STEHEKIN VALLEY COMPREHENSIVE PLAN

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STEHEKIN VALLEY COMPREHENSIVE PLAN

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INTRODUCTION

This comprehensive plan deals with a valley which has been recognized on a national scale for its remote, isolated setting, its rich pioneer heritage, its scenic grandeur, the subtle detail of its beauty and its scope of recreational opportunities. For its people, the valley is an access to rugged backcountry, it is a place to hunt and fish, it is a stopping point on a boat excursion, it is a place for a summer home, it is a place to visit on a two week vacation, it is a place to live and work, and more.

Perhaps this very richness of values and meaning poses the greatest challenge in planning for the future well-being of Stehekin. In an effort to preserve the area's unique, varied qualities, National Park and Recreation Area status has been assigned, numerous plans, studies and regulations have already been developed, all with the intent of preserving some aspect of the valley's essence. Ray Courtney[1] expresses the hazards as well as the challenge facing those who would plan for the future of a place that is loved:

> *"I believe we should all consider carefully what we really like about Stehekin. For me it is the relative lack of regulations--the relative inconvenience which has tended to encourage those who are resourceful, and this makes more interdependence and human qualities--the emphasis on integrity instead of law and order--the comparative self-reliance."*

> *"Plan this all out and organize each step--make access and living convenient and we will do away with the uniqueness of Stehekin--we will invite all of the qualities that are concerning us now. . ."*

It is the intent of this plan to recognize and preserve the values which contribute to Stehekin's uniqueness. The plan will focus on the use of private land within the Lake Chelan National Recreation Area (see location map on following page) and its interrelationships with the public

[1]Lifelong valley resident and member of one of the valley's original homesteading families.

lands and their administration. Basic standards common to all private lands in the County, which relate to the general health, safety, and welfare, will be assigned on an equitable basis. However, the real emphasis of the plan will be in its efforts to point toward higher goals which cannot be achieved through mere rules and regulations. These goals must be achieved through an appreciation of the resourcefulness, interdependence, and integrity of which Ray Courtney speaks.

NATURAL FEATURES

The Stehekin Valley possesses a set of natural characteristics which makes it unique among Cascade mountain valleys. The geology, topography, climate, hydrology, vegetation and wildlife all contribute to the essence of the Stehekin Valley's natural environment. This section takes a brief, selective look at some of these features, especially as they relate to man's use and enjoyment of the land.

Geology and Topography

The Stehekin Valley is one of the finest examples of glacially carved canyons in the North Cascades. An ice sheet nearly one mile thick carved and rounded the walls of the valley into their classic "U" shape, and as it retreated, dammed the lower end of the basin to create present day Lake Chelan. The valley is nearly 6000 feet deep, from ridge top to valley floor, a mile or less in width at the floor, and extends approximately 25 miles to its head at the Cascade Crest.

The valley floor is relatively flat, averaging about 5 - 10% slope. The surrounding ridges rise abruptly, with slopes in excess of 40%. The map on page 8 gives an indication of the extent and configuration of the valley floor. A number of debris torrents or rock slides occur at points along the base of valley walls. Within the valley, the most noticeable influence is the river. Even in areas relatively removed from the present channel, terraces, old gravel bars, and abandoned channels are common. These features give most of the valley a rolling, up-and-down character. Because of this unique flat floor and steep walls configuration, virtually all construction has occurred on the valley floor.

Climate

Prevailing westerly winds from the Pacific Ocean and the deep narrow valley are major influences on the climate of the Stehekin Valley. The result is that the lower Stehekin Valley is generally 2 to 4 degrees cooler in temperature and receives considerably more precipitation (33.8 inches vs. 11.23 inches) than the City of Chelan. This pattern is likewise reflected in snowfall records with Stehekin receiving an average of 39.9 inches in January, while Chelan receives an average of 13.3 inches. In the valley near the lake, snow usually reaches a depth of one to 2 feet in December, 2 to 4 feet in January, and 4 to 6 feet in February and March. By mid-April, snow has usually melted in the lower valley, while on the higher ridges, it remains until early summer. The frost free growing season extends from about mid-May to the end of September. The average number of clear days each month increases from about five in mid-winter to ten in the spring, 20 in midsummer, decreasing to 12-15 in late summer and early fall.

Hydrology

The surface waters of the Stehekin River system, including the upper portions of Lake Chelan, can be characterized as clear and cold, with a high oxygen content and low fertility. Despite the presence of numerous privies and septic tank systems in the valley, testing to date has evealed extremely low levels of coliform bacteria[1], with most samples recording less than 1 coliform/100 ml. (The highest count recorded thus far was off Weaver Point dock, at 4 coliform/100 ml, and was taken before holding tanks were required on boats.)

The average flow of the Stehekin River is 1429^3 ft./sec. The maximum flow on record occurred during the 1948 flood, on May 20, and was estimated ad 18,900 ft.^{3}/sec., with a gage height of 29 feet. Maximum flood flows for the six most recent years of record are as follows:

Date	Max. Flow	Gage Ht.
June 10, 1972	14,400 ft.^{3}/sec.	27.35 ft.
May 17, 1973	5,340 " "	23.11 "
June 16, 1974	16,600 " "	28.21 "
June 2, 1975	10,200 " "	25.64 "
Dec. 4, 1974	9,310 " "	25.17 "
June 7, 1977	5,800 " "	23.40 "

From this it can be seen that twice in the past six years, the Stehekin River has experienced substantial high water runoff. Stream gage levels show reduced magnitudes of increase when maximum flows exceed 10,000 ft.^{3}/sec., reflecting the flatness of the valley floor. During major floods, the river is able to spill its banks and occupy its floodplain, thereby moderating the ultimate height of the flood's crest.

The floodplain of the Stehekin River has been mapped by hydraulic engineers[2], as shown by the map on page 6. This map indicates the extent of the 100 year floodplain, and further shows the floodway and the floodway fringe within that floodplain. The floodway designation represents the area needed by the river to carry off the 100 year flood. Occupation by structures of land within the floodway would tend to

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[1] An indicator of contamination due to improper sewage disposal.

[2] CH2M Hill, under contract with H.U.D.

Floodplain Maps

increase the flood levels on the fringe. Lands in the flood fringe could be built upon with proper precautions, without significantly affecting the peak flows. The flat valley floor accounts for the extensive areas included within the 100 year floodplain.

Groundwater data for the valley is quite limited, consisting of thirteen well logs from the lower valley. Static water levels range from 43 feet (at the landing) to five feet (Silver Bay area). Water tables of less than ten feet also occur at the maintenance yard, on the main road one-half mile above Silver Bay, and on the main road just above the turnoff to Buckner Farm. Impervious layers also exist in parts of the valley, with wells penetrating to deep water tables. At present septic tank wastes post no known threat to wells included in the records. The Chelan-Douglas Health District minimum standard of two feet separation between the bottom of a drainfield and seasonal high water table should help in avoiding contamination. Another potential problem could occur in excessivly drained, coarse gravel areas where septic tank effluent could quickly enter the deeper water table. With proper care, on-site sewage disposal should pose no threat to the valley's water quality.

Vegetation

A variety of climatic, site, and disturbance factors contribute to the relative diversity of vegetation types found in the Stehekin Valley. The deep, narrow, low elevation valley, along with such influences as fire, the river debris torrents, and man have all created a mixture of plant associations which add to the visual attractiveness of the area. The general pattern of vegetation densities is portrayed by the map on the following page.

Prior to settlement in the valley, western red cedar stands were found throughout the lower valley floor. Most of these stands were

Existing Land Use +
Vegetation Map

logged in the early 1900s, and today, remnant stands are visible between Weaver Point and Harlequin Campground. In place of the cedar, a variety of hardwoods have occupied the moister valley floor sites.

On drier sites, Douglas fir, grand fir, and ponderosa pine are common. Clearings created as a result of fire or man's activity tend, if left alone, to return to a forested condition.

Man has played an important role in modifying the vegetation of the Stehekin Valley, and will continue to do so in the future. Aside from limited construction of new homesites and continued small scale farming and grazing, man's most important influence on vegetation today is through timber cutting for firewood.

Through Section 402(a) of Public Law 90-544 and the park's master plan, cutting of firewood for domestic use is allowed. An interim firewood management plan has been established for Lake Chelan National Recreation Area which defines the source of wood, type of tree to be cut, permit regulations, and amount of wood that can be cut. Basically only dead, dying, or hazard trees can be removed between September 10 and May 15 on a selective cut basis (to leave the area with an acceptable landscape appearance). The National Park Service selects and marks trees to be cut; all wood, two inches and larger, must be collected (and the remaining debris scattered); and off-road travel by motorized vehicles is prohibited (unless allowed on permit). A resident (one who resides in the valley 240 calendar days per year) is allowed six cords of wood, a parttime resident is allowed two cords, and a commercial facility is allowed six cords. A policy of cutting hazard trees in public use areas within the National Park and the recent insect infestations are providing a large supply of wood for the next few years, but the amount of wood that is available on a continuing sustained basis in unknown.

CULTURAL BACKGROUND

The history of the Stehekin Valley is represented by a series of events which characterize the eras, patterns of discovery, and settlement of the Pacific Northwest. Stehekin history reflects the era of Indian prehistory, the era of white exploration and discovery, the era of resource exploitation, the era of settlement, and the current, unfolding era of appreciation. Each of these eras produced some changes in the valley, some permanent, some barely leaving their mark. Noteworthy is the fact that in Stehekin eras are concentrated into a very short span of time, and many details are still fresh in the minds of the valley's people.

Indian Prehistory

The word Stehekin is said to be an Indian word meaning "the way through the mountains", indicating that the valley was probably used by the Indians as a trade route between the coast and the interior. Although little is presently known about the valley's original residents, their mark has been left on the rocks across from the landing, in the form of pictographs, which have sadly been defaced by subsequent valley visitors.

Exploration and Discovery

Alexander Ross of the Pacific Fur Company is regarded as the valley's first white visitor. In 1814 he led an expedition in search of a route between the interior fur trading posts and Puget Sound. His route is thought to have taken him over Twisp Pass, down Bridge Creek, then up the Stehekin River and over Cascade Pass. Although fur trapping was a minor theme in the North Cascades, the Ross expedition helped open the area to subsequent explorers.

Systematic exploration of the valley did not occur until the military expeditions of Merriam in 1879 and Pierce in 1882. Pierce's map and report publicized the North Cascades and made its timber and mineral resources known to the rest of the country.

Exploitation

Mineral exploration began in the Stehekin Valley and surrounding mountains in the late 1870s and continued on up to the 1950s. The early mines, in such places as Horseshoe Basin and Doubtful Lake Basin, attracted a great number of people to the valley. However, the ore proved to be of low quality, difficult to extract, and far from the nearest smelter.

Resource exploitation in the Stehekin Valley was not restricted to minerals. Logging took place for local building material, firewood and steamboat fuel. Gravel, sand, and rock has long been utilized for building material. Lake Chelan supported a short lived commercial fishery, which supplied the Waterville and Coulee City market with fish. Hunting of the area's wildlife, especially mountain goats, also occurred to excess in the early days, bringing about the first Lake Chelan National Park proposal in 1892.

Settlement

The first permanet settlers, primarily prospectors or those people supplying the miners, moved into the Stehekin Valley in the late 1880s. Early homesteaders built their cabins and started subsistence farming and orcharding in the valley. The Buckner Farm is probably the most noted example of an early homestead farm. Among the early cabins which still remain are the Kronk cabin (the first schoolhouse in the valley), the Buckner cabin and the McComb cabin. The most substantial early structure in the valley was the Field Hotel, which was torn down when the Lake was raised in the late 1920s. The present school house was built in 1921 and is still in use. The building which today serves as the Stehekin community hall was originally built in 1917 and used as a fish hatchery. This period of settlement continued into the mid-1950s.

Appreciation

The conservation movement traces its roots to the public protest over excesses in exploitation of natural resources. Since the words conservation and preservation have become so emotionally charged, the term "appreciation" is suggested to characterize the period which followed exploitation and settlement in the Stehekin Valley.

