

Acknowledgements

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Special thanks to all the participants including:

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NAIHC, founded in 1974, is a nonprofit organization that assists tribes and tribal housing agencies in reaching their goals of providing culturally relevant, decent, safe, sanitary, and affordable housing for Native people in Indian communities and Alaska Native villages.

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EXECUTIVE SUMMARY

Background

On August 6, 1998, President Clinton directed the Department of Commerce (DOC), in conjunction with the Department of Interior to undertake a study of technology infrastructure in Native American and Alaska Native communities. The DOC contracted with the College of Engineering at New Mexico State University (NMSU) to conduct the research study. The study was underway between January and June of 1999. The goals of the report, titled "Assessment of Technology Infrastructure in Native Communities," were to:

- Assess the current state of technology infrastructure.
- Identify and describe challenges and barriers.
- Propose solutions for overcoming the challenges and barriers.

The NMSU research report is very broad and includes all forms of infrastructure that affect economic development. The report clearly stated that telecommunications infrastructure alone could not improve the economic state in Indian country without a strong foundation of basic infrastructure, such as water, sewer systems, utilities and roads.

Each of the tribes that participated in the research study was asked to prioritize different forms of infrastructure. The analysis stated that the tribes identified their top priorities as: housing, roads, waste and water technology.

Although the report has somewhat in-depth quantitative information on basic infrastructure needed to build homes, the report does not discuss how this information affects housing in Indian country. The report does not mention the new Indian housing legislation known as the Native American Housing Assistance and Self-Determination Act (NAHASDA). This Act regulates a large federal block grant available to tribes and their designated entities to run their housing programs.

Given that, the National American Indian Housing Council (NAIHC) wanted a closer examination of how tribes are addressing their housing infrastructure needs under NAHASDA using their Indian Housing Block Grant (IHBG) and other funds. More broadly, what are the infrastructure needs in Indian country, including such things as roads, water, sewer systems and utilities? NAIHC conducted research to answer this and other questions, such as: What is the impact of existing infrastructure on the ability to provide housing? What are the influential factors to infrastructure development? What barriers/impediments to infrastructure development have been confronted?

Overview

This study is broken into ten major sections, including: an executive summary; introduction; methodology; four case studies; analysis of Technical Assistance Specialists (TAS) on-site interviews; analysis of telephone discussions; case study findings; TAS on-site and telephone conference findings; summary and Appendix A "Definition of Qualitative Examples."

Three tribes and one rancheria were selected as case studies: the Little River Band of Ottawa Indians in Michigan, the Lumbee Tribe of North Carolina, the Pleasant Point Passamaquoddy Tribe in Maine, and the Susanville Indian Rancheria in California (which consists of four tribes). It was deemed important to choose case study sites with various experiences developing infrastructure; as well as differing size, geographic region and federal recognition status. Research staff conducted individual and/or group interviews with tribal leaders and housing staff concerning their assessment of infrastructure development. Participants made suggestions and discussed funding sources, processes, issues, concerns and barriers to infrastructure development. Participants discussed additional infrastructure needed to provide new housing and/or community development and the feasibility to upgrade the tribe or community's existing infrastructure.

In addition, during January and February 2003, NAIHC's TAS conducted 22 interviews in conjunction with their technical assistance site visits. Forty-two telephone conferences were conducted during the same time period by NAIHC's Research Department. Discussions were held with the person most familiar with their tribe's infrastructure development. Participants for the telephone conferences were selected from the IHBG funding allocation. Similar topics were discussed during the on-site and telephone conferences. Participants were asked about their current state of infrastructure; the impact of the tribe or community's existing infrastructure on their ability to provide needed housing; funding sources for infrastructure that the tribe or community has utilized in the past five years; funding source regulations (particularly any that conflict) and the effect on the process of infrastructure development; success levels in utilizing funds; additional infrastructure needed; feasibility to upgrade existing infrastructure; factors contributing to, or impeding infrastructure development and major barriers overcome.

Major Findings

The case studies and interviews revealed similar findings with respect to funding sources; such as:

- Unavailability of funding has a *negative* impact on infrastructure development.¹
- The primary sources of funding for infrastructure development have conflicting regulations, or they were unusable in conjunction with the IHBG.²
- Utilizing other sources of funding, such as the Indian Community Development Block Grant (ICDBG), Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA), is difficult. For example, only federally recognized tribes and Alaskan Native villages are eligible to participate in the ICDBG program. The E.P.A.'s "environmental requirements" are a barrier.³ Non-federally recognized tribes, including state only recognized tribes, have to

¹ This study supports the correlation.

² From the TAS site visit interviews: two funding sources regulations were identified as having the most conflicting regulations, Bureau of Indian Affairs (BIA) and IHBG (45%); and Indian Health Service (IHS) and IHBG (27%). See page 58. From the telephone interviews: IHS, BIA USDA and EPA were funding resources that were specifically mentioned as having conflicting regulations with the IHBG. This prevented tribes from utilizing these funds in conjunction with their IHBG funds. See page 64.

³ Environmental requirements are a barrier. See page 49.

compete with other groups for USDA grants⁴; in some areas, grants are distributed giving “precedent to cities and towns, tribes are last.”⁵

The case studies closely examine unique situations these tribes experienced with infrastructure development. Aside from the above findings, major barriers to infrastructure development included: unavailability of land, non uniform building codes, difficult geology, socio-economics (such as extreme poverty), historical prejudices, not being federally recognized and poor relationships with local towns and governments.

Responses from the TAS site visits and telephone conferences depict infrastructure development as follows:

- Overall, infrastructure for roads was reported primarily poor to fair.⁶
- On site interviews and telephone conferences revealed infrastructure for sewer (systems or facilities) to be generally poor. Telephone conference participants reported an equal number of tribes with good infrastructure for sewer.
- A small percent continue to have no infrastructure in place for roads, sewer systems, water, and utilities.⁷
- Overall, infrastructure for utilities was reported as fair to good.
- It is only somewhat feasible to upgrade current infrastructure.⁸ There is a strong need for additional infrastructure that coincides with the negative impact that existing infrastructure has on a tribe’s ability to provide housing.
- When utilizing funding sources, the use of consultants and partnerships with other organizations was found to be a positive contributor to a tribe’s success level.
- Collectively, discussed factors did not have a substantially positive impact on infrastructure development.⁹

⁴ In 2002 there was a set aside of \$24,000,000 for Alaska villages. Also, in 2002 there was a set aside of \$16,000,000 for federally recognized tribes. Saffert, David. Personal Interview. 22 Sept. 2003.

⁵ Hardin, James. Personal Interview. 27 Mar. 2003. Member of state recognized Lumbee Tribe.

⁶ See Appendix A, page 73, “Definition of Qualitative Examples.”

⁷ From the TAS site visit interviews: 9% of the participants did not have hard surface roads, only dirt or grass; 9% had no sewer system or facility; a few participants had no water source within 300 feet of unit (4.5%), or had poor access to water (23%); and a few participants had no power sources (4.5%). See page 56. From the telephone interviews: 2% reported no infrastructure for roads; 7% reported having no sewer system or facility; 2% reported no infrastructure for water; and 4% reported no infrastructure for utilities. See page 62.

⁸ From the TAS site visit interviews: 59% reported that it is somewhat feasible to upgrade current systems. See page 57. From the telephone interviews: 48% stated it was somewhat feasible to upgrade current systems. See page 63. Some participants offered additional information. For example one tribe in the southwest stated the “tribe doesn’t really own land” thus financial burden falls on the residents. Lack of funding and other priorities were also noted.

- For the most part, land title/lease issues remain a major barrier.
- Although a barrier, participants are learning to deal with environmental regulations.

Summary

Although NAHASDA has enabled tribal communities to exercise greater freedom/flexibility over their housing projects, they are limited by what is perceived as insufficient funding. To further complicate the problem, many tribes have a limited or non-existing economy, and must rely on federal and other sources for funding to develop infrastructure prior to constructing homes.¹⁰ This appears to impede the housing progress of tribes in their self-determination through NAHASDA.

Participants complained their communities lack modern housing infrastructure components, such as water, sewer (systems or facilities), roads and utilities. The strong need for additional infrastructure coincides with the negative impact existing infrastructure has on tribes' abilities to provide housing.¹¹ This creates additional hardships for tribes as they struggle to meet housing demands of their people.

The study shows that the major sources of funding are, as one participant expressed "insufficient to support infrastructure and housing." Financial assistance is either in small amounts or has criteria that exclude most tribes from qualifying. For example, the case studies show instances when tribal sovereignty or Native American preference prevents tribes from applying for financial backing.¹² This is particularly true for state funds. Having relinquished so much already, it's hard for tribes to accept giving up further self determination rights, especially since tribes desperately need the assistance.

If tribes are not eligible to apply for federal or state funds, they may opt to apply for loans. However with non-existing, or limited economic base, tribes such as the Pleasant Point Passamaquoddy Tribe, have nothing to use as collateral for loans and are unable to make loan

⁹ Discussed factors are: availability of funding; funding sources such as Indian Health Services (IHS), USDA and banks; land status; remoteness or isolated location; relationship with surrounding towns/governments; sustainable energy; sustainable development; tribal politics; and workforce skill level.

¹⁰ The Pleasant Point Passamaquoddy Tribe, for example, reported that there are very little jobs to attract skilled labor to the immediate area. In the past year and a half several major industrial companies shut down. Also "the economy on the Reservation is consistently and significantly worse than the rest of Washington County or the state of Maine." See page 37. Remoteness, particularly in Alaska villages, is noted as a contributor.

¹¹ From the TAS site visit interviews: 68% of the participants reported the need for more electricity; 86% reported the need for more roads; 86% reported the need for more water; and 86% reported the need for more sewer. See page 57. From the telephone interviews: 45% of the participants reported the need for electricity; 83% reported the need for additional roads; 76% reported the need for water; and 74% reported the need infrastructure for sewer. See page 63.

¹² For example, the Little River Band of Ottawa Indians could not pursue state funds through the Michigan State Housing Development Authority because applicants have to be non-discriminatory and the tribe has a "Native American Preference" policy.

payments. Even when a tribe learns about funding sources for which they are eligible, applying for assistance can be a challenge requiring outside expertise.

Once additional funds are available and easier to access, upgrading existing infrastructure will become feasible for more tribes. Aside from improving on existing infrastructure there is a strong need for additional roads, water and sewer (systems or facilities).

One way to address hurdles may be to develop partnerships with other organizations. These relationships, as is outlined in the case studies, have contributed significantly to the success level for some tribal communities. Creating partnerships with other organizations allows for tribes to close the gap where the tribe has weaknesses.

Having experienced qualified staff is significant, as that allows tribes to have expertise throughout projects--alleviating discrepancies and additional costs.

The study revealed special circumstances for tribes, such as building culturally relevant homes and communities that might require additional costs and special construction. It is important to have a good architect who is committed to the project and the tribe.

For those tribes that have not established building codes, or follow local county and state codes, they will need to pass resolutions dealing with construction and the various aspects of infrastructure development, including procurement policies, zoning ordinances and easements. To prevent injury to construction workers, it may be necessary to pass resolutions preventing hunting, fishing and trapping in and around construction sites.

Tribes embarking on infrastructure development should be prepared to conduct needs assessments, environmental impact studies and geological surveys. Tribes may need to do geotechnical studies for water/waste water facilities. Tribes may need to hire a certified company or a consultant to do this work. These costs need to be considered as part of the project. There are funding sources that tribes may apply for to cover these types of studies. There may be local assistance available, such as utility co-operatives that may defray costs to install electricity and water lines and lower user payments. Tribes may consider starting nonprofit organizations, that are eligible for funding that the housing entity or tribe may not be.

As tribes and Alaska Native villages seek ways to address infrastructure development hurdles, they often rely on their sovereignty powers. Tribes as sovereign nations have the right to govern themselves and are endowed with the power to make decisions affecting their members. But they will only be able to maximize the use of those sovereign powers through increased access to federal and other funding.

INTRODUCTION

The purpose of the study is to look at factors impacting infrastructure development in Indian country and how this affects tribes' abilities to provide housing for their people. In addition, the study examines how tribes are addressing their housing infrastructure needs under the Native American Housing Assistance and Self-Determination Act (NAHASDA), using their Indian Housing Block Grant (IHBG) and other funds. The study includes four case studies that examine specific issues regarding infrastructure development. Existing infrastructure and the feasibility to upgrade systems is discussed. The study also looks at other contributing factors to infrastructure development such as barriers and impediments tribes have faced, funding sources and success levels in utilizing them.

METHODOLOGY

Data was collected via case studies, on-site interviews and telephone discussions.

Case Studies

Three tribes and one rancheria are featured in the study due to their varying experiences with infrastructure development. They have had successful infrastructure development, unsuccessful infrastructure development, or have overcome extreme obstacles to develop infrastructure. These tribes differ in size, geographic region and federal recognition status. It is hoped that these tribes' infrastructure development processes and lessons learned can be shared with others dealing with similar issues. The following were visited:

- **Little River Band of Ottawa Indians in Michigan:** This tribe is developing a "green community" using solar technology. They plan to construct units on land they purchased and to develop their own water/waste water and utilities systems.
- **Lumbee Tribe in North Carolina:** This tribe is experiencing extreme financial barriers to infrastructure development. They are a state recognized tribe and are not eligible for most federal funds designated for Indian tribes.
- **Pleasant Point Passamaquoddy Tribe in Maine:** This tribe was visited because they are having trouble developing homes due to inadequate sanitation facilities. The existing facility is at capacity and needs to be expanded.
- **Susanville Indian Rancheria in California:** This community (that consists of four tribes) has extreme geological and other barriers to developing infrastructure.

Upon arriving at the different locales additional issues surfaced that are included in the case studies. At the beginning of each site visit, researchers met with tribal leaders and/or housing staff to review the purpose and scope of the research. A schedule was proposed with an overview of research activities. Additional documentation was collected on their infrastructure development process.

Additionally, research staff conducted individual and/or group interviews with tribal elders, tribal leaders and tribally designated housing entities (TDHE) staff concerning their assessment of infrastructure development, barriers, lessons learned, and possible remedies.

Below is an outline of information that was collected for each case study:

<i>Description</i>	Description of current infrastructure.
<i>Participants</i>	Identification and role of participating parties; this could include individuals, tribal departments, local companies or financial institutions.
<i>Funding Sources</i>	Identification of major funding sources; this could include how funding sources were chosen and selected, role of funding sources, funding source process and evaluation of funding sources. A subtopic discussed was: <ul style="list-style-type: none"> • Identification of available funding that the tribe either chose not to pursue or was prevented from pursuing.
<i>Process</i>	Determination of how project(s) were selected; this could include need, economic development plan, strategic planning, sustainable energy, sustainable development or tribal goals and objectives. Subtopics discussed were: <ul style="list-style-type: none"> • Identification of tribal processes affecting infrastructure development; this could include: tribal zoning requirements, tribal permits, tribal ordinances and the tribe’s governing body. • Identification of non-tribal processes affecting infrastructure development; this could include environmental evaluations, state or county requirements. • Outline steps used to carry out project.
<i>Evaluation of how project(s) was carried out</i>	This could include evaluations and opinions of housing staff, tribal council members, tribal members, contractors, residents and others involved in the project(s).
<i>Consideration Factors</i>	This could include issues, concerns and barriers to infrastructure development. Possible subtopics discussed were: <ul style="list-style-type: none"> • Additional infrastructure needed to provide new housing and/or community development. • Feasibility to upgrade the tribe or community’s existing infrastructure.
<i>Suggestions</i>	Suggestions for improving the infrastructure development process.

Technical Assistance Specialists (TAS) Site Visit Interviews and Telephone Conferences

Information was collected from 22 TAS interviews made in conjunction with the National American Indian Housing Council's (NAIHC) Technical Assistance (TA) program during January and February 2003.¹³ At the same time, NAIHC's Research Department conducted 42 telephone conferences. Participants for the telephone conferences were selected from the fiscal year 2002 Indian Housing Block Grant (IHBG) funding allocation.¹⁴ Similar topics were discussed during the TAS site visits and the telephone conferences. During the site visits and telephone conferences, discussions were held with individuals having the most knowledge of their tribe's infrastructure development. For consistency in data collection, TAS and the research team were given a set of instructions. Topics of discussion included the following:

- The tribe's or community's current state of infrastructure.
- The impact of the tribe's or community's existing infrastructure on their ability to provide needed housing.
- Funding source(s) for infrastructure that the tribe or community has utilized in the past five years.
- Funding source regulations, particularly any that conflict, and their effect on the process of infrastructure development.
- Additional infrastructure needed to provide new housing and/or community development.
- Feasibility to upgrade the tribe's or community's existing infrastructure.
- The tribe's or community's success level in utilizing any funding sources.
- Factors contributing to, or impeding infrastructure development.
- Barriers to infrastructure development that were overcome.
- Identification of Resources and other factors contributing to the success level of the tribe's or community's ability to utilize funding sources.

¹³ TAS were provided instruction on appropriate interview procedures to preserve objectivity and sustain the integrity of data collected.

¹⁴ Five hundred and twenty six IHBG recipients were classified into three groups. Group one: 352 IHBG recipients (\$0-\$500,000); 39 randomly selected (11%); 27 agreed to participate (7.6%). Group two: 136 IHBG recipients (\$500,001-\$3,000,000); 16 randomly selected (11.7%); 12 agreed to participate (8.8%). Group three: 38 IHBG recipients (\$3,000,001+); 5 randomly selected (13%); 3 agreed to participate (3.8%). Analysis was conducted for sample size of 42 (7.9%). Sample selection method chosen to obtain a range of participants. IHBG recipients provided by IHBG Formula Customer Service Center, 1-800-410-8808.

