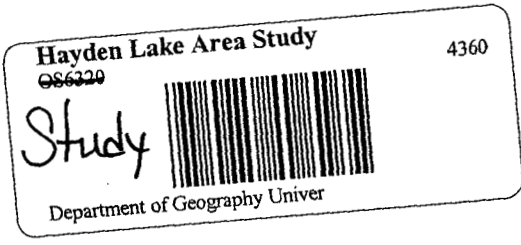
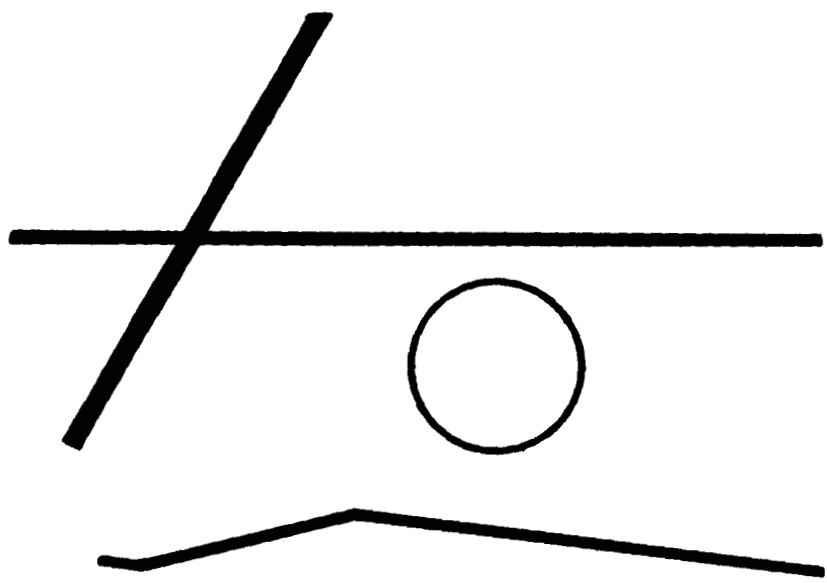


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# HAYDEN LAKE AREA STUDY



Department of Geography  
University of Colorado

HAYDEN LAKE

AREA STUDY

DEPARTMENT OF GEOGRAPHY

UNIVERSITY OF COLORADO

Boulder, Colorado

1972

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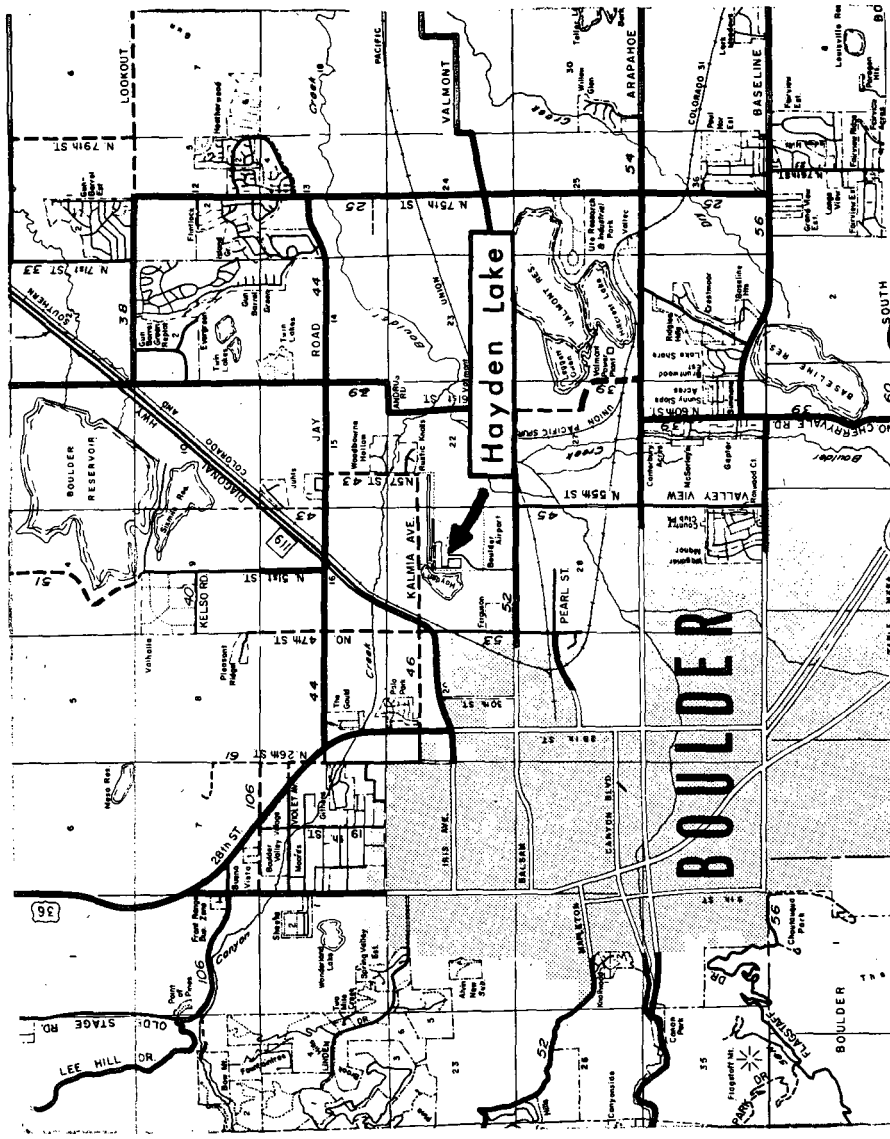
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## FOREWORD

This report on the Hayden Lake area is one of three undertaken by the Department of Geography at the University of Colorado for the City of Boulder. The project was initiated by the students and faculty of Geography 540, Land Use Seminar, as a research study. Its purpose is to provide information for city and county officials and concerned citizens to assist them in planning the future development of the City and County of Boulder.

Payments of expenses and for materials for this report were made possible by a grant from the City of Boulder. The project was carried out through field investigation and library research by the students.

