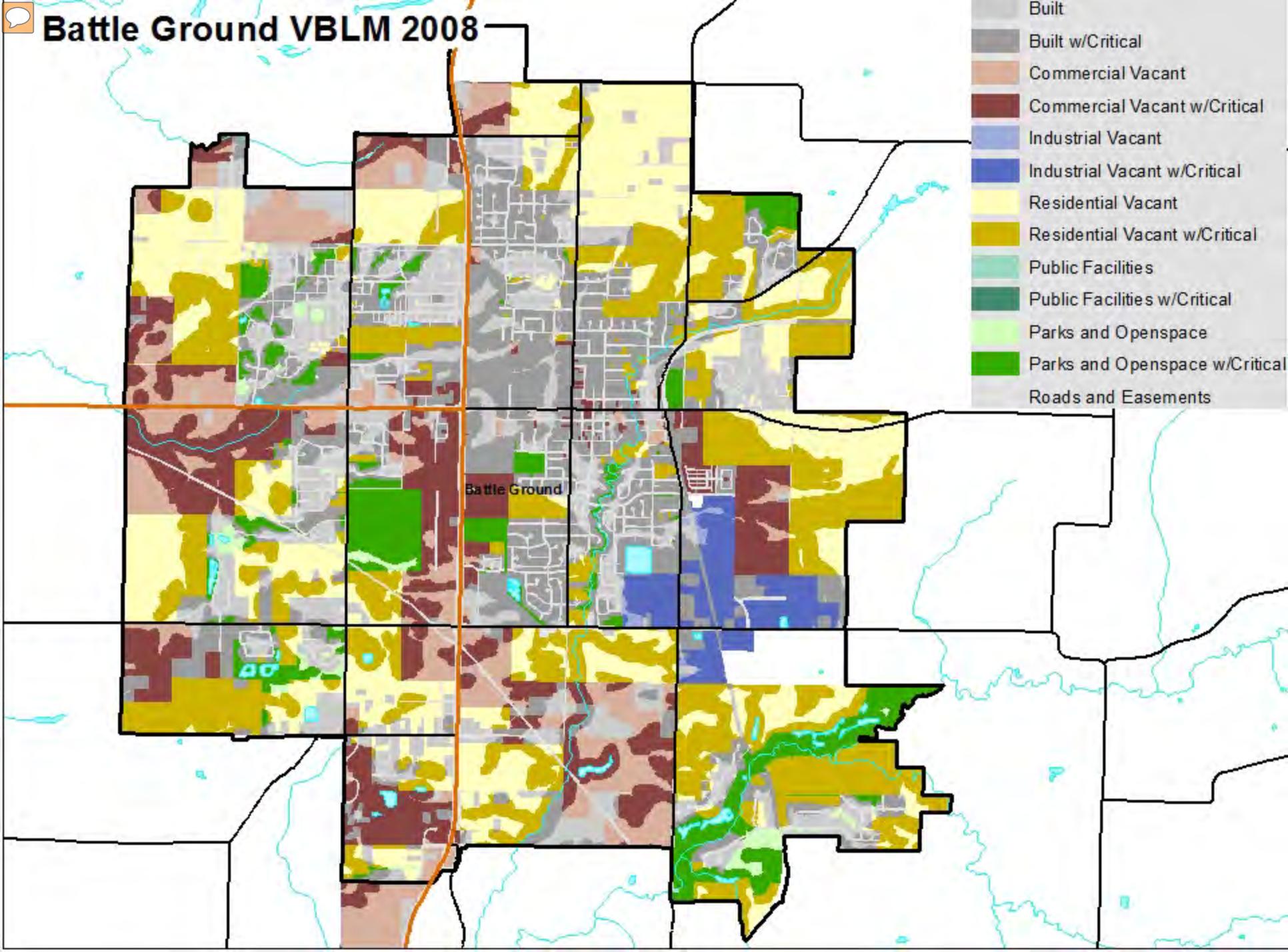
Battle Ground VBLM 2006



Battle Ground VBLM 2007

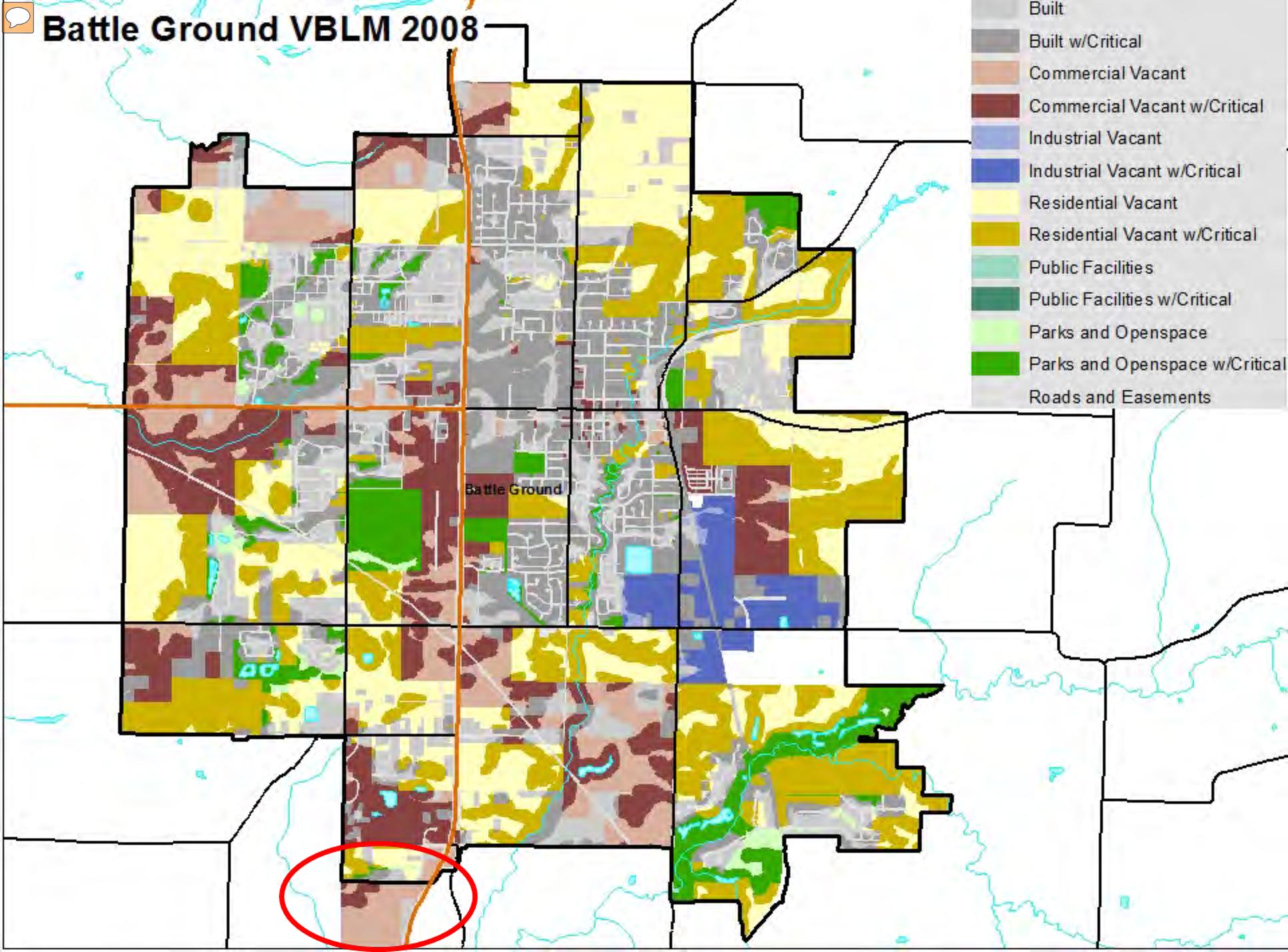


Battle Ground VBLM 2008

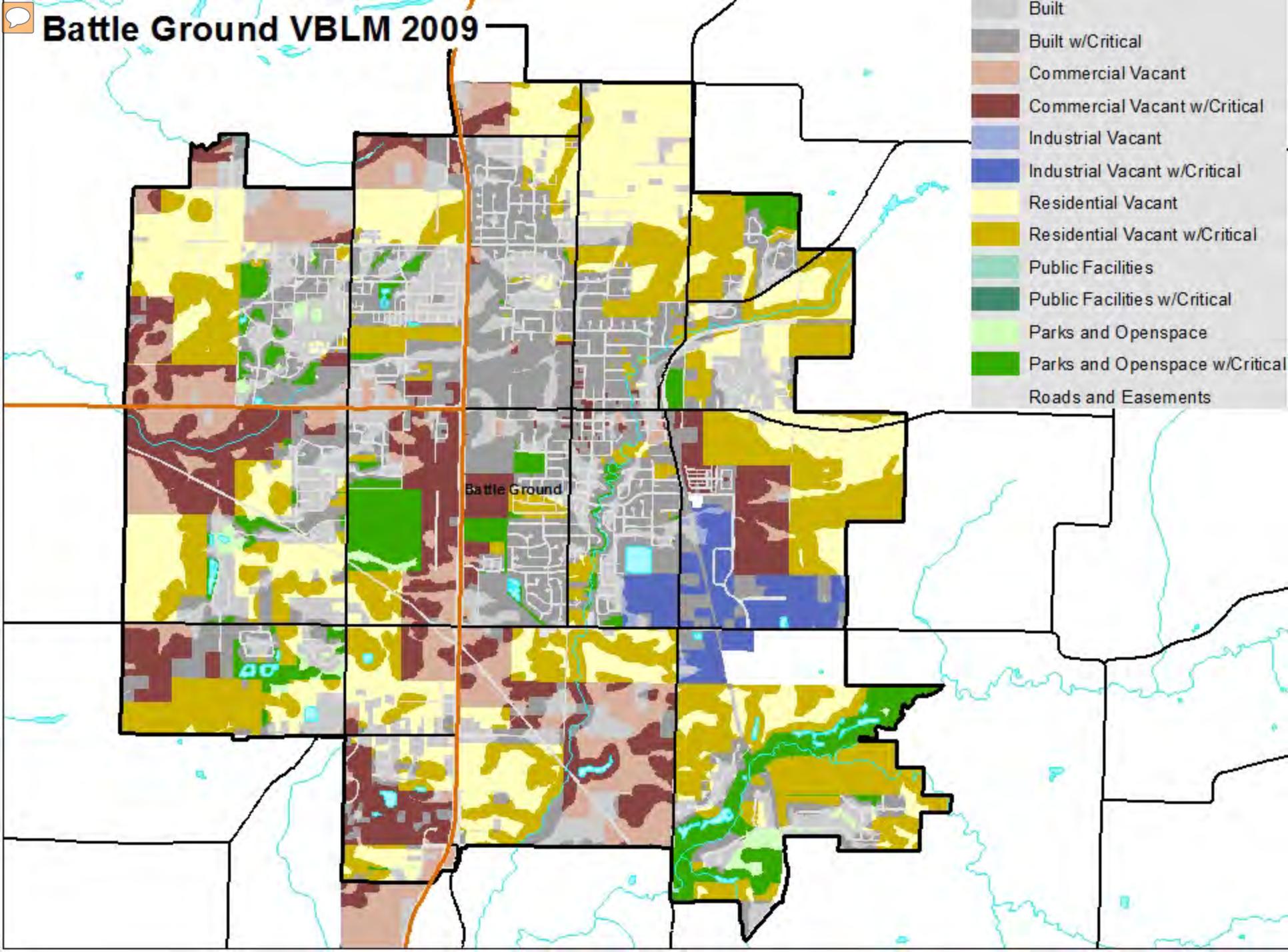


