

# Strengthening the Pine Ridge Economy

## *A Regional Equity and Opportunity Assessment*

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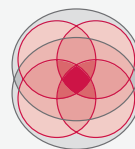
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## INTRODUCTION

## Building a Vibrant Tribal Economy in a Regional Economic Context

*The Pine Ridge reservation sits within a broader regional economic context, whose primary sectors include tourism, agriculture, manufacturing, and retail.<sup>1</sup> The **Pine Ridge Reservation** and the **Rapid City Metropolitan area** are interdependent economies that, to date, channel many economic benefits off-reservation. This Equity and Opportunity Assessment identifies key strategies to create greater vibrancy and equity in reservation-based economic activity—to increase prosperity and quality of life for both the Oglala Lakota people and the region as a whole.*

**Currently, the reservation and its people** support the larger regional economy by providing labor force for off-reservation employment, providing job opportunities for off-reservation workers and by doing the majority of their shopping and consumer-services spending off-reservation. To encourage housing and community economic development that benefits both the reservation and the larger regional economy, stakeholders should continue to create and expand opportunity on the reservation while building bridges to opportunity in the surrounding region.



The pine-topped ridge in this photo is where Pine Ridge gets its name. The beauty of the reservation contrasts sharply with the conditions under which residents live.

1.) South Dakota Department of Tourism, <http://www.travelsd.com/About-SD/South-Dakota-Facts>

## STRENGTHENING THE PINE RIDGE ECONOMY

*The tasks before stakeholders working to strengthen the Pine Ridge tribal economy include:*

- **Grounding a system of housing finance and development** to address the immediate, extreme housing crisis, including (1) enabling Lakota households to purchase or rent quality homes on the reservation, (2) encouraging housing developers to build quality housing developments across the reservation, and (3) ensuring that the local workforce participates in the housing development process.
- **Assembling land parcels in ways that can support infrastructure investment** to serve the quality development of housing and other community amenities. This can be achieved by targeting available funding for land purchasing strategies, streamlining and strengthening lease processes to do housing development on trust lands, and doing acquisitions of fee simple lands.
- **Developing a system of infrastructure finance** that can serve new and existing community development. Strengthen and streamline reservation leasing processes so that tribal and trust lands can be accessed more easily. Consider a potential trust fund from the potential increased lease revenue related to the Cobell settlement.
- **Aligning education, workforce development and reservation job sectors** to grow the share of Lakota workers filling reservation-based jobs, thus creating a market for higher quality housing choices.
- **Growing enterprises on the reservation** to capture a larger share of Lakota spending within the tribal economy and to support building cooperative and worker-owned companies as part of a community wealth-building strategy. Despite tremendous entrepreneurial potential, barriers to economic opportunity, such as land access, infrastructure limitations, and financing challenges stifle entrepreneurship on reservation.
- **Attracting on- and off-reservation investments and consumer and tourist spending** in reservation enterprises.
- **Building innovative, collaborative, mutually enhancing** relationships between the reservation and the larger region.

*The Oyate Omniciye, The Oglala Lakota Regional Plan for Sustainable Development (2013) refers to “the connectedness of all things and ... the ways in which health, culture, prosperity, and the natural world overlap.” An assessment of equity and opportunity should focus on this connectedness in intentional ways. For example, increased business opportunities on the reservation mean that more dollars are generated and circulated on the reservation. More income can support more attractive housing choices, which will in turn entice higher-skilled, higher-paid workers to live or remain on the reservation. Living closer to work will free up time and income that previously went to long, expensive commutes. A healthy, educated, well-trained workforce will better start, staff and support new and existing businesses. Investments into the preservation and teaching of tribal knowledge, language, and culture will open up new employment opportunities (language teachers, community health workers, archivists/librarians, counselors, landscape architects, artists, housing developers, and others) and strengthen Native people’s ties to the land and to the reservation community.*

Strengthening linkages to the regional economy to enhance opportunity could include:

- Building bridges to broader pools of investment capital
- Supporting transitions from high school to college, and from college to advanced training
- Leveraging regional educational, environmental, health care, and economic anchor institutions to meet reservation-based employment and economic goals
- Positioning of a reservation-based Native American entertainment, dining, shopping, arts and cultural experience in the context of the broader regional economy.

Oglala Lakota communities are hungry for investment, and reservation-based institutions stand ready to make these investments work. For instance, Lakota Funds, a model Native Community Development Financial Institution (CDFI), has helped finance more than 660 businesses owned by tribal members, in turn creating more than 1100 jobs.<sup>2</sup>

As the nation grapples with challenges to sustainability and adapts to embrace the benefits of diversity, lifting up successful Native American sustainability strategies could inspire and educate planners and policymakers across tribal communities, their regions and the country.

***A healthy, educated, well-trained workforce will better start, staff and support new and existing businesses***

### Addressing Key Challenges

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A broadly agreed-upon imperative is the immediate and significant need for housing and economic investment on Pine Ridge Reservation. While there is a lack of standardized data to adequately assess the need, one credible source, a 2013 survey of Head Start / Early Head Start families, indicated that top issues impacting families were “housing, death of a family member, and unemployment (about 30% responded equally to these three topics).”<sup>3</sup> Given the stress, poverty and poor health engendered by difficult living conditions, life expectancy is far below that of US averages. For example, a 1997 study found that men on the Pine Ridge Reservation live 16-1/2 years less than average US males; women on the Reservation live 13-1/2 years less than average US females.<sup>4</sup>

2.) Kathleen Pickering Sherman, “Best Practices Guide: Microenterprise and Emerging Businesses, Native Small Business Support, and the Contributions of Financial Institutions to Community Development.” September 2011.

3.) Oglala Lakota College, Head Start / Early Head Start, *Community-wide Strategic Planning and Needs Assessment*. 2013. Presented by: Thomas Shortbull, OLC President and Michelle Yankton, OLC HS/EHS Executive Director. (Document on file with author.)

4.) Oglala College 2012 Case Statement, quoting a 1997 *USA Today* article that referenced a Harvard School of Public Health study [by Dr. Christopher Murray] that found “the life expectancy of Lakota men and women living on the Pine Ridge Indian Reservation to be the lowest in the U.S. and the lowest in the Western Hemisphere except for Haitians.” Retrieved from Oglala Lakota College website on 11/14/2013 at: [olc.edu/~jdudek/webfolder/task.../case2.29.doc](http://olc.edu/~jdudek/webfolder/task.../case2.29.doc). (Document on file with author.) Dr. Murray’s 2006 update, while not calling out Pine Ridge specifically, noted that “Native American males in the cluster of Bennet, Jackson, Mellette, Shannon, Todd, and Washabaugh Counties in South Dakota had a life expectancy of 58 y in 1997–2001, compared to Asian females in Bergen County, New Jersey, with a life expectancy of 91 y, a gap of 33 y.” *Eight Americas: Investigating Mortality Disparities across Races, Counties, and Race-Counties in the United States*. Christopher J. L. Murray, Sandeep C. Kulkarni, Catherine Michaud, Niels Tomijima, Maria T. Bulzacchelli, Terrell J. Iandiorio, Majid Ezzati. PLOS Medicine. September, 2006.

A 2010 UN report observed:

During the mission, the Special Rapporteur observed many families living in subsidized housing units in conditions of severe overcrowding. This was...most strikingly on Pine Ridge Native American Reservation, where it was described as commonplace to have three to four families living in a three-bedroom house. **The conditions in the houses on the Reservation were the worst seen by the Special Rapporteur during her mission**, evidence of the urgent and severe need for additional subsidized housing units there.

[...]

Severe limitations in access to services such as public transportation and fresh food were observed by the Special Rapporteur during her visit to Pine Ridge Reservation. Problems have been compounded due to budget constraints, and in her meetings with HUD the Special Rapporteur was told that the budget for Indian housing has essentially been flat for the past decade.<sup>5</sup>

*Given the stress, poverty and poor health engendered by difficult living conditions, life expectancy is far below that of US averages*

**The 2012 Oglala Lakota College Case Statement reported** that students on the reservation in grades 3–8 average only 22% proficient in reading and 14% proficient in math.<sup>6</sup> Clearly, for the health, education, and future of Lakota youth, housing must be stabilized and education, training and employment opportunities expanded.

This report first explores the population data and housing needs on the Pine Ridge Reservation. Second, we review the job type mix on and off reservation and look at travel times for Pine Ridge residents commuting to work. Third, we compare Native American employment statistics across sectors on the reservation, and we compare reservation economic and business opportunities with those of the surrounding region. Lastly, we provide recommendations on building equitable opportunity pathways for Pine Ridge, as well as building connections to the larger region.

5.) Promotion and Protection of All Human Rights, Civil, Political, Economic, Social and Cultural Rights, Including the Right to Development. Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, Raquel Rolnik: Addendum. Mission to the United States of America. Report Issued 12 February 2010

6.) Oglala College 2012 Case Statement. Retrieved from Oglala Lakota College website on 11/14/2013 at: [olc.edu/~jdudek/webfolder/task.../case2.29.doc](http://olc.edu/~jdudek/webfolder/task.../case2.29.doc). (Document on file with author.)

## A. Pine Ridge Population Analysis

While Oglala Lakota participants in multiple surveys and planning exercises identify housing as one of the most urgent needs for a young and growing population, data related to Pine Ridge population and housing needs are difficult to come by, whether the source is on the reservation or off. Even the question, “how many Native American people reside on Pine Ridge?” has multiple answers, depending on the source of the estimate. Data on businesses operating on the reservation are equally difficult to come by. Not having reliable population and business figures contributes to the challenges facing the community. It is clear that the population is growing on Pine Ridge, with conservative Census estimates documenting a 21% increase in population between 2000 and 2010. In comparison, the State of South Dakota experienced population growth of 7.8% between 2000 and 2010. The growth of population on Pine Ridge (and other tribal lands) also sets the area apart from the State of South Dakota, which has an aging population and is not growing as quickly.

Because of the paucity of standard housing and economic data available for Pine Ridge, we have attempted to gather data from multiple sources to cross-corroborate our findings, including data from a proprietary source (ESRI) and findings from several studies of Pine Ridge, primarily from Colorado State University professor Dr. Kathleen Pickering’s work. Because federal allocations are based on population, knowing the number of residents on the reservation is a crucial piece of information for nearly all else that happens on Pine Ridge.

Like most federal agencies, HUD requires accurate population data from the US Census Bureau to ensure adequate funding for needed housing programs. Unfortunately, Census population numbers for Pine Ridge fall far short of the probable reservation population. HUD recognizes this shortcoming by allowing tribes to challenge all of the data inputs into the IHBG formula, including the Census, and HUD’s formula data reflect a more enlightened and accurate reservation population count.

Where a population denominator is needed for calculations, we have used the HUD formula number from the same year as that of the other source data in the calculations. This is because it is the basis for HUD funding allocations, it comes closest to the independent estimates arrived at by the Colorado State research, and it strikes a balance between the cited extremes.

While census taking is not HUD’s primary mission, HUD’s Policy Development and Research division (PD&R) has undertaken the task of collecting housing data in a Congressionally mandated assessment of Native American, Alaska Native, and Native Hawaiian housing needs. The assessment is underway and will utilize a sample of the nation’s 500+ recognized Native American tribes. Unfortunately, this national-level assessment will not provide finely grained data for use by individual tribes, which is sorely needed for program planning and implementation.