This period can be traced back to the early days, with lodges and resorts serving tourists since the 1890s. However, the primary emphasis of this period has been felt in more recent years, with the increased popularity of outdoor recreation. Beginning in about the mid 1950s, an increase in seasonal residents began to appear. The National Park and Recreation Area was created in 1968 in response to concerns over the threats of logging, mining, and road construction to the area. In the ten years since the establishment of the Park complex, annual visitation to the Stehekin Valley has increased by about 100%. During that same period, the number of residential structures in the valley has increased by about 60%. Appreciation of the quiet, isolated beauty of Stehekin has thus resulted in substantial increases in usage for the area, both by private property owners and by the visiting public.

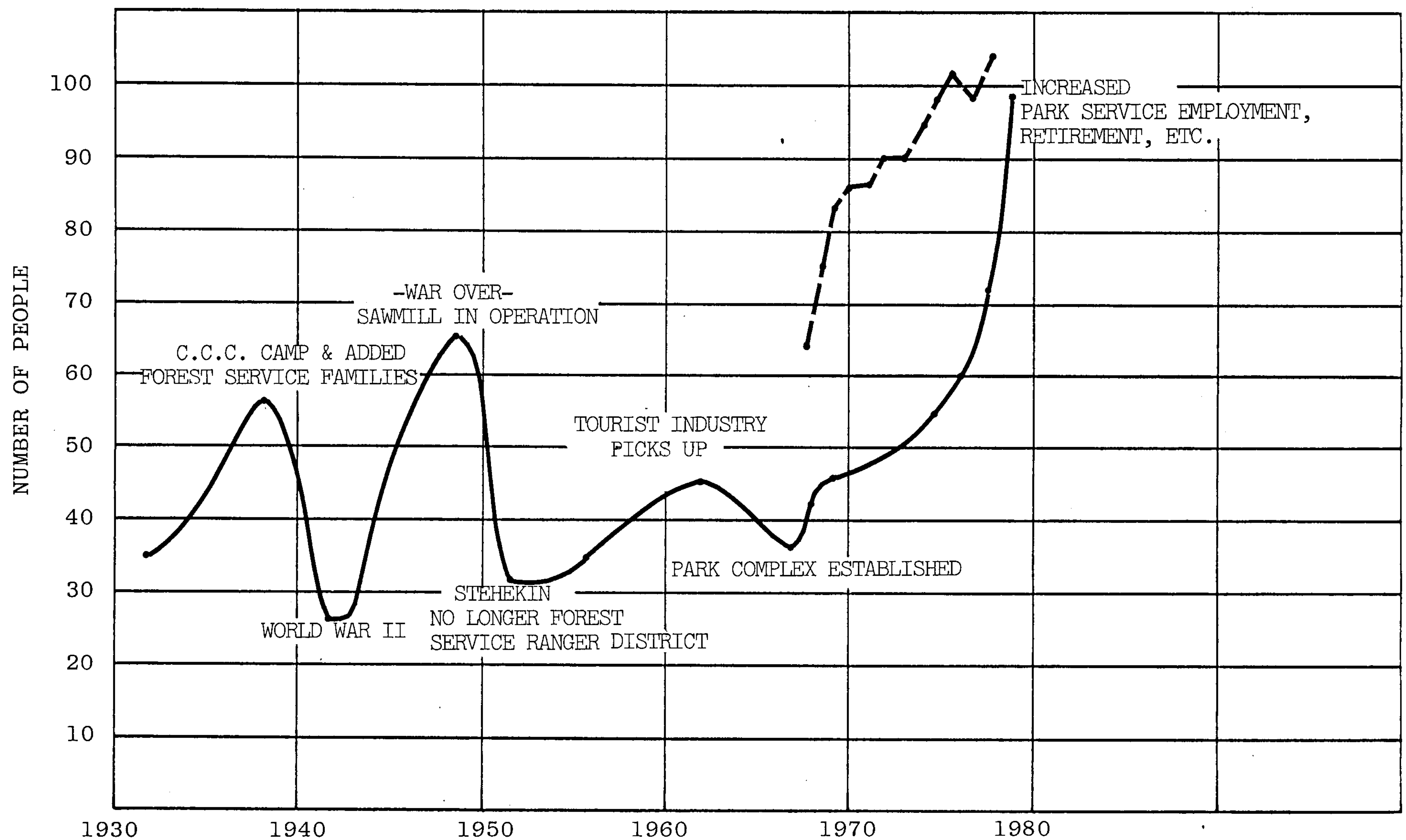
RESIDENT POPULATION TRENDS

The chart on the following page provides an illustration of the population fluctuations which have occurred in the Stehekin Valley

STEHEKIN WINTERING POPULATION TRENDS

and

NUMBER OF ELECTRICAL CUSTOMERS



during the past half century. In the early 1930s, the population reflected a mix of homesteaders, forest service employees, and resort operators. Expanded government programs had increased the population by the late 1930s. The impact of the war is most noticeable, followed by an increase due to sawmill employment. The loss of Forest Servce and sawmill jobs in the early 1950s resulted in another sharp population decline. Tourist industry growth, beginning in the mid-1950s and continuing up to the present time, has had its impact on permanent population levels. Most recently establishment of the National Park complex has effected the population, with a short-lived decline when the complex was first established, followed by a significant increase as park and park-related staffing increased. Young people and the retired have also become factors in the recent population increases.

It is apparent that population trends in Stehekin are heavily dependent upon economic factors, primarily employment opportunities. Projections into the future are difficult to make for such a small area, but a number of influences can be identified. Further growth based on increased permanent Park Service employment is highly unlikely. In fact, budget constraints might result in employment reductions in future years.

A slight potential for increase due to immigration of retired families seems possible. However, the remoteness, length of winter, isolation, and inconvenience of living would seem to restrict this possibility to the most hardy and dedicated people. Also, with increasing age, retired persons could be expected to move back out of the valley to be closer to required medical care and facilities.

Significant population growth due to a continued influx of young people appears most unlikely, due to the limited housing and employment opportunities. A continued pattern of coming and going seems likely, with young people moving into the valley for a year or two and then moving on, with occasional individuals obtaining employment and remaining.

One factor which may sustain growth in the wintering population would be the popularity of winter recreation. Snow camping, cross-country sking, snowshoeing, and winter mountaineering are increasing in popularity. Such activities might result in greater use of concessionaire and outfitter services during the winter months, thereby effectively increasing the winter population of the valley.

CARRYING CAPACITY

Carrying capacity is a term borrowed from the biological science of ecology, and refers to the capability of a habitat to support a population of wildlife for an extended period of time without degrading that habitat. In other words, it characterizes a wildlife population living in balance with nature.

Attempts have been made to apply this term to human settlements. The concept itself is useful, however some cautions must be kept in mind. First, man is unique among all other creatures in his ability to alter the carrying capacity of an area by modifying the environment or by modifying his means of relating to the environment. Also, it is man's nature to respond to challenges: If you tell someone he can't build because there isn't enough electricity or firewood, chances are, he will tend to apply his creative abilities to overcome the supposed limiting factors.

Nevertheless it is possible to look at some of the resources of the valley, and consider whether they could support added growth and development. It is also possible to consider what negative impacts might occur in the valley if the area were modified to allow increased levels of use in the valley. This type of input is necessary in developing a plan for the valley's future.

Firewood

Most permanent residents use firewood for home heating purposes. Seasonal residents also utilize firewood, in lesser amounts, for heating purposes while in the valley. The Park Service presently feels that the current level of usage could be sustained, and that a few additional families could also be served, however, definitive data is lacking.

The chart on the following page indicates the number of firewood cords which were authorized to be taken from federal lands by permit between the years 1972-1978. The sharp increase in firewood usage between 1977 and 1978 is most apparent. This increase tends to reflect a similar increase in the valley's wintering population, which grew from an estimated 72 persons in 1977-78 to 98 persons, representing 35 to 40 households in 1978-79.

A rough estimate of valley floor acreages gives the following information:

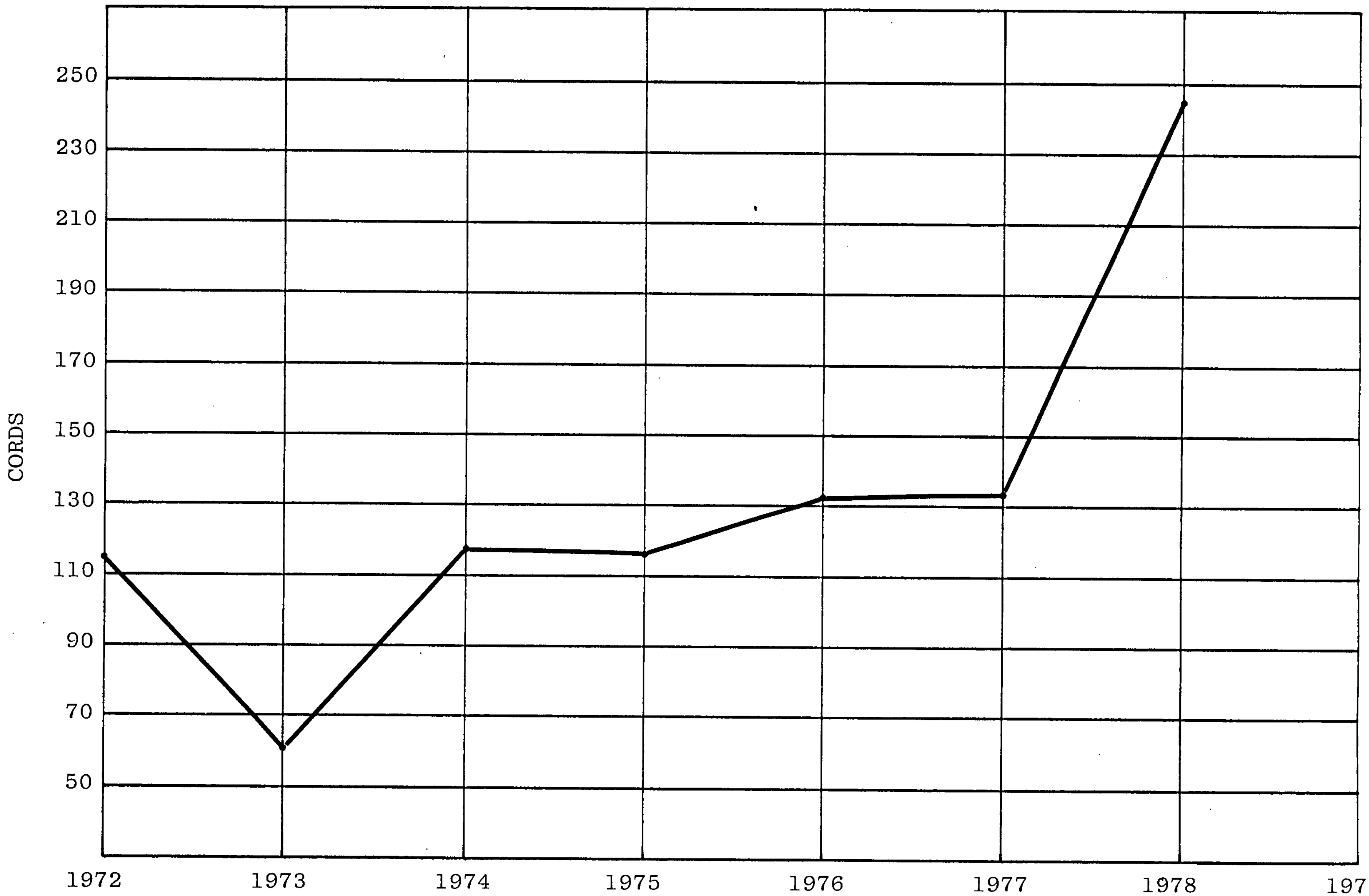
1640 Acres	- Heavy Timber
130 Acres	- Space Timber
500 Acres	- Cleared Land
430 Acres	- Other (river channel, roads, etc.)
2700 Acres	- Total area in N.R.A., valley floor

Of the 1770 acres of total timbered valley floor land, 450 acres are inaccessible by road (lying across the river), thus leaving about 1320 acres of accessible N.R.A. timber land capable of supplying firewood.