Battle Ground VBLM 2008

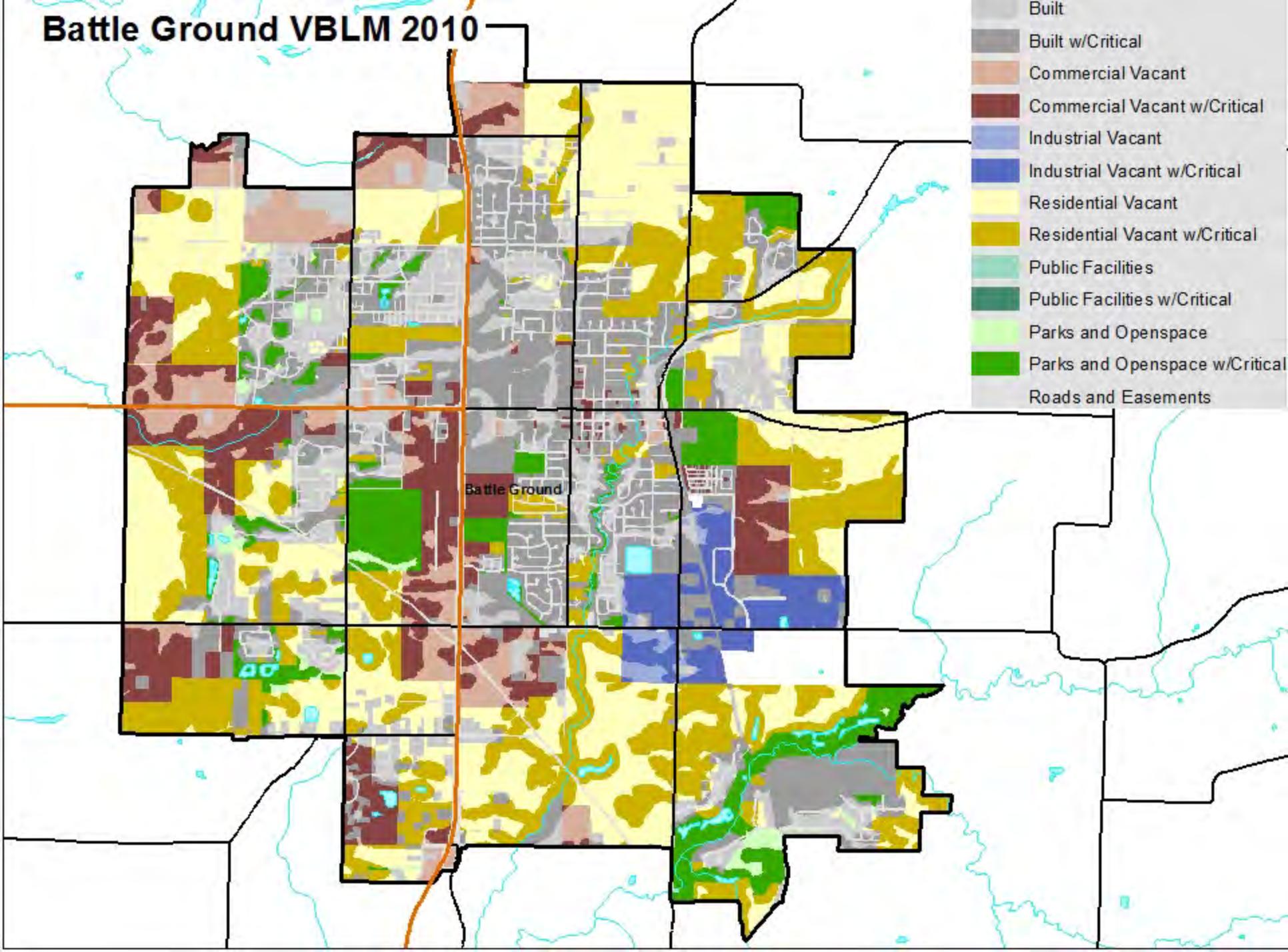
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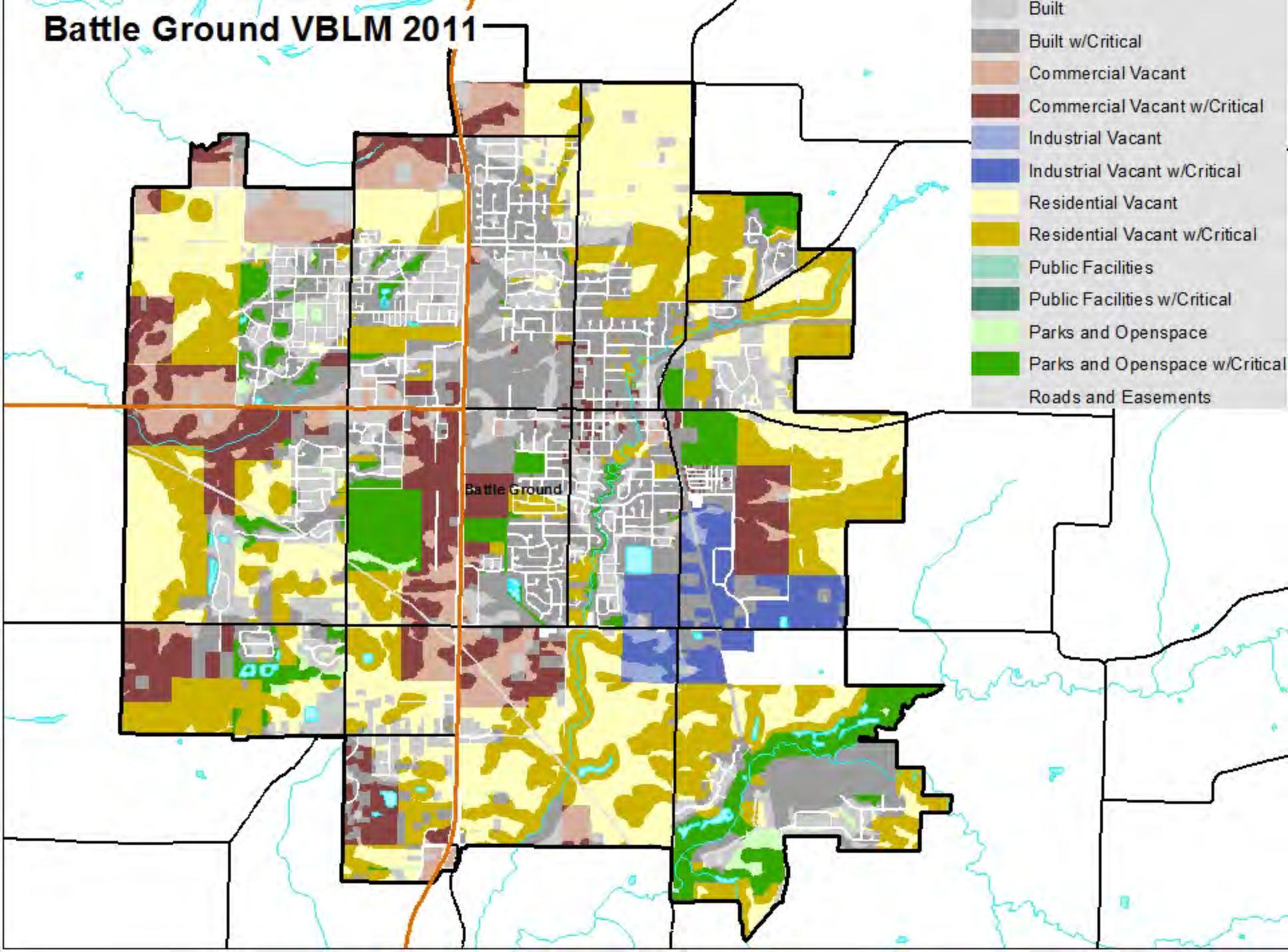
Battle Ground VBLM 2009