The study group would like to thank the following people who provided very helpful assistance and comments for our study:

Sanford Gladden, Boulder Historian

Paul Skwiot, City Land Officer, Advisory Committee on Open Space

Tom Powell, Assistant Wildlife Researcher, Colorado Division of  
Wildlife

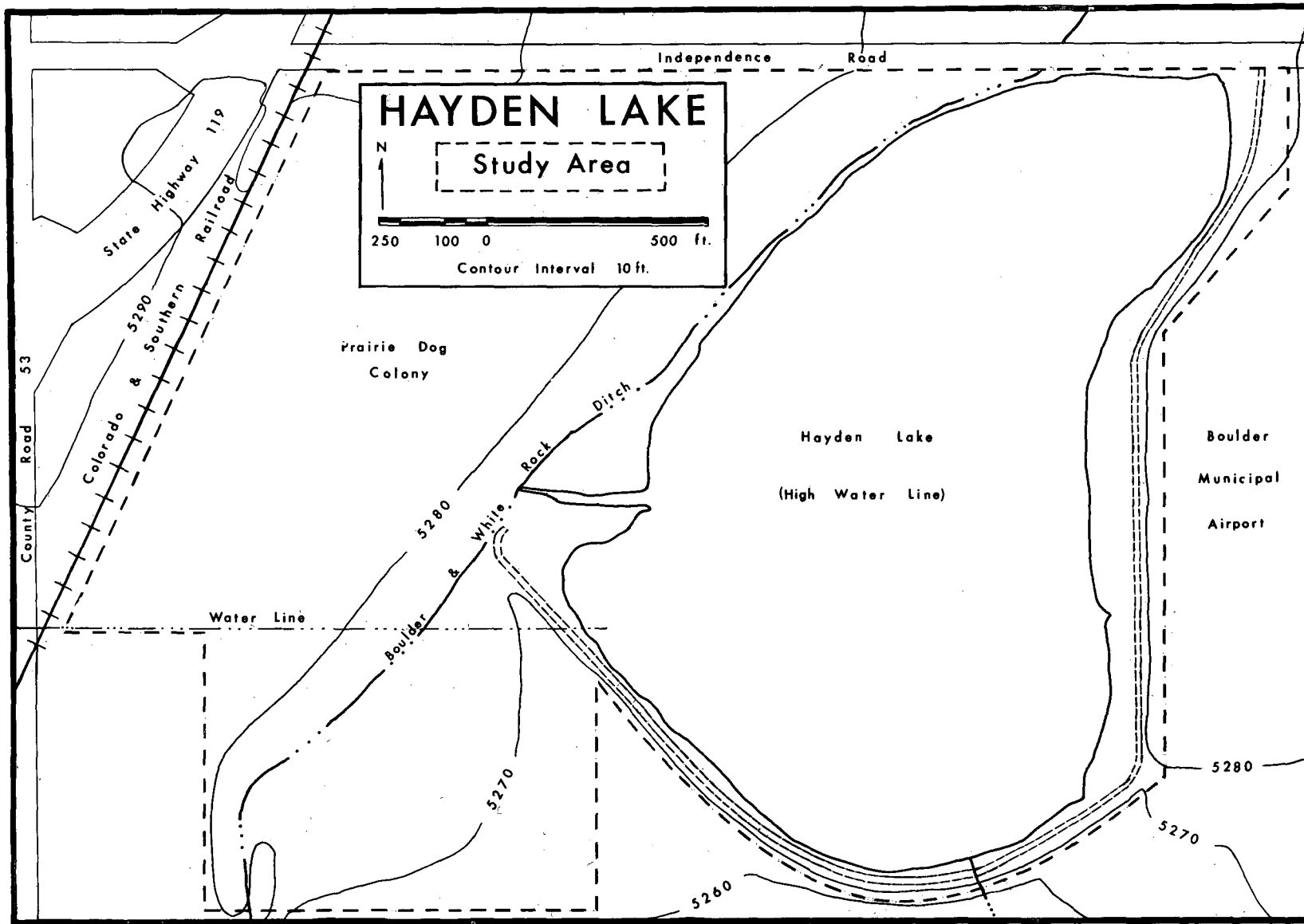
Libby Goodwin, Boulder County Park Planner

Doug Tiefel, Boulder County Planning Office, Seminar Participant

Special thanks to the personnel in the County Assessor's and Records Department for their patience and help during our long hours researching. Thanks also to Mary Axe for typing this report. A final note of thanks to Professor Donald D. MacPhail for his direction and encouragement in the research and preparation of this report.

The opinions expressed herein represent solely the conclusions of the students in the seminar. Their viewpoints do not necessarily reflect those of the University of Colorado, of the Geography Department, or of the City of Boulder.





PART I  
ENVIRONMENT

LOCATION

The study area under consideration is approximately eighty acres of land located two miles northeast of downtown Boulder. It includes Hayden Lake and 44 acres of agricultural land between the lake and the Colorado & Southern Railroad right-of-way. Its formal location is described as the center of the western one-half of Section 21, Township 1 North, Range 70 West. It is bounded on the north by Independence Road, an east-west county road, on the east by the Boulder Municipal Airport, and on the south by the Vista Village Trailer Park for mobile homes.

The study area, referred to as the Hayden Lake area in this report, is on a gentle sloping alluvial terrace. Elevation ranges from 5,290 feet above sea level at the northwest corner to 5,260 feet at the southeast corner. Its slope is ten degrees to the south and east.

Hayden Lake is an irrigation reservoir with an earth-filled dam on the southeast side. The Boulder and White Rock Ditch, flowing from the southwest to the northeast, feeds the reservoir through a small side ditch.

