SAN JUAN COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

135 Rhone Street, PO Box 947, Friday Harbor, WA 98250
(360) 378-2354 | (360) 378-2116
dcd@sanjuanco.com | www.sanjuanco.com

MEMO

MEMO DATE:	November 4, 2019
TO:	San Juan County Council San Juan County Planning Commission
CC:	Mike Thomas, County Manager Daniel Root, GIS Program Coordinator
FROM:	Adam Zack, Planner III Linda Kuller, AICP, Planning Manager
SUBJECT:	2036 Comprehensive Plan Update Briefing: Land Capacity Analysis (LCA) Report
BRIEFINGS:	County Council: November 18, 2019 Planning Commission: November 15, 2019
ATTACHMENTS:	A. Second draft Land Capacity Analysis Report dated November 4, 2019 B. Public Comments on First Draft LCA Report C. Growth Management Hearings Board Case No. 05-2-0022c Compliance Order D. Land Capacity Analysis Related RCW and WAC Sections

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Briefing Purpose: The Planning Commission and County Council will be briefed on the second draft of the Land Capacity Analysis Report (Attachment A) which also includes the draft LCA Methodology. This memo highlights revisions made to the first draft of the Land Capacity Analysis Report dated September 6, 2019 and addresses public comments. For a quick glance at the land capacity results, please see Tables 1 and 2 in the Executive summary of the report on page 2.

Public Comment Period: Comments on the November 4, 2019, Draft Land Capacity Analysis Report must be submitted by **December 2, 2019**. Changes from the first draft are shown in strikeout and underline.

How to Comment: Public comments are requested on the November 4, 2019, second draft LCA Report and LCA Methodology. The public is invited to provide email comments referencing the page and line numbers from the report to compplancomments@sanjuanco.com. Please use the subject line: RE: Land Capacity Analysis Report and provide your name and address for the record.

Background: The WA State Growth Management Act (GMA) requires counties with urban growth areas (UGA) to conduct a land capacity analysis (LCA) during their comprehensive plan periodic review. To comply with the Growth Management Act (GMA), the County needs to determine if there is sufficient land capacity for residential and non-residential development in the planning horizon. The LCA is a study of existing development, current regulations and Comprehensive Plan land use designations.

The GMA only requires the County to conduct a LCA for UGAs. San Juan County elected to conduct the LCA countywide. The LCA is a general planning tool that helps inform the sizing of UGAs and is not used to

determine specific permitting capacity. Residential capacity is expressed as potential dwelling units. Commercial/industrial capacity is measured in possible building square footage.

The Land Capacity Analysis will help answer the question:

> Do the existing Comprehensive Plan policies, land use designations, and development regulations provide enough land to accommodate the projected growth through the year 2036?

The land capacity analysis is intended to provide insight into the amount of additional development possible given existing development, policies, land use densities and development regulations. It should not be used to indicate how much development should take place. That policy question can be addressed during the update of the Comprehensive Plan goals and policies.

Draft LCA Methodology and Report

The County's draft LCA Methodology was developed using the previous methodology and guidance in the November 2012 *WA Department of Commerce Urban Growth Area Guidebook* publication 003 (UGA Guidebook). It will replace the LCA done for the existing Comprehensive Plan. In the decade since the previous LCA was conducted, GIS tools have improved, allowing for a very transparent process. Vetting of the draft methodology, its assumptions and reduction factors began in 2017. Since then, it has been refined to address public feedback and to correct data issues identified by staff and the public in quality control reviews. Still, this is a complex process that takes time for people to understand. With this in mind, briefings have been made at critical steps of the LCA to answer questions and obtain feedback to improve the methodology and analysis. For people that have not tracked this process, past staff reports and presentations are available on the project website at: https://www.sanjuanco.com/1306/Comprehensive-Plan-Elements. Look under the LCA tab.

In June 2019, the first LCA task, identification of the Gross Developable Lands Inventory (GDLI), was made available for public review and comment. Public comments and corrections were incorporated into the second GDLI draft. The first draft of the LCA Report, including the results of the residential and commercial/industrial capacity analysis, was available for comment September 6 through October 25, 2019. Attachment A is the second draft of the Land Capacity Analysis Report. In addition to incorporating public comments, Table 7 was added on page 22 to summarize recent development trends, and Report Section C was updated to include a summary of capacity results.

Summary of Changes to the First Draft of the LCA Report: The following changes were made in the second draft:

> The density and capacity calculations for the Eastsound Rural land use designation (ER/5 units per acre) were corrected by fixing a typo in the script that runs the GIS that should have been 0.2 not 2. This mistake was identified by staff and commented on by the Eastsound Planning Review Committee (EPRC) and John Campbell. The corrected residential capacity values for the ER designation were inserted into the gross and final capacity tables. The final capacity maps were updated to reflect the corrected calculations.
>
> These changes in the second draft LCA Report are shown on the following tables and maps:
>
> - Table 1. Final Housing Capacity Summary, on page 2;
> - Table 8. Gross Housing Capacity by Land Use Designation, on page 23;
> - Table 9. Gross Housing Capacity by Land Use Designation and Category, on pages 24;

- Map 11. Gross Capacity Orcas Island on page 33;
- Map 11.A. Gross Capacity Eastsound on page 34;
- Map 15. Gross Maximum FAR Capacity Orcas Island on page 43; and
- Map 15.A, Gross Maximum FAR Capacity Eastsound on page 44.

- Another typo related to the capacity value was identified by staff and corrected for the Eastsound Residential 4P designation. The correction made all capacity values were consistent at a gross capacity of 158.43 dwelling units. These changes are shown on the following tables:

  - Table 1. Final Housing Capacity Summary, on page 2;
  - Table 20. Eastsound Subarea Achieved FAR Final Capacity by Land Use Designation, on page 50; and
  - Table 26. Eastsound UGA Maximum FAR Final Capacity by Land Use Designation, on page 55.

- Completed Table 7. Recent Achieved Intensity and Density by Land Use Designation. This is the summary of permit activity from 2005 to 2019.

- Tables 18 through 33 showing final capacity were updated to correct a few typos.

- Added a new Section 2.0, the Final Capacity Summary. This section summarizes, explains and provides context for the final capacity results shown on the final capacity tables and maps.

Addressing Public Comments: Nine public comments were received on the first draft of the LCA Report. Attachment B summarizes the public comments and staff responses. Some of the comments warranted more detailed responses than those included on Attachment B and are addressed in this memo. The complexity of the LCA makes it difficult for people to understand the process, methodology and use particularly if they have not followed the process and release of documents from earlier LCA steps. We have tried to overcome this by vetting decisions early in the process by providing as much information as possible and provide a transparent process.

Further background information on the following issues raised in public comments follows:

A. An explanation of the rational regarding fractional capacity numbers;
B. Critical area assumptions and calculating residential capacity in the Net Developable Lands Inventory (NDLI);
C. Public use, market and seasonal home factor deductions;
D. Commercial and institutional uses allowed in the Eastsound Village Residential land use designation;
E. How to understand commercial and industrial capacity results;
F. Overlay districts; and
G. Replicating the LCA requires use of the correct data.

A. Fractional Gross Residential Capacity: Questions were raised about why residential capacities are not rounded to whole numbers by the EPRC and the Friends of the San Juans (Friends) (Comment #9, Attachment B) and County Council. This calculation is made when computing gross residential capacity and is explained in Task D of the draft LCA Methodology.

Net developable acreage in the equation below is the net parcel size after areas with limited development potential such as critical areas and buffers are removed. The critical area assumptions used to arrive at the net parcel size are also included in Task D. More information about the deduction of critical areas and buffers follows in Section B of this memo.

Gross residential capacity was calculated for parcels using the following formula:

Gross Residential Capacity =
(Net Developable Acreage x Comp. Plan assigned max. density) – (existing and pending dwelling units)

When the above equation is applied to most County parcels, the result is not a whole number. For example, an undeveloped twelve-acre parcel with a five acre per dwelling unit density would have residential capacity equal to 2.4 dwelling units:

(12 x 0.2) – 0 (undeveloped) =
2.4 dwelling unit capacity.

Several commenters contend that the decision not to round residential capacity numbers to the nearest whole number in the draft LCA Methodology is incorrect. Because they are looking at residential capacity on a parcel-by-parcel basis, using fractional capacity does not make immediate sense. No one knows what 0.4 dwelling units means.

The LCA, however, is a broad generalization about what development could be possible in the future given existing development, Comprehensive Plan assigned densities and current regulations. The fractional capacities are added together in the draft LCA Methodology for each land use designation. This provides the total overall capacity within each land use designation because it shows how much capacity is available in each land use designation. By not rounding to the nearest whole number, the fractions add up to balance out the overall densities in the designation. This balance is a closer representation of the developable land and allowed density than rounding up. This method is similar to guidance provided in the Guidebook, page 78.

Rounding capacity values to the nearest whole number would muddle results by inflating capacity on some parcels and reducing it on others. The possible effect of rounding is not immediately clear because it would be repeated across all of the developable parcels in each land use designation. For instance, on a parcel with 2.4 capacity, rounding would provide a capacity of two dwellings, whereas a parcel with 2.5 capacity would round to a capacity of three dwelling units. These parcels would have a total capacity of five dwelling units where there was actually 4.9 capacity. This calculation would be repeated over several thousand developable parcels and the effects would be unclear. Not rounding capacity per parcel clearly provides the amount of developable acreage times allowed density, which is more representative of the actual development potential.

Staff Recommendation: Do not round per-parcel residential capacity results to the nearest whole number. Not rounding capacity per parcel is more representative of the actual development potential. Although rounding is possible to do, it would introduce another variable, assumption, and caveat to the analysis. Rounding capacity to the nearest whole number would require changes to most of the tables and capacity maps in the LCA Report.

B. Critical Area Assumptions and the NDLI: Joe Symons and Friends in (Comments 6 and 9 in Attachment B) expressed concern over the use of net developable acreage (acreage minus critical areas, etc.) to calculate residential capacity in rural areas. Their concern is that the draft LCA Methodology undercounts residential capacity because it does not include the number of dwellings that may be allowed by code in and around critical areas. They cited the critical areas reasonable use provision and possibility of a no net loss provisions that might allow development and proposed a simplified calculation of residential capacity:

Gross Developable Acres x Assigned Density
– Existing and Pending Dwellings

The assumptions for deduction areas limited by critical areas are established in Section B of the draft LCA Methodology (page 13):

> "There are two layers because different deductions from the **Gross Developable Land Inventory** will be taken to create each layer based on the following assumptions:
>
> > Critical area buffers will not affect future capacity on residential parcels and are not deducted because the San Juan County development regulations allow for reasonable use exceptions and flexible development of residential properties with critical areas on them.
> >
> > Critical area buffers are not be developable on commercial, industrial and mixed-use parcels because development regulations for these uses are more restrictive. These uses are also more intensive than residential uses."

Additional specifics about the removal of these areas begins on page 13 of the draft LCA Methodology. Residential capacity is based on the net developable acreage of parcels (Net Developable Lands Inventory (NDLI)). On residential parcels, wetlands, streams, slopes greater than fifty percent, and flood hazard areas are removed when preparing the NDLI. The buffers are not removed from residential parcels. This is intended to capture that development is unlikely to occur in these critical areas but the code does allow residential development in in some buffers (Tree Protection Zone One) and with buffer averaging.

The draft LCA Methodology has been vetted four times since 2017. The NDLI methodology was determined to be reasonable for our community. On page 77, the Guidebook states:

> "Subtract all parcels that your community defines as not developable because of physical limitation. For instance, once you have identified critical areas, such as wetlands, and have established plan policies and regulations prohibiting development in these areas subtract these areas, from the initial land supply pool."

Subtracting areas with physical limitations is commonly used by local governments in their land capacity analyses. The draft LCA Methodology treads a middle road between:

- removing critical areas and their buffers that result in a significant reduction in parcel size, and
- not removing any critical areas assuming that development will take place wherever developers want (commenters' proposal).

The commenters' proposal would lead to larger residential capacity numbers and discount land not developable because of the physical limitations.

The purpose of the Land Capacity Analysis under the Growth Management Act (GMA) is to determine if the Comprehensive Plan and development regulations provide sufficient land suitable for development. This is stated clearly in RCW 36.70A.115 (1) Comprehensive Plans and development regulations must provide sufficient land capacity for development:

> "(1) Counties and cities that are required or choose to plan under RCW 36.70A.040 shall ensure that, taken collectively, adoption of and amendments to their comprehensive plans and/or development regulations provide sufficient capacity of land suitable for

> development within their jurisdictions to accommodate their allocated housing and employment growth, including the accommodation of, as appropriate, the medical, governmental, educational, institutional, commercial, and industrial facilities related to such growth, as adopted in the applicable countywide planning policies and consistent with the twenty-year population forecast from the office of financial management."

Staff Recommendation: No change to the LCA Methodology is recommended. It is logical to account for some critical areas and the limited development potential that they present as specified in the draft LCA Methodology.

C. Public Use, Market, and Seasonal Home Factors: In Comment 9 of Attachment B, Friends inquired how these factors were decided on, what they mean, and how these deductions are applied during the calculation of final capacity.

<u>How They Are Used</u>

These deductions are applied to the gross capacity numbers in Tables 18 through 33 of the LCA Report to account for the effect that these different factors have on development.

<u>How the Factors Were Determined</u>

These factors are addressed in the draft LCA Methodology on page 30. After consideration of the factors used in the current Comprehensive Plan LCA, public comments and information in the draft Housing Needs Assessment regarding housing occupancy, Council amended the seasonal home factor from twenty-five percent to thirty-five percent. The other factors are the same as those used in the existing Comprehensive Plan. Those market factors were upheld by the Growth Management Hearings Board (Attachment C).

The GMA allows discretion in how growth is planned. Communities may consider local circumstances used in determining UGA boundaries according to the following excerpt from RCW 36.70A.110 (2):

> "An urban growth area determination may include a reasonable land market supply factor and shall permit a range of urban densities and uses. In determining this market factor, cities and counties may consider local circumstances. Cities and counties have discretion in their comprehensive plans to make many choices about accommodating growth."

<u>Factor Explanations</u>

The following items explain the County's public use, market and seasonal home factors from the draft LCA Methodology.

<u>Public Use Factor – Five Percent</u>

Residential and commercial capacity is reduced by five percent. This accounts for the lands used for public purposes including rights-of-way, utility uses, and other lands set aside for public uses. The assumption is that development capacity is reduced by the required public uses associated with development.

<u>Market Factor – Twenty-five Percent</u>

This market factor deduction is applied to residential and commercial development. It accounts for land that might be held out of the market and not developed during the planning period.

It is also a within the range of market factor used by other counties in Washington State:

- Island County uses thirty-three percent, but has no public use factor deducted;
- Whatcom County used a range for various UGAs from fifteen to thirty-nine percent.

Seasonal Home Factor

According to the draft Housing Needs Assessment (HNA), a significant number of dwelling units in the County are vacant for most of the year and are used for seasonal, recreational, or occasional (SRO) use. Tables 5-7 of the HNA provides 2015 American Community Survey (ACS) data on housing occupancy in the County. It shows that thirty-five percent of housing in the County was vacant for SRO use. The percentage was the same in the 2010 Decennial Census. A seasonal home factor of thirty-five percent was used in the LCA Methodology to account for the SRO uses. This factor represents a reduction in capacity reflecting a housing stock comprised of thirty-five percent SRO uses.

D. Nonresidential Uses in Eastsound Village Residential: In Comment 4 of Attachment B, Fred Klein expressed concern that the code allows nonresidential uses in the Eastsound Village Residential (VR) land use designation. He maintains that residential capacity in the VR designation is significantly reduced because nonresidential uses are also allowed. He made a similar point in an appeal to the Western Washington Growth Management Hearings Board (WWGMHB) in case number 02-2-0008.

During that appeal, San Juan County successfully argued that the market factor deduction used in determining final capacity accounts for the reduced residential capacity resulting from allowing nonresidential uses in the VR designation. On page 29 of a January 30, 2009 compliance order (Attachment C), the WWGMHB concluded:

> "The County's methodology actually reduced the market factor for its residentially zoned land to provide for institutional uses on residentially zoned land. This market factor will likely be reduced further due to the likelihood that the County allows for commercial uses in residential zones and past history of those uses occupying some residential land. However, even assuming all new commercial and institutional uses will occupy VR-zoned, it appears that the UGA can accommodate its projected residential, commercial, and institutional growth with a smaller market factor than the County has employed.
>
> Nevertheless, since the GMA does not require use of a market factor and due to local circumstances of village zoning that mixes residential, commercial, and institutional uses in its VR and VC zones, the Board does not find it clearly erroneous to allow the market factor to account for the uncertainty and lack of precision of determining where uses will eventually locate in the future. Therefore, the Board finds that in light of the entire record, the land capacity analysis for Eastsound UGA's commercial, institutional, and residential uses is not a clearly erroneous violation of RCW 36.70A.110(2) and RCW 36.70A.115."

The draft Land Capacity Analysis uses the existing Comprehensive Plan LCA assumption that the market-factor deduction accounts for the "uncertainty and lack of precision of determining where uses will eventually locate in the future." This includes nonresidential uses allowed in the VR designation.

E. Understanding Commercial and Industrial Capacity Results: In Comment 5 of Attachment B, John Campbell asked how the LCA Methodology will relate commercial capacity to population/employment growth.

An additional methodology is being developed to be used in comparing final commercial capacity results with forecasted population/employment growth. This methodology will be used to determine if there is sufficient

land capacity to accommodate the projected population/employment growth in the UGAs as required by RCW 36.70A.115.

Staff is consulting with the WA State Department of Commerce and WA State Employment Security Department to obtain guidance and data to inform the methodology. A review of neighboring jurisdiction's methodologies is underway to help us understand how other counties have addressed this issue. Information about this draft methodology will be presented to the Planning Commission and County Council in December or January. The public will be able to review and comment on the proposed methodology prior to staff conducting the analysis.

F. Overlay Districts: In Comment 9 of Attachment B, Friends asked to have the San Juan Valley Overlay accounted for in the draft LCA Methodology. There are two overlay districts shown on the Comprehensive Plan Official Maps. They are the:

- San Juan Valley Overlay, and
- Eastsound Airport Overlay.

These overlay districts have specific development regulations that shape how and what kind of development can occur. Development is not completely prohibited in either overlay. Of the two overlays, the Eastsound Airport Overlay has the most complicated regulations, which include prohibitions on specific types of uses and limits to the intensity of development.

<u>San Juan Valley Overlay</u>

This overlay applies to an area between False Bay and the Town of Friday Harbor on San Juan Island. Its regulations are codified in San Juan County Code (SJCC) 18.35.145 and SJCC 18.70.060 (B)(10). They provide a conservation incentive bonus (SJCC 18.35.145(B)(1)). This bonus allows for the creation of residential lots smaller than the maximum density if sixty percent of the original lot is dedicated to open space.

<u>Eastsound Airport Overlay</u>

This overlay is applied to the area near the Eastsound Airport on Orcas Island. It is comprised of six zones. It is codified in SJCC 18.35.150, SJCC 18.40.030, SJCC 18.40.031, and SJCC 18.40.032. It is part of a policy framework that is intended to prevent the siting of incompatible uses adjacent to the Eastsound Airport. The regulations for the various zones of the overlay limit the types of uses allowed and the intensity at which development can occur. They do not categorically prohibit development.

Staff recommendation: Do not add additional steps to the LCA Methodology to account for these overlay districts. The addition of LCA steps to address these overlays would not significantly change the capacity results. Accounting for these variations that apply to very limited areas would not add to the overall capacity picture.

G. Replicating the LCA: In Comment 1 of Attachment B, Joe Symons indicated that he had trouble replicating the results of the Land Capacity Analysis. As staff worked to help him understand the LCA process, it was apparent that he performed a similar analysis using a different data set. His work produced different results. It is not known what process he followed. Trying to conduct the Land Capacity Analysis on one's own is problematic if the exact data sets and methods are not used. Conducting the LCA privately could lead to different results by incorrect application of the draft LCA Methodology.

Another problem with performing the LCA on your own is that the LCA Methodology details a complex data analysis and software. The County's professional GIS and planning staff have taken months to do the analysis

and refine the process and validate the results. Using GIS software, staff translated the detailed thresholds and assumptions of the LCA Methodology into a thorough process that is being publicly vetted. Without the same level of professional experience and understanding of how to use the software, the public may have a challenge replicating the LCA.

Transparency

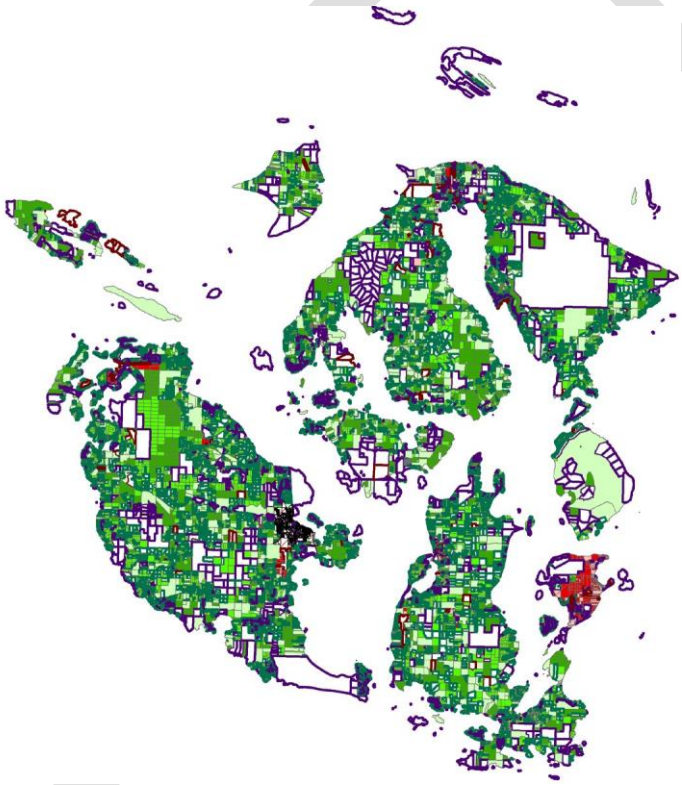
The complexity of the LCA requires transparency to ensure that the results are understood. The LCA as presented in the draft LCA Report is undergoing thorough public review. The draft LCA Methodology has been refined by incorporating public comments and County Council direction several times since it was initially made available in 2017. Starting in May 2019, the initial step of the analysis, the Gross Developable Lands Inventory (GDLI) was amended after rigorous internal staff review and consideration of a number of public comments. In August 2019, following the first draft, the Planning Commission and County Council reviewed the public comments received and provided additional direction to staff before the next steps of the analysis were completed.

Throughout the public review process, staff has briefed the Planning Commission, County Council, LVPRC and EPRC on how the analysis has been performed including in-depth explanations of the calculations and methods used. Maps for each step of the analysis have been provided to the public with staff reports and as web maps posted through the County's website. In short, the LCA process has been provided with a high degree of transparency.

San Juan County
Comprehensive Plan

Land Capacity Analysis

Second Draft, November 4, 2019



San Juan County Department of Community Development

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Second Draft Report Prepared November 4, 2019
First Draft Report Prepared September 6, 2019

San Juan County Department of Community Development Staff:
Erika Shook, AICP, Director; Linda Kuller, AICP, Planning Manager; and Adam Zack, Planner III

San Juan County Information Services Staff:
Daniel Root, GIS Program Coordinator

The maps and analysis in this report are for planning purposes only.
The information contained herein cannot be used for permitting or evaluation of site-specific proposals.

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Executive Summary

The Land Capacity Analysis (LCA) is a planning tool, which establishes a baseline understanding of how much development is possible in San Juan County and where that development might take place. It helps the County determine the existing capacity for housing, commercial, industrial and mixed-use development under development regulations and Comprehensive Plan land use designations.

The Washington State Growth Management Act (GMA) requires counties with urban growth areas (UGAs) to conduct a LCA. GMA requirements allow counties to exercise local discretion in how to conduct a LCA. The LCA is required for counties to demonstrate how they will meet the GMA statewide planning goals and local comprehensive plan goals. The purpose of the LCA is to determine if the County has enough developable lands to accommodate the expected growth during the planning period of the Comprehensive Plan. The GMA only requires a LCA to be conducted for UGAs; the San Juan County LCA addresses all lands in the County.

This report documents the analysis and results of the LCA. The entire process for LCA is provided in the *Land Capacity Analysis Methodology* (LCA Methodology) in Attachment A. The LCA Methodology defines the thresholds and assumptions used in every step of the LCA.

The maps and analysis in the LCA are for planning purposes only. The information contained in this report cannot be used for permitting or evaluation of site-specific proposals.

Six Major LCA Tasks

A. Gross Developable Lands Inventory (pg. 6) – parcels are determined to be fully developed, re-developable, partially developed, or vacant based on existing development and current regulations.

B. Net Developable Lands Inventory (pg. 13) – critical areas and other areas with development constraints are removed from the Gross Developable Lands Inventory.

C. Summarize Development Trends (pg. 21) – information from the County's permit records is compiled to summarize recent development. This task provides additional context, showing how development has occurred in the recent past.

D. Calculate and Map Gross Capacity (pg. 24) – The Net Developable Lands Inventory is compared with allowed density and achieved floor area ratios. The result is gross capacity in possible dwelling units and commercial building square footage.

E. Calculate and Map Maximum Capacity (pg. 36) – The Net Developable Lands Inventory is compared with maximum allowed development under San Juan County Code. The result is a maximum building square footage for commercial, industrial and mixed-use developments.

F. Calculate Final Capacity (pg. 45) – Public use, market, and seasonal home factors are deducted from the gross capacity to arrive at a final total of possible dwelling units and building square footages per land use designation.

Tables 1 and 2 below provide a snapshot of the total residential and commercial capacities countywide. There is final capacity countywide for 2,461 new dwelling units. Based on the 2036 population forecast of 19,423 people and a projected increase of 1,524 new households, there is sufficient land capacity for the projected population through 2036. Placeholder: The commercial capacity methodology is in progress.

Capacity Summaries

Table 1. Final Housing Capacity Summary.

Urban Growth Areas	
UGA	**Possible Dwelling Units**
Eastsound	~~474~~ 472
Lopez Village	217
UGA Subtotal	~~691~~ 689
	Activity Centers
Land Use Designation	**Possible Dwelling Units**
Residential Activity Center	29
2 Base Density District	7
Deer Harbor Hamlet Residential	17
Orcas Village Residential	4
Olga Hamlet	5
Eastsound Rural Residential	6
Eastsound Rural	~~104~~ 7
Eastsound Rural Residential 2P	8
Activity Center Subtotal	~~180~~ 83
Rural Areas	
Land Use Designation	**Possible Dwelling Units**
Rural Farm Forest	1,131
Rural Residential	150
Conservancy	48
Lopez Village Growth Reserve Area	1
Forest Resource	135
Agricultural Resource	125
Rural Subtotal	1,590
Countywide Total	**~~2,461~~ 2,362**

Table 2. Final Commercial/Industrial Capacity Summary.

Urban Growth Areas	
UGA	**Possible Building Sq. Ft.**
Eastsound	594,362
Lopez Village	1,617,219.77
UGA Subtotal	2,211,581.77
	Activity Centers
Land Use Designation	**Possible Building Sq. Ft.**
Island Center	158,147.19
Marine Center	46,921.96
Deer Harbor Hamlet Commercial	19,706.41
Deer Harbor Hamlet Industrial	31,840.00
Orcas Village Commercial	34,049.90
Master Planned Resort	360,332.10
Service Park	90,368.50
Country Corner Commercial	482.82
Activity Center Subtotal	741,848.88
Rural Areas	
Land Use Designation	**Possible Building Square Feet**
Rural Industrial	27,081.92
Rural General Use	4,123,102.44
Rural Subtotal	4,150,184.36
Countywide Total	**7,103,615.01**

DRAFT

1.0 Land Capacity Analysis

Introduction

The LCA is a planning tool that provides a high-level view of what development may be possible given existing development, current regulations, and comprehensive plan land use designations. It is a planning tool only and will not be used in consideration of permit applications.

This report provides the results of San Juan County's (SJC) Land Capacity Analysis (LCA) based on the County's LCA Methodology (Attachment A). The LCA Methodology establishes the tasks used to conduct the LCA for all land use designations of the SJC Comprehensive Plan (Plan).

Residential capacity is expressed as potential dwelling units. Commercial, industrial and mixed-use capacity is expressed as possible building square footage. The final capacity is calculated two ways:

- Capacity based on achieved floor area ratio (FAR), the most likely scenario, and
- Capacity based on the maximum FAR, a total possible buildout allowed by current development regulations and land use designations.

How will the Land Capacity Analysis be used?

The Land Capacity Analysis will be used throughout the Comprehensive Plan periodic update process to inform the County decision makers when considering possible amendments to goals and policies. The results of this analysis will help the County understand how and what growth can be accommodated through the year 2036 based on existing development, current regulations, and Plan designations. The Washington State Department of Commerce indicates that a Land Capacity Analysis is used to determine:

- The amount of vacant, partially-used, under-utilized lands, and redevelopment potential of built properties needed to accommodate growth, and
- If the existing or potential Urban Growth Areas (UGAs) can accommodate twenty years of urban growth.

The Growth Management Act (GMA) allows counties to exercise discretion in their comprehensive plans and to make choices on how they plan to accommodate growth over the twenty-year planning horizon. The LCA helps determine if the County's land supply aligns with the 2036 population projection of 19,423 total residents. The primary purpose of the LCA is to identify the capacity in Urban Growth Areas to accommodate urban development and to plan for the provision of adequate and cost-efficient urban services. Because the majority of development in San Juan County occurs outside of the Urban Growth Areas, the LCA will also help the County evaluate the development potential on rural and natural resource designated lands.

In addition, the LCA will be used to determine whether the County will have sufficient developable land to meet the Growth Management Act housing goal. This goal encourages the availability of affordable housing to all economic segments of the population, promotes a variety of residential densities and housing types, and encourages preservation of existing housing stock (RCW 36.70A.020(4)).

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Report Overview

This report contains the deliverables (GIS maps and data tables) for each of the six major LCA tasks. The results are presented in residential (dwelling units) and non-residential (building square footage) capacity. The six major LCA tasks are:

A. **Develop a Gross Developable Lands Inventory (GDLI)** – Geographic information system (GIS) and Assessor's data are used to assign a type such as residential or commercial and category such as vacant or fully developed to parcels based on existing development. For example, a parcel that cannot be subdivided, is designated for residential use, and already developed with a single-family home is typed and categorized as fully developed residential.

B. **Prepare a Net Developable Lands Inventory (NDLI)** – Development capacity on some lands may be limited by critical areas and their buffers or other regulatory factors. Such areas are subtracted from the GDLI to account for these kinds of development constraints.

Gross Developable Land Inventory
- Critical areas, buffers and other undevelopable areas
= Net Developable Land

C. **Calculate existing development intensity and summarize development trends** – Existing floor area ratios for commercial development, achieved densities for residential development, pending development and other aspects of existing development are provided in data tables.

D. **Calculate and map gross development capacity** – Once the area of land available for development is identified, development constraints such as critical areas have been removed, and existing development intensity is quantified, the gross development capacity is calculated. Gross development capacity is expressed as total potential housing units for residential lands and building square feet for commercial lands.

E. **Calculate and map maximum buildout capacity** –The maximum buildout capacity is calculated based on what is allowed under current development regulations for commercial, industrial and mixed-use land use designations. Capacity is measured in building square feet. The result is a map that shows the maximum buildout capacity of each commercial, industrial and mixed-use parcel.

F. **Calculate final capacity** – Public use, market, and seasonal home factors are deducted from the gross development capacity using GIS software and calculations in Excel. After these deductions, the resulting capacity for future housing and commercial/industrial development is calculated as total possible dwelling units by land use designation, total population capacity, and employment capacity (expressed as building square footage).

Land Capacity Analysis Methodology

The LCA Methodology defines the process used for each LCA major task. It is included with this report as Attachment A. Because the LCA is a planning tool that requires generalization about future development, there are key thresholds and assumptions used throughout the analysis. These thresholds and assumptions are detailed in the attached LCA Methodology. The thresholds and assumptions were applied by County staff during each step of the analysis to arrive at the results contained in this report.

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Community Input

The public engaged with the LCA throughout the process and provided substantial comments during the drafting of the LCA Methodology and results in this report. The Eastsound Planning and Review Committee (EPRC) and Lopez Village Planning and Review Committee (LVPRC) volunteered their time and local knowledge in refining the LCA results for their respective UGAs. The comments provided by the public, EPRC, and LVPRC were a valuable resource during the entire LCA process.

The initial draft of the LCA Methodology was made available for public comment on October 11, 2017. Comments regarding the thresholds and assumptions in the initial draft of the LCA Methodology were provided to the San Juan County Planning Commission and Council. County decision makers then refined the LCA Methodology in response to the public comments by amending key assumptions and adding additional analysis of the maximum allowed building capacity in Section E of this report.

The second draft of the LCA Methodology and first draft of the gross developable lands inventory (GDLI) were made available for public comment on June 4, 2019. The EPRC held additional meetings to provide in-depth review of the GDLI in the Eastsound UGA. They provided detailed comments on the GDLI in and around the Eastsound UGA. Individual members of the public provided numerous comments on individual parcels throughout the County. The Planning Commission and County Council were briefed on the public comments received during the comment period. Ultimately they decided to further refine the draft LCA Methodology and the GDLI based on the comments received.

On September 6, 2019, the first draft of this report was made available for public comment on the draft NDLI, draft development trends, draft gross capacity, draft maximum allowed capacity, and draft final capacity.

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A. Gross Developable Lands Inventory (GDLI)

The first LCA task, categorization of parcels into types and categories, was completed, mapped and checked for accuracy. Public comments on the draft GDLI were incorporated into the GDLI prior to completing the remaining LCA tasks.

Types that relate to whether the parcel is residential, commercial, industrial, public, or mixed-use were assigned to all parcels. The assigned categories refer to the development status of a parcel, such as vacant or fully developed. The GDLI maps show parcels by type and category based on their existing development and land use designation. The criteria and assumptions for assigning type and category are provided in the LCA Methodology (Attachment A). Tables 3 and 4 below identify the parcel types and categories assigned in the GDLI. A pairing of type and category identifies whether a parcel is developable and what kind of development is possible. Pairings of type and category are symbolized by different colors on Maps 1 through 4 below. These pairings constitute the GDLI.

Table 3. Gross Developable Land Inventory Types.

Type	Description
R	**Residential.**
CI	**Commercial and Industrial.**
MU	**Mixed Use.** The land use designation allows for a mix of commercial and residential uses.
P	**Public, Utility, and Conservation.** Parcels with this type have existing uses that preclude additional development (i.e. public parks, platted open space, parcels with electrical sub-stations, etc.).
' '	**N/A. Not Applicable.** These parcels are located in the County. The County does not have jurisdiction over them (i.e. Town of Friday Harbor).

Table 4. Gross Developable Land Inventory Categories.

Category	Description
0	**Fully Developed.** Parcels that are assumed to have no further development capacity.
1	**Partially Used.** Residential parcels occupied by a use allowed by its land use designation which contains enough land to be further subdivided or developed.
2	**Vacant.** Property with minimal or no building improvements.
3	**Vacant and Sub-dividable.** Vacant parcels that could be further divided into smaller lots.
4	**Re-developable.** A parcel that has a land use designation that allows uses that would be more intensive than an existing use (i.e. a parcel with a single-family home in a commercial designation).
5	**N/A.** Parcels in this category are located in the County but the County does not have jurisdiction over (i.e. Town of Friday Harbor)

DRAFT

Map 1. Gross Developable Land Inventory (GDLI): San Juan Island.

This map shows the gross developable land inventory (GDLI).

To prepare the GDLI, parcels were assigned a type based on the type of possible future development and categorized based on their existing level of development.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

Legend

GDLI

LCA Category

- Fully Developed Residential
- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Fully Developed Com./Ind.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use
- Public, Utility, Conservation
- N/A

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\GDLI_SJI_1-2.mxd

Draft GDLI San Juan Island Version 1.1

Map Drawn: August 20, 2019

Drawn By: Adam Zack, Planner III

Map 2. Gross Developable Land Inventory (GDLI): Lopez and Shaw.

This map shows the gross developable land inventory (GDLI).

To prepare the GDLI, parcels were assigned a type based on the type of possible future development and categorized based on their existing level of development.

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Legend

GDLI

LCA Category

- Fully Developed Residential
- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Fully Developed Com./Ind.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use
- Public, Utility, Conservation
- N/A

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\GDLI_Lopez_1-2.mxd

GDLI Lopez and Shaw Version 1.1

Map Drawn: August 20, 2019

Drawn By: Adam Zack, Planner III

Map 2.A. Gross Developable Land Inventory (GDLI): Lopez Village.

This map shows the gross developable land inventory (GDLI).

To prepare the GDLI, parcels were assigned a type based on the type of possible future development and categorized based on their existing level of development.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

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Legend

Lopez Village UGA

GDLI

LCA Category

- Fully Developed Residential
- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Fully Developed Com./Ind.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use
- Public, Utility, Conservation
- N/A

0 255 510 1,020 1,530 2,040 2,550 Feet

1 in = 320 feet

N

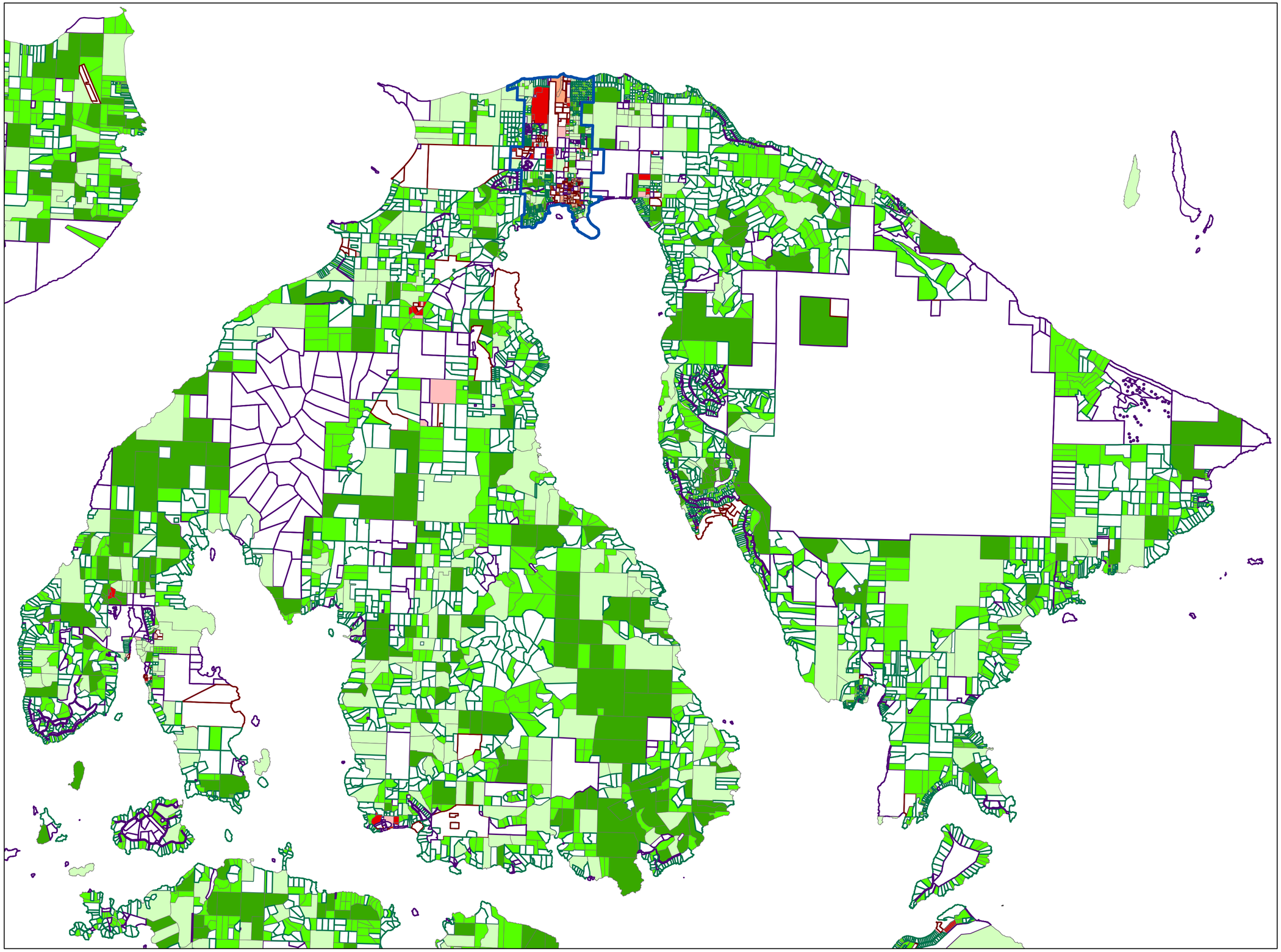
GDLI Lopez Village Version 1.0

Map Drawn: August 26, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Map2-A_GDLI_Lopez_Village_1.mxd

Map3. Gross Developable Land Inventory (GDLI): Orcas Island.



Legend

- Eastsound UGA

GDLI

LCA Category

- Fully Developed Residential
- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Fully Developed Com./Ind.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use
- Public, Utility, Conservation
- N/A

This map shows the gross developable land inventory (GDLI).

To prepare the GDLI, parcels were assigned a type based on the type of possible future development and categorized based on their existing level of development.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

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0 1 2 4 6 8 10 Miles

1 in = 1 miles

N

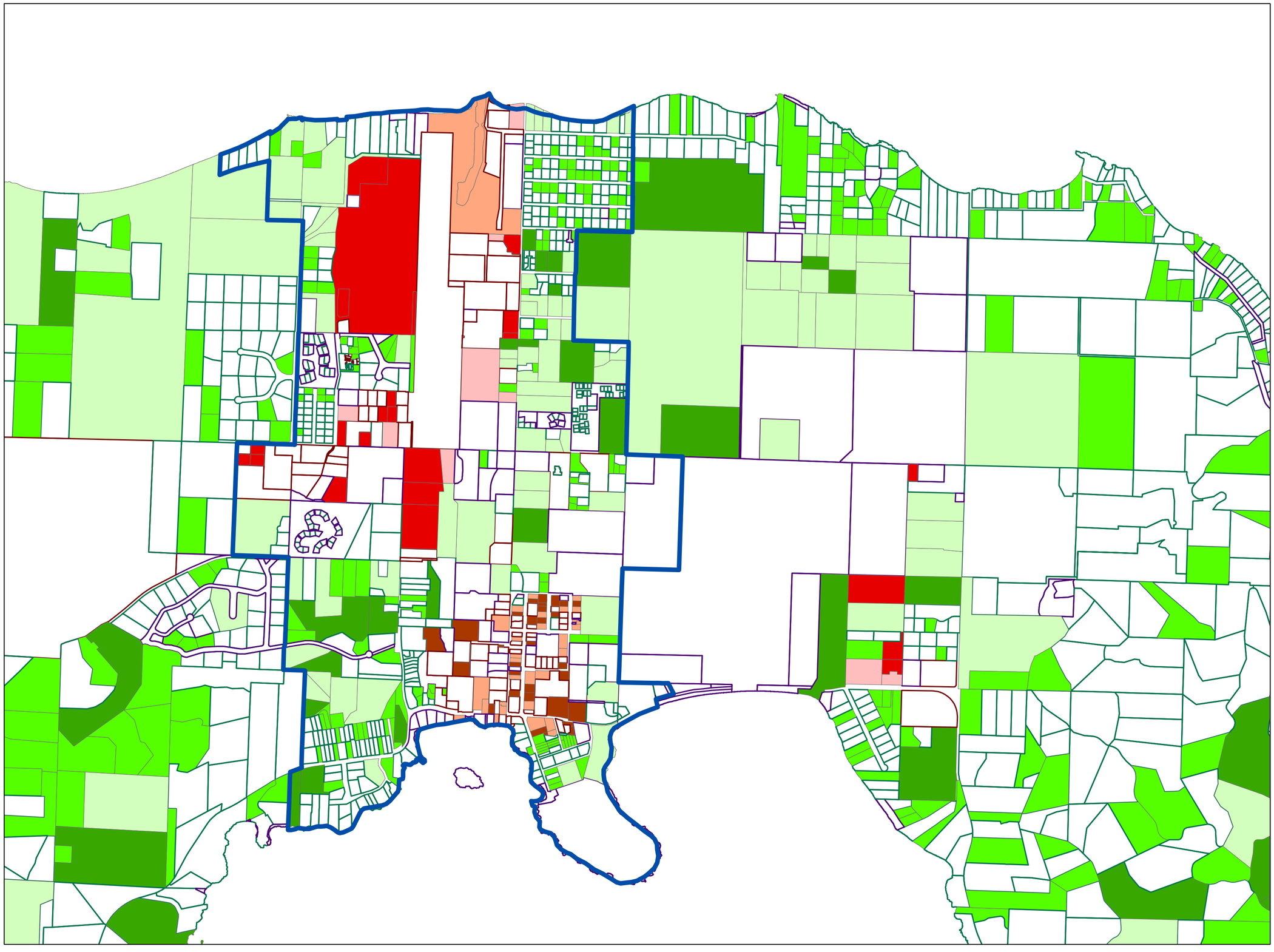
Draft GDLI Orcas Island Version 1.1

Map Drawn: August 20, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\GDLI_Orcas_1-2.mxd

Map 3.A Gross Developable Land Inventory (GDLI): Eastsound.



Legend

- Eastsound UGA

GDLI

LCA Category

- Fully Developed Residential
- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Fully Developed Com./Ind.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use
- Public, Utility, Conservation
- N/A

This map shows the gross developable land inventory (GDLI).

To prepare the GDLI, parcels were assigned a type based on the type of possible future development and categorized based on their existing level of development.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.2 0.4 0.8 1.2 1.6 2 Miles

1 in = 764 feet

N

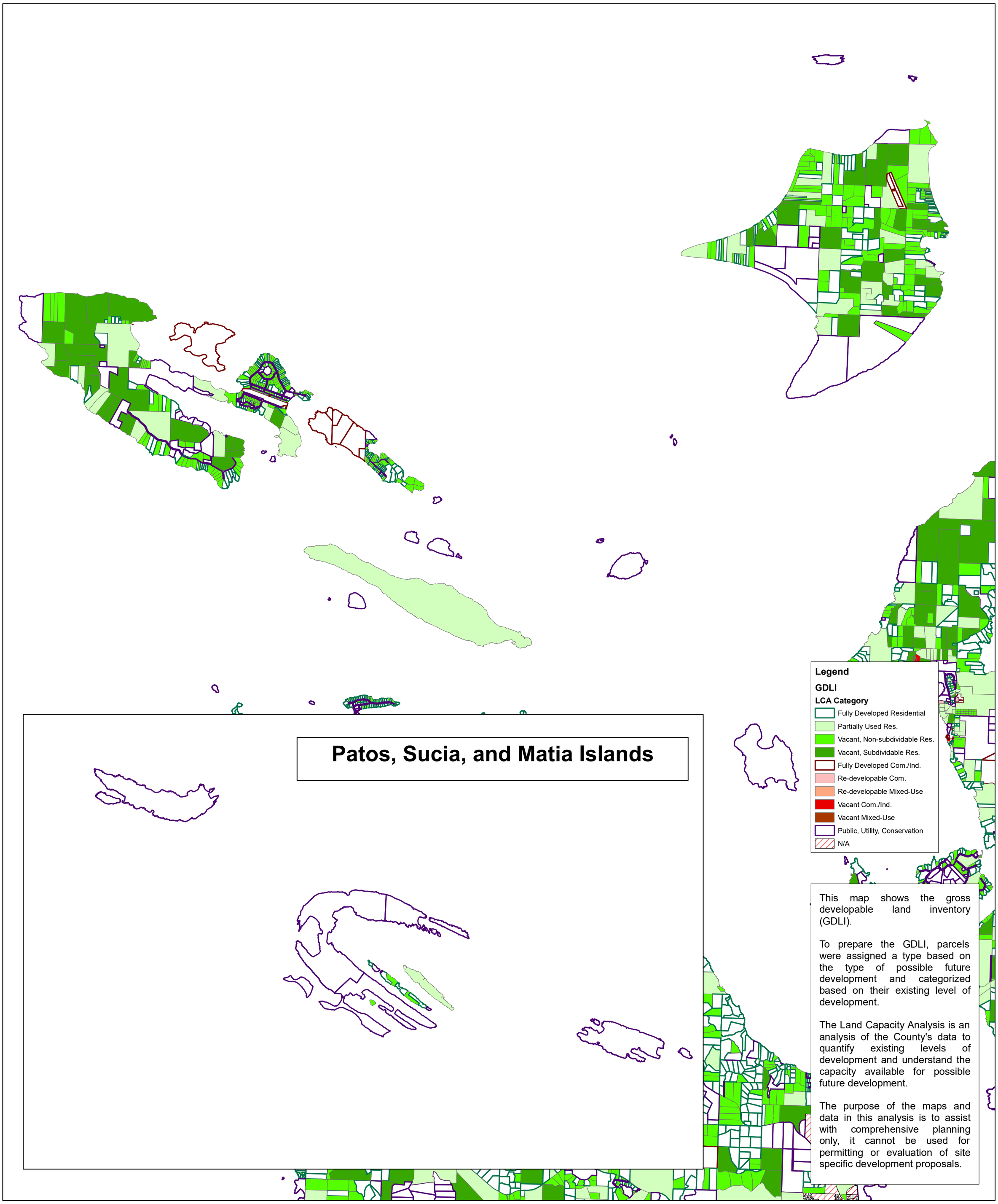
GDLI Eastsound Version 1.0

Map Drawn: August 26, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Map3-A_GDLI_Eastsound_1.mxd

Map 4. Gross Developable Land Inventory (GDLI): Outer Islands.



This map shows the gross developable land inventory (GDLI).

To prepare the GDLI, parcels were assigned a type based on the type of possible future development and categorized based on their existing level of development.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\GDLI_Outer_Islands_2-2.mxd

Draft GDLI Outer Islands Version 1.1

Map Drawn: August 20, 2019

Drawn By: Adam Zack, Planner III

B. Net Developable Lands Inventory (NDLI)

Areas with limited development potential such as critical areas were deducted from the GDLI to produce the Net Developable Lands Inventory (NDLI). The NDLI maps show the deduction of critical areas, buffers, and other areas with reduced development potential derived from the Gross Developable Land Inventory (GDLI).

Maps 5 through 8 below depict:

- The net developable residential lands, and
- The net developable commercial, industrial and mixed-use lands.

In deducting the critical areas, it is assumed that:

- Critical area buffers will not affect future capacity on residential parcels. This assumption is used because the development regulations allow a residential reasonable use exception and flexible development standards.
- Critical areas and their buffers are not considered developable on commercial, industrial and mixed-use parcels. There is no reasonable use provision for these types of uses.

Table 5 shows which critical areas were removed during the drafting of the NDLI. Section B.4 of the LCA Methodology (Attachment A) establishes the critical area deductions and assumptions.

Table 5. NDLI Critical Area Type and Description.

Critical Area Type	Description
Wetlands	The County's possible wetland inventory.
Streams	The County's base stream dataset with stream centerlines and an assumed 35 feet of non-buildable area on either side of the centerline, corresponding with Tree Protection Zone 1 (TPZ 1) per SJCC Table 18.35.130-2.
Steep Slopes	Areas with slopes greater than 50 percent which are considered Category 1 geo-hazards. Development in these areas is limited per SJCC 18.35.065.
Special Flood Hazard Areas	Land located within 100-year floodplains as shown on the Federal Emergency Management Agency (FEMA), April 2017, Flood Insurance Rate Maps (FIRMS.
Other Undevelopable Area	Mitigation and old dump sites that are not available or suited for development.

In addition to the critical areas in Table 5, buffers were deducted using the following assumptions:

1. A 150 foot wetland buffer because most of the County's wetlands are Class III or Class IV and industrial and commercial uses are designated high intensity uses (SJCC 18.35.095 and Tables 18.35.100-2 and 18.35.100-2), and
2. The following Tree Protection Zone buffers on parcels with a fish and wildlife habitat conservation area (FWHCA) (SJCC Tables 18.35.100-2 18.35.130-2):

3. 110 feet from the centerline for Type F (Type 2 or 3) streams and ponds designated as FWHCAs (assuming an 8 foot wide stream);

4. 110 feet from the Ordinary High Water Mark (OHWM) for marine shorelines containing FWHCAs and ponds, excluding parcels subject to the Eastsound Waterfront Access Plan or parcels within approved master planned resorts;

5. 50 feet from the bank full width for Type Np (Type 4) streams;

6. 30 feet from the bank full width for Type Ns (Type 5) streams; and

7. 30 feet from the bank full width for un-typed streams.

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Map 5. Net Developable Land Inventory (NDLI): San Juan Island.

This map shows the net developable land inventory (NDLI).

To prepare the NDLI, critical areas such as wetlands and steep slopes were subtracted from the developable parcels identified in the Gross Developable Lands Inventory (GDLI).

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site

Legend

LCA Category

- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

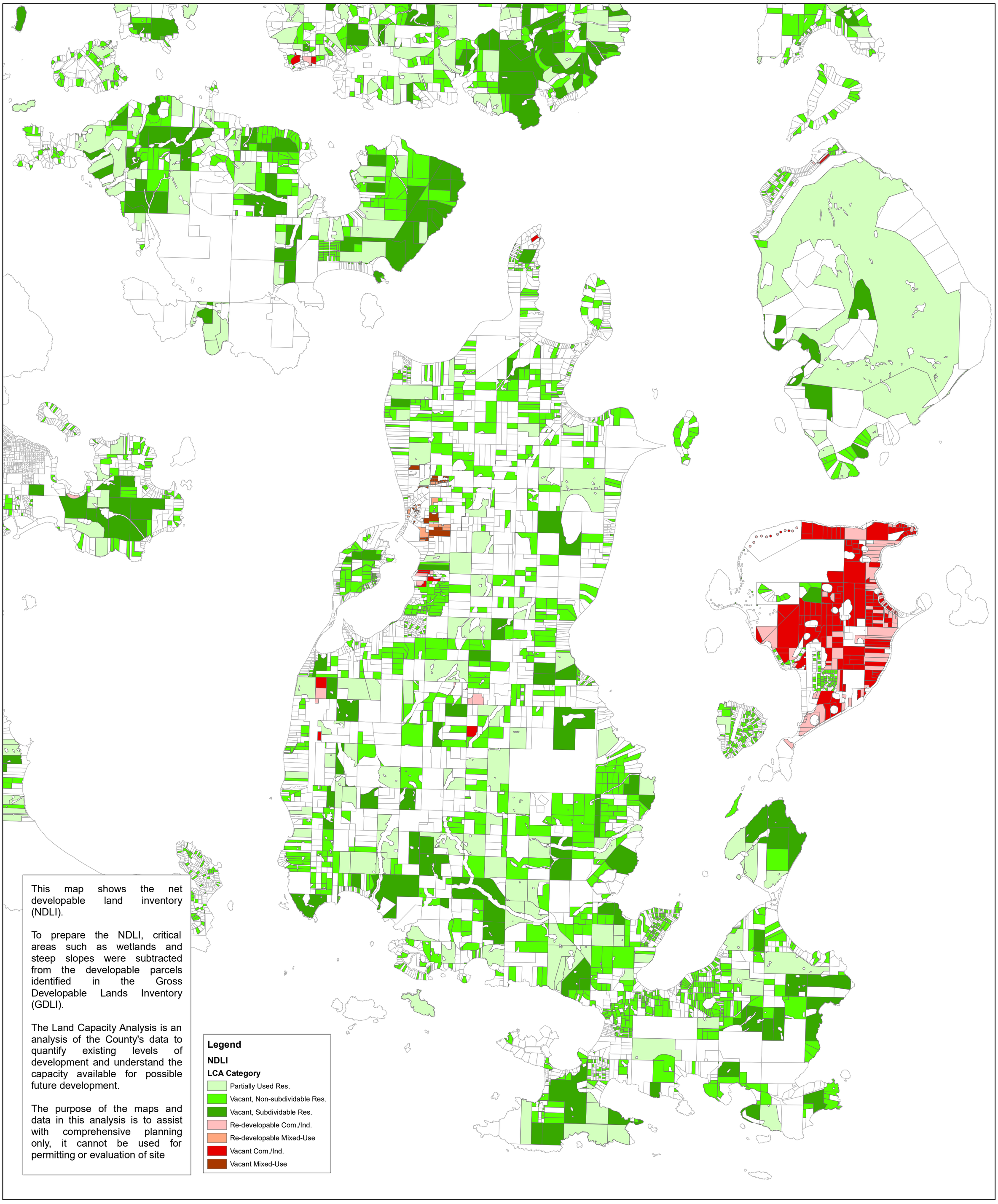
Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\NDLI\NDLI_SJI_1.mxd

NDLI San Juan Island Version 1.1

Map Drawn: August 23, 2019

Drawn By: Adam Zack, Planner III

Map 6. Net Developable Land Inventory (NDLI): Lopez and Shaw.



This map shows the net developable land inventory (NDLI).

To prepare the NDLI, critical areas such as wetlands and steep slopes were subtracted from the developable parcels identified in the Gross Developable Lands Inventory (GDLI).

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

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0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

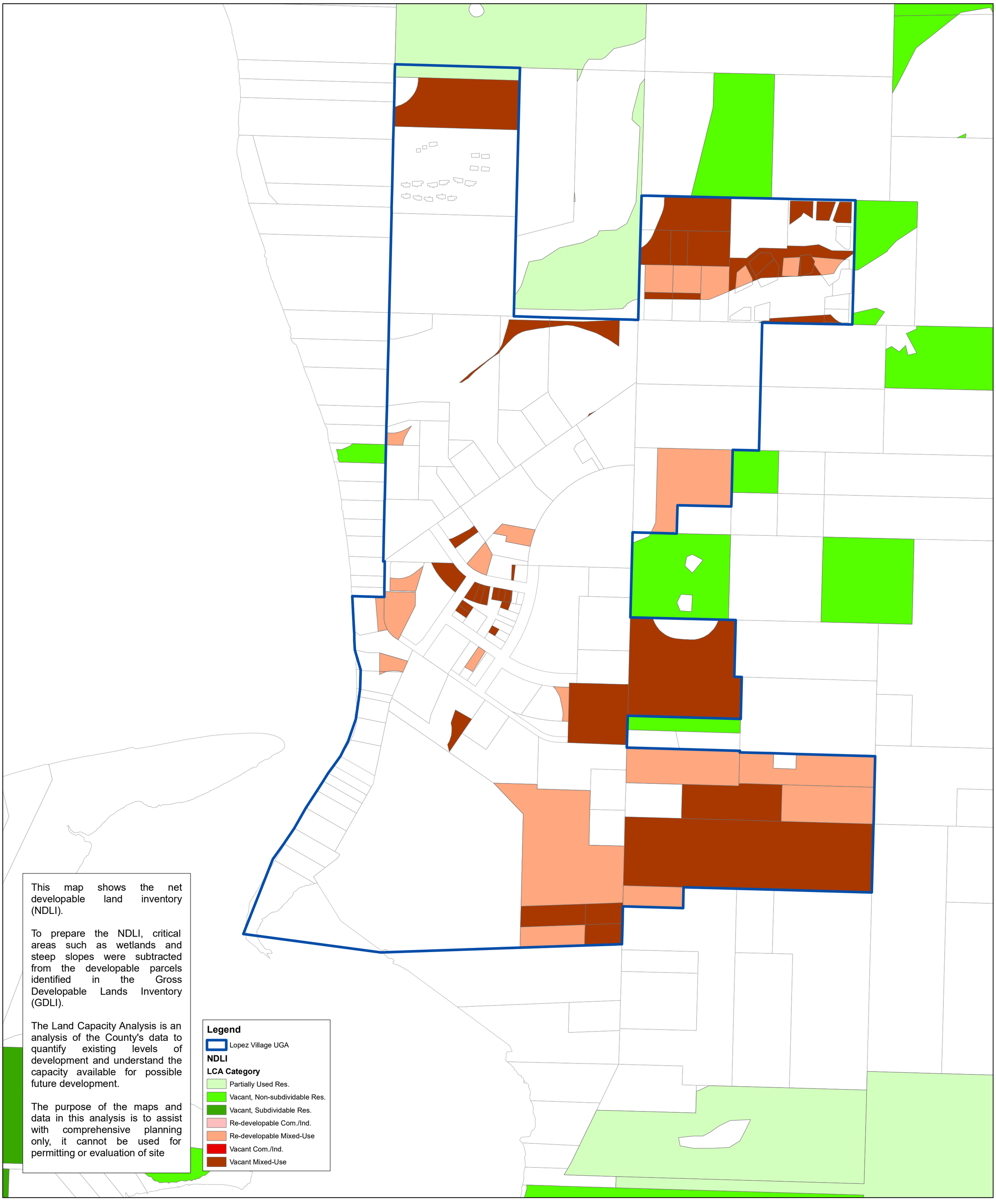
Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\NDLI\NDLI_Lopez_1.mxd

NDLI Lopez and Shaw Version 1.1

Map Drawn: August 23, 2019

Drawn By: Adam Zack, Planner III

Map 6.A. Net Developable Land Inventory (NDLI): Lopez Village.



This map shows the net developable land inventory (NDLI).

To prepare the NDLI, critical areas such as wetlands and steep slopes were subtracted from the developable parcels identified in the Gross Developable Lands Inventory (GDLI).