FOUR CASE STUDIES

Little River Band of Ottawa Indians, Michigan

Background

This case study examines one community being developed by the Little River Band of Ottawa Indians Housing Department (hereafter referred to as the “Housing Department”). The name of this community is “Aki Maad zi Win”, that translates literally into “living in balance with the earth.”¹⁵ The community is located on 18 acres.

The tribe was reaffirmed to federal recognition on September 21, 1994 and has 3,000 members.¹⁶ Most of the tribe’s members live in and around the town of Manistee and in 13 counties. These counties are included in the tribe’s service area. The tribe owns the land for Aki Maad zi Win and provides the infrastructures. The counties and the state of Michigan provide infrastructure for other lands, such as private property.

The tribe is in the process of creating a land base and has accumulated major tracts of land such as purchasing 500+ acres of land for a casino. The tribe then received 1,385 acres from the State of Michigan as part of a fish settlement case. Next, the tribe bought 120 acres of land for Aki Maad zi Win. This is the only community in which the tribe has developed infrastructure.

Description

A primary goal of the Housing Department is to develop adequate infrastructure to support the development of Aki Maad zi Win that will begin to address housing needs. The endeavor addresses the need to expand affordable housing for elders, low and moderate-income families and supports the need to provide for planned economic and community facility growth on tribal lands adjacent to Aki Maad zi Win. “The magnitude of this project reaches far into the future and will empower our tribal members towards self-sufficiency and opportunity for homeownership.”¹⁷ The tribe wants to construct a culturally relevant community, one that replicates how they lived traditionally. Seventy-five percent of the infrastructure to support 35 houses and 12 units was done by the end of November 2002, six months after ground was broken. The following information outlines infrastructure built to date for Aki Maad zi Win:

- 75% of the roads are complete. 100% complete for 12 elder units.
- 75% of the utilities are complete. 100% complete for 12 elder units.
- 75% of the water and sewer lines are complete. 100% complete for 12 elder units.

¹⁵ Batdorff, Alisson. “Little River Band Housing develops harmony with nature.” *Manistee News Advocate*, 16 November 2002: 1A, 7A.

¹⁶ The Little River Band of Ottawa Indians is the political successor to nine of the nineteen historic bands of Grand River Ottawa people. The Grand River Ottawa ceded most of their territory to the United States. In 1855, a treaty was negotiated between the U.S. government and the Ottawa and Chippewa of Michigan. Federal officials failed to protect the Grand River Ottawa from unscrupulous land speculators, and as a consequence, they lost record title to most of their reservation lands. The Grand River Bands, now known as the Little River Band of Ottawa Indians, have sought reaffirmation of land claims, treaty rights, and other sovereignty-related issues. <<http://epa.gov/Region5/tribes/littleriver.htm>>.

¹⁷ Bussey, Vanessa. Personal Interview. 7 Jan. 2003.

- A wastewater treatment plant has been constructed and is in operation.
- 12 elderly low rent units are complete.
- Components to support the water tower for the community of Aki Maad zi Win are pending.
- Awarded HUD Rural Development and Economic Development (RHED) grant on April 26, 2002.



(Aerial photo Aki Maad zi Win; 12 complete elder unit right-side of circle)

Participants

The following are involved with Aki Maad zi Win’s infrastructure development:

Abonmarche Consultants, Inc.	Consulting company that began phase one. Studio One completed Phase One that includes 12 elder units. ¹⁸
City of Manistee	Joint partner.
Consumers Power	A large state power company that provides electricity.
County Planner for Manistee County	Offered free services to plan roads and erosion protection.
Department of Energy	Offered planning expertise.
Domres Construction	Constructed the roads, installed the sewer system and water lines.
Environmental Program Coordinator	This department became involved when the Housing Department received a “Clean Air Transportation Communities” program grant. This program is to develop cleaner transportation alternatives.
Gosling Czubak Engineering, Inc.	Provided engineering services. They also completed the design and project bidding, the boundary and platting, a construction survey, staking, contractor quality control and inspection of Phase One.
Grant Writer	Instrumental in applying for grants.
Hvalke, Zoland and Niesen	Inspectors.

¹⁸ See, page 15 for description of construction phases.

Inter-Tribal Council of Michigan	Paid for environmental assessments, assistance estimated approximately \$6,000.
Little River Band of Ottawa Indians	Major participants included the Inter-Tribal Council, the Ogema (translation “one who leads and goes before the people”), the Housing Department, the Housing Commission, the Natural Resources Conservation Department and the Tribal Planner.
Michigan Bell Telephone Company	A.k.a. Ameritech Michigan, built and maintained communication lines along Aki Maad zi Win’s roads.
Michcon	A large state power company that provides gas. All units are gas heated. There are no wood burning units.
Reender’s Inc.	General contractor.
SBC	Installed phone lines.
Wade-Trim, Inc.	Did pre-architectural development planning and technical assistance related to Aki Maad zi Win.

Funding Sources

The Housing Department needed a large amount of money to construct Aki Maad zi Win. The Housing Commission hired a grants writer who obtained grants to purchase the necessary land and conduct environmental assessments. The grants writer wrote the Native American Environmental Protection Agency (NAEPA) about the “green community” concept and obtained a grant through the “Clean Air Transportation Communities” program. The Housing Department then received IHBG funds. Parts of these funds were used for construction of the first perimeter roads. Simultaneously, the grants writer obtained a Bureau of Indian Affairs (BIA) roads grant.¹⁹ Funding sources were chosen based on availability of funding for Native American Tribes pursuing housing development. The main funding sources utilized are as follows:

Bureau of Indian Affairs (BIA)	Provided \$500,000 to assist with engineering and construction of roads for Aki Maad zi Win.
Environmental Protection Agency (EPA)	Provided two grants. One \$70,000 grant for technical assistance and one for \$59,275 through “Clean Air Transportation Communities” program. This program aims to provide cleaner transportation alternatives by reducing emission from transportation sources. It also strives to enhance energy efficiency in the transportation sector. Aki Maad zi Win is purchasing three electric tricycles, two electric bicycles and a hybrid vehicle, that runs on gas and electricity, thus producing less pollution. This vehicle is a Toyota Prius. The gas will recharge the electric battery. The grant runs through the middle of August 2004. During that time period, the idea is to introduce the use of the cars for cleaner air. Use of the car and bicycles will be tracked via a “use log.” An emission reduction formula was developed to track reduction in

¹⁹ Bussey, “Interview,” 7 Jan.

	<p>emissions. The reduction in pollution will be tracked. This is the only tribe in a rural setting that has this program. A vehicle will be available to the elders to use to go shopping or into Manistee.²⁰ Part of the funds were used to purchase a windmill for \$20,000. The purpose of the windmill is to generate electricity. It has a 110 volt power outlet, same as in a house. People can use this to recharge small equipment, like the electric bicycles and power tools. This windmill will not provide power to units, but will act as a charging station for the community. The Housing Department also received technical assistance from the EPA for the development of a Utility Board, a Maintenance and Operation Plan and the job description for a Wastewater Treatment Plant and Community Water Manager.</p>
HUD Indian Community Development Block Grants (ICDBG)	<p>Provided \$500,000 in 2000 towards the Phase One roads and the infrastructure costs at Aki Maad zi Win²¹, \$500,000 in 2001 toward the construction of a wastewater treatment facility, and \$500,000 in 2002 towards the construction of an elevated water storage facility. These funds were leveraged with loans taken out by the tribe for waste water treatment.</p>
HUD Indian Housing Block Grant (IHBG)	<p>In FY 2002 the tribe received \$387,310. Half of the grant was spent on infrastructure. Part of the funds were used to pay IHS for engineering services on the water/wastewater system.</p>
HUD Rural Housing and Economic Development (RHED) Grants	<p>Provided \$500,000 in 2000 towards the Phase One roads and infrastructure costs at Aki Maad zi Win, and \$400,000 in 2002 towards the construction of an elevated water storage facility.</p>
Indian Health Services (IHS)	<p>Provided financial support to develop water and sewer system as well as technical engineering services in the design of the water and wastewater treatment systems. IHS will be monitoring the water quality and facility.</p>
Inter-Tribal Council	<p>Provided technical assistance for hiring an environmentalist to work with the Housing Department in assuring National Environmental Policy Act (NEPA) compliance, and reviewing housing specifications for sustainable energy.</p>

²⁰ Ripple, Paul. Personal Interview. 7 Jan. 2003.

²¹ See page 15 for description of Phase One.

Little River Band of Ottawa Indians Tribal Council and Ogema	Provided financial support to purchase land to develop Aki Maad zi Win in 1999, and in 2002, purchased 22 acres near Aki Maad zi Win where the elevated water storage tower will be located.
Manistee County Planner	Provided technical assistance for site plan and specifications of road designs.
Traditional Indian Housing (TIH) Grant	Provided \$31,400 for engineering services.
United States Department of Agriculture (USDA) Rural Housing Service (RHS)	Provided Section 515 grant to build 12 low-income units with 30 year terms. Work is slated to commence in summer 2003.

Each funding source has its own compliance standards and methodology of payments. All of the above funding sources offered technical assistance from their regional office and provided on site assistance. The technical assistance provided by funding sources was instrumental in tribes receiving grants.

Identification of available funding that the tribe either chose not to pursue or was prevented from pursuing

The tribe was unable to pursue funding through the Michigan State Housing Development Authority (MISHDA) because applicants have to be non-discriminatory and the tribe has a “Native American Preference” policy. Also, the tribe found the USDA Rural Development funding to be cumbersome and they were unable to accept the compliance models because affordability has to be maintained for 30 years.

Process

Determination of how project was selected

The Little River Band of Ottawa Indians Housing Commission made a conscious decision to develop housing that allows for the highest level of self-sufficiency and creates a community that integrates the lives of all its members. The tribe’s focus in the development of this project is to integrate sustainable energy housing concepts, culture and economic development by incorporating sound ecological design principles, protecting environmental quality, improving accessibility, mobility and strengthening their economy. The Housing Department’s Executive Director explained:

This allowed us to move forward toward our vision of developing a community that integrates the lives of all our members. A vision that reveres our elders...that respects our members at the prime of their lives by enabling them to experience homeownership; a vision that addresses our youth by offering them the opportunity of being surrounded by spiritual and cultural guidance...Indian people live as part of the land, not merely on it. We believe that the placement of housing should be gentle, settling down in places where it can become a part of the landscape, blending in with the natural features of the area. Since this is so, the design and placement of a house should utilize the natural elements of the site including sun, wind, water, and vegetation.²²

²² Bussey, “Interview,” 7 Jan. 2003.

This concept was utilized to develop the “green community” using solar energy, a windmill, recycled materials, energy efficient windows and appliances.



(Aki Maad zi Win completed elder units.
Electrical cables, water and sewer pipes underground)

Identification of tribal processes affecting infrastructure development

The tribe operates under a three-branch governmental system, including a nine-member Council, an elected Ogema, and an appointed independent Tribal Judiciary. The existing Tribal Constitution was adopted by the Council and approved by the Interior Department in July 1998. The tribe supports the Housing Department with funding. Therefore, the Council and the Ogema are very hands on with the Housing Department “because they need to know how the money is being spent.”²³

The tribe passed several resolutions throughout the entire development process of Aki Maad zi Win. These resolutions are outlined beginning on page 16.

Identification of non-tribal processes affecting infrastructure development

The Housing Commission worked closely with the Manistee County Planner to collaborate on the road infrastructure near Aki Maad Zi Win. The tribe is not bound to state and county ordinances. In FY 2000 the Tribal Council entered into a Self-Determination Act (P.L. 93-638) construction contract with the BIA for survey, design and right-of-way work. The County planner is also on the Housing Commission, who helped explain zoning ordinances and benefits of a zoning code for planning.

Steps to carry out project

This project is developing fairly quickly. Aki Maad zi Win will have a total of 180 integrated housing units sitting on 111 lots. Some of the units will be duplexes and fourplexes. Aki Maad zi Win will be developed in six phases. Part of Phase One is complete. Phases Two through Six are not yet begun.

²³ Sams, Johnnie J., II (Ogema). Personal Interview. 9 Jan. 2003.

In December 2000, a tribal resolution was passed that accepted the IHS engineer’s strategic plan for construction of the community water/waste water facilities. A request for proposals was used to select a firm to complete geotechnical studies of locations being considered for the water tower, community wells and wastewater treatment facilities.

In January 2001, a resolution was passed authorizing a Professional Services Agreement with Wade-Trim, Inc. for pre-architectural development planning and technical assistance. Later that year, Abonmarche Consultants, Inc. was retained to do preliminary design architectural services and Studio One Architects, P.L.L.C. will complete Phase One.

The following is an outline of major activities for each of the six phases:

<p>Phases One and Two</p>	<p>Construct 65 single family units (12 elder units are complete), two multi-family units and one inner circle office/community center.²⁴ Infrastructure for the community was developed at the same time the first 12 units were constructed. In 2003 the Housing Department applied for grants to build the community center.</p> <p>The following steps will run simultaneously with Phase One and are part of the 65 single family units. A group of five units will be built by students from Shoreline Academy, and a group of 12 low income units will also be built. The academy is owned by the school district. These students are being trained to build the units. The tribe will supply materials and the students will build the houses. This is a five year phase, the plan is to complete one house every year.</p> <p>In the summer of 2003 another group of 12 units will be started utilizing USDA Section 515 funds. The Section 515 units will have three-and four-bedrooms. There will be four duplexes with one-and two-bedrooms.</p>
<p>Phases Three and Four</p>	<p>Construction of 38 single-family units.²⁵</p>
<p>Phases Five and Six</p>	<p>Other facilities planned to be construction include the following:</p> <ul style="list-style-type: none"> • Cultural preservation and education facility • Daycare facility • Storage and maintenance facility • Two parks • Two ball fields (a smaller one for children, a larger one for adults) • Two water wells • Water storage tank (will be located near Aki Maad zi Win) • Vocational employment training

²⁴ The tribe is not sure during which phase remaining units will be constructed.

²⁵ Id.

Daily meetings were held to discuss the project. The Ogema provided ideas for circles, arches, etc. for the architecture and ground was broke in April. After the architect completed design and cost estimates, several interim steps were taken prior to construction, including the following:

- Architect determined building code specifications.
- Construction documents developed.
- Project advertised.
- Invitation to bid.
- Prebid meeting held to introduce potential contractors to federal requirements and NAHASDA.
- Bids were opened and analyzed.
- General contract awarded.
- Administration work completed for contractors to begin work.

The following outlines major resolutions passed by the tribe:

September 2001	A resolution was passed allowing the tribe to negotiate a lease agreement with the property owner of land adjacent to Aki Maad zi Win. The tribe acquired an easement, that allowed construction workers and tribal representatives to cross the property to get to Aki Maad zi Win. A dirt road was constructed leading to the community. This road was later closed and a permanent road constructed.
October 2001	Construction started on the roads and utilities, then the houses. Normally, pipes are laid in a vertical and horizontal grid. Pipelines in Aki Maad zi Win were laid jointed to fit under the circular shaped roads. ²⁶ Also that month the tribe recognized that the property for Aki Maad zi Win was being used to hunt, fish and trap animals. In order to prevent potential injury to construction workers, they passed a resolution to prevent hunting, fishing and trapping animals on the property.
November 2001	An easement granted to Consumers Energy to build and maintain the electrical lines along Aki Maad zi Win's roads. Also in November, a resolution was passed to enter into a contract with the BIA for grading, drainage, and aggregate base, curbs and gutter, and surface roads at Aki Maad zi Win.
February 2002	Funding from HUD authorized to pay for activities associated with development of the wastewater treatment facility and road/utilities.

²⁶ Campeau, Bob. Personal Interview. 7 Jan. 2003.

January 2002	A resolution passed to pay the BIA to conduct a roads study.
Later in 2002	International Building Code 2000 adopted with Michigan addendum and renamed to the State of Michigan Building Code 2000. The reason the tribe selected this code is because all the inspectors and contractors were familiar with it. The code was adopted for housing projects. Also in 2002 the Tribal Council enacted an ordinance to provide for the water tower. Tribal zoning has not been a problem nor issue.

The Housing Commission worked closely with the following Native American Agencies and is held accountable to their compliance for tribal ordinances, permits and zoning:

- Bureau of Indian Affairs.
- Little River Band of Ottawa Indians Inter-Tribal Council.
- U.S. Environmental Protection Agency specific to Native Americans.
- Indian Health Services. The Utility Board worked with IHS. A utility board maintenance plan is part of the grant. Now, the utility board is waiting for the water tower. There is a maintenance plan that IHS monitors.
- Little River Band of Ottawa Indians Conservation Department.

Infrastructure for the first part of Phase One and the 12 units was completed “ahead of schedule and under budget.”²⁷ Construction of the units was expedited by using pre-built interior walls and trusses. Upon installation and inspection of the first unit, one house was constructed every week. All units, except those for handicap individuals, have full basements with poured cement walls and floors. Total cost of the completed portion of Phase One was \$1,600,000. The 12 units cost approximately \$133,000 each to build. Bike paths run through the community and were built to encourage a good lifestyle. The Health Disease Prevention and Promotion Program at the Health Clinic will soon mark the distances on the bike paths, (e.g. ¼ mile, ½ mile, one mile, etc.).

