

Snohomish County Buildable Lands Support

PAC Subcommittee Meeting 3

January 7, 2020

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Agenda

- Stakeholder workshop summary
- Discuss potential updates to the buildable lands methodology
- Next steps
 - Subcommittee Meeting 4
 - SCT Briefing

Stakeholder workshop summary

- Held on November 25, 2019
- Attendees:
 - 23 stakeholder representatives
 - 11 County staff members
- Presentation and small-group discussion

Stakeholder workshop key concerns

- Market factor should account for different geographies, housing types, and proximity to jobs.
 - Consider lower market factors for some high demand areas and/or housing types.
- Infrastructure gaps are difficult to readily identify at this stage; however, existing gaps are usually resolved over 20-year planning period.

Stakeholder workshop key concerns *[continued]*

- Lack of coordination with other local GMA planning requirements and potentially conflicting timelines with the BLR.
- GMA and policy increasingly places demand in higher density areas and development types but much of Snohomish County's market is for lower density, detached housing units.

Buildable Lands Methodology Review

Land Classification Analysis

Approach

- Review existing methodology for defining land classifications.
- Analyze alternative land classifications to better assign developable lots
- Goal is to create methods/processes to better identify parcels that might develop
- Two Approaches (more than one way to do this)
 - Conditional Logit Model (econometric)
 - Threshold Tests (brute force)
 - Approaches are complementary

Land Classification: Key Findings

- Existing land classification scheme reasonably reflects actual development
 - Largest shares of development coming from lands classified as “developable”
 - Potential improvement in limiting development on “constant” and “partially developed”

Land Classification: Key Findings

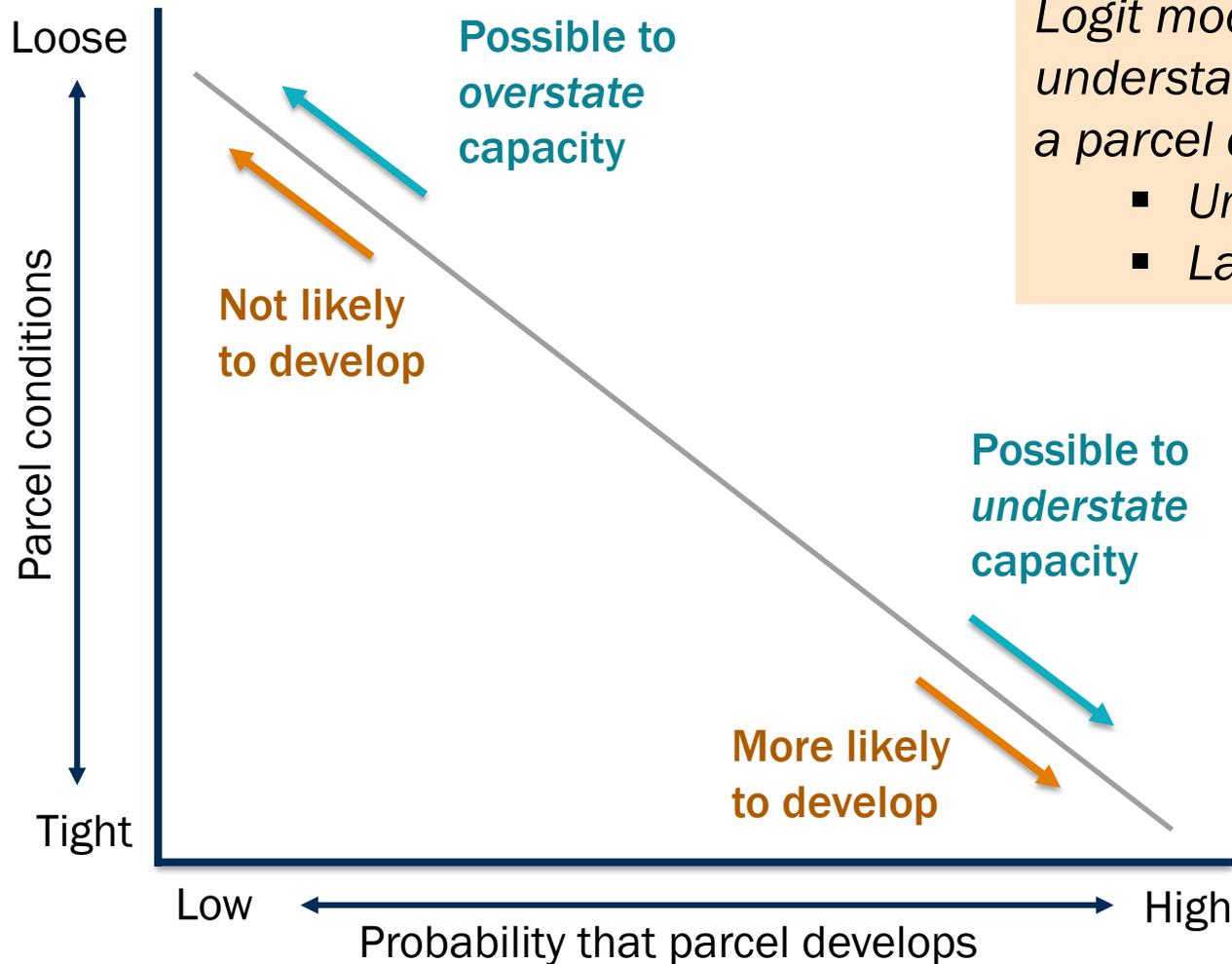
- Results show potential to better assign land classification types
 - Able to identify key parameters that predict development
 - Use model parameters to understand trade-offs in threshold setting and land classification (developable or not-developable)
 - Able to further refine tests for partially developed

Logit Model Approach

- A type of regression model
- Explains the relationship of individual characteristics to probability of development
- Model nicely fits the buildable lands methods and conditions
 - A parcel has many characteristics
 - Methods parameterize parcel characteristics and sets threshold determinations
 - Parameters and thresholds determine how land is classified (e.g. vacant, partially-used, redevelopable, constant)

Land Classification: Logit Model

Land Classification Tradeoffs



Logit model allows us to understand how the likelihood a parcel develops given:

- *Unique characteristics*
- *Land use type*

Findings (Single Family)

- Logistic regression variables:
 - Gross buildable acres
 - Land value
 - Improvement value
 - Improvement to land value ratio
 - Subdividable lot identification
 - Lots identified as constant
- All variables were statistically significant
- Gross buildable acres variable was strongest predictor, and more likely to develop as acres increased
- As improvement value and ILR increased, lots were less likely to develop

