

WRIA 13 ASSESSMENT CHAPTER 3: LAND USE – CURRENT AND FUTURE

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This Assessment chapter provides an overview to key features of existing and future land use in WRIA 13, including land cover (physical coverage as viewed from aerial images); existing land use; and projected future residential and commercial/industrial development.

3.1 LAND COVER

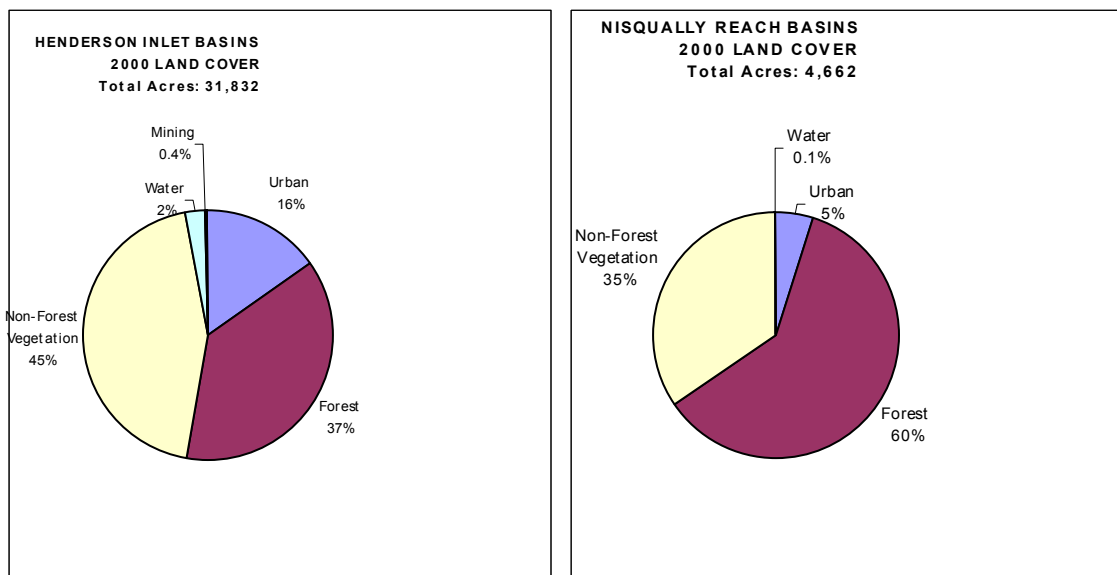
Land cover categorizes the vegetation, water, natural surface, and cultural features on a land surface (in contrast to categories of “land use” described in the following section). Land cover data for WRIA 13 captured via satellite imagery was obtained from Thurston Regional Planning Council.¹

There are several land coverages in the TRPC mapping:

- “Urban” which includes small areas of development in generally Rural areas
- Forest
- Non-forest vegetation. Significant areas of both Forest and Non-Forest Vegetation are found within urban and urbanizing areas.
- Water
- Mining

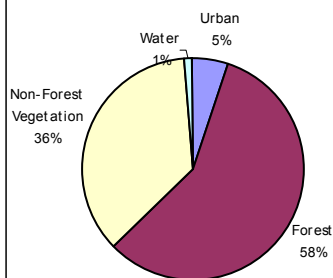
Land cover by basin

“Urban” land cover for WRIA 13 basins ranges from 5% in the Deschutes basin to 16% in the Henderson Inlet basin. Highest urban cover is in the Percival/Capitol Lake sub-basin, where existing land cover is 31% Urban.

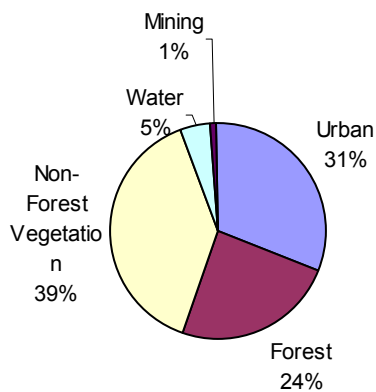


¹ Land Cover Mapping of Thurston County, Thurston Regional Planning Council, June 2001. Document is available at www.trpc.org.

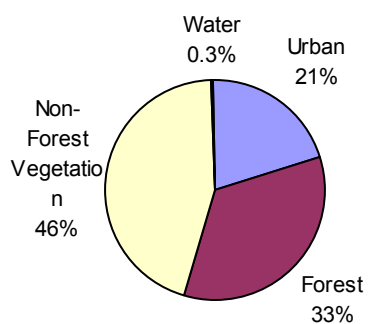
DESCHUTES BASIN: 2000 LAND COVER
Total Acres: 81,964



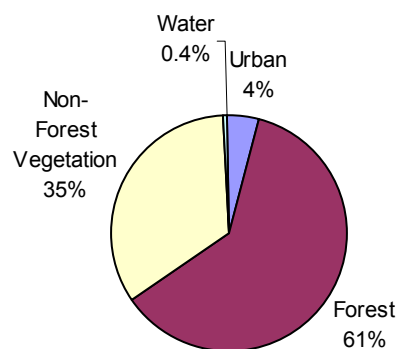
PERCIVAL SUB-BASIN: 2000 LAND COVER
Total Acres: 6,370



BUDD MARINE SUB-BASINS: 2000 LAND COVER
Total Acres: 10,154



ELD INLET BASINS
2000 LAND COVER
Total Acres: 14,152



Land cover for all the basins is summarized in the following table.