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site

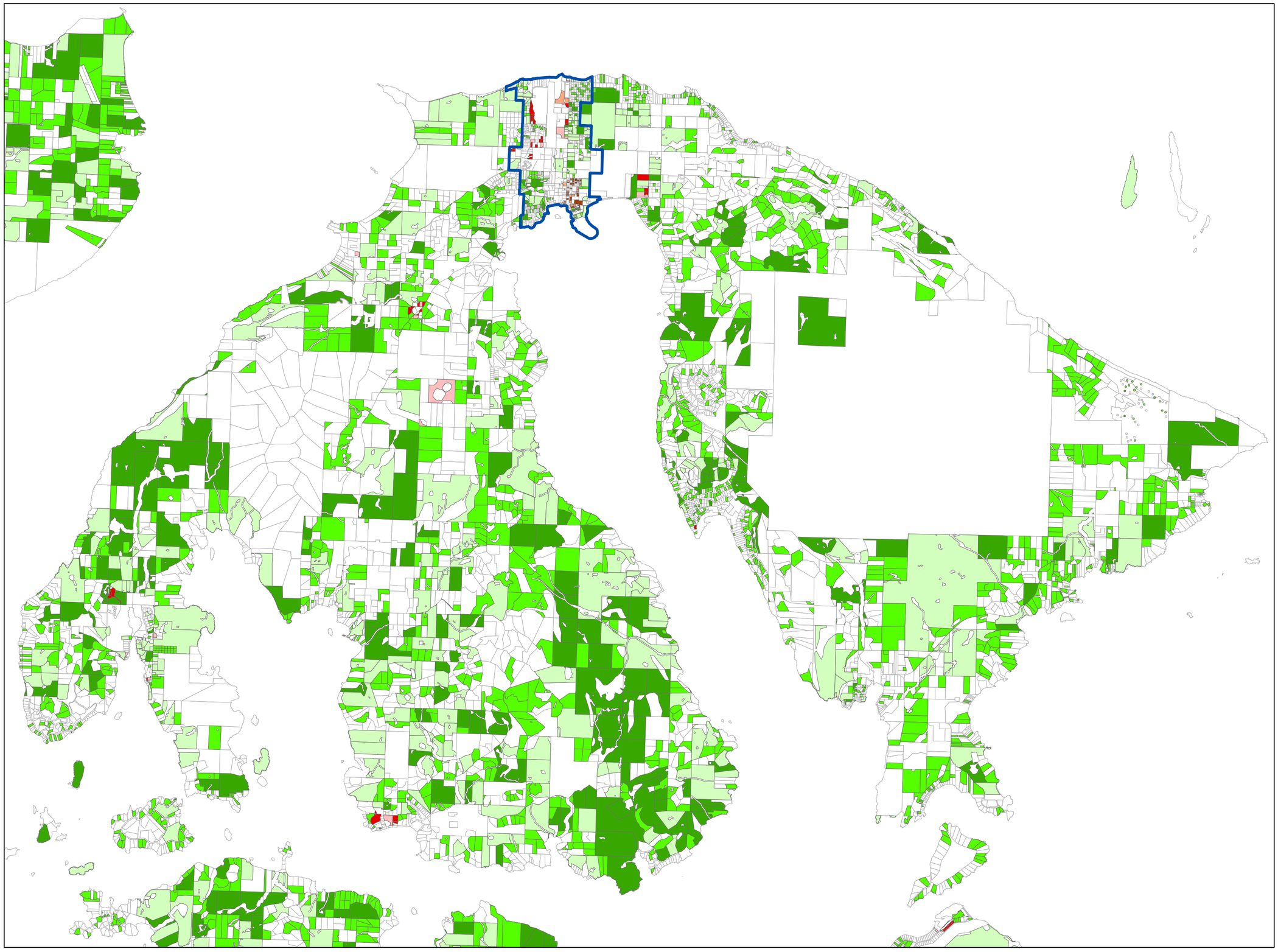
Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\NDLI\NDLI_Lopez_Village_1.mxd

NDLI Lopez Village Version 1.1

Map Drawn: August 23, 2019

Drawn By: Adam Zack, Planner III

Map 7. Net Developable Land Inventory (NDLI): Orcas Island.



Legend

Eastsound UGA

NDLI

LCA Category

- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use

This map shows the net developable land inventory (NDLI).

To prepare the NDLI, critical areas such as wetlands and steep slopes were subtracted from the developable parcels identified in the Gross Developable Lands Inventory (GDLI).

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 1 2 4 6 8 10 Miles

1 in = 1 miles

N

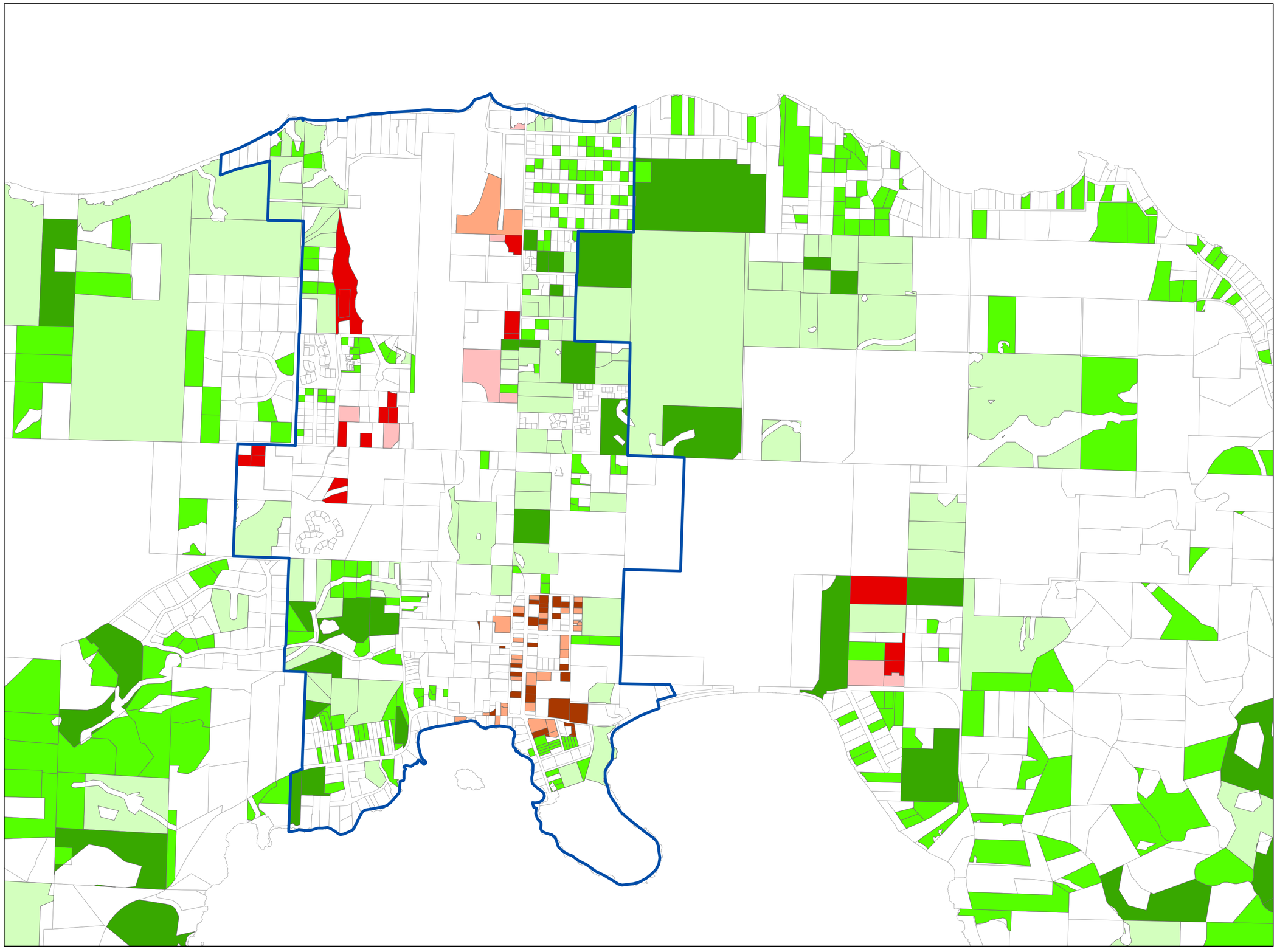
NDLI Orcas Island Version 1.1

Map Drawn: August 23, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\NDLI\NDLI_Orcas_1.mxd

Map 7.A. Net Developable Land Inventory (NDLI): Eastsound.



Legend

- Eastsound UGA

NDLI

LCA Category

- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use

This map shows the net developable land inventory (NDLI).

To prepare the NDLI, critical areas such as wetlands and steep slopes were subtracted from the developable parcels identified in the Gross Developable Lands Inventory (GDLI).

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.2 0.4 0.8 1.2 1.6 2 Miles

1 in = 764 feet

N

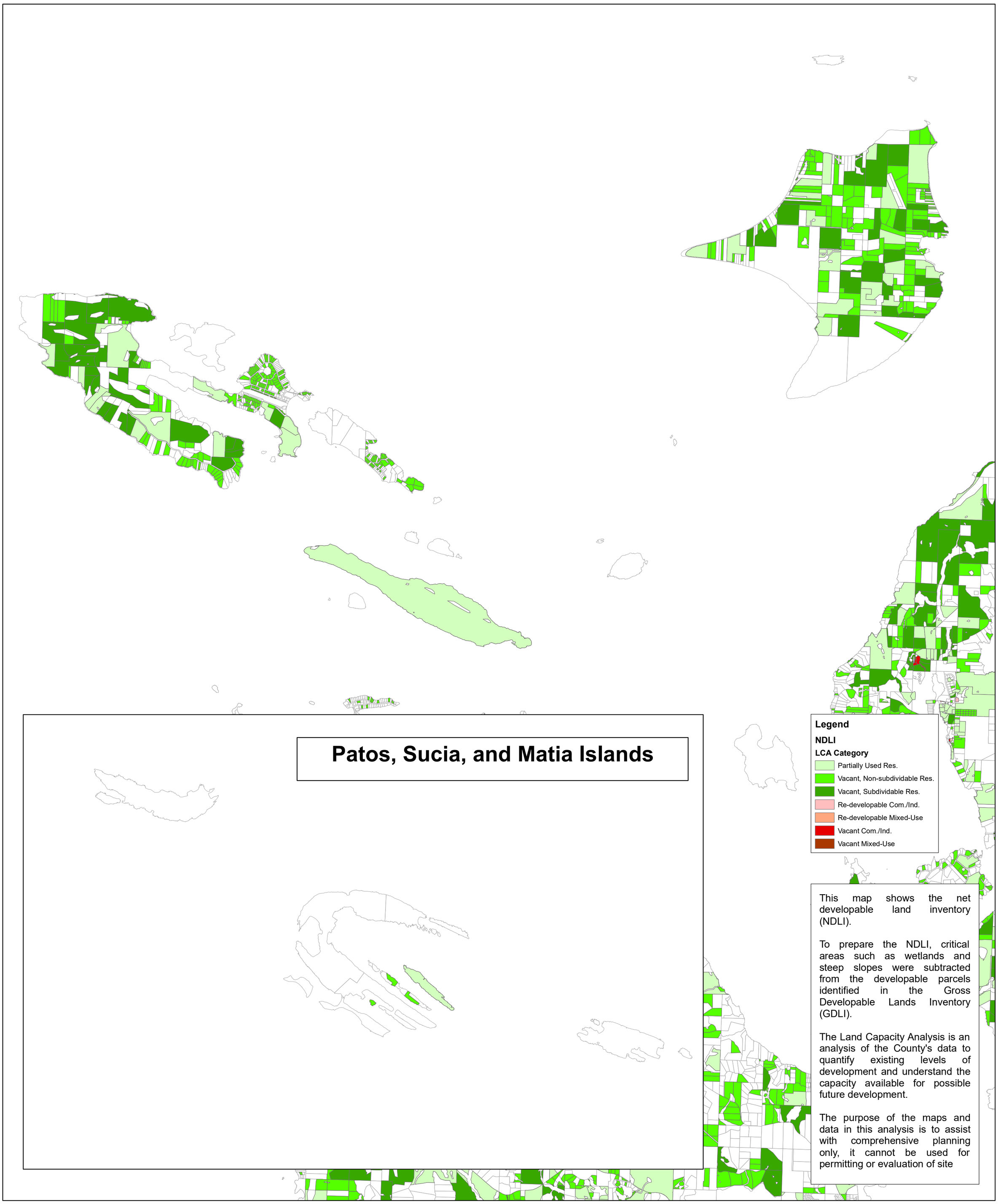
NDLI Eastsound Version 1.0

Map Drawn: August 23, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\NDLI\NDLI_Eastsound_1.mxd

Map 8. Net Developable Land Inventory (NDLI): Outer Islands.



This map shows the net developable land inventory (NDLI).

To prepare the NDLI, critical areas such as wetlands and steep slopes were subtracted from the developable parcels identified in the Gross Developable Lands Inventory (GDLI).

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\NDLI\NDLI_Outer_Islands_1.mxd

NDLI Outer Islands Version 1.1

Map Drawn: August 23, 2019

Drawn By: Adam Zack, Planner III

C. Calculate Existing Floor Area Ratios, Summarize Development Trends, and Assign Assumed Densities and Floor Area Ratios

Multiple calculations and analysis of permit data trends were completed to provide context for examining the LCA results. This data informs us about not only what development has happened, but also what development can be expected. This context is particularly valuable during the comparison of final capacity based on the maximum possible development under the existing Plan and development regulations to final capacity estimates based on assumed densities and achieved development intensities.

Summary of Tasks

Floor Area Ratios

Floor Area Ratios (FARs) of commercial, industrial and mixed-use development were calculated to obtain information about the intensity of development on a parcel. FAR is a metric that helps explain the amount of development on a parcel by comparing the square footage of development with the area of the property. FAR = Total area of development in square feet / Parcel area in square feet.

Development Trends (Achieved)

Past development trends were documented using permit data from April 1, 2005 – March 31, 2019 to determine actual densities achieved in all land use designations and urban growth areas. This information provides a check on the variability of FARs for existing development that was constructed under many different historic building regulations.

Assumed Density

Each land use designation was assigned an assumed density for the purposes of calculating capacity. For residential capacity, the Comprehensive Plan land use designations and densities were used as the future assumed densities. For commercial and industrial building intensity, existing average FAR by land use designation was used. For mixed-use intensity, the assumed density and average achieved FAR by land use designation were used.

Existing Building Floor Area Ratios by Land Use Designation

Table 6 below identifies the average existing FAR by commercial, industrial and mixed-use and land use designations. Existing FAR is based on building floor area and parcel sizes from the Assessor's records. For commercial, industrial and mixed-use parcels, FAR is good measure of how much building capacity exists on a parcel. FAR is useful because it relates the parcel size to building square footage showing the intensity of development.

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Table 6. Achieved FAR by Commercial, Industrial, and Mixed-use Land Use Designations.

Land Use Designation	Achieved FAR	Land Use Designation	Achieved FAR
RC: Rural Commercial	N/A[1]	**OHC:** Olga Hamlet Commercial	0.14
RI: Rural Industrial	0.026	**SP:** Service Park	N/A[2]
RGU: Rural General Use	0.122	**CCC:** Country Corner Commercial	0.024
MPR: Master Planned Resort	0.093	**VC:** Eastsound Village Commercial	0.39
IC: Island Center Limited Area of More Intense Rural Development (LAMIRD)	0.219	**M:** Marina	0.034
MC: Marine Center LAMIRD	0.113	**SLI:** Service and Light Industrial	0.466
DHHC: Deer Harbor Hamlet Commercial	0.299	**LUGA:** Lopez Village Urban Growth Area	0.914
DHHI: Deer Harbor Hamlet Industrial	N/A[2]	**OVC:** Orcas Village Commercial	0.152
		OVT: Orcas Village Transportation	N/A[2]

Notes:

1. The Rural Commercial (RC) land use designation only applies in one small area east of Lopez Village. This area does not correspond to specific parcel boundaries so an achieved FAR cannot be determined.

2. Deer Harbor Hamlet Industrial (DHHI), Service Park (SP), and Orcas Village Transportation (OVT) land use designations did not have fully developed commercial or industrial parcels from which to calculate an achieved FAR.

Recent Development

The development summarized in Table 7 below is based on permits that were issued between April 1, 2005 and March 31, 2019, the last date for which this information was available. This data set excludes single-family residences because this kind of development may take place on lots that were created before the current regulations were adopted.

Recent development information is provided to lend additional context to the overall land capacity results. The recently achieved FAR and density for each land use designation show the intensity of development under the current regulations. The achieved FAR as shown in Table 6, provides the all-time development intensity achieved under varying development code regulations, including development that occurred prior to the adoption of the Comprehensive Plan.

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Table 7. Recent Achieved Intensity and Density by Land Use Designation 2005-2019.

Land Use Designation[4]	Achieved Lots and Dwelling Units	Achieved Building Square Footage	Total Acreage of Lots to be Developed	Mean Recent Achieved FAR	Mean Recent Achieved Density (acres per dwelling)
ACT (Activity Center)	17	-	59.28	-	3.12
AG (Agricultural Resource)	86	4,450	1,553.07	0.0002	18.854
C (Conservancy)	-	1,344	5,422.35	0[1]	-
DHHI (Deer Harbor Hamlet Industrial)	1	-	0.12	-	0.12
DHHR (Deer Harbor Hamlet Residential)	2	-	16.82	-	8.41
EAD (Eastsound Airport District)	-	384	4.28	0.002	-
ER1 (Eastsound Residential, 1 dwelling per acre)	7	-	7.01	-	1.001
ER2 (Eastsound Residential, 2 dwelling per acre)	3	-	4.82	-	1.61
ER4P (Eastsound Residential, 4 dwellings per acre)	6	-	1.93	-	0.37
FOR (Forest Resource)	29	1,920	530.9	0.031	19.79
IC (Island Center)	-	18,786	44.143	0.016	-
LUGA (Lopez Village UGA)	40	15,086	53.69	0.127	1.556
MC (Marine Center)	-	6,192	3.644	0.039	-
MPR (Master Planned Resort)	-	9,407	17.748	0.124	-
N (Natural)	2	2,306	1,251.65	0[1]	147.93
OH (Olga Hamlet)	1	-	4.22	-	4.22
OVC (Orcas Village Commercial)	-	2,933.667	3.238	0.711	-
RFF (Rural Farm Forest)	538	46,435	6,324.18	0.005	10.91
RGU (Rural General Use)	38	59,425	379.48	0.082	8.767
RI (Rural Industrial)	-	5,946	16.7	0.008	-
RR (Rural Residential)	31	14,150	214.678	0.0086	8.64
SLI (Service and Light Industrial)	5	61,360	62.49	0.081	7.085
SP (Service Park)	-	1,200	19.88	0.001	-
VC (Village Commercial)	5	19,662	6.186	0.235	0.8
VR (Village Residential)	44[2]	33,569[3]	50.52	0.155	0.284

Notes

1. The achieved FAR in Conservancy and Natural is just above zero, there are six zeroes after the decimal.
2. The totals for Village Residential do not include the 'April's Grove' development because the building permits were issued after the cutoff date. If this development were included the totals for VR would be: 91 new dwellings, and an achieved density of 0.253 acres per dwelling.
3. The building square footage in Village Residential includes institutional uses such as schools.
4. List of land use designations only includes land use designations that did not have a permit issued between 2005 and 2019. For example, Rural Commercial (RC) did not have a permit issued during the study timeframe.

D. Calculate and Map Gross Housing and Commercial Development Capacity

Maps 9 through 12 depict the gross development capacity for residential, commercial, industrial and mixed-use parcels. To arrive at gross capacity, the NDLI is converted into capacity for housing units on residential land and building square feet on commercial, industrial and mixed-use land.

Gross capacity calculated is not final capacity. Gross capacity does not include deductions for public uses, market factors, and seasonal/recreational home factors. Those deductions were applied in the last step of the LCA to estimate final capacity.

Gross Housing Capacity

Gross housing capacity was derived from the residential NDLI. It is the total dwelling units of capacity available on each parcel. Pending development calculated in the previous LCA tasks (assumed densities and pending development in residential land use designations) was subtracted from the gross housing capacity. It is depicted in Tables 8 and 9 below and on Maps 9 through 12. Market factor deductions were not included; they are deducted during the next task, calculation of final capacity.

Table 8. Gross Housing Capacity by Land Use Designation.

Land Use Designation	Developable Acres	Dwelling Unit Capacity	Land Use Designation	Developable Acres	Dwelling Unit Capacity
2 BDD	55.95	19.17	**ACT**	74.75	81.73
AG	5,985.93	355.97	**C**	1,241.38	137.93
ER	159.15	~~298.29~~ 19.82	**ER1**	24.11	17.74
ER2	52.59	82.67	**ER412**	1.96	20.47
ER4P	51.58	158.43	**ERR**	100.98	16.25
ERR 2P	59.63	22.27	**FO**	9,487.11	384.89
HR	196.03	48.46	**LGRA**	21.78	2.36
OH	17.29	14.76	**OVR**	30.59	10.73
RFF	24,980.10	3,232.19	**RR**	2,841.74	430.09
VR	50.00	519.12	**VC**	13.15	498.99
M	7.96	52.10	**LUGA**	59.23	217.28

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Table 9. Gross Housing Capacity by Land Use Designation and Category.

Land Use Designation	Category	Developable Acres	Dwelling Unit Capacity
2 BDD	1	14.69	2.87
2 BDD	3	38.08	16.30
ACT	1	26.23	12.87
ACT	2	39.07	58.16
ACT	3	9.45	10.70
AG	1	2469.69	137.22
AG	2	1984.26	107.41
AG	3	1531.98	111.34
C	1	818.91	82.65
C	2	136.01	13.59
C	3	286.45	41.70
ER	1	134.99	~~251.99~~ 15.61
ER	3	24.15	~~46.30~~ 4.21
ER1	1	1.96	0.60
ER1	2	0.90	0.90
ER1P	1	6.78	2.78
ER1P	2	6.21	6.21
ER1P	3	8.26	7.26
ER2	1	11.58	16.16
ER2	2	6.55	11.23
ER2	3	5.92	9.83
ER2P	1	23.38	37.14
ER2P	2	5.16	8.31
ER412	2	1.96	20.47
ER4P	1	27.17	81.79
ER4P	2	11.45	26.77
ER4P	3	12.97	49.87
ERR	1	19.30	2.86
ERR	2	53.72	7.80
ERR	3	27.93	5.59
ERRP2	1	19.12	5.56
ERRP2	2	14.30	4.61
ERRP2	3	26.20	12.10
FO	1	3980.24	157.59
FO	2	3062.86	115.18
FO	3	2444.00	112.12
HR	1	148.44	19.25
HR	2	12.19	17.38
HR	3	35.39	11.83

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Table 9. Gross Housing Capacity by Designation and Category Cont.

Land Use Designation	Category	Developable Acres	Dwelling Unit Capacity
LGRA	1	14.41	1.88
LGRA	2	7.37	0.47
OLGA	1	7.04	3.34
OLGA	2	8.11	7.15
OLGA	3	2.14	4.27
OVR2	1	10.94	3.47
OVR2	2	15.99	5.43
OVR2	3	3.66	1.83
RFF	1	7782.40	917.16
RFF	2	9645.12	1107.27
RFF	3	7552.58	1207.77
RR	1	589.90	75.20
RR	2	1783.70	270.49
RR	3	468.14	84.40
VR	1	32.93	379.16
VR	2	10.51	107.59
VR	3	6.57	32.37
Total*			5853.54

*Total does not include mixed-use designations, VC, LUGA, and M.

Gross Commercial and Industrial Capacity

Capacity for future commercial or industrial growth is derived from the commercial and industrial NDLI. Gross capacity is calculated using the:

- Net developable area on the parcel, determined in the NDLI (Step B);
- Achieved FAR values for each commercial and industrial land use designation (Step C);
- Assessor's data for re-developable parcels, including the existing building square footage; and
- Pending commercial and industrial development data (Step C).

Commercial and industrial capacity square footage was calculated using the following formula:

(Achieved FAR X Net Developable Area in square feet) – (Existing + Pending building square footage) = Gross Capacity in square feet

The total building capacity in square feet and total net developable area are shown per land use designation in Table 11 below.

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Steps for Calculating Commercial and Industrial Capacity

1. Multiply net acres of commercial and industrial land in each land use designation by the achieved FAR for each land use designation. The output will be the total square footage capacity available in each land use designation before accounting for existing development on re-developable parcels.

2. Calculate the total existing commercial and industrial building square footage on vacant and re-developable parcels by land use designation. Subtract this square footage from the total square footage capacity from the previous step so that existing buildings are not counted as part of re-developable parcel capacity.

3. In the Task C of the LCA, pending development was calculated and shown in Table 9. These parcels included commercial and industrial developments that received preliminary approval, but were not constructed by March 3, 2017. The pending building square footage determined in Task C was subtracted from the capacity determined in the previous two steps. The output will be the gross commercial and industrial square footage capacity available in each land use designation. Gross commercial and industrial capacity is shown in Tables 10 through 11 and Maps 9 through 12.

Table 10. Gross Commercial and Industrial Land Capacity by Land Use Designation.

Land Use Designation	Developable Acres	Building Capacity	Land Use Designation	Developable Acres	Building Capacity
CCC	5.76	688.32	**DHHC**	2.65	28,152.01
MC	17.36	67,031.37	**IC**	30.44	263,578.60
OVC	7.71	48,642.71	**MPR**	131.87	514,760.14
RGU	1145.87	5,890,146.34	**RI**	53.17	38,688.46
SLI	19.98	369,873.98	**VC**	13.15	167,248.51
LUGA	59.23	2,310,313.95	M	7.96	311,966.02

Four land use designations are not shown on Table 11. The gross capacity shown in this table was calculated based on the achieved FAR of fully developed commercial and industrial parcels in each land use designation. Deer Harbor Hamlet Industrial (DHHI), Service Park (SP), and Orcas Village Transportation (OVT) land use designations did not have fully developed commercial or industrial parcels from which to calculate an achieved FAR. These designations will use the maximum capacity calculated in Task E. Rural Commercial (RC) and Olga Hamlet Commercial (OHC) do not have any capacity because they are both fully developed.

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Table 11. Gross Commercial Capacity by Land Use Designation and Category.

Land Use Designation	Category	Developable Acres	Building Square Foot Capacity
CCC	2	2.11	0.00
CCC	4	3.64	688.32
DHHC	2	0.31	3649.04
DHHC	4	2.34	24502.97
DHHI	2	4.23	0.00
DHHI	4	0.19	0.00
IC	2	13.99	131124.87
IC	4	16.45	132453.77
LUGA	2	35.78	1421485.42
LUGA	4	23.45	888828.53
M	2	0.89	755.87
M	4	7.07	8365.81
MC	2	9.93	48863.14
MC	4	7.43	18168.24
MPR	2	126.52	505594.86
MPR	4	5.34	9165.27
OVC	2	3.00	19319.50
OVC	4	4.71	29323.20
OVT	2	5.65	0.00
RGU	2	827.70	4373315.84
RGU	4	318.17	1516830.51
RI	4	53.17	38688.46
SLI	2	12.41	228316.57
SLI	4	7.56	141557.41
SP	2	4.97	0.00
VC	2	6.77	101307.61
VC	4	6.38	65940.89
VR	2	0.03	47.66

Gross Mixed-Use Capacity

Some land use designations allow mixed-uses, a combination of residential and commercial development. Assumptions about the proportion of residential and commercial development were used to calculate future capacity for these land use designations. The LCA assumes that mixed-use dwelling units will average 1,000 square feet per dwelling, the same assumption used in mixed-use designations in the Lopez Village and Eastsound urban growth areas. Mixed-use capacity is presented in three scenarios based on different proportions of commercial and residential uses. The scenarios are discussed below. Tables 12 through 13 below show the gross mixed-use capacity for all three scenarios.

Mixed-Use Development Scenarios

Mixed-use developments can be composed of any proportion of residential and commercial square footage. For this reason, the LCA presents mixed-use capacity in three scenarios:

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Scenario A: Mixed-use parcels develop with one-hundred percent commercial development;

Scenario B: Mixed-use parcels develop with fifty percent of each residential and commercial; and

Scenario C: Mixed-use parcels develop with one-hundred percent residential development.

Gross Mixed-Use Capacity Steps

1. Calculate building square footage capacity using achieved FAR that was determined in the third LCA task and subtract existing and pending building square footage. The result of this step is the capacity for Scenario A.

2. Multiply the building square footage from the previous step by 0.5 to determine what fifty percent of the square footage is. Fifty percent of the building will be considered commercial capacity in Scenario B. The remaining fifty percent will be used in the next calculation.

3. Divide the fifty percent residential floor area by 1,000 square feet to arrive at the number of possible mixed-use dwelling units for residential capacity in Scenario B. This process assumes that each dwelling unit will be 1,000 square feet. Mixed-use residential capacity in Scenario B is capped at the maximum allowed dwelling units per acre in each area.

4. The maximum allowed density is multiplied by the net developable acreage to calculate the possible dwelling units in Scenario C.

Table 12. Gross Mixed Use Capacity by Land Use Designation.

Scenario A: Mixed Use Develops 100 Percent Commercial			
Land Use Designation	**Net Developable Acres**	**Possible Commercial Building Square Footage**	**Possible Dwelling Units**
Eastsound Village Commercial	13.15	167,248.51	0
Eastsound Marina	7.96	9,121.68	0
Lopez Village UGA	59.23	2,310,313.95	0
Scenario A Total	**80.34**	**2,486,684.14**	**0**

Scenario B: Mixed Use Develops with 50 Percent Residential and Commercial			
Land Use Designation	**Net Dev. Acres**	**Possible Commercial Building Square Footage**	**Possible Dwelling Units**
Eastsound Village Commercial	13.15	83,297.25	68.95
Eastsound Marina	7.96	4,560.84	4.56
Lopez Village UGA	59.23	1,155,131.98	217.28
Scenario B Total	**80.34**	**1,242,990.07**	**290.79**

Scenario C: Mixed Use Develops 100 Percent Residential			
Land Use Designation	**Net Dev. Acres**	**Possible Commercial Building Square Footage**	**Possible Dwelling Units**
Eastsound Village Commercial	13.15	0	498.99
Eastsound Marina	7.96	0	61.66
Lopez Village UGA	59.23	0	217.28
Scenario C Total	**80.34**	**0**	**725.83**

Table 13. Gross Mixed-Use Capacity by Land Use Designation and Category.

Land Use Designation	Category	Developable Acres	Dwelling Unit Capacity[1]	Building Capacity in Square Feet[2]
LUGA	2	35.78	139.93	1,421,485.42
LUGA	4	23.45	77.35	888,828.53
M	2	0.89	7.11	755.87
M	4	7.07	54.55	8,365.81
VC	2	6.77	260.78	101,307.61
VC	4	6.38	238.22	65,940.89

Notes:

1. Dwelling unit capacity from Scenario A is shown in this table. This is the dwelling unit capacity calculated by assuming mixed-use areas develop with one-hundred percent residential.

2. Commercial capacity from Scenario C is shown table. This is the commercial building capacity calculated by assuming mixed-use areas develop with one-hundred percent residential.

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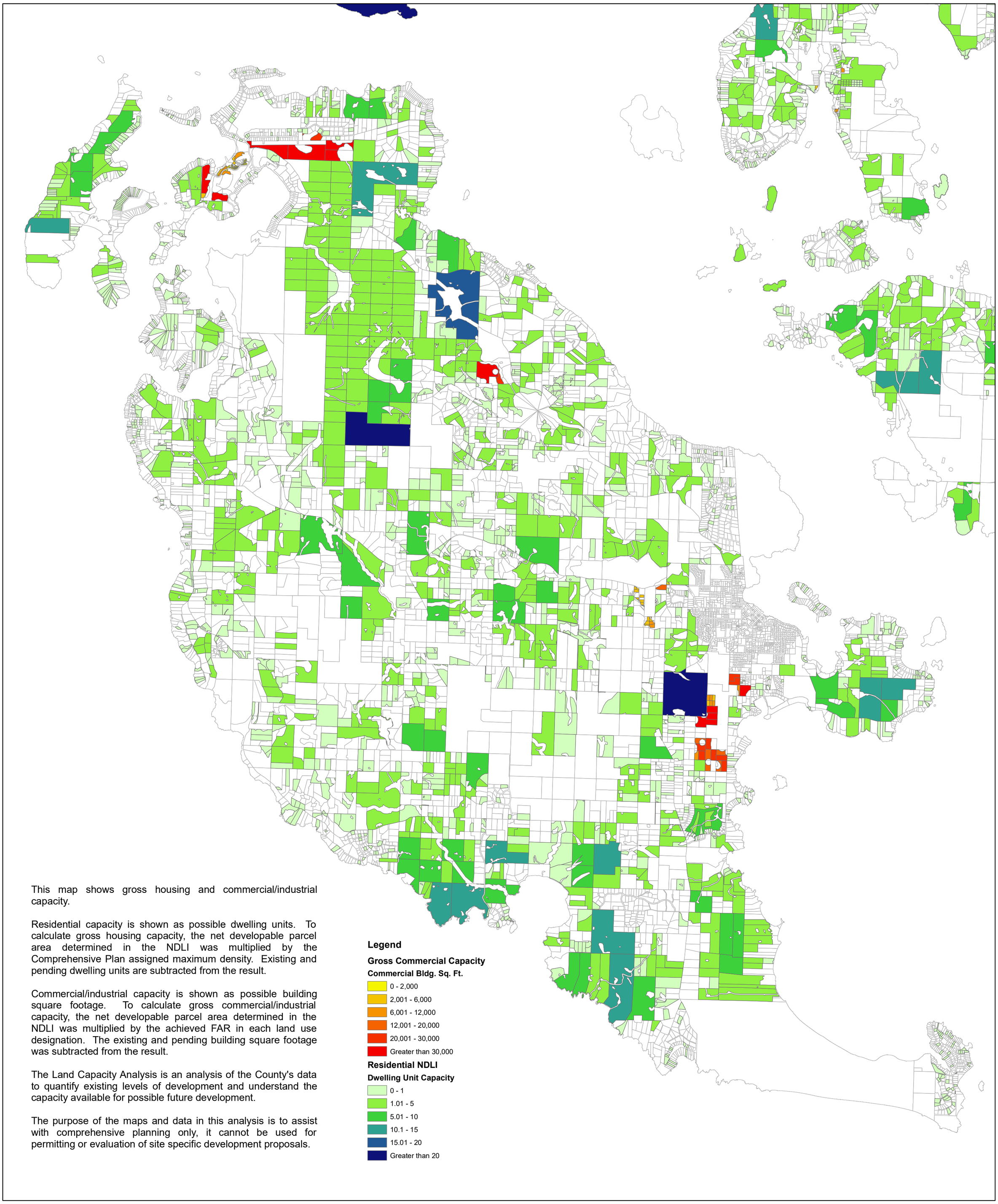
Map 9. Gross Capacity: San Juan Island.



This map shows gross housing and commercial/industrial capacity.

Residential capacity is shown as possible dwelling units. To calculate gross housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Commercial/industrial capacity is shown as possible building square footage. To calculate gross commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the achieved FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

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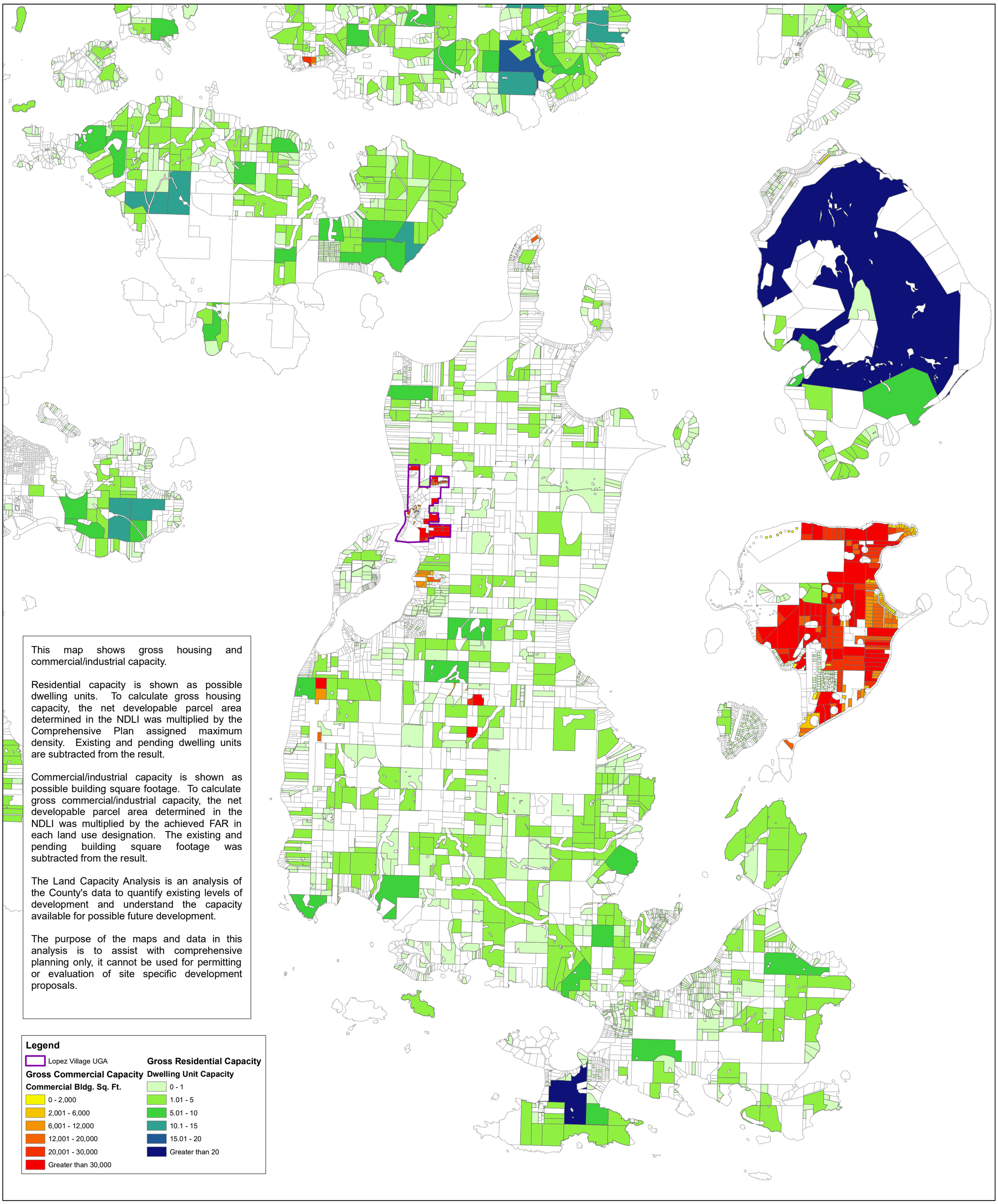
Gross Capacity San Juan Island Version 1.1

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Map 10. Gross Capacity: Lopez and Shaw.



This map shows gross housing and commercial/industrial capacity.

Residential capacity is shown as possible dwelling units. To calculate gross housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Commercial/industrial capacity is shown as possible building square footage. To calculate gross commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the achieved FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

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Legend

Lopez Village UGA

Gross Commercial Capacity

Commercial Bldg. Sq. Ft.

- 0 - 2,000
- 2,001 - 6,000
- 6,001 - 12,000
- 12,001 - 20,000
- 20,001 - 30,000
- Greater than 30,000

Gross Residential Capacity

Dwelling Unit Capacity

- 0 - 1
- 1.01 - 5
- 5.01 - 10
- 10.1 - 15
- 15.01 - 20
- Greater than 20

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

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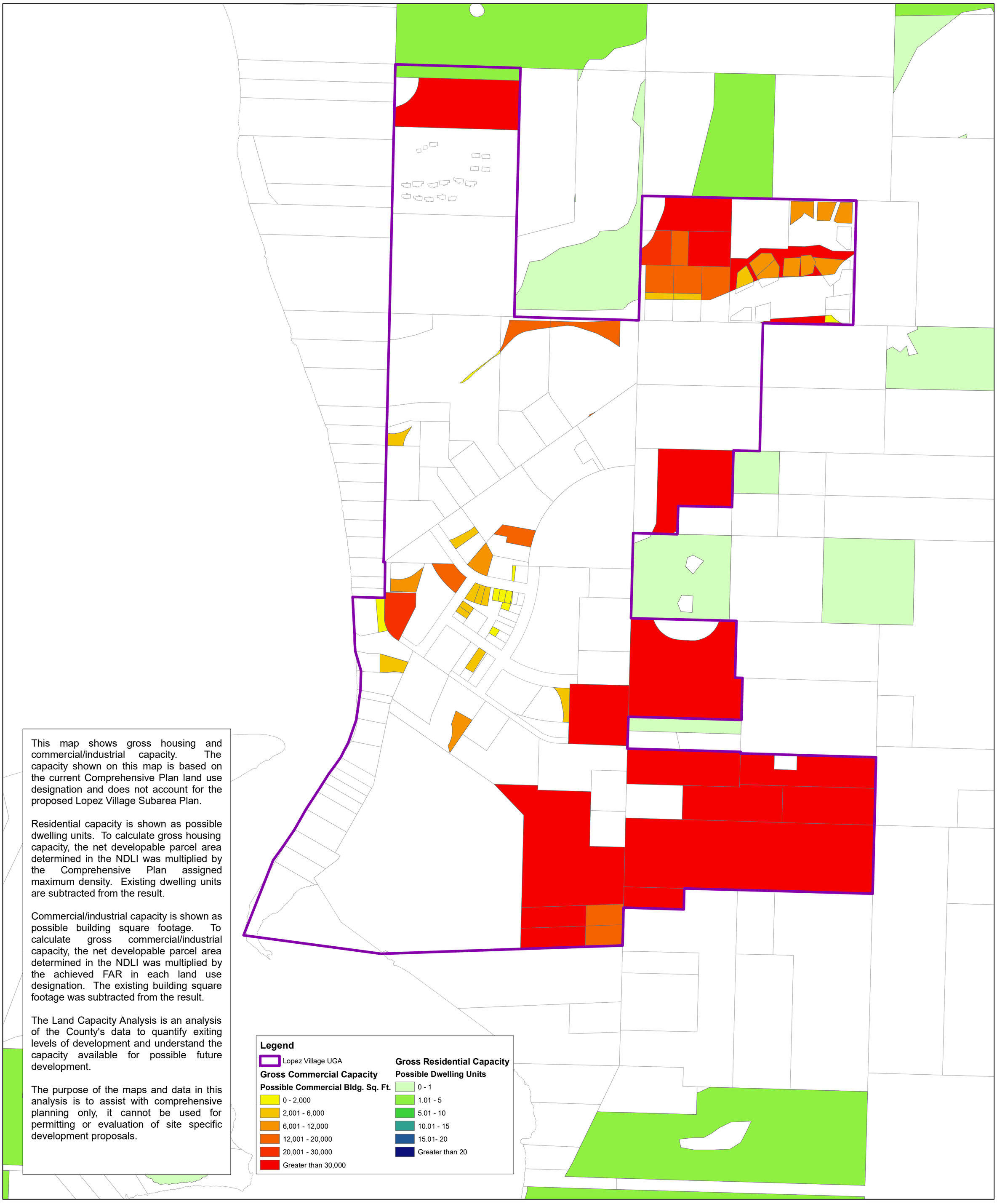
Gross Capacity Lopez and Shaw Version 1.1

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Map 10.A. Gross Capacity: Lopez Village.



This map shows gross housing and commercial/industrial capacity. The capacity shown on this map is based on the current Comprehensive Plan land use designation and does not account for the proposed Lopez Village Subarea Plan.

Residential capacity is shown as possible dwelling units. To calculate gross housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing dwelling units are subtracted from the result.

Commercial/industrial capacity is shown as possible building square footage. To calculate gross commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the achieved FAR in each land use designation. The existing building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify exiting levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 255 510 1,020 1,530 2,040 2,550 Feet

1 in = 320 feet

N

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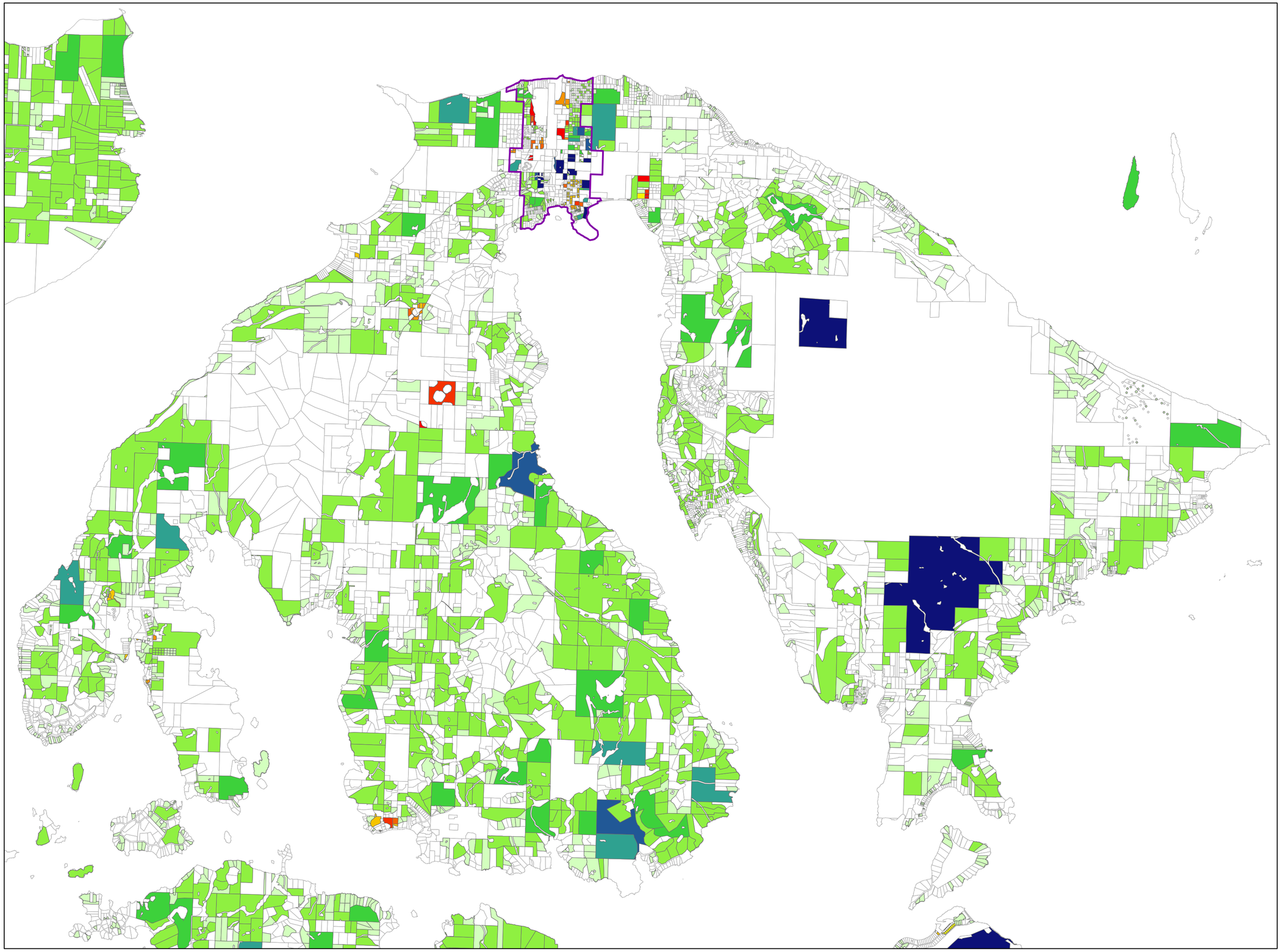
Gross Capacity Lopez Village Version 1.1

Map Drawn: Novembe 1, 2019

Drawn By: Adam Zack, Planner III

Map 11. Gross Capacity: Orcas Island.



Legend

Eastsound UGA

Gross Commercial Capacity

Possible Commercial Bldg. Sq. Ft.

- 0 - 2,000
- 2,001 - 6,000
- 6,001 - 12,000
- 12,001 - 20,000
- 20,001 - 30,000
- Greater than 30,000

Gross Residential Capacity

Possible Dwelling Units

- 0 - 1
- 1.01 - 5
- 5.01 - 10
- 10.1 - 15
- 15.01 - 20
- Greater than 20

This map shows gross housing and commercial/industrial capacity.

Residential capacity is shown as possible dwelling units. To calculate gross housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Commercial/industrial capacity is shown as possible building square footage. To calculate gross commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the achieved FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

Commercial capacity in Service Park and Hamlet Industrial is shown by maximum allowed. See Land Capacity Analysis Report for details.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 1 2 4 6 8 10 Miles

1 in = 1 miles

N

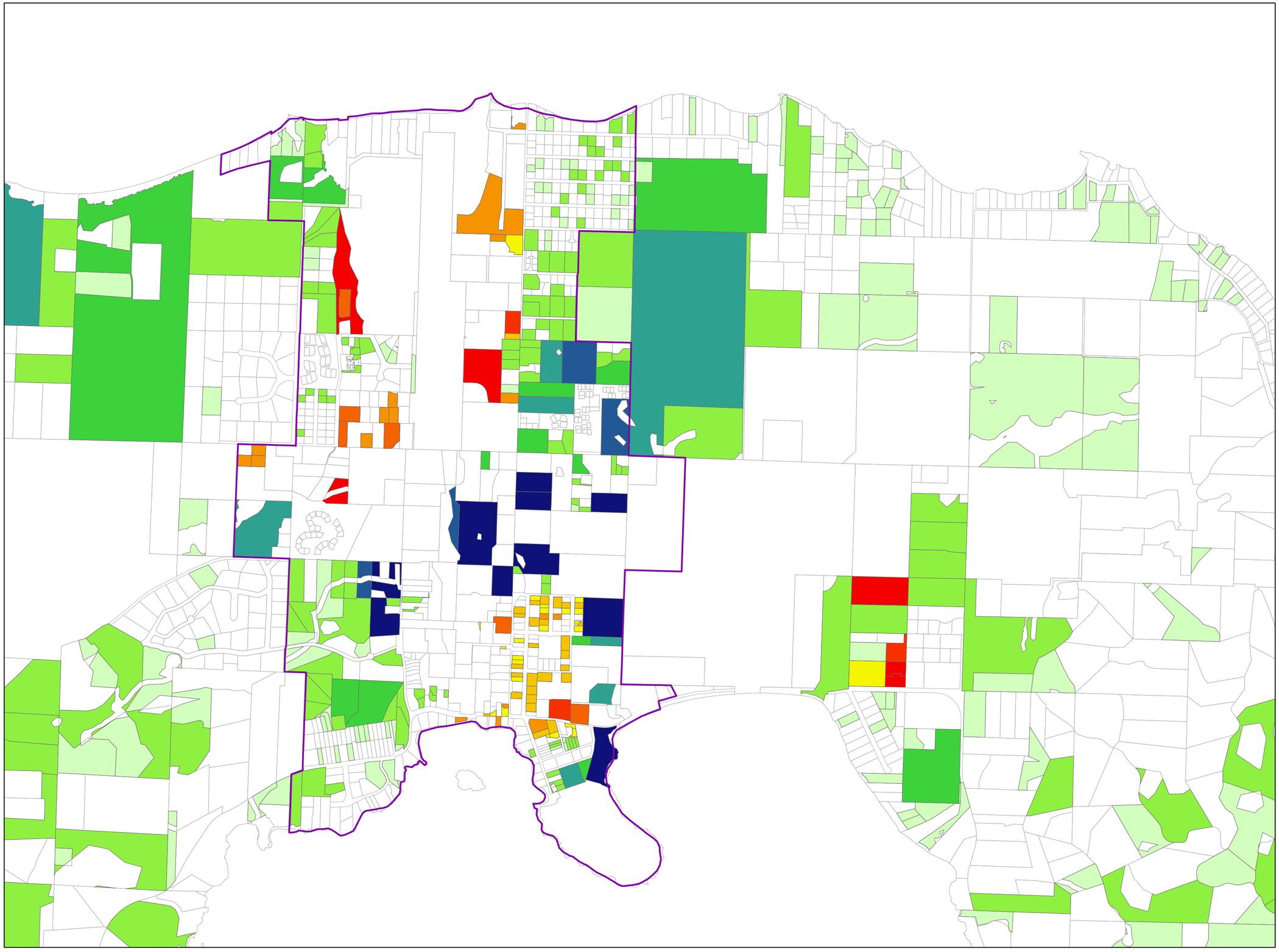
Gross Capacity Orcas Island Version 1.2

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Gross Capacity\G_Cap_Orcas_1-2.mxd

Map 11.A. Gross Capacity: Eastsound.



Legend

Eastsound UGA

Gross Commercial Capacity

Possible Commercial Bldg. Sq. Ft.

- 0 - 2,000
- 2,001 - 6,000
- 6,001 - 12,000
- 12,001 - 20,000
- 20,001 - 30,000
- Greater than 30,000

Gross Residential Capacity

Possible Dwelling Units

- 0 - 1
- 1.01 - 5
- 5.01 - 10
- 10.1 - 15
- 15.01 - 20
- Greater than 20

This map shows gross housing and commercial/industrial capacity.

Residential capacity is shown as possible dwelling units. To calculate gross housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Commercial/industrial capacity is shown as possible building square footage. To calculate gross commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the achieved FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

Commercial capacity in Service Park is shown by maximum allowed. See Land Capacity Analysis report for details.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.2 0.4 0.8 1.2 1.6 2 Miles

1 in = 764 feet

N

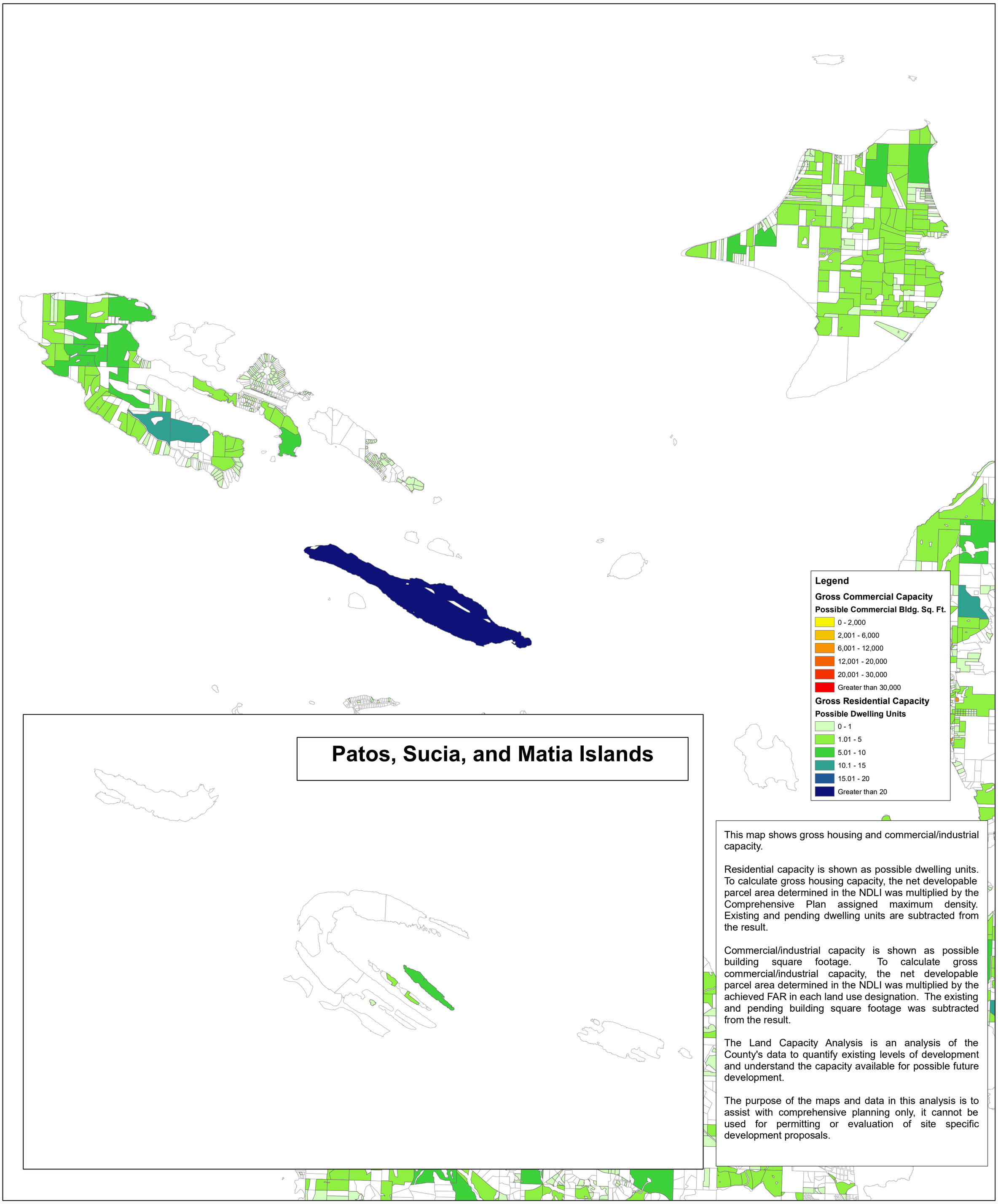
Gross Capacity Eastsound Version 1.2

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Gross Capacity\G_Cap_Eastsound_1-1.mxd

Map 12. Gross Capacity: Outer Islands.



This map shows gross housing and commercial/industrial capacity.

Residential capacity is shown as possible dwelling units. To calculate gross housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Commercial/industrial capacity is shown as possible building square footage. To calculate gross commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the achieved FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Gross Capacity\G_Cap_Outer_Islands_1-1.mxd

Gross Capacity Outer Islands Version 1.1

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

E. Calculating Maximum Commercial, Industrial, and Mixed-Use Building Capacity

The maximum building capacity was calculated based on what is allowed under current development regulations and Plan designations for commercial, industrial and mixed-use. Capacity is measured in building square feet. The result is a map that shows the maximum buildout capacity of each commercial, industrial and mixed-use parcel.

For all of the assumptions and formulas used in determining the maximum buildout capacity, see Section E of Attachment A, the LCA Methodology. Table 14 below summarizes the maximum FAR for each land use designation.

Table 14. Maximum Building FAR by Land Use Designation.

Land Use Designation	Max FAR	Land Use Designation	Max FAR
RC: Rural Commercial	0.3	**OHC:** Olga Hamlet Commercial	Variable[6]
RI: Rural Industrial	0.6	**SP:** Service Park	0.6
RGU: Rural General Use	0.3	**CCC:** Country Corner Commercial	Variable[7]
MPR: Master Planned Resort	N/A[9]	**VC:** Eastsound Village Commercial	Variable[1]
IC: Island Center LAMIRD*	Variable[8]	**M:** Marina	0.9
MC: Marine Center LAMIRD*	Variable[2]	**SLI:** Service and Light Industrial	1.8
DHHC: Deer Harbor Hamlet Commercial	Set[4]	**LUGA:** Lopez Village Urban Growth Area	Variable[2]
DHHI: Deer Harbor Hamlet Industrial	Set[5]	**EAD:** Eastsound Airport District	0.5
OVC: Orcas Village Commercial	Set[3]		
OVT: Orcas Village Transportation	Set[10]		
OCC: Olga Community Center	Variable[6]		

* Limited Area of More Intense Rural Development (LAMIRD)

NOTES:

1. In Eastsound Village Commercial, parcels larger than 5,556 are limited by lot coverage, FAR is 1.625. Parcels smaller than 5,556 are not limited by lot coverage, FAR is 2.25.
2. In Lopez Village Commercial and Marine Center, parcels larger than 5,556 are limited by lot coverage, FAR is 1.95. Parcels smaller than 5,556 are not limited by lot coverage, FAR is 2.7.
3. OVC is limited to 3,000 square feet of floor area.
4. DHHC is limited to 5,000 square feet of floor area.
5. DHHI is limited to 6,000 square feet of floor area.
6. In OHC and OCC Parcels smaller than 6,000 square feet: 3,000 square feet of floor area. Parcels 6,001 to 10,000 square feet: 0.5 FAR. Parcels 10,001 to 16,000 square feet: 0.5 FAR. Parcels 16,001 to 43,560 square feet: 8,000 square feet of floor area. Parcels larger than one acre: 0.2 FAR.
7. In CCC parcels larger than 44,444 square feet have a max floor area of 30,000. Parcels smaller than 44,444: 1.2 FAR.
8. In IC, parcels larger than 4,444 square feet: 1.8 FAR and smaller than 4,444 square feet: 4,000 square feet of floor area.

9. Master Planned Resorts have adopted master plans that determine the dimensional standards and expected development, see LCA Methodology.

8. OVT is limited to 4,000 square feet of floor area.

Commercial, Industrial, and Mixed-Use Maximum Building Capacity

Using the maximum FAR formula for each land use designation, the gross commercial, industrial, and mixed-use capacity in building square footage was calculated for all developable parcels in each relevant land use designation. These were summed. The gross maximum building capacity is shown by land use designation in Table 15 of this report and shown on Maps 13 through 16. The formula used was:

Parcel Area X Maximum FAR = Maximum Building Capacity per Parcel.

Table 15. Maximum Commercial and Industrial Buildout Capacity by Land Use Designation.

