

CHAPTER 3. COMMUNITY FACILITY NEEDS

The Heritage Land Bank is responsible for the management, transfer, or disposal of undedicated municipal land in a way that best meets the various facility needs of the community. Given this mandate, AMC 25.40.025 requires that a site-specific land use study for an HLB parcel shall address the need for community facilities at that location. Community facilities can include roads, parks, trails, schools, satellite municipal offices, etc. To help meet that requirement for the *NW¼ Section 25 Land Use Study*, various municipal departments and other agencies were contacted and asked to identify any specific facility needs that might be suitable for location on HLB NW¼ Section 25. In response to the request, several needs were identified by municipal and state agencies. Comments and suggestions regarding the future of the site were also requested and collected from community councils, community organizations, and the general public. Agency and community comments are documented in the Appendices.

Municipal Community Facility Needs

Anchorage School District

The Anchorage School District has requested that public land in the Study Area be reserved for a potential elementary school site, based on the growth potential and likely development of the Powder Reserve area.

The current Master Plan for the Powder Reserve Tract A could generate as many as 595 elementary school students. The anticipated new master plan for the entire proposed 1,500 acre Powder Reserve may generate between 1,400 and 1,700 elementary school children¹—a demand for 3 elementary schools (between 55 and 66 classrooms).² The current rate of development here is slow. However, within a metropolitan context of continued population growth and increasingly scarce vacant land, the pace of development is likely to change.

To meet the eventual need for a new elementary school, the Municipality would likely have to purchase a school site from Eklutna, Inc., at market rate value. *Anchorage 2020 Anchorage Bowl Comprehensive Plan* Policy #13 includes Strategies through which private development would help pay its own way in such circumstances. These Strategies, including *Development Impact Assessments*, *Impact Fees*, and *Development Rights Transfer*, have yet to be implemented.

¹ See table of Powder Reserve population and facility needs in *Appendix C*.

² See School District memorandum available in *Appendix C*.

Most of the Study Area may be inappropriate for an elementary school. Site selection standards for elementary schools favor a central location in the neighborhood so that children may walk to school. An elementary school traditionally serves as a neighborhood civic center and library also, as well as a local park and playground. A 100-foot high ridge physically isolates most of the Study Area from the Powder Reserve. At the foot of the ridge, the central and southwestern Study Area is nearly 900 feet north of the Powder Reserve. A school site on the central plain would possibly be shifted even further north, to ¼ mile north of the neighborhood boundary in order to avoid the dark, cool microclimate and poor drainage at the foot of the ridge. Proper infrastructure is also lacking. The School District will not select a school site that does not have existing or planned connections to water and sewer service.

Only the southeast corner of the Study Area shares the ridge-top plateau with the Powder Reserve. As a result, it is physically more related to the Powder Reserve than it is to the rest of the Study Area. It is within the same drainage basin as the planned Powder Reserve water and sewer service area. The ridge top is physically suitable for development, gets good sun exposure, and offers scenic views of the region. It fronts directly on the planned Powder Reserve street network and could be accessible to the neighborhood to the east via Almdale Avenue. The ridge top, an area of 9 acres, is the most, and perhaps only, appropriate location in the Study Area for an elementary school. With acquisition of additional acres to the south, it could accomplish the 15-acre elementary school site standard.

Parks and Recreation

Chugiak-Eagle River Parks and Recreation has requested that the Study Area be added to Beach Lake Regional Park. Parks and Recreation recommended the addition in order to expand the area available for multi-use and nordic ski trails, provide a chalet and recreation center site that will improve access to the park without consuming existing parkland, and reserve land for community park sports fields to adequately serve Birchwood. Also, a need for a neighborhood park is considered in the pages to follow, to address *Anchorage Park, Greenbelt and Recreation Facility Plan* recommendations for the Study Area.

The 1985 *Anchorage Park, Greenbelt and Recreation Facility Plan* describes neighborhood, community, and regional parks. **Neighborhood parks** are intended to provide local recreational opportunities in a residential neighborhood setting. They include such facilities as playgrounds, ball courts, and picnic areas. Intended to be readily accessible to pedestrians without the need of crossing an arterial street, neighborhood parks serve the local population within a ¼- to ½-mile radius.