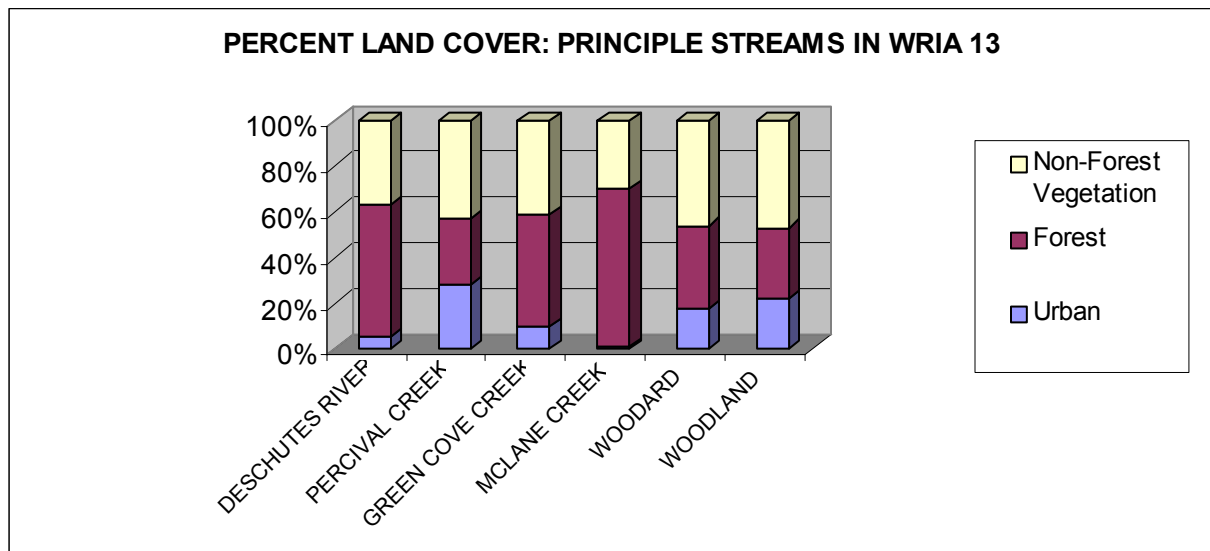
Table 1a
2000 Land Cover (acres) within WRIA 13 by Basin

Basin	Urban	Forest	Non-Forest Vegetation	Water	Mining	Total
DESCHUTES RIVER	4,270	46,959	29,737	887	112	81,964
PERCIVAL/CAPITOL LK	1,984	1,521	2,515	296	54	6,370
BUDD SMALL CREEKS	2,098	3,389	4,630	32	5	10,154
GREEN COVE CREEK	260	1,284	1,078	2	12	2,636
MCLANE CREEK	97	5,021	2,183	2	0	7,303
ELD INLET SMALL DRAINAGES	252	2,260	1,643	59	0	4,213
WOODARD	782	1,630	2,064	3	0	4,479
WOODLAND	3,960	5,601	8,478	703	131	18,872
HENDERSON SMALL DRAINAGES	248	4,535	3,640	59	0	8,481
NISQUALLY REACH	232	2,816	1,609	6	0	4,662
Total	14,430	79,549	61,216	2,107	314	157,615

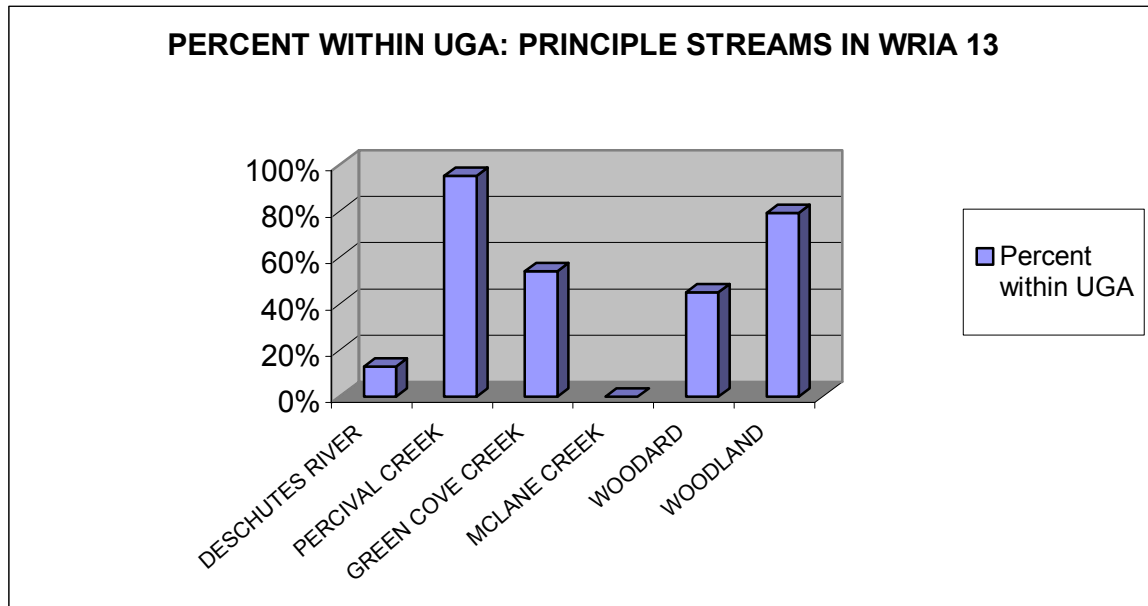
Source: TRPC.

Land Cover: Principal Streams

Land coverage data is presented below for the six principle streams in WRIA 13. Clear contrasts are illustrated between rural and urban-area watersheds in WRIA 13. Forest cover is highest in the McLane watershed (over 60% of total area). Three streams have 15% or greater “urban” land cover in their watersheds. These are Percival, Woodard and Woodland Creek.



Future likely development is illustrated by percent of each watershed designated as Urban Growth Area. The most dramatic conditions apply to Percival Creek and Woodland Creek. Both are predominantly in Non-Forest Vegetation or Forest cover at this time. However, over 75% of these two watersheds is designated UGA – the area intended for most intense development. In contrast, the Deschutes watershed is about 10% UGA designated – with no UGA designation within the McLane watershed.

