Naakaii Tó

MEXICAN WATER CHAPTER

LAND USE PLAN

Arizona • Utah

2015-2020

GREAT SEAL OF THE NAVAJO NATION

IN DEDICATION

With honor and respect this Land Use Plan is dedicated in memory of Mr. George Tohtsoni, for his contribution, devotion, support and hardwork in the Chapter's initial land use plan and to the founding leaders of the Mexican Water community - their leadership, vision, and commitment to the progess and well-being of the community is a legacy that continues to thrive today.

GEORGE TOHTSONI

BIG JOHN BEGAY

JAMES TSOSIE

LITTLE POUCH

LOUIS PATTERSON

WILLIAM BILL SCOTT

EILEEN LAMEMAN

ACKNOWLEDGEMENTS

The Mexican Water Chapter extends their appreciation to everyone for their participateion and contribution to this land use plan. Special thanks to the elders and youth for their continued support and vision for a sustainable community. Our gratitude to all of our leaders and administrative staff for their guidance, support, and commitment to local governance, well-balanced growth, and sustainable development.

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GENERAL LIMITING CONDITIONS

Every reasonable effort has been made to ensure that the data contained in this report are accurate as of the date of this plan however, factors exist that are outside the control of Mexican Water Chapter and JJ Clacs & Company and that may affect the statements, estimates and/or projections noted herein. No responsibility is assumed for inaccuracies in reporting by or any other data source used in preparing or presenting this plan.

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PREFACE

Mexican Water Chapter (hereafter interchangeably referred to as the Chapter) recognizes that to build a self-sustaining community, perseverance and a solid land use plan are needed. With that in mind, in August 2007, the chapter set in motion the development of a land use plan compliant with the Local Governance Act of 1998 (LGA). By December 2007, the Chapter developed a Community-Based Land Use Plan compliant with the Local Governance Act of 1998 (LGA). On December 20, 2007, the Navajo Nation Council Transportation and Community Development Committee certified the 2007 Community-Based Land Use Plan (TCDC-37-07) **(APPENDIX A)**.

Thereafter, the Chapter utilized the 2007 Land Use Plan as a guide for future land development. The Chapter used the document to support its development of phase I of a multi-purpose complex on a newly withdrawn 50-acre tract. The success of the Land Use Plan is a tribute to the community's commitment and their participation throughout the process.

According to the LGA, the Land Use Plan should be updated every five years. Thus, the Chapter began the Land Use Plan update process in early 2013. This revised and updated Land Use Plan (2015-2020) supersedes previous land use plans. The 2015-2020 Land Use Plan was approved by the Mexican Water membership through Chapter Resolution tMWCOCT08-001 (a copy of the resolution is inserted at the beginning of this document).

The purpose of this Land Use Plan is to develop a plan in which Mexican Water Chapter can take control of its own destiny and plan for their futures. The Land Use Plan satisfies the land use certification process under the LGA, as amended, and moves the Chapter closer to managing and making decisions regarding local matters pertaining to land use and thereafter administering the land use process. The Land Use Plan is a living document and is subject to change as the needs, desires and conditions change in the Chapter.

Much of the Land Use Plan flows from the voices of the community's members and its chapter leadership including the elected officials and the members of the planning commission. With a unique cultural perspective, the plan incorporates the traditions and customs of the past and articulates the community's overarching goals and objectives to guide and coordinate land uses. Essentially, it sets a direction for future development and economic growth.

1

VISION & GOALS

A beautiful community that is deeply rooted in:

Niítsíhakees - thinking
Nahat'á - planning
'Iiná -living
Sii hasin – fulfillment

Land is sacred to our well-being, happiness, health, spiritual and harmonious living.

1.1 VISIONING PROCESS

The community visioning process began by identifying the values of the community members, what is important to them. Everyone had their own vision of what Mexican Water Chapter should be like in the future. Through public meetings, work sessions and a public hearing, community members were able to express their significant beliefs and desires about the long-term future of the community. Although the individual visions were different, they shared common qualities. At the public hearing, the community members accepted a shared vision reflecting the hopes, dreams and aspirations of the people and for the community and land.

1.2 GUIDING PRINCIPLES

The Land Use Plan shall:

1. be forward looking: immediate to long-term.
2. be developed through a process allowing extensive community participation.
3. have widespread community support.

4. be based upon and reflect community values, beliefs and expectations.
5. be used to guide community decisions.
6. The Land Use Plan shall be a community document that is amended from time to time reflecting community changes.
7. be carried out within applicable common standards for land use development and adherence to all applicable laws, mandates, rules and regulations.
8. have planning meetings open to anyone who wishes to attend.
9. be developed by listening to and considering issues or concerns raised by community members and the general public.
10. shall be faciliated by a Community Involvement and Participation Plan.

1.3 GOALS AND OBJECTIVES

ONGOING INITIATIVES

1. GOVERNANCE

Goal One: Build strong governance and fiscal management

1.1. Practice and carry-out the full intent of LGA Certification
   a. Ensure annual budget allocation considers fixed assets
   b. Educate 'Window Rock' on real costs
   c. Develop and implement strategic planning

1.2. Develop and adopt sound ordinances
   a. Animal Control
   b. Livestock Regulations
   c. Building Standards
   d. No-Burn Control
   e. Trash Control
   f. Road Access Management (e.g. cattle guards, fencing, etc.)
   g. Hiking Permits

2. WATER RESOURCES

Goal Two: Protect, take care of and wisely use our water

2.1. Refine water hauling plan
   a. Determine distribution and storage for domestic/livestock/agricultural use

2.2. Develop a drought contingency plan
   a. Provide for all occurrences of water shortage particularly as it effects

earthen dams, livestock, and farming

2.3. Engage in water rights settlement negotiations
   a. Be involved in negotiations, consultations, discussions
   b. Prepare plan for uses and preservation of allotted water

3. SOLID WASTE

GOAL 3: Develop a solid waste management plan

3.1. Determine system for waste disposal - e.g. transfer station

3.2. Explore cluster family dump sites; sewer dumping; include waste cell

3.3. Determine number of septic systems in community

3.4. Develop plan for sewer plan/waste management plan

3.5. Begin a recycling program

4. TECHNOLOGY & COMMUNICATION

GOAL 4: Provide latest in technology

4.1. Designate corridors and develop appropriate plans

4.2. Seek funding for land lines/ROW, include fiber optics & other lines

4.3. Develop business plan

4.4. Explore operating a public radio station

5. VETERANS

GOAL 5: Honor and support our veterans

5.1. Develop a housing plan for veterans

5.2. Oversee veterans funding

5.3. Set in motion a plan for the veterans memorial park including design and seeking funds

5.4. Acquire vehicle for veterans – compare purchase/lease; plan for O & M

6. TRANSPORTATION

GOAL 6: Provide an orderly and safe transportation system

6.1. Put up welcome signs at entrances (design, text, location, cost)

6.2. Build new bridge at old chapter house location

6.3. Re-establish public transportation service (e.g. Navajo Transit System)

6.4. Identify community roads to include in NDOT plan

7. UTILITIES

GOAL 7: Plan for and provide reliable and cost-effective utilities

7.1. Establish system to distribute wood burning permits

7.2. Upgrade utilities (locate substation and future lines; write grants)

7.3. Examine feasibility of a water treatment plant

8. WELLNESS

GOAL 8: Provide health and wellness facilities and services

8.1. Plan, develop and open wellness center at old chapter house

9. ENVIRONMENT

GOAL 9: Promote a clean, safe and healthful environment

9.1. Review master plan and develop landscaping plan

9.2. Explore transplanting trees from river

10. RECREATION

GOAL 10: Provide recreation facilities, activities, and programs

10.1. Develop recreational plans targeting elderly, youth, diabetes, and obesity

10.2. Create job position to oversee recreation program

10.3. Identify potential areas for recreation

11. ECONOMIC DEVELOPMENT

GOAL 11: Nurture an environment favorable and in balance with cultural and natural resources for a strong, successful economic development

11.1. Designate and map economic development land use areas

11.2. Develop administrative and management plan

SHORT-TERM INITIATIVES • 1 TO 3 YEAR TIME PERIOD

1. LIVESTOCK

GOAL 1: Encourage sustainable livestock development and management

1.1 Develop horse roundup plan using community resources

1.2 Purchase hay & resale: establish program or grow own hay

1.3 Conduct community outreach – training, communication (youth inclusion)

1.4 Implement range management plans – develop a range inventory plan

2. FARMING

GOAL 2: Support farming practices and activities

2.1 Identify plants that can grow in the community

2.2 Utilize USDA resources

2.3 Establish a farmers market

2.4 Withdraw areas for farm land/plots

3. CONSERVATION & PRESERVATION

GOAL 3: Protect and respect our land

3.1 Encourage & support grazing permittees' development of 'plan of operation'

3.2 Review proposed Navajo Nation Grazing/Leasing Act

3.3 Establish a preservation plan for significant plants, sites, herbs & sand dunes

4. EDUCATION & TRAINING

GOAL 4: Provide sufficient resources to support education & training

4.1 Build strong working relationships with area schools

4.2 Explore/provide training opportunities at chapter (e.g. volunteer basis)

4.3 Conduct 'how to' classes (e.g. write resumes, job interviews)

4.4 Engage youth to build 'family tree' database

4.5 Teach and inform about Domestic Violence

5. EMPLOYMENT

GOAL 5: Promote innovative approaches to job creation

5.1 Create jobs utilizing local skills and talents (e.g. sewing, farming)

6. YOUTH INVOLVEMENT

GOAL 6: Promote and attract youth involvement

6.1 Develop a traditional/native food preparation class/program

7. PUBLIC SAFETY & LAW ENFORCEMENT

GOAL 7: Provide a safe and prepared community

7.1 Learn and understand applicable Navajo Nation, state & federal laws & jurisdiction

7.2 Initiate community-wide public education program – possibly developing a reference guide

8. TRADITIONAL RESOURCES

GOAL 8: Respect and preserve traditionally sensitive areas

8.1 Interpret significance of sites

8.2 Gather & provide listing of 'traditional' practitioners within community

8.3 Identify & establish mission site leases for ceremonial sites

8.4 Build listing of seasonal ceremonies including schedule and names of practitioners

8.5 Designate Poncho House as a tribal/national site or park

LONG-TERM INITIATIVES • MORE THAN 3 YEARS

1. LIVESTOCK

GOAL 1: Encourage sustainable livestock development and management

1.1 Develop horse roundup plan using community resource

6. YOUTH INVOLVEMENT

GOAL 6
Promote and attract youth involvement

6.1 Develop a traditional/native food preparation class/program

7. PUBLIC SAFETY & LAW ENFORCEMENT

GOAL 7
Provide a safe and prepared community

7.1 Learn and understand applicable Navajo Nation, state & federal laws & jurisdiction

7.2 Initiate community-wide public education program – possibly developing a reference guide

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2

CHAPTER PROFILE

2.1 LOCATION

Mexican Water Chapter, one of 110 chapters on the Navajo Nation, is a traditional Navajo community strategically located along the northern border of the Navajo Nation **(Map 1)**. The major highways servicing the Four Corners region, highways 160 and 191, cross the Chapter. Highway 160 runs east and west in the lower southern portion of the chapter while highway 191 runs north and south.

2.2 BRIEF CHAPTER HISTORY

For many centuries, Navajos lived peacefully all over the four corners area where they interacted and traded ideas with Pueblo and Plains Indian groups. It was not until the Spanish arrived and later U.S. soldiers and citizens that Navajo lives and traditions were threatened. Skirmishes, slave raids, and massacres occurred with increasing frequency. New alliances upset the balance of power among the native groups causing the Navajo to move out of Dinetah to avoid the hostilities. They moved into areas such as Bear's Ear in Utah, Canyon de Chelly, Mount Taylor, Navajo Mountain, and as far west as the Grand Canyon.

Most Navajos who remained in these areas were forced to relocate at Fort Sumner as part of the U.S. Government's "Long Walk" where unbearable conditions further decimated the population. Although many of the original families from the Mexican Water area such as Lee Jim's were able to avoid the initial round up by hiding in the nearby canyons of Monument Valley, some family members were tricked into going to Fort Defiance, Arizona, for food where they were captured and then sent to Fort Sumner.

Years after the Long Walk when the Navajo people returned to their homeland, they discovered and fed many hungry Utes who were roaming the Mexican Water area. Family clans reestablished their homes in their area and eventually more clans moved into the community.

One prominent tribal member in the Mexican Water area, Lester White, lived at "Dog Wash" and was an interpreter at the time of the Spanish battles. Another, Man Aitsid7 Bits07 (Silversmith Grandson) or Etsitty, was one of the first to move back to the community after the Long Walk. He was also known as "Policeman." Etsitty originally established three homes and moved around the community all the way up to Bluff. Another resident, "Hole in the Rock Woman" resided in the area near Bluff along the San Juan River. She used to recall a Mormon family passing thru the area and asking to stay the night and never leaving.

According to community member, Ben Yanito, his grandfather was named "Policeman" and he lived at a place call Bį́į' h11l9n9, but they moved around in the region. His grandfather talked about how they had an understanding among them regarding land stewardship. He was told to take care of one area and his siblings took other areas. During the time of grazing designations, his grandmother was issued a grazing permit for the area they were taking care of. To this day, Mr. Yanito respects and honors that understanding and continues to take care of the land.

Boundary Butte, one of about 300 diatremes in the Four Corners is 543 feet high. The name of this feature has nothing to do with its proximity to Four Corners of the state boundaries; it marked the northeastern corner of the original Navajo Reservation of 1868 **(Map 2)**. The Navajo name for it translates as "Rabbit Ears." This name must have been applied by someone viewing it from the west (http://fourcornerssw.com/mexwater.html accessed September 29, 2007).

After the Long Walk, the United States Government's Indian Policy determined the administration of the reservation. Appointed federal individuals (Indian Agents) essentially ruled the reservation, sometimes relying on the counsel of traditional Navajo methods of government. The current chapter system was established and recognized by the federal government in 1927 (http://en.wikipedia.org/wiki/Navajo_Nation accessed September 30, 2007). **Table 1** shows the history of events pertaining to the Navajo Chapter system since 1927.

TABLE 1. HISTORY OF NAVAJO CHAPTER SYSTEM	
YEAR	**EVENT**
1927	John Hunt, Superintendent of Leupp Agency, introduced the first chapter system
1980	The Navajo Tribal Council adopted a plan of operation for chapters
1990	Navajo Nation established Commission on Navajo Government Development to develop alternative forms of chapter government
1998	The Navajo Commission on Navajo Government Development submits the Local Governance Act to the Navajo Nation Council
1998	After approval by the Navajo Nation Council, the Local Governance Act is signed into law by Navajo Nation President Thomas Atcitty
1999	The Local Governance Support Centers are established under Resolution GSCAU-75-99 within Navajo Nation Division of Community Development.
2001	The Transportation and Community Development Committee of Navajo Nation Council established the Regional Council of Local Governance to oversee LGSC
2003	The Local Governance Support Centers are transferred from the central government to the Navajo Nation chapters
2009 - 2013	Proposed amendments to Title 26 Navajo Nation Local Governance Act.

Source: Navajo Nation Community Development – LGSC Brochure

2.3 CHAPTER NAME

The community eventually embraced the name Mexican Water based on oral histories that were passed down from generation to generation. Three main stories regarding the origins of the name differ slightly. One such story holds that a Mexican came to the area along with a mule; the Mexican is said to have dug a well behind the present location of the chapter house and church and stayed there.

Another account chronicles the life a Mexican who was passing through the area and stopping for a rest and a drink of water under a shady tree before continuing on his way. In this narrative, the Mexican was involved in local battles with Spanish explorers of earlier time. In the third accounting of events of the times, the story speaks to how Mexicans traveled from Bluff to Chinle on burros. As they traveled, the burros needed water so the Mexicans watered their burrow at a pool of water located near what is now the Baptist Church. The local Navajos referred to these travelers as Nakai to hi ye nili (Mexican's take out water). These three rich stores provide some insight as to the origins of this community and its name.

Regardless of the originals of its name, the Navajo community began to flourish again as members reestablished themselves in this "Mexican water" area. In particular, three traders, "Bear Rolled Up," "Tail Squashed," and later Don Reeves, moved in and ran a trading post. In addition, Lester White was an interpreter, and Lee Robert James was one of the first Council Delegates to represent the area. Today, the community cherishes its past and is still very traditional.

2.4 CHAPTER LEADERSHIP

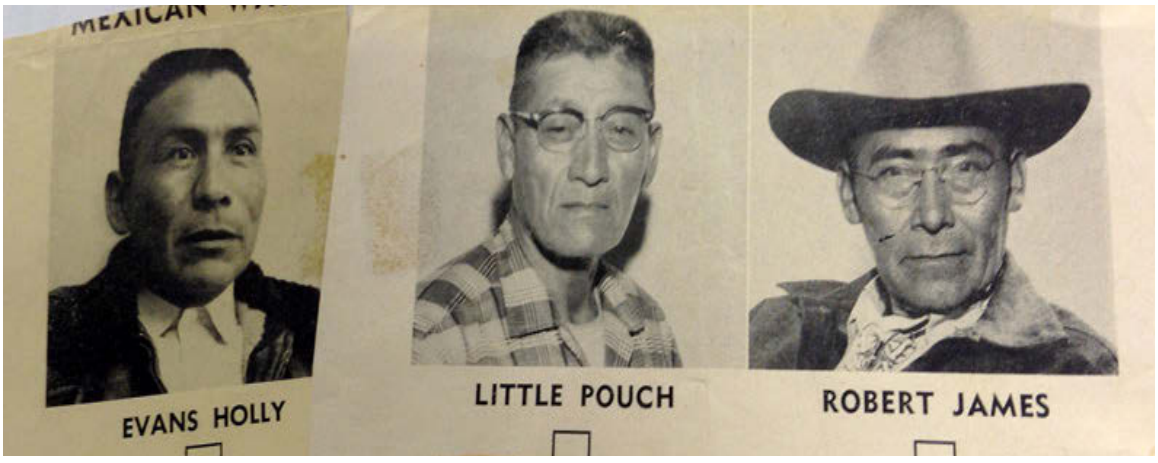
"Leaders were not voted in, they were appointed based on their speaking skills and character" states Ben Yanito. Outstanding leadership has been the norm for Mexican Water. "I was only seven years old," recalled Yanito, "when my grandfather was a police officer and a U.S. Marshall and many people feared him. He was among the early leaders also serving as a council delegate and grazing official." His name was "Shiny Police", "Policeman" or "Police" and he traveled to meetings on horse named "Short Tail". Policeman is in one of the early photos of the Navajo Nation Council. In the photo shown here, Shiny Police is wearing his U.S. Marshall badge. He used the stone building for his U.S. Marshall work; the building was also used as a shelter for the Range Riders.

Yanito also said "our leaders would gather people and stand outside the old trading post to conduct community meetings".

In 1955, Mexican Water Chapter was officially formed and its first officials were elected. Since that time, the Chapter has had terms with officials serving as President, Vice-President, Secretary/ Treasurer, and Council Delegate while the grazing representative began in 1963.

Community members say Evans Holly, Robert James and Little Pouch served in that order, contrary to the election office's record **(TABLE 2)**. The community members stand by their version. The current council delegate is Kenneth Maryboy.

TABLE 3 lists the chapter officials according to the election office. The current chapter official are include Jerry Tsosie as President, David L. John as Vice-President, Mary Ann Woody as Secretary/Treasurer



2.5 GOVERNANCE

The Navajo Tribal Council certified the Mexican Water Chapter on August 15, 1955 pursuant to CJ- 20-55. The earliest chapter meetings were held under trees next to the original Mexican Water Trading Post, which was directly west of the old Chapter house. During the winter months, chapter meetings were held in the Trading Post Warehouse or a stone hogan, northwest of the Chapter house that was also used for lodging.

Within a year of its chapter certification, the newly chosen chapter officials chose a site directly east of the old Trading Post near a water well as the location for its chapter facility. Construction ran from May through November, 1956, and was done by local community members: Hugh Poyer, Chiscilly Benally; Saggboy Bellison; Charley Sagg; Robert James; Wallace Tsosie; Leonard Hernandez; Dirty Bedoni; Frank Lameman; Chester Betsuie; Keith Francis; Council Delegate Dorsey Bellison; Jess White; Grover Bellison; Tom Poyer; and John Lameman. Other individuals present included Samuel Bellison, Dillion Platero, Anna Wauneka, Raymond Nakai, Paul Jones, Norma Collins, and James Etsitty. Colors were posted during the dedication of the Chapter house on Thanksgiving holiday. The Navajo Nation Band was present during the dedication, which was held with a large feast prepared by local community members: Susie Cly; Evelyn White; Bessie Sagg; Edith Lameman; Eileen Lameman; Bertha James; Lena Poyer; and Martha Naljahih.

TABLE 2. CHAPTER LEADERSHIP NAVAJO NATION COUNCIL DELEGATE

YEAR	COUNCIL DELEGATE
1955	Robert James
1959	Little Pouch
1963	Evans Hally
1967	Evans Hally
1971	Evans Hally
1975	Jonas Mustache
1979	Jonas Mustache
1983	Jonas Mustache
1987	Dean Paul, Sr.
1992	David L. John
1996	Mark Maryboy
2000	Kenneth Maryboy Mark Maryboy Robert B.Whitehorse
2002	Kenneth Maryboy Mark Maryboy
2006	Davis Filfred Kenneth Maryboy
2010	Kenneth Maryboy

Source: Navajo Election Office

By 2008, the Chapter community membership voted to relocate the chapter facility to higher ground and more central location. Land users consent and chapter approval were obtained that year; withdrawing 50 acres along U.S. Highway 191 in vicinity of mileposts two and three between Bluff, Utah, and Mexican Water, Arizona. The chapter administrator and the Community Land-Use Planning & Zoning Commission (CLUPZC) took the leadership role in planning and constructing the project. The new Mexican Water Chapter Multipurpose building complex 1 was completed in 2010. The facility includes the new chapter administration offices, town hall meeting rooms, activity room, kitchen, and Veterans center.

LOCAL GOVERNANCE ACT (LGA) CERTIFIED CHAPTER

Local Governance Act Title 26 Navajo Nation Code allows LGA Certified Chapters to implement certain authorities to become self-sufficient and self-sustaining in their community. Under the LGA, chapters are required to adopt and operate a five management system. Mexican Water's Five Management System was LGA Certified on February 7, 2012. Previously, the Navajo Nation certified the Mexican Water Chapter Community-Based Land Use Plan in 2007 and, in 2013, recertified this updated Land Use Plan.

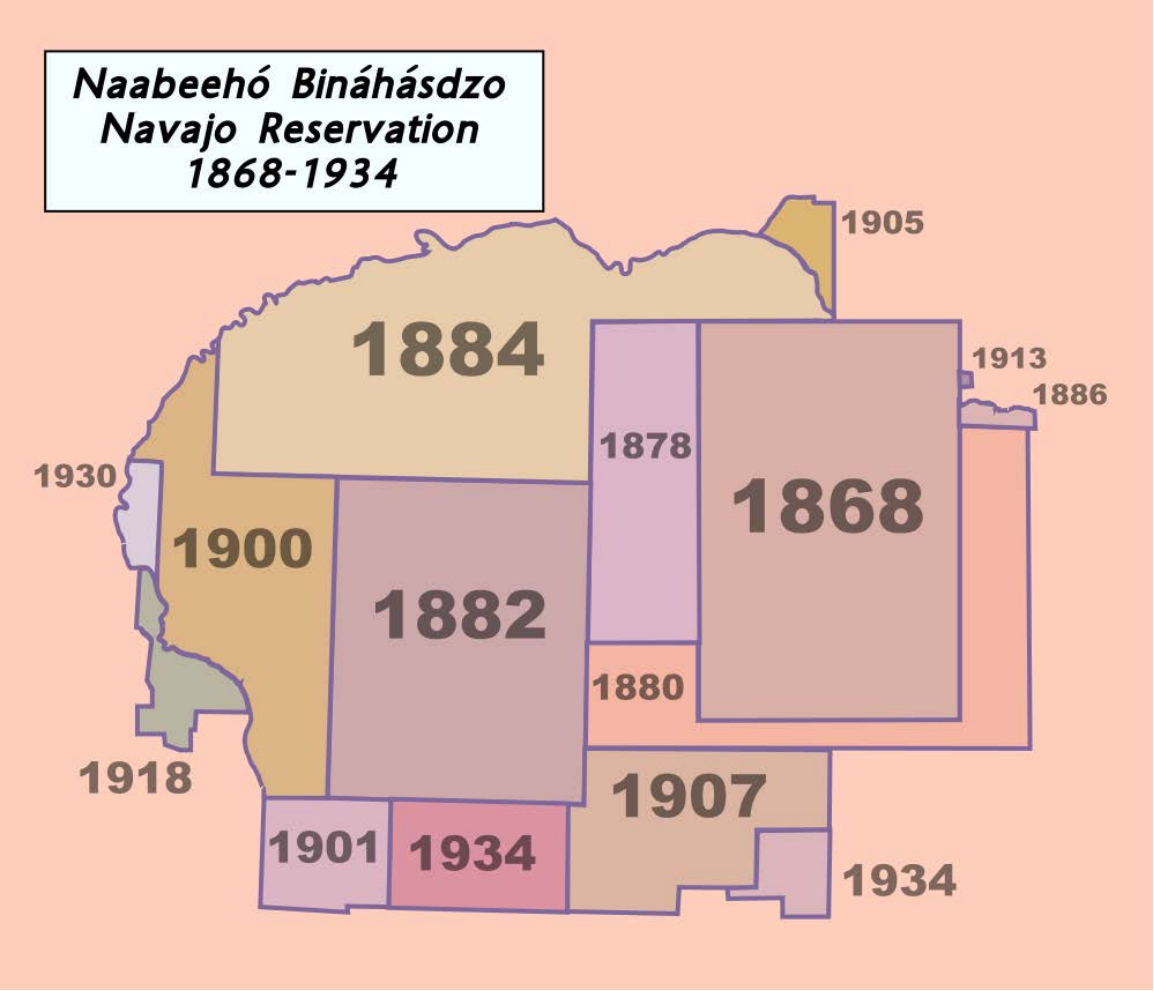
TABLE 3. CHAPTER LEADERSHIP – OFFICIALS

YEAR	PRESIDENT	VICE-PRESIDENT	SECRETARY TREASURER	GRAZING REPRESENTATIVE
1955	Chris E. Begay	Saggboy Bellison	Lawrence Big	-
1959	Robert James	Charley Saggboy	John Lamemen	-
1963	Robert James	Charley Saggboy	William Bill Scott	Whiskey Boy
1967	Robert James	Charley Saggboy	Roselyn Jim	Whiskey Boy
1971	Robert James	Charley Saggboy	Roselyn Jim	Whiskey Boy
1975	Louis Patterson	Tom Poyer	Thomas Poyer	Edward Bigben
1979	Louis Patterson	James Tsosie	Margaret Buck	Jess White
1983	James Naljahih	Dan A. Jones	Annie Gillwood	Kee L. White
1987	David Yanito	David L. John	Annie Gillwood	Dan A. Jones
1992	Marlin Saggboy	Francis Haskan, Sr.	Martha Nahkai James Tsosie	Luke G. Sagg
1996	Kenneth Maryboy Curtis Yanito	Esther Askan	Carmelita L. Sagg	Jerry Tsosie
2000	Amelia Begay	Alvin Tohtsoni	Carmelita L. Sagg	Virginia Black Jerry Tsosie
2004	Jerry Tsosie	Annie L. Gillwood	Cassandra A. James	Alvin Tohtsoni
2008	Jerry Tsosie	David L. John	Cassandra Beletso	Alvin Tohtsoni
2012	Jerry Tsosie	David L. John	Mary Ann Woody	Curtis D. Yanito

Source: Navajo Election Office & Community Members

MAP 1. LOCATION OF MEXICAN WATER

MAP 2. ORIGINAL NAVAJO RESERVATION OF 1868



Source: en.wikipedia.org/wiki/Navajo_Nation (1/01/14)

3

GEOGRAPHIC SCOPE

3.1 PLANNING AREA

During planning meetings and public work sessions, the Mexican Water community members identified the planning area as the land on which they live and practice their traditional life ways such as farming and grazing livestock. It is the area where community members reside and identify themselves with Mexican Water Chapter. As such, the Mexican Water planning area does not correspond with Chapter areas defined by Navajo Land Department or the Bureau of Indian Affairs (BIA) as shown in **Map 3**.

The San Juan River forms the northern edge of the planning area. The eastern edge of the planning area generally follows Navajo Route 5089 and follows the top of the mesas and ridges as it meets the San Juan River. The Southern edge lies south of Highway 160. It follows a fence south of Hummingbird Spring and ties back into the Chinle Wash and crosses over to the west of Chinle Wash. The western edge generally follows the ridge west of the Chinle Wash.

3.2 STATES AND COUNTIES

Located along the northern perimeter of the Navajo Nation, Mexican Water Chapter extends into two states; Arizona and Utah. Located in the northeastern part of Arizona and southeastern part of Utah, the planning area spans the Arizona-Utah state line. The northern portion of the planning area lies within San Juan County, Utah while the southern portion lies within Apache County, Arizona.

3.3 NEIGHBORING COMMUNITIES

Five chapters are adjacent to Mexican Water. These include Red Mesa to the east, Sweetwater and Rock Point to the south, and Dennehotso and Kayenta chapters to the west. The town of Bluff is located to the north across the San Juan River.

