

Appendix C – Former Bennett Freeze Economic and Market Feasibility Study

Former Bennett Freeze Area

Economic and Market Feasibility Study

Final Document / December, 2018



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A. Acknowledgments

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This report represents an overview of potential development opportunities at the point in time in which it was prepared. Market conditions can change rapidly, particularly across an area as large as the FBFA and surrounding border-area communities. While the data used in this document come from official sources and were believed to be the best available at the time, data in Indian Country can be less accurate than in other areas. Readers of this report should independently verify information prior to making investment decisions.

A wide-angle, sepia-toned photograph of the Grand Falls in Leupp, Arizona. The image shows a series of cascades of water flowing over layered sandstone cliffs. The water is captured with a long exposure, creating a soft, blurred effect. In the background, a flat-topped mesa rises against a hazy sky. The overall mood is serene and majestic.

B | Project Overview

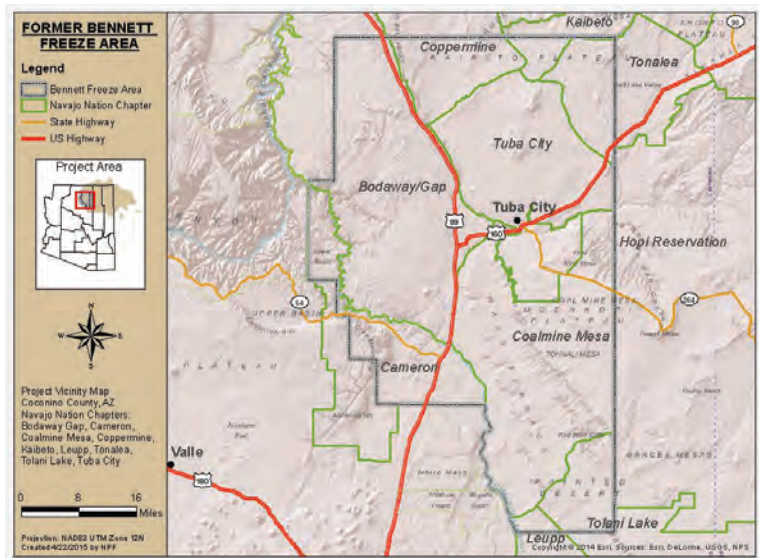


Feasibility Study Overview

The Indigenous Design Studio + Architecture (IDS+A) team assisted the Navajo Hopi Land Commission (NHLC) and the Navajo Nation Division of Economic Development (NNDED) develop an Economic and Market Feasibility Study for the nine chapters in the Former Bennett Freeze Area (FBFA), which consists of Bodaway-Gap, Cameron, Coalmine Canyon, Coppermine, Kaibeto, Leupp, Tolani Lake, Tonalea and Tuba City. The purpose of Economic and Market Feasibility Study is to serve as a guide to strategically identify the potential needs, demands and constraints for commercial, industrial, small businesses and tourism development in the FBFA region. Overall, the study will assist the Navajo Nation to make wise decisions for the future community and economic development initiatives for the FBFA that makes sense and that best reflects the people, culture, traditions, and language in the region.

As the Navajo Nation continues to progress on the development of their lands, the importance of implementing an Economic and Market Feasibility Study based on the current and existing economic climate are important factors for any type of future development. The key to improving the community and economic conditions of the Navajo Nation is to incorporate effective community and economic development planning processes to strategically plan for the future growth and long-term development of the FBFA.

Figure B-1. Former Bennett Freeze Area Project Map



Former Bennett Freeze Area Project Map¹

The Bennett Freeze

The Bennett Freeze, a development ban ordered by the Federal Government in 1966, once covered 1.5 million acres of Navajo lands and covered nine Navajo Chapters including Bodaway-Gap, Cameron, Coalmine Mesa, Coppermine, Kaibeto, Leupp, Tonalea, Tolani Lake, and Tuba City. The purpose of the ban was to resolve land disputes between the Navajo and Hopi Nations and to promote negotiations between both tribes. However, the ban concluded that no development will occur within boundary of the freeze including: home repairs, housing development, commercial development, utility development, infrastructure upgrades and updates. The ban, named after Robert L. Bennett (*Oneida Tribe of Wisconsin*) and Commissioner of Indian Affairs in 1966, was recently lifted in 2009 by the Obama Administration.

Today, this region, known as the Former Bennett Freeze Area, still covers portions of the chapters and areas listed above and shown in the map above. The impact of the freeze is profound as many residents still await the much needed repairs to their homes in addition to infrastructure upgrades that meet the safety standards of today’s environment.