Land Use Designation	Developable Acres	Building Capacity	Land Use Designation	Developable Acres	Building Capacity
CCC	5.76	136,286.61	**DHHC**	2.65	28,225.3
DHHI	4.43	31,840.00	**IC**	30.44	2,359,172.99
MC	17.36	1,457,934.96	**MPR**	131.87	N/A[2]
OVC	7.71	22,631.00	**OVT**	5.65	4,000.00
RGU	1145.87	14,742,215.26	**RI**	53.17	1,347,987.66
SLI	19.98	1,521,010.74	**SP**	4.97	129,097.86
LUGA	59.23	5,013,098.98	**VC**	13.15	889,362.82
			M	7.96	307,209.02

Notes:

1. Two land use designations are not shown on Table 14. Rural Commercial (RC) and Olga Hamlet Commercial (OHC) do not have any capacity because they are both fully developed.

2. Development standards in the Master Planned Resort (MRP) land use designation are determined by the adopted master plan. The plan specific parcel information is not included in the available GIS data and so cannot be adequately analyzed with the available information. As a result, maximum building capacity was not calculated in this land use designation. See LCA Methodology for more information (Attachment A).

Maximum Mixed-Use Building Capacity

Some land use designations allow mixed-uses, a combination of residential and commercial development. Assumptions about the proportion of residential and commercial development were used to calculate future capacity for these land use designations. The LCA assumes that mixed-use dwelling units will average 1,000 square feet per dwelling, the same assumption used in mixed-use designations in the Lopez Village and Eastsound urban growth areas. Mixed-use capacity is presented in three scenarios based on different proportions of commercial and residential uses. The scenarios are discussed below. Table 15 below shows the gross mixed-use capacity for all three scenarios.

Mixed-Use Development Scenarios

Mixed-use developments can be composed of any proportion of residential and commercial square footage. Tables 16 through 17 below show the mixed-use capacity based on maximum FAR. For this reason, the LCA presents mixed-use capacity in three scenarios:

Scenario A: Mixed-use parcels develop with one-hundred percent commercial development;

Scenario B: Mixed-use parcels develop with fifty percent of each residential and commercial; and

Scenario C: Mixed-use parcels develop with one-hundred percent residential development.

Gross Mixed-Use Capacity Steps

1. Calculate building square footage capacity using maximum allowed FAR. The result of this step is the capacity for Scenario A.

2. Multiply the maximum building square footage by 0.5 to determine what fifty percent of the square footage is. Fifty percent of the building will be considered commercial capacity in Scenario B. The remaining fifty percent will be used in the next calculation.

3. Divide the fifty percent residential floor area by 1,000 square feet to arrive at the number of possible mixed-use dwelling units for residential capacity in Scenario B. This process assumes that each dwelling unit will be 1,000 square feet.

4. The maximum allowed density is multiplied by the net developable acreage to calculate the possible dwelling units in Scenario C.

Table 16. Gross Maximum Mixed-Use Building Capacity by Land Use Designation.

Scenario A: Mixed-Use Develops 100 Percent Commercial			
Land Use Designation	**Net Developable Acres**	**Possible Commercial Building Square Footage**	**Possible Dwelling Units**
Eastsound Village Commercial	13.15	889,362.82	0
Eastsound Marina	7.96	307,209.02	0
Lopez Village UGA	59.23	5,013,098.98	0
Scenario A Total	**80.34**	**6,209,670.82**	**0**
Scenario B: Mixed-Use Develops with 50 Percent Residential and Commercial			
Land Use Designation	**Net Developable Acres**	**Possible Commercial Building Square Footage**	**Possible Dwelling Units**
Eastsound Village Commercial	13.15	444,681.41	444.68
Eastsound Marina	7.96	153,604.51	61.66
Lopez Village UGA	59.23	2,506,549.49	217.28
Scenario B Total	**80.34**	**3,104,835.41**	**723.62**

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Scenario C: Mixed-Use Develops 100 Percent Residential			
Land Use Designation	**Net Developable Acres**	**Possible Commercial Building Square Footage**	**Possible Dwelling Units**
Eastsound Village Commercial	13.15	0	498.99
Eastsound Marina	7.96	0	61.66
Lopez Village UGA	59.23	0	217.28
Scenario C Total	**80.34**	**0**	**725.83**

Table 17. Gross Maximum Mixed-Use Capacity by Land Use Designation and Category.

Land Use Designation	Category	Developable Acres	Dwelling Unit Capacity[1]	Building Capacity in Square Feet[2]
LUGA	2	35.78	139.93	3,066,479.20
LUGA	4	23.45	77.35	1,946,619.77
M	2	0.89	7.11	34,244.10
M	4	7.07	54.55	272,964.93
VC	2	6.77	260.78	479,052.71
VC	4	6.38	238.22	410,310.10

Notes:

1. Dwelling unit capacity from scenario A is shown in this table. This is the dwelling unit capacity calculated by assuming mixed-use areas develop with one-hundred percent residential.

2. Commercial capacity from scenario C is shown table. This is the commercial building capacity calculated by assuming mixed-use areas develop with one-hundred percent residential.

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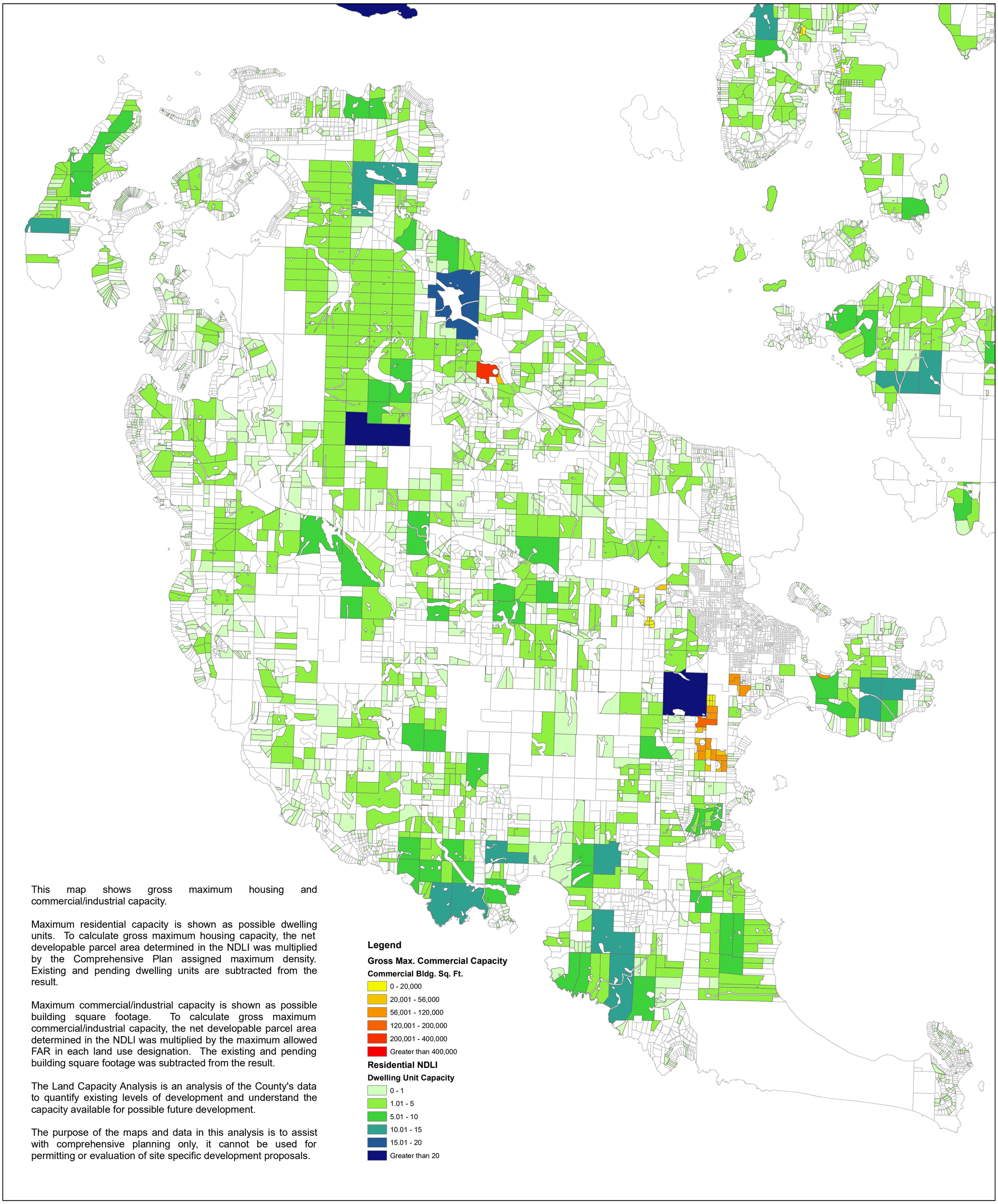
Map 13. Gross Maximum Capacity: San Juan Island.



This map shows gross maximum housing and commercial/industrial capacity.

Maximum residential capacity is shown as possible dwelling units. To calculate gross maximum housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Maximum commercial/industrial capacity is shown as possible building square footage. To calculate gross maximum commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the maximum allowed FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

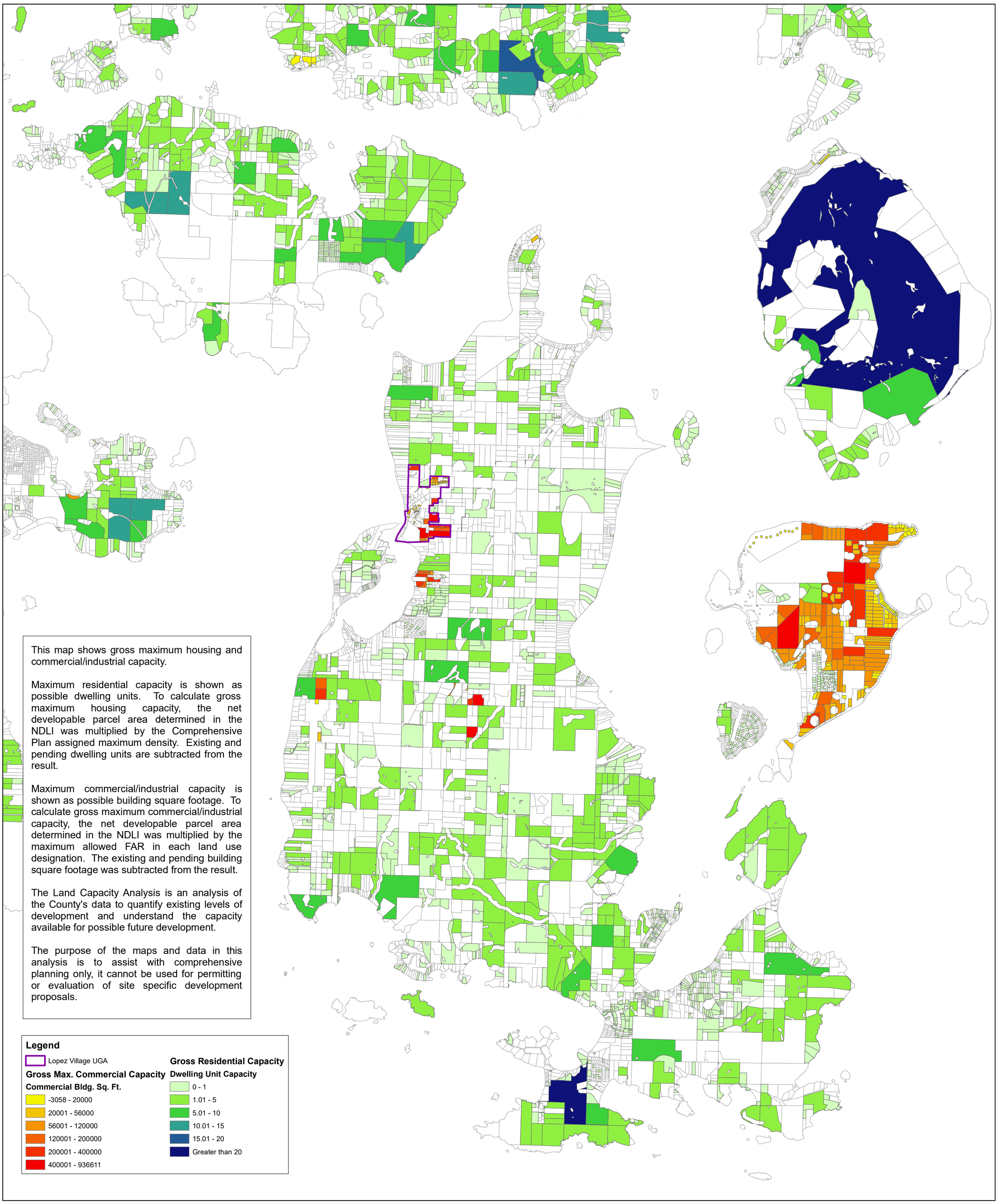
Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Max Capacity\Max-G_Cap_SJI_1-1.mxd

Gross Maximum Capacity San Juan Island Version 1.1

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Map 14. Gross Maximum Capacity: Lopez and Shaw.



This map shows gross maximum housing and commercial/industrial capacity.

Maximum residential capacity is shown as possible dwelling units. To calculate gross maximum housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Maximum commercial/industrial capacity is shown as possible building square footage. To calculate gross maximum commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the maximum allowed FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

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Legend

Lopez Village UGA

Gross Max. Commercial Capacity

Commercial Bldg. Sq. Ft.

- -3058 - 20000
- 20001 - 56000
- 56001 - 120000
- 120001 - 200000
- 200001 - 400000
- 400001 - 936611

Gross Residential Capacity

Dwelling Unit Capacity

- 0 - 1
- 1.01 - 5
- 5.01 - 10
- 10.01 - 15
- 15.01 - 20
- Greater than 20

0 0.5 1 2 3 4 5 Miles

1 in = 1 miles

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Max Capacity\Max-G_G_Cap_Lopez_1-1.mxd

Gross Maximum Capacity Lopez and Shaw Version 1.1

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Map 14.A. Gross Maximum Capacity: Lopez Village.

This map shows gross maximum housing and commercial/industrial capacity. The capacity shown on this map is based on the current Comprehensive Plan land use designation and does not account for the proposed Lopez Village Subarea Plan.

Maximum residential capacity is shown as possible dwelling units. To calculate gross maximum housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Maximum commercial/industrial capacity is shown as possible building square footage. To calculate gross maximum commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the maximum allowed FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

Legend

Lopez Village UGA

Gross Max. Commercial Capacity

Commercial Bldg. Sq. Ft.

- 0 - 20,000
- 20,001 - 56,000
- 56,001 - 120,000
- 120,001 - 200,000
- 200,001 - 400,000
- Greater than 400,000

Gross Residential Capacity

Possible Dwelling Units

- 0 - 1
- 1.01 - 5
- 5.01 - 10
- 10.01 - 15
- 15.01 - 20
- Greater than 20

0 255 510 1,020 1,530 2,040 2,550 Feet

1 in = 320 feet

N

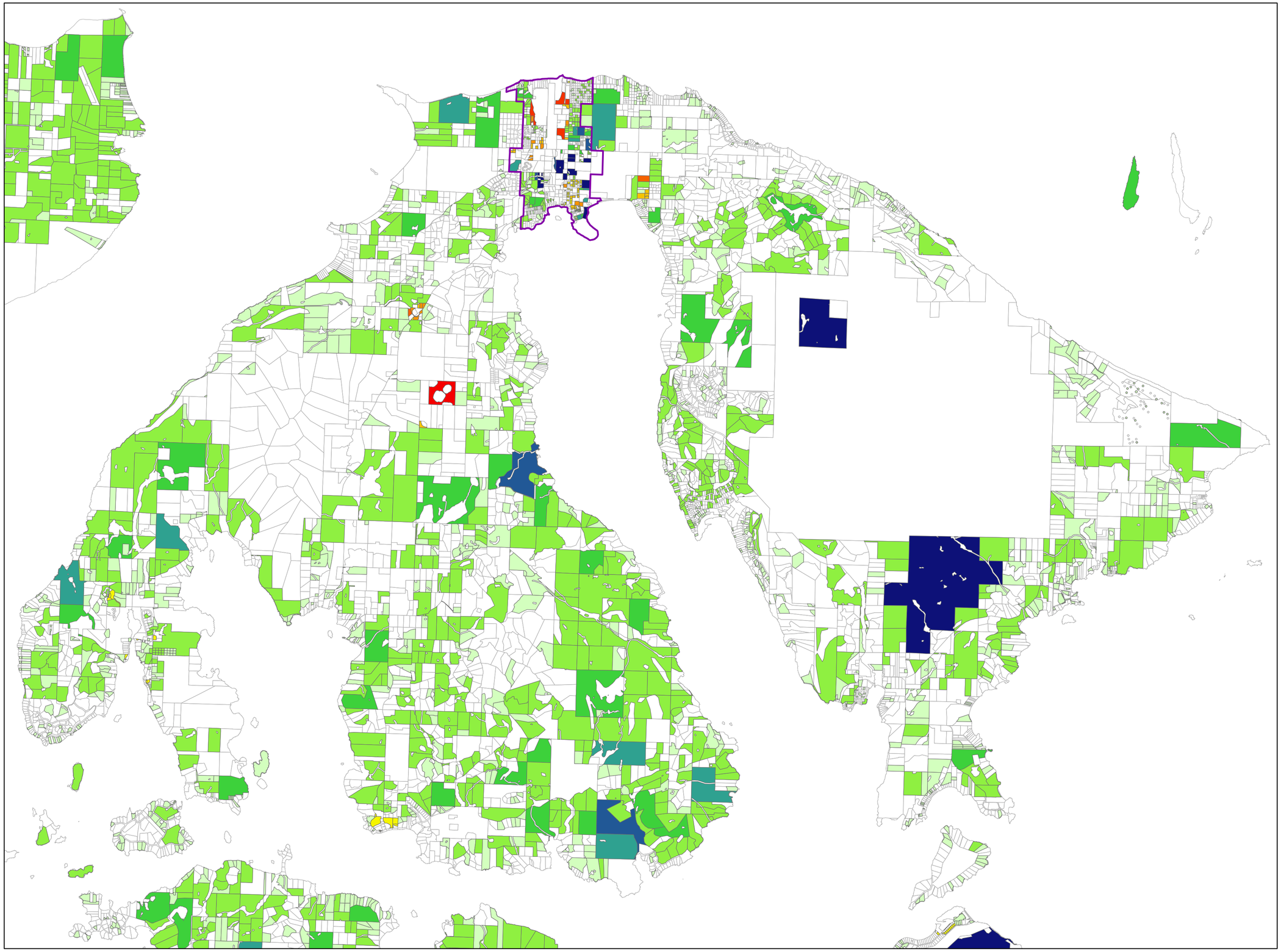
Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Max Capacity\Max-G_Cap_Lopez_Village_1-1.mxd

Gross Maximum Capacity Lopez Village Version 1.1

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Map 15. Gross Maximum Capacity: Orcas Island.



Legend

Eastsound UGA

Gross Max. Commercial Capacity

Commercial Bldg. Sq. Ft.

- 0 - 20,000
- 20,001 - 56,000
- 56,001 - 120,000
- 120,001 - 200,000
- 200,001 - 400,000
- Greater than 400,000

Gross Residential Capacity

Possible Dwelling Units

- 0 - 1
- 1.01 - 5
- 5.01 - 10
- 10.01 - 15
- 15.01 - 20
- Greater than 20

This map shows gross maximum housing and commercial/industrial capacity.

Maximum residential capacity is shown as possible dwelling units. To calculate gross maximum housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Maximum commercial/industrial capacity is shown as possible building square footage. To calculate gross maximum commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the maximum allowed FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

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0 1 2 4 6 8 10 Miles

1 in = 1 miles

N

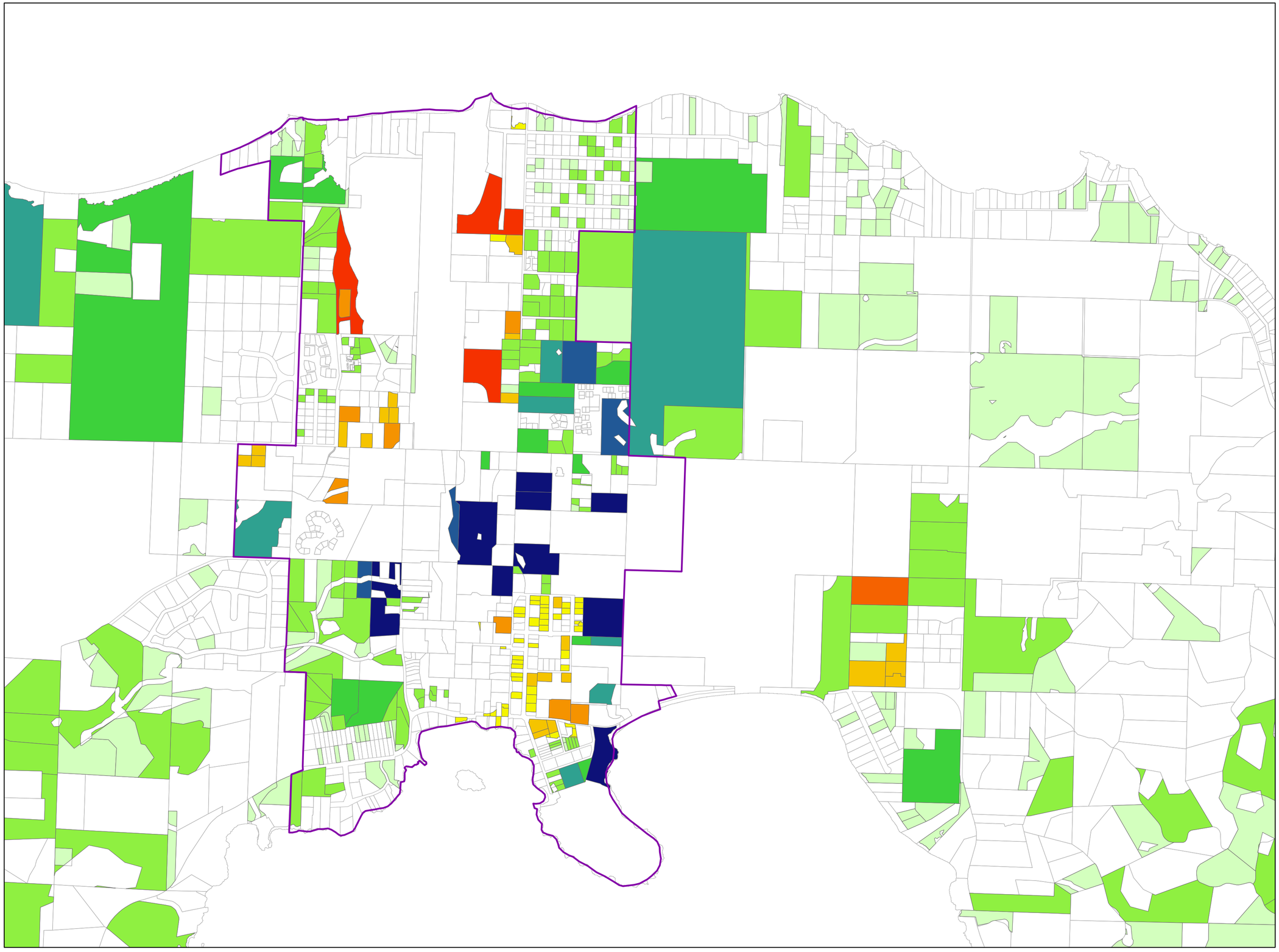
Gross Maximum Capacity Orcas Island Version 1.2

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Max Capacity\Max-G_Cap_Orcas_1.mxd

Map 15.A. Gross Maximum Capacity: Eastsound.



Legend

Eastsound UGA

Gross Max. Commercial Capacity

Commercial Bldg. Sq. Ft.

- 0 - 20,000
- 20,001 - 56,000
- 56,001 - 120,000
- 120,001 - 200,000
- 200,001 - 400,000
- Greater than 400,000

Gross Residential Capacity

Possible Dwelling Units

- 0 - 1
- 1.01 - 5
- 5.01 - 10
- 10.1 - 15
- 15.01 - 20
- Greater than 20

This map shows gross maximum housing and commercial/industrial capacity.

Maximum residential capacity is shown as possible dwelling units. To calculate gross maximum housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Maximum commercial/industrial capacity is shown as possible building square footage. To calculate gross maximum commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the maximum allowed FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 0.2 0.4 0.8 1.2 1.6 2 Miles

1 in = 764 feet

N

Gross Maximum Capacity Eastsound Version 1.2

Map Drawn: November 1, 2019

Drawn By: Adam Zack, Planner III

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Maps for June staff report\Gross Capacity\Max-G_Cap_Eastsound_1-2.mxd

F. Final Capacity

Final capacity was calculated using the tables created in the gross capacity step. Columns were added to the tables to include public use, market, seasonal and recreational home factors. The Final Capacity column in the final capacity tables reflects the gross capacity from the previous LCA tasks minus the deductions described below.

The calculation of final capacity on vacant, partially used and re-developable parcels is based on assumptions about how much development is expected on each parcel. The LCA uses two ratios in the final capacity calculations: achieved FAR and maximum possible FAR. The achieved FAR is based on existing development intensity and provides a metric of what development is likely to happen. The maximum FAR is the full FAR allowed under current development regulations. The maximum FAR was used in Task E to calculate the full intensity of development allowed under the development code.

Public Use Factor

The Public Use Factor of five (5) percent was deducted to account for the lands that may be used for public purposes, such as road right-of-ways, utility corridors, public pathways and other lands set aside for public uses.

Market Factor

A market factor of twenty-five (25) percent was deducted from the gross commercial and residential to account for the land that is not available for development during the planning period. It is expected that over the 20-year planning period some lands will be kept off the market due to speculative holding, land banking, and personal use.

Seasonal/Recreational Home Factor

A thirty-five (35) percent deduction was taken from the gross housing capacity. This deduction addresses US Census data indicating that around 35 percent of the houses in the County were categorized as vacant for seasonal, recreational, or occasional use.

Capacity Deductions

The final capacity is shown in Tables 18 through 33 below. The tables show each of the deductions and the final capacity once they are removed from the gross. The tables also show the population capacity for each land use designation by multiplying the final dwelling unit capacity by 2.04, the average number of people per household in San Juan County. Finally, the tables show San Juan County population forecast information as it relates to the LCA, particularly the Eastsound and Lopez Village UGAs.

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Table 18. Eastsound UGA Achieved FAR Final Capacity by Land Use Designation.

2036 Orcas Population	**6423**
April 1, 2016 Population	**5395**
Additional Population 2016-2036	**1028**
50% of projected Orcas Population Growth for sizing UGA Capacity	514

Commercial and Residential Capacity

Scenario A - Village Commercial and Marina Designations develop with 100% commercial

	Gross		Market Factor Reductions							Net			
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Com. Public Use Factor (5%)**	**Res. Public Use Factor (5%)**	**Com. Market Factor (25%)**	**Res. Market Factor (25%)**	**Res. Seasonal and Recreational Home Factor (35%)**	**Res. Subtotal Market Factor Capacity Reductions**	**Com. Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	**Capacity Excess/ Shortfall**
ER1	1.49	0	0	0.07	0	0.37	0.52	0.97	0	0.52	0	1	
ER1P	16.25	0	0	0.81	0	4.06	5.69	10.56	0	5.69	0	12	
ER2	37.22	0	0	1.86	0	9.30	13.03	24.19	0	13.03	0	27	
ER2P	45.45	0	0	2.27	0	11.36	15.91	29.54	0	15.91	0	32	
ER412	20.47	0	0	1.02	0	5.12	7.17	13.31	0	7.17	0	15	
ER4P	158.43	0	0	7.92	0	39.61	55.45	102.98	0	55.45	0	113	
VC	-27	167,248.51	8,362.43	0	41,812.13	0	0	0	50,174.55	-27.00	117,073.95	-55	
M	-2	311,966.02	15598.30	0	77,991.51	0	0	0	93,589.81	-2.00	218,376.21	-4	
SLI	-5.00	369,873.98	18493.70	0	92,468.50	0	0	0	110,962.19	-5.00	258,911.79	-10	
EAD	0	0	0	0	0	0	0	0	0	0	0	0	
EN	0	0	0	0	0	0	0	0	0	0	0	0	
VR	519.12	0.00	0.00	25.96	0.00	129.78	181.69	337.43	0.00	181.69	0	371	
Total	**764**	**849,088.51**	**42,454.43**	**39.57**	**212,272.13**	**199.61**	**279.45**		**254,726.55**	**245**	**594,362**	**501**	**-13**	**514**

Scenario B - Village Commercial and Marina Designations develop with 50% commercial and 50% residential

Land Use Designation														
ER1	1.49	0	0	0.07	0	0.37	0.52	0.97	0	0.52	0	1.07		
ER1P	16.25	0	0	0.81	0	4.06	5.69	10.56	0	5.69	0	11.60		
ER2	37.22	0	0	1.86	0	9.30	13.03	24.19	0	13.03	0	26.57		
ER2P	45.45	0	0	2.27	0	11.36	15.91	29.54	0	15.91	0	32.45		
ER412	20.47	0	0	1.02	0	5.12	7.17	13.31	0	7.17	0	14.62		
ER4P	158.43	0	0	7.92	0	39.61	55.45	102.98	0	55.45	0	113.12		
VC	68.95	83,298.25	4,164.91	3.45	20,824.56	17.24	24.13	44.82	24,989.48	24.13	58,308.78	49.23		
M	4.56	4,560.84	228.04	0.23	1,140.21	1.14	1.60	2.96	1,368.25	1.60	3,192.59	3.26		
SLI	-5.00	369,873.98	18,493.70	0	92,468.50	0	0	0	110,962.19	-5.00	258,911.79	-10.2		
EAD	0	0	0	0	0	0	0	0	0	0	0	0		
EN	0	0	0	0	0	0	0	0	0	0	0	0		
VR	519.12	0	0	25.96	0	129.78	181.69	337.43	0.00	181.69	0	370.65		
Total	**866.95**	**457,733.07**	**22,886.65**	**43.35**	**114,433.27**	**217.99**	**305.18**	**566.52**	**137,319.92**	**300**	**320,413**	**612**	**98**	**514**

1

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Scenario C - Village Commercial and Marina Designations Develop with 100% Residential

2036 Orcas Population	**6423**
April 1, 2016 Population	**5395**
Additional Population 2016-2036	**1028**
50% of projected Orcas Population Growth for sizing UGA Capacity	514

	Gross		Market Factor Reductions							Net			
	Gross Residential Capacity (Dwelling Units)	**Gross Non-Residential Capacity (Building square feet)**	**Com. Public Use Factor (5%)**	**Res. Public Use Factor (5%)**	**Com. Market Factor (25%)**	**Res. Market Factor (25%)**	**Res. Seasonal and Recreational Home Factor (35%)**	**Res. Subtotal Market Factor Capacity Reductions**	**Com. Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	**Capacity Excess/ Shortfall**
ER1	1.49	0	0	0.07	0	0.37	0.52	0.97	0	0.52	0	1.06	
ER1P	16.25	0	0	0.81	0	4.06	5.69	10.56	0	5.69	0	11.60	
ER2	37.22	0	0	1.86	0	9.31	13.03	24.19	0	13.03	0	26.58	
ER2P	45.45	0	0	2.27	0	11.36	15.91	29.54	0	15.91	0	32.45	
ER412	20.47	0	0	1.02	0	5.12	7.16	13.31	0	7.16	0	14.62	
ER4P	158.43	0	0	7.92	0	39.61	55.45	102.98	0	55.45	0	113.12	
VC	498.99	0	0	25	0	124.75	174.65	324.35	0	174.65	0	356.28	
M	61.66	0	0	3	0	15.42	21.58	40.08	0	21.58	0	44.03	
SLI	-5.00	369,873.98	18,493.70	0	92,468.50	0	0	0	110,962.19	-5.00	258911.79	-10.20	
EAD	0.00	0	0	0	0	0	0	0	0	0	0	0.00	
EN	0.00	0	0	0	0	0	0	0	0	0	0	0.00	
VR	519.12	0	0	25.96	0	129.78	181.69	337.43	0	181.69	0	370.65	
Total	**1354.08**	**369,873.98**	**18,493.70**		**92,468.50**				**110,962.19**	**471**	**258,912**	**960**	**446**

1 **Table 19. Lopez Village UGA Achieved FAR Final Capacity by Land Use Designation.**

Lopez Village Capacity

2036 Lopez Population	**2,936**
April 1, 2016 Lopez Population	**2,466**
Additional Lopez Population 2036	470
50% of projected Lopez Population Growth for sizing UGA Capacity	**235**

Scenario A. Mixed-Use develops with 100% commercial

	Gross		Market Factor Reductions							Net			
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Res. Public Use Factor (5%)**	**Com. Public Use Factor (5%)**	**Res. Market Factor (25%)**	**Com. Market Factor (25%)**	**Res. Seasonal/ Recreational Home Factor (35%)**	**Subtotal Res. Market Factor Capacity Reductions**	**Subtotal Com. Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	**Capacity Excess/ Shortfall**
LUGA	-26.00	2,310,313.95	0	115,515.70	0	577,578.49	0	0	693,094.19	-26.00	1,617,220	-53.04	
Total	**-26.00**	**2,310,313.95**	**0**	**115,515.70**	**0**	**577,578.49**	**0**	**0**	**693,094.19**	**-26**	**1,617,220**	**-53**	**-288**

Scenario B. Mixed-Use develops with 50% commercial and 50% residential

	Gross		Market Factor Reductions							Net			
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Res. Public Use Factor (5%)**	**Com. Public Use Factor (5%)**	**Res. Market Factor (25%)**	**Com. Market Factor (25%)**	**Res. Seasonal/ Recreational Home Factor (35%)**	**Subtotal Res. Market Factor Capacity Reductions**	**Subtotal Com. Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	**Capacity Excess/ Shortfall**
LUGA	217.28	1,155,130.98	10.86	57,756.55	54.32	288,782.74	76.05	141.23	346,680.52	76.05	808,450.45	155.14	
Total	**217**	**1,155,130.98**	**10.86**	**57,756.55**	**54.32**	**288783**	**76.05**	**141.23**	**346,681**	**76**	**808,450**	**155**	**-80**

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Scenario C. Mixed-Use develops with 100% residential

	Gross		Market Factor Reductions							Net			
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Res. Public Use Factor (5%)**	**Com. Public Use Factor (5%)**	**Res. Market Factor (25%)**	**Com. Market Factor (25%)**	**Res. Seasonal/ Recreational Home Factor (35%)**	**Subtotal Res. Market Factor Capacity Reductions**	**Subtotal Com. Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	**Capacity Excess/ Shortfall**
LUGA	217.28	0	10.86	0	54.32	0	76.05	141.23	0	76.05	0	155.14	
Total	**217.28**	**0**	**10.86**	**0**	**54.32**	**0**	**76.05**	**141.23**	**0**	**76**	**0**	**155**	**-80**

Table 20. Eastsound Subarea Achieved FAR Final Capacity by Land Use Designation.

Rural Eastsound Subarea Capacity

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

No mixed-use districts in Rural Eastsound Subarea

	Gross		Market Factor Reductions				Net		
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Public Use Factor (5%)**	**Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**
ERR 5P	16.25	0	0.81	4.06	5.69	10.56	5.69		11.60
ER	19.82	0	0.99	4.96	6.94	12.88	6.94		14.15
SP	0	0	0	0.00	0	0	0	-	0
CCC	0	688.32	34	172.08	0	206	0	481.82	0
ERR 2P	22.27	0	1.11	5.57	7.79	14.47	7.79		15.90
Total	**58.34**	**688.32**	**37.33**	**186.66**	**20.42**	**244.42**	**20**	**482**	**42**

Table 21. Deer Harbor Final Achieved FAR Capacity by Land Use Designation.

Deer Harbor Capacity

2036 County Population	19,423
April 1, 2016 Population	16,314
Additional Population 2016-2036	3,109
Additional Households at 2.04 people per household	1,524

No mixed-use districts in Deer Harbor

	Gross		Market Factor Reductions				Net		
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Public Use Factor (5%)	Market Factor (25%)	Seasonal/ Recreational Home Factor (35%)	Subtotal Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)
DHHC		28,152.01	1,407.60	7038	0	8,445.60	0	19,706.41	0
DHHI		0	0	0	0	0	0		0
DHHP		0	0	0	0	0	0		0
DHHR	48.46		2.42	12	16.96	31.50	16.96		34.60
Total	**48.46**	**28,152.01**	**1,410.02**	**7050**	**16.96**	**8,477.10**	**17**	**19,706**	**35**

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Table 22. Orcas Village Achieved FAR Final Capacity by Land Use Designation.

Orcas Village Capacity

No mixed-use districts in Orcas Village

	Gross		Market Factor Reductions				Net		
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Public Use Factor (5%)**	**Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**
OVC	0	48,642.71	2,432.14	12,160.68	0	14,592.81	0	34,049.90	0
OVR	10.73	0	0.54	2.68	3.76	6.97	3.76		7.66
OVT	0	0	0	0	0	0	0		0
Total	**10.73**	**48,642.71**	**2,432.67**	**12,163.36**	**3.76**	**14,600**	**4**	**34,050**	**8**

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

Table 23. Olga Hamlet Achieved FAR Final Capacity by Land Use Designation.

Olga Capacity

No mixed-use districts in Olga

	Gross		Market Factor Reductions				Net		
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Public Use Factor (5%)**	**Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**
OCC		0	0	0	0	0	0		0
OHC		0	0	0	0	0	0		0
OPS		0	0	0	0	0	0		0
OH	14.76	0	0.74	4	5.17	9.59	5.17		10.54
Total	**15**	**0.00**	**0.74**	**4**	**5.17**	**10**	**5**		**11**

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

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Table 24. Activity Center Achieved FAR Final Capacity by Land Use Designation.

Activity Center Capacity

No mixed-use districts in activity centers

	Gross		Market Factor Reductions				Net		
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Public Use Factor (5%)**	**Market Factor (25%)**	**Res. Seasonal/ Recreational Home Factor (35%)**	**Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**
MPR	0	514,760.14	25,738.01	128,690.04	0	154,428.04	0	360,332.10	0
ACT	81.73	0	4.09	20.43	28.61	53.12	28.61	0	58.36
IC (LAMIRD)	0	263,578.64	13,178.93	0	92,252.53	105,431.46	0	158,147.19	0
2 BDD	19.17	0	0.96	5	6.71	12.46	6.71	0	13.69
MC (LAMIRD)	0	67,031.37	3,351.57	16,757.84	0	20,109.41	0	46,921.96	95,720.80
Total	**100.90**	**845,370.16**	**42,273.55**	**145,473.10**	**92,287.84**	**280,034.50**	**35**	**565,401**	**95,793**

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

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Table 25. Rural Achieved FAR Final Capacity by Land Use Designation.

Capacity

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

There are no mixed-use land use designation in the Rural areas

	Gross		Market Factor Reductions				Net		
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Public Use Factor (5%)**	**Market Factor (25%)**	**Res. Seasonal/ Recreational Home Factor (35%)**	**Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**
RFF	3,232.19	0	161.61	808.05	1,131.27	2,100.93	1,131.27	0	2,307.79
RR	430.08	0	21.50	107.52	150.53	279.56	150.53	0	307.08
RC	0	0	0	0	0	0	0	0	0
RI	0.00	38,688.46	1,934.42	9,672.11	0	11,606.54	0	27,081.92	0
C	137.93	0	6.90	34.48	48.28	89.66	48.28	0	98.48
N	0	0	0	0	0	0	0	0	0
LGRA	2.36	0	0.12	0.59	0.82	1.53	0.82	0	1.68
FO	384.89	0	19.24	96.22	134.71	250.18	134.71	0	274.81
AG	355.97	0	17.80	88.99	124.59	231.38	124.59	0	254.16
RGU	0	5,890,146.34	294,507.32	1,472,536.59	0	1,767,043.90	0	4,123,102.44	0
Total	**4,543.43**	**5,928,834.80**	**296,668.91**	**1,483,344.56**	**1,590.20**	**1,781,603.67**	**1,590**	**4,150,184**	**3,244**

Table 26. Eastsound UGA Maximum FAR Final Capacity by Land Use Designation.

Commercial and Residential Capacity

2036 Orcas Population	6423
April 1, 2016 Population	5395
Additional Population 2016-2036	1028
50% of projected Orcas Population Growth for sizing UGA Capacity	514

Scenario A - Village Commercial and Marina Designations develop with 100% commercial

	Gross		Market Factor Reductions							Net				
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Com. Public Use Factor (5%)	Res. Public Use Factor (5%)	Com. Market Factor (25%)	Res. Market Factor (25%)	Res. Seasonal and Recreational Home Factor (35%)	Res. Subtotal Market Factor Capacity Reductions	Com. Subtotal Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)	Capacity Excess/ Shortfall	
ER1	1.49	0	0	0.07	0	0.37	0.52	0.97	0	0.52	0	1		
ER1P	16.25	0	0	0.81	0	4.06	5.69	10.56	0	5.69	0	12		
ER2	37.22	0	0	1.86	0	9.30	13.03	24.19	0	13.03	0	27		
ER2P	45.45	0	0	2.27	0	11.36	15.91	29.54	0	15.91	0	32		
ER412	20.47	0	0	1.02	0	5.12	7.17	13.31	0	7.17	0	15		
ER4P	158.43	0	0	7.92	0	39.61	55.45	102.98	0	55.45	0	113		
VC	-27	889,362.82	44,468.14	0	222,340.71	0	0	0	266,808.85	-27.00	622,553.97	-55		
M	-2	307,209.02	15,360.45	0	76,802.26	0	0	0	92,162.71	-2.00	215,046.31	-4		
SLI	-5.00	1,521,010.74	76,050.54	0	380,252.69	0	0	0	456,303.22	-5.00	1,064,707.52	-10		
EAD	0	0	0	0	0	0	0	0	0	0	0	0		
EN	0	0	0	0	0	0	0	0	0	0	0	0		
VR	519.12	0.00	0.00	25.96	0.00	129.78	181.69	337.43	0.00	181.69	0	371		Forecasted Population
Total	**764.44**	**2,717,582.58**	**135,879.13**	**39.57**	**679,395.65**	**199.61**	**279.45**		**815,274.77**	**245**	**1,902,307.81**	**501**	**-13**	**514**

Scenario B - Village Commercial and Marina Designations develop with 50% commercial and 50% residential

Land Use Designation														
ER1	1.49	0	0	0.07	0	0.37	0.52	0.97	0	0.52	0	1.07		
ER1P	16.25	0	0	0.81	0	4.06	5.69	10.56	0	5.69	0	11.60		
ER2	37.22	0	0	1.86	0	9.30	13.03	24.19	0	13.03	0	26.57		
ER2P	45.45	0	0	2.27	0	11.36	15.91	29.54	0	15.91	0	32.45		
ER412	20.47	0	0	1.02	0	5.12	7.17	13.31	0	7.17	0	14.62		
ER4P	158.43	0	0	7.92	0	39.61	55.45	102.98	0	55.45	0	113.12		
VC	444.68	444,681.41	22,234.07	22.23	111,170.35	111.17	155.64	289.04	133,404.42	155.64	311,276.99	317.50		
M	61.66	153,604.51	7,680.23	3.08	38,401.13	15.42	21.58	40.08	46,081.35	21.58	107,523.16	44.03		
SLI	-5.00	1,566,266.74	78,313.34	0	391,566.69	0	0	0	469,880.02	-5.00	1,096,386.72	-10.2		
EAD	0	0.00	0.00	0	0	0	0	0	0	0	0	0		
EN	0	0.00	0.00	0	0	0	0	0	0	0	0	0		
VR	519.12	0.00	0.00	25.96	0	129.78	181.69	337.43	0.00	181.69	0	370.65		Forecasted Population
Total	**1,299.78**	**2,164,552.66**	**108,227.63**	**64.99**	**541,138.17**	**326.19**	**456.67**	**847.86**	**649,365.80**	**452**	**1,515,187**	**921**	**407**	**514**

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Scenario C - Village Commercial and Marina Designations Develop with 100% Residential

Commercial and Residential Capacity

	Gross		Market Factor Reductions							Net				2036 Orcas Population April 1, 2016 Population Additional Population 2016-2036
	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Public Use Factor (5%)	Res. Public Use Factor (5%)	Market Factor (25%)	Res. Market Factor (25%)	Res. Seasonal and Recreational Home Factor (35%)	Res. Subtotal Market Factor Capacity Reductions	Com. Subtotal Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)	Capacity Excess/ Shortfall	50% of projected Orcas Population Growth for sizing UGA Capacity
ER1	1.49	0	0	0.07	0	0.37	0.52	0.97	0	0.52	0	1.06		
ER1P	16.25	0	0	0.81	0	4.06	5.69	10.56	0	5.69	0	11.60		
ER2	37.22	0	0	1.86	0	9.31	13.03	24.19	0	13.03	0	26.58		
ER2P	45.45	0	0	2.27	0	11.36	15.91	29.54	0	15.91	0	32.45		
ER412	20.47	0	0	1.02	0	5.12	7.16	13.31	0	7.16	0	14.62		
ER4P	158.43	0	0	7.92	0	39.61	55.45	102.98	0	55.45	0	113.12		
VC	498.99	0	0	25	0	124.75	174.65	324.35	0	174.65	0	356.28		
M	61.66	0	0	3	0	15.42	21.58	40.08	0	21.58	0	44.03		
SLI	-5.00	1,566,266.74	78,313.34	0	391,566.69	0	0	0	469,880.02	-5.00	1096386.72	-10.20		
EAD	0.00	0	0	0	0	0	0	0	0	0	0	0.00		
EN	0.00	0	0	0	0	0	0	0	0	0	0	0.00		
VR	519.12	0	0	25.96	0	129.78	181.69	337.43	0	181.69	0	370.65		Forecasted Population
Total	**1,354.08**	**1,566,266.74**	**78,313.34**	**67.70**	**391,566.69**	**339.77**	**475.68**	**883.40**	**469,880.02**	**471**	**1,096,387**	**960**	**446**	**514**

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Table 27. Lopez Village UGA Maximum FAR Final Capacity by Land Use Designation.

Lopez Village Capacity

2036 Lopez Population	2,936
April 1, 2016 Lopez Population	2,466
Additional Lopez Population 2036	470
Additional Lopez Households 2036	230
50% of projected Lopez Population Growth for sizing UGA Capacity	235
50% of projected Lopez Household growth	115

Scenario A. Mixed-Use develops with 100% commercial

	Gross		Market Factor Reductions							Net				
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Res. Public Use Factor (5%)	Com. Public Use Factor (5%)	Res. Market Factor (25%)	Com. Market Factor (25%)	Res. Seasonal/ Recreational Home Factor (35%)	Subtotal Res. Market Factor Capacity Reductions	Subtotal Com. Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)	Capacity Excess/ Shortfall (dwelling units)	
LUGA	-26.00	5,013,098.98	0	250,654.95	0	1,253,274.75	0	0	1,503,929.69	-26.00	3,509,169.29	-53.04		Forecasted Population
Total	**-26.00**	**5,013,098.98**	**0**	**250,654.95**	**0**	**1,253,274.75**	**0**	**0**	**1,503,929.69**	**-26**	**3,509,169**	**-53**	**-168**	**115**

Scenario B. Mixed-Use develops with 50% commercial and 50% residential

	Gross		Market Factor Reductions							Net				
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Res. Public Use Factor (5%)	Com. Public Use Factor (5%)	Res. Market Factor (25%)	Com. Market Factor (25%)	Res. Seasonal/ Recreational Home Factor (35%)	Subtotal Res. Market Factor Capacity Reductions	Subtotal Com. Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)	Capacity Excess/ Shortfall (dwelling units)	
LUGA	217.28	2,506,549.49	10.86	125,327.47	54.32	626,637.37	76.05	141.23	752,106.08	76.05	1,754,443.41	155.14		Forecasted Population
Total	**217.28**	**2,506,549.49**	**10.86**	**125,327.47**	**54.32**	**626,637.37**	**76.05**	**141.23**	**752,106.08**	**76**	**1,754,443**	**155**	**40**	**115**

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Scenario C. Mixed-Use develops with 100% residential

	Gross		Market Factor Reductions							Net				
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Res. Public Use Factor (5%)	Com. Public Use Factor (5%)	Res. Market Factor (25%)	Com. Market Factor (25%)	Res. Seasonal/ Recreational Home Factor (35%)	Subtotal Res. Market Factor Capacity Reductions	Subtotal Com. Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)	Capacity Excess/ Shortfall (dwelling units)	
LUGA	217.28	0	10.86	0	54.32	0	76.05	141.23	0	76.05	0	155.14		Forecasted Population
Total	**217.28**	**0**	**10.86**	**0**	**54.32**	**0**	**76.05**	**141.23**	**0**	**76**	**0**	**155**	**40**	**115**

Table 28. Eastsound Subarea Maximum FAR Final Capacity by Land Use Designation.

Rural Eastsound Subarea Capacity

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

No mixed-use districts in Rural Eastsound Subarea

	Gross		Market Factor Reductions				Net		
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Public Use Factor (5%)	Market Factor (25%)	Seasonal/ Recreational Home Factor (35%)	Subtotal Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)
ERR 5P	16.25	0	0.81	4	5.69	10.56	5.69	0	11.60
ER	19.82	0	0.99	5	6.94	12.88	6.94	0	14.15
SP	0	129,097.86	6,454.89	32,274.47	0	38,729.36	0	90,368.50	0
CCC	0	136,286.61	6,814.33	34,071.65	0	40,885.98	0	95,400.63	0
ERR 2P	22.27	0	1.11	6	7.79	14.47	7.79	0	15.90
Total	**58.34**	**265,384.47**					**20**	**185,769**	**42**

Table 29. Deer Harbor Maximum FAR Final Capacity by Land Use Designation.

Deer Harbor Capacity

2036 County Population	19,423
April 1, 2016 Population	16,314
Additional Population 2016-2036	3,109
Additional Households at 2.04 people per household	1,524

No mixed-use districts in Deer Harbor

	Gross		Market Factor Reductions				Net		
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Public Use Factor (5%)	Market Factor (25%)	Seasonal/ Recreational Home Factor (35%)	Subtotal Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)
DHHC	0	28,225.30	1,411.27	7,056.33	0	8,467.59	0	19,757.71	0
DHHI	0	31,840.00	1592	7960	0	9,552	0	22,288.00	0
DHHP	0	0	0	0	0	0	0		0
DHHR	48.46	0	2.42	12	16.96	31.50	16.96		34.60
Total	**48.46**	**60,065.30**					**17**	**42,046**	**35**

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Table 30. Orcas Village Maximum FAR Final Capacity by Land Use Designation.

Orcas Village Capacity

2036 County Population	19,423
April 1, 2016 Population	16,314
Additional Population 2016-2036	3,109
Additional Households at 2.04 people per household	1,524

No mixed-use districts in Orcas Village

	Gross		Market Factor Reductions				Net		
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Public Use Factor (5%)	Market Factor (25%)	Seasonal/ Recreational Home Factor (35%)	Subtotal Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)
OVC	0	22,631.00	1,131.55	5,657.75	0	6,789.30	0	15,841.70	0
OVR	10.73	0	0.54	3	3.76	6.97	3.76	0	7.66
OVT	0	4,000.00	200	1,000.00	0	1,200	0	2,800.00	0
Total	**10.73**	**26,631.00**					**4**	**18,642**	**8**

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Table 31. Olga Hamlet Maximum FAR Final Capacity by Land Use Designation.

Olga Capacity

2036 County Population	19,423
April 1, 2016 Population	16,314
Additional Population 2016-2036	3,109
Additional Households at 2.04 people per household	1,524

No mixed-use districts in Olga

	Gross		Market Factor Reductions				Net		
Land Use Designation	Gross Residential Capacity (Dwelling Units)	Gross Non-Residential Capacity (Building square feet)	Public Use Factor (5%)	Market Factor (25%)	Seasonal/ Recreational Home Factor (35%)	Subtotal Market Factor Capacity Reductions	Additional Residential Capacity (Dwelling Units)	Additional Non-Residential Capacity (Building square feet)	Population Capacity (2.04 persons per household)
OCC		0	0	0	0	0	0		0
OHC		0	0	0	0	0	0		0
OPS		0	0	0	0	0	0		0
OH	14.76	0	0.74	3.69	5.17	9.59	5.17		10.54
Total	**14.76**	**0**	**0.74**	**3.69**	**5.17**	**9.59**	**5**		**11**

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Table 32. Activity Center Maximum FAR Final Capacity by Land Use Designation.

Activity Center Capacity

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

No mixed-use districts in Activity Centers

	Gross		Market Factor Reductions				Net		
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Public Use Factor (5%)**	**Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**
ACT	81.73	0	4.09	20	28.61	53.12	28.61	0	58.36
IC (LAMIRD)	0	2,359,172.99	117,958.65	0	825,710.55	943,669.20	0.00	1,415,504	0
2 BDD	19.17	0	0.96	5	6.71	12.46	6.71	0	13.69
MC (LAMIRD)	0	1,457,934.96	72,896.75	0	0	72,896.75	0	1,385,038.21	0
Total	**100.90**	**3,817,107.95**					**35**	**2,800,542**	**72**

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Table 33. Rural Maximum FAR Final Capacity by Land Use Designation.

Capacity

2036 County Population	**19,423**
April 1, 2016 Population	**16,314**
Additional Population 2016-2036	**3,109**
Additional Households at 2.04 people per household	1,524

There are no mixed-use land use designation in the Rural areas

	Gross		Market Factor Reductions				Net		
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Public Use Factor (5%)**	**Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**
RFF	3,232.19	0	161.61	808.05	1,131.27	2,100.93	1,131.27	0	2,307.79
RR	430.08	0	21.50	107.52	150.53	279.56	150.53	0	307.08
RC	0	0	0	0	0	0	0	0	0
RI	0.00	1,347,987.66	67,399.38	336,996.92	0.00	404,396.30	0	943,591.36	0
C	137.93	0	6.90	34.48	48.28	89.66	48.28	0	98.48
N	0	0	0	0	0	0	0	0	0
LVGRA	2.36	0	0.12	0.59	0.82	1.53	0.82	0	1.68
FOR	384.89	0	19.24	96.22	134.71	250.18	134.71	0	274.81
AG	355.97	0	17.80	88.99	124.59	231.38	124.59	0	254.16
RGU	0.00	14,742,215.26	737,110.76	3,685,553.82	0.00	4,422,664.58	0	10,319,550.68	0
Total	**4,543.43**	**16,090,202.92**					**1,590.20**	**11,263,142**	**3,244.01**

2.0 Capacity Summary

A. County-wide Residential Capacity

The LCA identifies residential capacity as possible new dwelling units. Possible new dwelling units are an expression of:

- What the Comprehensive Plan (Plan) allows based on maximum density assigned on the Plan Official Maps, and
- Development regulations.

The LCA results together with the *Housing Needs Assessment* (HNA) and 2036 population forecast are planning tools that will help the County understand what may be expected in the future under existing densities and regulations. The supply of land available for housing development, as expressed by the LCA, and demand for new housing, as expressed in the HNA and population forecast, should be considered during the drafting of potential amendments to the Plan goals and policies.

Residential capacity provides information that is considered in the Plan Vision, goals, and policies. Residential capacity information will help County decision-makers understand how and where development may take place as they consider Plan updates. This context will be useful in evaluating how goals and policies have guided development and what changes might be needed to realize the Vision set out in the Plan. The 2036 Vision describes the community's desire for land use and housing:

> **"LAND USE** Neighborhoods, hamlets, villages, towns, and other activity centers are clearly defined to conserve, rural, agricultural, forest, mineral resource lands and critical areas. These areas define our heritage and sense of place: providing for commerce and community activities without losing their small scale and attractive island ambiance. The unique character of our shorelines is protected by encouraging uses that maintain or enhance the health of the shoreline environment. Through innovative land use strategies, our citizens and institutions balance and protect private property rights, public rights, and our natural environment.
>
> **HOUSING** Adequate, safe, affordable and stable housing helps our community thrive. There are diverse housing types and we use innovative strategies to meet the various housing needs of our community."

Population Forecast

In 2016, there were 16,314 people living in the County. According to the adopted population forecast, 19,423 residents are expected by 2036. This population forecast results in 3,109 additional people. At a rate of 2.04 people per household, the County forecasts 1,524 new households by 2036. The final capacity data indicates that the projected number of households corresponds with the number of possible dwelling units that could be developed under the existing Plan and development regulations. Countywide, there is final capacity for 2,461 new dwelling units (Table 1, page 2) and an excess final capacity of 937 dwelling units countywide. Final capacity is compared with the population forecast in Tables 18 through 33.

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Housing Needs Assessment

There is more residential capacity (5,605 dwelling units) than expected housing units (4,180) during the planning period for the Plan update. The County forecasts 4,180 additional housing units by the year 2036 in the *Housing Needs Assessment* (HNA). The LCA results shown in column three of Table 34 below indicate that there is gross residential capacity to accommodate 5,605 dwelling units in the County. Countywide, there is enough land designated for residential development to accommodate the projected number of housing units. Development of this number of housing units would consume approximately seventy-four percent of the County's gross residential capacity.

The HNA forecast and the LCA gross capacity are compared because they both do not include deductions based on occupancy. The housing unit forecast in the HNA does not differentiate between occupied and vacant housing units, projecting gross housing units. Gross capacity also considers all housing units. The gross residential land capacity results shown in Table 34 below do not include public use, market, and seasonal home factor deductions used account for vacant housing units. These deductions are taken out to get final residential capacity. Therefore, the HNA 2036 forecast of housing units compares more directly to gross housing capacity calculated in LCA Task D.

Despite the adequate residential capacity, there are significant housing challenges in San Juan County. Three primary housing issues that the County will face during the planning horizon are the affordability, availability and diversity in housing units. Policy choices should focus on these three issues.

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Table 34. Gross Residential Capacity[1] and Population Distribution by Island.

Island	Total Net Developable Acres (Residential)	Gross Residential Capacity[2]	Percent of Total Residential Capacity	2016 OFM Population Estimate	Percent of Total 2016 Population
Unincorporated San Juan	14,123.95	1,540.62	27.49	5,560	34
Town of Friday Harbor	N/A	N/A	N/A	2,250	13.8
Orcas	14,074.78	2,366.92	42.23	5,395	33
Lopez	8,135.96	630.43	11.25	2,466	15
Shaw	2,296.63	309.92	5.53	241	1
Ferry-served Island Subtotal	**38,631.32**	**4,847.89**	**86.49**	**15,912**	**97.54%**
Blakely	2,506.18	137.28	2.45	42	0.26
Brown	6.27	1.25	0.02	21	0.13
Center	64.83	9.13	0.16	20	0.12
Crane	77.02	11.90	0.21	10	0.06
Decatur	78.67	13.97	0.25	89	0.55
Henry	487.11	97.42	1.74	27	0.17
Pearl	4.77	0.61	0.01	11	0.07
Stuart	1,141.65	162.62	2.90	33	0.20
Waldron	1,645.16	222.79	3.97	109	0.67
Other Islands	789.59	100.18	1.78	40	0.25
Non-ferry-served island subtotal	**6,801.26**	**757.16**	**13.51**	**402**	**2.46**
Countywide Total	**45,432.59**	**5,605.05**	**100**	**16,314**	**100**

Sources: DCD LCA Gross Capacity data October 8, 2019 and SJC *Housing Needs Assessment*.

Notes

1. Gross capacity is used because final capacity is not geographically specific.
2. Gross Residential capacities shown in Table 34 do not include lands in the Rural General Use (RGU) designation. Gross residential capacity is shown in number of dwelling units.
3. Residential capacities for the Urban Growth Areas including final capacity are discussed in Section C Island Summaries of this report below.

B. Countywide Commercial, Industrial, and Mixed-Use Capacity

Examining the available commercial capacity informs policy choices in the Land Use and Economic Development elements of the Plan. The updated Vision provides a clear statement about community desires for the economy:

> **"ECONOMY** We support a diverse, resilient, and sustainable economy while respecting the natural world. This economy serves the needs of our community, and recognizes the rural, residential, quiet, agricultural, marine and isolated nature of the islands. Our economy comprises a wide spectrum of stable, year-round activities that provide wages that allow islanders to live, work, and thrive locally. We encourage new ideas and new technology for

improving the quality and profitability of our goods and services. Communication systems support our economy."

Population Forecast

By 2036, an increase of 3,109 new residents for 19,423 total residents expected in the County. Correlating employment of the projected population with possible commercial, industrial, and mixed-use building square footage is not as straightforward as correlating it with projected residential capacity. It is challenging to say definitively that X number of commercial square feet will provide employment for Y number of residents.

A review of commercial capacity and the County population forecast by distribution of population per island provides some potentially useful information. Table 7 (d) in the adopted population forecast (Plan Appendix X) depicts population distribution per island. Table 35 below shows the distribution of gross commercial capacity by island as determined in the LCA and the distribution of the 2016 population.

The LCA identifies commercial, industrial, and mixed-use commercial capacity using the building square footage possible under the existing development intensity and development regulations. For brevity, this capacity is referred to as "commercial" in the remainder of this section. Commercial capacity was calculated in two ways based on:

1. Achieved floor area ratio (FAR) (LCA Methodology Task D), and
2. The maximum FAR allowed by the development regulations (LCA Methodology Task E).

Achieved FAR was determined by analyzing the intensity of existing commercial development using Assessor's data. The maximum allowed FAR was determined by the maximum allowance under the development regulations.

Table 35. Gross Commercial Capacity[1] by Island.