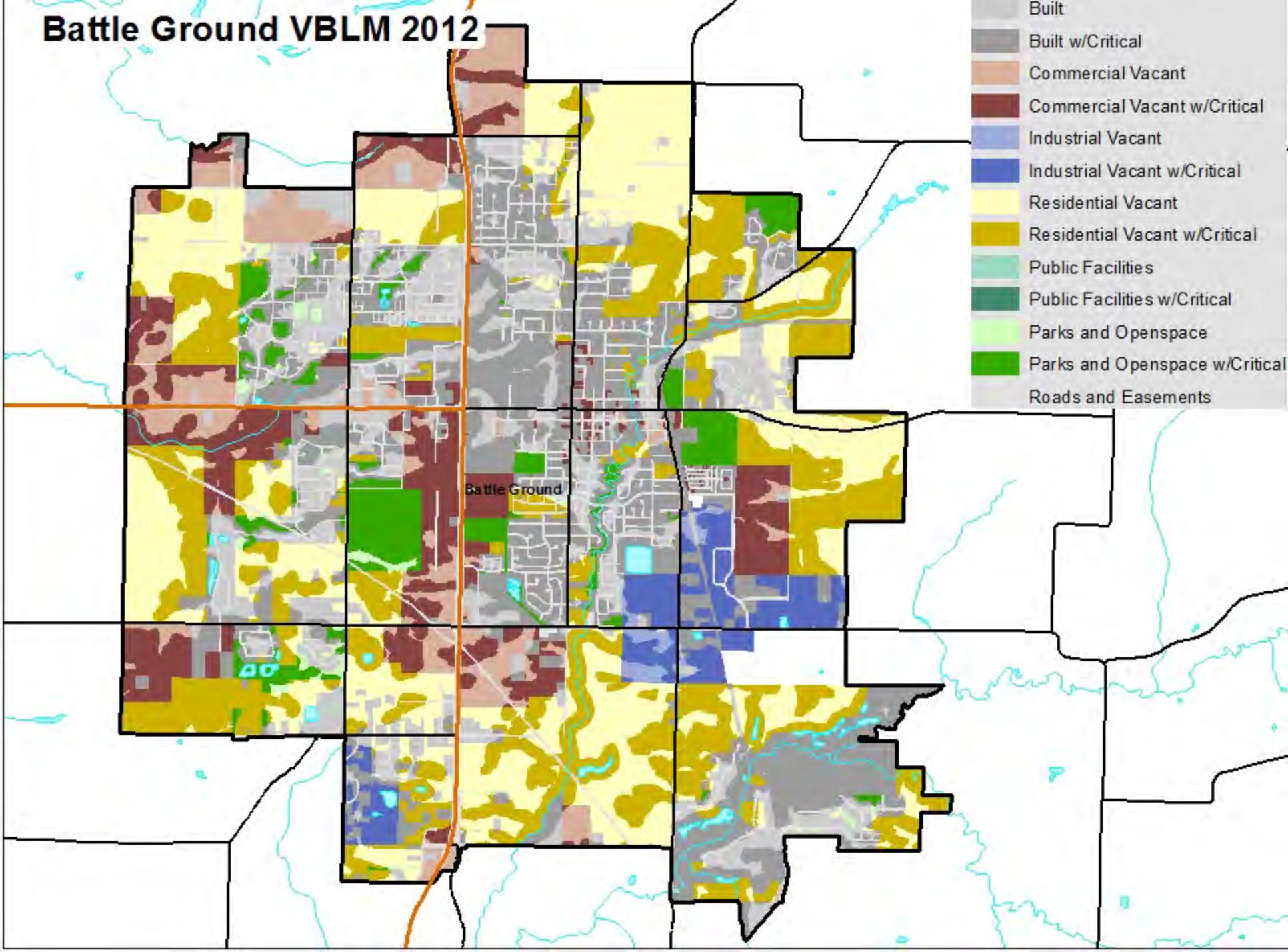
Battle Ground VBLM 2010



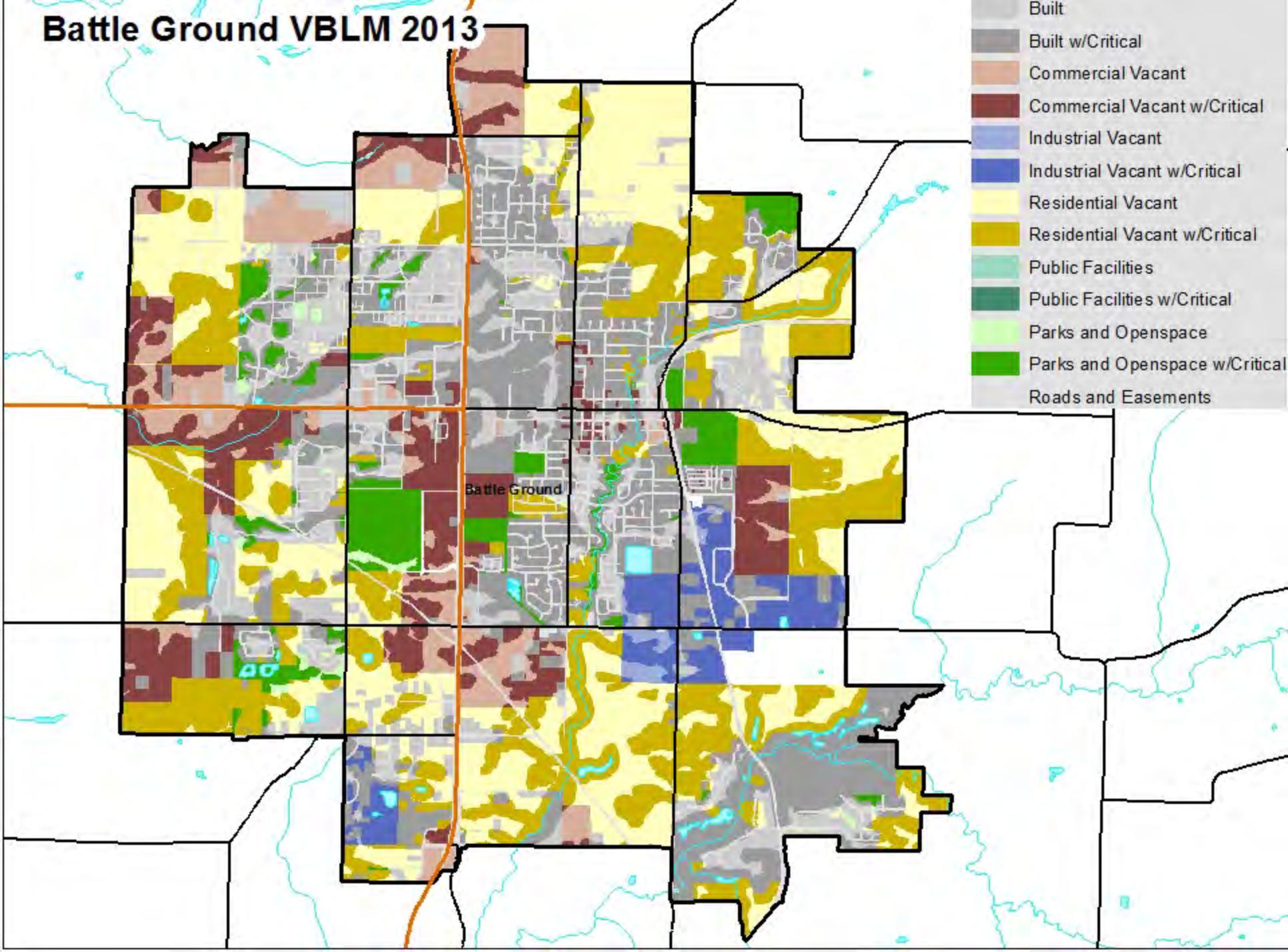
Battle Ground VBLM 2011



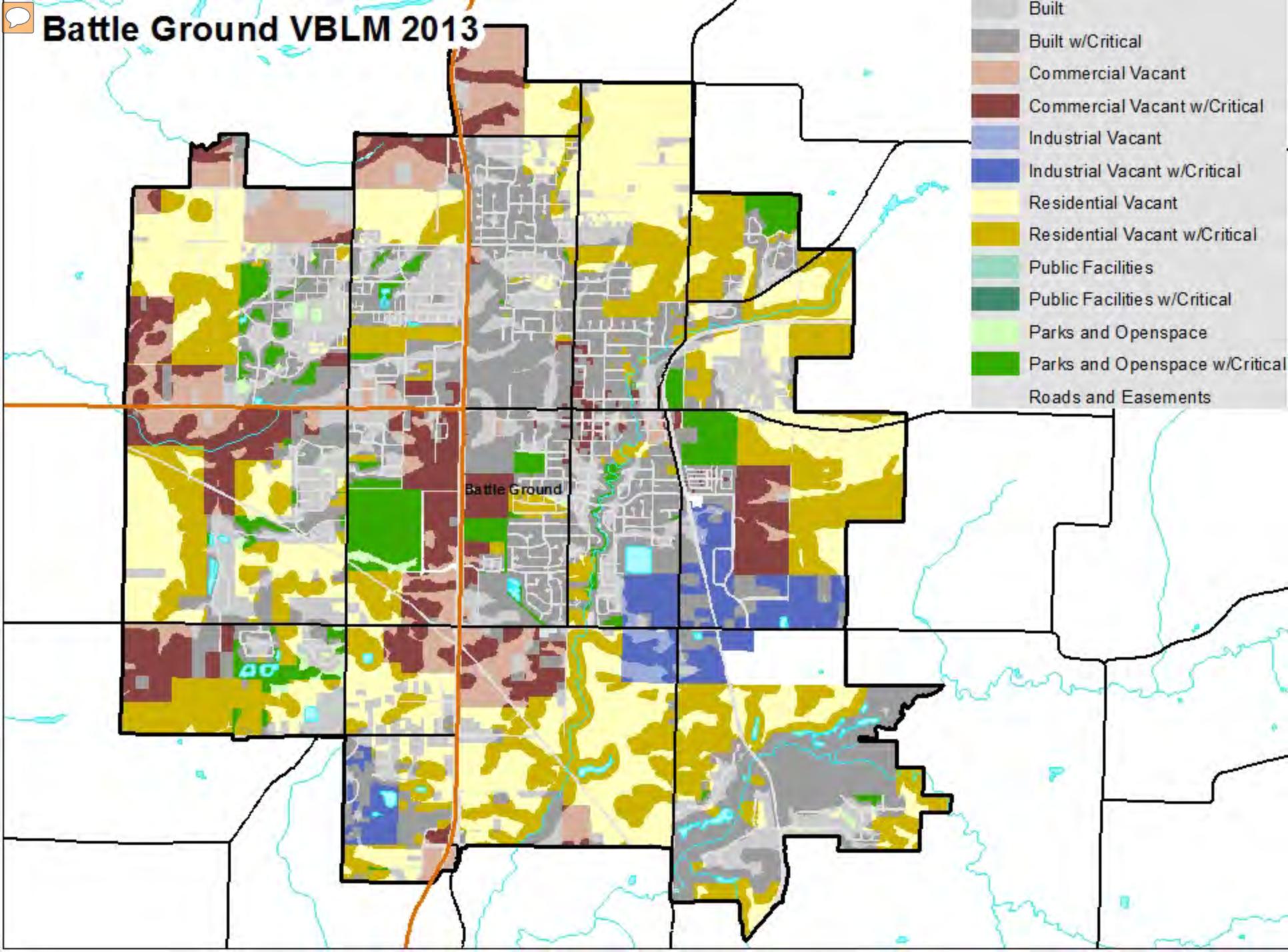
Battle Ground VBLM 2012



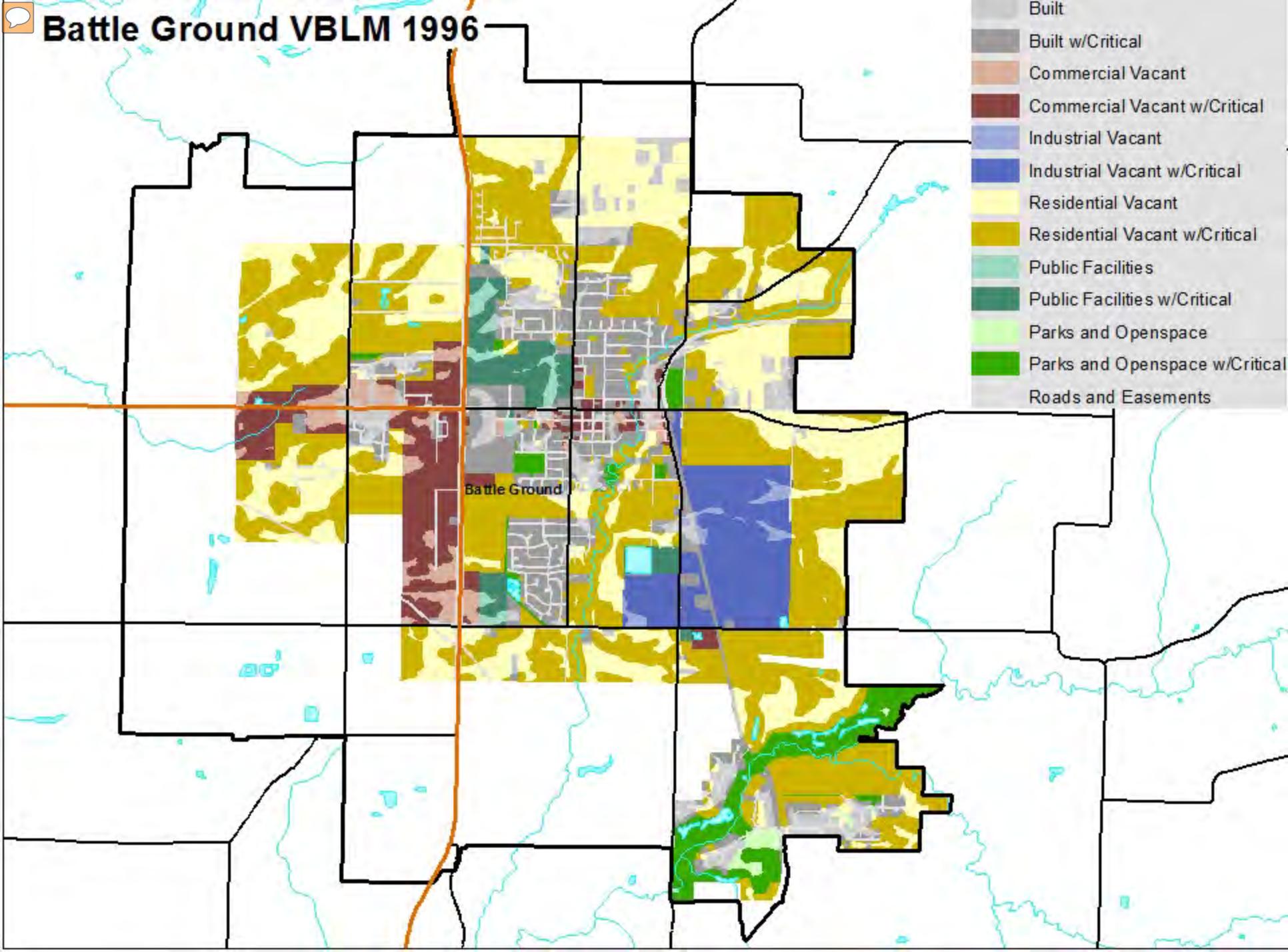
Battle Ground VBLM 2013



Battle Ground VBLM 2013



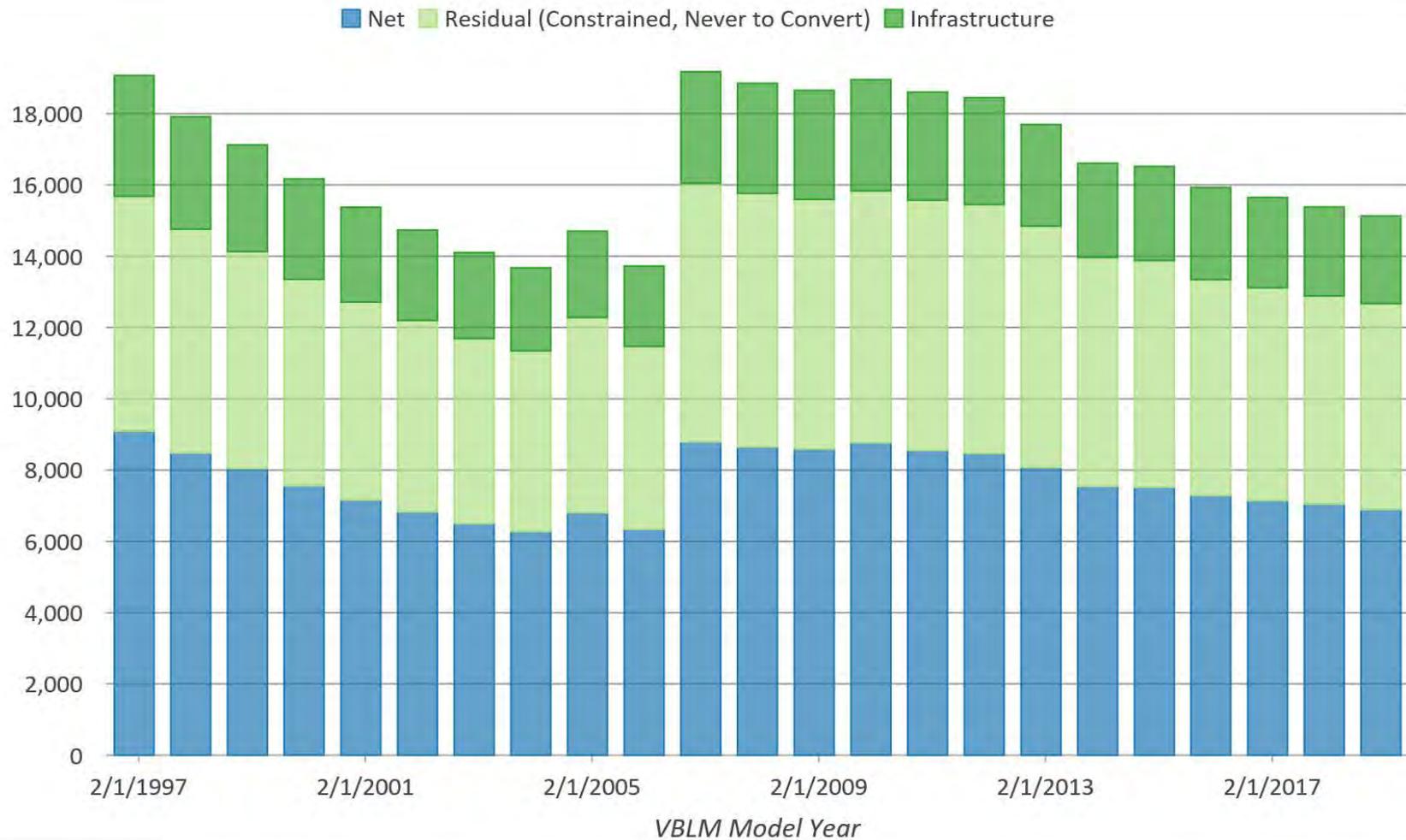
Battle Ground VBLM 1996



VBLM Results

- Trends through time
- Comparing VBLM Forecast to Actuals

Residential Vacant Buildable Land Countywide



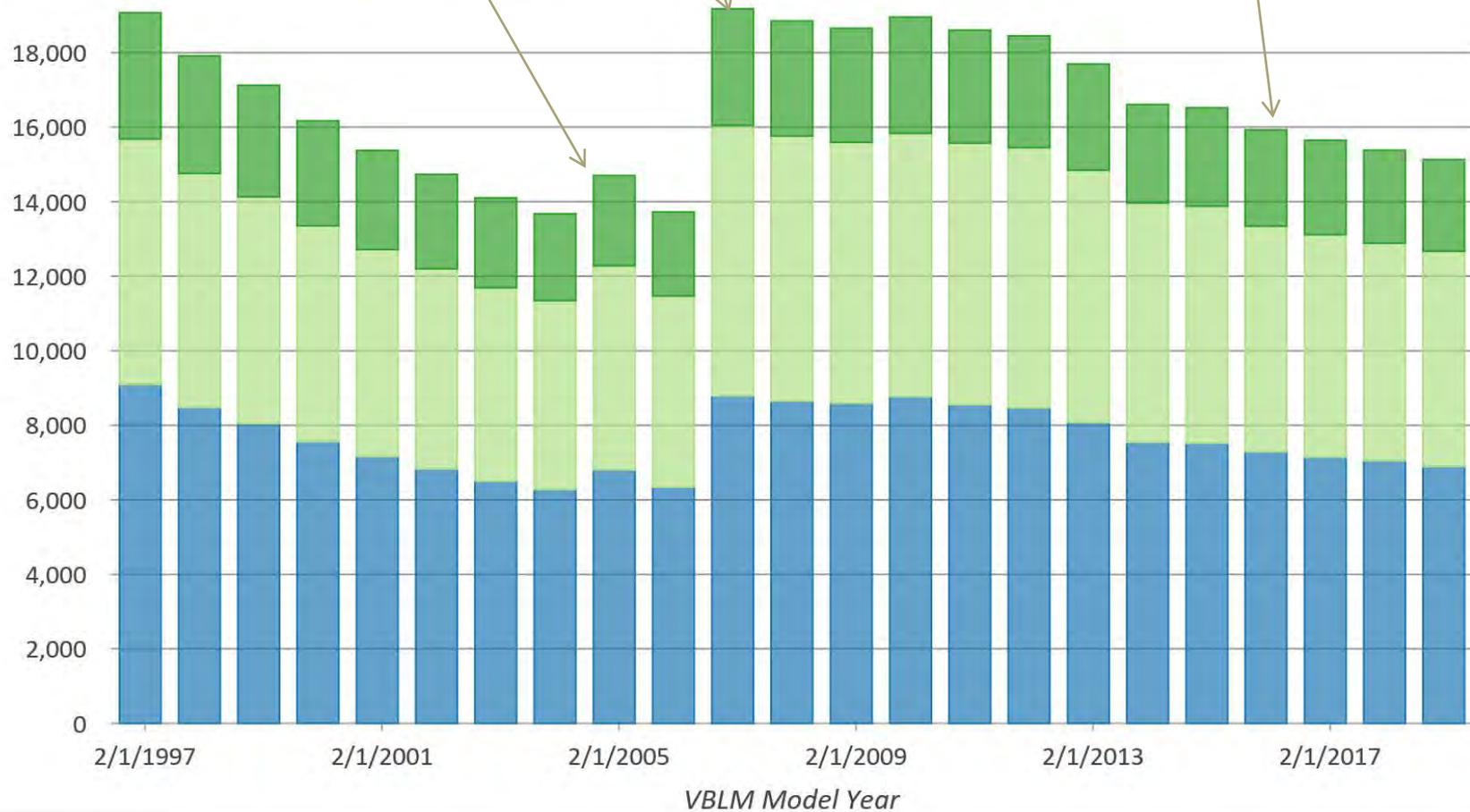
Residential Vacant Buildable Land

2004 Plan

2007 Plan

2015 Plan

Net Residual (Constrained, Never to Convert) Infrastructure





Net Acres to Houses, People, Jobs

Comprehensive Plan	VBLM Landuse	VBLM Model	Housing Units	Jobs	People Per Household
Mixed Use (MU)	Mixed Use - Residential	Residential	6	20	2.66
Mixed use - Residential (MU-R)	Mixed Use - Residential	Residential	6	20	2.66
Urban High Density Residential (UH)	Urban High Density	Residential	6		2.66