Chapter	Percentage of Chapter in FBFA Area
Cameron	99.5%
Bodaway-Gap	82.1%
Coppermine	31.0%
Tuba City	100.0%
Coalmine Canyon	99.8%
Leupp	4.0%
Kaibeto	10.6%
Tonalea	40.3%
Tolani Lake	25.0%

1. FBFA Integrated Resource Management Plan, Ecosystem Management, Inc.

A. Market Trade Area –

The Market Trade Area was analyzed for the FBFA region, which includes defining the economic study area, establishing a regional base map, a regional economic overview, identifying primary and secondary market trade areas, identifying vehicle traffic patterns, identifying tourist attractions, spending patterns, and industrial type uses. Some key procedures and findings for this section include:

- Few jobs are available within the region, compared to the number of working people living there, and this condition is likely to worsen assuming the NGS plant closes.
- Economic assets in the region, and in the border communities surrounding the region, are one indication of the potential for development there.
- Preliminary primary and secondary trade areas were identified to be the focus for analyzing local consumer demand, and subsequent to that six subareas were identified for additional analysis.
- The abundance of major as well as lesser-known tourist attractions in the region, the pattern of the location of these attractions along with tourism data provide the basis for analyzing tourism development potential in the region.
- Industrial and other employment-type uses in the region were identified based on a combination of previous studies and economic assets and resources in the region.

B. Consumer Analysis –

The Consumer Analysis was assessed for the FBFA region, which includes identifying market demand of local residents and tourism consumers in the area, Navajo dollar leakage to border towns, community meetings with the nine FBFA Chapters, conducting a community needs assessment, conducting a consumer needs assessment, and conducting a FBFA consumer survey.

- Some key procedures and findings for this section include:
- Multiple methods of analyzing the relationship between consumer demand and supply indicated sizable trade leakage and that potential existed for business development throughout the region.
- Even if tourism development strategies focused only on capturing a portion of projected tourism growth in northern Arizona, thousands of square feet of tourist-serving development could take place in the region each year.

C. Competitive Analysis –

The Competitive Analysis was assessed for the FBFA region, which includes a compiled list of existing businesses in the area.

Some key procedures and findings for this section include the fact that existing business development in the region is far below the available potential, but what does exist includes numerous establishments that serve tourists as well as the local population.

D. Site Analysis –

The Site Analysis was assessed for the FBFA region, which includes a compiled FBFA Regional Base Map, primary and secondary development focus areas, site analysis considerations, introduction of the residual land value analysis concept, and chapter site visits.

The Site Analysis addresses “development focus areas” rather than specific development site locations. Three development-focus locations are defined for this study as the designated Primary Growth Area: Bodaway-Gap at the intersection of US Highway 89 and Indian Route 20 (the Gap), and the communities of Cameron and Tuba City. Other portions of the FBFA are designated the Secondary Growth Area. A series of checklist tables summarize the status of community-area conditions.

E. Community Analysis –

The Community Analysis for the FBFA region consists of the following community development summary matrices.

Development options were identified for each of the three community development-focus areas.

F. Financial Analysis –

The Financial Analysis for the FBFA region consists of the following financial analysis models for a set of prototype business types and their associated building components.

Financial feasibility prototype models for application to development sites in the FBFA were prepared for the following uses:

- Small, Budget-Oriented Hotel
- Select-Service Hotel
- Grocery store
- Restaurant
- General (generic) retail

The structure of the models and model inputs reflect typical pro forma business-operation formats for the different uses modeled. The models provide a sense of the amount of investment required, for both business operations and buildings to accommodate the businesses.

