

# SAN JUAN CHAPTER

Community-Based Land Use Plan



SOUTH HOGBACK, NEW MEXICO

**Project Title:**

San Juan Chapter Community-Based Land Use Plan

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**Project Description:**

This land use plan was funded by the Native American Housing Assistance and Self Determination Act (NAHASDA) through the Navajo Nation Office of Navajo Government Development for the community of San Juan Chapter. Pursuant to the project requirements, this land use plan emphasizes housing, community and public facilities in accordance with the NAHASDA and the Navajo Nation Local Governance Act (LGA) provisions.

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# ACKNOWLEDGEMENTS

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## PREFACE

Community-based land use planning is a continuous process that guides the preservation, development or redevelopment of a community. Its purpose is to create and maintain a desirable environment and to promote the public health, safety and welfare guided by the aims, goals and ambitions of its residents. An approved land use plan helps the community and its leaders to make decisions. Planning is the first step in the preparation of development regulations, which put into practice the goals stated in the community's land use plan.

The purpose of this document is to present a community-based land use plan that emphasizes housing, community and public facilities. This land use plan shall serve as a general guide for the community of San Juan Chapter, Chapter Administration, Community Land Use Planning (CLUP) Committee and the public regarding development in the community. It emphasizes goals and policies necessary to implement the housing concept, as well as responds to community-wide needs. It is not intended to be rigid. It is a flexible guide for achieving balanced growth and preserving the unique character of the community of San Juan Chapter. The goals included in this land use plan may not be entirely achievable; however, they are meant to provide direction. As a policy plan, this document provides general guidance for more detailed decisions.

Much of this land use plan is written in non-technical language. This is to facilitate ownership of the land use plan among community members and moreover its use as a practical working plan.

This land use plan is organized into six parts. Part I addresses key components forming the foundation of this land use plan. Part II states the vision, goals and objectives. Part III covers inventory, assessment and analysis. Part IV presents the land use plan categories and descriptions along with a map. Part V covers proposed housing, community and public facilities. Part VI covers the implementation recommendations. The parts are organized hierarchically to illustrate the incremental components in the development of the land use plan.

Numerous tables, figures and photos are used throughout the document to enhance the effectiveness of the discussions. An extensive reference is presented at the end of the document. Useful appendices are also provided.



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PART I.

FOUNDATION OF OUR  
LAND USE PLAN

1. INTRODUCTION



This community-based land use plan is the official guide for actions and decisions on the use of land in the community of San Juan Chapter. We believe that a land use plan is necessary to achieve a higher quality of life, better homes, and economic improvement. The land use plan encompasses the planning area for San Juan Chapter and emphasizes housing, community and public facilities.

Our land use plan was developed over a period of one year with extensive public participation, assessment, study and consultation. As a planning team, the Community Land Use Planning (CLUP) Committee led the development of the land use plan under the direction of the San Juan Chapter Officials and Chapter Administration and with technical assistance provided by Consultants, JJ Clacs & Company and Novak Environmental, Inc. Community members participated in every step of the planning process. Comments, opinions, and ideas voiced at work sessions, land use planning meetings and public hearings were used to develop this land use plan document.

The designation of future land uses is based on the vision, goals and objectives as articulated by the community, as well as, information revealed in inventories and assessments of the natural, cultural and human resources, and the existing community infrastructure. This information has been compiled into this land use plan document. Throughout this document several terms that have special meaning in planning are referred to; these terms are defined in **TABLE 1**.

TABLE 1. Definitions

<b>Vision Statement:</b>	A concise statement embodying the purpose and overall goals for the plan. A vision statement expresses broad community values.
<b>Guiding Principles:</b>	A set of ideals that apply to the land use plan and the planning process.
<b>Goals:</b>	Broad long-range aims.
<b>Objectives:</b>	Often used interchangeably with the word “goals”, an objective is defined here as a measurable and verifiable method of achieving a goal.
<b>Strategies:</b>	Specifications that identify what will be accomplished, by whom, when and how. If the goal sets a general direction for action, the strategy specifies exactly how to get there.
<b>Policy:</b>	A brief, direct statement of what you intend to do to implement your goals and objectives. Ideally, policy formulation is the result of group identification of goals and objectives, represents group consensus and sets criteria for decision-making.

The land use plan is designed to fulfill several mandated requirements and needs. First, the land use plan emphasizes residential land use since the project was funded under the Native American Housing Assistance and Self Determination Act (NAHASDA).

Second, the land use plan offers an opportunity for community members of San Juan Chapter to document and address issues that are unique to the community. In the broadest terms, this land use plan provides the community members with the opportunity to articulate our vision of the future character and form of their community. They all want a healthy and safe place to live with good schools, job opportunities and affordable housing along with preservation and continuance of our current cultural activities. Basically, they want a desirable and livable community.

Finally, preparation of the land use plan was guided by relevant provisions of the Navajo Nation Local Governance Act (LGA), which requires adoption of a land use plan.



TABLE 2. What a Land Use Plan Can and Can't Do
<b>A LAND USE PLAN CAN...</b> Identify proposed housing locations and other land uses.  Improve the economic base by providing a climate for business creation and expansion.  Identify resources, opportunities and constraints.  Provide a forum for action.
<b>A LAND USE PLAN CAN'T...</b> Correct all past mistakes.  Be successful unless supported by policy and an action-oriented program.  Be used to advance or promote special interests.  Be used to exclude others from the community.



**HISTORY OF LAND USE PLANNING FOR THE COMMUNITY OF SAN JUAN CHAPTER**

The community of San Juan Chapter does not have a written and formal land use plan, but they all know and share their community vision. This land use plan documents their vision so that their children and grandchildren will have a pleasant and livable community complete with infrastructure to call home.

**WHAT A LAND USE PLAN CAN AND CAN'T DO**

A land use plan is a powerful tool to guide communities in making planning decisions that will shape their community over the next decade and beyond. **TABLE 2** summarizes some key functions of a good land use plan as well as what it can not or should not do.

**DIFFERENCE BETWEEN A LAND USE PLAN AND A ZONING ORDINANCE**

There is often confusion or blurring of the distinction between the role of the land use plan and the role of a zoning ordinance. The land use plan is a general policy document that guides growth and development decisions. The zoning ordinance and associated zoning maps are legal instruments that precisely define the permitted land uses and associated performance standards.

This land use plan does not include any zoning ordinances.

**2. NATIVE AMERICAN HOUSING ASSISTANCE AND SELF DETERMINATION ACT OF 1996 [NAHASDA]**

The Native American Housing Assistance and Self Determination Act of 1996 (Public Law 104-330) created a system that affords tribes more flexibility to create housing that best meets the needs of their specific communities. NAHASDA provides for the majority of housing assistance from Housing and Urban Development (HUD) to be awarded in the form of a block grant for tribes and their tribally designated housing entity (TDHE). Indian housing is no longer governed by the guidelines of the 1937 Housing Act, which addressed the housing needs of low income Americans (National American Indian Housing Council, 1996). The national objectives are (NAHASDA, 1996):

- to assist and promote affordable housing activities to develop, maintain, and operate affordable housing in safe and healthy environments on Indian reservations;
- to ensure better access to private mortgage markets for Indian tribes and their members and to promote self-sufficiency;
- to coordinate activities to provide housing for Indian tribes and their members with federal, state, and local activities to further economic and community development for Indian tribes and their members;
- to plan for and integrate infrastructure resources for Indian tribes with housing developments for tribes; and,
- to promote the development of private capital markets in Indian country and to allow such markets to operate and grow, thereby benefiting Indian communities.

NAHASDA changed how tribes address housing needs (Wagenlander, 1997). This means that there are now more opportunities to develop creative housing assistance services. Indian tribes can now create their own housing based upon tradition, custom, need and desire.

A flowchart shown in **FIGURE 1** illustrates the components of NAHASDA. Seven parts or titles



comprise the NAHASDA Act. As shown on the flowchart, the subtitles of Title II Section 202 list the eligible housing activities. The detailed provisions of Section 202 are included in **APPENDIX A**.

The Office of Navajo Government Development (ONGD) applied for and received NAHASDA funding to conduct land use planning at each Navajo Nation Chapter. The funding was awarded based on the premise that the land use plans would emphasize housing, community and public facilities. The ONGD designed this project to have consultants provide technical assistance to the Chapters in completing their land use plans. The Chapters were selected in groups of thirty and San Juan Chapter was selected in the fall of 2000. In addition, JJ Clacs & Company was selected as the consulting firm to provide technical assistance to the San Juan Chapter.

### 3. NAVAJO NATION LOCAL GOVERNANCE ACT [LGA]



In 1998, the Navajo Nation Council adopted the Local Governance Act (LGA) by Council Resolution CAP-34-98. Former President Thomas Atcitty signed the LGA and it became Navajo Nation Law under Title 26 of the Navajo Nation Code. **FIGURE 2** graphically illustrates the major elements of the LGA in a flowchart. This law grants governmental authority to decide on local matters to the Navajo Nation Chapters. Many of these Chapters are currently in the process of acquiring LGA certification.

There are basically two fundamental requirements for LGA certification as stated in Section 101; the adoption of a five management system and a community-based land use plan. Section 2004, Parts B, C, D and E clearly delineate the requirements of a comprehensive land use plan. These provisions (Section 2004) are included in **APPENDIX B**.

Section 102 Part C explains the procedural requirement for getting the land use plan approved by the appropriate Navajo Nation sub-committee. In this case, the Transportation and Community Development Committee (TCDC).

Upon LGA certification, Section 103 (D)(1) states that all Chapters, by resolution, may issue home and business site leases. The resolution may also designate a duly established committee or task force to review and approve such leases.

The San Juan Chapter is carefully and diligently working on applying for, and acquiring LGA certification. Since the development of a land use plan is a prerequisite, the design and development of this land use plan was completed in accordance with the related LGA provisions.



### 4. COMMUNITY LAND USE PLANNING (CLUP) COMMITTEE

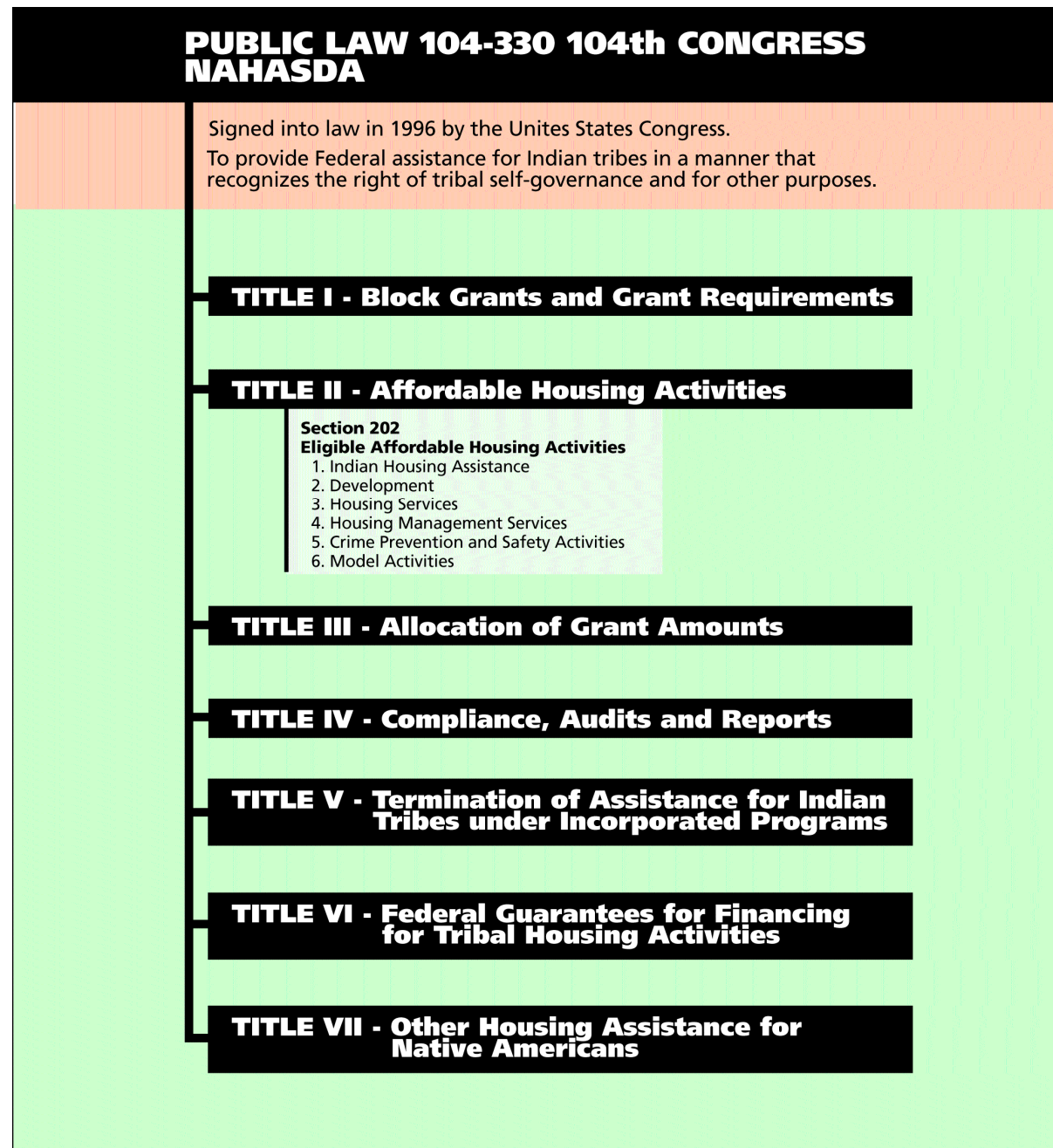
The Community Land Use Planning (CLUP) Committee is a duly established Chapter committee responsible for developing, approving and overseeing local land use planning activities.

The CLUP Committee advises and communicates with Chapter Officials and the Consultants in the development of community planning goals and the land use plan.

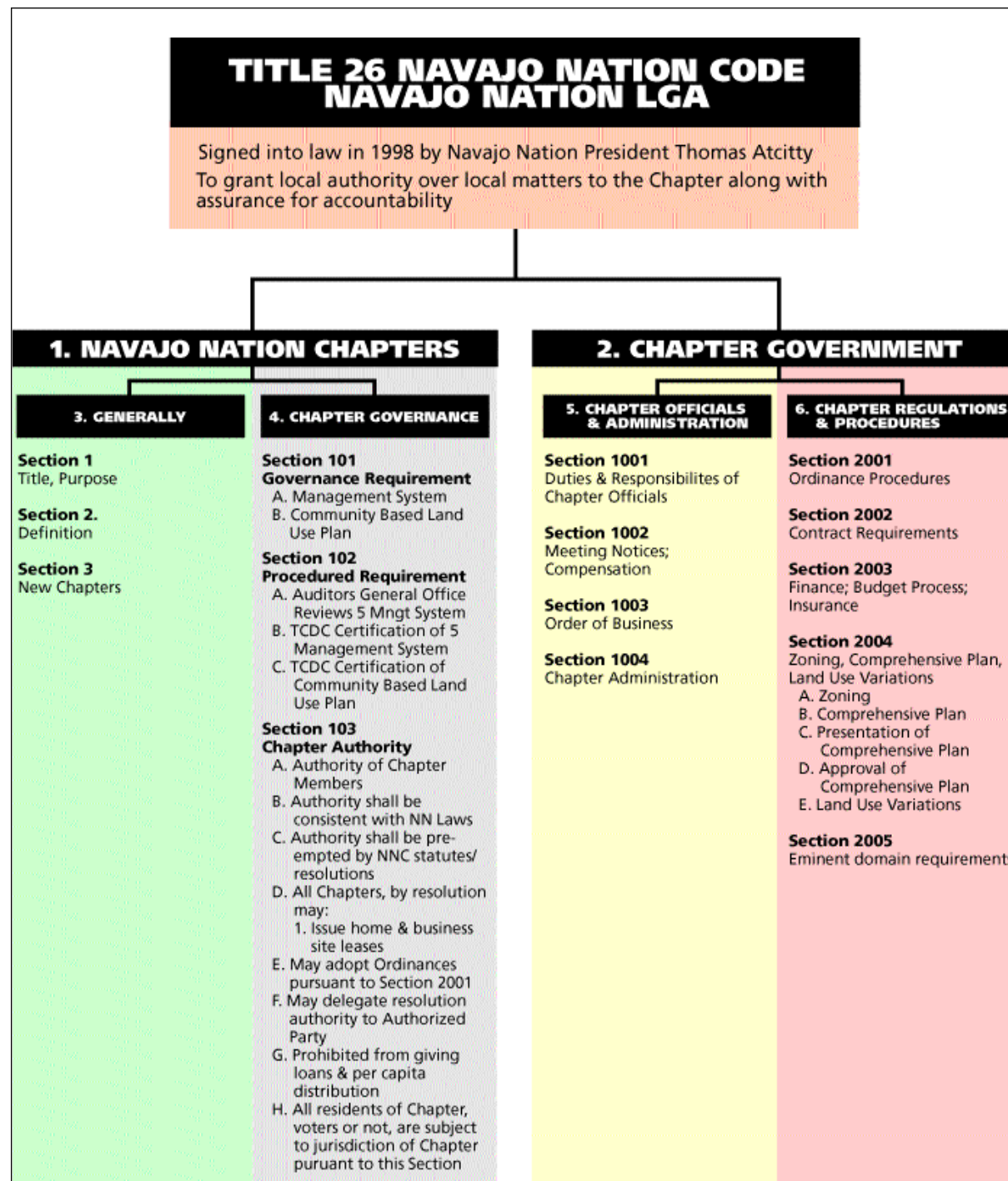
The CLUP Committee in collaboration with the Chapter Officials and Administration adopt a set format and procedure for conducting meetings and hearings.

The CLUP Committee in collaboration with the Chapter Officials and Administration are responsible for communicating with the community about the planning process, public hearings and meetings, and progress of the land use plan. After thorough review and analysis, the CLUP Committee presents the land use plan to the community members of San Juan Chapter at a duly called Chapter meeting.

The CLUP Committee in collaboration with the Chapter Officials and Administration may continue to develop more specific development controls, like zoning codes or other regulations, after the development of the land use plan.



**FIGURE 1.**  
**NAHASDAFlowchart**



**FIGURE 2.**  
Navajo Nation LGA Flowchart



The CLUP Committee in collaboration with the Chapter Officials and Administration may recommend changes to the land use plan and will require members to have a working knowledge of the Chapter development controls. Once standards for development have been established, they should not be changed without substantial cause. All housing and commercial developers should be treated equally. Granting exceptions may lead others to expect exceptions and may cause the CLUP Committee and the Chapter Officials and Administration to be accused of favoritism.

## 5. COMMUNITY PARTICIPATION PLAN

Community participation plays an important role in community-based land use planning. Community members must participate in the planning process, as they will use it to enhance their livelihood and those of future generations. LGA under Title 26 Section 2004 A3 (b) requires community education and participation through public hearings, newspapers, and radio announcements. Chapter members need to be periodically informed on the progress of the land use plan. In addition, all information pertaining to the plan must be readily available to the public.

The CLUP Committee adopted a community participation plan developed by the Consultants in February 2001. The community participation plan was developed to gain information, input, and concerns from the community members. It was also a tool for communication among community members and a means to document results.

### COMMUNITY PARTICIPATION TOOLS

Participation tools play an important role in community-based land use planning. The tools used in the development of the land use plan are listed, along with their objectives, in **TABLE 3**. These tools are the vehicle to access local knowledge, help foster efficient communication among local community members and document results of various meetings.

### COMMUNITY LAND USE PLANNING COMMITTEE MEETINGS

Land use planning meetings were held at least once a month. These meetings were organized and conducted by the CLUP Committee and were open to the public. Community members were encouraged to attend and participate. In many cases, these meetings provided the first opportunity for different parties to listen to each other and to understand their respective problems. This was the first step towards common planning. Meeting minutes were kept and maintained by the CLUP Committee.