3.4 GRAZING DISTRICTS

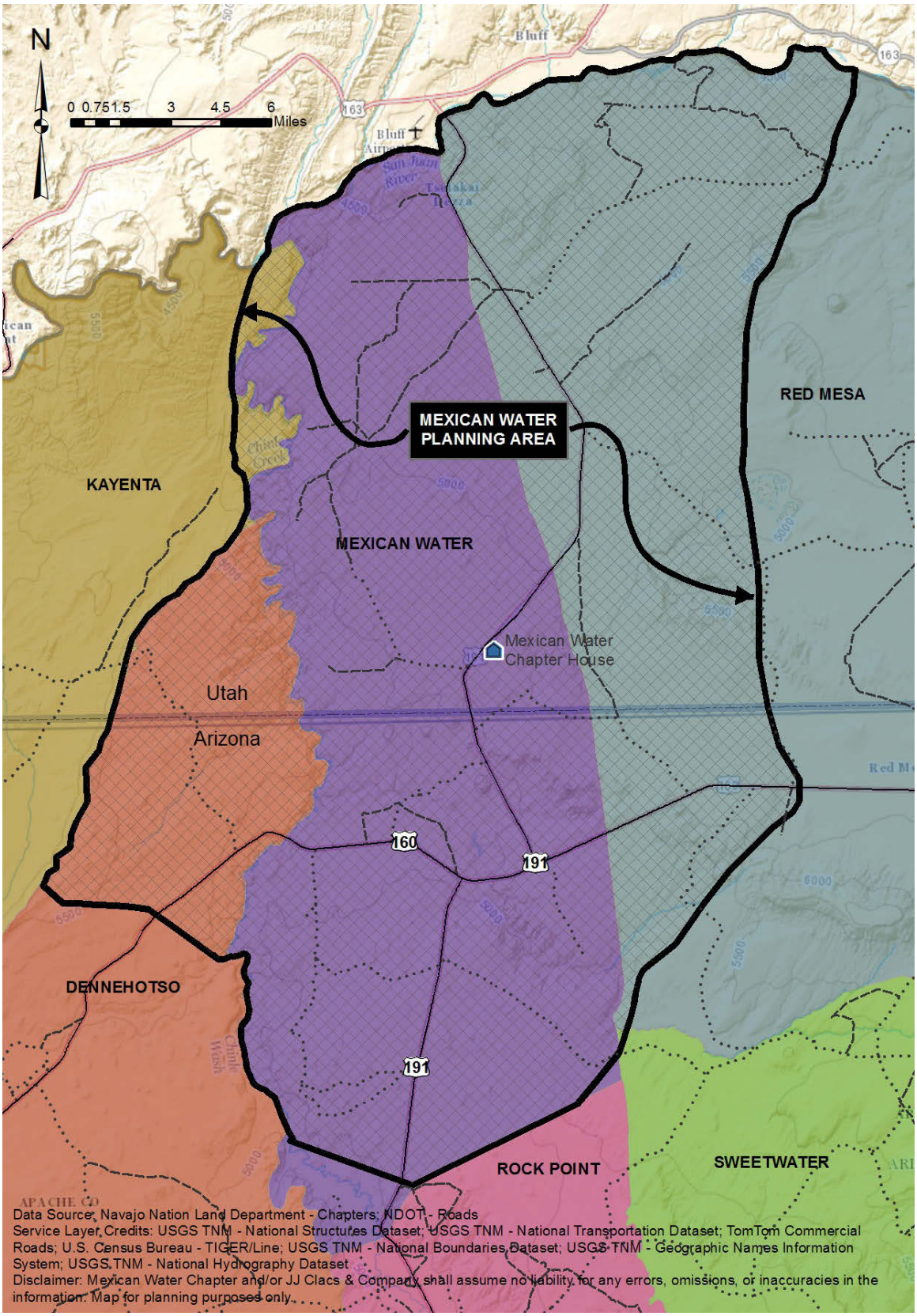
Generations of herding and grazing on the Navajo Nation led the federal government to form grazing districts over 70 years ago. The Bureau of Land Management (BLM) and the BIA developed Navajo Nation grazing districts in 1935. They based the districts on soil and range inventories, which they used to determine animal unit capacities. As these agencies performed their studies, they also kept track of their research areas with what they called grazing district lines. These grazing lines have never been surveyed; they are based on natural topography such as mountain ranges and washes.

Once created, the BIA grouped three individual grazing districts into the Shiprock Agency: 9, 12 and 13. The Mexican Water Chapter is mostly within Grazing District 9 **(Map 4)**. A small portion on the western edge of the planning area extends into Grazing District 8, which is held in the Western Agency.

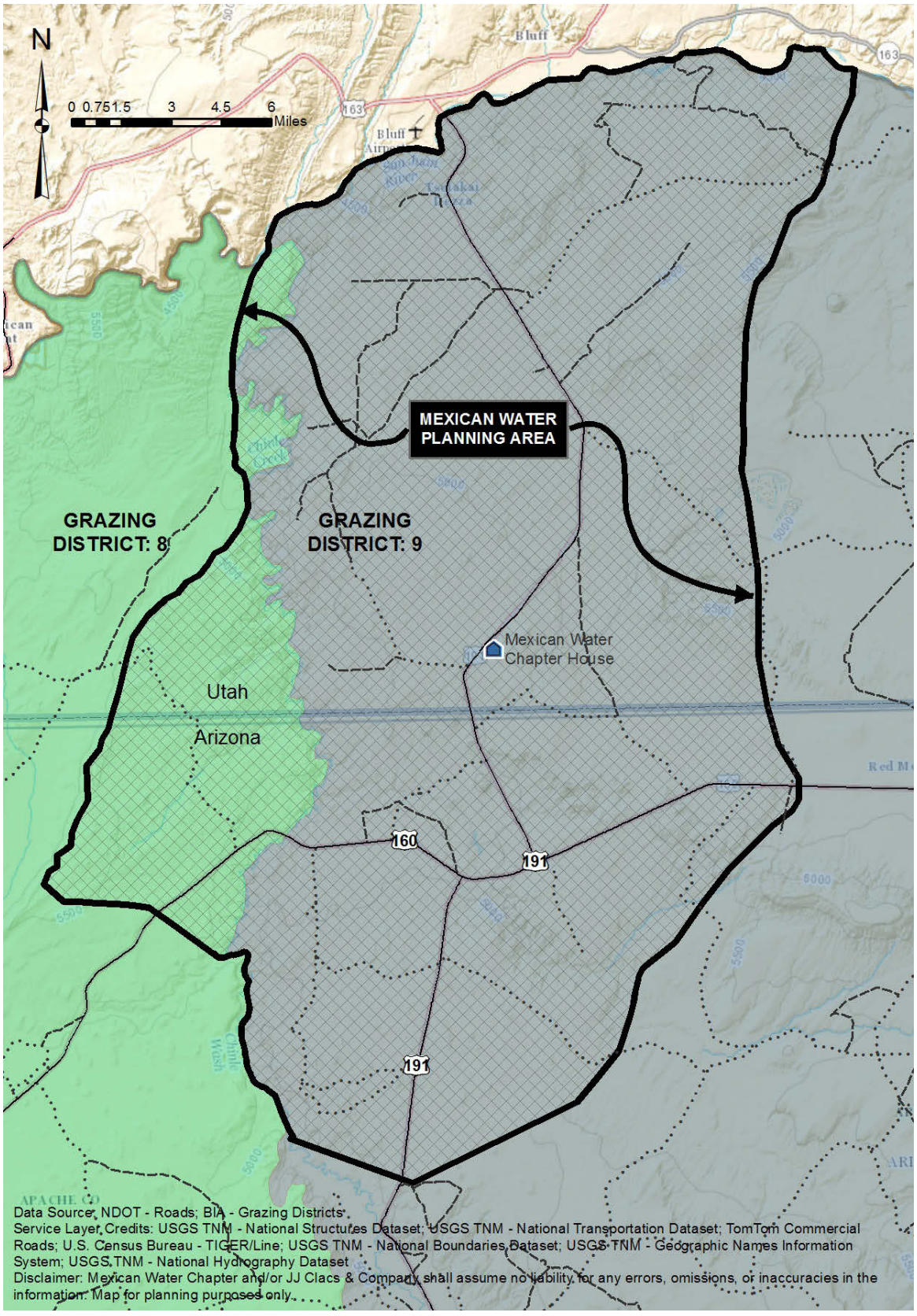
3.5 LAND STATUS

The vast majority of the Chapter's planning area is located on Navajo Tribal Trust Land as shown in **Map 5**. There are two narrow strips along the San Juan River that are withdrawn as Native American and Navajo Indian Power Sites.

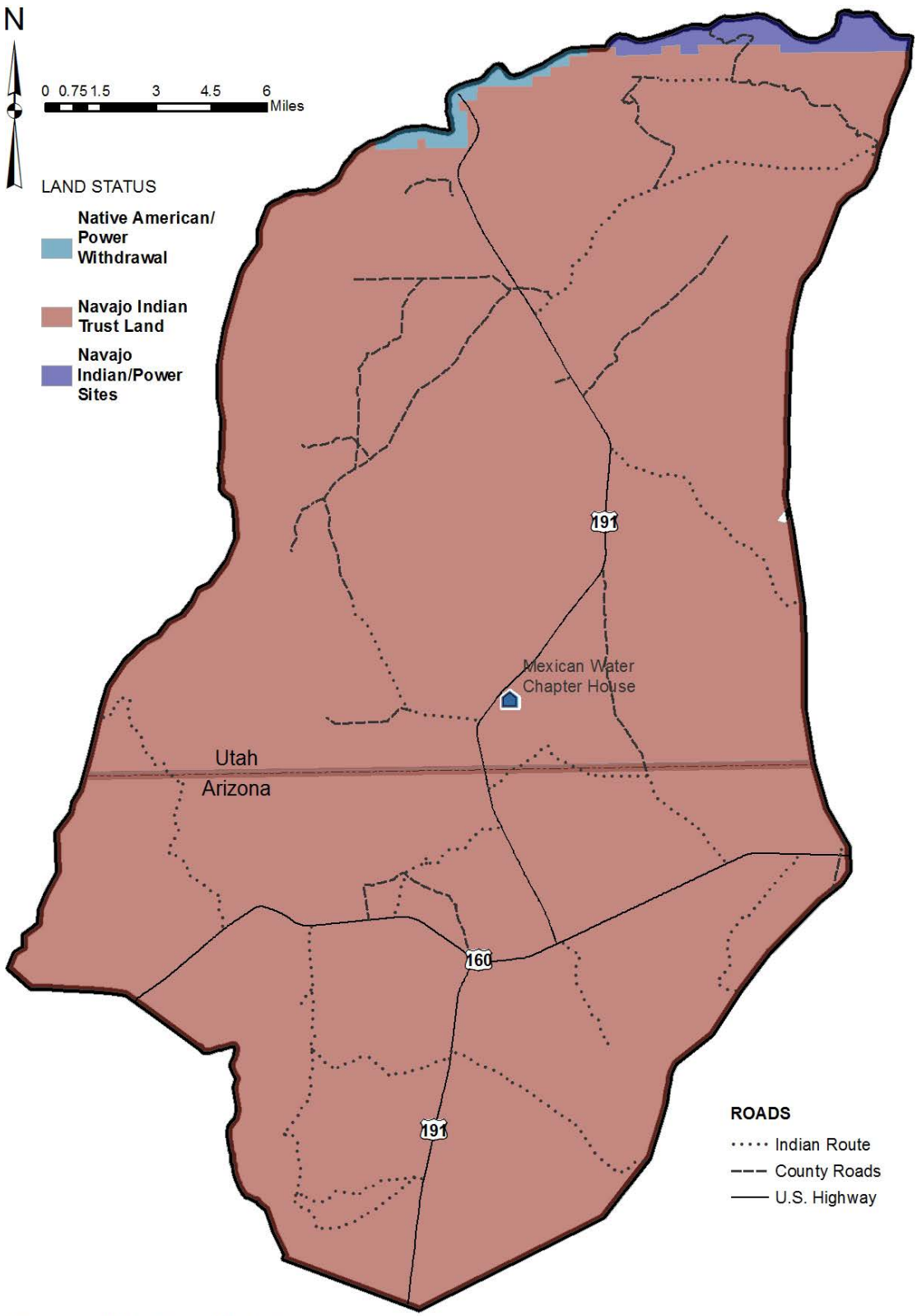
MAP 3. PLANNING AREA



MAP 4. GRAZING DISTRICTS



MAP 5. LAND STATUS



Data Source: NDOT - Roads; BIA - Grazing Districts
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

4

NATURAL CONDITIONS

4.1 TOPOGRAPHY

The local landscape consists of low, broad mesas, high plateaus and wide valleys with gently rolling desert grasslands, sand dunes, and hills (H. Sandoval 2002) **(MAP 6)**.

Within Utah, the Chapter is situated in portions of the following United States Geological Survey (USGS) 7.5' quadrangles: Bluff; Recapture Pocket; Mexican Hat; San Juan Hill; White Mexican Water; Hogan Mesa; Moses Rock; Boundary Butte; and Gray Spot Rock. In Arizona, the quadrangles include: Garnet Ridge; Mexican Water; Walker Creek Reservoir; Toh Atin Mesa West; Rock Point; and Hogansaani Spring.

4.2 GEOLOGY

Describing the geology of the planning area is not straight forward. The map symbols presented in **TABLE 4** and **MAP 7** for Arizona and Utah are not consistent. Consequently, information is described separately for the Utah and Arizona portions of the planning area. The planning area's Arizona section holds four major geological entities. These include the Glen Canyon Group, the Morrison Formation, the San Rafael Group, and Quaternary Surficial deposits, undivided. The Arizona Geological Survey (http://data.azgs.az.gov/geologic-map-of-arizona/#) describes these as:

> **Quaternary Surficial deposits, undivided**
> Unconsolidated to strongly consolidated alluvial and eolian deposits. This unit includes: coarse, poorly sorted alluvial fan and terrace deposits on middle and upper piedmonts and along large drainages; sand, silt and clay on alluvial plains and playas; and wind-blown sand deposits.

Morrison Formation (Late Jurassic, about 145-160 Ma)
Commonly cliff-forming, cross-bedded sandstone lenses alternating with slope-forming siltstone, mudstone and shale. Colors are highly variable, and include greenish gray, reddish brown, pink, white, and purple. Sands were deposited by braided streams with finer sediment representing overbank or lacustrine deposits.

San Rafael Group (Late to Middle Jurassic, about 160-180 Ma)
Commonly cross-bedded, ledge-forming sandstone and slope-forming siltstone. Rock typically has a striped red and white aspect. The Carmel Formation and Entrada Sandstone are prominent members of this group.

Glen Canyon Group (Early Jurassic, about 180-210 Ma).
Conspicuous red, cross-bedded Wingate Sandstone and the conspicuously cross-bedded, eolian, red to buff Navajo Sandstone form prominent cliffs in northern Arizona. These two sandstone units are separated by variably colored siltstone, silty sandstone, and sandstone of the Kayenta and Moenave Formations.

TABLE 4. GEOLOGIC FORMATIONS

STATE	GEOLOGIC FORMATION
AZ	Jgc – Glen Canyon Group
AZ	Jm – Morrison Formation
AZ	Js – San Rafael Group
AZ	Q – Quaternary Surficial deposits, undivided
UT	P1 - Cedar Mesa, Diamond Creek, Arcturus and other Fms
UT	Tr2 - Chinle, Ankareh Fms
UT	K1 - Dakota, Cedar Mountain, Kelvin and other Fms
UT	Jg - Glen Canyon Group (Navajo, Kayenta, Wingate, Moenave Fms)
UT	Tr1 - Moenkopi, Dinwoody, Woodside, Thaynes and other Fms
UT	P - Morgan, Round Valley, Honaker Trail, Paradox, Ely and other Fms
UT	J2 - Morrison Formation
UT	PP - Oquirrh Group, Wells, Weber Ely, Callville and other Fms
UT	J1 - Summerville, entrada, Carmel, Arapien, Twin Creek and other Fms
UT	QT - High-level alluvial deposits
UT	TI - Intrusive rock - Tertiary
UT	Qa -Surficial alluvium and colluvium
UT	Qe -Surficial eolian deposits
UT	Qao - Surficial older alluvium and Colluvium

Source: Hintze et al 2000

Surficial alluvium, colluvium, and eolian deposits characterize the Utah portion; however, the Glen Canyon Group noted above also covers a large area along the western side in the units Utah section. The Morrison Formation also presents itself in Utah. Formations that are unique to the Utah side are the Cedar Mesa/ Diamond Creek Arc, the Chinle Ankareh Formations, Dakota and Cedar Mountain, Moenkopi Dinwoody Woodside, Morgan Round Valley, Oquirrh Group, Wells, Weber, Summerville Entrada Carmel, and various intrusive tertiary rocks.

"The Moenkopi Formation consists of shale, siltstone, sandstone and limestone, of inter-layered shallow marine, tideland and mudflat origin.

The geological age of the planning unit's deposits are extensive (Hintze et al 2000) **(FIGURE 1)**. The Moenkopi and the Glen Canyon Group, formed during the Triassic Period 248 to 206 million years ago. Barnes (2000:41) describes the Moenkopi Formation:

Deposits are predominantly red and brown, with layers of gray limestone toward the western part of the region.

When exposed to weathering, the harder layers of the formation erode into strangely convoluted walls, columns and figures, while the softer shales form gentle slopes ledged by thin harder layers.

Geologists separate this formation into several different members in various areas of canyon country, but such distinctions have little meaning to nonprofessionals.

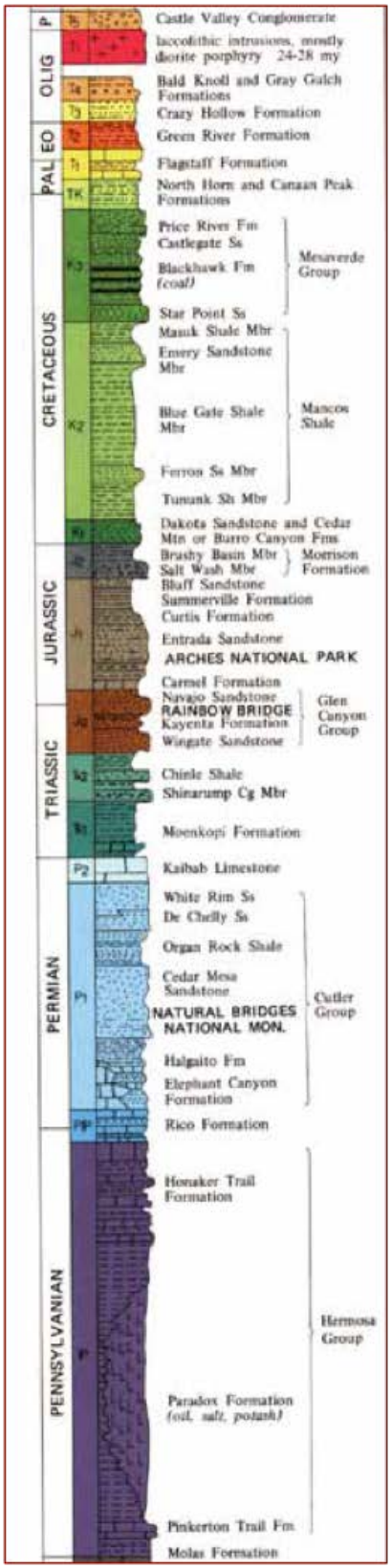
The whole formation is eight hundred feet thick at its maximum in most places, but exceeds two thousand feet thick in some sunken areas adjacent to salt valleys and in some areas to the west of the canyon country region.

The Moenkopi Formation is exposed throughout canyon country, with huge areas of the reddish rock along the flanks of the ancient Monument Uplift, in the San Rafael Swell and to the west of the Waterpocket Fold. Utah 24 goes through one beautiful area between the visitor center in Capital Reef National Park and Torrey to the west. The red slopes above the White Rim off-road vehicle trail in Canyonlands National Park are Moenkopi, as are the red, sloping hills in lower Castle and Professor valleys along Utah 128, upriver of Moab."

The Glen Canyon Group consists of the Kayenta Formation, Navajo Sandstone, Wingate Sandstone, and the Carmel Formation, which is transitional to the Jurassic Period. Other major formations that date to the Jurassic Period are the Morrison, Summerville, and the Entrada Sandstone date to 206 to 144 million years ago or the Jurassic Period. Barnes (2007:47–53) describes these as:

"The Summerville formation is interlayered sandstone, siltstone, mudstone, shale and gypsum, of a coastal-marine mudflat and tidal basin origin. This formation is predominantly red or red-brown in color, with some light tan or greenish layers, and is up to 330 feet thick. The lower part of the formation interlayers into the intruding Curtis Formation and Entrada Moab tongue, but the upper formation occurs throughout canyon country. It formed in the tidal basins and mudflats of the retreating Curtis Sea.

FIGURE 1. GEOLOGICAL AGE



The Morrison Formation consists of four members. The two main members together covered the eastern half of Utah, including virtually all of canyon country, plus all of Colorado and Wyoming, major parts of Montana, Nebraska, New Mexico and the Dakotas, and bits of Arizona, Texas, Oklahoma and Kansas.

The immense freshwater lake and stream region that deposited the Morrison Formation was ideal habitat for the many dinosaur species that dominated the land at that time. Fossilized dinosaur bones are fairly common in Morrison deposits. There are outstanding examples of petrified bone accumulations at Dinosaur National Monument and at the Cleveland Lloyd Dinosaur Quarry south of Price.

Entrada Sandstone consists of three distinct tongues or members. These are the Entrada/Dewey Bridge member from marginal marine mudflats, the Entrada/Slickrock member consisting of sandstone and siltstone from desert dune and marine tidalflats, and the Entrada/Moab tongue, which consists of white dune-sand from coastal seas."

The earliest rock structure laid was in the Permian, which is divided into three groups and primarily consists of the Cutler group. Unlike the later formations, the Cutler group is a heterogeneous conglomerate. As a whole, the formation is dark red and purple with some ranging from gray to green. The material is poorly sorted and ranges in size from sand size to boulders as large as 25 feet (Shults 1984 in Condon 1997) Rock in the Cutler group are from nearly Proterozoic rocks originally part of debris flow and braided stream deposits.

4.3 SOILS

USDA, Natural Resources Conservation Service (2005; 2006) indicate that the soils throughout the planning unit mainly consist of loamy fine sand with Badlands, sandstone outcrops, and various associations **(MAP 8)**. Three separate soil surveys cover the planning area: AZ-711 covers the western part of the planning area in Arizona **(TABLE 5)**. NM717 covers the eastern portion of Arizona and UT-643 covers the Utah portion **(TABLE 6)**.

Soil descriptions from the soil surveys for the planning area are presented in **APPENDIX B**. Soil descriptions include composition setting and characheristics for a soil type.

Additional tables indicating the severity of individual soil limitations are provided in **APPENDIX C** for Dwellings and Small Commercial Buildings in the three soil survey areas. The ratings range from 0.01 (the point at which the soil feature is not a limitation) to 1.00 (the soil feature has the greatest negative impact on the use). The information is not site specific and does not eliminate the need for onsite soil investigation by experienced experts.

TABLE 5. SOIL DESCRIPTIONS FROM AZ-711

SYMBOL	ARIZONA (AZ-711)
14	Gotho-Aneth family complex, 1 to 10 percent slopes
40	Riverwash-Sheppard complex, 0 to 24 percent slopes
45	Rock outcrop-Needle-Lithic Torriorthents complex, 1 to 25 percent slopes
52	Sheppard-Needle-Rock outcrop complex, 2 to 20 percent slopes
58	Typic Haplocambids-Sheppard-Needle complex, 0 to 10 percent slopes

TABLE 6. SOIL DESCRIPTIONS FROM NM-717 AND UT-643

SYMBOL	ARIZONA (NM-717)	SYMBOL	UTAH (UT-643)
501	Escavada-Riverwash complex, 0 to 1% slopes	AmB	Aneth loamy fine sand, 1 to 8% slopes
502	Sogzie loamy line sand, 1 to 5% slopes	AnA	Aneth loamjr fine sand, moderately afkafi, 0 to 3% slopes
505	Recapture-Shorthair-Aneth complex, 1 to 8% slopes	AsA	Aneth sandy clay loam, 0 to 3% slopes
506	Blackston-Grazane association, 3 to 50% slopes	AV	Aquic Ustifluvents-Typic Fluvaquents association, gently sloping
507	Sheppard loamy fine sand, 2 to 8% slopes, hummocky	BA	Badland
508	Shalet-Rock outcrop complex, 8 to 45% slopes	BD	Badland-Typic Torrifluvents association, steep
509	Trail loamy fine sand, 1 to 3% slopes	DeE	Deleco loamy fine sand, 12 to 55% slopes
510	Aneth loamy fine sand, 1 to 3% slopes	GtA	Gotho soils, 0 to 3% slopes
511	Redlands loamy fine sand, 1 to 3% slopes	LAG	Lithic Torriorthents-Typic Torriorthents-Rock outcrop association, steep
512	Gotho fine sandy loam, Oto 2% slopes	MbD	Moenkopie sandy loam, 3 to 8% slopes
513	Sogzie-Aneth association, 2 to 8% slopes	McF	Moenkopie-Rock outcrop complex, 8 to 25% slopes
514	Aneth loamy fine sand, 2 to 8% slopes, hummocky	MoB	Mota loamy fine sand, 1 to 8% slopes
516	Kaito-Claysprings complex, 30 to 65% slopes	NnD	Neskahi fine sandy loam, 2 to 6% slopes
517	Moffat loamy fine sand, 1 to 12% slopes	PY	Playas
518	Tohatin-Sheppard loamy fine sands, 5 to 35% slopes	RaE	Raplee very fine sandy loam, 2 to 12% slopes
519	Shumbegay loamy fine sand, 0 to 8% slopes	RO	Rock outcrop
520	Rock outcrop-Needle complex, 2 to 20% slopes	RRG	Rock outcrop, sandstone-Lithic Torriorthents, association, steep
521	Sandbench-Sheppard fine sands, 1 to 8% slopes	ShD	Sheppard fine sand, hummocky
522	Pennell loamy fine sand, 1 to 6% slopes	ShE	Sheppard fine sand, rolling
523	Tyende-Aneth-Shumbegay loamy fine sands, 1 to 25% slopes	SME	Sheppard-Rock outcrop association, hummocky
524	Uzaneva clay loam, 0 to 2% slopes	W	Water

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. The soil limitations tables show the degree and kind of soil limitations that affect dwellings and small commercial buildings. Information in these tables are intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil. (USDA Natural Resources Conservation Service)

4.4 GROUNDWATER

The Chapter is located in the San Juan River Basin where water-bearing rocks consist primarily of sandstone, limestone and other conglomerates. The Navajo, Coconino, Dakota, and Alluvial aquifers underlie the San Juan River Basin. The 103 wells in the Chapter's planning unit draw water from eight geologic formations held within these four hydrological systems, which are listed in **Table 7** and described below, beginning with the shallowest.

TABLE 7. AQUIFERS LOCATED WITHIN THE PLANNING AREA

GEOLOGIC FORMATION	AQUIFER
Alluvium	Alluvium aquifer
Recapture	D-aquifer
Bluff	D-aquifer
Entrada	N/D-aquifer
Navajo	N-aquifer
Lukachukai	N-aquifer
2Moenkopi	(C-aquifer
Chelly	C-aquifer

ALLUVIAL AQUIFERS

Alluvial aquifers are generally characterized by high transmissivities and storage coefficients. Alluvial fills occur along existing rivers and streams where water is actively moving and depositing sand and gravel. The occurrence of alluvial aquifers in the basin is minimal with water-bearing depths of less than 200 feet in most areas. The largest and most developed alluvial aquifers are in Spanish Valley, Castle Valley and flood plains of the San Juan River near Bluff http://water.utah.gov/planning/SWP/seastcol/swp_sc19.pdf accessed September 30, 2007). Alluvial water quality is poor, and yield to wells is generally small except where significant gravel exists. The concentrations of dissolved solids make the water mainly suitable for livestock.

THE DAKOTA AQUIFER (D-AQUIFER SYSTEM)

The Dakota aquifer sits above the Navajo aquifer. The system includes the Entrada Sandstone, Summerville Formation, and the Cow Springs Sandstone members of the Morrison Formation and the Dakota Sandstone. The Entrada Sandstone and Summerville Formation both consist of a sandstone and silty sandstone facies. In both cases, the silty facies is well cemented. The Cow Springs Sandstone is well sorted, fine-grained quartz that is also firmly cemented. These deposits are extensive, encompassing the southern half and western portion of the region. The sandstone tongues are quite extensive and interfinger with members of the Morrison Formation.

The Morrison Formation is the uppermost Jurassic unit in the region, and is comprised of four members. These are from oldest to youngest: 1) the Salt Wash Member, which consists of fine to coarse-grained lenticular sandstone beds and mudstone; 2) the Recapture member, which

consists of friable fine to medium–grained sandstone interstratified with shaly mudstone; 3) the Westwater Canyon Member, which consists of fine to coarse-grained sandstone and minor shaly mudstone; and 4) the Brushy Basin Member, which consists of shale interbedded with some mudstone and fine to medium-grained sandstone.

THE NAVAJO AQUIFER (N-AQUIFER)

The N-aquifer consists of consolidated water bearing rocks associated with Jurassic age formations of the Glen Canyon Group: the ingate, Kayenta, Navajo Carmel, and Entrada Formations. The N-aquifer generally ranges from 750-1,000 feet in thickness with the top of the aquifer averaging 550 feet below land surface. The aquifer is recharged along the flanks of the Abajo Mountains, Sleeping Ute Mountain, and the Carrizo Mountains. The water moves downgradient from these recharge areas and discharges into the San Juan River(Spangle et.al. 1996).