G. Project Analysis –

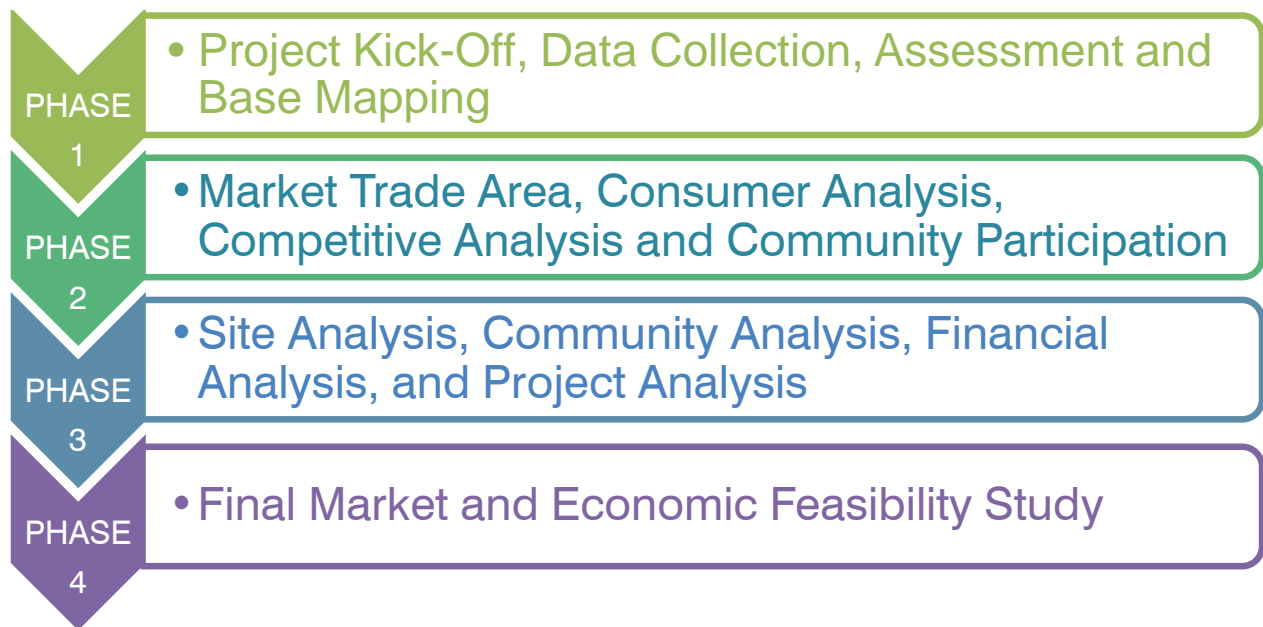
The Project Analysis for the FBFA region consists of the final project summary and recommendations based on the study.

The challenges to achieving successful property development in Indian Country, and the special problems associated with the FBFA, all suggest the need for an overriding strategic framework for development. First, the property development process can be formally established, and second, operational methods for implementing development plans need to be firmly in place for application throughout the region. While development for serving local populations must be very sensitive to local market conditions, the market for tourism projects is the entire region of visitor attractions,

extending all across northern Arizona and into neighboring states as well.

Approach / Methodology

The IDS+A team utilized a combination of an economic development planning process and a real estate feasibility analysis process to complete the Economic and Market Feasibility Study specifically for the FBFA region. Per the scope of work, the study consists of an assessment of the market trade area, consumer analysis, competitive analysis, site analysis, community analysis, financial analysis, and project analysis for the FBFA region. The study also included existing community and economic conditions, studies, reports, data, information, maps, community land use plans, and community feedback. The following tailored economic development planning process was used:



FBFA Chapters Collective Vision:

The nine FBFA Chapters created a collective title, theme, vision, mission and guiding principles for the Former Bennett Freeze Area, which they continuously incorporate in their various regional and community projects. The collaborative approach reflects the Navajo teachings of K'é, incorporating the people, communities, culture and regional characteristics of the Western Agency. The following collective vision helped guide the study:

TITLE

"Former Bennett Freeze Area – Road to Healing, Recovery and Redevelopment"

THEME

*"Coming Together is a Beginning, Keeping Together is Progress,
Working Together is Success."*

VISION

Diné Bikéyah doó bé'iina' náhiilnaah
Revitalization of Navajo Nation and its Communities. (Translation)

MISSION

To rebuild and redevelop our communities by investing in housing, infrastructure, education, and economic development and to heal and re-unite our people through our cultural and traditional way of life.

GUIDING PRINCIPALS

Faith, Availability, Participation, Human Dignity, Respect, Empowerment, Advocacy, Collaboration, Quality Services, Professionalism, Culture, Tradition, "Our way of life", Restoration, K'é, Accountability, Transparency, Inclusion, and Harmony.



C Market Trade Area



C. Market Trade Area

Market Trade Area

The Market Trade Area was analyzed for the FBFA region, which includes defining the economic study area, establishing a regional base map, a regional economic overview, identifying primary and secondary market trade areas, identifying vehicle traffic patterns, identifying tourist attractions, spending patterns, and industrial type uses.

Some key procedures and findings for this section include:

