

PREFERRED LOCATIONS FOR DEVELOPMENT OF SECOND HOMES:
A STUDY OF SANDPOINT AND VICINITY

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To the Faculty of Washington State University:

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Chair

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Abstract

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For the past few decades, one of the most rapidly growing trends in the recreational land use pattern has been the development of second homes in rural and scenic areas. As any other development trend, this segment of recreational real estate development has a gamut of challenges and facets with social, economical and environmental aspects. Effective planning and informed decision making are vital to meet these challenges and manage them accordingly. Early prediction of possible future development will aid this planning process.

The research question for this study was, ‘considering location preferences of the second home buyers and existing land use pattern, what will be the possible future second home development pattern in a case study area’? This research developed a Geographic Information System (GIS) model that feeds on the location preferences of the second-home buyers along with the land use pattern of a case study area and spatially determines the most suitable locations for the development of second homes. Applying the model in a case study area demonstrates the efficiency of the process.

My case study area is the city of Sandpoint and the vicinity, in Bonner County, Idaho. Built by railroad and timber industries over a hundred years ago, Sandpoint’s economic paradigm has shifted over the last 20 years. The area, offering a wide variety of

natural resources and tourist attractions along with thriving manufacturing and retail businesses, saw up to a 38.4% rise in population from 1991-2003. This community enjoys a partly tourism-based economy and a year round population consisting of permanent-home residents, second-home residents and tourists. Although Sandpoint is not yet solely a destination city, like Aspen or Vail, the seasonal second-home residents have started filling up the housing market rapidly in the last few years.

In this research, a questionnaire and literature survey of social and physical aspects are conducted to derive the parameters that are shaping this trend. These data are then used to project future development patterns by feeding the values of the parameters into a GIS model.

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Dedication

To

My father Hassan Zubair

And

My mother Taslima Khan

CHAPTER ONE

INTRODUCTION

The need to retreat from everyday life in order to find solitude and the desire to spend leisure time away in a different setting is a common goal for many. In today's urbanized society the demands for recreational activities in rural, naturalistic and scenic areas have increased the trend of owning a second home in such locales. Usually, second homes are used seasonally for vacation purposes and are located at some distance from the owner's primary home. Other than recreational purposes, benefits of owning a second home are their value as an investment and their possibilities for future retirement. These factors along with the increasing income, mobility and need for leisure activities have resulted in the development of second home communities throughout the most scenic places in the country. As any other development trend, this segment of recreational real estate development has a gamut of challenges and facets in terms of social, economical and environmental impacts. Proper planning and informed decision making are obviously the key to face these challenges and manage them accordingly towards building a better community.

This study is aimed towards a better understanding of second home development trend in terms of location preferences of the buyer community. This study focuses on and predicts the spatial outcome of future development driven by those preferences and constrained by existing land use patterns. This is accomplished with the modeling capabilities of Geographic Information System (GIS).

The city of Sandpoint in the Idaho panhandle has been chosen as the case study area for this research because this region has been subjected to a steady increase in tourism industry and recreational development in the last few decades. Located in the foothills of the Selkirk Mountain range and on the bank of Lake Pend Oreille (Fig.1.1) this scenic city had been built by timber and railroad industries over a hundred years ago. In the last few decades this rural landscape has undergone a significant change as it has experienced a boom in tourism industry and second home community developments. The main difference of this region from the more established second home destinations such as Aspen or Vail, Colorado is this area still boasts a strong permanent residence community. As the region is not totally dependent on tourism economy, the city is struggling to find a balance between the two diverse communities in an effort to retain the identity for both its permanent and seasonal resident communities.

This research paper examines the ‘pull factors’ (the factors or criteria that attracts people) of this region to determine the preferences of the second home buyers to select a particular locale for their second homes and uses those criteria in a GIS suitability model to spatially predict the location of future second home developments in the area. The process is aided by a literature and a questionnaire survey to set the parameters of the model. Throughout this thesis ‘the GIS suitability model’ is usually referred simply as ‘the model’.

Purpose of the Study

Owning a second home in the scenic areas has been a segment of real estate development since the colonial times in the United States. This trend was mainly

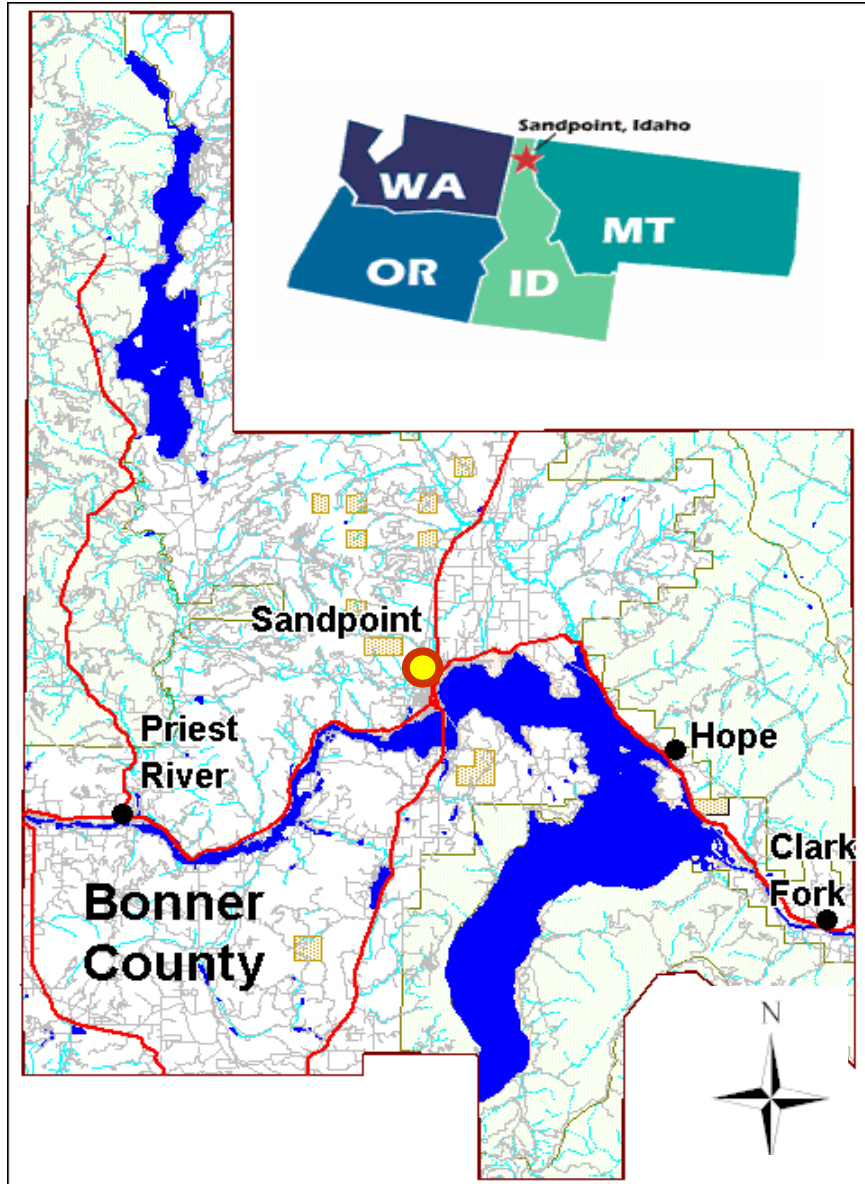


Figure 1.1: Location: Sandpoint, Idaho

restricted to the upper crust of the society and to popular recreational places like the Adirondacks, Cape Cod and Atlantic City (Payne, 1975). After World War II this trend started becoming much more widespread. By the late 1980s this trend was extended to include higher middle class two-income families. In most cases, the smaller rural landscapes have allowed the developments to expand without much foresight. This gave rise to various destination cities and resort towns where the once permanent residents were pushed away with the increasing demand of seasonal residents. Since this trend has been increasing in the last few decades it is vital that the communities facing this kind of development have a well-developed future plan to accommodate this seasonal influx.

Proper planning will enable these areas to retain a balance between permanent and seasonal communities to minimize the deleterious impacts of the development. To aid proper and effective planning it is essential to have a tool to predict the future development trend. This study is done mainly to develop one such tool that answers the research question, 'considering location preferences of the second home buyers and existing land use pattern, what will be the possible future second home development pattern in a case study area'?. The tool in this case is a GIS suitability model that feeds on the location preferences of the second home buyers along with the land use pattern of the area and spatially determines the most suitable places for the prospective second home buyers. This projection will help the planners and decision makers with future planning and zoning regulations in a given area. Applying the model in a case study area also demonstrates the efficiency of the process.

Although this study is done in a particular region, the parameters of the model are mostly common in any tourism based scenic region of the country. As a result, the

framework of the model could be used in any given second home development area by only changing the values and weights of the parameters. Even in the case of some other existing parameters, they could be added to the model following the same framework and assigning values and weights accordingly.

Research Design and Methodology

To successfully develop a robust and effective suitability model predicting future second home development the research process was arranged in four phases.

The first phase contained an in-depth literature survey to identify the key criteria for probable development. People looking for second homes usually do not think about planning and zoning regulations but mainly of spatial properties and amenities that they will be able to utilize and enjoy to maximize their recreational needs. The first phase determines those aspects in the decision making process and establishes the physical qualities and amenities for a preferred location. The literature survey and impact analyses in this study are oriented mainly towards the ‘ethical land use’ perspective, rather than commercial success and mindless developments disregarding environmental and social impacts. It is worth mentioning that the ‘ethical land use’ perspective applied in this research refers to the concepts of ‘responsible stewardship towards the land’ and ‘land ethic’, instigated by Aldo Leopold (1949).

In the second phase, the findings of the first phase and land use data obtained from United States Geological Survey (USGS) were used as the parameters for building a GIS suitability model. The model in this stage is devoid of any kind of planning /zoning stipulation and purely depends on the perception of possible developments derived from

the literature survey. The values and weights of the parameters in the model once again reflect the fact that this study is approached from the 'ethical land-use' viewpoint. The result in this phase is the first working model that depicts the preferred locations for future second homes.

In the third phase of the project, a focus group survey was conducted in the form of interviews. The survey is supplemented by the first working model. The key informants of this survey were the planning professionals in the subject area. In this process the rationales behind the values and weights of the parameters were described to the key informants and they were asked to impart their perceptions and assign values to those parameters or key criteria as they saw fit. Analyzing the result of the survey produced a new set of values and weights for the parameters.

The fourth phase of the study involved feeding these new values into the first working model thus deriving a final model predicting possible development areas. As the planning professionals of the area are the ones making the decisions about future developments, it could be argued that this refined final model is based on the real-life planning agenda of the area and depicts the spatial locations of probable development if the current planning agenda is continued.

Organization of the Text

The thesis is divided into six chapters. The first chapter deals with the introduction to the research topic, purpose of the study, methods applied for the study including the organization of the whole literature.

Chapter two is a literature review of the second home development trend. The first portion of this chapter outlines the history of the movement and its recent progress. The second portion describes the socio-economic and environmental impacts of this trend. As it is very hard to isolate these three aspects of the spectrum due to their interconnectivity and co-dependence, this portion of the review is researched and described in terms of the impact scenarios that are a direct outcome of all three components.

Chapter three is also a form of literature review where a literature survey is conducted to identify the key criteria for decision making process for a second home location. This is also done in two parts. The first examines the generally preferable locations or regions where people want to own a second home. The second portion investigates the decisive factors that lead the buyer to choose a particular site in a locale in terms of topography, amenity, and land use pattern.

Chapter four focuses on the description and relevant information about the case study area in terms of regional geography, settlement history, socio economic setting and present second home development trend. It also identifies the crucial factors or 'parameters' of the locale that influence the decision making process used in the model building.

Chapter five includes the methods of building the GIS suitability model, data sources and analysis of the survey results. The first part of this chapter describes the procedure to derive the first working model and the second part elucidates the input from the survey results and the derivation method of the final model.

Finally, the sixth chapter addresses the summary of the findings and recommends different scopes of future study in this arena.

CHAPTER TWO

LITERATURE REVIEW

Introduction

One of the most rapidly growing trends in the recreational land use pattern is development of second homes in scenic areas. By definition, second homes are the settlements which are, “Permanently located, single family housing used on a private-personal basis for seasonal outdoor recreation. The occupants must have some other form of shelter that is considered their primary place of residence, and the second home must have originally been constructed for the purpose of leisure time activities” (Ragatz, 1969). The trend of vacation or second home ownership is the hottest segment in the real estate market now and “most second home buyers today are high-income, high-asset, middle-aged couples” (Francese, 2003). The fact that people not only see these houses as a place to enjoy leisure time but also as an investment with significant appreciation potential has further stimulated the trend.

Historical Trend

The concept of second homes could be traced back to hundreds of years ago, as Wolfe (1964) reminds us that the nomadic practice of “summering away” from one’s winter’s quarters is far older than civilization and “the custom, among more fortunate city dwellers, of spending some part of the year in the country is as old as the city itself” (Wolfe, 1977). The prehistoric migration of men from winter quarters to summer encampment might be a little far fetched to relate to the current second home trends but it

could be easily linked to the seasonal movements of the European ruling families from their administrative headquarters to the summertime rural and coastal villas. In this country, the second home trend could be traced back even to the colonial period. The Adirondacks in New York became famous as a vacation spot for the wealthy families like the Vanderbilts, Morgans, Harrymans and Rockefellers in early 19th century (Crosette, 1973). The early 1900s saw the growth of tourism industry along with the trend of second home construction in the beachfront and lakeshore areas with the growing popularity of swimming and sunbathing (De Grazia, 1970). Development of the automobile industry enhanced the potential of owning a second home for the purpose of recreation and vacation as well. This development was heightened by the advances in road construction and transportation that mobilized the population and vast seasonal migration was made feasible. With the rise of industrialized societies and the growth of urban centers, city dwellers began to seek part time escape to the leisurely countryside (Irvine, 1990).

Recent Trend

Although for the better part of this century second homes have been the privilege of the very affluent society, the last 40 years have seen the rising trend where this privilege became more and more affordable to the upper middle- class population of the society. In his 1977 publication, Coppock effectively predicted that “like the color TV and the second car, the second home may move from the category of luxury to necessity”. Second home ownership or the recreational housing trend in the rural and scenic areas has boomed in the 20th century as rapid urbanization pushed mass population to seek refuge in rural areas. Another key factor was the fact that the once natural-

resource-extracting communities adopted tourism for survival and with the passing years they became national suburbs of major urban U.S. markets (Rademan, 2003). Eldred (1999) claims that,

Today millions of college graduates with their higher degrees are marrying each other and it is now commonplace to see families under 40 that enjoys household income that exceeds \$150,000 per year and with second home ownership fast emerging as the newest symbol of status and the best way to reduce stress, the direct way to quality family time, this younger generation fuels the demand for the second homes.

Furthermore, many families opt for second homes because they “want to maintain the homely feelings whether they are at home or vacation...sometimes people can’t choose the location where they are offered the best income potential, and thus need to maintain a primary residence, but they can choose an aesthetically appealing, climate friendly second home location where they are able to wind down and remove themselves from the stress of jobs and daily aggravations” (Eldred, 1999). However, second home ownership is not applicable only for the younger generation. A big portion of the upper-middle-aged people intend to own a second home as a retirement plan. Also stimulating the demand are senior citizens who expect better health and increased longevity to result from living in rural and close to nature places that are rich with natural amenities and away from the urban centers. According to the 2004 annual report of National Association of Realtors (NAR), the typical vacation-home owner is 59 years old, earned \$120,600 in 2003 and purchased a property that is 220 miles from their primary residence (34% were less than 100 miles and another 34% were 500 miles or more). Eight out of ten drive to their property and half of second homes are located within the same state as the owner's primary residence. 83% percent of owners are married couples.

In fact, some significant trends could be determined that mobilized the diffusion of second home ownership to a larger social market from around 1960s and 1970s. The expansion of the road network and widespread use of private automobiles enabled people to travel from city centers to the peripheral or rural areas without difficulty. People also started enjoying routine paid holidays and three-day holiday weekends, which provided them with larger blocks of time to spend away from the primary home.