Land Classification: Logit Model

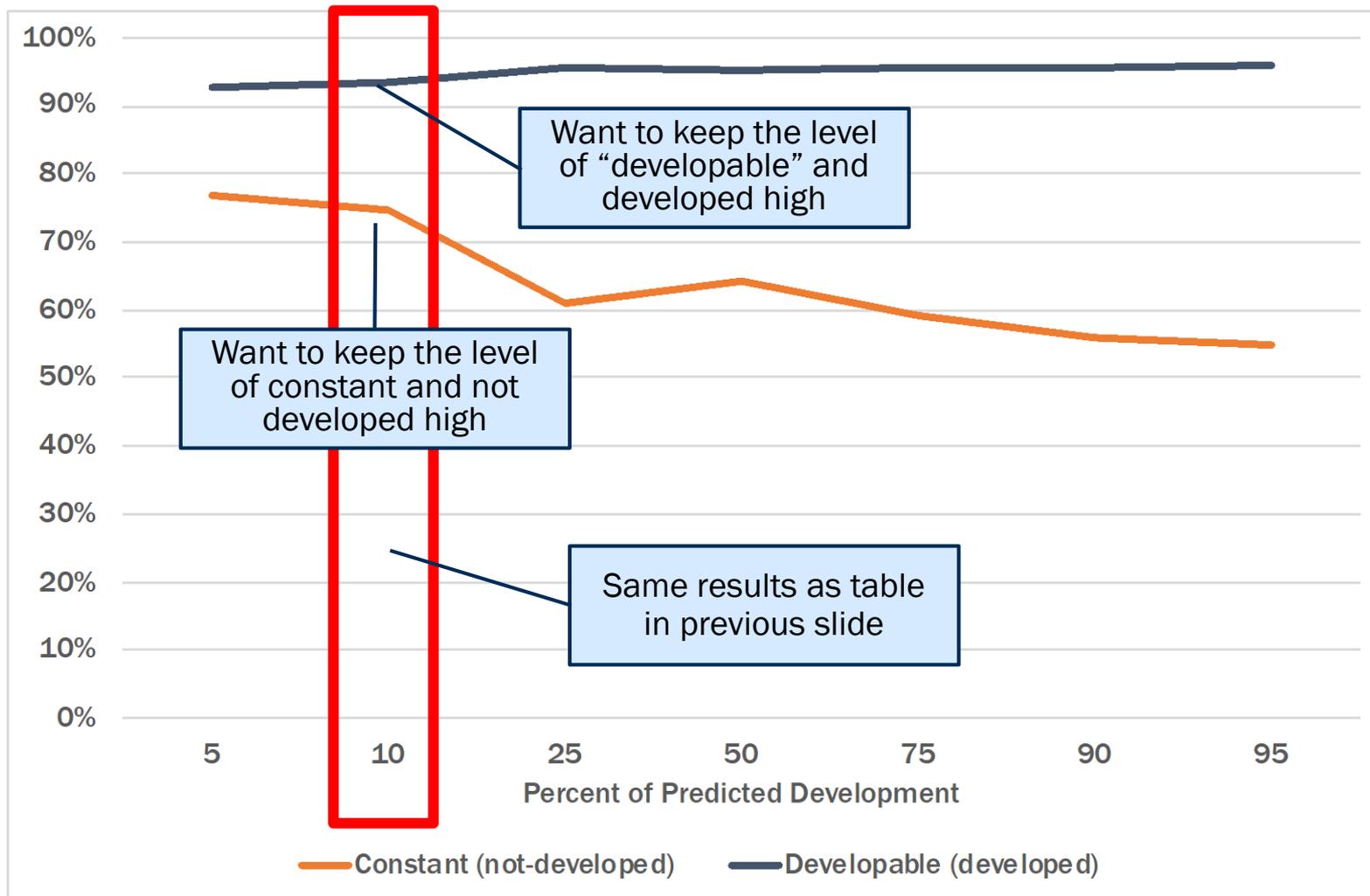
Findings (Single Family)

- Trade off: maximize constant percentage from “non-developed” while minimize constant percentage from “developed”
- “Sweet-spot” at conditions at 10th percentile predictive of development

Percent of Predicted Development	Impr. Value	Impr. Value/Land Value	Vacant Threshold	% of non-developed parcels labeled:				% of developed parcels labeled:			
				Constant	Partially Used	Redevelopable	Vacant	Constant	Partially Used	Redevelopable	Vacant
95	129,600	1.25	9,900	55%	16%	22%	7%	4%	66%	3%	27%
90	128,000	1.21	9,400	56%	16%	21%	7%	4%	66%	3%	27%
75	123,500	1.10	8,300	59%	16%	18%	7%	4%	66%	3%	27%
50	117,900	0.93	6,700	64%	16%	13%	7%	5%	66%	3%	27%
25	123,250	1.01	7,900	61%	16%	16%	7%	4%	66%	3%	27%
10	94,900	0.56	2,100	75%	16%	2%	6%	7%	66%	1%	27%
5	68,800	0.29	600	77%	16%	0%	6%	7%	66%	0%	27%