According to one of the few sources available[1], an acre of timber land can reasonably be expected to produce about one-half cord of firewood

[1] The Complete Book of Heating With Wood, Larry Gay, 1974

WOOD CONSUMPTION IN CORDS
(Based on permits issued by N. P. S., Stehekin)
1972-1978



per year on a sustained yield basis. If this figure were applied to the Stehekin Valley, it would take about twelve acres per family to support annual firewood needs. This would indicate that the valley could supply cordwood for about 110 families on a continuing basis. This figure represents about 2½ times the present number of wintering households.

It should be noted that a number of local factors may prove significant in determining the valley's actual productivity of firewood. Growth rates, age classes, accessibility, and scenic management objectives will all affect the availability of firewood, and may prove the figures cited above to be inaccurate. For these reasons, a detailed study of the firewood resource, along with a management plan, will be necessary in sensibly dealing with this matter.

Gravel

The legislation authorizing the N.R.A. specifically allowed for continuing the historic use of rock, sand, and gravel material in the valley for construction purposes. There is an existing stockpile of this material, which is being used at a rather slow pace. The Park Service issues extraction permits for specific locations, such as the area near Company Creek bridge, however the number of requests has been very low.

It should be noted that, unlike firewood which is continually used year after year, rock construction material is generally needed at one point in time for each new residence that is constructed. Gravel supplies do not appear to be a significant limiting factor for additional development. The only situation which could possibly alter this assessment would be a demand for fill to enable construction on elevated sites within the floodway fringe.

Electricity

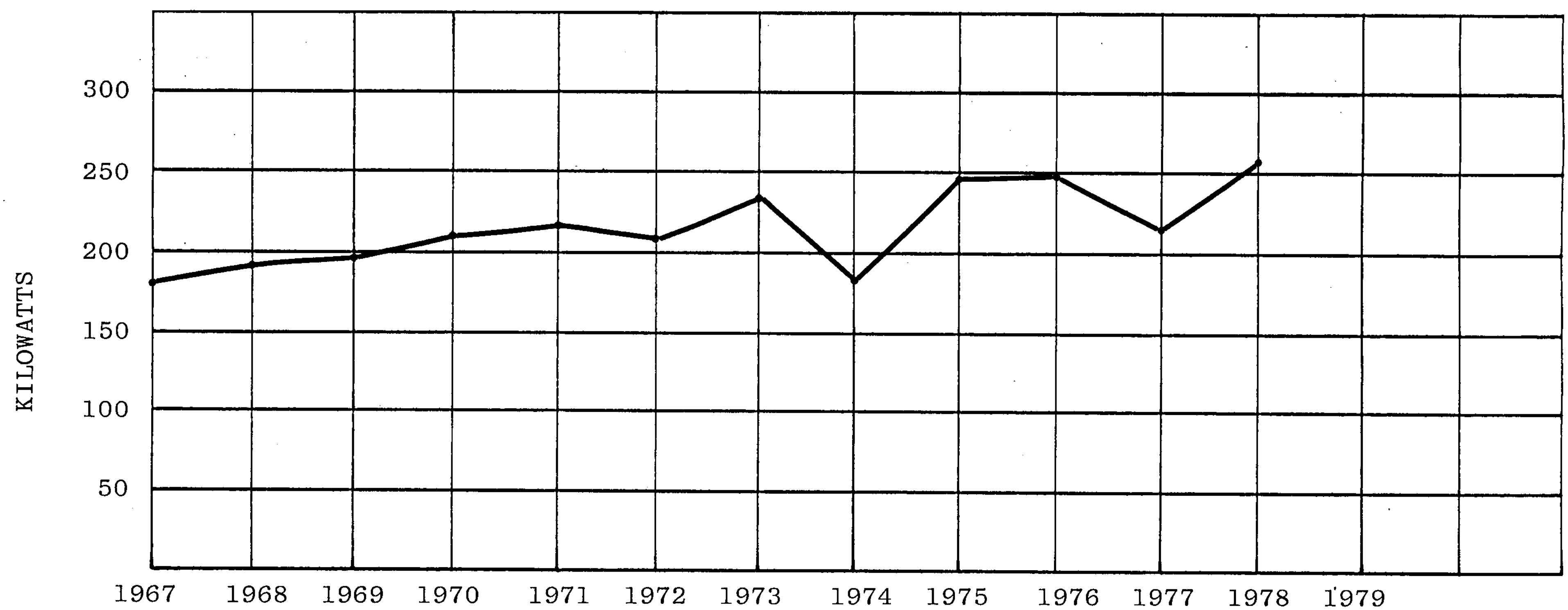
The Stehekin Valley receives electrical energy from facilities owned by the Chelan County P.U.D. Power is supplied by a 200 KW hydro unit and diesel units capable of producing an additional 400 KW for a total peak output of 600 KW. For planning purposes, the P.U.D. assumes a maximum load of 350 KW on this system, thereby covering the possibility of the largest unit being out of service, and also allowing for peak periods of use and for surges when power is restored. The present peak level of use by the existing plant to date is 274 KW. Increases in peak demand over the past twelve years are shown by the chart on the following page.

The current load is primarily handled by the hydro unit, with an average of 15% of the present demand being supplied by diesel. This results in a rate structure with charges of 3¢/KWH for the first 750 KWH, and 4.2¢/KWH for power beyond that level. These rates are scheduled to gradually increase to 3.6¢ and 5¢, respectively, over the next five years. These rates could continue to apply until new customers reach the practical capacity of the present system. Any expansion beyond the point would require additional generation capacity, with significantly escalating capital and operating costs. (See the chart on page 20.)

The number of households served by this system has grown substantially in the past ten years (see the chart on page 13). Total power sales, which reflect a number of factors, have had an erratic recent history, (see chart on page 22), but the general trend is still upward. At the present time, there are 103 customers on the system. Of these 12 are commercial, 22 are all-electric homes, and 69 are non-all-electric homes. Assuming that new residences continued in the ratio of 1/4 all-electric and 3/4 non-all-electric, the existing surplus capacity would allow perhaps four all electrics and 12 non-all-electric homes.
If only non-all-electric homes were built, a total of perhaps

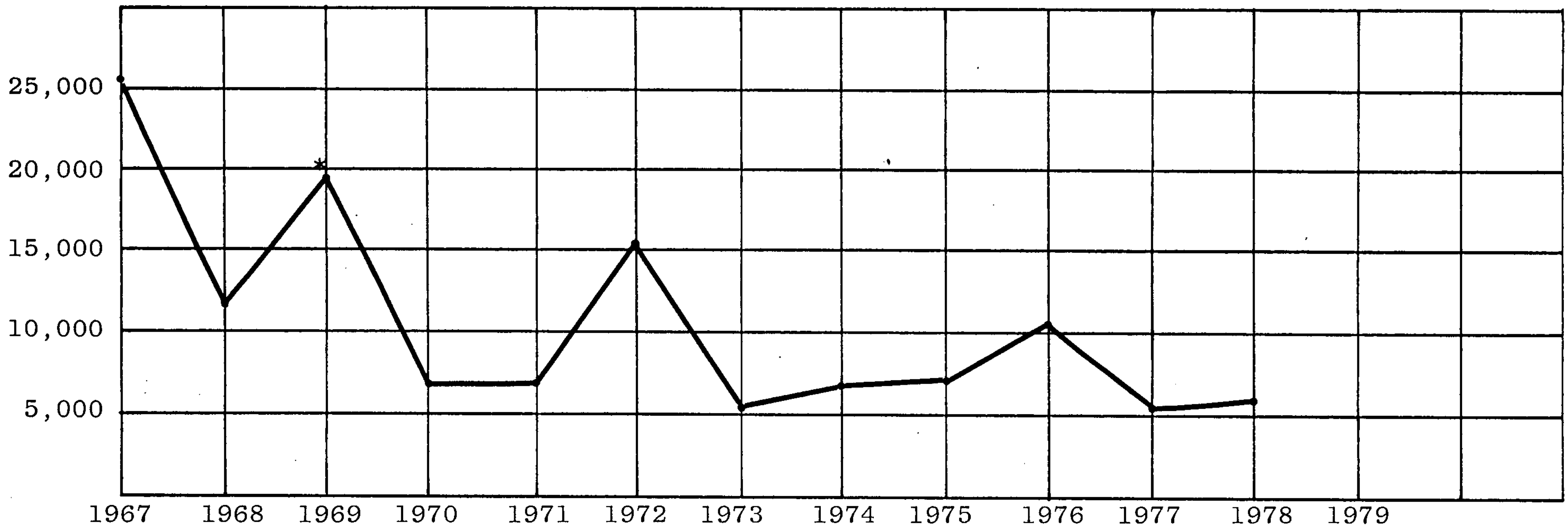
STEHEKIN ELECTRICAL POWER DATA

PEAK DEMAND



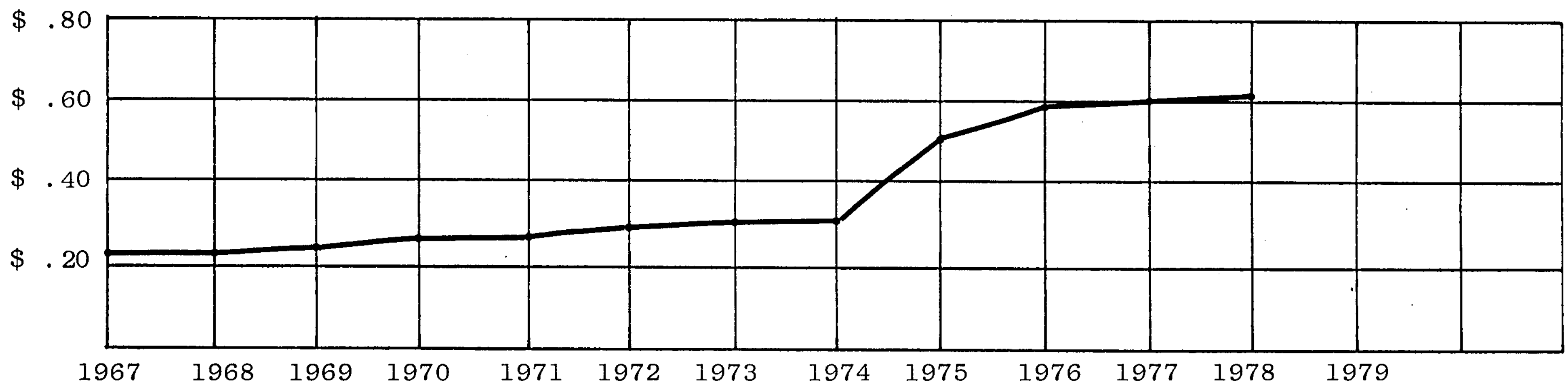
STEHEKIN ELECTRICAL POWER DATA

TOTAL OIL CONSUMED
(IN GALLONS)