Urban Medium Density Residential (UM)	Urban High Density	Residential	6		2.66
Urban Low Density Residential (UL)	Urban Low Density	Residential	6		2.66
Commercial (C)	Commercial	Commercial		20	
Downtown (D)	Commercial	Commercial		20	
Regional Center (RCC)	Commercial	Commercial		20	
Mixed use - Employment (MU-E)	Mixed Use - Employment	Commercial	6	20	2.66
Employment Campus (EMS)	Office/Business Park	Commercial		20	
Light Industrial (ML)	Industrial	Industrial		9	
Parks/Open Space (P/OS)	Open Space/Parks	None			
Public Facility (PF)	Public Facilities	None			
Airport (A)	Airport	None			

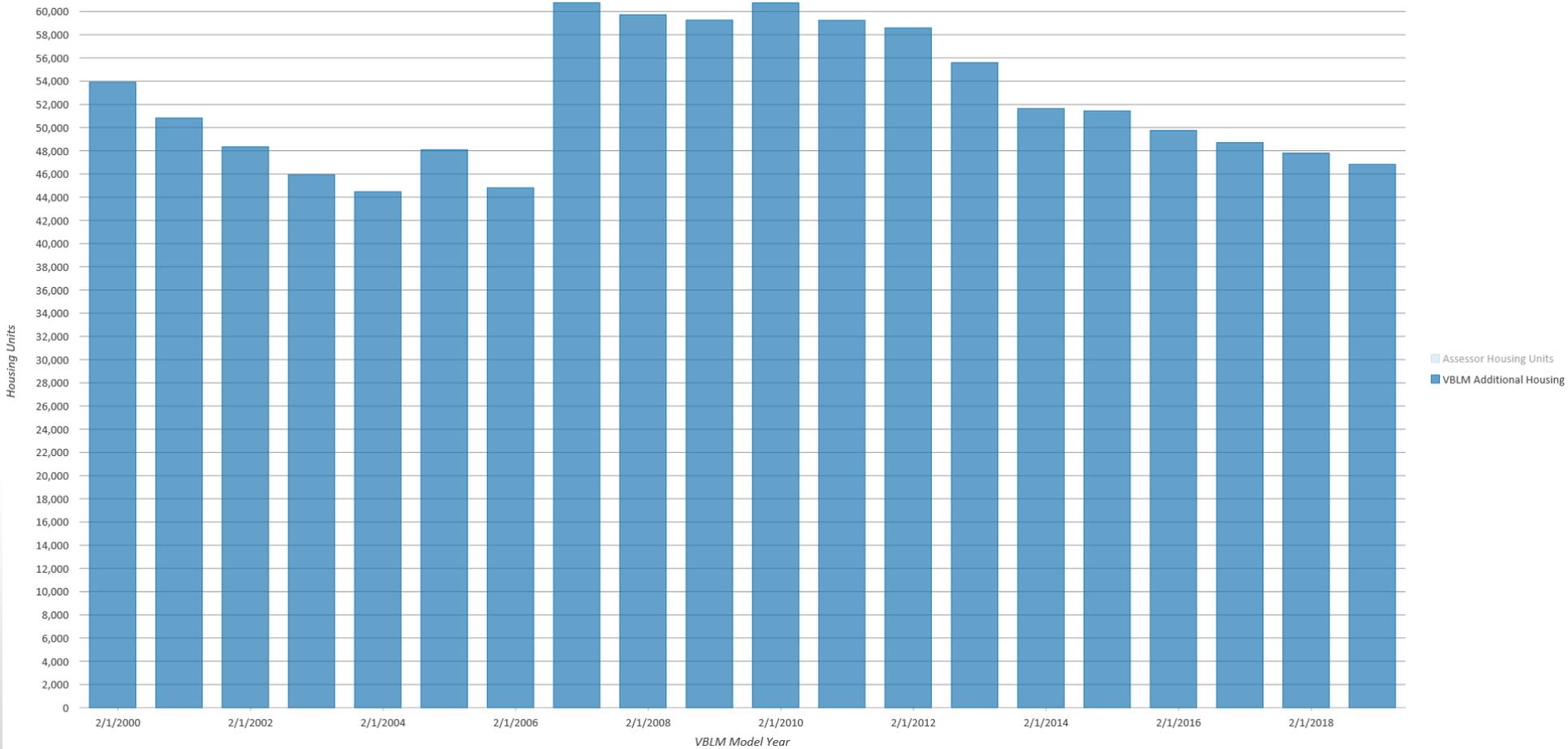


Houses, People, Jobs

City	Residential Low Density Units	Residential High Density Units	Residential Mixed Use Units	Commercial Jobs	Industrial Jobs	People Per Household
Battle Ground	6	6	6	20	9	2.66
Camas	6	6	6	20	9	2.66
La Center	4	4	4	20	9	2.66
Ridgefield	6	6	6	20	9	2.66
Vancouver	8	8	8	20	9	2.66
Washougal	6	6	6	20	9	2.66
Yacolt	4	4	4	20	9	2.66
Clark County	5	16	18	20	9	2.66