Community parks range in size from 20 to 100 acres and serve a population of 10,000 to 50,000. Automobile access is important as these parks serve an area within a ½- to 3-mile radius. Community parks act as a supplement to neighborhood parks by emphasizing recreational activities that require larger amounts of space, such as softball and soccer fields. **Regional parks** are reserves of natural open space, habitat, and scenery. While they may include the same types of facilities as community parks, regional parks emphasize recreational activities in a relatively undeveloped natural environment. Typical activities might include boating, swimming, golfing, archery, wildlife and nature viewing, camping, and trail uses such as nordic skiing, biathlon, skijoring, dog sled mushing, horseback riding, bicycling, running, and hiking.

Regional Park Needs

In terms of gross acreage, the 2,242 acres of regional park in Chugiak–Eagle River is enough to support a population of 110,000 people, according to adopted service level standards. Beach Lake Regional Park alone is 1,688 acres in size. For this reason, the adopted parks plan does not recommend acquisition of more regional parkland. Instead, it recommends that existing regional parks, including Beach Lake Park and Edmonds Lake Park, be more fully developed and made more accessible for a greater variety of recreational activities. The 1993 *Chugiak-Eagle River Comprehensive Plan* recommends updating the *Edmonds Lake Park* and *Beach Lake Park Master Plans*.

In addition, Beach Lake Park and Edmonds Lake Park have 20 kilometers (km) of existing or planned ski trails, and together could accommodate approximately 23 additional km. This alone could provide Chugiak-Eagle River with a level of service of 1 km of trail per 1,080 residents in 2020. Currently, the Anchorage Bowl has approximately 1 km of regional park trails for every 1,621 residents.

A need for additional regional parkland becomes more arguable in relation to the specific situation of Beach Lake Regional Park. For the 6 months of winter, approximately 1,450 out of 1,688 acres in Beach Lake Park are inaccessible to cross-country skiing, skijoring, and most other winter recreation activities. Most winter recreational activities in Chugiak-Eagle River must share only 800 acres of multi-use regional parkland. Given the existing arrangement of uses in Beach Lake Park, Chugiak-Eagle River will, during the winter, be 280 acres short of service level standards for the projected population in 2020.

Beach Lake Park's 15-km nordic trail system is highly developed but constrained to about 220 acres to the north of the Study Area. The trails are heavily used for daily recreation, practice, and for competitions. The student parking lot at Chugiak High School provides the only trailhead parking. This results in poor access and under-utilization of the system, and also results in conflicts between

trail user groups, high school students, and other events. Voters have funded the location and development of a trailhead and chalet facility.

The NW¼ Section 25 would be a strategic acquisition to buffer the existing trail system and provide acreage for its expansion. The easterly plain of the NW¼ Section 25 (east of the Hill Loop Trail) could provide a trailhead, chalet and multi-use recreation center site without consuming existing parkland for the nordic trail system. The plain is centrally located and accessible to the adjacent trail system and provides a plentiful area of upland flats for a chalet. The entire Study Area could provide space for as much as 7 km of additional nordic ski trails, a 40 percent increase over the existing system of 13.5 trails in the park, the 1.5 Hill Loop Trail, and 2.9 km on the Chugiak High School campus. The Study Area could also provide a strategic regional corridor for natural open space, trails, and wildlife habitat that could link the Hill Loop Trail and the Fire Creek beaver dams.

Aside from a strategic addition of acreage, the Study Area also offers unique terrain that is not available in the existing park. Existing nordic trails in Chugiak-Eagle River do not offer advanced-level hilly terrain that compares to some trails in Anchorage. The southeastern ridge in the Study Area has a vertical climb of 30 to 40 meters, possibly enabling Beach Lake Park to be certified by International Ski Federation standards, making it a favorable international competition site. The ridge has adequate space for perhaps four trails and has natural draws, ridges, and benches that would add variety to the trails winding up and down the hill. The crest of the ridge would offer recovery trail sections, as well as scenic views to the region. The ridge could also provide a sledding hill for Chugiak-Eagle River.

Community Park Needs

The Parks and Recreation Facility Needs Map shows that the inventory of community park sports fields in Chugiak-Eagle River amounts to 3 soccer fields, 3 little league fields, and 1 baseball field. All of the fields are located near Peters Creek, more than three miles north of the Study Area vicinity. According to service level standards, Parks and Recreation should have 10 softball/little league fields and 5 full-sized ball fields. It is assumed that the service level need for soccer fields is similar to that of baseball, softball, and little league fields. As shown on the map, the needs are expected to increase significantly by 2020.

