

## SETTLEMENT

### INTRODUCTION

Settlement refers to residential, commercial, industrial and related land uses. The Willow Sub-basin is as yet sparsely settled with only 8,000 people for its nearly one million acres. Gold mines and farmlands were the historical attraction of the area; in recent times the sub-basin's location relative to Anchorage - near enough to provide jobs\* and services but distant enough to provide a bit of Alaskan wilderness - has been the principal growth incentive.

Population growth in the Willow Sub-basin is almost certain to continue; the question is only how much and when. Presently the area has large amounts of vacant, subdivided land (17,350 lots totaling approximately 35,000 acres), is adjacent to the state's largest center of population, and may soon be affected by several proposed growth inducing projects, including port and industrial development at Pt. MacKenzie, the Knik Arm Crossing, the nearby Susitna Dam, and the capital move. The state and borough can have a profound effect on the future quality of life in the area through decisions on the amount, location, and type of land opened for settlement.

This land use plan designates approximately 6,000 acres of state and borough land for settlement use. Included in this figure is land designated solely for residential use or small farms and land designated for a combination of these uses. Additional public lands will be opened for settlement when the Fish Creek agricultural development occurs and on various solitary parcels of public land in management units that are primarily in private ownership.

The determination of the appropriate quantity and location of this land was based on several general conclusions. First, the existing large supply of private land is sufficient to meet existing and near term settlement needs. Second, public lands in the sub-basin are needed to provide a land base for the future economic development of the area. Third, the cost of publicly provided services and facilities is lowest when growth is concentrated.

\* Approximately 33% of the sub-basin work force commutes to jobs outside the borough.

Given these considerations, the borough and the state have set a low priority on selling the outlying portions of the sub-basin, especially forestry, agriculture, mining and recreational lands. It is recognized, however, that public land should be made available when the private supply is limited or when public land highly suitable for residential use is of limited value for other purposes. The borough and state will jointly assess demand for residential land and establish annual disposal schedules.

The remainder of this discussion begins with a look at settlement related issues in the sub-basin. This is followed by a discussion of the current and future supply of and demand for settlement lands. Concluding the section are a mapped and narrative description of the lands designated for settlement use.

## ISSUES

The over-riding issue relating to settlement in the sub-basin is determining which lands in which ownerships - state, borough, or private - will best meet future residential, commercial, and industrial land needs. Developing policy to resolve this issue requires consideration of the factors outlined below:

### 1. Sources of Supply of Land

There are limits to the amount of land that is physically capable of supporting settlement in the sub-basin. In addition, the supply of land available for settlement at any given time is affected by land ownership, access, and the presence of existing development.

### 2. Demand for Land

Various indicators of demand must be investigated to determine future needs for settlement land in the sub-basin. These include a review of price trends and sales activity on private land as well as for public land disposals; a look at the types of demand - year round and seasonal residential, commercial, industrial, and other urban uses; and a consideration of factors likely to induce population growth such as the capital move, Pt. MacKenzie industrial development, Susitna hydropower, etc.

### 3. Provision of Public Services and Facilities

The pattern of development - its relative compactness or scatteration - has a strong influence on the costs of providing and maintaining roads, schools, water and sewer, police and fire protection, and other public services and facilities. In almost every case, costs per household increase as densities decrease. In the case of services such as central water or sewer, the density of development can determine not just the cost but the feasibility of providing the service.

4. Impacts of Settlement on Economic Development

The future economic base of the Willow Sub-basin, and Alaska generally, is dependent on availability of large blocks of land in public or single ownerships for resource development or conservation. This is true both of activities that alter the landscape such as coal mining, agriculture and forestry, and of activities that require maintaining the land in a relatively natural state such as hunting, fishing, and other forms of outdoor recreation. Land disposal reduces or eliminates the potential to develop (or conserve) these resources.

5. Impact of Settlement on Natural Systems

The direct and indirect effects of settlement can have serious impacts on vegetation, water quality, and other aspects of the natural environment. Of special concern in the sub-basin are the long term impacts of wastewater discharge on the area's lakes and streams. In addition, development in areas subject to flooding or other hazards can pose risks to human life and property.

6. Impacts on Social Environment

Many of the residents of the Willow Sub-basin are living in the area specifically to get away from more populous, densely settled environments in Anchorage and elsewhere. Additional development in the region will likely affect this existing rural character.

This plan addresses these issues through the Goals, Policies, and Management Guidelines for Settlement in Chapter III, and through various land use designations. These land use designations are summarized below.

SETTLEMENT LANDS - SUPPLY AND DEMAND

The following discussion looks at the supply of and the demand for settlement lands. The discussion of the supply of land is divided into two general categories: the land's physical ability to support settlement, and the existing conditions (those affected by human activities such as road construction or land ownership) that affect supply. Existing conditions are discussed first.

