Anchorage Housing Market Analysis Appendix F: Buildable Lands Inventory and Housing Capacity Analysis

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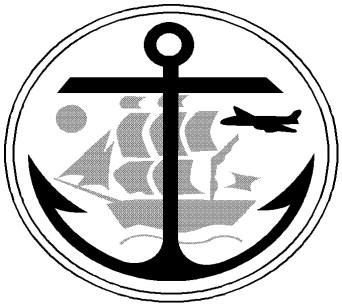
Buildable Lands Inventory and Housing Capacity Analysis

March 2012

Municipality of Anchorage



Community Development Department
Planning Division

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Section 1 Background

This appendix presents a summary of the residential land supply inventory and housing capacity analysis for the Anchorage Bowl and Chugiak-Eagle River. The results of the buildable lands inventory and housing capacity analysis is then compared to the results of the 20-year demand forecast, completed by ECO Northwest, to determine if there is sufficient housing capacity to accommodate the forecasted 20-year housing demand, at the densities and mix of housing needed, and in the intended parts of town.

ORGANIZATION OF THIS REPORT

- The remainder of this memo is organized as follows:
- **Section 2, Framework and Methods** provides an overview of key concepts and definitions pertinent to the residential land inventory as well as an overview of the methods used to prepare the inventory.
- **Section 3, Findings** summarizes the results of the buildable land inventory by subarea and zoning district, and three scenarios of the housing capacity of these lands by structure type.
- **Section 4, Residential Land Sufficiency** compares the housing capacity with housing demand to determine whether the Municipality has sufficient housing capacity to accommodate growth over the next 20 years
- **Section 5, Redevelopment** summarizes an analysis of the redevelopment capacity on mobile home parks and the historic rate of redevelopment.

Section 2 Framework and Methods

This section describes the methodology to determine the residential buildable land supply and housing capacity. This analysis is for the Anchorage Bowl and Chugiak-Eagle River. The analysis does not include Girdwood or Turnagain Arm. The results of this analysis are an approximation, intended as a general order of magnitude estimate for a long-term city-wide policy analysis.

Figure 2-1 provides a more detailed conceptual framework for the buildable land inventory and housing capacity analysis. The figure from Moudon and Hubner, 2000, provides a general idea of the analytical process the Municipality used. The process generally includes the following steps:

1. *Classify land into mutually-exclusive categories.* The first step requires parcels to be classified as vacant, partially vacant or developed (note that redevelopable land is a subset of developed land). The amount of vacant land is then tabulated by zoning district.
2. *Remove land with prohibitive constraints.* Not all vacant land is developable. Lands with environmental, urban service or other constraints are deducted from the inventory. This deduction yields net "buildable" acres, or the amount of land that is available for development.
3. *Estimate redevelopable lands.* Some developed land will redevelop during the planning period. In lieu of identifying specific lands that will redevelop, this analysis estimates the historic rate of redevelopment and projects that rate of redevelopment forward.
4. *Estimate development capacity by multiplying net buildable acres by density assumptions.* The capacity analysis results in estimates of the number of dwelling units by type that buildable lands can accommodate. The capacity analysis requires assumptions about gross density by land use designations.

Figure 2-1. Conceptual framework for buildable land inventory and capacity analysis

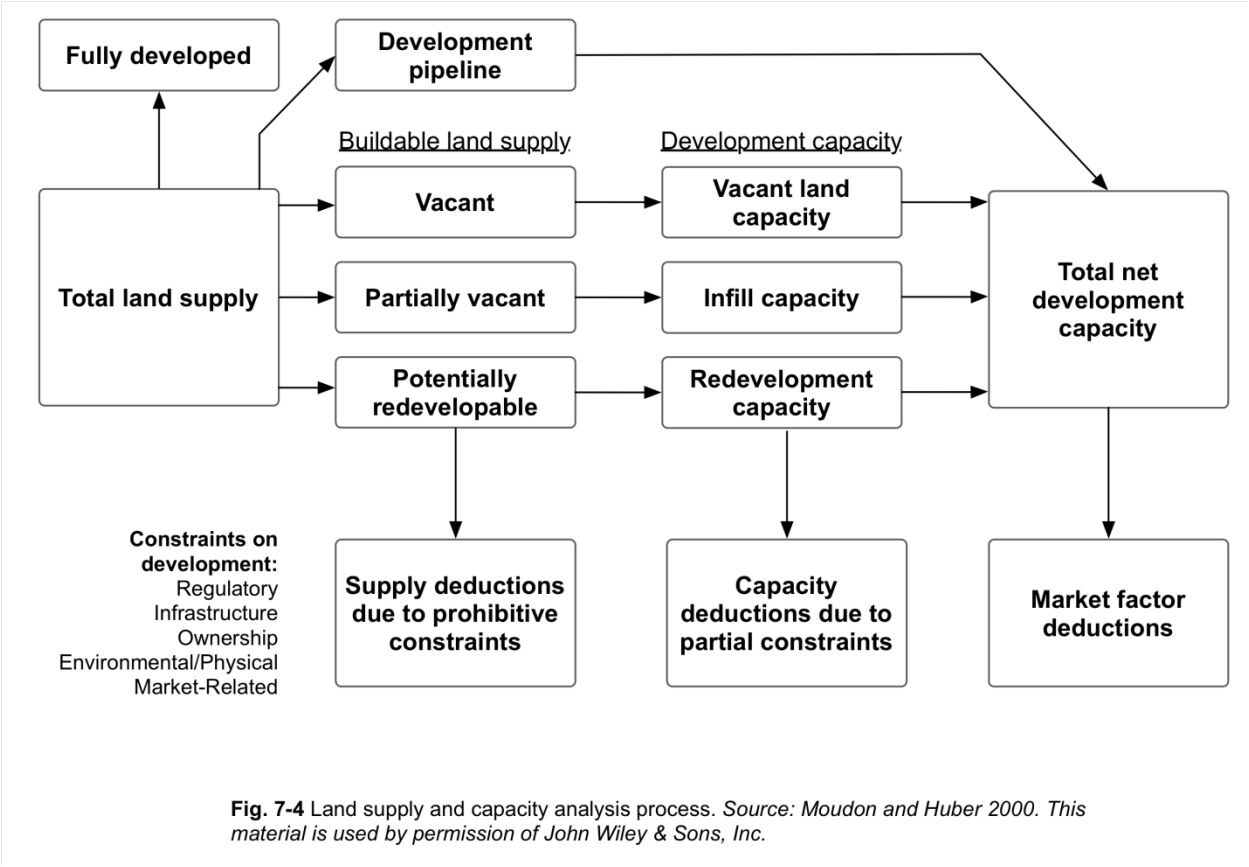


Fig. 7-4 Land supply and capacity analysis process. *Source: Moudon and Huber 2000. This material is used by permission of John Wiley & Sons, Inc.*

KEY CONCEPTS AND DEFINITIONS

This following key terms and definitions were used in the inventory. The terms are generally compatible with the land classification scheme and land development status framework shown in Figures 2-1

Land Supply – The entire land base within Anchorage and Chugiak-Eagle River, including both vacant and developed lands.

Residential Lands – Lands zoned or designated by the Municipality for residential use.

Buildable Land – All parcels that are vacant or partially vacant.

- **Vacant Land –** A parcel that has little or no building improvements or structures, nor is committed to an existing primary or accessory use such as parking for a nearby building.

- **Partially Vacant Land –** A parcel occupied by a use but which contains enough land to be further subdivided or developed with infill without need of rezoning. An example is a 10 acre R-6 zoned lot with a single family home. Partially vacant lots must meet a certain size threshold, and have a relatively low value of building improvements.

- **Potentially Redevelopable Land –** A parcel on which development has already occurred but on which, due to market forces or zoning that allows a more intensive use, there exists the potential that existing development will be converted to more intensive uses during the planning period. An example would be a parcel zoned for commercial or high density multifamily use that is currently occupied by a single-family home with a low assessed value of building improvements.

BUILDABLE LANDS INVENTORY - METHODS AND ASSUMPTIONS

Update Land Use Data to Identify Vacant and Partially Vacant Land

The first step of the buildable lands inventory was to assemble a gross buildable lands inventory consisting of vacant and partially vacant residential lands.[1] This is the total area of buildable parcels, including vacant and partially vacant parcels, before deductions for prohibitively constrained and already encumbered lands. Planners established the end of 2010 as the base point in time from which the buildable land inventory was measured. For the purposes of the land capacity analysis, all dwellings existing as of the 2010 inventory were considered developed, while units that were proposed or built after that date were counted as future capacity, except where stated otherwise below. Sources for information for the update process include municipal (MOA) Property Appraisal data and property photograph file, Google street screens,

[1] The buildable land estimate does not include capacity in non-residential (commercial) areas (e.g., mixed-use centers such as the Downtown CBD, or B-3 commercial corridors such as Spenard Road, or RO zoned lands).

municipal aerial imagery, municipal address file, the municipal building permit file, and field checks where necessary.

The steps to identify partially vacant lots were as follows:

- All developed (non-vacant) residential lots were grouped into four zoning district categories: single-family districts, multifamily districts, and two classes of rural (large lot) districts distinguished by lot size.