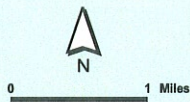
Community Parks should serve an area of a maximum of a three-mile radius. However, there is no existing, planned, or anticipated community sports field in central Chugiak-Eagle River. Birchwood, including the 1,500-acre Powder Reserve, and central Chugiak-Eagle River, in general, are expected to experience a large share of community growth to 2020. Given the future Powder Reserve population of between 11,000 and 14,000 persons at build-out, Birchwood Community Council alone would need the following community sports fields:



Parks and Recreation Facility Needs

Land Uses

- Existing Parks
- Floodplain / Wetlands
- Vacant Land
- Study Area Boundary



**Birchwood, Chugiak,
and Eklutna:**

Chugach State Park

**Future (Projected)
Powder Reserve:**

Chugach State Park

**Eagle River, South Fork,
and Eagle River Valley:**

Fort Richardson

Recreational Facilities

Community Sports Fields

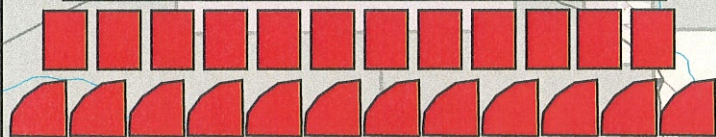
- Soccer / Football Field
- Baseball / Softball Field
- Existing Fields
- Current Deficiency / Need
- Anticipated Future Need

Neighborhood Parks

- Location and Number of 5 acre neighborhood parks needed

Source: 1993 Chugiak-Eagle River Comprehensive Plan

Projected Total Additional Need by 2020:



Regional Park Acreage

Existing Acres:	Acres Needed in 2020 to meet service level standards:
2,242	1,080
Existing acres in Anchorage Bowl:	Multi-use acres available in winter:
6,550	800

- 4 softball/little league fields
- 2 full-sized baseball fields.
- 4 recreational soccer fields (assuming a similar demand as for little league)
- 2 full-sized soccer fields (assuming a similar demand as ball fields)
- 4 outdoor ice rinks.
- a 5-acre parking lot area, given the importance of motorized access

A compact site plan could conceivably pack these facilities onto a minimum of 35 acres. A comparative example sports facility is Javier de la Vega Park, a community park in the Anchorage Bowl with a compact, efficient site plan containing 4 championship soccer fields, 4 full sized baseball fields, and a 5-acre entry and parking area on approximately 40 acres.

It is likely that 35 acres will not satisfy the need. However, the Powder Reserve development could provide scattered sports facilities to make up most of the difference. To the extent that a Powder Reserve plan can provide facilities, 35 acres in the Study Area could become adequate. Sports fields here would be on an upland plain central to Birchwood and the Powder Reserve. It can double as a trailhead staging area and associate with a chalet/multi-use recreation center.

Neighborhood Park Needs

Birchwood Elementary serves as Birchwood's only neighborhood park. The adopted parks plan recommends the acquisition of a series of neighborhood parks along the Fire Creek Greenbelt. The plan specifically recommends that a portion of the NW¼ Section 25 near Fire Creek become a neighborhood park. However, the NW¼ Section 25 may be a poor location for a neighborhood park. It is located at the periphery of Birchwood, outside of walking distance from most residences. In spite of the park plan's recommendation, the area of the NW¼ Section 25 adjacent to Fire Creek Greenbelt is particularly unsuitable for a neighborhood park, given its physical isolation and the floodplain wetland.

Two locations for neighborhood park facilities could be the southeast ridge top and the easterly plain at the dead-end of Pioneer Drive. Park facilities on the ridge would most likely serve the Powder Reserve to the south. The parks plan states that a neighborhood park may be combined with an elementary school. The recommended size for the combined neighborhood park and school is 20 acres.

The second location at the west end of Pioneer Drive is too far removed from most of the population of Birchwood to serve as a neighborhood park. However, it may serve the adjacent residential neighborhood as a local gateway into the regional park, providing a small trailhead and perhaps even some picnic or playground facilities at the dead-end of Pioneer Drive.