## SUPPLY OF SETTLEMENT LANDS

### Existing Conditions

This section describes land ownership, existing developed areas, access and public facilities and services. Of the Willow Sub-basin's nearly 1,000,000 acres, over 200,000 are privately owned and a very small area - less than 10,000 acres or 1% supports settlement. Residential uses comprise the large majority of developed lands with essentially no industrial land and only small amounts of commercial land. Most private land in the sub-basin was originally obtained from the federal government through mining claims, homesteads, and two federally surveyed townsites (in Wasilla and Knik). Native Alaskans received title to 13,300 acres within the area under the Native Claims Settlement Act. Several relatively small sales of land from local and state governments to private individuals have occurred or are planned for the near future.

Further details of the supply and demand of land for settlement can be best described by dividing the sub-basin into three geographic regions: community centers, rural road accessed areas, and remote non-road accessed areas.

The Willow Sub-basin contains several communities: Wasilla, Houston, Willow, Big Lake, and Knik. These are depicted on the map as existing cities (Wasilla and Houston), proposed cities (Willow), and areas of community influence which depict communities which people consider themselves part of (Big Lake, Knik, and a suburban Wasilla area).

The rural, road accessed area is intended to capture the portions of the borough where road access exists or is close by. This includes places (such as the Burma road area) where the accuracy of this description will vary with road conditions, type of vehicle, and the boldness of the driver. Road accessed areas (including community centers) make up approximately 60% of the sub-basin. The remainder of the area is defined as remote. This is, roughly, the region west of the Little Susitna River and south of Nancy Lakes, the area north of Willow Creek and east of the railroad, most of the capital site, and the Talkeetna Mountains (excepting the Hatcher Pass and several adjacent roads).

Residential land use in the sub-basin could be described by proponents as having a much desired low density rural quality; by detractors as sprawling without thought to many of the considerations deemed important in community development. The principal pattern is a strong orientation toward water, most sub-basin houses are located on or adjacent to streams or lakes. Average lot sizes are 1.43 acres per unit for existing dwelling units, 2.0 acres per lot for existing subdivided undeveloped lots. Highest densities occur immediately adjacent to the lakes, particularly those with a longer history of residential use, and within old federally surveyed townsites (in Wasilla and Knik). State law places a minimum of 40,000 sq. ft. on lots with both on-site wells and disposal of sewage. This law has probably not had a significant effect on sub-basin densities to date however, as most residents strongly prefer larger lots.

There is some slight increase in residential densities adjacent to and within the small retail and service nodes that exist at the center of the communities in the sub-basin. Settlement densities in the remainder of the areas shown as communities on the map are similar to densities in the surrounding rural residential areas.

Public services and facilities in the sub-basin are limited. Nearly all residences in the area have some form of road access. The few residences in the remote area are typically located on lakes with fly-in access such as Red Shirt or Flathorn or along navigable rivers. There are no centralized water or sewer systems in the sub-basin although one is in the planning stages in Wasilla.

#### Physical Capability to Support Settlement

Certain qualities of the land - natural hazards such as floodplains or unstable slopes, slope, soil drainage and bearing capacity, etc. - together determine the physical capabilities of an area to support settlement. Some environmental attributes, such as slope or bearing capacity, primarily affect construction costs. Locating settlement in areas of natural hazards such as floodplains or unstable slopes, on the other hand, can pose a risk to human life and property.

Map 14 shows areas that are physically capable of supporting low density residential development of the type typically found in the sub-basin (single family units on 1-3 acres, on-site water and sewer).<sup>\*</sup> This information was derived through an evaluation and systematic rating of information on soils, slopes, vegetation, natural hazards, and water availability. The original map rates each ten acre grid cell as having high, moderate, low, or very low capability to support this particular type of development. For purposes of this document, the categories have been compressed into high/moderate and low/very low. Approximately 38% of the sub-basin, or about 375,000 acres, falls into the high/moderate category. The majority of the lands in the sub-basin are steeply sloping, above timberline or in wetland areas where construction would be costly if feasible at all.

It is important to note that this information is intended to present a picture of the areas that have the physical capability to support development - not to present a final decision on where development should go. In addition, this information will not replace site specific evaluation but rather provide a good, large-scale indication of capable areas for the Willow Sub-basin's 1,000,000 acres.

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<sup>\*</sup> This map is one of several similar maps depicting capability for settlement. Other available maps not pictured cover settlement uses more and less intense than the one described here.

## DEMAND FOR SETTLEMENT LAND

Demand for land for settlement can be divided into several categories: residential land for the population residing year round in the sub-basin, land to support second homes, and demand for commercial and industrial uses. In addition, there is general demand for land itself, either for investment purposes or some unspecified future use. Predicting the amount of demand in this last category is nearly impossible and, in addition, is not likely to affect management decisions. As a result, it is not dealt with here.

Projections of the need for land to support year round residential uses (as opposed to seasonal uses) are based on three population growth scenarios and an estimate of average household size and average land requirement per new household. Land demand for this use is shown in the first four rows of the following Table.

In the fifth row of the Table, projected land requirements for seasonal residential and commercial uses are added. Projections of seasonal or second home land demand are based on projections of population growth among people thought to be in the market for such homes (principally Anchorage), the relationship between population growth and the number of people buying homes, and the average land requirement per new household. Commercial land demand, which is the most speculative of these projections, is based on typical requirements of commercial space for populations of various sizes.

