



SAN JUAN COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

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MEMO

MEMO DATE: January 6, 2020
TO: San Juan County Planning Commission
CC: Erika Shook, AICP, DCD Director
Linda Kuller, AICP, DCD Deputy Director
FROM: Adam Zack, Planner III 
SUBJECT: 2036 Comprehensive Plan Update
Land Capacity Analysis (LCA) Employment Capacity Analysis
BRIEFINGS: January 17, 2020
ATTACHMENT: A. Draft LCA Report Excerpt

Briefing Purpose: To explain and get feedback on the draft Employment Capacity Analysis (ECA). This analysis needs to be incorporated into the November 4, 2019 draft LCA Report (Draft LCA Report). The Draft LCA Report identifies how much commercial development is possible through 2036 in commercial building square feet. The draft ECA compares commercial capacity and projected population growth to determine if there is sufficient capacity for population and employment growth forecasts.

Public Comment Period: Comments on the January 3, 2020, draft ECA must be submitted by **January 27, 2020**.

How to Comment: Comments are requested on the attached excerpt from the draft LCA Report. Please reference the page and line numbers from the report to compplancomments@sanjuanco.com. Please provide your name and address for the record and use the subject line: Employment Capacity Analysis.

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. The LCA is a study of existing development, current regulations and Comprehensive Plan land use designations. It is required to ensure that there is sufficient land capacity for residential, commercial and industrial development to meet the projected growth through 2036.

The November 4, 2019, draft LCA Report (<https://www.sanjuanco.com/DocumentCenter/View/19296>) contains more information including the commercial and industrial capacity results.

The LCA must include analysis of capacity for commercial and industrial development. The County's draft LCA Methodology does not include specific steps for analyzing commercial and industrial capacity as it relates to future growth. It specifically does not include a method for comparing projected population and employment growth with commercial and industrial capacity. Staff developed a draft methodology that identifies steps to analyze these two factors. The first draft of the methodology was provided with a staff report dated December 3, 2019 (<https://www.sanjuanco.com/DocumentCenter/View/19426>). The Planning

Commission was briefed on that draft on December 20, 2019. The draft methodology was used to conduct the draft ECA in this report.

The draft ECA will help answer the question:

Is there sufficient commercial and industrial capacity to accommodate the projected growth through the year 2036?

Attachment A: Draft LCA Report Excerpt

G. Employment Capacity Analysis

The Growth Management Act requires that the County's urban growth areas as a whole provide a sufficient land capacity for commercial and industrial development or redevelopment that meets forecasted 2036 population and employment allocations (RCWs 36.70A.110 and 36.70A.115).

This employment capacity analysis provides planning estimates of projected job growth and their relationship to commercial and industrial capacity. The five-step process outlined in the *SJC Land Capacity Analysis Methodology* (LCA Methodology (Attachment A)) was used to determine if there would be enough commercial and industrial land to meet the projected 2036 employment base. These steps are:

Step 1. Calculating the 2016 Jobs to Households Ratio

Step 2. Forecasting New Jobs in 2036

Step 3. Calculating the Ratio of Existing 2017 Jobs to Existing Building Square Footage

Step 4. Forecasting the 2036 Employment Capacity

Step 5. Identifying Employment Capacity Surpluses or Deficits in 2036

Data Sources Background

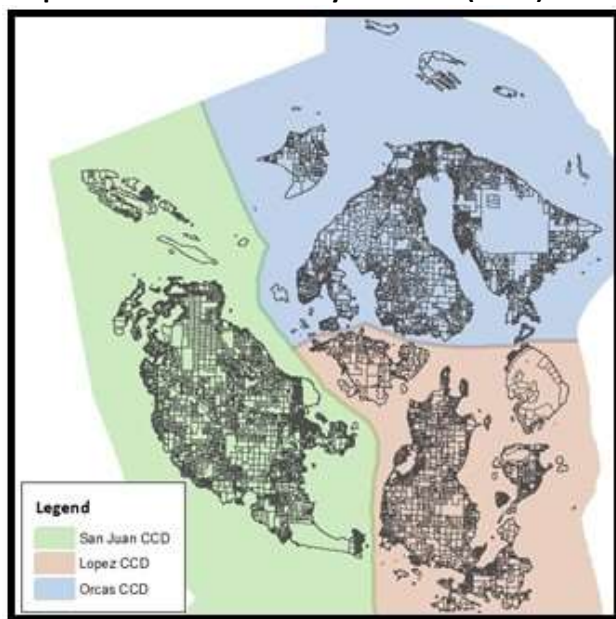
In the employment capacity analysis, countywide employment statistics are compared with the results of the analysis of commercial and industrial building square footage capacity from Section F of this report.