The quality of the water within this system is excellent. The Lukachukai member of the Wingate Sandstone, the Moenave Formation, the Kayenta Formation and the Navajo Sandstone comprise what is referred to as the N-aquifer system. The Lukachukai Member consists of a fine to very fine-grained quartz sandstone that is homogeneous throughout the region. The Moenave Formation consists of two sandstone members that include Dinosaur Canyon and the Springdale Members. These consist of coarse to very fine-grained quartz sandstone with a large percentage of silt and firm calcareous cement.

The Kayenta Formation consists of a sandstone facies and a silt facies of which the form is bonded with calcareous cement. The Navajo Sandstone is composed of medium to fine-grained quartz sandstone and is boded with weak calcareous cement. The sandstone contains many lenticular beds of cherty limestone. Because of their homogenous lithologies and loose cementation, the Navajo Sandstone and Lukachukai Member of the Wingate Sandstone are the primary water producing units in the N-aquifer system.

THE COCONINO SANDSTONE (C-AQUIFER SYSTEM)

The C-aquifer system yields water of good chemical quality except southwest of Leupp and in the northern part of the Black Mesa basin where excessive amounts of dissolved solids could render it unfit for use. The C-aquifer includes the Coconino Sandstone, the De Chelly Sandstone, the Moenkopi Formation and the Shinarump Member of the Chinle Formation.

The Coconino Sandstone is of very fine to medium-grained well sorted quartz grains. The grains are coarse near the southern extend of the unit along the Mogollon Rim and grade into a finer grain size to the north. The De Chelly Sandstone is a thick-bedded fine to medium grained sandstone and hydraulically connected with the Coconino and the Shinarump Member of the Chinle Formation. The Chinle and Moenkopi Formations consist primarily of mudstone and siltstone beds. The Chinle Formation and the De Chelly and Coconino Sandstones are the primary sources of ground water. The other members of Chinle Formation and the Moenkopi Formations are too fine grained and act as aquicludes. The C-aquifer system thins rapidly to the north and pinches out along the Utah-Arizona border.

The Cretaceous Dakota Formation is comprised of three lithologic types deposited under fluvial, lagoonal and shallow marine conditions. The lower fluvial member consists of well-cemented, medium to fine-grained quartz sandstone with a basal conglomerate in some places. The middle member consists of carbonaceous flat bedded mudstone and siltstones, coal and interbedded sandstone lenses. The upper shallow marine sandstone member differs somewhat in lithology from the lower because it has a greater amount of very fine sand and silt and in several areas forms alternating sandstone ledges and intercalated shaly beds.

The water quality is marginal to unsuitable for drinking due to sulfate and dissolved solids concentrations exceeding U.S. Public Health Service's recommended drinking water limits.

4.5 SURFACE WATER

The planning area is in the San Juan River Watershed, which takes in major portions of Arizona, Colorado, New Mexico, and Utah. Within this larger system, three smaller feed into the San Juan River and provide water to the Chapter's community **(MAP 10)**. The upper eastern third in Utah along Highways 191 and 515 is in the Lower San Juan-Four Corners watershed. The planning area's western half in both Utah and Arizona encompassing the chapter house and Highway 160 is in the Chinle Wash watershed. The Chinle Wash flows north into the Lower San Juan River. Only a small portion of the planning unit is in the Lower San Juan River-Kayenta watershed.

Much of the runoff from these systems is ephemeral, intermittent, and is in response to irregular precipitation. Down stream from large springs where the streambeds intersect the water table, streams are locally perennial. Maintained by groundwater discharge, perennial streams are restricted to the Navajo-Glen Canyon area, the lower Chinle Wash, and the Chuska Mountains-Defiance Plateau area among others. Tsaile, Wheatfields, Whiskey, and Coyote Creeks form a major stream system that drains much of the western escarpment of the Chuska Mountains. The dis¬charge from these streams funnels through Canyon de Chelly and eventually joins Chinle Wash. (Cooley et.al 1969).

4.6 VEGETATION

The native vegetation is presented followed by a vegetation analysis.

The native vegetation for the Arizona section of the planning unit mainly has Great Basin Desert scrub vegetation zone. The Utah portion is mainly characterized by Southern Colorado Plateau Sand Shrubland, Colorado Plateau Blackbrush-Morman Tea Shrubland, and Colorado Plateau Mixed Bedrock Canyon and Tableland **(MAP 11A, TABLE 8)**. The riparian areas in both states likely include Fremont

TABLE 8. VEGETATION

UNIT	VEGETATION
D04	Invasive Southwest Riparian Woodland and Shrubland
D08	Invasive Annual Grassland
N11	Open Water
N31	Barren Lands
S010	Colorado Plateau Mixed Bedrock Canyon and Tableland
S011	Inter-Mountain Basins Shale Badland
S012	Inter-Mountain Basins Active and Stabilized Dune
S014	Inter-Mountain Basins Wash
S039	Colorado Plateau Pinyon-Juniper Woodland
S045	Inter-Mountain Basins Mat Saltbush Shrubland
S053	Colorado Plateau Pinyon-Juniper Shrubland
S054	Inter-Mountain Basins Big Sagebrush Shrubland
S059	Colorado Plateau Blackbrush-Morman Tea Shrubland
S060	Mojave Mid-Elevation Mixed Desert Scrub
S065	Inter-Mountain Basins Mixed Salt Desert Scrub
S079	Inter-Mountain Basins Semi-Desert Shrub Steppe
S090	Inter-Mountain Basins Semi-Desert Grassland
S093	Rocky Mountain Lower Montane Riparian Woodland and Shrubland
S096	Inter-Mountain Basins Greasewood Flat
S136	Southern Colorado Plateau Sand Shrubland

cottonwoods, Coyote willows, and invasive species such as salt cedar/tamarisk, Russian olive, and peach-leaf willow. Gambel Oak forms dense thickets and even full grown trees in the upper reaches of the canyons. The side canyons have scattered specimens of western box elder, western chokecherry, and netleaf hackberry. Jimson weed, Rocky Mountain bee plant, and carrizo, the giant cane-like grass also grows in the canyons.

Vegetation analysis is based on a global 30 meter resolution Landsat imagery from 1990-2010 **(MAP 11B)**. This 543 band combination provides information on color contrast for detecting vegetation and bare soil. The bright green areas show vigorous and irrigated vegetation. Soils appear as tan, brown and mauve. Most of the planning area shows bare soil, thus conservative/restoration planning is needed.

4.7 WILDLIFE

The fauna of the region reflects the wide range of altitudes and plant zones. Coyote and kit fox are present on the Chinle plain. The black bear and the mule deer range through the forested areas as does mountain lion, bobcat, porcupine, raccoon, badger and spotted and striped skunks. Rodents are well represented with both jack rabbit and cottontail occurring in abundance along with several species of squirrels, including the handsome Albert's squirrel and the Colorado chipmunk.

Several large and economically important animals have been wiped out in recent times. These include grizzly, bighorn sheep, pronghorn antelope, Merriams's elk, and wolf. The bighorn sheep are protected within Mexican Water chapter.

Throughout the year, many birds, both resident and migratory, can be seen around Chinle and in Canyon de Chelly. Among the most conspicuous are the golden eagle, turkey vulture, raven, and great horned owl. Mallard and redhead ducks are winter visitors where there are ponds. Other birds often seen are the western mourning dove, red-shafted flicker, downy woodpecker, desert sparrow hawk, pinyon jay, western nighthawk, and cliff swallow. Many of these birds were important to the prehistoric and Navajo people for feathers and/or food. The most highly prized of all was the wild turkey. Other residents of the canyon include numerous toad and frog species, a variety of lizard species (including a variety of horned lizard), and a number of snake species including the prairie rattlesnake.

Data from the Navajo Nation Fish and Wildlife Department (NFWD) indicate that four wildlife zones fall within the Chapters planning unit. The majority is Wildlife Zone 3. Wildlife Zone 1 follows the San Juan River and the Chinle Wash. Only one small section of Wildlife Zone 2 is present, and a very small amount of Wildlife zone 5, a biological preserve, is present along Chinle Wash in the southwest area of the planning unit **(MAP 12)**.

ZONE 1: HIGHLY SENSITIVE/RESTRICTIVE DEVELOPMENT

This zone contains the best habitat for endangered, rare and sensitive plant, animal, and game species, and the highest concentration of these species on the Navajo Nation. To protect the Navajo Nation's most sensitive habitats for plants and animals the NNDFWL advises no further business or residential development, permanent, temporary or seasonal.

Exceptions are not of concern if a biological evaluation determines the proposed development is within or adjacent to an area already developed and not close enough to habitat to cause long-term impacts.

"Adjacency" will depend on the species and situation, but generally means within 1/8th of a mile (to existing development)

Any proposed development within Zone 1 shall be submitted to the NNDFWL for review and comment. The NNDFWL will evaluate each proposed project for appropriate environmental impact. The NNDFWL has the authority to reject any project in its entirety or approve with conditions.

ZONE 2: MEDIUM SENSITIVE/DEVELOPMENT WITH CAREFUL PLANNING
This zone has a concentration of rare, endangered, sensitive and game species occurrences or has a high potential for these species to occur throughout the landscape. To minimize impacts on these species and their habitats and to ensure the habitats in Zone 1 do not become fragmented, the NNDFWL recommends that no development be placed in Zone 2 to avoid species and their habitat.

Avoidance needs to include an adequate buffer to address long-term impacts. The buffer distance will depend on the species and the situation, and may be up to 1 mile.

As with Zone 1, any proposed development in Zone 2 shall be submitted to the NNDFWL for review and comment. The NNDFWL will evaluate each proposed project for appropriate environmental impact. The NNDFWL has the authority to reject any project in its entirety or approve with conditions.

ZONE 3: LOW SENSITIVITY
This zone has a low, fragmented or unknown concentration of species of concern. Species in this zone may be locally-abundant of "islands" of habitat; but islands are few and far between.

ZONE 5: HABITAT ENHANCEMENT/REFUGE/PRESERVE ZONES:
These areas contain excellent, or potentially excellent, wildlife and/or plant habitat and are recommended by the NNDFWL for protection from most human-related activities.

They will be identified for each chapter on a case-by-case basis. A variety of protection techniques are available, and the NNDFWL is interested in working with the chapter and land-user to protect/enhance these habitats by providing technical assistance and possibly materials and labor. The NNDFWL is also interested in receiving proposals from chapters and land-users for these types of zones.

4.8 MINERAL RESOURCES

Rich natural resources exist within or cross the Chapter's planning area **(Map 13)**. Near the former chapter house, prospectors once searched for gold. A couple of uranium mines are noted in the Comb Ridge area. The extent or operation of these mines is unknown.

Oil and natural gas fields are present in the Utah portion. Although some are inactive, some are operational and run by Resolute Natural Resources Company, an independent energy corporation with offices in Colorado, California, Oklahoma, and New Jersey. Although the company has offices across the county, their local base of operations is the Aneth Oil Fields, which they recently acquired in partnership with Navajo Nation Oil and Gas (http://www.lexdon.com/article/Resolute_Natural_Resources_Company_and/46845.html accessed 10/02/07).

An APS 500-KV transmission line originates from the Four Corners Coal-Fired Generating Station locatedin the San Juan Chapter southwest of Farmington, NM, and parallels Highway 160

as it crosses the Chapter's planning area. The Questar "Southern Trails" pipeline spans the southwestern part of the planning area generally following Highway 160. ARCO constructed the pipeline in 1957 to move crude oil from the Four Corners area to California. In 1977, ARCO reversed the pipeline's direction and used it to transport oil from Southern California to the north. Questar purchased the pipeline in 2002, converted it to a natural gas pipeline and only activated the portion west of the Colorado River. It is again flowing in the southwesterly direction, carrying natural gas from San Juan basin in the Four Corners area to California.

4.9 CULTURAL RESOURCES

The original Navajo land, Dinétah, which the Chapter stills resides within, is geographically defined by four sacred mountains located in three states. The four sacred mountains are 1) the east mountain Sis Naajin77 or Mt. Blanca located in south-central Colorado, 2) the south mountain Tsoodzi[or Mt. Taylor located in northwestern New Mexico, 3) the west mountain Dook'o 'oos[77d or San Francisco Peaks located in northwestern Arizona, and 4) the north mountain Dib4 Nitsaa or Mt. Hesperus located in southwestern Colorado. Ancient hogans, sweathouses, and fortresses that exist alongside petroglyphs and pictographs comprise an abundance of archaeological evidence that supports Navajo oral history and their emergence into this world from the three previous worlds in the general vicinity (Maryboy and Begay 2007).

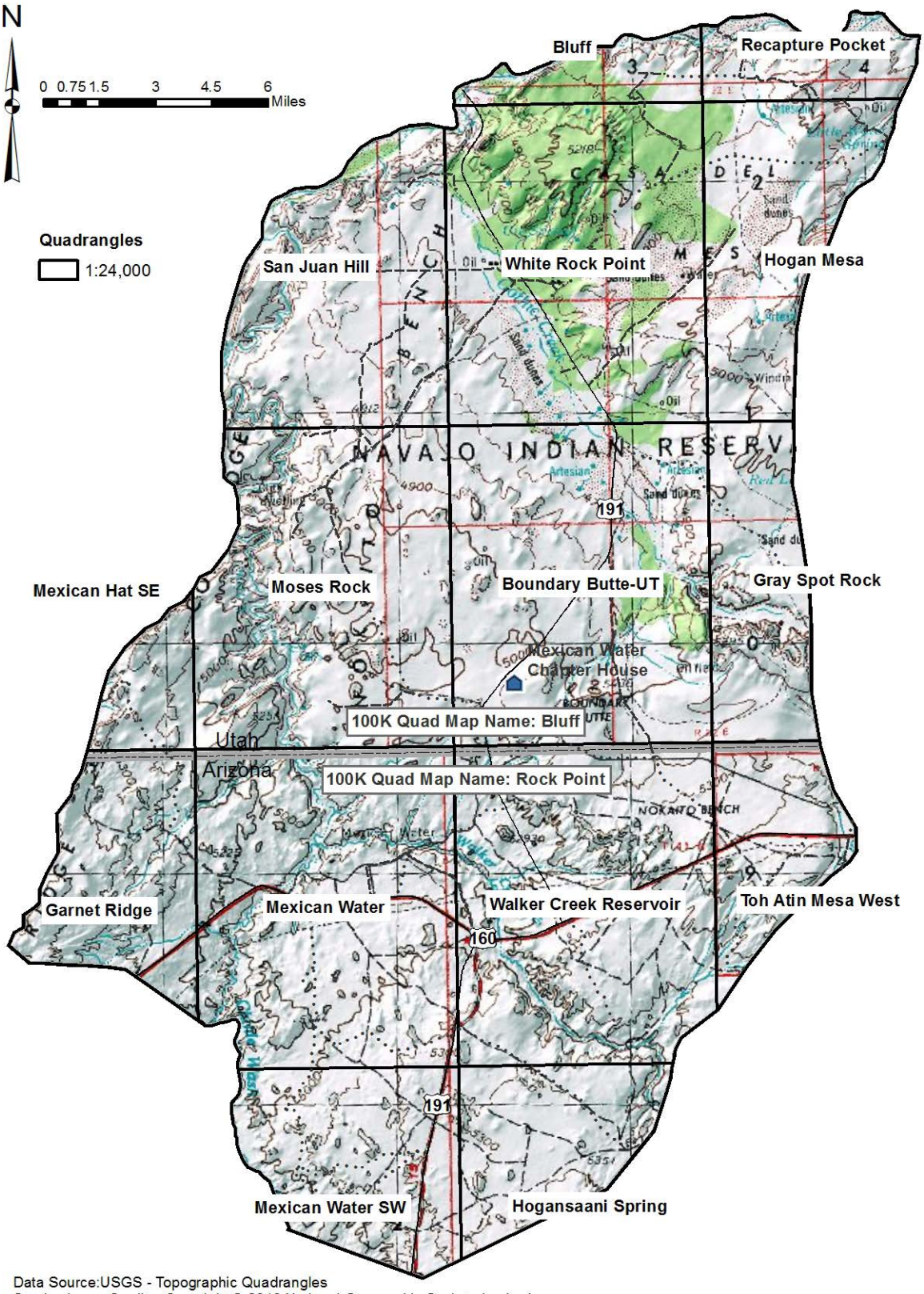
4.10 TRADITIONALLY SENSITIVE RESOURCES

Traditionally sensitive resources are considered important to retaining the culture of the community members. Traditionally sensitive sites are those areas most often used for ceremonies or those areas that have other traditional significance. These areas may be places where herbs are gathered or other resources are used for medicinal or ceremonial purposes. Often, such areas hold certain historic or traditional significance for community members.

These sites are protected under the NHPA, NAGPRA and Executive Order 13007.

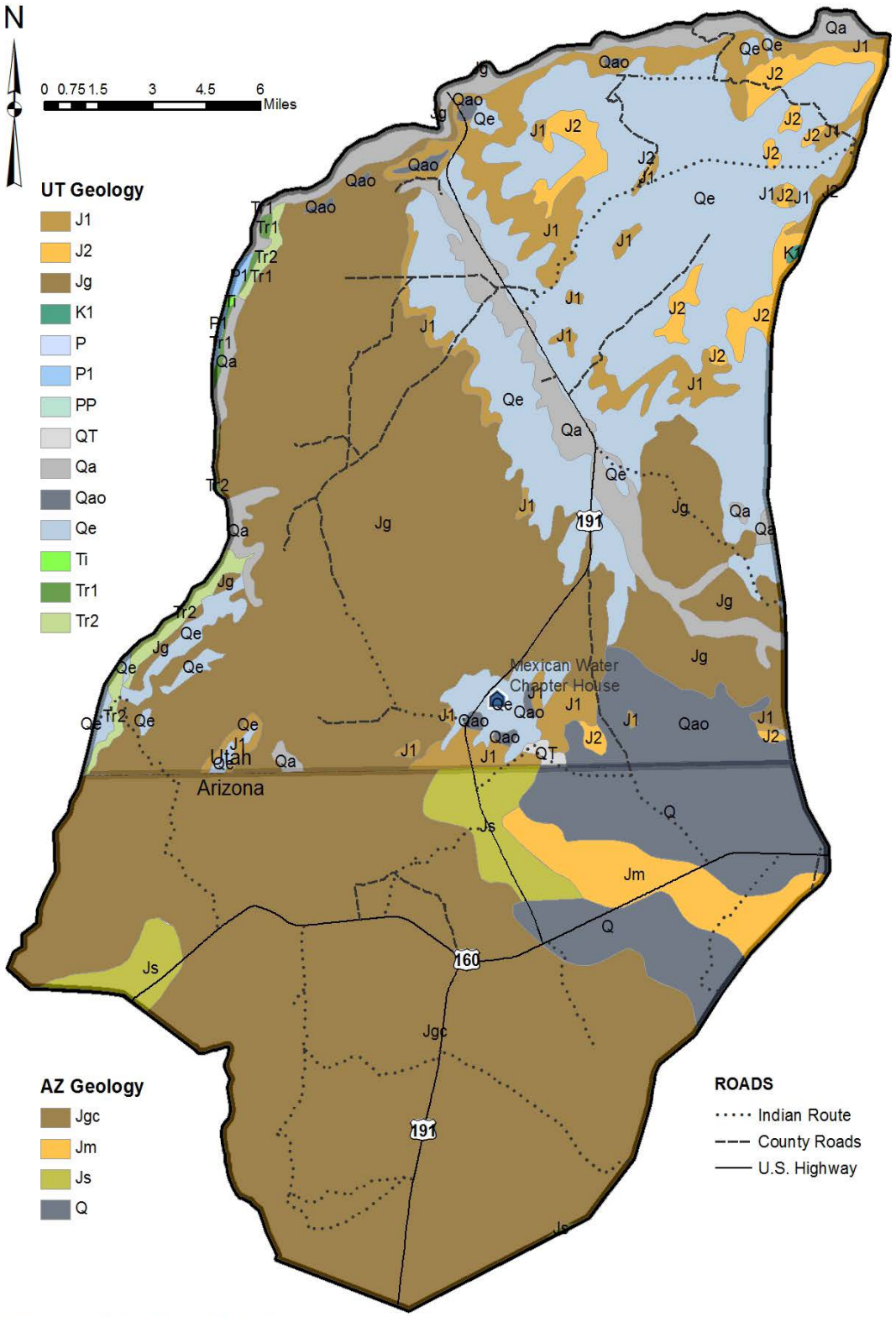
Several traditionally sensitive sites are located throughout the planning area. Some of these have been indicated on the map while other sites have not been designated on maps so as to add an additional layer of protection for them.

MAP 6. TOPOGRAPHY



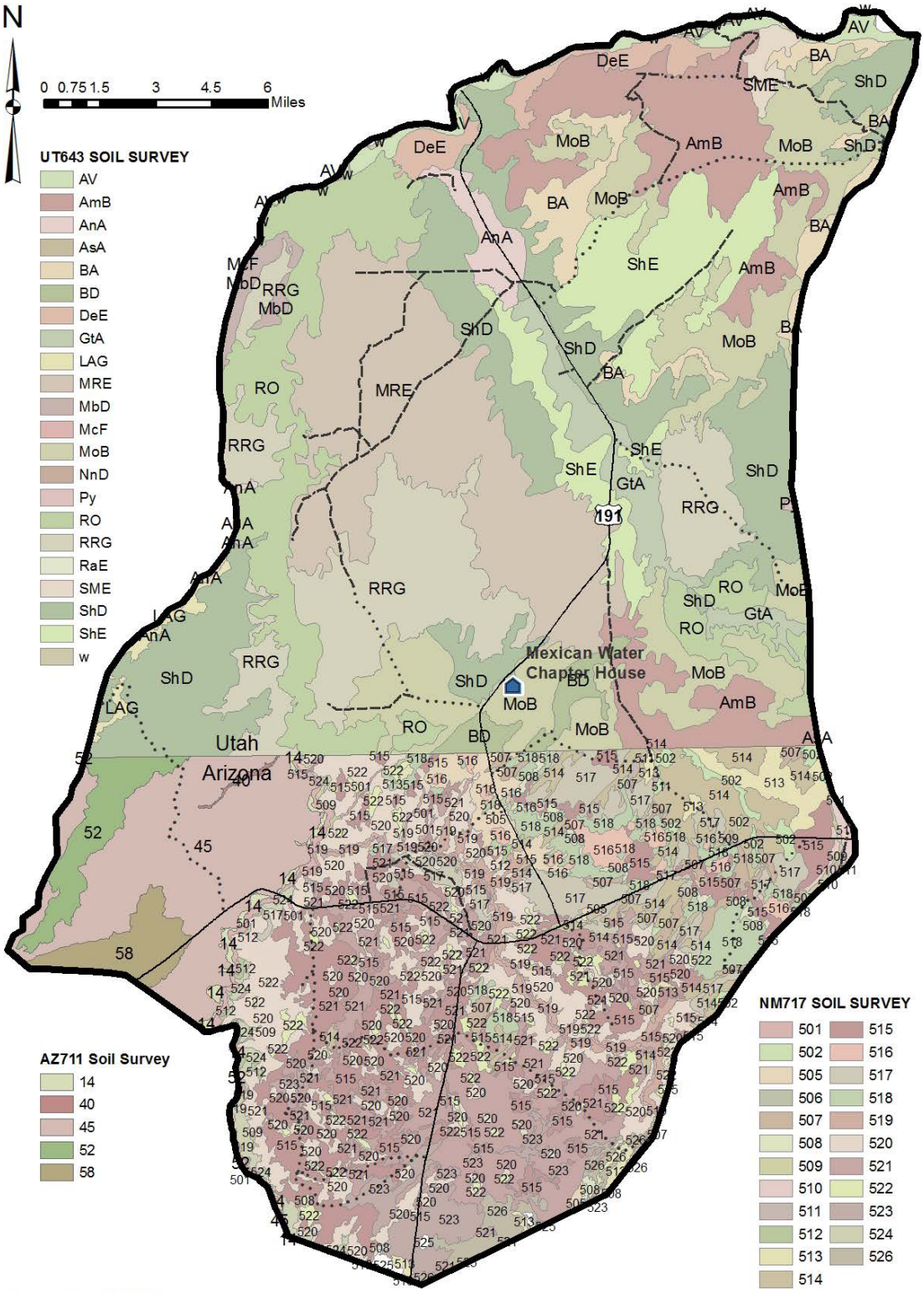
Data Source:USGS - Topographic Quadrangles
Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

MAP 7. GEOLOGY



Data Source: NDOT - Roads; BIA - Grazing Districts
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

MAP 8. SOILS



Data Source: USDA NRCS - SSURGO
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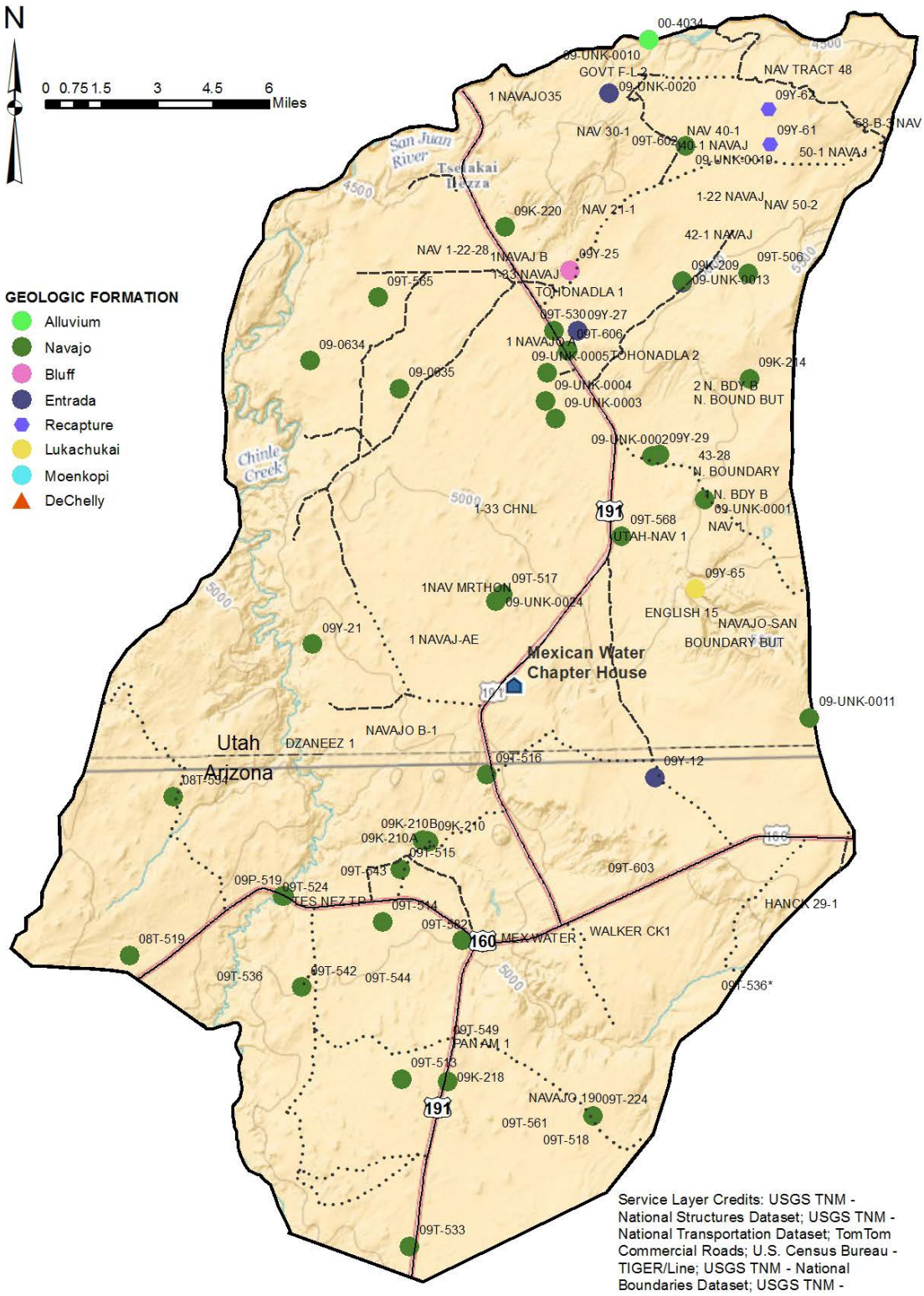
MAP 9. WATER WELLS



Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM -

Data Source: Navajo Divison of Water Resources - Water Wells
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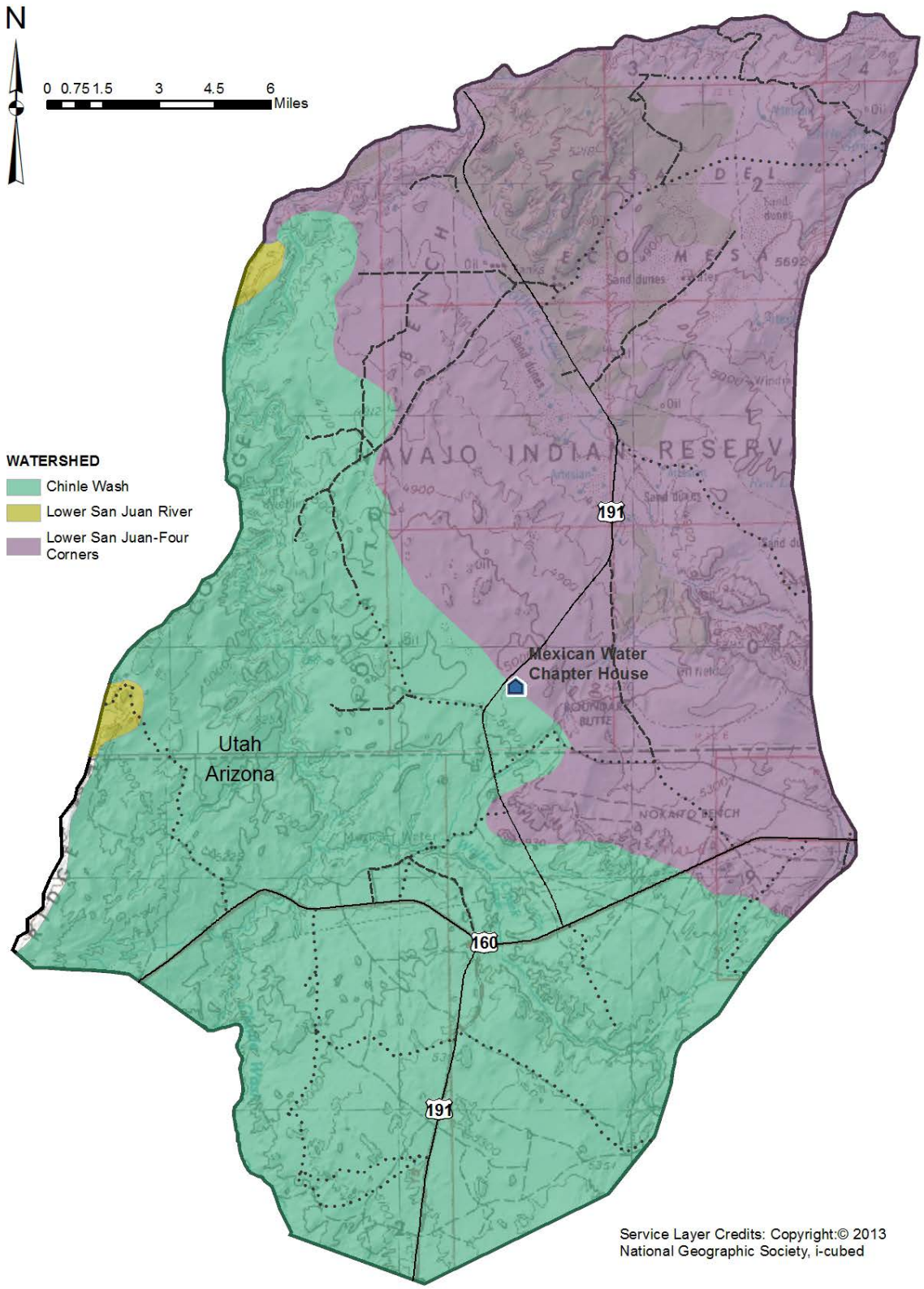
MAP 10. SURFACE WATER



Data Source: Navajo Divison of Water Resources - Watershed
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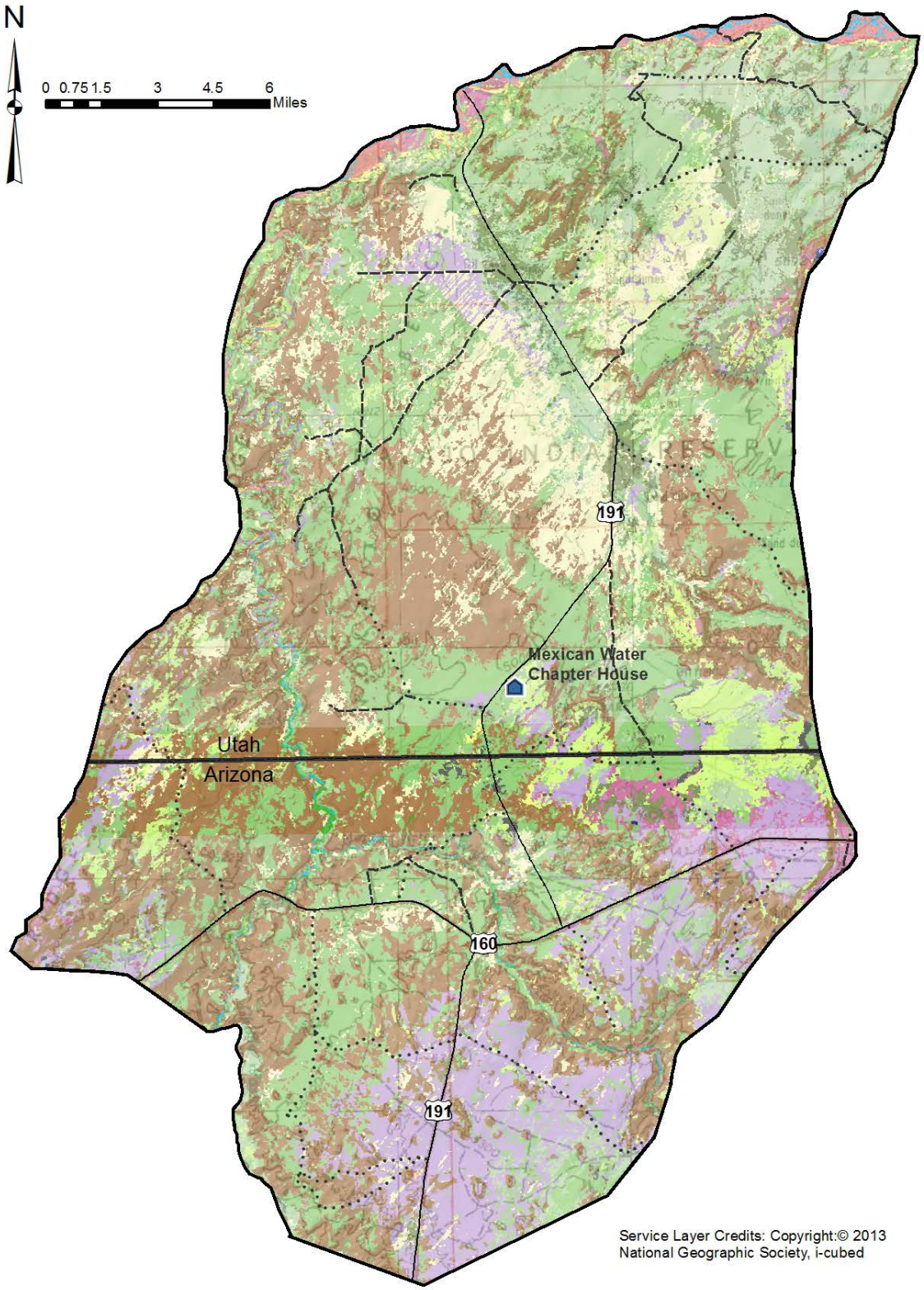
MAP 11A. NATIVE VEGETATION



Data Source: Navajo Divison of Water Resources - Watershed
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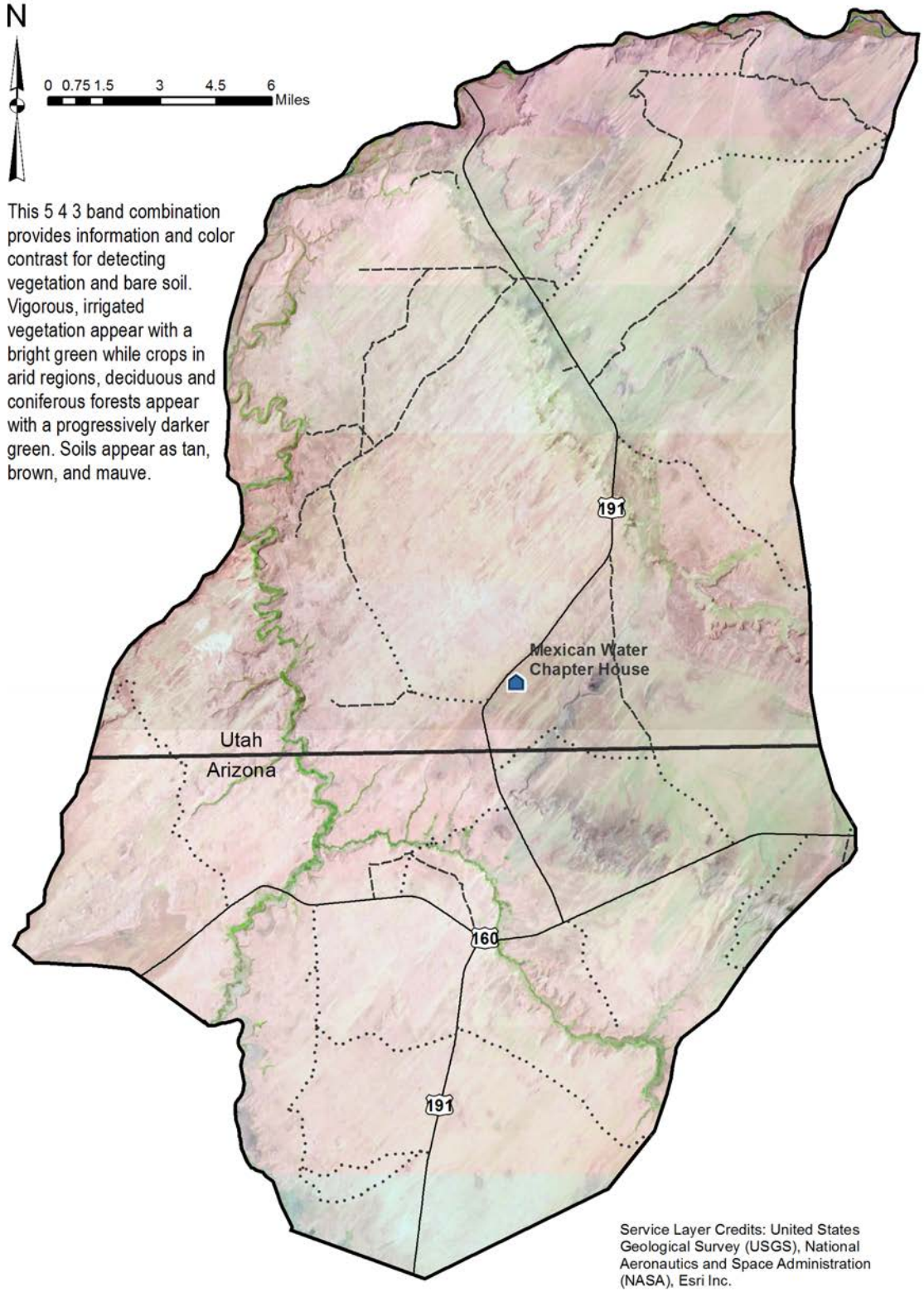
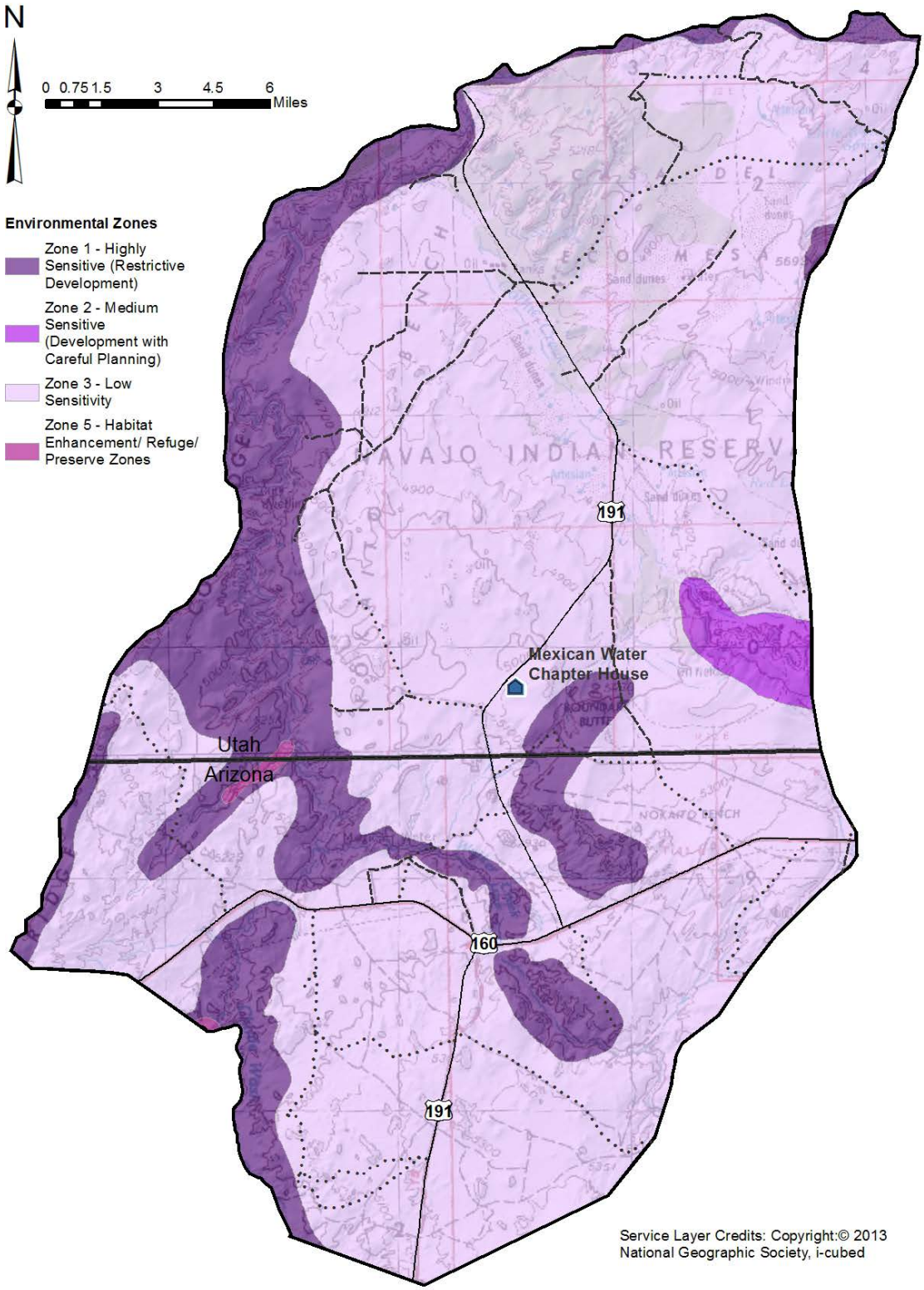
MAP 11B. VEGETATION ANALYSIS (543) 1990-2010



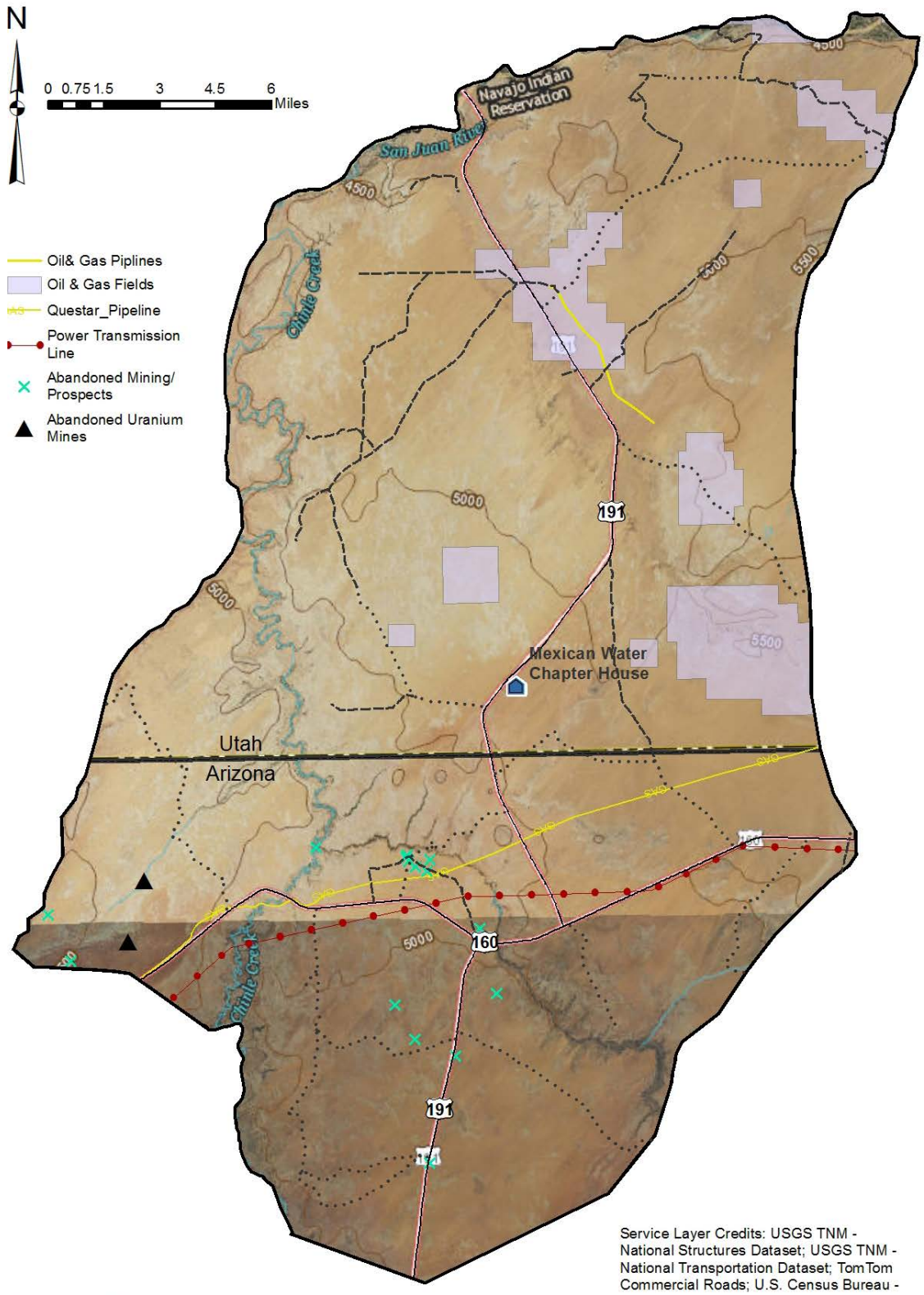
Data Source: Navajo Divison of Water Resources - Watershed
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

MAP 12. ENVIRONMENTALLY SENSITIVE ZONES



Data Source: Navajo Divison of Water Resources - Watershed
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

MAP 13. MINERALS



Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau -

Data Source: Navajo Divison of Water Resources - Watershed
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

5

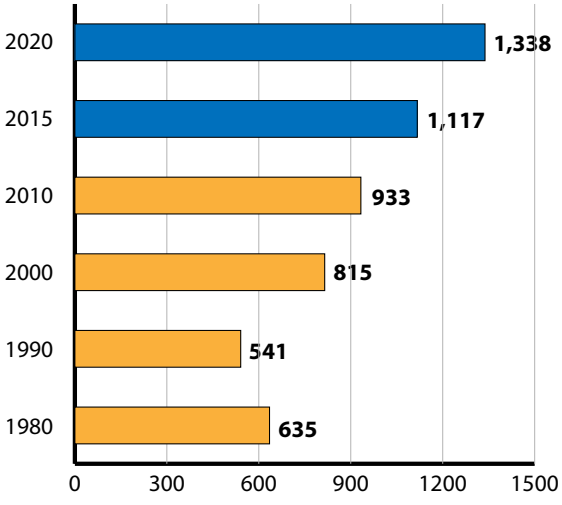
DEMOGRAPHICS, ECONOMICS & HOUSING

5.1 DEMOGRAPHICS

POPULATION TRENDS AND FORECASTS

Although, the Chapter's population decreased 14.8 percent from 635 in 1980 to 541 in 1990, it recovered by 2000. This temporary decline may have been partially due to inaccurate census data in 1990 and because many Chapter members may have moved to other areas where they would have blended in as part of a major growth center and enumerated at different chapters. Regardless, the population has grown substantially to over 933 members in 2010 **(FIGURE 2)**. (This is a major increase in a 20-year period (42.0 percent) especially considering that there was a population decline between 1980 and 1990.

FIGURE 2. POPULATION AND FUTURE PROJECTION



Population projections for 2015 increases to 1,117 based on a 1.82 percent growth rate recorded by the Navajo Nation Division of Economic Development (2006). At this growth rate, projections continue to increase to 1,338 for 2020.

In comparison, the Navajo Nation showed an overall 26.1 percent increase between 1990 and 2010. Apache County's population grew 13.9 percent during this time. The population in San Juan County Utah increased 14.4 percent whereas the U.S. only increased 19.4 percent **(TABLE 9)**.

TABLE 9. POPULATION TRENDS			
	POPULATION (1990)	POPULATION (2000)	POPULATION (2010)
United States	248,709,873	281,421,906	308,745,538
Arizona	3,665,228	5,130,632	6,392,017
Utah	1,722,850	2,233,169	2,763,885
Navajo Nation	128,356	155,214	173,667
Apache County	61,591	69,423	71,518
San Juan County	12,621	14,413	14,746
Mexican Water Chapter	541	815	933
Source: US Census 2000 & 2010			

AGE

In 2010, Mexican Water has the youngest population with a median age of 28.4 years of all jurisdictions shown in **Table 10**. Mexican Water also has the highest percentage of the school age population followed by the Navajo Nation and San Juan County. The U.S. and the state of Arizona have the lowest. The percent of the population over 65 years of age is lowest in the state of Utah (9.0 percent) but Mexican Water and the Navajo Nation are just as low with 9.5 percent. The state of Arizona has the highest senior population. Consistent with the Mexican Water's high percentage of school-age children, they also have the lowest median age.

TABLE 10. AGE CHARACTERISTICS: 2000 & 2010						
	2000 SCHOOL AGED 5-19 (%)	2010 SCHOOL AGED 5-19 (%)	2000 AGE 65 OR OLDER (%)	2010 AGE 65 OR OLDER (%)	2000 MEDIAN AGE (YEARS)	2010 MEDIAN AGE (YEARS)
United States	21.8	20.4	12.4	13.0	35.3	37.2
Arizona	22.1	21.3	13.0	13.8	34.2	35.9
Utah	26.9	25.3	8.5	9.0	27.1	29.2
Navajo Nation	34.9	28.6	7.0	9.5	24.1	29.1
Mexican Water	31.4	29.7	10.1	9.5	26.0	28.4
Apache County, AZ	32.8	26.8	8.3	11.6	27.0	32.4
San Juan County, UT	33.1	28.3	8.4	33.1	25.5	29.9
Source: US Census 2000 & 2010						

As shown in **Figure 3**, the age distribution for males and females in the chapter is similar, with a few small exceptions. For example, the number of girls

14 years old and younger outnumber the boys. Males between 15–49 years are higher than the girls of the same age range. Males between the ages of 60–64 outnumber the females in this age category. The number of females over 85 years is greater than the males.

HOUSEHOLD SIZE

U.S. Census reported 265 households for Mexican Water Chapter in the year 2010. The average household size is 3.52, which is slightly higher than the Navajo Nation and the other regions listed in **TABLE 11**.

HOUSEHOLDS TYPES

According to the 2010 Census, approximately half (48.7 percent) of the 265 households in the Chapter are married-couple families **(FIGURE 4)**. This is compared to 29.4 percent for single parent families and 18.9 percent 1-person households. Non-family households make up about 3 percent.

LARGE FAMILIES

Large family households have special housing needs due to the lack of adequately sized and affordably priced homes, which results in overcrowding. Large family households are defined as households with five or more persons. The Chapter and the Navajo Nation have the highest percentage of large families followed by San Juan and Apache Counties, Utah, Arizona, and lastly, the U.S. **(FIGURE 5)**.

EDUCATIONAL ATTAINMENT

Education attainment for the population 25 years and over within Mexican Water are presented here. Approximately 12.8 percent of the population has an education less than 9th grade. A significant number are high school graduates (approximately 49.0 percent). At the next level, some college was acquired with about 16.3 percent. Approximately 8.8 percent of the population acquired an Associates degree. Only 1.1 percent of the Chapter's population over the age of 25 has a Bachelor's degree. Roughly 8.6 percent have graduate or professional degrees **(FIGURE 6)**.

FIGURE 3. AGE DISTRIBUTION

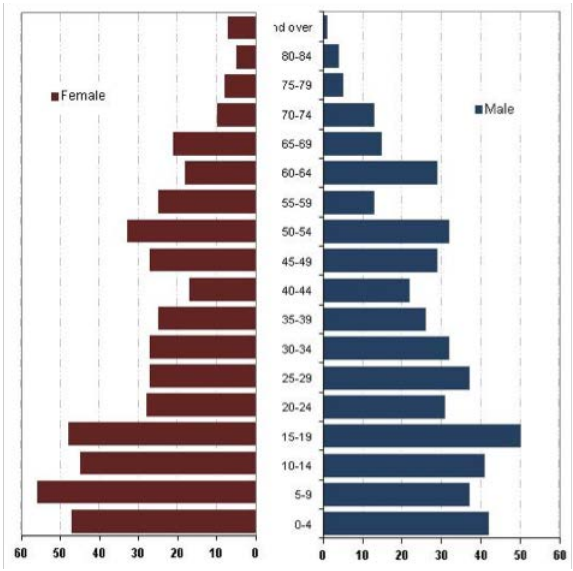


FIGURE 4. HOUSEHOLD TYPES

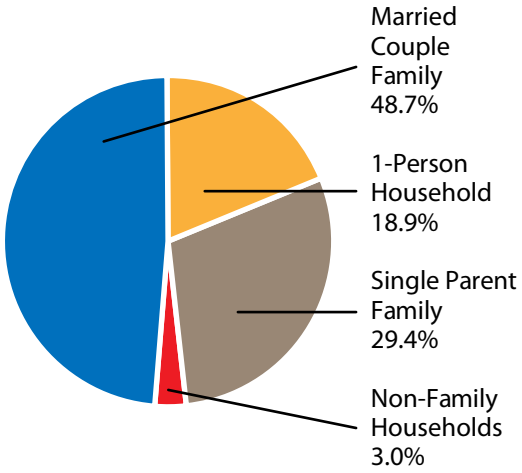


TABLE 1 1. HOUSEHOLD SIZE

Households	Mexican Water	Navajo Nation	Apache County	San County	Arizona	Utah	United States
Total Households	265	49,946	22,771	4,505	2,380,990	877,692	116,716,292
Persons per Household	3.52	3.46	3.10	3.21	2.63	3.10	2.58

FIGURE 5. LARGE FAMILY HOUSEHOLDS

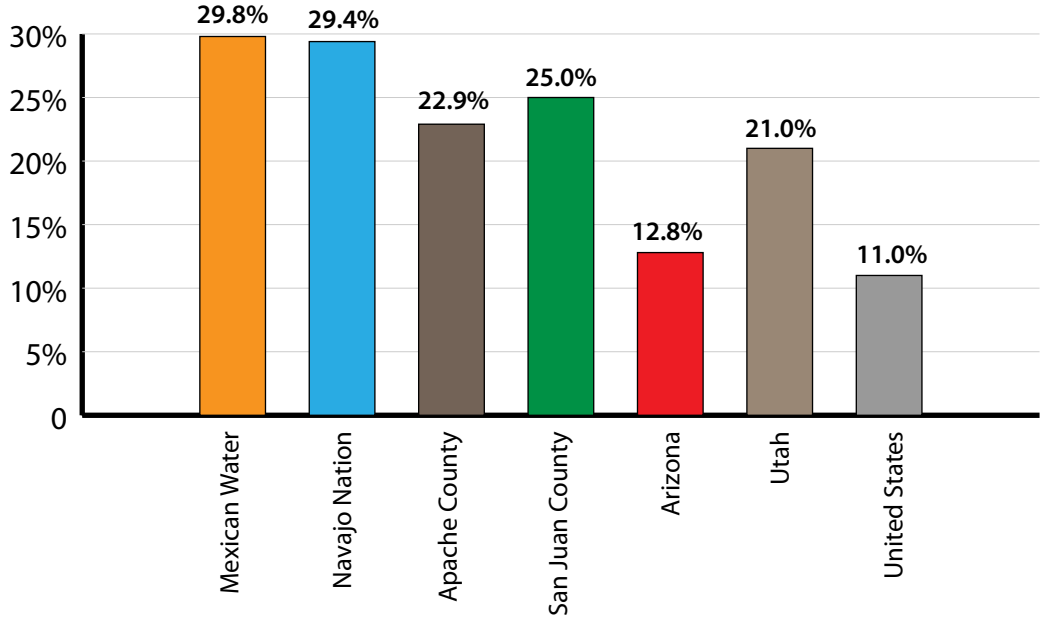
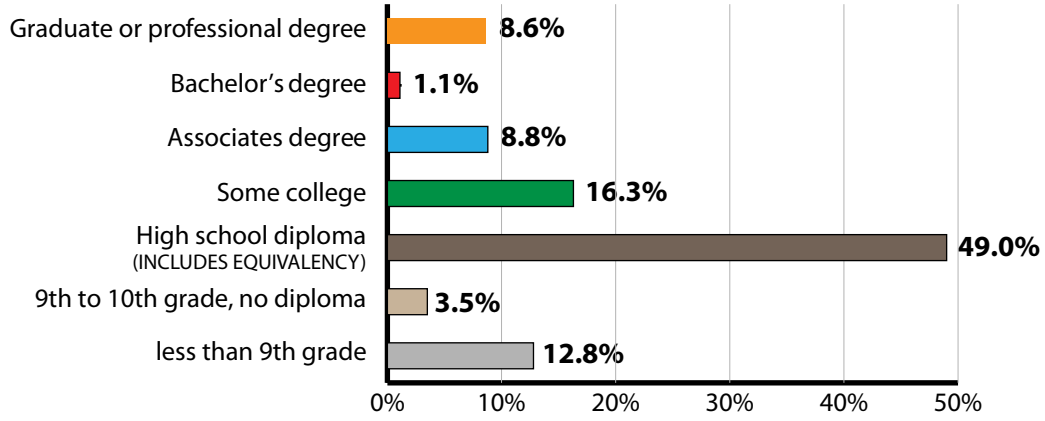


FIGURE 6. EDUCATIONAL ATTAINMENT



5.2 ECONOMIC PROFILE

LABOR FORCE AND EMPLOYERS

In 2010, 37.8 percent of those employed in Mexican Water worked in the public sector and the remaining 62.2 percent working in the private sector **(TABLE 12)**. No self-employed workers were reported. Employment in the public sector was dominated by jobs (95) in educational services, and health care and social assistance as compared to 7 jobs in public administration.