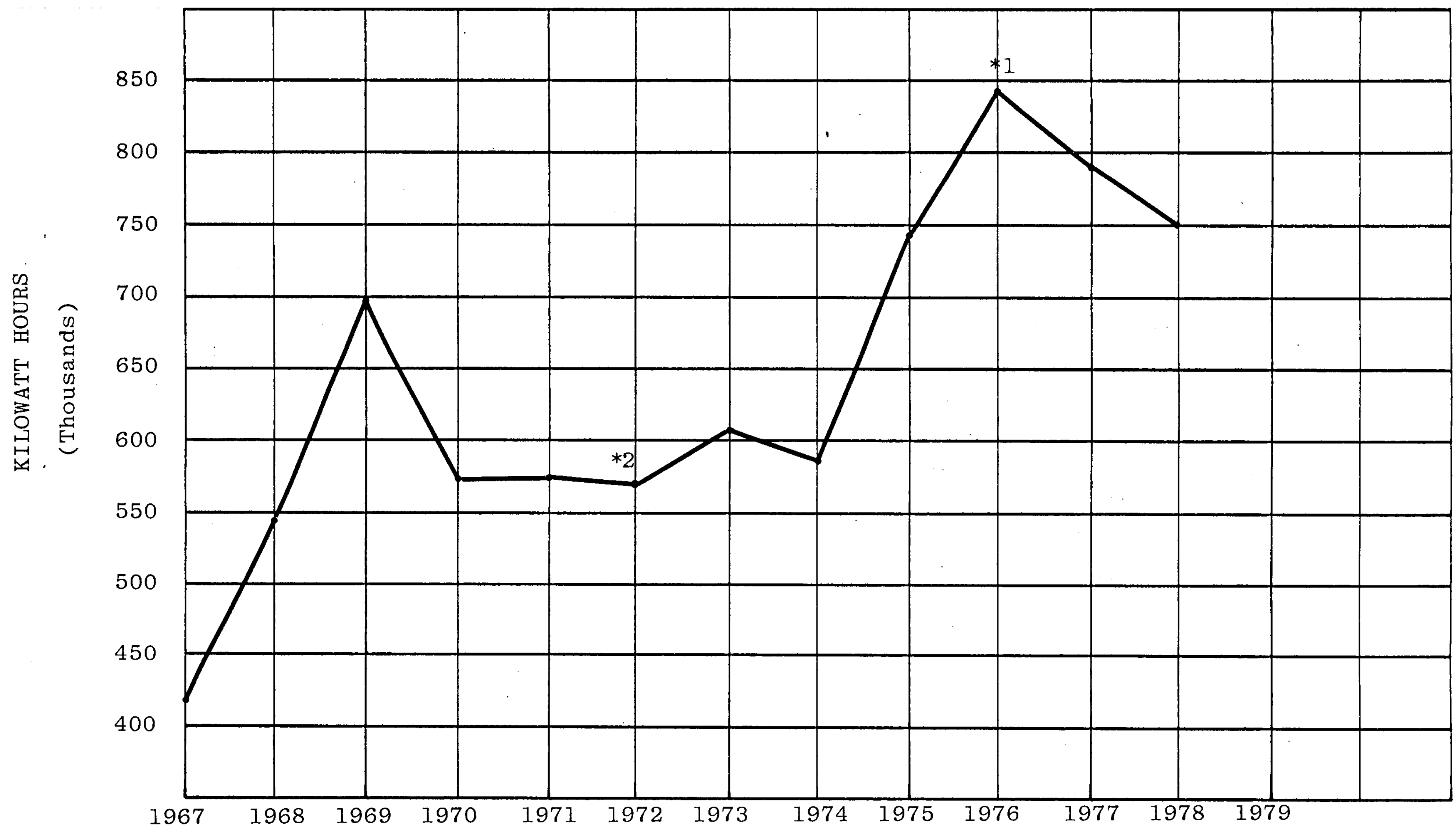
*Old hydro generator replaced

PRICE PER GALLON



STEHEKIN ELECTRICAL POWER DATA

TOTAL SALES



*1 Electric heat in Swissmont Lodge
*2 Conversion of concession facilities by park to propane

twenty four might be served. An additional five or ten seasonal units could probably also be served. It is apparent, then, that the present system can accommodate perhaps thirty or forty more units at most, depending on the type of unit and the occupancy patterns of the residents.

Privately Owned Land

One of the primary constraints to future growth and development in the Stehekin Valley is the availability of private land. Prior to the establishment of the park complex in 1968, there were 1700 acres of private land in the valley. Park acquisitions have reduced this total to 656 acres involving 165 individual tracts. Included in this total are 55 unoccupied tracts under two acres in size and 16 unoccupied tracts two acres or more in size, amounting to 371 acres. There are 67 occupied tracts under two acres in size. There are 27 occupied tracts over two acres in size, accounting for 285 acres.

There appear to be four or five vacant tracts located entirely within the floodway, accounting for about ten acres. The floodway affects about fifteen additional acres on portions of larger tracts. About 100 acres of private land is undevelopable due to extremely steep valley slopes or swampy conditions. The amount of vacant developable land is therefore estimated as follows:

Vacant tracts, less that two acres, not in floodway
46 tracts

Vacant land, over two acres - 371 acres

Available land on tracts over two acres (less one acre for existing building) - 258 acres

Available land located in floodway - 25 acres

Available land located on wetlands or steep slopes
100 acres

Estimated acreage potentially available for subdivision
504 acres

From these figures it becomes apparent that, without some sort of density controls, the potential exists for development far in excess of the valley's ability to supply firewood and electricity. And, while maximum densities are unlikely to occur throughout the valley, concentrations of development far in excess of the current average of one unit per four acres on occupied tracts could happen, thereby substantially altering the present character of the valley.

The present difficulty in obtaining land on which to build indicates that factors other that subdivision and zoning controls are affecting the availability of land parcels in the valley. These factors include a lack of access, unwillingness on the part of owners to subdivide and sell, as well as uncertainty as to what the Park Service will regard as compatible. Balancing the potential impacts of development on the unoccupied private lands with the practical realities of land availability, it would seem that zoning density standards should not be the sole means of assuring that development in the valley remains within the carrying capacity.

PLANNING PROBLEMS AND ISSUES

The list of planning problems and issues facing the Stehekin Valley varies, depending on one's viewpoint. The National Park Service has a particular set of concerns for the future of the valley. The recreational, visiting public represents another point of view. Year around residents express a different viewpoint, and non-resident property owners, while sharing some resident attitudes, differ with them on some significant points. This section attempts to identify and characterize some of the key planning problems and issues which will be addressed in this plan.

National Park Service Concerns[1]

The National Park Service's responsibility in Stehekin Valley, as stated in the act of establishment, is to provide for public use and enjoyment and to conserve the resources and values which contribute to public enjoyment. When the recreation area was created, a community, primarily composed of year around residents, was well established. Some of these residents traced their heritage back several generations. In drafting the legislation, Congress placed an emphasis on the life style and quality of life of this unique community. Provisions were made to insure that the lives of people whose existence was dependent on the valley would not be disrupted.

Since 1968, development on private land has consisted primarily of vacation home development. This trend and the potential for development and subdivision of the remaining private land is of growing concern to the Park Service. Also of concern is the impact of larger concentration of visitors on the quality of the experience and on the services at the landing.

The following is a list of concerns the Park Service has related to the effects of changing land use:

1. Increasing development and possible future development in areas of high scenic quality
    a. Lakeshore at the head of the lake
    b. Along the river corridor
    c. Along the main valley road corridor
    d. From high vantage points
2. Possible development in areas of potential future visitor use (e.g. if visitors were able to spend more time in the valley).

[1] This section provided by John Ochsner, N.P.S., Denver Service Center.

a. Shoreline of the river between the lake and Buckner homestead.

b. The east side of the river between Harlequin Campground and Weaver Point.

3. The effect of increasing population on:

a. Maintaining a balanced wildlife population and a variety of species throughout the valley.

b. Maintaining air and water quality standards. (More people mean more sewage to be treated or greater chance for river pollution.)

c. Vehicle traffic and potential increase in congestion and noise on the main road.

d. Demand for services and potential congestion at the landing.

e. Increased use pressure on fragile backcountry areas.

f. Pressure to control Stehekin River to protect private property through diking and channelizing.

g. More demand for power increasing costs to present consumers. More noise and air pollution from generators or pressure to develop other sources of hydro power.

h. Residents competing with transient users (visitors) for recreational space (trails, picnic areas, etc.) and services (bus).

i. Visual impact of summer homes--decrease in green-space buffers, decreasing privacy and natural qualities for residents as well as visitors.

j. Firewood--necessary to year-around residents to heat and cook--a luxury for second home residents.

Federal acquisition of private land is not necessarily the only way to conserve the values that make Stehekin unique. Closer attention to building locations, design, materials, site development, subdivision regulations to control population growth, maintaining or creating buffers, strict enforcement of existing county sanitation, floodplain and shoreline regulations are examples of measures that can be taken.

Recreational Visitor Concerns

Insight into the desires, attitudes, and concerns of the visiting public can be gained by examining a questionnaire distributed among recreational visitors during the summer 1978 season by the National Park Service. This questionnaire indicated that most visitors were on part of a one week vacation and were visiting Stehekin for the first time. Most were visiting for the day only, and said they were curious about what was there when asked the reason for their visit. On overwhelming majority indicated a desire to stay overnight on their next visit, and most frequently mentioned cabins with kitchens as the preferred type of accommodations.

General satisfaction was expressed for the overall quality of visitor services and information programs. Most visitors felt that the private homes in the valley added an interesting dimension to their visit, with very few expressing concern that they interfered with the natural scenery. Among the specific concerns revealed by the questionnaire were overcrowding in the restaurant, the desirability of a longer boat layover, food prices, and the need for more information about the area.

Resident Concerns

A planning department questionnaire was developed to help assess planning issues and concerns from the resident and property owner points of view. Respondents ranked statements in terms of their importance as issues, and indicated their support or opposition to the statements. Selected results of this questionnaire, reflecting the concerns of Stehekin Valley residents, are summarized as follows:[1]

[1] A copy of the questionnaire form, with complete tabulated results, appears in the appendix to this plan.

Rank as Issue	Statement	Reaction
1.	N.P.S. (National Park Service) should define "compatible use"	Strong Support
2.	Let existing generation capacity limit development	Moderate Support
3.	NPS should follow the same regs as private property owners	Strong Support
4.	Extensive vacation home development not compatible.	Moderate Support
5.	Private land development controls needed	Weak Support
6.	Limited commercial uses (grocery, cafe) should be permitted	Strong Support
7.	Current development trends threaten the valley with excessive density	Weak Opposition
8.	N.P.S. should state development levels and facility needs	Strong Support
9.	A community council should be established	Strong Support
10.	Expanded commercial should be N.P.S. concession	Strong Opposition
11.	Make trees available for local construction	Strong Support
12.	Expand electric generation based on need	Moderate Opposition
13.	Expand electric generation only if costs reasonable	Strong Support
14.	Concern with private property impact on natural and historic features	Divided Opinion
15.	Let firewood supply limit development	Weak Support

Other statements receiving moderate to strong support by residents, in descending priority as issues, included involving absentee owners in planning, use of local residents as guides by N.P.S., solid waste recycling se of airstrip for emergency use only, restricting road improvements to minor repairs, and use of improved fireplaces and insulation. Other statements which received moderate to strong opposition by residents, in descending order of importance, included the need for added parking at the landing, the need for added road paving, prohibiting new commercial use in the valley, the need for new road access to private property, the need for more frequent shuttle bus runs, the need for added private boat docking, the need for outside telephone service, development of a Stehekin River trail, changes to the "Lady's" schedule, need for a second boat run, and the need for improved law enforcement.

In general, valley residents expressed a strong desire to keep the valley essentially as it is today. Statements proposing improved access, communications, and transportation were opposed by most valley residents. Proposals to limit expanded availability of electricity and firewood were supported in most cases. Strong sentiments were expressed regarding the future accountability of Park Service plans and actions. Proposals for development controls generated divided opinions, or even majority opposition. Certain proposals affecting life in the valley such as a new grocery or cafe, use of trees for local construction, and the formation of a community council received strong support. Most valley residents did not feel threatened by current development trends, but were concerned by the prospect of extensive vacation home development.

Non-Resident Property Owner Concerns

The planning office questionnaire was also circulated to non-resident property owners. Selected results for this group are summarized as follows:

Rank as Issue	Statement	Reaction
1.	N.P.S. should define "compatible use"	Strong Support

Rank as Issue	Statement	Reaction
2.	Let existing generation capacity limit development	Weak Opposition
3.	Expanded commercial should be N.P.S. concern	Moderate Opposition
4.	N.P.S. should state development levels and facility needs	Moderate Support
5.	N.P.S. should follow same regs as private property owners	Strong Support
6.	Don't interfere with river channel	Moderate Opposition
7.	Extensive vacation home development not compatible	Divided Opinion
8.	Current development trends threaten valley with excessive density	Moderate Opposition
9.	A community council should be established	Strong Support
10.	Involve absentee owners in planning	Strong Support
11.	Expand electric generation base on need.	Weak Support
12.	Private land development controls needed	Divided Opinion
13.	Don't allow any new commercial	Moderate Opposition
14.	No more landfills	Divided Opinion
15.	Expand electric generation only if costs reasonable	Weak Support

Other statements receiving moderate to strong support by non-resident property owners, in descending order, involved establishing a design review process, permitting limited commercial (grocery, cafe), N.P.S. use of local residents as guides, making trees available for local construction needs, marking private property lines, continued use of sand and gravel, restricting road improvements to minor repairs, N.P.S. making payments to the county in lieu of taxes, the adequacy of road maintenance, need for solid waste recycling, need for sign controls and the need to use improved fireplaces and insulation. Other statements receiving moderate to strong opposition, in descending order of importance, were the need for added paving, the idea of letting firewood serve as a limiting factor for further development, and the need for a Stehekin River trail.