CLIMATE

Being located virtually in Boulder, the study area's climatic conditions are identical with Boulder's. The average monthly temperature ranges from a high of 71.8 degrees F. in August to a low of 37.5 degrees F. in January. The annual mean temperature is 51.6 degrees F. The frost-free season is usually 140-155 days per year. The annual precipitation is

18.57 inches, much of which is produced by numerous summer thunderstorms. Included in this is an average annual snowfall of 81.0 inches. Humidity, as would be expected in a semi-arid region, is low. The most dramatic climatic characteristic of the Boulder area is the frequent "high wind." The winds are generally from the west and heaviest during the winter months.<sup>1</sup>

#### GEOLOGY

The geology of the Hayden Lake area is relatively simple with the subsurface being made up of mainly alluvial which forms a gentle sloping terrace. The alluvium attains a maximum depth of approximately thirty feet and is totally underlain by Pierre Shale. This formation which can be more than 5,000 feet thick is composed of dark gray to black clay shales and arenaceous shales which are homogeneous over large areas.<sup>2</sup>

#### DRAINAGE

Hayden Lake was built by the Boulder & Lefthand Irrigation Company of Longmont, Colorado, as a water storage reservoir. The original filing of the lake was for 190.1 acre feet of water on July 21, 1905. In 1931 the reservoir was enlarged to a depth of 21 feet which allowed for an additional 311.7 acre feet of water.<sup>3</sup> The water is used to irrigate 2,800 acres of land owned by approximately forty separate users living to the south and east of the lake. Its 501.8 acre foot capacity (21,860,954 cubic feet) of water is attained in the spring and frequently later in the season during particularly wet years. At the time of this writing (mid-September), the water level was down approximately seven feet, with no attributable inflow from its feeder ditch, the Boulder and Whiterock Ditch,

called the Beasley Ditch by some local people.

The lake lies on a north-south axis and fills an erosion depression cut into the surrounding alluvial terrace. Its 5,600 foot perimeter (41.36 acres) at high water is tightly bounded on three sides by the Boulder County Airport to the east, the dam to the south, and Independence Road to the north. Boulder & Whiterock Ditch runs roughly parallel to the lake's western frontage and varies in distance from thirty to 250 feet from the shoreline. Beyond the ditch lie 44 acres of land also owned by the Boulder & Lefthand Irrigation Company, but under the reign of a substantial prairie dog colony.

Hayden Lake's water is appropriated and conveyed from Boulder Creek via the Boulder & Whiterock Ditch, which commences at Broadway Street in downtown Boulder. The water is removed when needed by means of an underground pipe beneath the dam which extends southward to the Boulder & Lefthand Irrigation Ditch. Complimentary rain water captured through drainage is probably minimal, due to the negligible relief of the surrounding land and the subsequent lack of any natural drainage channels into the lake.<sup>4</sup>

#### SOILS

All of the soil of this area is classified by the Soil Conservation Service, SCS, as type 28B, Nederland very cobbly sandy loam.<sup>5</sup> This is a moderately deep, well drained, poorly developed soil. The surface soil is moderately light textured. The subsoil is medium textured. This soil is underlain by rock and cobble at twenty to forty inches and has enough cobble and rock throughout to prevent cultivation. Water intake and water holding capacity are medium. Further classification by the SCS shows this soil ranging in slope from one to 12 per cent. It is not suited for cultivation,

having very severe limitations. It is suited for range, woodland, or wildlife uses if carefully managed. Usually the soil will not take physical practices such as pitting, furrowing or seeding. It can be shallow, heavy, stony, low in fertility, salty, alkaline or have low moisture capacity.

Examination of the Nederland series, as detailed by the SCS, may provide further insight. The Nederland series consists of deep, well drained, loamy soils. They develop on old high terraces and alluvial fans in loamy alluvium with much cobble and stone. Vegetation is mainly tall grasses and mid grasses. The surface layer is brown, very cobbly, sandy loam about six inches thick and noncalcareous. The subsoil is dark, reddish brown, sandy clay loam about 11 inches thick, noncalcareous, with much cobble. Underlying the subsoil to sixty inches or more is reddish brown, sandy loam, noncalcareous and containing much cobble and stone. The soil is neutral or slightly acidic in reaction. It is moderately permeable with a water holding capacity for the profile of 4.5 to 6.5 inches. Effective rooting is sixty inches or more. Most of these soils are used for range, but some areas near larger towns have homesites on them.

The thickness of the A horizon of the Nederland series ranges from three to eight inches. The texture is typically cobbly, sandy loam with the cobbles ranging from thirty to forty per cent. The B horizon is sandy, clay loam with weak prismatic and blocky structure. Content of the coarse fragments ranges from fifty to seventy per cent, with the thickness of the B horizon ranging from 22 to 27 inches. The C horizon ranges from light sandy clay loam to sandy loam with more than fifty per cent coarse fragments.

To summarize, the Nederland very cobbly sandy loam is a difficult

soil. Stones and cobbles prevent efficient plow agriculture. Though the erosion hazard is slight, if it occurs, reseeding is very difficult. With good range management this soil can produce excellent forage.

#### VEGETATION

It is apparent from the vegetation growing in the vicinity of Hayden Lake that the soil has been greatly disturbed, the eastern side much more so than the western. All but two of the species are considered to be weed (sand lily and black-eyed Susan). These weedy plants establish themselves on ground where the soil profile and water retention ability have been destroyed. The eastern side appears to have been overturned, possibly when the lake was deepened in 1931. The entire area is heavily overgrazed, particularly the pasture to the west. The overgrazing, by both horses and an overabundance of prairie dogs, results in a destruction of ground cover, which opens the trampled soil to weed invasions. The grasses present were impossible to identify in such a grazed state.

The vegetation can be separated into two broad areas, the area directly surrounding the lake and the adjoining pasture. The plants surrounding the lake grow in roughly concentric rings according to their water requirements and tolerances. Closest to the water on the fine clays are the cockleburs. This area might be submerged early in the spring or summer, but this annual can endure the flooding and waits until the drier August-October to flower. Surrounding the cockleburs on the outer, less-frequently submerged margins is a ring of cottonwood seedlings less than a foot high.

At this point, the rings break continuity because of the difference in soil disturbance on the two sides of the lake. The western side has a

less disturbed soil which is illustrated by the continuation of the ring pattern. On the outer edge of the cottonwood seedlings is an area of poor drainage with sedges, cattails, and bulrushes. Still further west of the lake but along the irrigation ditch are the large peachleaf willows, plains cottonwoods, and shrubby sand bar willows. The eastern side of the lake has a few small cottonwoods and willows at its outer margin, but the disturbed, drier ground is covered with weedy composites (asters) and a tall, weedy mustard (Lepidium latifolium). The dam at the south end also has a few trees, primarily willows and box elders.