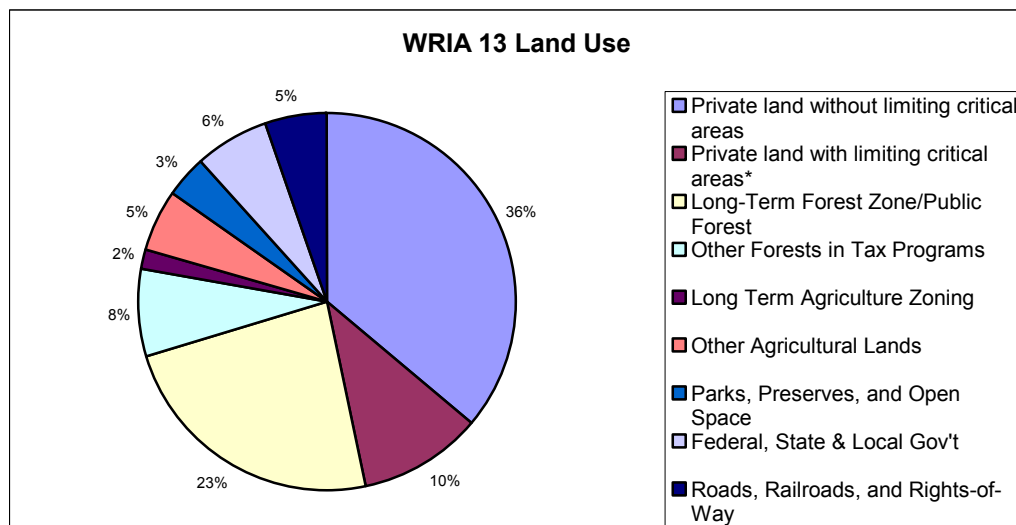


Thurston Regional Planning Council is working in conjunction with the area Stormwater Utilities to refine our understanding of land development impacts. A project is underway to link *impervious surface* – the key factor in increased runoff rates – to the land cover categories mapped in the 2000 project. Results are anticipated in 2003.

3.2 EXISTING LAND USE

Basic land use characteristics are summarized in the following pie charts. Land set aside for parks and open space, various rights-of-way and land with limitations due to Critical Area designations are identified, along with privately owned land without significant Critical Area limitations.

For the planning area as a whole, Private Land Without Limiting Critical Areas comprises about 36% with an additional 10% in private ownership having limiting physical features (see description below). Forestland totals over 30%, with Ag land totaling about 7%.



“Limiting critical areas” analysis was an attempt to identify acreage that will be difficult to develop for residential or other uses due to physical constraints and land use ordinances. County and city ordinances include a number of Critical Areas that limit development. (Some Critical Areas – like Aquifer Sensitive Areas – are very widespread and do not generally create strict limits on land use.) Areawide mapping was used to generally identify the principal “limiting critical areas”:

- Wetlands
- Streams
- Stream buffers generalized at 50 feet
- Wetland buffers generalized at 100 feet.

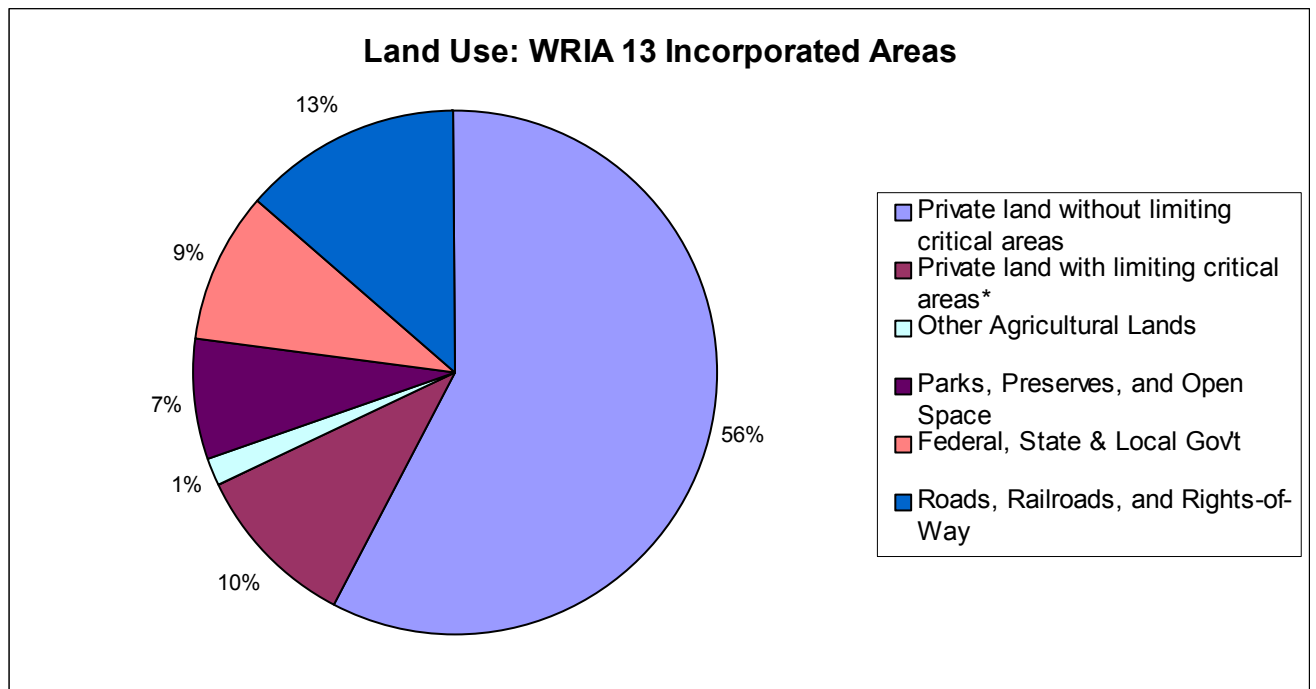
These buffers may be wider or narrower on specific waterbodies depending on waterbody class. However, this detailed mapping is not available. Mapping of sufficient accuracy was also not available to include Geologic Hazard/Steep Slope critical areas, or habitat areas and corridors for listed species or special habitats. These designations may include strict limits or preclusions on development.

Land cover is summarized below for Incorporated Areas, Unincorporated UGA and Rural designated areas in WRIA 13.