Paul Iron Cloud, Chief Executive Officer of The Oglala Sioux (Lakota) Housing Authority, testified on the poor quality of reservation Census data before the Committee on Indian Affairs:

“I would be remiss if I did not also mention that if a GPS and GIS needs assessment requirement was to replace the current defective U.S. Census method in the NAHASDA [Native American Housing Assistance and Self Determination Act] program, tribes, Congress, OMB and HUD would also then have an accurate, reliable and efficient way to better manage federal funding.”<sup>7</sup>

7) Testimony of Paul Iron Cloud, Chief Executive Officer of The Oglala Sioux (Lakota) Housing Authority, Pine Ridge Reservation, South Dakota, before the *Identifying Barriers to Indian Housing Development and Finding Solutions* Oversight Hearing of The Committee on Indian Affairs, United States Senate. April 10, 2013

### Recommendations to support accurate population data:

- Support the recommendation in the *Oglala Lakota Regional Plan for Sustainable Development* for the creation of a regional or tribal planning authority that acts as a one-stop shop for data on the Pine Ridge Indian Reservation. This entity would collect and evaluate data on an on-going basis.
- HUD should advance its work with the tribal housing authority to establish an accurate assessment of the Pine Ridge population and housing needs, and push other federal agencies to adopt the locally sourced numbers for use in funding allocations.
- HUD can advocate for more accurate data collection methodologies on reservations, including Pine Ridge, by leveraging the Congressional mandate behind the national assessment of Native American tribes to keep the need for accurate data before Congress and other federal agencies, particularly the Census Bureau.

**Figure 1: Population Estimates for Pine Ridge Reservation, Various Sources**

SOURCE	ESTIMATE
<p><b>Decennial Census, US Census Bureau, 2010; American Community Survey 2007–2011 5-Year Estimates, US Census Bureau, 2012</b></p> <p><i>Total population. The Census routinely undercounts minorities, low-income individuals, and children. Census response rates are further lowered on reservations due to deep-seated, historical mistrust of the federal government.</i></p>	<p><b>18,834; 18,825</b></p>
<p><b>American Indian Population and Labor Force Report, Bureau of Indian Affairs, 2005</b></p> <p><i>Total population. This figure is reported for both "Tribal Enrollment" and "Eligible for Services". BIA cautions that these two numbers should not be equal, given that some tribally enrolled members likely do not live on reservations. BIA services are only available to enrolled tribal members who reside on or near a reservation. This is the most recent BIA report available.</i></p>	<p><b>43,146</b></p>
<p><b>Pine Ridge Work Force Study, Pickering, 2005</b></p> <p><i>Total population. Estimate based on longitudinal data collected over four years from a random sample of 300 reservation homes. The lower figure derives from responses to a question asking how many currently live in the household. The higher figure derives from responses to a question asking the maximum number of household members within the past three years.</i></p>	<p><b>24,614–32,710</b></p>
<p><b>Economic impact of a private sector microfinancing scheme in South Dakota, Benson et al., 2011</b></p> <p><i>Presumed total population. Estimate based on Census data and Indian Health Service administrative records.</i></p>	<p><b>50,000</b></p>
<p><b>Indian Housing Block Grant Formula Data, US Department of Housing and Urban Development, 2014</b></p> <p><i>AIAN population only. Tribal enrollment reported as 43,146.</i></p>	<p><b>33,935</b></p>



## **B. Pine Ridge Housing Analysis**

*“Most Indian people on reservations today live under conditions that other Americans would not tolerate.”<sup>8</sup>*

**P**aul Iron Cloud’s Congressional Testimony in April 2013 called for 4,000 new homes and 1,000 repairs. Iron Cloud noted:

“We are today the 5<sup>th</sup> largest tribal population in the country, the 7<sup>th</sup> largest reservation, and we and a significant segment of Indian country face a housing crisis that has not been seen for forty years... Though NAHASDA provides us and many other tribes and tribal housing entities valuable resources, because of stagnant and reduced funding levels as well as flawed funding allocation methods, we and a large number of other tribes today have the worst housing in the United States...For at least a generation now, many of our people, infants, elders, vets and families have had to live in housing conditions that no American should have to endure. We have many situations where 3 or 4 families are packed into a single two-bedroom home or a family of six tries to survive in a one bedroom apartment. This overcrowding affects the physical, social and mental state of our people. Schooling is impacted, health conditions suffer and the family unit is impaired.”

In July of 2013, the Oglala Sioux (Lakota) Housing Authority estimated a housing shortage for low-income families alone of approximately 2500 new homes.

8.) Robert J. Miller, “American Indian Entrepreneurs: Unique Challenges, Unlimited Potential.” Arizona State Law Journal, Vol. 40, 2008. <http://ssrn.com/abstract=1153708>



All sources point to a demonstrated, significant need for additional housing units at every income level, including the replacement or renovation of current stock. While exact numbers are difficult to pin down due to varying population estimates, the Kirwan Institute calculated the *minimum* number of additional housing units needed to house the reservation's population at 875 three-bedroom homes<sup>9</sup>, an increase of 21.4% over existing housing stock.<sup>10</sup>

Not only are there too few units, much of the existing housing stock is substandard and in need of repair (**FIGURE 3**). Nearly 70% of all reservation housing is HUD housing or a trailer home (**FIGURE 2**). The median home value on the Reservation is \$25,900—barely more than one-fifth the US average of \$119,600<sup>11</sup>—the depressed values are due to the substandard quality of the housing stock and a lack of a widely accessible housing finance system for tribal land holdings. An EPA report on black mold in Pine Ridge housing states that mold has been found in 75% of tribal housing units, resulting in substantial health risks.<sup>12</sup> Currently, the Housing Authority has inadequate inspection capacity; and while current housing resources are directed at mold remediation, the level of resources is insufficient to address the scale of mold issues found. An additional challenge is the lack of places to house residents as renovations of their homes are taking place.

Reservation housing choice is currently very limited, due in part to the need to maintain existing stock and provide base-level shelter in the face of capacity shortages. And while current subsidies are directed at addressing the needs of low-income households, the reservation also lacks housing that would appeal to young Native American professionals (trained on or off the reservation) who would like to live on the reservation, but cannot. HUD and USDA are currently exploring ways to expand other housing assistance and development programs to Pine Ridge, such as the Section 502 Housing Loan Guarantee program that serves households earning up to 115% of median income, that can serve a broader spectrum of tribal members' housing needs, and that can leverage more private resources into housing development.<sup>13</sup>

In addition to meeting housing needs, home construction would also contribute to the overall local economy. The National Association of Home Builders reported in 2009 that “the estimated one-year local impacts of building 100 single-family homes in a typical metro area include \$21.1 million in local income, \$2.2 million in taxes and other revenue for local governments, and 324 local jobs.”<sup>14</sup>

9.) This estimate (875 new housing units) does not contradict Director Iron Cloud's testimony that Pine Ridge needs 4,000 new units of housing and repairs on 1,000 more. It only states how far short the current housing stock falls from providing the minimum total capacity needed to house the reservation's Native American population, assuming that the current stock were 100% inhabitable. In the light of the deplorable condition of current stock, Director Iron Cloud's estimate should be taken as the amount of housing needed to supplement the current housing stock and to replace a substantial amount of the current stock that is beyond repair.

10.) Details of the Kirwan analysis are in the Appendix.

11.) Oglala College 2012 Case Statement, page 17. Retrieved from Oglala Lakota College website on 11/14/2013 at: [olc.edu/~jdudek/webfolder/task.../case2.29.doc](http://olc.edu/~jdudek/webfolder/task.../case2.29.doc). (Document on file with author.)

12.) These impacts include chronic sinusitis, severe headaches, fungal skin infections, and upper and lower respiratory illnesses. National EPA – Tribal Science Council, National Tribal Science Priorities 2006: 17.

13.) For more from the perspective of the Housing Authority, please see Testimony of Paul Iron Cloud, Chief Executive Officer of The Oglala Sioux (Lakota) Housing Authority, Pine Ridge Reservation, South Dakota, before the *Identifying Barriers to Indian Housing Development and Finding Solutions* Oversight Hearing of The Committee on Indian Affairs, United States Senate. April 10, 2013

14.) NAHB, *The Local Impact of Home Building in a Typical Metro Area: Income, Jobs, and Taxes Generated*. Prepared by the Housing Policy Department, June 2009.

**Figure 2: Reservation Housing Structures**

RESIDENTIAL STRUCTURE TYPE	PERCENTAGE OF ALL STRUCTURES
HUD Housing	38%
Trailer Home	29%
Stick-Built	22%
Modular	5%
Duplex/Multifamily	2%
Other	5%

Source: OSL Housing Authority, 2008. Calculations by The Kirwan Institute.

**Figure 3: Inspected Housing Units Requiring Repair or Replacement**

INSPECTED (607 LOW-RENT UNITS)	% UNITS REQUIRING REPAIR OR REPLACEMENT
Bathroom	87%
Windows	84%
Drywall	84%
Floors	82%
Doors	81%
Roof/Gutters	80%
Interior Paint	72%
Grounds	70%
Electrical	64%
Plumbing	61%
Siding	58%
Exterior Paint	49%
Heat	39%
Foundation	38%
Range	25%
Refrigerator	13%
Water Heater	13%

Source: OSL Housing Authority, 2008. Calculations by The Kirwan Institute.

**RECOMMENDATION**

The Oglala Sioux (Lakota) Housing Authority, HUD, USDA, reservation-based nonprofits (like Thunder Valley CDC, Mazaska, Oglala Sioux Tribe Partnership 4 Housing), The Lakota Funds, and area banks should develop a targeted range of housing production/rehab goals, financial products, and subsidy resources that can address diverse income-levels' housing needs. These targeted resources should offer a mix of housing choices for current and potential reservation residents. Housing should meet the needs of low-income residents as well as provide opportunity for young professionals and other workers to live and work on the reservation. Financing products should work to serve rental and ownership properties on both tribally-held land and fee simple land within the reservation boundaries.

**RECOMMENDATION**

Utilize existing loan guarantee programs to further leverage formula grant programs, expanding offerings of affordable rental and home ownership opportunities.

- Use Title VI to leverage existing NAHASDA dollars for both rental and home ownership housing development.
- Maximize HUD Section 502 loan guarantee products by utilizing within the ICDBG program, further leveraging ICDBG funds.



## C. Pine Ridge Infrastructure Needs

Another key challenge to the expansion of quality, affordable housing on the Reservation is investment into the basic infrastructure that supports housing—roads, water, sewer and electricity. With parcels available for housing development scattered far apart, the costs of infrastructure development are prohibitive to the production of lower-cost homes. A land assembly strategy, complemented by a comprehensive plan to provide cost-effective infrastructure to development clusters, will be necessary to implement housing development plans.

Currently, infrastructure financing faces nationwide challenges. Due to declining federal infrastructure investment, 75% of all infrastructure is paid for by state and local governments.<sup>15</sup> Financing is competitive and difficult to come by at the state and local level as generally, taxpayers must support tax increases to expand infrastructure financing.