A comparison of non-resident property owner concerns with those of Stehekin area residents points out a number of interesting points. Non-residents tended to place a greater degree of priority in issues involving the Park Service than did residents. They tended to place greater priority on issues relating to future development options, such as controlling the river channel, restricting new commercial uses, the need for private docks, and controlling landfills than did residents. Non-residents placed a lower priority on such local concerns as the need for another grocery and the use of trees for local construction.

Some significant differences of opinion arise with regard to electricity and firewood. Non-residents were much more opposed to the idea of regarding existing resources as limiting factors for future development. Non-residents also felt much less threatened by the possibility of extensive vacation home development in the valley, and new road access to undeveloped private property. At the same time, non-residents tended to show more support for additional regulations and controls involving such matters as sign control, design review, and land use controls in general. Non-residents tended to disagree with residents regarding such developments as increased parking at the landing, added private boat docking, and improved uplake boat transportation by generally favoring these changes.

PLANNING GOALS

The uniqueness of Stehekin is not limited to its isolation and its natural beauty. The presence of a small yet vital community of people adds a key dimension to the atmosphere and character of Stehekin. Similar communities are common to mountainous European and Canadian National Parks, but the Stehekin community, in the midst of the Recreation Area and Park complex, is an extremely rare occurance for American National Park Service areas. This situation presents an opportunity for Stehekin to develop as a national showcase, a unique private community existing in an isolated valley, living in harmony with the environment, enriching rather than detracting from the recreational experience of visitors.

The sucessful realization of this opportunity won't come about by accident. Potential problems must be recognized and overcome. Opportunities must be identified and pursued. These concepts are recognized in a set of goals which give the plan focus and direction. The goal statements themselves are broad in scope, yet simple and direct in nature.

GOAL 1: Achieve and fulfill the expressed intentions of the original N.R.A. Legislation.

The original N.R.A. legislation speaks of providing for "public outdoor recreation use and enjoyment of the Stehekin River and Lake Chelan, together with surrounding lands, and for the conservation of the scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters, . . .subject to valid existing rights." The legislation speaks of property acquisition by purchase and land exchange and prohibits the use of condemnation so long as the lands are devoted to uses compatible with the purposes of the N.R.A. legsislation. Traditional utilization of renewable resources, as long as public values are not impaired, is guaranteed. Mining is restricted, hunting and fishing permitted, subject to pertinent laws, and road access from the North Cascades Highway to Stehekin is prohibited.

This plan seeks to aid in achieving the intentions of the N.R.A. legislation. The plan strives to achieve a balance between public use and enjoyment and valid existing rights associated with private property in the area. Private land uses and developments approved by the County in conformance with this plan and its implementation tools should be regarded as compatible with the N.R.A. legislation, and therefore not subject to condemnation now or at any time in the future.

GOAL 2: Retain and enhance the atmosphere and character of the valley.

In attempting to assess and describe the positive aspects of life in Stehekin, the planning committee identified the following points as contributing to the atmosphere and character of the valley:

a. The isolation and remoteness of the Stehekin Valley.

b. Preservation of the valley from logging through the establishment of the Park and N.R.A.

c. The nice people who came to work for the Park, and who have become part of the community.

d. The opportunity to be one's own man/woman, to be relatively independent in life's important decisions, to be free from stresses and hassles of urban/suburban life.

e. The willing acceptance by residents of a simpler life style involving inconveniences and hardships which would be regarded as unacceptable to most outsiders.

f. The quality of life itself, based on helping and sharing of skills, knowledge, work materials, garden produce, personal belongings, personal ups and downs, and many other such things usually remembered with nostalgia as being from the past, but no longer in effect.

g. The opportunity to experience and enjoy the outdoors while working, socializing, recreating, and living.

h. The informal atmosphere of the valley where you can stop your car in the middle of the road to visit with someone and where you can feel safe in offering a ride to a visitor or accepting one from a local resident.

i. The employment base provided by the Park, which enables many of the residents to live in the valley year-around.

j. The reduced cost of living in Stehekin which is available for those who are resourceful and willing to embrace the lifestyle which the valley offers.

By recognizing the presence of these qualities and characteristics, the plan seeks to make proposals and establish policies which will preserve the unique atmosphere of life in the valley. Positive efforts, more than regulation and restrictions, will be needed in achieving this goal.

GOAL 3: Recognize the nature of Stehekin as an evolving community and provide a sense of direction for its future development.

The Stehekin community cannot be regarded as a static entity, to be regulated and restricted so that it remains unchanged or reverts back to some previous condition. Stehekin is affected by trends and conditions of the outside world as well as by natural and social changes within the valley itself. As an evolving community, Stehekin faces a changing future. This plan attempts to anticipate changing conditions, to establish a structure for dealing with change, and to make recommendations which will help point Stehekin toward a desirable future.

The plan does not suggest that Stehekin look to the outside world for a development theme, such as an alpine architectual style. Rather the Stehekin community, including the Park Service and private property owners, must foster and maintain an appreciation of the valley's heritage, and retain enough flexibility to develop in ways which fit the environment. The homesteading values identified under Goal 2 should provide a strong foundation in addressing Stehekin's future. Stehekin's heritage as a pioneering community should be retained, so that traditional skills and relationships can be applied to current challenges and issues.

GOAL 4: Achieve a balance between development and the resources which support development.

In addition to benefitting from its past, Stehekin has the opportunity to point to the future by novel and unique solutions to its environmental problems. The energy and resource problems facing Stehekin mirror, on a small scale, current nationwhide and worldwide situations. Stehekin could be regarded as a laboratory example of how people might respond to resource limitations. The inability to adequately respond to this goal will certainly result in undesirable consequences, while the successful realization of this goal will help assure success with the other planning goals.

GOAL 5: Improve the level of cooperation and coordination between the Park Service, local government, and the Stehekin community.

This plan should point the way toward improved relations between all groups concerned with the future of Stehekin. The presence of a plan adopted by Chelan County and endorsed by the Park Service should help dispel some of the uncertainties which have previously faced the area. A structure is needed to represent the viewpoint of the Stehekin residents and property owners in their dealings with the Park Service and local government. The Park Service, the County, and the Public Utility District need to recognize their interrelated involvement in implementing the plan. All parties must work toward a climate of understanding and trust in pursuing these planning goals for the Stehekin Valley.

PLAN STATEMENT

The plan statement is organized into a series of plan elements, dealing with the environment, energy, circulation, land use, visual quality, and the National Park Service. Each of these elements contains objectives, followed by policies, guidelines, procedures, and recommendations which are intended to help achieve the plan's basic goals.

ENVIRONMENTAL ELEMENT

The environmental qualities of clean air, pure water, free-flowing streams, and uncommercialized forests are among Stehekin's grandest assets. The following objectives and policies are intended to preserve these qualities for succeeding generations.

1. To prevent or minimize the chances of property damage due to flooding along the Stehekin River and its tributaries:

   a. No permanent structures should be located within the identified floodway of the Stehekin River or its tributaries.

   b. Construction within the identified floodway fringe of the Stehekin River and its tributaries should be designed to minimize the risk of damage due to bank erosion or flooding. Maximum practical setback from the river is urged. The first floor must be elevated three feet above the projected flood level, and floodproof design principles are required for construction within the floodway fringe.

   c. All property owners with existing structures or anticipated building sites within the identified floodplain of the Stehekin River or its tributaries should be notified and encouraged to purchase federal flood insurance against property damage due to flooding.[1]

[1] Federal flood insurance is available at the rate of 25¢/$100 valuation, meaning it would cost $50 per year to insure a home valued at $20,000 (land value not included).

d. Persons with existing structures within the floodplain are encouraged to take appropriate floodproofing measures such as jacking up the structure to a higher elevation (if practical), floodproofing the doors and entryways, and maintaining a supply of sandbags for use in case of emergency.

e. Streambank modification such as rip-rap, levies, and current deflectors should only be permitted to protect existing residential or commercial structures from the threat of damage due to flooding or streambank erosion. Any such streambank modifications should fully consider the likely impacts on upstream and downstream property, and should conform to the County's Shoreline Master Program and Corps of Engineers Water Quality permit requirements.

f. New construction should be located so as to preclude the necessity of such activities along other stretches of streambank.

NOTE: Detailed floodplain maps for the Stehekin Valley containing floodway and floodway fringe boundaries along with cross-sectional 100 year flood elevations, have been prepared by consulting engineers and are on file at the Chelan County Planning Department, 411 Washington Street, Wenatchee, Wash., 98801. The map on page 6 gives the approximate locations of floodway and floodway fringe. Three or four small parcels appear to be entirely within the floodway of the Stehekin River. Much of the privately owned land is within the floodway fringe. In such cases, careful design and structure siting should minimize flood hazards.

2. To preserve and enhance the quality of the groundwater resource, which in many parts of the valley is near the surface and subject to potential contamination:

a. Persons planning to utilize septic tank sewage disposal systems in areas with potentially high seasonal groundwater conditions (floodway fringes, alluvial fans, damp areas with occasional standing water) or restrictive soil conditions, should have the Health District inspect the soil logs between mid June and early July, so that the depth to seasonal high ground water and soil characteristics in the proposed drainfield location can be accurately assessed.

b. Alternatives to the conventional septic tank and drainfield system may be considered by the Health District in areas with high water table levels or restrictive soil conditions. However, such systems must be designed and installed according to exacting engineering specifications, and are sure to add significantly to the costs of development. In addition, they may not be adaptable to all lots.

c. If a subdivision is approved on the condition that an alternate means of sewage disposal must be employed, the Health District will require the developer to record with the Auditor, when the plat is filed, a statement as to the nature of the required system.

d. Additional and more precise information on ground water characteristics in the valley is desirable. This information could be generated through a special study, or could be accumulated through the regular reporting of well drilling logs to the Health District and to the Department of Ecology.

3. To achieve a balance between scenic, aesthetic values and utilitarian needs in regards to Stehekin's forest resources, the following policies and suggestions are presented:

   a. The Park Service is encouraged to undertake a complete study of the Stehekin Valley forest resource, with local resident involvement and input, to identify growth rates, current supplies of usable fuel wood, mortality rates, successional patterns, aesthetic values, and similar factors.

   b. The Park Service is further encouraged to develop a forest resource management plan which recognizes the basic differences between the legislative and administrative management objectives of the Park and the Recreation Area. The historic pattern of forest product use should be recognized in the N.R.A. The Park Service should strive to develop forest management guidelines which allow for the limited utilization of wood products, primarily for fuel, but possibly also for local construction.

   c. The utilization of large trees and logs washed down into the Stehekin River should be recognized as a traditional practice and a desirable one from the standpoint of safety (eliminating streambank erosion and lake navigation hazards) and in terms of making local construction material and firewood available.

   The Park Service should identify those trees which are protecting the streambank and should therefore remain in place. Allocation policies may need to be developed with community input, and adequate precautions against damage to soil and vegetation during the removal process should be assured.

4. To assure an adequate supply of rock, gravel, and sand for local building needs, the Park Service should continue to work with residents in issuing permits for the use of such materials in areas where detrimental scenic and environmental impacts will be minimal. Commercial extraction of such materials on private lands are subject to County permit procedures, and should be approved only when undesirable visual and environmental impacts will be minimal.

ENERGY ELEMENT

In terms of energy resources, Stehekin is more like an island than a valley. Isolation makes Stehekin heavily dependent upon local energy supplies. Long-term availability and adequacy of sources, cost, equitable distribution of supplies, conservation measures, and land use impacts must all be considered in the development of appropriate energy policies for Stehekin. Stehekin's response to its energy problems may well serve as a small scale "laboratory" example for the rest of the nation in how to sensibly deal with our need for energy.