Evaluation of how project was carried out

The Housing Commission evaluated the current funding sources as excellent, due to their willingness to coordinate, collaborate, and provide technical assistance when needed. “Our evaluation is based on our outcome. We have completed 75% of our infrastructure, completed waste water facility, developing a water tower, completed 12 single family dwellings for our elders.”²⁸ Telephone cables are installed underground so telephone poles and cables are not seen.

²⁷ Batdorff, Alisson, quoting Bussey, Vanessa. “Little River Band Housing develops harmony with nature.” *Manistee News Advocate*, 16 Nov. 2002: 1A, 7A.

²⁸ Bussey, “Interview,” 7 Jan.

Consideration Factors

Factors to consider, issues, concerns and barriers to infrastructure development for Aki Maad zi Win are described below:

Adoption of Traditional Living	Aki Maad zi Win is “divided into four sections. The wheel represents the four directions, the four colors of man and the four sacred plants of sage, sweet grass, cedar and tobacco. The community is circular, following Native American patterns to camp in circles. The elders and families stayed in the inner circle, while the single men camped along the perimeter. A communal fire formed the center of these camps.” ²⁹ While making Aki Maad zi Win in a circular pattern for roads, water/sewer and electric lines may increase the construction costs, but it will be worth it to provide culturally-relevant living.
Electricity lines	Power lines run along side the circular roads, rather than on a grid.
Elder’s units	The elder’s units were intentionally put on the side of the community, rather than in the middle where traditionally elders lived, because “they said they didn’t want to be in the inside” with all the activity.”
Employment	The tribe is the largest employer in the County.
Waterlines	Waterlines are jointed and are laid underneath the circular road, rather than on a grid.
Wildlife	A hawk lived in a tree where a section of the road, referred to as the outer loop is planned to be built. “The tribe held a ceremony with the hawk, and when the hawk didn’t leave, they took it as a sign that it was okay to build in the area. The road was rerouted around the tree.” ³⁰ To pay tribute to the hawk, the Architect is going to build the community building, in Aki Maad zi Win, in the shape of a hawk. The hawk returns to its nest every season in the tree.
Insufficient funding	“It’s hard to produce infrastructure. Funding is insufficient to support infrastructure and housing.” ³¹
Lack of manpower	Currently the housing department only has three staff. During the construction of the 12 elder units, there were only two staff.
Self sustaining energy	The original plan was to export energy back to the local electric company. Now the project is self sustaining.

²⁹ Batdorff, Alisson, quoting Tribal Ogema Jonnie J. Sams, II. “Little River Band Housing develops harmony with nature.” *Manistee News Advocate*, 16 Nov. 2002: 1A, 7A.

³⁰ Krauskoph, Mark. Personal Interview. 8 Jan. 2003.

³¹ Sams II, “Interview,” 9 Jan.

Additional infrastructure needed to provide new housing and/or community development

Current efforts include the development of a zoning plan that includes commercial, retail and light industrial business enterprises, as well as tribal government, cultural, educational and recreational facilities in close proximity to Aki Maad Zi Win, thereby creating a green transit-oriented environment. This comprehensive planning process will bring together the essential elements necessary for a sustainable development of the Little River Band of Ottawa Indians community, consistent with smart growth concepts.

The Tribal Planner is working with the City of Manistee to build additional bike paths in to the City of Manistee. Other future bike paths will go to the tribe's casino and windmill.

Suggestions

Participants suggested the following:

- Additional manpower is needed in the housing department.
- Additional funding sources are needed to develop single-family units for affordable homeownership.
- Additional funding sources are needed for multi-family dwellings.
- Access to funding sources is needed for tribal members to obtain low interest mortgages, etc.
- “Look at funding...by giving so much for infrastructure and so much for housing.”³²
- Tribes need to pick a familiar code and stick with it, “the less obstacles put in front of [architects and construction companies] the smoother it will go.”³³

³² Id.

³³ Krauskoph, “Interview,” 8 Jan.

Lumbee Tribe, North Carolina

Background

This case study looks at infrastructure development for the Lumbee Tribe of North Carolina. There are approximately 50,000 enrolled Lumbees. Tribal members live predominantly in Robeson (46,896), Cumberland (4,691), Hoke (3,852), and Scotland (3,197) counties.³⁴ Land in these counties was originally swamped but in the 1950's the land was drained. Prior to several manufacturing plants entering the area, farming was the primary economic base. Historically, water and sewer systems weren't available to residents of the four counties. If a paved road was desired "the law required signatures of every one on a road."³⁵ The area was segregated with "Native Americans being the last to get services."³⁶ Families assisted each other with digging water wells and trenches to lay pipe and build roads. Over time, many Lumbees have moved into key positions on utility boards, committees and government positions where they remain instrumental in addressing tribal member's needs and in assisting the tribe with its infrastructure development. Hoke County still lags behind in residential infrastructure development. For example, "a large percentage of Native Americans in Hoke County still have outhouses."³⁷

Description

Currently, more than one entity is able to service the housing needs and infrastructure for the tribe. Some organizations are eligible for funding that other organizations are unable to obtain. For example, the Lumbee Tribe is ineligible to receive ICDBG funds. However, nonprofit organizations are eligible to receive these funds. Continued coordination between all jurisdictions and organizations is encouraged to meet the needs of the Lumbee people in a timely fashion.

The Lumbee Tribe of North Carolina Housing Committee's (LTNCHC) rehabilitation and emergency housing programs currently address infrastructure needs, including assistance with electricity, the purchase and installation of septic tanks and financing water/sewer connections. The tribe is currently seeking federal recognition that will allow them to put three recently purchased tracts of land into trust. The tribe also plans to develop infrastructure for communities they plan to build on this land.

Participants

The following are involved with infrastructure development for the Lumbee Tribe:

Carolina Power and Light (CP&L)	An electricity company. Does not charge residents to install electricity, unless it is a special request, e.g. installing cables underground or a lamp post for a nightlight.
Lumbee Tribal Council	Approves resolutions regarding housing and infrastructure development.

³⁴ 2000. U.S. Census.

³⁵ Locklear, Ruth. Personal Interview. 26 Mar. 2003.

³⁶ Jacobs, Darlene. Personal Interview. 26 Mar. 2003.

³⁷ Id.

Lumbee Regional Development Association (LRDA)	A nonprofit organization. LRDA’s tribally- elected board served as the governing body of the tribe until the new constitution-based tribal government was formed in 2001. LRDA continues to administer non-profit organization funded programs and provides a host of social and economic development services to a three county area.
Lumbee River Electric Corporation (LREC)	A co-operative electricity company. Does not charge residents to install electricity, unless it is a special request, e.g. cables underground or nightlight. The cities buy electricity from the counties. The co-op buys large amounts of electricity from the cities and offers it at a reduced rate to residents.
Lumbee Tribe of North Carolina Housing Committee (LTNCHC)	In 2001, the tribal council created LTNCHC to assume responsibility of the IHBG grant. The LTNCHC Housing Board formulates policies on how the tribe will assist applicants, then forwards recommendations to the Tribal Council, who adopts 99% of the proposals.
North Carolina Housing Authority ³⁸ (NCIHA)	NCIHA works with Tribal Council on housing infrastructure activities. The first year NCIHA administered approximately \$7.5 million per year on behalf of the tribe. They still receive \$700,000 per year to maintain the 1937 housing stock and any infrastructure needs from the Tribal Council’s annual IHBG allocation.
Porter Environmental Services	Consulting firm provides assistance with water, newly installed sewer lines, drainage systems, and the maintenance and repair of newly installed system and is providing consulting services for infrastructure on three newly-purchased tracts of land.
Cumberland, Hoke, Robeson and Scotland Counties	Each County is responsible for the maintenance of their roads. ³⁹ Robeson County is in the process of installing a sewer line across the County that residents can opt to hook up to. Residents in Hoke and Scotland Counties currently utilize septic tanks. Future communities will hook up to existing sewer lines. A central sewer system in Hoke County is yet to be installed.

Funding Sources

Funding sources were selected that allow state recognized tribes to apply. There are federal funds available for infrastructure but the Lumbee Tribe is not eligible for the majority of them because they are not federally recognized.⁴⁰ If the tribe is federally recognized they will be

³⁸ NCIHA is a Public Housing Authority.

³⁹ If the tribe gets federal recognition they will put the three tracts of land into trust and maintain the roads.

⁴⁰ In 1885 the State of North Carolina recognized the Lumbees as Indians. In 1956 a bill was passed by U.S. Congress that acknowledged the Lumbee as Indian while forbidding any customary federal benefits such as BIA services. Non-federally recognized tribes, including the Lumbee Tribe, are not eligible to receive IHS services and most other federal funds, e.g. the ICDBG set aside for tribes. This has been a financial hurdle for the Lumbee tribe

eligible to apply for additional funds that will assist the tribe in economic development and provide more infrastructure and homes.

1937 Housing Act	These funds were managed by NCIHA until 1999. Approximately 195 homes were rehabilitated. NCIHA is still responsible for maintaining these units, including infrastructure.
Indian Housing Block (IHBG)	<p>The IHBG has been managed by various organizations. In 1999 LRDA assumed responsibility for the funds. From 1999 to 2001, LRDA managed \$7.5 million per year. In 2001, the tribe assumed responsibility for the IHBG funds. In April 2001, \$132,000 was used to install a water/sewer lift station and sewer connections for the Family Services Center located on a 15-acre tract of land. Affordable housing is planned on the site as well. The City of Pembroke contributed to the lift station as well (see “Pembroke” below). Later that year, LTNCHC was designated by the Tribal Council to provide housing services and manage these funds, including infrastructure. LTNCHC manages approximately \$8.71 million per year.</p> <p>The tribe purchased 20 acres of land in Robeson County that is not yet developed. This tract of land will hold 30 lots. With residual IHBG funds that they still administer, they plan to install water and sewer lines that connect to the County system (the tribe also plans to utilize these residual funds to develop infrastructure for new units on an additional 10 acres in Robeson County). A second tract of land purchased is located in the City of Lumberton, North Carolina. This site consists of 23.68 acres. A third tract of land is located in Hoke County and consists of 35.38 acres of land. The tribe plans to utilize future IHBG funds to install water and sewer systems. It is projected that the Hoke County site will consist of single-family dwellings as well as an elderly site.⁴¹</p>
Low Income Home Energy Assistance Program (LIHEAP)	This program helps residents with electricity payments; connections for lights; gas assistance; and heating and cooling assistance. Criteria to participate includes income, age disability and condition of home. This program is currently administered by LTNCHC.

that has caused them to try and seek private funding. http://classweb.gmu.edu/mgabel/ncl110_1997/lumbee.htm. The “tribe is treated more like a nonprofit than a government entity.” (Hardin, James. Personal interview. 27 Mar. 2003). The tribe is in the process of seeking Federal recognition.

⁴¹ Affordable housing for the elderly is a rarity among the Lumbee communities. The tribe would like to provide affordable housing for more of the elderly enrolled Lumbee members.

North Carolina Finance Agency	In 2002 this agency gave LRDA a grant for \$500,000. This funding will rehabilitate 24 homes of which septic tanks can be either repaired or replaced as needed.
Pembroke	The City contributed \$11,000 from its Town CDBG toward the lift station.
Title VI	LTNCHC originally believed they were ineligible to utilize these funds. Upon learning that as an IHBG recipient, they are eligible for this financing, they now plan to partner with local towns and other organizations to build units and provide infrastructure on three newly purchased tracts of land.
United States Department of Agriculture (USDA)	Through their non-profit corporation, LRDA, the Tribal Council is eligible to apply for USDA grants and loans. Non-profit organizations are eligible to apply for these funds. In 2002, LRDA received a grant in the amount of \$98,000 to rehabilitate or replace septic tanks. The maximum per home amount is \$3,000 to be leveraged with other funds where possible. LRDA is looking into securing additional grants to assist with infrastructure development on three newly purchased tracts of land. LTNCHC is currently seeking these funds for utilization.

LRDA is working with LTNCHC and NCIHA in a joint effort, leveraging USDA and IHBG funds, to develop infrastructure for the LTNCHC’s rehabilitation program.



(Septic pump)

Each funding source has its own compliance standards and methodology of payments. Current funding “only meets the tip of the iceberg [the] tribe’s need is so great they could actually

replace the County’s social services, but they don’t want to go there.”⁴² Another person described current funding as “not [even] a drop in the bucket.”⁴³ The tribe is looking to leverage other types of funds, such as private sources.

Identification of available funding that the tribe either chose not to pursue or was prevented from pursuing

The tribe’s current non-federally recognized status prevents them from either receiving primary federal funds, other than IHBG, or they must compete for funding, including but not limited to the following:

Indian Health Service (IHS)	This program, a major source of assistance, aids federally recognized tribes. The Lumbee Tribe is unable to receive assistance from IHS for water and sewer needs. Individual tribal members are not eligible for this assistance.
Indian Community Development Block Grant (ICDBG)	LTNCHC is currently unable to utilize these funds.
United States Department of Agriculture (USDA)	Non-federally recognized tribes, such as the Lumbees, have to compete with other groups for USDA grants.

Process

Determination of how projects were selected

The Tribal Council looked at future growth in Pembroke, located in Robeson County, and knew the tribal members would need housing. “Four out of 10 people in the four counties are Lumbee.”⁴⁴ Robeson County has the largest population of Lumbees, approximately 39%. The tribe bought land to provide houses for young couples and displaced elders. Pembroke is in close proximity to good schools and future jobs that are conducive for expansion.

The tribe is still planning the infrastructure development for the three tracts of land. The tribe does plan to build the roads and the County will maintain them until the tribe receives full federal recognition. The tribe will then maintain the roads. The tribe has arranged in-kind services in lieu of paying local property taxes.

While LRDA developed scattered sites, LTNCHC is looking toward developing communities in close proximity to cut down on infrastructure costs. LTNCHC will develop the infrastructure including water, sewer, power, roads and possibly gas. There is a move toward getting away from septic tanks because they require more land.

Identification of tribal processes affecting infrastructure development

The Lumbee Tribe is governed by the Tribal Council; first elected in 2001, and a constitution adopted in November 2002, by the adult members of the tribe. The tribal government is comprised of executive, legislative and judicial branches. The legislative branch consists of a 23 member Tribal Council, representing 18 districts. The executive branch includes the Tribal

⁴² Jacobs, “Interview,” 26 Mar. .

⁴³ Goins, Jimmy. Personal Interview. 26 Mar. 2003.

⁴⁴ Jacobs, “Interview,” 26 Mar.

Chairman and staff. The judicial branch includes five judges authorized by the Constitution to preside over court proceedings. The Constitution provides for an independent tribal elections board.

Since the governing body is fairly new, it has not yet had the opportunity to develop long-range infrastructure goals. The tribe does not have zoning requirements, nor does it issue permits. It does adopt ordinances, usually presented by committees. The Tribal Council is in the process of adopting ordinances for the three tracts of recently purchased land. Under its lease/purchase program, the tribe can regulate use of residents' land until the title is conveyed. The tribe is currently under the prevailing ordinances of local counties and the State of North Carolina.

Identification of non-tribal processes affecting infrastructure development

City and County	The tribe adheres to the City/County zoning requirements and building codes. Tribal members purchase permits for water, sewer and construction. The County inspects all construction, including infrastructure projects. If tribal members are unable to purchase permits, the tribe will do so.
Electricity	The tribe is unable to assist in the installation of electricity and telephone poles. If a homeowner cannot afford installation, there are two co-ops that can provide assistance with installation. If residents desire a nightlight, the cost is an extra \$15-20 a month. Residents sometimes opt not to utilize heating or air conditioning equipment, or even have them installed if they have the option, because they cannot afford the bills.
Environmental evaluations	The North Carolina Department of Environmental and Natural Resources (NCDENR) oversees all environmental matters and adheres to EPA regulations. The tribe must work with NCDENR and adhere to EPA regulations.
Septic tanks	Approximately 80% of homeowners have septic tanks. They get a permit from the County and pay the environmental fee. The tribe does purchase and install septic tanks for tribal members who can't afford them.

Sewer system	<p>The City of Pembroke is in the process of getting small businesses and schools hooked up to its sewer line. The majority of Lumbees live in Robeson County, in or near Pembroke. If residents live along this sewer line, they can choose to hook up to it. The City of Pembroke has a good waste water system with capacity for growth.</p> <p>A solid waste treatment plant may not be possible to service the Lumbees as they are currently spread out, living in four contiguous counties.</p>
Water	<p>Tribal members can either dig a well, or tap into the County water line if it has been installed near their property. While all Cumberland County companies have water and sewer systems many residents do not. However, over the next 10-15 years, residents currently not receiving service will have access to water and sewer systems. Waterlines in Hoke County began in 1991; 85% of the residential homes have access. By the end of the summer 2003, Robeson County will have installed a water line across the entire County. If tribal members opt to connect to the water line as it is being installed the cost is only \$25.00. However, if tribal members choose to connect to the water line after the installation phase, the cost is \$300.00. Digging trenches to lay pipe, for example to lay an 8" pipe for five miles to provide access to County water could cost approximately \$400,000. Rural residents in Scotland County began to have access to waterlines in 1996. There are no County sewer lines. Water pressure can be a major problem. When high water consumption companies work at full capacity, resident's water pressures drop severally.</p>



(Drain pipe)

Steps to carry out project

The tribe is in the preliminary planning stages of how they want to develop the three tracts of land. The tribe has not decided how each community to be built will look. A survey will be conducted of potential residents regarding the design of units. A plan in writing has not yet been developed.