The pasture to the west of the ditch has a very sparse ground cover, little grass, and many weedy composites adapted to drier conditions. These include asters, ragweed, sage, and some small Russian thistle.

Ten of the species listed have spiny parts, usually on the leaves of the fruit. These plants are abundant, and at the least can be very annoying. The yucca or prickly pear can inflict serious injury if not treated with caution.

There is an overwhelming number of species in the Composite family. This could be due to one or both of two reasons: 1) This study was undertaken in early fall after most other plants have bloomed and died. Composites such as asters bloom primarily in late summer and autumn and dominate the landscape at that time. 2) Many composites, the goldenrods and ragweeds, for example, are invaders of disturbed ground, and would be present in high numbers in spring and summer as well as in fall.

Few of the plants are attractive, and the general impression is that of a disturbed, weedy roadside.

## LIST OF SPECIES

Trees & Shrubs: *Populus sargentii* (plains cottonwood)  
*Salix amygdaloides* (peachleaf willow)  
*Salix interior* (sandbar willow)  
 also: *Salix bebbiana* (bebb willow)  
*Acer negundo* (box elder)  
*Crataegus erythropoda* (hawthorn)

Herbs:Allergy

Pollen: *Solidago rigida* (Compositae) (stiff goldenrod)  
*Solidago speciosa* ( " ) (showy goldenrod)  
*Ambrosia psilostachya* (Compositae) (western ragweed)  
*Ambrosia artemisiifolia* ( " ) (common ragweed)  
*Ambrosia trifida* ( " ) (giant ragweed)

Spiny: *Bidens frondosa* (Compositae) (beggars ticks)  
*Xanthium pensylvanicum* ( " ) (cocklebur)  
*Cirsium arvense* ( " ) (Canada thistle)  
*Lactuca scariola* ( " ) (prickly lettuce)  
*Glycyrrhiza lepidota* (Leguminosae) (wild licorice)  
*Dipsacus sylvestris* (Dipsacaceae) (teasel)  
*Opuntia* spp (Cactaceae) (prickly pear)  
*Yucca glauca* (Liliaceae) (narrowleaf yucca)  
*Salsola kali* (Russian thistle) (Chenopodiaceae)  
*Kochia scoparia* (Chenopodiaceae) (Mexican fireweed)

Composites: (in addition to the above)

*Aster falcatus*  
*Aster porteri*  
*Aster laevis*  
*Senecio spartioides* (grass-leaved senecio)  
*Cichorium intybus* (chicory)  
*Grindelia squarrosa* (gunweed)  
*Chrysothamnus nauseosus* (rabbit brush)  
*Liatris punctata* (blazing star)  
*Gutierrezia sarothrae* (snakeweed)  
*Artemisia frigida* (pasture sagebrush)

Others: *Verbascum thapsus* (Scrophulariaceae) (mullein)  
*Euphorbia marginata* (Euphorbiaceae) (snow-on-the-mountain)  
*Asclepias speciosa* (Asclepiadaceae) (milkweed)  
*Rumex crispus* (Polygonaceae) (curly dock)  
*Chenopodium album* (Chenopodiaceae) (lambsquarters)  
*Portulaca oleraceae* (Portulacaceae) (purslane)  
*Lepidium latifolium* (Cruciferae) (tall whitetop)

Grasses: *Aristida longiseta* var. *robusta* (Agrostidea) (three-awn)  
 species of the tribe Chloridea (weedy)



Marshy: Typha latifolia (Typhaceae) (cattail)  
Scirpus spp (Cyperaceae) (bulrush)  
Carex spp (Cyperaceae) (sedges)

Non-Weeds: Rudbeckia hirta (Compositae) (black-eyed Susan)  
Leucocrinum montanum (Liliaceae) (sand lily)

### FAUNA

As in any natural area we may expect to find a biotic community consisting of many diverse forms of life. The territory surrounding Hayden Lake is populated by fauna common to the dry Great Plains environmental habitat.

At the ground level may be found mice, gophers, skunks, rabbits, snakes, ants, beetles, crickets, grasshoppers, caterpillars, worms, and other animals. Above the ground and in the trees we may observe owls, hawks, meadowlarks, killdeer, gulls, woodpeckers, flickers, crows, magpies, squirrels, butterflies, bees, flies, moths, and other birds and insects.

While it is interesting to note these animals which are common to the complex ecological web of the plains, perhaps the most distinctive animals living in the Hayden Lake area are the prairie dogs in the 44 acre field west of the lake. Although the prairie dog is native to the plains, and at one time large numbers of prairie dogs lived in the western part of the United States, its population has been greatly diminished in recent times. Millions of the animals are killed by poisoned food and poison gases because they are a serious pest to farmers and cattle raisers in the West.

The black-tailed prairie dog (*Cynomys ludovicianus*) of the kind living at Hayden Lake, lives socially in colonies or towns of crowded burrows with populations of between five and 35 per acre.<sup>6</sup> Each burrow has a little mound at its entrance forming a curb about the shaft which leads steeply to a series of chambers 12 feet or more underground. The animal is secure from predators and spends the winter in comfort in these chambers

sustained by a store of food gathered from the surrounding area.

The prairie dog has primarily a vegetarian diet and for this reason is often in competition with cattle and other livestock for range forage. Also, their open burrows occasionally cause injury to horses and farm equipment, thus lending credence to their status as a pest. In some places, however, prairie dogs have been found to destroy weeds with resulting benefit to range grasses, especially grama grass. Also they return underground nutrients to the surface where they may be utilized by plants, and their tunnels permit oxygen to stimulate the growth of microbial life beneath the surface. The study team estimated that there are between 200 and 300 prairie dogs presently living within the Hayden Lake area. With no natural predator evident, future control of the population might be necessary.

An anticipated water life survey of Hayden Lake by the State of Colorado, Division of Wildlife, was postponed until spring of 1973. Mr. Tom Powell, Assistant Wildlife Researcher, has assured us that Hayden Lake has fishery potential and will be included under the State's urban fishing program. He also stated that lakes of similar size usually support 1000-1500 fishing trips per acre per year.