While not entirely comparable, First Nations in Canada have found that the following factors facilitated investment financing:

- (1) Regularly updated strategic/community plans that have community involvement;
- (2) Stability in community leadership—each had a Chief and the majority of councilors who had been on council over 25 years. This provides stability and comfort to the financing community;
- (3) Development of long-term partnerships;
- (4) Close relationship with their financial institution(s); and
- (5) Own source of revenue.<sup>16</sup>

In a research report that promotes equity in infrastructure development, the World Bank suggests that stakeholders consider the following questions: (1) Who is providing the service and how? (2) Who is the provider accountable to—the policy maker (government), the client (the public utility) or the consumer? (3)... Who is gaining and who is losing [sic] from the existing system, and how will the [investment partnership] affect equitable access to services?<sup>17</sup>

### RECOMMENDATION

Utilize collaborative funding models to make strategic investments in basic infrastructure to support co-located housing developments. Create a leverage pool of public, philanthropy, and private funds that can be guaranteed by fee payments of users. Develop the capacity of Lakota leadership to pioneer creative infrastructure financing models that respond the unique status and needs of Reservation development, and to administer and manage the financing vehicles. Because the tribe does not do bonding, and because the County only taxes 14 percent of the land (thereby reducing bonding ability for infrastructure), Pine Ridge needs innovative sources of grants and loans to finance infrastructure (75% grant; 25% loan).

15.) The Urban Land Institute and Ernst & Young. *Infrastructure 2013: Global Priorities, Global Insights*.

16.) *Case Studies of Four First Nations Who Have Levered Funding from Financial Institutions for Infrastructure and Other Economically-Related Projects*. For Community Infrastructure Branch, Innovation and Partnerships Directorate, Department of Indian Affairs and Northern Development. The GBC Group Inc. 2010.

17.) *Public Private Partnerships, Infrastructure, Gender and Poverty*. World Bank Institute Finance and Private Sector Development. Mary Jennings and Cathy Gaynor. June 2004.



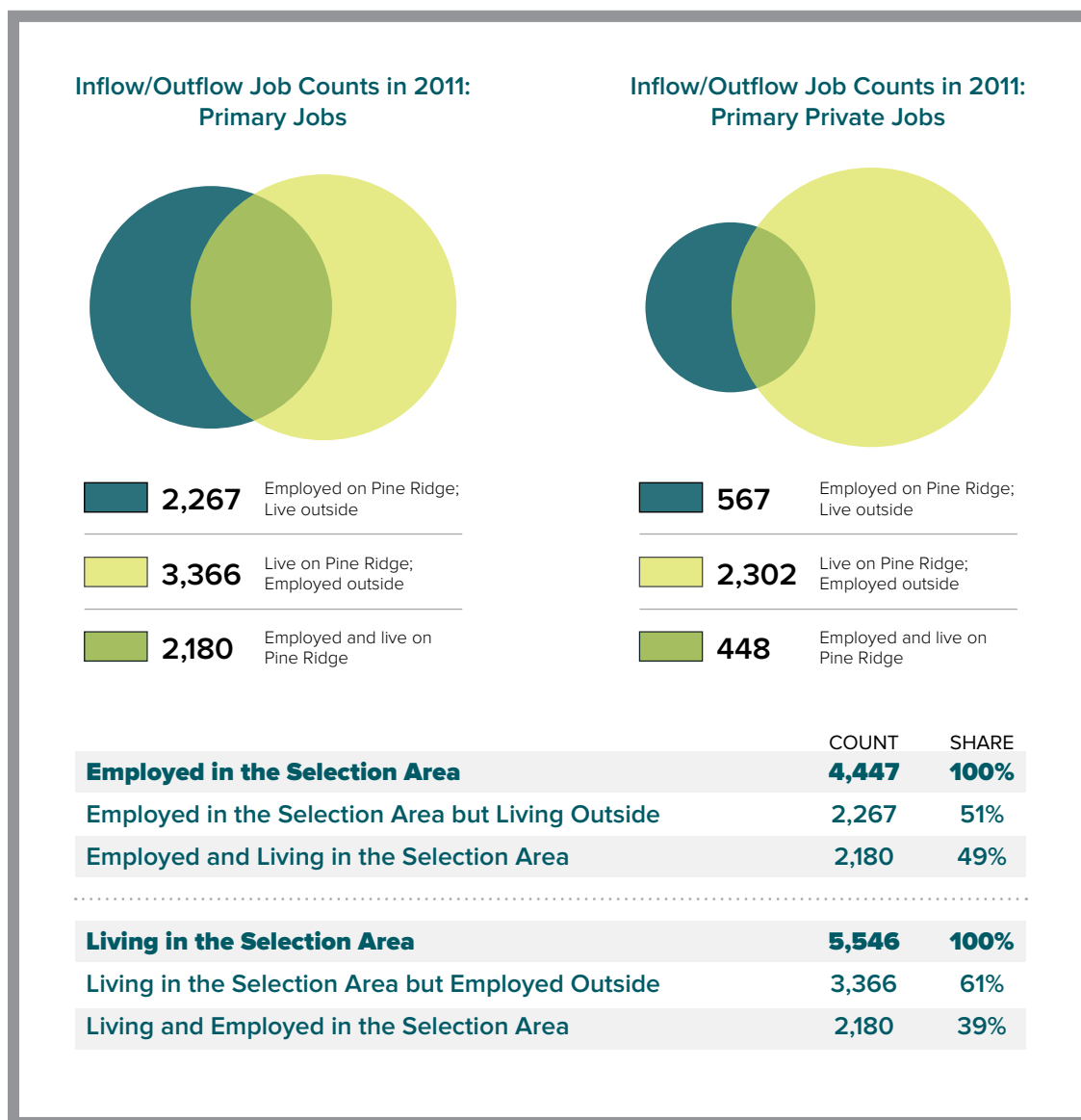
**In a way, addressing the housing and infrastructure needs of the Reservation** is similar to rebuilding after a natural disaster. All systems—roads, water, sewer, electricity, housing, grocery, schools—need to be repaired, upgraded, extended or rebuilt simultaneously. Areas devastated by nature can access unique disaster funding once a federal state of emergency is declared. It could be argued that a state of emergency exists on Pine Ridge and other reservations, with devastation on the scale of that seen in natural disasters—except the devastation on Pine Ridge is the result, not of natural forces, but of historic, deliberate policy choices (see Appendix A). Unfortunately, federal disaster funding is not available in such cases.

## D. Pine Ridge Reservation and Regional Economic Analysis

### Job Type Mix On and Off Pine Ridge Reservation

As with population data, different sources of local employment data provide a range of figures on jobs and workers. These sources include the Longitudinal Employer-Household Dynamics (LEHD), the Environmental Science Research Institute (ESRI) Business Analyst, and the American Community Survey (ACS), as well as a study of Pine Ridge employment by researchers at Colorado State University.

**Figure 4: Commute Patterns of Workers on Pine Ridge Reservation, 2011**

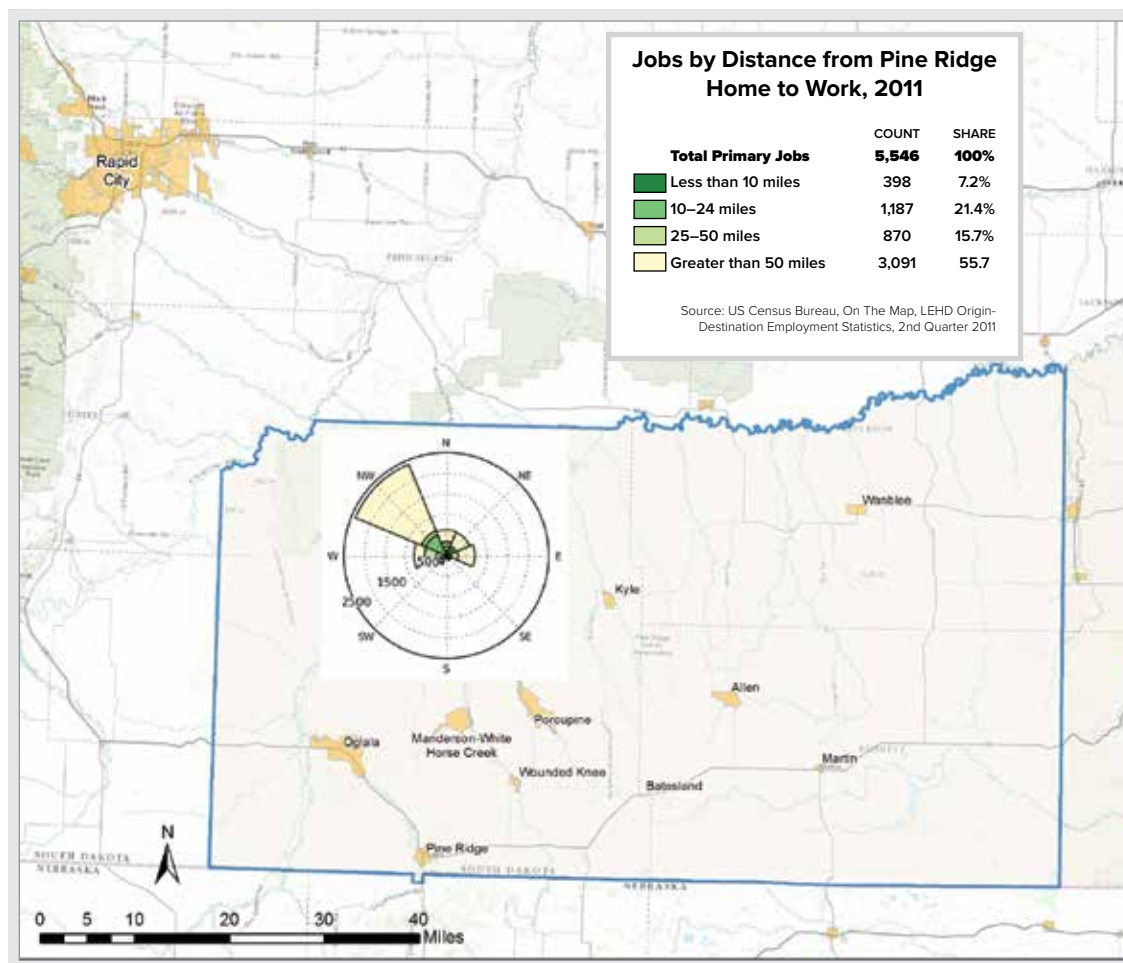


Source: U.S. Census Bureau, OnTheMap Application, and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002–2011)

One of the most significant findings in the data is the spatial mismatch between place of residence and place of employment. **FIGURE 4** characterizes the relationship between those who live and/or work on the Reservation (the “Selection Area” in the graphic), revealing that **51% of those who work on the Reservation live somewhere else, and 60% of those who live on the reservation work off-Reservation**. The associated Figure in the Appendix provides further numerical breakdown of resident workers and those employed on the Reservation.

The LEHD data provides further detail on the commute time and direction for working residents of the Reservation. The data show that over 70% of workers living on the Reservation travel greater than 25 miles to work, and approximately **55% travel more than 50 miles to their employment destination**, mainly in the direction of Rapid City (**FIGURE 5**).