Amenities offered by the rural lifestyle and natural settings became increasingly attractive to the growing urban population as nonagricultural rural land remained undervalued until the mid 70s (Healy and Short, 1981). Even though the price range has changed dramatically since then, the aforementioned increase of the average income in the new generation families has kept the trend of owning a second home going. Moreover, second homes are increasingly being viewed as favorable investment rather than only a leisure facility since the owner can enjoy the potential tax and appreciation advantages in the real estate, as it is usually located at a high demand area (Anonymous, 1987). The fact that current tax law allows property owner to spend two weeks per year in a second home without suffering tax penalties also stimulated the trend (Jarrell, 1991). Boomers usually believe in diversifying their assets, and most second home owners see their purchase as being a better investment than stocks. A report in the Washington Post in 2004 indicates that “ as demand rises prices for vacation homes probably will increase at a pace more than double the 6.7% forecast of the overall residential market in 2004” (Howley, 2004).

Howley (2004) also asserts that “the leading edge of the baby boomers, the 29% of the US population born from 1946 to 1964 will be turning 60 this year and that means the heightened demand for vacation, retirement and second homes will probably last for at least the next decade”. David Lereah, chief economist of National Association of Realtors (NAR), asserts that as the market continues to be dominated by the baby boom generation “middle-aged, middle-income households became the driving factor in the second home market, with favorable demographics providing a solid fundamental demand in this sector for the next decade” (NAR Report, 2006). Then again, this trend is becoming increasingly attractive as time-sharing, and rental and exchange programs are being more and more affordable and feasible for the middle-income families.

The environmental movements of the 1970s along with the natural decline of production played significant part in transforming most of the natural-resource-extracting communities (like mining, timber industry etc.) into tourism based communities. Moreover, the push in the tourism industry after World War II emphasized the campaigning for the widespread and ever-increasing trend of recreational land use. The work stressed population of the 21st century embraced the idea wholeheartedly and naturally owning second homes in scenic, rural areas became all the rage as it facilitates all the forms of leisure activities in a preferable site. So, “it is not surprising to find that half of vacation homes are located in resort or recreational areas, 18% in small towns and 16% in rural areas” (NAR Report, 2006).

The Table 2.1 here clearly shows the recent trend in the housing sector and the second home ownership.

Year	Number of Second homes(in thousands)	Percent of Total housing
1960	2,024	3.5
1980	2794	3.2
2000	5236	4.5
2006	6509	5.2

Table 2.1: Number of Second Homes and Percent of the Total Housing Units

1960-2006

(US Bureau of Census Data, 2006)

Impacts of Second Home Development

The trend of second home ownership is the hottest segment in the real estate market now. The homeowners usually spend a portion of the year (depending on the seasonal activities the location offers) in these recreational homes and for the rest of the year it is maintained by hired help. This seasonal and semi-permanent migration from primary home to the secondary home redistributes the population in the given community. For the time being the urban-oriented population along with the migrant workers floods the local community. For example, in Aspen, Colorado, the year round population is only around 6,000 while it reaches the limit of 30,000 in the peak seasons

with all the seasonal residents and tourists. Inevitably in these instances the community gets separated mainly into served and servant paradigms while the comparatively small group of permanent residents try to retain their way of life. The communities striving to integrate these different groups of people, their values and goals, give rise to all kinds of social situations and economic diversions and dynamism. In most of the cases when the seasonal visitors leave the town, the communities almost become ghost towns, giving rise to different set of problems. The permanent residents of the community are left to face and deal with the consequences of the seasonal overflow. Moreover, there is the ever eminent factor of environmental degradation resulting from this momentous growth and development.

These different aspects of environmental, economic and social impacts are so closely interwoven that it is impossible to talk about the problems separately although they have been investigated in this way in previous research. So, instead of going the traditional route of describing the consequences according to those aspects my research explores the impacts from the ethical perspective and examines them in terms of the impact scenarios that incorporate those three factors. It is worth mentioning that while the doctrines for the parameters of ethics have traditionally been anthropocentric (Holden, 2003), this research (where environmental and land ethics play a generous role) is determined and governed by more of a bio-centric viewpoint.

Booming development and transformed identity. The recreational housing market is an important part of tourism economics in amenity-rich regions (Deller, 1997). Naturally when the seasonal residents along with the tourists come and interact with the host community, the parameters of the host communities change according to the

demands induced by the visitors. The increasing pressure can result in unsightly urban sprawl around the community. In communities like Jackson Hole, WY, the once marginal agriculture region transformed into a landscape of leisure as tourism and outdoor recreation like skiing became the primary industry. As it strived for promoting its 'Last of the Old West' look, in reality it became the vanguard of the 'New West', which is invariably predated by travel tourism and the recreation industry. Despite the humble beginnings, skiing primarily reshaped the real estate market, social structure and international image of this Valley. This remarkable tale of Jackson Hole in the last decades of the 20th century is a tale of a town's metamorphosis from a national park gateway, to ski resort, to an exclusive international travel resort (Culver, 2003). This trend is mirrored in many other towns in varying extents where the recreational housing pattern plays the dominant role in shaping the landscape.

The same kind of landscape of leisure and consumption creates a certain amount of "placelessness" in any given community. "Usually the dynamic forces of place, time and culture work to create endless variations on the theme of a locale" (Campolli et al, 2002). But with the tourism industry as the governing force and big money flowing in the region with people from every other place with all sorts of tastes, this landscape transforms as that population places their needs according to whatever meets their budget or strikes their fancy (Campolli et al, 2002). As a result, there is really little difference between the once mining town Aspen, CO and the agriculture based town of Jackson Hole, WY. In both cases, the abundance of trophy homes, ski resorts, condos and vacation homes with high-maintained restaurants, builders, golf courses, and shopping centers dominates the skyline and shapes the landscape.

Equity gap and affordable housing. The most pronounced social disparity inflicted by the recreational home bonanza is the growing equity gap between the worker class, year round residents, and their affluent seasonal neighbors. It is true that equity gap in different social strata is a prevalent situation everywhere, but in these cases I worry about the ethical viewpoint for ethics of respect to human-to-human and human to non-human relationships because these particular communities are encountering the problem in gigantic proportions. “Scarcity of developable land with market’s preference for trophy homes and increasingly stringent planning regulations” are resulting into the ‘tragedy of the commons’ syndrome in terms of affordable housing. This housing crisis and the obvious inflation of living costs are pushing the longtime permanent residents to the edges of the development, initiating sprawl and hollowing out the core of the locales. As the once small scenic communities are transforming into sprawling regions, they are facing the same urban issues concerning long commutes, traffic, pollution, and most of all the vitality of the community itself (Rademan, 2003). In return we are getting an almost dead center of a community for most of the year. It doesn’t take much to figure out the ethical standpoint on this induced housing crisis and equity gap.

Trophy homes and land use of consumption. When people choose to buy a recreational home in an amenity rich region, inevitably in most of the cases, those houses become the “expressions of wealth primarily” (McCabe, 2001). And “when it comes to these high end properties, the occupants do live in their own universe” (Zito, 2002), separated from the surrounding, modest, permanent community. These situations automatically initiate a mentality of consumption and leisure.

It is comparatively easy to develop a land ethic or an environmental ethic when people live off the land or perceive the land as a part of the living or even when they just spend their whole life within the area. But the people who come here seasonally for only leisure purposes don't find it easy to develop an ethical perspective about the land as they use hired help to take care of the property and bear the mentality of consumption. But owning the best view-sheds or having a house in the best amenity rich area is no problem for big money. So the ethical dilemma of "do you provide views and amenities to everyone or to a few who can afford... and impact everyone down below both in terms of losing natural view and also running the risks of landslides" (McCabe, 2001) doesn't really always play the dominant role in real world real-estate business ethics. Moreover, the holistic ethical perspective is easy to be lost in a setting of consumption and recreation, which is more triggered by the fact that these people do not stay around to witness or experience the outcome of the mindless development. Again, in most cases big money can hide and meet almost every shortcoming of nature, if people do not learn to live close to and tuned with nature.

The cultural expenses. When tourist money floods the local economy, the cycle of immigrant workers, 'permanent visitors' and a totally recreation-based economy sets in motion inevitably, which leads to loss of individual identity and selling off of cultural elements. It is just a case of difference in extent, in which this cycle keeps in operation from destination to destination. Truly, as the time passes, places lose their identity as communities and take on the identity of 'destination'. In these seasonal, recreation based communities where the economy revolves around seasonal activities; the sustainability of these communities as towns becomes more questionable. The younger generations

growing up exposed in the allure of ‘quick money’ in recreation business can easily fall for opting against hard working land-based living. As the tourist-based economy gathers momentum, the land/resource-based population is naturally pushed out of the scenario. The dominant population, other than the seasonal visitors, of immigrant workers is more distant from the land and community, as they lack the education to adopt an environmentally sound ethical standpoint.

Land use rights and the fiscal myth. There is the ethical dilemma of who has the right to be served best in these communities. From the utilitarian perspective, in the part of the season when tourists and the guest community are the majority the “greatest good for greatest number of people” theory favors the visitors. But the year round population has the upper hand for most of the time in the year and most of all, services for them does not impair the environmental, more biocentric ethical conceptions. Again, a common assumption in favor of the seasonal community claims that the economic backbone of these communities are supported by the seasonal activities, and “the construction, maintenance, and use of recreational houses contribute additional jobs and income to the host communities through increased demand for locally available goods and services” (Deller et al, 1997). But the question is do we need those extra job opportunities, which will be ultimately occupied by immigrant workers? And again, should we welcome an economy that is totally based on a seasonal activity, but in course of time would impair the original land use pattern? Even if we can come to terms with those ethical implications and argue about changing times and changing value to accommodate progress, recent studies shows that areas with high rates of second home ownership also spend more on police and fire protection, cultural and educational

programs and general government expenditure. Even the tax revenues from second home ownership cannot compensate for these higher expenditures.

Moreover, when a local community expands and sprawls due to the recreational housing pattern, more roads and highest quality and quantity of amenities like water and electric supply in remote areas accentuate the government expenditure in manifold (Deller et al, 1997). These findings suggest that recreational housing development is not a net benefit for the local government. Small-scale local developments, if planned as environment sensitive communities, can go long way in practicing a more sensible 'land ethic' system while development of recreational housing in massive proportion only accelerates the social and environmental degradation of the host community.

Growth and the 'American Dream'. "A widely held interpretation of the 'American Dream' is the freedom and opportunity to rise on the social ladder and, better yet, to gain wealth and celebrity. It is a 'dream' of individual personal attainment in which social institutions are evaluated in relation to their making personal dreams come true" (Caldwell, 1993). Part of these dreams is the single-family primary housing and with additional economic success comes the other part of the dream to have a second home away from home, in the midst of nature. Incidentally the general American attitude towards growth is tinted with positive apprehensions, and in the promotion of these dreams the land developers 'forget' to point out that, beyond a point, continuing growth can cost any community in terms of inconvenience, insecurity, and diminished quality of life. If the spree of second home development keeps at the current pace, the people who purchased a home in a rural town, hoping to get away from the traffic, pollution and stress of urban life, will find themselves in the same dreaded position within a decade.

“The pristine views and clean air” that allured them to these rural communities, will be “replaced by subdivisions, strip malls, enormous vacation homes and automobile pollutions that ferments the mountain valleys” (Healy, 1998).

People fail to see the dark future looming ahead of them mainly because “responsible stewardship for land and natural resources does not appear in the American dream” (Caldwell, 1993). Their general, traditional ethical belief system deals with the human-to-human relationship and in an individualistic right based system, not in holistic entities or does not revolve around ‘synergistic environmental ethics’. Again, as mentioned briefly earlier, when we come to think about the community itself, a community consisting fulltime residents, is easier to approach, to educate, advocating responsible stewardship for land. A seasonal community, seeking refuge from the urban life and mainly involved in leisure activities, finds it harder to be swamped with environmentalist sentiments. However, there is an interesting twist in this game. If the second home and vacation homeowners spend a portion of their time in these places, their primary settlement also becomes a place where they reside only for a partial time. And with technological advances in telecommunication and internet system anybody can conduct business from anywhere on the planet. So a segment of the second homeowners can opt (and actually are opting) for spending much more time in the secondary home. As this trend gets more and more popular the concept of a primary home is being lost to one segment of the population. This segment experiences the lack of responsibility to any of the settlement they own. Responsible land stewardship is directly related to the concept of a homestead, but when homes turn into mere dwellings, it is tough to integrate responsibility for land into the growth system. Moreover, when people choose to get

away from the real life to a leisure home, they subconsciously want to get away from the problems of urban life and tries to find 'Peace and Quite' in midst of nature. But the idea missing here is if we are not responsible with that natural setting either, we will also loose our place of refuge. Already, resort towns like Aspen, Vail, and Jackson Hole are experiencing problems like their urban cousins. Gradually we are loosing the best of the both worlds.

Reshaping the land use and landscape. Recent studies show that the location of recreational housing is determined by six variables: greater distance from large cities, presence of natural areas/ absence of agricultural land, smaller distance from small towns, close proximity to local roads/ accessibility, presence of water and high landscape variability (Shellito et al, 2003). All these variables lead to greater seasonal home development in remote rural and scenic areas, which ultimately pushes out the traditional land users in the cost of a reshaped landscape. With increasing demand of recreational housing in the rural areas along with other factors we are experiencing a trend of agricultural land converting to residential land use. The boom in second home ownership in the real-estate market is resulting in decreased average size of land parcel while increasing the average residential lot sizes (Riebsame, 1996). The residential subdivisions are being carved out of agricultural land. Moreover, as the communities are transforming from natural resource based community to recreation based, the easy money in the recreation business makes agriculture-based economy hard to sustain. Building trophy homes aided by big money in the midst of a farming community only for the sake of natural splendor can only increase the likelihood of conflicts between farmers and non-farmers over noise, dust, and common agricultural practices. The haphazard, scattered

developmental trends provided with services by the taxpayer's money are tough to fight once started. Although in the recent decade measure is being taken to control this trend but already a lot of the country's farmlands have been replaced by rural subdivisions and developments.

Impacts on the biotic community. Recreational housing encroaching the wild land and farmlands are affecting the biotic community in many ways. One main factor is the 'overuse' of the land. When mass tourism and leisure activity is initiated in comparatively less used land the ecological balance automatically gets disturbed. Building recreational homes in remote places means accommodating for more roads and amenities. This could result in loss of habitat and degradation in water quality. Moreover, the non-native seasonal residents are obviously not accustomed and almost ignorant of local biotic community and their characteristics. This ignorance can result in drastic damage in the ecosystem. It is mentioned earlier that the balance of an ecosystem depends on the ethics of respect to non-human entities, which usually cannot be expected from consumption and leisure minded population. Introduction of non-native plants and animals for the seasonal people's entertainment also degrades the native wildlife. The mindless development for seasonal occupants can cost an ecosystem its biodiversity. It is true that allowing city people to spend quality time in the midst of natural splendor can make them sensitive to nature itself and environmental belief systems. However, what is argued here is the over consumption of any natural resources ultimately leads to the path of destroying it. The hard fact is people mostly come to these places for entertainment, so we should draw the ethical line, how much of nature can we afford to use for this purpose

and how far we will go to preserve and preach the ethics of respect in terms of human-to-non-human relationships.

Conclusion

It is clear that the recreational housing boom in the rural and scenic areas is the outcome of the capitalist system and our chosen path of consumption. But we should keep in mind that “increased consumption requires increased production” (Wenz, 2001). While the consumption level of our industrialized civilization keeps increasing day by day, we still have a limited amount of natural resources and a very few communities that are prone to land ethics. These communities practice a better environmental and land ethic as a way of life and comparatively small efforts can restore the negative factors acting against it. But as these communities are being exposed to the trend of mindless consumption, and urban invasion in the form of recreational housing development (among many other things), they are inevitably being invaded with the consumer mentality too. Wenz (2001) points out that in this capitalist setting “many of us confuse wealth with welfare, equating the better life with increased consumption”. By encouraging these urban invasions we are only accelerating the seepage of consumer economy in the most remote places of the country.