Transportation Planning

The Transportation Planning Division of the Traffic Department recommends that an 80-foot collector right-of-way be reserved through the Study Area, roughly along the same alignment as the MEA transmission line easement, connecting to Hillcrest Drive. A corollary recommendation would be to designate Hillcrest Drive as a collector street in the *Official Streets & Highways Plan*. The new street system is recommended in order to serve future north-south connectivity needs, and to provide site access for proposed park facilities in the NW¼ Section 25.

The Study Area is located between existing neighborhoods in Birchwood to the east and northeast, and the Powder Reserve to the south-southwest. Connectivity is poor between these two areas because of the lack of a good collector system. When the Powder Reserve develops, the lack of a collector is likely to have three negative effects on the road system. The lack of direct north-south connections will cause trips to be unnecessarily circuitous. Local roads, including Almdale and Shims, will be forced to function as collector streets, and the neighborhood around Shims will be impacted by increased traffic. Finally, the lack of connectivity will result in use of the New Glenn Highway for local trips.

Traffic between the neighborhoods will be generated by future residents of the Powder Reserve. The primary attraction would be Chugiak High School (CHS). Between 700 and 850 high school students could live in the Powder Reserve and attend CHS, generating 1,250 to 1,500 trips between the Powder Reserve and CHS on the average weekday. In addition to students driving or taking the bus to school, there will be personal travel between households north and south of the Study Area. Moreover, the high school is used for community functions at night and during the weekend.

The existing road system would connect the Powder Reserve to Birchwood Loop Road (at CHS) via a zigzag route composed of Almdale, Shims, and Hillcrest. Although these roads along the route are designated as collectors, they are less than ideal collector roads. Almdale, Shims, and Hillcrest are not constructed to collector standards nor do these streets limit the number of residential driveways. Driveway access is in conflict with the purpose of a collector, which is to conduct traffic from local residential areas to larger arterial streets or to local destinations such as CHS. Almdale, Shims, and Hillcrest have multiple residential driveways.

A new collector road through the NW¼ Section 25 could provide a more direct route between the Powder Reserve and South Birchwood Loop Road. This will have the advantage of allowing traffic from the Powder Reserve to bypass the existing neighborhood and local road system of Almdale and Shims. These roads could then function as local roads as originally intended.

Proposed community sports field facilities on-site in the NW¼ Section 25 could generate significant traffic. Residents of Birchwood, whether they live in the Powder Reserve or the lower density areas of Birchwood, should have good site access to community park or chalet facilities in the NW¼ Section 25. The access should be as direct as possible and not circuitous, and not unduly rely on the local road system. Access from only one direction would create the need for circuitous trips through the local road system. As a result, it will be important to provide access from both the southwest and northeast. A chalet and multi-use recreational facility would also best be served by a collector road running diagonally from southwest to northeast with a connection to Hillcrest Drive.

Non-municipal Community Facility Needs

Alaska Department of Transportation & Public Facilities

In 1966, the Alaska Department of Transportation and Public Facilities (ADOT&PF) identified the NW¼ Section 25 as having potential for supplying gravel material for public construction projects. Since that time, the ADOT&PF has considered the NW¼ Section 25 to be a significant gravel reserve for construction projects in the Anchorage metropolitan area. ADOT&PF has requested that the Municipality take no land use action that will adversely affect the future extraction of gravel reserves from the Study Area.

Geologic exploration confirmed the presence of over two million cubic yards of high quality gravel reserves underlying the NW¼ Section 25. ADOT&PF was issued a Free Use Gravel Permit by the Alaska Division of Lands for a quantity of four million cubic yards. Since that time other material sites have been depleted, and now the NW¼ Section 25 has the remaining ADOT&PF gravel reserve in Chugiak-Eagle River.

The ADOT&PF has identified a need for 341,500 cubic yards of gravel in the NW¼ Section 25 for Chugiak-Eagle River road projects in construction years 2002-2006. Identified in the *Long-Range Transportation Plan*, these include improvements to the Old Glenn Highway, Eagle River Road, and Eagle River Loop Road. Haul cost comparisons with other gravel sites show that this gravel could provide a savings of \$7,495,000. The gravel material in the NW¼ Section 25 is confirmed down to an average depth of 8 to 12 feet. A contemporary materials site study would bore deeper and may confirm the high-quality material in the Study Area to be 20 feet deep or more. Assuming an average gravel layer of 12 feet, an area of 18 acres would be needed to extract 341,500 cubic yards. Operational space needs and other contingencies require that 50 percent more area is mined than is needed by volume. As a result, the area needed for gravel extraction by 2006 is 27 to 30 acres or less of the NW¼ Section 25.