**Figure 5. Commute Distance and Direction\* of Workers Who Live on Pine Ridge Reservation**



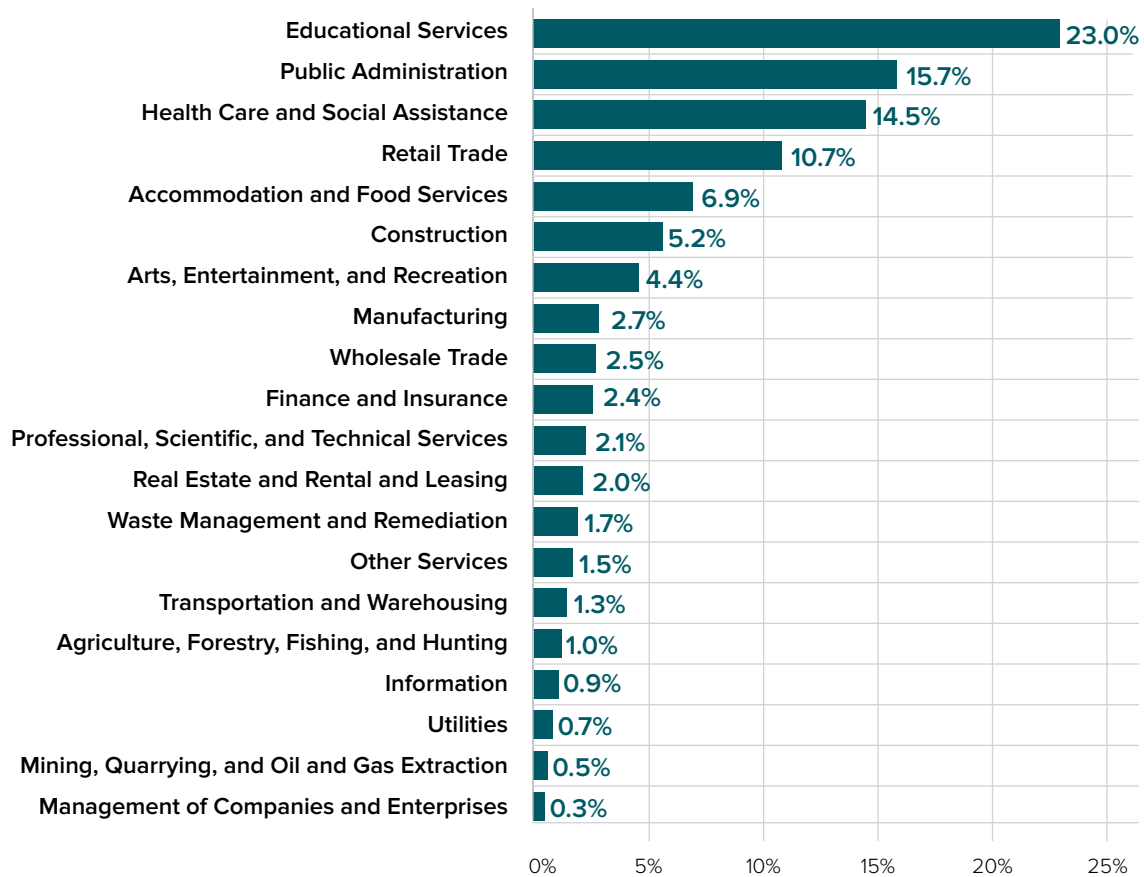
\*Distances and directions as measured from the Home Census Block Group to the Work Census Block Group.

### Employment for those Living on the Reservation:

An analysis of the employment landscape on the Reservation shows that the top three employment classes—Educational Service, Public Administration, and Health Care and Social Assistance—together make up over half of all jobs on the Reservation. **FIGURE 6** provides a breakdown of the jobs on the Reservation and off-reservation for tribal members, by sector or industry classification.

An important finding about workers employed on the Reservation is that **although Native Americans account for over 90 percent of the total population, they make up just over 40 percent of those employed on the Reservation**, while the “White Alone” worker population makes up 55.7 percent of those employed on the Reservation.

**Figure 6. Jobs Worked by Pine Ridge Reservation Residents (On or Off the Reservation)**





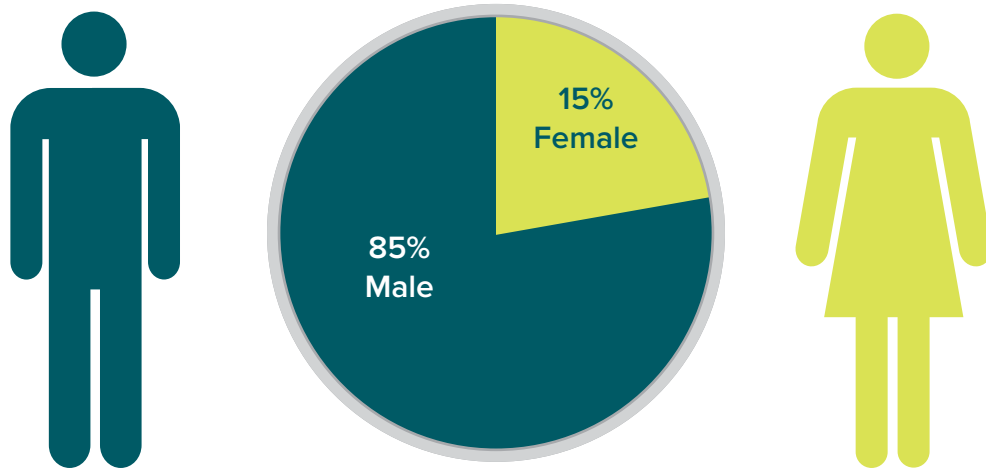
**FIGURE 7** shows Job Counts for the Reservation by Worker Race. The majority of those employed on the Reservation can be characterized as White skilled professionals. Additionally, the majority of Native American workers that live on the reservation, are employed off the reservation. These data collectively illustrate that most people who live or work on Pine Ridge Reservation travel considerable distances for work, in part due to the vastness of the reservation itself, but also because limited job opportunities on the reservation necessitate long drives to jobs off the reservation.

### **Figure 7: Demographics (Racial Characteristics) of Workers on the Pine Ridge Reservation—2011**

	COUNT	SHARE
<b>Total Primary Jobs</b>	<b>5,546</b>	<b>100%</b>
White Alone	3,089	55.7%
Black or African American Alone	28	0.5%
American Indian or Alaska Native Alone	2,272	41%
Asian Alone	37	0.7%
Native Hawaiian or Other Pacific Islander Alone	5	0.1%
Two or More Race Groups	115	2.1%

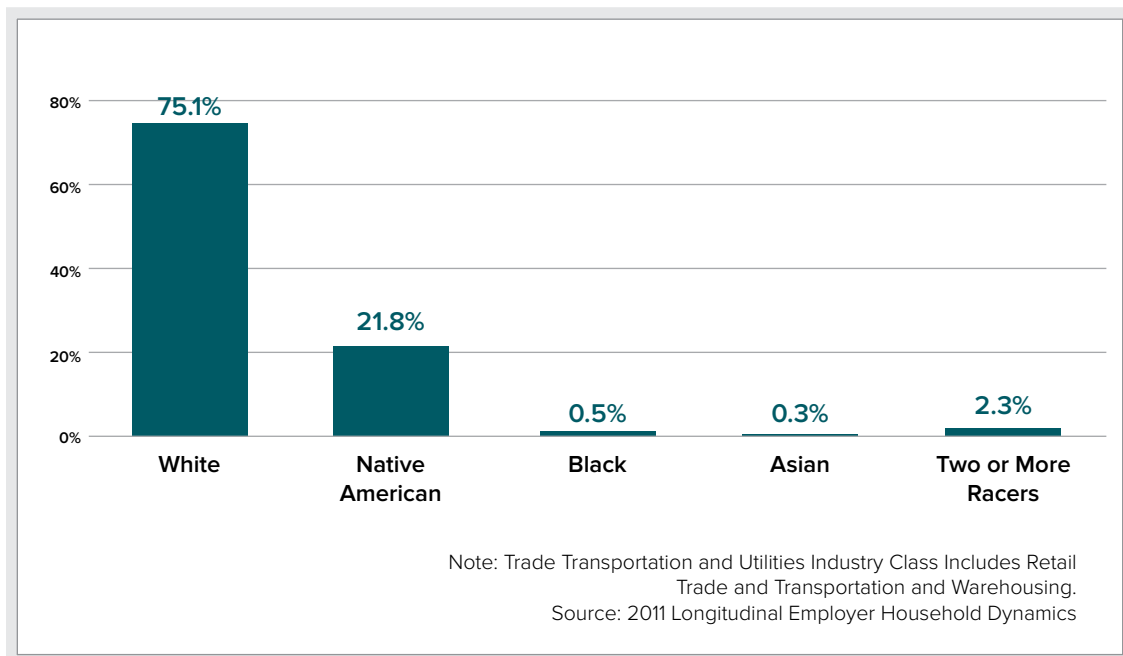
Breaking out major industries by race and gender shows that Native Americans are underrepresented in the “goods producing” and “trade, transportation and utility” sectors, both of which currently employ more men than women (see **FIGURE 8** and **FIGURE 9**). However, Native Americans make up 46% of the “all other services” sector, which employs more women than men. In fall of 2012, 66% of the Oglala Lakota College students were female. These employment and education statistics suggest the need for a targeted recruitment, education and training strategy for Native American males.

**Figure 8: Gender of Workers on the Pine Ridge Reservation Employed in the Goods Producing Sectors**

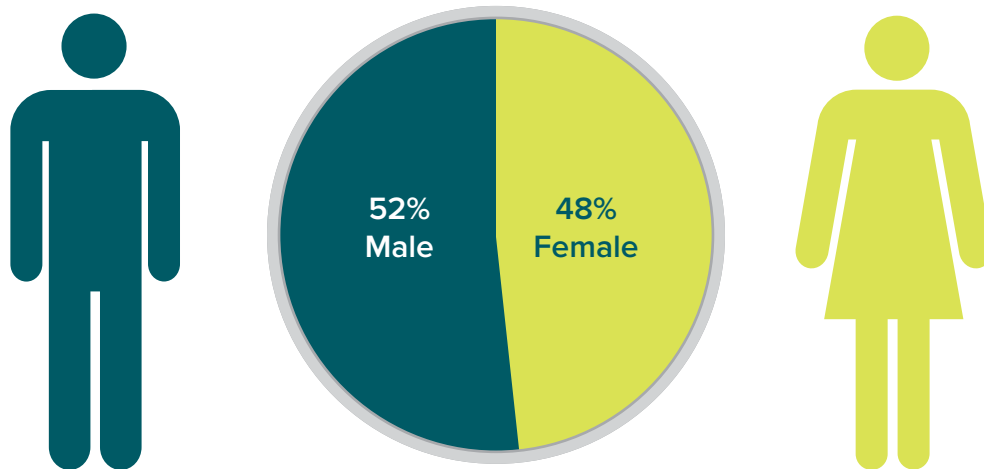


Source: 2011 Longitudinal Employer Household Dynamics

**Figure 9: Demographics (Race & Gender) of Workers on the Pine Ridge Reservation for the “Trade, Transportation and Utility” sectors**



## Gender of Workers on the Pine Ridge Reservation Employed in the Trade Transportation and Utilities Sectors



Source: 2011 Longitudinal Employer Household Dynamics

Another important facet of the reservation economy is unemployment. ACS estimates place the labor force participation rate on Pine Ridge at 49.4%. This low labor force participation rate should be understood in the context of the employment environment on the reservation. The combination of a lack of employment opportunities, a workforce that lacks the skills to do the best paying, skilled jobs on the reservation, and the large commutes to work (for jobs both on and off the reservation) effectively closes out many reservation residents from the local economy.