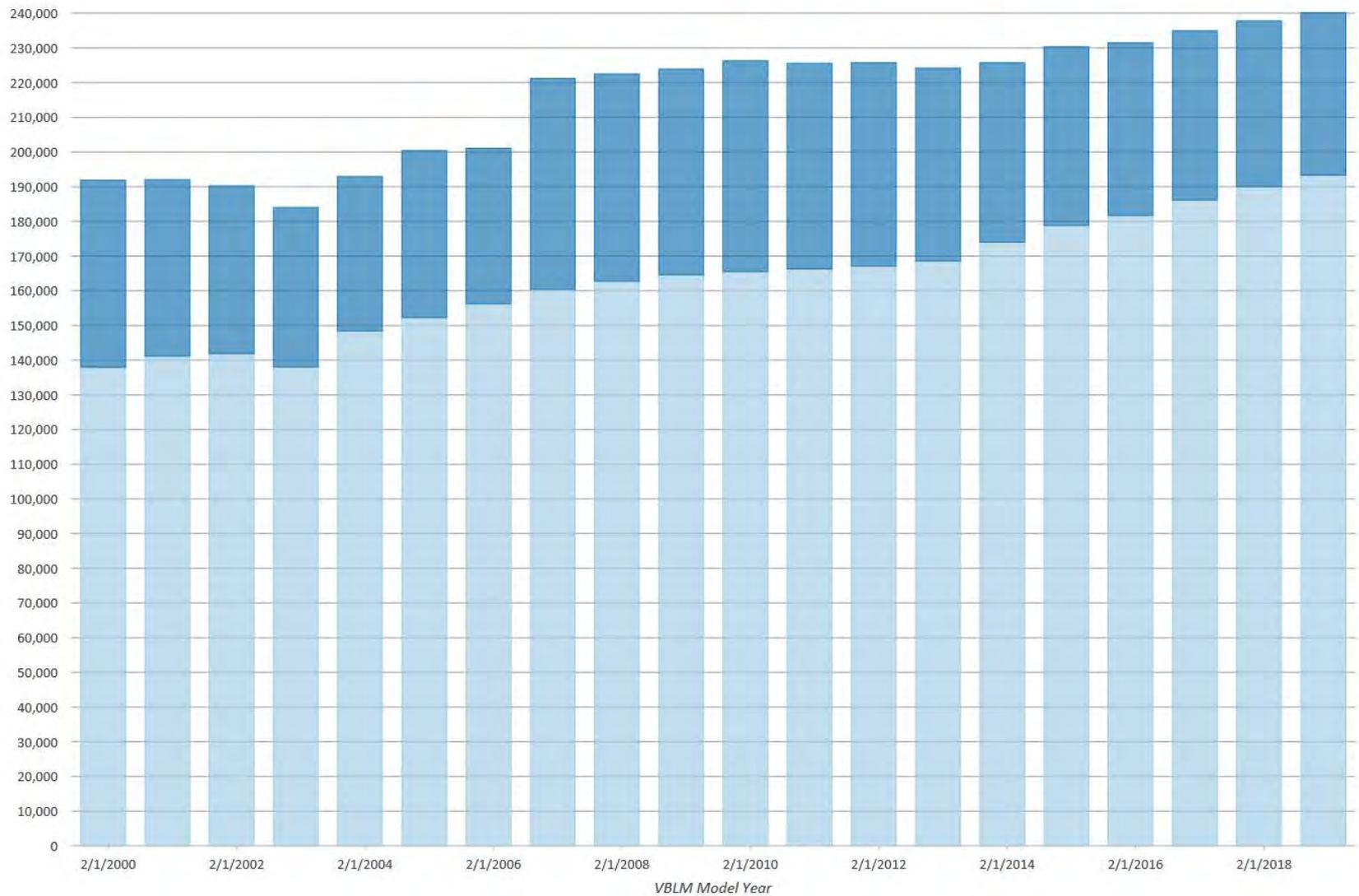


Residential VBLM Housing



Residential Housing Capacity

Housing Units



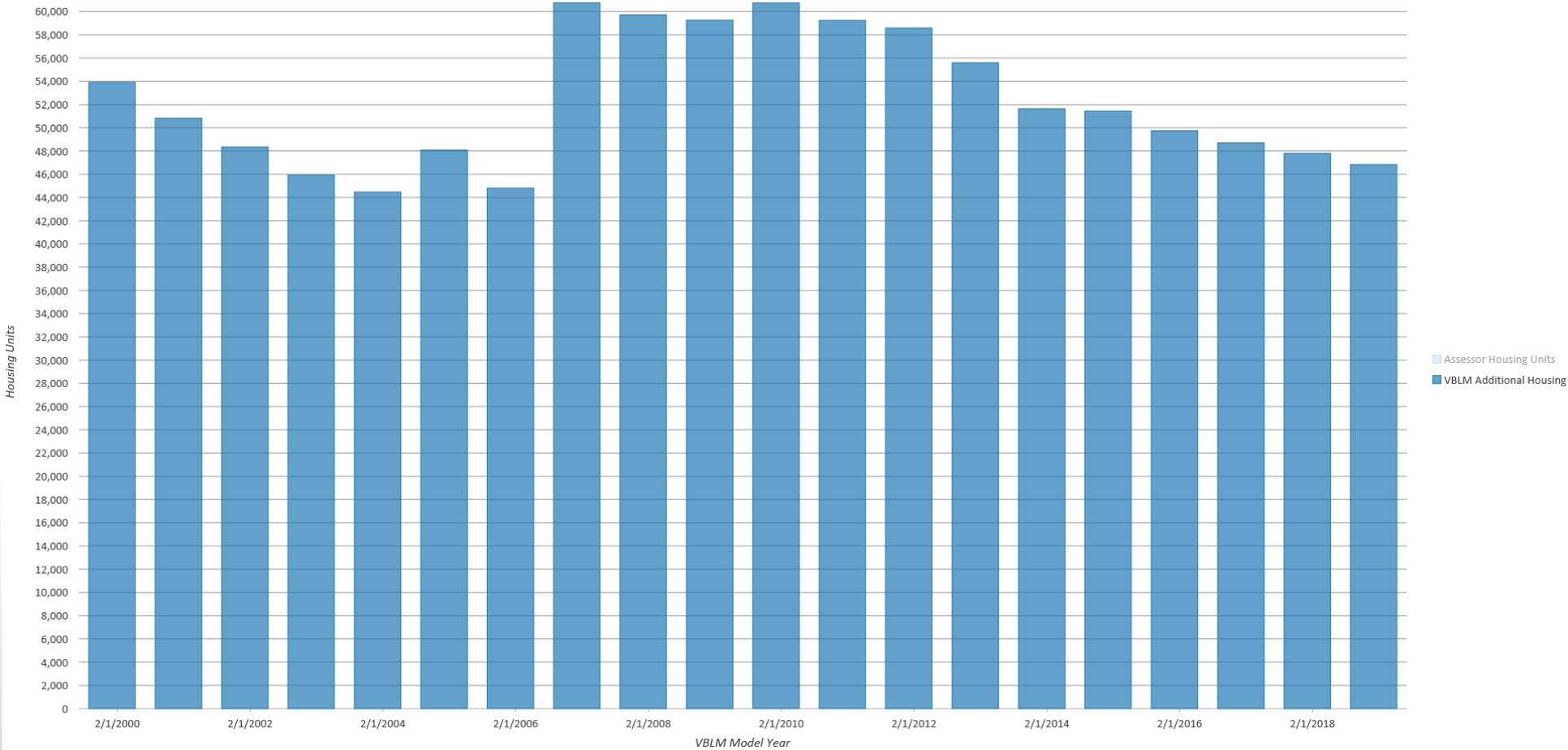
Assessor Housing Units
VBLM Additional Housing

New Houses Per Year

- VBLM Houses
 - Compare VBLM yields year to year
 - 2018 VBLM House forecast minus 2019 VBLM House forecast
- Assessor Houses
 - Compare Assessor housing unit counts year to year
 - 2019 Assessor Housing Units minus 2018 Assessor Housing units
- Issues:
 - Assumes VBLM vacant land converts to houses
 - Timing differences between VBLM and Assessor