While the above discussion sheds light on the negative impacts of second home development we should acknowledge the fact that we could not totally stop the trend from continuing. It could be argued that to some extent the phenomenon could help and improve the host community if it is managed properly. We cannot overlook the economical benefits from this new population which can greatly boost local economy in

some perspectives (Muller, 2002). Moreover, as second home owners visit the locale regularly they can very easily get attached to the local culture. Family links to the area could also accentuate this aspect greatly (Kaltenborn, 1997). Furthermore, “Grahn (1991) observes that second home ownership contributes to the protection of existing culture in peripheral areas by simply upholding settlement structures and the landscape” (Muller, 2002). To use and maximize these positive aspects the host community needs to set limits to the extent of influence it can exert on the locality thus controlling the negative affects initiated by the booming cycle. Predicting future possible developments could significantly aid the informed decision-making and planning process, which will enable the host community to take the suggested actions.

CHAPTER THREE
SECOND HOME LOCATION DECISION PROCESS/ DISTRIBUTION OF
SECOND HOMES

This chapter covers the aspects that control and determine the spatial location of the second homes. It is divided into two parts. First it considers the factors that determine the location of the growth regions and then it examines the more localized aspects and attributes that influence the precise placement of the second homes in a particular locale.

Location of the Second Home Growth Regions

“Decision making involves a complex sequence of events, which takes place when an individual is faced with more than one alternative or course of action” (Stewart, 1994). And the decision making process for a seasonal home location is unique and controlled by diverse criteria. One of the earliest studies by Aldskogias (1967) experimented with the relationship of the location of second homes in the Lake Siljan region of Sweden with the various landscape features. It concluded that these features play the most compelling role in the decision process and formulated the concept of “recreational place utility”. Ragatz (1970) considered the frictional affect of distance in analyzing the spatial distribution of second homes. Cloute’s (1974, 1977) experiment in the various cities of France sheds light on the concentric ring patterns of the second home developments around the urban centers (Adams, 1986). Lane (1999) argues that the second home locations should be within 200 miles from an urban center, particularly in light of the ‘energy crisis’ that the United States has suddenly entered. Gallent (2000)

paraphrases Coppock (1977) to assert that spatial distribution of second homes is “controlled by a number of factors including the distance from major centers of population, the quality and character of the landscape in importing regions, and the presence of specific physical features as the sea, rivers, lakes or mountains”.

While the distance between primary and secondary home is a detrimental factor in the decision process, the threshold distance obviously relies on the mobility, transportation system and topographic features of a given region. Since most of the demand for second homes is generated from the urban population and larger cities constitutes larger demand it is not surprising to find that most of the second home developments are situated within the 100 to 150 miles radius of major population areas (Ragatz, 1970). One of the main reasons for this is the fact that more and more people want to be able to spend their three-day weekends or holidays in their second home and given that time constraint it is not feasible to have a driving distance more than that. Of course there are exceptions in case of the popular and expensive destination points like Vail or Aspen, Colorado where the second home owner demographics consist of millionaires and billionaires. The main group addressed in this research is the aforementioned upper-middle and middle class who want to enjoy a home away from home with the minimum of expenses. Evidently smaller driving distances act as a major decision making factor in this case. Coppock’s (1977) study supports the fact as he observes that even with high mobility and intricate and efficient system of the freeways, two thirds of the second homes are in the same states as the primary home and over half are within 100 miles.

Ease of access is another role player in this decision making process. Part of it is akin to the reason stated above where people want to reach their destination with a minimum amount of hassles. Another part is easily accessible areas encounters fewer problem providing for amenities like utilities, fire and police protection etc.

Price and availability of property is another deciding factor in this decision making process. With rising demands, prices for second home property are rising accordingly. As a result, more and more people are opting for places where the second home trend is at the beginning stage. Rural areas, which provide lucrative natural and recreational amenities but the house prices are still at a moderate level for being in comparatively smaller tourism destination points rank highest in the decision making process. The reason became more compelling since in the last few years the second home developers have shifted their marketing by “moving away from pitches aimed at those close to retirement and instead focusing on families”(Kerch, 2003).

However, as the need for owning a second home mainly rises from the need to get away from the crowded city centers and enjoy a different lifestyle, preferably more close to nature, it is no wonder that the biggest ‘pull factor’ of the locations are the landscape and the natural amenities. The places with high tourism activities like areas near ski resorts, beaches, lakes, national parks, etc., that offer both scenic values and the recreational opportunities naturally act as the most popular locations for second homes. A study shows that natural resources such as water and forest are both important and desirable to nearly all seasonal home buyers (Stewart, 1997). Smart claims ‘water’ is the prime recreational amenity as it “offers both passive enjoyment and appeals to all ages with the variety of its recreational opportunities” (1981). Furthermore, Adams asserts that

“access to water is the single most important criterion and an inventory of second homes in the United States would probably reveal that the overwhelming majority of them are located near a river, lake or sea coast (with an additional share located adjacent to ski hills)”(1986).

One of the “most important motivation for second home living has always been simple physical comfort - the escape from bitter winter cold or oppressive summer heat” (Irvine, 1990). So the local climatic factors naturally influence the decision. “Second home sites which offer year round recreational opportunities command a premium in any market” (Lane, 1999) as it maximizes the usable time to choose from in a year.

Another deciding factor hinges on the fact that most people attempt to find a place ‘far from the madding crowd’ to spend quality time. The majority of the second homes are found in less urbanized areas than the primary home location. When the main point is to spend quality time in a less stressful environment it is of no surprise that people tend to choose rustic settings for their second home locations. The extent of the lack of urbanization accepted or expected varies from person to person as it depends on the degree of urbanization in their primary home locations.

In this era of rapid urbanization people are always relocating to find better jobs and opportunities. It is more common now for people to move from their places of origin to bigger cities and urban centers. Urban areas usually possess some universal characteristics that create a sense of ‘placelessness’ in many. Because of this, people often long to find locations that reflect their roots and cultural orientations. While seeking escape from their goal oriented and demanding professional life to a vacation spot, they may have a tendency to choose places that have similar cultural orientations and are

somehow tied to their origin so that it can evoke a sense of 'coming home'. Thus an emotional aspect is prevalent in the decision making process.

Last but not the least, advertisements for 'destination points' strongly influence people's decision. Catch phrases like 'place in the sun', 'ultimate destination', 'home away from home', or 'winter get away', are only a few examples of extensive advertisement campaigns that attract people to the destination points. Whether it is an already established resort area or emerging tourism based locale, public recognition and acceptance of an area as a vacation spot typically persuades buyers to purchase second homes in the region (Smart, 1981).

To sum up, we could list the decisive factors for choosing a location for a second home as:

- a. Distance from primary home location
- b. Price and availability of property
- c. Degree of urbanization in the hosting community
- d. Ease of access within the area
- e. Local climate
- f. Emotional factors
- g. Promotional campaigns

Location of the Second Home in a Particular Locale

Historically second homes were located intertwined with the primary home communities in a particular growth region. However, the recreational housing market experienced a tremendous growth around the 1970s and purely second home

communities started to emerge in forms of individual houses, condos and timeshares (Ragatz, 1976). Having separate neighborhoods for the second homes obviously aided developers to treat and design these homes from more recreational and leisure oriented perspectives. Nevertheless, as regions grow as destination points and recreational or leisure activities overwhelmingly dominate the economy the whole locale could turn into a large second home community (Jarrell, 1991).

Yet undoubtedly it is a gradual process and when an already residentially developed region starts gaining appreciation as a possible second home destination point, people initially buy regular homes in established primary home communities. In places experiencing both second and primary home developments, second home owners usually choose the location of their property considering certain criteria including both physical and social aspects.

One of the main aspects is the spatial relationship between the second home and primary home neighborhoods. The second home owners spend mainly their leisure time in the community and for only a part of the year. So it is not possible for them to take part in the system of a well-functioned, well-informed and well-connected neighborhood where the community members work together toward a successful neighborhood. On the other hand, the permanent residents might not accept their seasonal existence where they are served all the facilities but do not take on a lot of the community responsibility. Thus the planning process faces more sensitive issues if the second homes are integrated throughout the permanent residential fabric. It is a bigger challenge to satisfy both parties and plan accordingly (Muller, 2002). Whereas, if there are separate clusters or zones, the homeowners enjoy more recreation oriented amenities. Even the city can take more

direct, zone based planning actions for them. Then again, integrated second homes need little in terms of extra expenses to provide infrastructure and other devices which translate into having a house at considerably lower price as indicated by the local economy. On the contrary, a totally separate community will have to be provided utilities and civic protections all the year round even if people live there for only a part of the time. Naturally, it means greater housing prices in most cases. Moreover, the lifestyle of people on a vacation or leisure mode and people in a primary establishment varies extensively which could result in unwanted nuisances, disputes and social strains. Still single second homes or second home communities completely separate and far away from established communities might not be desirable in a locale that is only starting to embrace the idea of tourism economy as most of the urban and civic amenities would be around the established neighborhoods. Furthermore, people making future retirement plans regarding their second homes might opt to maintain and purchase a home in a permanent resident community (Powers, 1976).

Existing road systems are another point to ponder on, for an individual second home owner, it is almost necessary to buy property with easily accessible roads and established roadway and utility system. Even though in some cases “developers sought to create a destination- in essence open up a new area- which will attract second home buyers” (Smart, 1981). Nevertheless, it ultimately comes around to the price of property variable and obviously it will decrease with increasing demand and vice versa.

Yet another very important factor in the decision making process is the viewshed. Also, importance of water in this trend is already an established fact. Kussel (1977) asserts that in a lake-shore area, lake-front properties are the hottest segments in the

second home market and extent of development might well mostly depend on amount of lake-front land or plots available. In the case of mountain areas or other natural amenity rich areas the same principle also applies, the most attractive plots are among the best view-sheds available in the area.

Once again, being that recreational facilities are one of the major ‘pull factors’ for choosing a second home location, it is not surprising to find people preferring properties adjacent to those attractions. To conclude, we may pinpoint the following factors determining the probable spatial location of a second home:

- a) Relationship with primary residence neighborhoods
- b) Ease of access
- c) Distance from city core
- d) Distance from recreational facilities
- e) Infrastructure & utilities
- f) View-shed

“Second homes have been a part of the visual landscape of United States throughout its history. Second home development has followed the economic trends of prosperity and decline, creating impacts on the environment economy and society of the areas where they are located” (Jarrell, 1991). Sandpoint, Idaho is such an area. This rural town has experienced steady growth of second home development from the late 1970s due to the augmentation of recreational and tourism facilities like ski resorts, lake-shore amenities and mountain get aways in the area. I have chosen Sandpoint and its vicinity as my case study area. The next chapter examines the trend of second home development in the area in terms of spatial location of the settlements.

CHAPTER FOUR

CASE STUDY: SANDPOINT, IDAHO

The city of Sandpoint, nestled at the base of Selkirk Mountain in North Idaho's panhandle region, is on the north shore of Lake Pend Oreille, Idaho's largest freshwater lake. Built by railroad and timber industries over one hundred years ago, Sandpoint's economic paradigm has shifted over the last 20 years. The unlimited recreational possibilities from skiing in the winter to fishing, hiking and other activities in the summer have turned it into a great tourist attraction. Another part of the economy is shaped by vibrant retail hubs and manufacturing companies. The vicinity of this small city, offering a wide variety of natural resources and tourist attractions along with manufacturing and retail companies, saw up to 38.4 % rise in population from 1991-2003 (Marley, 2004). This community evidently enjoys a partial tourism-based economy and a population consisting of permanent homeowners, second homeowners and tourists.

Regional Geography

Sandpoint is located in Bonner County, which is among the five counties in Idaho panhandle region (Fig. 4.1). The county is noted for its many environmental assets, which include forests, scenic mountain ranges, abundant wildlife, and several large and relatively pristine lakes and rivers. While Coeur d'Alene is the biggest resort settlement in north Idaho, Sandpoint could be deemed as the most scenic, lying on the northwest shore of Lake Pend Oreille at an elevation of 2,070 ft. with a backdrop of the Selkirk Mountain range. Surrounded by the Selkirk and Cabinet Mountains, Sandpoint offers

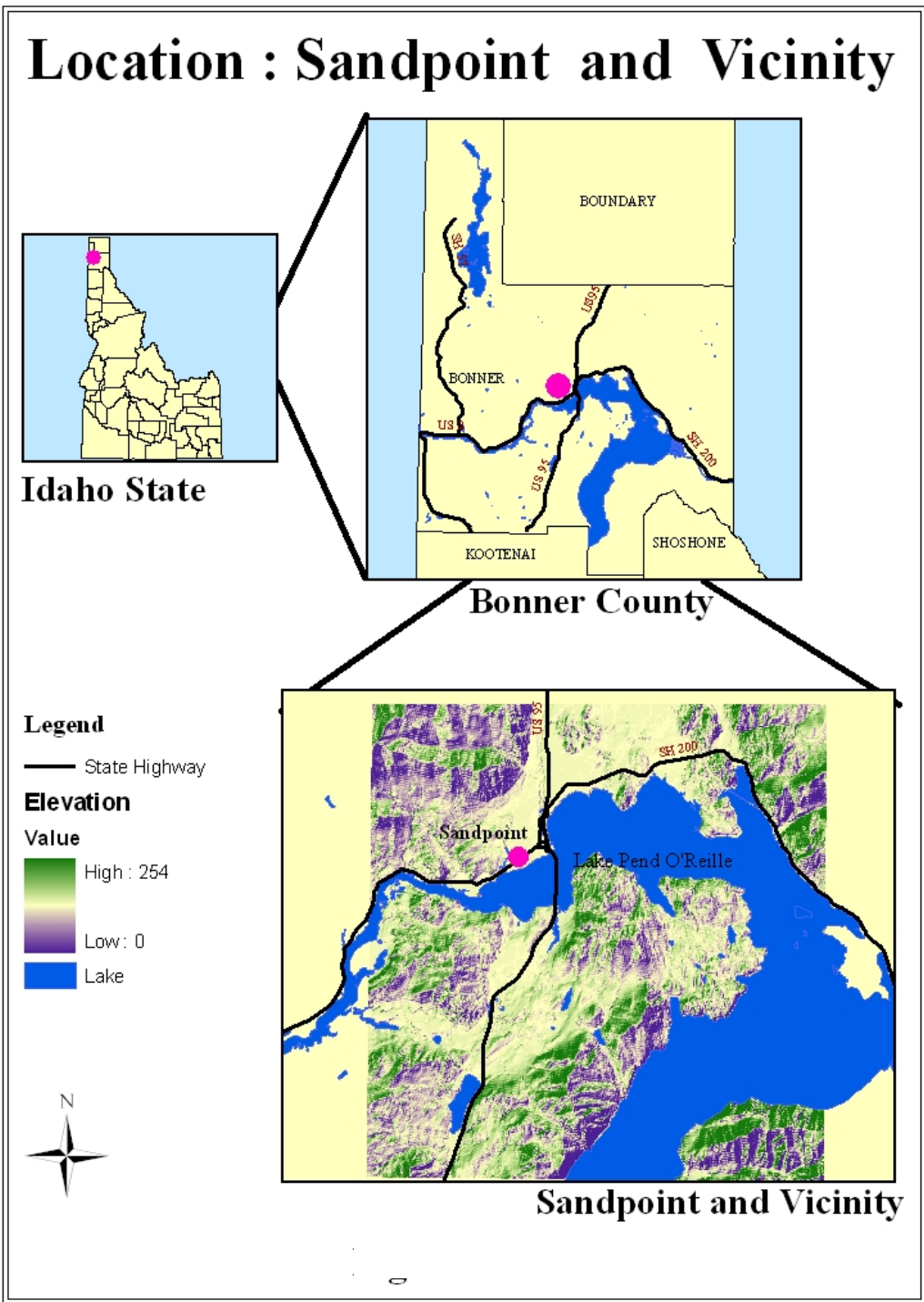


Figure 4.1: Sandpoint and Vicinity Map

outstanding recreation in all four seasons. The Selkirk and Cabinet Mountains are frontal ranges of the Rocky Mountains. The Selkirks extend 300 miles north into Canada, with a spectacular glaciated landscape and peaks up to 8,000 feet. No less stunning to the east, across Lake Pend Oreille from Sandpoint, are the Cabinet Mountains. Only 11 miles northwest from the town is the Schweitzer mountain ski resort. In fact the town is the valley between these mountains (Sandpoint Website).