It should also be noted that a lack of wage labor does not mean a lack of economic activity. Individuals participate in an array of formal and informal economic activities including barter and exchange as well as subsistence hunting to benefit one's own household and others in the community.<sup>18</sup>

18.) Kathleen Pickering, "Alternative Economic Strategies in Low-Income Rural Communities: TANF, Labor Migration, and the Case of the Pine Ridge Indian Reservation." *Rural Sociology* 65 (1): 148-167. March 2000.

## Businesses On and Off Reservation

A major factor contributing to unemployment and long commutes for residents of the Reservation (in addition to the sheer vastness of the reservation itself) is the relative shortage of Reservation businesses and employers compared to the larger region. While the surrounding region has 37 businesses per 1,000 persons, the Reservation has 16 businesses per 1,000 persons.<sup>19</sup>

**Figure 10: Comparative Economic Variables for Pine Ridge Reservation and Surrounding Region**

	PINE RIDGE RESERVATION	SURROUNDING REGION	REGIONAL TOTALS
Businesses	449	14,077	14,526
Avg. Sales (\$thousands)	\$823	\$1,523	\$1,501
Total Sales (\$thousands)	\$369,743	\$21,433,970	\$21,803,713
Avg. Employees	13	10	10
Total Employees	5,934	139,887	145,821
Population	28,000	380,145	408,145
Businesses/1,000 Population	16.0	37.0	35.6
Jobs/1,000 Population	211.9	368.0	357.3
Sales per Capita (\$thousands)	13.2	56.4	53.4

These figures are also reflected in the number of jobs per 1,000 persons; while there are about 212 jobs per 1,000 persons on the Reservation, there are 368 jobs per 1,000 persons in the surrounding region. Lastly, the sales volume per capita of businesses is another telling aspect of the local economic conditions. The sales volume of businesses on the Reservation is about \$13,200 per capita, while businesses in the surrounding region average over four times that—around \$56,400 in sales per capita. **FIGURE 10** provides a summary of these key business variables.

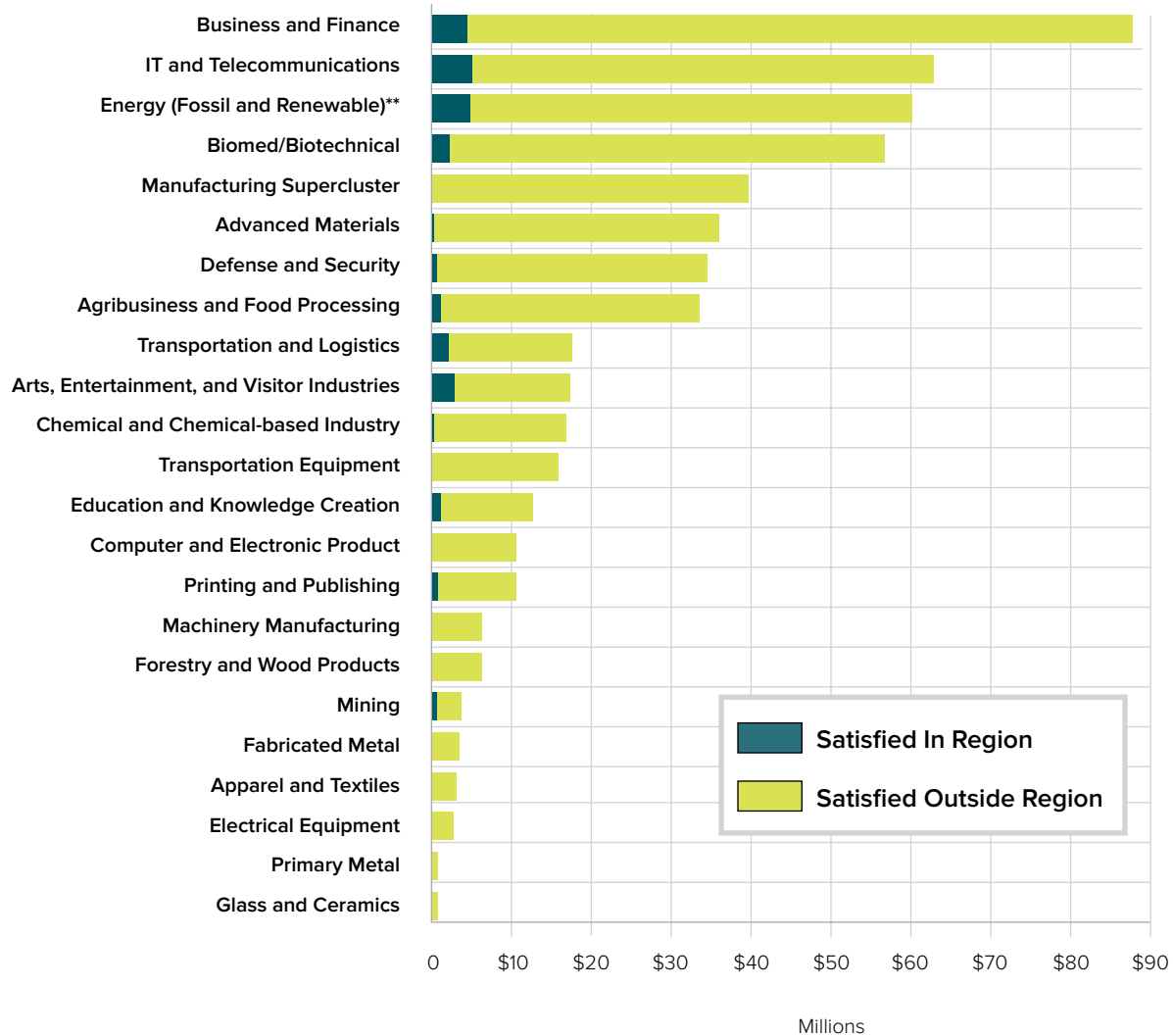
The Purdue Center for Regional Development provided a recent assessment of the three fastest growing occupations in the larger economic region from 2007 to 2012: “Creative” (legal occupations), with 23% growth; “Creative” (arts, design, entertainment, sports & media) with 14% growth; and “Working” (Construction and Extraction Occupations) with 13% growth. In addition, the Purdue analysis found that there are high-volume industries where there is “leakage” outside the three-county area comprising Pine Ridge that the reservation could work to build, expand or retain, including business & finance, IT & telecommunications, energy, biomedical/biotechnical, and manufacturing.<sup>20</sup> **FIGURE 11** is a reproduction of the Purdue study table.

19.) Based on a population estimate of 28,000; more recent estimates may be even higher, meaning the number of businesses and jobs per 1,000 persons could be lower.

20.) Pine Ridge includes all of Shannon County and large portions of Bennett and Jackson counties.

### Figure 11: Pine Ridge Indian Reservation, Three County Industry Clusters

Table Courtesy of Purdue Center for Regional Development



Data Source: EMSI 2012.4, industry cluster definitions by PCRD

It is informative to compare the industry makeup of business and employment on the Reservation and in the surrounding region. The largest employers on the Reservation are in public and institutional sectors such as education, government, and healthcare. The Prairie Winds Casino is also a large employer on the Reservation. The economy of the surrounding region is comparatively more diverse, having a variety of large employers in manufacturing, telecommunications, retail, food services, government, health care, and hospitality and accommodations. **FIGURE 12** provides a comparison of the five largest employing industries, in terms of average and total employment, for the Reservation compared with the largest employers in the surrounding Region.

**Figure 12: Reservation Employment Sectors in Relation to Regional Employment Sectors**

RESERVATION EMPLOYMENT		REGIONAL EMPLOYMENT	
AVERAGES	EMPLOYEES	AVERAGES	EMPLOYEES
Other Gambling Industries	200	Bare Printed Circuit Board Manufacturing	600
General Medical and Surgical Hospitals	117	Rubber and Plastics Hoses and Belting Manufacturing	330
Elementary Schools	61	Telemarketing Bureaus and Other Contact Centers	168
Colleges, Universities, and Professional Schools	49	Warehouse Clubs and Supercenters	163
Livestock Merchant Wholesalers	40	All Other Misc. Ambulatory Health Care Services	119
TOTAL	EMPLOYEES	TOTAL	EMPLOYEES
Elementary and Secondary Schools	1,700	Elementary and Secondary Schools	10,958
Other Government Support	1,478	Accommodation and Food Services	8,416
Colleges, Universities, and Professional Schools	395	National Security	5,051
General Medical and Surgical Hospitals	351	Legislative Bodies	4,946
Other Gambling Industries	200	Hotels (except Casino Hotels) and Motels	4,223

A comparison of sales revenue of businesses on the Reservation with businesses in the surrounding region identifies the strongest industries in both areas (**FIGURE 13**). Knowing which businesses are strong on the Reservation may point to competitive advantages that can be leveraged. High-performing industries in the surrounding area could suggest businesses to attract, if resources and demand are also present and the reservation business and regulatory environment could be made favorable to these businesses.

Wholesale industries in livestock, trade agents and brokers, and petroleum represent some of the strongest performing businesses on the Reservation. These industries are also strong in the surrounding region, as are additional industries such as manufacturing, automobile dealers and wholesalers, electric power distribution and retail department stores, some of which might also be viable on the reservation.

## Reservation Dollars Follow Opportunity

According to a recent survey of reservation shopping patterns, reservation dollars in large measure mirror the commute to Rapid City for work, retail and entertainment.<sup>21</sup> Huge amounts of income are spent off the reservation, primarily in Rapid City but also in smaller communities south of Pine Ridge (e.g. at the WalMart in Chadron, NE). About two-thirds of spending for groceries and household goods is off-reservation. Reservation residents desire a full consumer experience of the sort available in Rapid City that includes not only shopping but also dining and entertainment (the primary reason some go to the casino is for dining and to socialize with friends), suggesting that the reservation could support these activities. Those surveyed also said they would pay higher prices to shop on the reservation for comparable quality goods if doing so would create jobs, particularly for young people.