PART II  
LAND USE

PAST

The history of the Boulder area is illustrated on a small scale by some of the past land uses of the study area. The early gold strikes which brought miners to the area required agricultural support from the plains. In order to grow productive crops on the Colorado Piedmont a farmer needed to irrigate his land. For him to be assured of water when he needed it, reservoirs were built, and farmers and ranchers joined together to form ditch companies. Hayden Lake was just such a reservoir, being constructed in 1875 but not "officially" completed until 1905.

The railroads also played a significant part in the early history of the area. In 1870 the Colorado Central Railroad, later changed to the Colorado and Southern Railroad, was built between Boulder and Longmont. The track forms the western border for the study area.

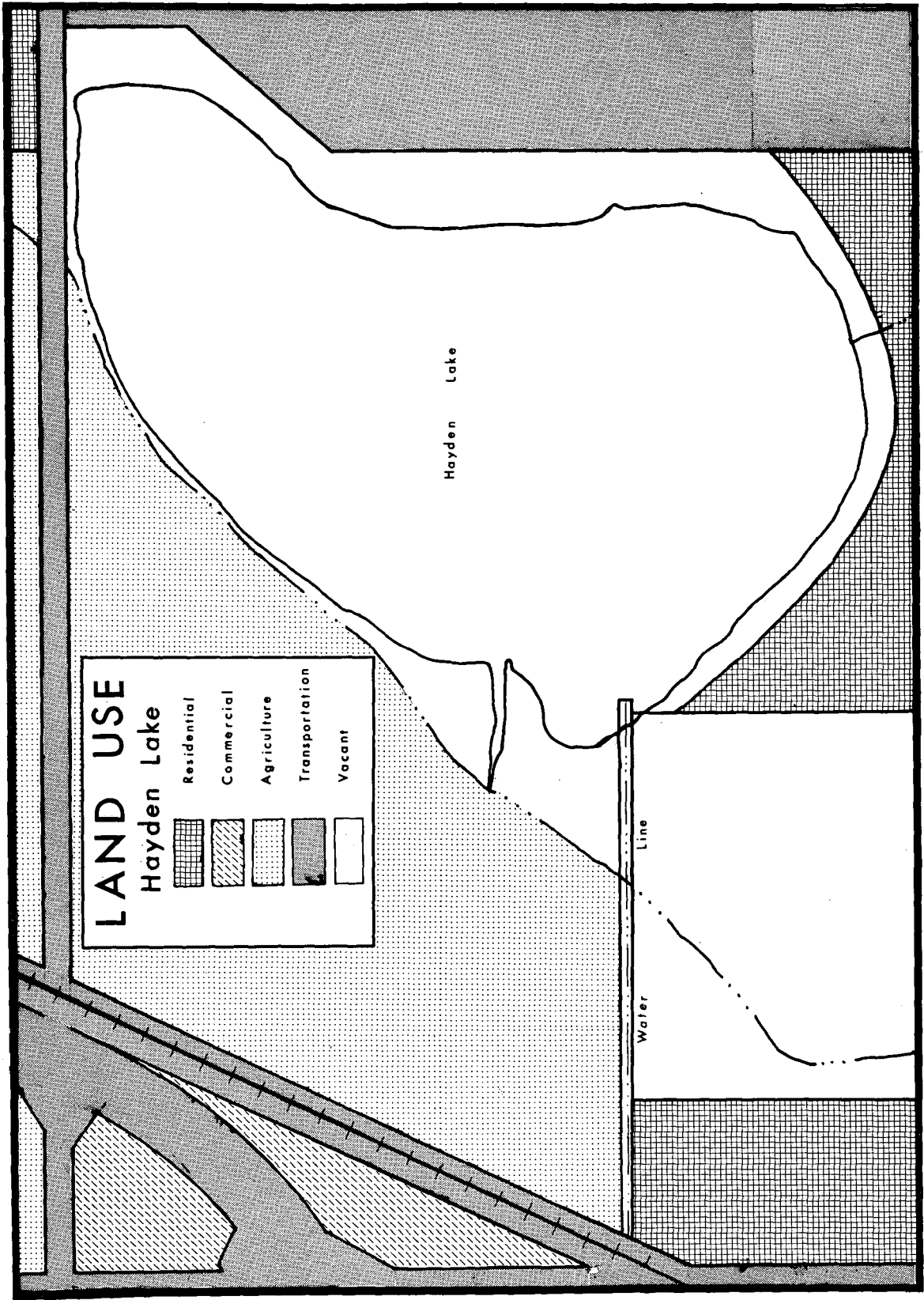
Up through 1900, the typical scene of the Boulder area was one of successful agricultural growth. Many farms dotted the area and homes were being built to accommodate further growth. Activities still had a mutual concern with the mining in the region. In 1901, some of that was changed when oil was discovered northeast of Boulder. In less than five years, over one hundred wells had been drilled of which 28 were producers. Land came under the ownership of various oil companies as the result of outright purchase and speculation. Oil production from the area soon became sufficient to qualify it as the second largest in the state. There were three wells drilled in the Hayden Lake area: the Alamo, the Blue Jacket, and the Interstate. It does not appear from the

record that any of them became producers.

In 1920, the area saw its first airplane landing on the flat land to the east. The Silverwing Aircraft Company established a small operation near the present Boulder Municipal Airport. Though the company moved in 1928, the airport's presence had been established in the area.

In 1931, the members of the Boulder & Lefthand Irrigation Company decided they needed more water. By March of that year they made a filing for an additional 311.7 acre feet of water, which was acquired by raising the dam 16 feet and excavating the lake bottom an additional five feet. This brought the total water in the reservoir to 501.8 acre feet which is its present capacity.

The area west of the lake was primarily used for grazing with no significant crops attempted due to the poor quality of the soil. In recent years the airport has been enlarged to accommodate increased air traffic, the railroad has decreased in use, and there has been considerable residential development to the south and west of the study area. The rate of converting agricultural land to fairly intensive residential has increased during the past few years.