Mexican Water Chapter and Trading Post are the only employers within the community and they provide few jobs. Most residents work outside of the community as shown by travel time to work in **TABLE 13**. Approximately one-third of the labor force travels over an hour to get to work; 19.4 percent travel 90 minutes or more and 13.0 percent travel 60 to 89 minutes. About 20.5 percent have less than 15 minutes travel time to work.

TABLE 12. MEXICAN WATER LABOR FORCE (2007-2011 5-YEAR ESTIMATES)		
Labor Force	**Persons**	**Percent of Total**
Persons 18 years and older	581	
In Labor Force	211	53.5%
Employed	270	46.5%
Unemployed	41	7.1%
Industry		
Agriculture	40	14.6%
Construction	16	5.9%
Manufacturing	10	3.7%
Wholesale Trade	7	2.6%
Retail Trade	44	16.3%
Transportation and Warehousing, and Utilities	10	3.7%
Information	10	3.7%
Professional Scientific, and Management, and Administrative and Waste Management Services	21	7.8%
Educational Services, and Health Care and Social Assistance	95	35.2%
Arts, Entertainment, and Recreation, and Accommodation and Food Services	10	3.7%
Public Administration	7	2.6%
Total	270	100%
Class of Worker		
Private Wage and Salary Workers	168	62.2%
Government Workers	102	37.8%
Self-Employed in own not incorporated business workers	-	0.0%
Unpaid Family Workers	-	0.0%
Total	270	100%

Source: U.S. Census Bureau, American FactFinder, 2007-2011 American Community Survey 5-Year Estimates

TABLE 13. TRAVEL TIME TO WORK FOR MEXICAN WATER WORKERS		
Travel Time to Work	**Persons**	**Percent of Total**
Less than 5 minutes	0	0.0%
5 to 9 minutes	20	7.9%
10 to 14 minutes	32	12.6%
15-19 minutes	7	2.6%
20-24 minutes	24	9.5%
25-29 minutes	0	0.0%
30-34 minutes	12	4.7%
35-39 minutes	0	0.0%

40 to 44 minutes	45	17.8%
45 to 59 minutes	31	12.3%
60 to 89 minutes	33	13.0%
90 or more minutes	49	19.4%
Total	253	100%

Source: U.S. Census Bureau, American FactFinder, 2007-2011 American Community Survey 5-Year Estimates

Major employers throughout the region include the BIA, Navajo Nation, Indian Health Service, Navajo Tribal Utility Authority, Navajo Engineering and Construction Authority, Abandoned Mine Land Reclamation Project, City of Farmington and San Juan County. Power Plants also serve as major regional employers.

The Navajo Nation in its entirety has 822 employers including various Navajo Nation government offices in Window Rock and at the chapter levels. Excluding the Navajo government offices decreases the number of employers to 676 whereby 236 are Navajo employers and 400 are non-Navajo employers (Choudhary, 2001).

SELF-EMPLOYMENT

Although U.S. Census reported there were no self-employed workers, there are an unknown number of community members self-employed or combine work to make a living. Entrepreneurs typically are people operating art and crafts businesses where they make their products in their homes. They sell their product through direct sales. Other entrepreneurs supplement their living via a cattle and/or sheep operation, farming, businesses or other home-based businesses.

LOCAL BUSINESSES

Currently, there are two businesses located within the community. Mexican Water Trading Post and restaurant are located near the southeast intersection of Highways 191 and 160 on Walker Creek.

The trading post includes a convenience store and gas station. The restaurant is adjacent to the trading post, but is owned and operated by the Mexican Water Trading Post. A laundromat was also built to the west of the restaurant, however, it remains closed today due to low water pressure.

Before moving to its current location, the original trading post was located near the Baptist Church by the chapter house. Three traders 'Bear Rolled Up', 'Tall Squashed', and later Don Reeves ran the trading post in the earlier 1900's. In 1907, Hamblin Noel built the Mexican Water Trading Post at its present location (Linford L., 2000).

Another commercial establishment comprising of a store and lodging facilities once existed in Tes Nez Lah which is located in Chinle Creek adjacent to the south side of Highway 160. After being in operation for some time, the establishments closed due to environmental hazardous conditions. Navajo EPA found leakage in the fuel storage container and ordered the area to be reclaimed and ensure soil and water conditions were within safety standards.

INCOME

The per capita income and median family income are show in **Table 14**. The per capita income for the Chapter is $14,731, which is comparable to that for San Juan County and higher than

TABLE 14. INCOME AND POVERTY - 2011				
	PER CAPITA INCOME	MEDIAN FAMILY INCOME	PERSONS BELOW POVERTY LEVEL	% BELOW POVERTY LEVEL
United States	$27,915	$64,293	42,739,924	14.3%
Arizona	$25,784	$60,237	1,003,575	16.2 %
Utah	$23,650	$65,646	304,125	11.4%
Navajo Nation	$10,864	$32,182	64,317	38.1 %
Mexican Water Chapter	$14,731	$42,273	161	22.3%
Apache County, AZ	$12,626	$38,290	24,120	34.7%
San Juan County, UT	$14,853	$44,151	4,173	29.4%

Source: U.S. Census Bureau (2010) Navajo Nation: Chapter Images (2004)

the Navajo Nation and Apache County, but still well below the per capita income for the U.S. and the states of Arizona and Utah. Similarly, the Chapter's median family income of $42,273 is comparable to that for San Juan County and higher than the Navajo Nation and Apache County, but lower than the state and national levels.

The percent of persons below poverty level is 22.3 percent for the Chapter, which is lower than Navajo Nation and the counties shown in **Table 14**. The state and national levels are much lower than the chapter.

UNEMPLOYMENT RATE

The total labor force, employment and unemployment figures for the Navajo Nation, Apache County and San Juan Counties, and the States of Arizona and Utah are summarized in **Table 15**.

In 2005, the NNDED reported that the unemployment rate for the Navajo Nation was 48.5 percent. The NNDED has not published unemployment rates since 2005; however U.S. Census Bureau's 2009-2013 American Community Survey 5-year estimate is 21.0 percent.

TOURISM

Tourism on the Navajo Nation has an economic impact of over $143 million, an increase of $43 million from 2002, and supports 1,788 full time jobs (NAU 2012).

Major reasons that visitors come to the Navajo Nation are for its scenic attractions and to engage in outdoor activities. The seclusion of the Navajo Nation is ideal for visitors to get away for general sightseeing, hiking, and boating, as well as to shop for arts and crafts. While tourists are vacationing on the Navajo Nation and spending a great deal of time outdoors, 79 percent of lodging is taken in hotels.

5.3 HOUSING PROFILE

HOUSING TYPE AND MEDIAN HOME PRICE

Census data for this section was obtained from selected housing characteristics (DP04) based on sample data.

TABLE 15. LABOR FORCE, EMPLOYMENT AND UNEMPLOYMENT CHARACTERISTICS

	YEAR	LABOR FORCE	EMPLOYMENT	UNEMPLOYMENT	UNEMPLOYMENT RATE
Arizona*	2013	3,012,476	2,772,245	240,231	8.0%
	2012	3.030.238	2,773,870	251,818	8.3%
	2011	3.048,567	2,761,381	287,186	9.4%
	2010	3.105,648	2,781,573	324,075	10.4%
	2005	2.858.656	2,724,859	133,797	4.7%
	2000	2.505.306	2,404,916	100,390	4.0%
	1990	1.806.323	1,707,287	99,036	5.5%
Utah**	2012	1,418,522	1,355,720	63,802	4.4%
	2012	1,376,628	1,302,641	73,987	5.4%
	2011	1,353,257	1,261,698	91,559	6.8%
	2010	1,362,489	1,252,517	109,972	8.1%
	2005	1,283,625	1,230,450	53,175	4.1%
	2000	1,136,036	1,097,915	38,121	3.4%
	1990	820,436	784,050	36,386	4.4%
Navajo Nation***	2009-2013 Estimates****	48,356	38,181	10,175	21.0%
	2005	60,229	30,996	29,233	48.5%
	2000	55,041	30,818	24,223	44.0%
	1990	-	40,742	-	40.6%
Apache County, Arizona*	2013	21,130	16,947	4,183	19.8%
	2012	22,061	17,725	4,336	19.7%
	2011	22,339	18,137	4,202	18.8%
	2010	22,762	18,893	3,869	17.0%
	2005	19,883	17,799	2,084	10.5%
	2000	19,004	17,277	1,727	9.1%
	1990	17,307	15,050	2,257	13.0%
San Juan County, Utah**	2013	4,942	4,484	458	9.3%
	2012	5,031	4,521	510	10.1%
	2011	5,253	4,653	600	11.4%
	2010	5,354	4,669	685	12.8%
	2005	4,819	4,433	386	8.0%
	2000	4,699	4,324	374	8.0%
	1990	4,135	3,763	372	9.0%

*Source: * Arizona Department of Administration ** Utah Department of Workforce Development *** Navajo Nation Department of Economic Development (2005) ****US Census Bureau (2009-2013 American Community Survey 5-year Estimates*

TABLE 16. TYPE OF HOUSING UNIT AND MEDIAN HOME VALUE

	SINGLE UNITS		MOBILE HOME UNITS		MEDIAN HOME VALUE	
	2000	2010	2000	2010	2000	2010
United States	76,313,410	87,597,674	8,779,228 (7.6%)	8,684,414 (6.7%)	$111,800	$188,400
Arizona	1,375,489	1,883,977	302,575 (13.8%)	305,355 (11.0%)	$109,400	$215,000
Utah	558,003	709,877	39,267 (5.1%)	38,662 (4.1%)	$142,600	$218,100
Navajo Nation	45,576	55,496	11,118 (18.7%)	13,044 (18.2%)	$23,800	$60,700
Mexican Water	229	261	116 (32.8%)	113 (30.2%)	$14,900	$57,100
Apache County	22,993	24,162	6,317 (20.0%)	6,590 (20.3%)	$39,200	$80,900
San Juan County	3,850	4,027	1,238 (22.7)	1,347 (23.6%)	$57,300	$108,000

Source: U.S. Census Bureau (2000 and ACS 2006-2010 5-Yr Estimate)

(1) A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms, or a single room occupied as separate living quarters, or if vacant, intended for occupancy as separate living quarters.

The median home values for the Chapter and the Navajo Nation are below all other jurisdictions examined in **Table 16**. Approximately one-third of the homes are mobile homes (30.2 percent). The number of mobile homes in the Chapter slightly decreased (32. 8 percent to 30.2 percent) over the ten year period. The states and the U.S also showed decreases, while San Juan and Apache counties had slight increases in the number of mobiles. Arizona and Utah showed considerable higher home values followed by U.S. and the counties. The median home value significantly increased for Mexican Water and the Navajo Nation, but they were still the lowest of all jurisdictions shown in the table.

NUMBER OF BEDROOMS

Figure 7 shows the distribution of the housing units based on number of bedrooms. The majority of the houses within Mexican Water are three-bedroom units (38.8 percent) followed closely by homes with no bedrooms (27.8 percent). Many of the homes without bedrooms may be hogans. Two and four bedroom units are the next highest with 15.2 percent and 12.3 percent, respectively. Less than five percent (4.8 percent) are one-bedroom units. There are even fewer five or bedroom homes (1.1 percent).

FIGURE 7. NUMBER OF BEDROOMS

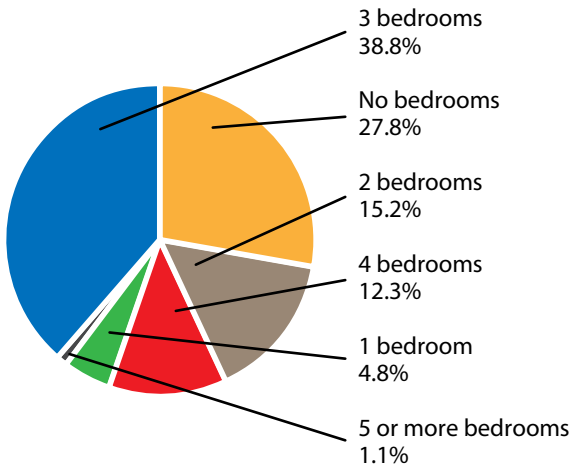
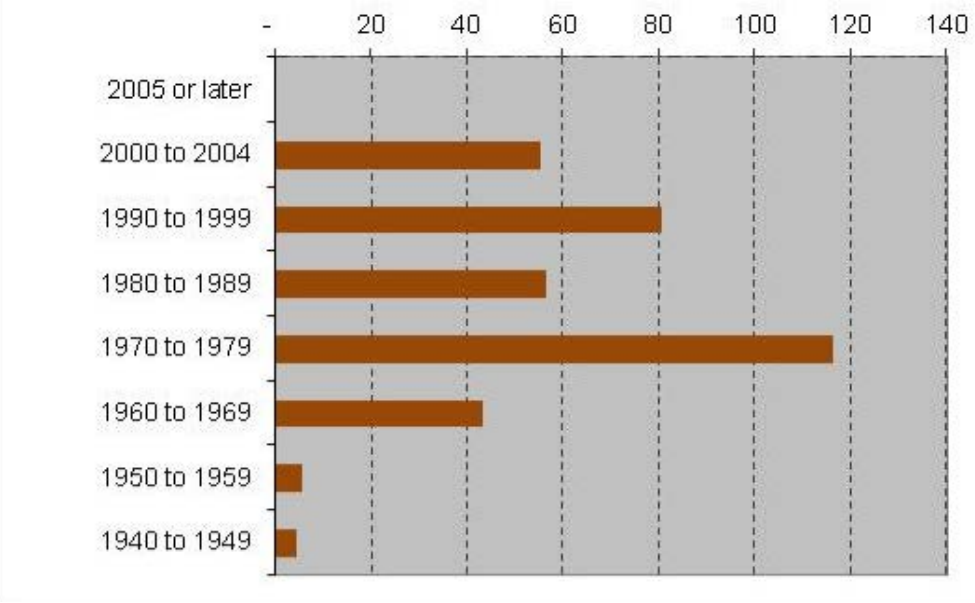


FIGURE 8. YEAR HOUSING UNIT BUILT



HOUSING CONDITION

The condition of housing is generally characterized by the age of the homes and the availability of basic facilities, such as plumbing and heating. The majority of houses in the Chapter were built between 1970 to 1979 and some much earlier than that **(FIGURE 8)**. No houses have been built since 2004.

Complete plumbing facilities are defined as hot and cold piped water, a bathtub or shower, and a flush toilet. Almost half (42.8 percent) of the homes in the chapter lack complete plumbing facilities.

5.4 VETERANS

VETERANS ORGANIZATION

The Veterans of Mexican Water Chapter are organized for the purpose of coordinating activities, providing financial assistance, advocating veteran-related issues and concerns, increase awareness of the veteran, and offer support to veterans.

NUMBER OF VETERANS

According to the local veteran's association, at one time there were a total of 47 veterans. With time, eight have passed on leaving 39 with three being women vets. The remaining veterans are below the age of 60 and the community continues to take pleasure in having these treasures within the community where they play a significant role.

6

LAND USE

Mexican Water's land use plan **(MAP 14)** is designed to inspire ideas that provide a broad, yet clear picture of the community as its members, leaders, and the general public envision it to be. It features a variety of land uses that contribute to its rural traditional character. The Land Use Plan is the community's general guide for managing growth in the location, type, scale and density of future land development.

The land uses indicate the intended predominate future function, density, and characteristic use of the land. They do not reflect the intended zoning of individual areas but rather generalizes desired future land uses. The maps suggest an overall mix of densities and should not be construed 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.

6.1 CONSIDERATIONS

LEADERSHIP AND GOVERNANCE

Leadership and governance are essential to planning for future land uses and implementing land use policies. The need for effective leadership and good governance is key to responsible uses of land and creating a sustainable livable community. Community leaders must be able to lead, govern and foster community and economic development while being good stewards of the land and its resources.

WATER RIGHTS SETTLEMENT

Mexican Water Chapter residents reside in Apache County, Arizona and San Juan County, Utah and they have an interest in the Navajo Nation/State of Utah Water Rights settlement. Any

settlement talks, conferences and the like should include the Mexican Water leadership; they should have a seat at the negotiating table. It is an inherent right.

The proposed settlement is to help resolve the Navajo Nation's water rights claims in the Upper Basin of the Colorado River Basin in Utah.

The proposed water settlement has been identified to address some of the Utah Navajo needs from the Upper Colorado River/San Juan River

The State of Utah Governor Gary Hebert has set aside $2 million in his proposed budget for fiscal year 2013 for what would be the first installment of money that is part of the settlement agreement pending with the Navajo Nation over water rights.

The money part of $8 million the state proposes by pay to help fund $154 million for water projects in the Utah section of the Navajo Tribe. The remainder would be paid by the federal government.

The State of Utah and the Navajo Nation has executed a memorandum of agreement to pursue negotiations before litigation, the proposed settlement is recognition by the state that the tribe has rights to an annual consumptive use of 81,500 acre feet of water. The water is part of Utah's unused allocation from the Upper Colorado River system.

The proposed settlement also recognizes the use of up to 314,851 acre-feet of water per year as long as the annual depletion limit is not exceeded.

TRADITIONALLY SENSITIVE RESOURCES

Traditionally sensitive resources are considered important to retaining the culture of the community members. Traditionally sensitive sites are those areas most often used for ceremonies or those areas that have other traditional significance. These areas may be places where herbs are gathered or other resources are used for medicinal or ceremonial purposes. Often, such areas hold certain historic or traditional significance for community members. These sites are protected under the NHPA, NAGPRA and Executive Order 13007.

Several traditionally sensitive sites are located throughout the planning area. Some of these have been indicated on the map while other sites have not been designated on maps so as to add an additional layer of protection for them.

HISTORIC RESOURCES

Historic resources include the original Mexican Water Trading Post.

GRAZING PERMITS

Between 1937 and 1938, the BIA issued grazing permits based on the units' capacities, and although the district boundaries have never been legally surveyed, they have had many uses over the years. The number of sheep units were authorized and based upon the carrying capacities set by the Soil Conservation Service. The districts issued the permits to the heads of household.

To date, Mexican Water has approximately 53 grazing permits. Since these grazing areas were never surveyed, some may overlap. Several community members have stated these permits have been changed over the years without proper consent or notification. Several maps may exist, each showing different versions of location and grazing permittees.

PUBLIC FACILITIES
The Chapter House is located near the Utah-Arizona state line. Built in 2012, the Chapter house serves as a local governance center for the community and conducts monthly meetings to address community needs and concerns. Office space within the Chapter house is also provided for the Veterans organization.

HOSPITAL AND HEALTH SERVICES
The Four Corner Health Care Facility is located in Red Mesa, Arizona, approximately 20 miles east along Highway 160. Community members also go the Utah Health Care Center located in Blanding.

CHURCHES
Mexican Water provides a variety of opportunities to worship, which include the following: Baptist Church located by the Chapter house and the White Rock Methodist Church. Several community members also practice the traditional Navajo religion and the Native American Church. These worship sites are located within or near existing developed homesteads.

SOLID WASTE MANAGEMENT
The Navajo Nation has a solid waste management program to provide assistance to Navajo communities to develop proper solid waste management and recycling practices, provide guidance to develop viable and self-sustaining proper solid waste disposal systems, and closure of existing landfills and illegal dump sites.

The Chapter has an existing transfer station, but there are plans to remove it. Once this happens, community members will have to alternative ways to dispose of their waste. The nearest solid waste disposal is located in Bluff, Utah.

RECYCLING
Navajo people have always had an individual and collective responsibility to protect and respect land. Recycling is one way to demonstrate that responsibility as well as insuring that the future generations will continue to enjoy the bounties and beauty of Mother Earth—free of pollution and degradation (Navajo Nation Council Office of the Speaker 2007).

LAW ENFORCEMENT AND FIRE PROTECTION
The Navajo Nation provides law enforcement from Shiprock and Kayenta.

The nearest fire station is located in Bluff, Utah, which is located across the San Juan River at the north end of the community.

EMERGENCY RESPONSE, RESCUE AND AMBULANCE SERVICES
The nearest rescue and ambulance services are in Bluff, Utah. The Health Care Center located in Red Mesa also provides ambulance and EMT services.

The chapter has established an Authorized Local Emergency Response Team (ALERT) as an emergency response unit within the local chapter government. The purpose is to coordinate available resources for effective and efficient response to mergency/disasters. To save lives, avoid injuries, and minimize economic loss by implementing a local comprehensive emergency management plan.

EDUCATIONAL
The preschool is located within the Chapter house compound. The Headstart is located in Todahaiddkani adjacent to 191 in the northern part of the community. The Headstart program was initially operated by the Utah Rural Education program before it was turned over to the Navajo Nation. Since the woes of the Navajo Headstart program begin in 2006, the facility has been closed.

Students attend elementary schools in Red Mesa, Dennehotso, Rock Point, Bluff and Blanding. Students attend middle schools in Red Mesa, Rock Point, and Blanding.

Students attend high schools in Red Mesa, Rock Point, Kayenta, Montezuma Creek and Blanding.

Dine College is the nearest college in Tsaile, Arizona with a Branch in Shiprock, New Mexico. Off reservation colleges includes the College of Eastern Utah in Blanding, Utah.

HOUSING
Scattered housing in the form of single family detached dwelling units is the predominant form of residential land use in the community. Housing areas are clustered based on family areas and typically include a home, Hogan and other structures. The majority of the homes are located in Utah. According to the Chapter's count, there are approximately 546 total housing units with approximately 339 units in Utah and about 207 in Arizona. These figures differ from the 378 reported by Census 2000. The primary difference may be attributed to the difference in areas considered to be within the Mexican Water community.

ELECTRIC
Several major electrical providers, including Arizona Public Service (APS), Rocky Mountain Power and the Navajo Tribal Utility Authority (NTUA) own or operate transmission lines that traverse the Chapter's planning area, but only Rocky Mountain Power and NTUA provide electricity to the community. Rocky Mountain serves the Utah portion. NTUA serves the Arizona side. An APS 500-KV transmission line originates from the Four Corners Coal-Fired Generating Station located in the San Juan Chapter southwest of Farmington, NM, and parallels Highway 160 as it crosses the Chapter's planning area.

GAS
The Questar "Southern Trails" pipeline spans the southwestern part of the planning area generally following Highway 160. ARCO constructed the pipeline in 1957 move crude oil from the Four Corners area to California. In 1977, ARCO reversed the pipeline's direction and used it to transport oil from Southern California to the north. Questar purchased the pipeline in 2002, converted it to a natural gas pipeline and only activated the portion west of the Colorado River.

It is again flowing in the southwesterly direction, carrying natural gas from San Juan basin in the Four Corners area to California. Although NTUA is one of several companies that draw gas from Questar's pipeline they do not provide service to the Mexican Water community. Instead, the community widely relies on local propane distributors.

DOMESTIC WATER
Public water systems are limited. Those that do exist are owned and operated by the NTUA. Most families rely on individual wells for drinking water. Water hauling is common practice that can be difficult for some community members, particularly the elderly because it requires significant time and effort.

WASTEWATER FACILITIES

There are no public sewage lagoons in the planning area, however the Mexican Water Trading Post operates its own lagoon within its compound. Some homes throughout the community also have small lagoons. Most rely on individual septic systems.

COMMERCIAL DEVELOPMENT

The commercial categories are established to provide areas in which business may be conducted, goods sold and distributed, and services rendered In addition, they are set up to provide for public activities and other activities which support retail and business functions. Such uses may include grocery stores, trading posts, or even areas for local vendors and artists to sell their wares to tourists and others.

ROADS

The major source of transportation through Mexican Water Chapter is serviced by U.S. highways 160 and 191 **(Map 15)**. Highway 160 runs east and west in the lower southern portion of the chapter while highway 191 runs north and south. Highway 160 is located entirely within AZ and is under the jurisdiction of the Arizona Department of Transportation (ADOT). Highway 191 is divided into three segments. ADOT oversees the segment south of highway 160. The segment between highway 160 and the Arizona-Utah stateline is actually Navajo Route 12 and is under the jurisdiction of the Navajo Department of Transportation (NDOT). The segment in Utah is under the jurisdiction of the Utah State Department of Transportation (UDOT).

The UDOT roadways are divided into four distinct classes of which Class A are highways, Class C are municipalities and Class B and Class D are considered "county" roads. The Class B and C road system, with a funding program, was established by the Utah Legislature in 1937 as a means of providing assistance to counties and municipalities for the maintenance and improvement of roads and streets throughout the state. This system continues today under the regulations governing class B and C roads as administered by UDOT. Class D roads on the other hand are maintained by the County. These roads do not receive regular maintenance or the level of improvements as that provided the B roads. They are maintained as needs and financing dictates. The Utah portion of highway 191 is Class A. Other roads within the Utah portion of Mexican Water Chapter are either Class B or D. The majority are Class B as shown on the transportation map.

Highway 160 is classified as a Rural Principal Other road under the ADOT classification system. The Rural Principal. Other system consists of all non-Interstate principal arterials. Highway 191 is a Rural Major Collector road. The rural collector routes generally serve travel of primarily intra-county rather than statewide importance and constitute those routes on which (regardless of traffic volume) predominant travel distances are shorter than on arterial routes. Consequently, more moderate speeds may be typical, on the average.

The remaining named roads within Arizona are part of the greater Navajo Nation Indian Reservation Roads (IRR) program. The IRR program was

established to provide for construction of public roads and bridges under the BIA administration. Its funding is authorized under the Federal Lands Highway Program and through the BIA-Division of Transportation. The Navajo IRR program is administered by the NDOT. The roads under the IRR program are referred to as Navajo routes.

NDOT classifies roads by their function. Functional road classification is the grouping of roads, streets and highways into integrated systems, each ranked by its relative importance and the function it is intended to serve, relative to mobility and land access. The classification also identifies the role each street or highway should play in channeling the flow of traffic in a logical and efficient manner. Navajo Route 12 (N12) is a Class 2 road. The Navajo-BIA Class 2 roads are major or minor arterials that provide an integrated network for serving traffic between population centers. They connect state highways and provide travel continuity among Navajo agencies. They collect traffic directly from Class 3 (streets) and Class 4 (local roads) roads onto state highways. Other Navajo routes within Mexican are considered Class 4 roads. The Navajo-BIA Class 4 roads are section line and/or stub-type roads collecting traffic for arterial roads and connecting with the grid of the Navajo IRR roads systems. They may serve areas around Navajo population centers areas, farming areas, schools, tourist attractions or various small business enterprises. This class also includes roads and vehicular trails for administration of forest, grazing areas, mining, recreation, or other utilization purposes. The Navajo-BIA Class 4 encompasses roads not falling in either the Class 2 or 3 classifications.

PUBLIC TRANSPORTATION

The Navajo Transit System does not service the Mexican Water community. The CHR, provides emergency medical transportation upon request. Other tribal and private services that provide public transportation to Navajos are: Navajo Aging Services Department providing service from Bluff; and Safe-Ride Services, which collects a fee for transportation.

AIR TRANSPORTATION

The nearest airstrip is located in Bluff, UT approximately 32 miles north from the Chapter house. A helipad is also located at the Four Corners Health Care Center in Red Mesa, Arizona approximately 16 miles east of the Mexican Water Chapter house.

TECHNOLOGY

It is essential to support the use of technology and science to their maximum potential to change the local economy and social life for the better. Advanced technology and communication will create job opportunities; access and improved delivery of services to education, healthcare, and public safety; knowledge creation and facilitate information sharing; and to increase the visibility, efficiency, and accountability of the Mexican Water Chapter.

TELEPHONE

Mexican Water did not have any phone services until 1988 when they started renting a radio-phone. Now the chapter is on a satellite microwave telephone system. Although Froniter Communications is the primary provider of telephone service on the Navajo Nation, they do not serve the Mexican Water Chapter. The nearest phone lines are 15 miles from the chapter house (Rodger 2004). Growing coverage of cellular telephone service across the Navajo Nation has begun to replace the need for landline service in some cases; however, cell-phone service in Mexican Water is limited.

In 2010, nearly three-quarters (68.9 percent) of the occupied housing units in the Chapter have no land line telephone. This is considerably higher than the Navajo Nation (39.4 percent).