**Figure 13: Reservation Sales in Relation to Regional Sales**

RESERVATION SALES		REGIONAL SALES	
AVERAGES	\$ THOUSANDS	AVERAGES	\$ THOUSANDS
Livestock Merchant Wholesalers	55,040	Bare Printed Circuit Board Manufacturing	119,400
Other Gambling Industries	19,200	Grain and Field Bean Merchant Wholesalers	114,103
Wholesale Trade Agents and Brokers	17,055	Rubber and Plastics Hoses and Belting Manufacturing	86,790
Petroleum and Petroleum Products Merchant Wholesalers*	17,042	Meat and Meat Product Merchant Wholesalers	68,738
Pipeline Transportation of Crude Oil	13,515	Automobile and Other Motor Vehicle Merchant Wholesalers	31,450
TOTAL	\$ THOUSANDS	TOTAL	\$ THOUSANDS
Livestock Merchant Wholesalers	55,040	Petroleum/Petro. Products Merchant Wholesalers*	1,261,071
Other Gasoline Stations	38,512	New Car Dealers	922,977
Petroleum and Petroleum Products Merchant Wholesalers*	37,026	Livestock Merchant Wholesalers	704,512
General Medical and Surgical Hospitals	34,083	Electric Power Distribution	555,659
Other Gambling Industries	19,200	Department Store (except Discount Dept. Stores)	519,696

\*except bulk stations and terminals

21.) *Social Marketing and Buy Local Campaign Results*. Colorado State University. October 2008. Retrieved from [http://anthropology.colostate.edu/wp-content/files/2013/05/Social\\_Marketing\\_results\\_20081.pdf](http://anthropology.colostate.edu/wp-content/files/2013/05/Social_Marketing_results_20081.pdf)

## Summary Findings

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The data on worker commutes, employment, and industry performance reveal a few key factors for housing and economic development planning on the Reservation.

- Long commutes for reservation workers, for employment both off and on the reservation, mean increased travel costs to work for families already living on the margins and less time with family. More work opportunities on the Reservation could alleviate the commuting burden for some families.
- The Reservation's economy is less diverse than that of the surrounding region, making it more vulnerable and less sustainable.
- The distance/direction and industry commuting patterns suggest that the local labor force could support more local and diverse business ventures.
- A higher skilled Native American workforce could compete for jobs on the reservation that are currently held by non-Natives who commute onto the reservation for work. These higher skilled jobs would generate more revenue on the reservation and drive demand for goods and services, if adequate housing choices were made available to these workers.
- As more job opportunities are created on the Reservation, the demand for quality housing could be expected to increase as well.
- The Reservation could better support shopping, dining, and entertainment demand, as well as buying local, high-quality, products.

## Economic Development Recommendations

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Equity and opportunity will not be achieved in Indian communities if they are not compatible with Native values. For example, the Thunder Valley CDC community development plan foregrounds Native knowledge, culture and language, sharing, ecosystem protection, and support for vulnerable populations, including the elderly and youth.<sup>22</sup> Economic development, land use planning, infrastructure development, housing availability and affordability are critical, but they must align to contribute to a sustainable, supportive community.

The Pine Ridge Reservation can build on opportunities to improve the current economy and plan for sustainable, long-term economic development. Stakeholders can leverage local resources, including workforce, cultural identity, and natural resources (the latter, in sustainable and minimally harmful ways). Efforts must focus on growing enterprises on the reservation to capture a larger share of Lakota spending within the tribal economy, and also support building cooperative and worker-owned companies as part of a community wealth-building strategies.

22.) *Building a Regenerative Community*. Thunder Valley Community, Pine Ridge Indian Reservation, South Dakota - Final Report July 15, 2013.



This includes investments in:

**Workforce development:** The tribal anchor institutions (Oglala Sioux (Lakota) Tribe Housing Authority, Indian Health Service, and Public Schools) should collaborate with Oglala Lakota College (OLC) to train reservation youth for jobs currently being worked by off-reservation workers, particularly in education, health care and government administration. The housing authority and non-profit housing developers could collaborate with OLC to create programs in applied science and trades on construction of housing and infrastructure. This partnership could also include Native construction firms to increase housing production and build capacity of the local workforce. The college also includes cultural awareness in its programming, not only to preserve Lakota culture but also to strengthen individual identity with the tribe and reservation. Building this identity helps to prevent “brain drain” from the reservation, encouraging graduates to stay and work for the benefit of the tribe. Reservation based non-profits and Oglala Lakota College need to continue to improve workforce development opportunities, so that local capacity is increased and jobs are created as more housing is developed.

**Arts community:** This industry is already in place on the reservation, but operates as a cottage industry, particularly for newer artists, who tend to lack dedicated studio space and business acumen. The arts community as a whole also lacks easy access to markets off the reservation, including Internet sales venues, that could provide fair pricing and greater profits for Pine Ridge artists. For example, artists who travel to Rapid City to sell their art must pay for gas, food and lodging, which lowers profit margins substantially. The arts industry on Pine Ridge could benefit from better organization of arts community resources and enhancement of its marketing and distribution strategies.<sup>23</sup> For example, the Thunder Valley model community development includes art spaces. These can be leveraged to enhance supply logistics and enable artists to benefit from one another’s marketing contacts and business experience.

**Natural Resources & Tourism:** The Oglala Sioux tribe will co-manage the South Unit of Badlands National Park and wishes to establish a tribal bison herd on the land, and possibly link to the South Unit bison herd buildup. Geographic location of the visitor center on the primary route from the interstate onto the reservation means it could serve as a “gateway” to Pine Ridge. The South Unit of Badlands National Park could become the first Tribal National Park—which is a tremendous opportunity, resulting in resources from federal sources that would be co-managed by the tribe. The first Tribal National Park represents an opportunity for tourism, cultural asset protection, and buffalo-based agricultural assets.

**Access to capital and business training:** Entrepreneurial success requires business acumen, mentors, capital, and investors willing to take a risk. While all have been historically lacking on Pine Ridge, the Lakota Fund plays a critical role in providing business training, access to credit and entrepreneurial coaching. A deeper analysis of key sectoral needs for reservation-based enterprises can inform Lakota Funds, area banks, and philanthropic investments. Stakeholders should look to create a partnership with Lakota Funds, Mazaska Owecaso Otipi Financial, and OST Partnership for Housing for workers on the reservation and for OLC students in training for reservation-based jobs to receive housing finance counseling to prepare for reservation housing purchase. Lakota Federal Credit Union capacity needs to be expanded to grow its lending portfolio. Mazaska Owecaso Otipi Financial is a CDFI offering mortgages, but needs stronger ties to the secondary market for selling loans, so that more loans can be made.

23.) *Establishing a Creative Economy: Art as an Economic Engine in Native Communities*. First People's Fund, Rapid City, SD, July 2013

**Housing construction:** Encourage tribal college collaborations and other opportunities to provide vocational training in construction, leveraging opportunities in meeting reservation housing needs, North Dakota oil industry-driven housing demand, and Rapid City growth. This can provide living wages for reservation residents and build up the reservation workforce. Encourage development of housing-related manufacturing to bring more construction industry jobs onto the reservation, to meet reservation needs and also to potentially market construction products off-reservation.

Investing in housing construction meets the immediate need for housing and provides an opportunity to train a sustainable workforce that would continue to build up the reservation's housing stock. Currently, an innovative partnership between Oglala Lakota College Oglala Sioux College and Colorado State has students collaborating on novel, renewable indigenous housing designs. The building boom in North Dakota (linked to extraction from the Bakken oil shale reserve) could also provide a timely training ground for Native construction workers.

**Manufacturing:** Explore housing manufacturing models that could be viable on the reservation. Although in a different industry, the Tanka Bar plant provides a model for successful manufacturing and social entrepreneurship on the reservation. Tanka Bar leverages cultural identity (dependence on the buffalo, a Lakota recipe in its flagship product) with savvy social-networking marketing and employment practices that “give back.” Manufacturing coupled with education presents a multigenerational approach to building the tribal workforce. Research suggests that when reservations have natural resources, those can fuel the tribal economy (e.g., timber, mining, and hydroelectricity have been sustainable on reservations that have those resources). When natural resources are lacking, manufacturing is the only industry that showed any promise of providing revenue (though even manufacturing was insufficient, by itself, to sustain most reservations). Manufacturing coupled with education results in a trained workforce that is able to make manufacturing viable—along the same lines that educating folks to work in casinos helps to bolster that industry.

**Renewable energy:** Invest in user-, community-, and utility-scale wind, solar, and/or geothermal energy. Wind presents an especially attractive option. South Dakota is one of the windiest states in the country, producing more wind energy than almost any other state.<sup>24</sup> Indian Country already has this on their radar, having created a multi-tribe consortium to explore wind development. The Thunder Valley CDC includes renewables in its model community. Renewables also reflect traditional values of linkage to the land and respect for it (as compared to uranium mining, oil and gas operations that often leave native lands polluted and uninhabitable). Considerations for wind and other renewable include:

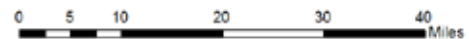
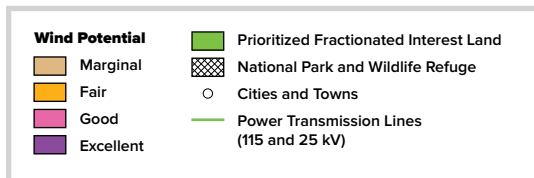
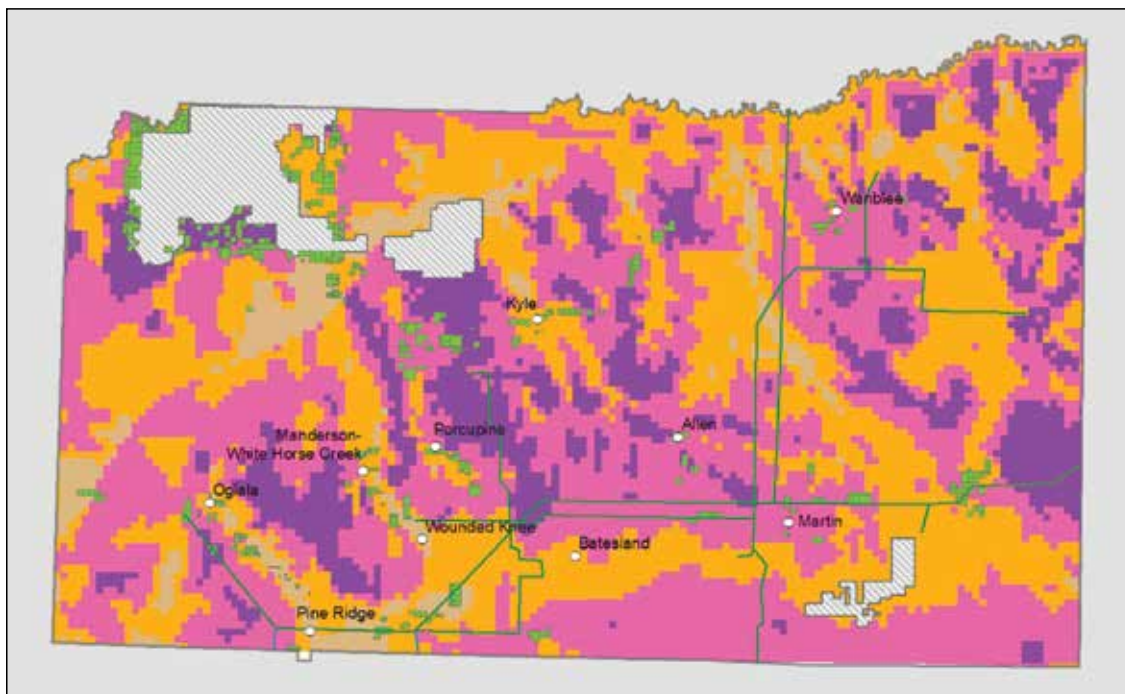
- Land leasing, including turbine siting on agricultural lands (dual use)
- Maintaining an attractive viewshed (avoid impinging on the view near tourist areas, for example, by placement of turbines or solar arrays)
- Leasing of transmission lines, to sell back to the grid from either community- or utility-scale production
- Training of reservation workers (e.g., in East LA a pilot program found that homeowners benefit from solar power by selling back excess generation, and that installers gain training in an up-and-coming industry).