Employment statistics are not available for individual islands. San Juan County employment data is available in three U.S. Census Bureau Census County Divisions (CCD); San Juan, Orcas, and Lopez (Shaw is included with Lopez). CCD is defined by the U.S. Census Bureau as:

"A subdivision of a county that is a relatively permanent statistical area established cooperatively by the Census Bureau and state and local government authorities. Used for presenting decennial census statistics in those states that do not have well-defined and stable minor civil divisions that serve as local governments."

The CCDs group the San Juan Islands as shown in Map 16 below.

Map 16. U.S. Census County Divisions (CCDs).



The analysis of commercial and industrial building square footage capacity from Section F uses Assessor's records of building square footage for structures constructed by 2017. This LCA data set is used in Steps 3 and 4 to calculate the ratio of 2017 jobs to existing building square feet and forecast 2036 employment capacity.

The employment capacity analysis uses the achieved FAR capacity for commercial and industrial capacity. These estimates are provided in Tables 18 through 25 in Section F of this report.

Step 1. 2016 Jobs to Households Ratio Results

A ratio of jobs to households relates employment and population. This ratio describes the rate at which jobs occur relative to the population. It is calculated as:

$$\text{Jobs to Households Ratio} = \frac{\text{Total jobs in San Juan County}}{\text{Households in San Juan County}}$$

Table 34 below provides the 2016 jobs to household ratio for each CCD. The Town of Friday Harbor has the highest jobs per household rate followed by Orcas, Lopez, and unincorporated San Juan Island.

Table 34. 2016 Jobs to Households by Census County Division (CCD).

CCD	2016 Population	2016 Households	2016 Jobs	2016 Jobs per Household
San Juan without Friday Harbor	5,652	2,771	742	0.268
Friday Harbor	2,250	1,103	2,172	1.969
Lopez	2,858	1,401	623	0.445
Orcas	5,514	2,703	1,760	0.651

Source: U.S. Census Bureau, SJC 2036 Population Forecast, and SJC Resolution 27-2017 and 2017 Technical Memorandum.

Step 2. Forecast 2036 New Jobs

In this step the 2016 jobs to households ratio was used to project the number of jobs expected per CCD based on the County's 2036 population projection. The 2036 jobs forecast is an estimate of the number of jobs relative to forecasted population.

This forecast is based on the assumption that the jobs to household ratio remains at the 2016 rate in each CCD. The forecasted number of 2036 jobs was estimated by multiplying the jobs to household rate by the expected number of households in 2036. Using the total number of forecasted jobs, the number of future new jobs was found by subtracting the number of jobs existing in 2017. Future new jobs were calculated as follows.

$$\text{Future New Jobs} = (\text{Projected Households} \times \text{Jobs to Household Ratio}) - \text{2017 Existing Jobs}$$

Table 35 below shows the jobs forecast for 2036 based on expected population growth. A total of 6,701 jobs are forecasted to be in the County by 2036. In 2017, there were 5,335 jobs countywide. Based on this forecast, the County can expect 1,366 new jobs by the year 2036. Of the study areas, employment in Friday Harbor is forecasted to grow the most by 2036; unsurprising given the high jobs to household ratio there. Employment in the Orcas CCD is expected to increase by 342 jobs during the planning period. Employment in the Lopez CCD and unincorporated San Juan CCD are expected to grow the least, ninety-six and thirty-five jobs respectively.

Table 35. 2036 Jobs per U.S. Census County Division (CCD).

CCD	2036 Forecasted Population	Forecasted Households	2016 Jobs per Household	Total Forecasted 2036 Jobs	2017 Existing Jobs	Forecasted New Jobs, 2036
San Juan without Friday Harbor	6,255	3,067	0.268	822	787	35
Friday Harbor	3,152	1,545	1.969	3,042	2,149	893
Lopez	3,403	1,668	0.445	742	646	96
Orcas	6,565	3,218	0.651	2,095	1,753	342
Total				6,701	5,335	1,366

*Source: U.S. Census Bureau and SJC 2036 Population Forecast adopted in Resolution 27-2017.

Forecasted Rate of Change

The average rate of change in countywide employment from 2002 to 2017 was 63.47 new jobs per year. Assuming that employment will grow in conjunction with population as described in Table 35, countywide employment is forecasted to increase from 5,335 to 6,701 by 2036. The result is growth of 1,366 new jobs by 2036 for an average rate of change of 71.89 new jobs per year. Closer examination of the average rate of change for segments of study period (2002-2017) reveals that there were significant variations in job growth in the sixteen years of jobs data analyzed.