The weather in Sandpoint changes dramatically throughout the year, creating four distinct seasons. The overall weather is much more moderate than that found further east in the Rockies. Summer daytime temperatures average in the 80s while nighttime temperatures are cool in the 40s. Fall temperatures are cooler with long Indian summers, and the autumn leaves and beautiful weather make it the preferred season for many residents. The winters are usually cold with average snowfall of 20~22 inches during December and January. Highest average precipitation is four inches/month in the winter and reaches lows of two inches/month in the summer. The weather, which is neither extremely hot nor too cold, is the biggest attraction of the area as it offers four season's of tourist activity.

Settlement History

Idaho is synonymous with wilderness. In this age of urban sprawl, "Idaho still boasts more undeveloped acreage than any other state in the lower 48. An astounding 21,621,000 of Idaho's total acreage remain forested" (Daffron, 2006). The Idaho panhandle region was populated by Native Americans of the Kalispell tribe until the 1800s. Lewis and Clark crossed Idaho in 1805, but the Sandpoint area was first visited by

white men around 1809 when a fur trading post was established on the shore of Lake Pend Oreille. As fur trading declined around 1840, the Northern Pacific Railway established a track along the north shore of the lake. This track and the old Indian trails cutting through Sandpoint acted as the main travel route for the thousands of the miners in the 1860s gold rush of Wild Horse Creek, British Columbia and Helen, Montana. Sandpoint grew slowly following completion of the railroad. An 1883 visitor found only 300 people in town, and nine years later another traveler reported that ‘Sandpoint is made up of between three and four dozen rude shacks and perhaps a dozen tents’. The town experienced tremendous growth, however, following the turn of the century. The great Northern Railway began its construction and its agent; a man named L. D. Farmin, officially founded Sandpoint and laid out a town plan. The timber and mining industries soon attracted small groups of settlers to the areas around Sandpoint, Hope, and Clark Fork. North Idaho became a primary producer of electric and telegraph poles made of native cedar. Even though mines prospered in many areas, including Priest Lake, Hope, Clark Fork, Lakeview, and Talache, timber remained the biggest industry in the area. Around the latter four decades of the last century the economic base supported the timber industry but it has been expanded to include light industry and tourism (Renk, 2006).

The Economic Setting

Bonner County and Sandpoint’s economy has been based on the timber industry mainly for over a hundred years and presently forest products account for over 20 percent of the Bonner County payroll. However, since the 1980s the area has experienced a huge shift to tourism due to the area’s pristine natural beauty. Tourism has increased in the last

decade when Schweitzer Mountain ski resort grew into a true four season destination, providing winter recreation related with skiing and transformed into a summer resort offering hiking, horseback riding, chairlift rides, paintball, disc golf and much more. Currently Schweitzer Mountain ski resort alone draws an average of 220,000 skiers and visitors per season. Moreover, every year thousands of tourists come to Sandpoint to enjoy the recreational facilities offered by Lake Pend Oreille.

Also around the 1980s manufacturing jobs entered the economic mix as Light House Dressing Company started its factory along with some electronics and non-wood-product manufacturing companies. Retail business like Coldwater Creek clothing, which is Bonner County's largest employer, also boosted the area's economy. The US Forest Service also plays a significant role in the area's economy. The rise of technology has also attracted many independent 'knowledge workers' and Internet-based businesses to Sandpoint. *Forbes* magazine called Sandpoint one of the best places in the U.S. for telecommuters, and small web-based businesses to find a congenial home. A number of local 'brick and mortar' shops also do a brisk Internet mail-order business. Indeed in the past 20 years the local economy shifted from an over-reliance on the timber industry to a vital mixture of tourism, manufacturing, retail, and services (City of Sandpoint Website).

In the last decade Sandpoint's labor force grew at almost double the rate of the US labor force. Since forest activities and tourism play the major role in the economy, employment peaks in the summer and falls throughout the winter. Employment falls to its lowest level in spring when muddy roads hinder loggers and winter tourism draws to an end. In 2004, for example, Bonner County's unemployment rate peaked at 8.6% in March and fell to 4.8% in August. Despite creating new jobs Sandpoint's unemployment rate

hovered below the national average due to highly seasonal employment pattern and the loss of high-paying lumber jobs. However, in 2004, exceptionally strong job growth pushed the unemployment rate below 7% for the first time since 1989. (Sandpoint Online Website and US census bureau, 2005). But in the year 2006 Bonner County's "unprecedented rise in employment has been spearheaded by its burgeoning manufacturing sector. While the nation slipped 16% in manufacturing jobs, Bonner County's has grown 21%" (Cohn, 2006). So it is evident that while the tourism industry alone failed to keep the economy of the area afloat the manufacturing industry is making up for the deficiency. The observation only strengthens the notion that Sandpoint and the vicinity must maintain an adequate balance between seasonal and permanent job and residency.

Rise of Recreational and Tourism Industry

With a population of 6,835, Sandpoint is the largest city in Bonner County, Idaho, which includes the towns of Clark Fork, Dover, Hope and East Hope, Kootenai, Oldtown, Ponderay, and Priest River. The Northern Pacific Railroad first recognized the tourist potential of Northern Idaho when it built 'Highland House' in Hope in 1886. Cross-country travelers could rest at this early resort, and many other tourist accommodations have followed through the years. However, tourism grew rapidly in the late 1980s and early 1990s. Summer tourism grew, as North Idaho became better known as a tourist destination. Inception of the Sandpoint Music Festival, featuring a summer concert series greatly accentuated Sandpoint's reputation as a haven for the arts and contributed to the

growth of tourism. Starting in the late 1980s, summer tourism began to grow rapidly. In 1990, a major expansion of the Schweitzer Mountain ski area boosted winter tourism.

The greatest boost in Sandpoint's tourism activities in the recent years is aptly described in an article published in 'Sandpoint Magazine' of Winter 2005,

Sandpoint exploded onto the national scene in a series of stories in 2004 that extolled the area's beauty, friendliness and lifestyle, calling Sandpoint the "West's best small town" (*Sunset* magazine), the "cool Northwest's hot property" (*Outside* magazine), and a "Norman Rockwell-meets-Ansell Adams classic" (*USA Today*). *National Geographic Adventure* magazine voted Sandpoint one of the 10 best adventure towns in the nation and *Forbes.com* reported this is the place to be for people who want to telecommute to work. And *Cabin Life, Cabin Living* called Sandpoint "the quintessential Western outdoor lover's town" (Gannon, 2005).

Since 2000 tourism has been growing at a healthy pace in the area and the unprecedented national attention that Sandpoint received in 2004 greatly increased the number of tourists that perpetuated the trend of second home developments over the recent years.

Second Home Development

The city of Sandpoint is almost ideal for a second home location for many reasons. It is on the bank of a water body and near to mountain retreats and ski resorts. It is rather small compared to Coeur D'Alene, so people coming from large urban cities perceive the landscape as refreshingly rural and natural. Interestingly, a good portion of the second home owners in the area originated from California in the late 1980s and decided to live permanently (Sayeed, 2006). The trend of Californians owning a home here has not diminished yet. A large portion of the seasonal homeowners are from

California these days. Other than that, there is another good portion of seasonal home owners mainly from all over the state of Washington. As the city previously had no restriction or planning regulations about second home communities, the buyers were able to buy homes in regular residential zones. Noticeably, the price of houses in this rural landscape was much more affordable compared to those big cities which obviously acted as a great incentive for the influx of out of state seasonal residents.

The location being on the Highway 95 route and only two hours away from the Spokane International Airport also heightened the desirability of the area. Established almost a hundred years ago, the city already had a very good infrastructure of civic amenities, while the manufacturing companies in the area gave Sandpoint an intriguing mix of rural and semi-urban sense. Here one could enjoy all the amenities of modern life provided by the city and only a few miles journey could take one to the heart of the wilderness of the lake or the mountain. The local climate is conducive to enjoy all the summer fun in the lake and mountains along with the winter recreations offered by 3000 acres of natural snow ski area in the Schweitzer Mountain resort. So it is no wonder that Sandpoint was dubbed as the best kept secret of Northern Idaho. In the last few years, mainly after the aforementioned publicity in national travel magazines, the demand for seasonal homes has reached its peak. Although the seasonal homes in the last decade were intermingled with the permanent residential zones, pressure has been building on the city's planning department to allot separate zones for the seasonal communities. In the recent years a few lake front sites have been allotted for only seasonal communities/homes. Then again, those do not belong in any separately zoned area.

There is, of course, more than a few large luxury homes or trophy homes scattered around the shore of the lake and deep in the mountains but the mainstream second homes are near or around the city and intermingled with the permanent residential zones.

Parameters for the Location of the Second Homes

Since currently there is no zoning restriction in the city for the location of second homes, the homebuyers can choose a spot anywhere in the regular residential zones. Their decision obviously depends on the physical and spatial qualities of the desired site and because of the lack of zoning regulation they can afford to select the site according to their wish, regardless of the impacts that could result from the choice. As mentioned before, there are two types of second home owners. One is the very rich who can afford a multi-million dollar home in any given area. They can install the amenities on site and do not have to worry about existing infrastructure. But they are a small percentage. As indicated in chapter two, the bulk of the second home owners are middle and higher-middle income families who want to own a home that matches the local housing price (which is considerably cheaper than their primary residence location) and can utilize the existing infrastructure of services and amenities. Invariably, physical proximity to the recreational spots also plays a significant role in their decision making.

This research is not aimed at the expensive luxury homes that can be built in spite of the lack of preferable amenities. It is mainly to discern the development trend of the

second homes that depends heavily on the existing civic amenities and tends to grow in or near the existing permanent residence community.

It should be noted that location of any kind of development is a two way process. People are bound to choose from the sites the realtors are developing but on the other hand, the realtors have to choose sites to develop that will attract prospective buyers. So, from the factors identified in chapter two we can derive a number of parameters that will usually feed and govern the decision making process for the second home buyers. As the main attraction of the buyers is recreational purposes, proximity to those facilities (in this case, the lake, the National Forest and the mountain retreats) is a dominant issue. Relation to the downtown or the city core is another important factor along with the already established permanent resident communities. While the mindset of being near or away from these could vary in each individual case, it could be assumed that close proximity to the existing civic amenities such as hospital, utilities, fire districts, roads etc. is desirable in most of the instances. There are also two industrial parks in the area and these obviously will play some role in the decision making process. Furthermore, the existing land use pattern of the area will govern the development sites. For example, areas like wetlands are mostly unsuitable for any kind of development even if it satisfies all the other preferential parameters or some of the preferable sites may fall under public lands, making them unavailable for private development. In addition, topography is another significant factor as steep slopes are unsuitable for this kind of development.

To summarize, we could identify the following factors as the main contributors resulting in the spatial location of second homes:

- a. Proximity to the downtown area
- b. Proximity to the industrial parks
- c. Proximity to the national parks and forests
- d. Proximity to the recreational facilities
- e. Proximity to the lake
- f. Proximity to the existing civic services
- g. Proximity to the existing primary residence neighborhood
- h. Feasible land use category and suitable topography

CHAPTER FIVE

METHODS OF BUILDING THE MODEL AND DATA SOURCES

This chapter is oriented towards the goal of developing a GIS suitability model using the modelbuilder interface in ArcGIS, which “provides a graphical modeling framework for designing and implementing geoprocessing models that can include tools, scripts, and data” (ESRI Website). With a model we will be able to examine different scenarios by changing the values and weights of the parameters. At this point of the research all the parameters that result in the choice of one particular site for owning a second home have been established. This chapter is divided into three parts. The goal of the first part is to convert these parameters into spatial inputs in a GIS compatible format. These are input to the suitability model as the base data and they go through a series of geoprocessing tools to finally generate a raster layer that predicts the most preferable spatial location for the second homes. After building the whole model it is run as the first working model. The next part is to conduct the questionnaire survey to determine the appropriate value and weights of the parameters. Finally, the third part is to input those new values into the model and run the model. Each of the parts is described in terms of methods and data source.

The First Working Model

There are seven preferential assumptions described in Chapter four. As this research was mainly based on environmental and ethical land use values the merits of those assumptions are that the second home buyers will prefer their home:

1. Away from downtown.
2. Away from the industrial parks.
3. Near the parks and forests.
4. Near the recreational facilities.
5. Near the lake.
6. Near the existing civic services (i.e. utilities, hospital, fire district, existing roads etc.)
7. Away from existing primary home (residential) neighborhoods.
8. Not on steep slopes.

Obviously it is very difficult to build on a slope that is more than 30%, so the slope factor was added into the model. To spatially input these parameters they have to be in the form of either vector and raster layers or feature classes. All of the vector feature classes were accessed from and supplied by the Bonner County Planning Department. The vector feature classes consisted of three point layers for the industrial parks, the recreational facilities such as ski resorts, marina, etc., and the utilities, i.e., hospital; five polygon feature classes for the downtown area, the national parks and forests, the lake, the fire districts (assigned to utility parameter) and primary home neighborhoods and one linear feature class for the existing road system (Fig. 5.1). There are two rasters used in the model and both of them are accessed and downloaded from the United States Geological Survey (USGS) data port at <http://seamless.usgs.gov>. One of them is the elevation raster (DEM) and the other raster is for the land use (Fig. 5.2). All of these layers were clipped to match the study area of Sandpoint and vicinity. Moreover, as the data came from different sources they were projected in different systems. Bonner County officially uses the state plane projection coordinate system of