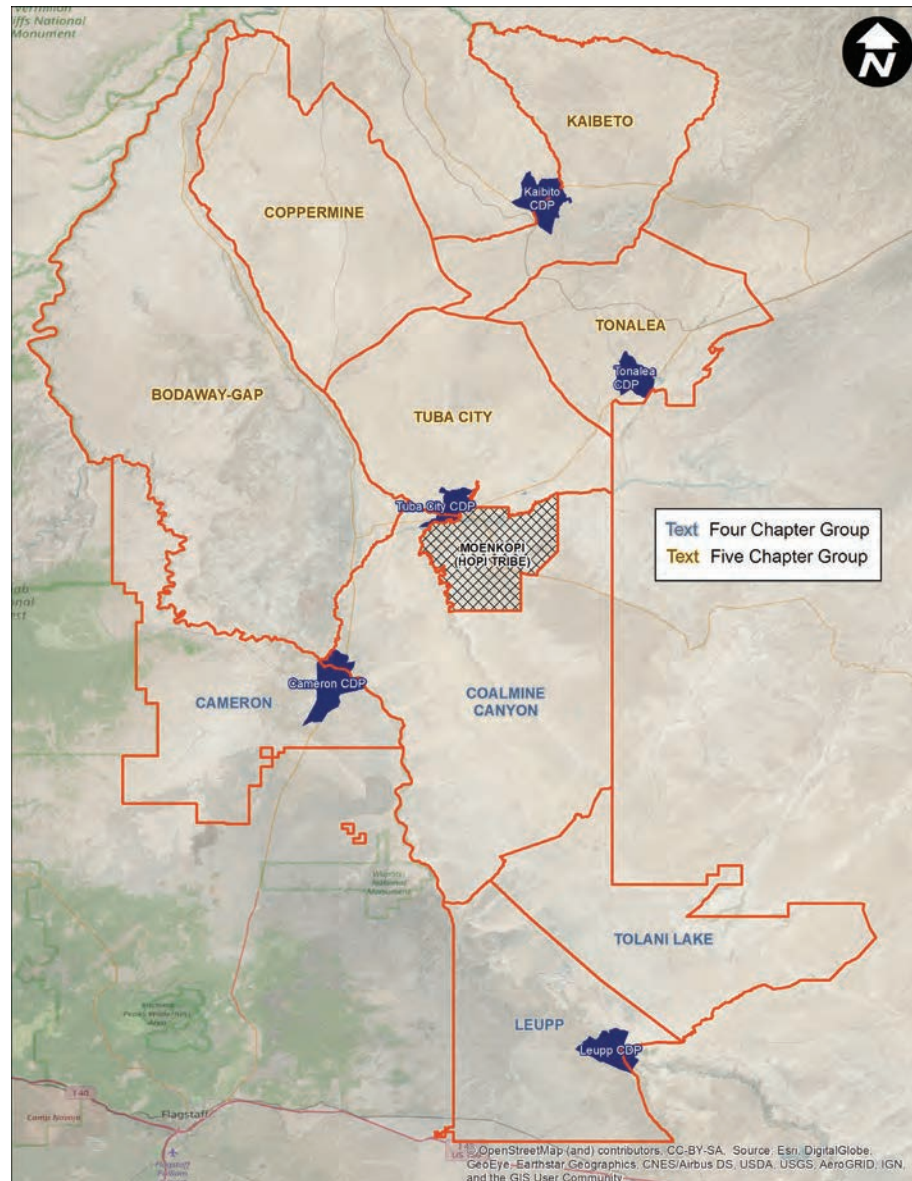
- Few jobs are available within the region, compared to the number of working people living there, and this condition is likely to worsen assuming the NGS plant closes.
- Economic assets in the region, and in the border communities surrounding the region, are one indication of the potential for development there.
- Preliminary primary and secondary trade areas were identified to be the focus for analyzing local consumer demand, and subsequent to that six subareas were identified for additional analysis.
- The abundance of major as well as lesser-known tourist attractions in the region, the pattern of the location of these attractions along with tourism data provide the basis for analyzing tourism development potential in the region.
- Industrial and other employment-type uses in the region were identified based on a combination of previous studies and economic assets and resources in the region.

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Economic Study Area

Figure C-1 shows the nine chapters associated with this FBFA study and also Census Designated Places (CDPs), communities identified by the U.S. Census and for which census data are compiled. On the map, chapters are labeled in two different colors, coinciding with the two groups formed for workshop sessions conducted for the study.

Figure C-1. FBFA Region Showing Census-Defined Chapter Boundaries and Census Designated Places (CDPs)



Source: See Map Notes

C. Market Trade Area

Components of Prospective Economic Development in the FBFA Region: Retail Development, Tourism Development, and Other Employment Opportunities

Relationship between Local-Serving and Tourism Development

Bringing more retail into the community to serve local residents is something residents want to see, because it adds to the quality of life, improves the local economy, and creates additional local job options.

The challenges in doing this include the following:

- No matter how well local retail facilities are developed, some amount of retail leakage will always remain in small communities, for the very important reason that “population thresholds” for certain goods and services are only achieved in larger cities.
- When people travel to a larger city for the things they can only get there, it is a simple matter for them to purchase other things, whether they can obtain them locally or not. This is especially an issue if people have become accustomed to doing this.
- When competition for certain goods and services is limited in a small community, residents are naturally concerned that prices may not be “fair,” even though the cost to bring goods to a small community and operate relatively small businesses may actually be higher than businesses in larger cities, necessitating higher prices.