An architect has been hired who will do a housing needs assessment that will be the basis for construction and type of units to be built.

The tribe plans on working with an engineering firm that provides technical assistance and can assist with directing the tribe to state resources such as the “Clean Water Management Trust Funds” and “Rural Water Association” funds.

Infrastructure will be installed first, then the units constructed.

Consideration Factors

Factors to consider, issues, concerns and barriers to infrastructure development are discussed below:

Traditionally, extended Lumbee families lived in close proximity to each other. The land was passed down through the family. These families have been on the land for years and ties remain strong. These ties lend to the strong cohesiveness of the Lumbees. Communities were established from these extended families that remain today. There are many young couples and Lumbees that have relocated back to the area and don’t have the family ties to land. These tribal members need housing.

Low-income levels not only have a socio-economic impact, but meeting basic infrastructure needs is problematic. Many residents aren’t able to handle hookup fees to the County waterline system, or purchase a septic tank. LTNCHC is able to assist with these fees. Robeson County has one of the highest poverty rates in North Carolina, and the state as a whole has one of the highest poverty rate in the United States.⁴⁵

Many residents do not have the finances to upgrade their current plumbing and will therefore “rig up something that is not sanitary.”⁴⁶ For example, they will hook a garden hose to an outside source and route the hose to inside water fixtures such as the bath tub and the commode.

⁴⁵ <http://www.cviog.uga.edu/poverty/introduction.pdf>.

⁴⁶ Hunt, Jimmy. Housing Chairman. Personal Interview. 24 June 2003.



(Unsafe commode)

All infrastructure is needed for the three newly purchased tracts of land. Most of the land is privately owned by tribal members. This reduces the cost of infrastructure on these lands, since the tribe doesn't need to purchase the land. The Lumbees cannot leverage their IHBG funds with IHS funds due to eligibility issues linked to their nonfederal recognition status. The tribe can leverage their IHBG funds with other federal and private sources. If the tribe "could get other funding, they wouldn't have to use IHBG funds for infrastructure."⁴⁷

Infrastructure funding sources have limitations. For example, non-federally recognized tribes have to compete with other groups for USDA grants.⁴⁸ In some areas, grants are distributed giving "precedent to cities and towns, tribes are last."⁴⁹

The pressing need to develop infrastructure and construct additional housing has to be addressed and "Lumbees are being innovative and creative."⁵⁰

More outreach needs to be done to get people services and services to people.

A big hindrance is the cost to meet local, county and state building codes. People are economically deprived. Getting lending institutions to participate is a hindrance.

A barrier is the unavailability of land. Due to the mass of "wetlands," when someone purchases land they have to buy more than they need because a large percentage of the land is unusable. These wetlands also affect the stability of septic tanks.

The costs for environmental review is high and there is a lot of EPA paperwork.

The tribe accepted its first applications for housing in September 2001. Since that date, there are approximately 1,500 people on the Rehabilitation waiting list; 500 people on the

⁴⁷ Hardin, James. Personal Interview. 27 Mar. 2003.

⁴⁸ In 2002 there was a set aside of \$24,000,000 for Alaska villages. Also, in 2002 there was a set aside of \$16,000,000 for federally recognized tribes. Saffert, "Interview," 22 Sept.

⁴⁹ Id.

⁵⁰ Jacobs, "Interview," 26 Mar.

Homeownership waiting list; and 300 people on the Down Payment Assistance program waiting list.⁵¹

It might be more feasible for the tribe to continue working with the local towns and counties for solid waste services.

The tribe has Native American preference. As there are a lot of Native-owned companies in the area these companies are strong contenders in the bid process.

Feasibility to upgrade the tribe or community's existing infrastructure

With additional funding it is feasible. The tribe is planning to start its own construction company to enhance economic development. There is a need to provide housing that people can afford, to reorient, to educate people to lift them up “to let them know they can have.”⁵²

Making housing units safe and sanitary is a big problem with the older units. It is very expensive to do rehab work on a large percentage of existing substandard units. Seventy-five percent of these units need some rehabilitation work on either their water or sewer/septic systems. This problem could be more readily alleviated with IHS assistance.

Suggestions

Participants suggested the following:

- It is important for the tribe to develop a map of their infrastructure, so a history can be developed. Once the underground pipes and cables are covered up, it is difficult to locate them for repairs if they are not identified on a map. The tribe has an opportunity to do this with the three tracts of newly purchased land.
- “Get the people involved in the political process is important. It’s important to maintain credibility.”⁵³

⁵¹ Maynor, Tammy. Personal Interview. 26 Mar. 2003.

⁵² Jacobs, “Interview,” 26 Mar.

⁵³ Id.

Pleasant Point Passamaquoddy, Maine

Background

This case study looks at infrastructure needed to develop a major project named “Cuspes (pronounced jewspuz) Park” along with seven to eight units located in neighboring communities in Pleasant Point. The tribe needs to expand their existing sanitation system. There are almost 4,000 Passamaquoddy Tribal members, making this the largest federally recognized Indian Tribe in New England. The Passamaquoddy Tribe is located on two reservations in the easternmost part of Maine; Pleasant Point and Indian Township. There are approximately 1,159 Native Americans living within the Pleasant Point Passamaquoddy service area including 640 tribal members.

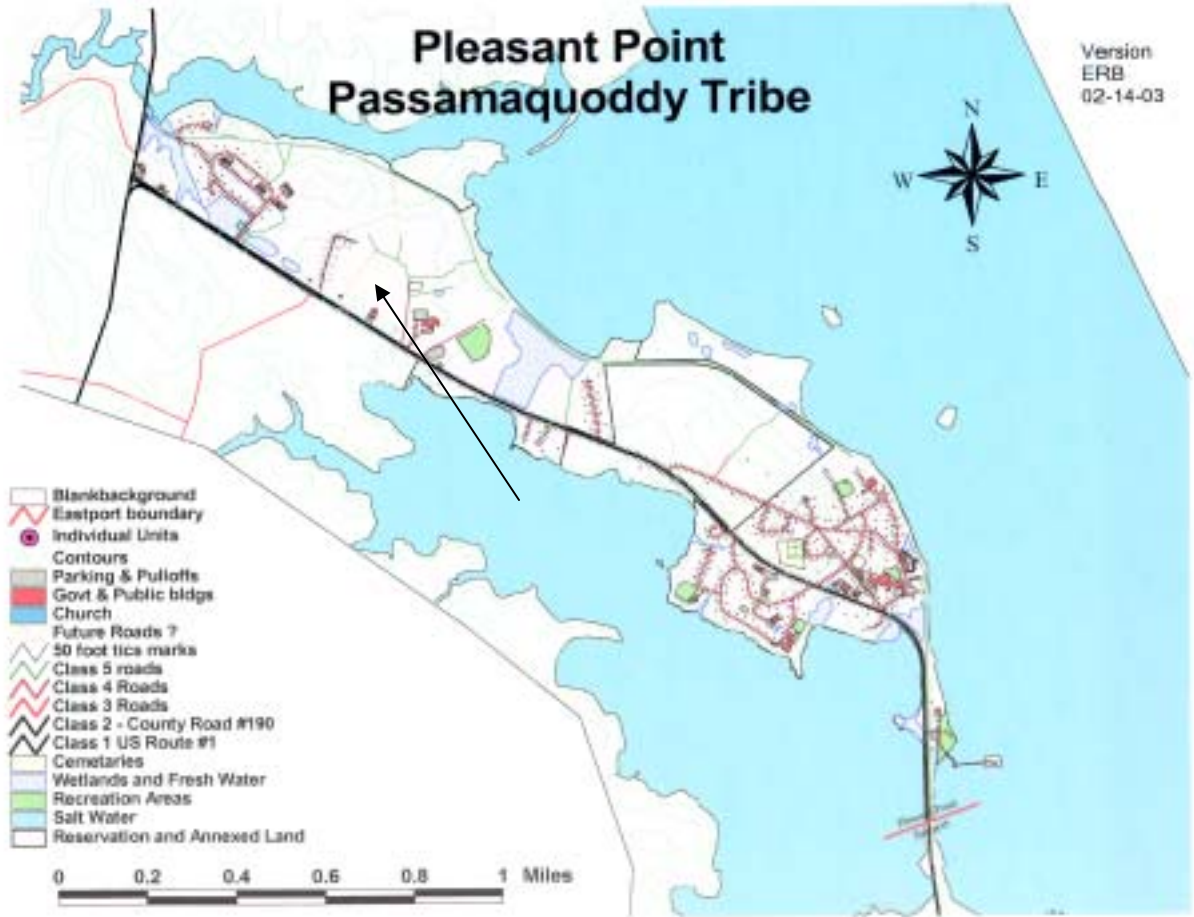
Since the 1970’s the population has more than doubled on the reservation (from 307 to 640). Tribal membership is expected to grow in the immediate future as 96% of the tribal women are in childbearing age. Many families want to return once housing becomes available.⁵⁴

Description

The Tribe purchased over 75 acres and plans to build 28 new two, three and four bedroom units in Cuspes Park utilizing the Low Income Housing Tax Credit Program (LIHTC). Six units are planned under Rural Development and 2002/2003 IHBG funds will be used to build two to three units.⁵⁵ These units will be located in nearby communities. Cuspes Park will include four commercial lots and two large recreational/camping areas that will offer recreational, health and occupational services. Roads, water/waste water and electricity are needed for Cuspes Park and the other units.

⁵⁴ 2003. Needs Assessment. Pleasant Point Passamaquoddy Reservation Housing Authority.

⁵⁵ Construction figures and data include 28 Cuspes Park and the additional eight to nine units to be built utilizing Rural Development and IHBG funds.



(Cuspes Park will be located in the upper left section)

Participants

The following are planned to be involved with the infrastructure development for Cuspes Park:

Bureau of Indian Affairs (BIA)	Provides funds for roads. The Pleasant Point Passamaquoddy Reservation Housing Authority (hereafter referred to as the “HA”) prioritizes areas of development and the types of roads required. These priorities are forwarded to the tribe’s Office of Economic Development/ Planning who submits an application to the BIA. Once the BIA determines the road is not a HUD project they will determine if they have funds available. If funds are available, the BIA will set them aside for the project. The HA will hire engineers to do land surveys and to monitor the project. The tribe will hire a contractor to build the roads.
Environmental Protection Agency (EPA)	The tribe must comply with environmental regulations.

Indian Health Service (IHS)	Provides funds to the tribe for digging trenches and installing water and sewer pipes to the tribe's Waste Water Treatment Facility. The HA makes a request to IHS for funds. Once the IHS determines this is not a HUD project they see if they have funds available. If funds are available the IHS will set them aside for the project. The HA requests for engineering specifications and works with a regional representative who will submit an application for funds to the IHS. The regional representative will coordinate with the HA and the IHS and monitor the project.
Passamaquoddy Water District	This is a quasi-municipal non-profit corporation. Three tribal members serve on its board. The tribe operates and maintains a public drinking water system that purchases wholesale water from this non-profit corporation.
Pleasant Point Passamaquoddy Reservation Housing Authority (HA)	Oversees housing infrastructure activities.
Pleasant Point Passamaquoddy Tribal Council	Approves housing and infrastructure activities.
Pleasant Point Passamaquoddy Tribal Planning Department	Works jointly with the HA and the Tribal Council to develop goals such as housing, economic and infrastructure development. They are currently working with the IHS to obtain water and sewer installation funds and with the BIA to obtain road construction funds.
Pleasant Point Passamaquoddy Utility Department	Administers the Waste Water Treatment Facility (WWTF). This Secondary Extended Aeration Sanitary Wastewater Treatment System and Collection System is used to stabilize the sewage generated by about 730 connected sewer users. The operation of this facility plays an important role in protecting the environment. It maintains the tribal government's multi-million dollar investment in pollution control infrastructure. It operates and optimizes the sewage collection, has 13 pump stations a wastewater treatment plant, and monitors water meters. The system includes several miles of water and sewer mains. ⁵⁶

Funding Sources

The HA plans to leverage various funding sources to develop infrastructure for upcoming housing construction. Approximately \$2.5 million is needed for infrastructure. Portions of this amount will hopefully be provided by the Bureau of Indian Affairs, IHS and if need be, the Federal Home Loan Bank (FHLB). The major funding sources identified are as follows:

⁵⁶ Memo to National American Indian Housing Council from Gene W. Francis, Utility Superintendent. 8 Apr. 2003.

Bureau of Indian Affairs (BIA)	These funds are being sought to construct a ½ mile road in Cuspes Park. The HA will work with an engineer who will monitor the project. Once the engineer determines the project is 50% complete the tribe will receive funds to reimburse their construction expenses and pay contractors. The HA will receive the remaining 50% when the project is complete.
Federal Home Loan Bank (FHLB)	If the BIA and the IHS cannot provide \$2.5 million for infrastructure, the tribe will attempt to secure a loan from FHLB. Although this possible source of funds is flexible the tribe currently does not have the economic base to generate the collateral to secure a loan or to make payments on a loan. If BIA and IHS are able to provide \$2.5 million, funds may still be needed to fill in the gaps.
Indian Housing Block Grant (IHBG)	The HA receives \$660,000 a year. Most will be used to construct 2-3 units near Cuspes Park with little available to assist with infrastructure for these units. ⁵⁷
Indian Health Service (IHS)	Funds are needed to dig trenches for water and waste water pipes and to install two new lift stations and provide funding to upgrade three existing lift stations, one of which may have to be replaced with a new station.
Low Income Housing Tax Credit (LIHTC)	This is the only funding source that provides large amounts of money and thus will be the primary source to prepare lots for construction, install housing foundations, and to construct units. A portion of the money will be used for infrastructure at Cuspes Park and for eight or nine units being built elsewhere on the reservation. This project will cost \$4 to \$5 million with an additional \$1 to \$2 million for infrastructure. This fund was selected because other sources only provide, for example, a half million dollars. Using other funding sources would force the tribe to seek and leverage five to six other funds. ⁵⁸ The tribe is a third-party in the LIHTC funding process. The funds will be funneled through the Maine State HA, a public housing authority. Funds will be used to defray the cost of the application. To ensure reporting requirements are met, a small amount of money will be used to hire an outside agency to oversee the management and monitoring of the funds. The Passamaquoddy Tribe is the first North-Eastern Tribe to receive these funds. ⁵⁹

⁵⁷ These funds are currently being utilized for rehabilitation only.

⁵⁸ Daugherty, Richard. Personal Interview. 8 Apr. 2003.

⁵⁹ The LIHTC program is complex. For consultation on the tribe's experience with this program, contact Clayton Cleaves, Pleasant Point Passamaquoddy Reservation Housing Executive Director, (207) 853-6021.

The HA is a member of the Wabanacki Housing Circle that includes four tribes in Maine, and local and state funding agencies. This organization meets once a month to discuss issues and learn from the funding sources what the tribes need to do to get their funding. This is an excellent way to have a relationship with funding sources. The company can also provide low interest loans to build infrastructure. Although the tribe is not currently in an economic position to take out a loan, they may be able to do so in the future.

Identification of available funding that the tribe either chose not to pursue or was prevented from pursuing

None were identified.

Process

Determination of how project was selected

The Cuspes Park layout was created to meet specific requirements of the tribe. It was requested that some residential, commercial and recreational areas be developed. The layout is designed to provide full parcel utilization with economical road and utility construction. The roads are designed to allow access for fire and emergency vehicles and school buses to all parts of the new development.

Identification of tribal processes affecting infrastructure development

The tribal government consists of a Governor, a Lt. Governor and six Tribal Council members. The Tribal Council has approved a land use plan to develop the housing units, some of the industrial area, and a recreational area at Cuspes Park.

The Tribal Planning Department is working with the IHS to secure funds to install water and sewer pipes and lift stations at Cuspes Park.

The Tribal Council is bringing together department heads to address the next three to five years needs of the tribe.

The tribe does not have zoning requirement, however the HA has developed some zoning policies.

Although the tribe has a Native American preference policy many local Native American companies do not meet the bonding requirements and are prevented from being competitive in the bid process. In addition, there are no Native American general contractors that do water, sewer and road construction, therefore these projects go to contractors that “charge top dollar to the tribe.”⁶⁰

The WWTF has proposed a tribal utility ordinance that basically describes responsibilities of system users, the Utility Department, and the tribe. The ordinance prescribes rules and regulations for water and wastewater service of the Utility Department and includes penalties for nonpayment of water and wastewater service. The HA will assist residents with maintenance and repairs. Once the ordinance is passed, the HA will be able to utilize it to lobby for additional funding for implementation and enforcement.

⁶⁰ Cleaves, Clayton. Personal Interview. 8 Apr. 2003.



(Pleasant Point Passamaquoddy Reservation Sanitation Facility)

Identification of non-tribal processes affecting infrastructure development

Environmental Protection Agency (EPA)	The tribe has a good working relationship with the EPA, they don't have a problem addressing environmental requirements.
Indian Housing Block Grant (IHBG)	The general consensus is that this source of funding is "going out" and the tribe needs to develop other methods of providing housing.