- Small lots in each group of zones (such as less than half an acre in size in urban districts, or less than 2.5 acres in the R-6 zone) were filtered out.

- Among the larger lots remaining, those with a very low appraised building value, as well as a low building value relative to the appraised value of the lot, were isolated for further study.

- Site checks and satellite imagery helped identify which among the isolated lots had buildable space left available for additional dwellings.

- Finally, lots with condominium projects at partial build-out were included in the inventory of partially vacant lots.

For each partially vacant lot, the analysis estimated the acreage of developable land remaining on the lot, in order to account for the portion of the lot already occupied the existing dwelling unit.

Determine Prohibitively Constrained Land

The next step of the buildable lands inventory was to identify prohibitively and partially constrained lands. Constraints on development are related to environmental, land use, and urban service constraints that limit both the supply of land and development capacity of the land. Prohibitively constrained lands were removed from the gross buildable land supply.

Partially constrained lands include developable wetlands, areas without public sewer service, areas with moderate slopes, or other lands with mitigating constraints that do not prohibit but nevertheless restrict economic feasibility or development capacity. Lands with only partial constraints were identified but not subtracted from the buildable lands inventory. Rather, a deduction is made for these lands during the housing capacity calculation.

Environmental, land use, and urban service constraints are defined as follows:

- **Environmental Constraints**

Environmental constraints can limit the net buildable supply of land, as well as the housing capacity of remaining buildable lands. An environmental suitability analysis was conducted to determine the acreage of developable land that is suitable, marginally suitable, or unsuitable for future development in Anchorage. The methodology was updated from the suitability analysis used for the Chugiak-Eagle River Comprehensive Plan Update (2006), the Anchorage 2020 Plan (2001), and the conceptually approved draft Anchorage Bowl Land Use Plan Map (2006). The chart below describes the definition and criteria for environmentally suitable, marginally suitable, and unsuitable land.

Environmental Constraint Criteria

	Definition	Criteria
Environmentally Suitable or Unconstrained	Lands that are not constrained by environmental factors.	All areas not affected by environmental constraints
Marginally Suitable or Partially Constrained	These lands have some environmental constraints that reduce the number of housing units that the property can support.	• Moderate avalanche hazard areas • Slopes between 25% and 45% • 100-year floodplain • Permit review and undesignated wetlands (class B, C, D, and P) • High seismic hazard areas (zone 4), except in R-1 and R-2 zones.
Unsuitable or Prohibitively Constrained	These lands are assumed to be undevelopable and are subtracted from the buildable land supply for residential development	• High avalanche hazard areas • Slopes greater than 45% • Stream buffers of 25 feet with the following exceptions: o The buffer was increased to 100 feet around anadromous fish streams within wetland areas o The buffer was increased to 65 feet in non-anadromous fish streams within wetland areas o The buffer was increased to 100 feet in R-10 district • Floodways

		• Class A wetlands • Marine coastlands • Very high seismic hazard areas (zone 5), except in R-1 and R-2 zones. • Bedrock surface outcroppings • Alpine areas (elevation 2,500 feet and above)

After identifying each individual constraint, a cumulative analysis was conducted using all the environmental layers and allowing the most restrictive constraints to prevail. For example, if a land parcel was covered by Class B wetlands, it would be considered marginally suitable for development. However, if the same parcel was also within a high seismic area designation, which is unsuitable for development, the unsuitable designation would apply in the cumulative analysis.

In addition, some lands were manually designated as either partially constrained or unlikely to develop within the planning horizon, including:

a. "Paper plat" unimproved subdivisions along Minnesota Drive south of Dimond Boulevard;
b. Fill sites on lots NE of Dimond Boulevard and Sand Lake Road, and Dimond Boulevard and Arlene Road; and
c. Individually selected tracts identified as unlikely to develop because of deep peat soils not shown on GIS soils data layers.

Environmentally suitable and marginally suitable (or partially constrained) lands are included in the buildable land supply inventory. The housing capacity on marginally suitable lands is reduced by 1/3 during the housing capacity analysis.

- **Land Use Commitments –** Land agreements, plans, or other encumbrances designating a future use other than housing. Examples include:
    - Conservation easements
    - Public facility site selections
    - Anticipated utility sites
    - Right of Way acquisition
    - Designated future parks

- Lands committed to public facilities e.g., airports, utility stations

- **Urban Service Constraints –** Anticipated absence or limitations to public services and infrastructure that limit or prohibit future residential development potential of an area. A forecasted lack of road access is a prohibitive urban service constraint. Lack of public wastewater service is a partial constraint on future housing density in an area because the minimum lot size for a house with a septic system is one dwelling unit per acre.

The end result of the buildable lands analysis was the net supply of vacant and partially vacant buildable land after making deductions for prohibitively constrained lands. The net buildable land supply was used as the base from which to estimate the future housing capacity.

HOUSING CAPACITY ANALYSIS – METHODS AND ASSUMPTIONS

This section is a summary of steps, methods, and assumptions used in the housing capacity analysis of residential vacant and partially vacant lands in the Anchorage Bowl and Chugiak-Eagle River. The capacity analysis began with the net supply of buildable residential vacant and partially vacant land after prohibitively constrained lands had already been removed as described above.

Determine Capacity of Projects in the Development Pipeline

For some lots, the number of future dwellings by structure type was already known or could be researched. These included:

- Lots with projects in the development pipeline[2];
- Subdivided single-family lots that will support only one single-family house;
- Development sites or master planned areas (e.g., Powder Reserve Tract A) for which the future number and type of dwellings could be estimated based on master plans, plats, interviews, or previous analyses; and

[2] Lands on which projects were approved for development but un-built, or were being reviewed for public action under zoning, subdivision, and other development regulations, or were under construction but not yet occupied (e.g., not yet having a certificate of occupancy) as of the 2010 inventories are considered to be in the "development pipeline". These dwelling units were not included in the inventory of existing housing. Instead, the capacity analysis considers these units to be future dwellings and includes them in the estimate of land capacity for future housing.

- Lots with condominium projects at partial build-out.

The known housing capacity for these lots was carried forward in the analysis. No density assumptions were applied to these lots.

Develop Housing Capacity Scenarios

For the remaining supply of buildable vacant and partially vacant lands, the estimate of future housing capacity was based on assumptions regarding the average density (dwelling units per acre DUA) and structure type mix of future residential development activity in each zoning district.

The housing capacity analysis used three housing density scenarios to project the likely range of average number of dwelling units per acre. The scenarios are:

- "Recent Densities" – A continuation of the average residential densities (dwellings per acre) and mix of housing structure types achieved over the past ten years of development activity, in each zoning district.

- "Historic Densities" – The average residential densities and mix of housing structure types achieved by all existing housing stock, regardless of year built.

- "Accelerated Densities" - A transition to higher average densities closer to the maximum achievable residential densities allowed by zoning. This scenario assumes the average future density is the median between recent achieved densities (Scenario 1) and the maximum allowed density in each zoning district.

Anchorage's historical average densities peaked in the 1970s. Average density of development activity in the 1970s was approximately 20 DUA in the R-3 zone and 40 DUA in the R-4. Scenario #3 assumes densities higher than those achieved in the 1970's but not above the realm of possibility. Table 2-1 lists the density assumptions by zoning district in the Bowl:

Table 2-1. Density Assumptions by Parent Zoning – Anchorage Bowl

Dwellings units per acre on the lot (DUA)

ZONING DISTRICT	Housing Density Scenarios			Maximum Allowable Density by Zoning
	#1 - Recent Densities	#2 - Historic Densities	#3 – Accelerated Densities	
R-1	4.79	4.87	5.90	7
R-1A	3.25	3.63	4.13	5
R-2A Two-family	6.33	6.61	8.16	10
R-2D Two-family	8.52	7.71	11.26	14
R-2M Multi-family	12.07	9.21	14.53	17
R-3 Multi-family	14.12	17.63	28.06	42
R-4 Multi-family[3]	17.23	24.19	58.61	100
R-5	4.42	4.92	5.71	7
R-6	0.89	0.96	0.95	1
R-7	1.60	1.52	1.80	2
R-8	0.31	0.42	0.25	0.2
R-9	0.50	0.64	0.45	0.4
R-10	0.41	0.44	0.45	
D-2	15.30	15.30	16.15	
PC	6.31	5.48	6.66	
Hillside PLI	3.1	3.1	3.1	
Hillside R-7 SL	2.1	2.1	2.1	
Hillside R-3 SL	0.8	0.8	0.8	

[3] The maximum zoned density for most districts is expressed in terms of minimum lot size per number of allowed dwelling units. However, the high density R-4 district is more difficult, where density is controlled by bulk restrictions and maximum FAR of 2.0. The maximum density expressed for R-4 district is based on a review of the effects of the zoning ordinance on actual built developments. Most are below 100 DUA.