Island	Total Net Developable Acres (Commercial)	Gross Commercial Capacity	Percent of Total Gross Commercial Capacity	2016 OFM Population Estimate	Percent of 2016 Total Population
Unincorporated San Juan	281.73	1,249,950.47	12.88	5,560	34
Orcas	110.93	709,839.87	7.31	5,395	33
Lopez	125.87	2,677,801.51	27.58	2,466	15
Shaw	0.00	0.00	0.00	241	1
Ferry served subtotal	**518.52**	**4,637,591.85**	**47.77**	**15,912**	**97.5**
Blakely	3.22	14,023.40	0.14	42	0.26
Decatur	989.13	5,056,678.51	52.09	89	0.55
Non-ferry served subtotal[2]	**992.35**	**5,070,701.92**	**52.23**	**402**	**2.46**
Countywide Total	**1,510.87**	**9,708,293.77**	**100**	**16,314**	**100**

Sources: DCD LCA Gross Capacity data from October 8, 2019 and Comp Plan update population forecast.

Notes:

1. Gross capacity is used because final capacity is not geographically specific. Gross residential capacity is shown in possible building square footage.

2. Non-ferry served islands without commercial capacity were excluded from the gross commercial capacity totals in table 35. These islands' population were included in the non-ferry served islands population subtotal.

Table 35 indicates that with less than one percent of the County's population in 2016, Decatur Island has fifty-two percent of the County's gross commercial capacity. In fact, it has more gross commercial capacity than the ferry served islands combined (excluding Friday Harbor). It should be noted that all of the gross commercial capacity on Decatur is associated with the Rural General Use (RGU) land use designation. The RGU designation is not an expressly commercial designation. It allows single-family residences and considerably more commercial and industrial uses than many other rural designations such as Rural Farm Forest and Rural Residential.

Table 35 also highlights two other facts about the distribution of commercial capacity and the 2016 population. Unincorporated San Juan Island is home to thirty-four percent of the County's population but has slightly less than thirteen percent of the total available commercial capacity. Some of this disparity can be explained by the concentration of commercial development in the Town of Friday Harbor UGA. Nevertheless, there may be an unmet demand through the planning horizon for additional commercial capacity outside of the Town of Friday Harbor UGA given the distribution of both population and gross capacity.

Similarly, Orcas Island is home to thirty-three percent of the County's population but has only a little more than seven percent of the total gross commercial capacity available. Gross commercial capacity on Orcas Island includes Eastsound UGA and activity centers. There also may be unmet demand for commercial capacity on Orcas given the discrepancy between population distribution and gross commercial capacity.

Achieved and Maximum FAR Capacity

One of the benefits of working with both achieved and maximum floor area ratio (FAR) is that it allows a comparison between what has been built (achieved) and how much development is allowed by existing development regulations. Comparing FAR values in this way will indicate to what degree development has approached the maximum intensity allowed by the development regulations. A FAR is the ratio of building floor area and parcel size. By relating existing development to parcel size, it describes the development intensity. The higher the FAR value, the more intense the development.

For each land use designation, Table 36 below documents the achieved and maximum FAR allowed by development regulations.

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Table 36. Achieved and Maximum FAR by Commercial Land Use Designation.

Land Use Designation	Achieved FAR	Maximum FAR Allowed
VC: Eastsound Village Commercial	0.39	1.625 or 2.25[3]
M: Marina	0.034	0.9
SLI: Service and Light Industrial	0.466	1.8
LUGA: Lopez Village UGA	0.914	1.95 or 2.7[4]
MC: Marine Center LAMIRD	0.113	1.95 or 2.7[4]
IC: Island Center LAMIRD	0.219	1.8[5]
DHHC: Deer Harbor Hamlet Commercial	0.299	N/A[6]
DHHI: Deer Harbor Hamlet Industrial	N/A[1]	N/A[7]
OVC: Orcas Village Commercial	0.152	N/A[8]
OVT: Orcas Village Transportation	N/A[1]	N/A[9]
CCC: Country Corner Commercial	0.024	1.2[10]
SP: Service Park	N/A[1]	0.6
MPR: Master Planned Resort	0.093	N/A[11]
RC: Rural Commercial	N/A[2]	0.3
RI: Rural Industrial	0.026	0.6
RGU: Rural General Use	0.122	0.3

Source: DCD LCA data October 8, 2019.

Notes:

1. Deer Harbor Hamlet Industrial (DHHI), Service Park (SP), and Orcas Village Transportation (OVT) land use designations did not have fully developed commercial or industrial parcels from which to calculate an achieved FAR.
2. The Rural Commercial (RC) land use designation only applies in one small area east of Lopez Village. This area does not correspond to specific parcel boundaries so an achieved FAR cannot be determined.
3. In Eastsound Village Commercial, parcels larger than 5,556 are limited by lot coverage, FAR is 1.625. Parcels smaller than 5,556 are not limited by lot coverage, FAR is 2.25.
4. In Lopez Village Commercial and Marine Center, parcels larger than 5,556 are limited by lot coverage, FAR is 1.95. Parcels smaller than 5,556 are not limited by lot coverage, FAR is 2.7.
5. In IC, parcels larger than 4,444 square feet: 1.8 FAR. Parcels smaller than 4,444 square feet: 4,000 square feet of floor area.
6. DHHC is limited to 5,000 square feet of floor area.
7. DHHI is limited to 6,000 square feet of floor area.
8. OVC is limited to 3,000 square feet of floor area.
9. OVT is limited to 4,000 square feet of floor area.
10. In CCC, parcels larger than 44,444 square feet have a max floor area of 30,000. Parcels smaller than 44,444: 1.2 FAR.
11. Master Planned Resorts have adopted master plans that determine the dimensional standards and expected development. Additional information is provided in the LCA Methodology.

Table 36 highlights that the maximum FAR allowed by the development regulations is not achieved in any land use designation. Throughout the County, commercial development occurred at lower intensities than what is allowed. This is not entirely unexpected and may reflect community preferences for the built environment and sense of place, limited demand for commercial development, and the cost of

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construction. Although some discrepancy is expected, the difference between maximum and achieved commercial FAR should be considered when weighing policy alternatives and considering the need to designate land for commercial use.

Average commercial development countywide is probably composed mostly of single-story commercial development. The development regulations for most land use designations limit total lot coverage to between sixty and sixty-five percent. Given lot coverage limitations, a first floor would have a FAR value of about 0.6 or 0.65. Most FAR values greater than 0.65 would require a second story to achieve the maximum FAR. Only twenty-two of the County's 212 fully developed commercial parcels or about ten percent have an achieved FAR above 0.65. These higher FAR values are more likely the result of small lot sizes or development that predates the current lot coverage standards rather than second story commercial development because the average net developable area of these twenty-two parcels is 0.15 acres or 6,813.19 square feet.

The only land use designation with an achieved FAR above 0.6 is the Lopez Village Urban Growth Area (LUGA) at 0.914. This is likely due to development on very small lots in the commercial core rather than the existence of a significant amount of second floor commercial development. In reality, many of the commercial parcels in Lopez Village do not include a significant amount of second story commercial development. Lopez Village has seventeen fully developed parcels with an average size of 0.4 acres or 17,387 square feet. Five of the seventeen fully developed parcels have an achieved FAR greater than one because the developable area on these parcels is significantly reduced in the Net Developable Lands Inventory (NDLI). None of the five parcels exceeds 2,400 square feet of developable area. The small sample size and limited developable area skews the average achieved FAR higher in the LUGA.

Commercial Capacity Options

Commercial capacity and future employment projections are discussed in Section X (*section number to be filled in when this analysis is added to the report*). In this analysis the expected increase in population, existing commercial development, current rates of employment, and commercial capacity were compared. The analysis showed X (*discussion of commercial capacity analysis will be added when the analysis has been completed*).

There are options for increasing commercial capacity if necessary. One option is to consider increasing the amount of commercial development allowed on commercial lands by encouraging infill development. Infill development might be encouraged by reducing the limitations on building dimensions in the development code. A second option might be boosting the land supply by increasing including additional undeveloped or partially developed parcels in commercial land use designations. A third option might be to modify the distribution of commercial capacity throughout the County in a way that better addresses the County's planning goals and needs. This distribution must comply with the GMA.

The achieved FAR values in Table 36 above suggest that increasing the allowed commercial intensity on a parcel may not lead to more intense commercial development. As shown in Table 36, most commercial development is not approaching allowed intensity. Given the nature of existing development on fully developed commercial parcels, development regulations do not appear to be a significant limiting factor for achieving greater development intensity.

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Capacity could be increased by adding more undeveloped land to commercial land use designations. Any decision to increase the total amount of land designated for commercial development must be weighed against the Vision, goals, and policies in the Plan. Not only must the land use designation criteria be met, but also re-designating the area should be in keeping with the aims of the Plan. The County must consider this while evaluating any possible land use designation changes during the Plan update.

Increasing the amount of undeveloped land designated for commercial development may not be necessary. Re-distributing the amount of land designated for commercial development could help if it is done consistently with the Plan and in compliance with the Growth Management Act. For example, areas designated for commercial development, such as of the RGU parcels on Decatur Island, may be unlikely to develop and may not be ideal areas for commercial development. There may be areas on other islands that meet the designation criteria for RGU and might be more desirable locations for the kind of development allowed by the RGU designation. Here again, the County must consider whether proposed changes are consistent with the Plan Vision, goals, and policies and the GMA.

C. Island Summaries

Lopez Island

At approximately 18,900 acres, Lopez Island is the third largest of the ferry-served islands. Lopez Island is home to fifteen percent of the County's population and nearly twenty-eight percent of the County's commercial capacity (Table 35). Table 37 below shows the distribution of commercial and residential capacity on Lopez Island. Lopez Village is the only urban growth area (LUGA) on Lopez Island. The more than two-hundred acres that make up Lopez Village provide eighty-six percent of the Island's commercial capacity and nearly one quarter of the residential capacity.

A handful of areas outside of the LUGA provide additional nonresidential capacity. A little over ten percent of Lopez's commercial capacity is found in two LAMIRDs, Island Center (IC) and Marine Center (MC). The MC LAMIRD is located about one-third of a mile south of Lopez Village along Fisherman Bay Road. The IC LAMIRD is located near Lopez Island's geographic center at the intersection of Center and School roads. Outside of these LAMIRDs, two land use designations also allow for some commercial capacity: Rural General Use (RGU) and Rural Industrial (RI). The majority of the RGU on Lopez Island and all of the RI are located north of the Lopez Airport. A small amount of RGU is located near the ferry landing and along Port Stanley Road.

Table 37. Lopez Island Distribution of Gross Capacity.

	Gross Commercial Capacity	Percent of Lopez Island Total	Gross Residential Capacity	Percent of Lopez Island Total
Lopez Village UGA	2,310,313.95	86.28	217.28	23.72
Island Center LAMIRD	205,235.24	7.66	0.00	0.00
Marine Center LAMIRD	67,031.37	2.50	68.45	7.47
Rural Lopez Island	95,220.94	3.56	630.43	68.81
Total	**2,677,801.51**	**100**	**916.15**	**100**

Source: DCD LCA Gross Capacity Data October 8, 2019. Note based on one designation on the UGA: Village Commercial.

Lopez Village UGA

At the time the Land Capacity Analysis was conducted, the entire UGA was regulated by a single land use designation. The County adopted the Lopez Village Subarea Plan (LVSP). It became effective on October 28, 2019. The LVSP has three land use designations and allows for higher density in residential areas and more infill development of Lopez Village within the UGA. Analysis of the capacity implications of the adopted LVSP and associated development regulations are shown in Attachment B. That analysis shows a capacity for 122 dwelling units or 248 residents even if the mixed-use area in Lopez Village develops without any dwelling units (if it goes 100% commercial).

Lopez Village is the only urban growth area (UGA) on Lopez Island. The Village is about 185 acres located on Fisherman Bay. It is less than one percent of the total land area of Lopez Island. Table 37 above shows that prior to the October 28, 2019, Lopez Village had the vast majority of the commercial capacity and a little less than a quarter of the total residential capacity on Lopez. The high amount of residential capacity outside of the UGA is a result of how much undeveloped land is outside of the UGA.

Capacity was analyzed using three development scenarios for mixed-use areas for the pre-LVSP and the LVSP scenarios. Table 38 summarizes the capacity results for each development scenario, those prior to the LVSP and those in related to the LVSP. This table pulls together information from Table 19 on page 49 of this report and Attachment B.

The population on Lopez Island in 2016 was 2,466 residents. The County forecasts a population on Lopez Island of 2,936 residents by the year 2036. This would mean an increase of 470 people. The existing Plan policy allocates fifty percent of the projected per-island growth to the UGA (Land Use Element, Policy B.2.3.A.12). Fifty percent of the projected growth would be an additional 235 residents in the Lopez Village UGA.

Lopez Village UGA final capacity is shown on Table 19, page 49 of this report. Final capacity is the gross capacity minus the public use (five percent), market (twenty-five percent), and seasonal homes (thirty-five percent) factor reductions (sixty-five percent total). There is final capacity for 76 dwelling units or 155 residents (at 2.04 people per household). Under current regulations and if the mixed-use LUGA develops with at least fifty percent residential, there is a capacity shortfall of 80 residents or 39 households at 2.04 people per household.

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Table 38. Lopez Village UGA Final Residential Capacity Summary.

Current Regulations[1]				
Scenario	**Final Residential Capacity**	**Population Capacity**	**Projected 2036 Population**	**Excess/shortfall**
A. Mixed-Use Develops 100 Percent Commercial	-26[3]	-53	235	-288
B. Mixed-Use Develops 50 Percent Split of Commercial and Residential	76	155	235	-80
C. Mixed-Use Develops 100 percent Residential	76	155	235	-80
Adopted Lopez Village Subarea Plan: October 28, 2019[2]				
Scenario	**Final Residential Capacity**	**Population Capacity**	**Projected 2036 Population**	**Excess/shortfall**
A. Mixed-Use Develops 100 Percent Commercial	122	248	235	13
B. Mixed-Use Develops 50 Percent Split of Commercial and Residential	699	1,426	235	1,191
C. Mixed-Use Develops 100 percent Residential	1,276	2,604	235	2,369

Notes:

1. Final Capacity calculations for LUGA are shown in Table 19, page 49.
2. Final Capacity calculations for the proposed LVSP are shown in Attachment B.
3. Final residential capacity in scenario A is a negative value because in this scenario, twenty-six dwelling units would be re-developed to commercial developments.

Implications of capacity results

The adoption of the proposed Lopez Village Subarea Plan (LVSP) was a major policy change. As such, the LCA results performed for the pre-LVSP adoption do not accurately describe what kind of development may be expected in the coming years. A significant change in land use regulations, including new and different designations, will take time to have an impact on the achieved development in Lopez Village. Determining what achieved development under the new LVSP may look like is further complicated by the countywide trend of development occurring below the maximum intensity allowed (Tables 7 and 36).

The LVSP allows higher density in designated residential areas and does not have a base density in the commercial areas. This allows for a greater degree of infill development in the Lopez Village UGA. Allowing for more intense development within the UGA greatly increases the amount of residential

capacity. There is no data available on how likely it is that new development will occur at the greater allowed intensity because this is a proposed policy change and development regulations take time to influence development. Providing adequate capacity for the projected population in Lopez Village will probably also require some residential development in the Lopez Village Commercial areas designated in the proposed LVSP. In these areas, residential development is limited to multi-family (three or more units) or mixed-use development.

Rural Lopez Island

All lands outside of the Lopez Village UGA are designated rural or resource lands. Lopez Island has 3,143 parcels covering 18,865.74 acres. On Lopez Island there are 2,605 parcels covering 9,090 acres designated Rural Farm Forest (RFF). Around forty-eight percent of the acreage on Lopez Island is designated RFF. The twenty-six parcels designated Lopez Village Growth Reserve Area (LGRA) are governed by the RFF land use regulations. The LGRA designation is applied to 105.5 acres adjacent to the Lopez Village UGA and covers less than one percent of the total acreage on Lopez. Lopez Island has 262 parcels designated as natural resource lands (agriculture or forest resource), which cover nearly 6,700 acres. Around one third of the acreage on Lopez Island is designated natural resource land. There are also 450 parcels covering 776 acres designated Rural Residential (RR) on Lopez. The RR designation accounts for about four percent of the acreage on Lopez. Rural areas include the Island Center (IC) and Marine Center (MC) limited areas of more intense rural development (LAMIRD). The IC designation covers about seventy-three acres on twelve parcels near the intersection of School and Center roads. The MC designation is applied to eleven parcels covering twenty-five acres south of the Lopez Village UGA.

Capacity Results, Summary and Implications

Outside of the Lopez Village UGA, land use designations that allow commercial development are limited to small and distinct areas. These areas are Island Center (IC), Marine Center (MC), the Lopez Airport, and near the ferry landing. The potential for commercial growth outside of the UGA is constrained by the limited areas where this growth is allowed. Ultimately, if additional areas are desired for commercial development, changing land use designations must be balanced with the Comprehensive Plan Vision, goals, policies, and the requirements of GMA.

Residential capacity on Lopez Island is distributed more evenly throughout the island. On Lopez Island, many of the land use designations allow for single-family residences. This spreads the residential capacity throughout the island. The majority of residential capacity on Lopez is provided in rural areas with low maximum density (at least five acres per dwelling unit) that only allow single-family residential development and do not have urban level governmental services (i.e. sewer service and stormwater treatment).

On Lopez, only the Lopez Village UGA and Marine Center LAMIRD allow for a density greater than five acres per dwelling unit. These are the only two land use designations on Lopez Island that allow for multi-family (more than three units) development. There is sufficient residential capacity on Lopez Island based on the projected population, but limiting the areas where multi-family development is allowed is a specific

policy choice. Limiting where multi-family residential is allowed combined with low maximum density forms a policy framework that puts the onus of providing diverse housing that serves the needs of all income levels squarely on Marine Center and the Lopez Village UGA.

Focusing density in the UGA and Marine Center ensures that higher density residential development occurs only in places with adequate urban services and prevents the extension of these services into rural areas where they may be inappropriate. The other side of this policy framework is that much of Lopez Island is limited in the kinds of housing allowed. Limiting residential development outside of the UGA and Marine Center to mostly single-family homes and density no greater than one dwelling per five acres minimizes the housing options available in other places on Lopez Island.

Orcas Island

Orcas Island is the second most populated island in the County. Located on approximately 678 acres at the north end of the island, Eastsound is the only urban growth area on Orcas. Orcas has eight activity centers: Deer Harbor, Island Center, West Beach Master Planned Resort, Orcas Village, Rosario Master Planned Resort, Olga, and Doe Bay. Orcas Island is also home to two large areas of public lands, Moran State Park and the Land Bank Turtleback Preserve.

Table 39 below provides the distribution of gross residential and commercial capacity. These numbers are later used in the final capacity calculations.

Table 39. Orcas Island Distribution of Gross Capacity.

	Gross Commercial Capacity[1]	Percent of Orcas Island Total Commercial	Gross Residential Capacity[2]	Percent of Orcas Island Total Residential
Eastsound UGA	546,291.83	76.96	1,363.12	42.86
Rural Eastsound Subarea	688.32	0.10	58.34	1.83
Orcas Village	48,642.71	6.85	10.73	0.34
Olga	0.00	0.00	14.76	0.46
Master Planned Resort	3,405.21	0.48	0.00	0.00
Island Center LAMIRD	58,343.40	8.22	0.00	0.00
Deer Harbor	28,152.01	3.97	48.46	1.52
Rural Orcas	24,316.39	3.43	1,406.20	44.22
Total	**709,839.87**	**100**	**3,180.08**	**100**

Source: DCD LCA Gross Capacity data October 8, 2019.

Notes:

1. Gross commercial capacity is expressed in possible building square feet.
2. Gross residential capacity is expressed in possible dwelling units.

Eastsound UGA

The Eastsound UGA is the only UGA on Orcas Island. There are 648 parcels in the UGA covering about 678 acres at the north end of Orcas. The Eastsound UGA has several different residential, commercial, and industrial land use designations. Eastsound Village Commercial (VC) and Eastsound Marina (M) are the two mixed-use designations within the UGA.

The population on Orcas Island in 2016 was 5,395 residents. The County forecasts a population on Orcas Island of 6,423 residents by the year 2036. This would mean an increase of 1,028 people. The County has decided to plan to allocate fifty percent of the projected per-island growth to the UGA (Land Use Element Policy B.2.3.A.12). Fifty percent of the projected growth would be an additional 514 residents in the Eastsound UGA.

Final capacity for the Eastsound UGA is shown on Table 18, page 47 of this report and is summarized below in Table 40. Final capacity is the gross capacity minus the public use (five percent), market (twenty-five percent), and seasonal homes (thirty-five percent) factor reductions. These total a sixty-five percent reduction. There is final capacity for 245 dwelling units or 501 residents at 2.04 people per household. Under current regulations and if Eastsound UGA mixed-use areas develop with at least fifty percent residential, there is excess capacity for 98 residents or 48 households at 2.04 people per household.

Final capacity was analyzed using three development scenarios for mixed-use areas. Table 40 summarizes the capacity results for each scenario in the Eastsound UGA.

Table 40. Eastsound UGA Final Residential Capacity Summary.

Scenario	Final Residential Capacity	Population Capacity	Projected 2036 Population	Excess/shortfall by Population
A. Mixed-Use Develops 100 Percent Commercial	245	501	514	-13
B. Mixed-Use Develops 50 Percent Split of Commercial and Residential	300	612	514	98
C. Mixed-Use Develops 100 percent Residential	471	960	514	446

Source: Table 18 of this report.

Residential Capacity

The Eastsound UGA has several unique residential land use designations. Table 41 below shows the gross and final residential capacity for each land use designation in the Eastsound UGA. The Eastsound UGA has just enough residential capacity for the projected population even if the mixed-use areas, Village Commercial and Marina designations, develop with 100 percent commercial development. This indicates

that by 2036 the Eastsound UGA may approach capacity if there is not some amount of mixed-use development.

Residential capacity is further complicated by the fact that some commercial and institutional uses are allowed in the Village Residential (VR) land use designation. The LCA Methodology accounts for this by reducing residential capacity by a market factor. The market factor reduction, twenty-five percent, helps account for the uncertainty about what kind of development may take place. This includes whether or not some of the VR land use designation may develop with nonresidential uses. The VR land use designation still provides a significant amount of residential capacity even considering that the other factors the County has deducted from residential capacity are significant. Final residential capacity in VR is reduced by a total of sixty-five percent (five percent public use factor, twenty-five percent market factor, and thirty-five percent seasonal home factor). Even with this significant reduction of final residential capacity in the VR land use designation, VR provides capacity for up to 181 dwelling units.

Table 41. Gross and Final Residential Capacity in Eastsound Residential Land Use Designations.

Land Use Designation	Gross Capacity	Final Capacity	Population Capacity
ER1	1.49	0.52	1.07
ER1P	16.25	5.69	11.60
ER2	37.22	13.03	26.58
ER2P	45.45	15.91	32.45
ER412	20.47	7.16	14.62
ER4P	158.43	55.45	113.12
VC	68.95	24.13	49.23
SLI	-5.00	-5.00	-10.20
M	4.56	1.60	3.26
VR	519.12	181.69	370.56
Total	**867**	**300**	**612**

Notes:

1. Residential capacity for mixed-use designations shown here from Scenario B, assuming that mixed-use develops with fifty percent commercial and fifty percent residential.
2. Final capacity includes the reductions for the public use (five percent), market (twenty-five percent), and seasonal home (thirty-five percent) factors (sixty-five percent total).
3. Residential capacity shown for the VC and M land use designations is from development Scenario B, where mixed-use districts develop with fifty percent commercial and fifty percent residential.
4. SLI has a negative value because five dwelling units in this area would be re-developed for commercial or industrial uses.
5. Population capacity is the number of people that could be housed in the final dwelling unit capacity. This assumes a rate of 2.04 people per household.

Residential capacity in Eastsound was calculated by assuming the maximum density allowed. There are two land use designations in Eastsound that allow a high maximum density, Village Residential (VR) and Village Commercial (VC). The VR land use designation allows a minimum density of four units per acre and a maximum density of twelve units per acre. The VC land use designation allows a minimum density of four units per acre and a maximum density of forty units per acre. Table 7 on page 23 of this report provides the achieved density based on development permits by land use designation from 2005 to 2019. Both the VR and VC land use designations are developing at a density closer to the minimum (four units

per acre) than the maximum allowed. This suggests that, based on the historic trend, these areas may not develop at the maximum allowed density.

If the VR designation in Eastsound keeps with the historic trend and develops at a lower density, the Eastsound UGA may not provide enough residential capacity for the projected population by 2036. A potential capacity shortfall would be exacerbated if the mixed-use designations do not develop with residential uses. There is a residential capacity shortfall in development Scenario A as shown in Table 40. Development Scenario A was calculated assuming that mixed-use areas develop with 100 percent commercial uses without residential development.

Increasing residential capacity can be reduced to two general policy tools. A possible option is to focus on infill development by allowing more intense residential development (higher density) within the current boundary of the UGA. Another option is to increase the amount of undeveloped land within the UGA by expanding or moving the boundary of the UGA. If the County Council decides that the UGA needs additional capacity, they can accomplish that by using either of these tools or a combination. Using either of these two policy tools would include a cadre of issues that will require specific and intentional policy responses. Policy decisions for the UGA will be made during the update to the Land Use Element.

Focusing on infill development will require an examination of the development code within the UGA to establish which regulations could be adjusted to achieve greater infill development. This would include a reviewing the Eastsound development and design standards and identifying if they reduce the feasibility of more intense development in the UGA. Changing development regulations would also require a good public process to ensure that other community goals regarding the built environment including infrastructure are met.

Emphasizing infill development will also face economic challenges. When considering the development that has taken place in Eastsound, development usually occurs at intensity below what is allowed (Tables 7 and 36 of this report). This suggests that the market is not providing high-density residential development. Dense market-rate residential development may not be profitable for private developers. A decision to focus on infill development might require further research into to the economics of higher density residential development in Eastsound. The County cannot control the market.

Expanding the boundary of the UGA to include more undeveloped land for residential development is another policy tool available to address a residential capacity shortfall. The Washington State Growth Management Act (GMA) has specific requirements a County must satisfy when considering expanding the UGA. A proposal to expand the UGA, like any amendment to the Comprehensive Plan, must be analyzed for compliance with the GMA requirements. Additionally, expanding the UGA would increase the service areas for urban level services. This includes water service, sewer service, and transportation infrastructure like roads and intersections. Expanding the UGA will need to be considered in the context of the ability of these services to meet the needs in the area proposed, specifically in terms of their service capacity. Another important consideration is the community's opinion about how development ought to take place. These are just three of the major topics that must be addressed when looking at the UGA boundary. Many other considerations must be analyzed prior to any decision about adjusting the UGA boundary.

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Commercial Capacity

The County's Land Capacity Analysis evaluates what development existing regulations and land use designations allow. Areas as a whole must provide a sufficient amount of land for development or redevelopment that meets forecasted population and employment allocations. Later in the Comprehensive Plan update process, policy options related to development regulations or changes in land use designations will be evaluated. This assessment should determine the effects of policy alternatives on the capability of the development regulations and land use designations to provide sufficient capacity for growth allocations.

The County's estimate of square footage of available commercial and industrial capacity is identified on Tables 18 through 33 beginning on page 46 of this Report. Capacity was determined using the SJC *Land Capacity Analysis Methodology.* The methodology provides two methods for calculating commercial capacity. One is based on the maximum allowed building square footage under current regulations. The other reflects the Assessor's records for building square footage for structures actually constructed and the average achieved floor area ratio per land use designation.

The Growth Management Act requires further analysis of commercial capacity to determine whether there will be a sufficient capacity of land suitable for commercial and industrial development through the planning horizon. The County must show that the commercial/industrial land capacity can accommodate projected population and employment growth (RCW 36.70A.115). This analysis is important particularly in sizing urban growth areas.

To ascertain whether there is sufficient commercial/industrial capacity to accommodate the forecasted population and employment, countywide employment forecasts and estimates of commercial and industrial land needs are used in conjunction with capacity data from the Land Capacity Analysis. The following sections of this report* provide general planning estimates of projected job growth and their relationship to the available commercial and industrial square footage capacity identified in the Land Capacity Analysis. They also describe the methodologies used to estimate job growth and relate it to the square footage of commercial and industrial capacity.

*Following sections to be developed.

Rural Orcas Island

All lands outside of the Eastsound UGA are designated rural or resource lands. Orcas Island has 5,251 parcels covering 36,827 acres. On Orcas Island there are 1,956 parcels covering 12,046 acres designated Rural Farm Forest (RFF). Around thirty-two percent of the acreage on Orcas Island is designated RFF. Orcas Island has 1,153 parcels designated as natural resource lands (agriculture or forest resource), which cover nearly 22,744 acres. Around sixty-one percent of the acreage on Orcas Island is designated natural resource land. There are also 662 parcels covering 1,262 acres designated Rural Residential (RR) on Orcas. The RR designation accounts for about three percent of the acreage on Orcas. Rural areas include the nine activity centers. These activity centers cover about 1,602 acres over 872 parcels. Activity Centers make up about four percent of the total acreage on Orcas.

Almost all of the commercial capacity outside of the Eastsound UGA on Orcas is located in the activity centers. Activity centers are designated as limited areas of more intense rural development (LAMIRD). Adding undeveloped land to these areas as a means to increase capacity would have to comply with the

Growth Management Act (GMA). WAC 365-196-430 provides the GMA guidelines for designating LAMIRDs. Outside of the activity centers on Orcas, there is one small area of Rural Industrial (RI) on Orcas Road. Seven parcels are designated RI covering a contiguous area of 100 acres on Orcas.

Outside of the Eastsound UGA, residential capacity is distributed among the activity centers, rural lands, and natural resource lands. Many of the activity centers on Orcas have specific subarea plans that allow for slightly higher density than the surrounding rural and resource lands. Activity centers that do not have an adopted subarea plan, Rosario, Doe Bay, and Westsound, are assigned several different densities. One of the densities assigned to the Westsound and Rosario activity centers is two acres per dwelling unit. The Doe Bay activity center is assigned a density of five acres per dwelling unit. A portion of the Rosario activity center has a density of 0.5 acres per dwelling unit. There is a bonus density district (BDD) in both Doe Bay and Rosario. These areas provide for a density bonus for affordable housing up to two dwelling units per acre if the development is included with a planned unit development (San Juan County Code 18.30.220 (D)).

San Juan Island

San Juan Island is the most populated island with 7,810 residents in 2016. The Town of Friday Harbor, located on the east side of the island, is the only incorporated town in the County. San Juan Island is made up of 6,294 parcels covering 35,262.30 acres.

Table 42. San Juan Island Distribution of Gross Capacity.

	Gross Commercial Capacity	Percent of San Juan Island Total Commercial	Gross Residential Capacity	Percent of San Juan Island Total Residential
Master Planned Resort	511,354.92	40.91	0.00	0.00
Rural San Juan Island	738,595.55	59.09	1,540.62	100.00
Total	**1,249,950.47**	**100**	**1,540.62**	**100**

Source: DCD Gross Capacity data October 8, 2019.

Notes:

1. Gross commercial capacity is expressed in possible building square feet.
2. Gross residential capacity is expressed in possible dwelling units.

Residential Capacity

The majority of San Juan Island outside of Friday Harbor is designated for rural development. On San Juan Island, 2,360 parcels covering 19,200.92 acres are designated Rural Farm Forest (RFF). The RFF land use designation covers around fifty-three percent of the total acreage of San Juan Island. Rural Farm Forest is primarily a residential land use designation because it does not allow many commercial uses unless they are associated with the residential use of the property. Another residential designation, Rural Residential (RR), applies to 2,150 parcels covering 3,772.74 acres or 10.7 percent of the total acreage on San Juan Island.

Three other land use designations on San Juan Island provide residential capacity. They are the Conservancy (C), Agricultural Resource (AG), and Forest Resource (FOR). These designations typically have

lower density that either RFF or RR. On San Juan Island, there are 305 parcels designated AG covering 6,117.45 acres. Seventy-one parcels covering 1,524.68 acres are designated FOR on San Juan Island. The C designation on San Juan Island applies to 2,162.79 acres over thirty-six parcels.

The County's population forecast projects that the population of San Juan Island will increase from 7,810 to 9,298 by the year 2036. This is an expected increase of 1,488 people or 729 households in that time. The County has chosen to plan for providing capacity for fifty percent of the projected growth to the UGA on islands with a UGA (Land Use Element, Policy B.2.3.A.12). On San Juan Island that would mean planning for an expected increase of 744 people or 365 households in the unincorporated area on San Juan Island.

Commercial Capacity

Staff is developing a methodology to compare expected growth with commercial and industrial building capacity. Discussion of the results will be included here.

Other Islands

Beyond Lopez, Orcas, and San Juan Islands, many other islands have some capacity. Of the remaining islands, the largest by land mass are Shaw, Blakely, Waldron, Decatur, and Stuart. Shaw is the only ferry-served island on this list. Table 42 below shows the capacity results for ten largest of the largest outer islands and the total gross capacity on the remaining islands. The combined total population of these islands is expected to increase by 123 people or around 60 households by the year 2036.

Table 43. Other Islands Distribution of Gross Capacity.

Island	Gross Commercial Capacity	Percent of Other Islands Total Commercial	Gross Residential Capacity	Percent of Other Islands Total Residential
Shaw	0	0	310	43.5
Blakely	14,023.40	<1	42	5.90
Brown	0	0	21	2.95
Center	0	0	20	2.81
Crane	0	0	10	1.40
Decatur	5,056,678.51	>99	89	12.50
Henry	0	0	27	3.79
Pearl	0	0	11	1.54
Stuart	0	0	33	4.63
Waldron	0	0	109	15.31
Other Islands	0	0	40	5.62
Total	**5,070,701.92**	**100**	**712**	**100**

Source: DCD LCA Gross Capacity data October 8, 2019.

Notes:

1. Gross commercial capacity is expressed in possible building square feet.
2. Gross residential capacity is expressed in possible dwelling units.

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Residential Capacity

Shaw and the outer islands are not projected to experience significant growth through the year 2036. There seems to be enough residential capacity to serve the projected growth of 123 new people or around 60 households.

Commercial Capacity

The most conspicuous results from the Land Capacity Analysis is the vast amount of commercial capacity on Decatur Island. Decatur Island has fifty-two percent of the County's gross commercial capacity. In fact, Decatur Island has more gross commercial capacity than the ferry served islands combined (excluding Friday Harbor). All of the gross commercial capacity on Decatur is provided by the Rural General Use (RGU) land use designation. The RGU designation is not an expressly commercial designation. It allows both single-family residences and considerably more commercial and industrial uses than many other rural designations such as the Rural Farm Forest and Rural Residential designations. The County may want to consider amending the land use designations applied on Decatur during the Comprehensive Plan update.

Most of the outer islands do not have any commercial capacity. Blakely is the only outer island other than Decatur that has some commercial capacity. A small area on the north end of Blakely near a marina is designated RGU. Waldron and Shaw islands have adopted subarea plans that intentionally preclude most nonresidential development.

3.0 Glossary of Terms

Achieved Density - the dwelling unit density present in existing development.

Assessor's Land Use Code (Use Code) - A four-digit code used by the County Assessor's office to indicate the existing development on a parcel. The use code is assigned at the time of assessment.

Assigned Density - the maximum allowable density as shown on the San Juan County Comprehensive Plan Official Maps. This is typically expressed as dwelling units per acre or acres per dwelling unit.

Achieved Floor Area Ratio (FAR) - the mean FAR of fully developed parcels in each land use designation.

Critical Areas - refers to places that have regulatory constraints on development because of environmental factors. These include wetlands, geologically hazardous areas, fish and wildlife habitat conservation areas, and special flood hazard areas. See Chapter 18.35 SJCC.

Density Ratio (DR) - the ratio of allowed density to parcel size. It is the inverse of dwelling unit capacity.

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Final Capacity - the land use capacity calculated by subtracting market factors from gross capacity. Final capacity will be provided in tables showing the total potential dwelling units and possible commercial/industrial square-footage by land use designation.

Floor Area Ratio (FAR) - the total building square footage divided by total lot square footage.

Fully developed - property that is assumed to have no further development capacity.

Gross Capacity - the mapped total land capacity in potential dwelling units (residential) and possible building square footage (commercial).

Gross Developable Lands Inventory (GDLI) - the first step in the Land Capacity Analysis where parcels are categorized based on existing development and what future development may be allowed under current regulations.

Intensity - a measure of the extent that land is developed. Often expressed as floor area ratio.

Land Capacity Analysis (LCA) - an analysis of lands in San Juan County to determine development capacity given existing development and current regulations. Residential capacity is expressed in possible dwelling units. Commercial and industrial capacity is expressed in possible building square footage.

Land Value - the assessed value of the land as determined at the time of tax assessment.

Maximum Floor Area Ratio (FAR) - the maximum allowed FAR based on regulations in San Juan County Code (SJCC).

Mixed-Use (MU) - property with a development comprised of or land use designation that allows for a mix of commercial and residential uses.

Net Developable Area - The area of a parcel that remains after critical areas and other development-constrained areas are removed.

Net Developable Lands Inventory (NDLI) - the second step in the Land Capacity Analysis where critical areas are deducted from the developable lands identified in the GDLI.

Partially used - residential property occupied by a use allowed by its land use designation, which contains enough land to be further subdivided or developed (e.g. a single-family home on a very large lot).

Re-developable - a parcel that has a land use designation that allows uses that would be more intensive than an existing use (e.g. a single family home on a parcel with a commercial land use designation).

San Juan County Code (SJCC) - the County's adopted regulatory code.

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Urban Growth Area (UGA) - an area designated by the County within which urban growth is to be encouraged and outside of which growth is not intended to be urban in nature (SJCC 18.20.210).

4.0 Land Capacity Analysis Land Use Designation Abbreviation Guide

Rural Land Use Designations

RFF: Rural Farm Forest

RR: Rural Residential

RC: Rural Commercial

RI: Rural Industrial

RGU: Rural General Use

Special Land Use Designations

C: Conservancy

N: Natural

LVGRA: Lopez Village Growth Reserve Area

Resource Land Use Designations

FOR: Forest Resource

AG: Agricultural Resource

Activity Center Land Use Designations

MPR: Master Planned Resort

ACT: Residential Activity Center

IC: Island Center Limited Area of More Intense Rural Development (LAMIRD)

MC: Marine Center LAMIRD

Deer Harbor Subarea

DHHC: Deer Harbor Hamlet Commercial

DHHI: Deer Harbor Hamlet Industrial

DHHP: Deer Harbor Hamlet Park

DHHR: Deer Harbor Hamlet Residential

Orcas Village Subarea

OVC: Orcas Village Commercial

OVR: Orcas Village Residential

OVT: Orcas Village Transportation

Olga Subarea

OCC: Olga Community Center

OHC: Olga Hamlet Commercial

OPS: Olga Park Site

OH: Olga Hamlet

Rural Eastsound Subarea

ERR 5P: Eastsound Rural Residential 5 acres per dwelling

ER: Eastsound Rural

SP: Service Park

CCC: Country Corner Commercial

ERR 2P: Eastsound Rural Residential 2 acres per dwelling

Eastsound Urban Growth Area

ER1: Eastsound Residential 1 dwelling per acre

ER1P: Eastsound Residential 1 dwelling per acre, site planning required

ER2: Eastsound Residential 2 dwellings per acre

ER2P: Eastsound Residential 2 dwellings per acre, site planning required

ER412: Eastsound Residential min. 4, max. 12 dwellings per acre

ER4P: Eastsound Residential four dwellings per acre, site planning required

VC: Eastsound Village Commercial

M: Marina

SLI: Service and Light Industrial

EAD: Eastsound Airport District

EN: Eastsound Natural

VR: Eastsound Village Residential

Lopez Village Urban Growth Area

LUGA: Lopez Village Urban Growth Area

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COMPREHENSIVE PLAN

Appendix 1

LAND CAPACITY ANALYSIS METHODOLOGY

~~October 11, 2017~~

September 6, 2019

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1.0 Introduction

San Juan County's 2036 Comprehensive Plan update process includes a Land Capacity Analysis (LCA). The Land Capacity Analysis methodology is ~~described~~ established in this document.

The Growth Management Act (GMA) allows counties to exercise discretion in their Comprehensive Plans and to make choices on how they plan to accommodate growth over the twenty-year planning horizon.

Conducting a Land Capacity Analysis is an important ~~step~~ process that will help the County determine how and what growth can be accommodated through the year 2036. The Washington State Department of Commerce (Commerce) indicates that the Land Capacity Analysis methodology is used to determine:

- The amount of vacant, partially-used, under-utilized lands, and redevelopment potential of built properties needed to accommodate growth, and

- If the existing or potential Urban Growth Areas (UGA's) can accommodate twenty years of urban growth.

The Land Capacity Analysis will help determine if the County's land supply aligns with the 2036 population growth projection of 19,423. The primary purpose of the Land Capacity Analysis is to determine the capacity of Urban Growth Areas for balancing urban development with adequate and cost-efficient urban services. However, because the majority of development in San Juan County occurs outside of the Urban Growth Areas, the Land Capacity Analysis will help the County evaluate the development potential of rural and natural resource lands.

The Land Capacity Analysis is also used to determine whether the County will have sufficient developable land to meet the Growth Management Act housing goal. This goal encourages the availability of affordable housing to all economic segments of the population, promotes a variety of residential densities and housing types and encourages preservation of existing housing stock (RCW 36.70A.020(4).

What tools are used to complete the LCA?

Geographic Information System (GIS) software, code that tells the software what to do (a script), County data, and staff calculations in excel spreadsheets have been used to apply the LCA Methodology. The results show existing levels of development and future capacity for residential and commercial/industrial development under existing development regulations. The LCA Methodology explains the criteria for each step of the LCA process.

How is GIS used in the process?

A Geographic Information System (GIS) is a computer program that allows us to geographically understand, analyze, and represent data. It associates geographic features such as parcels with a data table, similar to an Excel spreadsheet. This data can be presented visually by a map.

The County's parcel data is constantly changing as it is updated. The LCA requires a fixed data set.

This methodology defines terms, provides a high-level overview of the LCA. It outlines the LCA steps and assumptions. It also identifies deliverables of each step of the analysis and documents the LCA calculations using GIS maps, metadata, and Excel tables.

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2.0 Terms.

The following terms are used in this methodology:

Vacant means property with minimal or no building improvements.

Re-developable means a parcel that has a land use designation that allows uses that would be more intensive than an existing use (e.g. a single family home on a parcel with a commercial land use designation).

Partially-used means residential property occupied by a use allowed by its land use designation which contains enough land to be further subdivided or developed (e.g. a single-family home on a very large lot).

Fully developed means property that is assumed to have no further development capacity.

Floor Area Ratio (FAR) means the total building square footage divided by total lot square footage.

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3.0 Methodology Overview

The bullets below ~~provide a high level overview of~~ describe the six major tasks included in the LCA methodology:

A. Prepare the Land Capacity Analysis County Land Base and Develop a Gross Developable Land Inventory (GDLI) and GIS Map Layers

Assessing land supply begins with the identification of all parcels within the County that are fully developed, vacant, partially-used, re-developable, or public, utility & conservation. The **Gross Developable Land Inventory** includes parcels, which are categorized as vacant, partially used or re-developable and are potential candidates to accommodate future growth. This parcel-based inventory is based upon the Assessor's land use codes and data from March 3, 2017, the most current information when the project was initiated.

All parcels are categorized. Two map layers (GIS shapefiles) are produced:

- The first layer categorizes all parcels as fully developed, public/conservation, vacant, partially used, or re-developable. This layer is the **Land Capacity Analysis Land Base**.

- The second layer identifies all parcels categorized as vacant, partially used or re-developable and are assumed to have further development capacity.

The second map layer of potentially developable land is the **Gross Developable Land Inventory**.

B. Prepare an Inventory of Net Developable Land for Residential and Commercial, Industrial and Mixed-use Lands

The **Net Developable Land Inventory** is determined by deducting areas with reduced development potential such as critical areas and their buffers from the Gross Developable Land Inventory.

Gross Developable Land Inventory
\- Critical areas, buffers and other undevelopable areas
= Net Developable Land

Deliverables: Two map layers (GIS shapefiles):

- The first layer depicts the net developable residential land.

- The second layer depicts the net developable Commercial, Industrial and Mixed-Use land.

These layers show the land expected to be available to accommodate future growth before other deductions are made. This information is provided by island, UGA's, and land use designations.

C. Calculate Existing Floor Area Ratios, Summarize Development Trends, Assign Assumed Densities and FAR, and Calculate Pending Development Capacity.

~~This section provides~~ Analysis of past development trends is completed in this task in order to provide a basis for estimating future development capacity; to determine if development is occurring consistent with Comprehensive Plan densities; and to calculate pending development.

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The information gathered in this Step will be used in the capacity calculations. ~~This Step~~ In this task we will:

- Analyze recent development history, achieved densities and assign assumed densities;
- Provide data necessary to convert available land into capacity in terms of dwelling and square feet of building on each parcel; and
- Calculate pending development capacity.

D. Calculate and Map Gross Housing and Development Capacity

The Net Developable Land Inventory (in acres) is converted into capacity for housing units for residential land and building square feet for commercial, industrial, and mixed-use land. This work is conducted in GIS and Excel. This results in tables and GIS map layers showing capacity by parcel. The purpose of this exercise is to graphically display capacity at the parcel level.

The capacity calculated in this task will not be the final capacity because it is not converted to population by comparing the dwelling unit capacity with the average rate of people per household in San Juan County. It also does not include the deductions taken later that account for public uses, market factors, and seasonal/recreational home factors.

Deliverables:

- Net Developable Land Inventory maps for residential land – categorized into housing capacity ranges (dwelling units), and
- Net Developable Land Inventory maps for commercial, industrial and mixed-use lands – categorized into building capacity ranges (square feet).
- Excel tables of the Preliminary Housing and Development Capacity calculations summarized by island, land use designation, and urban growth areas.

E. Calculate and Map Maximum Commercial, Industrial, and Mixed-Use Building Capacity

Another way to calculate capacity is to determine what the maximum development is allowed under San Juan County Code (SJCC). This will be calculated by interpreting the development standards in SJCC into a maximum floor area ratio (FAR). The maximum FAR is multiplied by the net developable lands inventory parcel area in square feet to arrive at the maximum building square footage allowed on each parcel. Existing and pending building square footage is subtracted from the result to arrive at a gross maximum commercial, industrial, and mixed-use capacity.

F. Calculate Final Housing and Development Capacity

The summary tables of the preliminary housing and development capacity calculations created in the previous Step are the basis of the **Final Capacity Calculations**. Public use, market and seasonal/recreational home factors are deducted from the preliminary housing and development capacity. After these deductions, the following are calculated:

- **Total Occupied Housing Units by Land Use Designation**
- **Total Population Capacity**
- **Employment Capacity** (square feet of building)

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4.0 Land Capacity Analysis (LCA) Methodology

A. Prepare the Land Capacity Analysis County Land Base and Gross Developable Land Inventory

Assessing land supply begins with the categorizing of all parcels within the County as fully developed, vacant, partially used, and re-developable, or public, utility, and conservation as identified in Table 1. This results in the **Land Capacity Analysis Parcel Base** GIS layer. The subset of this layer consisting of all vacant, partially used and re-developable parcels is the **Gross Developable Land Inventory**. The Gross Developable Land Inventory is calculated by deducting all parcels categorized as fully developed from the Land Capacity Analysis Parcel Base.

LCA Parcel Base
- Fully developed parcels
- <u>Public, utility and conservation parcels</u>
= Gross Developable Land Inventory

The San Juan County Assessor's county-wide parcel data in shapefile format and the associated attribute data including improvement value and land value from March 3, 2017 (the latest data update) is used.

Parcels with structures existing on March 3, 2017 are considered developed. Structures proposed, built, or occupied after that date are counted in future capacity calculations.

GIS shapefiles for each island, Lopez Village and Eastsound UGA's, the Town of Friday Harbor, and all of the County land use designations are used.

<u>Steps</u>

A.1. Create a GIS layer that consists of all county parcels and includes fields for area, assessor land use code, assessed value of improvements, land use designation, Comprehensive Plan density and Land Capacity Analysis category.

A.2. Consistent with the assumptions in *Table 1. Gross Developable Land Inventory: Thresholds and Assumptions* and using the Assessor's land use codes and Comprehensive Plan land use designations categorize each parcel as:

- Fully developed residential;
- Fully developed industrial, commercial or institutional;
- Fully developed mixed-use;
- Public and conservation lands;
- Vacant and subdividable residential;
- Vacant non-subdividable residential;
- Partially-used residential;
- Vacant industrial or commercial;
- Vacant mixed-use;
- Re-developable industrial or commercial; or
- Re-developable mixed-use.

A.3 All parcels categorized as fully developed or public/conservation lands are deducted from the LCA Land Base. The result of this initial cut is a collection of all the parcels in the County that are vacant, partially-used or re-developable. This is the **Gross Developable Land Inventory**. The Gross

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Developable Land Inventory is the base from which additional acreage is deducted to account for various physical and regulatory constraints on future development.

Gross Developable Land Inventory = GIS layer of all parcels that are not fully developed.

This map layer depicts categories of the County's parcels and includes fields for land use and density designation, the Assessor' land use codes, improvement value, and land area.

Table 1. LCA Categories: Thresholds and Assumptions.

	LCA CATEGORY	DEFINITION	THRESHOLDS /ASSUMPTIONS
A.	**Fully Developed Residential** (No further development potential) GIS Data Category 0 GIS data type: R	**Land Use Designations** Agricultural Resource (AG) Forest Resource (FOR) Conservancy (C), Rural Residential (RR), Rural Farm Forest (RFF) Village Residential (VR), Hamlet Residential, (HR), Lopez Village Residential (LVR) Eastsound Residential (ER) Eastsound Rural Residential (ERR) Eastsound Rural (ER*) Village Residential/Institutional (VR/I) Olga Hamlet Residential (OHR) Deer Harbor Hamlet Residential (DHHR) Orcas Village Residential (OVR)	Parcels in these land use designations are considered fully developed if the following criteria apply: a. The assessed improvement value is ≥ ~~$10,000~~ $42,000; and b. The ratio of allowed density to parcel size is > 0.5; or c. Site developed with multi-family use (Assessor code 1200-1300) in any designation and the building to land value (BV/L ratio) is >1.0
B.	**Fully Developed Industrial, Commercial** (No further development potential) GIS data Category 0 GIS data type: CI	**Assessor's land use codes** 1400-1488 Accommodations 1600 Hotels/motels 1700 Institutional lodging 2100 Food and kindred products 2200 Textile Mill Products 2400-2403: Lumber/wood products 2500: Furniture/fixtures 2600: Paper and Allied products 2700: Printing and publishing 2800: Chemicals 2900: Petroleum refining / related 3100: Rubber misc. plastic products 3200: Stone, clay and glass 3300: Primary metal industries 3400: Fabricated metal products 3500: Prof. & Scientific Instruments 3900: Misc. Manufacturing 4100: Railroad and Transit 4200: Motor vehicle transportation 4300: Aircraft transportation 4400: Marine transportation 4600: Automobile parking 4700 Communications 4900: Other transportation 5000: Non-residential condos	Parcels in these Assessor's codes are fully developed if the following criteria apply: a. The site is developed with existing industrial, commercial or non-residential use per the Assessor's codes; and b. The ratio of building value to land value (BV/L ratio) is >1.0; or c. Existing development, such as gas stations, quarries or uses preclude significant additional development on the site, regardless of BV/L ratio.

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	LCA CATEGORY	DEFINITION	THRESHOLDS /ASSUMPTIONS
		5100: Wholesale trade 5200: Building & hardware & farm 5300-5320: General merchandise 5400-5403: Retail food 5500-5503: Retail-auto, marine, aircraft 5600: Apparel 5700-5708: Retail furniture and home furnishings 5800: Retail- Eating and drinking 5900: Other retail 6100: Finance, insurance & real estate 6200-6220: Personal services 6300: Business services 6400-6402: Repair services 6500-6503: Professional services 6600 Contract construct. services 6900-6902 Miscellaneous services 7100: Cultural activities 7200-7202: Public assembly 7300: Amusements 7400-7420: Recreational activities 7500: Resorts and group camps 7900: Other recreational 8100-8328: Agriculture 8400: Fishing and related services 8500: Mining activities 8600: Marijuana grow operation 8900: Other resource production	

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	LCA CATEGORY	DEFINITION	THRESHOLDS /ASSUMPTIONS
C.	**Public, Utility & Conservation** (No further development potential) GIS Data Category 0 GIS data type: P	**Assessors Land Use Codes:** 7600: Parks 4800-4820: Utilities 6800-6820: Educational services 6700-6793: Governmental services ~~9240~~ 9420: ~~Open space with conservation easement~~ ~~9243~~ 9423: ~~Open Space with conservation easement and dock~~ ~~9520: Current Use Timber land with a conservation easement~~ ~~8120: Agriculture with Conservation Easement~~ 4500: Highway right-of-way 7400-7420: Recreational activities ~~8800-8820: Designated forest land~~ 9900-9920 – Platted Common Area or Access **Land Use Designations** Natural (N) Eastsound Natural (EN) Olga Community Center (OCC) Hamlet Park (HP)	Parcels are considered fully developed public, utility and conservation lands if the following criteria apply: a. Properties with land uses listed by the Assessor's codes as Public, Utility and Conservation; or b. The parcel is on the GIS layers of public lands and County Parks and Open Space; or c. Existing public, utility and conservation developments preclude future development (i.e. cemeteries, public water system properties)
D.	**Vacant and Sub-dividable Residential** GIS Data Category 3 GIS data type: R	**Land Use Designations** Agricultural Resource (AG) Forest Resource (FOR) Conservancy (C) Rural Residential (RR) Rural Farm Forest (RFF) Village Residential (VR) Hamlet Residential, (HR) ~~Lopez Village Residential (LVR)~~ Eastsound Residential (ER) Eastsound Rural Residential (ERR) Eastsound Rural (ER*) Village Residential/Institutional (VR/I) Olga Hamlet Residential (OHR) Deer Harbor Hamlet Residential Orcas Village Residential (OVR) *With several densities	Parcels in these land use designations will be considered vacant and sub-dividable if they meet the following criteria: a. The assessed improvement value is < ~~$10,000~~ $42,000; and b. The ratio of allowed density to parcel size is ≤ 0.5.

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	LCA CATEGORY	DEFINITION	THRESHOLDS /ASSUMPTIONS
E.	**Vacant Non-Subdividable Residential** GIS Data Category 2 GIS data type: R	**Land Use Designations:** Agricultural Resource (AG) Forest Resource (FOR) Conservancy (C) Rural Residential (RR), Rural Farm Forest (RFF) Village Residential (VR) Hamlet Residential, (HR) Lopez Village Residential (LVR) Eastsound Residential (ER) Eastsound Rural Residential (ERR) Eastsound Rural (ER*) Village Res./Institutional (VR/I) Olga Hamlet Residential (OHR), Deer Harbor Hamlet Residential (DHHR) Orcas Village Residential (OVR) *With several densities	Parcels in these land use designations will be considered vacant but not sub-dividable if they meet the following criteria: a. The assessed improvement value is < $~~10,000~~ $42,000; and b. The ratio of allowed density to parcel size is > 0.5.
F.	**Partially-Used Residential** GIS Data Category 1 GIS data type: R	**Land Use Designations** Agricultural Resource (AG) Forest Resource (FOR) Conservancy (C) Rural Residential (RR) Rural Farm Forest (RFF) Village Residential (VR) Hamlet Residential, (HR) Lopez Village Residential (LVR) Eastsound Residential (ER) Eastsound Rural Residential (ERR) Eastsound Rural(ER*) Village Residential/Institutional (VR/I) Olga Hamlet Residential (OHR) Deer Harbor Hamlet Residential (DHHR) Orcas Village Residential (OVR) *With several densities	Parcels in these land use designations are considered partially-used if they meet the following criteria: a. The assessed improvement value ≥ ~~$10,000~~ $42,000; and b. The ratio of allowed density to parcel size is ≤ 0.5.

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	LCA CATEGORY	DEFINITION	THRESHOLDS /ASSUMPTIONS
G.	**Vacant Industrial and Commercial** GIS Data Category 2 GIS data type: CI	**Land Use Designations:** Rural Industrial (RI) Island Center(IC) Rural Commercial (RC) Orcas Village Transportation (OVT) Orcas Village Commercial (OVC) Rural General Use (RGU), Village Commercial (VC) Village Industrial (VI) Hamlet Commercial (HC) Hamlet Industrial (HI) Service Light Industrial (SLI) Service Park (SP) Country Corner Commercial (CCC) Eastsound Marina (~~EM~~ M) Eastsound Airport (EAD) Olga Hamlet Commercial (OHC), Olga Hamlet Community Cntr. (OHCC) Deer Harbor Commercial (DHC) Deer Harbor Industrial (DHI)	Parcels in these land use designations are considered vacant if the: Assessed improvement value is < ~~$10,000~~ $42,000.
H.	**Vacant Mixed-Use** GIS Data Category 2 GIS data type: MU	Eastsound Village Commercial (EVC) Lopez Village ~~Commercial (LVC)~~ Urban Growth Area (LUGA)	Parcels in these land use designations are considered vacant if the assessed improvement value is < $~~10,000~~ $42,000.
I.	**Re-Developable Industrial and Commercial** An assumption is that existing use may be demolished and new project developed over the planning period. GIS Data Category 4 GIS data type: CI	**Industrial, Commercial, Institutional** Rural Industrial (RI) Island Center(IC) Rural Commercial (RC) Orcas Village Transportation (OVT) Orcas Village Commercial (OVC) Rural General Use (RGU), Village Commercial (VC) Village Industrial (VI) Hamlet Commercial (HC) Hamlet Industrial (HI) Service Light Industrial (SLI) Service Park (SP) Country Corner Commercial (CCC) Eastsound Marina (~~EM~~ M) Eastsound Airport (EAD) Olga Hamlet Commercial (OHC), Olga Hamlet Community Cntr. (OHCC) Deer Harbor Commercial (DHC) Deer Harbor Industrial (DHI)	Parcels in these land use designations are considered re-developable if they meet the following criteria: a. The ratio of building value to land value is ≤ 1.0; or b. They are occupied by a single family residence (Assessor's codes 1100-1199).
J.	**Re-Developable Mixed-Use** GIS Data Category 4 GIS data type: MU	Eastsound Village Commercial (EVC) Lopez Village ~~Commercial (LVC)~~ Urban Growth Area (LUGA)	Parcels in these land use designations are considered re-developable if one of the following conditions are met: a. The ratio of building value to land value is ≤1. or b. The parcel is occupied by a single family residence. (Assessor's codes 1100-1199).

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B. Prepare an Inventory of Net Developable Land

The **Net Developable Land Inventories** are obtained by deducting critical areas, buffers, and other areas with reduced development potential from the **Gross Developable Land Inventory**.

Gross Developable Land Inventory
- <u>Critical Areas and areas with reduced development potential (Residential)</u>
= **Residential Net Developable Land Inventory**

Gross Developable Land Inventory
- <u>Critical areas, buffers and areas w/reduced development potential (Commercial, Industrial)</u>
= **Commercial, Industrial and Mixed-Use Land Inventory**

There are two layers because different deductions from the **Gross Developable Land Inventory** will be taken to create each layer based on the following assumptions:

Critical area buffers will not affect future capacity on residential parcels and are not deducted because the San Juan County development regulations allow for reasonable use exceptions and flexible development of residential properties with critical areas on them.

Critical area buffers are not be developable on commercial, industrial and mixed-use parcels because development regulations for these uses are more restrictive. These uses are also more intensive than residential uses.

<u>Steps</u>

B.1. Create the **Critical Area Deduction** GIS layer (shapefile) consisting of all critical area deductions described as follows:

<u>Critical Area Deductions</u>

Wetlands: The County's possible wetland inventory.

Streams: The County's base stream dataset with stream centerlines and an assumed 35 feet of non-buildable area on either side of the centerline, corresponding with Tree Protection Zone 1 (TPZ 1) per SJCC Table 18.35.130-2.

Steep Slopes: Areas with slopes greater than 50 percent which are considered Category 1 geo-hazards. Development in these areas is limited per SJCC 18.35.065.

Flood Plain: Land located within 100-year floodplains as shown on the Federal Emergency Management Agency (FEMA), April 2017, Flood Insurance Rate Maps (FIRMS.

Other Undevelopable Areas: Mitigation and old dump sites that are not available or suited for development.

B.2. Create the **Total Net Developable Land Inventory** by deducting critical areas from the GDLI. In GIS, overlay the Critical Area Deduction layer on the Gross Developable Land Inventory and clip the Gross Developable Land Inventory. The result will be the Gross Developable Land Inventory with critical areas removed. This layer is the **Total Net Developable Land Inventory.**

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B.3. Create the **Residential Net Developable Land Inventory** by selecting residential vacant, partially used and re-developable parcels from the Total Net Developable Land Inventory. The layer resulting from this selection is the **Residential Net Developable Land Inventory**.