Steps to carry out project

Cuspes Park:

- Identified need.
- Identified property for project.
- Acquired the property.
- Conducted preliminary site work (included mapping, elevations, and topography).
- Conducted engineering work (included site plan made that Tribal Council had to approve). Planned costs for residential infrastructure (not including commercial and recreational/camping areas) are as follows:

Table 1.1 Estimated Infrastructure Costs Cuspes Park⁶¹

	Unit	Unit Cost	Quantity	Cost
Refit existing sanitary lift station	1 lift station	\$120,000	1	\$120,000
New sanitary lift station	1 lift station	\$150,000	1	\$150,000
8" water main	lateral flow unit	\$50	2847	\$142,400
Complete 8" water line loop to road (recommended)	lateral flow unit	\$70	1250	\$87,500
Water services	each house	\$600	37	\$22,200
Fire hydrants	each fire hydrant	\$3,000	3	\$9,000
8" sewer line	lateral flow unit	\$55	3100	\$170,500
4" force main	lateral flow unit	\$30	1425	\$42,800
Sewer connections and laterals	each house	\$2,000	37	\$74,000
Manholes (6' standard)	each manhole	\$2,700	12	\$32,400
Surface paving	ton	\$70	726	\$50,900
Binder paving	ton	\$70	1452	\$101,700
Base material	cubic yard	\$16	6003	\$96,100
2-phase utilities (overhead)	lateral flow unit	\$15	2425	\$36,400
3-phase utilities (overhead)	lateral flow unit	\$25	1940	\$48,500
Clearing & grubbing	acre	\$5,000	7	\$33,900
Loam	cubic yard	\$23	981	\$22,600
Culverts	lateral flow unit	\$35	240	\$8,400
Ledge excavation	cubic yard	\$70	3590	\$251,400
Common excavation	cubic yard	\$8	3342	\$26,800
Common borrow	cubic yard	\$10	25	\$300
Trench ledge excavation	cubic yard	\$75	1762	\$132,200
Mobilization, general conditions				\$182,600
15% estimating contingency				\$276,400
TERO Tax				\$63,600
Estimated design fees				\$106,000
Total Probable Cost				\$2,388,600

⁶¹ Construction figures and data include 28 Cuspes Park and the additional eight to nine units to be built utilizing Rural Development and IHBG funds.

- Identified funding sources.
- Made LIHTC application.
- Contacted IHS and BIA for assistance [see funding sources].
- Ready to start digging the trenches for water and sewer pipes.

Consideration Factors

Factors to consider, issues, concerns and barriers to infrastructure development are described below:

The reservation has a 30% overcrowded rate. There are almost no vacant units but no homeless. Families take in people.⁶²

There is a high unemployment rate--21.2% of the labor force was unemployed in 2000.⁶³ In 1999 the median household income on the reservation was \$15,956 compared to \$37,240 for the state of Maine and \$41,994 for the United States as a whole.⁶⁴

There are a number of people that desire to move home, but there is no available housing for them.⁶⁵ The growing population will need more infrastructure and more units.

There are very few jobs to attract skilled labor to the immediate area. In the past year and a half several major industrial companies shut down. Tribal members are not able to make housing payments and the HA has experienced a surge in TARS. Several residents have resorted to crime, and once they become incarcerated, if they are the breadwinner, the family loses its source of income.⁶⁶

Many youth are getting an education. However, once they complete their education many are relocating to New Hampshire. This is depleting the skilled workforce. Thus, the tribal government, its agencies and residents are forced to hire off-reservation labor and pay top prices when purchasing goods and services. Nearly all contracts for construction, repair, professional services, consultants, or other purchases must go off-reservation.

“The Economy on the Reservation is consistently and significantly worse than the rest of Washington County or the State of Maine.”⁶⁷

“The LIHTC Program is intimidating and scary.”⁶⁸ The program is also “extremely administrative intense”.⁶⁹ Therefore the HA will hire a consultant to work with them on the Cuspes Park project.

⁶² 2003. Needs Assessment. Pleasant Point Passamaquoddy Reservation Housing Authority.

⁶³ Id.

⁶⁴ 2000. U.S. Census.

⁶⁵ 2003. “Assessment.”

⁶⁶ Altwater, Denise. Personal Interview. 9 Apr. 2003.

⁶⁷ 2003. “Assessment.”

⁶⁸ Cleaves, “Interview,” 8 Apr.

⁶⁹ Daugherty, “Interview,” 8 Apr.

There is a fear that if the BIA and the IHS cannot assist with the infrastructure for Cuspes Park, the tribe will not be able to move forward with developing this project.

An idea to use wood chip heating had to be scrapped due to high installation costs.

According to traditional tribal custom, land and houses were passed down in the family. Later, after the HUD programs started, if a house no longer stood on the land, the tribe leased the land back to the HA who built a HUD unit on it and if that family/tenant couldn't make the house payment they were evicted. This began a new era of displacement.

Due to the severe weather conditions there is only a four-month construction period here. This makes it difficult when several organizations need to come together to complete a project. This is the situation with the LIHTC project. The BIA and IHS have to bring their resources together at the same time in order for the HA to get the infrastructure installed and allow for construction of units.

If a project is over \$100,000 the tribe will formerly advertise for bids. The lowest responsive bid will receive the contract. Most of the available labor is unskilled; therefore, the tribe must go to off-reservation non-tribal construction companies.⁷⁰

“The IHBG funding was insufficient to develop infrastructure and build houses.”⁷¹

Feasibility to upgrade the tribe or community's existing infrastructure

A needs assessment has been completed clearly demonstrating housing and infrastructure needs, however the cost to upgrade existing infrastructure is yet to be determined.

Suggestions

Participants suggested the following:

- “The tribe needs to develop roads, water, sewer and electricity to keep and attract skilled labor force. The Tribe needs to develop infrastructure to keep members here.”⁷²
- Would “like to see more economic and commercial development and heating as a public utility owned by the tribe.”⁷³

⁷⁰ In a remote area like this, competition is extremely limited which in most cases results in higher costs for the HA and tribe. The Tribe is addressing this by planning to start 5-6 small companies that will provide windows, doors, superior thick siding, roofing and other construction materials that will wholesale to the Tribe. Another company the Tribe is planning to start will build manufactured housing. These units will hopefully be utilized in Cuspes Park.

⁷¹ Cleaves, “Interview,” 8 Apr.

⁷² Downing, Alberta. Personal Interview. 8 Apr. 2003.

⁷³ Daugherty, “Interview,” 8 Apr.

Susanville Indian Rancheria, California

Background

This case study looks at a small rancheria that is dealing with major barriers to infrastructure development. The tribes associated with the Susanville Indian Rancheria are Maidu, Pit River, Washoe and Northern Paiute. At that time, the Federal Government through the Department of Interior, recognized political entities and not the anthropological (tribal) entities. The individual Native Americans from the various tribes became one political, governmental entity.

The Susanville Indian Rancheria consists of three established communities: lower Rancheria, upper Rancheria, and the Sierra housing area located in Herlong, California. There is one undeveloped community, not yet named, that will be built on a recently purchased 3.21 acre tract. The Susanville Indian Rancheria is adjacent to the City of Susanville (hereafter referred to as “the City”). The infrastructure for the established communities was constructed separately. The City developed and owns some infrastructure and Susanville Indian Rancheria developed and owns some infrastructure.

Description

The lower Rancheria was the first community established. In 1923, a resident of the City sold the BIA 30 acres under the Landless and Homeless Act under which the U.S. Congress provided funds to purchase lands for landless and homeless California Indians. The BIA then turned the land over to the Susanville Indian Rancheria. There were many landless and homeless Maidu, Pit River, Washoe and Northern Paiute Indians living in the Susanville area. The original homes were small shacks built by the BIA, who also provided the infrastructure for the water and sewer. During the 1970s, when HUD started assisting tribes in California, the first housing development was built. The IHS put in the water and sewer and the BIA paved the first road. There are 34 homes, of which six are detached elderly units (the only detached elderly single family dwelling project in California), and nine tribally owned homes.

The upper Rancheria was established next. On October 14, 1978 Susanville Indian Rancheria received an additional 120 acres, made possible under Public Law 95-459. The Bureau of Land Management (BLM) had the land and turned it over to the tribe. The IHS put in the water and sewer, the previous umbrella housing authority and the BIA put in the roads. The Susanville Indian Rancheria owns and maintains a 100,000 gallon water tank on the upper Rancheria. There is one booster station and two pumps that pump water to the tank. There are 53 units in this community. Another 80 acres were donated to the Susanville Rancheria in 1994 that has not been put into federal trust status.

An additional 72 acres located at the Sierra Army Depot based in Herlong, California, was acquired (given) from the U.S. Department of the Army under the Base Closure and Realignment Act and added to the Susanville Indian Rancheria on November 6, 2000.⁷⁴ This is known as the Sierra housing area. The Susanville Indian Rancheria also received an Administration Building

⁷⁴ Under the Base Closure and Realignment Act, any land not being used for the immediate mission of the army is being relinquished. The army was also mandated to get out of the water and wastewater business. The intent of releasing the land and units for free is for economic growth, however, this isn't what's happening.

and 120 units. The tribe utilized some of the existing housing units to construct a Youth Treatment Center.

In 2000 Susanville Indian Rancheria Housing Authority (SIRHA) purchased 3.21 acres of land. Currently, engineers are conducting soil testing that will assist SIRHA in developing a plan to deal with the type of soil and water conditions they have. They also need to determine how much fill they will have to use. SIRHA projects \$190,000 per year for new construction.



(3.21 acres to be developed)

On March 28, 2002 the Susanville Indian Rancheria purchased an additional 875 acres, this will bring the total land base to 222 acres in trust status and 958.21 acres in fee status (taxed by the state).⁷⁵ The 875 acres will be set aside and have exclusion zones, or areas, containing animals and open spaces. A handful of houses will be built in one corner.

Participants

The following are involved with Susanville Rancheria’s infrastructure development:

Upper and lower Rancherias	Architect (for 3.21 acres) Charles Young Bureau of Indian Affairs, Road Committee City of Susanville Lassen Municipal Utilities District (LMUD) provides electricity. Land Use Planning Committee Lassen County RCAC SIRHA & BOC Susanville Rancheria Force Account Laborers Susanville Rancheria Maintenance Department Tribal Environmental Protection Agency Lassen County
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⁷⁵ The tribe plans to put the 875 acres into trust, this land is part of the 958.21 acres.

Sierra Housing Area	Environmental Protection Agency Tribal Environmental Protection Agency Herlong Utilities Company (HUC): Members include the Herlong Federal prison that is under the Federal Bureau of Prisons. The prison is not yet named and the opening date is not yet certain. Fort Sage Unified School District, United States Army (Sierra Army Depot, West Patton Village Community Service District (WPVCSD), Susanville Indian Rancheria, Lassen County and the Herlong community-at-large. Sierra housing residents SIRHA & BOC
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Funding Sources

The main funding sources utilized are as follows:

Administration for Native Americans (ANA) Grant	Will be used for land use planning and will help promote economic development. This will be the first planning grant received.
Bureau of Indian Affairs (BIA)	Part of the construction of Spring Ridge Road included a funding contract between the Susanville Indian Rancheria and the BIA. The Susanville Indian Rancheria received funding in the amount of \$274,788 from this contract. Not all of the funds were used to build the road. A residual \$106,000 was added to a “roads pool” and set aside to build the main road for the 3.21 acre community.
Comprehensive Improvement Assistance Program (CIAP)	Funds were used to assist with infrastructure for the upper Rancheria.
Environmental Protection Agency (EPA)	Susanville Indian Rancheria is currently working on obtaining an EPA grant to pay for part of the infrastructure for water. The grant is based on the poor quality of the water. The Susanville Indian Rancheria applied for the EPA Safe Drinking Water Tribal Set-Aside Grant to pay for its share of the capitol costs for HUC’s water and wastewater system construction.
Indian Health Service (IHS)	\$250,000 upgrade of the existing Upper Rancheria water system, including: paving road, cleaning tank, new telemetry system, chlorination system, booster station housing.
Indian Community Development Block Grant (ICDBG)	The Susanville Indian Rancheria received \$344,000 in 1997 and \$544,600 in 1999. The 1997 funds were utilized in a cooperative project with the City. Storm drains were installed between the 3.21 acres and the City. The 1999 funds were utilized to build Phase 1 of the new community building.

Indian Housing Block Grant (IHBG)	In 2000 the SIRHA became its own HA. It was able to utilize portions of the umbrella Modoc-Lassen HA IHBG funds from 1998 and 1999. The Susanville Indian Rancheria used their entire portion of 1998 and 1999 IHBG funds to purchase land and to do environmental tests. Infrastructure will be developed utilizing subsequent year's IHBG funds. The tribe is in the process of putting the 3.21 acres into trust. Between 2000-2003 the tribe received \$504,416 annually. SIRHA estimates they will use approximately 100% of their 2003 and future IHBG funds for infrastructure.
MM&S Commercial Bank	Funding to purchase the 875 acres was secured through this Minneapolis-based commercial banking firm that specializes in structuring and servicing commercial and Native American loans.
Susanville Indian Rancheria	The Susanville Indian Rancheria has only been able to assist the TDHE with roads because the tribe's funds have to be used for other projects. The Susanville Indian Rancheria and the SIRHA have a close working relationship.

Identification of available funding that the tribe either chose not pursue or was prevented from pursuing

The Susanville Indian Rancheria applied for an EPA grant. The EPA rates A-L categories. There are subcategories within each category. Secondary drinking water standards are rated L, the lowest. Although the Susanville Indian Rancheria qualified for the grant, receiving the lowest subcategory in L, the EPA was only able to fund projects in categories A-K.

Process

Determination of how projects were selected

Upper and lower Rancherias	Units were developed because of the need for housing.
Sierra housing area	The Susanville Rancheria acquired the land and buildings because there was no cost and the infrastructure was already in place. ⁷⁶

⁷⁶ This transaction was intended to promote economic growth and not to burden the recipient. The units were supposed to be in the same condition as when they were used by the military. When the Susanville Rancheria received them, they were not.

3.21 and 825 acres	The Susanville Indian Rancheria did not have any land available on which to build houses. Purchasing the 3.21 acres was driven by the need for more land and it is near existing utilities. The location alleviates the need to install lengthy pipes to connect existing systems. Initially, the 3.21 acres was not for sale. The Susanville Indian Rancheria approached the land owner who agreed to sell the land. The 825 acres are not near existing infrastructure, like the 3.21 acres that is located adjacent to the City. The cost will be much greater to the Susanville Indian Rancheria to build units on the 827 acres because lengthy pipes have to be laid and roads built to this area.
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Identification of tribal processes affecting infrastructure development

The Susanville Indian Rancheria is chartered under the authority of the Indian Reorganization Act (IRA) of the 1934. The Susanville Rancheria’s Constitution and Bylaws were approved by the Secretary of the Interior on March 3, 1969. The governing body of the Susanville Rancheria is a General Council composed of all the members who are at least 18 years old. The General Council has delegated day-to-day business responsibilities of the Susanville Rancheria to the Tribal Business Council consisting of a seven-member board. The board members are elected by the General Council every three years. The officers of the Tribal Business Council are: Chairperson, Vice-Chairperson and Secretary/Treasurer.

The Susanville Indian Rancheria worked with a community located in the mountains above the upper Rancheria by giving them an easement to allow these people to cross their land to get to their homes. The Susanville Indian Rancheria gave an easement to a logging company on another section of that land to allow the company to cross the land. In return the logging company agreed to bring the Susanville Indian Rancheria wood.

The Susanville Indian Rancheria doesn’t have any tribal zoning ordinances in place currently. The Susanville Indian Rancheria is following the City’s zoning, which is R1, residential single-family homes. The Susanville Indian Rancheria does not issue permits. The Susanville Indian Rancheria has assignments of property ordinance. They are updating this ordinance. The Susanville Indian Rancheria is progressive in changing and updating their ordinances and constitution. They try and change the government documents to meet the needs of today. SIRHA has to get a resolution from the Tribal Business Council. There are no tribal taxes, however there is a tax ordinance that is only imposed on outside contractors. SIRHA accepted the uniform building code for housing.

SIRHA reports once a month to the Tribal Business Council. Two council members are on the BOC, this helps keep the BOC informed of housing issues and activities.