Land Classification: Logit Model

Findings (Single Family) - illustration of the trade-off

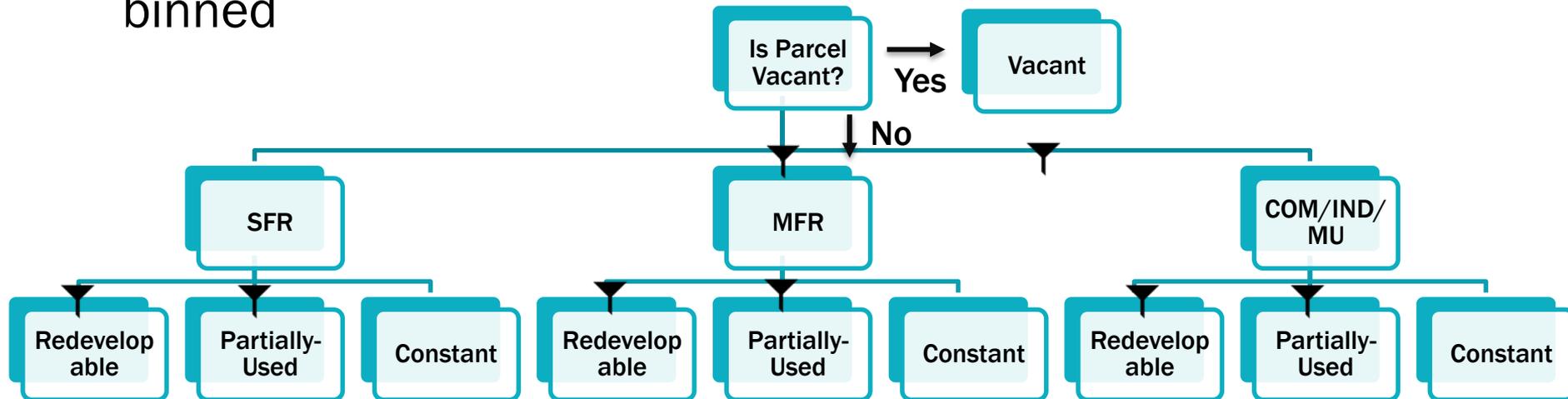


Logit Model: Key Findings

- Similar findings for multifamily, commercial, and industrial
- Ability to include additional variables – most likely candidate is gross buildable acres (results not shown for this model)
- All results would need to be inflation adjusted for nominal 2012 values (logit and threshold approaches)

Threshold Test Approach

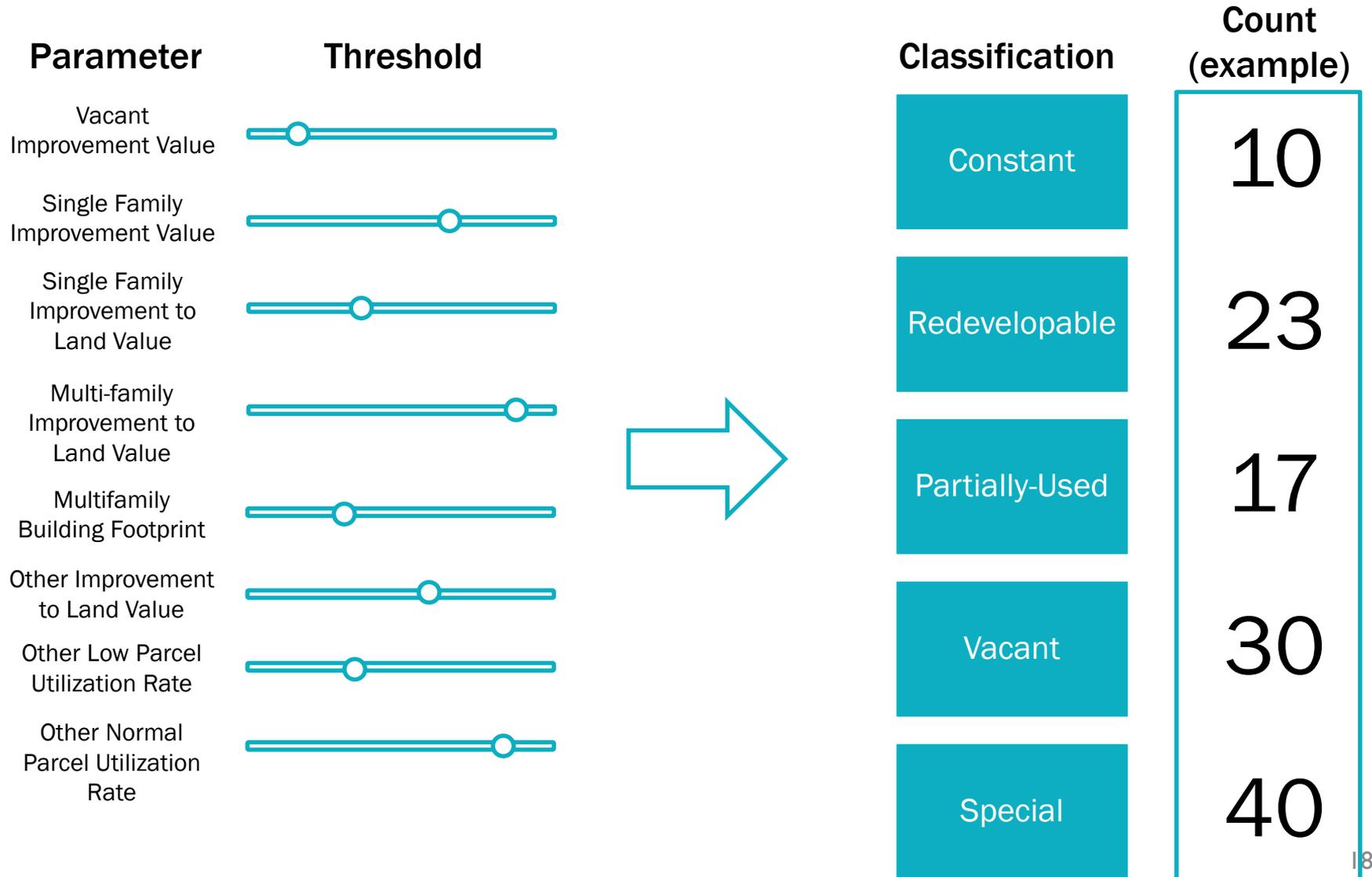
- Use the existing methodology for land classification and see if there are better thresholds to change how parcels are binned



⚡ Each filter is a threshold which can change the way a parcel is classified.