In contrast, facilities developed to serve tourists in small communities face minimal challenges, even though operational costs may be somewhat higher for small-city tourist businesses compared to their big-city rivals. Tourism facilities in Arizona Indian Country can also use the following circumstances to their advantage:

- Most travelers to northern Arizona are interested in sightseeing and other nature-oriented pursuits, so urban experiences are not important to them, and relatively remote locations have the appeal of being more closely aligned with, and perhaps also physically closer to, the things that they want to see.
- A few facilities in remote locations can also generate an aura of “exclusiveness” that can be attractive to visitors.
- Many travelers are also interested in cultural experiences, and culturally inspired goods, that are unique to Indian Country.

Tourism-oriented developments also offer local job opportunities and provide facilities that improve the quality of life for the local population, even though this is not their primary function. Tourists also constitute a market for certain goods and services that may exist primarily for the local population, and therefore can increase the feasibility of Alan, this is not ready for your review yet expanding local-serving retail.

Creating or recruiting employers in fields besides tourism and retail into the FBFA region can serve multiple purposes:

C. Market Trade Area

- Job opportunities are expanded for the local population, providing both employment options and, potentially, reduced commuting times.
- Manufacturing or warehousing activities can help maximize the efficient use of the region's resources, for example providing storage or processing facilities for local agricultural products.

Additional business types help diversify local economies, and increase the “multiplier effect” of spending within the region. Every new business within a region requires supporting goods and services that can potentially be locally supplied.

Regional Economic Overview

Population change since 2010 in the FBFA chapters is shown on Table C-1 . While the overall area had a population gain during this period, three chapters lost population, most noticeably in Tonalea. (Note that population figures for the 2012-2016 estimates produced by the US Census Bureau are not based on actual counts and can only be presumed to be reasonable approximations of conditions as of 2016.)

Table C-1. Population Trends in FBFA

Data Period/Source			
Chapter	2012-2016 5-Year Estimates	2010 Census	Difference
Bodaway-Gap	1,662	1,704	-42
Cameron	1,256	1,122	134
Coalmine Mesa	565	687	-122
Coppermine	886	590	296
Kaibeto	2,099	1,963	136
Leupp	1,728	1,611	117
Tolani Lake	661	647	14
Tonalea	2,031	2,595	-564
Tuba City	10,027	9,230	797
FBFA Chapters Total	20,915	20,149	766

Source: U.S. Census Bureau ACS 2012-2016 5-Year Estimates, 2010 Census, consulting team.

Median household income data for the FBFA chapters, as of 2010 and 2016, are shown in Table C-2. Note that these figures must be viewed in light of inflation that would have occurred from 2010 to 2016, resulting in the value of the dollar in 2016 being worth only about 91 percent of a dollar in 2010. In other words, households having an income \$25,000 in 2010 would need to have an income of \$27,335 in 2016 (using the actual numbers from the U.S. Bureau of Labor Statistics' inflation calculator) to be staying even with their income in 2010. On this basis (adjusting for inflation), median incomes increased only in Cameron and Coalmine Canyon over the time period shown. Even in nominal dollar amounts, median household incomes decreased in six of the nine chapters.

C. Market Trade Area

Table C-2. Median Household Income Trends in FBFA

Chapter	Data Period	
	2016	2010
Bodaway-Gap	\$21,974	\$23,214
Cameron	\$29,659	\$20,795
Coalmine Mesa	\$23,438	\$16,563
Coppermine	\$36,875	\$43,750
Kaibeto	\$32,404	\$30,652
Leupp	\$37,237	\$38,477
Tolani Lake	\$26,000	\$28,529
Tonalea	\$21,319	\$34,875
Tuba City	\$43,904	\$45,419

Source: U.S. Census Bureau American Community Survey (ACS), ACS 2012-2016 5-Year Estimates, 2006-2010.

Working people living in the FBFA chapters were employed in the economic sectors shown on Table C-3 (the source data includes workers who have jobs that are covered by unemployment insurance, and so generally do not include any self-employed persons). Numbers in the table represent the number of jobs in each sector held by resident workers in 2010 and 2015, and the difference in employment between those two time periods, by sector and by chapter. The numbers indicate that more people living in the FBFA region were employed by “employers” (that is, the increase did not represent self-employed or contract workers, etc.) in 2015 than in 2010, and this is generally true for all sectors and all chapters, with only a few exceptions as shown in the table. The Public Administration sector increased the most during the period, Manufacturing the least, although manufacturing jobs have generally been shrinking across the US. The category “all other sectors” in the table includes the following, none of which have more than 150 people employed in that sector across the FBFA chapter region.