### LAND USE PLANNING WORKSHOP

The Consultants conducted a workshop on land use planning basics for CLUP Committee members. This all-day workshop aimed at clarifying the scope of community-based land use planning, appropriate procedures, and duties and responsibilities of all parties involved. Workshop materials were provided by the Consultants and distributed to the participants.

### WORK SESSIONS

Public work sessions were conducted by the Consultants to educate the community and encourage active community participation in the land use planning process. Three public work sessions were held. They included one for developing goals and objectives, one for drafting of the land use plan and one for the finalization of land use plan. The San Juan Chapter and the CLUP Committee scheduled other work sessions on an as-needed basis.

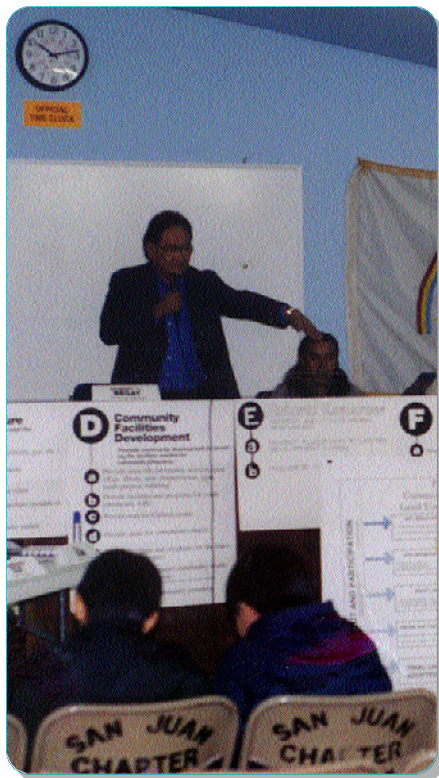


TABLE 3. Community Participation Tools
<b>Community Land Use Planning Committee Meetings:</b> To discuss the development and implementation of the land use plan, to approve the process for planning and to oversee planning activities.
<b>Work Sessions:</b> To come to a common understanding and agreement on the situation in general, the views of different groups, the perceived needs etc.
<b>Workshop:</b> To review basic principles.
<b>Public Meetings, Planning and Chapter Meetings:</b> To inform and provide an update on the planning activities of the land use plan at each of the these meetings.
<b>Public Hearings:</b> To obtain the views and comments of the community members regarding the land use plan.



**PUBLIC MEETINGS & PUBLIC HEARINGS**

Public meetings were held on a monthly basis. Public hearings were also conducted to obtain formal views and comments from community members. The first public hearing was held to approve the goals and objectives identified by the CLUP Committee and the public at the goals and objectives work session. The second public hearing was held to approve the draft land use plan to gather comments to be incorporated into the final land use plan. The last public hearing was to present and approve the final land use plan.

At a minimum, a 14-day notification period was given for each of the first two public meetings and hearings. Notifications were made via all of the media listed in the methods of notification. The final public hearing was announced 60-days prior to the scheduled date. These notification periods were necessary to allow community members enough time to voice their comments in writing or in testimony at the hearing. The drafts or plans to be discussed at the public hearings were available for public review during the notification period.

**METHODS OF NOTIFICATION**

Adequate public notification was given for all meetings, work sessions, workshops and public hearings. Methods of notification included:

- letters;
- radio announcements;
- newspaper;
- flyers;
- chapter meetings;
- chapter planning meetings;
- other interest group meetings;
- word of mouth; and,
- bring a friend.

6. PLANNING PROCESS

The planning process consisted of several steps starting with setting goals and objectives through plan adoption. Public input and participation were crucial to every step of the process. **FIGURE 3** presents these steps.

**SET GOALS AND OBJECTIVES**

Setting the goals and objectives was an important step in the planning process. It was the stage where the wants, needs and desires of the community were identified. A goals and objectives visioning work session was conducted to determine what and how the community of San Juan Chapter envision the future character and form of their community. What the community members said set the tone for the entire planning process. To ensure the ideas and opinions were accurately transformed into written goals and objectives, a public hearing was conducted whereby the goals and objectives were adopted. Upon adoption of the goals and objectives, a formal vision statement and guiding principles were developed.

**SITE INVENTORY AND ANALYSIS**

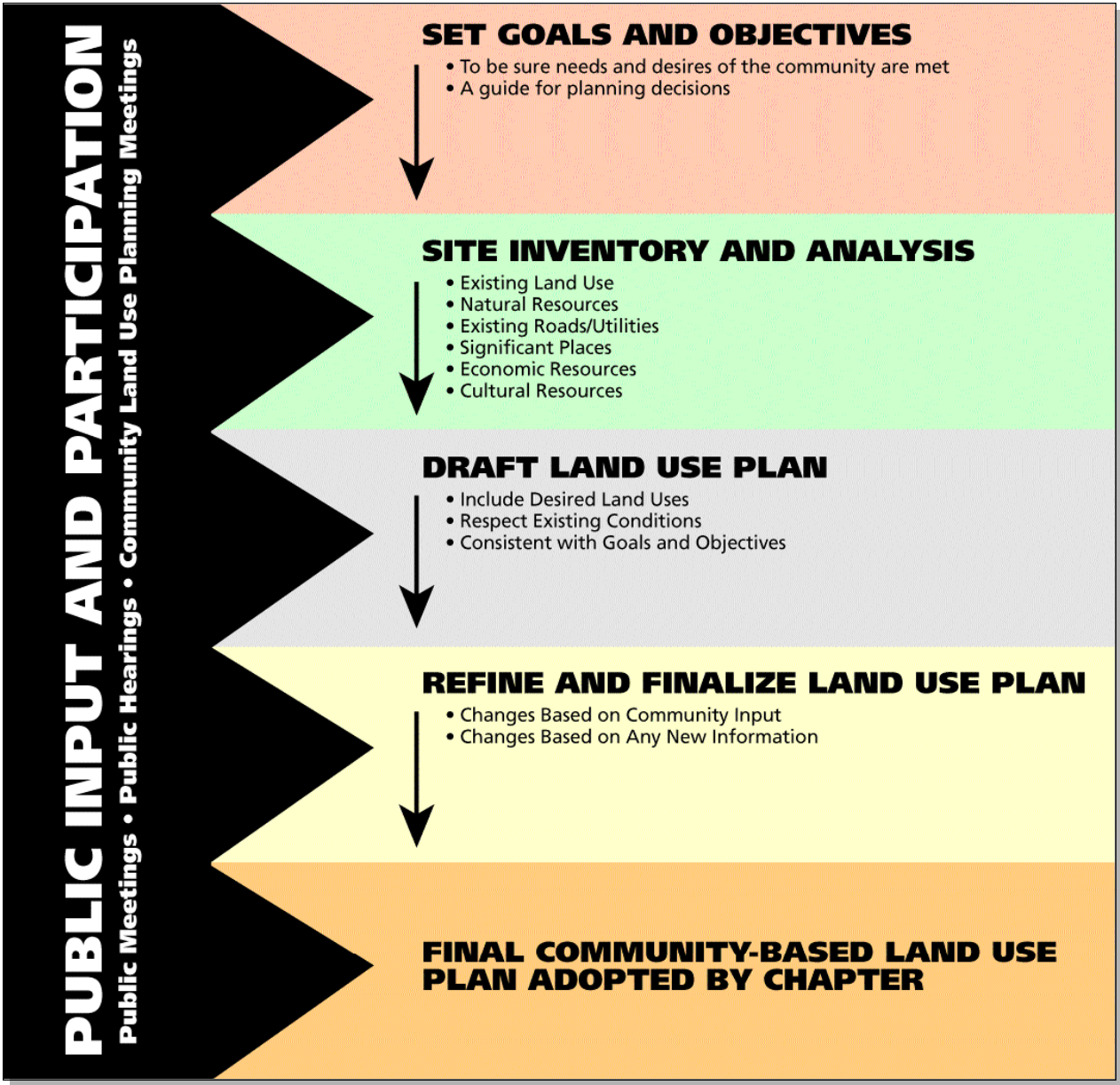
Site inventory and analysis encompasses a general community assessment and a land suitability analysis. Site visits were made and available information, local knowledge and official data were compiled and analyzed. The objective was to get an accurate evaluation of the physical elements and resources of the community. Gaining an understanding of the culture was equally important. Various existing maps were gathered and working maps were developed to aid in the analysis.

**DRAFT LAND USE PLAN**

This phase began with a hands-on public work session that allowed the community members to actually build a map. Large topographic maps of the community were provided and the people in attendance were divided into groups. Each group worked on the map and built their community in the way that they envisioned consistent with their goals and objectives. The maps from each group were reviewed and synthesized with information obtained from the site inventory and analysis phase. One map was developed illustrating the various land uses and presented at a public hearing.

**REFINE AND FINALIZE LAND USE PLAN**

Refining and finalizing the land use plan was the last stage of the planning process. The finalization of a land use plan is as important as its initiation. A public work session was conducted to incorporate changes based on community input and any new information. After changes were made to the land use plan, another public hearing was conducted whereby the CLUP Committee accepted the land use plan for adoption by the Chapter. The conclusion of this activity is viewed as the completion of the land use plan. Arrangements may be made for adoption by the Chapter and follow-up activities that implement the plan.



**FIGURE 3.**  
Land Use Planning Process



## PART II. VISION, GOALS & OBJECTIVES OF OUR COMMUNITY

### 7. COMMUNITY VISION STATEMENT

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**O**ur vision for the community of San Juan Chapter is to be a self-sustaining, safe and desirable community with a strong community base that will increase the standard of living with the recognition of appropriate cultural aspects, establishment of an appropriate government and educational programs, and the development of viable and profitable economic ventures. We cherish our people and the land we live on. We share a sense of place and take great pride in our established and emerging family clustered homesteads. We are proud of our heritage and culture.

Our land use plan is the best of the past merged with the best of the future; it is a plan for our community where we can lead healthy productive lives in harmony with our beliefs and environment. This land use plan holds true to the values of our heritage, culture and community. These values are embodied in the goals and objectives that formulate the vision and subsequent guiding principles which guide the land use plan.



### 8. GOALS AND OBJECTIVES

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**I**n accordance with the scope of work for the development of a land use plan, the community assessment included ascertaining the needs, wants and desires of the community members. The consultants conducted a goals and objectives visioning work session at the Chapter house on January 11, 2001 to identify the needs, desires and opportunities holistically. These goals and objectives were presented at a subsequent public hearing held on March 11, 2001 whereby the CLUP Committee formally adopted the goals and objectives, which are follows:

#### A. ISSUE: LAND USE PLANNING

**GOAL:** Create a land use plan based on community involvement to fulfill the needs and desires of the community as a whole.

**OBJECTIVES:**

- a. Hold regular public meetings & public hearings.
- b. Coordinate all decision making with the CLUP Committee.
- c. Define reasons for decisions made in the land use plan.
- d. Create a final plan that is approved by the CLUP Committee and supported by the community.
- e. Provide regular reports at Chapter meetings.

#### B. ISSUE: HOUSING

**GOAL:** Provide adequate housing for the community of San Juan Chapter.

**OBJECTIVES:**

- a. Provide areas for small family clusters of homes also known as scattered housing.
- b. Reduce or avoid the development of subdivisions.
- c. Provide at least one-acre home sites.
- d. Encourage architectural styles that are attractive and appropriate for the region.
- e. Encourage energy efficiency in new homes, including passive solar techniques.
- f. Encourage energy efficiency in renovations of existing homes.



**C. ISSUE: INFRASTRUCTURE**

**GOAL:** Provide infrastructure to meet the Chapter's needs.

**OBJECTIVES:**

- a. Provide utilities (water, electricity, gas, etc.) to housing.
- b. Provide utilities for community improvements.
- c. Utilize the local aquifer for water.
- d. Provide water treatment facilities.
- e. Provide a solid waste transfer station.

**D. ISSUE: COMMUNITY FACILITIES DEVELOPMENT**

**GOAL:** Promote community development by providing the facilities needed for community programs.

**OBJECTIVES:**

- a. Provide areas for community services (post office, library, new Chapter house, gym, fire station, police station, multipurpose building).
- b. Provide facilities and programs for youth (preschool, 4-H).
- c. Provide area for cultural center.
- d. Provide areas for community church.
- e. Provide facilities and programs for the elderly (elderly care center).
- f. Provide areas to support community health and wellness programs (wellness center, urgent care, veteran's center, drug prevention and treatment facilities).
- g. Provide area and facilities for community traditional ceremonial sites.

**E. ISSUE: NATURAL RESOURCES**

**GOAL:** Respect and utilize natural resources.

**OBJECTIVES:**

- a. Respect floodplains by limiting development in them.
- b. Preserve wetlands.

**F. ISSUE: COMMUNITY ANIMAL CARE**

**GOAL:** Provide for the communities collective animal care needs in a central location.

**OBJECTIVES:**

- a. Provide veterinary facilities.
- b. Provide community corrals.
- c. Provide an animal shelter for small animals (dogs, cats, etc).

**G. ISSUE: RANCHING**

**GOAL:** Ensure ranching remains an important part of the community and economy of the Chapter.

**OBJECTIVES:**

- a. Provide a place for livestock auctions.
- b. Install cattle-guards to prevent livestock from entering areas they are not wanted.
- c. Encourage fencing of grazing areas to control livestock.
- d. Ensure grazing rights support goals and objectives, revise if needed.

**H. ISSUE: FARMING**

**GOAL:** Ensure farming continues to be a significant part of the San Juan Chapter.

**OBJECTIVES:**

- a. Provide high quality land for farming.
- b. Provide facilities to support farming activities (greenhouses, irrigation ditches, farm equipment yard).

**I. ISSUE: RECREATION**

**GOAL:** Provide a variety of community recreation opportunities.

**OBJECTIVES:**

- a. Provide indoor recreation center.
- b. Provide parks and play fields (picnic facilities).
- c. Provide amphitheater.
- d. Provide swimming pools.
- e. Provide fair grounds, rodeo grounds.
- f. Enhance the Morgan Lake recreation center.

**J. ISSUE: NON-TOURISM ECONOMIC DEVELOPMENT**

**GOAL:** Address non-tourism based economic development opportunities.

**OBJECTIVES:**

- a. Identify area for commercial center for retail and services (grocery stores, welding shop, produce stand, etc).
- b. Encourage home-based business development.
- c. Provide place for wool marketing and rug sales.
- d. Develop gravel mining.
- e. Plan for future casino development if allowable.

**K. ISSUE: TOURISM**

**GOAL:** Address tourism as an economic development opportunity.

**OBJECTIVES:**

- a. Focus on natural visitor center.
- c. Identify areas for nature and river walk trails.
- d. Use river as a focal point for tourist activities (rafting, boating, guided and unguided fishing, lookout tower).
- e. Provide tourist lodging (bed & breakfasts, camping, RV parks, hotels).
- f. Develop tram to provide access to tops of bluffs, mountains.
- g. Identify areas for tourist lodging (camping, hotels, cabins, resorts).

**L. ISSUE: CULTURAL ISSUES**

**GOAL:** Preserve existing culturally significant areas and provide for present-day and future cultural areas.

**OBJECTIVES:**

- a. Protect Anasazi ruins from development.
- b. Protect and do not disturb existing burial sites.
- c. Preserve existing herb gathering sites.
- d. Preserve existing ritual sites.
- e. Provide water to ceremony area.
- f. Provide place for shoe game.
- g. Provide place for peace-making hogan.
- h. Provide place for sweat lodge.

**M. ISSUE: TRANSPORTATION**

**GOAL:** Improve transportation throughout the community.

**OBJECTIVES:**

- a. Clearly identify public roads and public rights-of-ways.
- b. Improve or upgrade roads, especially heavily traveled ones.
- c. Improve the ability to 'way-find' by providing road names and rural addressing.
- d. Improve access by building bridges over river, irrigation ditches.
- e. Provide an airstrip/airport.

**N. ISSUE: PUBLIC SAFETY**

**GOAL:** Improve public safety for Chapter residents and visitors.

**OBJECTIVES:**

- a. Provide fire station.
- b. Provide police stations and develop community-policing program to address alcohol, drugs, and stray dogs.

**O. ISSUE: INTRUSIONS**

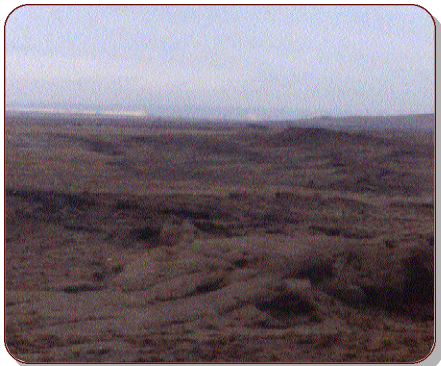
**GOAL:** Minimize the impact of negative intrusions on community lands that are beyond Chapter control.

**OBJECTIVES:**

- a. Avoid major power line corridors when siting housing.
- b. Develop policies to eliminate or minimize negative impacts of expansions to existing hydroelectric plant, coals, mines.
- c. Explore ways to minimize the way the railroad divides the community.

PART III.

INVENTORY, ASSESSMENT  
& ANALYSIS



9. OUR LAND

IN THE BEGINNING

Traditionally, the hogback landform was believed to be the fence of Mother Earth and the San Juan River the throat to the world. According to a local traditionalist, the area by the Chapter house was once considered very sacred ground. Down by the river near the Chapter house was a watering point. The sacredness lies within a story about miniature horses and donkeys. It is said that four different miniature horses as well as four different miniature donkeys would rise from the water and bring blessings to the Navajo People. (Marshall, 2002).

San Juan Chapter was certified in 1982 as the 109th Navajo Nation Chapter government. Prior to becoming its own Chapter, the community was part of the Nenahnezad Chapter. The people from both areas supported the separation to better serve the needs of its community members. During its infancy, the San Juan Chapter conducted its meetings at a local residence. Plans began immediately to build a Chapter house. The community members of the San Juan Chapter were very enthusiastic that they built the Chapter house themselves with the support of a local church organization. The community-built Chapter house continues to be utilized today.

LOCATION

The community of San Juan Chapter is located in the Northern Navajo Agency in San Juan County, New Mexico. **FIGURE 4** shows the general location relative to the other Chapters on the Navajo Nation. The land lies at the south bank of the San Juan River on the east and west side of the Hogback landform. Shiprock is approximately 10 miles to the northwest and Farmington is 20 miles to the east. **TABLE 4** provides location information.

The community of San Juan Chapter adjoins three Navajo Nation Chapters including Nenahnezad to the east, Burnham to the south, and Hogback to the west. Communities off the Navajo Nation nearby are Waterflow (Jewett) and Hogback. Both of these communities are located directly across the river. No direct access exists at this time, between the community and Waterflow or Hogback. The nearest bridges are in Fruitland to the east and Shiprock to the west.

PLANNING AREA

Planning area is an area of land identified for planning purposes while boundaries are a form of jurisdiction. The community of San Juan Chapter identified a planning area which may not coincide directly with their Chapter boundaries. The establishment of the planning area for the community of San Juan Chapter is based upon the areas of land that the community members indicated they use or hold permits to. The established planning area is shown in **FIGURE 5**.

The western border (starting at the south end) of the planning area is the Hogback ridge extending north up to the Chaco Wash. The planning boundary follows the Chaco Wash northwest until it intersects the San Juan River. The San Juan River is the northern border of the planning area. The eastern boundary basically follows the mining area. The planning area is used interchangeably with the community of San Juan Chapter in this document.

LAND STATUS

The land within the community of San Juan Chapter is designated as tribal trust land. Grazing permits,

TABLE 4. Location Information
Navajo Nation Chapter Government: San Juan
Navajo Nation Agency: Northern Navajo
Navajo Nation Grazing District: 13
County: San Juan
State: New Mexico

land use permits and farming permits are issued to community members. Most permits have been in place for years and continue today. Approval from respective permit holders is required for land withdrawals including home site leases. There are existing home site leases within the grazing areas. These home site leases are one-acre sites or less for residential use only.