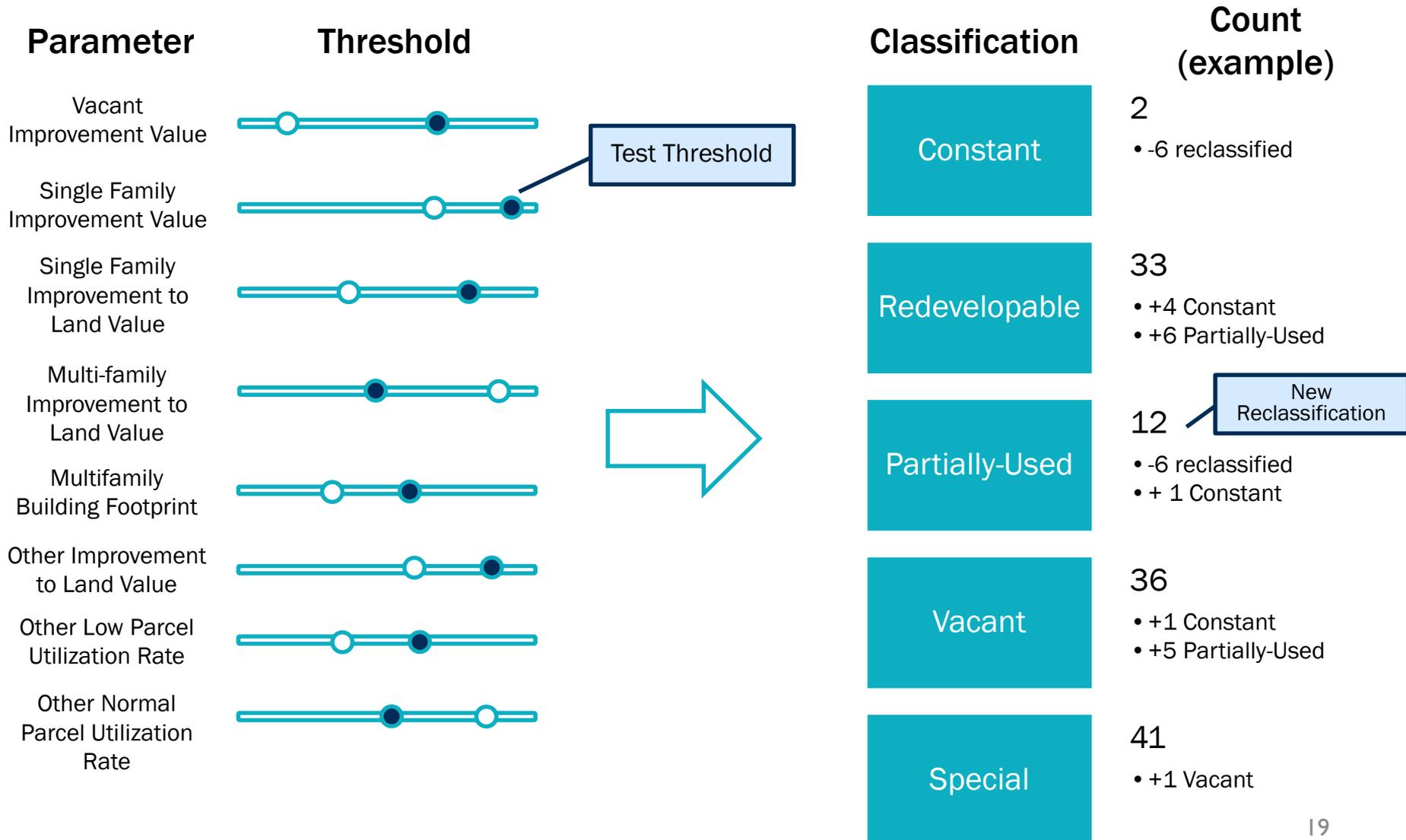
Land Classification: Threshold Tests

- Eight Different Thresholds in Baseline Test (existing methods)



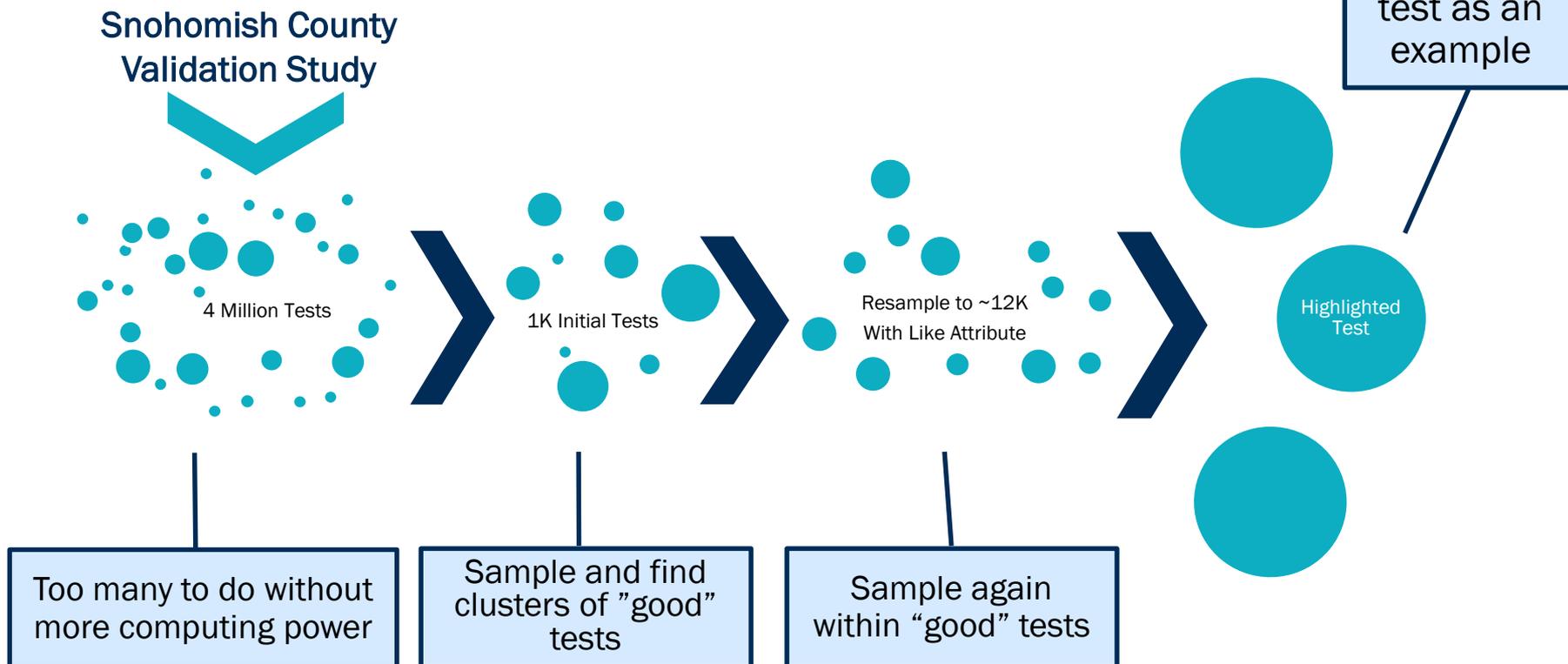
Land Classification: Threshold Tests

- A Test will test all 8 thresholds, compare the results to Baseline for performance
- Tests are scored on their ability to better “sort” parcels into land classification bins



Land Classification: Threshold Tests

- We generate 4 million “tests” with different combinations of thresholds across the parameters
- Compare results to Baseline counts (current BLI scheme), resample and test again



Land Classification: Threshold Tests

Findings:

- We find tests that have parameters that better sort parcels into land classifications
 - They reduce the number of constant parcels experiencing development
- Results for parameters and thresholds are shown in the table below.