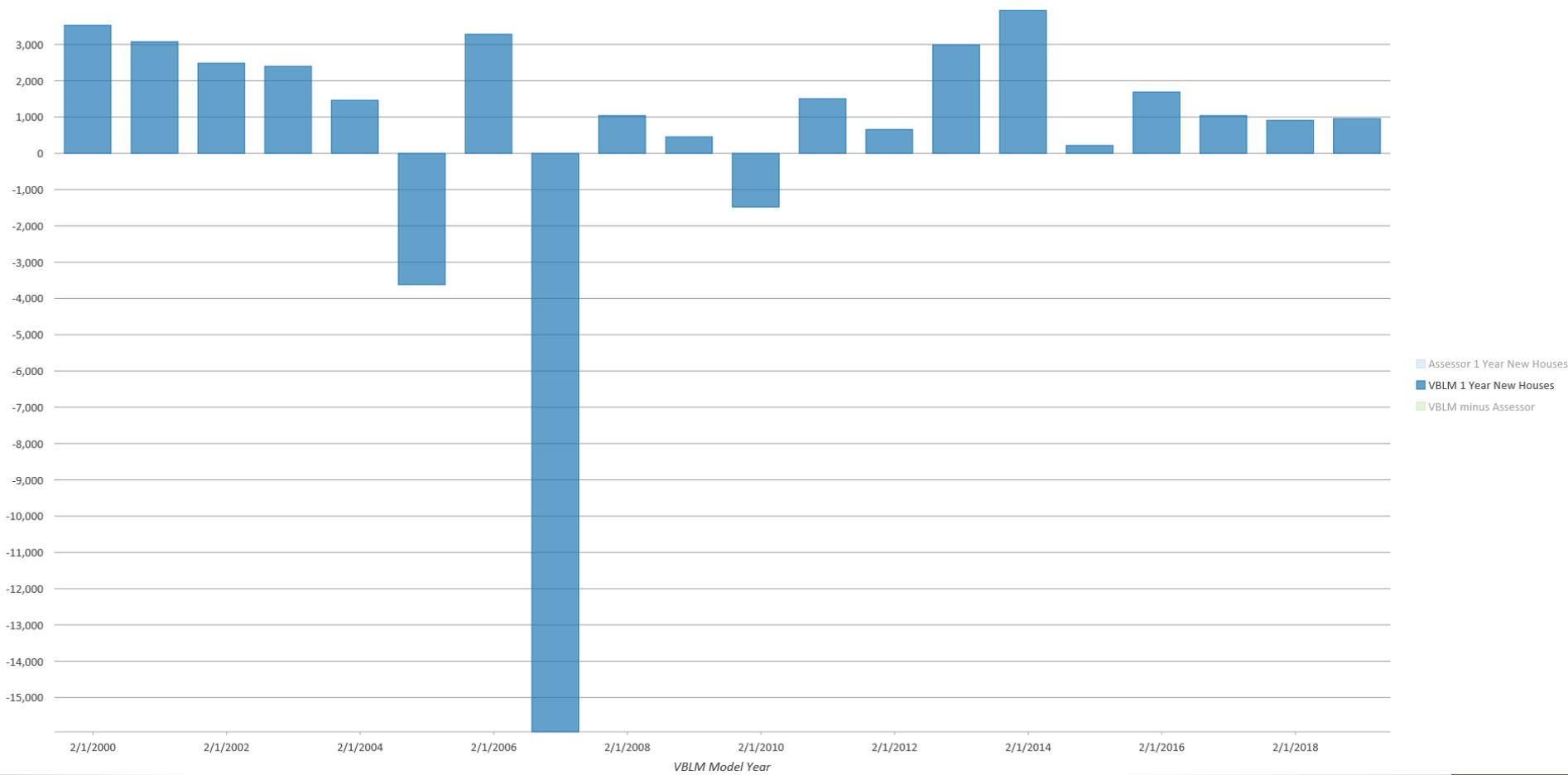


Residential VBLM Housing



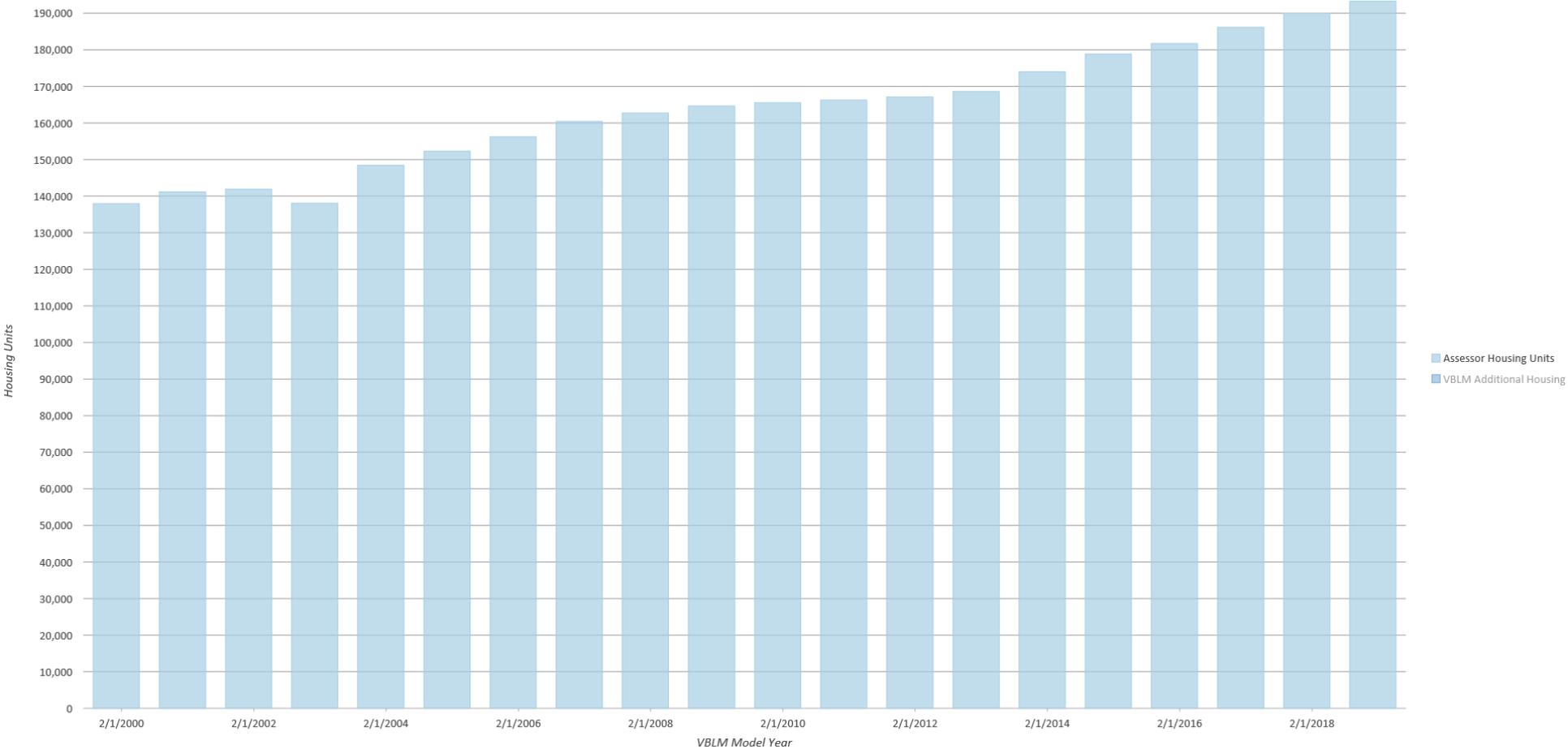
VBLM 1 Year Change in Housing

Housing Units



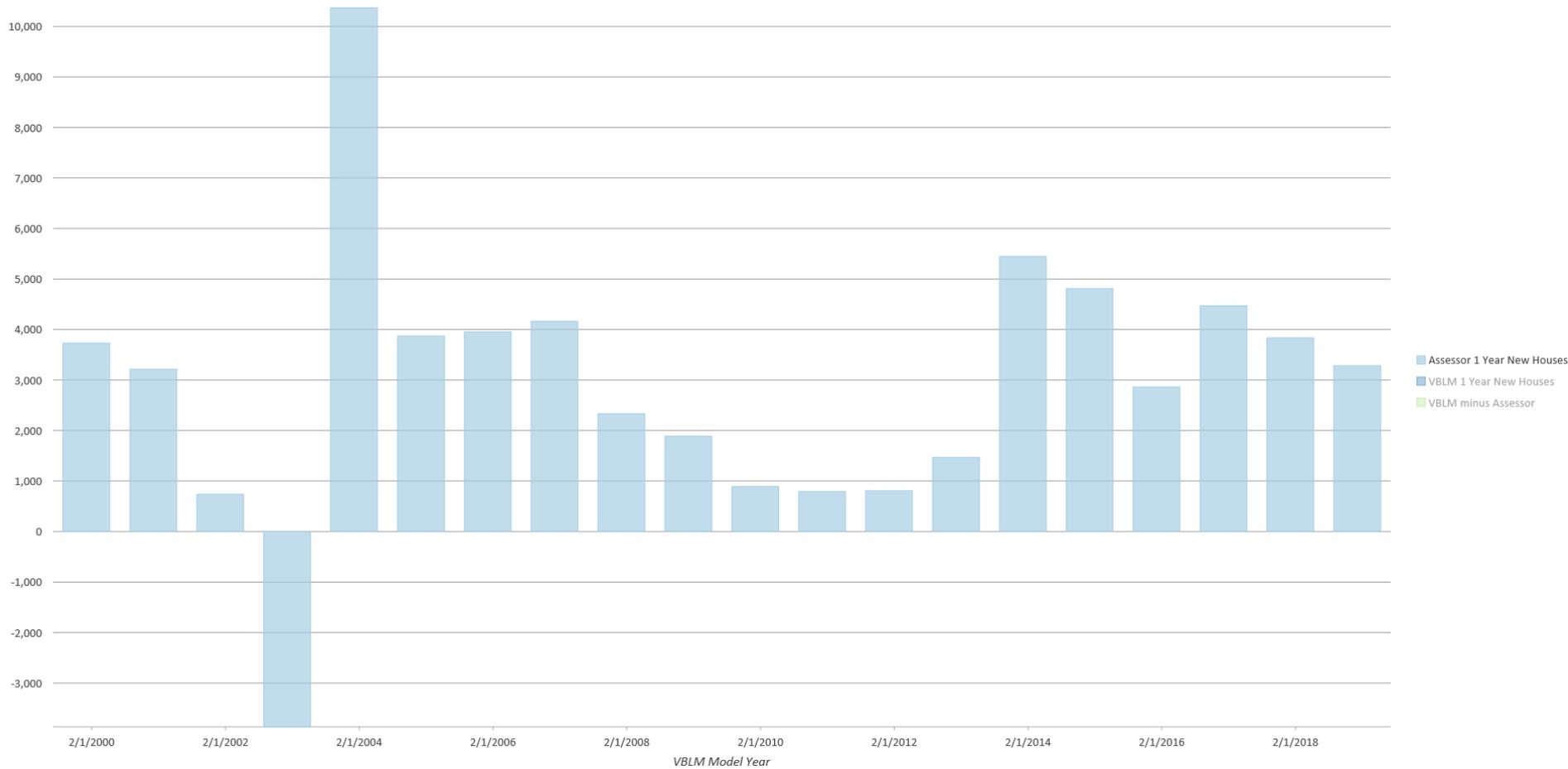


Assessor Housing Units



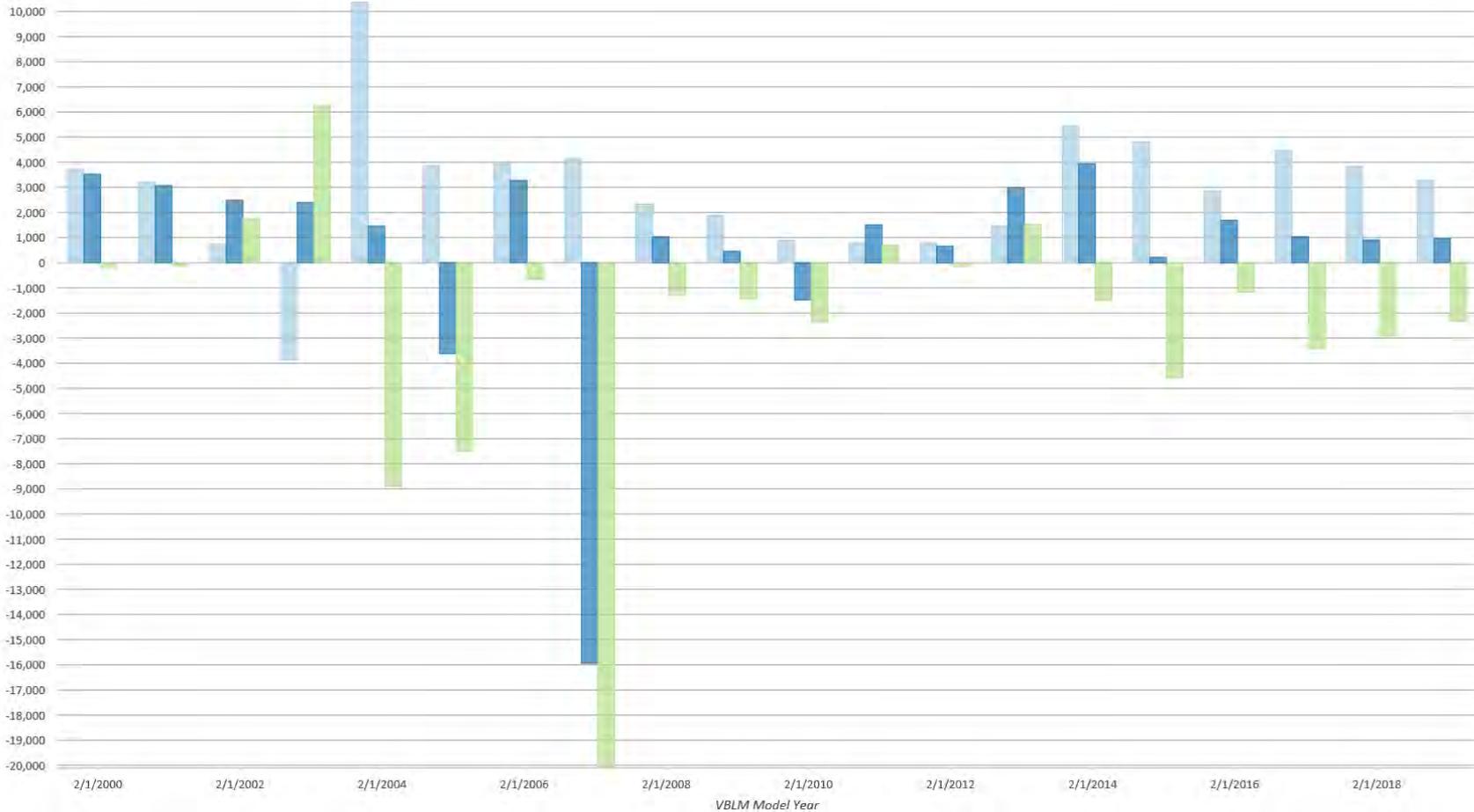
Assessor 1 Year Change in Housing Units

Housing Units



VBLM Housing verses Assessor Housing

Housing Units

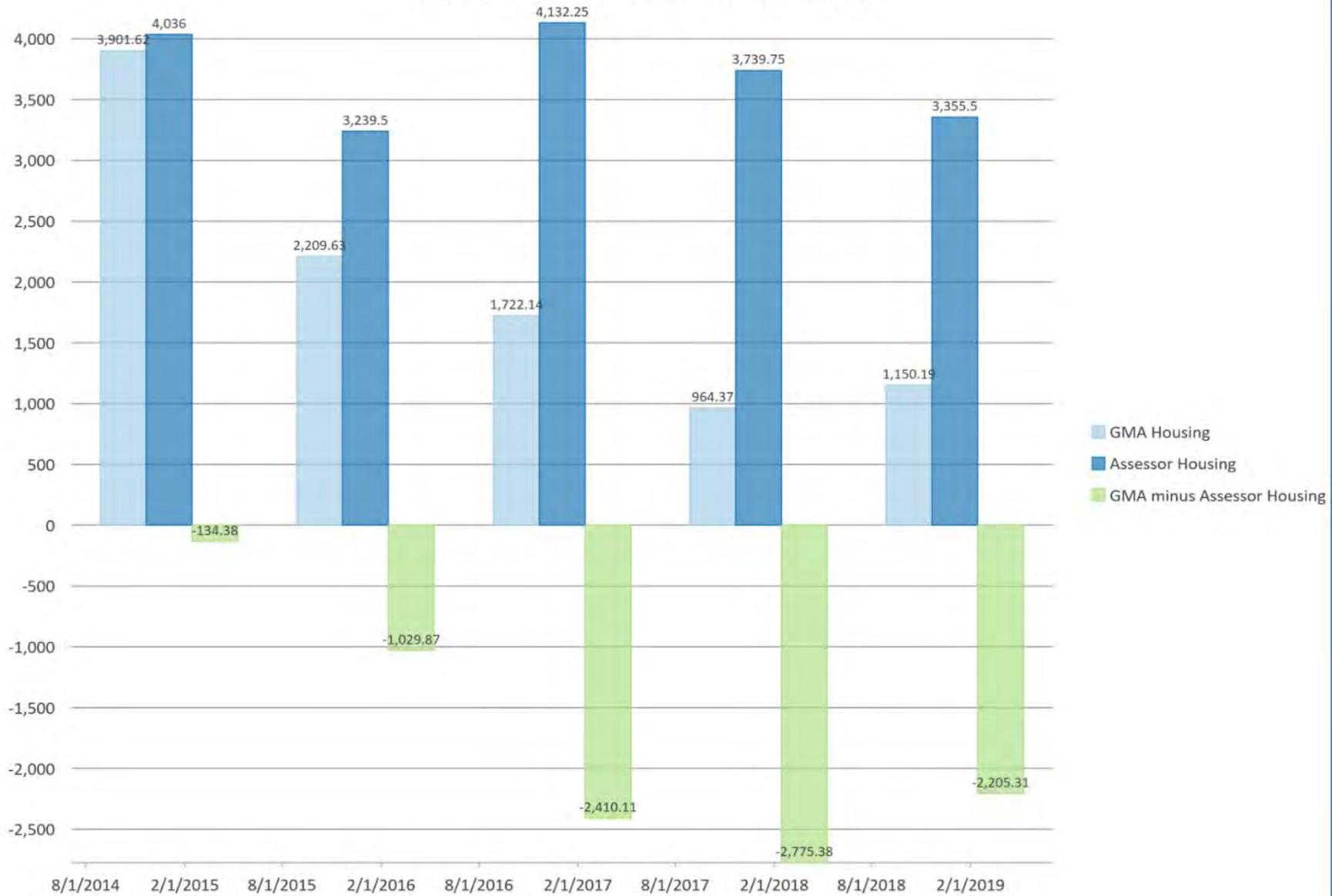