### **ACCESSIBILITY**

The northern portion of the the community of San Juan Chapter is accessible from the east and west directions via Navajo Route (N36). N36 runs east and west and is the only paved road in the community. All other areas in the community are accessible by dirt or gravel roads.

### **TOPOGRAPHY**

Topography describes the physical features of the land. A topographic map graphically illustrates the topography of an area of land. This map shows the shape and elevation of the surface of the earth, natural and man-made, at a specific scale. This map is useful to planners in the evaluation of land.

The community of San Juan Chapter is located in the San Juan Basin of the Colorado Plateau. The topographic relief of the area varies from moderate to gently sloping and generally flat terrain in the farmlands as shown in **FIGURE 6**. The terrain also includes ridges and low-lying semiactive dunal hills and areas overlooking the floodplain of the San Juan River. (Cleveland, 1999). The sharp narrow Hogback belt reaching over 6100 feet is the most prominent landform. The Hogback ridge partially forms the western border of the community of San Juan Chapter. The San Juan River forms the northern border of the community. The river flows from the Navajo reservoir, east of the community of San Juan Chapter, towards the four corners region. The area along the river is predominately farming land. Morgan Lake is located on the east side of the community. Major power transmission lines, high pressure transportation gas lines and water lines are also present in the area.

### **SLOPES**

The slopes of land are determined from a topographic map. Slopes are calculations based on the relationship between vertical elevations and horizontal distances. These slope calculations are expressed in percent. A slope map shows several ranges of slope calculations. Topographic maps and slope maps are basic tools for planning.

The inventory of slopes in an area is a critical tool to use while planning placement of buildings, roads or other development. The feasibility of a project may be strongly dependent upon the degree of slope in a particular area. Steep slopes typically have fewer plant species and shallower soils than surrounding areas and are more sensitive to active uses. Sewage disposal systems may be adversely affected by steep slope conditions. In general, they are poor locations for extensive development due to high risk of erosion and elevated expense in construction and maintenance (Sargent, 1991).

Slopes for the community of San Juan Chapter were defined by the Consultants as gently (0-5% grade), moderate (5-15% grade) or steep (greater than 15%) grade. These defined slopes are illustrated in **FIGURE 7**. Well over half of the planning area (70%) has gentle slopes, mostly along the San Juan and Chaco Rivers and along the shores of Morgan Lake. Slopes in these areas would not restrict any development or land use and much of which along the San Juan River is used for farming. Moderate slopes make up 6% of the community and land use in these areas, such as farming and development, could be limited by the prevailing slope. Steep slopes make up the remainder, or 24% of the total planning area. These areas are suitable only for grazing and/or open space.

**VIEWS**

The visibility of certain prominent natural and man-made features from a certain point is known as views. Determination of these views is based upon actual field visits. Views allow a high, scenic vista overlooking an area to be used for an aesthetically pleasing purpose and not for junk yards or sanitary landfills.

Major views for the community of San Juan Chapter are represented in **FIGURE 8**. Views to the Hogback, Morgan Lake and the San Juan River are present throughout most of the northern section of the community of San Juan Chapter. Also, on the western horizon, Shiprock rises 2,000 feet and can be seen from as far away as Morgan Lake. On the northern horizon are views of the La Plata Mountains. To the west of Hogback, particularly at the western end of the community peninsula, are views of Table Mesa, Sleepy Ute Mountain and the La Plata Mountains. Of concern among community residents are existing obstructions to these visual resources. Power lines criss-cross the planning area and power plants dot the landscape.

**GROUND AND SURFACE WATER**

Ground water is the water contained in rocks below the earth's surface. This water moves through the rocks in cracks, crevices, and small interconnected pore spaces between the mineral grains of the rock (Pennsylvania Geological Survey, 1972). Surface water is fresh water that flows in rivers, streams, tributaries, lakes and ponds. Building of homes in areas where ground-water conditions cause flooding results in aggravation and financial loss.

The U.S. Geological Survey has defined the northwestern portion of New Mexico as the Colorado Plateau hydroclimatic province. In general, this semi-arid region contains very few perennial streams and the average annual precipitation ranges from 7 inches at lower elevations to 20 inches in the mountains (USGS, 1989). The community of San Juan Chapter receives an average annual precipitation of approximately 8-10 inches.

The community of San Juan Chapter is located within the Middle San Juan watershed, which drains 7,240 square miles of land from Colorado, New Mexico and Arizona (EPA, 2001). The San Juan River flows along the northern boundary of the community and is a major perennial water source for the area.

Major water uses on the Navajo Nation include irrigation for agriculture crops, industrial and coal mining, with a relatively small portion consumed for domestic use.

Water supply is obtained from surface streams (i.e. diversion from the San Juan River), reservoirs (Morgan Lake) and ground water wells. Shallow wells, windmills and stock ponds supply water for outlying, rural residents and grazing animals.

**SOILS**

Soils describe the upper layer of the earth's surface. A soils map graphically illustrates the types of soil present in a certain area of land. Knowledge of the types of soil present is important in land use planning. The design of foundations for buildings is largely dependent upon the type of soil. Soil studies may eliminate possible fatalities, failures, and added maintenance costs (Pennsylvania Geological Survey, 1972).

The community of San Juan Chapter has soil formation in two distinct areas; one is formed along the major river valleys and the other is formed in the uplands. Generalized soil types for the community of San Juan Chapter are illustrated in **FIGURE 9**. In general, much of the soils along the San Juan and Chaco Rivers are deep, well drained soils that formed in alluvium, on fans and in valleys (USDA/SCS, 1980). These soils are used for irrigated crops and/or livestock grazing. Some soils, located on river terraces and mesas, are shallow and cobbly. These areas are suitable for livestock grazing and urban development.

Upland areas lie south and west of Morgan Lake. Soils on mesas and plateaus of the uplands are generally deep and well drained (USDA/SCS, 1980). These areas are used for open rangeland grazing and development. Soils on the upland hills and ridges are steep and very shallow with rock outcrops dissected by deep intermittent arroyos and gullies. These areas are suitable for livestock and/or wildlife grazing.

### **VEGETATION**

Vegetation describes and classifies plant life or plant coverage of an area of land. A vegetation map graphically illustrates the types of vegetation present in a certain area of land. Knowledge of the types of vegetation present is important in land use planning. Natural occurrence and human influence directly and indirectly affect plant growth. Naturally occurring conditions might include climactic variations, topography, soil type, drainage and wildlife, to name a few. Human influence on vegetation might include construction, development, pollutants, livestock, recreational activities and so on. Plants are also culturally, traditionally important to the Navajo people.

There are two distinct types of vegetative communities within the community of San Juan Chapter, that which is associated with water and that which is found on drier slopes and uplands. Vegetation for the community of San Juan Chapter is represented in **FIGURE 10**. Vegetation along the San Juan River and the shores of Morgan Lake are typical of that found in warm-temperate riparian strands throughout the southwestern United States. It is the denser, more diverse vegetative cover within the community of San Juan Chapter and comprises less than 10% of the total land area. Vegetation along the river is a cottonwood-willow association, providing a corridor of habitat for ducks, geese, herons and muskrats. Willows and grasses that line the edges of Morgan Lake provide cover and shade for aquatic, as well as terrestrial, wildlife. In drier valley locations, riparian vegetation quickly gives way to Great Basin Grasslands. These grasslands are characteristically dry and windy, consistent of short-grasses that have been much altered in the past century by grazing.

The remaining 90% of the Chapter consists of sparsely vegetated mesas and plateaus. These uplands are cold-temperate desertlands and their biotic community is classified as Great Basin Desertscrub (Brown, 1994). The dominant vegetation here is bunch grass association with an occasional small brush species such as rabbitbrush (*Chrysothamnus nauseosus*) or bud sagebrush (*Artemisia spinescens*). The grasses are valuable browse for sheep and are also browsed by cattle and wildlife. Even though vegetation is sparse it provides habitat for small wildlife such as kangaroo rats, gophers as well as coyote and jackrabbits.

### **WILDLIFE**

Wildlife are culturally and traditionally important to the Navajo people, thus it is crucial to protect and preserve wildlife and their habitat. Legislative mandates include the Navajo Nation Code (Titles 17 and 23), the Endangered Species Act, the National Environmental Policy Act, Lacey Act and Airborne Hunting Act and others as related to wildlife.

The Navajo Nation Department of Fish and Wildlife (NNDFWL) is designating wildlife areas throughout the Nation. Wildlife areas are being rated as areas of high, medium or low sensitivity with associated recommendations and criteria for development. A biological evaluation required for most development in these areas and NNDFWL has set forth guidelines on the process for planning and approval of development within a wildlife area.

Wildlife area 1 is designated as a highly sensitive area and the general rule for this area is no development. This wildlife area contains the best habitat for endangered and rare plant, animal and game species and the highest concentration of these species on the Navajo Nation. Wildlife area 2 is designated as a moderately sensitive area with high concentration of rare, endangered, sensitive and game species occurrence or has a high potential for these species to occur. The suggested general rule



for this area is that all development be placed to avoid species and their habitat, including buffers to minimize impacts. Wildlife Area 3 is designated as a low sensitivity area containing fragmented or unknown concentrations of species of concern.

### **CULTURALLY SIGNIFICANT AREAS**

Culturally significant areas include prehistoric and historic period sites as well as traditional cultural properties such as objects, structures, locations or natural features. Cultural resource compliance on the Navajo Nation is mandated by the National Environmental Policy Act and by the National Historic Preservation Act (Sections 106 and 110). The National Environmental Policy Act of 1969 (NEPA) requires environmental impact statements on the cultural as well as natural resources affected by proposed projects. The National Historic Preservation Act of 1966 (NHPA), as amended, is one of the most important pieces of cultural resource legislation passed by Congress (SWCA, 2000). This act provides protection and preservation of significant properties. Other relevant cultural resource legislation includes the Antiquities Act of 1906, the Historic Sites Act of 1935, the Archaeological Resource Protection Act of 1979 (ARPA), the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), and Executive Order 13007 (Indian Sacred Sites [1996]).

The community of San Juan Chapter has several cultural resource sites. This means that there are significant areas with material remains of past Indian or non-Indian life or activities that are of archaeological interest, including without limitation, historic or prehistoric ruins, burial grounds, and inscriptions made by human groups. The sites in the community of San Juan Chapter include the presence of numerous material types or important tool types or surface artifacts that appear to indicate a substantial subsurface component. Many of these sites have been surveyed and recorded with the Navajo Nation Historic Preservation Department.

Burial sites are also culturally significant areas. There are scattered burial sites in the community that should be respected with no encroachment of development.

### **TRADITIONALLY SENSITIVE AREAS**

Residents of the community of San Juan Chapter live close to the land, herding sheep, farming and gathering ceremonial sacred herbs. Because of this connection to the land, there are areas located throughout the area that are important to the people and culturally and traditionally sensitive such as herb gathering sites, squaw dance and ceremonial areas. It is of widespread opinion that these culturally and traditionally sensitive areas should not be encroached upon, therefore they were identified on area maps by local residents and have been withdrawn from development.

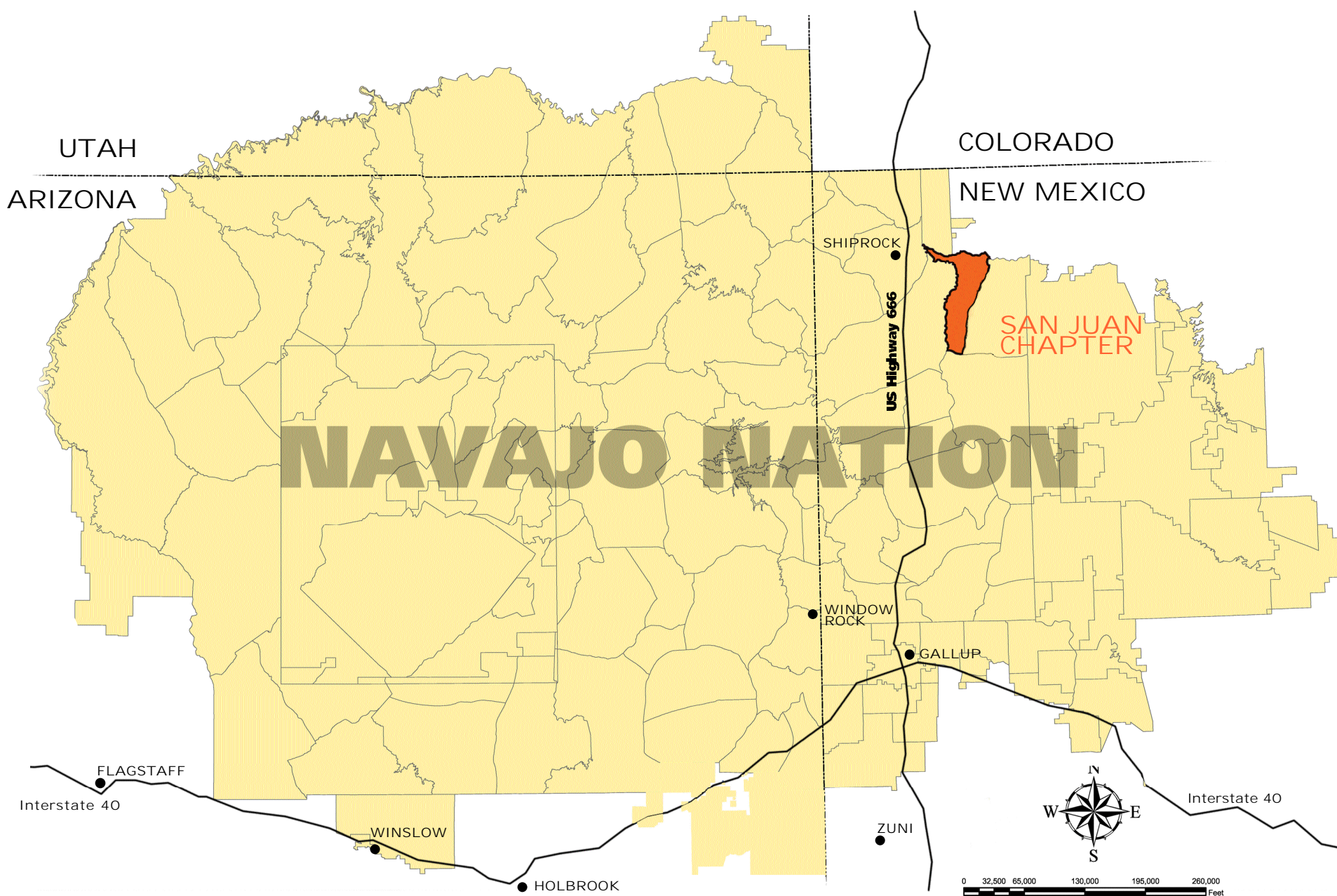
The dominate land feature of community is the Hogback ridge which runs north-south through the community and rises over 1500 feet above the San Juan Valley floor. This is a culturally significant and traditionally sensitive area and should be protected from intrusion or development and left as natural open space.

### **ENVIRONMENTALLY SENSITIVE AREAS**

Environmentally sensitive areas include areas as designated habitat for threatened and endangered species, important wildlife areas or corridors, riparian areas and protected plant populations. Environmental compliance on the Navajo Nation is mandated by the National Environmental Policy Act of 1969 (NEPA). The NEPA requires environmental impact statements on the cultural as well as natural resources affected by proposed projects.

The nature of the industries in and around the community of San Juan Chapter (i.e. coal mining, oil drilling and electrical plants) typically adversely influence the environment. It is important to keep this in mind during the planning process and be aware of potential environmental hazards.





## FIGURE 4

### LOCATION OF SAN JUAN CHAPTER COMMUNITY

SAN JUAN CHAPTER COMMUNITY-BASED LAND USE PLAN  
JJ CLACS & COMPANY - NOVAK ENVIRONMENTAL, INC.  
MARCH 2002

Base Map Source: Navajo Nation Land Department

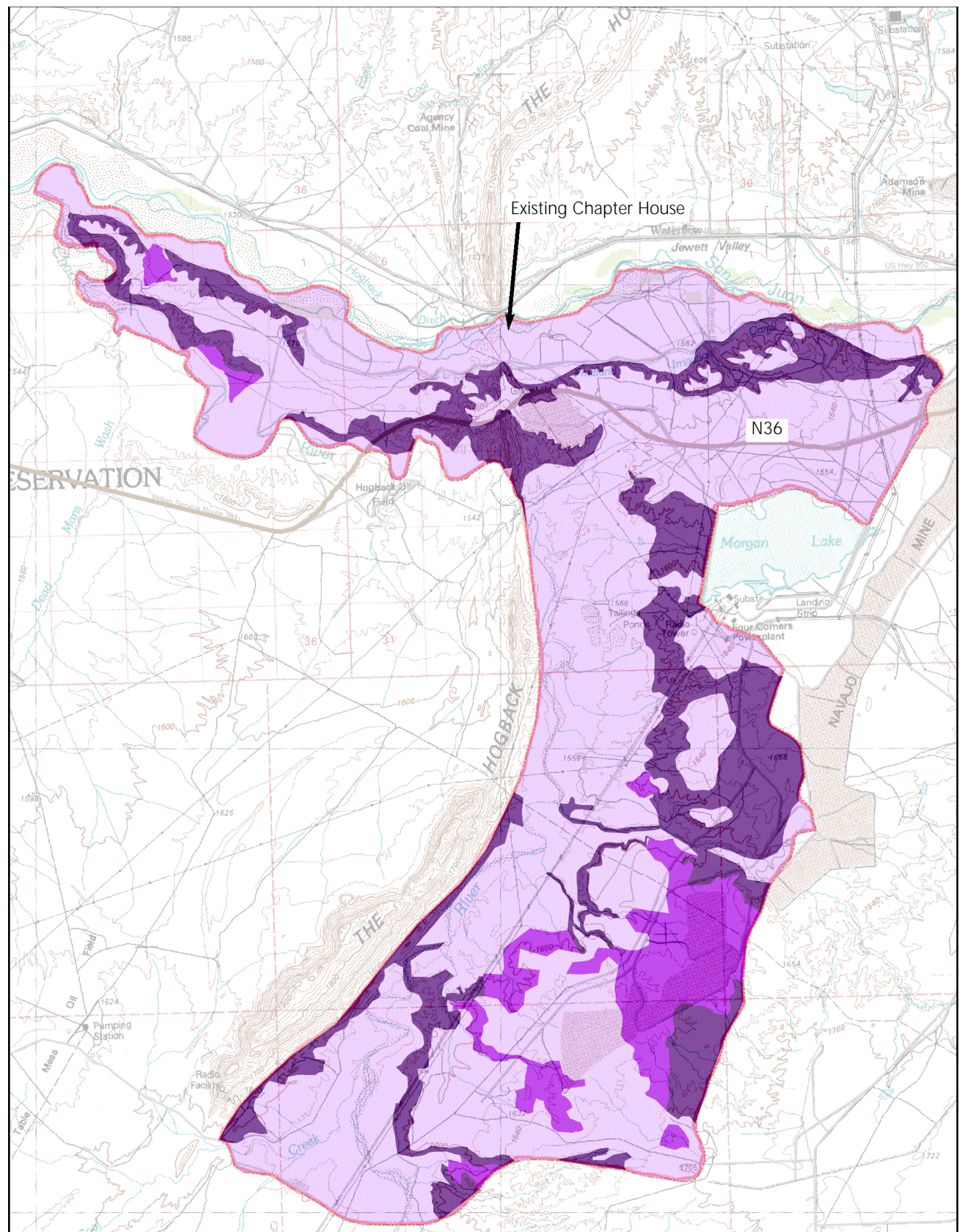
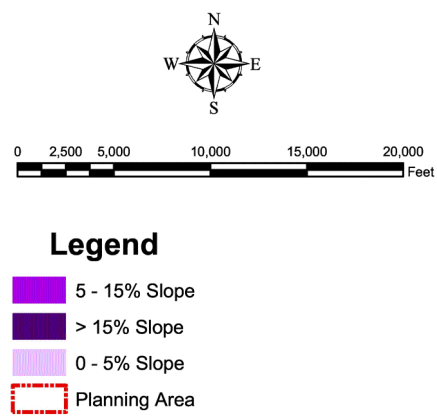