Identification of non-tribal processes affecting infrastructure development

Architect and Inspectors	During construction, inspectors gave input and the architect addressed concerns regarding the contractors.
Building Codes	Architect, engineers and subcontractors have to adhere to local standards. The Susanville Indian Rancheria improved the 1997 uniform building code, because of the earthquakes in California, and adopted the 1998 Uniform Building Codes and Codes of Lassen County. They also adhere to American Disabilities Act (ADA) regulations. These codes were adopted to ensure structures built on tribal lands be held to County standards.
City of Susanville	<p>The City owns and maintains the water and sewer for the lower Rancheria units. The residents pay their water/sewer bills to the City.</p> <p>The residents of the upper Rancheria pay their water bills to the Susanville Indian Rancheria who buys the water from the City. The upper Rancheria residents pay a higher rate for water than other residents in the entire Susanville area, including the City and lower Rancheria. This is due to transportation of water and maintenance costs. The water is pumped up to the water tank above the upper Rancheria then, gravity pulled down to the upper Rancheria. These residents are also paying for the maintenance of the water line that is owned by the Susanville Indian Rancheria, this includes: electrical, cost of water, cost of replacement pumps, switchbox, repairs of water meters, administration of the water (e.g. billing and meter reading). All these costs are divided among the 53 units, the park and maintenance building, for a total of 55 meters.</p> <p>Residents of units to be built on the 3.21 acres will pay the City for water, sewer and gas.</p> <p>The City had planned on building 3,000 units on the 875 acres, however when they checked with the land owner, who is the Susanville Indian Rancheria, they learned of other plans for the land. Susanville Indian Rancheria wants to use the land for animals, open spaces and to preserve the cultural sites. This has created friction between the City and Susanville Indian Rancheria.⁷⁷</p>

⁷⁷ Another source of friction is a natural gas line the City installed that circumvents the Susanville Indian Rancheria. A lot of geo-thermal units of gas were purchased for the prison, via the High Desert State Prison and California

Environmental Protection Agency (EPA)	Under the safe drinking water act, the EPA has jurisdiction over water and waste water. Environmental requirements are a barrier. The Tribal EPA office is very involved with the Sierra housing area. They have been trying to lower the costs. The prison wants to put in oxidation ditches. This is very expensive and will only drive up the costs to install new water and wastewater infrastructure for the Herlong community. ⁷⁸ There was a drought that all the surrounding water tables recovered from except the one under Herlong. In addition to the oxidation system, the prison wants to recharge the water table using rapid infiltration basins that inject wastewater back into the groundwater. The tribe's EPA office researched the cost of this oxidation system and found a lagoon system would be less expensive and that rapid infiltration basins were unnecessary and could result in contamination of the groundwater. ⁷⁹ HUC would not accept this and the tribe's EPA office is continuing to research this.
Historical	The Federal Government created the infrastructure problems for many Rancherias, by putting the tribes on "the worst piece of land." ⁸⁰ In the Susanville area, the soil is full of huge boulders and when you dig, the ground water rises to the surface. These geological barriers affect the development of infrastructure, largely by driving up costs.
Herlong Utilities Company (HUC)	The Susanville Indian Rancheria discovered the water in Herlong was bad and the wastewater system was polluted with hazardous waste. The water was considered "secondary." They began trying to resolve the issue with the U.S. Army. In 1997, IHS conducted a feasibility study and recommended that the Susanville Indian Rancheria take the lead in developing a utility district in Herlong. In 1998 HUC was created to address the water issues. HUC did not have enough funds to get anything going until the

Correctional Center. This brought the overall cost down, thus making it less expensive for the City . However, the Susanville Indian Rancheria was not included in this project.

⁷⁸ The Susanville Indian Rancheria hired a water/wastewater engineering consultant to research alternative avenues other than HUC to acquire water/wastewater for Sierra Housing. To date, the consultant has not come up with an alternative.

⁷⁹ According to HUC, it would be more expensive to treat the Army's water so that it meets secondary standards than it would be to build an entirely new system five miles away.

⁸⁰ Lowry, Allen. Personal Interview. 5 Feb. 2003.

	<p>Federal Bureau of Prisons provided \$3 million in 2001. HUC's environmental documents were certified in November 2002 and they received their use permit. Construction on the water line began in March 2003.</p> <p>Susanville Indian Rancheria cannot pay for the administration fees to belong to this board. The most wealthy member of this board, the prison, can afford to make decisions that can be more costly.</p>
Indian Health Service (IHS)	Installed the water and sewer lines and inspects the water system.
Miller Construction, Inc.	The Susanville Indian Rancheria received IHS funds and contracted with this company to build the water tank, booster station and related pipelines. The Rancheria obtained the required easements and the company obtained the required permits.
Local banks, the County and mayor of the City	The Susanville Indian Rancheria has a good relationship with the local banks, the County and the mayor of the City. They have a fairly good relationship with individual city officials. A good working relationship needs to be developed with the City administration staff.
United States Army	The units relinquished by the U.S. Army to the Susanville Indian Rancheria in the Sierra housing area are in very bad shape. The Susanville Indian Rancheria has spent \$1.5 million in Herlong already and will need to spend \$10,000-\$20,000 more per unit this does not include maintenance, for new electric, siding, windows and roofing. These units are hooked up to the army's water and wastewater system. The water doesn't even meet secondary drinking water standards. The army is not required to meet these standards because this is a state requirement. If the water is transferred to another system, that system has to meet the state's standards (secondary drinking water standards).
Zoning	The 3.21 acres were zoned for housing by the City. The Susanville Indian Rancheria is complying with the zoning and to date the City hasn't required them to pay fees. A local engineering company is assisting them through the process. The 3.21 acres is a blighted area that once developed, will raise the tax value of the surrounding community. The 3.21 acres is taxable until it is put into trust, then it will not be taxable.

Steps to carry out projects

Lower Rancheria	<ul style="list-style-type: none"> • BIA transferred 30 acres to Susanville Rancheria. • BIA installed water and sewer. • 1970's additional units built. IHS installed water and sewer. BIA installed a road.
Upper Rancheria	<ul style="list-style-type: none"> • 1978, Susanville Rancheria received 120 acres from BLM. • SIRHA hired an architect to learn about developing infrastructure for the upper Rancheria. Architect looked at geotechnical issues, roads, water, and sewer systems. • The Susanville Rancheria learned to work with the City in order to develop land. This included accessibility to the land and developing a master plan. • The architect obtained help from HUD. At that time HUD played a major role in the process. • The Rancheria was able to obtain a right of way via a Tri-party Agreement with HUD, IHS and BIA. • First 12 units started. • IHS Water and sewer lines developed next. These are tied into local City systems. • A separate district handled the utilities. • Modoc-Lassen umbrella HA and BIA installed roads. • After construction of units it became apparent that everyone had to contribute to the process.
Sierra housing area	<p>U.S. Army relinquished 72 acres, 120 units, and one administration building to the Susanville Indian Rancheria. Originally thought to be a good move for the Susanville Indian Rancheria, this transaction has turned into an expensive endeavor.</p>
3.21 acres	<ul style="list-style-type: none"> • On December 13, 2000 SIRHA purchased 3.21 acres. • SIRHA conveyed land to the Susanville Indian Rancheria, who is working to have it put into trust. Once the land is received into trust status the Susanville Rancheria will then lease it back to SIRHA. • Susanville Rancheria and City entered into a joint agreement and installed a lattice work of drain lines, or storm drain system, that join the City's system. • Architect hired to assist with infrastructure development and plan community.

	<ul style="list-style-type: none"> • Twelve units planned to be built, one or two a year as funds permit. • Utilities planned to be installed underground. This includes natural gas hookups.
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Evaluation of how project was carried out

This is a slow growth area, therefore things are not done in a hurry. Of great assistance to SIRHA is the Executive Director who is a certified inspector and reviews every phase of construction.

Consideration Factors

Issues, concerns and barriers to infrastructure development for the Susanville Indian Rancheria are described below:

Boulders	<p>Numerous large boulders are in the ground and have to be removed. This requires the use of large equipment, such as bulldozers that are expensive to use.</p> <p>The bad soil and large boulders will be a barrier to developing infrastructure on the 3.21 acres. A major problem with installing the utilities in the upper Rancheria was little soil and lots of boulders.</p>
Bureau of Indian Affairs (BIA)	<p>One of the biggest problems in California is to handle infrastructure with Total Development Contracts (TDC) through the BIA. The cost is \$15,000-\$20,000 per unit just for infrastructure.</p> <p>The BIA only receives a small percentage of the Federal Highway Allocation funds for their roads program. This very small amount of funding has to be spread out among all the tribes. In addition, there is an 18-20 year cycle for the replacement of roads funded by the BIA, in other words the roads get resurfaced every 18-20 years. The BIA alternates years they fund roads between “self-governance” and “non self-governance” tribes. Susanville Indian Rancheria is a non self-governance tribe. This impacts planning- “if you don’t know when roads are going to be built, you can’t plan.” The BIA does not allow you to take the road’s program funds to subsidize other programs, but you can subsidize the roads program with other funds. The Susanville Indian Rancheria received a Total Development Contract (TDC) through the BIA.</p>
City of Susanville	<p>The issues over land use and water have not been conducive to a good relationship between the Susanville Indian Rancheria and the City. The City started to build a new hospital located near the upper Rancheria. The hospital did not have to get a water/waste water permit prior to receiving a building permit. Therefore, they did not have to adhere to any regulations that may have required them to obtain permission from the Susanville Indian Rancheria. The City tapped into the Susanville Indian Rancheria’s water line without receiving permission from the Susanville Indian Rancheria. The city did not do a water needs</p>

	<p>assessment (hydraulic analysis). The hospital pumps are larger than the Rancheria’s pumps. This could affect the water pressure when the new hospital comes online.</p> <p>The Susanville Indian Rancheria learned rules for conducting open meetings with the City. These meetings are governed by the “Brown Act” that requires no more than three city council members meet at one time with the Susanville Indian Rancheria. More than three representatives makes a quorum and decisions can be made.</p> <p>The City and local communities want things from the Susanville Indian Rancheria that are not easy to attain.</p>
<p>Environmental Protection Agency (EPA)</p>	<p>Environmental requirements are a barrier.</p>
<p>Federal Trust Land</p>	<p>Putting the 3.21 acres into trust is a barrier with the BIA. Susanville Indian Rancheria conducted an environmental assessment that the BIA returned pointing out grammatical errors. It is felt that this “word smithing” is unnecessary and is delaying the process and costing the Susanville Indian Rancheria time and energy. There are no environmental problems. Putting this land into trust will test the Susanville Indian Rancheria’s relationship with the City. A question is posed “will they help us or fight us?” The 3.21 acres are currently taxable. Once put into trust the City will lose those taxes, but it’s estimated to be minimal.</p>
<p>Funding</p>	<p>Not enough funding. A major issue with small tribes is the inability to combine certain key funding sources, for example HIP and some HUD program funds. While there is funding to build water systems, there is no funding to operate and maintain water systems. The Susanville Indian Rancheria cannot afford to hire an operator and the residents cannot afford to pay for one, this would be an added expense on top of the cost they already pay for the water system.</p> <p>A lot of funding is available to create water systems for tribes. However, there is no money available for operation and maintenance. The burden often falls on residents, many of which are low income and can’t afford this, to pay for maintenance of the system. This leads to non-maintenance of the systems that leads to “patch work” maintenance that ultimately is more expensive. Upon inspection by IHS they found several components that need to be replaced and the Susanville Indian Rancheria was found to be in non-compliance, “it’s a catch 22 situation.” Testing has to be done monthly for coliform bacteria and bi-annually for lead and copper. These costs are part of operations. Currently the Susanville Indian Rancheria is paying for these tests.</p> <p>Another barrier is trying to save enough money to build something.</p>

	<p>Some tribes have to use ICDBG money to build units. Tribes need enough money to build a satisfactory unit.</p> <p>The ICDBG application process is a barrier for tribes. The problem for tribes is coming up with their portion of the contribution and the short notice of Notice of Funding Availability (NOFA). Applicants can only argue the “math” not the substance of the application. HUD needs to provide more training to tribes prior to the tribes submitting applications. Smaller tribes do not have funds to hire qualified manpower, to travel, or to even apply for grants.</p> <p>Misperception of funding impedes infrastructure development. For example, the mayor of the City believes the BIA still funds more infrastructure than roads and thinks the Susanville Indian Rancheria can readily obtain assistance from this source. The City gets CDBG funding and thinks the Susanville Indian Rancheria can use ICDBG funds for projects. The ICDBG funds received by the Susanville Rancheria is only enough to carry out one project at a time. The City has the misperception that funds acquired through ICDBG can be replenished when the funds exceed the project. Therefore, joint projects between the Susanville Indian Rancheria and the City are difficult to develop. The City thinks the Susanville Indian Rancheria can easily secure funds and is unwilling to assist or enter into joint projects; other than the storm drain joint venture where the Susanville Indian Rancheria was able to use their ICDBG funds.</p> <p>The Susanville Indian Rancheria got an extension of their 1999 IHBG portion of funds because they are having difficulties with the environmental regulations. These difficulties are causing SIRHA to amend other things. “NAHASDA has not been good for this tribe. We were able to build 25-30 units under other types of grants.”⁸¹ SIRHA will have to seek other funds to leverage. They received very little IHBG funds “not enough for the needs.”⁸²</p> <p>Lack of knowledge is preventing the Susanville Indian Rancheria from getting additional funds.</p>
Geography	<p>The entire area is on earthquake fault lines.</p> <p>There was a southeast facing slope on the upper Rancheria that affected construction of the units with bay windows.</p>

⁸¹ Lowry, “Interview,” 5 Feb.

⁸² Sanchez, Joe. Personal Interview. 6 Feb. 2003.

Geological	Large boulders, expansive soils and surface water in the ground increase the cost of infrastructure by 50 percent.
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(Large boulders removed to development infrastructure for units)

Herlong Federal Prison (not official name):	<p>The prison has sufficient funds and is the driving force behind HUC. They are moving forward quickly to upgrade the water system in Herlong, as well as assist bringing natural gas to the City- but not to the Susanville Rancheria. Unfortunately, their progression is becoming a hurdle to the Susanville Rancheria. The new water system will be constructed, however there is a fear that no one will be able to afford it.</p>
Herlong Utilities Company (HUC)	<p>Each member of HUC pays a percentage of the capital costs of the co-operative. The Susanville Indian Rancheria pays \$2,000,000 in capital costs for the 120 units in Sierra. The cost is \$17,500 per unit, this is three to four times higher than normal. Currently the Tribe is suspended from HUC for failure to pay the administration fees. The Susanville Indian Rancheria is trying to decide if they will pay or abandon the housing units. The Susanville Indian Rancheria has a good youth treatment center in Herlong. It is generating money from rent payments. The residents pay \$300 housing notes and the prison is paying \$3,600 to rent space in the administration building. The Susanville Indian Rancheria gets about \$5,000 a month from these payments.</p> <p>HUC requested help from the IHS who did a feasibility study for \$700,000. When they got into the project they found out it was being driven by the prison. An engineer was hired, the costs were high. The Susanville Indian Rancheria couldn't pass the costs onto the residents because it was too expensive. A meeting was held with the prison in which they were advised they were driving up the costs. The prison is also driving the project faster than anybody else can generate funding or review project documents.</p> <p>The Community School District, Lassen County and the Susanville Indian Rancheria have no money to pay for their share of HUC construction costs to install an expensive water and wastewater system.</p>

	Obtaining grant funds is a lengthy process and funding agencies are involved with every aspect of system planning. Funding agencies will also not fund construction that has occurred before they deliver their funds. The prison wants their water and wastewater services by June 2003. The earliest any of the other organizations on the HUC board would be able to receive grant funding would be September 2003.
Indian Health Service (IHS)	They do not respond readily to requests “this is crippling because right now [Susanville Indian Rancheria is having] problems with their pumps.” ⁸³
Lava beds	The area is surrounded by lava rock beds. The water gets pushed to the surface and can do damage to the houses.
Remoteness	Aside from the geological barriers, the remoteness of the Susanville Indian Rancheria drives up costs for construction as materials have to be trucked in.
Residents	Barriers for the upper Rancheria included getting people to agree they had to play a part in the development of the project. At that time local folks saw the Susanville Indian Rancheria there did not see their role in assisting.
Seasonal	The building season for roads is May through October. Asphalt needs a certain temperature. The building season for constructing homes can be done year round, but during the winter months it goes slower, thus extending work and increasing the costs.
Susanville Indian Rancheria Housing Authority (SIRHA)	SIRHA only has three employees. They cannot travel to training. It is hard on the budget and small staff. For small tribes the minimum IHBG of \$50,000 is insufficient. SIRHA believes they were better off under the 1937 Housing Act. In 1999, the Susanville Indian Rancheria decided to break away from the Modoc-Lassen umbrella HA. HUD did not provide any support. Their basic attitude was that the umbrella HA and the Susanville Rancheria would have to work it out themselves. NAHASDA does not include procedures for tribes to break away from umbrellas. The final settlement agreement between Modoc Lassen IHA and the Susanville Indian Rancheria was signed on March 31, 2000, and SIRHA was formed in April of 2000. There was a difficult period of transition for the Susanville Indian Rancheria. They are now operating more smoothly.
Soil	Have expansive soil made of clay that is not good for building. The soil expands when it gets wet, which requires the use of “fill” soil.
Surface water	Soil testing was done on the 3.21 acres and water came up. The soil has to be removed, a mixture of gravel and dirt has to be added. This will allow the water to percolate back down into the ground and into the adjacent storm drains. Any good soil will be saved. Additional top soil has to be brought in. These are added costs.

⁸³ Id.