Phased Development of Chugiak-Eagle River

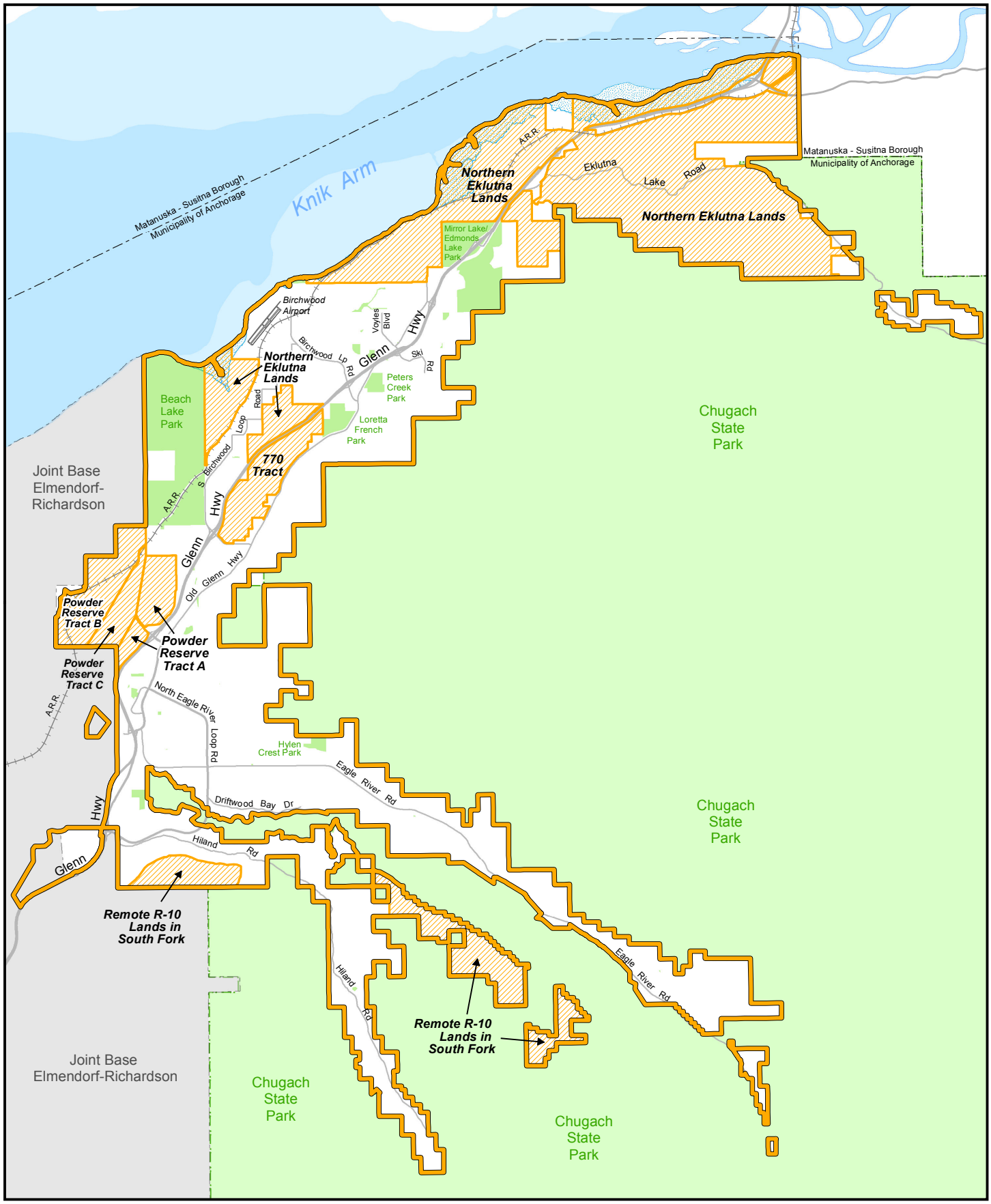
Chugiak-Eagle River(C-ER) future assumed densities were derived using the same basic method, with several significant differences. Because of the small size and distinct character of special limitation zoning districts in C-ER, each special limitation district was listed separately and in many cases given a unique density assumption. Secondly, because of localized constraints, density scenario #3 used historic achieved densities adjusted upward manually rather than by a set under-build factor.

The assessment of the land capacity of the buildable land inventory in Chugiak-Eagle River is largely affected by how much of Eklutna, Inc's. landholdings can be assumed to become available for residential development within the 20 year planning horizon. Based on current trends and in part on discussions with Eklutna, Inc., the project team applied informed assumptions regarding the rate of land consumption for the major Eklutna landholdings in Chugiak-Eagle River. The land capacity analysis assumes that Eklutna will phase residential development of its lands over the long term in a sequential pattern beginning with the Powder Reserve and then the "Eklutna 770" tract, and only afterward progress to major landholdings further north and to remote R-10 areas of the South Fork of Eagle River. A map of the Chugiak-Eagle River Subareas is on page 12. Following are the assumptions regarding phased development for these areas in each of the density scenarios:

Table 2-2. Phased Development Scenarios – Chugiak-Eagle River

Development Area	#1 - Recent Densities	#2 - Historic Densities	#3 – Accelerated Densities and Phasing
Powder Reserve	Full build-out of Tract A Master Plan area	Full build-out of Tract A Master Plan area	Full build-out of Tracts A, B, and C
Eklutna 770	50% build-out by 2030 at densities based on 2006 Comp. Plan and discussion with Eklutna	Full build-out at densities based on 2006 Comp. Plan and discussion with Eklutna	Higher density build-out using only 2006 Comp. Plan assumptions
North Eklutna Lands	Development phased after 2030	Development phased after 2030	Developed at current zoned rural densities
Remote R-10 lands	Development phased after 2030	Development phased after 2030	Developed at zoned densities adjusted for local constraints
Density assumption on all other lands	Average of recent trends 2006-2010	Average of long-term historic trends	Accelerated densities

Chugiak - Eagle River
Subareas



HOUSING CAPACITY DEDUCTIONS

Assumed future densities for all vacant and partially vacant land was then adjusted downward in certain areas to account for the existence of partial constraints, and the need for streets and other community facilities.

Deductions on Partially Constrained Lands

Partially environmentally constrained lands such as moderately steep slopes, low and medium value wetlands, and lands with other environmental characteristics affect the density of housing development. This analysis assumed that on average partially constrained lands would have 1/3 less capacity than unconstrained lands. A density ceiling of 1.0 DUA was applied in areas that AWWU deemed unlikely to have sewer service by 2030.

Deductions for Future Roads

The capacity analysis made further deductions to account for future roads on large vacant and partially vacant lots in urban areas. These lots would be likely to include an internal street network which will take space. Capacity was therefore reduced by 20% on large lots (4+ acres) and by 10% on medium sized lots (2 - 3.9 acres). Smaller lots in urban areas and areas zoned for large lot (rural) development were not subject to a roads deduction.

Deductions for Community Facilities

The analysis further deducted capacity by 5% for all vacant lots to accommodate miscellaneous other community facilities (e.g., churches, schools, daycare, open space acquisitions, conversions, etc.). For partially vacant lands, this deduction in capacity was increased to 20% in order to also account for anticipated inefficiencies in future development around existing houses.

Deductions for Rate of Consumption

The net housing capacity was further reduced by 10% for a "rate of land consumption" factor. This represents buildable lands kept off the market for the duration of the planning period due to speculative holding, land banking, estate settlement delays, personal use, etc. A 5% “rate of consumption factor” was applied to subdivided lots and master planned developments, based on an assumption that lots already subdivided or planned will have a faster build-out.

The final result is an adjusted net housing capacity of vacant and partially vacant lands. Capacity of vacant lands is called "vacant land capacity". Capacity of partially vacant lands is "infill capacity", per the third column in the analytical flow chart in figure 2-1 above.

HOUSING CAPACITY BY STRUCTURE TYPE – METHODS AND ASSUMPTIONS

The estimate of future housing capacity is allocated among five housing structure types. This allows a comparison of housing capacity to housing demand for each of the housing structure types:

- Large lot single family
- Single family
- Two family / duplex
- Townhouse
- Multifamily / other

Because most every residential zoning district allows more than one of these structure types, the assumed share of future housing development among the structure types was determined as follows:

Scenario #1 - Recent Densities, allocates housing capacity among the structure types by assuming that the mix of future housing in each district will be similar to that of recent achieved development 2001-2010.

Scenario #2- Historic Densities, assumes future allocation among housing structure types is similar to the overall historical achieved ratio of housing types.

Scenario #3- Accelerated Densities, assumes an incremental shift from historical patterns toward higher density housing types.

These assumptions did not need to be applied to lots with projects in the development pipeline where the structure type of future units was already known.

Section 3 Buildable Land and Residential Capacity Findings

This section includes the results of (a) the buildable residential land supply and (b) estimates of the capacity of these lands to support additional housing. The estimate of the buildable land supply and its future housing capacity is important to determine if there is enough buildable land to accommodate the forecasted 20-year housing demand, at the densities and mix of housing needed, and in the intended parts of town.

BUILDABLE LAND INVENTORY

Table 3-1 summarizes the net supply of buildable residential land in the Anchorage Bowl and Chugiak-Eagle River. The net buildable land supply includes both unconstrained and partially constrained lands. This is the acreage of land expected to be physically available for new housing between 2010-2030.