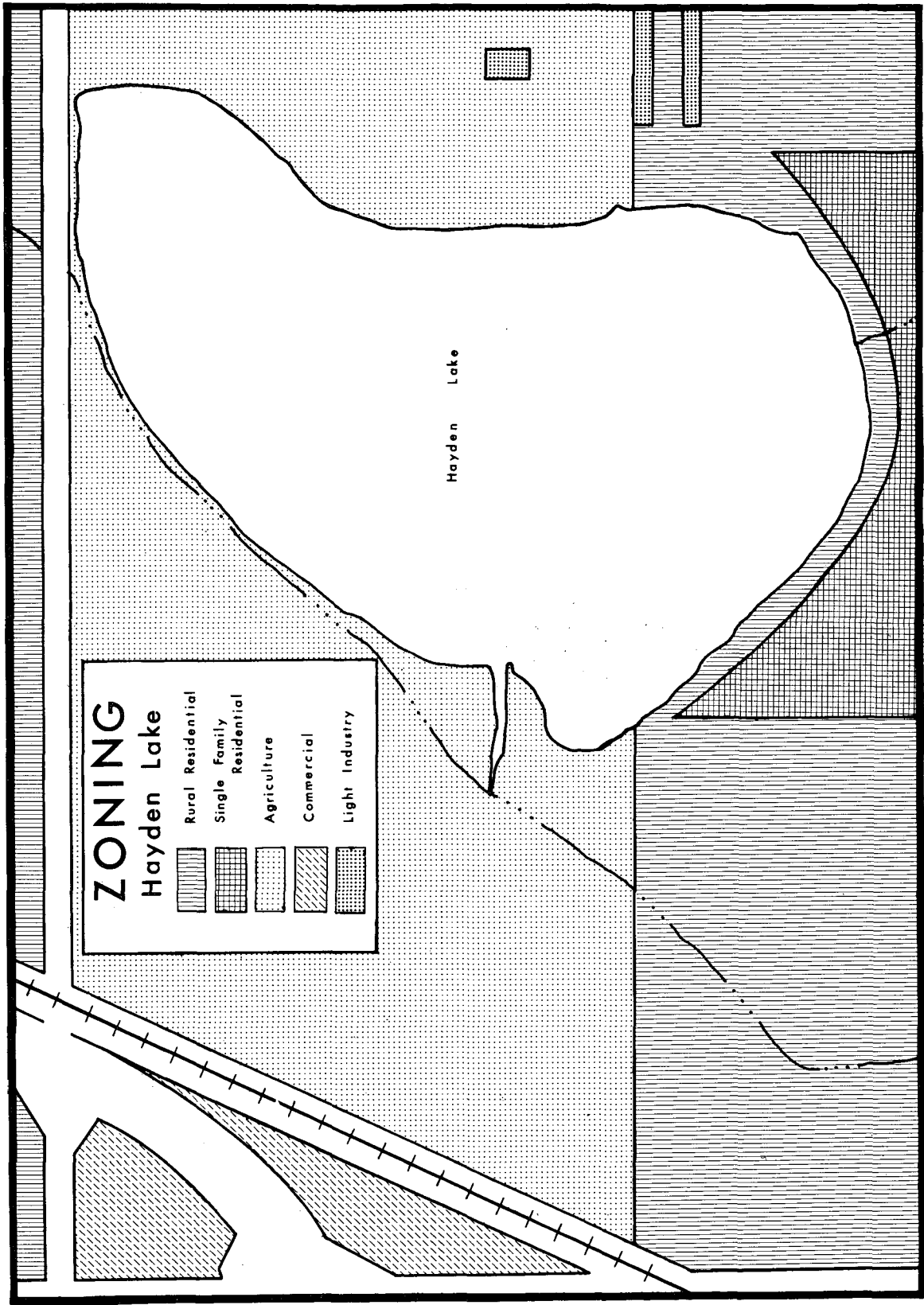
**LAND USE**

Hayden Lake

- Residential
- Commercial
- Agriculture
- Transportation
- Vacant

Hayden Lake

Water Line



PRESENT

The land in the immediate vicinity of Hayden Lake appears to be in a transitional stage from a predominantly open, agricultural type of use to one of increasingly urbanized development. In our examination of the area we find that present land uses are representative of these changing conditions. The categories of land uses which are of significance in our analysis are residential, agricultural, commercial, transportation, and vacant.

The most notable residential use of the land is the Vista Village Trailer Park adjacent to the southern edge of the Hayden Lake dam. This trailer court, with spaces developed for approximately three hundred trailers, extends southward to Valmont Road and is bounded on the east by the Airport Road. Other homes in the area are individual single-family dwelling units with about ten residences located north of Independence Road, 15 on either side of County Road 53, and five scattered to the south of the lake.

Agricultural use of the land seems to be restricted mainly to relatively unimproved pastures for grazing except in isolated areas. Approximately ten horses share the field west of the lake with prairie dogs, while the area of open field to the north, across Independence Road, appears unused at this time. Other pasture lands, broken by residential developments, are considerably smaller and are interspersed throughout the vicinity.

Commercial activity in the study area is limited to the intersection of the Longmont Diagonal and County Road 53. A service station, mobile home dealer, car wash, and restaurant-bar are now located at this intersection.

Land use connected with transportation has a large influence upon the Hayden Lake area. The Boulder Municipal Airport borders the eastern edge of the



lake and extends eastward for over half a mile. The airport is used primarily by small private aircraft and a few gliders. The Longmont Diagonal Highway provides a major automobile artery for the City of Boulder, and the Colorado and Southern Railroad tracks parallel the Diagonal. County Road 53 on the west, though handling comparatively minimal traffic, has the potential, if the proposed 47th Street By-pass is adopted, of becoming a thoroughfare.