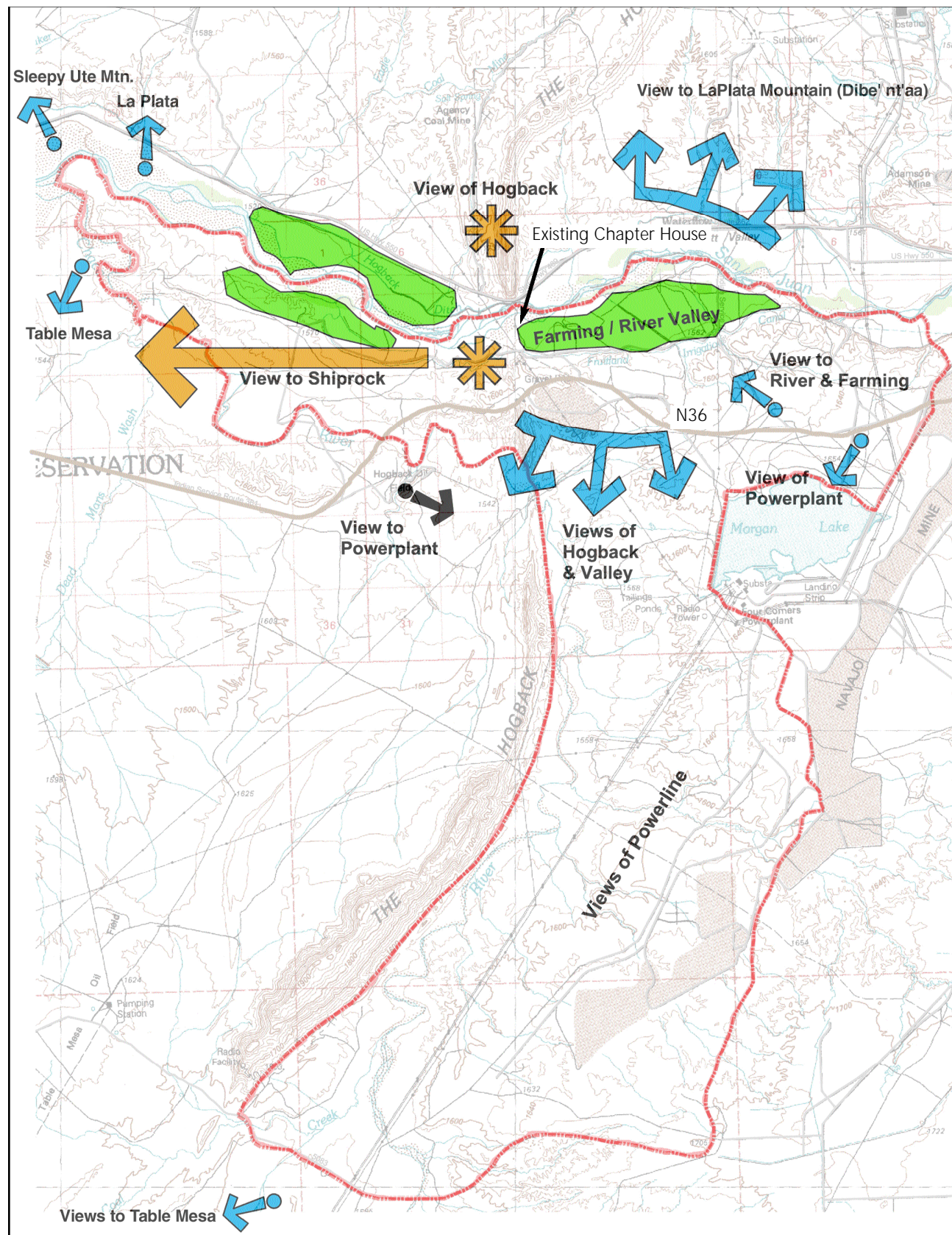
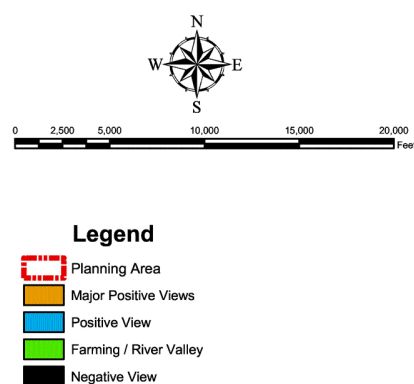


## FIGURE 7 SLOPE ANALYSIS

SAN JUAN CHAPTER COMMUNITY-BASED LAND USE PLAN  
JJ CLACS & COMPANY - NOVAK ENVIRONMENTAL, INC.  
MARCH 2002

Base Map Source: U.S. Geological Survey - Roads Source: Bureau of Indian Affairs



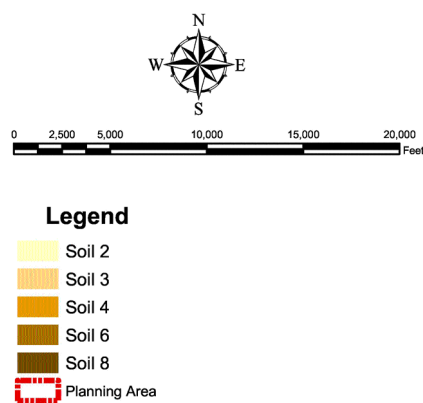


## FIGURE 8 VIEWS/VISUAL RESOURCES

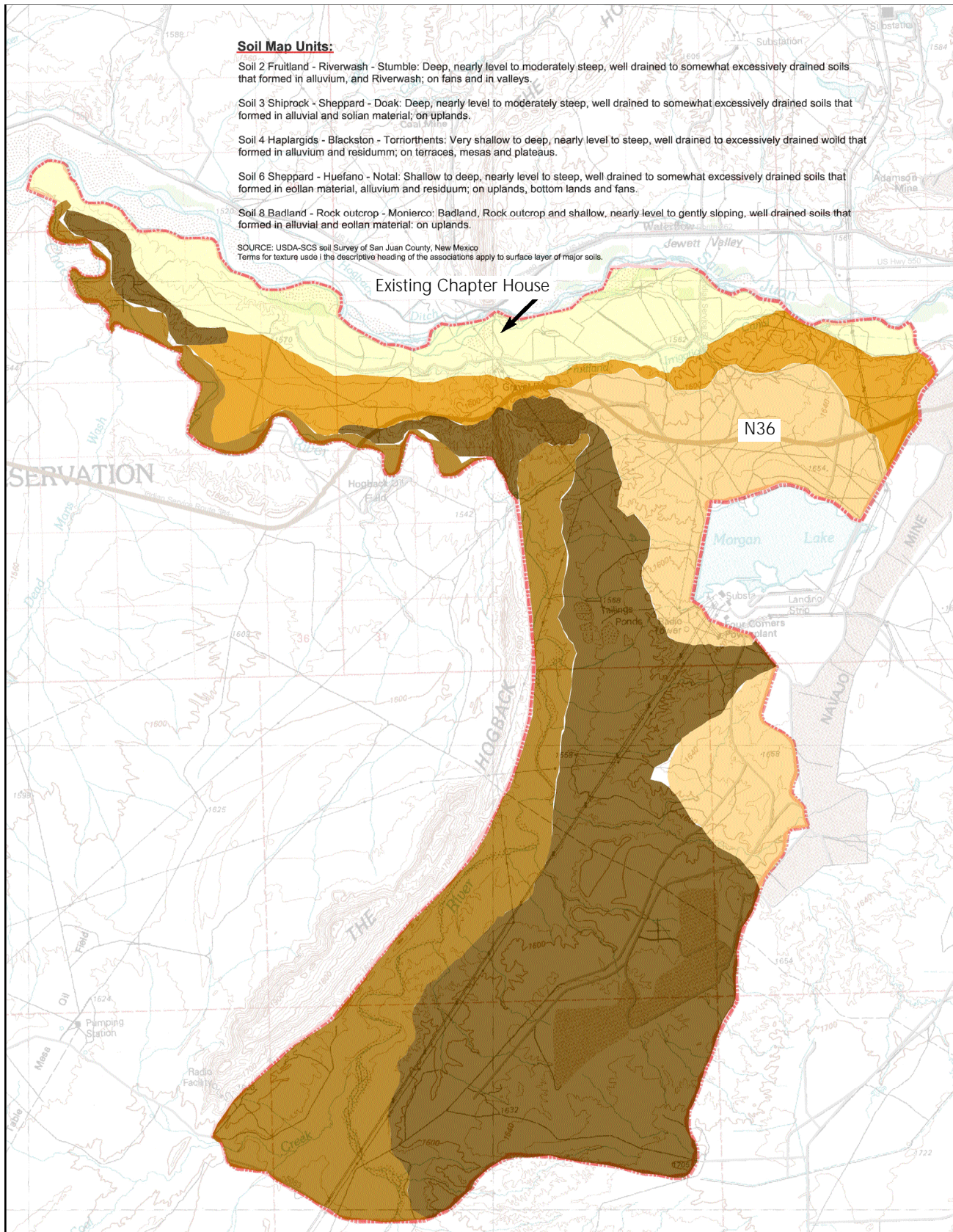
SAN JUAN CHAPTER COMMUNITY-BASED LAND USE PLAN  
JJ CLACS & COMPANY - NOVAK ENVIRONMENTAL, INC.  
MARCH 2002

Base Map Source: U.S. Geological Survey - Roads Source: Bureau of Indian Affairs





- Legend**
- Soil 2
  - Soil 3
  - Soil 4
  - Soil 6
  - Soil 8
  - Planning Area

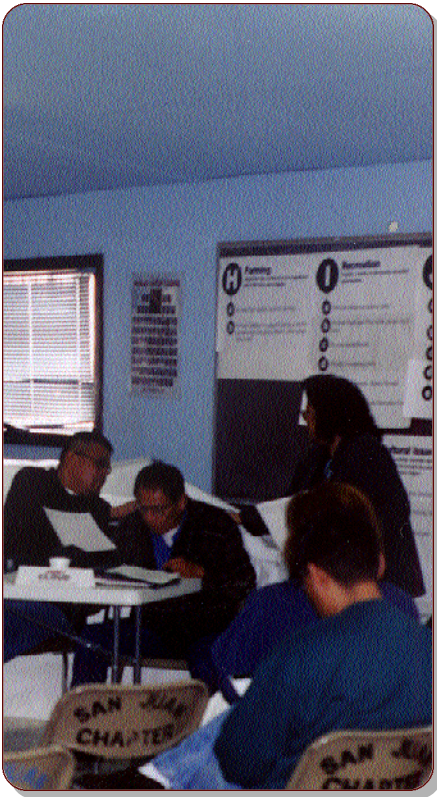
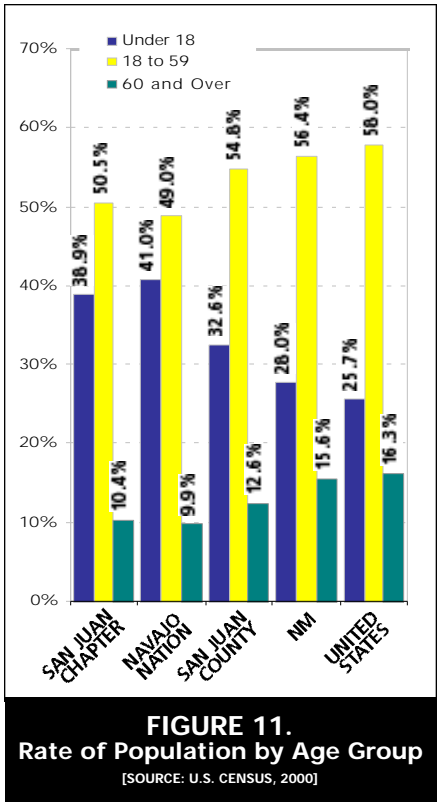


**FIGURE 9**  
**SOILS ANALYSIS**  
SAN JUAN CHAPTER COMMUNITY-BASED LAND USE PLAN  
JJ CLACS & COMPANY - NOVAK ENVIRONMENTAL, INC.  
MARCH 2002  
Base Map Source: U.S. Geological Survey - Roads Source: Bureau of Indian Affairs









# 10. WHO WE ARE - DEMOGRAPHICS

## POPULATION

The population for the community of San Juan Chapter is estimated to be 570 as presented in **TABLE 5.**

This number was determined by multiplying the percentage of registered voters and the total combined population of the San Juan and Nenahnezad Chapters as reported by U.S. Census 2000. In other words, it was assumed that registered voters are directly proportional to population. According to the Navajo Election Office, San Juan Chapter had 416 registered voters and Nenahnezad has 823 registered voters in the year of 2000. 1996 Chapter Images publication estimated a population of 536 in 1990. The community experienced a 6.3 percent growth between 1990 estimates and 2000 census. On an average annual basis, the community of San Juan Chapter has absorbed more than 0.5 percent additional residents each year since 1990. This percentage rate is less than half of the average annual growth rate of 1.2 percent for the Navajo Nation. The 1.2 percent growth rate is based on studies conducted by the Navajo Nation Division of Economic Development (DED).

TABLE 5. Population		
[SOURCE: CHAPTER IMAGES, 1996 AND U.S. CENSUS, 2000]		
	1990	2000
Female	n/a	278
Male	n/a	292
Total Persons	536	570

According to U.S. Census 2000 numbers, an estimated 180,462 persons reside on the Navajo Nation, 113,801 in San Juan County, 1.8 million in New Mexico and 281 million in the United States. Breaking down these populations into three age groups reveals the workforce age range of 18 to 59 comprise the greatest number of people. Children under the age 18 years are the next largest age group followed by the elders, 60 years old and over. These percentages are presented in **FIGURE 11.**

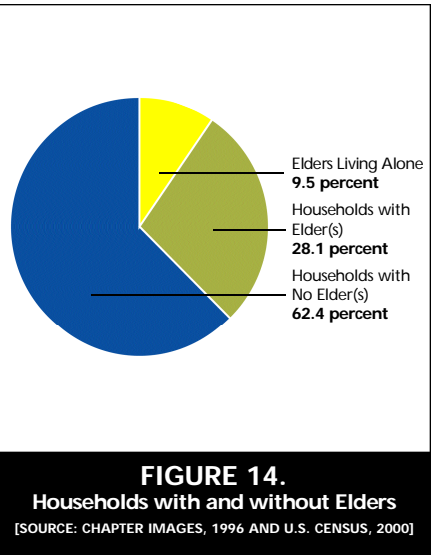
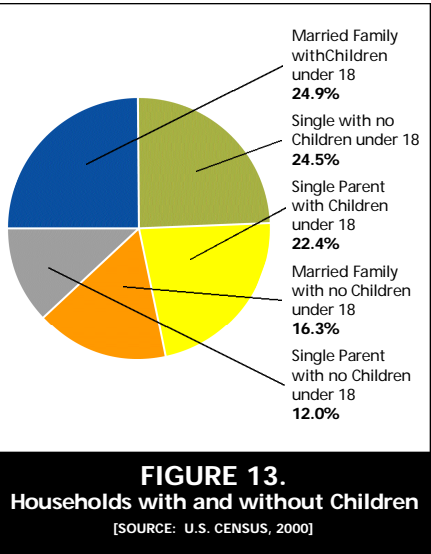
Half of the population in San Juan Chapter is in the workforce age group consistent with the Navajo Nation. The workforce age groups for San Juan County, New Mexico and the United States average is about 5 to 8 percent higher. San Juan Chapter, the Navajo Nation and San Juan County show higher rates of children, 38.9 percent, 41.0 percent and 32.6 percent, respectively. New Mexico and the United States are about 10 percent lower. Approximately 10 percent of San Juan's population comprises of elders 60 years old and over compared to the state and national average of 16.3 percent. The Navajo Nation show the lowest, 9.9 percent while San Juan County shows 12.6 percent.

## MEDIAN AGE

**TABLE 6** shows the median age of the female population to be slighter higher than the male population in all geographical areas shown. San Juan has a 2.6 percent difference between males and females consistent with the other areas. The median age (24.5) for both sexes for the San Juan Chapter is consistent with the Navajo Nation and about 6 percent lower for San Juan County. The state and national median ages are much higher at about 35 years of age.

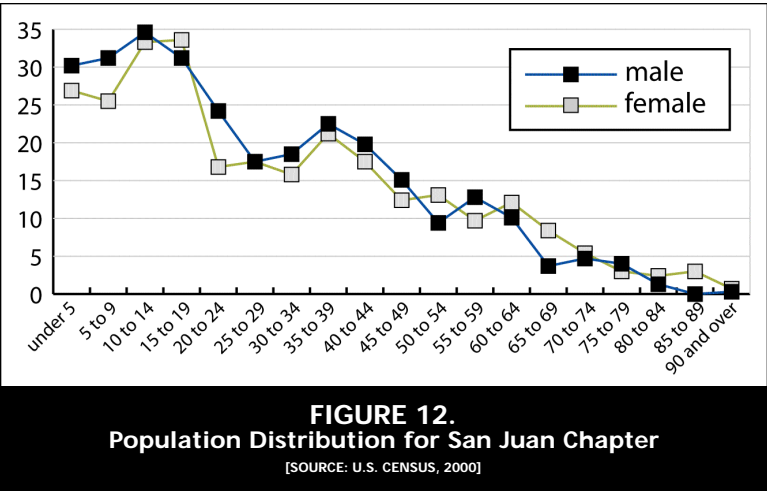
TABLE 6. Median Age by Gender					
[SOURCE: U.S. CENSUS, 2000]					
	United States	New Mexico	San Juan County	Navajo Nation	San Juan Chapter
Both Sexes	35.3	34.6	31.0	24.0	24.5
Male	34.0	33.4	29.8	22.6	23.0
Female	36.5	35.6	32.2	25.6	25.6





AGE DISTRIBUTION

The age distribution by age group for San Juan Chapter is presented in **FIGURE 12**. Children between the ages of 10 and 14 represent the largest population group for the San Juan Chapter. Children between the ages of 15 and 19 represent the second largest population group. Among the adults, the groups from 35 to 39 represent the largest adult population followed by the 25 to 29 age range. The gender distribution in each age ranges is fairly even across the difference age groups.



Based on U.S. Census and the Navajo Election Office data, there were 151 households estimated for the San Juan Chapter community in the year 2000. Almost half of the total households (48.3 percent) reported children under 18 living in the home. A closer look reveals married family households comprise 24.9 percent and single parent households make up 22.4 percent as shown in **FIGURE 13**. Also shown in this figure, are households with no children under the age of 18. Single persons comprise 24.5 percent, married families make up 16.3 percent and single parent families round out this category at 12.0 percent.

Approximately 28.1 percent of the total households have an elder 60 years and over in the household as illustrated in **FIGURE 14**. Almost 10 percent of these elders live alone and 28.1 percent live with two or more persons in the household. The remaining 62.4 percent of all households do not have an elder 60 years and over in the home.

EDUCATION LEVEL

According to the 1990 US Census data, 48.6 percent of Navajos in New Mexico (51.0 percent for Navajos in all states) completed high school or higher.

MAJOR EMPLOYERS AND MEDIAN INCOME

Major employers are Arizona Public Service Company, BHP Billiton, Navajo Agricultural Products Industry, San Juan Mine. The city of Farmington, NM and the town of Shiprock, NM also provide employment opportunities. Other employers include the Bureau of Indian Affairs, Navajo Nation, Indian Health Service, Navajo Tribal Utility Authority, Navajo Engineering and Construction Authority, Abandoned Mine Land Reclamation Project, and San Juan County.