24.) South Dakota Wind Energy Association. <http://www.sdwind.org/>

In all these opportunities, the tribe should prioritize Cobell settlement land buys that consolidate land use appropriate for the opportunity provided—e.g., land near roads and other infrastructure for the building of homes; remote and/or agricultural land for the siting of wind turbines, solar arrays, or other community resource developments (**FIGURE 14**).

### Figure 14: Areas of wind energy potential and fractionated interest lands

Pine Ridge 50-Meter Wind Potential and Prioritized Fractional Interest Lands



Sources: Oglala Sioux Tribal Land Office, National Renewable Energy Laboratory (NREL).

Fractionated interest parcels given priority for acquisition under the Cobell Trust land buy-back program. Wind energy potential at 50 meters (approx. 164ft.) above ground. National Park and Wildlife Refuge lands displayed, but other wind project exclusion areas (buffers around federal land; incompatible land-use designations; water areas; slopes prohibitive for turbine siting) are not shown.

## Conclusion: Call to Action

The *Oyate Ominicye Plan* and this complementary *Pine Ridge Equity and Opportunity Assessment* reflect the imperative for urgent and strategic focus. The tasks before stakeholders working to strengthen the Pine Ridge tribal economy include:

- **Grounding a system of housing finance and development** to address the immediate, extreme housing crisis, including (1) enabling Lakota households to purchase or rent quality homes on the reservation, (2) encouraging housing developers to build quality housing developments across the reservation, and (3) ensuring that the local workforce participates in the housing development process.
- **Assembling land parcels in ways that can support infrastructure investment** to serve the quality development of housing and other community amenities. This can be achieved by targeting available funding for land purchasing strategies, streamlining and strengthening lease processes to do housing development on trust lands, and doing acquisitions of fee simple lands.
- **Developing a system of infrastructure finance** that can serve new and existing community development. Strengthen and streamline reservation leasing processes so that tribal and trust lands can be accessed more easily. Consider a potential trust fund from the potential increased lease revenue related to the Cobell settlement.
- **Aligning education, workforce development and reservation job sectors** to grow the share of Lakota workers filling reservation-based jobs, thus creating a market for higher quality housing choices.
- **Growing enterprises on the reservation** to capture a larger share of Lakota spending within the tribal economy and to support building cooperative and worker-owned companies as part of a community wealth-building strategy. Despite tremendous entrepreneurial potential, barriers to economic opportunity, such as land access, infrastructure limitations, and financing challenges stifle entrepreneurship on reservation.
- **Attracting on- and off-reservation investments and consumer and tourist spending** in reservation enterprises.
- **Building innovative, collaborative, mutually enhancing** relationships between the reservation and the larger region.

While many tribal agencies and associated institutions and nonprofits are already making headway on these efforts, state and federal agencies, regional businesses, regional financial institutions, and metropolitan planning organizations should also contribute their resources and talent to solving these challenges. Creative capital, development, and educational partnerships are needed to build bridges from the local resources to broader pools of investment capital.

## APPENDIX A

### History of US Land Policy on Tribal Lands Impacts Current Opportunity Structures

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*“We must together recognize that there is an assault on our spirit.” –  
Oyate Omniciye/Oglala Lakota Plan*

The General Allotment Act of 1866, or the “Dawes Act,” granted the U.S. President the authority to allot, or divide and assign title to, individual parcels of land on reservations to Native Americans, who were then granted U.S. citizenship. At the time of the Dawes Act, many Indian tribes still practiced communal land stewardship, and their cultural, religious, and family structure revolved around communal ownership. Therefore, allotment was a powerful means of attempting to forcibly alter the social and economic relationships of an already isolated and disenfranchised people. Between 1887 and 1934, Native Americans lost 90 million acres of land due to sales of “surplus” lands to white settlers.

Federal agents perceived the communal ownership of land and an extended, matrilineal, nomadic family structure as chaotic, resulting in the “improper” use of land. White “reformers” were especially troubled by the lack of connection between marriage and land title, and the lack of patriarchal, inter-generational land transfer. The Eurocentric characterization of the reservation as a “failing” economic system, one in which there was no individual economic incentive, did not match the Native representation of a functioning economic system that made it a priority to protect the poor. Allotment and fixed housing was also intended to end the communal, mobile Native cultures of agriculture, hunting and war. The Dawes Act also provided an opening for federal agents to intervene into Native family life with, for example, a hunting ban to enforce allotment and the issuance of livestock shares to Indians who complied with White marriage practices.

The Dawes Act had important consequences for Native American territories and economies. In response to the extreme fractionation, and thus unprofitable and inefficient use of allotted land, Congress passed the Indian Land Consolidation Act (“ILCA”) in 1983. However, the U.S. Supreme Court has twice rejected it as an unconstitutional Fifth Amendment taking. Despite recent developments, including the Indian Land Consolidation Program and the Cobell Settlement, tribes and the federal government are still struggling with the multiple legacies of forced allotment.

The unjust taking of Native land was part of a larger strategy to destroy a people. Therefore, land restitution and housing and community development needs to occur with the parallel intent of restoring a people. A restored Native society, economy and ecology can be the basis of sustainable, robust, diverse cultural and economic growth. New paradigms of community investment must continue to be explored both on and off reservations.

## APPENDIX B

### 1. Notes on Population Estimates in Figure 1.

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**Census** (Census 2010: **18,834**; ACS 2007-2011: **18,825**): The US Census routinely undercounts the poor and people of color while overcounting non-Hispanic Whites. Evidence from surveys and administrative records (below) strongly suggests that both the decennial census and the American Community Survey (ACS) significantly undercounted the Pine Ridge population. However, assuming that the undercount is systematic (i.e., it results from deficiencies in the collection of the data due to a variety of factors, which it affect not only the population count but also the other data collected through the ACS on household demographics, conditions, occupancy, etc.), derived statistics like percentages and ratios on the reservation should be reliable.

**Bureau of Indian Affairs American Indian Population and Labor Force Report**, 2005. (2005: Tribal Enrollment, **43,146**) This report includes figures for “Tribal Enrollment” and “Eligible for Services.” BIA services are available only to enrolled tribal members who reside on or near reservations, and so, according to the BIA, these two numbers should be different. BIA raises a cautionary flag if the “enrolled” and “eligible” numbers are the same, and this is the case for the population cited for Pine Ridge. *Therefore, the 2005 report cannot be relied upon as an accurate representation of Pine Ridge population.* (Note that The Bureau of Indian Affairs is required to issue a report of population and labor force statistics for Indian Country “no less than biennially.” The report draws from tribally compiled data reported on a BIA census form. BIA issued reports for data compiled in 1982, 1985 and then every two years until 2005. No reports have been issued since, including the latest for 2010 data, which was to have been issued in 2012. BIA chose not to release the report, citing problems “rooted in the survey methodology.”

**Administrative records:** Not available to us from either the tribe or the state. However, at least one study using census data and administrative records from the Indian Health Services places the Pine Ridge population at “**about 50,000.**” (Benson et al., 2011)

Kathleen Pickering, **Pine Ridge Work Force Study** (July 2005): 24,614 to 32,710. HUD: 28,787.

**Indian Housing Block Grant Formula Data**, 2014: The Department of Housing and Urban Development (HUD) derives their population figures for formula grant calculations from Census Bureau base-year data adjusted through what could be described as a modified “components of growth” model (“modified”, because it uses Indian Health Service projections based upon birth and death rate data but apparently does not explicitly include in- and out-migration). HUD accepts challenges to the data used in calculating their population figures. Tribal authorities may challenge the base year Census data or any of the components of population change. The Oglala Sioux challenged the census base year on the basis of the Sherman survey data, resulting, with annual percentage adjustments, in the 2014 formula figure.

## 2. Kirwan Analysis of Land Office 2007 Home Site Data: 21.4% expansion of housing stock needed

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In 2007, the Oglala Sioux Tribe Land Office conducted a GPS survey of housing units on Pine Ridge reservation. The result was an inventory of the reservation's housing stock, including housing unit location, type, and in many cases number of bedrooms.

Using the Land Office data and an overcrowding threshold of two persons per bedroom,<sup>25</sup> The Kirwan Institute estimated the capacity of the inventoried housing stock and how much additional housing, if any, would be needed to stay below the overcrowding threshold.

### A. Housing units and bedrooms in inventoried housing stock

- Estimated inventory of Pine Ridge housing units = 4090
- Average number of bedrooms/housing unit = 3<sup>26</sup>
- Estimated total bedrooms = 12,270

### B. Housing stock needed to house Pine Ridge population

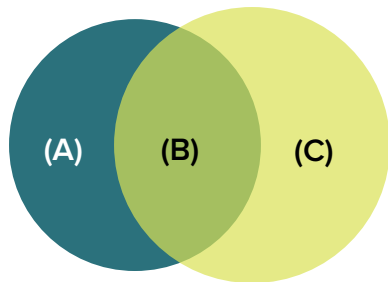
- Reservation population = 29,787
- Persons per bedroom =  $29,787 / 12,270 = 2.43$
- Bedrooms needed to meet the 2-persons-per-bedroom threshold =  $29,787 / 2 = 14,894$  total bedrooms (21.4% increase over 12,270 inventory)
- Additional bedrooms needed =  $14,894 - 12,270 = 2,624$
- Additional housing units needed =  $2,624 \text{ bedrooms} / 3 \text{ bedrooms per housing unit} = 875$  additional housing units
- Total housing capacity needed =  $4,090 \text{ inventory} + 875 \text{ additional} = 4,965$  three-bedroom housing units

Note: This analysis estimates the minimum total housing capacity needed to house the reservation's population, because it assumes that all families could distribute themselves in multiples of two per bedroom. This is unrealistic, given the many ways family structure can vary and incompatibilities for sharing of bedrooms (e.g., single-parent households with children, households with multiple adults, siblings of different gender).

25.) *Measuring Overcrowding in Housing*, US Department of Housing and Urban Development, Office of Policy Development and Research, September 2007.

26.) Where records lacked data on bedrooms, the number of bedrooms for the housing unit was imputed as the average of bedrooms for that housing type, calculated from records that did have bedroom counts.