Vector Layers Sandpoint, ID and Vicinity

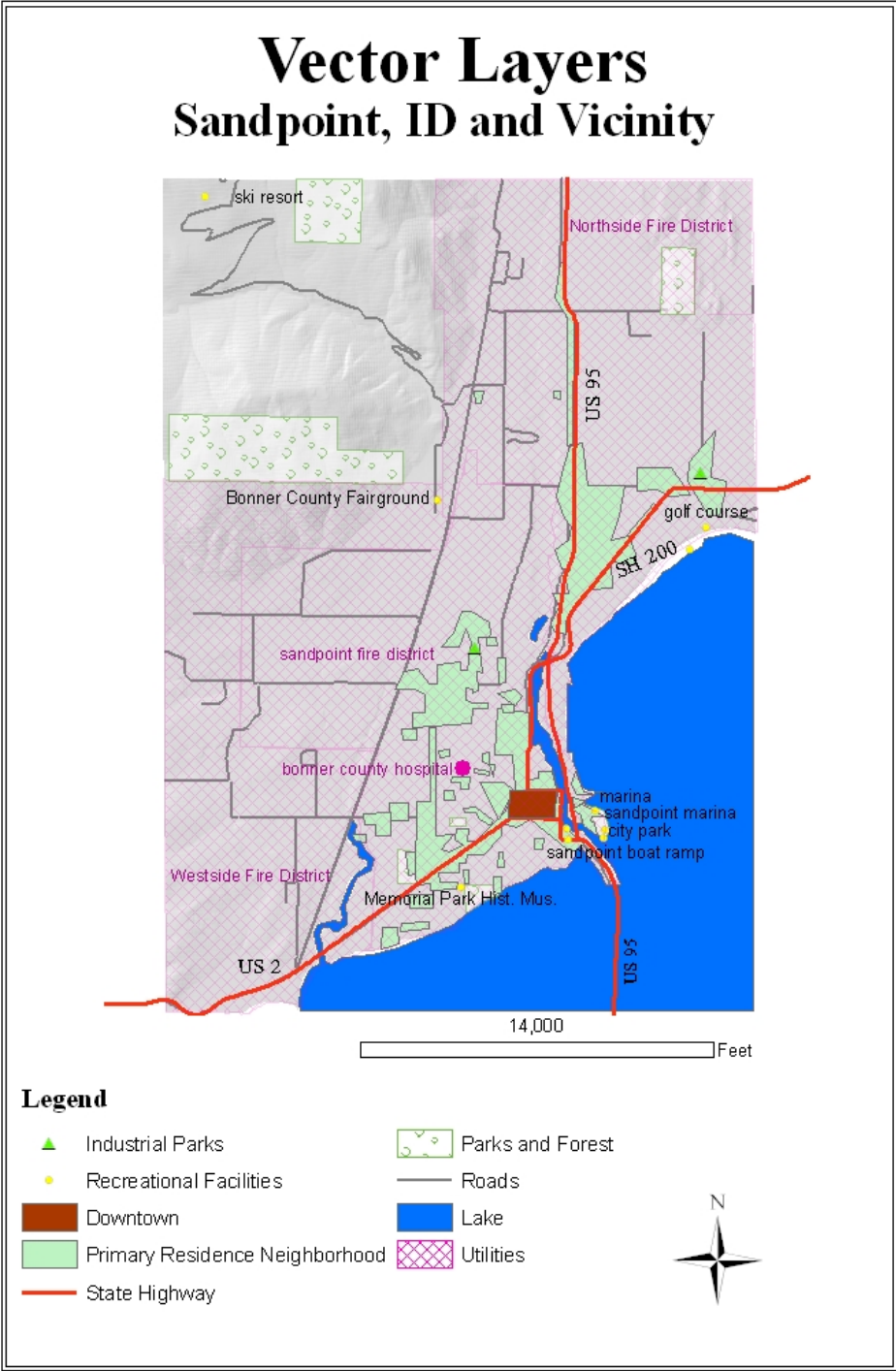


Figure 5.1: Vector Layers of Sandpoint and Vicinity

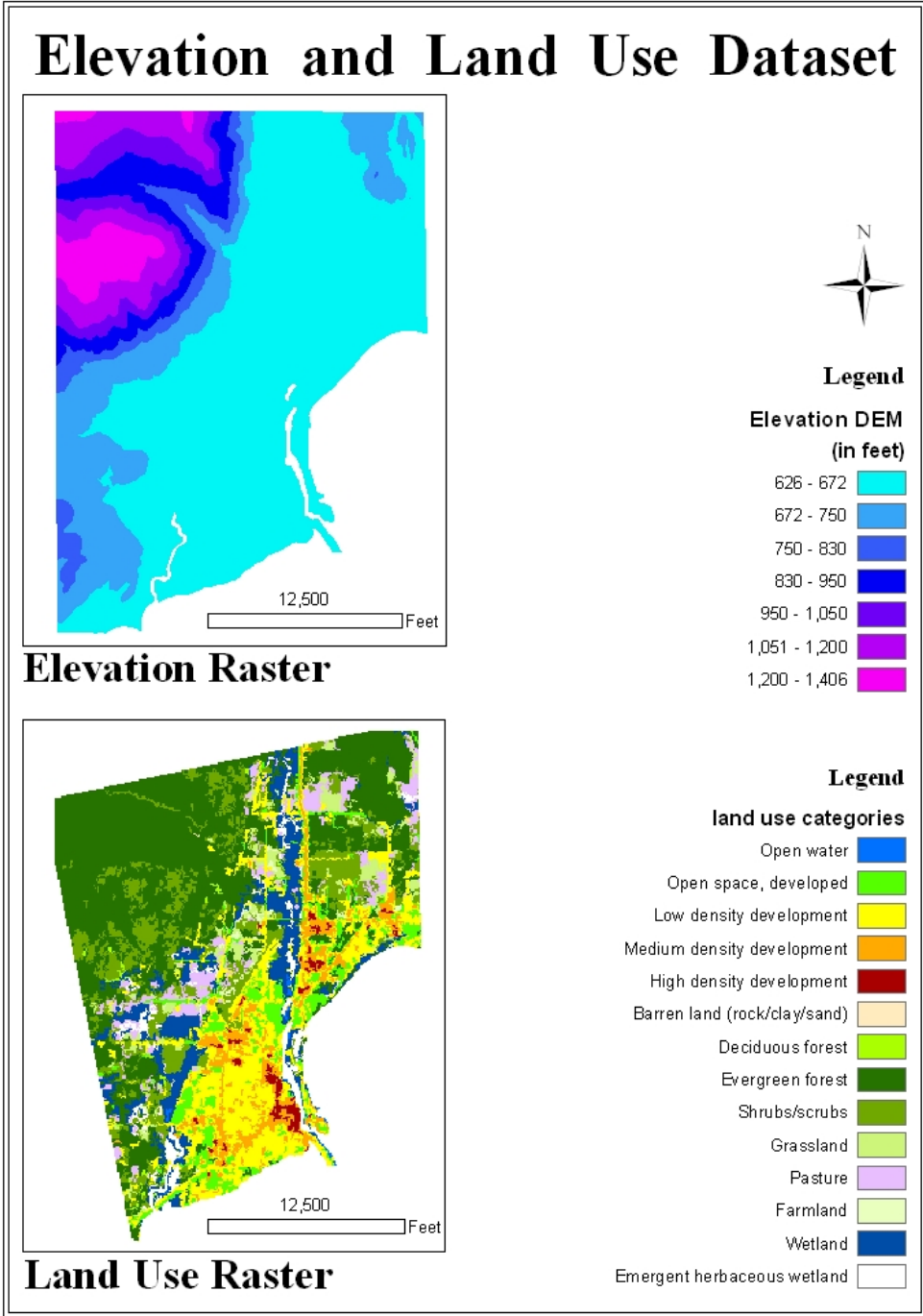


Figure 5.2: Elevation and Land Use Raster Layers of Sandpoint and Vicinity

“NAD_1983_StatePlane_Idaho_West_FIPS_1103_Feet”, so all of the other data were re-projected to match that coordinate system. Among the vector feature classes the primary neighborhood information was provided as a hardcopy map. So a new polygon feature class was created and populated using ArcEditor. The raster elevation DEM was transformed into a ‘hill-shade’ raster, using Spatial Analyst to achieve greater visual perception.

There are two major stages in the model. In the first stage the aforementioned eight criteria are geoprocesed and combined through ‘weighted overlay’ tool to derive an output raster that depicts the first stage of suitable areas. In the second stage the land use raster is combined with output from the first stage in another ‘weighted overlay’ to incorporate the land use criterion into the model. This geoprocessing exercise narrows down the suitable areas. The output from this stage is run through a conditional statement to derive the most suitable areas for second home development. However, at this point there are some public lands included in the raster and they are eliminated from the layer by using ‘single output map algebra’ to finally obtain the raster that spatially maps the most suitable areas for second home development based on buyer preferences and existing land use pattern.

First stage of the model. To begin with, the first seven input parameters are geoprocesed using the ‘euclidean distance’ tool. To work with these layers together they had to have a common scale system. So at this point each of the resulting rasters are reclassified in a ‘1 to 10’ scale using the ‘reclassify’ tool where most preferable location has a value of ‘10’ with the least preferable having the value of ‘1’. For example, in the case of proximity to the lake, it is assumed the nearer areas to the lake are most

preferable. So the smallest distance class in the raster is given the value of '10' and the rest of the values are assigned accordingly descending to the value of '1', which is the longest distance away from the lake. On the other hand, following the same logic, in the case of 'distance to industrial park' raster the smallest distance is given the value of '1' while the farthest has the value of '10'. Steep slope, i.e., over 30% did not occur in the study area, so the slope component is discarded from the model at this point.

For the first working model it is assumed that all these components are equally important in the decision making process. Therefore, these rasters are geoprocesed through the 'weighted overlay' tool where the weights for each individual components are the same. The output from this exercise spatially maps the first stage of suitable areas (Fig. 6.1)

Second stage of the model. The land use component is incorporated in the model at this stage. The land use raster downloaded from the USGS data port has 14 categories of land use (Fig. 5.2). Again, to incorporate the raster with the last output raster it had to be reclassified to a common scale system. However, as this raster has fourteen categories, they are reclassified randomly from one to fourteen. Subsequently, it is combined with the output from the last exercise through another 'weighted overlay' geoprocessing. In this process again both of the rasters are given the same weights while the values of the land use layer are reassigned to reflect the findings and perceptions from the literature survey. Like the other rasters, the most preferable category of land use is given the highest value of '10' and the rest followed to the value of '9' to '1' according to their suitability. Complementing the 'ethical land use approach' the 'Wetland', 'Emergent herbaceous wetland', 'Farmland' and 'Open water' categories were restricted, which

means they will be automatically excluded from the resulting raster. On the other hand, categories like 'Low density development' and 'Developed open space' were given the higher values while the 'Forests' and 'Grasslands' have mid values (Table. 6.2). The raster derived in this stage indicates the suitable areas that have values from '4' to '10'. As the areas with the value of ten is the most suitable area this raster is geoprocesed through a conditional statement using the 'con' tool (where 'input conditional raster' and 'input true raster or constant value' both are the resultant raster from the previous step and the expression is, 'Value = 10'). This step eliminated all the areas with value other than ten in the output raster.

In this stage some of the raster cells coincide with the polygons of 'Parks and Forests' layer, which means some of the suitable areas are located inside the public lands where private properties cannot be owned (Fig. 5.4(a)). To eliminate those cells first the public land polygon feature-class (Parks and Forests) is converted to a raster and then the output raster is reclassified where the old value '1' is assigned the value of '0' and the 'no data' is assigned the value of '1'. Doing a 'single output map algebra' function between this reclassified raster output and the suitable area raster output gives us a final output where the cells coinciding with the public lands have the value "0" and the other cells retain the value of '10'. The value '0' is removed from the data frame by removing it in the 'symbology property'. The resulting output denotes the most suitable areas for future second home developments (Fig. 5.4 (b)). This first working model is shown in Figure 5.3 (a) and 5.3 (b) and the map generated by the model is displayed in Figure 5.4 (c).

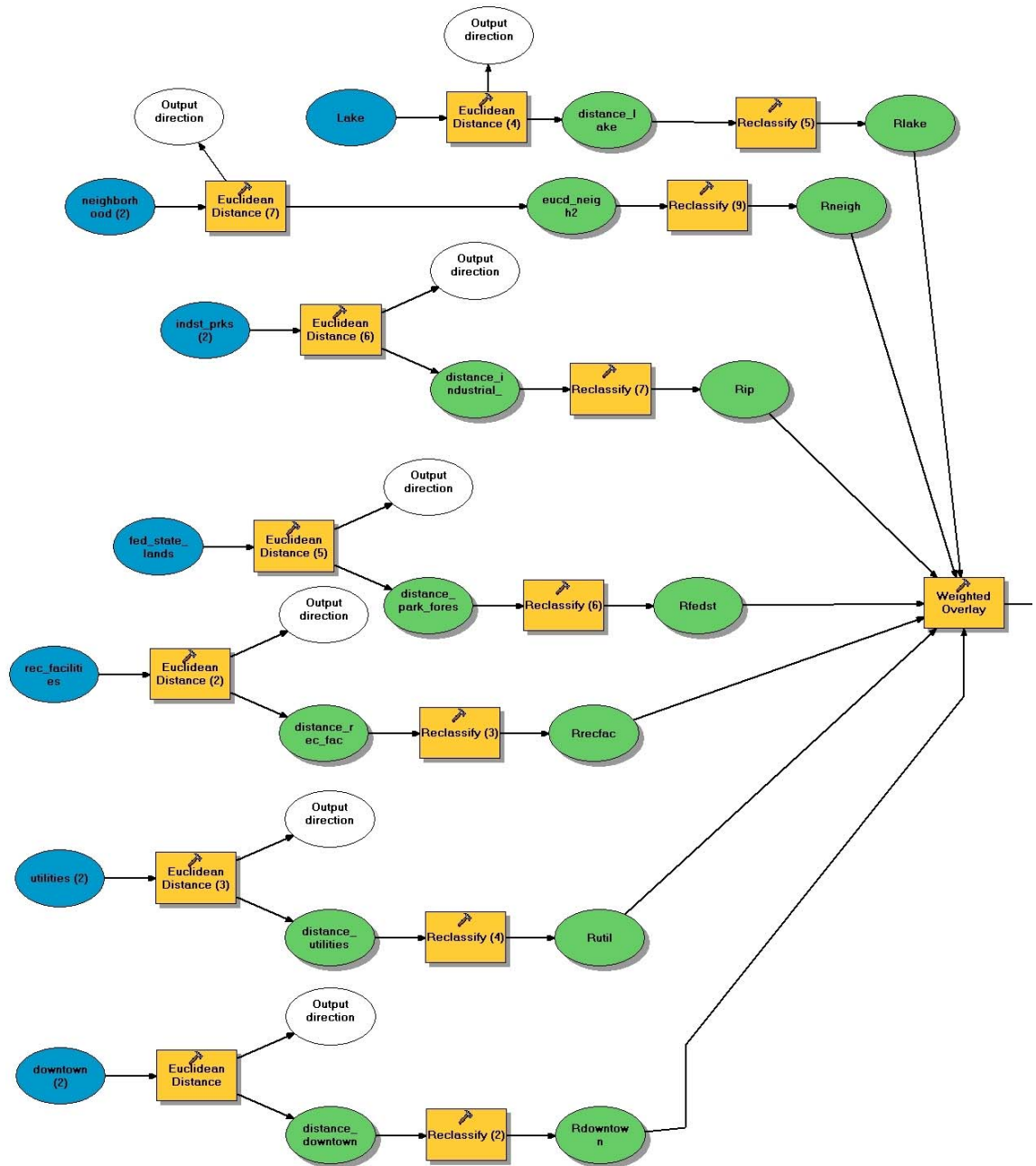


Figure 5.3 (a): The Suitability Model: First Stage

Note: The Legend for the model parameters area shown in the Appendix

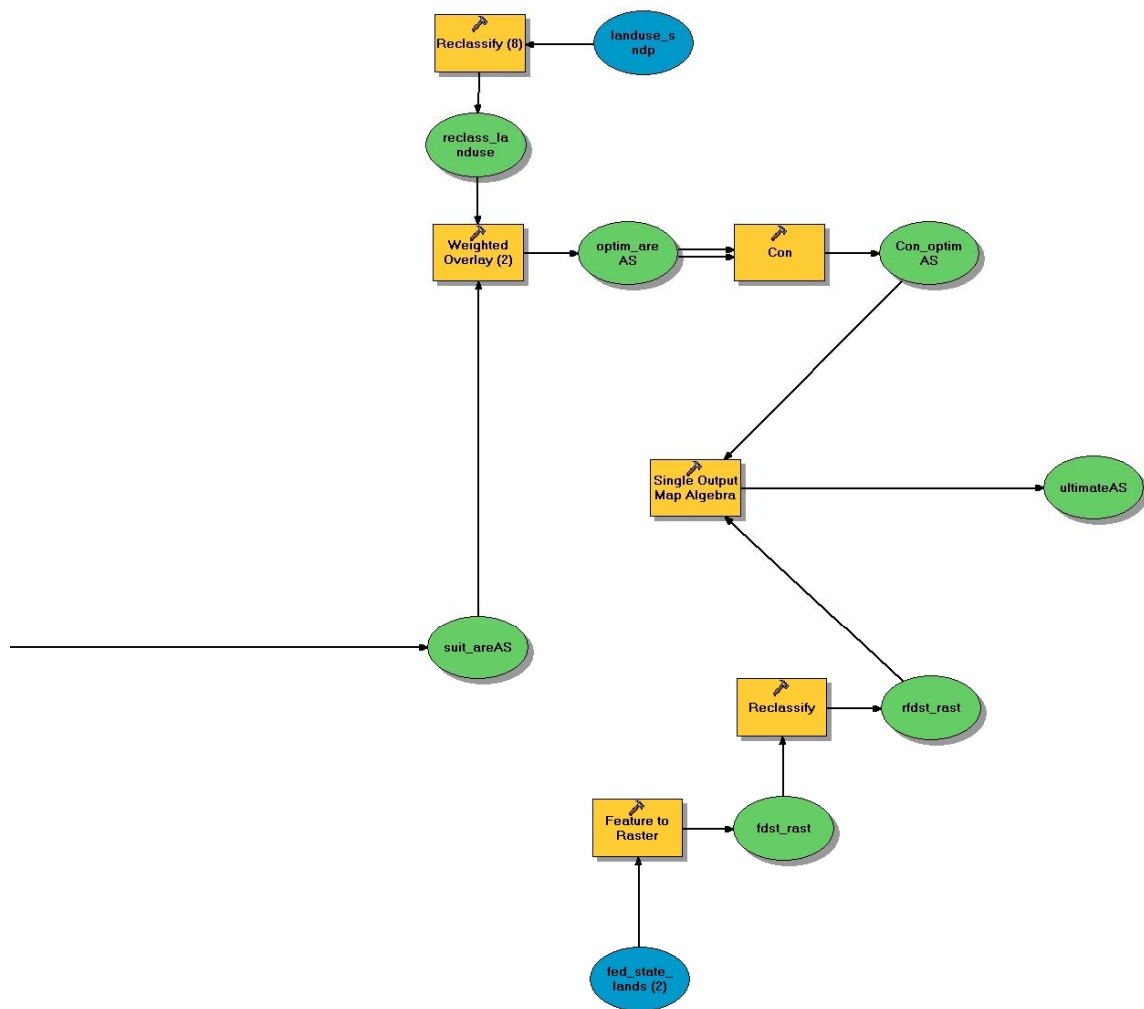


Figure 5.3 (b): The Suitability Model: Second Stage

Note: The Legend for the model parameters area shown in the Appendix

Suitable Areas for Second Homes First Working Model

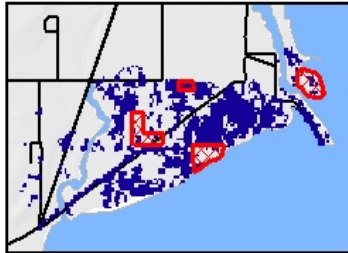


Figure: 5.4 (a)