**TABLE 7** presents the national, state, county and Navajo Nation median income levels. San Juan was

TABLE 7. Median Income					
[SOURCE: U.S. CENSUS, 2000, DED]					
	United States	New Mexico	San Juan County	Navajo Nation	San Juan Chapter
Median Income	\$39,021	\$27,540	\$14,100	10,958	10,958

estimated to be the same as the Navajo Nation which is \$10,958. This was 29 percent lower than the county average. The national average is almost three times as much as the Navajo Nation. In 1999, the Navajo Nation Division of Economic Development reported a per capita income of \$6,217 for the Navajo Nation. From 1990 to 1999, the per capita income grew by nearly 25 percent (DED, 1999). According to 1990 U.S. Census, 47.3 percent of Navajo families live below federal poverty levels compared to 19 percent for New Mexico and the national rate of 11.3 percent.

UNEMPLOYMENT RATE

In 1999, the Navajo Nation Division of Economic Development (DED) reported that the unemployment rate for the Navajo Nation was 43.65 percent and 98.37 percent for the community of San Juan Chapter. U.S. Census reported a state unemployment rate of 7.5 percent and a national unemployment rate of 11.8 percent. These rates are presented in **TABLE 8**.

TABLE 8. Unemployment Rate					
[SOURCE: U.S. CENSUS 2000, DED]					
	United States	New Mexico	San Juan County	Navajo Nation	San Juan Chapter
Unemployment Rate	11.8%	7.5%	-	43.65%	98.37%



11. RESIDENTIAL HOUSING DATA

HOUSING COUNT

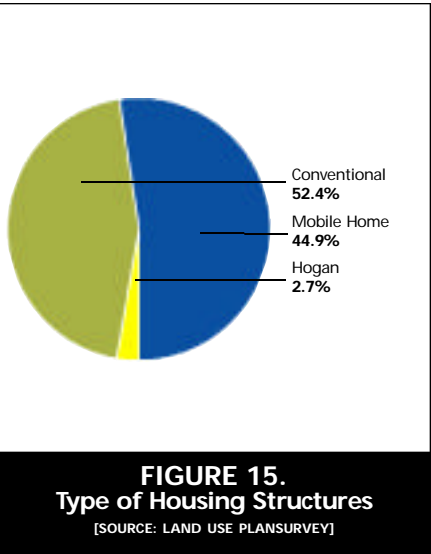
Residents of the community of San Juan Chapter live predominantly in small family clusters spread along the San Juan River. Fewer houses are sparsely distributed south of N36. There are no existing housing subdivisions within the community.

The total estimated housing count for San Juan Chapter is 167 based on U.S. Census 2000. **TABLE 9** shows almost three quarters (72.5 percent or 121) of the housing units in the San Juan Chapter are occupied. Compared with the rest of the Navajo Nation, county, state, and nation, San Juan Chapter ranks the highest, 27.5 percent, in vacant housing units. This could be attributed to several factors.

San Juan Chapter ranks very high in owner occupied units (79.3 percent) versus renter occupied units (19.8 percent) as shown in **TABLE 10**. The high owner occupancy rate reflects the rural character of the

TABLE 9. Number of Housing Units					
[SOURCE: U.S. CENSUS 2000]					
	United States	New Mexico	San Juan County	Navajo Nation	San Juan Chapter
Total	115 9M	780,579	43,221	68,744	167
Percent	100%	100%	100%	100%	100%
Occupied	105 M	677,971	37,711	47,603	121
Percent	91.0%	86.9%	87.3%	69.2%	72.5
Vacant	10.4 M	102,608	5,510	21,141	47
Percent	9.0%	13.1%	12.7%	30.8%	27.5%

TABLE 10. Occupied Housing Units					
[SOURCE: U.S. CENSUS 2000]					
	United States	New Mexico	San Juan County	Navajo Nation	San Juan Chapter
Owner	69.8M	474,445	28,419	36,092	96
Percent	66.2%	70.0%	75.4%	75.8%	79.3%
Renter	35.7M	203,526	9,292	11,511	24
Percent	33.8%	30.0%	24.6%	24.2%	19.8%



community of San Juan Chapter and the fact that families tend to live in their homes for very long periods of time.

**TABLE 11** shows the factors contributing to the vacant housing count for San Juan Chapter as well as the Navajo Nation, San Juan County, State of New Mexico, and the U.S. About 53.2 percent of the vacant housing units in San Juan Chapter are attributed to seasonal, recreational or occasional use. These numbers are relatively consistent with the Navajo Nation; however the other three areas are around 32 percent.

Very few (2.1 percent) houses in the community were found to be for sale or for rent, which indicates a lack of housing available for growth.

Vacant housing for the San Juan Chapter, the Navajo Nation and the San Juan county were generally high at 40 percent while the rest of the state and nation showed 22 to 27 percent. These vacant houses may be hogans or summer shacks.

TYPE OF HOUSING STRUCTURE

**FIGURE 15** show the type of housing residents of the community of San Juan Chapter live in. According to the survey conducted by the San Juan Chapter, a majority of the homes in the community have 2 and 3 bedrooms, 46.3 percent and 26.9 percent respectively. More than two thirds of residents live in conventional built homes while 25.4 percent live in mobile homes and 6 percent live in hogans.

HOUSEHOLD SIZE

Household size is compared in **TABLE 12**. Numbers are somewhat consistent for 3-person households. San Juan Chapter and the Navajo Nation, however, show a higher rate of households with 4 to 7 persons. Consistent with the Navajo Nation, the average household size for San Juan's occupied housing is 3.78.

TABLE 11. Vacant Housing Units					
[SOURCE: U.S. CENSUS 2000]					
	United States	New Mexico	San Juan County	Navajo Nation	San Juan Chapter
For rent	25.1%	26.0%	17.3%	3.2%	2.1%
For sale only	11.6%	10.4%	6.5%	1.7%	2.1%
Rented or sold, not occupied	6.7%	4.6%	4.8%	1.3%	0%
For seasonal, recreational, or occasional use	34.3%	31.2%	31.3%	52.6%	53.2%
For migrant workers	0.2%	0.3%	0.1%	0.1%	0.0%
Other vacant	22.1%	27.4%	40.0%	41.1%	40.4%

TABLE 12. Household Size					
[SOURCE: U.S. CENSUS 2000]					
	United States	New Mexico	San Juan County	Navajo Nation	San Juan Chapter
1-person	25.8%	25.4%	19.3%	18.6%	17.2%
2-person	32.6%	32.4%	29.6%	17.2%	15.9%
3-person	16.5%	16.3%	17.1%	14.6%	16.6%
4-person	14.2%	14.1%	16.6%	15.0%	17.9%
5-person	6.6%	7.0%	9.2%	13.4%	11.9%
6-person	2.5%	2.8%	4.6%	9.2%	9.3%
7-or-more	1.8%	1.9%	3.7%	12.0%	11.3%
Average	2.59	2.63	2.99	3.77	3.78



## 12. RESIDENTIAL HOUSING NEEDS

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The housing needs are significant. Many community members need help with renovations, utilities, roads and in some cases new homes. Some homes are inadequate and do not meet national building standards and codes yet they remain occupied because there is no other choice.

The need for new housing is influenced by the growth of families, job generation, and residents moving back "home". The community of San Juan Chapter has been growing at a steady rate. As stated, the average annual growth rate is an estimated at 1.4 percent of San Juan Chapter compared to the Navajo Nation average of 1.2 percent. Based on a annualized growth factor of 1.4 percent, the population will grow from 517 to 605 in 2010.

The San Juan Chapter has a waiting list of 23 people requesting renovations or new homes. The community of San Juan Chapter has many housing-related problems or obstacles. The range includes the filtering of low and moderate income housing opportunities, type and price of new housing and the existing difficulties of home financing.

Despite the current vacant housing count of 117 (U.S. Census, 2000) there are really no vacancies. Most of the 117 are probably hogans, or shacks. The for-sale only categories support this assumption, because they show values of less than 1 percent which is equal to 2 houses.

Population increase is expected to create the greatest demand for new housing units followed by families wanting to move back to the community. Based on the projected population increase, number of families wanting to move back to the community and an assumed decrease in the average household size, the housing need for new units is 42.



## PART IV. LAND USE PLAN

### 13. LAND USE CATEGORIES AND PLAN DESCRIPTIONS —

The land use categories reflect the goals and objectives and provide guidance for determining appropriate land uses. The following descriptions provide information about each land use element and the land use plan map is presented in **FIGURE 15**. The map indicates the intended predominate future function, density and characteristic use of land. It does not reflect the intended zoning of individual areas, but rather generalize desired future land uses. The map suggests an overall mix of densities and should not be read as tying individual projects to density designations. To achieve appropriate balance among the goals promoted by the land use plan, flexibility in specific decisions is required.



#### **RESIDENTIAL HOUSING**

Residential land uses include scattered housing and subdivisions. Small clusters of these home sites may make up a family area, and share utility lines. Within these clusters, homes may or may not be close together, depending on the preferences of the family. It is envisioned that these clusters would be widely spread, giving the feel and appearance of the more preferred arrangement of homes scattered through out the housing areas, rather than that of a 'subdivision'. This arrangement is more conducive to the lifestyles of many of the community members, especially those whose livelihood is farming or grazing.

#### Existing Residential Housing:

Scattered housing sites are located throughout the community of San Juan Chapter. The housing areas are located primarily near the major roads to provide easier access to the home sites and close proximity to existing utilities. Scattered housing is located along both sides of Navajo Route N36. One large area extends south from the road to an area west of Morgan Lake.



#### Proposed Future Residential Housing:

Some widely scattered housing would be acceptable in the areas designated as grazing/scattered housing. New housing, in keeping with the scattered or clustered concept, will have to be built to meet residential housing needs. Particular attention must be paid to special needs of the elderly, disabled, large families and households with low-moderate incomes. In addition, housing will have to be planned to enhance the unique family cluster character. Small clusters of these home sites may make up of a family area and share utility lines. Within these clusters, homes may or may not be close together.

It is anticipated that these housing areas will meet the needs for housing in the foreseeable future. Eleven home sites were selected from these areas based on a housing waiting list maintained by the San Juan Chapter. These home sites are further analyzed in Part V of this land use plan.

#### **COMMERCIAL**

The commercial categories are established to provide areas in which business may be conducted, goods sold and distributed, and services rendered, and to provide for public activities and other activities which support retail and business functions. These may include such uses as grocery stores, trading posts, or even areas for local vendors and artists to sell their wares to tourists. This land use

is important to the economic development of the community as it provides places for businesses. Businesses which provide jobs and create an economic base, and potential revenue for the Chapter through sales tax or business leases. Local businesses also let Chapter residents spend money "locally" rather than in communities further away. Commercial land use does not include more industrial business such as heavy manufacturing or mining.

Existing Commercial Development:

There are no established commercial areas within the community of San Juan Chapter.

Proposed Future Commercial Development:

The community of San Juan Chapter intends to develop limited areas for tourism and commerce while preserving its uniqueness and special qualities. The community has designated two small areas for commercial development. The first area is located just south of Navajo Route N36 near the middle of the community. This location on a main road allows for easier access to the commercial area. This area is intended primarily to serve local residents.

The second commercial development area is intended to serve both local residents and tourists. This area is located near the Chapter house, closer to the river. This area has been suggested as an area where tourist based enterprises may be based. Such enterprises may include lodging, boat rentals, a place to hire fishing or hiking guides, etc, or other services that may serve tourists and/or local residents.

## **INDUSTRIAL**

Industrial development typically facilitates businesses connected with the production, manufacture, or construction of a product or a range of products. Typical industrial development may include mining, manufacturing or warehousing. Industrial land use may also include uses needed for providing public utilities, such as water treatment, power lines or power plants, and other utilities, industrial development provides jobs for the community and can bring revenue from user fees, sales tax, or other mechanisms.

Existing Industrial Development:

The community of San Juan Chapter is already surrounded by large industrial projects. These projects include the Arizona Public Service power plant near Lake Morgan, a tailings ponds and a large powerline that bisects the community. These industrial developments are all run by entities outside of the community and have been identified by the community as intrusions. Because of the large amount of industrial development already in the area, there are no new Industrial areas shown on the land use plan. The existing tailings ponds southwest of Morgan Lake are shown as industrial development. The BHP Billiton coal mine also borders the eastern boundary of the community of San Juan Chapter. Oil and gas developments by Tiffany Oil & Gas Company are located in the farming area in the western peninsula of the community.

Proposed Industrial Development:

No further industrial development like those already existing is planned. However, the community desires to locate a water treatment facilities or a solid waste transfer station within the community if feasible. Because these were stated goals for the land use plan, they should be located and added to the land use plan map as an amendment.

## **COMMUNITY FACILITIES**

This category is used to designate public land uses, including schools, colleges, libraries, fire stations, police stations, convention centers, museums, governmental offices, utility stations, and hospitals.



Community facilities provide a valuable service to the community, offering services to benefit and serve the entire community.

Existing Community Facilities:

Chapter House Compound: The Chapter house is located within the Chapter house compound which comprises 30.5 acres of land. Built in the summer of 1985, the Chapter house is in poor condition with structural and building code deficiencies.

Educational Facilities: There are no established schools or educational facilities within the community of San Juan Chapter. Students from the community attend schools at Nenahnezad Boarding School, Kirtland Elementary School, Ojo Amarillo Elementary School, and Kirtland High School. Head Start children attend the Pre-school or homebase program under the Nenahnezad Chapter (Chapter Images, 1996).

Senior Citizens Center: There are no established senior citizen facilities within the community of San Juan Chapter.

Church Facilities: There are several churches in the community of San Juan Chapter. The Da'Na'Has'Ta Full Gospel Church was constructed in 1984 and is located on 1.5 acres in East San Juan Chapter area. The church filed a mission site application with the Navajo Nation and currently has a mission site permit. The San Juan Christian Church is 3 years old and is situated on 1 acre of land. This church also has a mission site permit. The Native American Church of Navajoland is established in the community and is utilizes sites at private residences.

Public Safety: Police, fire and emergency services are currently provided out of Kirkland and Shiprock, NM.

Health Care: The nearest hospitals are the Northern Navajo Medical Center located in Shiprock, NM and the San Juan Regional Medical Center in Farmington, NM. One community health worker, also known as the CHW, located at the Nenahnezad Chapter house serves both the communities of San Juan Chapter and Nenahnezad Chapter.

Proposed Community Facilities:

One large area near the Chapter house has been designated for community facilities. Developing additional community facilities near the Chapter house will serve to locate similar facilities in a centralized area. This will make it easy for residents to access a number of facilities conveniently.

An area on the east side of the Chapter house has been designated for a community multi-purpose building. Also an area located in the east side of the community has been designated for a fire station.

A number of community facilities have been named in the goals and objectives and additional locations may be necessary to accommodate all of them. As additional areas are needed they should be identified and added as an amendment.

## **RECREATION**

Recreation facilities provide places for play, relaxation and fitness. The areas designated as recreation on this land use plan are intended to be more structured recreation facilities than those provided by trails in the open space. These facilities may include both indoor and outdoor facilities. Outdoor facilities may include parks, playgrounds, ball fields, rodeo or equestrian facilities, or golf courses, and may include hiking and biking trails. Indoor facilities may include gymnasiums, fitness centers, or a multi-use recreation center which may include several recreational elements.

Existing Recreation:

There are no established recreational facilities within the community of San Juan Chapter.

Proposed Recreation:

One large area south of Navajo Route N36 is designated as a recreation area. This area is fairly large and could accommodate several of the proposed recreational uses. The proximity of this area to the main road makes it easily accessible to both residents and visitors.

A nature trail has been suggested along the San Juan River and from the area of the Chapter house to Morgan Lake. These trails have been suggested for use by community members and as an attraction for tourists. This trail would be an excellent recreational opportunity capitalizing on the beauty of the riparian habitat, while providing views of the river and access to other recreational activities along the river like fishing or rafting. The trail to Morgan Lake offers a recreational opportunity through a very different, grassland landscape with the destination of the lake. This trail is suggested as a loop trail and would provide access to any recreational development that may occur on Morgan Lake in the future.

The land use plan calls for enhancement of the Morgan Lake recreation center, however the land use plan does not reflect any recreational or commercial development around the lake. If the recreation center is to be enhanced within the San Juan Chapter planning area, this area should be designated on the land use plan map and adopted formally as an amendment.

**OPEN SPACE**

Areas designated as open space are those areas that the community has identified as having special significance, and are areas that should be preserved in their natural state without development. The designation as open space does not mean that people can not use the space for limited grazing, hiking, or other low impact activities, but it does protect the area from mining, building or other forms of development. Grazing in open space areas should not be intensive and should be carefully monitored to ensure that overgrazing does not occur in these areas. The intent of open space is to preserve areas of particular beauty, natural, cultural or traditional significance for future generations to enjoy and respect.

Existing Open Space:

There are no established or officially designated areas for open space in the community of San Juan Chapter.

Proposed Open Space:

Because of San Juan's natural beauty, the community recognizes the importance of preserving areas of special significance from development. By preserving areas as open space, the community will respect the natural beauty and importance of the natural land and preserve these areas.

Two large areas of open space have been identified on the land use plan map. It should also be noted that those areas designated as ceremonial or cultural sites should also remain undeveloped and should be offered the same respect and protection as open space sites.

Two of the identified open space sites are near the Hogback, on both the east and west sides of the feature. Preserving these areas as open space not only preserves these areas of special significance to the members of the community, but also ensures that visitors to the community of San Juan Chapter can experience the Hogback and surrounding areas undeveloped in their natural beauty.

**GRAZING**

The suitability of land for grazing is dependent on various factors including the amount of annual precipitation, soil conditions, and the degree of slope on the land. The type of vegetation that will grow on the land is also affected by these factors. Land where the degree of slope is steep are suitable for grazing and/or open space. As open space areas, grazing lands possess scenic values except when overgrazed. Areas designated for grazing should remain primarily undeveloped to ensure that grazing rights in these areas are protected. The grazing areas will likely be managed by the grazing committee and should be regulated by the grazing management plan. Areas designated for grazing should not limit the use of these areas for other non-development related activities like recreation or hunting, however the primary managed land use on this land is grazing.

Traditionally home sites and family clusters of homes are located within a grazing lease area. This type of home site development is compatible with areas designated for grazing.

Existing Grazing:

Ranching and sheepherding have been a major occupation and, more importantly, a way of life in the community of San Juan Chapter for many years. A majority of the land in the community are now grazed. The valleys in the southern part of the community of San Juan Chapter are showing signs of overgrazing. Grazing lands need to be protected from encroaching developments.

Proposed Grazing:

The community voiced a desire to preserve and protect these lands from encroachment by other uses since they are valued for the cultural, economic and aesthetic values they offer. The majority of the area of the community of San Juan Chapter is dedicated to grazing. Because people often want to live near to the area they graze, grazing and scattered housing are found together in many areas. In these areas, widely scattered housing is acceptable, but subdivisions or high density housing developments are not encouraged.

Large tracts of land in the east and west portions of the community of San Juan Chapter have been designated as grazing land. The entire southern area of the community has been designated for grazing with scattered housing acceptable throughout the area.

**FARMING**

Land that has been designated for farming should be used for raising crops, either for subsistence or for market. Soils and location are prime factors in determining the suitability of land for farming. Water is also a serious consideration and limits the amount of land capable of being brought into cultivation. Farming land is typically relatively flat with healthy, rich soils, and near a natural or irrigated water source.

Existing Farming:

Farming is another important way of life for some San Juan members, though on a smaller scale than grazing. The cultivation of land for crops also has a long history in the community of San Juan Chapter. Crops grown for food or to provide feed for livestock are the major farming enterprises in the area. Crops of the community include squash, corn, melons, and alfalfa. All farms in the valley paralleling the San Juan River use irrigated water as the source for farm water.