B.4. Create the **Critical Area Buffer Deduction** GIS layer (shapefile). Create a GIS layer of critical area buffers as follows:

a. A 150 foot wetland buffer because most of the County's wetlands are Class III or Class IV and industrial and commercial uses are designated high intensity uses (SJCC 18.35.095 and Tables 18.35.100-2 and 18.35.100-2), and

b. The following Tree Protection Zone buffers on parcels with a ~~shoreline~~ FWHCA (SJCC Tables 18.35.100-2 18.35.130-2):

i. 110 feet from the centerline for Type F (Type 2 or 3) streams and ponds designated as FWHCAs (assuming an 8 foot wide stream);
ii. 110 feet from the Ordinary High Water Mark (OHWM) for marine shorelines containing FWHCAs and ponds, excluding parcels subject to the Eastsound Waterfront Access Plan or parcels within approved master planned resorts;
iii. 50 feet from the bank full width for Type Np (Type 4) streams;
iv. 30 feet from the bank full width for Type Ns (Type 5) streams; and
v. 30 feet from the bank full width for un-typed streams.

B.5. Create the **Commercial, Industrial and Mixed-Use Net Developable Land Inventory** as follows:

a. Select vacant, partially used and Re-developable Commercial, Industrial and Mixed-Use parcels from the Total Net Developable Land Inventory created in B.2.

b. Overlay the Critical Area Buffer Deduction layer over this selection and clip to remove the critical area buffers. The resulting layer will be the **Commercial, Industrial and Mixed-use Net Developable Land Inventory.**

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C. Calculate Existing Floor Area Ratios, Summarize Development Trends, Assign Assumed Densities and Floor Area Ratio and Calculate Pending Development Capacity

This section provides analysis of past development trends in order to provide a basis for estimating future development capacity; to determine if development is occurring consistent with Comprehensive Plan densities; and to calculate pending development.

To calculate future capacity on vacant, partially-used and re-developable parcels, the Land Capacity Analysis must use assumptions about how much development is expected on each parcel in the future. Analysis of existing built conditions, achieved densities, and development trends provides the data necessary to forecast future development.

This analysis will also account for pending development which is a more accurate predictor of future densities. Later, achieved densities and building intensities will be used to calculate the future capacity of available land.

- Analyze recent development history and achieved densities and assign assumed densities,
- Convert information into dwelling units per acre and building intensity Floor Area Ratio, and
- Calculate pending development capacity

C.1 Calculate Existing Building Floor Area Ratios by Land Use Designation

One method to calculate future capacity on Commercial, Industrial and Mixed-use parcels is to assume future Floor Area Ratios will be similar to Floor Area Ratio as past development. This information will be used in Step C.3 to determine future ~~assumed~~ Floor Area Ratio.

For commercial, industrial and mixed-use parcels, Floor Area Ratio is good measure of how much building capacity exists on a parcel. Floor Area Ratio is a good measure because it accounts for parking, sewage disposal and other site improvements that affect capacity but vary widely by use and from site to site. The capacity of a commercial, industrial or mixed-use parcel is the assumed future Floor Area Ratio multiplied by the area of the parcel.

The following ~~are the~~ steps <u>are used</u> to calculate the average existing Floor Area Ratio by land use designation:

a. Select all parcels from the Land Capacity Analysis Land Base layer that are fully developed and are Commercial, Industrial or Mixed-use land as defined by Table 1. Add a field for Floor Area Ratio for each parcel.

b. Calculate the ratio of total building square feet to lot area for each parcel using the Assessor's building improvement information for the parcels selected in Task A. This results in a<u>n achieved</u> floor area ratio for each parcel.

$$\underline{\text{Achieved}}\ \text{FAR} = \frac{\underline{\text{Total building area (square feet)}}}{\text{Parcel area (square feet)}}$$

c. Average the <u>achieved</u> floor area ratio for each land use designation and export to an Excel table.

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C.2 Summarize Recent Development Trends (Achieved)

The results of Step C.1 above will provide an average Floor Area Ratio for all Commercial, Industrial and Mixed-Use parcels as of March ~~3, 2017~~ March 31, 2019. This average will include buildings constructed under many different land use and building regulations, and therefore may not be accurate for forecasting into the future if regulations have changed and significantly altered the amount of development that is allowed. In order to check the reliability of the averages developed in C.1, the Land Capacity Analysis must also evaluate development that occurred within the recent past to see if there are other development trends to consider.

~~Ten~~ Fourteen years of County development history (April 1, 2005 – ~~April 1, 2015~~ March 31, 2019) is evaluated to determine the actual densities achieved in all land use designations and Urban Growth Areas (UGAs). Department of Community Development staff performs this analysis using permit files.

Table 2. Basic Achieved Density Calculations by Development Type.

Development Type	Achieved Density Calculation
Single Family Residential Plats	Number of Lots / Plat Area
Multi-family Building Permits and Plats	Number of Units / Site Area
Mixed-Use Building Permits Residential Portion	Number of Units / Residential Portion of Site
Mixed-Use Building Permits Commercial Portion	Commercial Floor Area / Commercial Portion of Site
Commercial and Industrial Building Permits	Total Floor Area (main building)/ Site Area

Create an Excel table and compile data from permit files as follows:

Table 3. Achieved Density by Land use Designation 2008-2019. (Note Parcel & permit# parcels deleted)

A. Land Use Designation	B. Plat area or lot site area (SF)	C. Pending lots (Number of lots approved)	D. Pending housing units (Number approved)	E. Pending building square feet (SF approved)	F. Achieved FAR	G Achieved Density (DU/acre)
					= G/D	= F/ (D/43,560)

Source: DCD permit data April 1, 2005- 201~~5~~9

C.3 Assign Assumed Density and Floor Area Ratios (FAR)

Each land use designation will be assigned an assumed density for the purposes of calculating capacity. For residential capacity, the Comprehensive Plan land use designations and densities are the future assumed densities. For commercial and industrial building intensity, existing average Floor Area Ratio by land use designation will be used. For mixed-use intensity, an assumed density and Floor Area Ratio will be used based on land use regulations and ~~existing~~ achieved FAR.

~~Different assumptions may be used if there is a clear and compelling rationale for deviating from these designations. The following factors would be considered in deviating from the assumed densities: recent achieved densities; land use goals and policies; local circumstances such as development plans and pending development; and any other local market or policy conditions that are likely to impact future development densities.~~

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~~C.4. Calculate Pending Development Capacity~~

~~This step accounts for pending development which is a more accurate predictor of future density than assumed densities. It involves compiling parcels with approved multi-family permits, commercial and industrial binding site plans, and preliminary and final plats that were not constructed by March 3, 2017 (last date of Assessor's update). This includes Master Planned Projects that are not completely built out but that have received preliminary approval for a number of dwelling units or commercial and industrial square footage. These developments will be considered pending capacity and will be added to the final land capacity for each parcel during the final capacity calculations.~~

~~For this analysis, the development records for all multi-family, commercial, industrial, binding site plans, and preliminary and final plats approved since January 1, 2010 that were not finalized prior to March 3, 2017 31, 2019 are compiled including:~~

- ~~Single family residential building permits;~~
- ~~Residential preliminary and final approved plats and short plats;~~
- ~~Multi-family building permits;~~
- ~~Assessor's county-wide parcel data in shapefile format; and~~
- ~~Commercial and industrial building permit activity and binding site plans.~~

~~Create an Excel table and compile data as follows: **(Note Parcel & permit# parcel columns deleted)**~~

~~**Table 4. Pending Development Capacity Summary by land Use Designation 2005–2019.**~~

~~A. Land Use Designation~~	~~B. Plat area or lot site area (SF)~~	~~C. Pending lots (Number of lots approved)~~	~~D. Pending housing units (Number approved)~~	~~E. Pending building square feet (SF approved)~~	~~F. Achieved FAR~~	~~G. Achieved Density (DU/acre)~~
					~~= G/D~~	~~= F/(D/43,560)~~

~~Source: DCD permit data April 1, 2005-2015 19 and GIS shapefiles~~

~~Deliverables:~~

~~Excel tables that summarize the following by land use designation and island:~~

- ~~Achieved densities;~~
- ~~Achieved floor area ratios;~~
- ~~Existing floor area ratios;~~
- ~~Recommended assumed densities to be used in Task D; and~~
- ~~Pending development capacity to be used in Task D.~~
-

Note: Pending development relocated to task D.

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D. Calculate and Map Gross Housing and Commercial Development Capacity

The purpose of this Step is to graphically display capacity at the parcel level. This work is conducted in GIS and produces maps showing capacity by parcel. Gross capacity is also provided in tables showing capacity by land use designation and by NDLI category.

The Net Developable Land Inventory (in acres) is converted into capacity for housing units on residential land and building square feet on commercial, industrial and mixed-use land.

The capacity calculated in this Step will not be the final capacity because it will not be converted to population ~~and will not~~ or include deductions for public uses, market factors, and seasonal/recreational home factors. Those deductions will be taken to obtain final capacity in Step E.

The following conversion factors as modified by Step C.3 are used in this Step:

a. Density allowed by Comprehensive Plan land use designation for residential, and

b. Average existing floor area ratio for fully developed commercial and industrial by land use designations.

Determine Gross Housing Unit Capacity

Gross Housing Unit Capacity is derived from the Residential Net Developable Land Inventory developed in Step B.3. The output will be total dwelling units of capacity available on each parcel**.** These calculations use:

- The Residential Net Developable Land Inventory;
- Assumed densities for residential land use designations; and
- Pending development capacity**.**

D.1 Using GIS, multiply the net developable acres of residential developable land on each parcel by the assumed density (DUs/acre) for each land use designation. The output will be the Total Dwelling Unit Capacity available on each parcel before accounting for existing development on partially-used and re-developable parcels.

D.2 Subtract existing dwelling units on partially-used and re-developable parcels by land use from the capacity calculated in the previous Step so that existing units are not counted as part of partially-used or parcel capacity. Existing dwelling units are derived from the number of residential addresses assigned to a property.

D.3 ~~Earlier in the process, parcels with pending developments were set aside. These parcels included preliminary or final plats, permits, and binding site plans for developments that have received preliminary approval but have not been constructed by March 3, 2017. Master Planned Projects that have not been completely built out but have received approval for a certain number of dwelling units are also included.~~ Addresses for pending residential development are assigned when the permit is issued but prior to the building being finished. The addressing data used to determine existing dwelling units includes pending residential development. The estimated capacity in these ~~developments is~~ data are a more accurate count of future dwelling units than the calculated

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theoretical capacity. ~~Add these pending housing units to the parcels on which they occur.~~ Addresses assigned to parcels will be counted as existing/pending dwellings when determining gross residential capacity. The addressing data is added as Column F "Existing/Pending Housing Units", in Table 5 below.

D.4 Using GIS and the Residential Net Developable Land Inventory, calculate capacity for each parcel using the following fields and export to Excel table:

Table ~~5~~ 4. Gross Housing Capacity by Land Use Designations.

A. Parcel Number	B. Area	C. Land Use Designation	D. LCA Category (Vacant, Re-developable, Partially used etc…)	E. Comprehensive Plan Density (assumed density)	F. Existing /Pending Housing Units	G. ~~Pending Housing Units~~	H. Housing Capacity (Housing Units)
							= (B*E) - F ~~OR~~ ~~= G-F (if pending >0)~~

Determine Commercial and Industrial Land Capacity

Capacity to accommodate future commercial or industrial growth is derived from the net developable area in commercial and industrial land use designations. This work requires the following data:

- The Commercial and Industrial Net Developable Land Inventory created in Step B.5;
- Assumed Floor Area Ratio values for commercial and industrial designations created in Step C.3;
- Assessor's data for re-developable parcels; and
- Pending commercial and industrial development from Step C.~~4~~2.

D.5 Multiply net acres of commercial and industrial land in each land use designation by the ~~assumed~~ achieved Floor Area Ratio for each land use designation. The output will be the **Total Square Footage Capacity** available in each land use designation before accounting for existing development on re-developable parcels.

D.6 Summarize total existing and pending commercial and industrial building square footage on parcels by land use designation. Subtract this square footage from the totals from the previous Step and parcel data showing total existing building square footage so that existing buildings are not counted as part of re-developable parcel capacity.

D.7 Earlier in the process, parcels with pending developments were set aside. These parcels included commercial and industrial permits or binding site plans for developments that have received preliminary approval but had not been constructed by March 3, 2017. Master Planned Projects that have not been completely built out but have received approval for a certain amount of commercial/industrial square footage are also included. The estimated capacity in these developments is more accurate than calculated theoretical capacity.

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Replace theoretical capacity on each parcel with actual capacity from Step C.4. The output will be total commercial and industrial square footage capacity available in each land use designation.

D.8 Some parcels with existing development that exceeds the theoretical capacity may have a negative gross capacity. The negative gross capacity on these parcels may be the result of development such as a building floor area that exceeds the average achieved FAR for that land use designation or residential development on existing lots smaller than the density would allow. These negative gross capacity values were reduced to zero before totaling the gross capacity per land use designation.

D.9 Mixed-use developments can be composed of any proportion of residential and commercial square footage. For this reason, mixed-use capacity will be provided in three scenarios:

Scenario A: Mixed-use parcels develop with one-hundred percent commercial development;

Scenario B: Mixed-use parcels develop with fifty percent of each residential and commercial; and

Scenario C: Mixed-use parcels develop with one-hundred percent residential development.

D.10 Gross mixed-use capacity will be calculated in the following steps

1. Calculate building square footage capacity using achieved FAR that was determined in the third LCA task. The result of this step is the capacity for Scenario A.

2. Multiply the building square footage by 0.5 to determine what fifty percent of the square footage is. Fifty percent of the building will be considered commercial capacity in Scenario B. The remaining fifty percent will be used in the next calculation.

3. Divide the fifty percent residential floor area by 1,000 square feet to arrive at the number of possible mixed-use dwelling units for residential capacity in Scenario B. This process assumes that each dwelling unit will be 1,000 square feet. Mixed-use residential capacity in Scenario B is capped at the maximum allowed dwelling units per acre in each area.

4. The maximum allowed density is multiplied by the net developable acreage to calculate the possible dwelling units in Scenario C.

Deliverables:

- Map layers (GIS Shapefiles) of the Net Developable Land Inventory parcel map of commercial, industrial, and mixed-use lands including the following fields in the attribute table:

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Table ~~6~~ 5. Gross Commercial and Industrial Land Capacity.

A. Parcel Number	B. Area	C. Comp Plan Land Use Designation	D. LCA Category (Vacant, re-developable etc.)	E. ~~Assumed~~ Achieved Floor Area Ratio	F. Existing Total Floor Area	G. Pending Floor Area	H. Building Capacity (Square Feet)
							= (B*E) - F OR G+F (If pending>0)

- Net Developable Land Inventory parcel map of mixed-use lands including the following fields in the attribute table:

Table ~~7~~ 6. Gross Mixed-Use Capacity.

A. Parcel No.	B. Area	C. Land use designation	D. Category (Vacant, redevelopable etc.)	E. Assumed Floor Area Ratio	F. Comprehensive Plan Density or Achieved Densities	G. Existing total floor area	H. Existing Housing Units	I. Pending Floor Area	J. Pending housing units	K. Building capacity (Square Feet)	L. Housing Capacity (Housing Units)
										= (B*E) - G OR G+I (if pending>0)	= (B*F) –H OR J-H (if pending >0)

Excel Tables for County-Wide Capacity and Capacity for Each Island Depicting:

1. Totals of residential acreage and capacity (housing units) by land use designation;

2. Totals of residential acreage and capacity by category (vacant, partially used etc.) and by land use designation;

3. Totals of commercial and industrial acreage and capacity (building square feet) by land use designation;

4. Totals of commercial and industrial acreage and capacity by category (vacant, partially used etc.) and by land use designation;

5. Totals of mixed-use acreage and capacity (building square feet) by land use designation and category (vacant, partially used etc.); and

6. Totals of mixed-use acreage and capacity (housing units) by land use designation and category (vacant, partially used etc.).

Maps

1. Residential Net Developable Land Inventory with parcels categorized in housing capacity ranges;

2. Commercial and Industrial Net Developable Land Inventory parcel maps with parcels categorized in building capacity ranges;

3. Mixed-use Net Developable Land Inventory maps of mixed-use lands with parcels categorized in building capacity ranges;

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4. Mixed-use Net Developable Land Inventory maps with parcels categorized in housing capacity ranges.

E. Calculate and Map Maximum Commercial, Industrial, and Mixed-Use Building Capacity

This step calculates the maximum buildout capacity allowed under current development regulations and the SJC Comprehensive plan for commercial, industrial and mixed-use land use designations. Capacity is measured in building square feet. The result is a map that shows the maximum buildout capacity of each commercial, industrial and mixed-use parcel.

The maximum allowed commercial, industrial and mixed-use square footage is limited by development standards in San Juan County Code (SJCC) Chapters 18.30 and 18.60. Standards such as maximum lot coverage, height, and building footprint influence the possible building square footage allowed on a lot. Since capacity is measured in building square feet, a series of calculations are necessary determine how many square feet of building is possible under the current development regulations on each parcel:

1. Determine the maximum lot coverage by buildings allowed in each land use designation
2. Determine the maximum height of buildings allowed in each land use designation
3. Maximum lot coverage by buildings X max building height = maximum floor area ratio (Maximum FAR) for each land use designation
4. Maximum FAR X parcel size in square feet = maximum allowable building square feet on the parcel

For example, in Eastsound the Service and Light Industrial (SLI) designation allows a maximum height of 35 feet (three stories) and a maximum lot coverage by buildings of sixty percent. The results in a maximum FAR of 1.8:

0.60 lot coverage X 3 stories = a maximum FAR value of 1.8

To get the possible building square footage for developable parcels in the SLI designation, multiply the parcel area by 1.8 (maximum FAR value). For example, a 10,000 square foot parcel in the SLI designation would have a possible building square footage of 18,000 square feet (10,000 X 1.8).

In addition to looking at the possible buildout of commercial, industrial and mixed-use development, the LCA also provides information about trends and achieved buildout. Sections C, D and F address what development is likely because full allowed buildout of a parcel rarely occurs.

Key Points

- Maximum buildout provides a picture of how much development is possible under current regulations and land use designations.
- Maximum buildout of a parcel rarely occurs.

Maximum FAR Formulas: Eastsound UGA Industrial, Commercial, and Mixed-Use Designations

Assumptions

1. A maximum building height of 35 feet allows the construction of three stories except in the Eastsound Village Commercial designation which has a required roof pitch (SJCC 18.30.670 (B)).
2. Required landscaping and setbacks are included in areas of the parcel not covered by structures.

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Service Light Industrial (SJCC 18.30.500)

Standards

Maximum lot coverage: 60 percent
Maximum height: 35 feet

Service Light Industrial MAXIMUM FAR = 0.60 lot coverage X 3 stories = 1.8

Marina (SJCC 18.30.530)

Standards

Maximum lot coverage: 30 percent
Maximum height: 35 feet

Marina MAXIMUM FAR = 0.3 lot coverage X 3 stories = 0.9

Eastsound Village Commercial (SJCC 18.30.470)

Assumption

SJCC 18.30.470 Table 9. Eastsound Village Commercial District limits lot coverage to 65 percent for buildings 5,000 square feet or larger. Lots larger than 5,556 square feet can have a building of 5,000 square feet, the maximum square footage. A 65 percent limit on lot coverage is applied to larger parcels.

Standards

Required open space: Ten percent
Maximum height: Thirty-five feet (three stories) pitched roof limiting the third story to 0.5 stories = 2.5 stories
Lot coverage: Buildings larger than 5,000 square feet in the net use building area shall not exceed 65 percent of the lot

Village Commercial MAXIMUM FAR = Parcels with possible buildings less than 5,000 square feet = 0.9 lot coverage X 2.5 stories =2.25.

Parcels with possible building 5,000 square feet or larger = Parcel area X 0.65 lot coverage X 2.5 stories = 1.625.

Eastsound Airport District (SJCC 18.30.540)

Standards

Maximum FAR set by code: 50 percent (0.5)

Eastsound Airport District MAXIMUM FAR = 0.5

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Existing Lopez Village UGA: Commercial, Industrial, and Mixed-Use Maximum FAR Formulas

Village Commercial (all of Lopez Village UGA) (SJCC 18.60.050)

The maximum FAR is calculated based on two parcel size scenarios:

- Parcels larger than 5,556 square feet, and
- Parcels smaller than 5,556 square feet.

These scenarios are needed because there is a maximum building footprint in the standards. This creates two scenarios, one above and below that maximum.

Assumptions

1. SJCC 18.60.050 Table 6.1. Density, Dimension and Opens Space Standards for Activity Center Land Use Districts requires a minimum of 10 percent open space. Parcels smaller than 5,000 are limited by the 10 percent open space requirement.
2. SJCC 18.60.050 Table 6.1 limits building height to thirty feet allowing the construction of a three-story building.
3. The required 10 percent open space will be used to meet the front setback.

PARCELS LARGER THAN 5,556 SQUARE FEET

Village Commercial lots larger than 5,556 square feet (0.127 Acre) MAXIMUM FAR = 0.65 lot coverage X 3 stories = 1.95

LOTS SMALLER THAN 5,556 SQUARE FEET (0.127 ACRE)

Village Commercial MAXIMUM FAR lots smaller than 5,556 square feet MAXIMUM FAR = 0.9 buildable area allowed by the open space requirement X 3 stories = 2.7

Activity Center Land Use Designations: Commercial and Industrial Maximum FAR Formulas

Orcas Village Commercial (SJCC 18.30.440 and Table 18.30.440)

Standard

Maximum building floor area: 3,000 square feet

No FAR is applied on OVC parcels because the maximum floor area of 3,000 square feet is the most limiting standard. The maximum square footage of 3,000 square foot is used in the calculations.

Orcas Village Transportation (SJCC 18.30.440 and Table 18.30.440)

Maximum building floor area: 4,000 square feet

No FAR is applied on OVT parcels because the maximum floor area of 4,000 square feet is the most limiting standard. The maximum square footage of 4,000 square foot is used in the calculations.

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Deer Harbor Hamlet Commercial (DHHC) (SJCC 18.30.320 and Table 18.30.320 Development Standards.)

Standard

Total cumulative floor area: 5,000 square feet per parcel

No FAR is applied on DHHC parcels because the maximum floor area of 5,000 square feet is the most limiting standard. In the calculations, the maximum square footage of 5,000 square feet is used.

Deer Harbor Hamlet Industrial (SJCC 18.30.320, Table 18.30.320 Development Standards.)

Standard

Total, cumulative floor area: 6,000 square feet per parcel

No FAR is applied in the DHHI designation because the maximum floor area is more limiting than other dimensional standards.

Olga Hamlet Commercial and Olga Community Center (SJCC 18.30.246)

Assumptions

- The twenty-five foot maximum height allows the construction of two stories.
- The required setbacks depend on what road the parcel fronts on.
- Setbacks are assumed to be located in the required open space.
- The Olga Subarea Plan and SJCC 18.30.246 include complex variations on the dimensional standards depending on the proximity to Olga Park Lane and Olga Road. In the following formula, the regulations are generalized by the dimensional standards that apply throughout the subarea.

Standards

Height: Twenty-five feet
Lot coverage: Based on four parcel sizes:

1. Lots 6,000 square feet or smaller:

   Maximum building square footage: 1,500 square feet lot coverage X 2 stories = 3,000 square feet (no maximum FAR)

2. Lots 6,001 to 10,000 square feet:

   Maximum FAR =: 0.25 lot coverage X 2 stories = 0.5

3. Lots 10,001 to 43,560 square feet:

   25 percent lot coverage up to a maximum of 4,000 square feet

   Lots between 10,001 and 16,000 square feet, MAXIMUM FAR = 0.25 lot coverage X 2 stories = 0.5

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Lots between 16,001 and 43,560 square feet, MAXIMUM FAR = 4,000 maximum square feet X 2 stories = 8,000 square feet

4. Lots larger than one acre:

   10 percent maximum lot coverage is allowed, MAXIMUM FAR = 0.1 lot coverage X 2 stories = 0.2

Eastsound Service Park (SJCC 18.30.520 Table 14 – Service Park District) – Not in UGA

Assumptions:

1. The maximum height of thirty-five feet allows the construction of three stories.
2. The lot coverage limit includes parking and driveways. Parking areas and driveways are assumed to use up twenty percent of the available lot coverage. The building is assumed to make up eighty percent of the available lot coverage.

Standards

Maximum building height: Thirty-five feet
Maximum lot coverage: Twenty-five percent

Service Park MAXIMUM FAR = 0.25 lot coverage X 3 stories X 0.8 building share of lot coverage = 0.6

Country Corner Commercial (SJCC 18.30.550, Table 17 – Eastsound Country Corner Commercial) – Not in UGA

Assumptions

1. Lots smaller than 44,444 square feet are limited by the forty percent maximum lot coverage because the allowed lot coverage is less than the 10,000 square foot maximum building footprint.
2. Lots larger than 44,444 square feet are limited by the 10,000 square foot maximum building footprint because that footprint is smaller than the forty percent maximum lot coverage.
3. The maximum height of thirty feet allows the construction of three stories.

Standards

Maximum height: Thirty feet
Maximum lot coverage: Forty percent
Maximum building footprint: 10,000 square feet

Country Corner MAXIMUM FAR for lots larger than 44,444 square feet = 30,000 square feet (limited to 3 stories with 10,000 square feet building footprint)

Country Corner MAXIMUM FAR for lots smaller than 44,444 square feet = 0.4 lot coverage X 3 stories = 1.2

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Island Center (SJCC 18.60.050, Table 6.1 Density, Dimension, and Open Space Standards for Activity Center Land Use Districts.)

Assumptions

1. SJCC 18.60.050 Table 6.1. Density, Dimension and Opens Space Standards for Activity Center Land Use Districts limits lot coverage to 60 percent for buildings over 4,000 square feet. Lots larger than 4,444 square feet can have a building of 4,000 square feet, the maximum square footage.
    - A 60 percent limit on lot coverage is applied to larger parcels. On parcels larger than 4,444 square feet, the open space is included in the forty percent of the parcel that must not be covered by buildings.
    - On parcels smaller than 4,444 square feet, the ten percent open space standard limits the building footprint to footprints below 4,000 square feet.
2. The maximum height of thirty feet allows the construction of three stories.
3. The required ten percent open space and setbacks are included in the forty percent of the parcel that is not covered by the maximum lot coverage.

Standards

Maximum building height:	Thirty feet
Maximum lot coverage:	Sixty percent (applies to buildings larger than 4,000 square feet in gross floor area)
Maximum lot coverage:	None for buildings with 4,000 square feet or less in gross floor area

Island Center MAXIMUM FAR for lots larger than 4,444 square feet = 0.60 max lot coverage X 3 stories = 1.8

Island Center MAXIMUM FAR for lots smaller than 4,444 square feet = 4,000 square feet

Marine Center (SJCC 18.30.030 and SJCC 18.60.050 Table 6.1 Allowed and Prohibited Uses in Activity Center Designations.)

SJCC 18.30.210 (G) specifies that Marine Center shall be governed by the Village Commercial land use designation. The maximum FAR is calculated based on two lot size scenarios: those parcels larger than 5,556 square feet and those smaller than that because there is a maximum building footprint in the standards. This creates two scenarios, one above and below that maximum.

LOTS LARGER THAN 5,556 SQUARE FEET

Assumptions

1. SJCC 18.60.050 Table 6.1. Density, Dimension and Opens Space Standards for Activity Center Land Use Districts limits lot coverage to 65 percent for buildings over 5,000 square feet. Lots larger than 5,556 square feet can have a building of 5,000 square feet, the maximum square footage. A 65 percent limit on lot coverage is applied to larger parcels.
2. SJCC 18.60.050 Table 6.1 also limits building height to thirty feet which allows construction of a three-story building.

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Marine Center lots larger than 5,556 square feet (0.127 Acre) MAXIMUM FAR = 0.65 lot coverage X 3 stories = 1.95

LOTS SMALLER THAN 5,556 SQUARE FEET (0.127 ACRE)

Assumptions

1. SJCC 18.60.050 Table 6.1. Density, Dimension and Opens Space Standards for Activity Center Land Use Districts requires a minimum of 10 percent open space. Lots smaller than 5,000 are limited by the 10 percent open space requirement.
2. SJCC 18.60.050 Table 6.1 limits building height to thirty feet allowing the construction of a three-story building.
3. The required 10 percent open space will be used to meet the front setback.

Marine Center lots smaller than 5,556 square feet MAXIMUM FAR = 0.9 buildable area allowed by the open space requirement X 3 stories = 2.7

Rural Land Use Designations: Commercial and Industrial MAXIMUM FAR Formulas

Rural Commercial (SJCC 18.60.050, Table 6.2 – Density, Dimension, and Open Space Standards for Rural, Resource, and Special Land Use Designations.)

Assumptions

1. The maximum height of thirty-five feet allows the construction of three stories.
2. The required open space and setbacks are included in the ninety percent of the parcel that is not allowed to be covered by impervious surface.

Standards

Maximum building height: Thirty-five feet
Maximum impervious surface: Ten percent

Rural Commercial MAXIMUM FAR = 0.1 maximum impervious X 3 stories = 0.3

Rural Industrial (SJCC 18.60.050, Table 6.2 – Density, Dimension, and Open Space Standards for Rural, Resource, and Special Land Use Designations.)

Assumptions

1. The maximum height of thirty-five feet allows the construction of three stories.
2. The required open space and setbacks will be included in the remainder of the parcel that is not covered by impervious surface.

Standards

Maximum building height: Thirty-five feet
Maximum impervious surface: Twenty percent

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Rural Industrial MAXIMUM FAR = 0.2 maximum impervious X 3 stories = 0.6

Rural General Use (SJCC 18.60.050, table 6.2 – Density, Dimension, and Open Space Standards for Rural, Resource, and Special Land Use Designations.)

Assumptions

1. The maximum height of thirty-five feet allows the construction of three stories.
2. The required open space and setbacks will be included in the ninety percent of the parcel that is not allowed to be covered by impervious surface.

Standards

Maximum building height: Thirty-five feet
Maximum impervious surface: Ten percent

Rural General Use MAXIMUM FAR = 0.1 maximum impervious X 3 stories = 0.3

Master Planned Resorts

Development in master plan resorts is defined by adopted master plans. Building in the commercial, industrial and mixed-use areas in these resorts affects a small percentage of possible rural development.

The primary area in the Roche Harbor Master Plan Resort contains 170 acres. Another 187 acres includes the Roche Harbor Airport and surrounding land. The total resort area is 357 acres, much of which is developed. Roche Harbor open space standard is 40 percent

The Rosario Master Plan Resort includes approximately 100 acres. It has a variable open space and lot coverage standards depending on the resort subarea. These subareas are not identified in the GIS data.

West Beach Resort has not adopted a master plan.

No maximum commercial, industrial or mixed-use buildout capacity was figured for these resorts. Plan specific parcel information is not in GIS. Their development standards cannot be easily analyzed using available data. These rural resorts are relatively small in overall rural acreage and are largely built out.

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F. Calculate Final Capacity

Conduct the **Final Capacity** calculations using the Excel tables created in Tasks D and E, **Gross Capacity and Maximum Capacity**. ~~Add~~ Create a new ~~column to the~~ table~~s~~ to ~~include~~ calculate the Final Capacity numbers. The Final Capacity ~~column reflects~~ uses the gross capacity from Task D ~~minus~~ and subtracts the capacity deductions described below:

Deduct Capacity to Account for Public Use, Market, Seasonal/Recreational Home Factors

Public Use Factor

The public use factor is a deduction to account for the lands that may be used for public purposes, such as road right-of-ways, utility corridors, public pathways and other lands set aside for public uses. A public use factor of five percent (5%) will be deducted.

Market Factor

A market factor of twenty-five percent (25%) of the Developed Land Inventory will be deducted to account for the land that is not available for development during the planning period. ~~The market factor is a deduction to account for lands that will not be available for development during the planning period.~~ It is expected that over the 20-year planning period some lands will be kept off the market due to speculative holding, land banking, and personal use.

Seasonal/Recreational Home Factor

A~~n additional~~ deduction of ~~twenty five percent (25%)~~ thirty five percent (35%) of the gross housing capacity will be deducted to account for the recreational home market. The 2010 US Census indicated that 35 percent (35%) of the houses in the County were categorized as seasonal/recreational, or occasional use properties. ~~Recent comparisons of the population increases and finalized residential building permits indicate that between 2010 and 2016 approximately one and one half (1.5) housing units were built for each new resident.~~

F.1 To each Excel tables developed in Section F, add columns for "Public Use Deduction", "Market Factor", "Seasonal/Recreational Home Factors", "Capacity Deduction", "Occupied Housing Units", "Total Population Capacity" and "Final Building Capacity".

F.2 Add the following factors to the final capacity tables ~~in Step D~~ as applicable:

- A 5 percent (5%) public use factor for all designations;
- For vacant residential designations: a 25 percent (25%) market factor, plus an additional ~~25~~ 35 (~~25~~ 35%) percent seasonal, recreational or occasional use home factor;
- For partially-used residential parcels: a 25 percent (25%) market factor and an additional ~~25~~ 35 (~~25~~ 35%) percent seasonal, recreational or occasional use home factor;
- For vacant commercial or industrial land use designations: a 25 percent (25%) market factor; and
- For re-developable commercial or industrial parcels: a 25 percent (25%) market factor.

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~~**F.3** A market factor will be applied to Master Planned Resorts as a proportionate share based on the ratio of developed to undeveloped areas within the Master Planned Resort. See Section C.~~

F.4 In the "Capacity Deduction" column, calculate the total amount of capacity to be subtracted based on steps F.2 and F.3.

F.5 Calculate the Total Occupied Housing Units by Land Use Designation. To convert dwelling units into occupied housing units use the following data on occupancy rates and average household sizes:

- Apply occupancy rate assumptions for the County by using best available data from Washington Office of Financial Management (OFM) and/or the US Census. Seasonal housing is considered vacant according to Census definitions. These housing units are not included in the occupied housing unit category and are not folded into Census calculations of average household size.

- Multiply the total housing units of capacity in each land use designation by the occupancy rate assumption. The output will be total occupied dwelling units in each land use designation. Add this result in a column to the table modified as part of Step 1 called "Occupied Housing Units".

F.6 Calculate the **Total Population Capacity**. In the "Total Population Capacity" Column, subtract "Capacity Reduction" from the "Housing Capacity" column and multiply the result by the average household size for the County which is 2.04 to calculate "Total Population Capacity".

F.7. Calculate **Employment Capacity**. In the "Total Building Capacity" column, subtract "Capacity Reduction" from the "Building Capacity" column to calculate "Total Building Capacity."

F.8 Repeat steps F.1 through F.7 using the maximum capacity from Task E in place of the gross capacity.

Deliverables:

Excel Tables for County-Wide Final Capacity and Final Capacity for Each Island Depicting:

1. Totals of both gross and maximum allowed residential acreage and final capacity (housing units and population) by land use designation;

2. Totals of both gross and maximum allowed residential acreage and final capacity by category (vacant, partially used etc.) and by land use designation;

3. Totals of both gross and maximum allowed commercial and industrial acreage and final capacity (building square feet) by land use designation;

4. Totals of both gross and maximum allowed commercial and industrial acreage and final capacity by category (vacant, partially used etc.) and by land use designation;

5. Totals of both gross and maximum allowed mixed-use acreage and final capacity (building square feet) by land use designation and category (vacant, partially used etc.); and

6. Totals of both gross and maximum allowed mixed-use acreage and final capacity (housing units) by land use designation and category (vacant, partially used etc.).

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LOPEZ VILLAGE LAND CAPACITY ANALYSIS EQUATIONS AND ASSUMPTIONS – PROPOSED DESIGNATIONS

FAR Equations

In Lopez Village Commercial (LVC) the maximum building footprint per building is 6,000 square feet and the maximum impervious surface is 65% of the lot. The maximum building height in LVC is 35 feet, allowing for three-story development.

Maximum FAR in LVC

FAR = 0.85 maximum impervious surface X 3 stories = 2.55

The gross capacity in LVC was calculated using the following formula:

(Net developable lot square footage X 2.55 maximum FAR) – (existing + pending building square footage)

Housing Density

The base density in Lopez Village Residential (LVR) is six dwelling units per acre. There is not a base density in LVC. Residential development in LVC must be in multifamily residential (3+ units).

Maximum dwelling units in Lopez Village Residential (LVR) land use designations

Maximum allowed density in LVR is 6 units per acre

The gross capacity in LVR was calculated using the following formula:

(Net developable lot acreage X 6 units per acre) – (pending + existing dwelling units)

Maximum dwelling units in LVC (mixed use)

Mixed-Use Scenario B

{[(Net developable square footage X 0.85 maximum impervious) X 3 stories] X 0.50 max residential floor area} / 1,000 square foot dwelling units

Mixed-Use Scenario C

[(Net developable square footage X 0.85 maximum impervious) X 3 stories] / 1,000 square foot dwelling units

Assumptions

Parking space requirements were not included in considering FAR because off-site parking and impervious surface options exist.

Commercial development in LVC land use designation is limited by maximum impervious surface. The Lopez Village Subarea Plan development regulations allow green roofs to offset impervious surface limitations. For calculating possible FAR, it is assumed that commercial development will only use impervious roofing.

Assuming that developers *will* use pervious surfaces for parking areas and *will not* use pervious surfaces for roofing is intended to show the likelihood that development will contain a mix of both.

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LOPEZ VILLAGE LAND CAPACITY ANALYSIS EQUATIONS AND ASSUMPTIONS – PROPOSED DESIGNATIONS

For calculating housing density in LVC (mixed-use), it is assumed that mixed-use dwelling units would average 1,000 square feet each.

There is no base density in the proposed regulations for Lopez Village Commercial.

Lopez Village Institutional does not provide commercial, mixed-use, or residential capacity. Assuming this, only one undeveloped parcel was excluded from the capacity calculations (251544004000).

The western 300 feet of TPN 252322001000 is designated Lopez Village Commercial, resulting in a 2.5 acre area of that parcel designated commercial. Those 2.5 acres were subtracted from the residential net developable land and added to the commercial net developable land.

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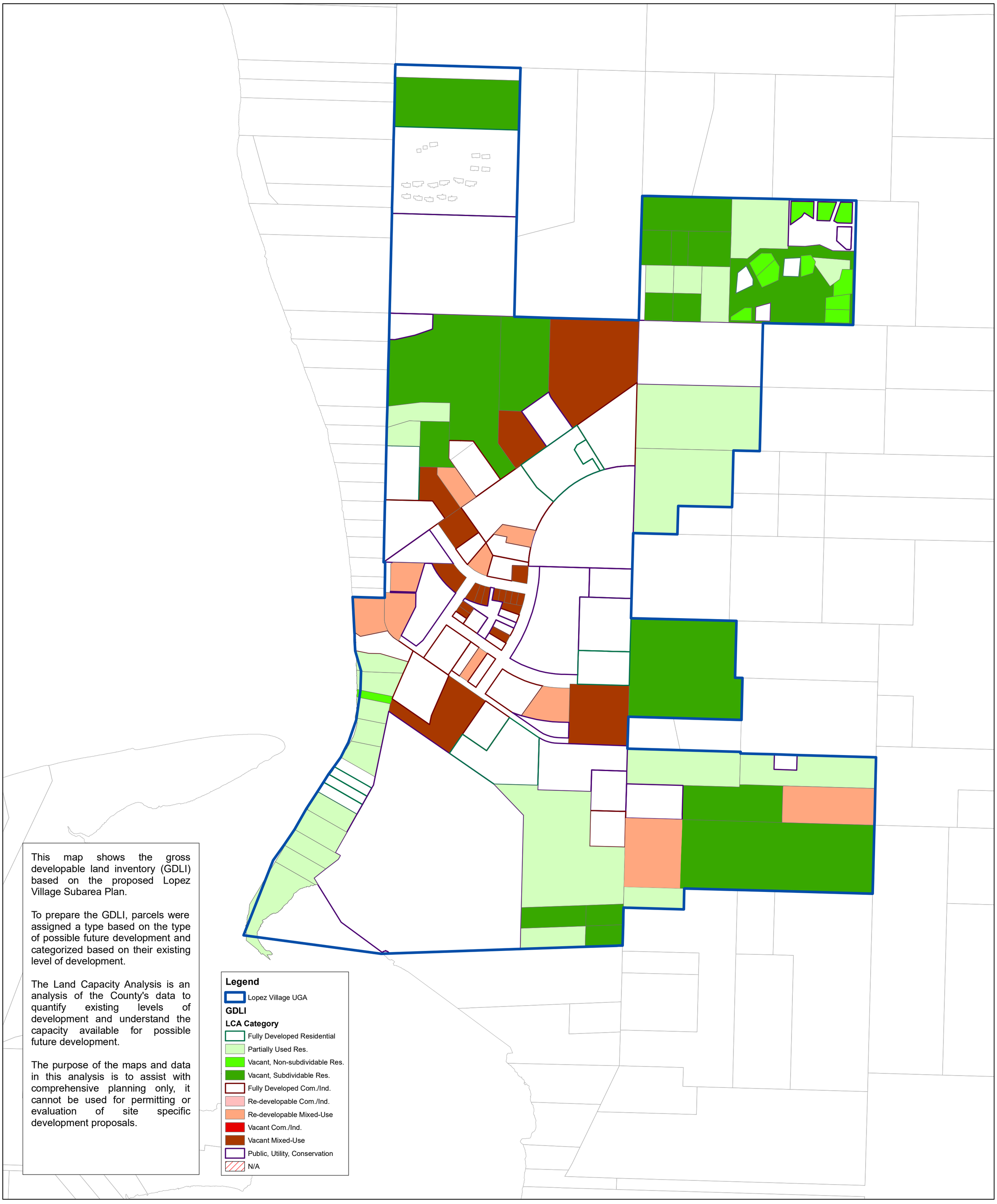
Gross Developable Land Inventory (GDLI): Lopez Village Proposed Subarea Plan.



This map shows the gross developable land inventory (GDLI) based on the proposed Lopez Village Subarea Plan.

To prepare the GDLI, parcels were assigned a type based on the type of possible future development and categorized based on their existing level of development.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 255 510 1,020 1,530 2,040 2,550 Feet

1 in = 320 feet

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Proposed Lopez Village\2019-10-04_Map2-A-2_GDLI_Lopez_Village_1.mxd

GDLI Lopez Village Proposed Subarea Plan Version 1.0

Map Drawn: October 9, 2019

Drawn By: Adam Zack, Planner III

Net Developable Land Inventory (NDLI): Proposed Lopez Village Subarea Plan.

This map shows the net developable land inventory (NDLI).

To prepare the NDLI, critical areas such as wetlands and steep slopes were subtracted from the developable parcels identified in the Gross Developable Lands Inventory (GDLI).

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site

Legend

LCA Category

- Partially Used Res.
- Vacant, Non-subdividable Res.
- Vacant, Subdividable Res.
- Re-developable Com./Ind.
- Re-developable Mixed-Use
- Vacant Com./Ind.
- Vacant Mixed-Use
- Lopez Village UGA

0 255 510 1,020 1,530 2,040 2,550 Feet

1 in = 320 feet

N

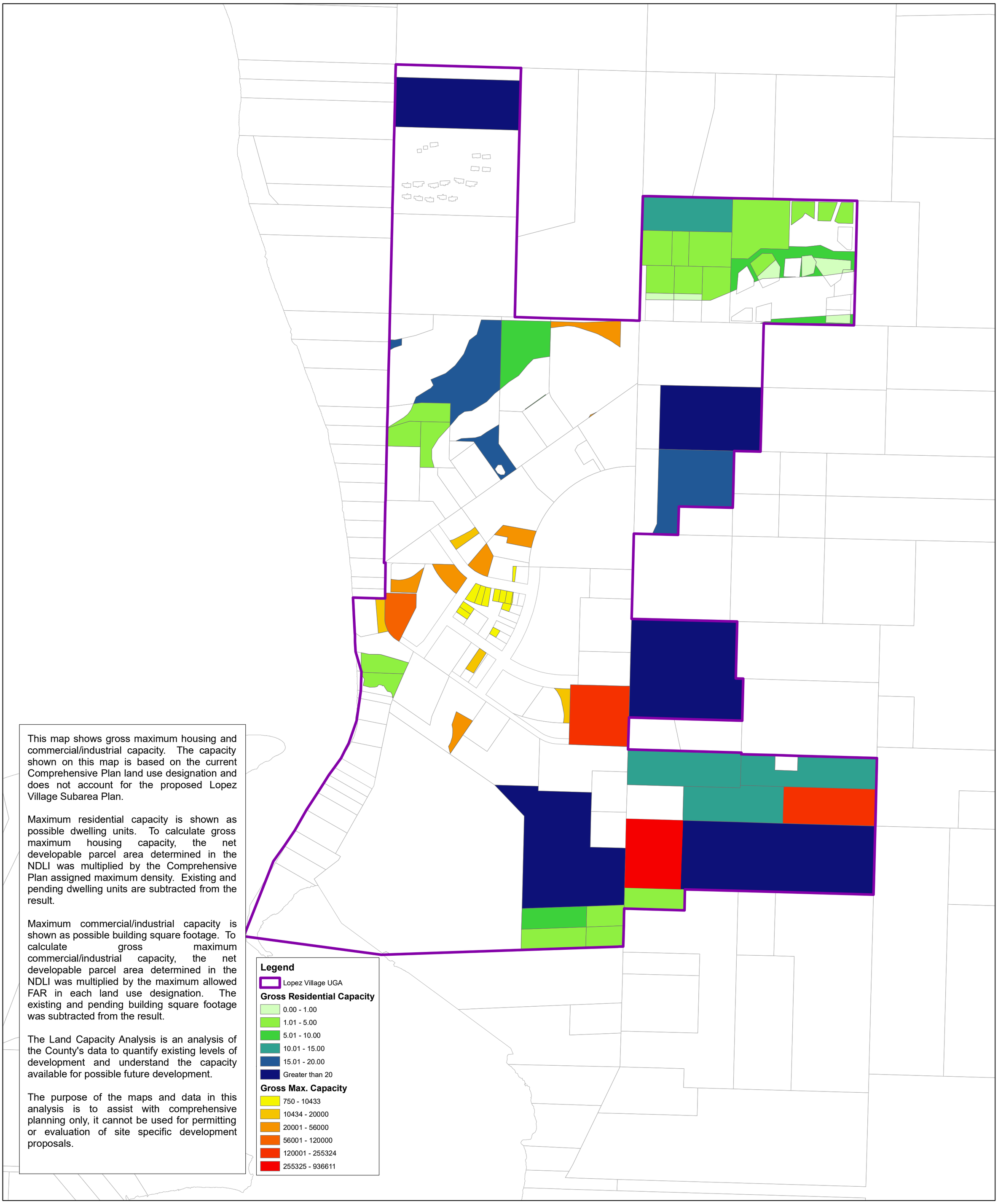
Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Proposed Lopez Village\2019-10-08_NDLI_Prop_LU_Lopez_Village_1.mxd

NDLI Proposed Lopez Village Subarea Plan Version 1.1

Map Drawn: October 8, 2019

Drawn By: Adam Zack, Planner III

Gross Maximum Capacity: Proposed Lopez Village Subarea Plan.



This map shows gross maximum housing and commercial/industrial capacity. The capacity shown on this map is based on the current Comprehensive Plan land use designation and does not account for the proposed Lopez Village Subarea Plan.

Maximum residential capacity is shown as possible dwelling units. To calculate gross maximum housing capacity, the net developable parcel area determined in the NDLI was multiplied by the Comprehensive Plan assigned maximum density. Existing and pending dwelling units are subtracted from the result.

Maximum commercial/industrial capacity is shown as possible building square footage. To calculate gross maximum commercial/industrial capacity, the net developable parcel area determined in the NDLI was multiplied by the maximum allowed FAR in each land use designation. The existing and pending building square footage was subtracted from the result.

The Land Capacity Analysis is an analysis of the County's data to quantify existing levels of development and understand the capacity available for possible future development.

The purpose of the maps and data in this analysis is to assist with comprehensive planning only, it cannot be used for permitting or evaluation of site specific development proposals.

0 255 510 1,020 1,530 2,040 2,550 Feet

1 in = 320 feet

N

Document Path: O:\Projects\Comprehensive Plan\2018\LCA Validation\Proposed Lopez Village\2019-10-08_Prop_LU_Max-G_Cap_Lopez_Village_1.mxd

Gross Maximum Capacity Proposed Lopez VillageSubarea Plan

Version 1.0

Map Drawn: October 8, 2019

Drawn By: Adam Zack, Planner III

Lopez Village Capacity, Proposed Land Use Designations

2036 Lopez Population	**2,936**
April 1, 2016 Lopez Population	**2,466**
Additional Lopez Population 2036	470
50% of projected Lopez Population Growth for sizing UGA Capacity	**235**

Scenario A, Lopez Village Commercial develops with 100% commercial.

	Gross		Market Factor Reductions							Net			
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Comm. Public Use Factor (5%)**	**Res. Public Use Factor (5%)**	**Comm. Market Factor (25%)**	**Res. Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Comm. Market Factor Capacity Reductions**	**Subtotal Res. Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	
LVC	0	3,299,102.88	164,955.14	0	824,775.72	0	0	989,730.86	0	0	3,299,102.88	0	
LVR	348.03	0	0	17.40	0	87.01	121.81	0	226.22	121.81	0	248.50	
LVI	0	0	0	0	0	0	0	0	0	0.00	0	0	**Capacity Excess/Shortfall**
Total	**348.03**	**3,299,102.88**	**164,955.14**	**17.40**	**824,775.72**	**87.01**	**121.81**	**989730.86**	**226**	**122**	**3,299,103**	**248**	**13**

Scenario B, Lopez Village Commercial develops with 50% commercial and 50% residential.

	Gross		Market Factor Reductions							Net			
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Comm. Public Use Factor (5%)**	**Res. Public Use Factor (5%)**	**Comm. Market Factor (25%)**	**Res. Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Comm. Market Factor Capacity Reductions**	**Res. Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	
LVC	1649.55	1,649,551.44	82,477.57	82.48	412,387.86	412.39	577.3425	494,865.43	1,072.21	577.34	1,154,686.01	1178	
LVR	348.03	0	0	17.40	0	87.01	121.81	0	226.22	121.81	0	248	
LVI	0	0	0	0	0	0	0	0	0	0	0	0	**Capacity Excess/Shortfall**
Total	**1,997.58**	**1,649,551.44**	**82,477.57**	**99.88**	**412,387.86**	**499.40**	**699.15**	**494,865.43**	**1,298**	**699**	**1,154,686**	**1426**	**1191**

Scenario C, Lopez Village Commercial develops with 100% residential.

	Gross		Market Factor Reductions							Net			
Land Use Designation	**Gross Residential Capacity (Dwelling Units)**	**Gross Non-Residential Capacity (Building square feet)**	**Comm. Public Use Factor (5%)**	**Res. Public Use Factor (5%)**	**Comm. Market Factor (25%)**	**Res. Market Factor (25%)**	**Seasonal/ Recreational Home Factor (35%)**	**Subtotal Comm. Market Factor Capacity Reductions**	**Res. Subtotal Market Factor Capacity Reductions**	**Additional Residential Capacity (Dwelling Units)**	**Additional Non-Residential Capacity (Building square feet)**	**Population Capacity (2.04 persons per household)**	
LVC	3299.10	0	0	164.96	0	824.78	1154.69	0	2,144.42	1154.69	0	2355.56	
LVR	348.03	0	0	17.40	0	87.01	121.81	0	226.22	121.81	0	248.50	
LVI	0	0	0	0	0	0	0	0	0	0	0	0	**Capacity Excess/Shortfall**
Total	**3,647.14**	**0**	**0**	**182.36**	**0**	**911.78**	**1276.50**	**0.00**	**2,371**	**1276**	**0**	**2604**	**2369**

COMMENTS AND QUESTIONS ON THE LAND CAPACITY ANALYSIS FIRST DRAFT REPORT RECEIVED BY OCTOBER 25, 2019

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
1	October 3 through 11, 2019	Joe Symons	https://www.sanjuanco.com/DocumentCenter/View/19237/2019-10-07_PUB_LCA_Klein_legend	Question	Mr. Symons had several questions about how residential capacity was calculated, particularly in the rural areas. Mr. Symons indicated that he was trying to duplicate the analysis and results using a different data set and that this produced different results.

Staff Response

Via email, staff answered Mr. Symons questions about the Land Capacity Analysis Methodology and clarified how capacity was calculated. In this email exchange, staff pointed out that conducting an analysis using a different input data set and different assumptions would produce different capacity results. The full exchange is provided with Comment 1.

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
2	October 5 through 7, 2019	Fred Klein	https://www.sanjuanco.com/DocumentCenter/View/19237/2019-10-07_PUB_LCA_Klein_legend	Question	Mr. Klein thought that the residential capacity shown on TPN 271223009000 was incorrect. It is shown in the legend in the capacity category of 6 to 10 dwelling units. He maintains that it should be in the 2 to 5 category. In his reply to the staff explanation, Mr. Klein expressed concern regarding the use of fractional capacity on parcels.

Staff Response

The capacity on TPN 271223009000 is 5.59 dwelling units. This is because the parcel is 27.93 acres in a 5 acres per unit density (27.93 acres / 5 acres per dwelling = 5.59 dwellings). The issue here is the labeling on the legend of the map. The categories are not broken up at the whole number breaks. They are instead broken up by decimal points. For example, anything greater than 5 (including 5.00001) ends up in the 6 to ten category. The legend of the maps was simplified to the whole number. Staff fixed the labels on the legend to better show the ranges for each category.

Fractional capacity results for residential capacity are discussed in the staff report.

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
3	October 9, 2019	Fred Klein	https://www.sanjuanco.com/DocumentCenter/View/19240/2019-10-09_PUB_LCA_Klein_density_in_VR	Comment	Mr. Klein is concerned that the current patterns of development in the Eastsound Village Residential land use designation limit the amount residential capacity. Mr. Klein disagrees with the application of the maximum allowed density, 12 unit per acre, in this designation for the purposes of calculating capacity.

Staff Response

Council directed staff to look at the maximum development allowed under the current regulations. For this reason, the maximum density for this area is used when calculating possible capacity.

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
4	October 16, 2019	Fred Klein	https://www.sanjuanco.com/DocumentCenter/View/19241/2019-10-16_PUB_LCA_Klein_VR_nonres	Comment	Mr. Klein is concerned that the presence and allowance of nonresidential uses in the Eastsound Village Residential land use designation reduce the amount of residential capacity available in the UGA.

Staff Response

Some nonresidential uses are allowed in the Eastsound Village Residential land use designation. Capacity in this designation is subject to the same public use, market, and seasonal homes factors as everywhere else. These deductions reduce the gross residential capacity by a total of sixty-five percent. These factors account for nonresidential uses in the VR land use designation. The capacity reductions are discussed further in the staff report.

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
5	October 23, 2019	John Campbell	https://www.sanjuanco.com/DocumentCenter/View/19242/2019-10-23_PUB_LCA_Campbell_questions	Question	Mr. Campbell provided 5 questions about the content of the report related to the content of several of the tables in the report. He also had questions about how commercial capacity will be interpreted.

Staff Response

Staff answered to Mr. Campbell's questions in an email dated November 1, 2019, included with comment 5. He pointed out a few copying errors in the final capacity tables that staff had noticed too. These errors have been addressed in the second draft of the report. One of Mr. Campbell's questions is about commercial capacity and expected demand for commercial development. This issue is discussed in the November 4, 2019 memo, on page 7.

COMMENTS AND QUESTIONS ON THE LAND CAPACITY ANALYSIS FIRST DRAFT REPORT RECEIVED BY OCTOBER 25, 2019

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
6	October 23, 2019	Joe Symons	https://www.sanjuanco.com/DocumentCenter/View/19243/2019-10-23_PUB_LCA_Symons_density	Comment	Mr. Symons is concerned that residential capacity calculations in rural areas include a deduction for critical areas. He posits that it should be calculated using the gross acreage on developable parcels without any critical area deductions. He expresses additional concern that regional growth will increase development pressure. Mr. Symons wants the LCA to be considered within the context of the rest of the Comprehensive Plan. Finally, he is concerned that second homes will increase the demand for infrastructure and raise the cost of governmental services.

Staff Response

The assumptions used in calculating gross and final residential capacity are detailed in the draft Land Capacity Analysis Methodology. The Methodology uses net developable lands and parcel acreages with critical areas deducted when calculating residential capacity. This decision and the implications are discussed in the November 4, 2019 memo, on page 4.

Regional growth does influence development pressure. This is partially accounted for by using a future population forecast based on a proportional share of the State's projected population. Information on the population forecast is posted to the Comprehensive Plan update project website. The population forecast is one of the technical reports the County will consider during the update. Consideration of the technical reports will provide more context regarding the type of development pressure that is expected during the coming years.

The demand for additional governmental services is not part of the LCA. Demand for services and level of service analyses will be conducted during the update to the capital facilities, utilities, and transportation appendices.

Second homes are accounted for in the draft LCA Methodology by using a 'seasonal home' capacity deduction. Capacity deductions are discussed further in the November 4, 2019 memo, on page 6. Mr. Symons' concern that these second homes will drive the demand for government services is beyond the scope of the LCA. The demand that residential development places on government services is addressed in the level of service analyses that will be conducted in the appendices mentioned above.

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
7	October 24, 2019	John Campbell	https://www.sanjuanco.com/DocumentCenter/View/19244/2019-10-24_PUB_LCA_Campbell_EastsoundRural_density	Question	Mr. Campbell correctly pointed out that the capacity calculations in Eastsound Rural seemed to use the incorrect density value.

Staff Response

Staff responded to Mr. Campbell explaining that the density value in Eastsound Rural was corrected for the second draft. The density assigned in the Eastsound Rural land use designation is five units per acre (0.2 dwellings per acre). Capacity was inadvertently calculated at two units per acre (2 dwellings per acre). The decimal point for this value was put in the wrong place. Staff made the correction in the second draft report.

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
8	October 24, 2019	Francine Shaw	https://www.sanjuanco.com/DocumentCenter/View/19245/2019-10-24_PUB_LCA_Shaw_conclusions	Question	Ms. Shaw represents several property owners that have submitted requests for land use review during the Comprehensive Plan update. She had several questions about interpreting the report, the implications of capacity results, and the next steps for the submitted land use review requests.

Staff Response

The Department of Community Development accepted requests for land use review during the Comprehensive Plan update. These requests will be considered during the update to the Land Use Element. Work on the Land Use Element will begin following the Land Capacity Analysis.

The staff response to Ms. Shaw's other questions are provided with her email in Comment 8.

COMMENTS AND QUESTIONS ON THE LAND CAPACITY ANALYSIS FIRST DRAFT REPORT RECEIVED BY OCTOBER 25, 2019

Comment #	Date Received	Commenter Name	Link to Comment	Question or comment	Summary of Comment
9	October 25, 2019	Tina Whitman, on behalf of Friends of the San Juans	https://www.sanjuanco.com/DocumentCenter/View/19246/2019-10-25_PUB_FOSJ_methodology	Ccomment	This comment was submitted by Tina Whitman on behalf of the Friends of the San Juans (Friends). They are concerned that residential capacity calculations in rural areas include a deduction for critical areas. They contend that this results in an undercount of the total possible dwelling units in rural areas. The Friends also requested more explanation of the public use, market, and seasonal home factor reductions used in calculating final capacity. They also mention that at the briefing to the Eastsound Planning and Review Committee (EPRC) that staff pointed out that the policy to allocate fifty percent of growth on each island to the UGA was a local policy choice. The Friends oppose changing this policy. They also request there be additional accuracy review of the Land Capacity Analysis. Friends' fourth concern is that some overlay districts that may influence development are not included in the analysis. The given example is the San Juan Valley Heritage Plan Overlay District Conservation Incentive Bonus.

Staff Response

Staff conducted the LCA in accordance with the draft LCA Methodology, which the County began vetting in 2017. The assumptions listed in that document were applied to arrive at results provided in the Land Capacity Analysis Report. This includes using net developable acreage (parcel size minus critical areas) to calculate residential capacity. This is an underlying assumption that staff recommended and the Council directed staff to use. Using the gross acreage, including critical areas, will increase the amount of residential capacity shown throughout the County. A discussion of this issue is provided in the November 4, 2019 memo, on page 4.

The public use, market, and seasonal home factors are discussed further in the staff report. These have been refined throughout the vetting process and are consistent with those used by other communities and the State guidance. These factors are discussed in the November 4, 2019 memo, on page 6.

When presenting to the EPRC in October, staff mentioned that the policy to allocate fifty percent of a ferry-served island's expected growth to the UGA is a local choice. Staff did not state that this policy should or would change. It was used as an example of the kinds of existing policies that the County might consider during the Comprehensive Plan update discussion of goals and policies.

Staff points out that additional accuracy review is the very process that the Land Capacity Analysis is currently undergoing. Prior to public comment periods, the LCA has undergone internal review and validation. The results presented in the first draft of the Land Capacity Analysis Report were made available to the public, EPRC, Planning Commission, and County Council for review prior to the preparation of the second draft. Information on the public process the LCA has already gone through is provide in the November 4, 2019 memo, on page 9.

Overlay districts shape how and what kind of development may take place in distinct areas. Overlays are discussed in detail in the November 4, 2019 memo, on page 8.

Throughout their comment letter, Friends contends that the draft LCA is not based on County data. This is incorrect. The Land Capacity Analysis is entirely based on County data including information from the Assessor's Office and other County sources. This data was analyzed based on the steps described in the draft LCA Methodology. The analysis did create new data points within the data set such as net developable acres for parcels, but the base data set is the County's parcel data.