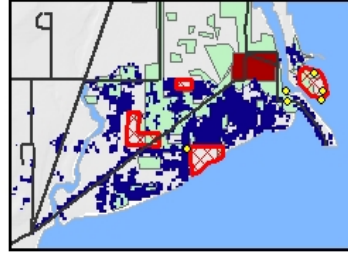
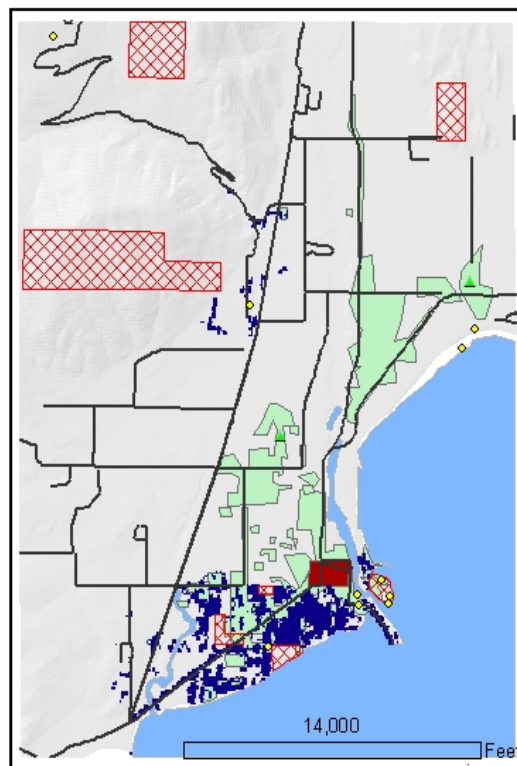


Figure: 5.4 (b)



- Legend**
- Industrial Parks ▲
 - Recreational Facilities ◆
 - Roads
 - Parks and Forests
 - Most Suitable Location
 - Downtown
 - Primary Resident Neighborhood
 - Lake



Figure: 5.4 (c)

Figure 5.4: Suitable Areas for Second Homes: First Working

Model

The final output raster layer shows that the most preferable area for second home development is concentrated on the southern part of the city near the lake and marina and a very small segment near the national forest. The area is away from the industrial parks and downtown but near the recreational facilities. The primary residence neighborhoods do not have a significant influence on the locations. The first model complements all the assumptions made for the parameters based on the literature survey.

The Questionnaire Survey

The discussion so far has been based on the assumptions of parameters, values and weights that were solely dependent on the researcher's perception from the literature survey. The goal of the questionnaire survey is to shed a better light on those parameters that influence development and get a more practical and consequential perspective on the subject. The questionnaire survey is done among a focus group consisting of the planning professionals of Sandpoint area. As "focus groups are not polls, but in depth, qualitative interviews with a small number of carefully selected people", they ensure results that "give a sense of what is going on in peoples minds and lives that cannot be obtained with survey data" (ASA series pamphlet). Naturally, the planning professionals of an area are one of the focus groups that shapes the development trend by directly being involved in the decision making process. They also possess a good insight into the current land use patterns and their significance to future development. The survey results from this focus group can be justifiably applied to determine the weights and values of the parameters to predict a more logical and pragmatic outcome.

The questionnaire was divided into three parts (Appendix). The first part aims to validate the seven key criteria or parameters of the model. This is in fact seven ‘agree/disagree/ neutral’ multiple choice questions. The result from this part affects the first reclassification portion of the model and classifies the locations preferences according to the spatial proximity of those parameters.

The second part asks the key informant to assign weights to those parameters as a percentage. The total weights assigned should add up to one hundred percent. This is to determine the significance of the parameters in the decision making process. The results from this portion are input to the first ‘weighted overlay’ of the model.

The third part of the questionnaire deals with land use. The assumed values for different categories of land use are listed in the questionnaire and the key informant is asked to re-assign those values according to their perception. It is worth mentioning that the first working model supplemented the survey process and before completing the survey, the structure of the model was explained to the key informants to ensure clear understanding and accuracy of response. And since the survey was done in a focus group interview process it was possible to explain any difficulty personally and the researcher was allowed to acquire additional insights into the matters that were not included in the questionnaire.

Survey Results

Thirteen key informants took part in the survey. They included four planners from Bonner County Planning Department, three planners from the City of Sandpoint Planning Department and six members of the City of Sandpoint Planning Commission. For the

first two parts of the questionnaire survey all thirteen responses were used. But one of the responses for the third portion was discarded due to incorrect completion.

The surveys were analyzed and the average value was used for the second and third part whereas the majority was used in the final model for the first part.

Figure 5.5 is the survey result for the first part of the questionnaire.

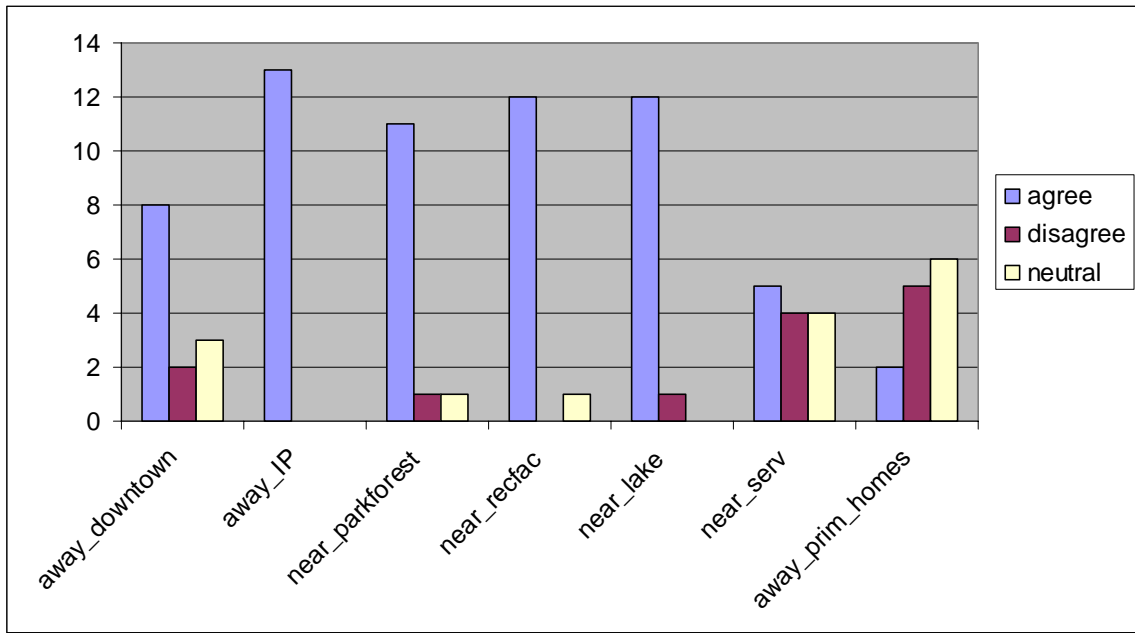


Figure 5.5: Results for Location Preferences

The abbreviated parameters are elaborated in the Appendix. We can discern from the figure above that the assumptions regarding proximity to the first six land use matches the original assumptions while the last assumption was reversed after the survey.

Figure 5.6 is the survey result for the second part of the questionnaire.

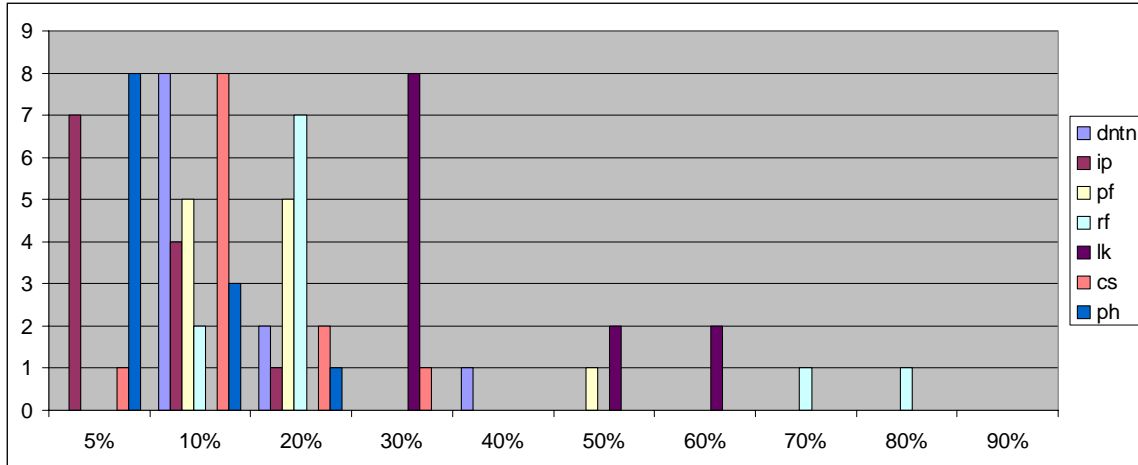


Figure 5.6: Significance of Preferences

The abbreviated legend is elaborated in the Appendix. By taking the average of all the responses for each of the criteria we derive a new set of weights to use in the first ‘weighted overlay’ of the model. The new values are shown in Table 6.1.

Figure 5.7 is the survey result for the third part of the questionnaire.

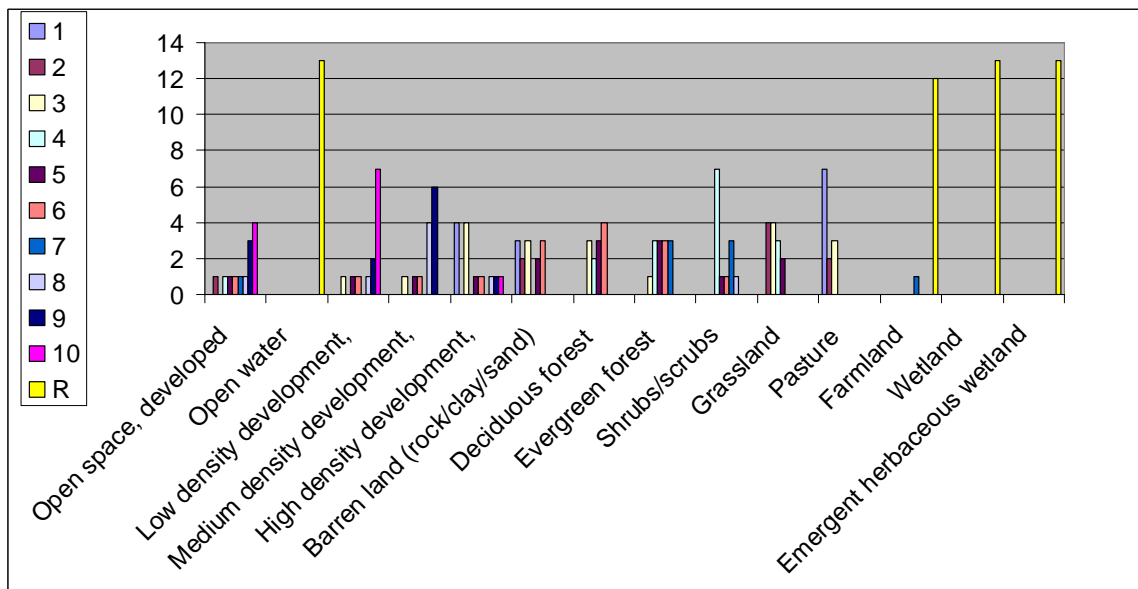


Figure 5.7: Suitability of the Existing Land Use

The results again are gained from the average value of the responses. The new reclassified values of the suitability scale for this part is shown in Table 6.2. These values are used in the second ‘weighted overlay’ of the model.

The Final Model

All the new values acquired from the survey were input to the final model in appropriate places following the framework of the first working model and the model was run with a new set of weights and values. The resultant map from the new model is shown in Figure 5.8. This map shows that using the findings from the survey in the model has significantly shifted the suitable areas to the northeast from the first predictable areas. The findings are elaborated and discussed in the next chapter.