ADOT&PF anticipates many public construction projects over the next 50-70 years, for which the NW¼ Section 25 represents the lowest cost source of gravel material. Such projects have not been programmed, so an amount of needed gravel is unknown. However, an extrapolation of the haul cost savings calculated for the initial 341,500 cubic yards shows a potential savings of \$44 million in today's dollars from the 2 million confirmed cubic yards in the Study Area. Because funding for road projects is limited, material cost savings could have a positive ripple effect on transportation improvements throughout the Municipality.

The closest alternative ADOT&PF gravel sources are in the Mat-Su Valley. Remaining sources of gravel in Chugiak-Eagle River are privately owned and subject to limitations. A portion of Loretta French Park is an active gravel pit. A private contractor has rights to this gravel. Another potential site lies in northern Chugiak-Eagle River, where Cook Inlet Region, Inc. (CIRI), owns the subsurface rights to a large tract of Eklutna, Inc., property. However, the amount and quality of gravel material at this site is unproven. Other private gravel pits may still exist.

The character of a gravel extraction operation would probably be as follows. The extraction area would include a truck haul route, truck ingress and egress, temporary gravel processing facilities, and the extraction operation. Extraction would likely progress from the southwest corner of the Study Area toward the northeast, depleting one "cell" at a time, a cell being at least 10 acres in size. Overburden may be placed in the "worked out" portions of the gravel site. This process could continue for decades. When the operation depletes one cell, it would then proceed to the next.

The extraction would lower the existing central alluvial plain of the Study Area by anywhere from 20 to 40 feet in elevation. The plain would still drain into Fire Creek to the southwest. The gravel pit walls would have a 22 percent slope. A site reclamation plan could eventually enhance the Study Area as a recreation resource. Re-contouring could provide undulating ski trail terrain and flat areas for sports fields. Re-vegetation could hasten the reclamation of the site as a park. However, the ongoing gravel hauling, stockpiling, and equipment storage on site will limit what can be reclaimed until extraction operations cease. Reclamation for most of the site may therefore be 50 to 75 years into the future.

The Alaska Railroad has offered to allow ADOT&PF to construct a gravel haul road along the railroad up to Beach Lake Road. The Railroad has also offered to move the gravel by railroad. However, a railcar loading facility may be economical only if ADOT has access to all 2 to 4 million cubic yards of gravel. Neither Hillcrest nor Pioneer Drive is a viable haul route because of impacts to existing neighborhoods. A Powder Reserve haul route depends on Eklutna, Inc.

Community Needs and Aspirations

Area community councils, the Eagle River Parks Board, and local recreational user groups have for decades supported the use of the NW¼ Section 25 as park. Members of the community, past and present, have argued that the Study Area should be added to Beach Lake Regional Park in order to provide for a buffer and future expansion of the existing multi-use nordic trail system and to preserve open space for future generations.

The first known request by the Birchwood Community Council for annexation of the NW¼ of Section 25 into Beach Lake Park occurred in 1978. Since that time, local community representatives have periodically repeated the request. Statements supporting the transfer of the HLB lands to Beach Lake Park were filed through the 1980s when the issue surfaced in 1984, 1985, 1986, and 1988. In 1988 the Birchwood and Chugiak Community Councils issued a joint letter with the Chugiak-Eagle River Parks Board requesting that the Municipality add the NW¼ Section 25 to Beach Lake Park.

During the *Comprehensive Plan* and *Areawide Trails Plan* public planning processes in the early to middle 1990s, community participants argued for park annexation and trails expansion. Another formal request was made to the HLB for areas around the Hill Loop Trail in 1996. In the meantime, recreational uses from Beach Lake Park bled into the undeveloped woodlands of the NW¼ Section 25.

In 2000, the Eagle River and Eagle River Valley Community Councils each requested that the entire NW¼ Section 25 be retained as park in order to provide a buffer and future expansion for the existing ski trail system. In May 2000, the Birchwood Community Council unanimously renewed its 1996 request that the Municipality add the NW¼ Section 25 to Beach Lake Park.