## SUPPLY/DEMAND SUMMARY

There are 375,000 acres of land with high/moderate capability for residential use in the sub-basin (38% of the total area). More than half of this capable land, or over 185,000 acres is located within the rural road accessed and community center areas. Another measure of the existing supply of land was supplied by the Matanuska-Susitna Borough. Based on estimates prepared for January 1981, there are 17,350 vacant, subdivided parcels in the sub-basin (a total of 35,270 acres). This land is essentially all within the rural road accessed and community areas.

Comparing these various measures of supply against existing use and possible future demand shows that the amount of road accessed capable land is well in excess of near term demand. For example, under projections two and three, total settlement land demand in the year 2000 is 45,425 and 60,820 acres respectively, well below the 185,000 plus acres of capable land in the road accessed portions of the sub-basin. If the existing 17,350 vacant subdivided lots in the Willow Sub-basin were all developed and occupied at the existing average of 3.2 people per dwelling unit, this existing supply of land could support 55,000 new

Settlement Land Required to Support  
Projected Increases in Population -  
Three Population Projections

	PROJECTION 1 No capital move Moderate resource development	PROJECTION 2 No capital move Major resource development	PROJECTION 3 Capital move* Moderate resource development
1980 Existing Population & Residential Land Use	8,000 people 5,400 acres	8,000 people 5,400 acres	8,000 people 5,400 acres
1980-1985 Population increase Residential land required	4,900 people 3,648 acres	13,500 people 10,075 acres	18,800 people 16,295 acres
1985-2000 Population increase Residential land required	19,800 people 13,810 acres	40,000 people 27,970 acres	83,200 people 36,803 acres
1980-2000 Population increase Residential land required	24,700 people 17,458 acres	53,500 people 38,045 acres	102,000 people 53,098 acres
1980-2000 Seasonal residential land required Commercial land required	1,600 acres 145 acres	1,600 acres 380 acres	1,600 acres 725 acres
TOTAL NEW SETTLEMENT Land required 1980-2000 Total (existing and new) settlement land in 2000 Total (existing and new) population in 2000	19,200 acres 24,600 acres 32,700 people	40,025 acres 45,425 acres 61,500 people	55,423 acres 60,823 acres 110,000 people

Source: Demand for Land to Accomodate Projected New Dwelling Units and Commercial Facilities. Land and Resource Planning Section Unpublished Report. 1980.

\* Residential land requirements for the capital move projection are based on plans developed by the capital move commission. Under these plans it is assumed that many new residents would reside in relatively high density dwelling units within the capital site, thus consuming less land than an equal number residing at the sub-basin's typically lower densities.

residents. This is larger than the population growth projected under projection two (53,500 new people) and larger than the population anticipated to live outside the capital site if the capital were to be moved. (Of the 102,000 people projected to move into the Willow Sub-basin if the capital moves to Willow, it is assumed the majority would live on the capital site.)

The purpose of these projections of demand for settlement land is not to predict the future but rather to identify a range of future conditions that might occur given assumptions about population growth, average household size, etc. Assuming that the demand projections cover a reasonable range of land needs, it is possible to conclude that the existing supply of capable road accessed land can meet the majority of settlement land needs through the year 2000.

#### DESCRIPTION OF LANDS DESIGNATED FOR SETTLEMENT

Map 15 illustrates specific areas where land is designated for settlement within the sub-basin. The following are management units in which settlement is a designated primary use on public lands: Pear Lake, Ronald Lake, and Iron Creek. In these units, the state has identified approximately 2,000 acres of land for which settlement is a primary designation. Settlement is designated as a secondary use on approximately 10,000 acres of state and 7,000 acres of borough land in the Fish Creek Unit. That does not mean that most of this land will be used for settlement, but that settlement may occur as compatible with the designated primary uses (principally agriculture).

For most of the management units with road access, where private landowners hold a majority of land, the plan lists settlement as a "recommended land use." This means that although there may be little public land in these units, it is both borough and state policy to encourage settlement in these accessed areas rather than on remote public lands.

Borough and state lands designated for use as small farms are in the Kashwitna, Ronald Lake, Pear Lake, Little Willow Creek Corridor, and Iron Creek Units. Agricultural land in the Fish Creek Unit not suitable for large farms because of topography will be sold for small farms. Although specific tracts have not been identified, small farms are a "recommended use" in the Knik Unit, where private landowners and the borough own considerable land suitable for that purpose. (There are several thousand acres of private land suitable for small farms in the Wasilla Management Unit.)

It is difficult to specify an acreage figure for small farms because the plan frequently designates small farms as one of several permitted uses

within a management unit. Sites for small farms will be identified specifically through more detailed planning. However, the plan does designate approximately 3,000 acres of state land and 2,500 acres of borough land for primary small farm use. Through this plan, the state and borough have also set small farm disposal targets of 3,000 acres and 4,000 acres, respectively, during the next 5 years.