CEMETERY
The community cemetery is an approximately one acre tract located north of the former Chapter House site. Many of the graves are unmarked and as a result it is difficult to determine if the tract has reached its capacity. The Chapter is in need of a new site. Several family cemeteries also exist throughout the community. These sites are located near the family homesteads and maintained by the respective families.

6.2 PROPOSED DEVELOPMENT SITES

Land use and community development plans in the planning area as presented below are based on the wants, needs and desires of the community members. The result of the community joining together has been extremely positive and immensely productive for all parties. The results of the collective efforts of community members with reference to land use and community development are discussed in the following sections. The information within these sections came directly from the written and spoken words of the families and community members as voiced during work sessions and in public meetings.

To facilitate planning, the planning area has been subdivided into 13 development sites **(MAP 16)**. The individual development areas and their proposed land uses are discussed below along with the corresponding maps.

SAN JUAN RIVER DEVELOPMENT
The San Juan River Development area has a couple of proposed uses would support expanded growth for development opportunities **(MAP 17)**. Uses in this area would be associated with recreational, commerical, industrial and agricultural development. The proposed development would have a positive potential impact on economic development by providing an enhancement to recreational facilities for the area, and possibly providing a source of income from tourism and industrial development. Potential uses could range from a rafting launch, park, river walk and gravel pit. There are no utilties lines in this area.

Farming
The farm area is located south of the San Juan River and west of Highway 191. This use would potentially generate income for residents of the area in the form of products that could be sold at markets.

Recreation
A recreational area is proposed adjacent to the South side of the San Juan River and to the east and west of Highway 191.

Commercial
An area along the west side of Highway 191 has been designated for commerical development.

Industrial
A large area for a potential gravel pit is located south of the farming area and near Highway 191.

CROW SPRINGS DEVELOPMENT

This area is located next to the existing South White Rock housing area along Highway 191 **(MAP 18)**. Potential development include community facilities, commerical, recreational and farming. This area near existing development and power and water lines cross some the proposed development areas.

Community Facilities

Two areas for community facilities along either side of Highway 191 have been identifed to compliment an existing community facilities site. The existing site is currently undeveloped.

Farming

A large area west of Highway 191 behind the other development areas is proposed for farming.

Recreation

Two existing recreational areas are located in the area. The northern site is currently used for biking. The other site is adjacent to the east side of Highway 191.

Commercial

Two areas along the west side of Highway 191 are designateded for commerical development. The smaller tract is adjacent to the existing communty facilities site. The larger area is to the south of the residences and along the highway.

Industrial

An industrial site on the north end of this development site and extends into the Crow Springs development site.

TODAHALDKANI DEVELOPMENT

This area is located in the along Highway 191 North just south of Crow Springs **(MAP 19)**. Proposed development areas range from residential to farming.

Residential

Two large tracts of land have been designated for residential housing. Families have also indicated they they would like to have homesite leases near their homesteads.

Community Facilities

Community facilities are proposed for an area along the east side of Highway 191.

Commercial

Two commercial tracts are proposed along the northeastern side of the highway. The area has been designated for further development such as a truck stop. The southwestern site is proposed for roadside vending such as a farmers market.

Farming

Several farm plots have been designated in the southwestern portion of this site.

METEOR SITE DEVELOPMENT
This area is located along County Road 415 **(Map 20)**.

Residential
Two residential tracts are proposed in this site.

Open Space
The area along the east side of County Road 415 where a meteor hit in the 1920s or 30s has been designated as open space to preserve the area.

PONCHO HOUSE CLIFF DEVELOPMENT
This area is located in and near the Chinle Wash **(Map 21A).**

Tourism
A commerical area is designated for tourism and conceptual plans are depicted in **Map 21B**. A stewardship and tourism program can include an interpretative/ visitor plan as well as business workforce and economic development as a succession of linked activities that will collectively preserve the Poncho House Cliff Dwellings cultural and natural assets while supporting economic vitality of the Mexican Water community.

Farming
Farming is proposed east of County Road 415.

Residential
A residential area is proposed along the county road

COMB RIDGE DEVELOPMENT
This area is located along a dirt road in Utah near the AZ-UT border **(Map 22)**.

Commercial
A commercial tract is designated along the east side of the dirt road. This tract is to complement the cultural site directly across the road.

Cultural, Visitor, Tribute
The area west of dirt road has been designated for cultural, visitor and tribute to the Navajo way of life.

RED WATER RANCH DEVELOPMENT
This area is located in the Utah portion of the planning area along Highway 191 approximately five miles north of the AZ-UT border **(Map 23A)**.

Mixed Use
This is a 50-acre tract withdrawn for mixed use as the conceptual drawing shows in in **Map 23B**. The existing multipurpose complex is located on the tract. The first three cabins for commerical purposes were built in 2014. Additional development including the multipurpose complex II are ready for construction (waiting on funding).

Open Space
The area across the highway is rich in vegetation and has been designated as open space to preserve the area.

Farming
The farm area is located west of Highway 191. This use would potentially generate income for residents of the area in the form of products that could be sold at markets.

Traditional Site
A traditional area has been designated west of Highway 191. This use is for tradtional purposes including ceremonial site, plant/herb gathereing area, and/or historical sites.

LOOKING BOBCAT DEVELOPMENT
This area is located along the north side of Highway 160 **(MAP 24)**.

Commercial
A commercial tract is proposed along the north side of Highway 160. This highway is a major thoroughfare in the region and strategic commerical development would boost the local economy.

Traditional Site
An existing traditional site located along the edge of the dirt that extends northwest of the main highway.

Farming
The farm area is located west of Highway 191 along the wash. This use would potentially generate income for residents of the area in the form of products that could be sold at markets.

MEXICAN WATER DEVELOPMENT
This area is located on the Arizona portion of the planning area along Highway 191 **(MAP 25)**.

Residential
A large tract of land has been designated for residential housing along the south side of Highway 160. Families have also indicated they they would like to have homesite leases near their homesteads.

Community Facilities
Community facilities are proposed for an area between the proposed residential and commerical tracts along the south side of Highway 191.

Commercial
A commercial tract is proposed along the south side of the highway. This highway is a major thoroughfare in the region and strategic commerical development would boost the local economy.

CROSSROADS DEVELOPMENT
This area is located at the intersection of Highway 160 and Highway 191(also known as Navajo Route 12 up to the state border) **(MAP 26)**.

Residential
A tract of land has been designated for residential housing in the northeast section of the intersection. Families have also indicated they they would like to have homesite leases near their homesteads.

Community Facilities
Community facilities are proposed for an area between the proposed residential and Highway 191. Community facilites should complement the development area.

Commercial
Several tracts of commerical development are proposed for the area. The intersection lends itself to opportunities for economic development.

Cultural, Visitor, Tribute
The area is strategically located at the corner of the northwest corner of the intersection. Land use is desgnated for cultural, visitor and tribute to the Navajo way of life.

TOHTSONI DEVELOPMENT
This area is located in Arizona portion of the planning area near Navajo Route 5054 **(MAP 27)**.

Farming
Two farm plots are located along the wash. This use would potentially generate income for residents of the area in the form of products that could be sold at markets.

HUMMINGBIRD SPRINGS DEVELOPMENT
This area is located in the southwest part of the planning area **(MAP 28)**.

Residential
A residential tract has been deignated adjacent to an existing powerline and near Navajo Route 5057. Families have also indicated they they would like to have homesite leases near their homesteads.

Community Facilities
A tract adjacent to Navajo Route 5057 and central to existing homesites has been designated for community facilities. Community facilites should complement the development area.

Farming
Two farm plots are proposed near the wash. would potentially generate income for residents of the area in the form of products that could be sold at markets.

Traditional Sites
Two significant areas have been designated as tradtionally sensitive. These sites need to protected and preserve the area.

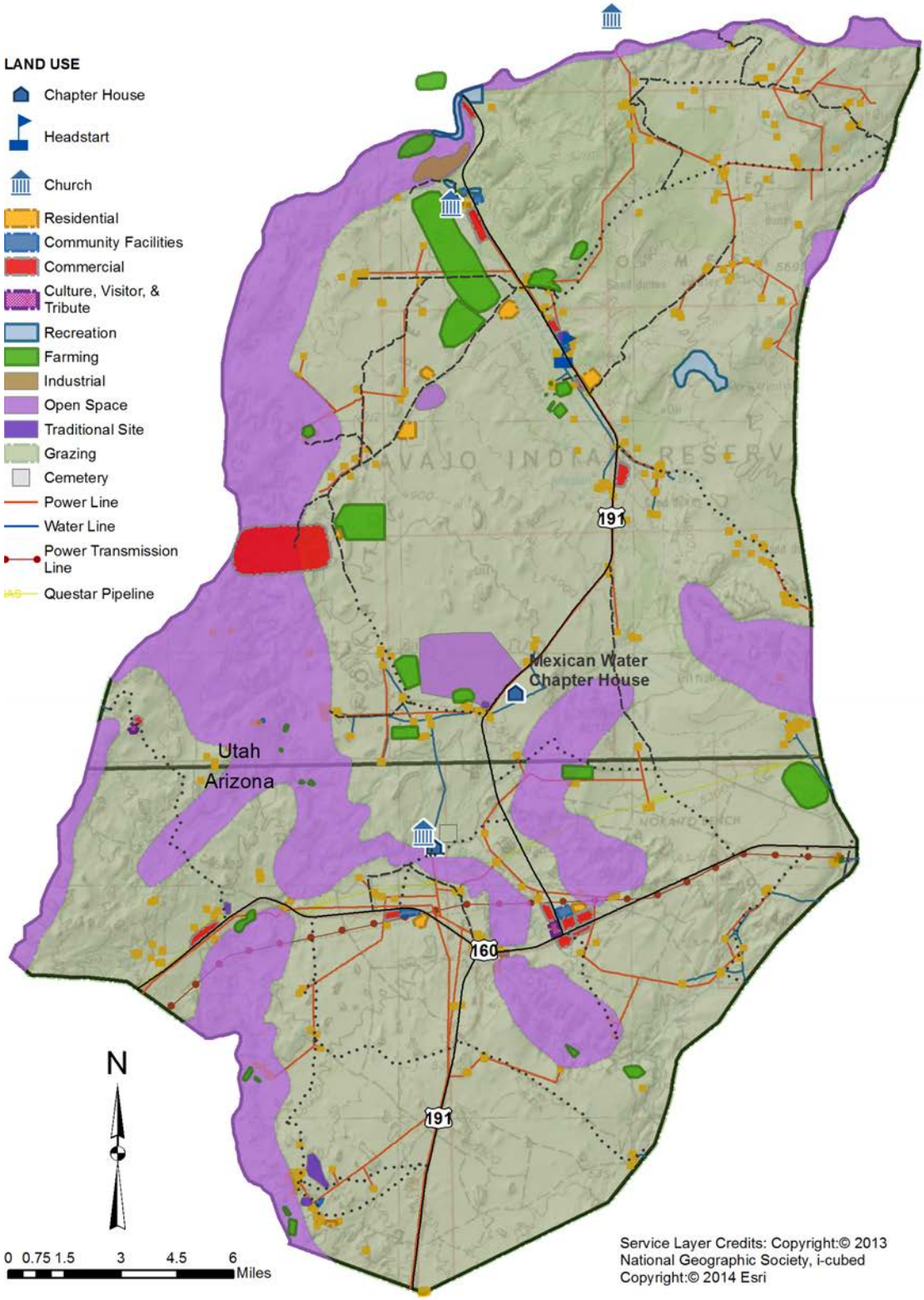
DESCHEENIE DEVELOPMENT

This area is located in Arizona near Chinle Wash and near the western edge of the planning area **(MAP 29)**.

Farming

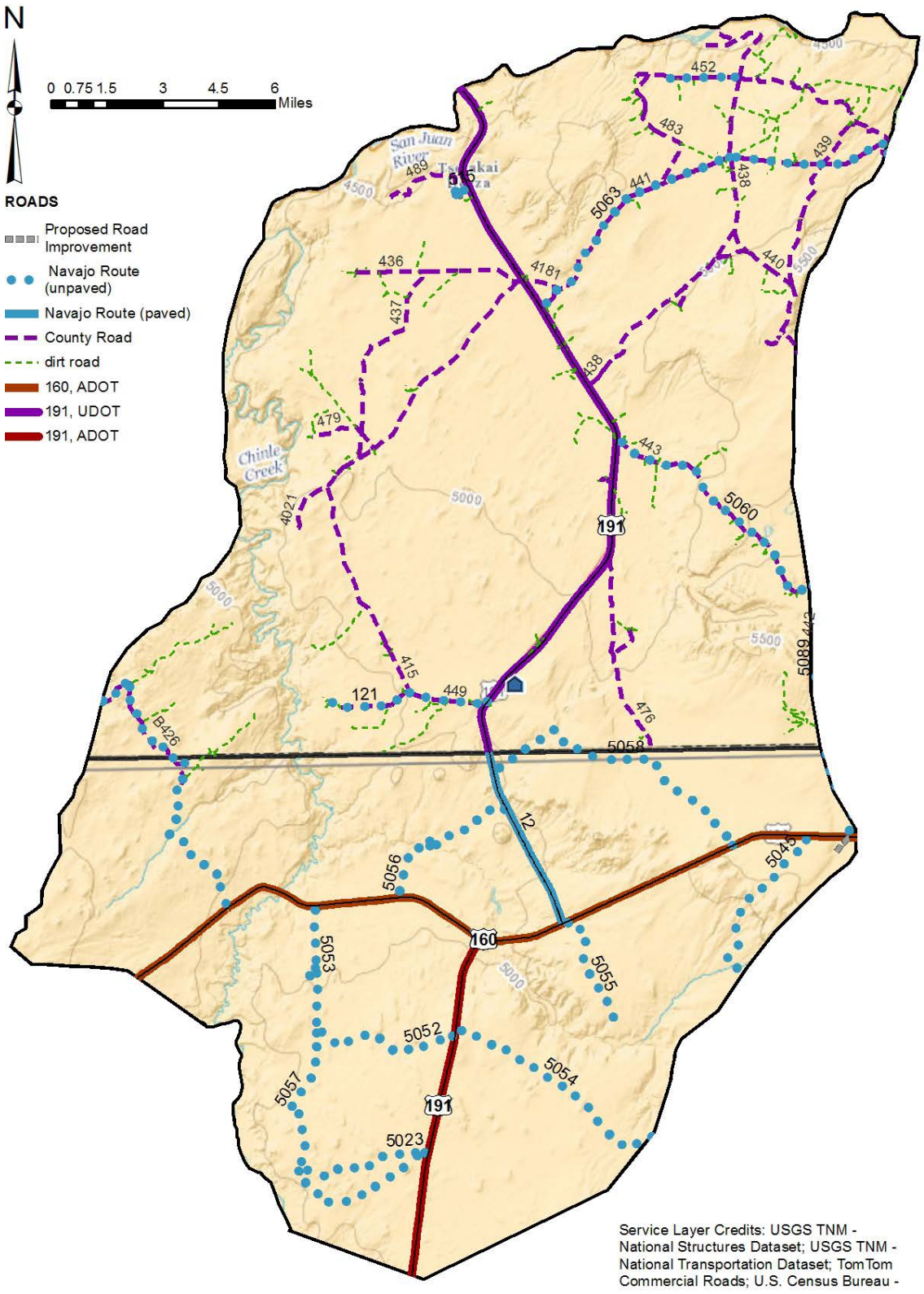
Two farm plots are located along the wash. This use would potentially generate income for residents of the area in the form of products that could be sold at markets.

MAP 14. LAND USE



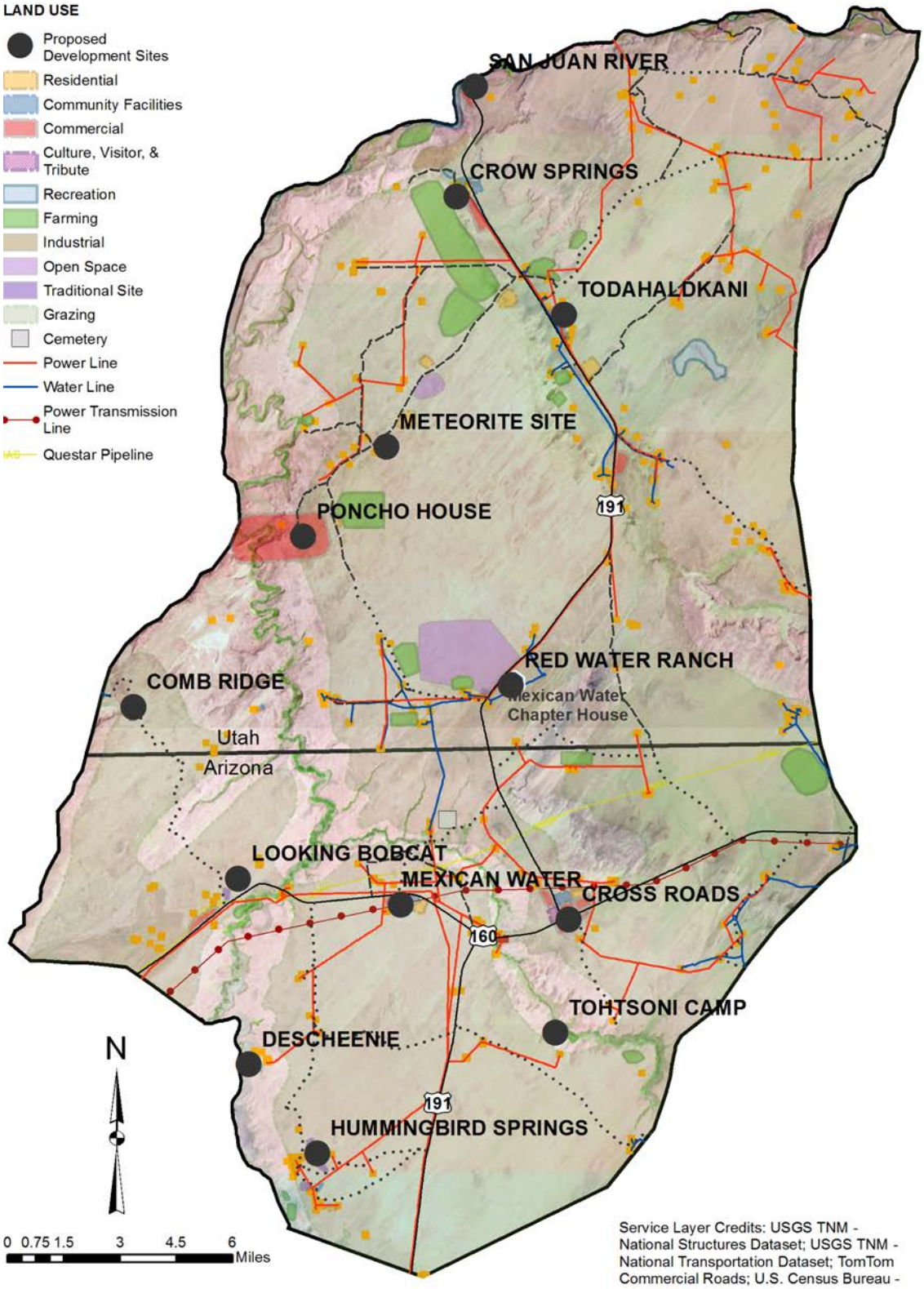
Data Source: Navajo Divison of Water Resources - Watershed
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

MAP 15. ROADS



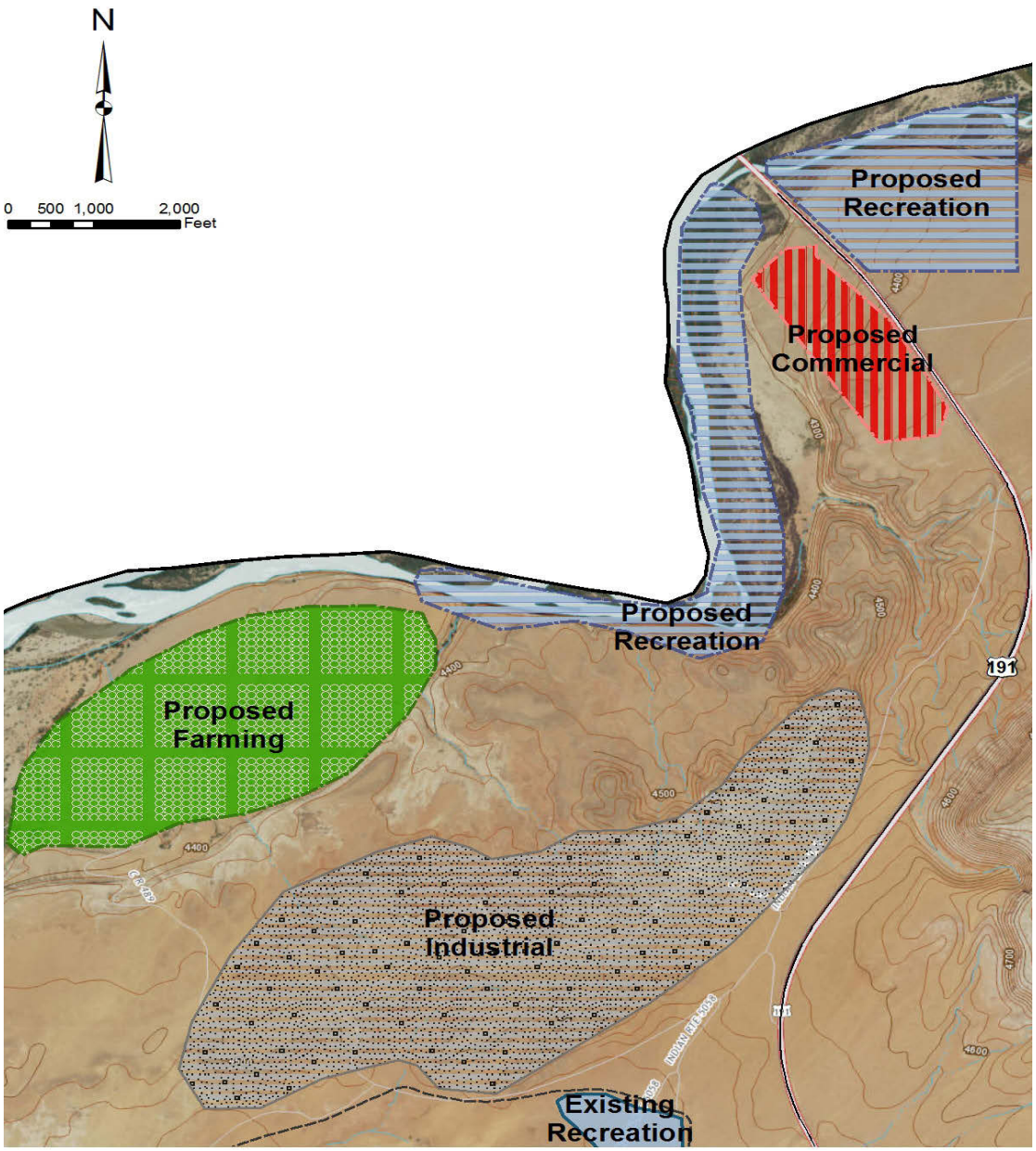
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

MAP 16. DEVELOPMENT SITES



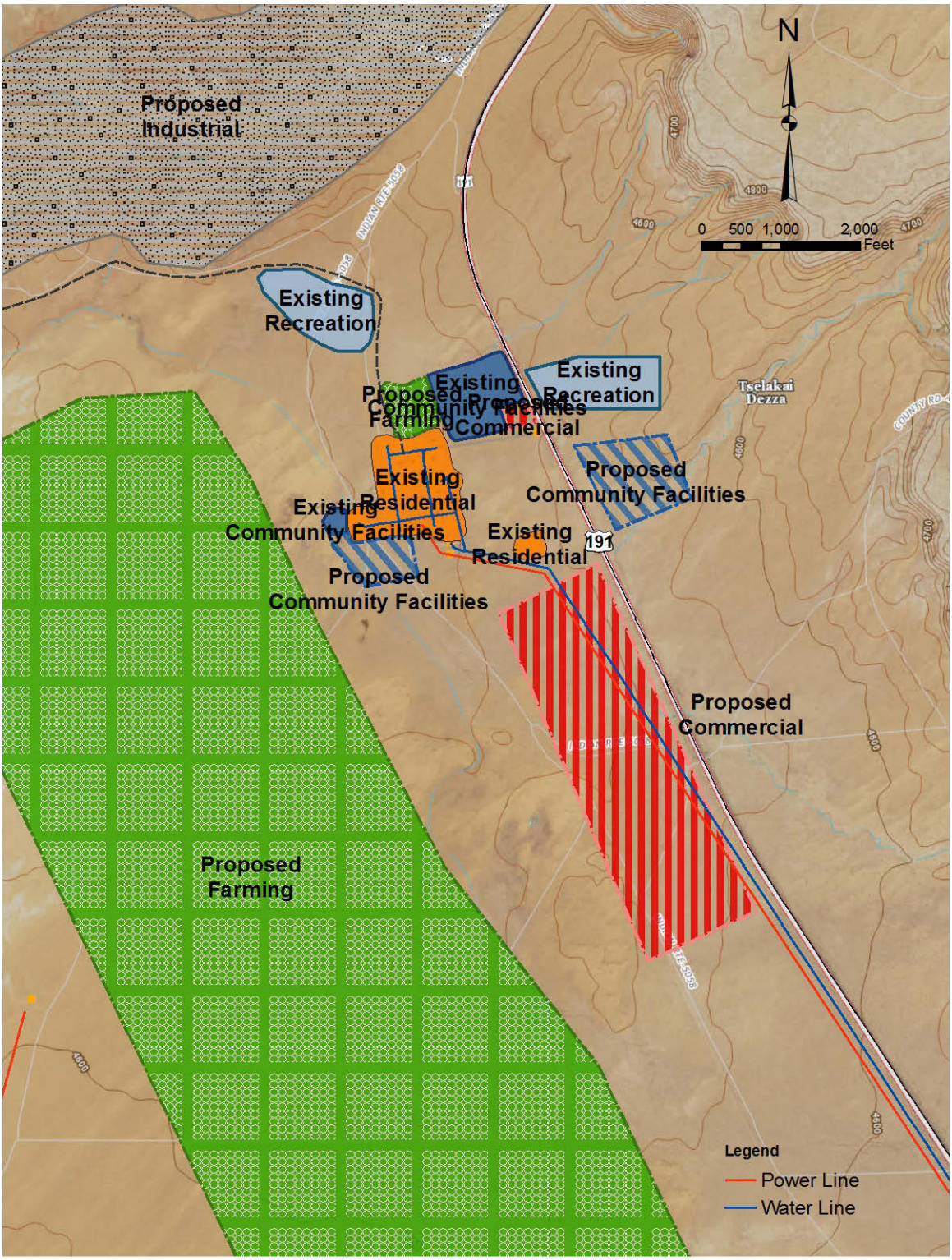
Data Source: Rocky Mountain Power - Utah Power Lines; NTUA - Arizona Power Lines & Water Lines
Disclaimer: Mexican Water Chapter and/or JJ Clacs & Company shall assume no liability for any errors, omissions, or inaccuracies in the information. Map for planning purposes only.