The economic disruption of the 2008 recession resulted in a fair amount of variation in total employment through the study period. Between 2002 and 2007, before the recession, countywide employment grew by 366 jobs for an average rate of change of 73.2 jobs per year in this five-year period. During the three-year period between 2008 and 2011, total countywide jobs reduced by 368 jobs. Over this period, countywide

employment lost an average of 122.67 jobs per year. Employment began to grow between 2011 and 2017. Over this six-year period, countywide employment grew by 755, an average of 125.83 jobs per year. The effects of the 2008 recession create an anomaly in employment totals, however; the forecasted average annual growth in employment (71.89 jobs per year) is similar to the average rate of growth in the five years preceding the recession (73.2 jobs/year).

Eastsound and Lopez Village Urban Growth Areas (UGAs) Forecasted Job Growth

In addition to looking at employment capacity across the entire CCD, the County must consider the expected growth in Eastsound and Lopez Village UGAs. Land Use Element, Policy 2.3.A.12 of the San Juan County Comprehensive Plan (Plan) requires the County to allocate fifty percent of the projected growth per island to the UGAs. Table 36 below shows that allocation of job growth from Table 35 for Orcas and Lopez islands and their UGAs.

As shown in Table 35 above, more than fifty percent of the projected growth in San Juan Island jobs is expected in Friday Harbor. In fact, more than fifty percent of the new jobs forecast countywide will occur in Friday Harbor, exceeding this policy's targeted growth.

Table 36. 2036 Job Growth Allocation for Eastsound and Lopez Village UGAs.

Island	Total 2036 New Jobs in CCD	Fifty Percent of 2036 New Jobs Allocated to the UGA
Orcas (Eastsound UGA)	342	171
Lopez (Lopez Village UGA)	96	48

*Source: Table 35 above.

Step 3. The Ratio of Existing 2017 Jobs to Existing Building Square Footage

This step defines the relationship between existing nonresidential building square footage and the number of existing jobs. It is used to determine the rate at which jobs occur per building square foot. This ratio is used in Step 4 to estimate how much new square footage of building area is needed to provide for the 2036 jobs forecast.

Data Background

This ratio is calculated using the LCA 2017 Assessor's data set for existing commercial and industrial building square footage and U.S. Census Bureau job statistics. The commercial and industrial building square footage from the LCA Report is derived from the Gross Developable Lands Inventory (GDLI) the first step in the *Land Capacity Analysis Methodology* that characterizes fully and partially developed parcels. This ratio is calculated by U.S. Census County Division (CCD) as shown on Map 16.

The building square feet per job metric specifically for the Eastsound and Lopez Village UGAs cannot be calculated with the jobs data available because jobs statistics are not provided specifically for these UGAs. Future commercial capacity in the UGAs will use the rate of square feet per job from that island's CCD. This approach provides a more refined per-area rate than a countywide ratio.

Building square feet per jobs is calculated as follows:

$$\text{2017 Building square feet per job} = \frac{\text{Existing 2017 building square feet in the CCD}}{\text{Existing 2017 jobs in the CCD}}$$

In 2017, Orcas had the highest amount of nonresidential building square footage and the most jobs. Orcas also had the highest orate of building square feet per job of the three CCDs. In that year, there were 530.99 nonresidential building square feet per job in the Orcas CCD. Lopez CCD had the second highest rate of square feet per job (415.27) followed by unincorporated San Juan (314.74). The rate of building square feet per job will be used in the next step to calculate the amount of employment that may be accommodated in the available commercial and industrial building capacity.

Table 37. 2017 Building Square Feet per Job by U.S. Census County Division (CCD).

Area	Nonresidential Building Square Feet	Existing Jobs	Building Square Ft./Job
San Juan CCD without Friday Harbor	247,696.9	787	314.74
Lopez CCD	268,264.1	646	415.27
Orcas CCD	930,839.1	1,753	530.99

*Source: U.S. Census Bureau and SJC Land Capacity Analysis Report data.

Step 4. Forecast of 2036 Employment Capacity

Tables 38.A through C below depict the 2036 employment capacity for each CCD. These results assume that the rate of building square feet per job will remain the same for each CCD through the planning period. This calculation uses the expected final capacity of nonresidential development in building square footage from tables 18 through 25 in Section F of this report. Three development scenarios were used to evaluate mixed use development capacity in the Lopez Village and Eastsound UGAs. The three development scenarios are provided with the tables in Section F.