Assessor 1 Year New Houses
VBLM 1 Year New Houses
VBLM minus Assessor

How well does the VBLM match reality?

Sum of Values

Comparison of GMA and Assessor Housing

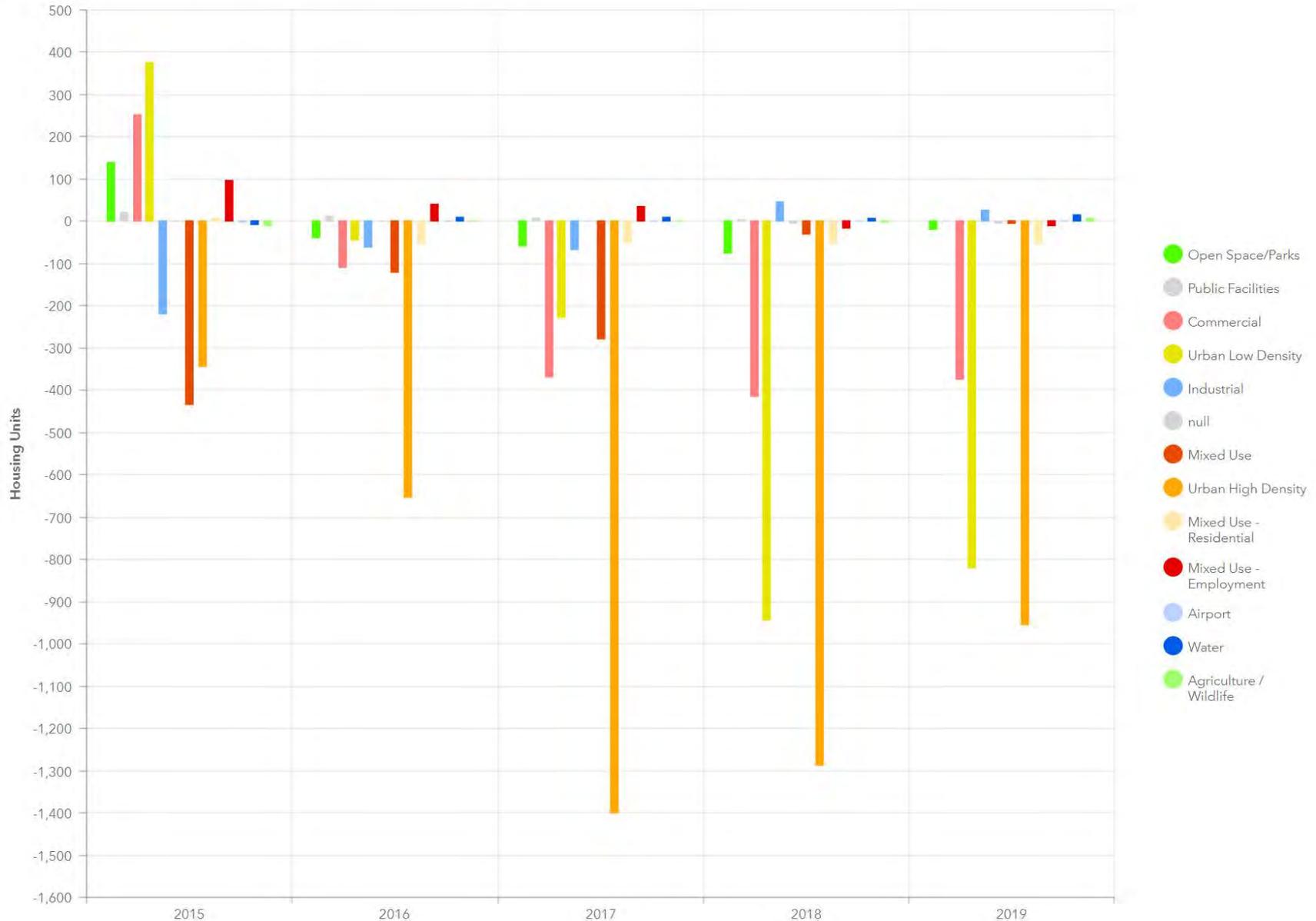


Comparison of four year moving average



Housing by VBLM Landuse

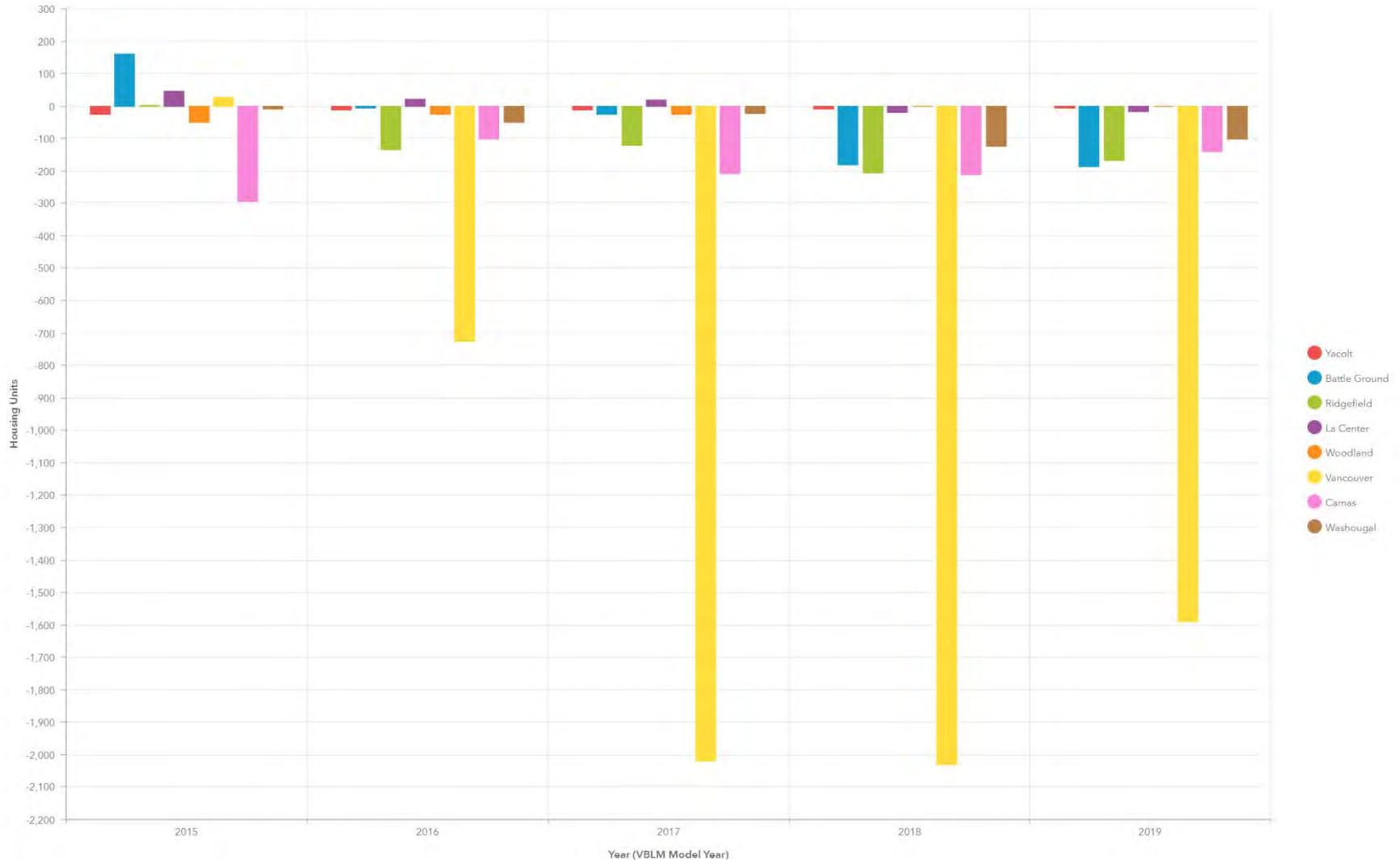
VBLM Housing Forecast vs Assessor Actuals - Four Year Moving Average