(Measuring water rising to the surface)

<p>Susanville Indian Rancheria</p>	<p>Is in the process of expanding and they are willing to enroll people. The Native American population in the surrounding areas would like to return to the Susanville Indian Rancheria. This is putting additional pressure on the Susanville Indian Rancheria to provide housing.</p> <p>The Susanville Indian Rancheria community's are surrounded by the City and hooked up to their water and wastewater systems. It's a problem because the City does not really respect the Susanville Indian Rancheria or the government to government relationship. There is historical prejudice. There is no money to develop water systems and it is not in the Susanville Indian Rancheria's best interest to depend on existing systems by the City and County. City and County governments do not try to understand tribal sovereignty.</p>
<p>United States Army</p>	<p>The army has created communities around their bases and then they got out of the water/waste water system business. The units relinquished in the Sierra housing area also have asbestos and lead based paint. There are also Trichloroethylene (TCE)(degreaser) plumes under the Army base. This has seeped into one well that has since been closed. Right now, HUC plans to drill new wells five miles away and pipe the water into the community.</p>
<p>Water quality</p>	<p>The army base water does not meet secondary drinking water standards. Secondary drinking water standards do not pose a health hazard but there are elements that make the water taste and look bad, such as iron and manganese. This water has stained the units and sidewalks with a rust color. Every resident there buys drinking water. The problem water in the Sierra housing area "coats everything with black gunk and has a smell." The siding and windows are stained a rust color from the water. The siding is chipping off the houses. Funding is a barrier. The Susanville Indian Rancheria is trying to decide if it wants to keep spending money on the units in Herlong. Right now Herlong is breaking even. Susanville Indian Rancheria's major issue has to do with the army and their share of the responsibility of the units. The Susanville Indian</p>

	<p>Rancheria was told the units would be in the same condition as when they were occupied, but they are not. The regulations provide that the transaction is not to be a financial burden, but it is.</p>
Water capacity	<p>There is no water capacity for the Susanville Indian Rancheria to build more units and provide them with water.</p>
Water Tank	<p>Currently the Susanville Indian Rancheria is dealing with a failing water system to the upper Rancheria. The telemetry system, that controls the water pumps, is antiquated and the SIRHA is trying to get it fixed. This is problematic, as the system is designed to tell the pumps when to go on and off, however it's not working. Currently, the maintenance crew has to manually turn the pumps on and off. If they do not turn the pumps on, the pressure drops and the water has a hard time getting from the pump up to the water tank, then back down to the Rancheria. If they do not turn the pumps off, the water overflows the storage tank and runs on the ground. The Susanville Indian Rancheria had paid for new pumps, control systems and maintenance, however that is not what they received.</p> <p>The current water tank was installed when the first 28 New Mutual Help homes were built, since then 25 Low Rent units, a Maintenance Building, and a Park have been added. The tank cannot adequately serve the needs of the additional homes, building and park.</p> <p>The water tank that sets above the upper Rancheria should allow water to enter the top and leave out the bottom. However, the tank is not designed that way. The check valve is also not working, thus allowing the water to back up to the pumps.</p> <p>RCAC estimated that the residents living in the upper Rancheria are paying three times more for water than they should.</p> <p>A new water system altogether would be cheaper for residents living in the Upper Rancheria units because IHS and RCAC has to keep coming out and little parts need to be replaced.</p>
Weather	<p>There are also high winds and extreme winter weather conditions.</p>
Miscellaneous	<p>“Things run smoothly if you have no audit findings, get your IHPs and APRs in on time.”</p> <p>Susanville Indian Rancheria’s Tribal Chairman does not have to worry about the SIRHA because the department is run well.</p> <p>The only economic development is the very small casino that currently only provides employment.</p> <p>“We look forward to the vast opportunities this additional land presents (875 acres). Not only will we be able to meet the growing housing needs of our members for generations to come, but in purchasing land that</p>

	<p>belonged to our forbearers, we are also able to preserve cultural sites important to the four tribes of the Susanville Rancheria.”⁸⁴</p> <p>The Susanville Indian Rancheria’s procurement policy can be overridden by tribal vote.</p>
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Additional infrastructure needed to provide new housing and/or community development

For the 3.21 acres, SIRHA wants to put in the infrastructure first, then build 12 units, one to two per year. The Sierra community needs a new water system. The Susanville Indian Rancheria needs a new telemetry system for the water pumps, and a new check valve.

Feasibility to upgrade the tribe or community’s existing infrastructure

It would be very expensive to upgrade the infrastructure or develop new infrastructure. For example, the SIRHA has to spend \$35,000 to \$40,000 more per unit to do the infrastructure. For example, they spend \$80,000 to build one unit with the infrastructure.

There is no additional water capacity. Due to funding cuts, it may not be feasible to upgrade the current system.

Suggestions

Participants suggested the following:

- Increase contact with California State Legislators.
- Improve relations between the Susanville Indian Rancheria and neighboring City.
- IHBG should include additional funding for infrastructure.
- IHS needs to be more responsive to calls.
- Infrastructure development could be streamlined. The local governments and other involved organizations need to look beyond historical prejudices to meet growth needs of the entire area.

⁸⁴ Lowry, Ike. Susanville Rancheria Tribal Chairman. 2002. WWW.Pechanga.net

TECHNICAL ASSISTANCE SPECIALISTS (TAS) SITE VISIT INTERVIEWS ANALYSIS

Information is utilized from twenty-two on-site interviews conducted by NAIHC’s TAS.

Current State of Infrastructure.

Participants were asked to discuss the current state of infrastructure for their tribe or community. Participants were asked to define the current state of roads, sewer, water and utilities. See Appendix A, page 73 for “Definition of Qualitative Examples” of roads, sewer, water and utilities.

Roads

Nine percent of the participants did not have hard surface roads, only dirt or grass.⁸⁵ The majority of participants either had poor infrastructure for roads (22%)⁸⁶; or thought the road infrastructure was fair (45%).

Sewer

Nine percent had no sewer system or facility.⁸⁷ The majority either had poor sewer (41%) or fair infrastructure for sewer (32%).⁸⁸

Water

A few participants had no water source within 300 feet of unit (4.5%), or had poor access to (23%) water. The bulk had either fair (36%)⁸⁹ or good infrastructure (32%)⁹⁰ for water.

Utilities

A few participants either had no power sources (4.5%) or had power sources that were beyond 300 feet of their homes, or worked only 50% of the time (9%).

Table 1.2 summarizes the responses of roads, sewer, water and utilities.

Table 1.2 Current status of Roads, Sewer, Water, and Utilities

	No Infrastructure	Poor Infrastructure	Fair Infrastructure	Good Infrastructure	Excellent Infrastructure	Total Participants
Roads	2	5	10	3	2	22
Sewer	2	9	7	3	1	22
Water	1	5	8	7	1	22
Utilities	1	2	9	9	1	22

⁸⁵ One participant explained the tribe is located at the bottom of a canyon and only have trails down to the community. The other participant’s tribe is located in Oklahoma and did not provide additional information about the status of their roads.

⁸⁶ Dirt/sand or rock but were not passable in inclement weather, not maintained or contained pot holes.

⁸⁷ Have to go outside, no permanent structure, have to go elsewhere.

⁸⁸ Indoor plumbing that functions at least 50% of the time, more than 5 people per bathroom.

⁸⁹ On site water source is a well, or tank, or pipeline of poor quality having hard water, or high mineral content.

⁹⁰ On site water of good quality.

Conditions defining poor and fair infrastructure may be considered by many as unacceptable by mainstream standards, yet the majority of participants have only fair infrastructure conditions.

Infrastructure Needs

Participants were asked if additional infrastructure was needed within their communities. The following details additional infrastructure needed for electricity, roads, water and sewer:

- Electricity: 68% reported the need for more electricity.
- Roads: 86% reported the need for more roads.
- Water: 86% reported the need for more water.
- Sewer: 86% reported the need for more sewer.

Table 2.2 Needed infrastructure

Additional infrastructure	Yes	No	Total Participants
Electricity	15	7	22
Roads	19	3	22
Water	19	3	22
Sewer	19	3	22

There is a strong need for additional roads, water and sewer. The bulk of participants only have fair infrastructure and are in need for additional electricity, roads, water and sewer.

Table 3.2 Feasible to upgrade

Not feasible	3
Somewhat feasible	13
Substantially feasible	6
Total Participants	22

Fifty-nine percent reported that it is somewhat feasible to upgrade current systems. Others thought it was not feasible (14%) or substantially feasible (27%).

Impact on Ability to Build

Twenty-seven percent reported that existing infrastructure had a substantially negative impact on the tribe’s ability to provide housing. Twenty-three percent reported existing infrastructure had a somewhat negative impact and 23% thought it had no impact on a tribe’s ability to provide housing. With the majority of participants having only fair infrastructure, most need additional infrastructure. This coincides with the negative impact existing infrastructure has on a tribe’s ability to provide housing.

Table 4.2 Existing infrastructure in providing housing

<u>Impact</u>	Existing infrastructure on tribes/community's ability to provide housing
Substantially negative	6
Somewhat Negative	5
No impact	5
Somewhat positive	3
Substantially positive	2
Did not respond	1
Total Participants	22

Combining substantially negative and somewhat negative, 50% found negative conditions of infrastructure affecting the tribe's ability to provide housing. None of the participants provided additional information on this topic.

Funding Sources Utilized in Last Five Years

In an effort to learn about recent funding utilized for infrastructure development, participants were asked to identify funding sources their tribe has utilized in the past five years. The results are provided in the table below.

Table 5.2 Funding Sources used in the last five years

Bureau of Indian Affairs (BIA)	13
Rural Community Assistance Corporation (RCAC)	1
United States Department of Agriculture (USDA)	9
Environmental Protection Agency (EPA)	9
Indian Housing Block Grant (IHBG)	18
Indian Health Service (IHS)	17
Tribal Resources	0
Other	12 ⁹¹

Leveraging funds can be a significant hurdle and can have an enormous impact on tribes' ability to carry out a project. Seventy-three percent of the participants reported the above funding sources have conflicting regulations. All but five of these participants reported conflicting regulations impede their tribe's infrastructure development. Two funding sources regulations that were identified having the most conflicting regulations are BIA and IHBG (45%); and IHS and IHBG (27%).

⁹¹ Participants indicated they used other sources of funding, but did not provide additional information on funding source.

Some participants provided other barriers to funding sources they have utilized in the past five years. This include “BIA does not allow (HIP) work on paid off Mutual Help units”; each agency has specific requirements which may in turn limit use of funds”; cannot use IHS funds for NAHASDA units. BIA HIP income guidelines are not in line with NAHASDA”; and “sometimes [Alaska village] is not considered rural, too close to [large city].”

Success Level in Utilizing Funding Sources

Participants were asked to rate their success level on the different funding sources. The table below shows the results.

Table 6.2 Success level of utilizing funding sources

	Not Successful	Somewhat Successful	Very Successful	Completely Successful	Did not know	Total Participants
BIA	5	8	6	2	1	22
IHS	3	10	8	1	0	22
IHBG	0	5	9	6	2	22
USDA	8	2	8	1	3	22
RCAC	15	3	0	0	4	22

An equal number reported having no success or being very successful utilizing these funding sources. Twenty-five percent reported having somewhat success. Participants reported having the least success with RCAC (68%) and 45% had somewhat success with IHS.

Contributing Factors to Success Level in Utilizing Funding Sources

To determine contributors to the success level of utilizing funding sources, each participant was asked to rate the following factors:

Table 7.2 Contributing factors to success level to utilize funding sources

	Substantially Negative	Somewhat negative	No impact	Somewhat Positive	Substantially Positive	Did not respond	Total Participants
Funding Source Regulations	2	7	5	7	0	1	22
Local Banks	4	4	10	3	0	1	22
Relationship with surrounding towns/ Governments	4	2	9	5	1	1	22
Tribal politics	2	2	9	6	1	1	22
Experienced qualified staff	0	6	6	6	3	1	22
Use of consultants	0	2	8	10	1	1	22

Partnerships with other organizations	1	3	6	8	3	1	22
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Largely, these factors either had no impact (34%) or somewhat positive (29%) impact. These factors were found not having a substantially positive impact on utilizing funding sources. Forty-five percent think local banks have no impact. Forty-five percent also think use of consultants has a somewhat positive impact. Eighteen percent reported local banks have a substantially negative impact. Eighteen percent also think the relationship with surrounding towns and/or governments has a substantially negative impact.

Factors Contributing to Infrastructure Development

To determine the factors that contributed to infrastructure development, participants were asked to rate the following:

Table 8.2 Factors contributing to infrastructure development

	Substantially Negative impact	Somewhat Negative impact	No impact	Somewhat positive impact	Substantially positive	Did not respond	Total Participants
Availability of funding	7	7	2	3	2	1	22
Funding Sources	5	7	2	6	2	0	22
Land Status	3	4	7	6	2	0	22
Remoteness	3	7	12	0	0	0	22
Relationship with town/ Governments	4	4	9	3	2	0	22
Sustainable energy	2	4	11	5	0	0	22
Sustainable development	3	7	6	4	2	0	22
Tribal politics	2	7	9	1	1	1	22
Workforce skill level	1	7	5	8	1	0	22

Largely, these factors did not have a substantially positive impact. Forty-two percent thought availability of funding had a substantially and somewhat negative impact on infrastructure development. Only twenty-four percent reported the funding sources had a substantially and somewhat negative impact on infrastructure development. These factors have more negative than positive impact on infrastructure development.

Barriers/Impediments to Infrastructure Development That Were Overcome

In carrying out infrastructure for housing projects, the top ten known barriers that many tribes face are listed in the table below. Each of the participants was asked to identify those barriers that have been overcome in developing infrastructure. Table 9.2 lists the results.

Table 9.2 Barriers that tribes have overcome

Barrier	Able to overcome	Not able to overcome	Total Participants
Environmental regulations	9	13	22
Funding regulations	6	16	22
Lack of funding	7	15	22
Land title/lease issues	6	16	22
Local geography	7	15	22
Other tribal priorities	9	13	22
Remote or isolated location	9	13	22
Relationship with surrounding towns, governments	7	15	22
Tribal politics	8	14	22
Workforce skill level	11	11	22
Other	4	2	6

The top three barriers that the tribes were able to overcome are:

- Environmental regulations: 41% have overcome this barrier.
- Other tribal priorities: 41% have overcome this barrier.
- Remote or isolated location: 41% have overcome this barrier.

The top two barriers that tribes still struggle with are:

- Funding regulations: 73% have not overcome this barrier.
- Land title/lease issues: 73% have not overcome this barrier.

Overall the barriers combined, 64% reported their tribe has not yet overcome the top 10 barriers. Only 36 % of the tribes were able to overcome the barriers listed above.

The following factors were measured for contributing to success levels in utilizing funding sources and contributing to infrastructure development. These factors were also examined as whether they were a barrier that was overcome⁹²:

- Tribal politics: Only 23% of the same participants reported tribal politics having substantially and somewhat negative impact in utilizing funding sources and infrastructure development. Of this group, 60% reported tribal politics was a barrier that was overcome.
- Workforce skill level/experienced qualified staff: Only 23% of the participants reported a substantially and somewhat positive impact in utilizing funding sources and infrastructure development. Of this group 80% reported this as a barrier that was overcome.

⁹² Relationships with local towns and governments was measured in the three factors, but showed no significant trends.

TELEPHONE CONFERENCES ANALYSIS

Information is utilized from forty-two telephone conferences conducted by NAIHC's Research Department staff.

Current State

To determine the current state of infrastructure, each participant was asked to define current status of water, sewer, roads and utilities.⁹³

Roads

Two percent reported no infrastructure for roads. Forty-five percent reported roads were poor. Thirty-six percent reported roads were fair and only 17% reported good infrastructure for roads. None of the participants found road conditions to be of excellent condition.

Sewer

Seven percent reported having no sewer system or facility. Thirty-six percent reported having poor sewer and an equal number reported having a good sewer system. Only two percent reported having excellent sewer systems.

Water

Two percent reported no infrastructure for water. Fifty-seven percent reported having poor to fair water conditions.

Utilities

Four percent reported no infrastructure for utilities. Equally, 38% reported fair or good utilities.

Table 1.3 summarizes the responses of roads, sewer, water and utilities.

Table 1.3 Current status of Roads, Sewer, Water, and Utilities

	No Infrastructure	Poor Infrastructure	Fair Infrastructure	Good Infrastructure	Excellent Infrastructure	Total Participants
Roads	1	19	15	7	0	42
Sewer	3	15	8	15	1	42
Water	1	14	10	16	1	42
Utilities	2	4	16	16	4	42

Based on the results above, tribes are not having difficulty with infrastructure for utilities but continue to have difficulties with poor conditions of roads, sewer and water. It is very expensive to develop roads in Native American communities. In addition, roads have to be cleared through the Bureau of Indian Affairs which is considered a long process. Water and sewer are difficult as many tribes are functioning with inadequate water supply and have not found the adequate resources for upgrading current sewer systems. Many tribal communities are still functioning with old septic tank systems.

⁹³ Utilizing the same definitions in Appendix A, page 73.

Infrastructure needs

Each of the participants was asked if additional infrastructure was needed within their communities. Largely, 70% of the participants stated the need for additional infrastructure and 30% stated that additional infrastructure was not needed. Of the infrastructure needed The results are as follows:

- Electricity: 45% reported the need for electricity.
- Roads: 83% reported the need for additional roads.
- Water: 76% reported the need for water.
- Sewer: 74% reported the need infrastructure for sewer.

Table 2.3 Needed infrastructure

Additional infrastructure	Yes	No	Total Participants
Electricity	19	23	42
Roads	35	7	42
Water	32	10	42
Sewer	31	11	42

Roads, water and sewer showed high percentages for needed infrastructure. This supports the results stated for current infrastructure status.

While 48% stated it was somewhat feasible to upgrade current systems, 26% reported that it is not feasible; an equal 26% stated it was substantially feasible to upgrade. Table 3.3 shows the numerical results.

Table 3.3 Feasible to upgrade

Not feasible	11
Somewhat feasible	20
Substantially feasible	11
Total Participants	42

Impact on ability to provide housing

To determine the impact of a tribe's existing infrastructure on their ability to provide housing, Sixty-four percent reported existing infrastructure had a substantially to somewhat negative impact on their tribe's ability to provide housing. Only twenty-two percent reported existing infrastructure had a somewhat to substantially positive impact. Table 4.3 shows results.