Agriculture, Forestry, Fishing and Hunting	Finance and Insurance
Mining, Quarrying, and Oil and Gas Extraction	Real Estate and Rental and Leasing
Utilities	
	Professional, Scientific, & Technical Services
Wholesale Trade	Management of Companies and Enterprises
	Arts, Entertainment, and Recreation
Transportation and Warehousing	Other Services (excluding Public Admin.)
Information	

Table C-3. Employment by Sector for Two Time Periods

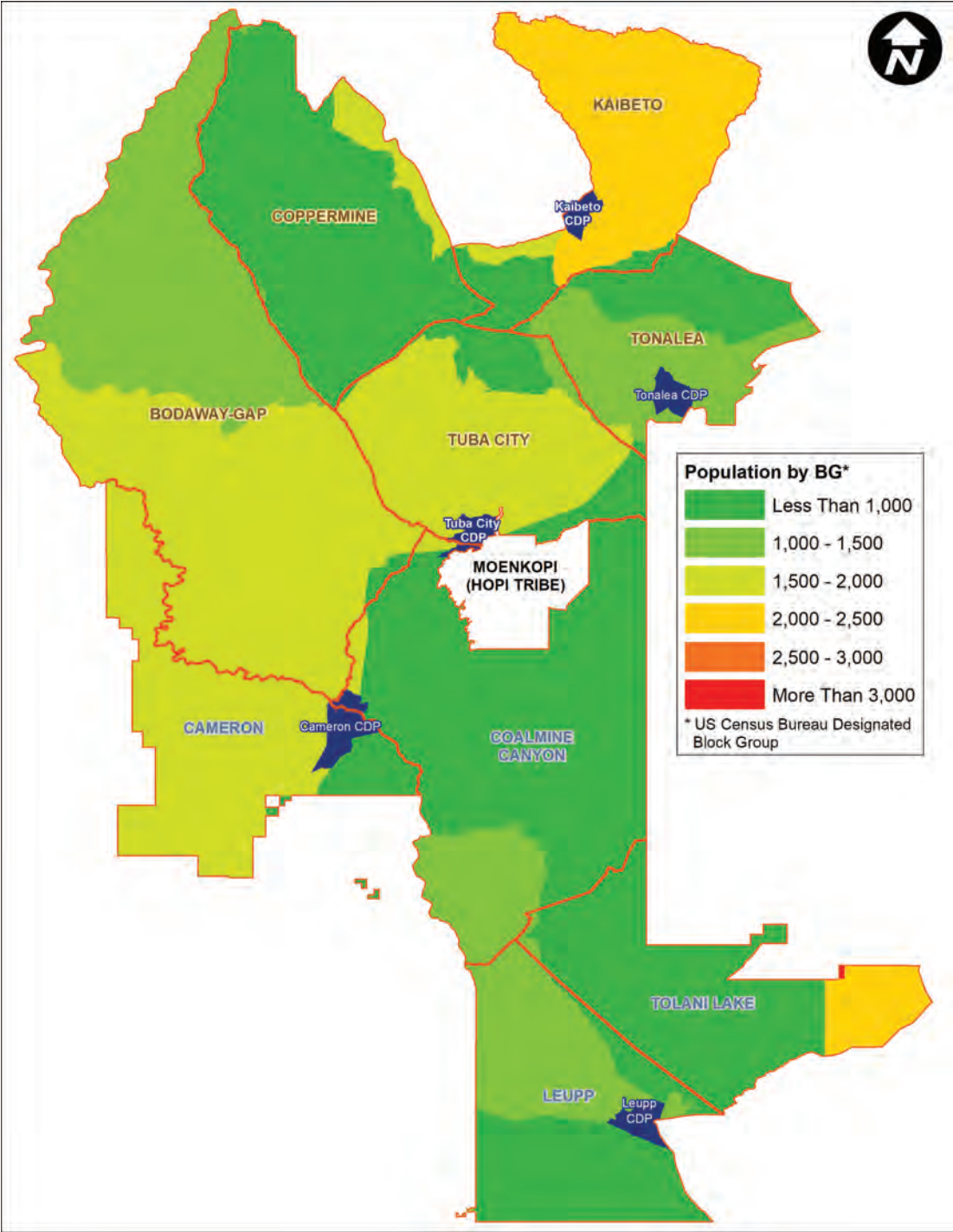
Chapters	Data year	Business/Industry Sectors									All Sectors Total
		Construc- tion	Manufac- turing	Retail Trade	Adminis- tration & Support, etc	Educational Services	Health Care and Social Assistance	Accommo- dation & Food Svs	Public Adminis- tration	All Other Sectors (see text)	
Bodaway/Gap	2015	27	10	40	11	41	27	31	28	39	254
	2010	14	7	22	12	9	12	22	20	47	165
	Difference	13	3	18	-1	32	15	9	8	-8	89
Cameron	2015	22	11	23	10	26	21	22	22	43	200
	2010	8	10	23	7	8	17	13	18	38	142
	Difference	14	1	0	3	18	4	9	4	5	58
Coalmine Mesa	2015	12	3	9	8	14	7	8	20	15	96
	2010	3	1	7	1	3	4	3	6	7	35
	Difference	9	2	2	7	11	3	5	14	8	61
Coppermine	2015	11	9	17	6	19	25	20	19	51	177
	2010	4	3	22	3	15	14	6	21	24	112
	Difference	7	6	-5	3	4	11	14	-2	27	65
Kaibeto	2015	27	9	37	14	35	46	77	41	76	362
	2010	12	9	23	10	32	31	19	54	36	226
	Difference	15	0	14	4	3	15	58	-13	40	136
Leupp	2015	29	12	24	15	19	40	27	33	38	237
	2010	15	7	20	9	8	15	10	16	30	130
	Difference	14	5	4	6	11	25	17	17	8	107
Tolani Lake	2015	11	5	5	4	8	10	14	16	15	88
	2010	5	2	14	5	5	5	6	2	15	59
	Difference	6	3	-9	-1	3	5	8	14	0	29
Tonalea	2015	43	22	82	29	69	63	104	75	168	655
	2010	22	14	48	10	36	50	31	80	58	349
	Difference	21	8	34	19	33	13	73	-5	110	306
Tuba City	2015	125	55	220	81	230	131	208	308	286	1,644
	2010	64	21	120	46	92	131	76	99	156	805
	Difference	61	34	100	35	138	0	132	209	130	839
FBFA Chapters	2015	307	136	457	178	461	370	511	562	731	3,713
Total	2010	147	74	299	103	208	279	186	316	411	2,023
	Difference	160	62	158	75	253	91	325	246	320	1,690