Members of the community have provided a number of arguments in support of adding the Study Area to Beach Lake Regional Park. Arguments having to do with the specific needs of the nordic ski trail system include:

- protection and expansion of the geographically constrained Beach Lake Park ski trails, the only maintained, illuminated trail system in Chugiak-Eagle River;
- trailhead or chalet site to provide better access to this system;
- the unique topography for nordic skiing, scenic views, and a sledding hill that are unavailable or inaccessible in Beach Lake Park; and
- regional open space connections to the Fire Creek beaver dams.

Other more general arguments from community participants emphasize that Chugiak-Eagle River is a young city and has a unique opportunity to designate

natural open space for the benefit of future generations. If developed for housing, natural open spaces are lost. As the population grows and more land is developed, the remaining areas of parkland will become increasingly valuable and will have to serve increasing demands.

In particular, participants say, the needs for a park will take on a greater importance in this area when a much higher population density occurs in the Powder Reserve south of the Study Area. Future Powder Reserve residents can benefit from adjacent parkland and connections to Beach Lake Regional Park.

Others arguments include the following: the character and aspirations of much of Chugiak - Eagle River, including Birchwood, are defined by natural open spaces, scenery and a semi-rural lifestyle. Also, the community reaps economic, social, and health benefits from open space. Another recurring argument is that the will of so many members of the local community, community councils, parks board, and user groups has been so rarely as unified on an issue as they have become on the issue of the NW¼ Section 25. Another suggestion is that the natural ecology and scenery of the site are inherently worth preserving. Many have argued that site constraints, such as the gravel extraction permit, utility easements, poor existing road access via Hillcrest, and environmental constraints diminish the area available for residential development so much that disposal is nearly worthless.

Some participants have suggested looking at other potential recreational needs for the site other than for cross-country ski trails. Some want to save the current, informal system of multi-use trails, including the trail along the power line easement, that allow for a range of activities such as walking, dog sled mushing, skijoring, or horse riding that are not tolerated in the winter by nordic ski trails. Others have suggested consideration of the site for a range of recreational uses, including skijoring, sledding, and sports fields and ballparks, in addition to ski trails. Others argue the potential of the north-facing ridge slope as a beginners' downhill skiing hill or lighted sledding hill, noting that local children equipped with sleds already have christened the ridge slope along the cleared AWWU water pipeline easement as "Dead Man's Hill".

CHAPTER 4. EVALUATION OF LAND USE ALTERNATIVES

The Land Use Alternatives in this chapter do not necessarily cover all possible combinations of land uses for the Study Area. Nor do they represent a limited set of alternatives from which the community must choose either one or another. Land Use Alternatives serve to illustrate key issues for discussion and evaluation. How well a land use choice—or a combination of choices that comprises a Land Use Alternative—addresses the key site planning and land use issues of the NW¼ Section 25 has implications for the final Land Use Recommendations.

The study of site conditions, surrounding land uses, available facilities, adopted plans, legal encumbrances, and community facility needs in Chapters 2 and 3 of this report provided the information for the development of Land Use Alternatives. Each Alternative also results from a consideration of the compatibility of each **potential land use** with neighboring land uses.¹ How well a Land Use Alternative addresses the key land use issues is the basis for evaluating its effectiveness and implications.

A set of Land Use Alternatives was presented to the community for discussion. The Land Use Alternatives evaluated in this chapter reflect that discussion. Based on public comment, the evaluation of *Alternative 1 – All Regional Park* includes an “*Alternative 1-a*” which illustrates the implications of a regional park without a collector street. Members of the public also suggested consideration of a school in the southwestern rather than southeastern corner of the Study Area. Such a variant of *Alternative 2* is included for evaluation. Community participants pointed out that *Alternatives 2* and *3* seemed to represent the same set of choices. As a result, they have been merged to simplify the evaluation. Other comments led to map improvements to clarify potential chalet locations, gravel haul routes, and acreage and distances. The Land Use Alternatives in this chapter help to form the basis for the final Land Use Recommendations. The resulting Land Use Recommendations for the NW¼ Section 25 may combine land use choices from this chapter in order to best serve community needs and aspirations.

Layout of Chapter 4

There are seven Land Use Alternatives. Each alternative consists of a narrative and a map. Following the narrative-map set is an evaluation table. The evaluation table summarizes how well the alternative addresses key land use issues, and shows the implications for possible land use recommendations. Chapter 4 concludes with a summary of all evaluation results for the Land Use Alternatives.

¹ See Appendix C, “Menu of Potential Land Use Types (Table)”.