	Vacant	Single Family		Multi Family		Commercial/Industrial/Mixed Use		
Test ID	Improvement Value	Improvement Value	Improvement to Land Value	Improvement to Land Value	Building Footprint	Improvement to Land Value	Parcel Utilization (low use)	Parcel Utilization (moderate use)
BASELINE	\$2,000.00	\$100,000.00	0.75	1	0.2	1	0.1	0.25
1480427	\$2,000.00	\$250,000.00	1.5	0.5	0.4	1	0.25	0.4
1481507	\$2,000.00	\$250,000.00	1.5	0.75	0.4	1	0.25	0.4
1482587	\$2,000.00	\$250,000.00	1.5	1	0.4	1	0.25	0.4
1482947	\$2,000.00	\$250,000.00	1.5	1.25	0	1	0.25	0.4
1483127	\$2,000.00	\$250,000.00	1.5	1.25	0.1	1	0.25	0.4
1483307	\$2,000.00	\$250,000.00	1.5	1.25	0.2	1	0.25	0.4
		\$250,000.00	1.5	1.25	0.3	1	0.25	0.4
		\$250,000.00	1.5	1.25	0.4	0.5	0.25	0.4
		\$250,000.00	1.5	1.25	0.4	0.75	0.25	0.4
1483637	\$2,000.00	\$250,000.00	1.5	1.25	0.4	1	0	0.4
1483643	\$2,000.00	\$250,000.00	1.5	1.25	0.4	1	0.05	0.4
1483649	\$2,000.00	\$250,000.00	1.5	1.25	0.4	1	0.1	0.4
1483655	\$2,000.00	\$250,000.00	1.5	1.25	0.4	1	0.15	0.4
1483661	\$2,000.00	\$250,000.00	1.5	1.25	0.4	1	0.2	0.4

Results for next slides compare this test to baseline

Land Classification: Threshold Tests

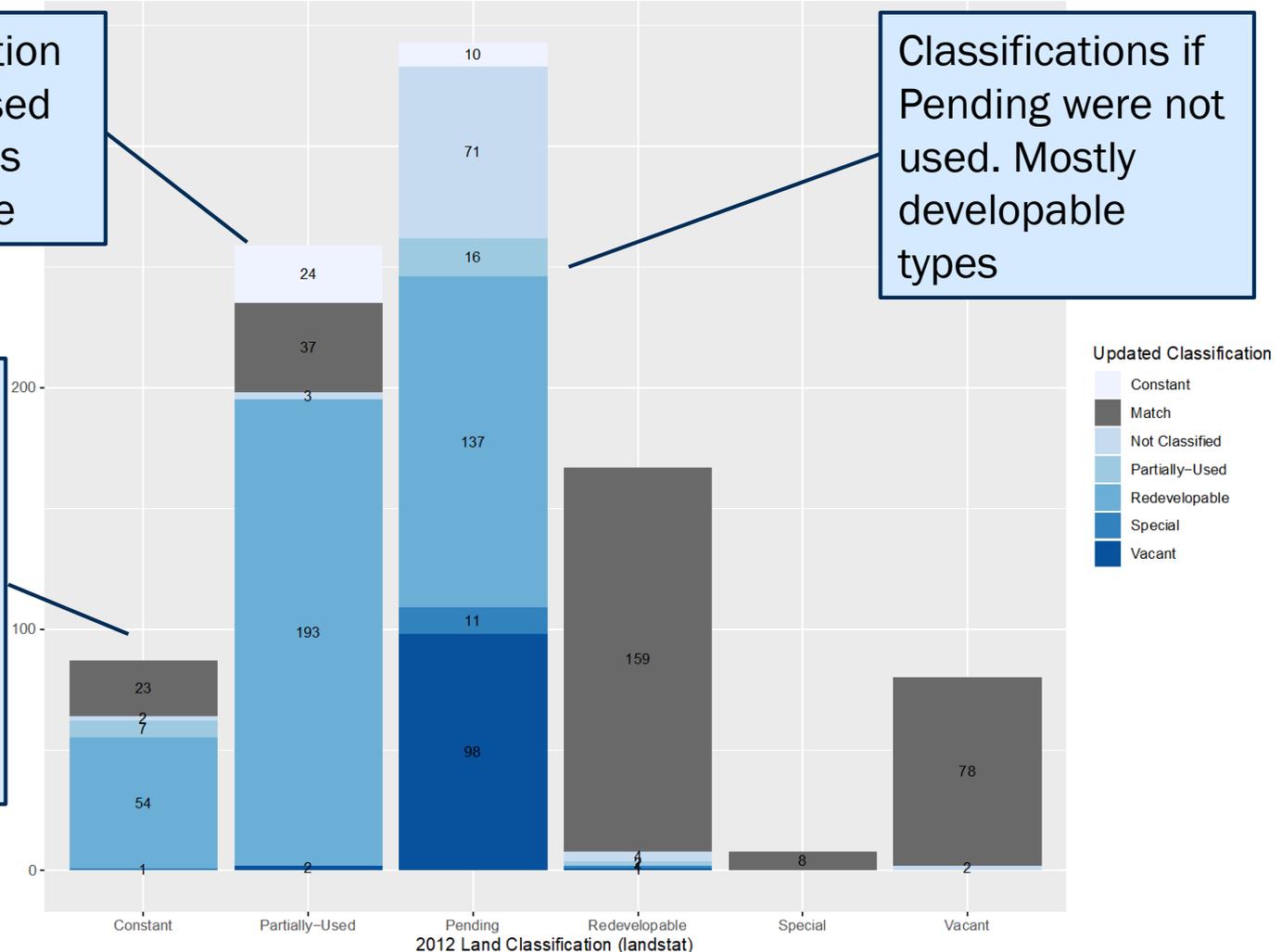
- How do these parameters re-sort parcels from the county's ad-hoc true-up process?
- Performance compared to current land classification (single family results)

Test-1480427: by 2012 Land Classification (landstat)

Large proportion of partially used reclassified as redevelopable

Classifications if Pending were not used. Mostly developable types

Of the parcels that developed, 87 were constant. They are matched or reclassified by the distribution in the chart.