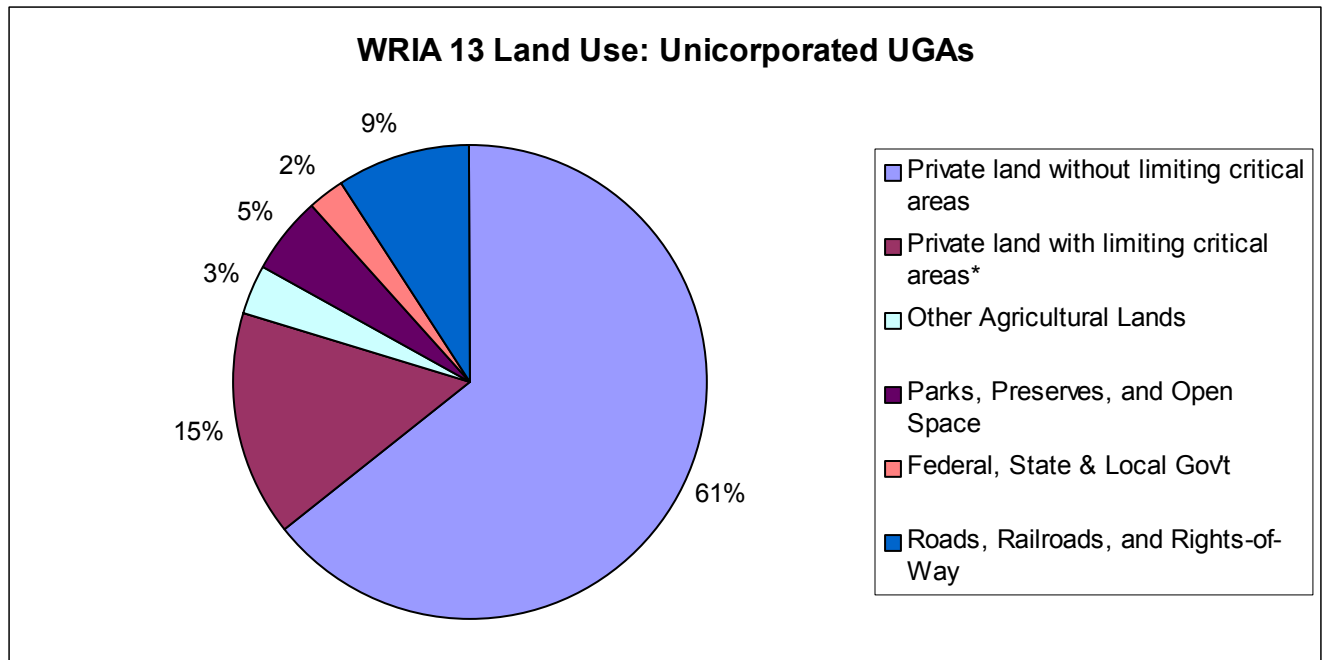
Urban Area Land Use

Urban land use is described for incorporated and unincorporated Urban Growth Areas. Incorporated Area Land Use key features include:

- 10% - 15% of each area is private land with significant development limitations due to Critical Area designations. These designations include wetlands, floodplains and buffers around these designated areas.
- 13% of the Incorporated area is in rights-of-way for local streets, state highways and railroads.

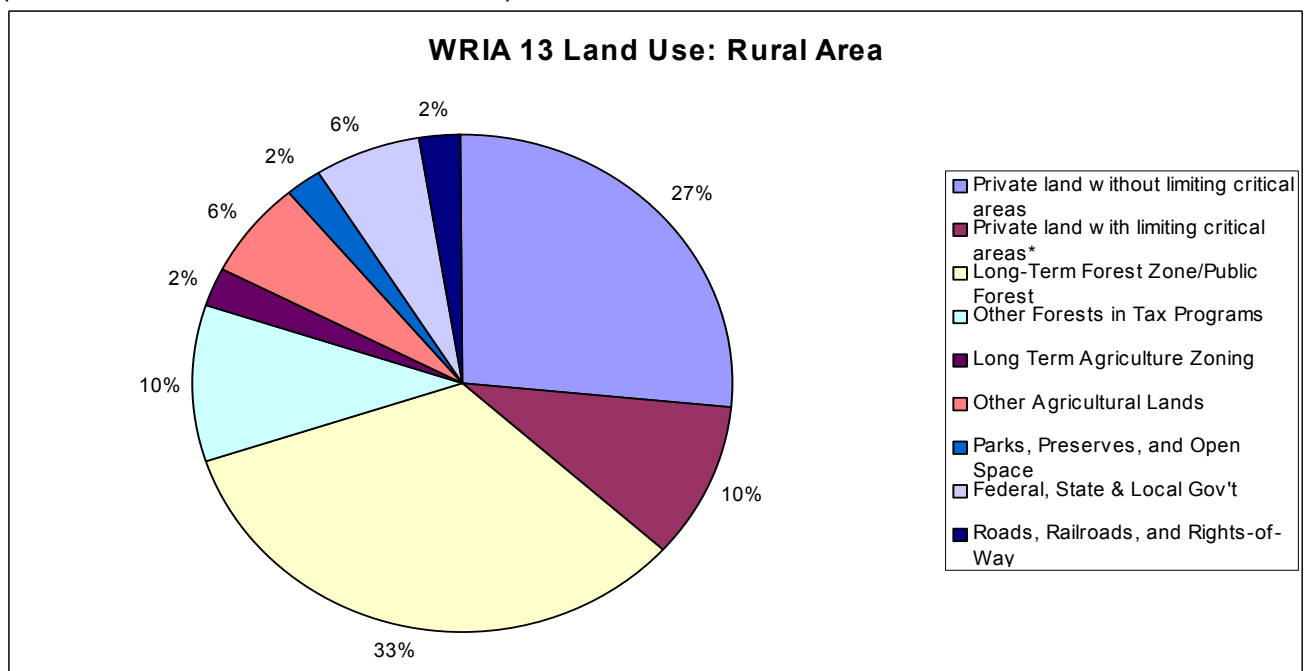


Within the Unincorporated UGA - the intended location of significant future development - 61% is in private ownership without significant Critical Areas limitations. This is somewhat higher than such private ownerships within Incorporated Areas (56%).



Rural Land Use

Rural land use is dominated by Forestry (43%) with a further 8% in Agricultural use. In contrast to the Urban areas, only 3% of total area is in rights-of-way (versus around 10% in Urban areas).