Housing by Jurisdiction

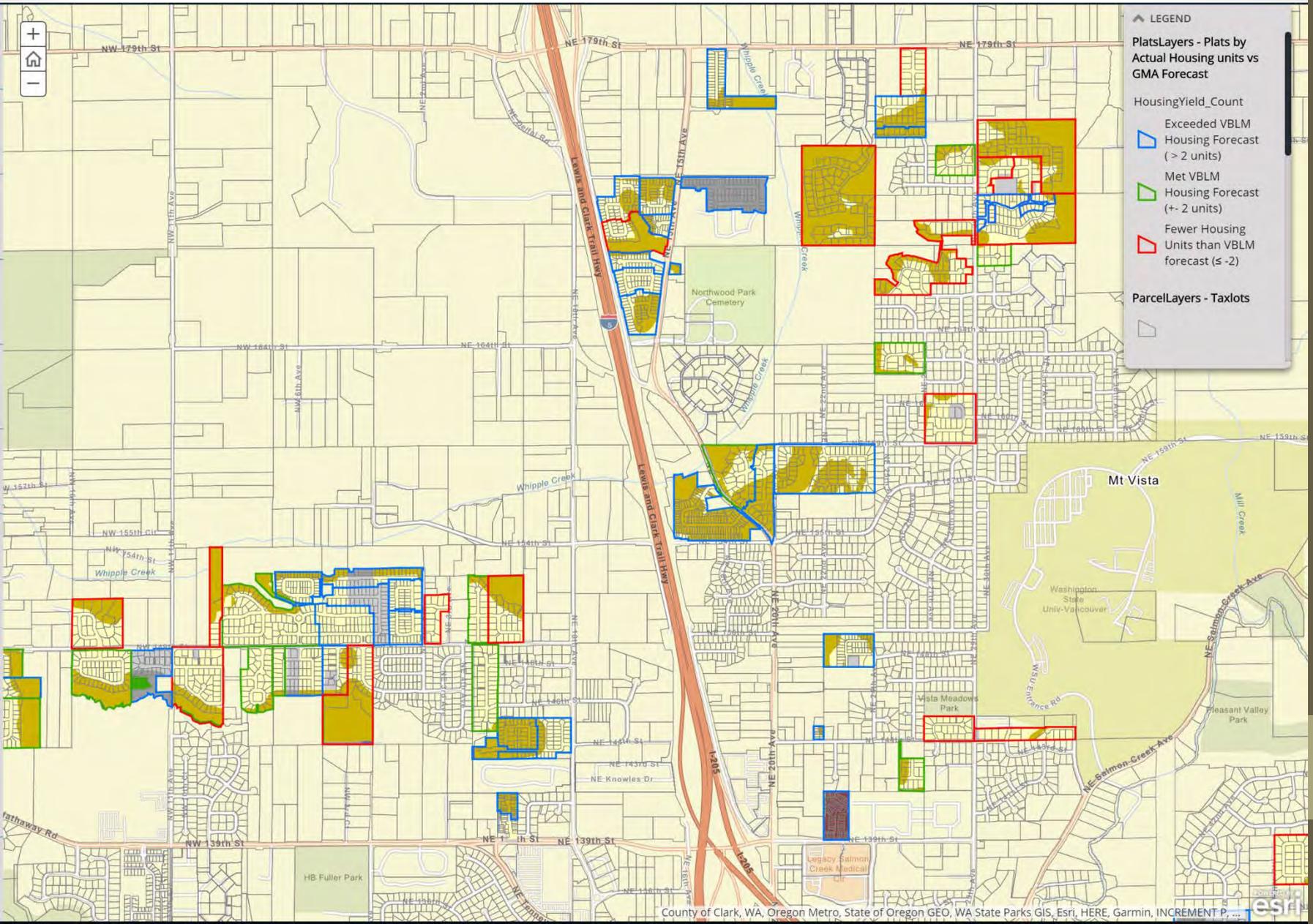
VBLM Housing versus Assessor Housing (4 Year Moving Average) by UGA



Subtracting the Assessor New Housing Unit Count from the forecast number of houses built from the VBLM. Both numbers are the four year moving average of the change from the prior year.

The VBLM is underestimating the number of houses actually built.

What About Subdivision Yields?



VBLM Yield

- Where is the Growth Happening?
- Where is the Remaining Capacity?
- Need Yields by different Geography
 - City and UGA
 - School Districts/Attendance Areas
 - Comprehensive Plan/ Zoning
 - Hot spots?
 - Trends?



VBLM Summary Report

Annual Model Run Summary Totals 2019

RESIDENTIAL	Gross Acres	Will Not Convert Acres	Infrastructure Acres	Developable Net Acres	Housing Units	Persons
Battle Ground						
City	1,683.5	627.4	291.3	764.8	4,588.7	12,205.9
UGA	673.9	270.8	110.3	292.8	1,756.6	4,672.6
Total	2,357.4	898.3	401.6	1,057.6	6,345.3	<u>16,878.6</u>

Yield by Zoning

2019 GMA Results Main Story Map - DRAFT -

No issues detected x

Edit x

A Story Map



Residential Commercial Maps Summary Report

VBLM 2019 Results

VBLM 2019 by Zoning

Showing 1

Vancouver UGA
Zoned: **Single Family Residential (R1-7.5)**
Jurisdiction: **Clark County**

Undeveloped Houses: **832**
1 Year Change: **-132**
Assessor Houses: **468**
1 Year Change: **56**

Residential Net Acres: **104.00**
1 Year Change: **-16.56**
Residential Gross Acres: **218.54**
1 Year Change: **-29.51**

Legend

Where is the Capacity?

GMA_Housing

- > 1,248
- 900
- 600
- 300
- < 0

GMA by Zoning for 2019

- Single-Family residential (R1-20, R-20)
- Single-Family residential (R1-15, R-15)
- Single-Family residential - 12 (R-12)
- Single-Family residential (R1-10, R-10, R10)
- Single-Family residential (R1-7.5, R-7.5, LDR-7.5)
- Single-Family residential (R1-6, R-6, LDR-6)
- Single-Family residential (R1-5)

Yield by Zoning

2019 GMA Results Main Story Map - DRAFT -

No issues detected

Edit

A Story Map



Residential Commercial Maps Summary Report

VBLM 2019 Results

VBLM 2019 by Zoning

Showing 1

Vancouver UGA
Zoned: **City Center (CX)**
Jurisdiction: **Vancouver**

Undeveloped Houses: **0**
1 Year Change: **0**
Assessor Houses: **2001**
1 Year Change: **14**

Residential Net Acres: **0.00**
1 Year Change: **0.00**
Residential Gross Acres: **0.00**
1 Year Change: **0.00**

Legend

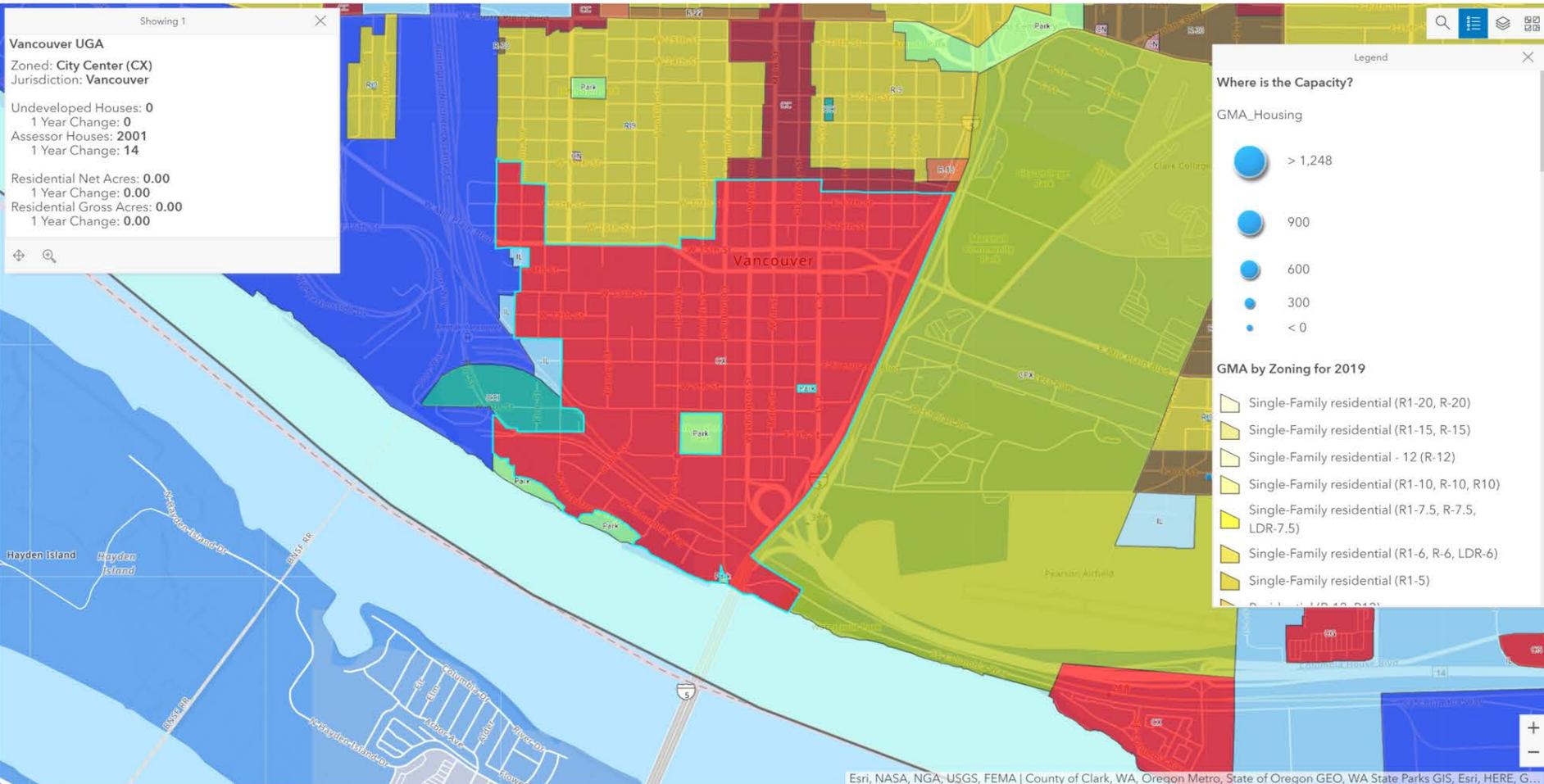
Where is the Capacity?

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GMA by Zoning for 2019

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- Single-Family residential (R1-10, R-10, R10)
- Single-Family residential (R1-7.5, R-7.5, LDR-7.5)
- Single-Family residential (R1-6, R-6, LDR-6)
- Single-Family residential (R1-5)



3D Visualizations



How about jobs?

- Working on it...
- Jobs per acre are much more variable than houses and people
- Jobs data is restricted and hard to process.



What about density?

- Working on it...
- Gross Density for a City
 - Easy
- Net Density
 - Parks
 - Interstates
 - Vancouver Lake
 - Right of Way
 - Schools
 - Public Facilities
- Net Density by Development
- Net Density by Year?



GIS VBLM Online Resources

[Maps Online](#): GMA Maps

[GIS GMA Hub](#) New resource for sharing GIS interactive maps and apps for GMA: See the 2019 VBLM Update for the Cities Story Map.

[Housing Study Dashboard](#): Dashboard of maps and graphs looking at VBLM forecast vs. Assessors actuals.

[2019 VBLM Results Dashboard](#): Dashboard of maps and graphs showing 2019 VBLM results.

[Subdivision Story Map](#): 2018 Review of housing unit yield at the plat level. Looks at infrastructure and VBLM forecast vs. Actuals.



Questions?

We want your feedback.

- Which web resources do you find useful?
- What information about the VBLM would you like to see?