1. To provide for a supply of electricity in the Stehekin Valley which will be dependable and affordable over the long run:

   a. Water power should be regarded as the primary generating source for electricity in the Stehekin Valley.

   b. Because of its escalating cost, the present reliance on diesel generation for supplemental and peak power loads should be stabilized or reduced through modification of use patterns and conservation efforts.

   c. The long-term economic feasibility of improving the efficiency and output of the existing hydro plant should be periodically evaluated in comparison with the costs of comparable diesel generation.

d. Hydroelectric generation along the main Stehekin River (by using devices such as bulb turbines) should be considered provided that it would prove cost effective, help reduce dependence upon diesel generation, and have minimal environmental and visual impacts.

e. In an effort to supplement the capabilities of the hydroelectric generating resource, alternative energy sources should be considered. For example, water heating by solar collectors may prove feasible for spring, summer and fall use. The Park Service is encouraged to pursue a demonstration project in this regard.

2. To provide for equitable distribution of available electrical energy supplies, and to encourage conservation in its use, the following policies and approaches are suggested:

a. The P.U.D. should encourage energy conservation through a progressive rate structure which favors limited electrical usage and charges at increasingly higher rates for heavy users.

b. Special conservation measures and load redistribution practices should be identified and encouraged during peak demand and/or low supply periods. Such practices as automatic shut-off of diesel units between midnight and 5 A.M., turning off electric water heaters during heavy load periods of the day, delaying or allocating times for the use of major appliances such as washers and driers, and restricted use of non-essential electrical appliances during certain times of the day or seasons of the year could prove most effective. The Community Council (see page 60) in conjunction with the P.U.D., could identify appropriate measures and determine methods of informing valley residents as to their need.

c. Electricity should not be utilized as the primary source of heating in newly built structures in the Stehekin Valley. Owners of existing all-electric homes are encouraged to consider converting to efficient wood stoves for heat.

d. All owners of electric water heaters are encouraged to wrap an additional blanket of insulating material around their tank to reduce heat loss and conserve electricity.

e. Valley residents should be encouraged to share with one another inventive alternatives and simpler "hand" ways of doing things, as opposed to increasing reliance upon conventional appliances and electrical conveniences. With its slower pace of life, these so-called time saving conveniences may be both incongruous and needless drains on electrical supplies.

f. Gravity flow water systems are encouraged as a means of saving energy. The Park Service could support this policy by reducing or eliminating the "usage fee" required for crossing government land with water pipes, and extending the time for such permits to cover more than one year at a time.

g. The P.U.D. is encouraged to make an annual report at a public meeting to the residents and property owners of Stehekin. This report should discuss the trends of use in the past year, anticipating loads for the coming year, suggested system improvements and conservation measures so that anticipated demands can be effectively met.

h. Noise emissions from gas or diesel powered electric generating units shouldnot exceed 55 decibels at any property line during daytime use, and 45 decibles during nighttime use.

NOTE: A gas engine emitting 70 decibles at 25 feet, without any accoustical insulation, would have to be located about 400' from property lines to meet these standards.[1] Sound-proofing measures such as below-ground level installation, sandbagging, sound-insulated building enclosure, and muffled air intake and exhaust, as well as use of quieter models of generators, would enable users to meet these standards on typical Stehekin Valley lots. It should be noted that the 44 and 45 decibel levels are minimal state standards for residential areas, and that even quieter performance should be the goal in the Stehekin Valley.

3. To provide for equitable distribution of an ongoing supply of locally produced fuel wood, the following policies are suggested:

a. Wood is recommended as the primary means of space heating in the valley. Efficient, air-tight wood stoves provide the best ratio of heat output for the volume of wood burned, and their use is highly recommended.

b. The Park Service is encouraged to involve valley residents and property owners in developing a fuel wood allocation plan, based on the sustained yield concept and data generated by the timber production study.

c. The use of horse teams during summer and fall, or snow machines during the winter, could enable firewood source areas back from the road to be utilized, with minimal environmental disturbance. These practices should be encouraged.

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[1]55 to 60 decibles results in interference with normal conversation.

d. All varieties of wood, including the less desirable species such as cottonwood, should be considered for use as fuel.

e. Provided that the wood availability study indicates an adequate ongoing supply, valley residents are encouraged to consider utilizing wood as a fuel for water heating and cooking purposes.

f. All property owners, including the Park Service, are strongly encouraged to assess the insulation and weather-stripping aspects of their structures. Weatherproofing improvements should be undertaken as soon as possible in an effort to make the most efficient use of available fuel wood supplies.

CIRCULATION ELEMENT

Much of Stehekin's uniqueness can be attributed to the limited access which is available to the valley. Most people arrive by boat or float plane, and a few come in by trail. The nature and extent of transportation service into the valley has a major impact on the quality of the environment. In addition, circulation patterns and facilities within the valley relate directly with a number of land use and recreational issues. It's important to identify a set of circulation policies which adequately reflect the goals of preserving the valley's atmosphere and character and maintaining a balance of environmental quality.

1. To provide for access into Stehekin which is in keeping with the land use and environmental objectives of this plan:

   a. Commercial boat service into Stehekin should attempt to coordinate with the valley's capabilities in providing visitors with a quality recreational experience. Modification of boat schedules for the purpose of enhancing visitor experience, added flexibility of travel schedules, or improved service to residents should be considered only if overcrowding of the valley and its facilities can be avoided.

   b. The airstrip should be maintained for emergency use only, and should not be upgraded for regular use by the public.

2. To provide for circulation within the valley, in keeping with its remote location and relatively undeveloped state:

   a. Residents and visitors alike are encouraged to utilize the shuttle bus for their transportation needs whenever possible during the summer season, so that traffic congestion, noise, and dust can be kept to the lowest possible levels.

   b. Abandoned automobiles should not be allowed to remain in the valley.

   c. Maintenance of the main valley road and the Company Creek road should continue at essentially the current levels, with no major widening, extensions, or additional paving.

   d. Road extensions to new subdivisions or private developments should be as inconspicuous as possible. Such roads should be built to minimal standards consistent with safe access. The use of private driveways and roads is strongly recommended, with maintenance responsibilities in the hands of the private property owners served by the roads themselves.

   e. Non-motorized travel opportunities in the valley should be enhanced. A logical network of hiking, bridle, bicycling, and cross-country ski trails should be developed by the Park Service. Community input should be obtained throughout the planning and developing phases. Such routes should be located so as to minimize potential conflicts with privately owned property. When particularly desirable new route possibilities involve the crossing of undeveloped private lands, the Park Service is encouraged to contact owners regarding the feasibility of obtaining access easements or similar rights of access.

LAND USE ELEMENT

The existing land use pattern in the Stehekin Valley is largely a reflection of four factors: natural environmental characteristics, the location of privately owned tracts of land, development decisions of the Park Service (and the Forest Service before them), and development decisions of various individual private land owners. Land use plans and regulations have had minimal influence, until now, on development within the valley. Some insensitive developments have occurred, however they are limited in extent, and tend to be the exception rather than the rule. Looking to the future, however, it is apparent that considerable attention will be focused on new development activities. Planning guidance is needed in resolving these land use issues before they reach the conflict or confrontation stage. This section presents objectives and policies which attempt to strike a balance between the individual desires of private property owners and the overall planning goals of preserving the valley's character and environmental quality.

1. To provide guidance for the types, density, and location of residential uses in the valley:

   a. The suggested minimum lot size for any new subdivisions in the Stehekin Valley should be two acres.

   NOTE: This proposal is not a suggestion that all undeveloped private land should ultimately be developed to a two acre density. Rather, it is intended to be a lot size standard which will help preserve the privacy of valley residents by maintaining a dispersed residential character in those areas where vacant, developable lands remain.

   The average lot size for developed tracts in the Stehekin Valley is currently about four acres for each residential structure. This low density, with the accompanying dispersed pattern of development, contributes to the valley's character—namely, occasional cabins and homesites, well separated from neighbors and the main road by the forested landscape, understated rather than dominating the scene. This situation exists in spite of the fact that many of the parcels are less than one acre in size.

   However, change away from this low-key pattern is likely. The present low density character in some areas of existing, small platted lots is maintained only because not all of the lots have yet been built upon. As development continues, the character of some of these areas might change from the traditional, low density Stehekin community area to that of a commercially developed recreational subdivision. Such a pattern, made possible by small, densely developed existing lots, will not enhance the visual attractiveness and the liveability of such areas.

   In areas which have not yet been divided into building lots, the potential for this situation should be clearly avoided. A trend favoring this consideration can be noted. The four most recent subdivisions in the valley have been to lots of two acres or larger. A two acre lot size provides greater options in terms of locating the building site with respect to neighbors and the traffic on the main road. At the same time, it is not so large as to raise the cost of such lots to a prohibitive level.

b. The suggested minimum lot width for newly subdivided parcels in the Stehekin Valley is 200' at the building line.

NOTE: This standard is comparable to that already required for residential development in natural shoreline areas of the County. It would help prevent the development of long, narrow two acre parcels which might still result in neighbors building uncomfortably close together.

A reduction of this standard, down to 100 feet, could be allowed if a staggered pattern of building sites could be established at the time of subdivision. Under such conditions, one parcel could be built upon near the front of the lot, while the adjoining parcel would be built upon toward the rear. At least 200 feet of separation should be maintained between structures in this case.

c. Residential land development by means of major subdivision (creation of five lots or more at one time) should be regarded as inappropriate in the Stehekin Valley. Subdivision activity should be restricted to the short platting process, in accordance with the floodplain regulations, health district requirements, above-cited dimensional standards, and the site design recommendations contained in the visual quality element of this plan.

NOTE: Short platting allows for the creation of four or fewer parcels. A five year waiting period is required before any additional short platting may be done on a piece of land which has been previously subdivided. This requirement should apply to all parcels in the valley regardless of size.

This policy is presented as a means of avoiding the potential of large-scale, sudden change in the valley which could result from major development proposals. Considering the historical pattern and pace of development, as well as the current energy situation, major, large scale developments are simply not compatible with the valley's recognized values and character. This policy would allow for the occasional creation of new building sites, in response to the personal needs of property owners and individuals seeking a place to live within the valley. Speculative subdivision in excess of these needs should be discouraged under this policy.

d. Residential development in the valley should be limited to site-built single family residences and bunkhouse-type accommodations for seasonal employees. Condominiums, apartments, and conventional, flat roofed, metal skinned mobile homes should be recognized as inappropriate forms of new residential development in the Stehekin Valley. Modular or manufactured single family units could be allowable, on an individual basis, provided that they meet acceptable visual quality and site location standards.