Proposed Farming:

There are two large specific areas designated for farming. However, this does not mean that small plots of land cannot be used for growing crops outside of these areas. If a family wants to grow a corn field or a garden near their home, this would be acceptable within the land use plan. However, large tracts of farmland should be confined to those areas designated as farm land. Existing scattered home sites are found within the farming areas, however it has

been determined that no additional housing shall be permitted within the farming areas.

The farming areas are located in the valley near the San Juan River; these areas accommodate the existing farming lands and provide room for additional farming to be incorporated. It was also noted in public hearings, that there are several burial grounds scattered through out these farming areas. These areas should be respected and remain undisturbed.

### **CEREMONIAL/CULTURALLY SENSITIVE SITES**

Ceremonial/culturally sensitive sites are defined as those areas that have been designated by community members as areas that are either used for ceremonies, or have some cultural significance. These areas may be areas where herbs are gathered, areas of archeological importance, or they may be areas that hold other historic or cultural significance for members of the community. The actual use or significance of these areas is not shown on the land use plan to protect these areas.

These areas should be treated with the greatest of respect and should not be subject to any sort of development (with the exception of building ceremonial structures, etc.). The purpose of designating these areas is to protect them for the use and respect of community members and future generations.

#### Existing Sensitive Sites:

Ceremonial/cultural sites are scattered throughout the community. The areas shown on the land use plan map are likely not the only sites in the community, however; all ceremonial/cultural sites should be respected equally, regardless of if they are shown on the land use plan map.

Those areas shown on the land use plan map include several ceremonial sites and other sites that have been determined to have special cultural significance to members of the Chapter. Other areas on the land use plan map shown as ceremonial/cultural may accommodate future ceremonial grounds.

#### Proposed Sensitive Sites:

The community voiced a desire to preserve and protect these lands from encroachment by other uses.

### **BURIAL SITES**

The areas shown on the land use plan as burial sites have been identified by community members. These sites should not be disturbed by development, and recreational trails, etc. should not lead to these areas. The burial sites shown on this land use plan map are not the only sites in the community, however; all burial sites should be respected equally, regardless of if they are shown on the land use plan map.

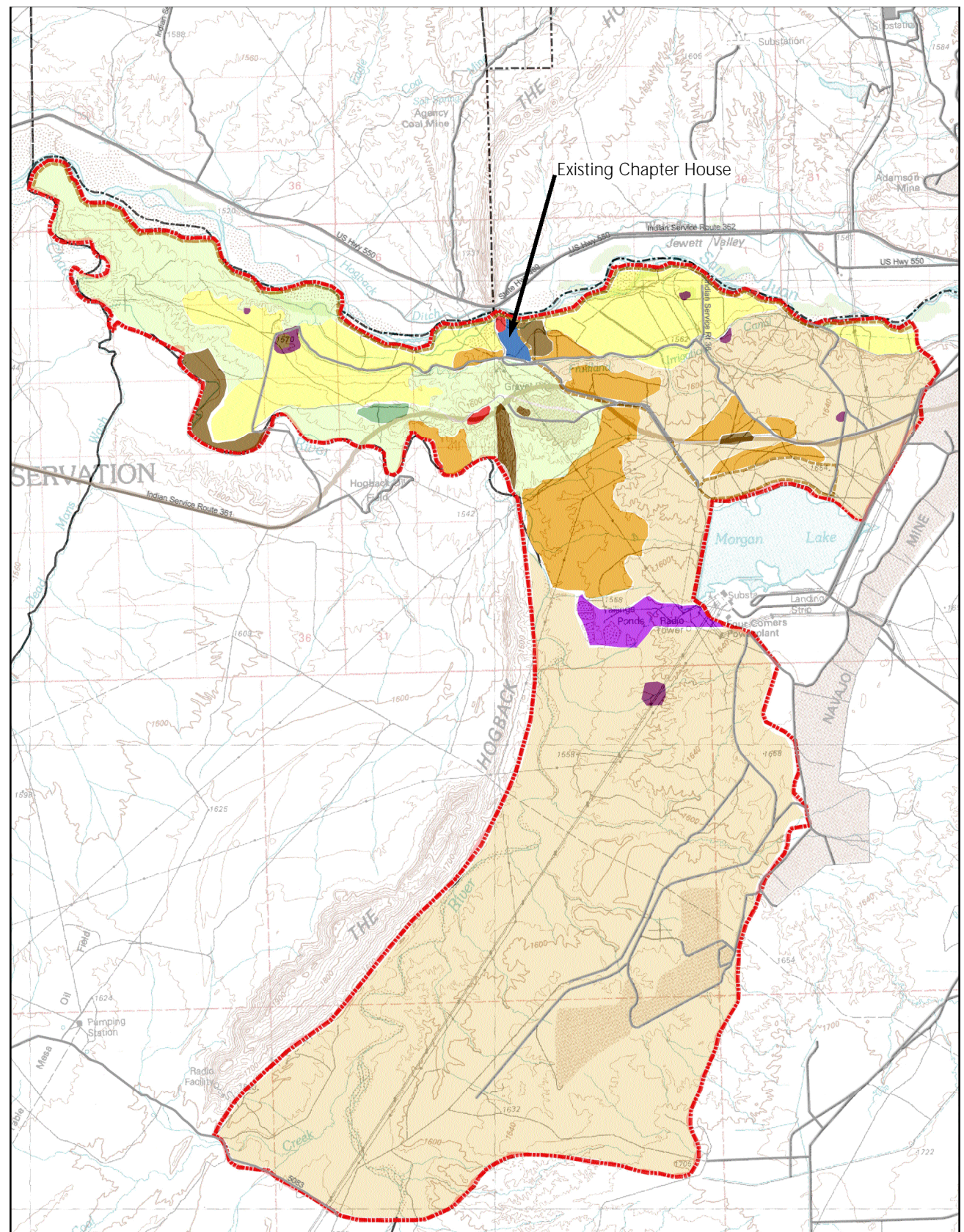
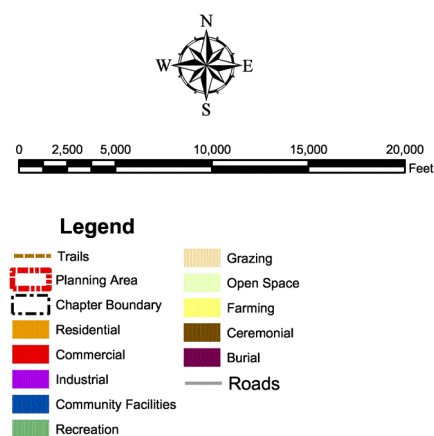
#### Existing Burial Sites:

There are two current burial sites shown on the land use plan map, both in the northern area of the community. There are several small burial sites scattered throughout the community. Several of these have been located on the land use plan map, but there are many that were not specifically located. There are many burial sites in the areas designated for farming and all of these should remain undisturbed. The local community members are aware of the locations of these burial sites and have respected them. Each individual site is not located on the land use plan map in an attempt to further protect these sites.

#### Proposed Burial Sites:

One goal of this land use plan was to identify an area for a community cemetery; however consensus could not be reached on a location so a cemetery is not shown on this land use plan map. Identifying an area for this use should be accomplished and added to the land use plan as an amendment.





# FIGURE 16 LAND USE PLAN

SAN JUAN CHAPTER COMMUNITY-BASED LAND USE PLAN  
JJ CLACS & COMPANY - NOVAK ENVIRONMENTAL, INC.  
MARCH 2002

Base Map Source: U.S. Geological Survey - Roads Source: Bureau of Indian Affairs



# PART V. PROPOSED HOUSING, COMMUNITY AND PUBLIC FACILITIES

This section builds on the groundwork established in the planning process in order to conceive and implement individual housing projects that respond directly to local conditions and context and are consistent with the future vision of the community. The explicit goal is to give physical form to the housing possibilities that were identified in the planning process.

The following sections present a framework for residential housing development by taking eleven proposed scattered housing requests from the community of San Juan Chapter. The framework is based on infrastructure and land suitability analyses.

The goal of infrastructure and land suitability analyses is to explicitly identify constraints and opportunities for proposed residential housing development. This is accomplished by determining the fitness of a given tract of land for the intended use (Steiner, McSherry, Cohen, Marruffo, Davis, 1999).



## 14. PROPOSED HOME SITES

Eleven proposed home sites encompassing one-acre or less have been identified, at various locations, for the construction and development of residential homes including associated facilities. The locations of the proposed home sites are shown on **FIGURE 16**. Infrastructure and land suitability analyses have been conducted for each home site and are presented herein.

### INFRASTRUCTURE ANALYSIS:

#### ELECTRIC

Electric power is presently provided to the community by the Navajo Tribal Utility Authority (NTUA).

Home site 1: There is an existing single-phase power line located just to the west of the proposed home site.

Home site 2: There is an existing single-phase power line located 250-feet to the west of the proposed home site.

Home site 3: There is an existing single-phase power line located on the proposed home site.

Home site 4: There is an existing single-phase power line located along the western edge of the proposed home site.

Home site 5: There are no power lines in the general vicinity of the proposed home site.

Home site 6: There is an existing single-phase power line on the southeast corner of the proposed home site.

Home site 7: There are no power lines in the general vicinity of the proposed home site.

Home site 8: There are two existing single-phase power lines located near the northern edge of the proposed home site. Large power transmission lines run near the east edge of the proposed home site.

Home site 9: There is an existing single-phase power line runs through the eastern section of the proposed home site.

Home site 10: There are no power lines in the general vicinity of the proposed home site.

Home site 11: There is an existing single-phase power line located approximately 400 feet west of the proposed home site.



**WATER**

Water is presently provided to the community by the Navajo Tribal Utility Authority (NTUA).

Home site 1: There is an existing water distribution line located just northwest of the proposed home site.

Home site 2: There is an existing water distribution line located along the northeast corner of the proposed home site.

Home site 3: There is an existing water distribution line located on the proposed home site.

Home site 4: There is an existing water distribution line located on the western edge of the proposed home site.

Home site 5: There is an existing water distribution line located approximately 600-feet to the north of this proposed home site.

Home site 6: There is an existing water distribution line located across the existing dirt road east of the proposed home site.

Home site 7: There is an existing water distribution line located near the southern boundary of this proposed home site.

Home site 8: There is an existing water distribution line located near the western edge of the proposed home site.

Home site 9: There is a water distribution line that serves the existing home site just south of the proposed home site

Home site 10: There are no existing water distribution lines located in the vicinity of this proposed home site.

Home site 11: There are no existing water distribution lines located in the vicinity of this proposed home site.

**SEWER**

There is no existing sewer system within the community at this time. However, the community currently uses underground septic systems. The proposed home sites would have to use septic systems because there are no plans in the immediate future for a community-wide sewer system. The proposed home sites are scattered and do not justify a sewer system.

**GAS**

There is no natural gas service currently available in the community and there are no immediate plans for future service. The potential homeowner has the option of selecting propane or electric for heating and other appliances requiring natural gas.

**COMMUNICATION**

Telephone service is available throughout the community by Qwest Communications. New service near existing lines are possible and no problems are anticipated.

Home site 1: There is an existing telephone land line located just to the northwest of the proposed home site.

Home site 2: There are no existing telephone land lines in the general vicinity of the proposed home site.

Home site 3: There is an existing telephone land line along the southern edge of the proposed home site.

Home site 4: There is an existing telephone land line along the western edge of the proposed home site.

Home site 5: There are no existing telephone land lines in the general vicinity of the proposed home site.

Home site 6: There are no existing telephone land lines in the general vicinity of the proposed home site.

Home site 7: There are no existing telephone land lines in the general vicinity of the proposed home site.

Home site 8: There is an existing telephone land line near the western edge of the proposed home site.

Home site 9: There are no existing telephone land lines in the general vicinity of the proposed home site.

Home site 10: There are no existing telephone land lines in the general vicinity of the proposed home site.

Home site 11: There are no existing telephone land lines in the general vicinity of the proposed home site.

#### **LAND SUITABILITY ANALYSIS:**

##### **ACCESSIBILITY**

Home site 1: Proposed home site is located less than one-half mile south of Navajo Route 36 (N36). Access to the home site is via a dirt road off of N36.

Home site 2: Proposed home site is located just south of N362, a two-lane gravel road running alongside the Fruitland Irrigation Canal. Access to the home site is via a private dirt road off N362.

Home site 3: Proposed home site is located along N362. Access to the home site is via Navajo Route N362.

Home site 4: Proposed home site is located one-miles from N362. Access to the home site is via a hard pack gravel base road.

Home site 5: Proposed home site is located just south of N362. Access to the home site is via a private dirt road off of this main dirt road.

Home site 6: Proposed home site is located just south of Navajo Route N362. Access to the home site is via a private dirt road off N362.

Home site 7: Proposed home site is located just north of a two-lane gravel road running east to west through the northern portion of the community. Access to the home site is via a private dirt road off of this main dirt road.

Home site 8: Proposed home site is located just north of N36. Access to the home site is via a private dirt road.

Home site 9: Proposed home site is located north of N362. Access to the site is along a dirt road past an existing home site, and on to a private dirt road.

Home site 10: Proposed home site is located approximately 1.5 miles south of Morgan Lake and west of the mining railroad. Access to the site is along a dirt road on a private dirt road. No paved roads are located in the near vicinity.

Home site 11: Proposed home site is located south of the Fruitland Irrigation Canal off of N362, a two-lane gravel road. Access to the home site is via a private dirt road.

##### **SLOPES AND TOPOGRAPHY**

Home site 1: Proposed home site is located near the shores of Morgan Lake on gently sloping land, less than a 5 percent slope towards the lake. The site elevation is

approximately 5,400 feet above mean sea level and it tilts down towards the south. No well defined drainages were noted on this home site during the site visit.

Home site 2: Proposed home site is located near the San Juan River on gently sloping land, approximately 5 percent slope towards the river. The site elevation is approximately 5,080 feet above mean sea level and it tilts down towards the north. The southern most edge of the home site is at the base of a steep slope. No well defined drainages were noted on this home site however there is a man made canal just to the north of the site.

Home site 3: Proposed home site is located near the San Juan River on gently sloping land, less than a 5 percent slope towards the river. The site elevation is approximately 5,090 feet above mean sea level and it tilts down towards the northwest. No well defined drainages were noted on this home site however there is a man made canal south of the home site.

Home site 4: Proposed home site is located near the San Juan River on gently sloping land, less than a 5 percent slope towards the river. The site elevation is approximately 5,030 feet above mean sea level and it tilts down towards the northwest. No well defined drainages were noted on this home site however there is a slightly sloped area running through the middle of the home site.

Home site 5: Proposed home site is located on a ridge top between San Juan and Chaco Rivers on gently sloping land, less than 5 percent slope. The site elevation is approximately 5,120 feet above mean sea level and it tilts down towards San Juan River to the northeast. The southern most edge of the home site is near a steep facing slope that drops down into Chaco River.

Home site 6: Proposed home site is located near the San Juan River on gently sloping land, approximately 5 percent slope towards the river. The site elevation is approximately 5,030 feet above mean sea level and it tilts down towards the north. The northern most edge of the home site is at the top of a steep slope down to the San Juan River. No well defined drainages were noted on this home site during the site visit however there is a man made irrigation canal south of the site near Navajo Route 362.

Home site 7: Proposed home site is located on a ridge top between San Juan and Chaco Rivers on gently sloping land, less than 5 percent slope. The site elevation is approximately 5,100 feet above mean sea level and it slopes toward the San Juan River to the northeast. North and west edges of the home site are near steep hillsides to the San Juan River.

Home site 8: Proposed home site is within 1.5 miles of the San Juan River on gently sloping land that slopes toward the river at slope of less than 5 percent. The site elevation is approximately 5,420 feet above mean sea. No well defined drainages were noted on this home site.

Home site 9: Proposed home site is located near the San Juan River on gently sloping land, less than 5 percent slope. The site elevation is approximately 5,100 feet above mean sea level and it slopes toward San Juan River to the north.

Home site 10: Proposed home site is located on a mesa top south of Morgan Lake on gently sloping land, with less than 5 percent slope. The site elevation is approximately 5,413 feet above mean sea level.

Home site 11: Proposed home site is located on a mesa approximately 15 miles east of Shiprock, NM. Steep slopes surround the north, east and west edges of the proposed home site. The site elevation is approximately 5,200 feet above mean sea level. No well defined drainages were noted on this home site during the site visit.

#### **GROUND AND SURFACE WATER**

Home site 1: Proposed home site is located less than one-half mile north of Morgan Lake, a

1,400-acre reservoir that is a reliable perennial water source. Other surface water available to this home site is the San Juan River located 2 miles to the north. Ground water is available in limited quantity. The area surrounding the home site has been mapped by the United States Geological Survey (USGS) as an area where wells have only the potential to yield less than 25 gallons per minute (Goodman, 1982).

Home site 2: Proposed home site is located less than one-half mile south of San Juan River, a major perennial river in the region. Other surface water available to this home site is Morgan Lake located 4 miles to the southeast. Ground water is also available at this location. The area surrounding the home site has been mapped by the USGS as an area where wells have the potential to yield at least 75 gallons per minute (Goodman, 1982).

Home site 3: Proposed home site is located less than one mile south of San Juan River, a major perennial river in the region. Other surface water available to this home site is Morgan Lake located 3 miles to the southeast. Ground water is also available at this location. The area surrounding the home site has been mapped by the USGS as an area where wells have the potential to yield at least 75 gallons per minute (Goodman, 1982).

Home site 4: Proposed home site is located less than one mile south of San Juan River, a major perennial river in the region. Other surface water available to this home site is Morgan Lake located 2 miles to the southeast. Ground water is also available at this location. The area surrounding the home site has been mapped by the USGS as an area where wells have the potential to yield at least 75 gallons per minute (Goodman, 1982).

Home site 5: Proposed home site is located less than one-half mile south of San Juan River, a major perennial river in the region. Ground water is available at this location in limited quantity. The area surrounding the home site has been mapped by the USGS as an area where wells have only the potential to yield less than 25 gallons per minute (Goodman, 1982).

Home site 6: Proposed home site is located less than one-half mile south of San Juan River. Other surface water available to this home site is Morgan Lake located 4 miles to the southeast. Ground water is also available at this location. The area surrounding the home site has been mapped by the USGS as an area where wells have the potential to yield at least 75 gallons per minute (Goodman, 1982).

Home site 7: Proposed home site is located less than one mile south of San Juan River. Ground water is available at this location in limited quantity. The area surrounding the home site has been mapped by the USGS as an area where wells have only the potential to yield less than 25 gallons per minute (Goodman, 1982).

Home site 8: Proposed home site is located less than two miles south of San Juan River. Other surface water available to this home site is Morgan Lake located approximately 2 miles to the south. An aqueduct running between the lake and the San Juan River runs north south near the western edge of the proposed home site. Ground water may be available in limited quantity. Areas near the home site have been mapped by the USGS as an area where wells have only the potential to yield less than 25 gallons per minute (Goodman, 1982).

Home site 9: Proposed home site is located less than one mile south of San Juan River, a major perennial river in the region. Other surface water available to this home site is Morgan Lake located 2 miles to the southeast. An irrigation canal runs approximately 0.75 miles south of the proposed home site. Ground water is also available at this location. The area surrounding the home site has been mapped by the USGS as an area where wells have the potential to yield at least 75 gallons per minute (Goodman, 1982).

Home site 10: Proposed home site is north of Chinle Wash, a westward flowing tributary of Chaco Wash. Chaco Wash is approximately 2.5 miles to the west, and the San Juan River is approximately 6 miles to the north. Other surface water available to this home site is Morgan Lake located 2 miles to the north. There is likely no groundwater available in the area. The

area surrounding the home site has been mapped by the USGS as an area where wells do not have the potential to yield at least 75 gallons per minute (Goodman, 1982).