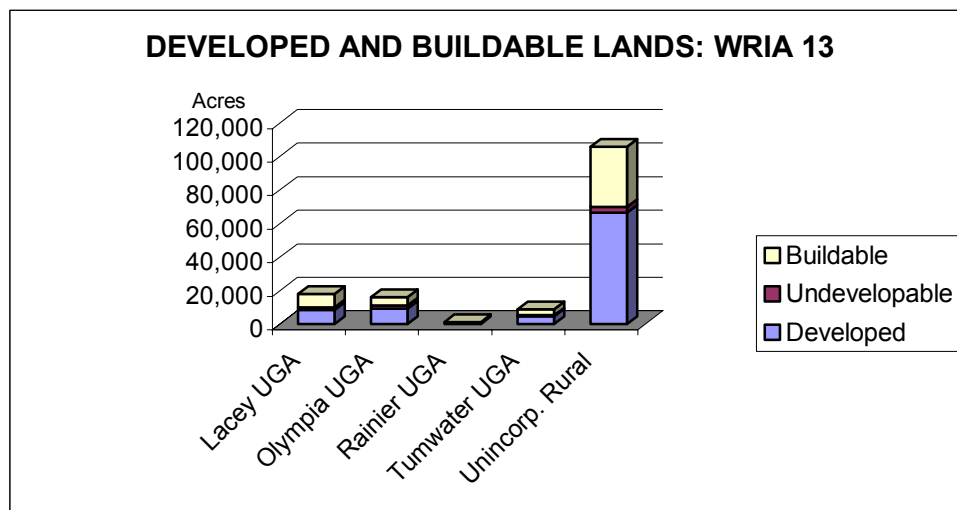
3.3 FUTURE LAND USE

“Buildable Lands” Capacity in WRIA 13

Thurston Regional Planning Council identified future development capacity in a comprehensive survey completed in 2002.² Lands available for development were identified through detailed examination to exclude “developed” and “undevelopable” lands.

“Developed” is essentially fully occupied land based on existing zoning and land use plans. For example, agricultural use within a Long-Term Agriculture Area is coded “developed”. In some cases, physical limitations like wetlands did not equate to “undevelopable” designation. For example, some jurisdictions allow transfer of dwelling units from an unbuildable portion of a parcel to the remaining buildable portion. In these cases, the acres in wetland did not result in a reduction of “buildable” units assigned to the parcel.

Results of the inventory for the UGAs and the Rural designated area are summarized below.



Buildable Lands By Jurisdiction

The following “Buildable Lands Within WRIA 13” table summarizes data from the TRPC study by incorporated area, unincorporated UGAs and Rural area.

For Residential uses, existing development and future capacity are both identified by dwelling units. Future capacity is based on zoning designations throughout the Urban and Rural areas, at densities achieved by new development during the

² Buildable Lands Inventory 2000, 2002, Thurston Regional Planning Council.

past five years. While this is likely to change over time (for example, if land becomes significantly more expensive higher densities are likely) the Buildable Lands data is a useful “snapshot” of future conditions if existing trends continue.

For Industrial/Commercial uses, direct comparison of existing vs. future capacity is not as simple to project. The table lists existing square feet of Commercial/Industrial development for each jurisdiction; future capacity for Commercial/Industrial is identified by Buildable acreage.

“Developed” for purposed of the Buildable Lands data means occupied and utilized based on zoning. Thus, lands in agricultural use in a Long-Term Ag zone are classified as “developed.”

Undevelopable lands have limiting physical features and land use regulations precluding development. (See full report at www.trpc.org for more details.)

2000 Buildable Lands within WRIA 13

WRIA 13	Total Land Area (acres)	Developed Land (acres)	Undevelopable Land (acres)	Buildable Land (acres)	Buildable Land (acres)		Redevelopable Land (acres)	Dwelling Units		Commercial & Industrial (sq. ft.) Total (2000)
					Residential	Comm. or Industrial		Total (2000)	Additional Capacity	

Cities/U/ga/Rur al

Cities	28,268	16,439	1,964	9,865	5,531	4,334	1,005	38,792	26,863	31,096,822
Unincorp. UGAs	16,181	6,655	2,064	7,462	5,912	1,550	216	13,306	26,874	2,730,759
Unincorp. Rural	105,644	66,408	3,447	35,790	35,288	502	43	10,211	10,317	2,050,418

Total	150,093	89,502	7,474		46,731	6,386	1,264	62,309	64,054	35,877,999
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By Jurisdiction

Lacey	10,102	4,837	622		2,053	2,590	356	12,794	8,369	7,064,434
Lacey UGA	7,959	3,652	936		2,636	736	108	8,206	12,252	1,407,653
Lacey UGA	18,061	8,488	1,558	8,015	4,689	3,326	464	21,000	20,621	8,472,087
Olympia	11,181	7,307	1,056		2,189	628	439	19,692	12,819	17,534,952
Olympia UGA	4,867	2,076	630		2,003	159	14	3,804	8,666	554,800
Olympia UGA	16,048	9,383	1,686	4,979	4,192	787	453	23,496	21,485	18,089,752
Rainier	927	495	20	412	379	33	6	506	585	252,605
Rainier UGA	436	229	17	189	168	22	0	69	38	5,968
Rainier UGA	1,363	724	38	601	546	55	6	575	623	258,573

Tumwater	6,058	3,800	264	1,994	910	1,083	205	5,800	5,090	6,244,831
Tumwater UGA	2,919	698	481	1,739	1,105	633	94	1,227	5,918	762,338
Tumwater UGA	8,977	4,499	746	3,733	2,016	1,717	299	7,027	11,008	7,007,169
Unincorp. Rural	105,644	66,408	3,447	35,790	35,288	502	43	10,211	10,317	2,050,418

Long-Range Population Projections for WRIA 13

Long-range population projections for the WRIA are a key Plan element. Projections for the various jurisdictions in WRIA 13 are summarized below. “Capacity” projections are based on 2000 TRPC Buildable Lands data. At “capacity” development, WRIA 13 population would more than double - from the current population of fewer than 150,000 to nearly 300,000 at full capacity. For comparison purposes, the TRPC 2025 population projections are also shown. 2025 projections for the area in WRIA 13 total about 250,000.

Nearly all land use and utility planning in the region utilizes the official “2025” forecast issued by TRPC in 1998. For purposes of long-range WRIA planning, the full-capacity projection of 300,000 is proposed to be utilized – reflecting the extraordinary scope of the WRIA planning compared to capital facility plans and other planning normally conducted by local governments.