Final capacity numbers based on the achieved FAR were used to compare future commercial and industrial capacity with building square feet per job. Achieved FAR most accurately characterizes existing development and what is likely to occur. Future employment capacity is calculated as follows:

$$\text{2036 Employment Capacity} = \frac{\text{2036 Commercial Capacity per CCD}}{\text{2017 Building Square Feet per Job per CCD}}$$

Table 38.A shows that employment capacity in the unincorporated San Juan CCD is spread between rural general use (RGU) and Master Planned Resort (MPR). All of the designated MPR in the San Juan CCD is found at Roche Harbor. In total, 2,787.54 jobs could be accommodated in the 877,348.98 square feet of commercial building capacity on vacant and redevelopable land.

Table 38.A. 2036 Employment Capacity per Land Use Designation, San Juan CCD without Friday Harbor.

San Juan CCD Without Friday Harbor				
Land Use Designation	Developable Acres	Commercial Capacity Square Feet	Building Square Feet per Job	Future Employment Capacity in Jobs
Rural General Use	148.04	517,016.89	314.74	1,642.68
Master Planned Resort	131.87	360,332.10	314.74	1,144.86
Total	279.91	877,348.98	314.74	2,787.54

Source: Land Capacity Analysis Report Data Set and Table 37 above.

Table 38.B shows that the majority of employment capacity outside of the Lopez Village UGA is provided in the RGU land use designation. This is the result of a significant amount of undeveloped RGU on Decatur Island. Decatur Island accounts for 989 of the 997 developable acres of RGU in the Lopez CCD. Employment capacity outside of the Lopez Village UGA and Decatur RGU is limited to small areas of Rural Industrial, Marine Center, and Island Center. Inside the Lopez Village UGA, if Lopez Village Commercial, a mixed-use designation, develops with at least fifty percent residential and fifty percent commercial (Scenario B), there is capacity for 2,780 jobs.

Table 38.B. 2036 Employment Capacity per Land Use Designation, Lopez CCD.

Lopez CCD				
Land Use Designation	Developable Acres	Commercial Capacity Square Feet	Building Square Feet per Job	Future Employment Capacity in Jobs
Rural General Use	997.82	3,606,085.56	415.27	8,683.71
Rural Industrial	20.61	10,060.44	415.27	24.23
Marine Center	17.36	46,921.96	415.27	112.99
Island Center	23.19	143,664.67	415.27	345.95
Subtotal, non-UGA	1,058.98	3,806,732.63		9,166.89
Lopez Village UGA				
Lopez Village Commercial ²				
Scenario A	8.49	2,309,372.02	415.27	5,561.13
Scenario B	8.49	1,154,686.01	415.27	2,780.57
Scenario C	8.49	0	415.27	0
Lopez CCD Total				
Scenario A	1,067.47	6,116,104.65	415.27	14,728.02
Scenario B	1,067.47	4,961,418.64	415.27	11,947.45
Scenario C	1,067.47	3,806,732.63	415.27	9,166.89

Source: Land Capacity Analysis Report Data Set and Table 37 above. For scenario explanations, see Section F of this report.

Notes:

- Commercial capacity for Service Park and Deer Harbor Hamlet Industrial are based on the maximum allowed not the achieved FAR. There were not fully developed parcels in these designations to base an achieved FAR on.
- Lopez Village Commercial capacity shown in this table is based on the Lopez Village Subarea Plan adopted in October 2019. Commercial Capacity in Lopez Village Commercial is based on the maximum allowed because this is a new land use designation. There is not an established achieved FAR because the regulations were adopted in October 2019. Lopez Village Institutional and Lopez Village Residential do not provide commercial capacity.

Table 38.C shows that there is capacity for 427.77 jobs outside of the Eastsound UGA. Inside the Eastsound UGA, there is capacity for 603.43 jobs if the mixed-use areas develop with fifty percent mix of residential and

commercial development (Scenario B). A significant amount of employment capacity in the UGA is provided by the almost twenty developable acres of Service and Light Industrial (SLI) designation, which provides capacity for 487.60 jobs.

Table 38.C. 2036 Employment Capacity per Land Use Designation, Orcas CCD.