MAP 17. SAN JUAN RIVER DEVELOPMENT



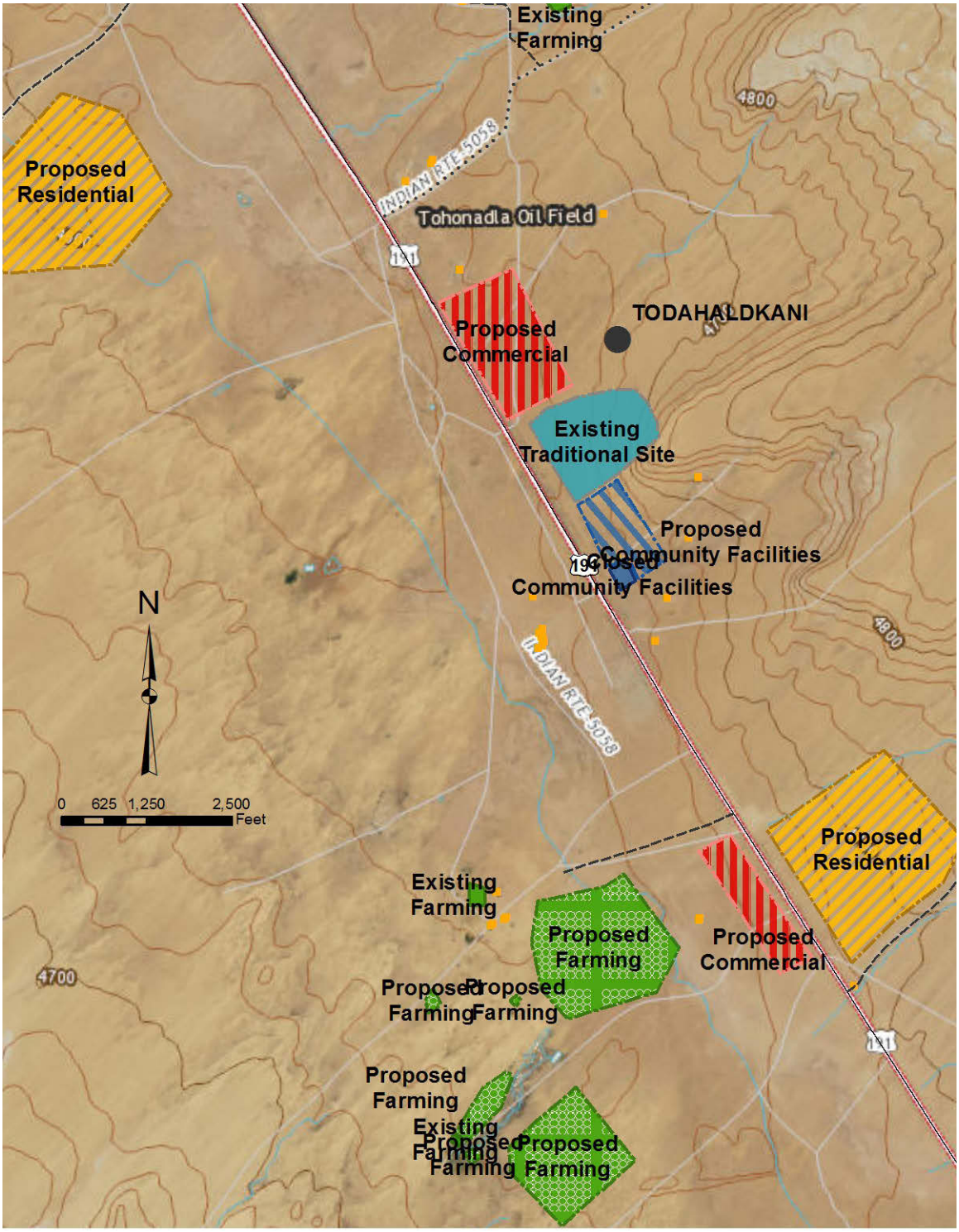
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 18. CROW SPRINGS DEVELOPMENT



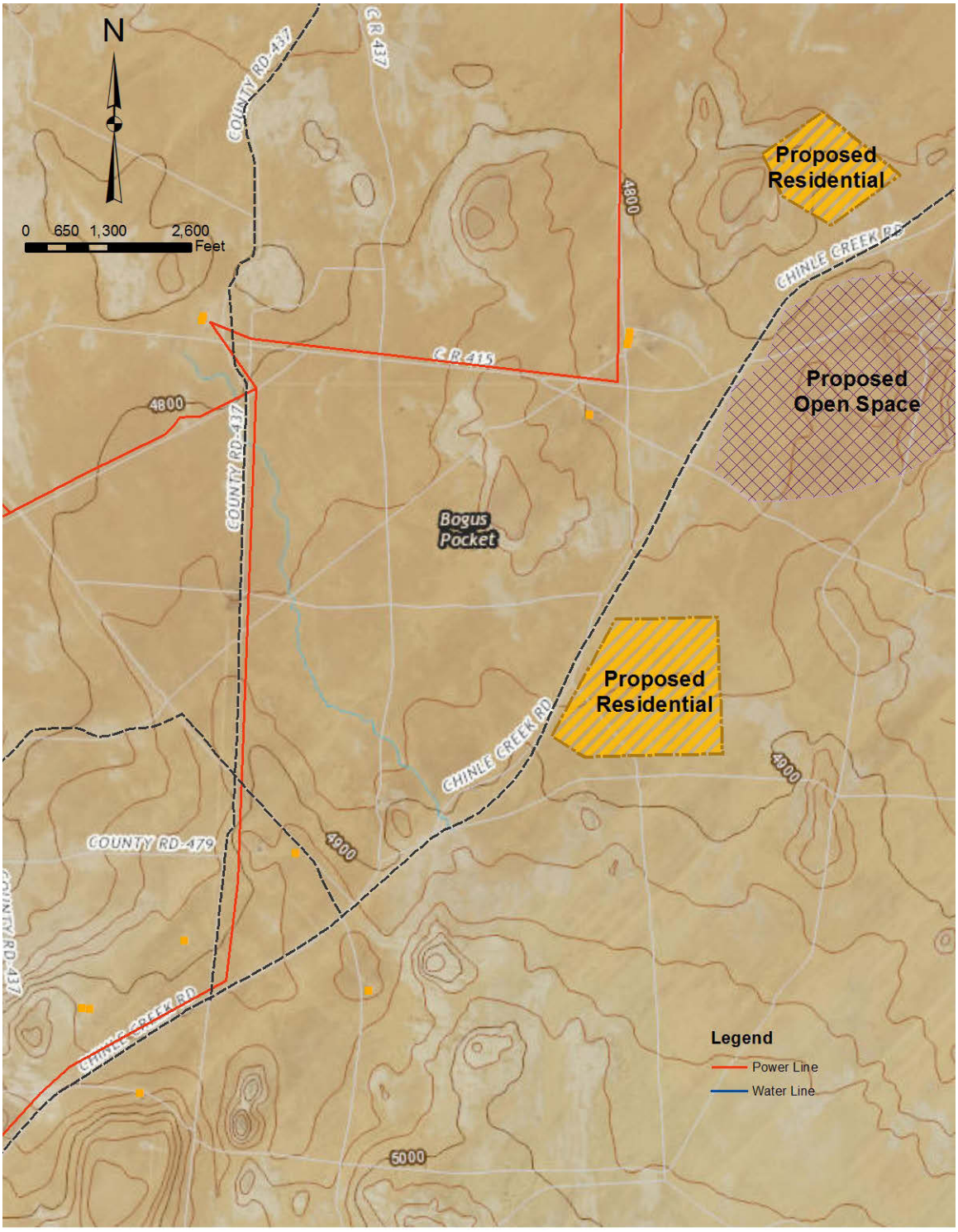
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 19. TODAHALDKANI DEVELOPMENT



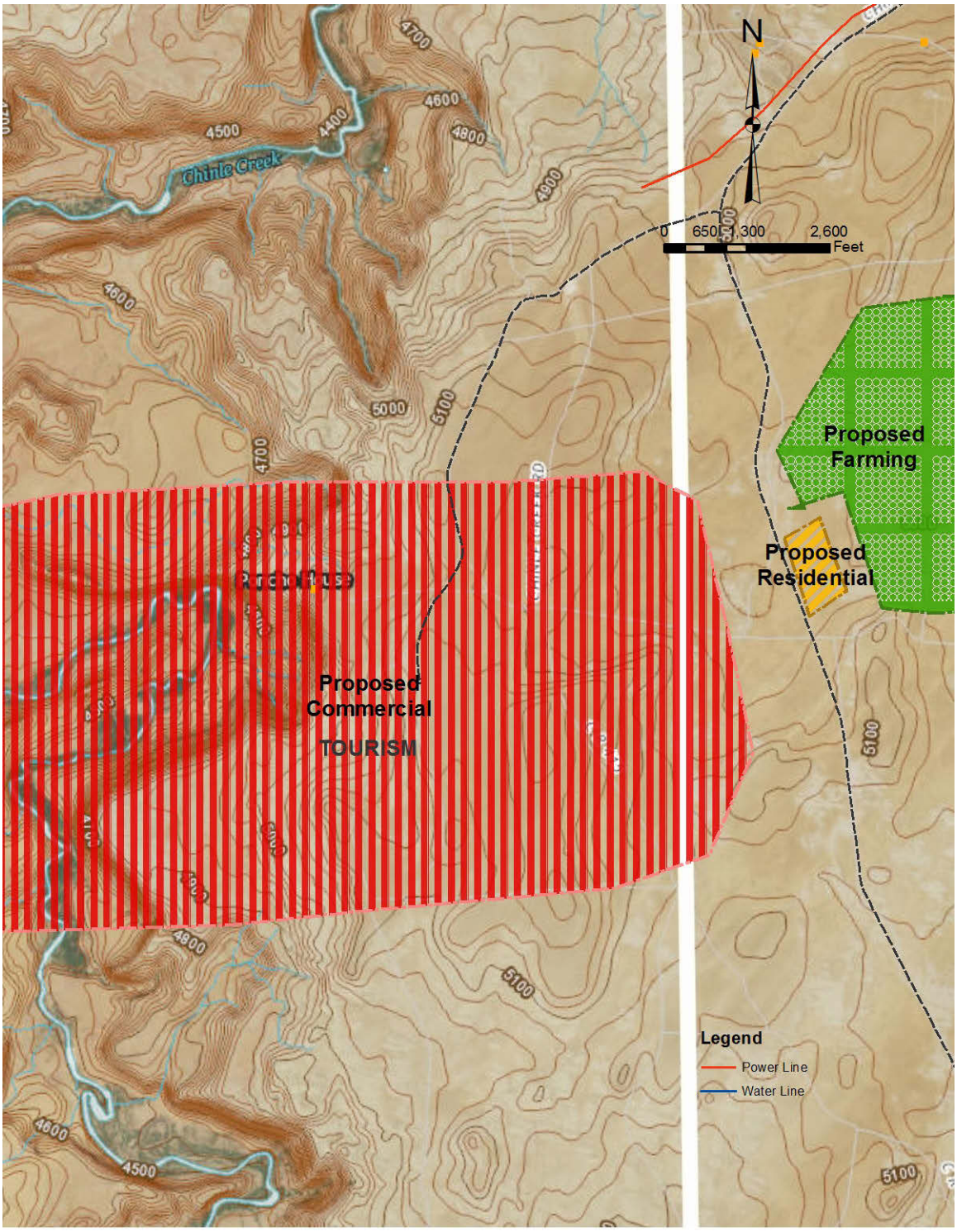
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 20. METEOR SITE DEVELOPMENT



Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 21A. PONCHO HOUSE DEVELOPMENT



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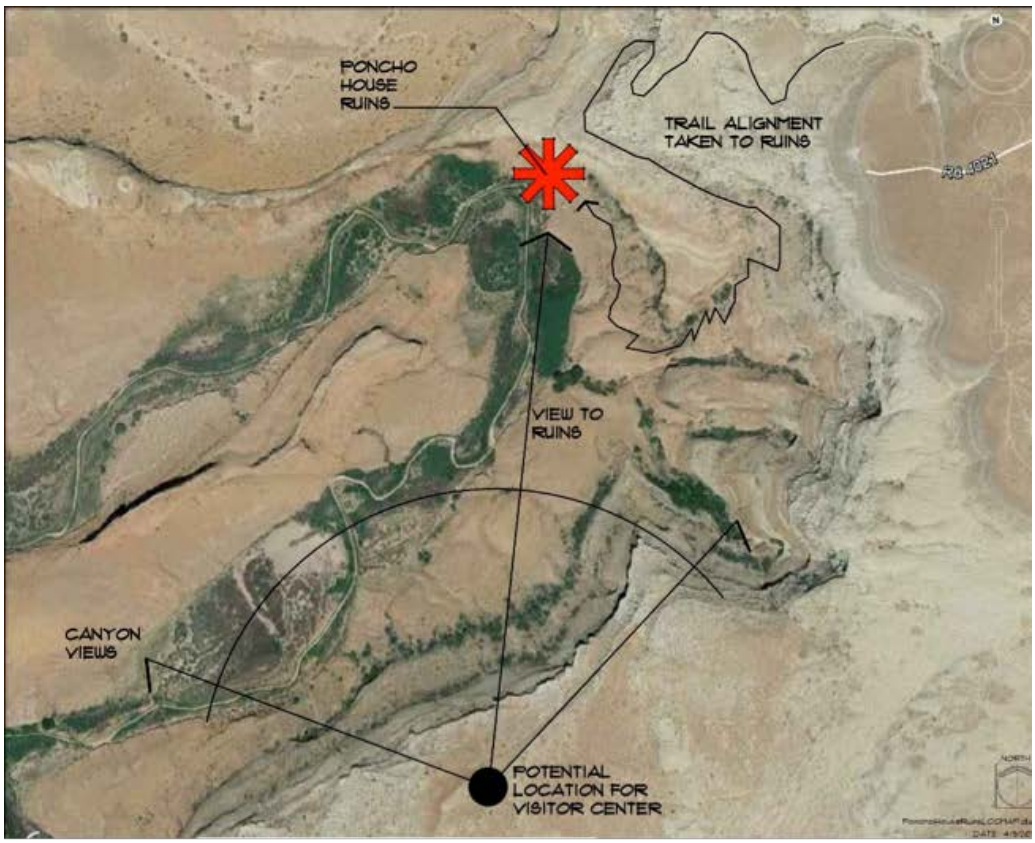
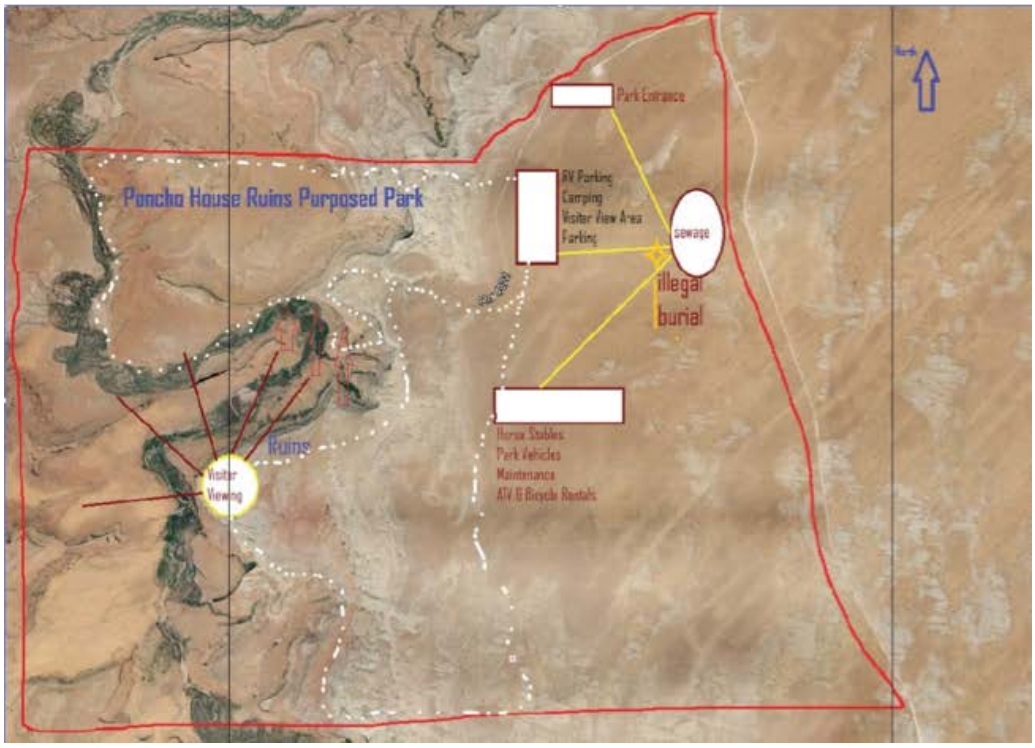
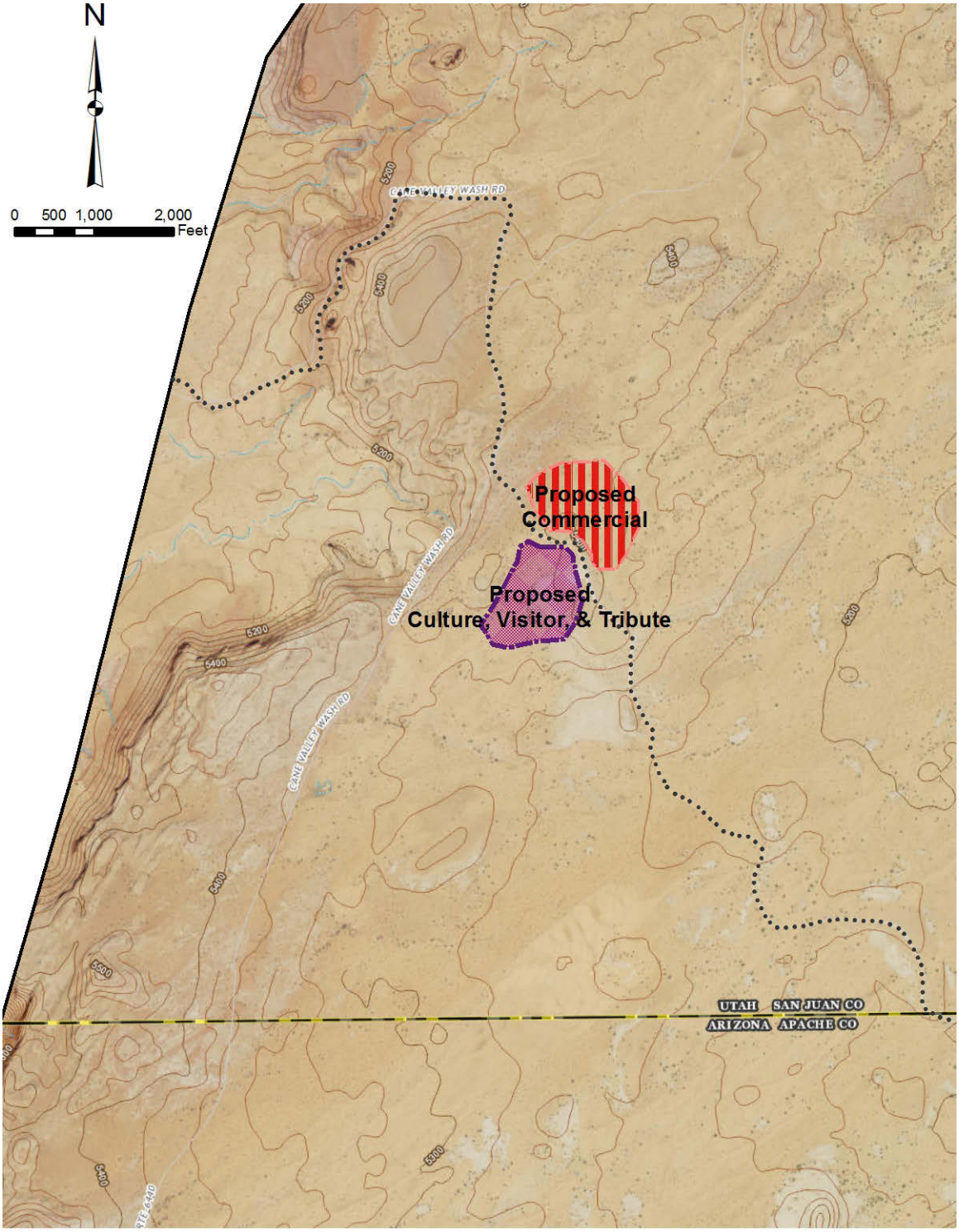
MAP 21B. PONCHO HOUSE CONCEPTUAL



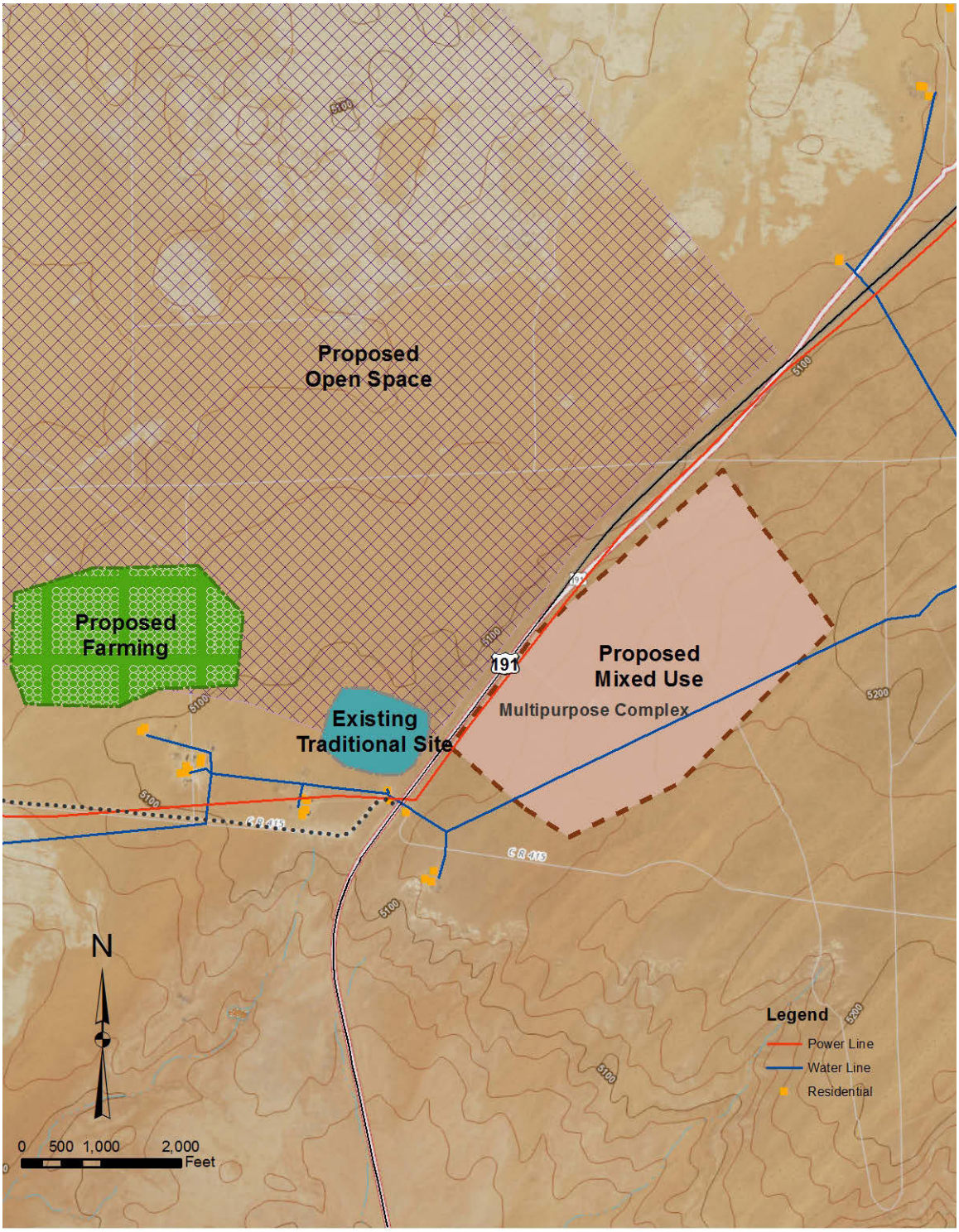


MAP 22. COMB RIDGE DEVELOPMENT



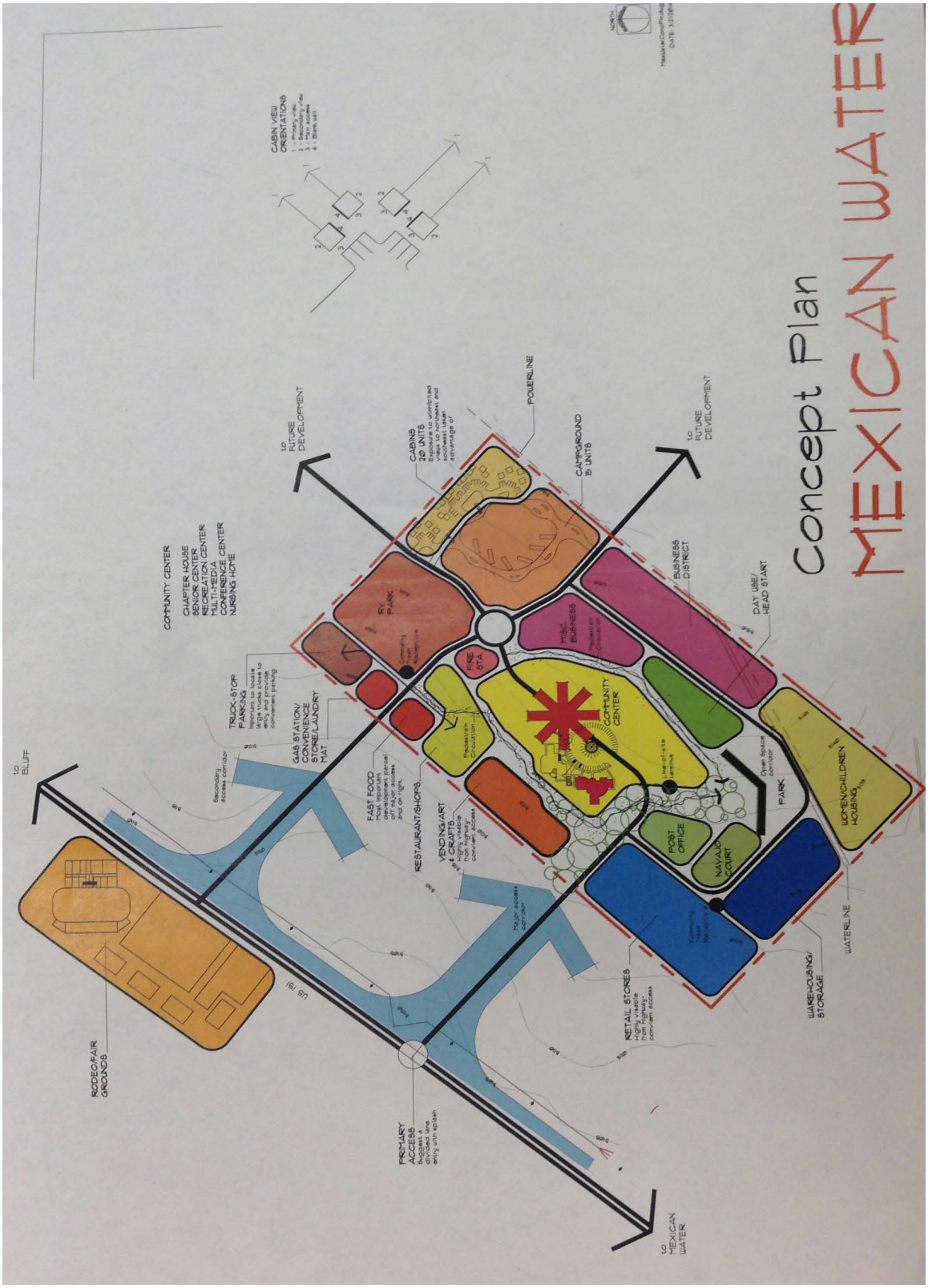
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 23A. RED WATER RANCH DEVELOPMENT

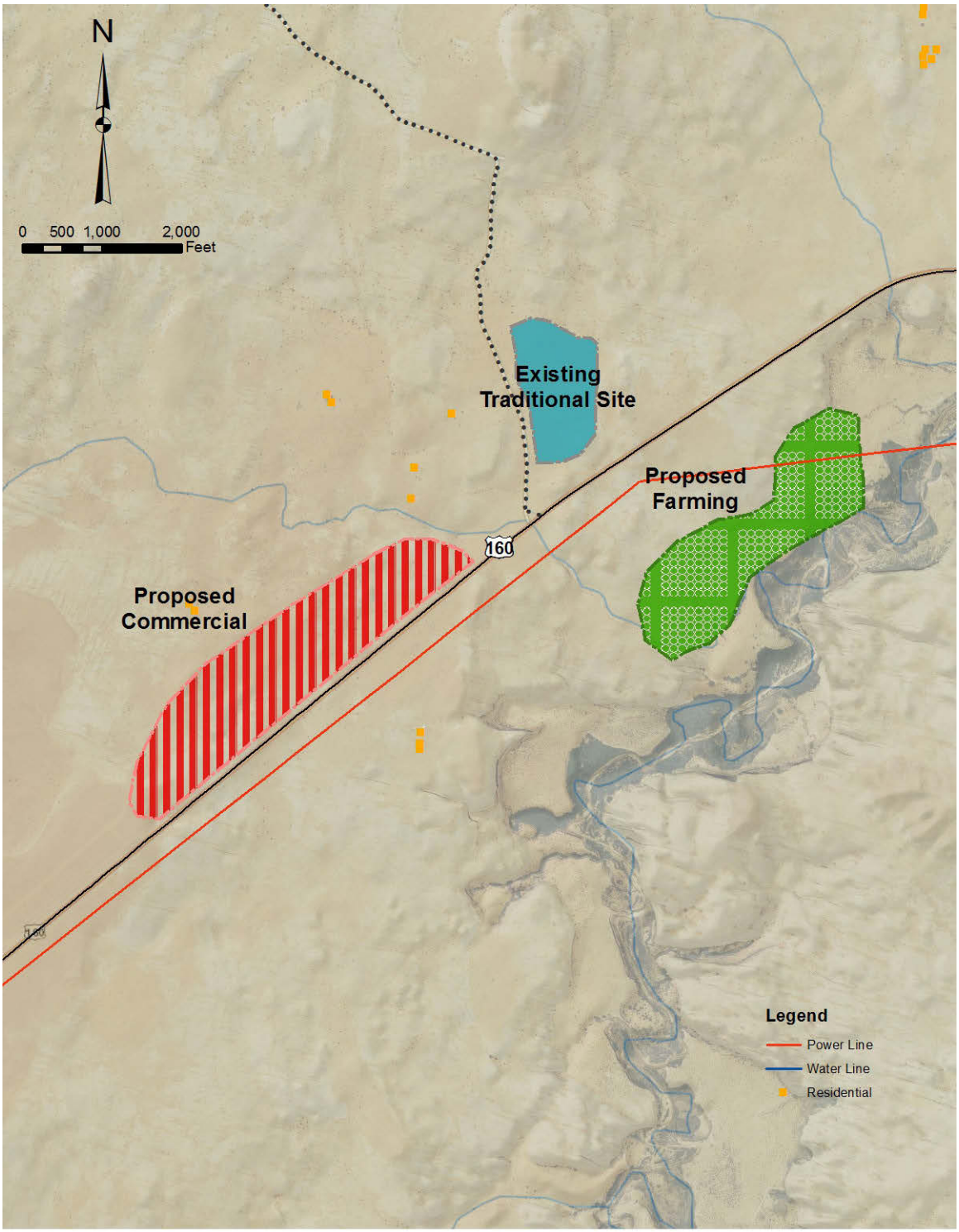


Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 23B. RED WATER RANCH CONCEPTUAL