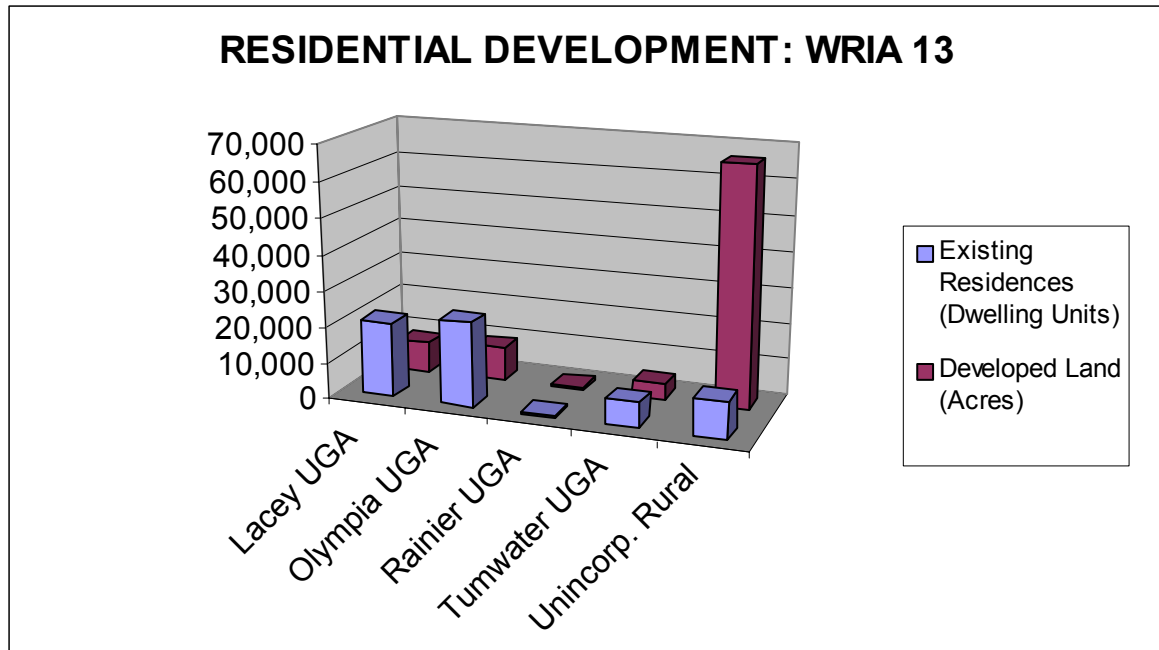
WRIA 13 LONG-RANGE POPULATION PROJECTION

	Update from 2002 "Developable Lands" Report"						2025 WRIA 13 Projection (TRPC, 1999)
	2000		Capacity (Households)		HouseholdPopulation		
	Dwelling Units	Population	Additional Capacity	Total Capacity	Size 2000 Census	at Total Capacity	
Jurisdiction							
Lacey	12,794	30,194	8,369	21,163	2.36	49,945	45,436
Lacey UGA	8,206	18,956	12,252	20,458	2.31	47,258	33,725
Lacey UGA	21,000	49,150	20,621	41,621		97,203	79,161
Olympia	19,692	42,535	12,819	32,511	2.16	70,224	56,955
Olympia UGA	3,804	8,331	8,666	12,470	2.19	27,309	22,047
Olympia UGA	23,496	50,865	21,485	44,981		97,533	79,002
Rainier	506	1,371	585	1,091	2.71	2,957	2,007
Rainier UGA	69	123	38	107	1.78	190	186
Rainier UGA	575	1,494	623	1,198		3,147	2,193
Tumwater	5,800	12,470	5,090	10,890	2.15	23,414	19,146
Tumwater UGA	1,227	2,896	5,918	7,145	2.36	16,862	7,171
Tumwater UGA	7,027	15,366	11,008	18,035		40,276	26,317
Subtotal UGAs	52,098	116,875	53,737	105,835		238,158	186,673
Unincorp. Rural	10,211	27,263	10,317	20,528	2.67	54,810	36,335
Total WRIA 13: Dwelling Units	62,309		64,054	126,363			
Total WRIA 13:	62,309	144,138				292,968	223,008

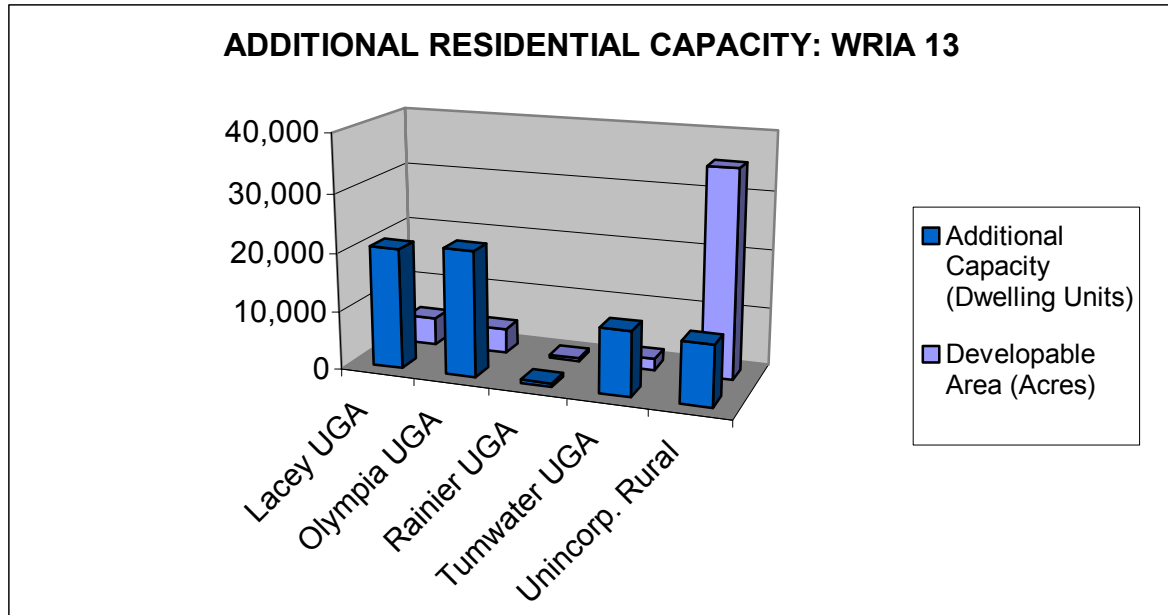
Proposed target long-range population for WRIA 13 planning: 300,000.