Home site 11: Proposed home site is located approximately two miles south of San Juan River. Other surface water available to this home site is Morgan Lake located 2 miles to the southeast. Available ground water is unlikely at this location. The area surrounding the home site has been mapped by the USGS as an area where wells do not have the potential to yield at least 75 gallons per minute (Goodman, 1982).

### **SOILS INFORMATION**

Home site 1: Soils at this proposed home site location consist of aeolian sand, Avalon-Sheppard-Shiprock association. Properties of this soil association include moderate to rapid permeability, low shrink-swell potential, hazard of water erosion is slight to moderate and hazard of soil blowing is high to very severe (USGS, 1980).

Home site 2: Soils at this proposed home site location consist of alluvial terrace material. Properties of this soil include medium to coarse texture, moderate permeability and a moderate hazard to erosion.

Home site 3: Soils at this proposed home site location consist of Fruitland sandy loam. Properties of this soil association include moderately rapid permeability, low shrink-swell potential, hazard of water erosion is slight and hazard of soil blowing is severe (USGS, 1980). This soil is well suited to urban development with seepage being the only limitation for sewage lagoon areas.

Home site 4: Soils at this proposed home site location consist of Fruitland sandy loam. Properties of this soil association include moderately rapid permeability, low shrink-swell potential, hazard of water erosion is slight and hazard of soil blowing is severe (USGS, 1980). This soil is well suited to urban development with seepage being the only limitation for sewage lagoon areas.

Home site 5: Soils at this proposed home site location consist of alluvial sand and gravel. Properties of this soil include medium to moderately coarse texture with moderate permeability and a moderate hazard to erosion.

Home site 6: Soils at this proposed home site location consist of alluvial terrace material. Properties of this soil include medium to coarse texture, moderate permeability and a moderate hazard to erosion.

Home site 7: Soils at this proposed home site location consist of alluvial sand and gravel. Properties of this soil include medium to moderately coarse texture with moderate permeability and a moderate hazard to erosion.

Home site 8: Soils at this proposed home site location consist of aeolian sand, Avalon-Sheppard-Shiprock association. Properties of this soil association include moderate to rapid permeability, low shrink-swell potential, hazard of water erosion is slight to moderate and hazard of soil blowing is high to very severe (USGS, 1980).

Home site 9: Soils at this proposed home site location consist of Fruitland sandy loam. Properties of this soil association include moderately rapid permeability, low shrink-swell potential, hazard of water erosion is slight and hazard of soil blowing is severe (USGS, 1980). This soil is well suited to urban development with seepage being the only limitation for sewage lagoon areas.

Home site 10: Soils at this proposed home site location consist of aeolian sand, Avalon-Sheppard-Shiprock association. Properties of this soil association include moderate to rapid permeability, low shrink-swell potential, hazard of water erosion is slight to moderate and hazard of soil blowing is high to very severe (USGS, 1980).

Home site 11: Soils at this proposed home site location consist of aeolian sand, Avalon-Sheppard-Shiprock association. Properties of this soil association include moderate to rapid

permeability, low shrink-swell potential, hazard of water erosion is slight to moderate and hazard of soil blowing is high to very severe (USGS, 1980).

#### **VEGETATION AND WILDLIFE**

Home site 1: Proposed home site is currently void of any significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site is in close proximity to the Morgan Lake recreational area but does not fall within any wildlife areas.

Home site 2: The location of the proposed home site is currently void of any significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site does not fall within any wildlife area. The home site is in close proximity, to the Hogback, which is designated as wildlife area 1.

Home site 3: The location of this proposed home site currently contains some significant riparian trees among existing homes. The remainder of the home site is cultivated land. It is possible to conduct construction at this home site such that the vegetation will no be disturbed. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site does not fall within any wildlife area.

Home site 4: Approximately half of this proposed home site is vegetated and contains significant riparian vegetation. The western half of the home site is currently void of vegetation and contains a new trailer. It is possible to conduct construction at this home site such that the vegetation will no be disturbed. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site does not fall within any wildlife area.

Home site 5: The location of the proposed home site currently contains a minimum of significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site falls within a designated wildlife area 1 and is designated to protect valuable and sensitive biological resources.

Home site 6: The location of the proposed home site is currently void of any significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site does not fall within any wildlife area. The home site is in close proximity, to the Hogback, which is designated as wildlife area 1.

Home site 7: The location of the proposed home site is currently contains a minimum of significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site falls within a designated wildlife area 1 and is designated to protect valuable and sensitive biological resources.

Home site 8: The location of the proposed home site is currently void of any significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site is in close proximity to Morgan Lake Recreation area but does not fall within any wildlife area.

Home site 9: Areas of this home site are vegetated with significant riparian vegetation. It may be possible to conduct construction at this home site such that the vegetation will not be disturbed. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site does not fall within any wildlife area.

Home site 10: The location of the proposed home site is currently void of any significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site is in close proximity to Morgan Lake Recreation area but does not fall within any wildlife area.

Home site 11: The location of the proposed home site is currently void of any significant vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this home site is in close proximity to Morgan Lake Recreation area but does not fall within any wildlife area.



**CULTURALLY SIGNIFICANT AREAS**

A site file search was conducted at the Navajo Nation Historic Preservation Department (NHPD) in Window Rock, Arizona to identify recorded sites located within or near the proposed home site areas. Results are presented herein. Additional cultural survey requirements may be required for development on the home sites.

Home site 1: A review of the records indicates that an archeological survey (Report #99-439) has been conducted on an area located southwest of this home site. No significant sites were recorded.

Home site 2: A review of the records indicates that an archeological survey (Report #95-084) has been conducted on an area located south of this home site. No significant sites were recorded.

Home site 3: A review of the records indicates that an archeological survey (Report #99-551) has been conducted on an area located west of this home site. No significant sites were recorded.

Home site 4: A review of the records indicates that an archeological site was recorded within a 0.25 mile radius of this home site (Report #02-089, and NMH-11-21).

Home site 5: A review of the records indicates that an archeological site was recorded within a 0.25 mile radius of this home site (Report #'s 95-171 and NM-H-13-49).

Home site 6: A review of the records indicates that an archeological survey (Report #84-303) has been conducted on an area located south of this home site. The report generated no findings of culturally significant areas.

Home site 7: A review of the records indicates that two archeological sites (NM-H-13-50 and NM-H-13-49) were recorded within the vicinity of this home site.

Home site 8: A review of the records indicates that three recorded archeological surveys (Report #'s NTM-83-456, 96-033, and 93-283) have been performed within the vicinity of this home site.

Home site 9: A review of the records indicates that there are no recorded archeological sites within a 0.25-mile radius of this home site. The community has identified a culturally significant burial site on or near the location of this proposed home site. If this site is developed, it should be carefully planned so as not to disturb the burial site.

Home site 10: A review of the records indicates that there are no recorded archeological sites within a 0.25-mile radius of this home site. A review of the records indicates that one recorded archeological survey (Report # HPD-98-248) has been performed just south of this home site. The community has identified a culturally significant burial site within one mile of the home site.

Home site 11: A review of the records indicates that a recorded archeological site (Report #96-301) is located northwest of this home site. The community has identified a church and a burial area within one mile of this home site.

**TRADITIONALLY SENSITIVE AREAS**

The nearest sacred place is Chimney Rock (Tse'e'ahi [Standing Rock]), located approximately 10 miles northwest.

Home site 1: A review of the records and community input indicate that no traditionally sensitive areas have been identified near this proposed home site.

Home site 2: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The home site is in the vicinity (1-mile west) of The Hogback, which has been identified by the community as a traditionally sensitive area.

Home site 3: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The home site is in the vicinity (1.5-miles east) of The Hogback, which has been identified by the community as a traditionally sensitive area.

Home site 4: No traditionally sensitive areas have been identified near this home site.

Home site 5: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The community has identified one ceremonial site within a mile of this home site.

Home site 6: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site.

Home site 7: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The community has identified one ceremonial site within in one mile of this home site.

Home site 8: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The community has identified no additional traditionally sensitive areas in the vicinity of this home site.

Home site 9: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The community has identified no additional traditionally sensitive areas in the vicinity of this home site.

Home site 10: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The community has identified no additional traditionally sensitive areas in the vicinity of this home site.

Home site 11: A review of the records indicates that no traditionally sensitive areas have been identified near this proposed home site. The home site is in the vicinity (2-miles east) of The Hogback, which has been identified by the community as a traditionally sensitive area.

#### **ENVIRONMENTALLY SENSITIVE AREAS**

A list of Threatened, Endangered, and Sensitive (TES) species potentially occurring within the Navajo Nation was obtained from the Navajo Nation Department of Fish and Wildlife (NNDFWL). The list is presented in **APPENDIX C**. A general evaluation of the individual proposed home sites in regards to environmentally sensitive areas is presented herein.

Home site 1: Proposed home site does not have any environmentally sensitive areas other than the sensitivity to wind erosion. Sensitive biological resources associated with Morgan Lake will not be affected by this proposed home site.

Home site 2: Proposed home site does not have any environmentally sensitive areas other than the sensitivity to erosion. Sensitive biological resources associated with The Hogback will not be affected by this proposed home site.

Home site 3: Proposed home site does not have any environmentally sensitive areas other than the sensitivity to erosion. Sensitive biological resources associated with The Hogback will not be affected by this proposed home site.

Home site 4: Proposed home site does not have any environmentally sensitive areas other than the previously mentioned sensitivity to soil erosion. Sensitive biological resources that may be encountered on this site, but are not likely to occur.

Home site 5: Proposed home site falls within a sensitive biological resources area as delineated by the NNDFWL, containing the best habitat for endangered and rare plant, animal and game species such as Solcroactus mesa verde cactus, Astragalus humillimus and Astragalu monumentalis var. cottamii. Preparation of a biological evaluation for the NNDFWL will be required for development within this home site.

Home site 6: Proposed home site does not have any environmentally sensitive areas other than the previously mentioned sensitivity to erosion. Sensitive biological resources associated with The Hogback will not be affected by this proposed home site.

Home site 7: Proposed home site falls within a sensitive biological resources area as delineated by the NNDFWL, containing the best habitat for endangered and rare plant, animal and game species such as Solrocactus mesa verde cactus, Astragalus humillimus and Astragalus monumentalensis var. cottamii. Preparation of a biological evaluation for the NNDFWL will be required for development within this home site.

Home site 8: Proposed home site does not have any environmentally sensitive areas other than the previously mentioned sensitivity to erosion and soil blowing.

Home site 9: Proposed home site does not have any environmentally sensitive areas.

Home site 10: Proposed home site does not have any environmentally sensitive areas.

Home site 11: Proposed home site does not have any environmentally sensitive areas other than the sensitivity to erosion. Sensitive biological resources associated with The Hogback will not be affected by this proposed home site.



## 15. CONCLUSIONS FOR PROPOSED HOME SITES

The accessibility to each proposed home site is good. All home sites, except home site 10, are located near N36, which is the primary road generally running east and west in the upper northern part of the community. Although home site 10 is located approximately 1.5 miles south of Morgan Lake, it is still accessible via a dirt road.

According to the infrastructure analysis, there are no power lines with the vicinity of three home sites (5, 7 and 10). Two additional home sites (2 and 11) do not have power lines in the immediate vicinity, however, there are existing power lines within 500 feet. Further analysis is needed to determine the feasibility of extending power lines to home site 2 and 11. The remaining 6 home sites have existing power lines within or very near the home sites. The power lines are single phase power lines and extension to serve the new residential homes should pose no problems.

Two proposed home sites (10 and 11) do not have existing water distribution lines nearby or in the general vicinity. No domestic water service poses a potential constraint for these two locations. The other home sites have water distribution lines nearby and service would be possible to the new residential homes.

Septic systems would be the best solution for sewer service to all proposed home sites at this time because the community does not have an existing sewer system.

Natural gas service is not available to the community. The alternatives are propane or electric for heating or other appliances that require natural gas. No problems are anticipated.

Proposed home sites 2, 5, 6, 7, 9, 10 and 11 do not have any telephone land lines nearby. This should not present any problems to the construction of new homes. The home owners can go without this service or they may utilize cellular telephone service.

All of the home sites are located on fairly flat terrain or gently sloping land with slopes of less than 5 percent. No problems are anticipated with the slopes for each home site.

Soil consist primarily of aeolian sand, alluvial sand, Fruitland sandy loam and alluvial terrace material. Hazard of erosion is slight to moderate. Over all, soil conditions are anticipated not to present any problems.

The proposed home site areas are disturbed with very little vegetative ground cover. Home sites 3 and 9 have some significant riparian trees and vegetation that should not be disturbed. A minimum of significant vegetative habitat were found on home sites 5 and 7. Further analysis should be conducted. The analysis for designated wildlife areas revealed that home sites 2, 5, 6, and 7 may fall within the NNDFWL designated wildlife area 1. Further analysis should be conducted.

A review of the records at the NHPD, revealed that home sites 4, 5 and 7 have previously recorded sites nearby. All other home sites have cultural surveys completed nearby or on site. Based on the site file searches, the remaining home sites do not have any previously recorded culturally significant areas.





None of the home sites are located on any known traditional sensitive areas. The nearest recorded sacred place is Chimney Rock located approximately 10 miles to the northwest of the community.

Proposed home sites 5 and 7 fall within the sensitive biological resources area as delineated by NNDFWL. A biological evaluation should be conducted.

The infrastructure potential constraints for the home sites are summarized in **TABLE 13**. Home sites 5, 7, 10 and 11 show potential constraints with water or power. Home site 10 has potential constraints with both water and power.

**TABLE 14** shows home sites 4, 5 and 7 with potential constraints with vegetation, cultural resources and environmentally sensitive areas.

TABLE 13. Infrastructure Potential Constraints

Home Site	Power	Water	Sewer	Natural Gas	Telephone
1					
2					x
3					
4					
5	x				x
6					x
7	x				x
8					
9					x
10	x	x			x
11		x			x

TABLE 14. Land Suitability Potential Constraints

Home Site	Access	Slope	Soil	Veg,	Cult. Res.	Trad. Areas	Envir. Sens.
1							
2							
3							
4					x		
5				x	x		x
6							
7				x	x		x
8							
9							
10							
11							

16. PROPOSED COMMUNITY AND PUBLIC FACILITIES SITES

A site encompassing approximately 30-acre has been identified for community development. The location of the proposed community development site is shown on **FIGURE 17**. Infrastructure and land suitability analyses have been conducted and are presented herein.

INFRASTRUCTURE ANALYSIS:

ELECTRIC

Electric Electric power is presently provided to the community by the Navajo Tribal Utility Authority (NTUA). An existing single-phase power line located just to the west of the proposed home site.

WATER

Water is presently provided to the community by the Navajo Tribal Utility Authority (NTUA). There is an existing water distribution line located on the proposed site.

**SEWER**

There is no existing sewer system within the community at this time. However, the community currently uses underground septic systems. The proposed community development site would have to use a septic system however, a sewer lagoon is proposed with the new development of a multi-purpose building.

**GAS**

There is no natural gas service currently available in the community and there are no immediate plans for future service. The community development facilities have the option of using propane or electric for heating and other appliances requiring natural gas.

**COMMUNICATION**

Telephone service is available throughout the community by Qwest Communications. New service near existing lines are possible and no problems are anticipated. There is an existing telephone land line located within the designated area.

**LAND SUITABILITY ANALYSIS:****ACCESSIBILITY**

Proposed community development site is located less than two miles north of Navajo Route 36 (N36). Access to the community site is via a dirt road off of N36.

**SLOPES AND TOPOGRAPHY**

Proposed community development site is located less than one-half mile north of the San Juan River on gently sloping land, approximately 3 percent slope towards the river. The site elevation is approximately 5,050 feet above mean sea level and it tilts down towards the northwest. No well defined drainages were noted on this site.

**GROUND AND SURFACE WATER**

Proposed community development site is located less than one-half mile south of the San Juan River, a major perennial river in the region. Other surface water available to this site is Morgan Lake located 4 miles to the southeast. Ground water is also available at this location. The area surrounding the site has been mapped by the USGS as an area where wells have the potential to yield at least 75 gallons per minute (Goodman, 1982).

**SOILS INFORMATION**

Soils at this proposed community development site location consist of Walrees fine-loam over sandy mesic. Properties of this soil include poorly drained, medium to moderate fine texture alluvium, moderately slow to 30 inches then very rapid permeability and only a slight hazard to erosion.

**VEGETATION AND WILDLIFE**

The location of the proposed community development site currently has some vegetation which becomes significant habitat to the north as it approaches the San Juan River. Existing vegetation is such that development on this site could easily avoid significant stands of vegetative habitat. According to the preliminary draft map of NNDFWL designated wildlife areas, this site does not fall within any wildlife area.

**CULTURALLY SIGNIFICANT AREAS**

A site file search was conducted at the Navajo Nation Historic Preservation Department (NHPD) in Window Rock, Arizona to identify recorded sites located within or near the proposed community development site area. A review of the records indicates there are no cultural sites within a 0.25-mile radius of this community site but there are some within a mile (Reports #79-181 & 93-547). This assessment of previous cultural resources surveys provides a summary of current information only, and additional survey requirements may be required for development on this home site. The community has identified no additional culturally sensitive areas in the vicinity of this site.

**TRADITIONALLY SENSITIVE AREAS**

The nearest sacred place is Chimney Rock (Tse'e'ahi [Standing Rock]), located approximately 10 miles northwest. No traditionally sensitive areas have been identified near the community development site.

**ENVIRONMENTALLY SENSITIVE AREAS**

A list of Threatened, Endangered, and Sensitive (TES) species potentially occurring within the Navajo Nation was obtained from the Navajo Nation Department of Fish and Wildlife (NNDFWL). The list is presented in Appendix C. A general evaluation of the proposed community sites in regards to environmentally sensitive areas is presented herein. Proposed community development site has a small amount of environmentally sensitive area on the northern most part of the site closest to the River. This portion of the site falls within the San Juan River Riparian Habitat Protection buffer. Sensitive biological resources associated with The Hogback will not be affected by this proposed site.

**17. CONCLUSIONS FOR PROPOSED COMMUNITY AND PUBLIC FACILITIES SITES**

**G**enerally, there are no potential constraints for this site. Existing utilities can be expanded to serve the need of new development within the site.

The gently sloping land with a 3 percent slope is good for development. No problems are anticipated with the slopes. The proposed community development site is disturbed with very little vegetative ground cover. Soil conditions and vegetation are anticipated not to present any problems. The basic site review determined that cultural resources and traditional sensitive areas will not be affected. A biological evaluation should be conducted to determine the effect on the riparian habitat associated with the San Juan River. A cultural resources survey and environmental assessment may also reveal other findings not found in this analysis.

The findings of this analysis indicated that there are no potential constraints associated with infrastructure or land suitability elements. The site is good for the proposed development.









## PART VI IMPLEMENTATION RECOMMENDATIONS

**T**his land use plan shall serve as a guide for actions and decisions on the use of the land in the community of San Juan Chapter. The following sections present recommendations to implement this land use plan.

### 18. GUIDING PRINCIPLES

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**T**he goals and objectives were synthesized into guiding principles, which represent the overall framework for developing, interpreting and implementing the land use plan. These principles shall be carried out with the application of common standards for land use development, infrastructure and resource management, as appropriate or applicable. The principles implement the vision for the community of San Juan Chapter, to sustain and enhance the quality of life and well being of its residents.



#### LAND USE PLANNING

**Guideline 1:** Community participation must be a part of achieving a greater community.

**Intent:**

- Provide clear, understandable information to encourage more community involvement in the planning process.
- Provide opportunities for the community to become involved in planning decisions.
- Ensure diverse values and visions are heard.