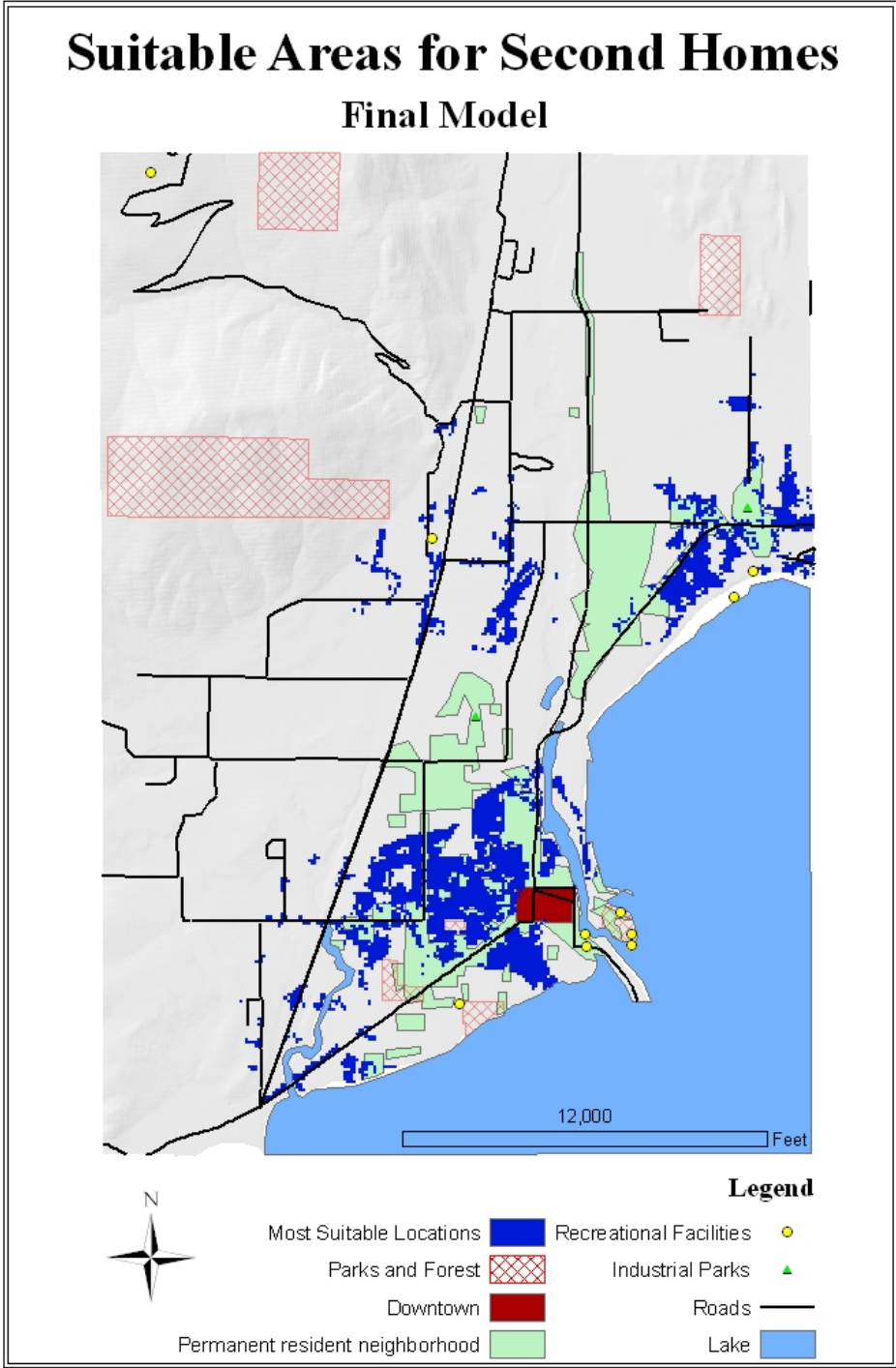


Figure 5.8: Suitable Areas for Second Homes: Final Model

CHAPTER SIX

SUMMARY AND CONCLUSION

This chapter elaborates and explains the results from the survey and the corresponding model. It also recommends possible future studies in this area.

Summary and Results of the Model and Survey

To illustrate the impact of survey results on the final model, the first working model is explained at first and then the second one is explained and the results are compared with the first one. The results are discussed in two parts, the first part illustrates the first ‘weighted overlay’ process and the second part illustrates the ultimate suitable area derived from the second ‘weighted overlay’ and following procedures described in Chapter Five.

The first working model. In this model, the first ‘weighted overlay’ gives us the suitable areas in relation to the seven primary parameters. As we can see in Figure 6.1, the highest value of suitability here is ‘8’ and those areas are mainly near the lake and recreational facilities. The only primary residence neighborhood that falls into those suitable areas is the one that is near the lake. Other than that, suitable areas reflect the assumption that these areas should be away from the downtown and industrial parks.

Figure 6.2 shows the effect of land use after this parameter is incorporated in the second stage of the model through the second ‘weighted overlay’. Clearly the restricted areas, i.e., ‘Wetland’, ‘Emergent Herbaceous Wetland’, ‘Open Water’ and ‘Cultivated Farmland’ have the value ‘0’ as they are restricted. Best suited areas are denoted with the

Suitable Areas For Second Homes First Working Model: First Stage

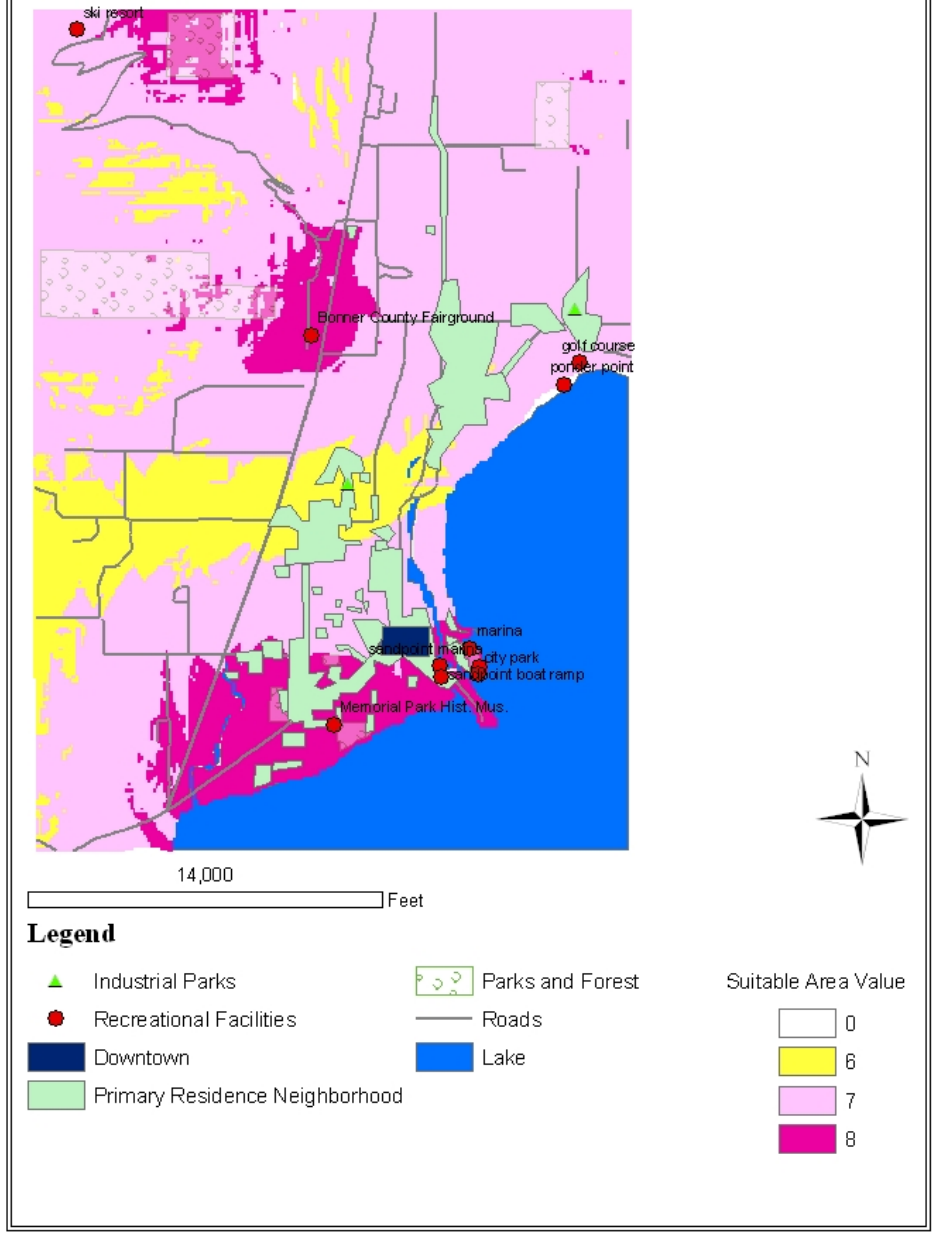
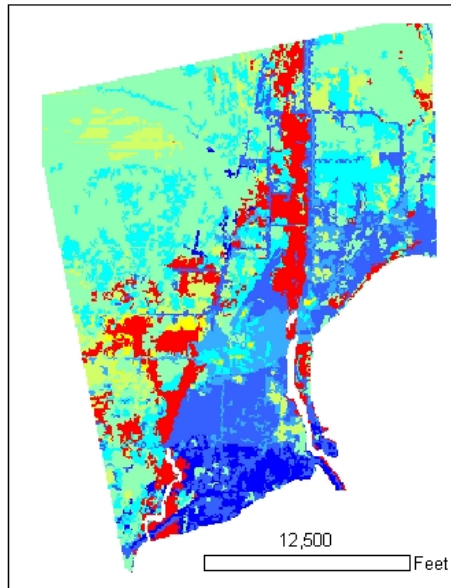


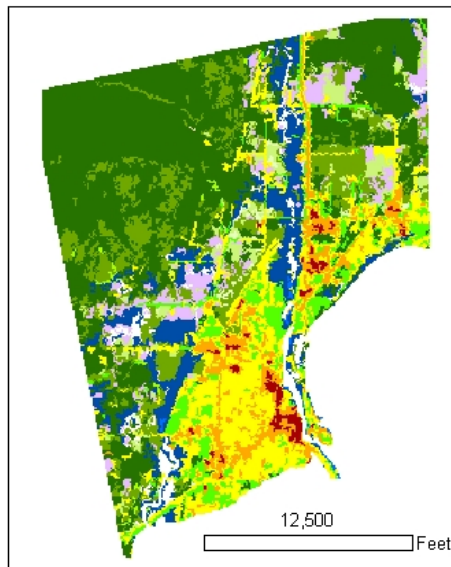
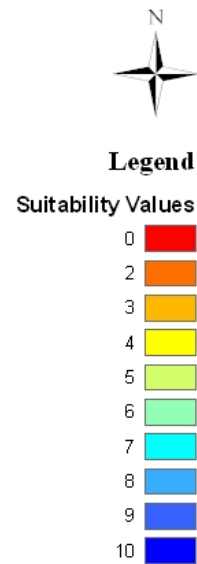
Figure 6.1: Suitable Areas for Second Homes: First Working Model, First Stage

Suitable Areas for Second Homes

First Working Model: Second Stage



Suitable Areas



Land Use

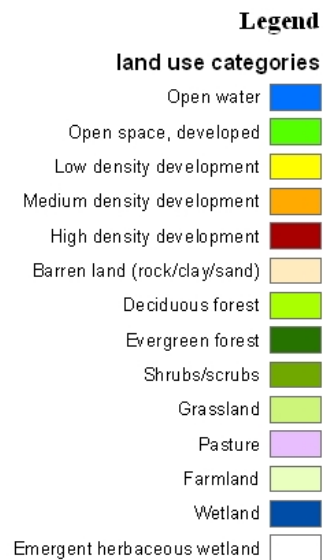


Figure 6.2: Suitable Areas for Second Homes: First Working Model, Second Stage

value of ‘10’. They are concentrated mainly on the south side of the city where it has low to medium density development and developed open spaces. Moreover, there are some suitable areas near the national forest. Figure 5.4 (a) shows the public lands that are coinciding with the suitable area raster from this stage.

The final result with only the best suited areas is shown in Figure 5.4 (c). The public lands are excluded from the suitable area raster in this map (Fig. 5.4 (b)) and the overall location further supports the seven primary assumptions for the model and also reflects the scaling order assigned to the land use raster. These areas, as mentioned before, mainly concentrate around the south side of the city, near the lake, with a small area situated in the northern side near the ski resort and the National Forest. All the suitable areas also coincide with the existing road system.

The final model. In this model the findings from the questionnaire survey are input. Figure 5.5 shows that the assumption about the proximity of primary residence neighborhoods is reversed in the survey result and the other remains the same. Moreover, the survey gives us a new set of weights for these assumed parameters. Table 6.1 depicts the new set of weights.

Parameter	Weight (in % value)
Proximity to the downtown	10
Proximity to the recreational facilities	22
Proximity to the utilities	10
Proximity to the lake	33

Parameter	Weight (in % value)
Proximity to the parks and forests	15
Proximity to the industrial parks	5
Proximity to the primary residence neighborhood	5

Table 6.1: Weights of Parameters

Suitable areas were derived by running the first ‘weighted overlay’ in the final model (Figure 6.3). The highest value of suitability here is ‘9’. It is the area surrounding mainly the lake and the recreational facilities. As the proximity to the primary residence neighborhood is reversed from the first model, i.e. suitable areas are preferable near this parameter (Figure 5.5); we can see some areas with the value of ‘8’ and ‘9’ around the primary residence neighborhoods. As the weight of this parameter is very low compared to the recreational parameters, these areas don’t have the highest suitability. They mainly have a suitability of ‘8’. Moreover, as the ‘Wetlands’ and ‘Open water’ is not restricted from the model in this stage, we can see some suitable areas overlapping those restricted land use patterns.

In the second part of the model, the second ‘weighted overlay’ where land use is incorporated gives us more precise suitable locations. Table 6.2 shows the new values that were derived from the survey by averaging the responses along with the old ones that were used in the reclassification of the land use raster:

Suitable Areas For Second Homes Final Model: First Stage

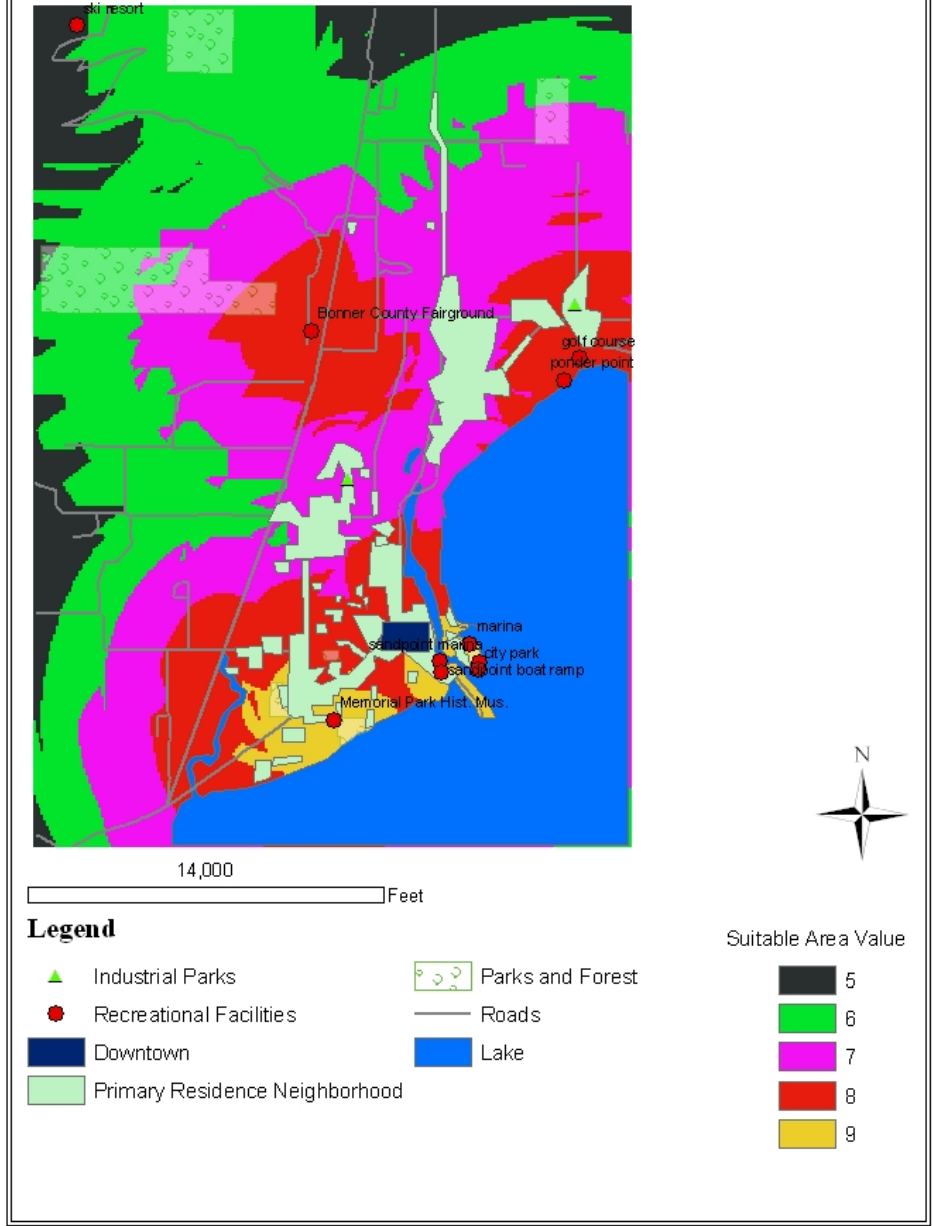


Figure 6.3: Suitable Areas for Second Homes: Final Model, First Stage

Land use	Value(1-10 scale) Preliminary model	New Value(1-10 scale)
Open water	Restricted	Restricted
Open space, developed	9	8
Low density development, mainly residential	10	10
Medium density development, mainly residential	8	9
High density development, Residential/commercial	2	2
Barren land (rock/clay/sand)	7	6
Deciduous forest	4	5
Evergreen forest	3	7
Shrubs/scrubs	5	4
Grassland	6	3
Pasture	1	1
Farmland	Restricted	Restricted
Wetland	Restricted	Restricted
Emergent herbaceous wetland	Restricted	Restricted

Table 6.2: Values of Land Use Categories

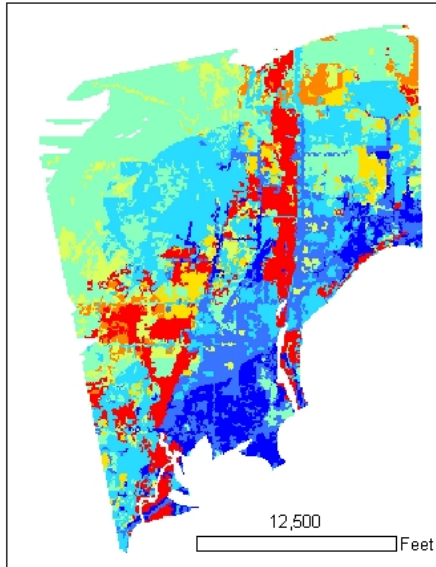
We can clearly see that the new values closely resemble the old values. One reason for this similarity might be the fact that the focus group consists of the planning professionals who are usually pro-environmentalists. Thus their view on this subject complements the ‘ethical land use’ approach of this research and results in this kind of close resemblance. The results for running the model with these input are depicted in

Figure 6.4. In this figure, the restricted areas have the value of '0'. In comparison, the areas with the highest value of '10' usually occur around 'Low' to 'High density development' areas as well as 'Developed open spaces' that are near lakeshores with another area located near the National Forest and ski resort.