Residential Development By Jurisdiction

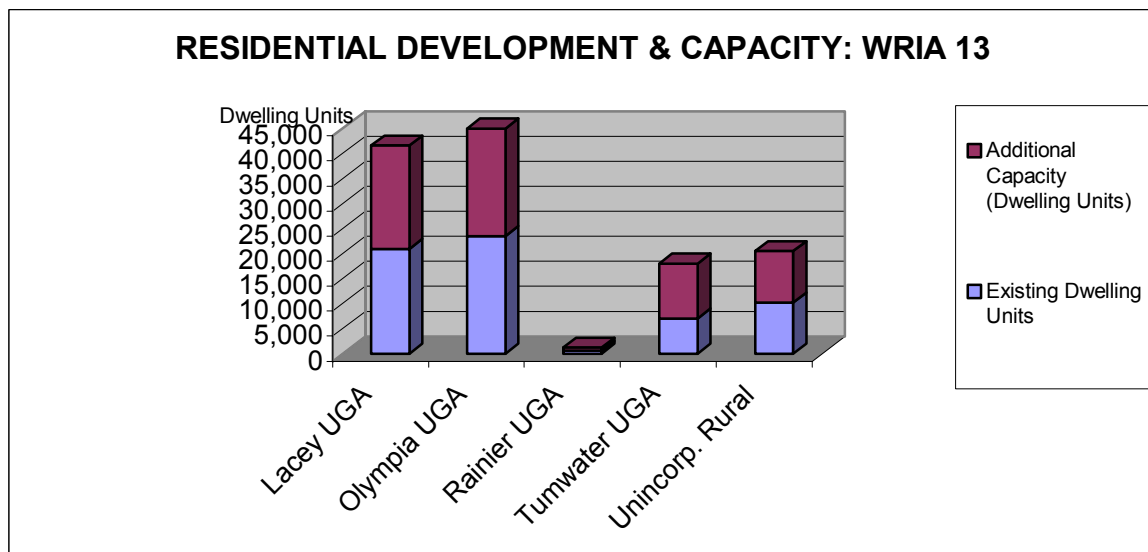
Existing residential development by number of units and acres is illustrated below. Due to low-density residential development and designated natural resource uses, the Rural area has a relatively high number of “developed” residential acres accommodating a relatively small number of dwellings, compared to the various UGAs. UGA data includes incorporated and unincorporated portions of each jurisdictions designated Growth Area.



Future residential development capacity is identified in the following graphic. The density difference between the Growth Areas and Rural designated area is clearly illustrated – a small Developable area in the UGAs has capacity to provide a relatively high number of future dwelling units.

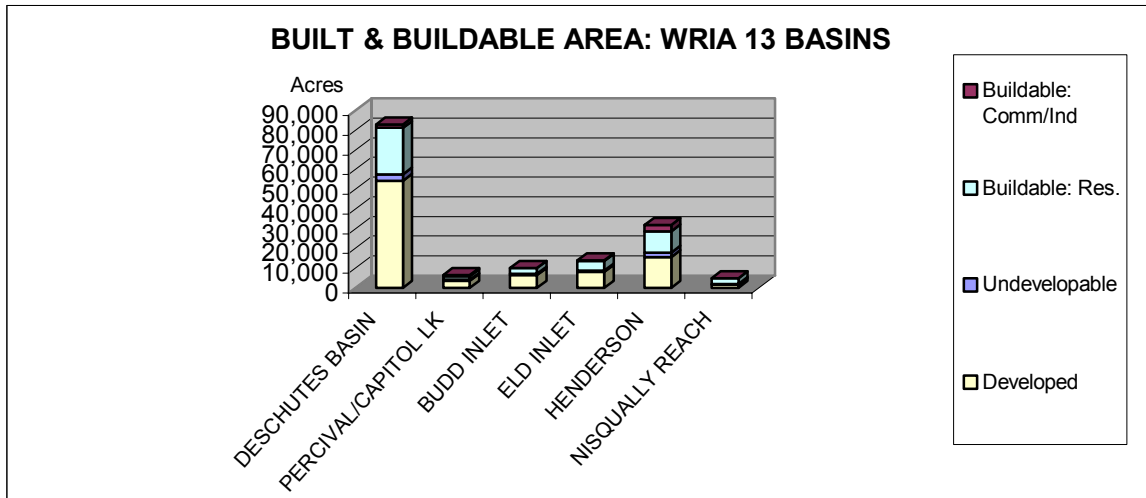


Existing and future residential capacity for each UGA and the Rural area are indicated below. Despite the large acreage in the Rural area, most residential capacity is in the Urban areas. Olympia and its designated UGA have a slightly higher number of both existing and potential future dwellings than the Lacey UGA.



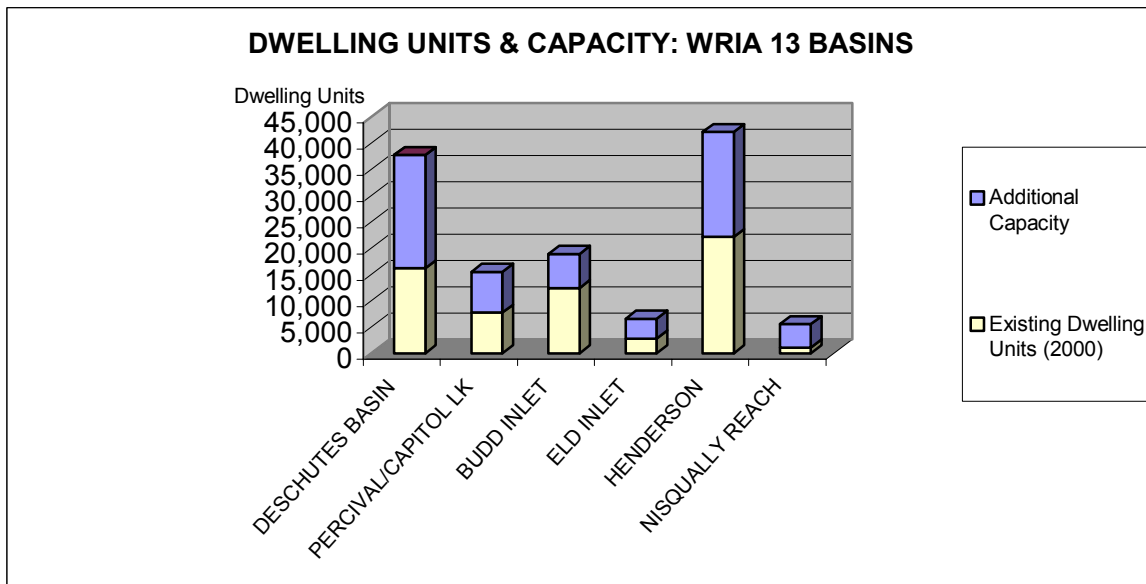
Development by Basin

Current “developed” and “buildable” area within WRIA 13 is illustrated below. Significant “buildable” areas exist in each basin. Greatest “developed” and “buildable” acreage is in the Deschutes Basin.