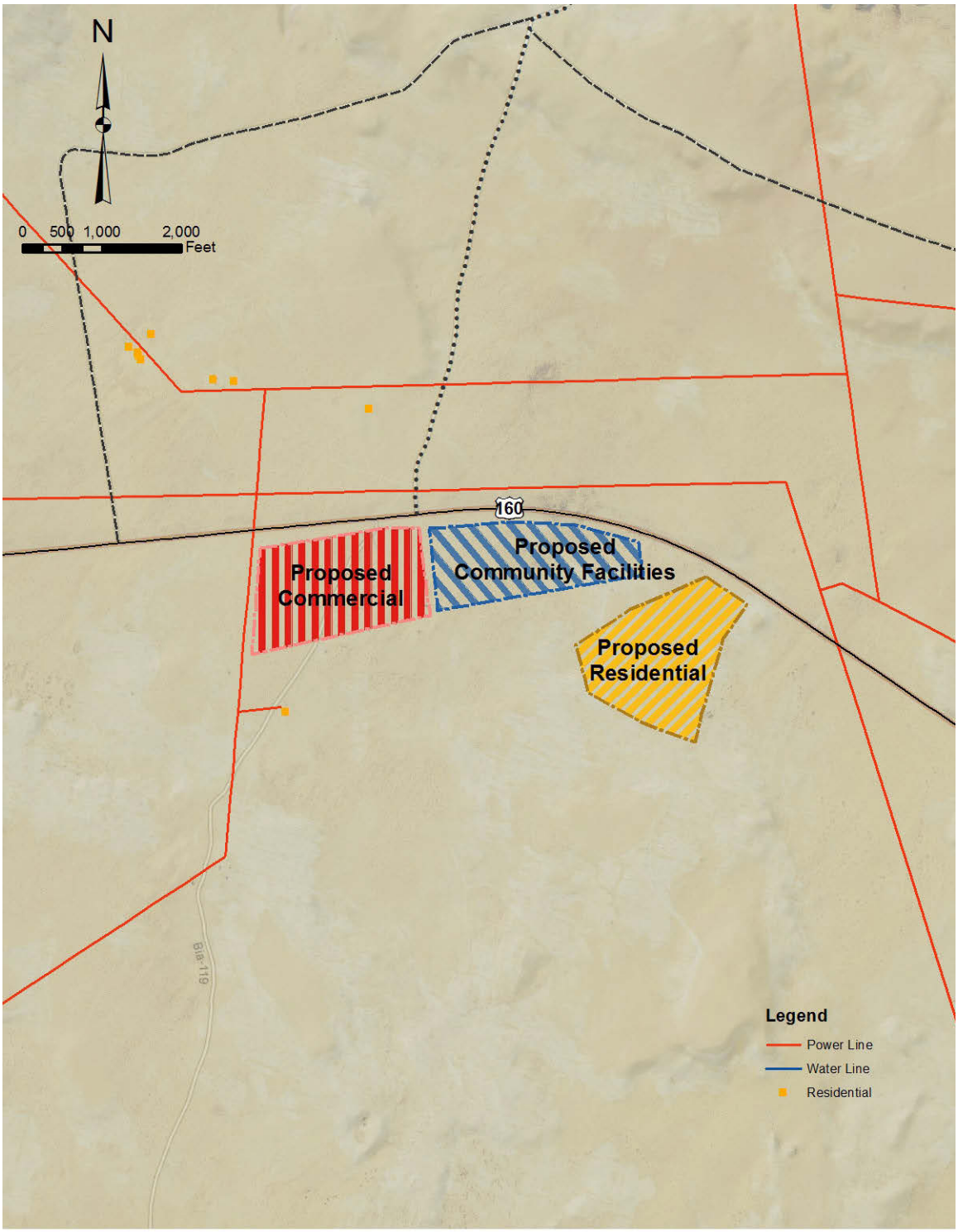


MAP 24. LOOKING BOBCAT DEVELOPMENT



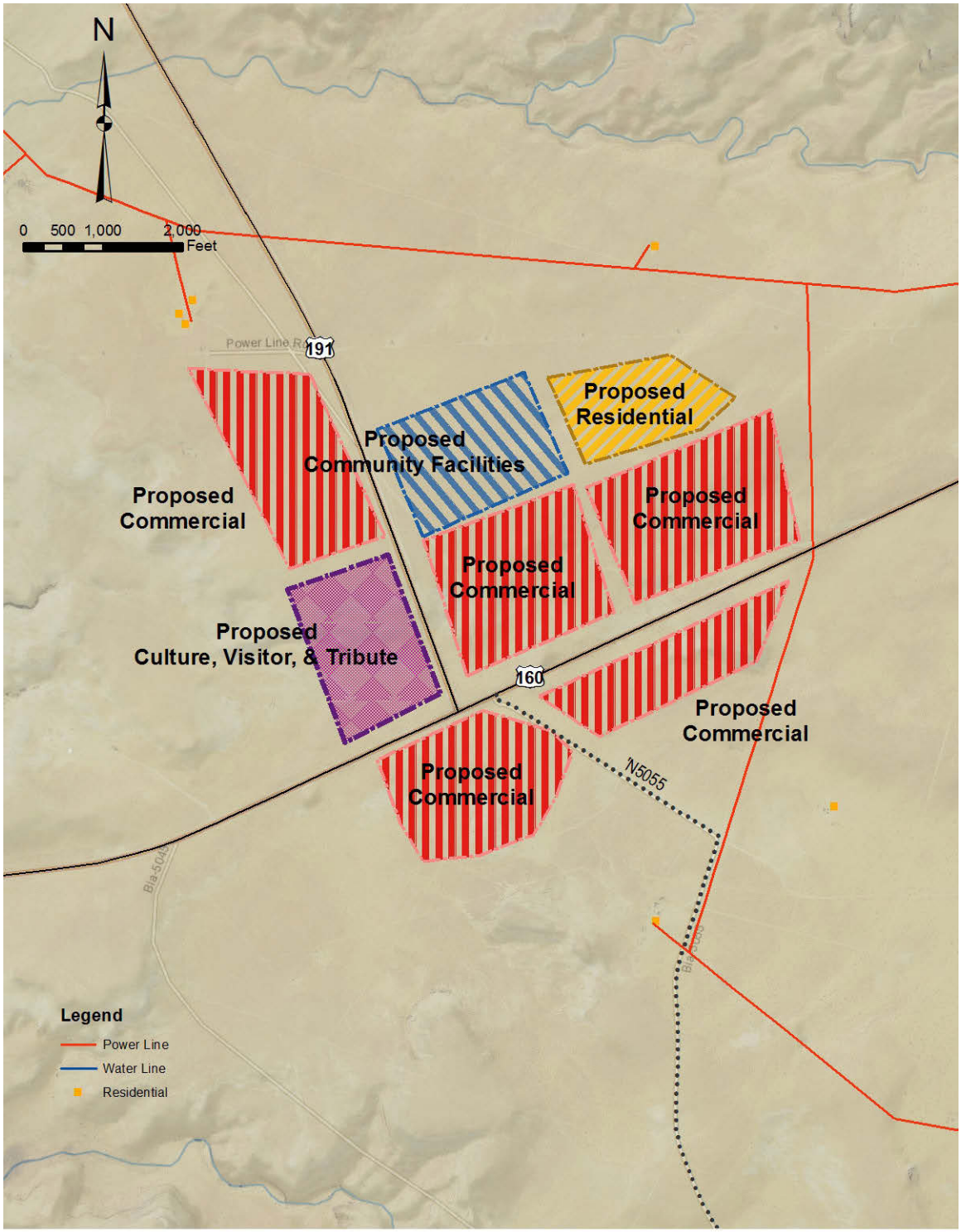
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 25. MEXICAN WATER DEVELOPMENT



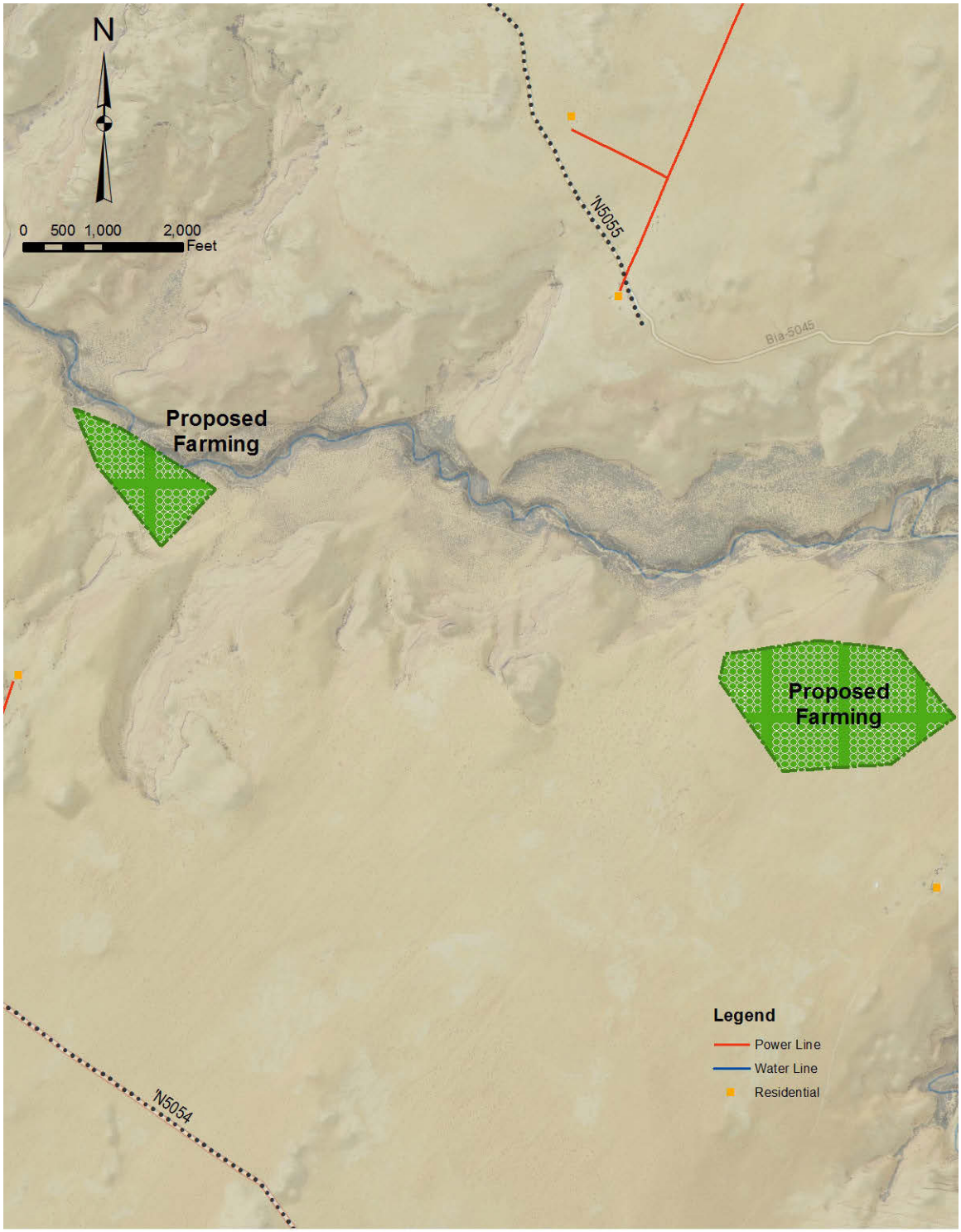
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 26. CROSS ROADS DEVELOPMENT



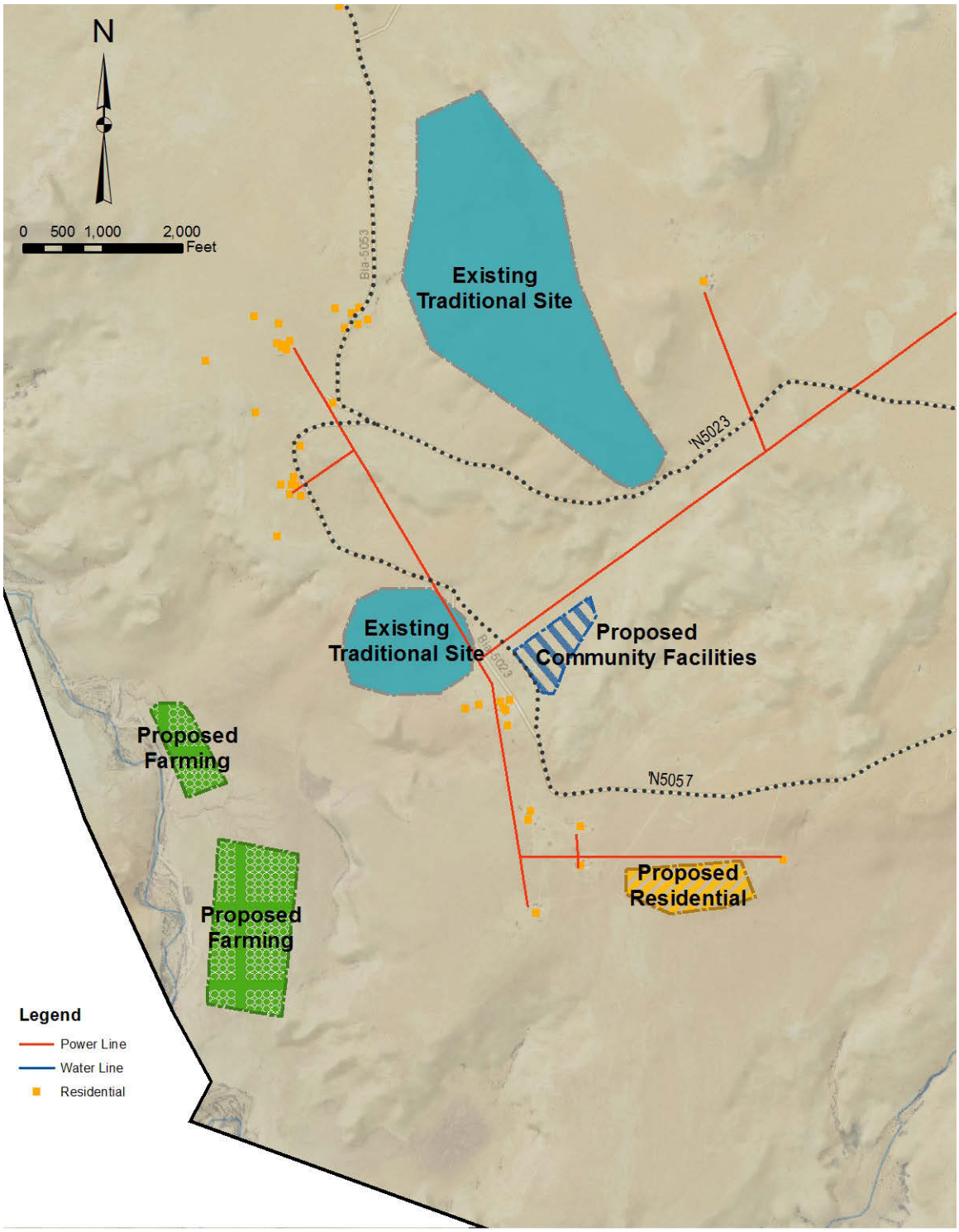
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 27. TOHTSONI DEVELOPMENT



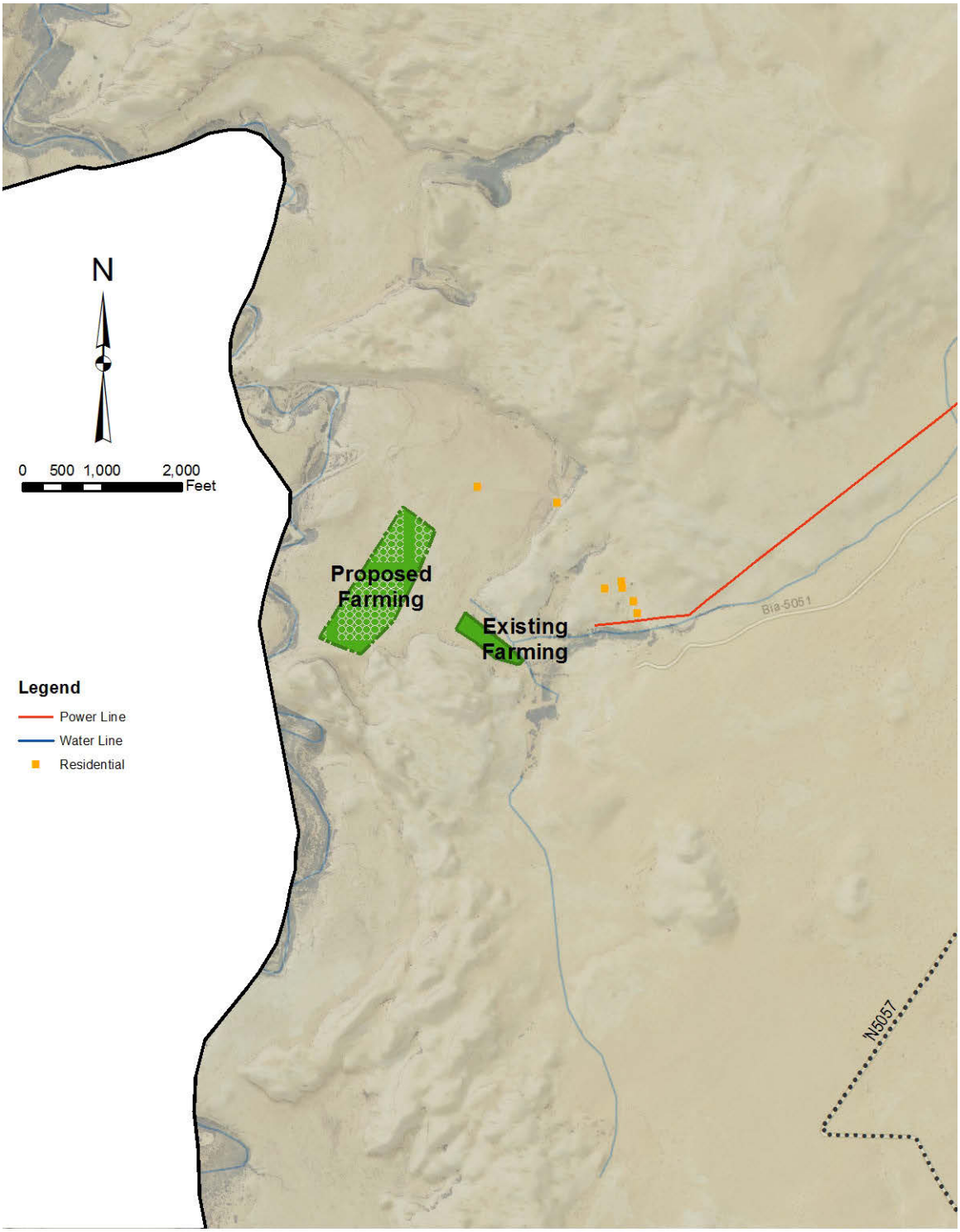
Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 28. HUMMINGBIRD SPRINGS DEVELOPMENT



Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

MAP 29. DESCHEENIE DEVELOPMENT



Data Source: Rocky Mountain Power - Utah Roads; NDOT - Navajo Routes
Service Layer Credits: USGS TNM - National Structures Dataset; USGS TNM - National Transportation Dataset; TomTom Commercial Roads; U.S. Census Bureau - TIGER/Line; USGS TNM - National Boundaries Dataset; USGS TNM - Geographic Names Information System; USGS TNM - National Hydrography Dataset

7

CAPITAL IMPROVEMENT PROJECTS

Capital projects are planned for and built over a period of several years. They are important to the implementation of the land use plan.

Under the Navajo Nation, the Infrastructure and Capital Improvement Plan (ICIP) is a list of priority projects showing the estimated costs and source of revenue and funding for selected projects over a six year period. Eligible projects pursuant to the Navajo Nation Infrastructure and Capital Improvement Guidelines and Procedures include:

- The construction, renovation(s) repair or expansion of public facilities. i.e., Chapter House, Senior Citizens Centers, Headstart/Preschool buildings, Recreation facilities, Cemetaries, Fire Stations, Solid Waste facilities, Airports, Streets & Lights, Bridges, Warehouses and Storage buildings.
- Major equipment purchases such as road maintenance equipment, farm equipment, fire fighting equipment, vehicles, school playground equipment, office equipment and furnishings that support new buildings.
- Acquisitions of manufactured buildings, aircraft, land and/or lease of thereof.
- The cost for the development of infrastructure such as electric power line, water line, sewer lagoons, waste water treatment facilities, communication and transportation systems, roads and parking lots, Erosion Control Systems, and Irrigation Systems.
- The installation of bathroom additions and electrical housewiring required as a precedent to planned or current waterline extensions or electrical powerline extensions for the same project.

Mexican Water's ICIP Plan 2016-2021 covers projects for Fiscal Year 2015 thru 2019. A project summary is presented on the following page.

INFRASTRUCTURE CAPITAL IMPROVEMENT PLAN 2016 - 2021

Mexican Water Chapter

PROJECT SUMMARY

Project Title	Rank	Category	Funding Sources	2016	2017	2018	2019	2020	2021	Total
Construction of 2nd Phase of Multipurpose Cmplex - Senior Center/Three Phase Power Line	2015 - 1	Building-Community	AML NN CIP General Funds State Other	3,963,000	0	0	0	0	0	3,963,000
Upgrade Three Phase Powerline with Fiber	2015 - 2	Utilities--Power - Linear	CDBG NN CIP General Funds Chapter CIP Funds	2,275,380	0	0	0	0	0	2,275,380
Scattered Telephone Ext/UT Broadband Project	2016 - 1	Utilities--Telecomm - Linear	AML NN CIP General Funds NN Other	0	1,386,000	0	0	0	0	1,386,000
Pln, Dsgn, Cnstr Chapter Accel/Decel Lanes/ Access Road & Parking Lot	2016 - 2	Transportation - Linear	BIA NN CIP General Funds NN Fuel Excise Tax Funds	0	616,000	0	0	0	0	616,000
Pln, Dsgn, Cnstr Media Computer Bldg	2017 - 1	Building-Community	AML CDBG USDA	0	0	450,000	3,000,000	0	0	3,450,000
Pln, Dsgn, Cnstr Red Ranch Resort	2017 - 2	Building-Economic Development	USDA 4CEC Legislative Grants	0	0	400,000	2,500,000	0	0	2,900,000
Plan, Dsgn, Cnstr Scattered Housing	2018 - 1	Housing - Block	NAHASDA USDA	0	0	0	216,000	216,000	216,000	648,000
Pln, Dsgn, Cnstr Head Start	2019 - 1	Building-Education	USDA Chapter CIP Funds NRS	0	0	0	0	360,000	1,200,000	1,560,000
			TOTAL	$6,238,380	$2,002,000	$850,000	$5,716,000	$576,000	$1,416,000	$16,798,380

8

PLAN ADMINISTRATION

A long-term strategy is important as part of community and economic development effort, but it is more critical that a Plan be established with specific action steps to get the process underway.

Wise and rapid decision making now will not only make appropriate lands available for community and economic development. Wise and rapid decision making will also impress potential business and industries that may be interested in these areas.

Below are some of the first steps that need to be taken:

8.1 AUTHORIZATION

Land use planning has been an option for Navajo Nation chapters since the Title 26 Navajo Nation Local Governance Act (LGA) passed into law in 1998. If Chapters choose to administer land within their community, a Land Use Plan must be developed and implemented, pursuant to the law, and updated every five years.

The purpose of the LGA is to recognize governance at the local level. Through adoption of this Act, the Navajo Nation Council delegates its authority, with respect to local matters consistent with Navajo law including custom and tradition, to the individual Chapters. This authority will improve community decision making, allow communities to excel and flourish, enable Navajo leaders to move towards a more prosperous future, and improve the strength and sovereignty of the Navajo Nation in the long run. The LGA compels Chapters to govern with responsibility and accountability to the local citizens.

Chapters wanting to administer land, pursuant to LGA, are required to develop a Land Use Plan based upon results of a community assessment. Chapters who complete a Land Use Plan must then receive certification from the Transportation and Community Development Committee. Once certified, Chapter can then administer land pursuant to the LGA. The Mexican Water Chapter has exercised this option and developed a Land Use Plan.

Under the Local Governance Act, chapters may enact zoning ordinances provided that the membership adopt and implement a community based land use plan pursuant to Navajo Code Title 26 Section 2004 (B).

8.2 LAND USE PLANNING & ZONING COMMISSION

In conformance with the LGA, Mexican Water Chapter established a Community Land Use Planning and Zoning Commission comprised of community members that operate according to an approved plan of operation under Chapter Resolution MWC-991305-001. The CLUPZC was established to approve the community-based land use planning processes and oversee community-based land use planning activities. The responsibilities of the CLUPZC include attending periodic meetings to discuss the development and implementation of the Land Use Plan. Members advise, review, and make recommendations related to land use to the Mexican Water Chapter's membership at duly called chapter meetings.

The current CLUPC members were confirmed via Chapter Resolution MWC071209-80024. In order to better represent the mission of the Community-Based Land Use Committee and the growth and development of the community, the Chapter recently changed the CLUPC name to Mexican Water Land Use Planning & Zoning Commission per Resolution MWC 070814-113.

8.3 COMMUNITY INVOLVEMENT AND PUBLIC PARTICIPATION

In accordance with the LGA, the Planning Commission initially developed, approved, and adhered to a Community Involvement and Participation Plan (January 15, 2013) to guide community members through the land use planning process by giving all interested parties the greatest possible opportunity to learn and actively participate in developing the Land Use Plan. In this way, community members were strongly encouraged to participate in every step of the planning process to develop the Land Use Plan.

The objective of the Community Involvement and Participation Plan was to provide opportunities for the maximum level of chapter community involvement throughout the planning process. The Community Involvement and Participation Plan offered participation processes that build on social interaction between the community members and the Chapter government. The Community Involvement and Participation Plan also fostered community education and active participation that ultimately allow the membership to substantially contribute to the back bone of Land Use Plan.

The education component of the planning process relied on public meetings, work sessions and a public hearing that were held from January 15, 2013 through October 8, 2014. The approach of each session type is defined below:

- Public meetings informed, updated and recommended the land use planning activities of the Chapter community.

- Work sessions offered the community a more informal and hands-on approach to participating in the planning process.
- Public hearing is a meeting that was held in a more formal setting to obtain views and comments of community members and typically include a wider public audience regarding the project.

These sessions were used to educate, inform, and involve the community in the project at various stages along the way. During these times, community members received feedback about assessments, helped prioritize land use plan objectives, and further defined goals. Local community members were encouraged and urged to attend and participate in any and all of the education and communication sessions. Information pertaining to the land use plan was available to the public.

8.4 AMENDMENTS

The amendment process provided an opportunity for community members, groups, organizations, departments, entities, businesses and the general public to propose changes to the Land Use Plan. Proposed amendments included changes that addressed changing social, economic and environmental conditions.

Changes also reflected on-going work or new information. Proposed amendments may include changes to policies, maps, appendices or other components of the Land Use Plan.

FIVE -YEAR UPDATE
Mexican Water Chapter anticipates that the Land Use Plan will function well for some time to come; however, to assure that the plan is meeting the needs of the community, the Land Use Plan will be completely reviewed, revised and updated by the Planning & Zoning Commission, as appropriate, every five years pursuant to LGA regulations.

AS NEEDED AMENDMENT
In between the five-year updates, amendments can be made on an as needed basis. Community members, groups, organizations, departments, entities, businesses and/or the general public can propose an amendment(s) in accordance with the process described herein. When the Planning & Zoning Commission approves an amendment, it shall become part of this Land Use Plan as an addendum. All addendums will be reviewed and incorporated, as appropriate, into the Land Use Plan during the Five-Year Update.

PROCESS FOR PROPOSING AN AMENDMENT
Request for amendments should be in writing to the attention of the Planning & Zoning Commission. Appropriate support material, if any, should be included along with the request for the amendment.

CRITERIA FOR CONSIDERING AN AMENDMENT
If an amendment is proposed to the Land Use Plan, specific questions will be considered asked as part of the evaluation process. Such questions included but are not limited to the following:

- Is the proposed amendment appropriate for the Land Use Plan?
- Do proposed changes pertain to the Land Use Plan? For example, some proposed amendments suggest changes to regulations or budgets while others request

specific assistance, which are more appropriately addressed at Chapter planning meetings and Chapter meetings.

- Is the proposed amendment legal? Consider whether the proposed amendment meets existing relevant laws.

APPROVAL/DISAPPROVAL OF AN AMENDMENT

The Planning & Zoning Commission shall conduct a public hearing for all proposed amendments determined to be appropriate to the Land Use Plan. After the public hearing, the Planning & Zoning

Commission shall vote to accept or reject the proposed amendment. If the proposed amendment is accepted, the Planning & Zoning Commission shall recommend adoption, via a resolution, of the proposed amendment to the Mexican Water Chapter. Mexican Water Chapter membership then shall vote on the resolution at a duly called chapter meeting. Pursuant to the LGA, Chapter approved amendments or modifications shall be approved by the RDC of the Navajo Nation Council. The approval by the RDC is the formal acknowledgement of Mexican Water Chapter amending its Land Use Plan.

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APPENDIX A

Community-Based Land Use Plan Certification

Certificate, December 20, 2007

APPENDIX B

Soil Descriptions

APPENDIX C

Soil Limitations for Dwelling and Small Commercial Buildings