Land Classification: Threshold Tests

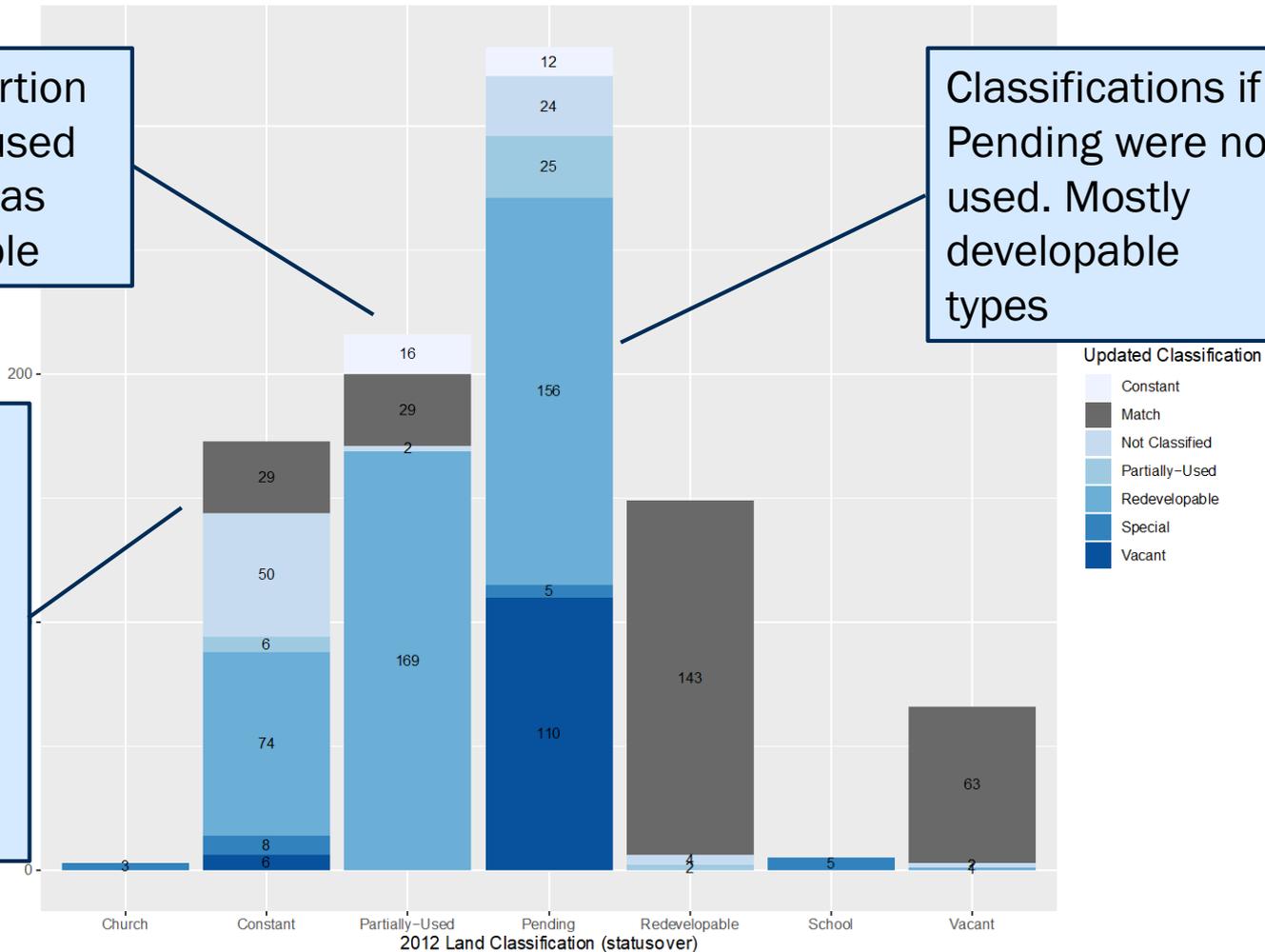
- How do these parameters re-sort parcels from the county's final land classifications?
- Performance Compared to current land classification (single family results)

Test-1480427: by 2012 Land Classification (statusover)

Large proportion of partially used reclassified as redevelopable

Classifications if Pending were not used. Mostly developable types

Of the parcels that developed, 87 were constant. They are matched or reclassified by the distribution in the chart.



Land Classifications - Takeaways

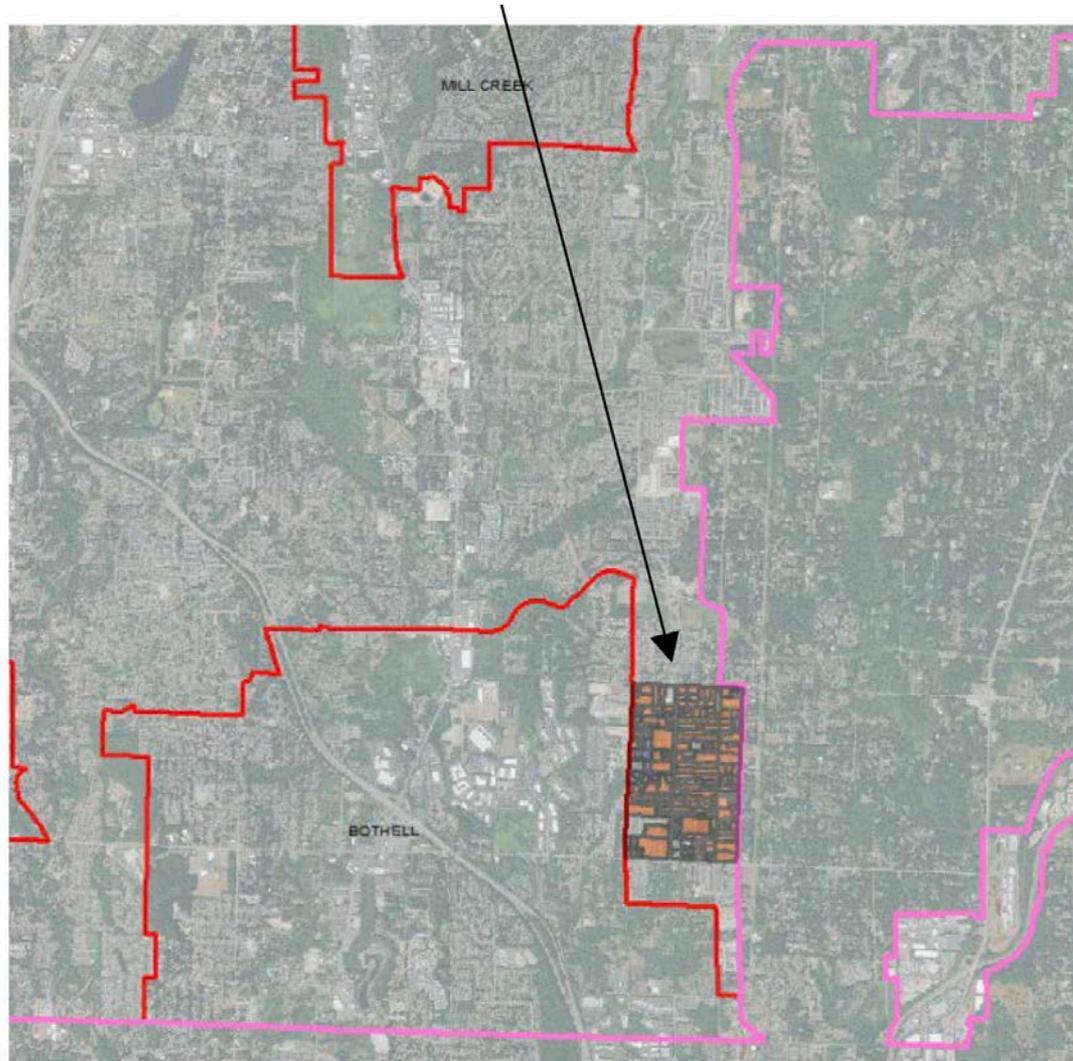
- Alternative analytic approaches show incremental performance gains relative to the 2012 BLI baseline
- Ability to make performance gains in all land classifications types
- Work with the county on using logit model results to complement threshold test schemes