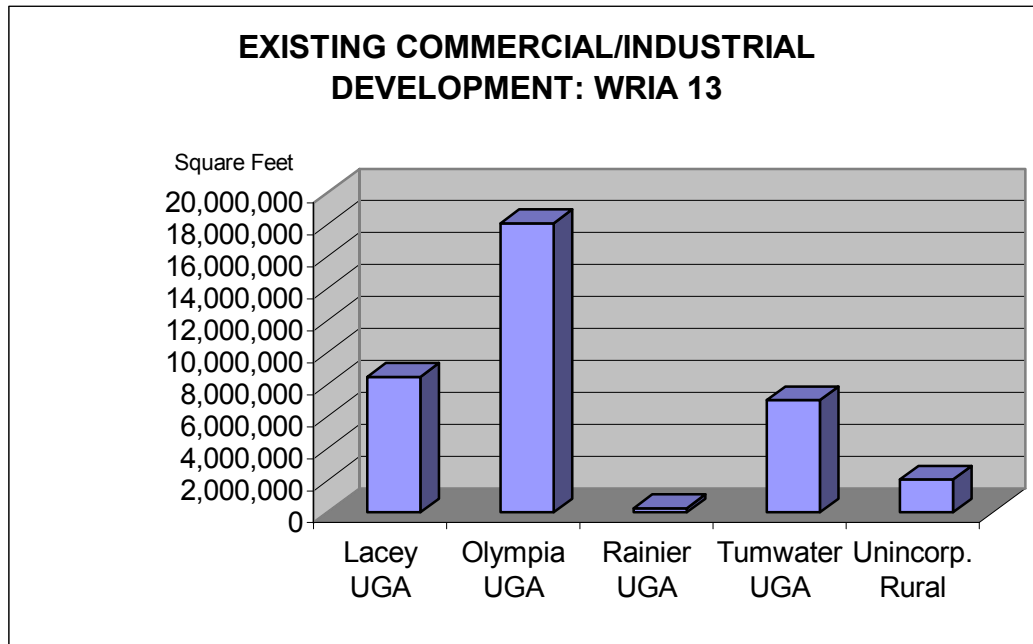
Despite their small acreage, the Percival/Capitol Lake, Budd Inlet and Henderson basins support a high level of existing and future residential capacity. This reflects the higher-intensity land use designations that predominate in these basins.

Nisqually Reach is a small percent of area and total development in WRIA 13. However, the graph illustrates that at full capacity there could be a marked increase in development within this basin.



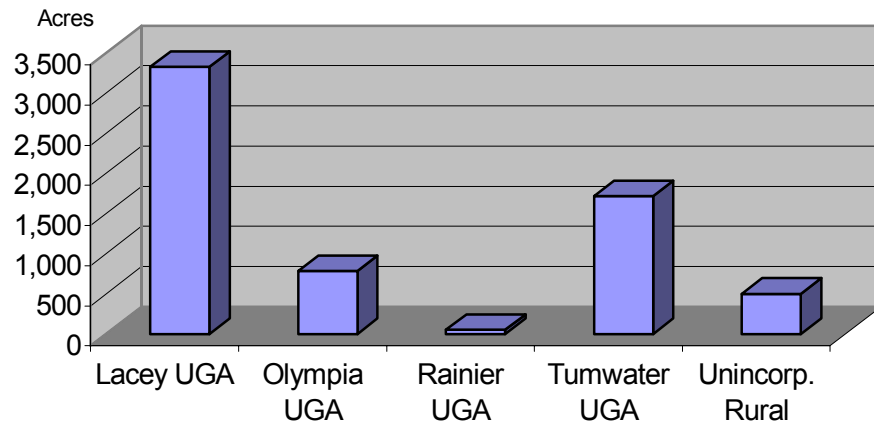
Commercial/Industrial Development

The Buildable Lands Inventory also addressed Commercial/Industrial current uses and future capacity. Olympia contains the greatest share of existing Commercial/Industrial development in WRIA 13 (value is square feet of existing commercial/industrial development.)

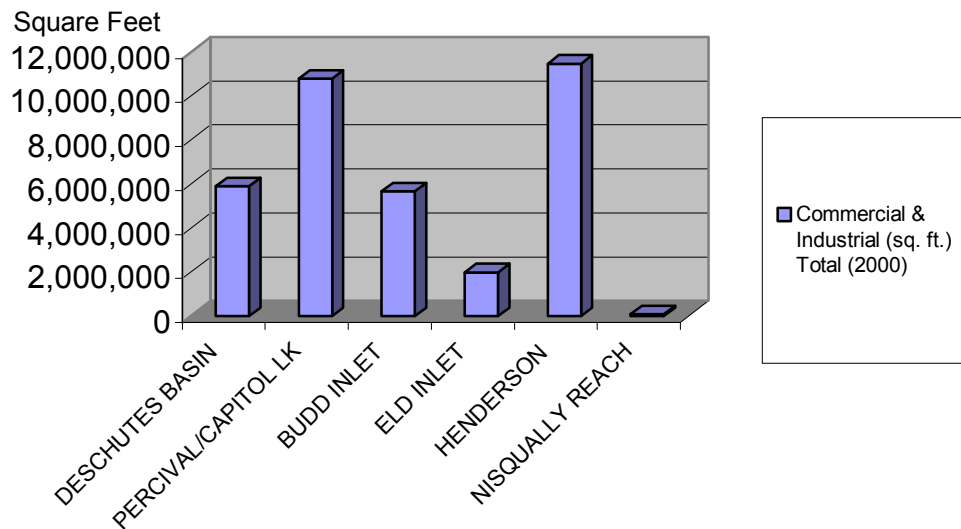


In contrast to existing conditions, *future* capacity for Commercial/Industrial development shifts to the Lacey and Tumwater UGAs - reflecting the greater amount of undeveloped commercial and industrial zoned land still available (values are buildable acres).

COMMERCIAL/INDUSTRIAL CAPACITY: WRIA 13



COMMERCIAL/INDUSTRIAL DEVELOPMENT: WRIA 13 BASINS



COMMERCIAL/INDUSTRIAL CAPACITY: WRIA 13 BASINS