Table 3-1. Acres of Buildable Residential Land, 2010

Land Supply Category	Anchorage Bowl	Chugiak – Eagle River
Gross Buildable Residential Land		
Vacant	7,533	21,697
Partially Vacant	765	1,856
Total	8,298	23,553
minus Prohibitively Constrained Land		
Vacant	- 2,325	- 12,245
Partially Vacant	- 149	- 1,022
Total	- 2,474	- 13,267
equals Net Buildable Residential Land [4]		
Vacant	5,208	13,355
Partially Vacant	616	834
Total	**5,824**	**14,189**

[4] Net buildable land in table 3-3 includes unconstrained lands as well as partially constrained lands.

There were 5,800 acres (net) of buildable residential land in the Anchorage Bowl as of 2010, including 5,200 acres of vacant (undeveloped) land, and 600 acres of partially vacant land which has space to be further subdivided or developed. This indicates a 30%-40% decline in the amount of buildable land since 1998, when approximately 8,500 acres of vacant residential lands existed (*Anchorage 2020/Anchorage Bowl Comprehensive Plan*, page 25).

Table 3-2 breaks out Anchorage's net buildable lands by zoning district. Zoning districts are grouped by predominant allowed housing structure type. On page 18 is a map of the net supply of buildable residential land in the Anchorage Bowl.

Table 3-2. Acres of Net Buildable Land, Anchorage Bowl

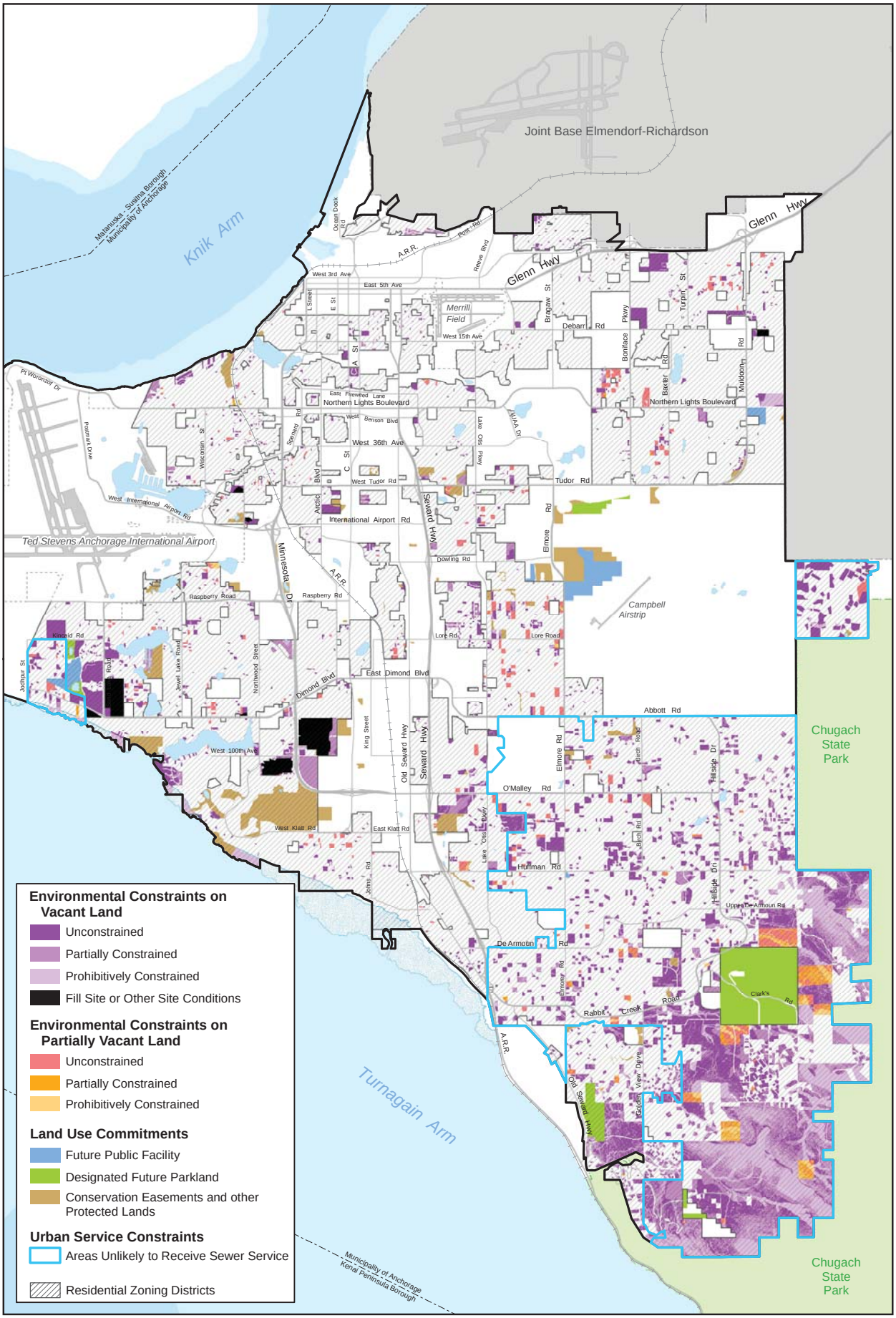
By Subarea and Zoning Districts (grouped by allowed Structure Type), 2010

Zoning Districts (grouped by allowed Structure Type)	Anchorage Bowl Subareas					
	Northwest	Northeast	Central	Southwest	Southeast	Total
Large Lot Single Family	**0**	**175**	**0**	**17**	**3271**	**3463**
R-6	0	0	0	17	1,263	1,280
R-7 SL (Hillside)	0	0	0	0	145	145
R-8	0	0	0	0	513	513
R-9	0	0	0	0	211	211
R-10	0	175	0	0	1,284	1,459
Single Family	**46**	**59**	**184**	**382**	**849**	**1661**
R-1	6	22	147	147	60	523
R-1A	40	37	37	227	182	523
R-3 SL (Hillside)	0	0	0	0	277	277
R-7	0	0	0	0	185	185
PC	0	0	0	8	0	8
Two Family / Duplex	**13**	**56**	**54**	**47**	**0**	**170**
R-2A	10	51	20	41	0	122
R-2D	3	4	0	0	0	7
R-5	0	1	34	6	0	41
Multifamily / Other [5]	**126**	**247**	**125**	**52**	**120**	**670**
R-2M	31	97	75	30	0	233
R-3	67	120	50	10	21	268
R-4	28	30	0	12	0	70
PLI (Hillside)	0	0	0	0	99	99
Total	**185**	**537**	**363**	**499**	**4,239**	**5823**

[5] Townhouse is included with Multifamily/Other in this table.

Anchorage Bowl

Net Supply of Buildable Residential Land



0 1 2 Miles

Chugiak-Eagle River has 14,200 acres (net) of buildable residential land. Table 3-3 breaks this acreage out by zoning. A substantial share of Chugiak-Eagle River's buildable land is located in districts where the future mix of housing types is uncertain. Such areas are either undesignated or subject to a flexible master plan. On page 20 is a map of the buildable residential land in the Anchorage Bowl.

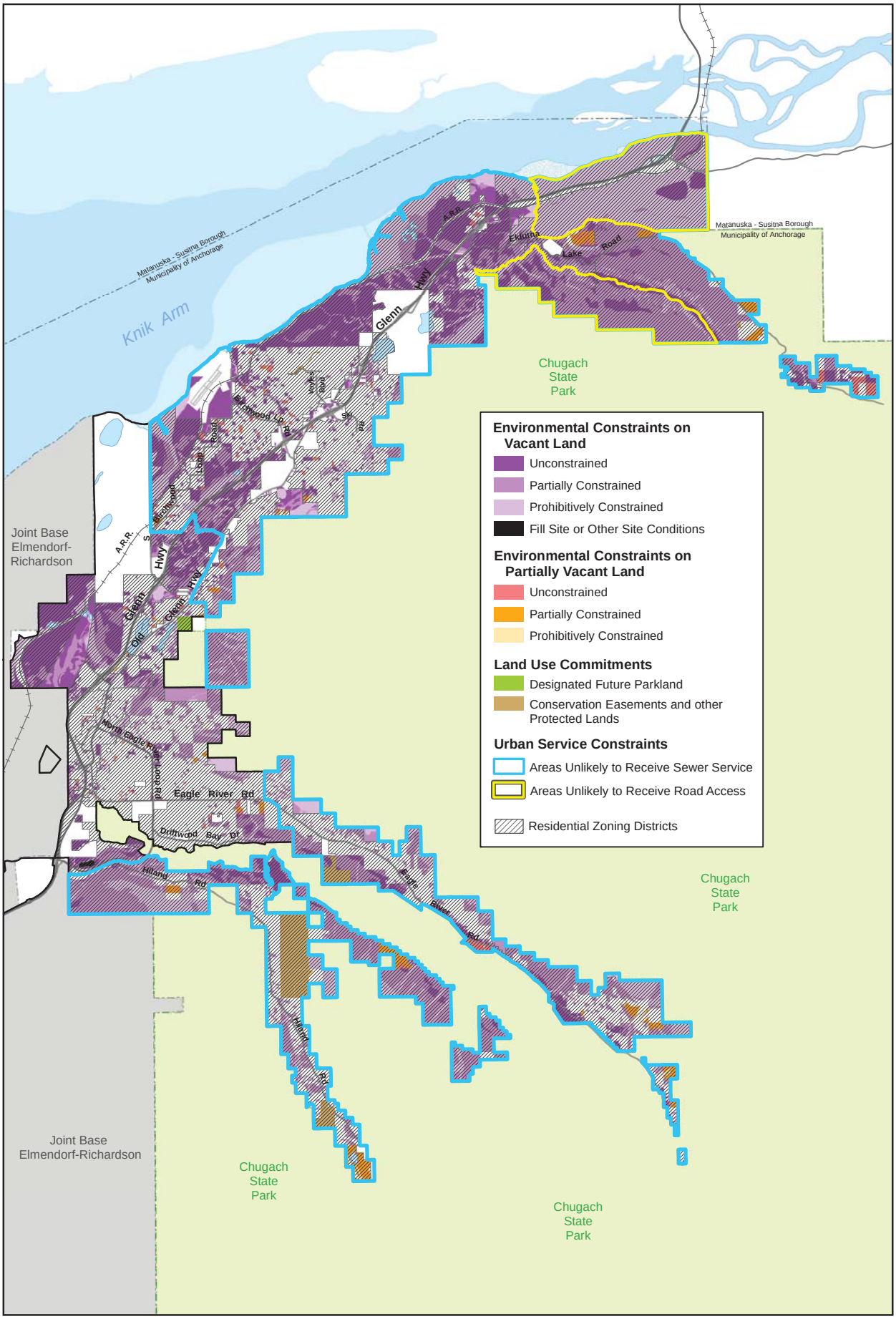
Table 3-3. Acres of Net Buildable Land, Chugiak – Eagle River