Orcas CCD				
Land Use Designation	Developable Acres	Commercial Capacity Square Feet	Building Square Feet per Job	Future Employment Capacity in Jobs
Rural Industrial	29.36	17,021.47	530.99	32.06
Island Center	7.25	40,840.38	530.99	76.91
Deer Harbor Hamlet Commercial	2.65	19,706.41	530.99	37.11
Deer Harbor Hamlet Industrial ¹	4.43	22,288.00	530.99	41.97
Orcas Village Commercial	7.71	34,049.90	530.99	64.13
Master Planned Resort	1.95	2,383.65	530.99	4.49
Country Corner Commercial	5.76	481.82	530.99	0.91
Service Park ¹	4.97	90,368.50	530.99	170.19
Subtotal, non-UGA	64.08	227,140.14		427.77
Eastsound UGA				
Service and Light Industrial	19.98	258,911.79	530.99	487.60
Village Commercial				
Scenario A	13.18	117,073.96	530.99	220.48
Scenario B	13.18	58,308.78	530.99	109.81
Scenario C	13.18	0	530.99	0
Marina				
Scenario A	7.96	218,376.21	530.99	411.26
Scenario B	7.96	3,192.59	530.99	6.01
Scenario C	7.96	0	530.99	0
UGA subtotal				
Scenario A	41.12	594,361.96	530.99	1,119.35
Scenario B	41.12	320,413.15	530.99	603.43
Scenario C	41.12	258,911.79	530.99	487.60
Orcas CCD Total				
Scenario A	105.20	821,502.09	530.99	1,547.11
Scenario B	105.20	547,553.29	530.99	1,031.19
Scenario C	105.20	486,051.93	530.99	915.37

Source: Land Capacity Analysis Report Data Set and Table 37 above. For scenario explanations, see Section F of this report.

Table 38.C Notes:

- Commercial capacity for Service Park and Deer Harbor Hamlet Industrial are based on the maximum allowed not the achieved FAR. There were not fully developed parcels in these designations to base an achieved FAR on.
- Lopez Village Commercial capacity shown in this table is based on the Lopez Village Subarea Plan adopted in October 2019.

Commercial Capacity in Lopez Village Commercial is based on the maximum allowed because this is a new land use designation. There is not an established achieved FAR because the regulations were adopted in October 2019. Lopez Village Institutional and Lopez Village Residential do not provide commercial capacity.

Step 5. 2036 Employment Capacity Surplus or Deficit

In Step 5, projected jobs and employment capacity were compared to identify potential surpluses or deficits of commercial and industrial development capacity. Table 39 below shows the number of jobs projected for 2036 and 2036 employment capacity. The possible surpluses or deficits were determined by comparing 2036 jobs and 2036 job capacity as follows.

2036 Employment Capacity Surplus or Deficit =

2036 Employment Capacity - Forecasted 2036 New Jobs

Table 39 below shows Employment Capacity Surplus or Deficit by U.S. Census County Division under different scenarios identified in Section F of this report. In total, there is surplus employment capacity in each CCD, each UGA, and each development scenario with one exception. In the Lopez Village UGA under Scenario C (commercial areas develop with 100 percent residential), there is a deficit of forty-eight jobs. This deficit in the UGA only occurs because the only commercial designation is a mixed-use designation and Scenario C would not include any new commercial development. In each area throughout the County, there is more employment capacity than the expected growth in employment.

Table 39. 2036 Employment Capacity Surplus or Deficit by U.S. Census County Division (CCD).

Area	2036 Job Capacity in Possible New Jobs	2036 New Jobs Forecast	2036 Job Capacity +/-
San Juan CCD without Friday Harbor	2,780	35	2,745
Lopez CCD, Non-UGA	9,166.89	48	9,118.89
Lopez Village UGA			
Scenario A	5,561.13	48	5,513.13
Scenario B	2,780.57	48	2,732.57
Scenario C	0	48	-48
Lopez CCD Total			
Scenario A	14,728.02	96	14,632.02
Scenario B	11,947.45	96	11,851.45
Scenario C	1,067.47	96	971.47
Orcas CCD, Non-UGA	427.77	171	256.77
Eastsound UGA			
Scenario A	1,119.35	171	948.35
Scenario B	603.43	171	432.43
Scenario C	487.60	171	316.60
Orcas CCD Total			
Scenario A	1,547.12	342	1,205.12
Scenario B	1,031.2	342	689.20
Scenario C	915.37	342	573.37

Table 39. 2036 Employment Capacity Surplus or Deficit by U.S. Census County Division (CCD) Continued.

Countywide Total without Friday Harbor			
Scenario A	19,055.14	473	18,582.14
Scenario B	15,758.65	473	15,285.65
Scenario C	4,123.14	473	3,650.14

Source: Tables 34 - 38 above. For scenario explanations, see Section F of this report.

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