Figure 6.5 shows the results in the form of ultimate suitable areas for second home developments from the first working model and the final model side by side. Apparently, in the new outcome of the model the suitable areas are not concentrated on the south part of the city but more or less scattered through the whole lakeshore and recreational areas. The areas near the National Forest have also shifted towards the lake in the east considerably. Obviously, the classification change in the 'proximity to the primary residence neighborhoods' parameter is one of the reasons for this shift, even if the weight of the parameter was rather small. The new result also shows the suitable areas either near or surrounding the primary residence neighborhoods. Another main reason behind the shift is the considerably high weight assigned to the 'proximity to the lake' parameter and the 'proximity to recreational facilities' parameter. Most of the recreational facilities are located near the lake, thus the shift in this direction. The suitable areas near the National Forest and ski resort have almost doubled in the new model for the same reason of higher weights assigned to those parameters. Also the comparatively lower weight assigned to the 'industrial park' parameter results in developing suitable areas near this parameter regardless of their unsuitability.

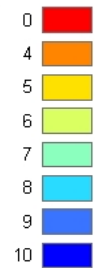
Suitable Areas for Second Homes

Final Model: Second Stage

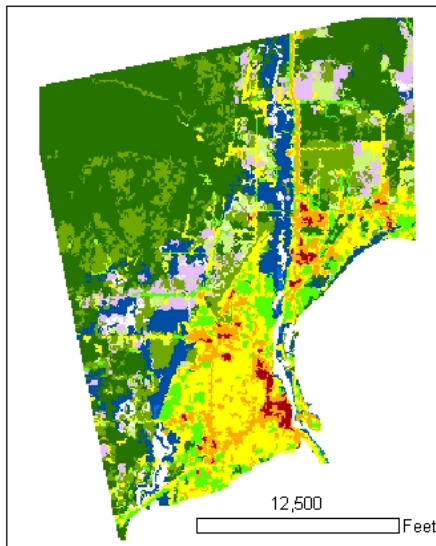


Legend

Suitability Values

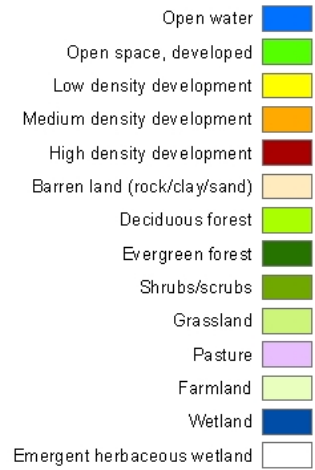


Suitable Areas



Legend

land use categories

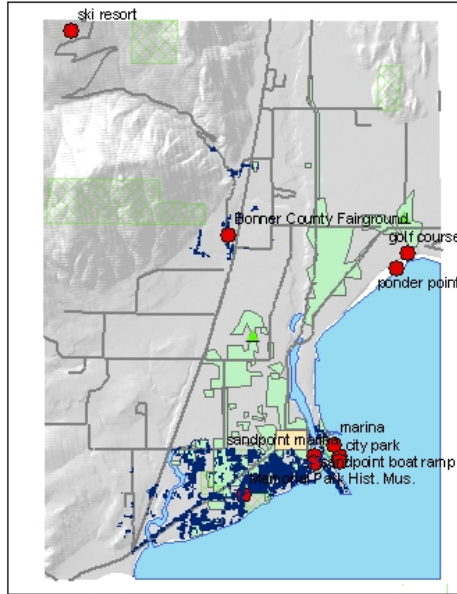


Land Use

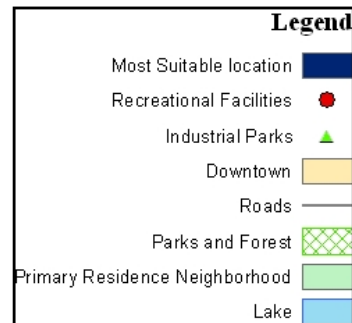
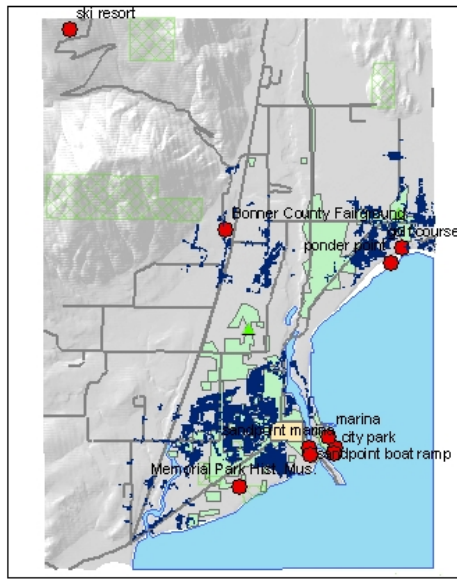
Figure 6.4: Suitable Areas for Second Homes: Final Model, Second Stage

Suitable Areas for Second Homes

Comparison of the Results



First Working Model



Final Model

Figure 6.5: Suitable Areas for Second Homes: Comparison of the Results

Conclusion

Sandpoint, Idaho is on the verge of a tremendous shift in the scheme of recreational land use allocation in the area. The demand for second homes has almost tripled in the past few years (Bramblee, 2006). The planning departments of both Bonner County and the City of Sandpoint are trying to find the best ways to meet this challenge. While the permanent resident community is determined to retain its small town values and system of close neighborhoods, they are pressuring the planners and decision makers to allocate totally separate zones for the seasonal home communities. On the other hand, the significant economic contribution from this seasonal population cannot be overlooked. Moreover, new second home communities can share and help in rebuilding and renovating the city's existing infrastructure and utility systems. Close proximity or intermingling of these two separate entities is desirable for this purpose.

To plan a successful blend of permanent and seasonal community system, it is imperative to acknowledge the area's 'pull factors' and the high demand areas for each individual need. This research will preferably give a sound insight into the possible future growth of the second homes in the area, depending on those 'pull factors'. Better and informed community planning and zoning systems could be developed depending on this study.

As mentioned before, this challenge of dealing with the trend of second home development is not only the case of this particular town but is one for hundreds of small rural towns in the scenic areas. This model should be able to predict those scenarios by twisting the parameters according to individual place characteristics while following the basic framework.

Recommendation for Future Study

This research is mainly approached from the ‘ethical land use’ perspective and conducted using a focus group survey where the focus group consists of the planning professionals. The outcome of the survey could very well differ if the focus group consisted of varying professionals, where the values and weights of the parameters might greatly vary.

Other than the planning professionals, the realtors are the next important decision makers in the spectrum. But their perspective could be totally opposite from the first focus group on some of the aspects. This is because they will obviously contemplate the situation from the monetary or ease of construction point and not necessarily the ‘ethical land use’ perspective. For example, if the realtors were included in the survey they might have placed a very high value on the ‘Farmland’ parameter as the suitable areas for development. On the contrary, in this study they are deemed restricted areas. In addition, the permanent residents are also a strong group who could influence the decision making process.

So, for further study in this direction with separate focus groups, the survey could be done with the realtors and the residents of the area. Those new sets of values will generate results different from the one derived from this research. Comparing and contrasting those three sets of results will definitely give a better insight into the whole trend.

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APPENDIX

Survey Questionnaire, Survey Responses and Model Parameters

WASHINGTON STATE UNIVERSITY
PULLMAN, WASHINGTON 99164

July 18, 2006

Dear Planning Commission Members and Planners,

As you may know, the trend of Second Home Development has been growing rapidly in the Sandpoint area and vicinity for the last few years. Proper planning and decision making is vital to implement this developmental trend in a sustainable way. I am researching the location preferences of the second home owners to derive a GIS model that will predict the most suitable and lucrative areas for this kind of developments (according to the home buyers). For my case study I have chosen Sandpoint area and vicinity and a key part of my study is identifying and using your perspectives towards these possible developments.

I am presenting my preliminary 'working model' today and I hope that you will take a few minutes to complete the enclosed questionnaire after the presentation. Your participation is vital to the success of this project.

All responses will be handled with strict confidence and will be used only by the researcher for the purpose of the study.

For any questions regarding the project you can e-mail me at Saadia_h75@yahoo.com or by writing to the Department of Horticulture and Landscape Architecture, Washington State University.

Thank you very much for your time and concern.

Sincerely

Saadia Hassan
Graduate Student (MSLA)
Department of Horticulture and Landscape Architecture
Washington, State University.

Questionnaire

Questions for location preferences

1. Second home buyers will prefer their home away from downtown.
 - Agree
 - Disagree
 - Neutral

2. Second home buyers will prefer their home away from the industrial parks.
 - Agree
 - Disagree
 - Neutral

3. Second home buyers will prefer their home near the parks and forests.
 - Agree
 - Disagree
 - Neutral

4. Second home buyers will prefer their home near the recreational facilities.
 - Agree
 - Disagree
 - Neutral

5. Second home buyers will prefer their home near the lake.
 - Agree
 - Disagree
 - Neutral

6. Second home buyers will prefer their home near the existing civic services (i.e. utilities, hospital, fire district, existing roads etc.)
 - Agree
 - Disagree
 - Neutral

7. Second home buyers will prefer their home away from existing primary home (residential) neighborhoods.
 - Agree
 - Disagree
 - Neutral

Questions for significance of preferences

(Answer this section with % of influences)

1. How important is second home location in relation with recreational facilities?
-----%
2. How important is second home location in relation with the downtown?
-----%
3. How important is second home location in relation with utilities, considering they will be near the existing civic services?
-----%
4. How important is second home location in relation with the lake?
-----%
5. How important is second home location in relation with parks and forests?
-----%
6. How important is second home location in relation with the industrial parks area
-----%
7. How important is second home location in relation with existing primary home (residential) neighborhoods?
-----%

Do you have any other suggestions for the location preference criteria?

In the preliminary model the 14 categories of land use dataset are weighted in a 1-10 scale, '10' being the most suitable category for second home location. How would you scale the categories?

Land use	Value(1-10 scale) Preliminary model	Value(1-10 scale) Your perception
Open water	Restricted	
Open space, developed	9	
Low density development, mainly residential	10	
Medium density development, mainly residential	8	
High density development, Residential/commercial	2	
Barren land (rock/clay/sand)	7	
Deciduous forest	4	
Evergreen forest	3	
Shrubs/scrubs	5	
Grassland	6	
Pasture	1	
Farmland	Restricted	
Wetland	Restricted	
Emergent herbaceous wetland	Restricted	

Survey Responses

Prameters	agree	disagree	neutral
away_downtown	8	2	3
away_IP	13	0	0
near_parkforest	11	1	1
near_recfac	12	0	1
near_lake	12	1	0
near_serv	5	4	4
away_prim_homes	2	5	6

Table: A1
Result for Location Preferences

Abreviation	Parameter
away_downtown	Preferred area away from the downtown
away_IP	Preferred area away from the industrial parks
near_parkforest	Preferred area near the parks and forests
near_recfac	Preferred area near the recreational facilities
near_lake	Preferred area near the lake
near_serv	Preferred area near the existing utilities
away_prim_homes	Preferred area away from the primary residential neighborhood

Table: A2
Legend: Location Preferences

	Influence in %	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Parameter	number	of responses										
dntn			8	2		1						
ip		7	4	1								
pf			5	5			1					
rf			2	7					1	1		
lk					8		2	2				
cs		1	8	2	1							
ph		8	3	1								

Table: A3
Result for Significance of Preferences

Abreviation	Parameter
dntn	proximity to the downtown
ip	proximity to the industrial parks
pf	proximity to the parks and forests
rf	proximity to the recreational facilities
lk	proximity to the lake
cs	proximity to the existing utilities
ph	proximity to the primary resident neighborhood

Table: A4
Legend: Significance of preferences

Land use/ Weight	1	2	3	4	5	6	7	8	9	#	Restricted
	no. of responses										
Open space, developed		1		1	1	1	1	1	3	4	Restricted
Open water											13
Low density development,			1		1	1		1	2	7	
Medium density development,			1		1	1		4	6		
High density development,	4		4		1	1		1	1	1	
Barren land (rock/clay/sand)	3	2	3		2	3					
Deciduous forest			3	2	3	4					
Evergreen forest			1	3	3	3	3				
Shrubs/scrubs				7	1	1	3	1			
Grassland		4	4	3	2						
Pasture	7	2	3								
Farmland							1				12
Wetland											13
Emergent herbaceous wetland											13

Table: A5
Result for values of Land Use categories

Model Parameters

Title in the model	Parameter
downtown(2)	Polygon feature class, the downtown
indst_prks	Point feature class, the industrial parks
fed_st_lands	Polygon feature class, the parks and forests
rec_facilities	Point feature class, the recreational facilities
lake	Point feature class, the lake
utilities(2)	Polygon feature class, the existing utilities
neighborhood(2)	Polygon feature class, the primary resident neighborhood
fed_st_lands (2)	Polygon feature class, parks and forests
landuse_sndp	Land use raster of Sandpoint

Table: A6
Input Parameters of the Model

Title in the model	Parameter
Rdowntown	Reclassified raster for the proximity to the downtown
Rutil	Reclassified raster for the proximity to the utilities
Rrecfac	Reclassified raster for the proximity to the recreational facilities
Redst	Reclassified raster for the proximity to the parks and forests
Rip	Reclassified raster for the proximity to the industrial parks
Rneigh	Reclassified raster for the proximity to the primary resident neighborhood
Rlake	Reclassified raster for the proximity to the lake
suit_areAS	Raster for the first stage of suitable areas
reclass_landuse	Reclassified land use raster of Sandpoint
optim_areAS	Raster for the second stage of suitable areas
con_optimAS	Raster for the suitable areas with the highest value '10'
fdst_rast	Converted raster of parks and forest feature class
rfdst_rast	Reclassified raster of parks and forest feature class
ultimateAS	Most suitable areas for second home development

Table: A7
Output Parameters of the Model