Adam Zack

From: Adam Zack
Sent: Friday, October 11, 2019 3:59 PM
To: 'joe symons'
Cc: Lynnette Wood; Erika Shook; Timothy P. Blanchard; Georgette Wong
Subject: RE: Request for LCA / GDLI calculations

Hi Joe,

A video recording of the County Council briefing on the Land Capacity Analysis on September 16, 2019, is available on the County website here: https://www.sanjuanco.com/903/Council-Agendas-and-Video

You may also be interested in the Planning Commission briefing on the Land Capacity Analysis recorded on September 20, 2019. The video is posted here: https://www.sanjuanco.com/971/Planning-Commission-Meeting-Video

These recordings should answer your questions about either briefing.

A fair characterization of the difference between your attempt to conduct an analysis and the Land Capacity Analysis is that you do not seem to be using the same data set and it is possible that you may not be correctly applying the Land Capacity Analysis Methodology. I do not know your process nor what software you are using and so, cannot speak to what kind of analysis you're conducting. I will not comment further on an attempted analysis conducted independently of the Land Capacity Analysis process.

Please let me know if you have any additional questions about the Land Capacity Analysis.

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: joe symons <joesymons@me.com>
Sent: Wednesday, October 9, 2019 12:22 PM
To: Adam Zack <adamz@sanjuanco.com>
Cc: Lynnette Wood <lnmiwood@gmail.com>; Erika Shook <erikas@sanjuanco.com>; Timothy P. Blanchard <tim@blanchardmanning.com>; Georgette Wong <georgette_wong@yahoo.com>
Subject: Re: Request for LCA / GDLI calculations

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thanks for your prompt reply.

Yes, I believe, based on your info here, that we are using different "versions" of the same data set. I'm using the simple, basic, GDLI-esque data set, which I interpret to be the legal foundation for development. DCD appears to be using a sub-set of this, based on LCA assumptions which reduce "buildout" by public, market and vacant-use factors. The "legal" vesting of du's appears to be ignored. As I recall, Rick Hughes asked you about this during a recent hearing where you testified re the LCA progress.

Would this be a fair characterization of the difference between the results we have?

Thank you for your recommendations re comments on the LCA.

Joe

On Oct 9, 2019, at 11:49 AM, Adam Zack <adamz@sanjuanco.com> wrote:

Hi Joe,

It sounds like you are using a different data set. Because you are not using the same data set, you are getting different results. The confusion stems from using different inputs to try and get to the same result. As I mentioned in the previous email, the capacity calculations are based on the Net Developable Lands Inventory (NDLI) data set, which stemmed from the Gross Developable Lands Inventory (GDLI) prepared over the course of this summer. If you use a different data set, you will get different results. The instructions I previously provided will help you check the math used in preparing the LCA. If you are trying to check the results while using a different data set, you will get different results.

Your comments about using acreage, removing areas with limited development potential, and how density is applied to arrive the capacity calculations are all directed at the assumptions used in the LCA Methodology. If you have comments on this document (Attachment A of the LCA report available here:https://www.sanjuanco.com/DocumentCenter/View/18995/2019-09-09_DCD_LCA_draft_capacity_Rep_AZ_PCCC_09-2019) please refer to the page and line number and send your comment tocompplancomments@sanjuanco.com.

I think you may be commenting on the LCA rather than asking me a question about how the Land Capacity Analysis was prepared. If you would like to comment on the LCA, please send your comments to compplancomments@sanjuanco.com make sure you refer to the page and line numbers of the report linked to above. Please note, the comment period on the current draft report goes through October 25, 2019. Submitting your comments through the proper channels will ensure that they are appropriately filed and distributed to the Planning Commission and County Council.

For reference, the maximum FAR values were derived from the San Juan County Code, and are intended to provide for the maximum allowed development. A full description of how each maximum FAR value was calculated is provided on page 22 of the LCA Methodology, included with the draft report linked to above.

Please let me know if you have any other questions about how the draft Land Capacity Analysis was prepared. Make sure to send any comments you have on the LCA report or methodology to compplancomments@sanjuanco.com.

Thanks,
Adam Zack

Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
NOTICE: All emails, and attachments, sent to and from San Juan County are public records and may be subject to disclosure pursuant to the Public Records Act, Chapter 42.56 RCW.

From: joe symons <joesymons@me.com>
Sent: Wednesday, October 9, 2019 11:15 AM
To: Adam Zack <adamz@sanjuanco.com>
Cc: Lynnette Wood <lnmiwood@gmail.com>; Erika Shook <erikas@sanjuanco.com>; Timothy P. Blanchard <tim@blanchardmanning.com>; Georgette Wong <georgette_wong@yahoo.com>
Subject: Re: Request for LCA / GDLI calculations

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you for your careful explanation of how you derived the numbers shown in the LCA page 68 (pdf that I sent in my inquiry).

I am focussing only on rural areas.

The example you gave, an 84 acre parcel in Forest Overlay with an existing structure on it, would, in the world of "development capacity", be seen (by the owner anyway) as allowing for a maximum of 4 legal development (SFR) parcels should the single parcel be subdivided. Since there is already one du on the parcel, the owner could expect s/he could enjoy 3 additional du's for his/her land.

What I am sensing is a gap between legal subdivision potential and a more nuanced, but also more confusing, calculation based on acres (to the nearest hundredth of an acre) that would not necessarily represent the max legal development potential of any parcel. Taking acreage away from a parcel for wetlands or slopes does not mean the parcel has lost development potential.

It may be that your analysis methodology is of greater significance in activity centers, dealing with FAR's.

Using the spring 2017 Parcels database, which is what I believe you are using, containing 17201 parcels, (note: this SJC database has been modified by Dean Doughtery of SJPT to exclude all acreage that is covered by conservation easements) and sorting on land use RFF, I get 6883 existing parcels with, at buildout (this means all parcels are subdivided to their max based on the density assigned to that parcel), an additional development potential for RFF designated parcels of 4458 du's.

Table "Capacity" pg 62 LCA shows a gross residential capacity for RFF for the entire county of 3232 du's.

These numbers are so far off that I am unable to reconcile the difference. Clearly DCD did not do its work parcel by parcel, but used a aggregating methodology to create the LCA.

I have compared "my" density designations assigned to each parcel (by combining a pile of SJC datasets; this work was done in 2017 and 2018) with the GDLI density designations (which came out in summer 2019). They are identical. I have run the numbers on total "capacity" based on each of the 6 categories (0 to 5) of the GDLI. I know you don't mess with the town of FH, but the parcel data is county wide, so data on all parcels (specifically density data) is available. The buildout potential for FH is so far off the charts that the impact of this on overall county buildout has to be looked at with considerable scrutiny. However, since I'm looking at rural lands only, this anomaly is not on my todo list today.

Any assistance you can offer me as to how our analytical methods looking at precisely the same data could be so far off would be appreciated.

From a big picture perspective, I believe the fundamental LCA methodology may be appropriate for activity centers given the FAR considerations, tho even there much massaging is likely. That said, I think the methodolgy does not appear to consider legal maximums. DCD may be using "best practices" among national planning standards in its LCA methodology but in reality at buildout there will be no market factor and absolutely no discount for vacation/partial use/recreational du's. If a parcel has a du, at buildout it will be used, or in all cases it is legally available to be used (i.e., developed). State and County regs require certain water and other resources be met AS IF a du were occupied full time. Common sense reveals that "recreational use" structures are basically fully occupied in peak season months. Discounting these structures as if they didn't exist distorts the infrastructure requirements that the county is obligated to supply, and thus the costs to be incurred. Further, none of these calculations speaks to the impact on the community, on the vision statement, on carrying capacity topics.

In short, the calculations seem to seriously under-represent the actual number of structures that could be built in the county at any time, not just at a theoretical buildout. The LCA also does not address the impact of visitors. Given super-user-friendly visitor booking platforms like airbnb, many of what otherwise might have been "empty" recreational homes are now not empty: they have become businesses hiding under the current presumption that they are recreational use, or, worse, that as far as the LCA is considered they "don't exist."

Granted, "life" is complex. One can never get a precise answer to almost anything. Everything is a moving target. But the number of parcels and the number of acres in SJC are not rapidly moving targets. Acres are pretty fixed, and save for subdivision potential (of which there's a fair amount sitting there in the legal books), the number of parcels is not untrackable or unpredictable. I should think we could be close enough (i.e., to a first approximation) on how the number of parcels, in rural areas of the county, by land use category (RFF, RR, etc.) are calculated to be able to move to the next steps, which are: what's this look like? what will this cost? is this consistent with the vision statement? Do we have sufficient critical resources (e.g., water, septic, ferry, roads, etc.) to meet this projection? Does this portrait, presumably transparently and clearly articulated to the public, meet the deeply felt public interest?

It has been extremely informative, and discouraging, to note that 3 separate efforts over the past 20 years to get DCD and CC to authorize a "full disclosure" portrait of what this county will grow into, based on existing legal vesting, has been consistently disregarded. If one rules out incompetence on the part of professional planners in DCD, the obvious question is: why don't we know what is really going on? is there something to hide? Who benefits from silence? Please note I take no umbrage at DCD, tho I am discouraged at DCD's recommendation to PC re my 2019 docket request.

Step one: let's get the numbers right. Step two: let's really talk about what they mean.

Joe Symons

On Oct 8, 2019, at 3:30 PM, Adam Zack <adamz@sanjuanco.com> wrote:

Hi Joe,

Yes, the capacity shown in the table you provided is based on the maximum allowed floor area ratio as described in San Juan County Code and the maximum allowed density as designated on the Comprehensive Plan Official Maps.

The parameters for calculating the capacities shown in the report are all spelled out in the Land Capacity Analysis Methodology (LCA Methodology), included as an appendix to that report. Gross residential capacity is calculated as follows:

> (Net developable acreage X comp. plan assigned max. density) – (existing and pending dwelling units) = residential capacity.

You will not be able to calculate this using the GDLI data. The first term in the equation above is derived from the Net Developable Lands Inventory, which has critical areas and other areas with limited development potential removed from the GDLI, as provided in the LCA Methodology.

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For example:

When you get to the web map, open the layers list (blue circle) and turn on the gross maximum capacity layer (red underline).
<image001.png>

Once you have the capacity layer turned on, navigate to a parcel of interest and click on it. That parcel's relevant data will come up in the pop up window. Multiply the NDLI Acres (red underline) by the density value (blue underline) and subtract the existing dwelling units (yellow underline). See below:
<image002.png>

> Capacity = (84.87 acres * 0.05 density) – 1 existing dwellings

Capacity = (4.2435) – 1
Capacity = 3.24

Performing the calculations on the overall data set is fairly complicated, particularly once you get to the commercial capacity calculations. The web map is provided to make reviewing the results and checking the related math easier than wrestling with a large data set without the software tools used to perform the analysis.

Please note: rounding to whole numbers for each parcel's capacity will produce a different total than what is provided in the sheet you included with your last email. Rounding was not included in the LCA Methodology and was not used in the related calculations. For example, the capacity listed for the parcel I included above is 3.24 dwelling units, not 3 or 4.

Remember, if you have a comment on the Land Capacity Analysis, please send it to compplancomments@sanjuanco.com. Let me know if you have any other questions.

Thanks,

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: joe symons <joesymons@me.com>
Sent: Thursday, October 3, 2019 5:31 PM
To: Adam Zack <adamz@sanjuanco.com>; Erika Shook <erikas@sanjuanco.com>
Cc: Lynnette Wood <lnmiwood@gmail.com>; Timothy P. Blanchard <tim@blanchardmanning.com>; Georgette Wong <georgette_wong@yahoo.com>
Subject: Request for LCA / GDLI calculations

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I attach page 68 (in the pdf file), page 53 in the report, which I understand shows the rural capacity "at buildout"

first, is my assumption that this table shows rural lands buildout capacity correct?

assuming so, I am unable to divine how you calculated column 2 in the spreadsheet below, the Gross Residential Capacity Dwelling Units.

In June I received from your office the GDLI spreadsheet, some 17240 rows.

I am at a loss as how you got any of the numbers in column 2. I can parse the spreadsheet for what I imagine are the filters you used, (but I don't know them), and come up with very different numbers. I have read up thru page 12 of the appendix (LCA Methodology) which covers assumptions for rural lands. My attempt at reproducing these relatively simple filters results in different numbers than what you got. Note I do not calculate to the nearest hundredth of a parcel's maximum development capacity. I calculate to the nearest whole digit. Thus if a parcel has 21 acres in R-5, I get 4 development "units", not 4.2, since a parcel owner can't "use" that extra acre for development purposes.

Your assistance most welcome.

Thanks

Joe Symons

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carpe diem

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carpe diem

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carpe diem

Adam Zack

From: Fred Klein <freddythek10@gmail.com>
Sent: Monday, October 7, 2019 11:18 AM
To: Adam Zack
Cc: pkamin@rockisland.com; jmc779@rockisland.com
Subject: Re: Eastsound LCA Map 11.A

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Adam…thanks for your reply…please note that before a recent BLM and SLD, this parcel stood as just a hair over 30 acres, thus generating 6 potential dwelling units in its present designation.

The BLM and SLD processes are designed to preclude a result which would generate an increase in the number of potential dwelling units.

Since the newly created lot allows for a single dwelling unit, what remains of the original parcel can only support 5 potential dwelling units.

My concerns rest with the 5.59 dwelling units which your computations show…simply a theoretical increase, but one which, if generated repeatedly over hundreds (or thousands) of parcels would (or could?) result in a count significantly in excess of the true number of potential dwelling units.

This concern would not be addressed by your suggestion to change the criteria for the color of your map from "6 to 10" to "5.01 to 10" if I understand you correctly.

Best wishes in all the craziness,

Fred

On Oct 7, 2019, at 9:18 AM, Adam Zack <adamz@sanjuanco.com> wrote:

Hi Fred,

Fortunately, the arithmetic for calculating residential capacity is not too complicated. The math for calculating residential capacity is as follows:

(NDLI Acres * Comp. Plan Assigned Density) – (Pending + Existing Dwellings)

The data for parcel 271223009000, available on the web map at https://gis.sanjuanco.com/LCA_Inventory/, is shown in the screen shot below.

<image001.png>

The math for calculating the capacity on TPN 271223009000 is:

(27.93 acres * 0.2 dwelling units per acre) – (0 existing or pending dwellings) = 5.59

As you can see, the residential capacity on this parcel 5.59, as shown on the map. The labeling on the legend of the map could be changed to show this color as being "5.01 – 10". I will look into changing the legend's labels to alleviate any confusion.

Thank you for taking the time to send in your question, I hope this clears it up for you. If you have additional comments on the Land Capacity Analysis, please send them to compplancomments@sanjuanco.com.

Thanks,

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com

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From: Fred Klein <freddythek10@gmail.com>
Sent: Saturday, October 5, 2019 10:46 AM
To: Adam Zack <adamz@sanjuanco.com>
Cc: Paul Kamin EWUA <pkamin@rockisland.com>; John Campbell <jmc779@rockisland.com>
Subject: Eastsound LCA Map 11.A

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Adam,

Thank you for your presentation at EPRC last Thursday. I do have an appreciation for the enormity of the task you've taken on in developing an LCA for Eastsound…and…I've really no idea how the graphics of **Map 11.A** factor into the computations needed for an LCA.

I bring to your attention **TP#271223009000** which is colored to indicate a capacity of **6 to 10** dwellings…this is **incorrect.**

Rather than 6 to 10, it's current designation and size put it into your category of **2 to 5.**

Again, as I am uncertain as to how your algorithm deals with the designated range of available capacity for future development, I cannot weigh the significance of this error. It does, however, lower my confidence in the numbers which your analysis will generate.

Good luck,

Fred

Adam Zack

From: Fred Klein <freddythek10@gmail.com>
Sent: Wednesday, October 9, 2019 2:10 PM
To: Adam Zack
Cc: John Campbell; Paul Kamin EWUA
Subject: Eastsound LCA

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Adam,

In conversation with others on development capacity within the existing UGA boundaries, I've learned that:

> It is also worth noting that roughly 2/3 of that development capacity, 519 of 764, lies in the Village Residential 4-12 unit zone and assumes there will be NO commercial/institutional development.

If this is accurate…and this is what your algorithms are telling you…I would urge you to get a sense of what's on the ground, and ask yourself what the realistic potential for this VR 4-12 area actually is.

It consists of two lotting patterns, the first being very small lots, virtually all of which are presently occupied by small single family detached dwellings; the second being a few larger lots with a small number of one and two story apartments. My hunch is that if you were to take a look around, you would readily conclude that the potential for future development within the planning period is but a tiny fraction of what your present analysis concludes.

I understand that you base your analysis on the allowable densities in each land use designation…but if the goal is to actually provide development opportunities within the UGA, perhaps some history will help to give some context and override the implications of this particularly sloppy land use designation which only occurs in this one isolated area.

When I arrived here thirty years ago, this area had been designated as an isolated pocket of Village Residential land. I don't know when or why that occurred; the very small SFD lots had been recorded long before planning of any kind occurred. Most likely, the VR designation was in response to a small pocket of one and two story apartments, but I speculate.

I do recall, when serving on EPRC, participating in a LU review which determined that the VR designation was inappropriate, and the VR 4-12 was concocted so as to recognize the small lots AND the isolated pocket of rental apartments, and to avoid the *taking* of any of their development potential.
There was NEVER an intention to convert the large area of tiny lots into multi-family development at 12 du/acre.

To suggest that the VR-4-12 area has a development potential to satisfy the projected need for over 500 dwellings defies reason.

In any event, please supplement the results of your computer analysis with your planning skills and expertise and ensure that this CP update process is more than just an exercise to generate numbers which purport to satisfy GMA mandates.

Best,

Fred

Adam Zack

From: Adam Zack
Sent: Friday, October 11, 2019 3:59 PM
To: 'joe symons'
Cc: Lynnette Wood; Erika Shook; Timothy P. Blanchard; Georgette Wong
Subject: RE: Request for LCA / GDLI calculations

Hi Joe,

A video recording of the County Council briefing on the Land Capacity Analysis on September 16, 2019, is available on the County website here: https://www.sanjuanco.com/903/Council-Agendas-and-Video

You may also be interested in the Planning Commission briefing on the Land Capacity Analysis recorded on September 20, 2019. The video is posted here: https://www.sanjuanco.com/971/Planning-Commission-Meeting-Video

These recordings should answer your questions about either briefing.

A fair characterization of the difference between your attempt to conduct an analysis and the Land Capacity Analysis is that you do not seem to be using the same data set and it is possible that you may not be correctly applying the Land Capacity Analysis Methodology. I do not know your process nor what software you are using and so, cannot speak to what kind of analysis you're conducting. I will not comment further on an attempted analysis conducted independently of the Land Capacity Analysis process.

Please let me know if you have any additional questions about the Land Capacity Analysis.

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: joe symons <joesymons@me.com>
Sent: Wednesday, October 9, 2019 12:22 PM
To: Adam Zack <adamz@sanjuanco.com>
Cc: Lynnette Wood <lnmiwood@gmail.com>; Erika Shook <erikas@sanjuanco.com>; Timothy P. Blanchard <tim@blanchardmanning.com>; Georgette Wong <georgette_wong@yahoo.com>
Subject: Re: Request for LCA / GDLI calculations

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thanks for your prompt reply.

Yes, I believe, based on your info here, that we are using different "versions" of the same data set. I'm using the simple, basic, GDLI-esque data set, which I interpret to be the legal foundation for development. DCD appears to be using a sub-set of this, based on LCA assumptions which reduce "buildout" by public, market and vacant-use factors. The "legal" vesting of du's appears to be ignored. As I recall, Rick Hughes asked you about this during a recent hearing where you testified re the LCA progress.

Would this be a fair characterization of the difference between the results we have?

Thank you for your recommendations re comments on the LCA.

Joe

On Oct 9, 2019, at 11:49 AM, Adam Zack <adamz@sanjuanco.com> wrote:

Hi Joe,

It sounds like you are using a different data set. Because you are not using the same data set, you are getting different results. The confusion stems from using different inputs to try and get to the same result. As I mentioned in the previous email, the capacity calculations are based on the Net Developable Lands Inventory (NDLI) data set, which stemmed from the Gross Developable Lands Inventory (GDLI) prepared over the course of this summer. If you use a different data set, you will get different results. The instructions I previously provided will help you check the math used in preparing the LCA. If you are trying to check the results while using a different data set, you will get different results.

Your comments about using acreage, removing areas with limited development potential, and how density is applied to arrive the capacity calculations are all directed at the assumptions used in the LCA Methodology. If you have comments on this document (Attachment A of the LCA report available here:https://www.sanjuanco.com/DocumentCenter/View/18995/2019-09-09_DCD_LCA_draft_capacity_Rep_AZ_PCCC_09-2019) please refer to the page and line number and send your comment tocompplancomments@sanjuanco.com.

I think you may be commenting on the LCA rather than asking me a question about how the Land Capacity Analysis was prepared. If you would like to comment on the LCA, please send your comments to compplancomments@sanjuanco.com make sure you refer to the page and line numbers of the report linked to above. Please note, the comment period on the current draft report goes through October 25, 2019. Submitting your comments through the proper channels will ensure that they are appropriately filed and distributed to the Planning Commission and County Council.

For reference, the maximum FAR values were derived from the San Juan County Code, and are intended to provide for the maximum allowed development. A full description of how each maximum FAR value was calculated is provided on page 22 of the LCA Methodology, included with the draft report linked to above.

Please let me know if you have any other questions about how the draft Land Capacity Analysis was prepared. Make sure to send any comments you have on the LCA report or methodology to compplancomments@sanjuanco.com.

Thanks,
Adam Zack

Planner III
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adamz@sanjuanco.com
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Thank you for your careful explanation of how you derived the numbers shown in the LCA page 68 (pdf that I sent in my inquiry).

I am focussing only on rural areas.

The example you gave, an 84 acre parcel in Forest Overlay with an existing structure on it, would, in the world of "development capacity", be seen (by the owner anyway) as allowing for a maximum of 4 legal development (SFR) parcels should the single parcel be subdivided. Since there is already one du on the parcel, the owner could expect s/he could enjoy 3 additional du's for his/her land.

What I am sensing is a gap between legal subdivision potential and a more nuanced, but also more confusing, calculation based on acres (to the nearest hundredth of an acre) that would not necessarily represent the max legal development potential of any parcel. Taking acreage away from a parcel for wetlands or slopes does not mean the parcel has lost development potential.

It may be that your analysis methodology is of greater significance in activity centers, dealing with FAR's.

Using the spring 2017 Parcels database, which is what I believe you are using, containing 17201 parcels, (note: this SJC database has been modified by Dean Doughtery of SJPT to exclude all acreage that is covered by conservation easements) and sorting on land use RFF, I get 6883 existing parcels with, at buildout (this means all parcels are subdivided to their max based on the density assigned to that parcel), an additional development potential for RFF designated parcels of 4458 du's.

Table "Capacity" pg 62 LCA shows a gross residential capacity for RFF for the entire county of 3232 du's.

These numbers are so far off that I am unable to reconcile the difference. Clearly DCD did not do its work parcel by parcel, but used a aggregating methodology to create the LCA.

I have compared "my" density designations assigned to each parcel (by combining a pile of SJC datasets; this work was done in 2017 and 2018) with the GDLI density designations (which came out in summer 2019). They are identical. I have run the numbers on total "capacity" based on each of the 6 categories (0 to 5) of the GDLI. I know you don't mess with the town of FH, but the parcel data is county wide, so data on all parcels (specifically density data) is available. The buildout potential for FH is so far off the charts that the impact of this on overall county buildout has to be looked at with considerable scrutiny. However, since I'm looking at rural lands only, this anomaly is not on my todo list today.

Any assistance you can offer me as to how our analytical methods looking at precisely the same data could be so far off would be appreciated.

From a big picture perspective, I believe the fundamental LCA methodology may be appropriate for activity centers given the FAR considerations, tho even there much massaging is likely. That said, I think the methodolgy does not appear to consider legal maximums. DCD may be using "best practices" among national planning standards in its LCA methodology but in reality at buildout there will be no market factor and absolutely no discount for vacation/partial use/recreational du's. If a parcel has a du, at buildout it will be used, or in all cases it is legally available to be used (i.e., developed). State and County regs require certain water and other resources be met AS IF a du were occupied full time. Common sense reveals that "recreational use" structures are basically fully occupied in peak season months. Discounting these structures as if they didn't exist distorts the infrastructure requirements that the county is obligated to supply, and thus the costs to be incurred. Further, none of these calculations speaks to the impact on the community, on the vision statement, on carrying capacity topics.

In short, the calculations seem to seriously under-represent the actual number of structures that could be built in the county at any time, not just at a theoretical buildout. The LCA also does not address the impact of visitors. Given super-user-friendly visitor booking platforms like airbnb, many of what otherwise might have been "empty" recreational homes are now not empty: they have become businesses hiding under the current presumption that they are recreational use, or, worse, that as far as the LCA is considered they "don't exist."

Granted, "life" is complex. One can never get a precise answer to almost anything. Everything is a moving target. But the number of parcels and the number of acres in SJC are not rapidly moving targets. Acres are pretty fixed, and save for subdivision potential (of which there's a fair amount sitting there in the legal books), the number of parcels is not untrackable or unpredictable. I should think we could be close enough (i.e., to a first approximation) on how the number of parcels, in rural areas of the county, by land use category (RFF, RR, etc.) are calculated to be able to move to the next steps, which are: what's this look like? what will this cost? is this consistent with the vision statement? Do we have sufficient critical resources (e.g., water, septic, ferry, roads, etc.) to meet this projection? Does this portrait, presumably transparently and clearly articulated to the public, meet the deeply felt public interest?

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Thanks,

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Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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Cc: Lynnette Wood <lnmiwood@gmail.com>; Timothy P. Blanchard <tim@blanchardmanning.com>; Georgette Wong <georgette_wong@yahoo.com>
Subject: Request for LCA / GDLI calculations

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Your assistance most welcome.

Thanks

Joe Symons

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carpe diem

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carpe diem

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carpe diem

Adam Zack

From: Fred Klein <freddythek10@gmail.com>
Sent: Wednesday, October 16, 2019 4:09 PM
To: Adam Zack
Cc: Paul Kamin EWUA
Subject: Eastsound LCA

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Adam…my mistake…I just now learned that the 519 units I mention below are located in the Village Residential/Institutional designation, not the VR 4-12 area.

My apologies…

I do, however, have concerns IF the FULL development potential in VR/I is allocated to residential development…I urge you to familiarize yourself with the existing development within VR/I areas which will reveal that the vast majority of that area consists of institutional development along with non-retail allowable commercial uses. A few years ago, I calculated that 80% of the development in what we now label as VR/I area was institutional…NOT residential.

Certainly, a significant portion of the available development capacity in VR/I areas should be allocated for future institutional uses which need to be adjacent to the commercial core of Eastsound.

Best,

Fred

*****

Adam,

In conversation with others on development capacity within the existing UGA boundaries, I've learned that:

> It is also worth noting that roughly 2/3 of that development capacity, 519 of 764, lies in the Village Residential 4-12 unit zone and assumes there will be NO commercial/institutional development.

If this is accurate…and this is what your algorithms are telling you…I would urge you to get a sense of what's on the ground, and ask yourself what the realistic potential for this VR 4-12 area actually is.

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When I arrived here thirty years ago, this area had been designated as an isolated pocket of Village Residential land. I don't know when or why that occurred; the very small SFD lots had been recorded long before planning of any kind occurred. Most likely, the VR designation was in response to a small pocket of one and two story apartments, but I speculate.

I do recall, when serving on EPRC, participating in a LU review which determined that the VR designation was inappropriate, and the VR 4-12 was concocted so as to recognize the small lots AND the isolated pocket of rental apartments, and to avoid the *taking* of any of their development potential.
There was NEVER an intention to convert the large area of tiny lots into multi-family development at 12 du/acre.

To suggest that the VR-4-12 area has a development potential to satisfy the projected need for over 500 dwellings defies reason.

In any event, please supplement the results of your computer analysis with your planning skills and expertise and ensure that this CP update process is more than just an exercise to generate numbers which purport to satisfy GMA mandates.

Best,

Fred

Adam Zack

From: Adam Zack
Sent: Friday, November 1, 2019 1:47 PM
To: 'jmc779@rockisland.com'
Subject: RE: Land Capacity Analyssis

Hi John,

Answers to your questions are provided in bold and italics below. These issues will be discussed further in a staff report we will send to the Planning Commission and County Council with an updated version of the report next week. Let me know if you need a copy of that report.

1. On page 45, Gross residential Capacity, ER4P. Why does this capacity vary from 158 to 270 to 163 as one goes from Scenario A thru C? It seems that this residential zone should remain unaffected by the shifting scenarios.

This is the result of an input error when assembling the tables. The tables were corrected for consistency in the next draft of the report.

2. Why is VR always assumed to develop 100% residential? This Village Residential zone allows a variety of commercial uses yet is in all three scenarios assumed to develop 100% residential. Hospitals, schools, churches, art museums and office buildings are likely candidates to need space.

The Eastsound Village Residential designation is primarily a residential designation. The market factors help account for the uncertainty about what kind of uses may take place in this designation because some nonresidential uses are allowed. More information will be provided in the next staff memo to Council and the Planning Commission.

3. Commercial growth and demand. Does the report calculate projected commercial development that will be needed, both retail/office (VC) and industrial (SLI)? I cannot find this information in the report. It is apparent on the ground that the Eastsound SLI zone is about maxed out and I wonder if this report offers any confirmation of that observation? That is, is there any projection of industrial space that will be needed over the planning period?

The current draft of the report and the draft LCA Methodology do not specifically address commercial growth and employment capacity. Staff is in the process of assembling a methodology to analyze this as part of the next step of the LCA. The preliminary draft of the additional methodology to examine future commercial growth and employment capacity will be available for review in December or January.

4. On page 2, Capacity Summary, the Report indicates an Eastsound residential development capaciyt of 474 units (based on scenario C which assumes that Village Commercial develops 100% into residential development) That seems very unlikely. Why was it chosen?

The summary of capacity on page 2 is a quick look at capacity countywide. Scenario C is one of the development scenarios that is easiest to understand. The executive summary is a brief presentation of the massive amount of information in the overall LCA Report. The capacity summary tables show the total residential capacity and the total commercial capacity. The hundred-plus pages that follow provide the nuance of the development scenarios and context for the capacity results.

5. Similarly, a Commercial capacity of 594,362 s.f. is indicated based on scenario A. We can not have it both ways. Eastsound cannot build out the Island Market parking lot with dwellings and parking @ 40 du/ acre AND develop it into commercial space and its attendant parking too. Both of these capacities are based on extreme conditions and are certainly mutually exclusive. What am I missing?

Here again, the executive summary at the beginning of the report is a distillation of the results for overall commercial capacity. The added context and explanation is provided in the remainder of the report.

Let me know if you need any other information.

Thanks,

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: jmc779@rockisland.com <jmc779@rockisland.com>
Sent: Wednesday, October 23, 2019 2:14 PM
To: Adam Zack <adamz@sanjuanco.com>
Cc: Paul Kamin EWUA <pkamin@rockisland.com>; Fred Klein <freddythek10@gmail.com>; brian wiese <brian_wiese@outlook.com>
Subject: Land Capacity Analyssis

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Adam,
Thank you for the clean copy of your September 6 report with fold out tabulations. It is a vast improvement over my old printout and, in the words of the Growth Management Hearings Board, it splendidly "shows the work". This is in sharp contrast to the Friday Harbor Housing Element which is simply a black box as far as where and how the numbers are generated. Several; questions:

1. On page 45, Gross residential Capacity, ER4P. Why does this capacity vary from 158 to 270 to 163 as one goes from Scenario A thru C? It seems that this residential zone should remain unaffected by the shifting scenarios
.
2. Why is VR always assumed to develop 100% residential? This Village Residential zone allows a variety of commercial uses yet is in all three scenarios assumed to develop 100% residential. Hospitals, schools, churches, art museums and office buildings are likely candidates to need space.

3. Commercial growth and demand. Does the report calculate projected commercial development that will be needed, both retail/office (VC) and industrial (SLI)? I cannot find this information in the report. It is apparent on the ground that the Eastsound SLI zone is about maxed out and I wonder if

this report offers any confirmation of that observation? That is, is there any projection of industrial space that will be needed over the planning period?

4. On page 2, Capacity Summary, the Report indicates an Eastsound residential development capaciyt of 474 units (based on scenario C which assumes that Village Commercial develops 100% into residential development) That seems very unlikely. Why was it chosen?

5. Similarly, a Commercial capacity of 594,362 s.f. is indicated based on scenario A. We can not have it both ways. Eastsound cannot build out the Island Market parking lot with dwellings and parking @ 40 du/ acre AND develop it into commercial space and its attendant parking too. Both of these capacities are based on extreme conditions and are certainly mutually exclusive. What am I missing?

Too many questions, I fear. .....jmc

Adam Zack

From: joe symons <joesymons@me.com>
Sent: Wednesday, October 23, 2019 11:58 AM
To: Comp Plan Update
Cc: Jennifer Barcelos; Stephanie Buffum
Subject: Correspondence regarding LCA / GDLI calculations

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I submit the following email exchange to the county to ensure that the information and comments are part of the record regarding LCA, GDLI and buildout issues, pursuant to page 5, lines 25-26, of https://www.sanjuanco.com/DocumentCenter/View/18995/2019-09-09_DCD_LCA_draft_capacity_Rep_AZ_PCCC_09-2019?bidId=, i.e., the memo from DCD to Council and Planning Commission regarding the LCA Report briefing.

In particular, I draw your attention to the description of the calculation of buildout, described in the email from Adam Zach on 8 October 2019, to wit:

> The parameters for calculating the capacities shown in the report are all spelled out in the Land Capacity Analysis Methodology (LCA Methodology), included as an appendix to that report. Gross residential capacity is calculated as follows:
>
> > (Net developable acreage X comp. plan assigned max. density) – (existing and pending dwelling units) = residential capacity.
>
> You will not be able to calculate this using the GDLI data. The first term in the equation above is derived from the Net Developable Lands Inventory, which has critical areas and other areas with limited development potential removed from the GDLI, as provided in the LCA Methodology.

The assumption here is that gross residential capacity is based on net developable acreage, and not on legally vested development rights. It appears that the resulting calculations would indicate a buildout capacity smaller than the legally vested rights of the land owner. For planning purposes, and for the 20 year planning horizon, this might be acceptable as an *estimate* of residential capacity. This forecast, or estimate, has nothing to do with what the landowners might choose to do. As you know, there are no limits on the issuance of building permits (or vacation rental permits) by island, land use, or any other criteria, so what you might estimate has little to do with what can actually occur.

Buildout calculations are not based on estimates or forecasts. They are based on what is legally permitted, which in turn is derived from the density map. Under a buildout scenario, there are no reductions in acreage for public use, market factors or seasonal/vacation use. Buildout by definition means if ALL parcels were developed to their **legally vested maximum development potential.**

It appears there is a disconnect between estimating possible residential potential (the LCA) and the actual legal rights of the land owners. I believe this distinction should be made clear.

Other assumptions that are insufficiently clarified: the whole thrust of this LCA methodology is that past treands are a good (indeed the only) indicator of future behavior. Given the enormous and increasing turbulance (read: unpredictable nature) of national and international economic and environmental impacts, this assumption is questionable. At least it should be made explicit. Ceteris Paribus doesn't do well here.

On the other hand, some behaviors are likely. One is the consequence of a very rapidly expanding Seattle metro area, both in terms of the numbers of people inmigrating and the amount of money that many of the intellectual property service workers are earning. If past behavior is any guide, the impact on the San Juans of this proximity of people and money means developmental pressure, either in terms of 2nd homes, possible full time residents, and certainly visitors. This accents the importance of the legal vesting of development potential, especially given no regulatory policies to guide, restrict or prohibit development. In addition, the actual on the ground consequences of the uncontrolled growth potential on carrying capacity issues such as water, ferries, septic, roads, schools, and other expensive infrastructure investments is not discussed anywhere. There are no "estimates" of the tax burdens, quality of life indicators, etc. that are associated with any of these forecasts, whether for just the 20 year planning horizon or for the legally vested parcels at buildout.

There is no commentary on whether either the 20 year forecast or the buildout potential meets the approved SJC Vision Statement, and if it does not, **why** it does not. Or if it does, how the county **demonstrates** that these increases in total population (not just full time residents which is what this entire LCA conversation is about) but part time property owners and visitors fulfill and meet the standard of the adopted Vision Statement.

Discounting the impact of 2nd homes (and vacation rental properties) by "market factors" and "seasonal use" factors entirely hides the fact that the development ignored by numerically discounting these factors nevertheless occurs. Those "seasonal use" homes are still occupied, still create infrastructure, environmental and community-cohesion costs, so waving them away as if they don't count appears specious. At least the conversation should acknowlege this. The single-minded focus on GMA 20 year "residential" planning based on past trends and excluding the massive impacts of non-residents should at least be explictly stated in simple clear language. The Cost of Community Services study done for SJC in 2004 (http://doebay.net/appeal/COCSReportExecSum51804.pdf) should be woven into the fabric of this conversation. More people (ie. residences, regardless of owner occupancy) means higher taxes, period. As SJC is at present entirely vulnerable to any growth level dictated by the market, and as the vast majority of investment in the county is for residential development, the current process all but guarantees a race to the bottom: higher tax obligations, lower quality of life, failure to meet the vision statement, dry wells, failed septic fields, even worse (if that is possible) housing non-availability, greater income inequality, and lower income for those owner-occupied VR permit holders who live in the county and depend on VR income to be able to live here.

Joe Symons
Olga Wa

Begin forwarded message:

From: Adam Zack <adamz@sanjuanco.com>
Subject: RE: Request for LCA / GDLI calculations
Date: October 9, 2019 at 11:49:40 AM PDT
To: 'joe symons' <joesymons@me.com>
Cc: Lynnette Wood <lnmiwood@gmail.com>, Erika Shook <erikas@sanjuanco.com>, "Timothy P. Blanchard" <tim@blanchardmanning.com>, Georgette Wong <georgette_wong@yahoo.com>

Hi Joe,

It sounds like you are using a different data set. Because you are not using the same data set, you are getting different results. The confusion stems from using different inputs to try and get to the same result. As I mentioned in the previous email, the capacity calculations are based on the Net Developable Lands Inventory (NDLI) data set, which stemmed from the Gross Developable Lands Inventory (GDLI) prepared over the course of this summer. If you use a different data set, you will get different results. The instructions I previously provided will help you check the math used in preparing the LCA. If you are trying to check the results while using a different data set, you will get different results.

Your comments about using acreage, removing areas with limited development potential, and how density is applied to arrive the capacity calculations are all directed at the assumptions used in the LCA Methodology. If you have comments on this document (Attachment A of the LCA report available here:https://www.sanjuanco.com/DocumentCenter/View/18995/2019-09-09_DCD_LCA_draft_capacity_Rep_AZ_PCCC_09-2019) please refer to the page and line number and send your comment to compplancomments@sanjuanco.com.

I think you may be commenting on the LCA rather than asking me a question about how the Land Capacity Analysis was prepared. If you would like to comment on the LCA, please send your comments to compplancomments@sanjuanco.com make sure you refer to the page and line numbers of the report linked to above. Please note, the comment period on the current draft report goes through October 25, 2019. Submitting your comments through the proper channels will ensure that they are appropriately filed and distributed to the Planning Commission and County Council.

For reference, the maximum FAR values were derived from the San Juan County Code, and are intended to provide for the maximum allowed development. A full description of how each maximum FAR value was calculated is provided on page 22 of the LCA Methodology, included with the draft report linked to above.

Please let me know if you have any other questions about how the draft Land Capacity Analysis was prepared. Make sure to send any comments you have on the LCA report or methodology to compplancomments@sanjuanco.com.

Thanks,

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: joe symons <joesymons@me.com>
Sent: Wednesday, October 9, 2019 11:15 AM
To: Adam Zack <adamz@sanjuanco.com>
Cc: Lynnette Wood <lnmiwood@gmail.com>; Erika Shook <erikas@sanjuanco.com>; Timothy P. Blanchard <tim@blanchardmanning.com>; Georgette Wong <georgette_wong@yahoo.com>
Subject: Re: Request for LCA / GDLI calculations

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you for your careful explanation of how you derived the numbers shown in the LCA page 68 (pdf that I sent in my inquiry).

I am focussing only on rural areas.

The example you gave, an 84 acre parcel in Forest Overlay with an existing structure on it, would, in the world of "development capacity", be seen (by the owner anyway) as allowing for a maximum of 4 legal development (SFR) parcels should the single parcel be subdivided. Since there is already one du on the parcel, the owner could expect s/he could enjoy 3 additional du's for his/her land.

What I am sensing is a gap between legal subdivision potential and a more nuanced, but also more confusing, calculation based on acres (to the nearest hundredth of an acre) that would not necessarily represent the max legal development potential of any parcel. Taking acreage away from a parcel for wetlands or slopes does not mean the parcel has lost development potential.

It may be that your analysis methodology is of greater significance in activity centers, dealing with FAR's.

Using the spring 2017 Parcels database, which is what I believe you are using, containing 17201 parcels, (note: this SJC database has been modified by Dean Doughtery of SJPT to exclude all acreage that is covered by conservation easements) and sorting on land use RFF, I get 6883 existing parcels with, at buildout (this means all parcels are subdivided to their max based on the density assigned to that parcel), an additional development potential for RFF designated parcels of 4458 du's.

Table "Capacity" pg 62 LCA shows a gross residential capacity for RFF for the entire county of 3232 du's.

These numbers are so far off that I am unable to reconcile the difference. Clearly DCD did not do its work parcel by parcel, but used a aggregating methodology to create the LCA.

I have compared "my" density designations assigned to each parcel (by combining a pile of SJC datasets; this work was done in 2017 and 2018) with the GDLI density designations (which came out in summer 2019). They are identical. I have run the numbers on total "capacity" based on each of the 6 categories (0 to 5) of the GDLI. I know you don't mess with the town of FH, but the parcel data is county wide, so data on all parcels (specifically density data) is available. The buildout potential for FH is so far off the charts that the impact of this on overall county buildout has to be looked at with considerable scrutiny. However, since I'm looking at rural lands only, this anomaly is not on my todo list today.

Any assistance you can offer me as to how our analytical methods looking at precisely the same data could be so far off would be appreciated.

From a big picture perspective, I believe the fundamental LCA methodology may be appropriate for activity centers given the FAR considerations, tho even there much massaging is likely. That said, I think the methodolgy does not appear to consider legal maximums. DCD may be using "best practices" among national planning standards in its LCA methodology but in reality at buildout there will be no market factor and absolutely no discount for vacation/partial

use/recreational du's. If a parcel has a du, at buildout it will be used, or in all cases it is legally available to be used (i.e., developed). State and County regs require certain water and other resources be met AS IF a du were occupied full time. Common sense reveals that "recreational use" structures are basically fully occupied in peak season months. Discounting these structures as if they didn't exist distorts the infrastructure requirements that the county is obligated to supply, and thus the costs to be incurred. Further, none of these calculations speaks to the impact on the community, on the vision statement, on carrying capacity topics.

In short, the calculations seem to seriously under-represent the actual number of structures that could be built in the county at any time, not just at a theoretical buildout. The LCA also does not address the impact of visitors. Given super-user-friendly visitor booking platforms like airbnb, many of what otherwise might have been "empty" recreational homes are now not empty: they have become businesses hiding under the current presumption that they are recreational use, or, worse, that as far as the LCA is considered they "don't exist."

Granted, "life" is complex. One can never get a precise answer to almost anything. Everything is a moving target. But the number of parcels and the number of acres in SJC are not rapidly moving targets. Acres are pretty fixed, and save for subdivision potential (of which there's a fair amount sitting there in the legal books), the number of parcels is not untrackable or unpredictable. I should think we could be close enough (i.e., to a first approximation) on how the number of parcels, in rural areas of the county, by land use category (RFF, RR, etc.) are calculated to be able to move to the next steps, which are: what's this look like? what will this cost? is this consistent with the vision statement? Do we have sufficient critical resources (e.g., water, septic, ferry, roads, etc.) to meet this projection? Does this portrait, presumably transparently and clearly articulated to the public, meet the deeply felt public interest?

It has been extremely informative, and discouraging, to note that 3 separate efforts over the past 20 years to get DCD and CC to authorize a "full disclosure" portrait of what this county will grow into, based on existing legal vesting, has been consistently disregarded. If one rules out incompetence on the part of professional planners in DCD, the obvious question is: why don't we know what is really going on? is there something to hide? Who benefits from silence? Please note I take no umbrage at DCD, tho I am discouraged at DCD's recommendation to PC re my 2019 docket request.

Step one: let's get the numbers right. Step two: let's really talk about what they mean.

Joe Symons

On Oct 8, 2019, at 3:30 PM, Adam Zack <adamz@sanjuanco.com> wrote:

Hi Joe,

Yes, the capacity shown in the table you provided is based on the maximum allowed floor area ratio as described in San Juan County Code and the maximum allowed density as designated on the Comprehensive Plan Official Maps.

The parameters for calculating the capacities shown in the report are all spelled out in the Land Capacity Analysis Methodology (LCA Methodology), included as an appendix to that report. Gross residential capacity is calculated as follows:

> (Net developable acreage X comp. plan assigned max. density) – (existing and pending dwelling units) = residential capacity.

You will not be able to calculate this using the GDLI data. The first term in the equation above is derived from the Net Developable Lands Inventory, which has critical areas and other areas with limited development potential removed from the GDLI, as provided in the LCA Methodology.

If you would like to submit a public records request for the Land Capacity Analysis data for the subsequent steps, you can do so here:https://www.sanjuanco.com/349/Public-Records-Request

You may find it easier to review the results as presented on the online Land Capacity Analysis web map. If you have the gross capacity layer turned on, you can click on a given parcel and the pop up will show the relevant data. The web map is much easier to navigate than the overall data set and it is all the same information. The web map is available here:https://gis.sanjuanco.com/LCA_Inventory/

For example:

When you get to the web map, open the layers list (blue circle) and turn on the gross maximum capacity layer (red underline).
<image001.png>

Once you have the capacity layer turned on, navigate to a parcel of interest and click on it. That parcel's relevant data will come up in the pop up window. Multiply the NDLI Acres (red underline) by the density value (blue underline) and subtract the existing dwelling units (yellow underline). See below:
<image002.png>

> Capacity = (84.87 acres * 0.05 density) – 1 existing dwellings
> Capacity = (4.2435) – 1
> Capacity = 3.24

Performing the calculations on the overall data set is fairly complicated, particularly once you get to the commercial capacity calculations. The web map is provided to make reviewing the results and checking the related math easier than wrestling with a large data set without the software tools used to perform the analysis.

Please note: rounding to whole numbers for each parcel's capacity will produce a different total than what is provided in the sheet you included with your last email. Rounding was not included in the LCA Methodology and was not used in the related calculations. For example, the capacity listed for the parcel I included above is 3.24 dwelling units, not 3 or 4.

Remember, if you have a comment on the Land Capacity Analysis, please send it to compplancomments@sanjuanco.com. Let me know if you have any other questions.

Thanks,

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com

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From: joe symons <joesymons@me.com>
Sent: Thursday, October 3, 2019 5:31 PM
To: Adam Zack <adamz@sanjuanco.com>; Erika Shook <erikas@sanjuanco.com>
Cc: Lynnette Wood <lnmiwood@gmail.com>; Timothy P. Blanchard <tim@blanchardmanning.com>; Georgette Wong <georgette_wong@yahoo.com>
Subject: Request for LCA / GDLI calculations

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you for all the work you have been doing on the LCA / GDLI.

I attach page 68 (in the pdf file), page 53 in the report, which I understand shows the rural capacity "at buildout"

first, is my assumption that this table shows rural lands buildout capacity correct?

assuming so, I am unable to divine how you calculated column 2 in the spreadsheet below, the Gross Residential Capacity Dwelling Units.

In June I received from your office the GDLI spreadsheet, some 17240 rows.

I am at a loss as how you got any of the numbers in column 2. I can parse the spreadsheet for what I imagine are the filters you used, (but I don't know them), and come up with very different numbers. I have read up thru page 12 of the appendix (LCA Methodology) which covers assumptions for rural lands. My attempt at reproducing these relatively simple filters results in different numbers than what you got. Note I do not calculate to the nearest hundredth of a parcel's maximum development capacity. I calculate to the nearest whole digit. Thus if a parcel has 21 acres in R-5, I get 4 development "units", not 4.2, since a parcel owner can't "use" that extra acre for development purposes.

Your assistance most welcome.

Thanks

Joe Symons

carpe diem

carpe diem

carpe diem

Adam Zack

From: Adam Zack
Sent: Monday, October 28, 2019 9:09 AM
To: 'jmc779@rockisland.com'
Subject: RE: Rural Eastsound SubareaCapacity (LCA pg 57)

Hi John,

I'm glad that printout is working for you.

The density value for Eastsound Rural had the decimal point in the wrong place (it should have been 0.2 but was 2). This has been fixed for the next draft of the report. The correction is now showing on the web map at: https://gis.sanjuanco.com/LCA_Inventory/

The capacity in this area has been corrected for the next draft. I will work on getting a response to your other questions once I have completed the next draft of the report later this week. Let me know if you need any more information in the meantime.

Thanks,
Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: jmc779@rockisland.com <jmc779@rockisland.com>
Sent: Thursday, October 24, 2019 11:38 PM
To: Adam Zack <adamz@sanjuanco.com>
Subject: Rural Eastsound SubareaCapacity (LCA pg 57)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Adam, I continue to appreciate the printout you have provided with foldout charts. Beats anything I can print. Back to the Rural Eastsound Rural Subarea Capacity indicated on page 57 and Map 11A. These two exhibits are in agreement but seem to be mistaken. They seem to assume the development capacity of Eastsound Rural to be two units/acre. The maximum allowable density here is one unit/5 acres. The development capacity is far less than the 298 given on page 57. Consider AP# 271232001, 67 acres owned by 3BB+Train. This has a development capacity of 67/5=13 units yet is coded on Map 11A as >20. All the little 1 to 5 acre parcels to the east are color coded to have 2 to 10 unit development capacity are developed and do not appear available for significant additional

development. My rough tabulation puts the development capacity at closer to 25 units in the ER zone and 60 total in all the Eastsound Rural areas. Does that make sense?

Growth Management has been quite clear that. except in unusual circumstances, rural is 5 acres or more/ unit. Urban is 0.25 acres/unit or less. We are not making any more one acre or two acre lots in western Washington.

As all this is a rural area outside the UGA, I'm not sure that it matters much but it is a conspicuous anomaly.

.....jmc

Adam Zack

From: Adam Zack
Sent: Monday, October 28, 2019 9:26 AM
To: 'Francine Shaw'
Cc: rockman@rockisland.com; 'Frank Penwell'; 'michelle Carson'
Subject: RE: Comments Regarding Land Capacity Analysis

Hi Francine,

I'm glad you're digging into the Land Capacity Analysis.

The September draft of the report does not have a section that discusses the implications of the capacity results. That discussion will be included in part with the next draft of the report. The next draft should be available later this week, we plan to brief the Planning Commission in November.

Existing development on parcels was considered using a bevy of different data points. The thresholds, assumptions and criteria for determining which parcels are fully developed, partially used, or vacant are provided in Table 1 on page 8 the Land Capacity Analysis Methodology. The Methodology is included as Attachment A of the September 6, 2019 Land Capacity Analysis Report.

The issues raised regarding the Corner Store and Community Treasures are not considered specifically in the Land Capacity Analysis, which is a general analysis of how much land may be available for development in the future. A discussion of land use designations will be included in the overall update to the Comprehensive Plan Land Use Element further downstream in the Comp. Plan update process. These issues are not considered in the Land Capacity Analysis but will be considered during the update, we have the submitted materials on file to be considered during the process for both properties.

Examining designated natural resource lands (Ag. Resource, Forest Resource, and mineral overlay) is part of the scope of work for the Comprehensive Plan Update. Specifically looking at the designation criteria for these lands, and whether or not the designation is appropriate is not part of the Land Capacity Analysis. Those issues will be considered during the update Land Use Element. So far, the only work done on designated resource lands is an economic analysis released in 2018. This report doesn't draw any conclusions but will help the Planning Commission and County Council understand many of the issues surrounding designated natural resource lands. You can see the current draft of the report here: https://www.sanjuanco.com/DocumentCenter/View/14554/Economic-Analysis-of-Resource-Lands-

Let me know if you need any other information about the Land Capacity Analysis.

Thanks,
Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: Francine Shaw <fshaw@rockisland.com>
Sent: Thursday, October 24, 2019 1:51 PM
To: Adam Zack <adamz@sanjuanco.com>
Cc: rockman@rockisland.com; 'Frank Penwell' <frank.pat.penwell@gmail.com>; 'michelle Carson' <michelle_mem@hotmail.com>
Subject: Comments Regarding Land Capacity Analysis

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Adam:

I read the Land Capacity Analysis and is it very complicated and difficult to understand. Have you determined how much land will be needed to meet the 20 year growth calcs in each land use designation? For instance, what I am looking for is something that says we have this much land available for residential development/commercial development/industrial development, etc. and we need this much more (or we don't need anymore). There needs to be something that is simple to understand. I've been in land use planning my entire career and can't make heads or tails out of the report.

I also noticed the Land Capacity Analysis was based on existing land use designations and building permit activity and did not factor in parcels that may be fully developed but do not have structures on them (i.e., contractor's storage yards).

I represent the owners of the Corner Store on Cattle Point Road and Community Treasures on Roche Harbor Road. Both of these parcels are recognized as fully developed properties but are not currently zoned to reflect the historic commercial use of the properties. They have been inappropriately zoned since the first comprehensive plan was established in 1979. Forty years later these parcels are still being used for commercial uses. Commercial use of these properties is not going to go away and, therefore, they should be given a zoning designation that matches the existing use as they both provide vital commercial services to the San Juan Island community. They should not have to conform to the non-conforming use regulations if they want to redevelop, expand, etc..

Also, I didn't see anything regarding land capacity analysis for Ag Resource, Forest Resource or Mineral Resources lands. I submitted a request for re-designation of the McCutcheon property at the intersection of Roche Harbor and Rouleau Roads from Ag Resource to RGU through the Comp Plan update process because that is the only way resource lands can be re-designated (TPN 361931001). They must be evaluated county-wide and not a parcel-by-parcel basis. I submitted an ag report (attached again) that says this county has too much ag resource lands. How is the county going to address Resource Lands?

Thanks for consideration of these comments.

From: Adam Zack [mailto:adamz@sanjuanco.com]
Sent: Monday, October 21, 2019 3:04 PM
To: 'Francine Shaw'
Subject: RE: Land Capacity Analysis

Hi Francine,

An area shown without a fill color is considered 'fully developed'. The color of the outline in the gross developable lands inventory (GDLI) layer indicates whether it is fully developed residential (green), fully developed commercial/industrial (red) or fully developed for public use (purple). The relevant information for a given parcel comes up when you click on the parcel.

If you're still having trouble with the Land Capacity Analysis web map you can send me the parcel numbers and I can give you some more particular information.

Let me know if you need any further help.

Adam Zack
Planner III
Department of Community Development
San Juan County, WA
360-370-7580
adamz@sanjuanco.com
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From: Francine Shaw <fshaw@rockisland.com>
Sent: Monday, October 21, 2019 10:07 AM
To: Adam Zack <adamz@sanjuanco.com>
Subject: Land Capacity Analysis

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Adam:

I was trying to track the 3 parcels that I am watching during the Comp Plan update process for re-designation of their properties. I looked at the existing land capacity map and am having difficulty understanding it. What are the parcels designated that are shown in the undesignated aerial? I also can't seem to tract parcels along Roche Harbor Road, specifically the MEM property at the corner of Roche Harbor Road and Rouleau Road. What is the designation of that parcel? It may be easier to talk about this on the phone.

Francine Shaw, Land Use Planner
Planning and Permit Services, LLC
P.O. Box 868
Friday Harbor, WA 98250
Phone: (360) 298-4449

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Mapping Agricultural Land in San Juan County, Washington

Crow Valley, Orcas

A study prepared by the Agricultural Resources Committee of San Juan County

For the San Juan County Council

Funded by the Office of Farmland Preservation

July 2009

This report is written to fulfill requirements of a grant from the Washington State Office of Farmland Preservation to the Agricultural Resources Committee of San Juan County.

Summary

During the first six months of 2009, the Agricultural Resources Committee of San Juan County (ARC) finished a mapping project begun in 2008, funded by a grant from the Washington State Office of Farmland Preservation (OFP). The project looked for patterns of farmland loss by mapping all agriculturally viable parcels within the county. Aerial photos, Geographical Information Systems (GIS), and windshield surveys were the main tools used to achieve these goals. Three primary factors account for most farmland loss: 1) when larger parcels are sub-divided into smaller parcels, they often fall out of agricultural use, turn fallow, become populated with shrubs and eventually return to forest; 2) forest gradually encroaches upon larger parcels; and 3) Urban Growth Areas can intrude into farmland.

Background

In January 2008, the Washington State Office of Farmland Preservation awarded a grant for public education and outreach on farmland preservation to the ARC of San Juan County. The goals of that grant included preliminary work to map farmland within the county. In the fall of 2008, a second grant was awarded to the ARC to finish the mapping project and to determine local areas of concern for farmland preservation. The goals included mapping agricultural areas down to two acres, which is considered the smallest viable farming unit for this area. San Juan County encompasses only 111,941 acres, which made the goal attainable. Also helpful was the county's recent acquisition of aerial photographs covering all the major islands.

Methods

The San Juan County Public Works GIS Team donated aerial photos, GIS software, and mapping data. The data covered parcels, shorelines, land use zoning, roads, and the latest online soil survey from the Natural Resources Conservation Service (NRCS) (online at www.websoilsurvey.nrcs.usda.gov). The GIS software used was ArcGIS 9.3 from ESRI. Aerial photos were taken in June of 2008 at a resolution of six inches per pixel. At this resolution it is possible to pick out individual fence posts.

The first task was to define agricultural soils. In San Juan County's Uniform Development Code, the definition of agricultural soils (Chapter 18.20.010) was written using a soil survey from 1963 and is out of date. The criteria for soils classification are more closely defined in the latest soil survey, and some criteria have changed.

As an alternative, a system entitled "Farmland Classification" in the new soil survey rates soils by their physical and chemical characteristics related to the production of crops. This is the classification system recommended for the new Farm and Agricultural Conservation section in the county's Open Space public benefit rating system. Another possible system is that chosen by Pierce County in their agricultural mapping project, which rated soils by the amount of hay harvested per acre. Neither of these systems is completely satisfactory for this study, since each leaves out soil types that are currently farmed in San Juan County. This project included all of the 55 soil types present in San Juan County, that were productive with common farming practices, which limited the number to 29 soil types. Once the soil types were defined, GIS was used to combine the different soil types into an agricultural soil group. Parcels were considered if they contained at least one acre of agricultural soil and encompassed at least two acres of land, to allow housing. The resulting map included 4,675 parcels out of a total of 16,958 parcels in the county. Next, aerial photos for each of these parcels were visually examined, and the major land uses and active agricultural areas for each parcel were noted. The aerial photo segment consumed most of the time spent on the project. Maps were generated and land use patterns became apparent on both visual and statistical levels.

Several decisions made during the course of the project influenced the results. First, the decision to include all soil types that are currently farmed may have led to including more parcels of forested land with pockets of agricultural soils. This would lead to a higher total parcel area, and a higher percentage of forested land. As an example, Moran State Park was included (a 4,900 acre parcel) in the project, even though it has only forty acres of agricultural soil. Another problem lay in the reliance on aerial photos. While these are very good photos (see Figure 1.), the sheer number of parcels called for quick, subjective decisions on land use, and the tree canopy often obscured any underlying detail. Thus it was almost impossible to tell whether a woodlot was grazed, and the extent of agricultural use. To compensate, local knowledge of several islands was very useful. For San Juan Island, windshield surveys were employed to figure out such puzzles as medium sized mowed areas, many of which were lawns, instead of agricultural fields.

In addition, most parcels are managed in more than one way. Sixteen basic land use categories produced forty-six common combinations (Table 1, and Figure 2). These forty-six categories were collected into four groups: agriculture, fallow, forest, and commercial. These groups are related to the likelihood of farmland loss. It was assumed that parcels in the commercial group were not going to be used for agriculture in the foreseeable future. Parcels in the forest group would be unlikely to be used for agriculture, due to the costs of land clearing. Fallow parcels could more easily return to agricultural production, but they could also continue the along the path into shrub and then forestland, and therefore are most at risk of farmland loss. Parcels in the agriculture group have varying chances of staying in agriculture, which is reflected by the

shading shown in Figure 2. For example, the darker green of Forage is a more stable agricultural use than the lighter green of Forage/Forest. Also, the darker red of Fallow/Forest indicates a more likely permanent loss of agricultural use than the pink of Fallow/ Lawn.

Home gardens, as well as larger market gardens, were included for another project by the ARC. A decision was made that gardens encompassing more than one-quarter acre would be counted as agricultural, while those under a quarter acre would be classified either as fallow or forest using other information.

Results

Looking at the attributes of parcels with at least one acre of agricultural soil, several trends stand out (Table 2). Parcels in the fallow, commercial, and agricultural groups have similar percentages of agricultural soils on average (73%, 73% and 79%, respectively). But mean parcel size for fallow or commercial land is less than half that of agricultural parcels. The difference between the groups has more to do with their size than their soil, leading to the conclusion that, for these three groups, land use is linked to parcel size. This becomes evident on a more intuitive level when looking at the maps (Figure 3), which show many smaller fallow parcels surrounding and occasionally encroaching on larger agricultural parcels. Land in the forest group contains a much smaller percentage of agricultural soils (49%), so it is more likely that these parcels are better suited to that land use.