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2010 and 2015).

C. Market Trade Area

The FBFA region is relatively sparsely populated, as shown on Figure C-2 . Figure C-3 , showing where workers reside, provides another view of how people are distributed within the region, and clearly indicates that not all residents are located within the main communities or CDPs.

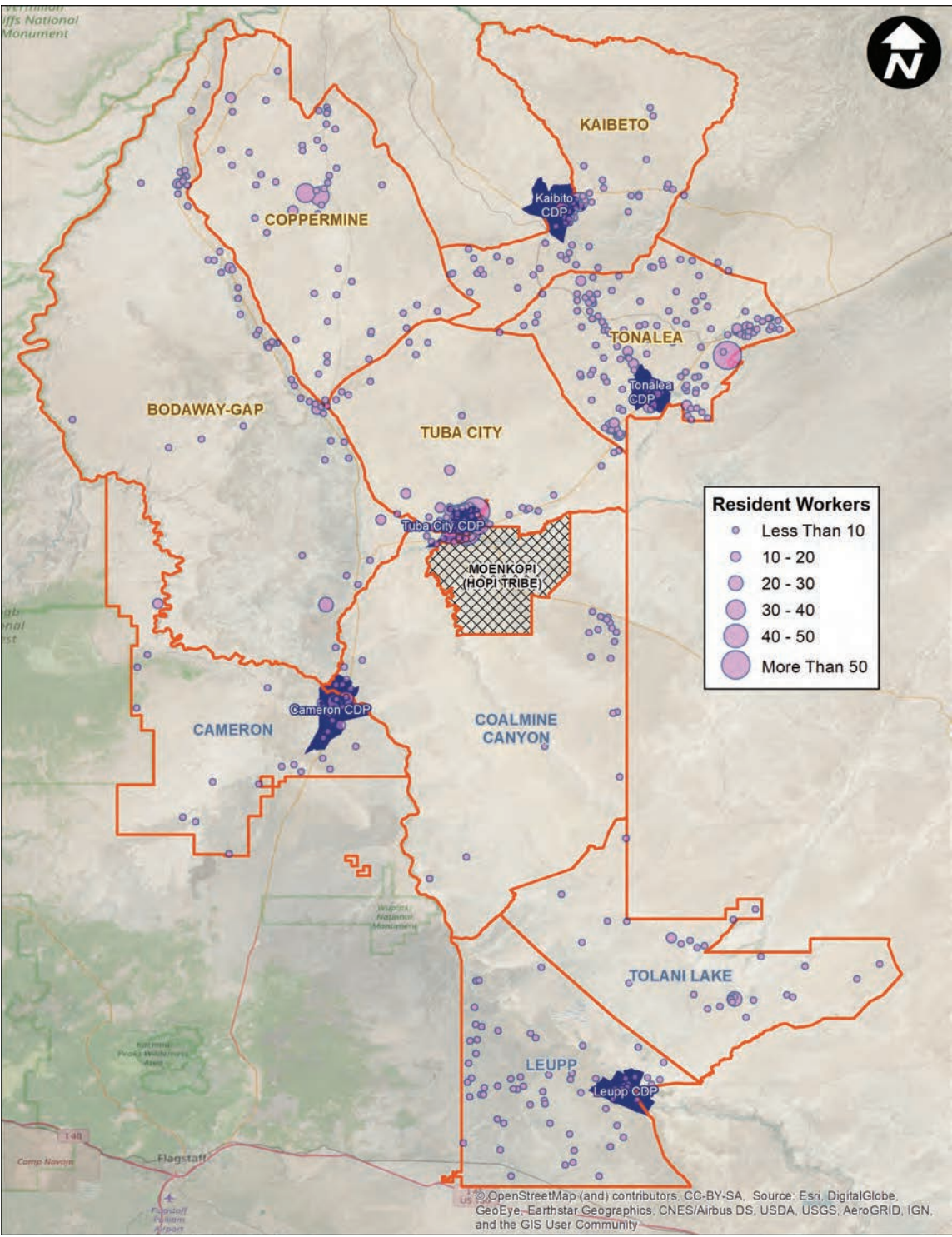
Figure C-2. Current Population Distribution in FBFA Chapters