**Policies:**

1. Flyers: Use flyers as official notice for meetings and public hearings. Make them informative, easy to read and understand, and use a public notice posting procedure.
2. Radio/Newspaper: Use media to announce meetings and public hearings.
3. Land Use Planning Meetings: CLUP Committee will meet at least once a month to foster strong communication.
4. Chapter Meetings: Make periodic reports at the Chapter meetings about the land use plan.
5. Five Year Review: At 5-year intervals beginning 2001, initiate a comprehensive review and update of the land use plan.

#### HOUSING

**Guideline 2:** Provide housing opportunities that define a strong sense of community unique to the community of San Juan Chapter while recognizing the affordability and quality of homes for current and future residents.

**Intent:**

- Identify locations for new housing withing the community.
  - Identify scattered housing sites that include home site leases of one-acre or more.
- Ensure that all types of housing needs are addressed.

**Policies:**

1. Housing Development: Ensure that new housing developments are planned for small family clusters. Reduce or avoid development of subdivisions. (Goal B, Objectives a and b).



2. Home Sites: Locate housing on at least one acre home sites when possible. (Goal B, Objective c).
3. Architectural Styles: Encourage architectural styles that are attractive and appropriate for the region. (Goal B, Objective d).
4. Energy Efficiency: Promote energy efficiency in new homes, including passive solar techniques. (Goal B, Objective e). Promote energy efficiency in renovations of existing homes. (Goal B, Objective f).
5. Housing Regulations: Avoid siting of additional housing on farming lands. (Goal B, Objective h).
6. Archeological or Burial Sites: Avoid siting housing on archeological or burial sites. (Goal L, Objective b).
7. Preservation: Avoid housing sites in areas designated for preservation by the community.

### **INFRASTRUCTURE**

**Guideline 3:** Improve, maintain, and expand public infrastructure to meet current and future demands of the community while preserving the environment.

**Intent:**

- Meet the infrastructure needs of the community. Infrastructure such as roads, water, electricity, gas, sewer, fire protection systems and phone lines should be provided to housing and commercial sites.
- Ensure that the carrying capacity of the land and infrastructure is not exceeded.
- Coordinate location of new developments with the provision of adequate infrastructure.

**Policies:**

1. Adequate Utility Service: Provide utilities to existing houses. Locate housing, economic or other developments in areas served by existing or planned utilities. (Goal C, Objectives a and b).
2. Local Aquifer: Utilize local aquifer for water. (Goal C, Objective c).
3. Water Treatment Facilities: Determine the feasibility of a water treatment facility. (Goal C, Objective d).
4. Solid Waste Transfer Station: Locate solid waste disposal station in an area that has adequate access and is screened from public view. Adopt a solid waste management plan. (Goal C, Objective e).
5. Existing Roads: Improve or upgrade roads to enhance safety. (Goal M, Objective a and b).
6. Road Names: Develop a plan to name the roads and clearly identify public roads. (Goal M, Objectives a and c).
7. Access: Promote easy access by building bridges over river and irrigation ditches. (Goal M, Objective d).

### **COMMUNITY DEVELOPMENT**

**Guideline 4.** Promote a healthy family community.

**Intent:**

- Locate and design community facilities to ensure the highest quality design and compatibility with nearby developments.
- Ensure that community facilities are located where they are accessible and provide a valuable service to benefit and serve the entire community.

**Policies:**

1. Community Services: Encourage and promote the central locality of community services such as police, post office, fire department, ambulance service, emergency response team, library, new Chapter house, gym and multipurpose. (Goal D, Objective a).

2. Facilities for Youth activities: Promote the establishment of facilities for youth activities such as preschool and 4-H. (Goal 7, Objective b).
3. Cultural Center: Promote and establish a cultural center that will display the arts and crafts of local artisans. (Goal D, Objective c).
4. Community Church: Promote and establish a community church that will best serve the community. (Goal D, Objective d).
5. Elderly: Establish programs and facilities that will best serve the elders such as an elderly care center. (Goal D, Objective e).
6. Health and Wellness: Establish health care services and facilities such as wellness center, urgent care, veteran's center, drug prevention and treatment facilities. Ensure that they are located in accessible locations. (Goal D, Objective f).

### **NATURAL RESOURCES**

**Guideline 5.** Protect and manage natural areas, natural features, and important cultural and scenic resources.

**Intent:**

- To preserve the natural resources and use only what is necessary to the benefit of the community.

**Policies:**

1. Open Space: Preserve open space. (Goal D, Objective a).
2. Eco-tourism: Promote eco-tourism development that highlights the distinctive area and characteristics of the existing surroundings. (Goal D, Objective b).
3. Cultural Needs: Encourage and promote the importance of respecting the cultural needs and wants of the community. (Goal D, Objective c).
4. Existing Natural Resources Plan: Support and respect any existing natural resources plan. (Goal D, Objective d).
5. Cultural/Natural Places: Develop standards and regulations for special places to reserve sites and areas that have designated natural, traditional, cultural and historic features and resources that are important to the community. Ensure new land uses do not have a negative impact on these areas. (Goal D, Objective e and f).

### **COMMUNITY ANIMAL CARE**

**Guideline 6.** Provide animal care needs in a central location.

**Intent:**

- Meet the animal care needs of the community.

**Policies:**

1. Facilities: Preserve open space. (Goal J, Objective a).
2. Animal Control: Develop community-policing program to address stray dogs. (Goal J, Objective b).

### **RANCHING**

**Guideline 7.** Preserve and maintain the integrity of grazing lands.

**Intent:**

- Ensure ranching remains an important part of the community and economy of the community.
- Respect prime grazing areas as vital to the livelihood and way of life for many residents. Locate and design development to minimize impact on grazing lands.

**Policies:**

1. Management Plans: Respect and follow all existing management plans, including grazing leases, etc.. If needed, adopt a land management plan specifically to address grazing.
2. Livestock Auction: Conduct a feasibility study to determine the need for a central livestock auction facility. (Goal G, Objective a).
3. Cattle guards: Installed cattle guards to prevent livestock from entering areas where they are not wanted. (Goal G, Objective b).
4. Fencing: Encourage fencing to control and manage livestock consistent with land capacities. (Goal G, Objective c).
5. Coordination: Encourage committees to work together to ensure that grazing policies are consistent with the land use plan. (Goal G, Objective d).
6. The Land Use Plan: Include the grazing committee as part of the decision making in land use planning. (Goal G, Objective e).

**FARMING**

**Guideline 8.** Preserve farming lands.

**Intent:**

- Ensure farming remains an important part of the community and economy of the Chapter.

**Policies:**

1. Management Plans: All farming areas shall respect and follow all existing management plans, including grazing leases, etc. If needed, the Chapter shall adopt a land management plan specifically to address farming.
2. Facilities: Provide support facilities for farming i.e. green houses, irrigation ditches, farm equipment yard, etc.). (Goal H, Objective b).
3. Plant Management Plan: Develop an invasive plant management plan. (Goal H, Objective c).

**RECREATION**

**Guideline 9.** Provide adequate recreation programs and facilities for play, relaxation and fitness.

**Intent:**

- To identify and provide places for play, relaxation and fitness. These facilities may include both indoor and outdoor facilities. Outdoor facilities may include parks, playgrounds, ball fields, rodeo or equestrian facilities, or golf courses, and may include hiking and biking trails. Indoor facilities may include gymnasiums, fitness centers, or a multi-use recreation Center which may include several recreational elements.

**Policies:**

1. Recreation facilities: Promote the establishment of an indoor recreational center that will support the population distribution. (Goal I, Objective a).
2. Parks and Play Fields: Plan and locate parks and play fields where they will best serve the community. Provide a range of park types, sizes, and uses to accommodate recreational and leisure activities. Adopt common standards for development of parks and fields. (Goal I, Objective b).
3. Amphitheater: Conduct feasibility study to determine the viability of an amphitheater. (Goal I, Objective c).
4. Other Recreation Opportunities: Conduct feasibility studies to determine the viability of recreation opportunities such as swimming pool, race track, and fair grounds. (Goal I, Objective d and e).



5. Morgan Lake Recreation Center: Promote a recreation center. (Goal I, Objective f).
6. Location: Focus on the natural beauty of the area and locate recreational facilities so that they do not have a negative impact upon views or any areas designated as open space in this land use plan.
7. Land Management Plans: All recreation facilities shall respect and address any Land management plans.
8. 100-year Floodplain: Locate only non-structural recreation facilities within the 100-year floodplain of the San Juan river. (Goal E, Objective a).
9. Wetlands: No recreation facilities shall have a negative impact on wetlands. (Goal E, Objective b).

#### **NON-TOURISM ECONOMIC DEVELOPMENT**

**Guideline 10.** Promote economic vitality to serve community needs and provide jobs, revenues and opportunities.

**Intent:**

- To provide opportunities for new businesses to come into the community.
- To provide jobs and create an economic base, and potential revenue, for the community through sales tax or business leases.
- To ensure the availability of necessary usable land to facilitate commercial, industrial, and residential development.
- To let community residents spend money "locally" rather than in communities farther away.

**Policies:**

1. Commercial Center: Recruit new businesses to provide retail and other services, and employment and other opportunities for residents and visitors. Locate commercial center on a major road with good access and at a location where nuisances and activities of the proposed use will not adversely affect adjacent areas. (Goal J, Objective a).
2. Home-based Business Development: Encourage home-based business development. (Goal J, Objective b).
3. Cultural Center: Support the establishment of a cultural center in harmony with the surroundings. Promote sales of rugs, local arts and crafts and wool marketing. (Goal J, Objective c).
4. Gravel Mining: Conduct feasibility study to determine viability of gravel mining. (Goal J, Objective d).
5. Casino: Conduct feasibility study to determine viability of a casino. (Goal J, Objective e).

#### **TOURISM**

**Guideline 11.** Target tourism as it contributes to the economic vitality of the community by providing jobs, revenues and opportunities.

**Intent:**

- To provide opportunities for tourism related businesses to come into the community.
- To provide jobs and create an economic base, and potential revenue, for the community through sales tax or business leases.
- To ensure the availability of necessary usable land to facilitate tourism development.

**Policies:**

1. Natural Beauty: Attract and provide businesses that preserve, respect and care for the natural beauty of the area. (Goal K, Objective a).

2. Visitor's Centers: Create opportunities for new employment and job training opportunities suitable for to the existing and potential skill levels of community residents. Also create opportunities for local artisans to sell their arts and crafts. (Goal K, Objective b).
3. Trails: Encourage targeted development of nature and river walk trails. (Goal K, Objective c).
4. Tourist activities/attractions: Explore tourist activities using the river as a focal point such as rafting, boating, guided and unguided fishing, and lookout tower. (Goal I, Objective k).
5. Lodging: Identify space for lodging such as bed and breakfast, camping, hotels, cabins, RV parks. Create opportunities for new employment and job training opportunities suitable for to the existing and potential skill levels of community residents. (Goal K, Objective e and g).

### **CULTURAL AND TRADITIONAL RESOURCES**

**Guideline 12.** Protect and manage cultural resources and traditional sensitive areas

**Intent:**

- Preserve and protect cultural resources and traditional sensitive and only use what is necessary to the benefit of the community.

**Policies:**

1. Cultural Resources: Protect cultural resources such as Anasazi ruins and burial sites in compliance with relevant laws. (Goal L, Objectives a and b).
2. Traditional Sensitive Areas: Develop standards and regulations for special places to reserve sites and areas that have designated natural, traditional and historic features that are important to the community. Ensure new land uses do not have a negative impact on these areas. (Goal L, Objective c and d).
3. Water: Provide water to community ceremonial site. (Goal L, Objective e).
4. Places: Provide a place for shoe game, peace-making hogan and sweat lodge. (Goal L, Objective f, g and h).

### **PUBLIC SAFETY**

**Guideline 13.** Provide adequate public safety programs through good planning.

**Intent:**

- Identify and provide programs/plans for public safety and environmental protection.

**Policies:**

1. Fire Station: Identify area for a fire station. (Goal N, Objective a).
2. Police Station: Support the establishment of a police station. (Goal N, Objective b).
3. Policing Program: Create a community-policing program or plans to address alcohol, drugs and stray dogs. (Goal N, Objective b).

### **INTRUSIONS**

**Guideline 14.** Minimize the impact of negative intrusions in the community.

**Intent:**

- Identify and minimize the impact of major power lines, railroad, and mining.

**Policies:**

1. Housing: Encourage the siting of houses away from major powerlines. (Goal O, Objective a).
2. Management Plan: Develop standards and regulations to eliminate or minimize negative impact of expansions to existing power plants, oil and gas, and mines. (Goal O, Objective b).Objective j)

19. DEVELOPMENT OF RESIDENTIAL HOUSING

The sites for proposed residential housing have been identified in Part V. The infrastructure analysis revealed potential constraints for home sites 5, 7, 10 and 11 with water or power. Home site 10 has potential constraints with both water and power. The land suitability analysis revealed potential constraints for home sites 4, 5 and 7 with vegetation, cultural resources and environmentally sensitive areas. Since the only potential constraint with home site 4 is cultural resources, the recommendation is to have an archeologist review the recorded site information and do a field visit. If the recorded site can be avoided and there are no other cultural resources issues, this proposed home site can be developed provided other surveys, evaluations and assessments are acceptable.

Proposed home sites 5, 6 and 10 have multiple potential constraints. The recommendation for these proposed home sites is to seek alternate sites that reduce or eliminate the constraints. Proposed home site 11 is a good site but does not have water. Therefore the recommendation is to explore alternatives for water service such as a cistern system.

Proposed home sites 1, 2, 3, 6, 8 and 9 do not show any potential constraints. The recommendation is to pursue housing development on the sites. **TABLE 15** presents the necessary actions to pursue development of these sites.

The potential home-owners may choose any developer to build their house. A list of a few tribally designated home providers within the Navajo Nation is presented in **TABLE 16**. The listing was obtained from Navajo Housing Authority and may not be a total comprehensive list. Individuals may approach any one of these home providers, but to increase the feasibility a collective group proposal is recommended.

To grow in the direction of the community vision, the community should establish a housing design. The form, character and details of the housing design should be compatible with existing conditions, respectful of the physical and cultural context.



TABLE 15. Recommended Action Plan for Development of Residential Housing

ACTION	TIME FRAME			RESPONSIBILITY
	0-1 Years	1-2 Years	2-3+ Years	
Obtain home site lease	X	X	X	Potential Homeowner
Select housing provider	X	X	X	Potential Homeowner
Identify a collective group ready for houses	X	X	X	Potential Homeowner and Chapter
Prepare and submit proposal	X	X	X	Chapter housing
Establish housing design		X		Land Use Committee and Chapter Officials
Cultural Resources Survey		X	X	Housing Provider
Biological Evaluation		X	X	Housing Provider
Environmental Assessment		X	X	Housing Provider

TABLE 16. List of Housing Providers

HOUSING PROVIDER	ADDRESS	TELEPHONE
Navajo Housing Authority	P.O. Box 1579 Window Rock, AZ 86515	(928) 871-2600
Navajo Housing Services	P.O. Box 2396 Window Rock, AZ 86515	(928) 871-6493
Fort Defiance Housing Corporation	P.O. Box 579 Window Rock, AZ 86515	(928) 729-5210
Department of Navajo Veterans Affairs	P.O. Box 430 Window Rock, AZ 86515	(928) 871-6413
Navajo Partnership for Housing	P.O. Box 1370 St. Michaels, AZ 86511	(928) 810-3112
Twilight Dawn, Inc.	P.O. Box 4097 Window Rock, AZ 86515	(505) 371-5595



20. DEVELOPMENT OF COMMUNITY AND PUBLIC FACILITIES

The site for proposed community and public facilities has been identified in Part V. The location is a good location and has the general infrastructure near or within the site needed for development. The site does not negatively impact any land suitability issues. The recommendation is to pursue development at this location. **TABLE 17** provides the actions needed to develop this site.

TABLE 17. Recommended Action Plan for Development of Community & Public Facilities				
ACTION	TIME FRAME			RESPONSIBILITY
	0-1 Years	1-2 Years	2-3+ Years	
Withdraw Site	X			Chapter
Survey Site	X			Chapter/Contractor
Cultural Resource Survey		X		Chapter/Contractor
Biological Evaluation		X		Chapter/Contractor
Environmental Assessment		X		Chapter/Contractor

21. PLAN AMENDMENTS AND UPDATES

The land use plan constitutes a land use policy statement that was created based upon public input, needs of the community, existing conditions, man-made and natural constraints and environmentally sensitive lands. Over a period of time, any of these variables are subject to change. Consequently, the land use plan must periodically be reviewed and amended if it is to remain effective. However, amendments to the land use plan should never be allowed to occur in a haphazard manner. Amendments to the land use plan should only occur after careful review of the request, finding of facts in support of the amendment, and holding public hearing(s). The process that guided the adoption of the land use plan shall be followed for all amendments, including public hearings etc. All decisions should be based on the adopted visions, guiding principles, goals and objectives. The term amendment applies to both text and map revisions.

CONSIDERATIONS

The information that should be required before making a decision on an amendment should include, but is not limited to:

- What is the request and who will be impacted (positively and negatively) by the amendment?
- Is the request supported by the recommendations of the land use plan when all visions, goals, objectives, and other policies are evaluated?
- Insure that the amendment is not detrimental to the community of San Juan Chapter as a whole.
- Amendments to the land use plan may be initiated or requested by the San Juan Chapter Officials, or requested by a community member on a regularly-scheduled basis. However, the CLUP Committee and the Chapter Officials may, by an affirmative vote, direct the initiation of a plan amendment process at any time if an opportunity for the community of San Juan Chapter appears to exist.
- Conduct a yearly monitoring review of the land use plan to evaluate:
  - If the land use plan is adequately addressing growth in the community.
  - If policies are being implemented, and development is occurring as directed in the land use elements.



PROCESS FOR AMENDING THE LAND USE PLAN

Requests for amendments should be in writing to the attention of the San Juan Chapter and the CLUP Committee. Each request shall be evaluated by the CLUP Committee and presented to the community of San Juan Chapter at an advertised public hearing. The CLUP Committee will hear comments from the public on the issue, and then make a recommendation for or against approval of the amendment to the San Juan Chapter Officials. The amendment request shall be officially adopted or rejected at a duly called San Juan Chapter meeting.

If the amendment is adopted, a formal amendment shall be added to plan and included with the land use plan document.

To ensure and preserve the integrity of the land use plan that was adopted through significant public input and participation, it is extremely important that this process be followed for each amendment to the land use plan.



22. NAVAJO NATION LGA CERTIFICATION

A primary goal of the San Juan Chapter is to acquire LGA certification and a prerequisite for LGA certification is the development of a comprehensive land use plan. As much as the scope of this project would allow, this land use plan was developed in accordance with the provisions of Section 2004 B. Comprehensive Plan of the Act. **TABLE 18** lists the actions required to fulfill this goal.

The first action item is the adoption of the land use plan by the Chapter. This land use plan must be presented at a duly called San Juan Chapter meeting and adopted via a supporting resolution. This land use plan may then be submitted to the Transportation and Community Development Committee (TCDC) of the Navajo Nation Council. The San Juan Chapter is then required to form a land use review committee, and develop processes by which this committee will review land use proposals and make plan updates and amendments.

TABLE 18. Recommended Action Plan for LGA Certification

ACTION	TIMEFRAME			RESPONSIBILITY
	0-1 Years	1-2 Years	2-3+ Years	
Adopt Land Use Plan	X			Chapter Officials
Submit the Land Use Plan to TCDC	X			Chapter Officials
Establish Process to Review Land Use Proposals	X			Chapter Officials and Land Use Committee
Establish Process to Amend the Land Use Plan		X		Land Use Committee
Update of Land Use Plan (@ 5 Years)			X	Land Use Committee and Chapter Officials

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# APPENDIXES

A - NAHASDA TITLE II SECTION 2002

B - LGA SECTION 2004

C - NAVAJO NATION THREATENED, ENDANGERED  
AND SENSITIVE SPECIES







APPENDIX C - NAVAJO NATION THREATENED, ENDANGERED AND  
AND SENSITIVE SPECIES 

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