## PART III

## LAND TENURE AND EVALUATION

TENURE

Table 1 lists the present owners of land in the Hayden Lake area. The letters refer to the location on the accompanying map. The significant property holders of the land surrounding the lake, which is owned by the Boulder & Lefthand Irrigation Company, are the City of Boulder with the airport to the east, the Boulder & Lefthand Irrigation Company to the west, and the Vista Village Trailer Park to the south. The latter is owned jointly by Doris L. Baisirger, Vaughn Leggett, and Inez L. and Ledra L. Snyder. Neil D. McKenzie, et al., own the major portion of the land north of Independence Road.<sup>7</sup>

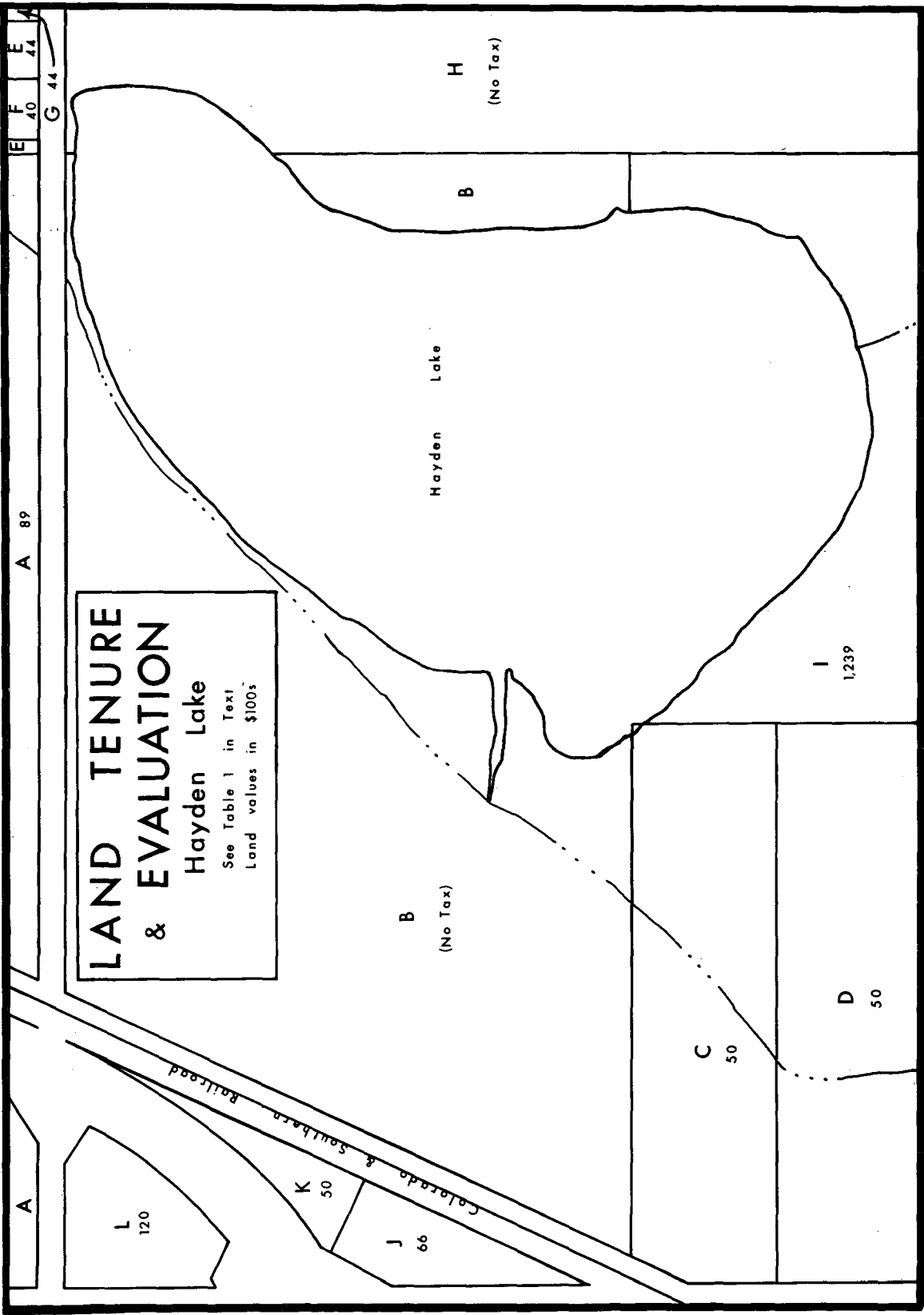
EVALUATION

The examination of land values in the Hayden Lake area involves a study of the assessed land values recorded at the County Assessor's Office, Boulder, Colorado. The assessed land value is thirty per cent of the actual appraised value. The property tax is determined by multiplying the assessed value by the appropriate mill levy.

The information concerning the land values of the Hayden Lake study area are presented on Table 1. The chart in this survey lists tract number, the acreage involved, and its accompanying assessed value. From this value was computed the actual appraised value and the value per acre. The appraised value is determined by the County Assessor from his appraisal of present land use value and not in consideration of any potential value of a future use. The fair market value of property is generally between ten and twenty per cent greater than the assessor's appraised value.

Because the Hayden Lake area is presently used for mainly agricultural and rural residential purposes, the assessed value reflects the value of these usages. However, the location of this area might place the fair market value of its potential use in a different category. The pressure of an expanding Boulder for development and the potential commercial, industrial, or more intensive residential usages of this land may possibly make the fair market value considerably greater than what might be expected of the land if it remained agricultural. The future land values will depend directly upon the types of land use selected or permitted for the area.

We may already observe how the values have risen in the case of the Vista Village Trailer Park adjoining Hayden Lake to the south. This residential development is valued five to ten times greater per acre than the former agricultural area. To the west, near the Longmont Diagonal, commercial businesses established have values per acre which have increased five times that of open agricultural lands.



**LAND TENURE  
& EVALUATION**  
 Hayden Lake  
 See Table 1 in Text.  
 Land values in \$100s

A 89  
 E 40  
 F 44  
 G 44

L 120

J 66  
 K 50  
 Colorado & Southern Railroad

B (No Tax)

Hayden Lake

B

H (No Tax)