The mean size of agricultural parcels (22.4 acres) in this study is very different from the average in the 2007 USDA Agricultural Census (74 acres). Only the largest commercial farms that filed Schedule F income tax statements also volunteered to be surveyed by the USDA, while this project covered many small, noncommercial farms. A more comprehensive overview is an advantage to the more inclusive definition of agriculture used in this study.

The maps lead to several conclusions. As mentioned, fallow lands tend to be smaller parcels around agricultural parcels. Urban Growth Areas lie next to agricultural areas, which is not surprising when you realize that towns grew up around some of the county's most productive farms (Figure 4). While there are arguments that agricultural land adjacent to Urban Growth Areas can be beneficial (see *City of Redmond v. Central Puget Sound Growth Management Hearings Board*, 136 Wn.2d at 58), it is undeniable that there is more development pressure on these lands. As the Washington State Growth Management Hearings Board has said, "Both experience and common sense indicate that conversion of agricultural resource lands to nonagricultural uses is a one-way ratchet. To suggest that designated agricultural resource lands, once given over to intensive uses demanded by an ever-increasing urban population, could ever be "retrieved" is simply not credible." (*Green Valley, 98-3-0008c,* FDO, at 18.)

Next Steps

The ARC has recommended to the County Council that San Juan County adopt a policy of "No Net Loss of Agricultural Resource Lands". The policy would provide a procedure for mitigation should any Agricultural Resource Land (ARL) be taken out of ARL by de-designation. The policy would require designating an appropriate area of adjacent farmland to ARL zoning in order to maintain a base acreage of ARL. This project was able to map parcels that could serve in this regard (Figure 5), and found that there are more than enough parcels available (652 parcels already zoned ARL, and 952 potential parcels). The adoption of a "No Net Loss" policy and the enforcement of planning policies already on the books would increase awareness of the importance of farmland preservation. Once the policy is adopted, it would seem prudent to educate alternative ARL parcel owners about the advantages of agricultural zoning.

San Juan County is the only county in the state whose voters have endorsed the concept of a Land Bank, where a small tax on land sales funds the acquisition of exemplary lands, including agricultural lands. Local citizens have also endorsed farmland preservation through the San Juan Preservation Trust, the first nonprofit land trust in the state. Both these organizations work aggressively to preserve farmland through acquisition and conservation easements. Further incentives to decrease development rights would help preserve the larger farms that seem better able to stay in agricultural production.

The promotion of more intensive agricultural models would help the smaller parcels that seem to be in greater jeopardy of farmland conversion. Again, San Juan County is a leader with such programs as the Lopez Locavores' Evening Meals at the School (www.lopezlocavores.org), the Islands Certified Local program (www.sjcarc.org), and the San Juan Islands Agricultural Guild (www.sjiagguild.com). Another possibility would be a study of the food system of San Juan County, detailing the food consumed, grown, exported, and imported. Such a study would be more easily done in a county with only one portal (i.e., the ferry) for imports and exports. The results could detail new marketing opportunities for specific agricultural commodities.

Conclusions

From this study, it appears that the greatest threat to farmland in San Juan County is small parcel sizes. Smaller parcels tend to have more fallow land, which leads to forestation and consequent loss of farmland. Reducing the sales of small pieces of larger farms would slow that loss. Thus, enabling programs to purchase the development rights of larger farms might be the most effective path to farmland preservation in this county.

Another avenue would be support for smaller, more intensive farms. Education, recruitment of innovative farmers, opening new markets, and a less onerous regulatory environment could

lead to a renewal of agriculture in the county. There does not seem to be a lack of farmland for small farms.

Indeed, saving all the farmland in the county will not guarantee the existence of farms. To achieve that goal, farming must be profitable. In the 2002 USDA Census of Agriculture, San Juan County was one of only three Washington state counties to have an average net loss of income for farming operations. By 2007, five other counties had joined the club. Now is the time to provide education, business skills, and regulatory reform for farmers to help them make a profit. If farming were more profitable, less land would be sold for residential development. Farmland preservation requires natural resources, the economic support of a profitable enterprise and the social support of a community. Milking stools don't have one leg.

Acknowledgements

The Washington State Office of Farmland Preservation has supported this project from its inception. The staff at the Agricultural Resources Committee of San Juan County worked to procure the grant and to see it finished. The San Juan County GIS Team gave time, software, and help whenever needed. The San Juan Islands Conservation District provided office space, administrative assistance, brainpower, and encouragement. Special thanks go to the San Juan County Land Bank, the San Juan Preservation Trust, and WSU Extension for San Juan County—our Farmland Preservation Partnership.

Bibliography

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Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov accessed February, 2009

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Washington State Growth Management Hearings Board, Green Valley, 98-3-0008c, FDO, at 18.

Ibid., Redmond, 136 Wn.2d at 58

Table 1.

Category Grouping

Commercial	Fallow	Forest	Agriculture==
Commercial	Fallow	Forest	Forage
Road	Golf Courses	Wetland/Forest	Orchard
Cemetery	Lawn	Wet/Fallow/Forest	Nursery
Airport	Fallow/Forest	Gar<.2A/Wet/Forest	Vineyard
School	Fallow/Lawn	Gar<.2A/Lawn/Forest	Gardens > 0.2 Acres
Wetland	Road/Fallow	Commercial/Forest	Equine
	Wet/Fallow	Garden<.2A/Forest	Equine/Fallow
	Garden<.2A/Fallow	Gar<.2A/Fal/Forest	Forage/Fallow
	Gar<.2A/Lawn	Lawn/Forest	Forage/Forest
		Wet/Lawn/Forest	Forage/Lawn
			Forage/Wetland
			Garden/Equine
			Garden/Forage/Forest
			Garden/Forage
			Garden/Forage/Fal
			Garden/Orchard
			Gar>.2A/Wetland
			Nursery/Forest
			Orchard/Forage
			Orchard/Forest
			Vineyard/Forage

Table 2.

Land use of parcels containing one acre of agricultural soil in San Juan County

Category	# Parcels	Mean Size	Ag Soil Area	Parcel Acres	%
Commercial	128	9.5	868	1,215	2
Fallow	983	10.0	6,956	9,835	13
Agricultural	1,115	22.5	19,908	25,069	34
Forest	2,449	15.2	18,060	37,140	51
Total	4,675	---	45,792	73,259	100
San Juan County	16,958	6.5		111,941	
USDA Census	291	74 (average)		21,472	
ARL Zoning	652	21.3		13,891	
Alternate ARL	952	22.7		21,566	

This study found 45,792 acres of agricultural soil in San Juan County, and 13,463 acres of active agricultural land.

Figure 1. Farm Aerial Photo

Figure 2. San Juan County Farmland Use

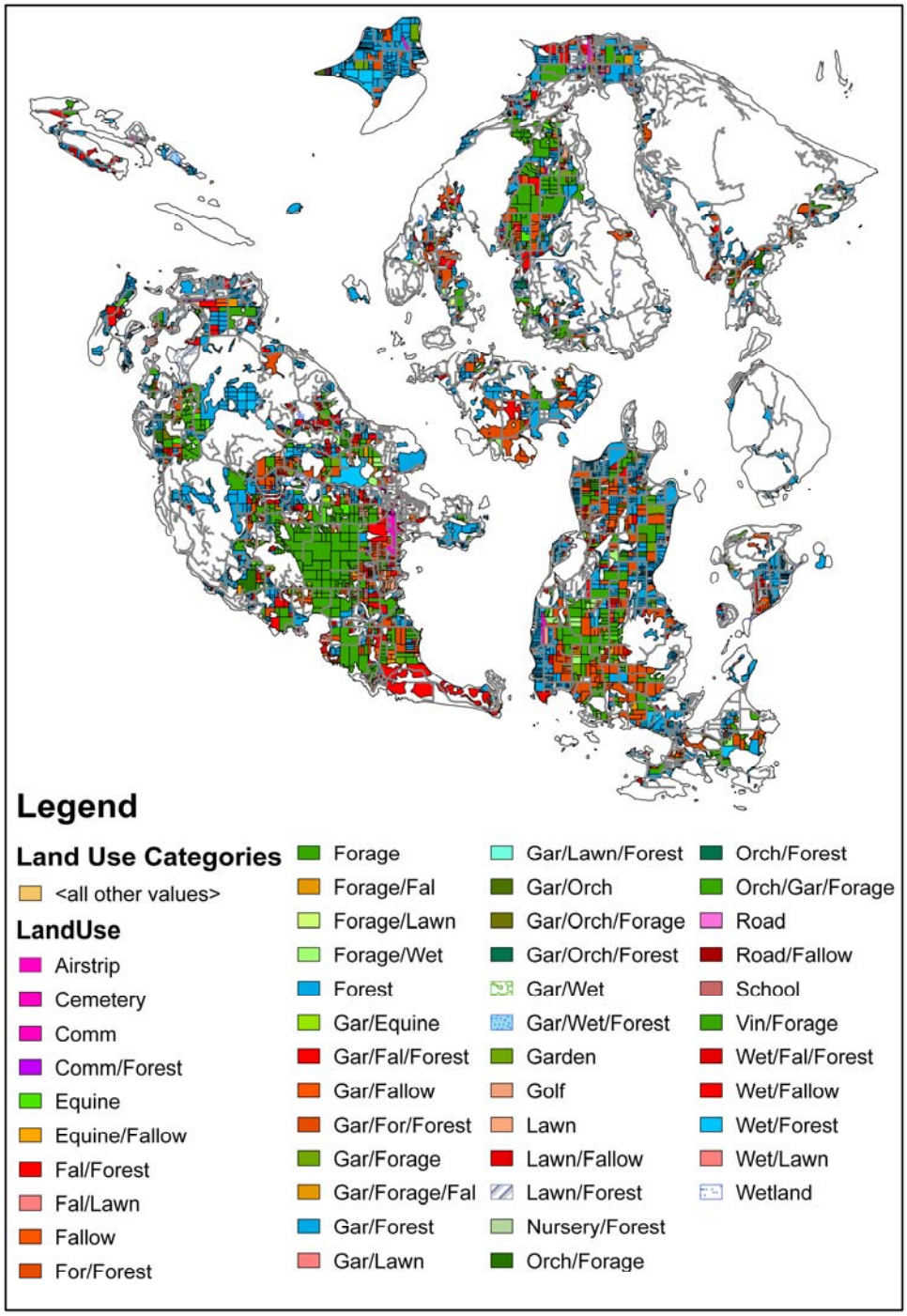


Figure 3. San Juan County Farmland Use

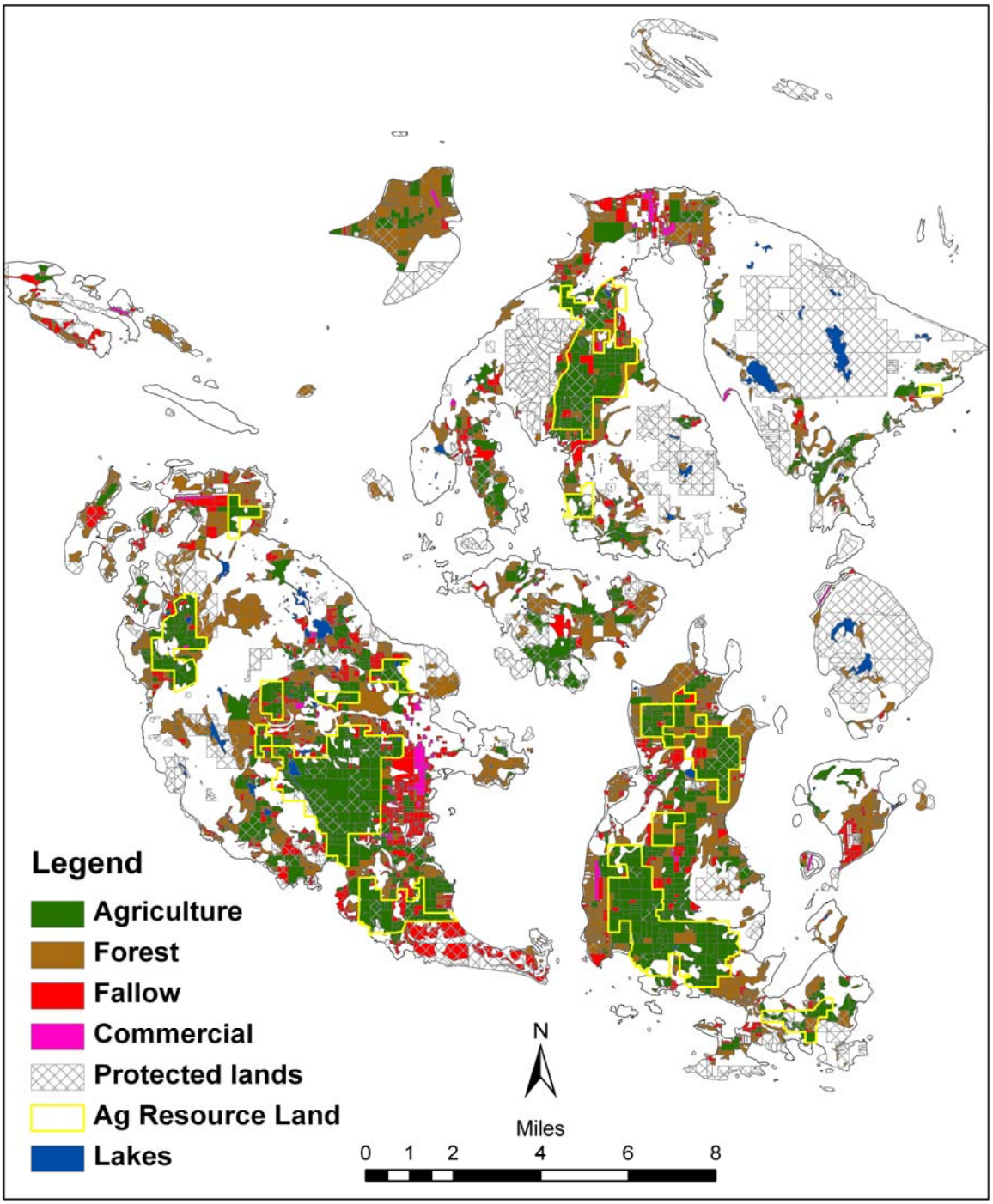


Figure 4. Friday Harbor UGA and ARL Boundaries

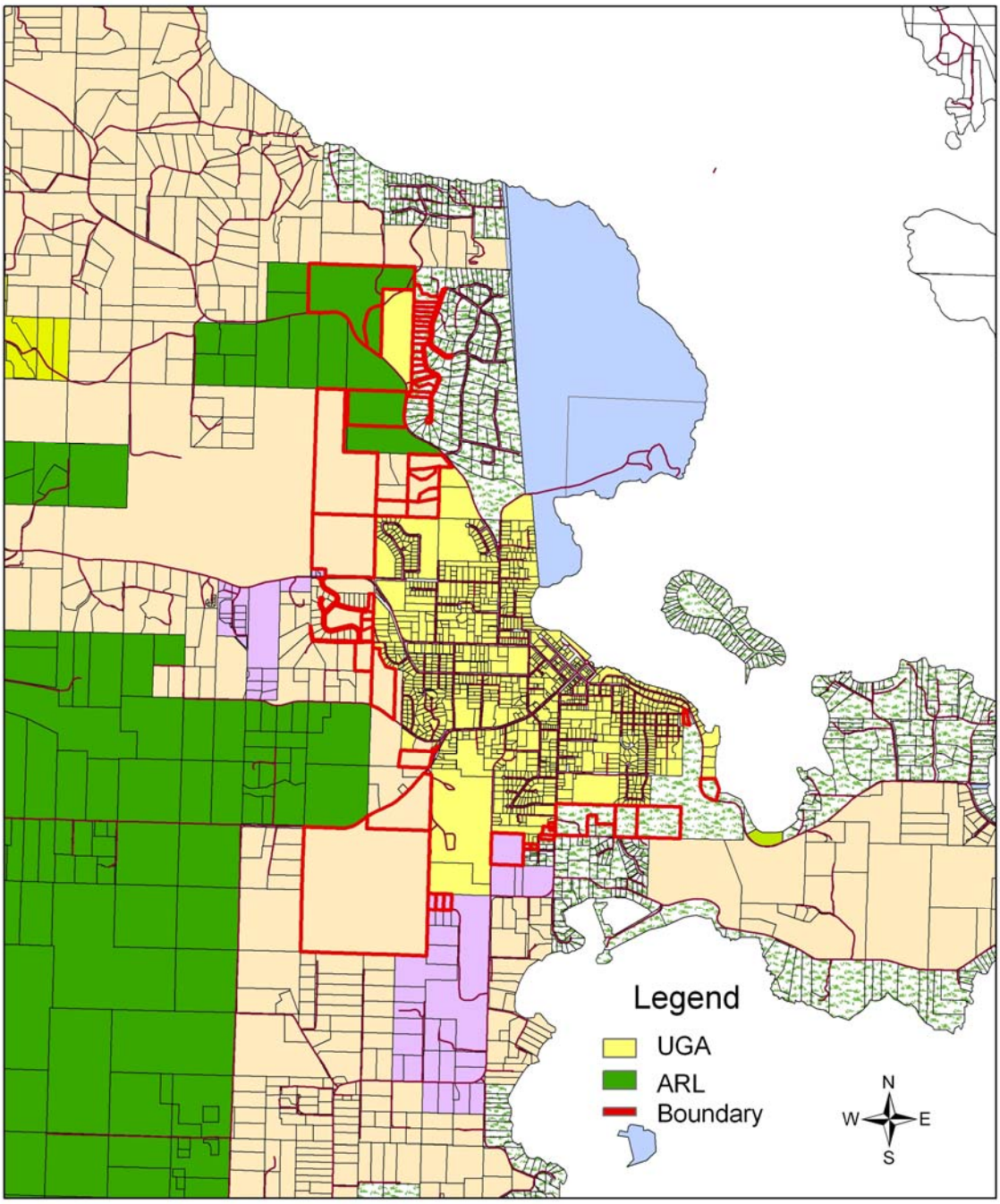
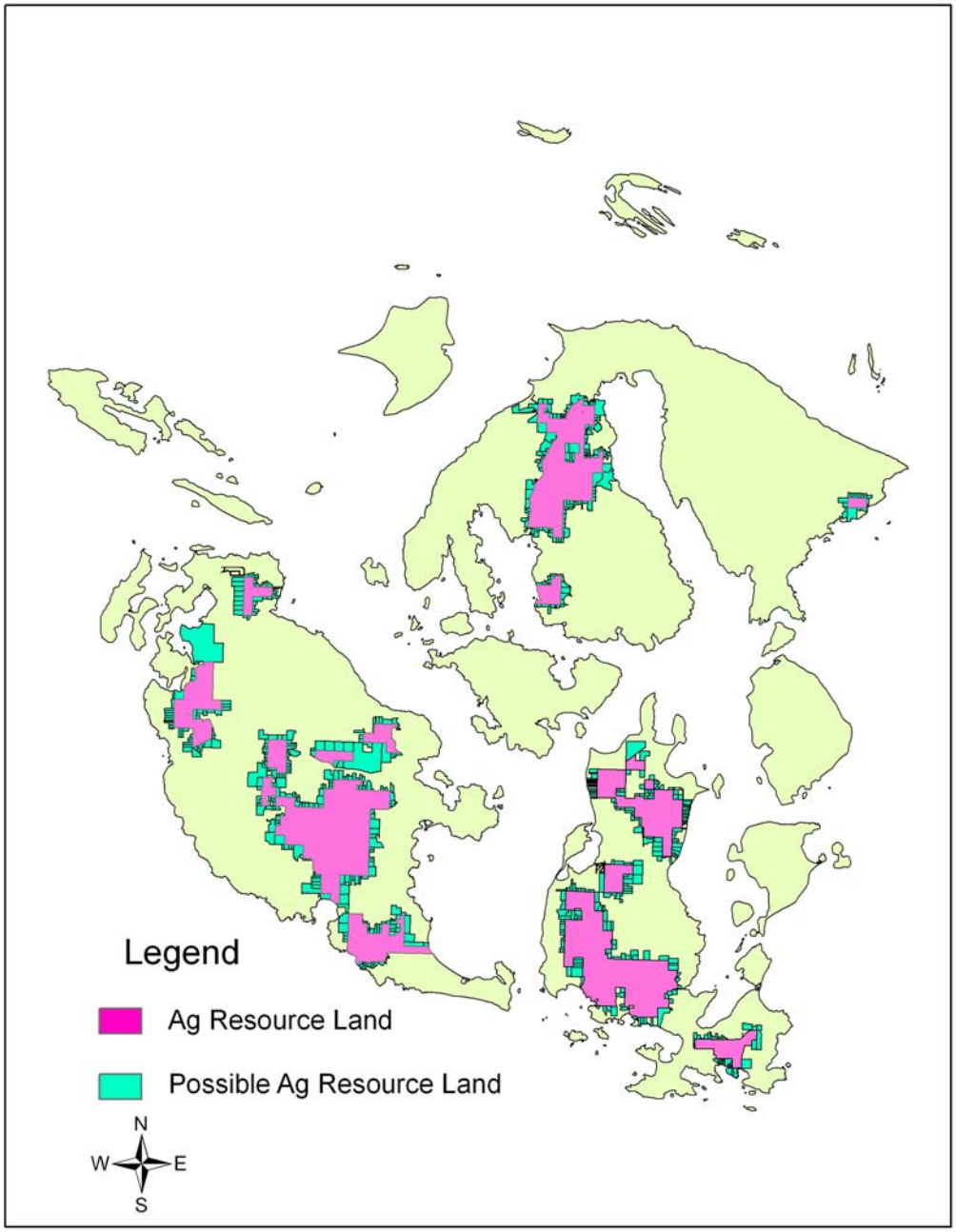


Figure 5.
Future Possibilities for Ag Resource Zoning



Adam Zack

From: tina@sanjuans.org
Sent: Friday, October 25, 2019 2:43 PM
To: Comp Plan Update
Subject: land capacity analysis comments
Attachments: FSJ_LCA_comments_Oct_25_2019_final.pdf

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Attached please find comments from Friends o the San Juans on the land capacity analysis.
Thanks
Tina

Tina Whitman, Science Director
Friends of the San Juans
P.O. Box 1344 Friday Harbor, WA 98250
tina@sanjuans.org
Direct: 360-298-7616 Cell: 360-840-3824

Friends *of the* **San Juans**

360.378.2319 P.O. Box 1344
www.sanjuans.org Friday Harbor, WA 98250

San Juan County Community Development

October 25, 2019

Friends of the San Juans has reviewed the San Juan County Land Capacity Analysis (LCA) report and we appreciate the significant amount of work that has gone into the analysis. We submit the following comments for consideration and look forward to a final draft that improves confidence in the accuracy of the analysis and its results.

1. **First, we question the decision to rely on a complex system of assumptions to essentially model each stage of the land capacity analysis, instead of simply using the actual data.**
   The San Juan County Assessor's data provides accurate parcel acreage and can be queried by land use designation and other factors, eliminating the need to rely on assumptions. If the current modelled approach is retained, a robust quality review and sensitivity analysis must be added to see which assumptions (rules/inputs) are having the most impact on results and if those results are logical (e.g., consistent with reality) or are instead an unintended consequence of the methods.

   A few examples of the major issues that occur when actual data isn't relied on for the analysis are provided below, along with potential solutions.

   a) Removal of critical areas from the net developable lands inventory underrepresents actual development potential.

   As the net developable lands inventory is the closest thing to a buildout scenario the county is including in the comprehensive plan update, and provides the basis for all future stages of the LCA, the information must be as accurate as possible. This is especially true as multiple additional reductions in capacity are made in subsequent steps that rely on a suite of additional assumptions. Quite simply, the removal of critical areas from the developable lands calculations does not make sense. The development of critical areas such as wetlands and steep slopes exists through multiple pathways, including critical areas reports with no net loss findings as well as reasonable use exceptions. As a result, removing density from these areas is not supported by either the current code or the way development is authorized and occurring in the county. Critical areas must be included in the net developable lands inventory.

   b) Assumption of consistent parcel size despite the reality of many smaller, still developable parcel sizes also under-counts development potential.
   For example, an assumption of a 5 acre parcel size per dwelling unit for the entire rural farm forest (RFF)

land use category fails to account for the extensive number of legal parcels that exist that are both smaller than 5 acres *and* allowed to be developed. Using the Assessor's LANDUSE shape files, a quick query of parcels in the RFF designation results in 7,212 parcels with a mean size of just over 6 acres. But over half (n=3,889) of the parcels are less than 5 acres in size.

At a minimum the distribution of various parcel sizes (min., max., mean, mode) within each land use designation must be reviewed to understand the potential scale of bias within that assumption, its effect on results and then the analysis adjusted to better reflect reality. One potential solution to address the impacts of small parcel sizes is to set the development factor for all legal parcels less than 5 acres in RFF at a value of 1, instead of a fraction of 1, as was done in the LCA.

c) Percentages utilized to reduce maximum capacity and estimate final capacity need further review.

The percentages applied seem fairly arbitrary and are large, especially since previous assumptions built into the analysis are likely already influencing results and may also be artificially reducing development potential. The rationale is behind the percentages used to estimate reduction in capacity through public uses, speculative holding and seasonal, recreational and limited use housing stock should be better explained. Are the numbers based on an approximation of on-the-ground conditions? Ranges used in past similar analysis? Related to values used by other communities with land use patterns similar to ours? Or something else?

2. Balance of growth objectives and details on the relationships between growth in rural and urban areas should be clarified.

The current approach of summarizing results for rural lands across the entire county does not support meaningful understanding of the relationship between development outside of and within the urban growth areas (& land activity centers etc.). As a key objective of the LCA is to determine if there is adequate capacity within the UGAs and to ensure that the intended balance of growth between the rural and urban areas is able to be met, site specific results for Orcas and Lopez, and really all islands, is required.

In the methods, draft report and presentation it was noted that the majority of growth in the county occurs outside of the urban areas and it was also mentioned that the 50/50 split between rural areas and urban and activity centers was a voluntary choice made last time that is open to change this time around. We disagree that this balance of urban and rural growth is wide open to reallocation and encourage the county to carefully review and clarify its planned approach to this topic. This is a fundamental underlying components to both the LCA and the comprehensive plan update.

3. General accuracy review needed

During the presentation of the LCA that I attended, people in the room viewing the small area shown as an example on the map identified parcels that had been incorrectly categorized. The county needs to ensure

that this process includes a discrete quality review process to evaluate for accuracy and ensure that errors are not widespread. A clear process for quality review should be implemented and described in the final report, ensuring that public comments aren't the primary source of quality control.

4. **Ensure that the SJCC 18.30.170C San Juan Valley Agricultural Heritage Open Space Conservation Overlay District has been incorporated.**

   This allows for increased density in that Ag Resource area. It is unclear how examples like this one, that impact density, have been incorporated into the LCA.

In summary, there seem to be two primary paths to resolving the fact that the numerous underlying assumptions employed are impacting the results of the LCA to a currently unknown (or undescribed) degree. The first, and most robust solution is simply to conduct the analysis using the parcel scale data, which would ensure results reflect actual conditions. If using the county's own base data is not possible for some reason (no discussion of this was seen in the report), a thorough quality review and sensitivity analysis of the various assumptions must be conducted to understand the both magnitude and direction of their impact on LCA results as well as to support subsequent adjustments to methods based on the finding to tighten the relationship between on-the-ground accuracy and the modelled approach employed. We encourage the community development department to work closely with the assessor's office and the county's GIS staff to develop a reasoned path forward and increase confidence in the accuracy of the results.

Thank you for your consideration.

Sincerely,

Tina Whitman

Tina Whitman
Science Director

BEFORE THE WESTERN WASHINGTON GROWTH MANAGEMENT HEARINGS BOARD

Stephen F. Ludwig, et al, Petitioners, v. San Juan County, Respondent,	**CASE NO. 05-2-0019c** **COMPLIANCE ORDER - EASTSOUND UGA**
Fred R. Klein, Petitioner, v. San Juan County, Respondent.	**CASE NO. 02-2-0008** **COMPLIANCE ORDER - EASTSOUND UGA**
John M. Campbell, et al, Petitioner, v. San Juan County, Respondent.	**CASE NO. 05-2-0022c** **COMPLIANCE ORDER - EASTSOUND UGA**

THIS Matter came before the Board on September 22, 2009 following the submittal of San Juan County's Compliance Report.[1] The Board held a telephonic compliance hearing attended by Board members Jim McNamara, Nina Carter and William Roehl with Mr. Roehl presiding. San Juan County (County) was represented by Jonathan W. Cain. Also

[1] San Juan County's Compliance Report (Eastsound UGA), filed August 11, 2009.

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

participating was Colin Maycock on behalf of the County. None of the Petitioners participated and no objections to a finding of compliance were filed.

I. BURDEN OF PROOF

After a board has entered a finding of non-compliance, the local jurisdiction is given a period of time to enact legislation to achieve compliance. RCW 36.70A.300(3)(b).

After the period for compliance has expired, the board is required to hold a hearing to determine whether the local jurisdiction has achieved compliance. RCW 36.70A.330(1) and (2).

For purposes of board review of the comprehensive plans and development regulations adopted by local governments in response to a non-compliance finding, the presumption of validity applies and the burden is on the challenger to establish that the new adoption is clearly erroneous. RCW 36.70A.320(1),(2) and (3).

In order to find the County's action was clearly erroneous, the Board must be "left with the firm and definite conviction that a mistake has been made." Department of Ecology v. PUD1, 121 Wn.2d 179, 201, 849 P.2d 646 (1993).

> In recognition of the broad range of discretion that may be exercised by counties and cities consistent with the requirements of this chapter, the legislature intends for the boards to grant deference to the counties and cities in how they plan for growth, consistent with the requirements and goals of this chapter. Local comprehensive plans and development regulations require counties and cities to balance priorities and options for action in full consideration of local circumstances. The legislature finds that while this chapter requires local planning to take place within a framework of state goals and requirements, the ultimate burden and responsibility for planning, harmonizing the planning goals of this chapter, and implementing a county's or city's future rests with that community. RCW 36.70A.3201 (in part).

In sum, the burden is on the Petitioner to overcome the presumption of validity and

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

demonstrate that any action taken by the County is clearly erroneous in light of the goals and requirements of the GMA. Where not clearly erroneous and thus within the framework of state goals and requirements, the planning choices of the local government must be granted deference.

II. ISSUE TO BE DISCUSSED

Whether San Juan County has achieved compliance with regard to the area found to be non-compliant in the Board's Compliance Order (CO) of January 30, 2009?

III. DISCUSSION

The Compliance Report describes the action the County took in response to the CO in which the Board found that a single compliance issue remained in regards the Eastsound UGA:

> By including the (Eastsound Sewer and Water) District Plan's proposed extensions outside the UGA including an extension to a nonexistent LAMIRD, an area where no documented health hazard exists, and no investigation of alternatives to sewer service is discussed in its capital facilities element, the County's capital facilities element for sewer service does not comply with RCW 36.70A.110(4), RCW 36.70A.070, and RCW 36.70A.020(2).

The County states that on April 28, 2009 it adopted Ordinance No. 11-2009 which amended the Capital Facilities element of the Comprehensive Plan to indicate that the Eastsound Sewer and Water District 2008 Update of 2003-2023 General Sewer Plan (2008) was adopted with the exception "for any references in that plan to the development of a sewer line extension outside of the Eastsound UGA".[2]

IV. ORDER

The Board finds that the action of San Juan County has achieved compliance by amending its Comprehensive Plan's Capital Facilities Element as required by prior order of this Board so as to achieve compliance with RCW 36.70A.110(4), 36.70A.020(2) and 36.70A.070.

[2] San Juan County Ordinance 11-2009, pg. 4, Sec. 4.

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

Therefore, the Board enters a finding of compliance and the Eastsound UGA portion of this case is closed.

Dated this 29th day of September, 2009.

_____
William Roehl, Board Member

_____
James McNamara, Board Member

_____
Nina Carter, Board Member

Pursuant to RCW 36.70A.300 this is a final order of the Board.

Reconsideration. Pursuant to WAC 242-02-832, you have ten (10) days from the date of mailing of this Order to file a petition for reconsideration. The original and three copies of a motion for reconsideration, together with any argument in support thereof, should be filed with the Board by mailing, faxing, or otherwise delivering the original and three copies of the motion for reconsideration directly to the Board, with a copy served on all other parties of record. Filing means actual receipt of the document at the Board office. RCW 34.05.010(6), WAC 242-02-240, and WAC 242-02-330. The filing of a motion for reconsideration is not a prerequisite for filing a petition for judicial review.

Judicial Review. Any party aggrieved by a final decision of the Board may appeal the decision to superior court as provided by RCW 36.70A.300(5). Proceedings for judicial review may be instituted by filing a petition in superior court according to the procedures specified in chapter 34.05 RCW, Part V, Judicial Review and Civil Enforcement. The petition for judicial review of this Order shall be filed with the appropriate court and served on the Board, the Office of the Attorney General, and all parties within thirty days after service of the final order, as provided in RCW 34.05.542. Service on the Board may be accomplished in person or by mail, but service on the Board means actual receipt of the document at the Board office within

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

thirty days after service of the final order. A petition for judicial review may not be served on the Board by fax or by electronic mail.

Service. This Order was served on you the day it was deposited in the United States mail. RCW 34.05.010(19).

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
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Olympia, Washington 98504-0953
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BEFORE THE WESTERN WASHINGTON GROWTH MANAGEMENT HEARINGS BOARD

Stephen F. Ludwig, et al, Petitioners, v. San Juan County, Respondent,	**CASE NO. 05-2-0019c** **COMPLIANCE ORDER - EASTSOUND UGA**
Fred R. Klein, Petitioner, v. San Juan County, Respondent.	**CASE NO. 02-2-0008** **COMPLIANCE ORDER - EASTSOUND UGA**
John M. Campbell, et al, Petitioner, v. San Juan County, Respondent.	**CASE NO. 05-2-0022c** **COMPLIANCE ORDER - EASTSOUND UGA**

I. SYNOPSIS OF THE DECISION

San Juan County has struggled to establish an Eastsound Urban Growth Area (UGA) for almost a decade. The effort has proceeded with fits and starts due largely to turnover in staff until just recently. This endeavor also illustrates the difficulty that rural counties have in designating a UGA due to the expense of providing urban services and the reliance on

Western Washington
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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

outside service providers such as special districts that are not required to plan according to the Growth Management Act (GMA) or subject to the Board's jurisdiction.

The issues before the Board in this compliance hearing are set forth in our June 20, 2006 Final Decision and Order/Compliance Order. These issues include the adequacy and lack of incorporation of sewer and storm drainage plans in the County's Comprehensive Plan, presence of less than urban densities in the UGA, and failure of the Eastsound Sewer District's (District) Plan to serve the entire UGA for the 20-year planning period.

This order finds that the areas designated with less than urban densities have environmental constraints and will be served by sewer. For that reason including them in the UGA complies with the GMA.

The County has incorporated its storm drainage plan and the District's sewer plan into its Comprehensive Plan to fulfill the GMA's planning requirements for a capital facilities element. These plans also demonstrate that these facilities can be extended throughout the UGA and financed over the Comprehensive Plan's 20-year planning period. The final stumbling block for the County is the District's Plan, now part of the County's Comprehensive Plan, that shows sewer lines extending far from the UGA's boundaries. This is not consistent with the Comprehensive Plan's Land Use Element or the UGA boundaries and does not comply with RCW 36.70A.110(4), RCW 36.70A.070, and RCW 36.70A.020(2).

A major issue of contention for Petitioners Klein and Campbell is that the County's land capacity analysis does not demonstrate that there is enough residential land supply because areas in the UGA zoned Village Residential (VR) are occupied by institutional and commercial uses. Here, the County used a market factor and seasonal home factor to add more land than it actually needed to account for land that might be developed over the planning period and homes used by seasonal residents. Petitioners object to the County using these factors to account for institutional land that might occupy VR zoned land. The

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P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
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Board finds that using the market factor for this purpose is not clearly erroneous. Although institutional and commercial uses will most likely occupy VR-zoned land in the future, the market and seasonal home factors provide that the Eastsound UGA has sufficient capacity to provide for its future residential, commercial, and institutional uses.

II. RECENT PROCEDURAL HISTORY[1]

On June 20, 2006 the Board issued the Final Decision and Order/Compliance Order (Eastsound UGA) in WWGMHB Cases 05-2-0019c, 02-2-0008, and 05-2-0022. These cases are being heard together. That Order found that San Juan County's designation of the 2005 Eastsound UGA was not compliant for the following reasons: (1) failure to incorporate financing plans for sewer and storm drainage facilities in the County's six-year capital facilities plan, (2) "failure to show its work" for commercial and institutional uses and adequately analyze the need for commercial and institutional land, (3) zoning areas within the UGA at less than urban densities without showing the local circumstances that warrant these lower densities, and (4) failure of the capital facilities element to show that urban levels of service are planned within the entire UGA in the 20-year planning period. That Order also found that the County's designation of the Eastsound UGA was noncompliant because it did not have a capital facilities plan that showed that sewer service could be delivered to all parts of the UGA in violation of RCW 36.70A.110(3) and (4) and RCW 36.70A.020(2). That Order established December 18, 2006 as the compliance deadline. [2]

The Board issued Orders extending the compliance deadline for 180 days on January 19, 2007, June 19, 2007, January 18, 2008, and June 6, 2008. The June 19, 2007 order required San Juan County to engage in mediation with the Eastsound Sewer District. The June 6, 2008 order that granted an extension also denied Petitioner Austin's Motion for Invalidity.

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[1] For a more complete procedural history see Final Decision and Order/Compliance Order (June 20, 2006) at Appendix A.

[2] Final Decision and Order/Compliance Order (June 20, 2006) at 35.

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P.O. Box 40953
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Phone: 360-586-0260
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On September 11, 2008, San Juan County filed its compliance report. Petitioners Klein, Campbell, and Austin all filed timely responses.

Petitioner Klein filed a motion to add to the index on September 22, 2008 to which the County responded on October 6, 2008. Petitioner Klein filed a motion to disregard the County's Response on October 10, 2008, and the County responded on October 23, 2008. This Order denies those motions.

On October 21, 2008, the County filed its Response to Objections to a Finding of Noncompliance.

A Compliance Hearing was held on October 30, 2008 at the Fire Station on Orcas Island. All three Board Members attended. Holly Gadbaw presided. Petitioners Fred Klein, John Campbell, and Dorothy Austin represented themselves. Jonathan Cain represented San Juan County.

At the hearing the Board asked the County to submit supplemental information, which it did on November 20, 2008. Petitioners Klein and Campbell asked permission to respond, which the Presiding Officer granted. On December 1, 2008, Fred Klein filed an Objection to San Juan County's Supplemental Authorities.

III. PRELIMINARY MATTERS

A. Motion to Supplement the Record and Motion to Disregard County's Response Brief

Positions of the Parties

On September 22, 2008, the Board received Petitioner Klein's Motion to Supplement the Record and Memorandum in Support There Of with the following items:

- Proposed Index Numbers 000901, 902 – San Juan County Auditor File No. 2005 1014006, Pages 1 and 2,

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- Proposed Index Numbers 000903, 000904, 000905 – San Juan County Auditor File No. (1980) 11718, Vol.2. Pages 76, 76A, 76B,
- Proposed Index Numbers 000906 and 907 – San Juan County Auditor File 94052739, Volume 6, Pages 71, 71A,
- Proposed Index Number 000908 – San Juan County Auditor File No. 2005 10140007, Pages 5 -7, and
- Proposed Index Numbers 000909 and 000910 – San Juan County Auditor File 2007 1107023, Volume 7, Pages 101, 101A.

Petitioner says these items would substantially assist the Board in evaluating the County's land capacity analysis and show that the County does not have sufficient land available to meet the anticipated commercial, institutional, and residential growth through 2020. [3]

San Juan County's Response to Motion to Supplement the Record was filed on October 6, 2008. The County says the documents submitted by Petitioner were not submitted to the County as part of its compliance efforts. The County argues that because these documents describe restrictions that can be modified or overcome, they will not substantially assist the Board.[4]

On October 10, 2008, Petitioner Klein submitted Motion to Disregard San Juan County's Response Opposing Motion to Supplement the Index to the Record. Petitioner says that the County made no objection to his motion to supplement the index until after he had submitted his brief and the County had assessed the strength of his argument. Petitioner further notes that the County's response to his motion to supplement was made after the ten-day deadline to respond to motions. For these reasons, Petitioner asks the Board not to accept the County's motion.[5]

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[3] Motion to Supplement the Index to the Record and Memorandum in Support There Of at 2 and 3.
[4] San Juan County's Response to Motion to Supplement the Record at 2.
[5] Motion to Disregard San Juan County's Response Opposing Motion to Supplement the Index to the Record at 2 and 3.

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P.O. Box 40953
Olympia, Washington 98504-0953
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San Juan County's Response to Motion to Disregard was submitted on October 23, 2008. The County argues that its motion was timely because according to WAC 242-02-534 the appropriate date to calculate when the response is due is from the date the County received the motion, which was September 23, 2008. The County further informs the Board that the attachments to the subject motion were not received until September 26, 2008. The County notes it filed its response ten days after it received the motion and the attachments. [6]

The County contends the Board established the deadline for filing Petitioners' brief in its June 6, 2008 Order Granting an Extension and Denying Motion for Invalidity. The County says the timing of Petitioner's motion to supplement was determined by him, and even if the date of filing was considered complete on September 23, 2008, the County could not have responded by the time Petitioner's brief was due.[7]

Board Discussion

The following Board rules of procedure are pertinent to this discussion:

WAC 242-02-540:

> Generally, a board will review only the record developed by the city, county, or state in taking the action that is the subject of review by the board. A party by motion may request that a board allow such additional evidence as would be necessary or of substantial assistance to the board in reaching its decision, and shall state its reasons. A board may order, at any time, that new or supplemental evidence be provided.

WAC 242-02-534 (1):

> A party served with a motion shall have ten days from the date of receipt of the motion to respond to it, unless otherwise directed by the presiding officer. A response to the motion shall be filed with a board and a copy served on the opposing party/parties.

The County maintains it did not receive the motion until September 23, 2008, and did not receive the documents which Petitioner seeks to add to the index until September 26, 2008.

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[6] San Juan County's Response to Motion to Disregard at 2 and 3.
[7] Id. at 3.

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P.O. Box 40953
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Phone: 360-586-0260
Fax: 360-664-8975

The Board received Petitioner's motion to supplement on September 22, 2008 by e-mail and a hard copy of the motion and attachments postmarked September 22, 2008. That is the date from which the deadline for responses is calculated.

At argument, Petitioner did not dispute supporting documents were not mailed to the County with the motion. The Board finds that without the supporting documents it would be difficult for the County to evaluate them and prepare a response. In this situation, the deadline for a response should be calculated from the time the County received the supporting documents. Because the County received the supporting documents on September 26, 2008, the County's response was filed on October 6, 2008, ten days from the date the supporting documents were received by the County. Therefore, the County's response was not untimely pursuant to WAC 242-02-534.

At argument, Petitioner Klein did not disagree with the County's assertion that he had not submitted the auditor's records to the County that questioned the County's interpretation of data as part of the compliance process. Generally, the Board will only review evidence that was part of the County's record. Petitioner does not state why he could not have submitted this evidence to the County as it was available at the time the County was making its decision. While the data was available to the County, Petitioner should have presented the data and argument to the County during the compliance process so that the County could respond to it.

Conclusion: Based on the foregoing, Petitioner Klein's Motion to Disregard San Juan County's Response Opposing Motion to Supplement the Index to the Record is DENIED. Petitioner Klein's Motion to Supplement the Record and Memorandum in Support There Of is DENIED.

B. Post Hearing Submittals

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

On November 20, 2008, the County submitted San Juan County's Supplemental Authorities (Eastsound UGA) in response to the Board's request at the hearing on the merits. These included the following attachments: a 1977 Franchise Agreement between San Juan County and the District, excerpts from the Districts National Pollutant Discharge Permit, various excerpts from the County Code, a November 4, 2008 Letter to the District from Deputy Prosecutor Jonathan Cain, a November 12, 2008 Letter to Jonathan Cain from the District with attached list of sewer connections made between 2005-2008, and a map entitled Residential Land Use in Eastsound.

Petitioners Klein and Campbell asked for permission to respond to the County's submittal, which was granted by the Presiding Officer.

Petitioner Klein submitted Motion Objecting to San Juan County's Supplemental Authorities. With his submittal, Petitioner Klein attached the November 4, 2008 letter from Jonathan Cain to the District, a November 17, 2008 letter from Randall Gaylord to the District, Petitioner's Exhibit E - an annotated version of the map entitled Residential Land Use In Eastsound showing commercial uses in the Village Residential Zone and various assessor's records.

As for the assessor's records, there is no indication in the Index to the Record that these were submitted to the County during the compliance proceedings, so the Board will not consider them.

Petitioner Campbell submitted Motion to Amend Respondent's Supplemental Authorities. He attached an enlarged map of the Village Commercial and Village Residential Zones showing the commercial uses occupying the Village Residential Zone, various assessor's records, a October 12, 2007 letter to Peter Fisher, Chair of EPRC, November 25, 2008 e-mail from Colin Maycock to Fred Klein, and various sections the San Juan County Code regarding the Village Residential District.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

As with the other assessor's records submitted by Petitioner Klein, as there is no indication in the index that they were submitted to the County they will not be considered by the Board.

IV. BURDEN OF PROOF

After a board has entered a finding of non-compliance, the local jurisdiction is given a period of time to adopt a legislative enactment to achieve compliance. RCW 36.70A.300(3)(b). After the period for compliance has expired, the board is required to hold a hearing to determine whether the local jurisdiction has achieved compliance. RCW 36.70A.330(1) and (2).

For purposes of board review of the comprehensive plans and development regulations adopted by local governments in response to a non-compliance finding, the presumption of validity applies and the burden is on the challenger to establish that the new adoption is clearly erroneous. RCW 36.70A.320(1),(2) and (3). If a finding of invalidity has been entered, the burden is on the local jurisdiction to demonstrate that the ordinance or resolution it has enacted in response to the finding of invalidity no longer substantially interferes with the goals of the GMA. RCW 36.70A.320(4).

In order to find the City's action clearly erroneous, the Board must be "left with the firm and definite conviction that a mistake has been made." *Department of Ecology v. PUD1*, 121 Wn.2d 179, 201, 849 P.2d 646 (1993).

Within the framework of state goals and requirements, the boards must grant deference to local governments in how they plan for growth:

> In recognition of the broad range of discretion that may be exercised by counties and cities in how they plan for growth, consistent with the requirements and goals of this chapter, the legislature intends for the boards to grant deference to the counties and cities in how they plan for growth, consistent with the requirements and goals of this chapter. Local comprehensive plans and development regulations require counties

Western Washington
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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

> and cities to balance priorities and options for action in full consideration of local circumstances. The legislature finds that while this chapter requires local planning to take place within a framework of state goals and requirements, the ultimate burden and responsibility for planning, harmonizing the planning goals of this chapter, and implementing a county's or city's future rests with that community.
> RCW 36.70A.3201 (in part).

In sum, the burden is on the Petitioner to overcome the presumption of validity and demonstrate that any action taken by the County is clearly erroneous in light of the goals and requirements of Ch. 36.70A RCW (the Growth Management Act). RCW 36.70A.320(2). Where not clearly erroneous and thus within the framework of state goals and requirements, the planning choices of the local government must be granted deference.

V. ISSSUES TO BE DISCUSSED

These issue statements are based on the issues on which the Board found the County noncompliant in the June 20, 2006 Final Decision and Order/Compliance Order:

Issue One: Does the County's capital facilities element incorporate a capital facilities plan for sewer service in the Eastsound UGA in order to comply with RCW 36.70A.070(3)?[8]

Issue Two: Does the County's capital facilities element include a six-year financing plan for its storm drainage facilities for the Eastsound UGA in order to comply with RCW 36.70A.070 (3)(a) – (d) and RCW 36.70A.020(12)?[9]

Issue Three: Has the County's "shown its work" for the Eastsound UGA's commercial and institutional needs and adequately analyzed the needed land for commercial and institutional uses in order to comply with RCW 36.70A.110(2) and RCW 36.70A.115?[10]

Issue Four: Has the County provided evidence to show that the areas within the UGA zoned for less than urban densities is based on the local circumstances that warrant such lower densities in order to comply with RCW 36.70A.020(1), (2) and RCW 36.70A.110(1)?[11]

Issue Five: Does the capital facilities element for the Eastsound UGA demonstrate that

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[8] Final Decision and Order/Compliance Order (June 20, 2006) at Conclusion of Law A at 34.
[9] Id. at Conclusion of Law B.
[10] Id. at Conclusion of Law C.
[11] Id. at Conclusion of Law E.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

urban levels of service are planned for the entire UGA during the 20-year planning period in order for the boundaries of the Eastsound UGA to comply with RCW 36.70A.110(3) and RCW 36.70A.020(12)?[12]

Issue 6: Does the capital facilities plan fail to provide urban levels of service to all areas of the UGA during the 20-year planning period and are the boundaries of the UGA compliant with RCW 36.70A.110(3) and (4) and RCW 36.70A.020(12)?[13]

Petitioners raise the following issues:

Issue 7: Does the Eastsound UGA provide for affordable housing?[14]

Issue 8: Does the Eastsound UGA provide for enough industrial land?[15]

Issue 9: Does the Eastsound UGA's capital facilities plan provide for adequate water service to the UGA?[16]

VI. DISCUSSION OF THE ISSUES

A. Sewer Capital Facilities Plan

1. Compliance with RCW 36.70A.070 (3)(d)

Issue One: Does the County's capital facilities element incorporate a capital facilities plan for sewer in the Eastsound UGA into its comprehensive plan in order to comply with RCW 36.70A.070(3)?[17]

Issue Five: Does the capital facilities element for the Eastsound UGA demonstrate that urban levels of service are planned for the entire UGA during the 20-year planning period in order for the boundaries of the Eastsound UGA to comply with RCW 36.70A.110(3) and RCW 36.70A.020(12)?[18]

We will discuss these issues together.

The June 20, 2006 Final Decision and Order/Compliance Order found,

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[12] Id. at Conclusion of Law F.
[13] Id at 22.
[14] Petitioner's Brief Compliance Hearing at 18 and 19. Petitioner's Brief at 2.
[15] Petitioner's Brief at 2.
[16] Objections to a Finding of Compliance at 1.
[17] Final Decision and Order/Compliance Order (June 20, 2006) at Conclusion of Law A at 34.
[18] Id. at Conclusion of Law F.

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P.O. Box 40953
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> The County's capital facilities plan for sewer and storm drainage facilities for the Eastsound UGA is not compliant with RCW 36.70A.070(3)(a) – (d). [19]
>
> Because the capital facilities plan fails to provide for urban levels of sewer service to all areas of the UGA during the 20-year planning period, the boundaries of the UGA are not compliant with RCW 36.70A.110(3) and (4); and RCW 36.70A.020(12).[20]

Ordinance 39-2008 amended the County's Comprehensive Plan to incorporate by reference the Eastsound Water and Sewer District's (District) 2008 Update of 2003-2023 General Sewer Plan.[21] The sewer capital facilities plan now includes an inventory of existing sewer capital facilities, a forecast of future needs and the proposed locations of new facilities to support the entire UGA and a six-year capital facility financing plan. [22] The sewer plan also shows how sewers will be financed over the 20-year life of the plan.[23]

Petitioner Austin alleges that "public money" as referenced in RCW 36.70A.070(3)(d) means money from a municipal corporation, such as a city or county, and does not mean the District's user fees, surcharges, and capital reserve funds which she argues are not sources of public money. Since the District uses these sources, Petitioner Austin contends that such use violates the GMA.[24] Sewer Districts are authorized by RCW 57.02.020. The Board has held that counties can rely on water and sewer districts to provide capital facilities to UGAs as long as the plan is incorporated into the comprehensive plan to fulfill GMA requirements.[25] The Board agrees with the County that the sources of money to which Petitioner objects are commonly used to fund sewer plans and that the District is authorized by RCW 57.08.050 to fix rates, assess connection charges, and sell bonds.

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[19] Id. at 11.
[20] Id. at 22.
[21] Record at 000701.
[22] Record at 000714, 000719, 000731, and 000732..
[23] Record at 000733.
[24] Objections to a Finding of Compliance at 1 and 2.
[25] See Final Decision and Order/Compliance Order (Lopez Island UGA) at 14 and 15 and *Whidbey Island Environmental Network v. Island County*, WWGMHB 03-2-0008 at 11.

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P.O. Box 40953
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Phone: 360-586-0260
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Conclusion: The District's Sewer 2008 Update of the 2003-2023 General Sewer Plan adopted by reference into the County's Comprehensive Plan now complies with RCW 36.70A.070(3)(a)–(d), RCW 36.70A.110(3), and RCW 36.70A.020(12).

2. Extension of Sewer Lines Outside the UGA

Positions of the Parties

Petitioners' Position

Petitioner Klein charges the District's sewer plan is not coordinated or consistent with the County's land use element because the District's map of existing and proposed facilities shows that the District's sewer service area extends east and west of the UGA boundaries and shows extension of sewer lines outside of the UGA. Petitioner Klein argues that the extension of lines outside of UGA boundaries does not comply with RCW 36.70A.110(4) and is not consistent with the County's statement that "Existing regulations prohibit the extension of urban services out of UGAs, master planned resorts, or areas of more intense rural development", as referenced in the Board's Order Granting Extension and Denying Motion for Invalidity.[26]

Petitioner Klein points out various sewer lines that extend beyond the UGA that include: (1) an existing sewer line east of the UGA serves Bartwood Estates and was constructed in the 1990's and in 2003 extended to serve Scenic Lane, (2) a sewer line on Sunset Avenue that he says was built in 2006 funded by Developer Funds and is scheduled to be extended again, and (3) an additional sewer line extension east and south of the UGA boundaries that is intended to serve Country Corner, an area proposed to be designated as a LAMIRD that has not been designated as a LAMIRD.[27]

Petitioner Austin argues the District has no legal contractual agreement with the County to provide sewer service to the UGA or prevent sewer extension into rural areas as forbidden

[26] Compliance Hearing Petitioners' Brief at 9 and 10.
[27] Compliance Hearing Petitioner's Brief at 7 -9.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

by SJCC 18.60.250. Petitioner Austin claims that the District is bound by its National Pollution Elimination (NPDES) permit, and the County does not have the authority to overrule federal law. Petitioner Austin also contends that it would be absurd, illegal, and unethical for the District to allow a health or environmental hazard to develop before extending a sewer line to an area with too many drainfields or allow an aquifer to degrade.

County's Position

The County states Petitioners' objections to lack of an agreement with the District and the extension of sewer services outside of the UGA are not part of the compliance order and are aspects of the new District sewer plan, and therefore should have been the subject of a new petition. [28] Nevertheless, the County addresses Petitioners' allegations.

The County says that the District plan acknowledges circumstances under which sewer service can be provided outside the UGA. The plan indicates service to the LAMIRD study area which was identified in Ordinance 13-2005. The plan acknowledges the District is concerned about existing, mature, non-rural neighborhoods to the east of the UGA with aging septic drainfields that present a considerable risk to the Eastsound aquifer. The County says its development regulations prevent extension to the Country Corner Area unless it is designated a LAMIRD or where it is necessary to protect public health and safety. [29]

The County asserts the GMA does not require the removal of existing facilities from rural areas. The County explains the 2003 version of the sewer plan did not show the UGA boundaries but the version of the plan adopted by reference by the County shows the UGA boundary. According to the County the District's sewer service area is defined by the Certification of Necessity and approved by the Washington Department of Ecology

[28] San Juan County's Response to Objection to a Finding of Compliance at 12.
[29] Id. at 13.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
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Phone: 360-586-0260
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(Ecology), but does not relieve the District from complying with applicable state and local statutes.[30]

In regard to Petitioner Austin's argument that the County has no agreement with the District, the County responds that Petitioner does not cite any authority that requires this nor did the Board's order find the lack of an agreement to be noncompliant.

Board Discussion

The Board will first address the County's argument that if Petitioner Klein wanted to challenge the inconsistency of the land use element and the capital facilities element, he needed to file a new petition. The County adopted the District's sewer plan to achieve compliance with the RCW 36.70A.070(3). RCW 36.70A.070 requires that all elements of the comprehensive plan be consistent and coordinated with each other. The Board's compliance order also found that the District's sewer plan did not show how sewer was going to be provided throughout the UGA and the sewer plan did not comply with RCW 36.70A.110(3) and (4).[31] The issue in the compliance order and before the Board now is how does the County intend to have sewer services provided to the Eastsound UGA in a compliant manner. Therefore, when the County adopts a new part of its capital facilities element, it must be consistent with the other parts of the plan and comply with the GMA. When the County adopted the District's sewer plan as part of the County's Comprehensive Plan, it triggered the requirement that the sewer plan must be consistent with the County's land use element. Therefore, Petitioner did not have to file a new petition to challenge the capital facilities element to raise objections concerning the consistency of the District's sewer plan with the land use element.

The challenge to the consistency of the District's sewer plan and the land use element presents a difficult dilemma for the County which must rely on the District to provide urban

[30] Id. at 15.
[31] Final Decision and Order/Compliance Order at 22.

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Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

services to Eastsound UGA. Complicating this, the GMA does not apply to the development of plans of special districts, including water and sewer districts so the Board has no jurisdiction over their plans. See RCW 36.70A.280(1).

RCW 57.16.010 outlines the process for adoption of sewer and water district comprehensive plans and amendments. This process includes approval of the sewer comprehensive plan by the County and specifically requires that the "comprehensive plan shall not provide for the extension or location of facilities that are inconsistent with the requirements of RCW 36.70A.110".

A 2001 Certificate of Necessity (Certificate) granted by Ecology defines the boundaries of the District's sewer service area. This Certificate states that Ecology's approval does not relieve the District from complying with other state and local statutes.[32] The local regulation that applies in this situation is SCC 18.60.250(D)(1) which prohibits urban level facilities and services outside of UGAs, Master Planned Resorts, or LAMIRDs that had not been completed, were being constructed, or had completed planning or budgeting by January 1, 2001. [33]

While the Board has no jurisdiction over County approval of the District's Plan pursuant to RCW 57.16.10, it does have jurisdiction to determine whether the County's Comprehensive Plan's capital facilities element, of which the District's sewer plan is now a part, complies with the GMA.

Petitioner Klein says the District's Sewer Plan shows extensions outside of the UGA, which violates the GMA. The Board notes the extension on Bartel Road, which Petitioner says was constructed in the 1990s, was constructed before the boundaries of the UGA were reduced in 2005 and before the 2001 date indicated in SCC 18.60.250(D)(1) so they would

[32] Record at 000830.
[33] Projects meeting those criteria are considered pre-existing projects.

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Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

be considered existing facilities. Another smaller sewer extension outside the UGA pointed out by Petitioner is the extension on Sunset Avenue which the District's Plan indicates was completed in 2006.[34] The Board notes that completion was after the UGA's reduction by Ordinance 13-2005. However, there is no evidence in the record for the Board to evaluate whether the County ignored SCC 18.60.250(D)(1) or that construction was underway before boundaries of the UGA were reduced for this sewer extension. The Board agrees with the County that there is no requirement that existing sewer facilities need to be removed.

Petitioner Klein questions the District's proposal to improve the sewer line on Sunset Avenue. [35] Petitioner Klein declares he had conversations with the District's manager that the County pressured the District to call this capital facility's project an improvement rather than an extension. [36] The District's map illustrating existing and proposed facilities shows the current extension outside the UGA as an existing facility and shows no further extension. [37] At the Board's request, the County was asked to clarify what constituted the "improvements" on Sunset Avenue listed as funded by a Developer Extension Agreement. Letters from the County requesting this information provided by the County and the Petitioner do not constitute improper pressure.[38] A November 12, 2008 District letter states the improvements are not an extension.[39]

However, the long proposed sewer extension along Mount Baker Road and Terrill Beach Road extending far from the UGA boundaries proposed to serve Country Corner, an area the County is considering designating a LAMIRD, and potential health hazards, concerns the Board. Both Petitioner Austin and the District's Plan express concern about urban style

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[34] Record 000731.
[35] Compliance Hearing Petitioner's Brief at 8.
[36] There is no indication in the record that Petitioner Klein submitted his declaration to County during the compliance proceedings. Therefore, the Board will not consider it.
[37] Record at 000714.
[38] Exhibit A to San Juan County's Supplemental Authority.
[39] Attachment B to San Juan County's Supplemental Authority.

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

subdivisions outside the UGA presenting potential for pollution of the Eastsound aquifer. No documentation of aquifer contamination exists in the record. Likewise, while urban services can be provided in a LAMIRD, under conditions that do not promote urban sprawl, no evidence is contained in the record that the Country Corner area has been designated a LAMIRD.

This situation is analogous to a similar situation in Thurston County. In that situation the Supreme Court found noncompliant an extension of a proposed sewer line to a more densely developed rural area where no threat to human health had been documented and which had not been designated a LAMIRD .[40] The Court also noted the pressure to urbanize the extension of urban services creates:

> …we find it significant that the GMA seeks to reduce "the inappropriate conversion of undeveloped land into sprawling, low-density development." RCW 36.70A.020(2). The provision at issue, which guards against the extension or expansion of urban governmental services into designated rural areas, is certainly consistent with that purpose. So also is the Board's conclusion that "[t]he Legislature has recognized that intrusion or extension of urban services to rural areas inevitably creates pressure to urbanize. That is the reason that the strict 'necessary to protect' test was adopted rather than a 'betterment of health or environment' standard." (reference eliminated)[41]

Therefore, the Board disagrees with Petitioner Austin that the County's Comprehensive Plan should propose sewer lines outside of a UGA where a documented health hazard may occur in the future. By including the District Plan's proposed extensions outside the UGA, including an extension to a nonexistent LAMIRD, where no documented health hazard exists, and no investigation of other alternatives to sewer service has been discussed in its capital facilities element, the County's capital facilities element for sewer service does not comply with RCW 36.70A.110(4). Such extensions increase the pressure to urbanize in rural areas and increase the potential for sprawl in violation of RCW 36.70A.020(2). Also,

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[40] *Thurston County v. Cooper Point Association*, 148 Wn.2d1 at 9-11.
[41] Id. at 13.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

these extensions make the capital facilities element and the land use element inconsistent in violation of RCW 36.70A.070.