By Subarea and Structure Type allowed by zoning, 2010

Structure Type allowed by zoning	Northern Eklutna Lands	Powder Reserve	Eklutna 770 Tract	All Other Areas	Total
Large Lot Single Family	**1135**	**0**	**0**	**5490**	**6625**
R-5A	0	0	0	107	107
R-6	601	0	0	1,238	1839
R-8	0	0	0	139	139
R-9	0	0	0	237	237
R-10	534	0	0	3,769	4303
Single Family	**88**	**0**	**0**	**553**	**641**
R-1	0	0	0	39	39
R-1A	0	0	0	199	199
R-7	88	0	0	315	403
Two Family / Duplex	**13**	**0**	**0**	**77**	**90**
R-2A	0	0	0	40	40
R-2D	0	0	0	4	4
R-5	13	0	0	33	46
Multifamily / Other	**0**	**0**	**0**	**220**	**220**
R-2M	0	0	0	37	37
R-3	0	0	0	183	183
Mixed / Undesignated	**3521**	**1385**	**600**	**1108**	**6614**
PC	270	378	600	563	1811
T	3,005	1,007	0	415	4427
PLI	246	0	0	130	376
Total	**4757**	**1385**	**600**	**7448**	**14190**

Chugiak - Eagle River

Net Supply of Buildable Residential Land



ANCHORAGE BOWL – HOUSING CAPACITY BY STRUCTURE TYPE

Table 3-4 summarizes the buildable land capacity in the Anchorage Bowl by housing structure type, using the following three housing density scenarios. The capacity assumptions are discussed in greater detail in Section 2.3.

- "Recent Densities" – A continuation of the average residential densities (dwellings per acre) and mix of housing structure types achieved over the past ten years of development activity, in each zoning district.
- "Historical Densities" – The average residential densities and mix of housing structure types achieved by all existing housing stock, regardless of year built.
- "Accelerated Densities" - A transition to higher average densities closer to the maximum achievable residential densities allowed by regulatory zoning. This scenario assumes the average density is the median between recent achieved densities (Scenario 1) and the maximum allowed density in each zoning district.

Table 3-4. Anchorage Bowl Residential Vacant Land Capacity

Number of Dwellings by Structure Type and Housing Density Scenario, 2010-2030

	Housing Density Scenarios		
Structure Type	1. Recent Densities	2. Historical Densities	3. Accelerated Densities
Large Lot Single Family	1,945	2,030	1,991
Single Family	3,535	3,614	3,813
Two Family / Duplex	1,890	1,272	1,878
Townhouse	1,043	768	1,572
Multifamily / Other	2,040	3,315	5,486
Total Dwellings	**10,453**	**11,000**	**14,740**

Note: Residential lands include RO and B-3 lots in the housing project development pipeline.

Table 3-4 indicates that single family structures account for just over half of the total housing capacity of the Anchorage Bowl, assuming a continuation of either recent or historical densities. This includes capacity for around 2,000 additional large lot homes and 3,500–3,800 single-family houses on urban sized lots.

The attached, more compact housing structure types—including multifamily, townhouse and two-family—comprise just under half of the total housing capacity of the Anchorage Bowl, assuming a continuation of recent and historical development patterns. Scenarios 1 and 2 differ from one another, however, in what share of the additional attached units will be two-family or townhouse or stacked multifamily dwellings. Ground-oriented townhouses and two-family structures account for a greater share (27%) of estimated future capacity than multifamily (20%) under the recent densities scenario (#1). This reflects that in recent years housing development has shifted away from vertically stacked units toward ground-oriented attached units.

To support a total housing capacity of more than 11,000 additional dwellings in the Anchorage Bowl, higher average densities than have been historically achieved would be needed to absorb more growth. The last column of table 3-4 provides a third future housing density scenario which shows the potential impact of an upward shift in average densities from the recent or historical average. The allocation among the housing structure types in the third scenario uses a moderate increase in higher density housing structure types as a share of future development in the multi-family districts. Scenario 3 increases the capacity for multifamily housing to nearly 5,500 multifamily units. This is because stacked multifamily can potentially achieve very high densities. The capacity for townhouses, which are the second most land efficient housing type, also increases substantially in Scenario 3.

CHUGIAK-EAGLE RIVER – HOUSING CAPACITY BY STRUCTURE TYPE

Tables 3-5 summarizes the estimated buildable land capacity by housing structure type in Chugiak-Eagle River.

Table 3-5. Chugiak-Eagle River Residential Vacant Land Capacity
Number of Dwellings by Structure Type and Housing Density Scenario, 2010-2030

	Housing Density Scenarios		
Structure Type	1. Recent Densities	2. Historical Densities	3. Accelerated Densities and Phasing
Large Lot Single Family	1,659	1,700	3,227
Single Family	2,306	2,677	3,535
Two Family / Duplex	691	824	1,171
Townhouse	608	707	1,005
Multifamily / Other	526	629	1,012
Total Dwellings	**5,790**	**6,537**	**9,999**

Note: Residential lands include RO, PLI, and B-3 lots in the housing project development pipeline.

Large lot single family comprises a somewhat larger percent share of total housing capacity in Chugiak-Eagle River than it does in the Bowl. This reflects current zoning patterns and the amount of land area expected to remain unconnected to public sewer during the study period.

In scenarios 1 and 2, urban single family accounts for around 40% of total housing capacity, because it is the predominant pattern of development in the urbanized areas of Eagle River. See table 2-2 for a detailed explanation of the density and phasing assumptions.

The attached, and more compact, housing structure types—including multifamily, townhouse and two-family—comprise one-third of the total housing capacity, in the recent and historic density scenarios. However, estimates of capacity for compact structure types are influenced by assumptions about the development plans in the Powder Reserve and Eklutna 770. These lands are expected to include a mix of more compact housing types. However, if the master planned developments shift further toward single-family, then the relative share of estimated capacity will shift away from the compact housing structures.

To support more than 6,500 additional dwellings in Chugiak-Eagle River, a combination of accelerated densities and phasing of additional land at urban densities will be needed to absorb more growth. Currently the supply of vacant, buildable land in Chugiak-Eagle River is constrained by the pace of road and sewer extensions and phasing of lands for urban housing development. The third scenario illustrates the latent land capacity in Chugiak – Eagle River by assuming accelerated phasing of additional lands in the Powder Reserve, Eklutna 770, and more remote areas. It may over-estimate the number of large lot single family dwellings, because it assumes the development of northern Eklutna landholdings in Chugiak at large lot densities allowed under current zoning. Eklutna, Inc. may be more likely to phase most of its northern areas long after the planning horizon, or use part of its northern areas for higher density development, such as a tribal village style housing area near Eklutna Village.

HOUSING CAPACITY BY SUBAREA OF THE ANCHORAGE BOWL

This subsection further breaks out the housing capacity of the Anchorage Bowl into its five Planning Subareas established in the *Anchorage 2020 / Anchorage Bowl Comprehensive Plan.* A map depicting the boundaries of the five Anchorage subareas appears on page 26. Tables 3-6, 3-7 and 3-8 estimate the land capacity for future housing, by structure type, for each of the five planning subareas.