Market Factors

Approach

- Identify study areas in different geographies in the County that largely built out over the past nearly 20 years (during the 2001-2019 period)
- Analyze remaining unused capacity to test market factor assumptions based on land status classifications in the 2002 BLR.
- Determine percent of additional capacity identified in the 2002 BLR that did not develop.
- Compare to existing market factor methodology.

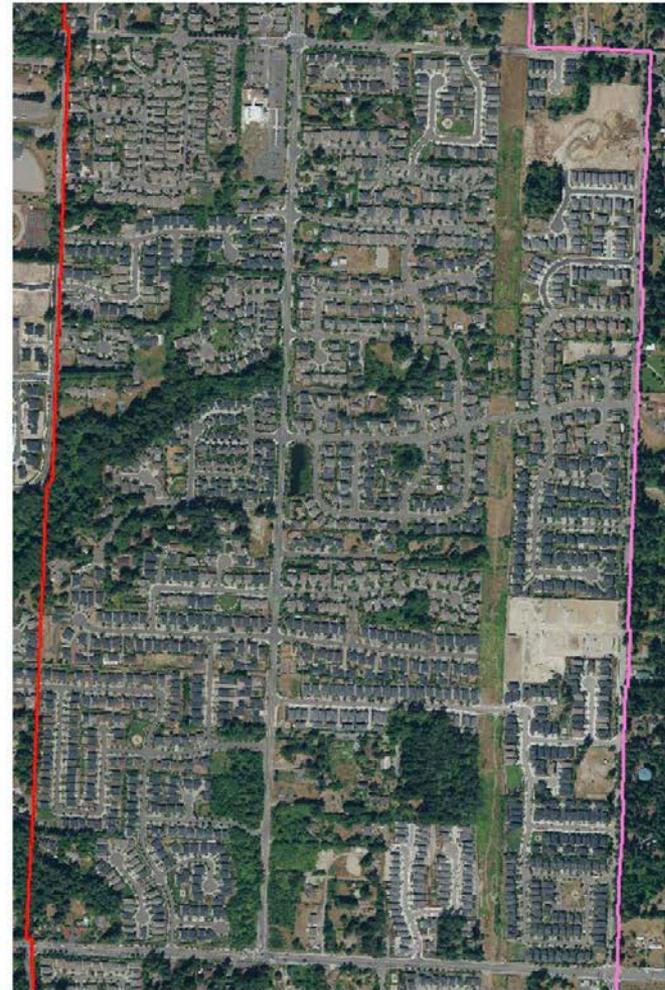
Market Study Area #1 (SWUGA)



Market Study Area #1 (SWUGA)