Table 4.3 Existing infrastructure in providing housing

<u>Impact</u>	Existing infrastructure on tribes/community's ability to provide housing
Substantially negative	9
Somewhat negative	18
No impact	0
Somewhat positive	4
Substantially positive	5
Did not respond	1

Some participants provided additional information. Of the tribes that commented, insufficient water supply, inadequate sanitation systems, and high costs of new infrastructure were the stated as negative impacts. Many tribes have been unable to upgrade current systems due to lack of funding. Most tribes are relying on federal funds from various sources for infrastructure and are very limited.

Funding Sources Utilized in Last Five Years

The table below states the results of funding sources tribes have utilized in the last five years.

Table 5.3 Funding Sources used in the last five years

Bureau of Indian Affairs (BIA)	31
Rural Community Assistance Corporation (RCAC)	6
Indian Community Development Block Grant (ICDBG)	25
United States Department of Agriculture (USDA)	15
Environmental Protection Agency (EPA)	25
Indian Housing Block Grant (IHBG)	41
Indian Health Service (HIS)	31
Tribal Resources	19
Other	12

IHS, BIA USDA and EPA were funding resources that were specifically mentioned as having conflicting regulations with the IHBG. This prevented tribes from utilizing these funds in conjunction with their IHBG funds.

Success Level in Utilizing Funding Sources

Participants were asked to rate the success level in utilizing different funding sources. The table below shows the results.

Table 6.3 Success level of utilizing funding sources

	Not Successful	Somewhat Successful	Very Successful	Completely Successful	Did not respond	Total Participants
BIA	4	21	8	2	6	42
IHS	11	15	10	4	2	42
IHBG	5	18	14	3	2	42
USDA	21	8	4	1	8	42
RCAC	21	4	1	1	15	42

Largely, participants reported having somewhat success (31%) in utilizing these funding sources. USDA and RCAC are two funding sources that 51% found not to be successful. No additional information was gathered in to determine why the tribes found each source to be not successful and completely successful.

Contributing Factors to Success Level in Utilizing Funding Sources

To determine contributors to the success level of utilizing funding sources, each participant was asked to rate the following factors:

Table 7.3 Contributing factors to success level in utilizing funding sources

	Substantially Negative	Somewhat Negative	No impact	Somewhat Positive	Substantially Positive	Total Participants
Funding Source Regulations	5	14	9	12	2	42
Local Banks	5	1	24	6	6	42
Relationship with surrounding towns/ governments	2	10	11	9	10	42
Tribal politics	2	13	3	13	11	42
Experienced qualified staff	1	8	2	18	13	42
Use of consultants	1	3	13	15	10	42
Partnerships with other organizations	0	3	11	19	9	42

These factors had a primarily somewhat positive impact (31%) or had no impact (25%). Fifty-seven percent thought that local banks had no impact. Forty-five percent think that partnerships with other organizations had a somewhat positive impact.

Factors Contributing to Infrastructure Development

To determine the factors that contributed to infrastructure development, participants were asked to rate the following:

Table 8.3 Factors contributing to infrastructure development

	Substantially Negative impact	Some-what Negative impact	No impact	Some-what positive impact	Substantially positive	Did not respond	Total Participants
Availability of funding	12	14	2	10	4	0	42
Funding Sources	6	14	6	12	4	0	42
Land Status	8	15	11	7	1	0	42
Remoteness	18	11	12	1	0	0	42
Relationship with town/ governments	5	14	4	12	7	0	42
Sustainable energy	3	7	21	8	2	1	42
Sustainable development	4	11	17	6	3	1	42
Tribal politics	5	11	9	8	9	0	42
Workforce skill level	6	14	8	9	5	0	42

Largely, these factors did not have a substantially positive impact. Remoteness (43%) was reported as having the greatest substantially negative impact. Sixty-two percent reported availability of funding had a substantially and somewhat negative impact on infrastructure development. Fifty-five percent reported land status had a substantially and somewhat negative impact on infrastructure development.

Barriers/Impediments to Infrastructure Development That Were Overcome

In carrying out infrastructure for housing projects, the top ten known barriers that many tribes face are listed in the table below. Each of the participants was asked to identify those barriers that have been overcome in developing infrastructure. Table 9.3 lists the results.

Table 9.3 Barriers that tribes have overcome

Barrier	Able to overcome	Not able to overcome	Total Participants
Environmental regulations	28	14	42
Funding regulations	30	12	42
Lack of funding	26	16	42
Land title/lease issues	21	21	42
Local geography	25	17	42
Other tribal priorities	22	20	42
Remote or isolated location	23	19	42
Relationship with surrounding towns, governments	21	21	42
Tribal politics	21	21	42
Workforce skill level	21	21	42
Other	0	0	0

In identifying barriers that have been overcome, the top two barriers overcome are:

Funding regulations: 71% have overcome this barrier.

Environmental regulations: 67% have overcome this barrier.

Four barriers were identified as being equally most difficult to overcome:

Land title/lease issues: 50% have not overcome this barrier.

Relationship with surrounding towns, governments: 50% have not overcome this barrier.

Tribal politics: 50% have not overcome this barrier.

Workforce skill level: 50% have not overcome this barrier.

All barriers combined, 57% of the tribes were able to overcome the top ten barriers and 43% are still having difficulties overcoming each of the barriers listed above.

CASE STUDY FINDINGS

There is greater success in securing funds if sources provide technical assistance. There are instances when tribal sovereignty or Native American preference prevents tribes from applying for financial backing.⁹⁴ This is particularly true for state funds. Having relinquished so much already, it's hard for tribes to accept giving up further self determination rights, especially since tribes desperately need the assistance.

Tribes seeking to build culturally relevant homes and communities may experience additional costs and face special construction issues, but in the end it will be worth it. A good architect, committed to the project and the tribe is important.

⁹⁴ For example, the Little River Band of Ottawa Indians could not pursue state funds through the Michigan State Housing Development Authority because applicants have to be non-discriminatory and the tribe has a "Native American Preference" policy.

For those tribes that have not established building codes, or follow local county and state codes, they will need to pass resolutions dealing with construction and the various aspects of infrastructure development, including procurement policies, zoning ordinances and easements. To prevent injury to construction workers, it may be necessary to pass resolutions preventing hunting, fishing and trapping in and around construction sites.

Tribes should be prepared to conduct needs assessments, environmental impact studies and geological surveys. Tribes may need to do geotechnical studies for water/waste water facilities. Tribes may need to hire a certified company or a consultant to do this work. These costs need to be considered as part of the project. There are funding sources that tribes may apply for in order to cover these types of studies.

Utility co-operatives may be useful to defray costs to install electricity and water lines, as well as lower user payments.

Tribes may consider starting nonprofit organizations. These are eligible for funds that the housing entity or tribe may not be eligible.

Major barriers to infrastructure development include lack of funding, unavailability of land, uniform building codes, funding source regulations, geology, socio-economics, historical prejudices, not being federally recognized and poor relationship with local towns and governments.

The primary source of funding utilized for infrastructure is the IHBG, then the BIA and IHS. The secondary sources of funding are EPA, ICDBG, Rural Housing and Economic Development and USDA. Other sources of funding utilized are tribal funds, Traditional Indian Housing Grant, state finance agencies, local towns, Title VI, Comprehensive Improvement Assistance Program, Administration for Native Americans grant, local banks, Federal Home Loan Banks and the Low Income Housing Tax Credit program.

TAS SITE VISITS AND TELEPHONE CONFERENCE FINDINGS

Current state of infrastructure; infrastructure needs; and impact of existing infrastructure on tribe's ability to provide housing

Roads, sewer, water and utilities are essential components of infrastructure. These are core for building decent homes and communities. Below are major findings regarding the current state of tribe's infrastructure, needs and impact of existing infrastructure on tribe's abilities to provide housing.

- Overall, infrastructure for roads was reported primarily poor to fair.⁹⁵
- On site interviews and telephone conferences revealed infrastructure for sewer (systems or facilities) to be generally poor. Telephone conference participants reported an equal number of tribes with good infrastructure for sewer.

⁹⁵ See Appendix A, page 73, "Definition of Qualitative Examples."

- A small percent continue to have no infrastructure in place for roads, sewer systems, water, and utilities.⁹⁶

Although there is a strong need for additional roads, water and sewer (systems or facilities) most participants thought it was only somewhat feasible to upgrade current infrastructure. Several participants noted if additional funding were available, then it would be substantially feasible. The strong need for additional infrastructure, coincides with the negative impact existing infrastructure has on a tribe's abilities to provide housing.

Funding sources utilized in the last five years; success level in utilizing funding sources; and contributing factors to success level in utilizing funding sources

Inside most Native American communities there are limited economic opportunities and in some areas no economic opportunity at all. Tribes are required to rely on federal, and other sources of funding, to develop infrastructure and move toward housing construction. Tribes do not have sufficient funds for most of their operations, again they must rely on funding that most often has to be leveraged to obtain amounts necessary.

Leveraging funds can be a significant hurdle and have an enormous impact of tribes' abilities to even begin a project. Results from the on-site interviews and the telephone conferences rendered slightly variant results.⁹⁷

On-site interviews: Seventy-three percent of the participants reported funding sources have conflicting regulations. All but five of these participants reported conflicting regulations impede their tribe's infrastructure development. Two funding sources regulations identified as having the most conflicting regulations are BIA and IHBG (45%); and IHS and IHBG (27%).

An equal number reported having no success or being very successful utilizing these funding sources. Twenty-five percent reported having somewhat success. Participants reported having the least success with RCAC (68%) and 45% had somewhat success with IHS.⁹⁸

Telephone conferences: IHS, BIA USDA and EPA were funding resources that were specifically mentioned as having conflicting regulations and tribes were not able to utilize them in conjunction with IHBG funds.

Participants reported having somewhat success (31%) in utilizing these funding sources. USDA and RCAC are two funding sources that 51% found not to be successful. No additional information was gathered to determine why the tribes found each source to be not successful and completely successful.

Overall, factors discussed were found to have no impact or somewhat positive contribution to tribe's success level in utilizing discussed funding sources. Participants from the telephone

⁹⁶ See pages 56 and 62.

⁹⁷ The intent of this study is not to analyze the differences between in-person interviews and telephone interviews, rather to present major findings to invoke further examination of issues.

⁹⁸ Participants did not provide additional information regarding specific conflicting regulations.

conferences thought these were substantially more positive than the on-site interviews. Use of consultants and partnerships with other organizations were found as being positive contributors to tribe's success level in utilizing funding sources. Compared to other factors, banks were found as not having an impact.

It is important to point out that partnerships with other organizations have contributed significantly to the success level for tribal communities. Creating partnerships with other organizations allows for tribes close the gap where the tribe has weaknesses. Having experienced qualified staff is significant in that it allows tribes to have expertise throughout projects alleviating discrepancies and additional costs.

Factors contributing to infrastructure development; and barriers/impediments to infrastructure development that were overcome

Overall, discussed factors did not have a substantially positive impact on infrastructure development. Availability of funding was found to have a substantially negative to somewhat negative impact on infrastructure development. Telephone conferences found remoteness and land status had a significant negative impact.

Overall, land title/lease issues remains a major barrier. Problems with environmental regulations are being overcome. The two groups differed on specific barriers that were overcome.

SUMMARY

Although NAHASDA has enabled tribal communities to exercise greater freedom/flexibility over their housing projects, they are limited by what is perceived as insufficient funding. To further complicate the problem, many tribes have a limited or non-existing economy, and must rely on federal and other sources for funding to develop infrastructure prior to constructing homes.⁹⁹ This appears to impede the housing progress of tribes in their self-determination through NAHASDA.

Participants complained their communities lack modern housing infrastructure components, such as water, sewer (systems or facilities), roads and utilities. The strong need for additional infrastructure coincides with the negative impact existing infrastructure has on tribes' abilities to provide housing.¹⁰⁰ This creates additional hardships for tribes as they struggle to meet housing demands of their people.

The study shows that the major sources of funding are, as one participant expressed "insufficient to support infrastructure and housing." Financial assistance is either in small amounts or has

⁹⁹ The Pleasant Point Passamaquoddy Tribe, for example, reported that there are very little jobs to attract skilled labor to the immediate area. In the past year and a half several major industrial companies shut down. Also "the economy on the Reservation is consistently and significantly worse than the rest of Washington County or the state of Maine." See page 37. Remoteness, particularly in Alaska villages, is noted as a contributor.

¹⁰⁰ From the TAS site visit interviews: 68% of the participants reported the need for more electricity; 86% reported the need for more roads; 86% reported the need for more water; and 86% reported the need for more sewer. See page 57. From the telephone interviews: 45% of the participants reported the need for electricity; 83% reported the need for additional roads; 76% reported the need for water; and 74% reported the need infrastructure for sewer. See page 63.

criteria that exclude most tribes from qualifying. For example, the case studies show instances when tribal sovereignty or Native American preference prevents tribes from applying for financial backing.¹⁰¹ This is particularly true for state funds. Having relinquished so much already, it's hard for tribes to accept giving up further self determination rights, especially since tribes desperately need the assistance.

If tribes are not eligible to apply for federal or state funds, they may opt to apply for loans. However with non-existing, or limited economic base, tribes such as the Pleasant Point Passamaquoddy Tribe, have nothing to use as collateral for loans and are unable to make loan payments. Even when a tribe learns about funding sources for which they are eligible, applying for assistance can be a challenge requiring outside expertise.

Once additional funds are available and easier to access, upgrading existing infrastructure will become feasible for more tribes. Aside from improving on existing infrastructure there is a strong need for additional roads, water and sewer (systems or facilities).

One way to address hurdles may be to develop partnerships with other organizations. These relationships, as is outlined in the case studies, have contributed significantly to the success level for some tribal communities. Creating partnerships with other organizations allows for tribes to close the gap where the tribe has weaknesses.

Having experienced qualified staff is significant, as that allows tribes to have expertise throughout projects--alleviating discrepancies and additional costs.

The study revealed special circumstances for tribes, such as building culturally relevant homes and communities that might require additional costs and special construction. It is important to have a good architect who is committed to the project and the tribe.

For those tribes that have not established building codes, or follow local county and state codes, they will need to pass resolutions dealing with construction and the various aspects of infrastructure development, including procurement policies, zoning ordinances and easements. To prevent injury to construction workers, it may be necessary to pass resolutions preventing hunting, fishing and trapping in and around construction sites.

Tribes embarking on infrastructure development should be prepared to conduct needs assessments, environmental impact studies and geological surveys. Tribes may need to do geotechnical studies for water/waste water facilities. Tribes may need to hire a certified company or a consultant to do this work. These costs need to be considered as part of the project. There are funding sources that tribes may apply for to cover these types of studies. There may be local assistance available, such as utility co-operatives that may defray costs to install electricity and water lines and lower user payments. Tribes may consider starting nonprofit organizations, that are eligible for funding that the housing entity or tribe may not be.

¹⁰¹ For example, the Little River Band of Ottawa Indians could not pursue state funds through the Michigan State Housing Development Authority because applicants have to be non-discriminatory and the tribe has a "Native American Preference" policy.

As tribes and Alaska Native villages seek ways to address infrastructure development hurdles, they often rely on their sovereignty powers. Tribes as sovereign nations have the right to govern themselves and are endowed with the power to make decisions affecting their members. But they will only be able to maximize the use of those sovereign powers through increased access to federal and other funding.

Appendix A

Definition of Qualitative Examples

Roads

Examples of “No infrastructure” for roads are: dirt or grass roads only.

Examples of “Poor infrastructure” for roads are: established road, either dirt/sand/ or rock, not passable in inclement weather, not maintained, contains pot holes.

Examples of “Fair infrastructure” for roads are: gravel or similar material, generally passable in inclement weather, at least 8 feet wide (one lane).

Examples of “Good infrastructure” for roads are: asphalt, blacktop, in decent condition, passable in inclement weather, not less than 8 feet wide (one lane).

Examples of “Excellent infrastructure” for roads are: blacktop with curve and gutter in good condition, wider than 10 feet (two lanes).

Sewer

Examples of “No infrastructure” for sewer are: go outside, no permanent structure, have to go elsewhere.

Examples of “Poor infrastructure” for sewer are: honey bucket, outhouse, porta potty, indoor plumbing that functions less than 50% of the time.

Examples of “Fair infrastructure” for sewer are: indoor plumbing that functions at least 50% of the time, more than 5 people per bathroom.

Examples of “Good infrastructure” for sewer are: decent indoor plumbing, generally works with 5 or less people per bathroom.

Examples of “Excellent infrastructure” for sewer are: no more than 3 people average per bathroom, or 3 or more continuously working bathrooms per house.

Water

Examples of “No infrastructure” for water are: no potable water source within 300 feet of units.

Examples of “Poor infrastructure” for water are: water source within 300 feet of units.

Examples of “Fair infrastructure” for water are: on site water source is a well, or tank, or pipeline of poor quality having hard water, or high mineral content.

Examples of “Good infrastructure” for water are: on site water of good quality.

Examples of “Excellent infrastructure” for water are: more than one water source on site, well and indoor water good quality.

Utilities

Examples of “No infrastructure” for utilities are: no power sources.

Examples of “Poor infrastructure” for utilities are: power sources beyond 300 feet of units, or indoor utilities function less than 50% of the time.

Examples of “Fair infrastructure” for utilities are: indoor utilities functions at least 50% of the time.

Examples of “Good infrastructure” for utilities are: decent indoor utilities, generally work.

Examples of “Excellent infrastructure” for utilities are: utilities continuously work.

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