Table 3-6. Anchorage Bowl Residential Vacant Land Capacity
Housing Density Scenario 1: Recent Densities
Number of Dwellings by Structure Type and Planning Subarea, 2010-2030

	Anchorage Bowl Subareas					
Structure Type	Northwest	Northeast	Central	Southwest	Southeast	Total
Large Lot Single Family	1	68	3	20	1,853	1,945
Single Family	431	398	718	1,045	943	3,535
Two Family / Duplex	277	747	556	261	49	1,890
Townhouse	325	415	166	52	86	1,043
Multifamily / Other	236	868	294	201	441	2,040
Total	1,270	2,496	1,737	1,578	3,372	**10,453**

Table 3-7. Anchorage Bowl Residential Vacant Land Capacity
Housing Density Scenario 2: Historic Densities
Number of Dwellings by Structure Type and Planning Subarea, f2010 - 2030

	Anchorage Bowl Subareas					
Structure Type	Northwest	Northeast	Central	Southwest	Southeast	Total
Large Lot Single Family	1	69	3	21	1,935	2,030
Single Family	417	389	772	1,077	959	3,614
Two Family / Duplex	166	483	370	214	39	1,272
Townhouse	234	284	127	41	84	768
Multifamily / Other	631	1,493	473	233	486	3,315
Total	1,449	2,718	1,745	1,586	3,502	**11,000**

Table 3-8. Anchorage Bowl Residential Vacant Land Capacity
Housing Density Scenario 3: Accelerated Densities
Number of Dwellings by Structure Type and Planning Subarea, 2010 - 2030

	Anchorage Bowl Subareas					
Structure Type	Northwest	Northeast	Central	Southwest	Southeast	Total
Large Lot Single Family	2	70	3	22	1,894	1,991
Single Family	413	419	853	1,104	1,024	3,813
Two Family / Duplex	260	710	541	324	42	1,878
Townhouse	424	658	299	79	113	1,572
Multifamily / Other	1,378	2,583	715	281	529	5,486
Total	2,477	4,441	2,410	3,601	1,810	**14,740**

Anchorage Bowl
Subareas

HOUSING CAPACITY BY SUBAREA IN CHUGIAK – EAGLE RIVER

The following tables 3-9 through 3-11 break down the buildable land capacity of Chugiak-Eagle River into four analytical areas. A map depicting these areas appears on page 12.

The first area, "Northern Eklutna Lands", comprises the extensive Eklutna holdings in northern Chugiak-Eagle River, including extensive R-6 lands in Birchwood and lands north of Chugiak and in the Eklutna River Valley. Scenarios 1 and 2 assume that, rather than allow the lands to develop inefficiently at rural densities allowed by currently zoning and absence of utilities, Eklutna will hold these areas in reserve until sometime after the 2010-2030 time horizon. Scenario 3 illustrates the potential capacity of the Northern Eklutna lands if developed without public sewer at a density of one house per acre.

The Powder Reserve and 770 Tract hold more than half of Chugiak-Eagle River's urban housing capacity for the 2010-2030 planning horizon, and in the longer run have substantially more capacity. Scenarios 1 and 2 assume that the Powder Reserve Tract A will achieve full build-out by 2030. Scenario 3 projects a build-out of Eklutna's Powder Reserve Tract B with a similar density and mix of housing as Tract A, except that it would also include large-lot single-family development in the remote section north of Clunie Lake.

Scenario 1 assumes a 50% build-out of the Eklutna 770 Tract by the year 2030, based on recent discussions with Eklutna, Inc. Achievement of 50% build-out would depend on the rate of growth and the extension of urban infrastructure into the 770. Scenario 2 illustrates a full build-out of the 770 Tract at most likely densities under current trends, while Scenario 3 illustrates a higher density build-out as envisioned in the previous land capacity analysis for this area by the municipal Planning Division, which was conducted during the 2006 *Chugiak-Eagle River Comprehensive Plan Update*.

Land capacity scenarios 1, 2 and 3 in Chugiak-Eagle River are not mutually exclusive, but rather illustrate a variety of possibilities for individual development areas.

Table 3-9. Chugiak – Eagle River Residential Vacant Land Capacity
Housing Density Scenario 1: Recent Densities
Number of Dwellings by Structure Type and Planning Subarea, 2010-2030

	Analytical Subareas in Chugiak – Eagle River				
Structure Type	Northern Eklutna Lands	Powder Reserve	Eklutna 770 Tract	All Other Areas [6]	Total
Large Lot Single Family	0	0	0	1,659	1,659
Single Family	0	828	400	1,078	2,306
Two Family / Duplex	0	232	150	309	691
Townhouse	0	310	100	198	608
Multifamily / Other	0	310	100	116	526
Total	0	750	1,680	3,360	**5,790**

Table 3-10. Chugiak – Eagle River Residential Vacant Land Capacity
Housing Density Scenario 2: Historic Densities
Number of Dwellings by Structure Type and Planning Subarea, 2010-2030

	Analytical Subareas in Chugiak – Eagle River				
Structure Type	Northern Eklutna Lands	Powder Reserve	Eklutna 770 Tract	All Other Areas	Total
Large Lot Single Family	0	0	0	1,700	1,700
Single Family	0	828	800	1,049	2,677
Two Family / Duplex	0	232	300	292	824
Townhouse	0	310	200	197	707
Multifamily / Other	0	310	200	119	629
Total	0	1,680	1,500	3,357	**6,537**

[6] "All Other Areas" in tables 3-9 through 3-11 includes remote R-10 zoned lands in South Fork Community Council. The remote R-10 lands in South Fork are depicted in Map 2-2. These are assumed not to develop by year 2030 under housing density scenarios 1 and 2.

Table 3-11. Chugiak – Eagle River Residential Vacant Land Capacity
Housing Density Scenario 3: Accelerated Densities and Phasing
Number of Dwellings by Structure Type and Planning Subarea, 2010-2030

	Analytical Subareas in Chugiak – Eagle River				
Structure Type	Northern Eklutna Lands	Powder Reserve	Eklutna 770 Tract	All Other Areas	Total
Large Lot Single Family	880	150	50	2,197	3,227
Single Family	0	1,578	850	1,107	3,535
Two Family / Duplex	19	432	350	370	1,171
Townhouse	0	510	250	245	1,005
Multifamily / Other	0	510	250	252	1,012
Total	899	3,180	1,750	4,170	**9,999**

Section 4 Residential land sufficiency

This section compares the capacity of residential land in Anchorage and Chugiak-Eagle River with the forecast of housing demand, from Appendix C: Anchorage Forecast for Housing Demand 2010 to 2030[7].

ANCHORAGE BOWL

Table 4.1 shows a comparison of land capacity and housing demand in the Anchorage Bowl, resulting in an estimate of the sufficiency of buildable residential land to accommodate residential growth over the next 20 years. Table A is based on the following assumptions:

- **Land capacity** assumptions shown in Table 3-4 using historical densities in the Anchorage Bowl.
- **Housing demand** from Table 4-3 in Appendix C, which presented a variation to the baseline forecast that assumed the Anchorage region would have more demand for compact housing in the future due to shifting demographics, increasing housing costs, shifting preferences, and increasing commuting costs.

Table 4.1 shows that given historic densities Anchorage lacks sufficient residential land capacity in its vacant and partially vacant residential lands to accommodate expected growth over the 20 year period. Given the estimated capacity and expected demand, Anchorage lacks vacant and partially vacant land for about 8,900 of the housing units that new population will require over the next 20 years: 2,400 units of single-family, 2,200 units for two-family/duplex, 700 townhouse units, and 3,600 multifamily units.[8] These figures do not include the capacity to accommodate additional housing units through redevelopment.

[7] This section was contributed by ECONorthwest.

[8] ECONorthwest considered residential land sufficiency under both demand forecasts presented in Appendix C: Anchorage Forecast for Housing Demand 2010 to 2030 (the baseline in Table 4-2 and the variation in Table 4-3) at all three levels of capacity modeled by Municipality staff (Table 3-4 in this appendix). The results were essentially the same in all six permutations of land capacity and housing demand: the Anchorage Bowl lacks enough land to accommodate the forecast for single-family, two-family/duplex, and multifamily housing. In some permutations, the Anchorage Bowl had enough land to accommodate demand for townhouses and in some cases it did not.

Table 4.1. Residential land sufficiency, Anchorage Bowl, 2010 to 2030

Structure Type	Land Capacity	Housing Demand	Sufficiency (capacity minus demand)
Large Lot Single Family	2,030	362	1,668
Single Family	3,614	6,003	(2,389)
Two Family / Duplex	1,272	3,455	(2,183)
Townhouse	768	1,455	(687)
Multifamily / Other	3,315	6,909	(3,594)
Total	11,000	18,184	
Total "surplus units"	--	--	1,668
Total "deficit units"	--	--	(8,852)

Source: Land Capacity is from Table 3-4 (using Historical Densities) in this appendix;
Housing demand is from Table 4-3 in Appendix C Anchorage Forecast for Housing Demand 2010 to 2030.

Reconciliation with *Anchorage 2020 Growth Allocation Policy*

Table 4.2 shows an allocation of housing demand shown in Table 4.1 to the five planning subareas in the Bowl.[9] We allocated housing demand to the subareas based on the assumptions about neighborhood housing allocation in *Anchorage 2020* (page 59). *Anchorage 2020* assumed the following allocation of housing: 28% of housing would locate in Northwest, 20% in Northeast, 20% in Central, 17% in Southeast, and 17% in Southwest. Table B uses the same assumptions.

Anchorage 2020 did not use the same housing types used in this study. As a result, we combined the single-family and two-family/duplex into one category and the townhouse and multifamily into another category.