Both Petitioners Klein and Austin contend the County and District's lack of agreement violate the GMA and the Board's order, while the County argues the Board has no authority to mandate agreement. Despite rulings in the past in other cases[42], the Board agrees that we have no such authority. However, RCW 57.16.010 requires the County to approve the District's Plan and the incorporation of the District's Plan into the County's Comprehensive Plan constitutes agreement. Further, according to RCW 57.16.010, the County only needed to adopt certain parts of the District's plan. More specifically, the County only needed to incorporate the parts of the District's Plan necessary to fulfill GMA requirements and comply with the GMA.

Conclusion: By including the District Plan's proposed extensions outside the UGA including an extension to a nonexistent LAMIRD, an area where no documented health hazard exists, and no investigation of alternatives to sewer service is discussed in its capital facilities element, the County's capital facilities element for sewer service does not comply with RCW 36.70A.110(4), RCW 36.70A.070, and RCW 36.70A.020(2).

B. Storm Drainage Financing Plan

Issue Two: Does the County's capital facilities element include a six-year financing plan for its storm drainage facilities for the Eastsound UGA in order to comply with RCW 36.70A.070 (3)(a) – (d) and RCW 36.70A.020(12)?

The June 20, 2006 Compliance Order/Final Decision Order found,

> …the County's capital facilities element for storm drainage facilities does not comply with RCW 36.70A.070 (a)–(d) until it is incorporated into the County's comprehensive plan and contains a six-year financing plan that identifies funding capacities and sources of public funding. Additionally, the storm drainage plan

[42] See Final Decision and Order/Compliance Order – Lopez Island UGA (April 2006) at 17.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

> needs to show how storm drainage facilities will be provided over the 20-year planning period to comply with RCW 36.70A.110(3) and RCW 36.70A.020(12).[43]

Ordinance 33-2008 adopts a 20-year storm drainage plan for the Eastsound UGA as part of the San Juan Comprehensive Plan.[44] The storm drainage plan includes an inventory and locations of existing facilities and proposed locations and capacities of needed facilities over the 20-year life of the plan[45], a six year financing plan[46], and a plan to fund the 20-year storm drainage plan projects[47]. This plan represents an impressive effort for a small, rural county.

Petitioners raise no objections to a finding of compliance.

***Conclusion**:* The adoption of the Long Range Drainage Plan Proposal for the Eastsound Village UGA by Ordinance 33-2008 as part of San Juan County's Comprehensive Plan brings the capital facilities plan for storm drainage facilities for the Eastsound UGA into compliance with RCW 36.70A.070 (3)(a) – (d) and RCW 36.70A.020(12).

C. Less than Urban Densities in the UGA

Issue Four: Are the areas within the UGA zoned for less than urban densities based on the local circumstances that warrant such lower densities in order to comply with RCW 36.70A.020 (1) (2) and RCW 36.70A.110(1)?

The June 20, 2006 Final Decision and Order/Compliance Order found,

> The record does not show, or has the County claimed that local circumstances dictate a need for suburban zoning for properties designated Eastsound residential – one unit per acre or Eastsound – two units per acre. Under these circumstances this designation is not an appropriate density for a UGA.[48]

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[43] Final Decision and Order/Compliance Order at 12.
[44] Record at 00563.
[45] Record at 000621, 000628 – 000641.
[46] Record at 000666.
[47] Record at 000667.
[48] Final Decision and Order/Compliance Order at 21.

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P.O. Box 40953
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Resolution 42-2008 adopted the analysis in the April 15, 2008 Staff Report that concluded the properties shown on the Eastsound UGA official maps designated at suburban densities are existing parcels on or near shorelines.[49] The Record shows these parcels are affected by wetlands, steep slopes, poor soils, flood zones, and archaeological sites. [50] Additionally, sewer service will be provided to these areas during the 20-year planning period. [51]

Petitioners do not object to a finding of compliance.

Conclusion: The findings in Resolution 42-2008 are supported by the analysis in the April 15, 2008 staff report. The analysis describes the local circumstances that support zoning at less than urban densities in the Eastsound UGA. Based on the County's analysis, the zoning for these areas in the UGA now comply with RCW 36.70A.020(1) and (2) and RCW 36.70A.110(1).

D. Land Supply Analysis

Issue Three: Has the County's "shown its work" for the Eastsound UGA's commercial and institutional needs and adequately analyzed the needed land for commercial and institutional uses to cause the boundaries in order to comply with RCW 36.70A.110(2) and RCW 36.70A.115?

The Board's June 20, 2006 Compliance Order found,

> The County has not "shown its work" that it has assessed the commercial and institutional needs of the Eastsound UGA or that it has adequately analyzed land supply to meet these needs of the Eastsound UGA's future residents. Therefore, in light of the entire record, the land capacity analysis of the Eastsound UGA's future commercial and institutional needs does not comply with RCW 36.70A.110(2) and RCW 36.70A.115. [52]

[49] Record at 000422.
[50] Record at 000441 to 000444.
[51] Record at 000443.
[52] Id. at Final Decision and Order/Compliance Order at 17.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

Positions of the Parties

County's Land Supply Analysis

The County estimates that the population of Orcas Island is expected to grow by 1,913 persons to a population of 6,869 by 2020. The County plans to accommodate 50 percent of that growth in the Eastsound UGA, or about 956 people. Based on average household size of 2.13 people, the UGA needs to accommodate about 449 dwelling units.[53] The County included a 25 percent market factor and a 25 percent seasonal home factor in determining its land supply. The County used the market factor to account for land that won't come on the market or be available for development and the seasonal home factor as the number of housing units that would not be available to permanent year round residents. The County based the seasonal home factor on the 2000 census accounts that showed 25 percent of Orcas Island's housing stock is seasonal housing. The combination of market and seasonal home market factor increases the UGA's need for sufficient land to accommodate 673 homes. [54]

The County also projected that while most current institutional uses could expand on their current sites, another 3.4 acres of land would be occupied by institutional uses. [55] The County estimated the UGA would need 8.6 acres of land for commercial uses.[56]

The County made various assumptions about the developability of vacant and partially vacant parcels in the Eastsound UGA to determine the UGA's land supply. This analysis concluded that the County had land supply to accommodate 687dwelling units, with 20 of these being accommodated on VC zoned land, 16 acres of vacant commercial land, and that the institutional uses could be absorbed by the supply of land provided by the market

[53] Record at 000429.
[54] Record at 000430-31.
[55] Record at 000440.
[56] Record at 000443.

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
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and seasonal housing factors. [57]

Petitioners' Position

Petitioner Klein criticizes the County's assumptions and methods of determining land supply. Petitioner says it was erroneous for the County to assume that all the land supply in the Village Residential (VR) zone would be used for residential uses, as over the last 20 years 80 percent of the new growth on VR zoned land was used for institutional uses. Petitioner contends that the County's application of the market factor to account for available land to accommodate institutional uses misuses the market factor which should be reserved for land that is unlikely to be available to meet required needs and amounts to "double counting" when determining available land supply. According to Petitioner, because all the institutional uses have been built in the VR zone, land supply in the VR zone must be reduced by an area that would support 27 dwelling units, based on the County's calculation that the land will accommodate 8 units per acre, so that the residential land supply would accommodate only 660 units.[58] Petitioner further questions the devotion of the entire residential land supply in the VR zone to residential use because numerous lots in the VR zone now are occupied by commercial uses. [59]

Petitioner doubts the County assumptions that the Village Commercial zone which allows for residential uses will accommodate 20 units over the next 20 years when over the last 22 no residential units to his knowledge have been built in the VC zone.[60]

Petitioner also criticizes the County for not fully utilizing the assessor's records to analyze deed restrictions on various lots in the VR zone, which he asserts significantly reduce the supply of land. Petitioner concludes from his analysis that the County underestimated land

[57] Record at 000432, 000436, and 000440.
[58] Petitioners Brief Compliance hearing at 14.
[59] Petitioner's Brief Compliance Hearing at 13, 16 and 17.
[60] Id. at 19.

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P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

supply by at least another 44 dwelling units[61] Because Petitioner did not present these documents to the County, so that it could respond, the Board will not consider this information. [62]

Petitioner Campbell argues that if the County is correct that the VC zone is adequate for planned commercial and institutional growth, these uses should be eliminated from the VR zone. Petitioner maintains these lands are critical to providing enough residential land, especially land for affordable housing.[63]

County's Response

The County responds that the market factor used by the County "provides for the possibility that the land will be held off the market or that some residential and commercial properties would be developed with other uses". The County says it recognized that some mechanism must be used to account for the fact that land use districts in the UGA allow for a variety of uses and the County chose the market factor to do this. The County maintains this method addresses the local circumstances in the UGA and is within the County's discretion. According to the County, the market factor is large enough to account for the possible development of nonresidential uses in the VR zone and noncommercial uses in the VC zone while ensuring ample land supply for residential and commercial uses.[64]

The County explains that if all the institutional and commercial growth occurs in the VR zone, a total of 12 acres, that would leave additional land in the VC zone for residential development. Likewise, if all the 3.4 acres of projected institutional growth takes place in the VC zone, it would still leave enough land for projected commercial growth.[65] Additionally, in the VC zone, the County acknowledges that most of the property will be

[61] Id. at 15,16,and 18.
[62] See Preliminary Matters at 7 Supra.
[63] Petitioner's Brief at 2 and 3.
[64] San Juan County Response to Objections to a Finding of Compliance at 19.
[65] Id. at 20.

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P.O. Box 40953
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used for commercial purposes and only assigns 20 dwelling units to the VC zone.

Board Discussion

The following parts of the GMA apply to this issue:

RCW 36.70A.110(2) states (in pertinent part),

> Based upon the growth management population projection made for the county by the office of financial management, the county and each city within the county shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county or city for the succeeding twenty-year period…
>
> …An urban growth area determination may include a reasonable land market supply factor and shall permit a range of urban densities and uses. In determining this market factor, cities and counties may consider local circumstances. Cities and counties have discretion in their comprehensive plans to make many choices about accommodating growth.

RCW 36.70A.115 states,

> Counties and cities that are required or choose to plan under RCW 36.70A.040 shall ensure that, taken collectively, adoption of and amendments to their comprehensive plans and/or development regulations provide sufficient capacity of land suitable for development within their jurisdictions to accommodate their allocated housing and employment growth, as adopted in the applicable countywide planning policies and consistent with the twenty-year population forecast from the office of financial management.

To determine if a UGA has sufficient land to accommodate urban growth, a land capacity analysis is necessary. The Board has characterized the land capacity in this way:

> It is prospective – looking forward over the coming 20 years to see if there is enough land within the UGA to accommodate the growth that has been allocated to the area. However, part of this determination of how much land is available is filled with assumptions or "educated guesses" that lack absolute certainty….
>
> This lack of precision permeates the entire process because the assumptions are largely qualitative, reach into the distant future, and reasonable people can disagree about them.[66]

[66] *Petree v. Whatcom County*, WWGMHB Case No.08-2-0021c (Final Decision and Order, October 13, 2008) at 27.

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P.O. Box 40953
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Phone: 360-586-0260
Fax: 360-664-8975

The Board agrees with Petitioner Klein that while the Board's analysis specifically mentioned concerns about the County's past analysis of commercial and institutional uses, it was appropriate for the County to update its land capacity analysis because of the interrelationships of commercial, institutional, and residential uses due to proximity and the uses allowed in residential and commercial districts. [67] For this reason, the Board needs to evaluate the County's residential land capacity as well as commercial and institutional land capacity.

One of San Juan County's land capacity assumptions Petitioner Klein challenges is the capacity of the VR zone to accommodate the amount of dwelling units assigned to it in the land capacity analysis. Petitioner's challenge is based on the assumption that this zone will be entirely devoted to residential use even though the zoning code allows commercial and institutional uses and in the past, the majority of growth in institutional uses has taken place there as well as numerous commercial uses. The County accounts for future absorption of the VR zoned land by institutional uses by reasoning that the extra land provided by the market and seasonal housing factor will provide for that demand. Neither the County nor Petitioner Klein provided an assumption for how much VR zoned land will be absorbed by commercial uses. The County does say that if commercial uses all locate in the VR zone, then the VC zone that allows for residential uses will be available for residential uses. Petitioner Klein also objects to the County's use of the additional land provided by the market factor to account for institutional land.

While land use assumptions are "educated guesses" on which reasonable people can disagree, the Board agrees with Petitioner Klein that given past history, commercial uses will most likely continue to take up some of the land in the VR zone. However, the Board disagrees that additional land supply provided by the market factor cannot be used to account for institutional land. RCW 36.70A.110(2) requires that the County "shall include

[67] Petitioner's Brief Compliance Hearing at 12.

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Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

areas and densities sufficient to permit the urban growth that is projected to occur in the county or city for the succeeding twenty-year period…" According to the County's land capacity analysis all the County actually needs to provide is 449 dwelling units to accommodate its projected growth.

RCW 36.70A.110(2) also allows that "An urban growth area determination *may* include a reasonable land market supply factor". (emphasis added). The Board reads this to mean that while the County can provide for additional land over and above what the County's land capacity analysis says it actually needs to provide for sufficient land to accommodate its projected population, the use of a market factor is not required. San Juan County says it has provided for a 25 percent market factor, which it characterizes as "a typical value for a market factor used in many communities in the state" and 25 per cent seasonal home factor, which, for the purpose of a land capacity analysis actually add ups to a 50 percent market factor. [68] Petitioner has not challenged the size of the market or seasonal home factor. Using the market factor to account for institutional uses has the effect of reducing the market factor. While a market factor is a useful tool in ensuring adequate land supply over the 20-year life of the plan, it is not required. Thus, the Board does not find it clearly erroneous for San Juan County to reduce the market factor to account for institutional land.

Likewise, it would not be clearly erroneous for the County to reduce the market factor to account for commercial land that might occupy VR zoned land. The County counters Petitioner Klein's objection to the lack of assumption for how much VR land will be absorbed by commercial uses by contending that if all of the 8.6 acres of projected commercial uses occurs on VR land, enough land will be left in the VC zoned land for residential uses. Without providing the Board with any actual land costs to support his assumption that VC

[68] Record at 000400. Until the Supreme Court's decision in *Thurston County v. Western Washington Growth Management Hearings Board*, the Growth Management Hearings Board held that 25 percent was a reasonable market factor. The Supreme Court ruled in that case that the Boards could not establish a bright line for a market factor and the market factor should be based on local circumstances.

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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
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zoned land will always cost more than VR zoned land, Petitioner Klein contends that the price of VC zoned land has caused commercial uses to locate in the VR zone and that will deter residences from locating in the VC zone, as evidenced by the lack of residences there now. While Petitioner Klein has not provided the Board with an assumption or the basis for an assumption of how much VR land will be taken up with commercial uses, based on past history, the Board agrees that it is likely some new commercial uses would occupy VR zoned land.

While it may be likely that commercial uses will occupy VR zoned land, the resulting loss of residential land may be accommodated due to the County's use of both a market factor and a seasonal home factor. Furthermore, there is no data in the record showing what the past percentage of commercial uses on VR zoned land is, or an educated assumption for the amount of commercial uses occupying VR zoned land. As for the other County assumptions, the Board also finds it reasonable for the County to assume that 20 residential units over the planning period will be located on VC zoned land as mixed use areas are now being seen as desirable places to live. Second story residences over commercial and apartments in the VC zone could be affordable. The Board finds it reasonable for the County to use a seasonal home factor on a sought after recreational area like Orcas Island to provide for additional land capacity. However, the County bases this on the 2000 census that showed 25 percent of the housing units on Orcas Island were seasonal housing. The Board considers that it is probably unlikely that all of these seasonal homes would be located in the Eastsound UGA. Therefore, using a 25 percent seasonal home factor for the UGA most likely provides for more capacity for this type of housing than is needed and could provide the extra capacity necessary for permanent year-round housing.

As for Petitioner Campbell's contention that the County should be compelled to bar commercial and institutional uses from the VR zone, the Board finds that while the County must accommodate its projected residential growth, how its regulations provide for it is

Western Washington
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319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

within the County's discretion. Barring commercial and institutional uses from the VR zone also would ignore the historical mixed use village nature of this zone and the trend in zoning to not separate commercial and residential uses. The Board is sympathetic to Petitioner Campbell's desire to provide cheaper land for affordable housing, but the issue before us is whether the County has provided adequate land supply in the UGA within the parameters of the GMA that includes consideration of local circumstances and the discretion afforded to the County to make choices on how to accommodate growth.

Conclusion: The County is obligated to provide sufficient land to accommodate its projected growth which is land for 449 housing units, 8.6 acres of land for commercial uses, and 3.4 acres for institutional uses. The County estimated the UGA could provide for 687 dwelling units. This would be somewhat in excess of 673 dwelling units that would be needed to provide for the County's 2020 population as well as a 25 percent market and a 25 percent seasonal home factor. The County's methodology actually reduced this market factor for its residentially zoned land to provide for institutional uses on residentially zoned land. This market factor will likely be reduced further due to the likelihood that the County allows for commercial uses in residential zones and past history of those uses occupying some residential land. However, even assuming all new commercial and institutional uses will occupy VR-zoned, it appears that the UGA can accommodate its projected residential, commercial, and institutional growth with a smaller market factor than the County has employed. Nevertheless, since the GMA does not require use of a market factor and due to local circumstances of village zoning that mixes residential, commercial, and institutional uses in its VR and VC zones, the Board does not find it clearly erroneous to allow the market factor to account for the uncertainty and lack of precision of determining where uses will eventually locate in the future. Therefore, the Board finds that in light of the entire record, the land capacity analysis for Eastsound UGA's commercial, institutional, and residential uses is not a clearly erroneous violation of RCW 36.70A.110(2) and RCW 36.70A.115.

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

E. Issues That Are Not Before the Board on Compliance

Issue 7: Does the Eastsound UGA provide for affordable housing?

Issue 8: Does the Eastsound UGA provide for enough industrial land?

Issue 9: Does the Eastsound UGA's capital facilities plan provide for adequate water service to the UGA?

Both Petitioners Klein and Campbell argue that the land capacity analysis does not address affordability.[69] Petitioner Campbell alleges that the land capacity analysis does not provide an analysis of whether there is adequate land for industrial/commercial uses in the Eastsound UGA such as aircraft and auto related, construction related, and equipment repair due to the location in an Industrial Service Zone surrounded by residential uses.[70] Petitioner Austin points out that the Eastsound Water Supply Report and Recommendations and abbreviated Coordinated Water system Plan (sic) was not included in the record. Petitioner alleges that this report does not include a financing plan and lists numerous supply and contamination problems in Eastsound.[71]

The June 20, 2006 Final Decision and Order/Compliance Order did not find noncompliance on any of these issues, therefore these issues are not before the Board for compliance. For the Board to address these issues, Petitioners needed to file a new petition. Petitioners have not done so, so these issues are not before the Board to decide.

Conclusion: The issues of whether the Eastsound UGA provides for affordable housing, adequate water supply, and adequate water service are not before the Board on compliance and have not be raised in a Petition for Review, therefore the Board has no jurisdiction over these issues pursuant to RCW 36.70A.330[72].

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[69] Petitioner's Brief Compliance Hearing at 18 and 19. Petitioner's Brief at 1 and 2.
[70] Petitioner's brief at 1.
[71] Objections to a Finding of Compliance at 1.
[72] See *Port Townsend v. Jefferson County*, WWGMHB 94-2-0006(Compliance Order, December 12, 1994).

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Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

F. Invalidity

Petitioner requests that the Board impose an order of invalidity on the Eastsound UGA due to the County's long-term failure to reach compliance and lack of progress toward coordinated and consistent boundaries for the UGA and the delivery of urban services. [73]

The County responds that Petitioner has not identified what part of the plan or regulation on which invalidity should be imposed. The County states it has brought the UGA into compliance so invalidity cannot be imposed.[74]

Board Discussion

While the Board has ruled that long-term failure to meet schedules of compliance could result in a finding of invalidity, the Board has also ruled: "… invalidity should be imposed if continued validity of noncompliant regulations would substantially interfere with the local jurisdiction's ability to engage in GMA compliant-planning". *Futurewise v. Thurston County*, WWGMHB Case No. 05-2-0002 (Final Decision and Order, February 12, 2004). Also see *Butler v. Lewis County*, WWGMHB Case No. 99-2-0027c (Order Finding Noncompliance and Invalidity, February 2, 2004).[75] In this order, the Board has found compliance on all issues except one, albeit a very serious issue. The Board found that the Eastsound UGA's sewer capital facilities plan shows that it plans to extend sewers outside the UGA to areas that have not been documented as a health hazard or designated as a LAMIRD.

The County asserts that it issued 21 building permits on existing lots of less than five acres outside the UGA.[76] The District's records show that it has made four connections to sewer outside the UGA since October 25, 2005.[77] The County declares that only one of the building permits for existing lots outside the UGA indicated a sewer connection. The Board

[73] Petitioner's Brief Compliance Hearing at 24.
[74] San Juan County's Response to Objections to a Finding of Compliance at 23.
[75] Final Decision and Order/Compliance Order at 30.
[76] County's Supplemental Authorities at 4.
[77] County's Supplemental Authorities at 4, Exhibit B.

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Growth Management Hearings Board
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P.O. Box 40953
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is concerned that a small number of sewer connections have occurred outside the UGA since the adoption of Ordinance 13-2005 that adopted the current boundaries of the UGA in an apparent violation of SCC 18.60.250(D)(1). Nevertheless, a violation of enforcement of the County's development regulations is a matter for the courts.

With the incorporation of the Eastsound's sewer capital facilities plan into the Comprehensive Plan, the plan now shows that sewer service can be provided to the UGA in compliance with RCW 36.70A.070(3)(d) and RCW 36.70A.110(3).

The noncompliant sewer extensions outside the UGA are slated for 2014-2015. Therefore, although noncompliant, their presence in the Comprehensive Plan does not pose a threat to proper GMA planning at this time and the County has time to amend its capital facilities' element before these extensions are scheduled to occur.

***Conclusion*:** Based on the foregoing, the Board declines to impose invalidity at this time.

VII. FINDINGS OF FACT

1. San Juan County is located west of the crest of the Cascade Mountains and plans in accordance with RCW 36.70A.040.
2. Petitioners Fred Klein, John Campbell, and Dorothy Austin filed a petition in at least one of these cases that are being heard together.
3. The June 20, 2006 Final Decision and Order/Compliance Order found that San Juan County's designation of the 2005 Eastsound UGA was not compliant for the following reasons: (1) failure to incorporate financing plans for sewer and storm drainage facilities in the County's six-year capital facilities plan, (2) "failure to show its work" for commercial and institutional uses and adequately analyze the need for commercial and institutional land, (3) zoning areas within the UGA at less than urban densities without showing the local circumstances that warrant these lower densities, and (4) failure of the capital facilities element to show that urban levels

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P.O. Box 40953
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Fax: 360-664-8975

of service are planned within the entire UGA in the 20-year planning period. That Order also found that the County's designation of the Eastsound UGA ~~also~~ was noncompliant because it did not have a capital facilities plan that showed that sewer service could be delivered to all parts of the UGA in violation of RCW 36.70A.110(3) and (4) and RCW 36.70A.020(2).

4. Ordinance 39-2008 amended San Juan County's Comprehensive Plan to incorporate by reference the Eastsound Water and Sewer District's (District) 2008 Update of 2003-2023 General Sewer Plan.
5. The District's sewer capital facilities plan now includes an inventory of existing sewer capital facilities, a forecast of future needs and the proposed locations of new facilities to support the entire UGA and a six-year capital facility financing plan. The referenced sewer plan also shows how sewers will be financed over the 20-year life of the plan.
6. An issue in the compliance order and before the Board now is how does the County intend to have sewer services provided to the Eastsound UGA in a compliant manner.
7. RCW 57.16.010 outlines the process for adoption of comprehensive plans and amendments to these plans of sewer and water districts. This process includes approval of the sewer comprehensive plan by the County and specifically requires that the "comprehensive plan shall not provide for the extension or location of facilities that are inconsistent with the requirements of RCW 36.70A.110".
8. The 2001 Eastsound Sewer District Certificate of Need states that Ecology's approval does not relieve the District from complying with other state and local statutes.
9. SCC 18.60.250(D)(1) prohibits urban level facilities and services outside of UGAs, Master Planned Resorts, or LAMIRDs that had not been completed, were being constructed, or had completed planning or budgeting by January 1, 2001.

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
Fax: 360-664-8975

10. The sewer extension on Bartel Road, which Petitioner says was constructed in the 1990s, was constructed before the boundaries of the UGA were reduced in 2005 and before the 200l date indicated in SCC 18.60.250(D)(1) so they would be considered existing facilities.
11. The District's Plan indicates the extension on Sunset Avenue was completed in 2006 after the UGA's reduction in 2006. There is no evidence in the record for the Board to evaluate ~~on~~ whether the County ignored SCC 18.60.250(D)(1) or that construction was underway before boundaries of the UGA were reduced for this sewer extension.
12. The District's map showing existing and proposed facilities show the Sunset Avenue extension outside the UGA as an existing facility and shows no further extension.
13. The District's 2014 -2023 Capital Facilities Plan shows that "improvements" to Sunset Avenue are to be funded as a "Developer Extension Agreement".
14. A November 12, 2008 District letter states the" improvements" to Sunset Avenue are not an extension.
15. The long proposed sewer extension along Mount Baker Road and Terrills Beach Road extending far from the UGA boundaries is proposed to serve Country Corner, an area the County is considering designating a LAMIRD and which the District says contains development that is a threat to the Eastsound aquifer.
16. Ordinance 33-2008 adopts a 20-year storm drainage plan for the Eastsound UGA as part of the San Juan Comprehensive Plan that includes an inventory and locations of existing facilities and proposed locations and capacities of needed facilities over the 20-year life of the plan, a six year financing plan, and a plan to fund the 20-year storm drainage plan projects.

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17. Resolution 42-2008 adopted the analysis in the April 15, 2008 Staff Report that concluded the properties shown on the Eastsound UGA official maps designated at suburban densities are existing parcels on or near shorelines.
18. The Record shows the parcels in areas zoned for less than urban densities are affected by wetlands, steep slopes, poor soils, flood zones, and archaeological sites. Additionally, sewer service will be provided to these areas during the 20-year planning period.
19. The County plans to accommodate 50 percent of Orcas Island's population growth in the Eastsound UGA, or about 956 people. Based on the average household size of 2.13 people, the UGA needs to accommodate about 449 dwelling units.
20. The County included a 25 percent market factor and a 25 percent seasonal home factor in determining its land supply.
21. The County based the seasonal market factor on the 2000 census accounts that showed 25 percent of Orcas Island's housing stock is seasonal housing.
22. The combination market and seasonal home factor increases the UGA's need for sufficient land to accommodate 673 homes.
23. The County ~~also~~ projected that while most current institutional uses could expand on their current sites, another 3.4 acres of land would be occupied by institutional uses.
24. The County estimated the UGA would need 8.6 acres of land for commercial uses.
25. The County's land supply analysis concluded that there was enough land in the Eastsound UGA to accommodate 687 dwelling units, with 20 of these being accommodated on VC zoned land, 16 acres of vacant commercial land, and that the institutional uses could be absorbed in the supply of land provided by the market and seasonal housing factors.

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26. The zoning code allows commercial and institutional uses in the VR zone and, in the past, the majority of growth in institutional uses has taken place there as well as numerous commercial uses.
27. The market factor and the amount of land available for residential use will likely be reduced further due to the likelihood the County allows for commercial uses in residential zones and past history of those uses occupying some VR zoned land.
28. Even assuming all new commercial and institutional uses will occupy VR zoned land, it appears that the UGA can accommodate its projected residential, commercial, and institutional growth with a smaller market factor than the County assumed in its land capacity analysis.
29. The issue of whether designation of the Eastsound UGA provides for affordable housing is not before the Board for compliance.
30. The Board's June 20, 2006 Final Decision and Order/Compliance Order did not find the land supply for industrial uses noncompliant.
31. The June 20, 2006 Final Decision and Order/Compliance Order did not address the adequacy of the Eastsound UGA's capital facilities for supplying and delivering water.
32. The noncompliant sewer extensions outside the UGA are slated for 2014-2015.
33. Any Finding of Fact later determined to be a Conclusion of Law is adopted as such.

VIII. CONCLUSIONS OF LAW

A. The Board has jurisdiction over the parties and the subject matter of these cases.

B. Petitioners Klein, Campbell, and Austin have standing to participate in these compliance proceedings.

C. The District's Sewer 2008 Update of 2003-2023 General Sewer Plan adopted by reference into the County's Comprehensive Plan now complies with RCW 36.70A.070(3)(a) –(d), RCW 36.70A.110(3), and RCW 36.70A.020(12).

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D. Petitioner did not have to file a new petition to challenge the capital facilities element to raise objections concerning the consistency of the District's sewer plan with the land use element.

E. While the Board has no jurisdiction over County approval of the District's Plan pursuant to RCW 57.16.10, it does have jurisdiction to determine whether the County Comprehensive Plan's capital facilities element which now includes the District's sewer plan, complies with the GMA pursuant to RCW 36.70A.280(1).

F. By including in its Comprehensive Plan the District Plan's proposed sewer extensions outside the UGA to a nonexistent LAMIRD, including to an area where no documented health hazard exists, and to where no investigation of other alternatives to sewer service is discussed in its capital facilities element, the County's capital facilities element for sewer service does not comply with RCW 36.70A.110(4), RCW 36.70A.070, and RCW 36.70A.020(2).

G. The adoption of the Long Range Drainage Plan Proposal for the Eastsound Village UGA by Ordinance 33-2008 as part of San Juan County's Comprehensive Plan brings the capital facilities plan for storm drainage facilities for the Eastsound UGA into compliance with RCW 36.70A.070 (3)(a) – (d) and RCW 36.70A.020(12).

H. The zoning for areas containing less than urban densities in the UGA comply with RCW 36.70A.020(1) and (2) and RCW 36.70A.110(1).

I. RCW 36.70A.110(2) does not require use of a market factor.

J. It is not a clearly erroneous violation of RCW 36.70A.110(2) to allow the market factor to account for the uncertainty and lack of precision of determining where uses will eventually locate in Eastsound UGA .

K. In light of the entire record, the land capacity analysis for Eastsound UGA's commercial, institutional, and residential uses is not a clearly erroneous violation of RCW 36.70A.110(2).

L. The Board's May 7, 2001 Compliance Order in this case found the housing element

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compliant. Adoption of Resolution 42-2008 did not revise the housing element and open it to challenge.

M. The issues of whether the designation of the Eastsound UGA provides for adequate affordable housing and industrial land supply and its water system complies with the GMA are not before the Board for compliance, so were not considered in this order pursuant to RCW 36.70A.330.

N. Although noncompliant, the presence in the Comprehensive Plan of sewer Lines outside the UGA does not substantially pose a threat to proper GMA planning at this time.

O. Any Conclusion of Law later determined to be a Finding of Fact is adopted as such.

IX. ORDER

San Juan County must take legislative action to bring the capital facilities element of its Comprehensive Plan regarding sewer service for the Eastsound UGA into compliance within 180 days in accordance with the following schedule:

Item	Date Due
Compliance Due	August 6, 2009
Compliance Report and Index to the Record Due	August 17, 2009
Objections to a Finding of Compliance Due	August 31, 2009
Response to Objections Due	September 14, 2009
Compliance Hearing	September 22, 2009

Dated this 30th day of January, 2009.

_____
Holly Gadbaw, Board Member

_____
James McNamara, Board Member

Western Washington
Growth Management Hearings Board
319 7TH Avenue SE, Suite 103
P.O. Box 40953
Olympia, Washington 98504-0953
Phone: 360-586-0260
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_____
William H. Roehl, Board Member

Pursuant to RCW 36.70A.300 this is a final order of the Board.

Reconsideration. Pursuant to WAC 242-02-832, you have ten (10) days from the date of mailing of this Order to file a petition for reconsideration. The original and three copies of a motion for reconsideration, together with any argument in support thereof, should be filed with the Board by mailing, faxing, or otherwise delivering the original and three copies of the motion for reconsideration directly to the Board, with a copy served on all other parties of record. Filing means actual receipt of the document at the Board office. RCW 34.05.010(6), WAC 242-02-240, and WAC 242-02-330. The filing of a motion for reconsideration is not a prerequisite for filing a petition for judicial review.

Judicial Review. Any party aggrieved by a final decision of the Board may appeal the decision to superior court as provided by RCW 36.70A.300(5). Proceedings for judicial review may be instituted by filing a petition in superior court according to the procedures specified in chapter 34.05 RCW, Part V, Judicial Review and Civil Enforcement. The petition for judicial review of this Order shall be filed with the appropriate court and served on the Board, the Office of the Attorney General, and all parties within thirty days after service of the final order, as provided in RCW 34.05.542. Service on the Board may be accomplished in person or by mail, but service on the Board means actual receipt of the document at the Board office within thirty days after service of the final order. A petition for judicial review may not be served on the Board by fax or by electronic mail.

Service. This Order was served on you the day it was deposited in the United States mail. RCW 34.05.010(19).

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Land Capacity Analysis Related RCW and WAC Sections

RCW 36.70A.110 Comprehensive plans – Urban growth areas.

1) Each county that is required or chooses to plan under RCW 36.70A.040 shall designate an urban growth area or areas within which urban growth shall be encouraged and outside of which growth can occur only if it is not urban in nature. Each city that is located in such a county shall be included within an urban growth area. An urban growth area may include more than a single city. An urban growth area may include territory that is located outside of a city only if such territory already is characterized by urban growth whether or not the urban growth area includes a city, or is adjacent to territory already characterized by urban growth, or is a designated new fully contained community as defined by RCW 36.70A.350.

(2) Based upon the growth management population projection made for the county by the office of financial management, the county and each city within the county shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county or city for the succeeding twenty-year period, except for those urban growth areas contained totally within a national historical reserve. As part of this planning process, each city within the county must include areas sufficient to accommodate the broad range of needs and uses that will accompany the projected urban growth including, as appropriate, medical, governmental, institutional, commercial, service, retail, and other nonresidential uses.

Each urban growth area shall permit urban densities and shall include greenbelt and open space areas. In the case of urban growth areas contained totally within a national historical reserve, the city may restrict densities, intensities, and forms of urban growth as determined to be necessary and appropriate to protect the physical, cultural, or historic integrity of the reserve. An urban growth area determination may include a reasonable land market supply factor and shall permit a range of urban densities and uses. In determining this market factor, cities and counties may consider local circumstances. Cities and counties have discretion in their comprehensive plans to make many choices about accommodating growth.

Within one year of July 1, 1990, each county that as of June 1, 1991, was required or chose to plan under RCW 36.70A.040, shall begin consulting with each city located within its boundaries and each city shall propose the location of an urban growth area. Within sixty days of the date the county legislative authority of a county adopts its resolution of intention or of certification by the office of financial management, all other counties that are required or choose to plan under RCW 36.70A.040 shall begin this consultation with each city located within its boundaries. The county shall attempt to reach agreement with each city on the location of an urban growth area within which the city is located. If such an agreement is not reached with each city located within the urban growth area, the county shall justify in writing why it so designated the area an urban growth area. A city may object formally with the department over the designation of the urban growth area within which it is located. Where appropriate, the department shall attempt to resolve the conflicts, including the use of mediation services.

(3) Urban growth should be located first in areas already characterized by urban growth that have adequate existing public facility and service capacities to serve such development, second in areas already characterized by urban growth that will be served adequately by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided by either public or private sources, and third in the remaining portions of the urban growth areas. Urban growth may also be located in designated new fully contained communities as defined by RCW 36.70A.350.

(4) In general, cities are the units of local government most appropriate to provide urban governmental services. In general, it is not appropriate that urban governmental services be extended to or expanded in rural areas except in those limited circumstances shown to be necessary to protect basic public health and safety and the environment and when such services are financially supportable at rural densities and do not permit urban development.

(5) On or before October 1, 1993, each county that was initially required to plan under RCW 36.70A.040(1) shall adopt development regulations designating interim urban growth areas under this chapter. Within three years and three months of the date the county legislative authority of a county adopts its resolution of intention or of certification by the office of financial management, all other counties that are required or choose to plan under RCW 36.70A.040 shall adopt development regulations designating interim urban growth areas under this chapter. Adoption of the interim urban growth areas may only occur after public notice; public hearing; and compliance with the state environmental policy act, chapter 43.21C RCW, and under this section. Such action may be appealed to the growth management hearings board under RCW 36.70A.280. Final urban growth areas shall be adopted at the time of comprehensive plan adoption under this chapter.

(6) Each county shall include designations of urban growth areas in its comprehensive plan.

(7) An urban growth area designated in accordance with this section may include within its boundaries urban service areas or potential annexation areas designated for specific cities or towns within the county.

(8)(a) Except as provided in (b) of this subsection, the expansion of an urban growth area is prohibited into the one hundred year floodplain of any river or river segment that: (i) Is located west of the crest of the Cascade mountains; and (ii) has a mean annual flow of one thousand or more cubic feet per second as determined by the department of ecology.

(b) Subsection (8)(a) of this section does not apply to:

(i) Urban growth areas that are fully contained within a floodplain and lack adjacent buildable areas outside the floodplain;

(ii) Urban growth areas where expansions are precluded outside floodplains because:

(A) Urban governmental services cannot be physically provided to serve areas outside the floodplain; or

(B) Expansions outside the floodplain would require a river or estuary crossing to access the expansion; or

(iii) Urban growth area expansions where:

(A) Public facilities already exist within the floodplain and the expansion of an existing public facility is only possible on the land to be included in the urban growth area and located within the floodplain; or

(B) Urban development already exists within a floodplain as of July 26, 2009, and is adjacent to, but outside of, the urban growth area, and the expansion of the urban growth area is necessary to include such urban development within the urban growth area; or

(C) The land is owned by a jurisdiction planning under this chapter or the rights to the development of the land have been permanently extinguished, and the following criteria are met:

(I) The permissible use of the land is limited to one of the following: Outdoor recreation; environmentally beneficial projects, including but not limited to habitat enhancement or environmental restoration; stormwater facilities; flood control facilities; or underground conveyances; and

(II) The development and use of such facilities or projects will not decrease flood storage, increase stormwater runoff, discharge pollutants to fresh or salt waters during normal operations or floods, or increase hazards to people and property.

(c) For the purposes of this subsection (8), "one hundred year floodplain" means the same as "special flood hazard area" as set forth in WAC 173-158-040 as it exists on July 26, 2009.

(9) If a county, city, or utility has adopted a capital facility plan or utilities element to provide sewer service within the urban growth areas during the twenty-year planning period, nothing in this chapter obligates counties, cities, or utilities to install sanitary sewer systems to properties within urban growth areas designated under subsection (2) of this section by the end of the twenty-year planning period when those properties:

(a)(i) Have existing, functioning, nonpolluting on-site sewage systems;

(ii) Have a periodic inspection program by a public agency to verify the on-site sewage systems function properly and do not pollute surface or groundwater; and

(iii) Have no redevelopment capacity; or

(b) Do not require sewer service because development densities are limited due to wetlands, flood plains, fish and wildlife habitats, or geological hazards.

RCW 36.70A.115 Comprehensive Plans and development regulations must provide sufficient land capacity for development.

(1) Counties and cities that are required or choose to plan under RCW 36.70A.040 shall ensure that, taken collectively, adoption of and amendments to their comprehensive plans and/or development regulations provide sufficient capacity of land suitable for development within their jurisdictions to accommodate their allocated housing and employment growth, including the accommodation of, as appropriate, the medical, governmental, educational, institutional, commercial, and industrial facilities related to such growth, as adopted in the applicable countywide planning policies and consistent with the twenty-year population forecast from the office of financial management.

(2) This analysis shall include the reasonable measures findings developed under RCW 36.70A.215, if applicable to such counties and cities.

Chapter 365-196 WAC

WAC 365-196-310 Urban growth areas

(1)(a) Except as provided in (b) of this subsection, counties and cities may not expand the urban growth area into the one hundred-year flood plain of any river or river segment that:

(i) Is located west of the crest of the Cascade mountains; and

(ii) Has a mean annual flow of one thousand or more cubic feet per second as determined by the department of ecology.

(b) Subsection (1)(a) of this section does not apply to:

(i) Urban growth areas that are fully contained within a flood plain and lack adjacent buildable areas outside the flood plain;

(ii) Urban growth areas where expansions are precluded outside flood plains because:

(A) Urban governmental services cannot be physically provided to serve areas outside the flood plain; or

(B) Expansions outside the flood plain would require a river or estuary crossing to access the expansion; or

(iii) Urban growth area expansions where:

(A) Public facilities already exist within the flood plain and the expansion of an existing public facility is only possible on the land to be included in the urban growth area and located within the flood plain;

(B) Urban development already exists within a flood plain as of July 26, 2009, and is adjacent to, but outside of, the urban growth area, and the expansion of the urban growth area is necessary to include such urban development within the urban growth area; or

(C) The land is owned by a jurisdiction planning under this chapter or the rights to the development of the land have been permanently extinguished, and the following criteria are met:

(I) The permissible use of the land is limited to one of the following: Outdoor recreation; environmentally beneficial projects including, but not limited to, habitat enhancement or environmental restoration; stormwater facilities; flood control facilities; or underground conveyances; and

(II) The development and use of such facilities or projects will not decrease flood storage, increase stormwater runoff, discharge pollutants to fresh or salt waters during normal operations or floods, or increase hazards to people and property.

(c) Under (a)(i) of this subsection, "one hundred-year flood plain" means the same as "special flood hazard area" as set forth in WAC 173-158-040 as it exists on July 26, 2009.

(2) Requirements.

(a) Each county planning under the act must designate an urban growth area or areas within which urban growth must be encouraged and outside of which growth can occur only if it is not urban in nature. Each county must designate an urban growth area in its comprehensive plan.

(b) Each city that is located in such a county shall be included within an urban growth area. An urban growth area may include more than a single city.

(c) An urban growth area may include territory that is located outside a city if such territory already is characterized by urban growth or is adjacent to territory already characterized by urban growth.

(d) Based upon the growth management planning population projection selected by the county from within the range provided by the office of financial management, and based on a county-wide employment forecast developed by the county at its discretion, the urban growth areas shall include areas and densities sufficient to permit the urban growth that is projected to occur in the county for the succeeding twenty-year period. Counties and cities may provide the office of financial management with information they deem relevant to prepare the population projections, and the office shall consider and comment on such information and review projections with cities and counties before they are adopted. Counties and cities may petition the office to revise projections they believe will not reflect actual population growth.

(e) The urban growth area may not exceed the areas necessary to accommodate the growth management planning projections, plus a reasonable land market supply factor, or market factor. In determining this market factor, counties and cities may consider local circumstances. Cities and counties have discretion in their comprehensive plans to make many choices about accommodating growth. Each urban growth area shall permit urban densities and shall include greenbelt and open space areas.

(f) Counties and cities should facilitate urban growth as follows:

(i) Urban growth should be located first in areas already characterized by urban growth that have existing public facilities and service capacities adequate to serve urban development.

(ii) Second, urban growth should be located in areas already characterized by urban growth that will be served by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided by either public or private sources.

(iii) Third, urban growth should be located in the remaining portions of the urban growth area.

(g) In general, cities are the units of local government most appropriate to provide urban governmental services. In general, it is not appropriate that urban governmental services be extended to or expanded in rural areas except in those limited circumstances shown to be necessary to protect basic public health and safety and the environment and when such services are financially supportable at rural densities and do not permit urban development. Recommendations governing the extension of urban services into rural areas are found in WAC 365-196-425.

(h) Each county that designates urban growth areas must review, according to the time schedule specified in RCW 36.70A.130(5), periodically its designated urban growth areas, and the densities permitted within both the incorporated and unincorporated portions of each urban growth area (see WAC 365-196-610).

(i) The purpose of the urban growth area review is to assess the capacity of the urban land to accommodate population growth projected for the succeeding twenty-year planning period.

(ii) This review should be conducted jointly with the affected cities.

(iii) In conjunction with this review by the county, each city located within an urban growth area shall review the densities permitted within its boundaries, and the extent to which the urban growth occurring within the county has located within each city and the unincorporated portions of the urban growth areas.

(3) General procedure for designating urban growth areas.

(a) The designation process shall include consultation by the county with each city located within its boundaries. The adoption, review and amendment of the urban growth area should reflect a cooperative effort among jurisdictions to accomplish the requirements of the act on a regional basis, consistent with the county-wide planning policies and, where applicable, multicounty planning policies.

(b) Each city shall propose the location of an urban growth area.

(c) The county shall attempt to reach agreement with each city on the location of an urban growth area within which the city is located.

(d) If an agreement is not reached with each city located within the urban growth area, the county shall justify in writing why it so designated an urban growth area.

(e) As growth occurs, most lands within the urban growth area should ultimately be provided with urban governmental services by cities, either directly or by contract. Other service providers are appropriate within urban growth areas for regional or county-wide services, or for isolated unincorporated pockets characterized by urban growth. Counties and cities should provide for development phasing within each urban growth area to ensure the orderly sequencing of development and that services are provided as growth occurs.

(f) Counties and cities should develop and evaluate urban growth area proposals with the purpose of accommodating projected urban growth through infill and redevelopment within existing municipal boundaries or urban areas. In some cases, expansion will be the logical response to projected urban growth.

(g) Counties, cities, and other municipalities, where appropriate, should negotiate interlocal agreements to coordinate land use management with the provision of adequate public facilities to the urban growth area. Such agreements should facilitate urban growth in a manner consistent with the cities' comprehensive plans and development regulations, and should facilitate a general transformation of governance over time, through annexation or incorporation, and transfer of nonregional public services to cities as the urban area develops.

(4) Recommendations for meeting requirements.

(a) Selecting and allocating county-wide growth forecasts. This process should involve at least the following:

(i) The total county-wide population is the sum of the population allocated to each city; the population allocated to any portion of the urban growth area associated with cities; the population allocated to any portion of the urban growth area not associated with a city; and the population growth that is expected outside of the urban growth area.

(ii) RCW 43.62.035 directs the office of financial management to provide a reasonable range of high, medium and low twenty-year population forecasts for each county in the state, with the medium forecast being most likely. Counties and cities must plan for a total county-wide population that falls within the office of financial management range.

(iii) Consideration of other population forecast data, trends, and implications. In selecting population forecasts, counties and cities may consider the following:

(A) Population forecasts from outside agencies, such as regional or metropolitan planning agencies, and service providers.

(B) Historical growth trends and factors which would cause those trends to change in the future.

(C) General implications, including:

(I) Public facilities and service implications. Counties and cities should carefully consider how to finance the necessary facilities and should establish a phasing plan to ensure that development occurs at urban densities; occurs in a contiguous and orderly manner; and is linked with provision of adequate public facilities. These considerations are particularly important when considering forecasts closer to the high end of the range. Jurisdictions considering a population forecast closer to the low end of the range should closely monitor development and population growth trends to ensure actual growth does not begin to exceed the planned capacity.

(II) Overall land supplies. Counties and cities facing immediate physical or other land supply limitations may consider these limitations in selecting a forecast. Counties and cities that identify potential longer term land supply limitations should consider the extent to which current forecast options would require increased densities or slower growth in the future.

(III) Implications of short term updates. The act requires that twenty-year growth forecasts and designated urban growth areas be updated at a minimum during the periodic review of comprehensive plans and development regulations (WAC 365-196-610). Counties and cities should consider the likely timing of future updates, and the opportunities this provides for adjustments.

(D) Counties and cities are not required to adopt forecasts for annual growth rates within the twenty-year period, but may choose to for planning purposes. If used, annual growth projections may assume a consistent rate throughout the planning period, or may assume faster or slower than average growth in certain periods, as long as they result in total growth consistent with the twenty-year forecasts selected.

(iv) Selection of a county-wide employment forecast. Counties, in consultation with cities, should adopt a twenty-year county-wide employment forecast to be allocated among urban growth areas, cities, and the rural area. The following should be considered in this process:

(A) The county-wide population forecast, and the resulting ratio of forecast jobs to persons. This ratio should be compared to past levels locally and other regions, and to desired policy objectives; and

(B) Economic trends and forecasts produced by outside agencies or private sources.

(v) Projections for commercial and industrial land needs. When establishing an urban growth area, counties should designate sufficient commercial and industrial land. Although no office of financial management forecasts are available for industrial or commercial land needs, counties and cities should use a county-wide employment forecast, available data on the current and projected local and regional economies, and local demand for services driven by population growth. Counties and cities should consider establishing a

county-wide estimate of commercial and industrial land needs to ensure consistency of local plans.

Counties and cities should consider the need for industrial lands in the economic development element of their comprehensive plan. Counties and cities should avoid conversion of areas set aside for industrial uses to other incompatible uses, to ensure the availability of suitable sites for industrial development.

(vi) Selection of community growth goals with respect to population, commercial and industrial development and residential development.

(vii) Selection of the densities the community seeks to achieve in relation to its growth goals. Inside the urban growth areas densities must be urban. Outside the urban growth areas, densities must be rural.

(b) General considerations for determining the need for urban growth areas expansions to accommodate projected population and employment growth.

(i) Estimation of the number of new persons and jobs to be accommodated based on the difference between the twenty-year forecast and current population and employment.

(ii) Estimation of the capacity of current cities and urban growth areas to accommodate additional population and employment over the twenty-year planning period. This should be based on a land capacity analysis, which may include the following:

(A) Identification of the amount of developable residential, commercial and industrial land, based on inventories of currently undeveloped or partially developed urban lands.

(B) Identification of the appropriate amount of greenbelt and open space to be preserved or created in connection with the overall growth pattern and consistent with any adopted levels of service. See WAC 365-196-335 for additional information.

(C) Identification of the amount of developable urban land needed for the public facilities, public services, and utilities necessary to support the likely level of development. See WAC 365-196-320 for additional information.

(D) Based on allowed land use development densities and intensities, a projection of the additional urban population and employment growth that may occur on the available residential, commercial and industrial land base. The projection should consider the portion of population and employment growth which may occur through redevelopment of previously developed urban areas during the twenty-year planning period.

(E) The land capacity analysis must be based on the assumption that growth will occur at urban densities inside the urban growth area. In formulating land capacity analyses, counties and cities should consider data on past development, as well as factors which may cause trends to change in the future. For counties and cities subject to RCW 36.70A.215, information from associated buildable lands reports should be considered. If past development patterns have not resulted in urban densities, or have not resulted in a pattern of desired development, counties and cities should use assumptions aligned with desired future development patterns. Counties and cities should then implement strategies to better align future development patterns with those desired.

(F) The land capacity analysis may also include a reasonable land market supply factor, also referred to as the "market factor." The purpose of the market factor is to account for the estimated percentage of developable acres contained within an urban growth area that, due to fluctuating market forces, is likely to remain undeveloped over the course of the twenty-year planning period. The market factor recognizes that not all developable land will be put to its maximum use because of owner preference, cost, stability, quality, and location. If establishing a market factor, counties and cities should establish an explicit market factor for the purposes of establishing the amount of needed land capacity. Counties and cities may consider local circumstances in determining an appropriate market factor. Counties and cities may also use a number derived from general information if local study data is not available.

(iii) An estimation of the additional growth capacity of rural and other lands outside of existing urban growth areas compared with future growth forecasted, and current urban and rural capacities.

(iv) If future growth forecasts exceed current capacities, counties and cities should first consider the potential of increasing capacity of existing urban areas through allowances for higher densities, or for additional provisions to encourage redevelopment. If counties and cities find that increasing the capacity of existing urban areas is not feasible or appropriate based on the evidence they examine, counties and cities may consider expansion of the urban growth area to meet the future growth forecast.

(c) Determining the appropriate locations of new or expanded urban growth area boundaries. This process should consider the following:

(i) Selection of appropriate densities. For all jurisdictions planning under the act, the urban growth area should represent the physical area where that jurisdiction's urban development vision can be realized over the next twenty years. The urban growth area should be based on densities which accommodate urban growth, served by adequate public facilities, discourage sprawl, and promote goals of the act. RCW 36.70A.110 requires that densities specified for land inside the urban growth area must be urban densities. See WAC 365-196-300 for recommendations on determining appropriate urban densities.

(ii) The county should attempt to define urban growth areas to accommodate the growth plans of the cities. Urban growth areas should be defined so as to facilitate the transformation of services and governance during the planning period. However, physical location or existing patterns of service make some unincorporated

areas which are characterized by urban growth inappropriate for inclusion in any city's potential growth area.

(iii) Identifying the location of any new lands added to the urban growth area. Lands should be included in the urban growth area in the following priority order:

(A) Existing incorporated areas;

(B) Land that is already characterized by urban growth and has adequate public facilities and services;

(C) Land already characterized by urban growth, but requiring additional public facilities and urban services; and

(D) Lands adjacent to the above, but not meeting those criteria.

(iv) Designating industrial lands. Counties and cities should consult with local economic development organizations when identifying industrial lands to identify sites that are particularly well suited for industry, considering factors such as:

(A) Rail access;

(B) Highway access;

(C) Large parcel size;

(D) Location along major electrical transmission lines;

(E) Location along pipelines;

(F) Location near or adjacent to ports and commercial navigation routes;

(G) Availability of needed infrastructure; or

(H) Absence of surrounding incompatible uses.

(v) Consideration of resource lands issues. Urban growth areas should not be expanded into designated agricultural, forest or resource lands unless no other option is available. Prior to expansion of the urban growth area, counties and cities must first review the natural resource lands designation and conclude the lands no longer meet the designation criteria for resource lands of long-term commercial significance. Designated agricultural or forest resource lands may not be located inside the urban growth area unless a city or county has enacted a program authorizing transfer or purchase of development rights.

(vi) Consideration of critical areas issues. Although critical areas exist within urban areas, counties and cities should avoid expanding the urban growth areas into areas with known critical areas extending over a large area. See RCW 36.70A.110(8) for legislative direction on expansion of urban growth areas into the one hundred-year flood plain of river segments that are located west of the crest of the Cascade mountains and have a mean annual flow of one thousand or more cubic feet per second.

(vii) If there is physically no land available into which a city might expand, it may need to revise its proposed urban densities or population levels in order to accommodate growth on its existing land base.

(d) Evaluating the feasibility of the overall growth plan. Counties and cities should perform a check on the feasibility of the overall plan to accommodate growth. If, as a result of this evaluation, the urban growth area appears to have been drawn too small or too large, the proposal should be adjusted accordingly. Counties and cities should evaluate:

(i) The anticipated ability to finance the public facilities, public services, and open space needed in the urban growth area over the planning period. When conducting a review of the urban growth areas, counties and cities should develop an analysis of the fiscal impact of alternative land use patterns that accommodate the growth anticipated over the succeeding twenty-year period. This provides the public and decision makers with an estimate of the fiscal consequences of various development patterns. This analysis could be done in conjunction with the analysis required under the State Environmental Policy Act.

(ii) The effect that confining urban growth within the areas defined is likely to have on the price of property and the impact thereof on the ability of residents of all economic strata to obtain housing they can afford.

(iii) Whether the level of population and economic growth contemplated can be achieved within the capacity of available land and water resources and without environmental degradation.

(iv) The extent to which the comprehensive plan of the county and of adjacent counties and cities will influence the area needed.

(e) County actions in adopting urban growth areas.

(i) A change to the urban growth area is an amendment to the comprehensive plan and requires, at a minimum, an amendment to the land use element. Counties and cities should also review and update the transportation, capital facilities, utilities, and housing elements to maintain consistency and show how any new areas added to the urban growth area will be provided with adequate public facilities. A modification of any portion of the urban growth area affects the overall urban growth area size and has county-wide implications. Because of the significant amount of resources needed to conduct a review of the urban growth area, and because some policy objectives require time to achieve, frequent, piecemeal expansion of the urban growth area should be avoided. Site-specific proposals to expand the urban growth area should be deferred until the next comprehensive review of the urban growth area.

(ii) Counties and cities that are required to participate in the buildable lands program must first have adopted and implemented reasonable measures as required by RCW 36.70A.215 before considering expansion of an urban growth area.

(iii) Consistent with county-wide planning policies, counties and cities consulting on the designation of urban growth areas should consider the following implementation steps:

(A) Establishment of agreements regarding land use regulations and the provision of services in that portion of the urban growth area outside of an existing city into which it is eventually expected to expand.

(B) Negotiation of agreements for appropriate allocation of financial burdens resulting from the transition of land from county to city jurisdiction.

(C) Provision for an ongoing collaborative process to assist in implementing county-wide planning policies, resolving regional issues, and adjusting growth boundaries.

WAC 365-196-325 Providing sufficient land capacity suitable for development.

(1) Requirements.

(a) RCW 36.70A.115 requires counties and cities to ensure that, taken collectively, comprehensive plans and development regulations provide sufficient capacity of land suitable for development within their jurisdictions to accommodate their allocated housing and employment growth, including the accommodation of, as appropriate, the medical, governmental, educational, institutional, commercial, and industrial facilities related to such growth, as adopted in the applicable county-wide planning policies and consistent with the twenty-year population forecast from the office of financial management. To demonstrate this requirement is met, counties and cities must conduct an evaluation of land capacity sufficiency that is commonly referred to as a "land capacity analysis."

(b) Counties and cities must complete a land capacity analysis that demonstrates sufficient land for development or redevelopment to meet their adopted growth allocation targets during the review of urban growth areas required by RCW 36.70A.130 (3)(a). See WAC 365-196-310 for guidance in estimating and providing sufficient land capacity.

(c) Counties and cities subject to RCW 36.70A.215 must determine land capacity sufficiency as part of the buildable lands reporting required no later than one year prior to the deadline for periodic review of comprehensive plans and development regulations required by RCW 36.70A.130, and adopt and implement measures that are reasonably likely to increase the consistency between land capacity and growth allocations. See WAC 365-196-315 for guidance.

(d) A complete land capacity analysis is not required to be undertaken for every amendment to a comprehensive plan or development regulation outside of the act's required periodic reviews. However, when considering amendments to the comprehensive plan or development regulations which increase or decrease allowed densities, counties and cities should estimate the degree of increase or decrease in development capacity on lands subject to the amendments, and estimate if the capacity change may affect its ability to provide sufficient capacity of land suitable for development. If so, the county or city should complete a land capacity analysis.

(2) Recommendations for meeting requirement.

(a) Determining land capacity sufficiency. The land capacity analysis is a comparison between the collective effects of all development regulations operating on development and the assumed densities established in the land use element. In order to achieve sufficiency, the development regulations must allow at least the low end of the range of assumed densities established in the land use element. This assures a city or county can meet its obligation to accommodate the growth allocated through the county-wide population allocation process.

(b) Appropriate area for analysis. The focus of the analysis is on the county or city's ability to meet its obligation to accommodate the growth allocated through the county-wide population or employment allocation process. Providing sufficient land capacity for development does not require a county or city to achieve or evaluate sufficiency for every parcel of a future land use designation provided the area as a whole ensures sufficient land capacity for development.

(c) The land capacity analysis should evaluate what the development regulations allow, rather than what development has actually occurred. Many factors beyond the control of counties and cities will control the amount and pace of actual development, what density it is built at and what types and densities of development are financially viable for any set of economic conditions. Counties and cities need not ensure that particular types of development are financially feasible in the context of short term market conditions. Counties and cities should, however, consider available information on trends in local markets to inform its evaluation of sufficient land capacity for the twenty-year planning period.

(d) Development phasing. RCW 36.70A.115 does not create an obligation to ensure that all land in the urban growth area is available for development at the same time. When counties or cities establish mechanisms for development phasing, zoned densities in the short term may be established that are substantially lower than called for in the future land use designations. In these cases, a county or city ensures a sufficient land capacity suitable for development by implementing its development phasing policies to allow development to occur within the twenty-year planning period. Development phasing is described in greater detail in WAC 365-196-330.

(e) The department recommends the following means of implementing the requirements of RCW 36.70A.115.

(i) Periodic evaluation. Counties and cities ensure sufficient land capacity for development by comparing the achieved density of development that has been permitted in each zoning category to the assumed densities established in the land use element using existing permitting data. If existing permitting data shows that the densities approved are lower than assumed densities established in the land

use element, counties and cities should review their development regulations to determine if regulatory barriers are preventing development at the densities as envisioned. This evaluation must occur as part of the urban growth area review required in RCW 36.70A.130 (3)(a) and as part of the buildable lands review and evaluation program conducted under RCW 36.70A.215.

(ii) Flexible development standards. Counties and cities could ensure sufficient land capacity for development by establishing development regulations to allow development proposals that transfer development capacity from unbuildable portions of a development parcel to other portions of the development parcel so the underlying zoned density is still allowed. This may provide for flexibility in some dimensional standards provided development is consistent with state law and all impacts are mitigated.

(iii) Evaluation of development capacity impacts of proposed development regulation amendments. Counties and cities may also consider evaluation of whether proposed amendments to development regulations will have a significant impact on the ability of a county or city to provide sufficient capacity of land for development.