### Inflow/Outflow Job Counts in 2011: Primary Jobs



- (A)  **2,267** Employed on Pine Ridge; Live outside

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- (B)  **3,366** Live on Pine Ridge; Employed outside

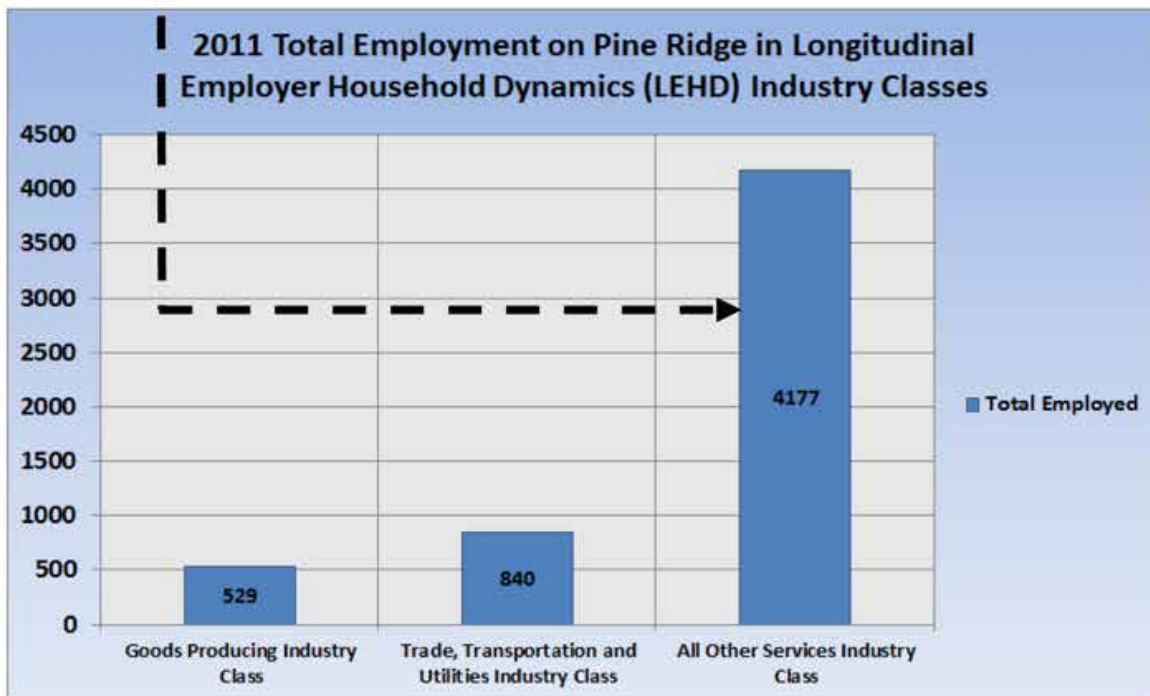
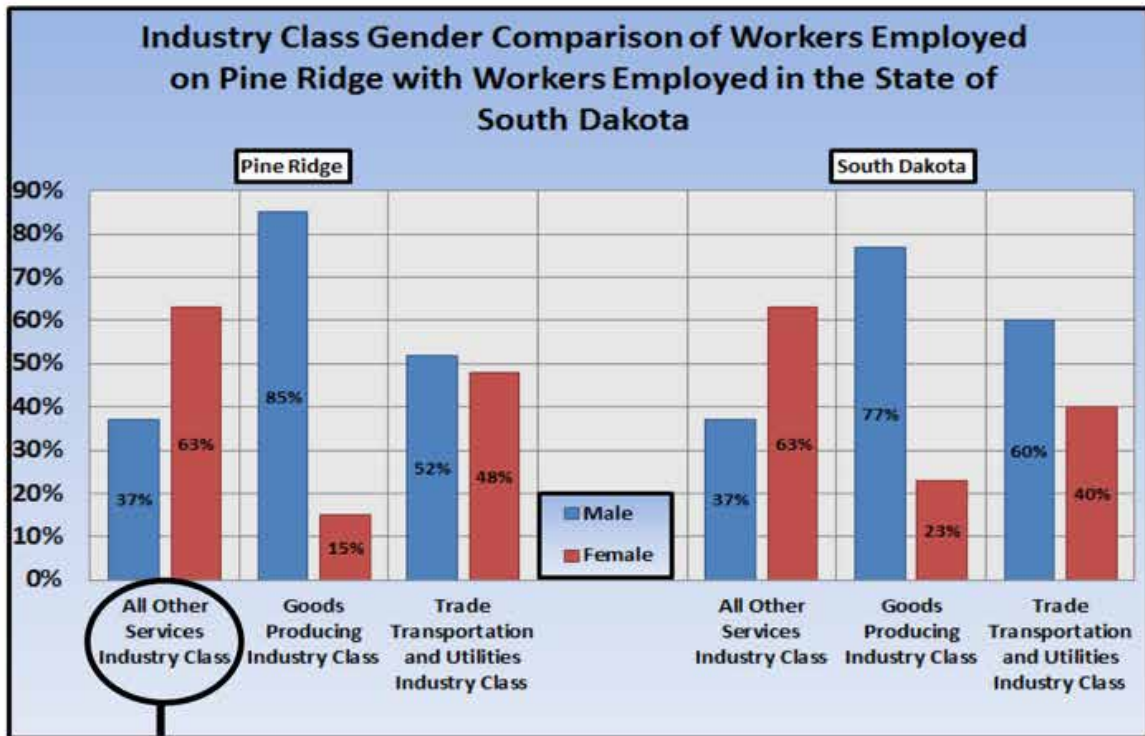
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- (C)  **2,180** Employed and live on Pine Ridge

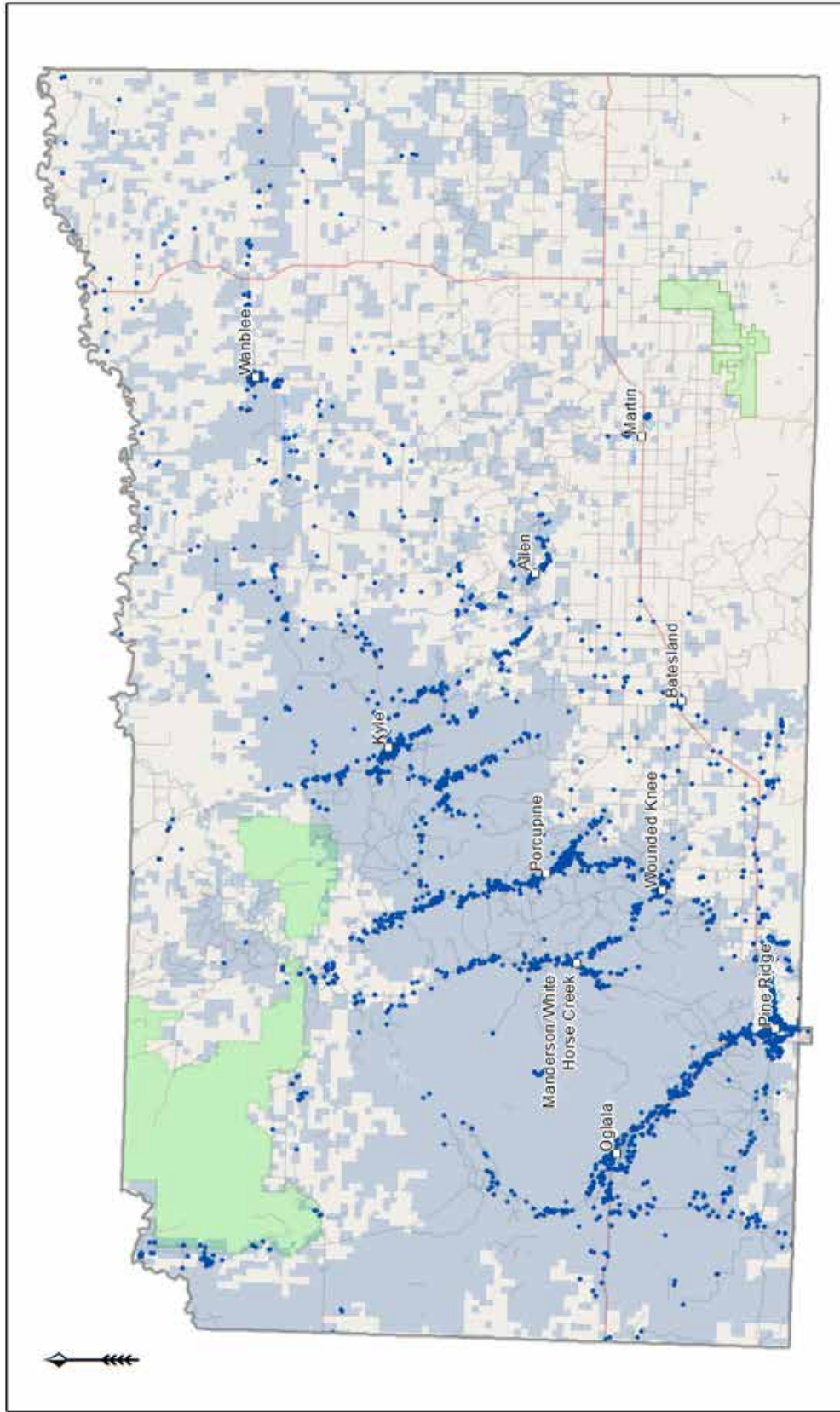
		Reservation Jobs and Workers			Calculations			
		(A) Employed on Pine Ridge, live outside	(B) Employed and live on Pine Ridge	(C) Live on Pine Ridge, employed outside	(D) Ratio of Jobs Filled by Pine Ridge Residents Off versus On the Reservation [(C) / (B)]	(E) Total Jobs on Pine Ridge Filled by Either Pine Ridge Residents or Outside Workers [(A) + (B)]	(F) Total Jobs Filled by Pine Ridge Residents, both On and Off Pine Ridge [(B) + (C)]	(G) Ratio of Pine Ridge Resident Workers to Pine Ridge Jobs [(F) / (E)]
<b>All Primary Jobs</b>		2,267	2,180	3,366	1.5	4,447	5,546	1.2
Jobs Grouped by Worker Income	Workers Earning \$1,250 per month or less	455	420	995	2.4	875	1,415	1.6
	Workers Earning \$1,251 to \$3,333 per month	1,055	1,090	1,560	1.4	2,145	2,650	1.2
	Workers Earning More than \$3,333 per month	757	670	811	1.2	1,427	1,481	1.0
Jobs Grouped by Industry Classification	Workers in the "Goods Producing" Industry Class	88	83	446	5.4	171	529	3.1
	Workers in the "Trade, Transportation, and Utilities" Industry Class	203	191	649	3.4	394	840	2.1
	Workers in the "All Other Services" Industry Class	1,976	1,906	2,271	1.2	3,882	4,177	1.1

Source: Longitudinal Household Employer Dynamics (LEHD) Origin-Destination Employment Statistics, Beginning of Quarter Employment, 2Q2011, U.S. Census Bureau.





# Pine Ridge Home Sites and Allotted Lands



- Home Sites (GPS)
- Pine Ridge Towns
- Allotted Parcels
- National Park and Wildlife Refuge

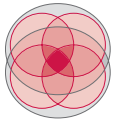
Sources: Oglala Sioux Tribe Land Office (allotted parcels, 2013; home sites, 2007 GPS survey).

## For More Information

The Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University is known and respected nationally and deeply engaged in social issues. We are focused on projects that are integrated with sound research, strategic communication, and advocacy.

As a university-wide, interdisciplinary research institute, the Kirwan Institute works to deepen understanding of the causes of—and solutions to—racial and ethnic disparities worldwide and to bring about a society that is fair and just for all people.

Kirwan Institute research is designed to be actively used to solve problems in society. Its research and staff expertise are shared through an extensive network of colleagues and partners—ranging from other researchers, grassroots social justice advocates, policymakers, and community leaders nationally and globally, who can quickly put ideas into action.



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