[9]Appendix C Anchorage Forecast for Housing Demand 2010 to 2030 noted that we were waiting to allocate housing to neighborhoods until the capacity analysis was complete.

Table 4.2. Allocation of housing demand to Anchorage Bowl neighborhoods based on *Anchorage 2020 Growth Allocation Policy*, 2010-2030

	Northwest	Northeast	Central	Southeast	Southwest
Large Lot Single Family	-	15	-	323	24
Single Family (SF and 2Fam/Duplex)	539	462	1,617	2,649	4,190
Multifamily (Townhouse and MF)	3,151	2,204	1,872	569	569
Total	3,690	2,681	3,489	3,541	4,783

Source: Overall housing demand is from Table 4-3 in Appendix C Anchorage Forecast for Housing Demand 2010 to 2030; Assumptions about housing allocation are from page 59 in *Anchorage 2020*.

Table 4.3 shows residential sufficiency of the Anchorage Bowl subarea, based on the Growth Allocation Policy in *Anchorage 2020*. Table 4.3 shows that: (1) most subareas have enough land for large-lot single-family (except Southwest); (2) the Northwest and Northeast have enough land for single-family but the other three areas do not have sufficient single-family land; and (3) most subareas (except the Southeast) have a deficit of land for multifamily housing.

Table 4.3. Residential land sufficiency of Anchorage Bowl subareas based on *Anchorage 2020 Growth Allocation Policy*, 2010-2030

	Northwest	Northeast	Central	Southeast	Southwest
Large Lot Single Family	1	54	3	1,612	(3)
Single Family (SF and 2Fam/Duplex)	44	410	(474)	(1,651)	(2,899)
Multifamily (Townhouse and MF)	(2,286)	(427)	(1,272)	0	(295)

Source: Land Capacity is from Table 3-7 in this appendix; Housing demand is from Table 4.1 of this appendix,; Allocation of demand is based on *Anchorage 2020 Growth Allocation Policy*.

CHUGIAK-EAGLE RIVER

Table 4.4 shows a comparison of land capacity and housing demand in Chugiak-Eagle River, resulting in an estimate of the sufficiency of residential land to accommodate residential growth over the next 20 years. Table 4.4 is based on the following assumptions:

- **Land capacity** assumptions shown in Table 3-5 using Historical Densities in Chugiak-Eagle River.
- **Housing demand** from Table 4-3 in Appendix C Anchorage Forecast for Housing Demand 2010 to 2030, which presented a variation to the

baseline forecast that assumed the Anchorage region would have more demand for compact housing in the future due to shifting demographics, increasing housing costs, shifting preferences, and increasing commuting costs.

Table 4.4 shows that Chugiak-Eagle River has enough residential land capacity to accommodate expected growth over the 20 year period. Chugiak-Eagle River has a surplus of land in each housing category, with the largest surpluses in large-lot single-family and single-family. [10]

Table 4.4 Residential land sufficiency, Chugiak-Eagle River, 2010 to 2030

Structure Type	Land Capacity	Housing Demand	Sufficiency (capacity minus demand)
Large Lot Single Family	1,700	665	1,035
Single Family	2,587	1,663	924
Two Family / Duplex	914	499	415
Townhouse	707	132	575
Multifamily / Other	629	365	264
Total "surplus units"	6,537	3,324	3,213

Source: Land Capacity is from Table 3-10 in this appendix; Housing demand is from Table 4-3 in Appendix C Anchorage Forecast for Housing Demand 2010 to 2030

[10] ECONorthwest considered residential land sufficiency under both demand forecasts presented in Appendix C Anchorage Forecast for Housing Demand 2010 to 2030 (the baseline in Table 4-2 and the variation in Table 4-3) at all three levels of capacity modeled by Municipality staff (Tables 3-9 to 3-11 in this appendix). The results were essentially the same in all six permutations of land capacity and housing demand: Chugiak-Eagle River has enough land to accommodate the forecast all types of housing.

Section 5 Redevelopment

The previous sections provide an estimate of the future housing capacity on vacant and partially vacant land. However, land can also be redeveloped. Since the 1950s, American cities have been looking inward to accommodate growth through redevelopment. Redevelopment occurs when a low-intensity use is replaced (either through demolition or rehabilitation) with a higher intensity use. Redevelopment can occur for both residential and commercial uses. To date, redevelopment in Anchorage has occurred slowly. Rather than attempt to predict what the characteristics of redevelopable land and how much redevelopable land there is, this analysis determined the historic rate of redevelopment and projects that rate forward. This analysis was limited to the following:

A. An estimate of net capacity on mobile home parks; and

B. An estimate of the historic redevelopment rate for the Anchorage Bowl from 1998-2010.

REDEVELOPMENT CAPACITY OF MOBILE HOME PARKS

Mobile home parks are often identified as potential sites for redevelopment because they are large contiguous parcels and because there is often a low improvement to land value ratio. However, redevelopment of mobiles homes is very complicated. First, the families who live in mobile home parks often own the mobile home and pay relatively low rent for the space ($300-400 per month). It is very difficult to find alternative housing for these families that is both affordable and also provides the same pride of home ownership. Second, because of the small footprint of individual mobile homes, mobile home parks frequently have a moderate level of density to begin with making it difficult to increase the net number of dwelling units through redevelopment. Finally, redevelopment of mobile home parks is perceived as risky because there are frequently significant and unknown levels of environmental contamination.

Methodology

The purpose of this analysis was to estimate the net residential capacity in the Anchorage Bowl on land currently used as a mobile home park. This analysis includes only mobile home parks where there is contiguous land ownership. It does not include mobile homes on individually owned lots.

The methodology for determining the housing capacity was identical to the methodology for the remainder of the housing capacity analysis with one exception. No deduction was made for "rate of consumption." This analysis represents the maximum capacity on mobile home parks and does not attempt to predict how much would be redeveloped over the planning horizon. To determine net capacity, the existing number of residential units was subtracted from the total capacity on the site.

Findings

The following two charts summarize the total acreage currently developed as a mobile home park and the number of existing dwelling units in mobile home parks. In 2010, there were 456 acres with 3,785 dwelling units developed as mobile home parks. The majority, 275 acres, are in the Northeast subarea.

Table 5.1. Net Acres of Mobile Home Parks by Zoning District, 2010

ZONING DISTRICT	Acres
R-2A Two-family	120
R-2M Multi-family	176
R-3 Multi-family	100
R-4 Multi-family	21
D-2	39
Total	**456**

Table 5.2. Net Acres of Mobile Home Parks and Dwelling Units by Subarea, 2010

ZONING DISTRICT	Acres	Dwelling Units
Northwest	29	373
Northeast	275	2,124
Central	153	1,288
Total	**456**	**3,785**

Net residential capacity was calculated using the same three density scenarios as explained in the housing capacity methodology, Net capacity subtracted the existing number of residential units. Using the Historical Density Scenario (#2), there is a net capacity of 1,500 units in the Anchorage

Bowl in mobile home parks. The majority of capacity is in the R-2M and R-3 zoning districts. The Northeast Subarea has nearly all potential capacity with capacity for 1,480 net units. The Central Subarea has a net loss of dwelling units when applying the Historical Density Scenario.

Table 5.3. Net Residential Capacity in Mobile Home Parks by Zoning District, 2010

	Housing Density Scenarios		
ZONING DISTRICT	#1 - Recent Densities	#2 – Historical Densities	#3 – Accelerated Densities
R-2A	762	796	983
R-2M	2,120	1,617	2,552
R-3	1,417	1,769	2,815
R-4	358	503	1,218
D-2	600	600	633
Gross Capacity	5,256	5,285	8,200
minus Existing Units	3,785	3,785	3,785
Net Capacity	**1,471**	**1,500**	**4,415**

Table 5.4. Net Residential Capacity in Mobile Home Parks by Subarea, 2010

	Housing Density Scenarios		
SUBAREA	#1 - Recently Densities	#2 - Historical Densities	#3 – Accelerated Densities
Northwest			
Gross Capacity	396	429	829
minus Existing Units	373	373	373
Net Capacity	23	56	456
Northeast			
Gross Capacity	3,349	3,599	5,521
minus Existing Units	2,124	2,124	2,124
Net Capacity	1,225	1,475	3,397
Central			
Gross Capacity	1,511	1,256	1,851
minus Existing Units	1,288	1,288	1,288
Net Capacity	223	-32	563
Net Capacity	**1,471**	**1,500**	**4,415**

HISTORICAL RATE OF REDEVELOPMENT

Methodology

This analysis answers the following question:

- Of the total number of units developed between 1998 and 2010, how many of the units were created through "large" redevelopment projects?

The following definition of "large" redevelopment was used:

"Large" Redevelopment: In 1998, the majority of the lot was cleared and in use. The lot was converted to a more intensive use that increased the net residential unit count by at least three dwelling units or the lot was part of a larger multi-parcel project where the total net unit count of the project increased by three

It is important to note that this analysis does NOT include redevelopment projects where a single family home was converted into a duplex or triplex. Time and budget constraints did not allow for the identification of smaller redevelopment and infill projects.