C 50

D 50

I 1,239

TABLE I

Land Ownership and Assessed Values in the Hayden Lake Area\*

Use	Map Identification Letter	Present Owner	Tract Number	Acreage	Assessed Value	Appraised Value	Appraised Value/Acre
Agricultural	A	Neil D. McKenzie, et al.	897899	39.1	\$2670 Improvements: 50	\$ 8891 167	\$ 227.39
	B	Boulder-Lefthand Irrigation Co.	988992	44	NO TAX		
Rural Residential	C	W. William & Gertrude Anderson	14295	10	1500 Improvements: 1680	4995 5594	499.50
	D	Keith Enterprises, Inc.	00092	10	1500 Improvements: 5220	4995 17383	499.50
	E	George & Zelma Carter	811733	5	1320 Improvements: 6390	4396 21279	879.20
	F	C. B. & Lucille R. Bennett	632534	1	1200 Improvements: 2100	3996 6993	3996.00
	G	Earl & Lillian Juhl	645570	5	4140 1320 Improvements: 2290	13786 4396 7626	879.20
	H	City of Boulder	99876	97	NO TAX		
Airport Trailer Park	I	Doris L. Baisirger, Vaughn Leggett, & Inez L. & Ledra L. Snyder (each 1/3 interest)	867970	18.5	12400 Improvements: 10370	41292 34532	2752.80
			867971	20	12400 Improvements: 10370	41292 34532	2064.60
			377820	20	12400 Improvements: 10370	41292 34532	2064.60
	J	Mark One	831142	1.5	1980 Improvements: 12890	6593 42924	4395.33
Commercial Business	K	L. F. & Ira M. Wellborn	684232	1.5	1500 Improvements: 10300	4995 34299	3330.00
	L	J. D. & J. B. Parker	629957	2	3600	11988	5994.00

\*Assessed Value 1970<sup>8</sup>

## PART IV

## ALTERNATIVES, IMPACTS, AND RECOMMENDATIONS

Consideration of the future of the Hayden Lake study area yields five alternatives. Each alternative and its impact on the Hayden Lake area is discussed below. This discussion is followed by the specific recommendation of the study group.

The first alternative is light industrial development. It has been suggested that a light industrial park might be beneficial in the Hayden Lake area. Certainly the proximate access to transportation routes of major highways, railroads, and possibly aircraft exists in the area. Several benefits would be derived from this alternative. Warehousing activities would be transferred to the outskirts of the city which would reduce some industrial and heavy truck traffic to the central business district. An additional benefit of an industrial park would be an increase in the Boulder tax base. This added revenue might be used to acquire greenbelt or open space land. The location just off the Longmont Diagonal and the proposed 47th Street By-pass would facilitate easy dispersal to the north, northeast, and south.

Several restrictions to this industrial alternative are apparent. The proposed area is directly in line with the existing east-west runway of the Boulder Municipal Airport. The Federal Aviation Agency has fairly specific height regulations on buildings in or near the flight path of a runway. This plan also runs counter to the proposals in the 1970 Boulder Valley Comprehensive Plan and may tend to produce unwanted high density growth in the Hayden Lake area.

The second alternative is residential development. To the south and

west of the study area, this alternative is already a reality. The rapid residential encroachment into the vicinity is evident from studying past aerial photographs. If this trend is followed, a prediction can be made that this area will develop into low income, high density housing. Several factors would make the Hayden Lake area unattractive for residential development. The previously mentioned restrictions on the height of buildings in light industry would be secondary to the potential danger of aircraft flying low over high density apartment type structures. In fact, due to Federal Aviation regulations, residential development would be restricted to the southwest corner of the study area. An additional factor worth anticipating would be the noise volume of the various aircraft, trains, and heavy automobile and truck traffic.

A strip of business development along the Diagonal and Independence Road is the third possibility. Commercial development has already been proposed in the Boulder Valley Comprehensive Plan, but for the area directly north and west of the study area across the Longmont Diagonal. Besides being close to growing population centers, there are easy access routes into the area. The city would also derive a healthy tax base from this development. This alternative possesses several problems. Federal Aviation Agency safety regulations may limit building height and location directly west of the flight path of the airport. The numerous transportation routes in the area, producing ever increasing traffic noise may prove annoying to customers, offsetting the commercial value of easy access. And finally, strip development seems contrary to recent concern shown by citizens for concentrating business areas.

The fourth alternative is basically the one set forth in the Boulder Valley Comprehensive Plan which is city purchase of Hayden Lake and the property

west to the Diagonal. Coming under potential greenbelt, the area would become a recreational location. A city park will definitely be needed in the future if the proposed development south and west continues. However, the numerous transportation facilities operating near this area might present serious safety limitations for any intensive recreational use. A more feasible solution within this alternative would be a limited-use recreational area. This option could include fishing on the lake, picnic areas around the lake, and a nature walk circling the prairie dog colony. Besides providing an unusual visitors' stop, the location could be used by various school groups for educational field trips. In the southwest corner of the area, considerably south of the airport flight path, a small children's park could be developed for the citizens of the mobile home park. There is no usable park in the vicinity. An additional possibility within this alternative might be the development of a city-owned camp ground west of Hayden Lake.

The final alternative is simply no development. The property would remain as it presently is zoned for agriculture. The public would continue to be restricted from the area, and the lake would remain a rather unattractive, litter-gathering reservoir.

#### RECOMMENDATION

It is the opinion of the study group that a limited use recreational site is the most suitable alternative for the Hayden Lake study area. If in the future the airport is moved, the alternatives listed above can all be re-considered. None of them would be limited by any Federal Aviation regulations regarding height of structures or location in the flight path.

Light industry could possibly move to the east and encompass a much



larger area, assuming the 97 acres of the City's airport land were made available for private development. Residential opportunities would also be opened up, as well as strip development. The specific study area of a little over eighty acres, including the lake, would continue to have an appeal as a recreation or open space location regardless of the surrounding development.

FOOTNOTES

- 1 Details of Boulder's Climate. Boulder, Colorado: Chamber of Commerce, 1972.
- 2 Zena M. Hunter, Geology of the Foothills of the Front Range in Northern Colorado (map, sheet 2 of 2). Denver, Colorado: Rocky Mountain Association of Geologists, 1955.
- 3 Record of Water Decrees, District #6, Book 8. Boulder, Colorado: Boulder County Clerk's Office, pp. 263-264.
- 4 Alex Laber, President, Boulder & Lefthand Irrigation Company, Longmont, Colorado. Telephone interview.
- 5 Donald C. Moreland, Soils Handbook for the Boulder Survey Area, Colorado: Report for the U.S. Department of Agriculture. Boulder, Colorado: Soil Conservation Service, 1966.
- 6 Alexander C. Martin, American Wildlife and Plants. New York: McGraw-Hill Book Co., 1951.
- 7 Land Description Book. Boulder, Colorado: Boulder County Assessor's Office, 1972.
- 8 Ibid., 1970.

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