2002 Aerial Photo

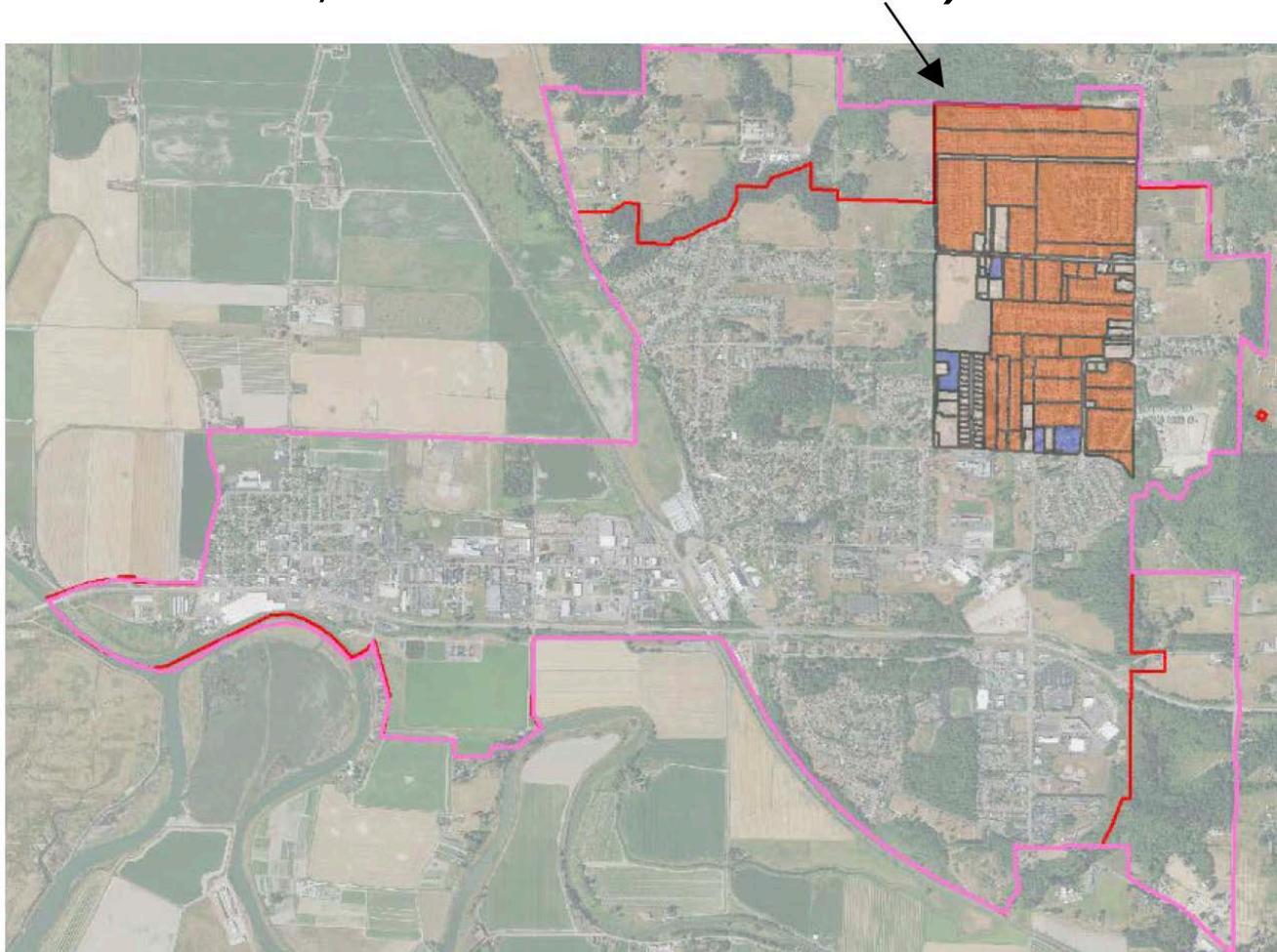


2018 Aerial Photo

Findings: Market Study Area #1 (SWUGA)

- Vacant parcels: 6% of estimated additional housing unit capacity did not develop.
- Under-utilized parcels (partially-used or redevelopable): 10% of estimated additional housing unit capacity did not develop.
- Both results were lower than the market factor assumptions (15% and 30%, respectively).

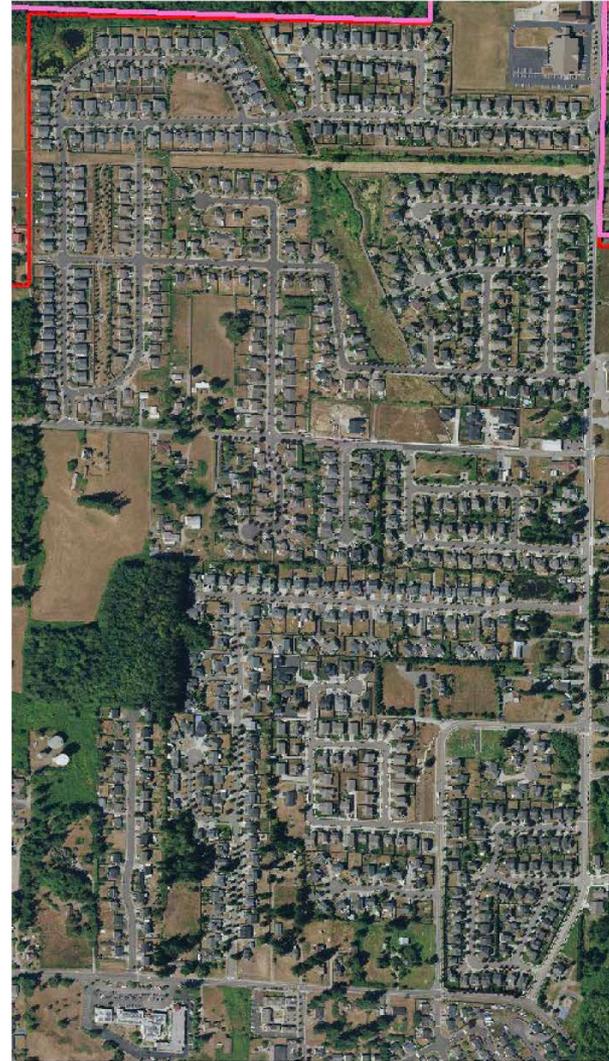
Market Study Area #2 (Stanwood UGA, Cedarhome Area)



Market Factor



2003 Aerial Photo



2018 Aerial Photo

Findings: Market Study Area #2

(Stanwood UGA, Cedarhome Area)

- Vacant parcels: 12% of estimated additional housing unit capacity did not develop.
- Under-utilized parcels (partially-used or redevelopable): 16% of estimated additional housing unit capacity did not develop.
- Both results were lower than the market factor assumptions (15% and 30%, respectively).
- Results were higher than the study area in the SWUGA.

Infrastructure Gaps

Approach

- Completed case studies for areas with potential infrastructure gaps.
- Drafted potential updates to the current methodology to address new guidance for addressing infrastructure gaps.

Findings

- Most infrastructure gaps are likely to resolve in the planning period.
- Assuming reduced capacity or reasonable measures due to infrastructure gaps requires adequate rationale.
- Jurisdictions may identify infrastructure gaps at different parts of the BLR process.

Infrastructure Gaps

1. Identify potential infrastructure gap

- Draft map review with local jurisdictions
- Results of BLR show unmet capacity or growth target

2. Assess factors

- Length of lack of urban development
- Information in recent comprehensive plan or facilities plans
- Likelihood of development within the planning period

3. Provide rationale

- Infrastructure gap will (*or will not*) be addressed in planning period
- Infrastructure gap is not the factor affecting capacity or growth patterns (e.g., market or other factor)
- Sufficient evidence for reduced capacity or application of reasonable measure to address the infrastructure gap

Reasonable Measures

Approach

- Review Guidance recommendations on updates to reasonable measures program.
- Modify existing matrix to identify scale of impact of each measure and categorize measures by issue.
- Suggest additional measures.

Findings

- Scale of impact helps determine whether more than one reasonable measure is necessary.
- Jurisdictions shall implement reasonable measures that are potentially sufficient to remedy the identified issue.
- Implementation of reasonable measures may consider regional coordination and partnership, to better align with Regional Growth Strategy.

Evaluative Criteria

Evaluative criteria to help determine recommended updates to the methodology, the existing method and alternatives include:

- Ease of implementation
- Availability of data
- Alignment with DOC Guidance
- Empirical evidence

Next Steps

- Draft recommended methodology updates
- Subcommittee meeting 4
 - Currently scheduled for January 28, 2020
- SCT Briefing (February)