The years 1998 and 2010 were chosen because these are the years in which the Municipality collected residential land use data for the Anchorage Bowl. Using GIS, parcels that had a matching parcel identification number where compared between 1998 and 2010 to identify parcels where the net residential unit count increased by at least three residential units. In order to capture parcels that had been re-platted (and do not have matching parcel id numbers), parcels in 2010 that had no match in 1998 were included if the total residential unit count was three or more. Parcels that were used as mobile home parks in 2010 were excluded from the analysis. All zoning districts were included. Every parcel was reviewed using aerial photography and land use data to identify "large" redevelopment sites. Parcels without apparent structural change and partially vacant development were coded as such and removed from the data set. A parcel was designated as partially vacant if there was previously an existing structure on the lot and the majority of the lot was not in use.

Noteworthy Redevelopment

There are several prominent examples of redevelopment that are not included in this analysis. First, the redevelopment of Loussac Manor, a partnership between Alaska Housing Finance Corporation and Cook Inlet Housing Authority, was not included because construction is not complete. This project will increase the residential unit count from 62 to 120 units.

Additionally, the Creekside Town Center redevelopment project was not included because the project is still under development. This project included the redevelopment of the 220 unit Alaska Village mobile home park. This mixed-use redevelopment project includes a new middle school, fire station, restoration of Chester Creek, and several commercial sites along the arterial streets. The residential portion of the site includes 100

residential units, to date. At full build out, the master plan includes 80-120 additional residential units.

Finally, there has been an enormous community effort to redevelop the Mountain View neighborhood. This effort, led by Cook Inlet Housing Authority and Anchorage Community Land Trust has resulted in the rehabilitation and construction of 226 residential units and several commercial properties. The redevelopment of many of these properties resulted in a substantial increase in quality by removing substandard housing and replacing it with quality, affordable, home-ownership opportunities. This redevelopment effort has had a significant impact on improving the quality of the Mountain View neighborhood.

Findings

The tables below summarize the number of net units created through "large" redevelopment between 1998-2010 by structure type, zoning district and subarea. A map of these redevelopment sites is on page 42. The findings can be summarized as follows:

- Between 1998 and 2010, 590 dwelling units on 28 acres were created through "large" redevelopment in the Anchorage Bowl.

- 6% of the total dwelling units created between 1998 an 2010 were built through "large" redevelopment. 17% of multi-family and townhouse units during the same time period were built through "large" redevelopment.

- The majority of "large" redevelopment is occurring in the Northeast and Northwest Subareas.

- A few large redevelopment projects had a significant impact on the rate of redevelopment. The McKay Building on 4th and Denali added 160 multi-family units and the redevelopment of a mobile home park into a duplex condominium project at Boniface and Sapphire Loop created 86 additional units.

Table 5.5. Total Change in Housing Stock and Net Units through "Large" Redevelopment by Structure Type, Anchorage Bowl, 1998-2010

STRUCTURE TYPE	Total Dwelling Unit Increase	Net Dwelling Units via Redevelopment	% of Total Dwelling Unit Increase via Redevelopment
Two Family / Duplex	3,639	155	4.26%
Multifamily and Townhouse	2,634	435	16.51%
Total	**10,323**	**590**	**5.72%**

Table 5.6. Net Units through "Large" Redevelopment by Subarea, Anchorage Bowl, 1998-2010

SUBAREA	Net Dwelling Units via Redevelopment
Northwest	314
Northeast	182
Central	29
Southwest	65
Total	**590**

Table 5.7. Net Units through "Large" Redevelopment by Zoning District, Anchorage Bowl, 1998-2010

ZONING DISTRICT	Net Dwelling Units via Redevelopment
B-2C	199
B-3	61
R-2M	190
R-3	96
R-4	44
Total	**590**

Implications

If the historical rate of redevelopment continues, how many units can we reasonably assume will be created through redevelopment over the next twenty years? Table 5.8 applies the historical redevelopment rate to the historical density housing capacity scenario (#2). Assuming that the rate of redevelopment will remain constant (4% for duplexes and 17% for townhouses and multi-family), 860 units could be created through redevelopment from 2010-2030.

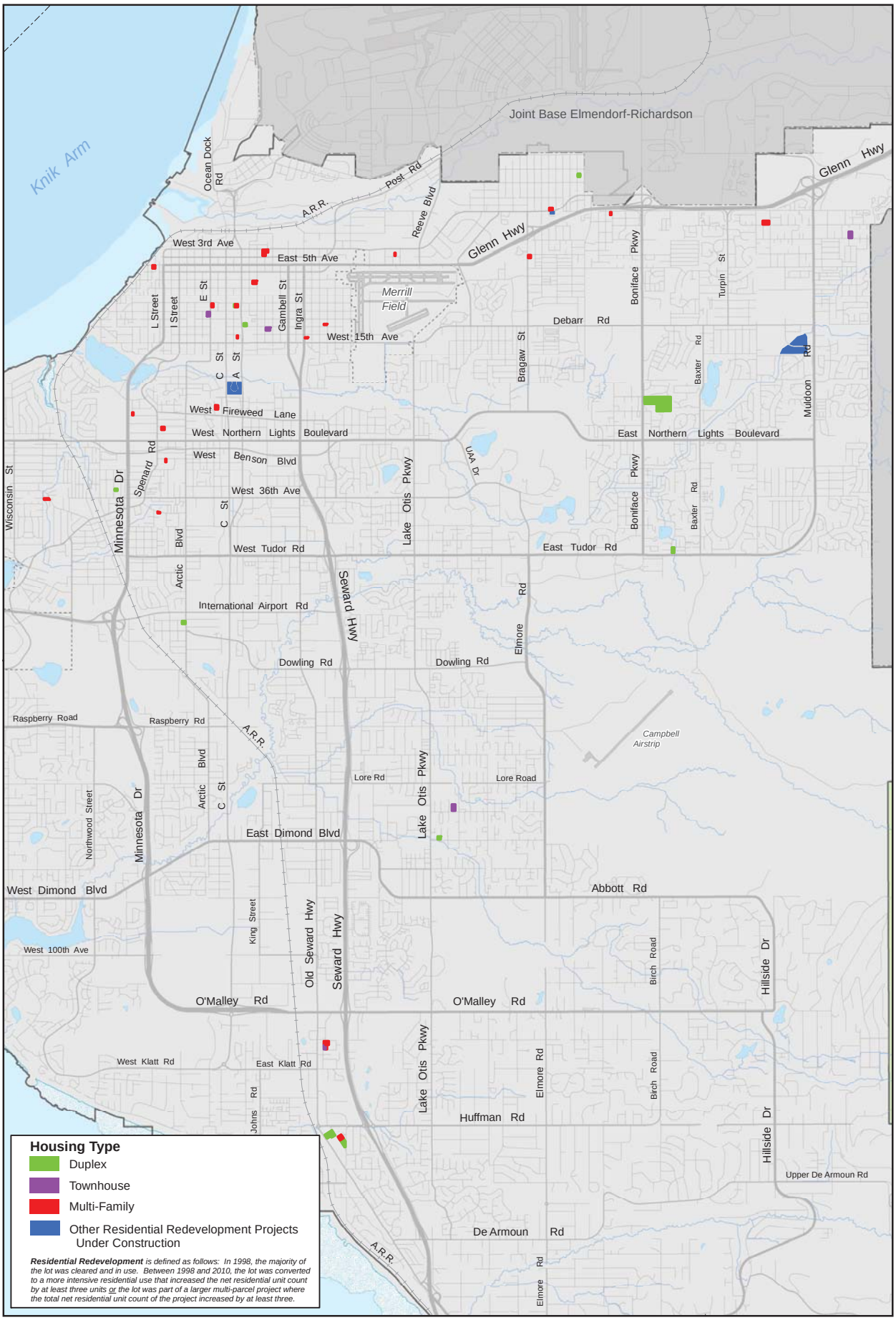
This does not imply that is the limit of redevelopable land. There is more redevelopment capacity in the Bowl. This analysis did not attempt to quantify the amount of land potentially available for redevelopment. With the increased constraints on land supply and projected housing demand, the rate of redevelopment may increase. However, redevelopment faces even greater development challenges and costs than green field development including demolition costs, environmental contamination costs, and retrofitting existing utilities. In sum, in order to accommodate more growth in the Anchorage Bowl, the rate of redevelopment will need to increase.

Table 5.3. Projected Capacity including Redevelopment at Historic Redevelopment Rate, Anchorage Bowl, 2010-2030

STRUCTURE TYPE	Vacant and Partially Vacant Land Capacity	Units via Redevelopment	Total Capacity
Large Lot Single family	2,030		2,030
Single Family	3,614		3,614
Two Family / Duplex	1,272	56	1,328
Multifamily / Townhouse	4,084	808	4,892
Total	**11,000**	**864**	**6,220**

Anchorage Bowl

Residential Redevelopment with Net Residential Unit Increase Greater than Three Dwelling Units: 1998-2010



Housing Type

- Duplex
- Townhouse
- Multi-Family
- Other Residential Redevelopment Projects Under Construction

Residential Redevelopment *is defined as follows: In 1998, the majority of the lot was cleared and in use. Between 1998 and 2010, the lot was converted to a more intensive residential use that increased the net residential unit count by at least three units or the lot was part of a larger multi-parcel project where the total net residential unit count of the project increased by at least three.*