2. In recognition of the significance of the few large, privately owned tracts of land remaining in the valley, specific consideration should be given to the values and characteristics of each. The sketch map on page 47 indicates the approximate location, size, and shape of six parcels of land which exceed ten acres in size. Planning consideration and policies for each parcel are presented as follows:

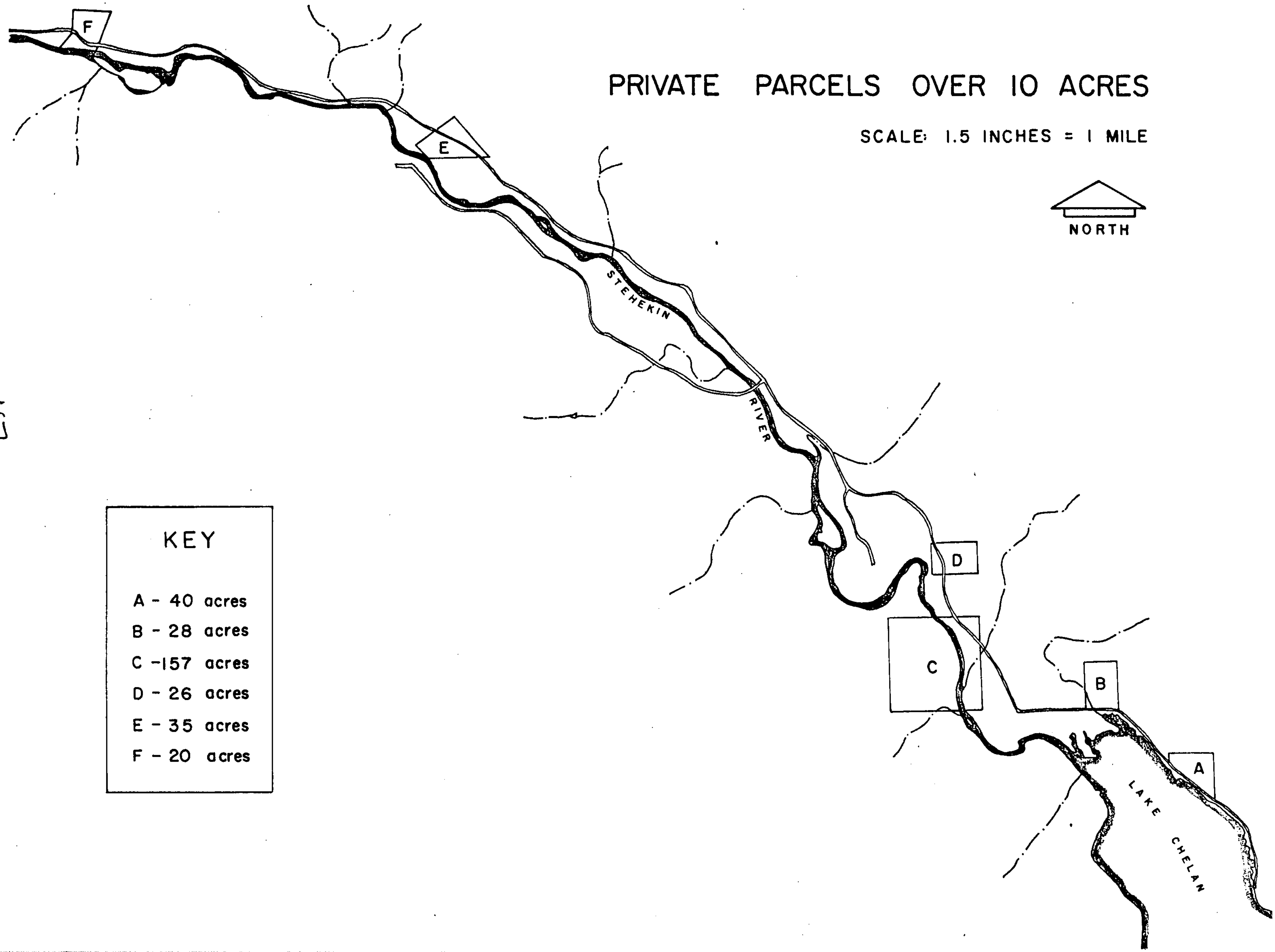
Parcel A: This tract is forty acres in size. Most of the property is on steeply sloping ground where access and septic tank sewage disposal would pose severe limitations for residential development. A corner of the property is located between the road and the lake, on the only significant flat between the landing and the head of the lake. Development possibilities on this land might include a boat moorage, a restaurant, or residential use, provided that they meet the requirements of the Chelan County Shorelines Master Program as water dependent or water related uses. Such activities might be appropriate at the head of the lake, however, the highly visible nature of this site imposes substantial responsibilities. Development would have to reflect strong sensitivity to its location. Structures should maintain a low profile, with carefully laid out landscaping of native materials.

Parcel B: This tract is twenty-eight acres in size. Again, most of the property is on steeply sloping ground. There is a small area of buildable ground on a bench above Little Boulder Creek, in the extreme northwest corner of the property. Access would almost certainly have to be by trail to this site, making construction extremely difficult, costly, and unlikely. Approximately five acres of the property is level, between the lake and the slope. However, this area is marshy, and very poorly suited to development. Prospects for further development on this parcel appear extremely limited due to the natural limiting constraints.

Parcel C: This tract is 157 acres in size, and from a development potential standpoint, is probably the most significant private ownership in the valley. About 37 acres is situated between the road and the river, while the remaining 120 acres is located on the far side of the river. Steep slopes account for about 17 acres of land across the river, and the river and its floodway occupy about 21 acres. The remaining land would be well suited for development purposes, if access were available. A trail traverses the length of the property on the west side of the river.

PRIVATE PARCELS OVER 10 ACRES

SCALE: 1.5 INCHES = 1 MILE



KEY

A - 40 acres
B - 28 acres
C -157 acres
D - 26 acres
E - 35 acres
F - 20 acres

A number of concerns arise with regard to this parcel. Its size raises the possibility of extensive new building lots. If this possibility were to materialize, even gradually, the character of the valley would almost certainly be drasticaly altered. Other concerns focus on the impact that vehicular access across the river might have on the area, the prospect of development moving into a large area of currently unoccupied land, and possible conflict with the trail which traverses the area.

Zoning alone cannot respond to all of these considerations. In addition to the general standards recommended by this plan, the National Park Service is encouraged to enter into negotiations with the owner, in an attempt to resolve these issues in an equitable and agreeable fashion. These negotiations should seek to accomplish the following:

a. Resolve the issue of development on the far side of the river. Outright purchase would be one option. Another approach might involve acquisition of trail rights-of-way in fee or by easement, as well as the development of a restrictive covenant (or similar device) with compensation, which would limit development to a few (perhaps five or six) widely scattered cabin sites. Access might be restricted to a cable crossing or a footbridge. Cabin construction could possibly incorporate on-site logs and construction materials, which could make such development an enhancement, rather than a detriment, to the area. Resolution of this issue would eliminate a significant amount of the development incertainties now facing the valley.

b. The remaining land, between the river and the road, faces development problems due to the presence of the Stehekin River and Boulder Creek floodplains, as well as a lack of access. However, the issues of bridging the Stehekin, possible conflicts with trail use, and developing in a natural area are not present. Homesites could be gradually developed here without substantially disturbing the character of the area. Structures should be visually screened from the river and the road as much as possible. Access to the southern portion of this property should preferably be from a point south of Boulder Creek to avoid the necessity of a lengthy road traversing the length of the property. The residential, subdivision, environmental, and visual quality of policies of this plan should help assure compatible use, if development activity is proposed in this area.

<u>Parcel D:</u> This tract is twenty-six acres in size, with about six acres on the west side of the road and the remaining twenty east of the road. It is in a key location due to its proximity to the Buckner Farm. The Rainbow Creek Trail also begins nearby, and crosses a corner of the property.

The Park Service should consider purchasing a right-of-way and scenic easement for the Rainbow Creek trail corridor. Visibility from the road should be taken into consideration in the review of any subdivision proposals associated with this parcel.

Parcel E. This tract is 35 acres in size. Again, the main road transects the property, with a little over half of the property between the road and the river. Floodway and floodway fringe occupy most of this area. The land above the road is mostly unaffected by floodplain.

The Park Service should consider acquisition in fee or by easement of the Kronk cabin and a reasonable buffer area around it, so that this historic feature can be preserved and included in interpretive programs.

Floodplain, visibility from the road, and relationship to the Kronk cabin are all factors to be considered in the event of subdivision proposals in this area. As with portions of Parcels C and D, gradual homesite development in this area, in keeping with the policies of this plan, could occur without unduly altering the character of the valley.

Parcel F. This tract is twenty acres in size. It is the furthest private parcel up the valley, and is located several miles beyond the nearest other private ownerships. It is in agricultural use, with a substantial portion of the property cleared, offering a magnificent view of the surrounding landscape. Pack station corrals and related facilities are also located on the property.

Because of its removal from private residential areas, the attractiveness of the cleared land, and the essentially undeveloped, natural character of the surrounding lands, residential subdivision for the creation and sale of homesites would be inappropriate on this parcel. Rather, it should continue to act as a gateway to the backcountry. Development of facilities in conjunction with the agricultural and recreational pack service activities should be considered as appropriate, provided that adequate concern for the visual aspects of development is maintained.

NOTE: Because of the substantial acreage with development potential, which these six parcels include, eventual development to the maximum allowable density would almost certainly overtax the electrical and firewood resources of the valley. The short plat requirement, with its five year waiting period, should provide adequate opportunity to assess the impacts associated with development on these and other parcels in the valley. Limitation of development potential through outright purchase or development rights acquisition by the Park Service, on a willing buyer, willing seller basis, might prove useful in maintaining a balance between residential use and the resources needed to sustain that use.

3. To provide for reasonable and necessary commercial services in the Stehekin Valley:

   a. A need appears to exist for imporved cafe and grocery services for the valley residents as well as visitors. These services could be privately developed possibly through a cooperative of valley residents. The location should be in the lower end of the valley, as close to the landing as possible, and along the main road. Since such services require a visible location, they should be carefully designed and sited so as to be an asset to the valley.

   b. Residents are encouraged to develop "cottage industries" and "cabin crafts" on their respective properties, for sale in a valley crafts shop at the landing. So long as these activities do not involve on site advertising, or produce undo noise or other disturbance to adjoining properties, they should be encouraged as a unique and useful aspect of valley life.

   c. A need appears to exist for an alternative to camping and motel units as a means of accommodating overnight visitors. Hostels, dormatories or simple cabins where guests could bring their own bedding and prepare their own meals would offer such an alternative. Modest development of such accommodations might occur on either private land or as a Park Service concession.

<u>VISUAL QUALITY ELEMENT</u>

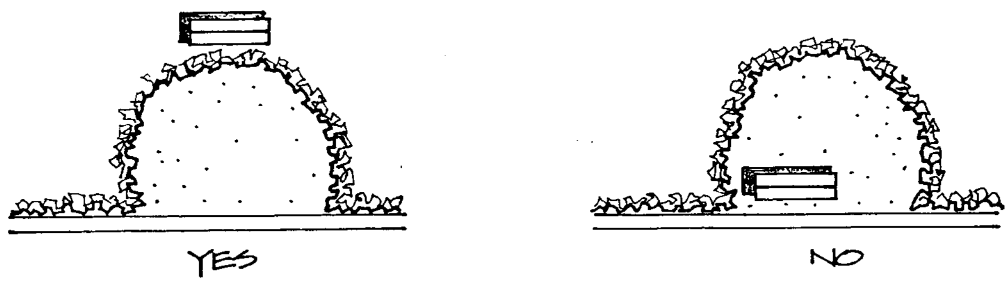
Considerable emphasis has already been placed on the need for sensitivity regarding the visual resource. In many instances, subdivisions and residential development could occur without appreciably altering the valley's traditional atmosphere and character. In fact, carefully considered improvements can, under certain circumstances, enhance an area. This element attempts to provide recommendations and guidelines regarding the visual quality of development in the valley.

1. To provide guidance in the design and location of structures in the valley:

   a. Location of structures:

      i. <u>Open or sparsely forested areas</u>:

         Locate structures at far edge of clearing or far enough from road or shoreline that it becomes an integral part of the landscape rather than a dominant feature along road corridor or shoreline.

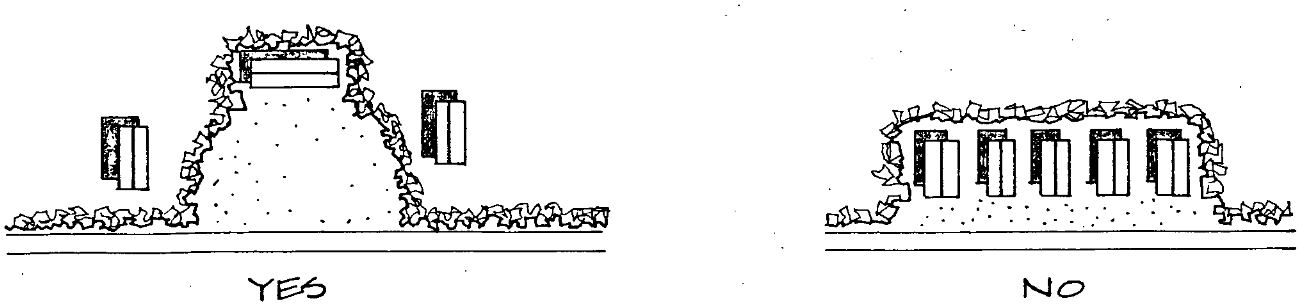


ii. Densely forested areas:

Maintain natural vegetation between structure and road corridor or shorelines (filtered view). Set back dependent on density of vegetation.

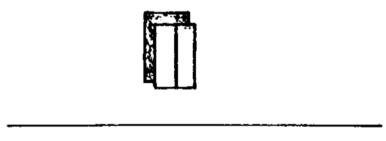
b. Frequency and sequence:

Stagger setback of structures and maintain natural vegetation between structures.

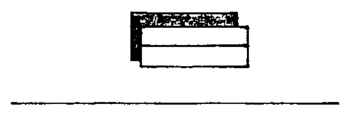


c. Orientation:

Wherever possible minimize visual impact by locating structures so that gable end faces road or shorelines. (Especially if bright metal roofing is used.)



YES



NO

d. Color:

Use natural earth tones for siding and trim and less reflective colored anodized aluminium if metal roofing is used. Where possible, utilize wood products or native materials (log construction, stone, etc).

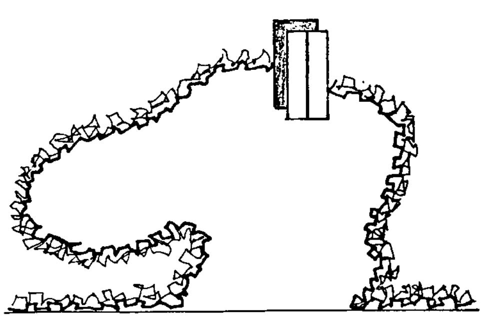
e. Lighting:

One of the unique characteristics of Stehekin is the lack of bright commercial lighting at night.

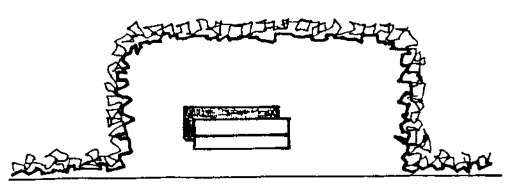
Locate yard lighting so that it shines vertically downward rather than horizontally outward. Avoid use of colored or harshly intense lighting (mercury vapor, etc.)

f. Site development:

i. Avoid artificial forms, edges or lines when clearing, grading, landscaping or locating driveways.

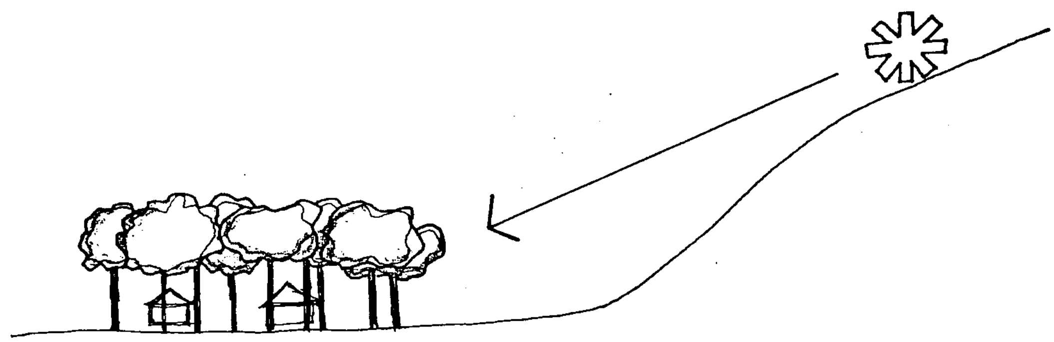


YES



NO

ii. Locate structures and maintain sufficient tree canopy to minimize impact of structures from high vantage points.



2. To provide for effective understanding and use of these visual quality concepts and principles:

   a. A design review board, comprised primarily of residents and property owners, but also including Park Service representation should be established. This board should serve in an advisory capacity in identifying preferred building sites and orientation in new short plats, according to the above-mentioned design concepts. The board should also review and comment on conditional use and planned unit development applications. The National Park Service is encouraged to seek the input of this board prior to public development activity. Finally, the board is encouraged to contact persons planning to build residences in the valley with an invitation to meet and discuss design review and local building considerations.

b. The Chelan County Planning Department should prepare a brochure describing the preferred design and siting concepts, as outlined in this plan. This brochure could then be distributed to all valley property owners, and made available in the valley and at the building permit counter.

3. To fully realize and achieve the valley's potential of visual quality, the Park Service and private property owners alike should recognize the appropriateness of visual enhancement, management, and rehabilitation activities. Examples of such activities are listed below:

   a. Removal, instead of unsightly topping of trees growing beneath the power line.

   b. Selective removal of vegetation on the edges of artificial clearings, such as the airstrip, to give such areas a more natural appearance.

   c. Landscaping, with native plant materials, around structures and other man-made features which are, presently, in exposed and highly visible locations.

   d. Selective, small scale alteration of the lakeshore in areas where previous dredging and filling has resulted in harsh, abrupt, unnatural shorelines. This activity could soften the appearance of such areas and give the lakeshore a more natural appearance.

   e. Maintenance of clearings and openings which afford views of the surrounding scenery through selective removal of encroaching vegetation.

NATURAL PARK SERVICE ELEMENT

This plan has attempted to concentrate on issues and policies dealing with private property, however, much of what the Park Service does in Stehekin has great impact on the owners of private property. For the plan to be realistic and effective, the role of the Park Service in the planning process must be clearly defined. This element presents concepts, understandings, and policies relating to the Park Service.

1. To assure an atmosphere of cooperation and understanding regarding the policies and recommendations of this plan, the Park Service is encouraged to accept the following principles:

   a. The Park Service should be willing to adhere to the policies, restrictions, and recommdations of this plan on an equal footing with affected residents and private property owners.

   b. The Park Service should be willing to endorse, formally, and in writing, this plan in its final adopted form.

   c. The Park Service should be willing to accept the principle that private property use and development activities undertaken in conformance with the concepts, goals, policies, and recommendations of this plan and its accompanying implementation measures, are compatible with the intent of the National Recreation Area legislation.

2. To help assure that Park Service development activities will not unduly impact the use and enjoyment of private property in the valley:

   a. The Park Service is encouraged to avoid major new development activities which would tend to attract significant increases in visitor use to the valley.

   b. The Park Service is encouraged to discuss proposed changes in the valley's development and administration with residents and property owners well in advance of making final commitments and decisions.

   c. The Park Service is encouraged to take a leadership role in the areas of structural siting and design, energy conservation, and development of alternative energy sources in managing and developing public facilities in the valley.

3. To provide clarification and direction regarding certain specific Park Service management activities:

   a. The Park Service is encouraged to restore the Golden West Lodge for appropriate interpretive, administrative and community uses.

   b. The Park Service is encouraged to implenent a solid waste recycling program in conjunction with its garbage disposal service.

   c. The Park Service is encouraged to consult local residents in developing historical and interpretive programs.

   d. The Park Service is encouraged to emphasize historical preservation and interpretation in its management activities and visitor services. The human history of the valley needs to be researched, recorded, and presented for the education and enjoyment of all. Historic sites and structures need to be identified and maintained, and historic artifacts need to be collected, displayed, and kept from leaving the valley.

   e. The Park Service is encouraged to make information on local federal employment opportunities available to valley residents in a timely fashion.

I M P L E M E N T A T I O N

Successful implementation of the Stehekin Comprehensive Plan will require the concerted, cooperative effort of valley residents and property owners, the County, and the Park Service. This section lists the steps, procedures, and tools needed for effective plan implementation, and also identifies the responsibilities that each group has regarding Stehekin's future.

PLAN ADOPTION AND ENDORSEMENT

For this plan to become a formal statement of public policy, it must first be adopted by Chelan County. The adoption process should not be initiated until the plan has been subjected to thorough review by all groups, organizations, and individuals interested in or affected by the plan. This review process will likely result in revisions, additions, and possibly deletions to the original draft. The revised draft must then be submitted to the County Planning Commission for study, public hearing, and recommendation to the Board of County Commissioners. The Commissioners must then hold their own public hearing regarding plan adoption. Once adopted, the plan will become a part of the County's overall comprehensive land use planning policy.

Of equal importance is endorsement of the plan by the National Park Service. Since most aspects of the plan either affect or are affected by the Park Service, it is imperative that the Park Service be willing to support and endorse this plan as finally adopted by Chelan County. Close coordination must be maintained with the Park Service during the review period, so that the plan finally considered for adoption adequately reflects Park Service input. Formal endorsement of the plan by the Park Service is essential in resolving the question of what may be compatible, and in removing the threats of condemnation and uncertainty regarding the future use of the land.

ZONING

Zoning is one of the primary tools used in implementing any comprehensive plan. The unique characteristics of the Stehekin Valley, along with specialized recommendations of this plan, will necessitate the preparation and adoption of a new zone, which would have to be added to the County's existing zoning ordinance. This new zone would address such matters as lot size, dimensional standards, setback requirements, permitted uses, and conditional uses. The policies of this plan would serve as a guideline in preparing the specifics of this zone.

SUBDIVISION

Subdivision regulations govern the manner in which land may be divided and prepared for development. The County currently has in effect a subdivision ordinance which is appropriate for implementing the policies of this plan. One aspect of the ordinance, involving the possibility of creating multiple short plats on parcels of land over 40 acres in size, should be examined and amended to eliminate this loophole. As with all ordinances and legislation, the subdivision regulations are only as good as the effectiveness of their administration. All proposed subdivisions should be examined on site and thoroughly reviewed before being approved.

SHORELINES MASTER PROGRAM

The Shoreline Master Program is a land use regulatory document which applies to lands along or near the County's major lake and stream shorelines. The privately owned lands along the Stehekin River and adjoining Lake Chelan are subject to the Master Program. For these lands, the Master Program superimposes a set of regulations which are intended to protect and enhance the State's limited shoreline resources.

FLOODPLAIN MANAGEMENT

Building and development within the floodplain is subject to regulations contained in Chelan County's zoning ordinance. The floodplain of the Stehekin River and its tributaries has been mapped. Permanent construction is prohibited within the floodway, but structures can be located in the floodway fringe, subject to certain conditions.

In addition, federally subsidized flood insurance is available for those persons who have improvements within the identified floodplain. It is anticipated that Chelan County will be formally adopting the floodplain maps in the near future. At that time, flood insurance will become mandatory for any new structures financed with federally insured loans, which are located in the floodway fringe.

BUILDING AND SEWAGE DISPOSAL PERMITS

Chelan County has adopted the Uniform Building Code and similar codes relating to plumbing, fire, mechanical, and dangerous building abatement. All construction is subject to the provisions of these codes, and a building permit is required for construction valued at $500 or more. Similarly, the Chelan-Douglas Health District enforces regulations dealing with on-site sewage disposal, and requires a permit for system installation or modification. These permit processes are directly related to issues of public health and safety, and they need to be effectively administered and enforced. On site inspection of residential construction and sewage disposal systems is essential in administering these regulations.

DESIGN REVIEW

This plan includes a recommendation that a design review process be initiated. This process should be advisory in nature, and not regulatory as such. A local design review board should be formed to advise on the visual aspects of permit applications and major development proposals.

In addition, by coordinating with the building department, it would be possible for this board to contact persons planning on building in the valley. An invitation to review building plans could be extended on an informal basis. While not mandatory, such a procedure could prove mutually beneficial by introducing newcomers to valley residents, identifying potential building problems unique to the valley, and sharing knowledge of locally available services and techniques.

COMMUNITY COUNCIL

The community council concept is being received with increasing popularity in Chelan County. It is a means of focusing local energy and attention on the challenges and problems facing unique, identifiable unincorporated areas of Chelan County. This approach certainly appears to have merit for the Stehekin Valley. A Stehekin Community Council could serve in an advisory capacity regarding issues involving the County and the Park Service. The Council could take on the expressed task of following through on the spirit and intent of this comprehensive plan. The Council could appoint or act as the design review board, and serve in many other similar capacities which involve community action and involvement, rather than mere regulation and administration. It should be noted, however, that a community council composed strictly of permanent valley residents would not include or reflect input from the non-resident property owners. This remains an open issue that needs to be resolved to the satisfaction of both resident and non-resident property owners.

SEPA

The State Environmental Policy Act of 1971 requires that any actions of local government, including the processing of permits, zone changes, and subdivisions, be evaluated in terms of their possible environmental impacts. Accordingly, an environmental assessment has been included with this plan, and all development applications will be reviewed in terms of their possible environmental impacts. If a project or proposal is determined to be a major action, an environmental impact statement may be required.