Source: US Census ACS 2016 5-year estimates; consulting team.

C. Market Trade Area

Figure C-3. Resident Workers in the FBFA Region, 2015

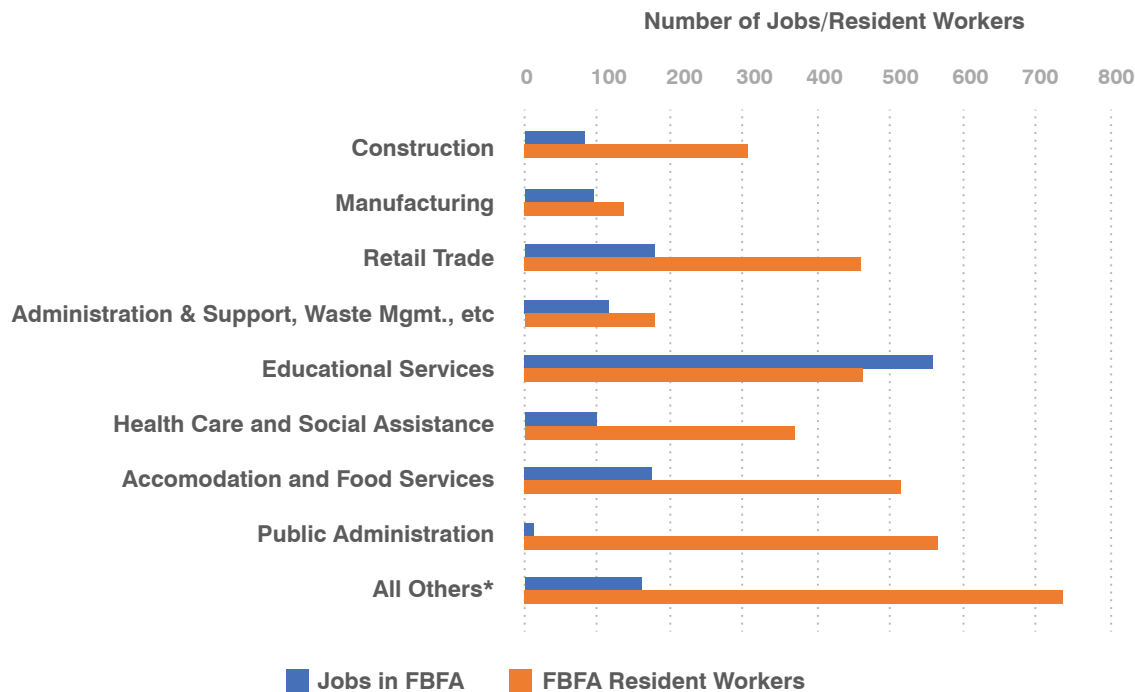


Sources: Census OTM; consulting team.

C. Market Trade Area

Jobs located within the FBFA region are relatively scarce. Figure C-4 charts the difference between the number of jobs located in the FBFA region and the number of jobs held by workers living there, by economic sector. According to the data source for this figure, a total of 1,475 jobs existed in the FBFA region while 3,713 workers resided there. (Note that the source data set only includes workers covered by Unemployment Insurance and not self-employed workers, so jobs and resident workers are both undercounted in this respect.)

Figure C-4. Jobs Located within FBFA Region Compared to Jobs Held by Resident Workforce, 2015



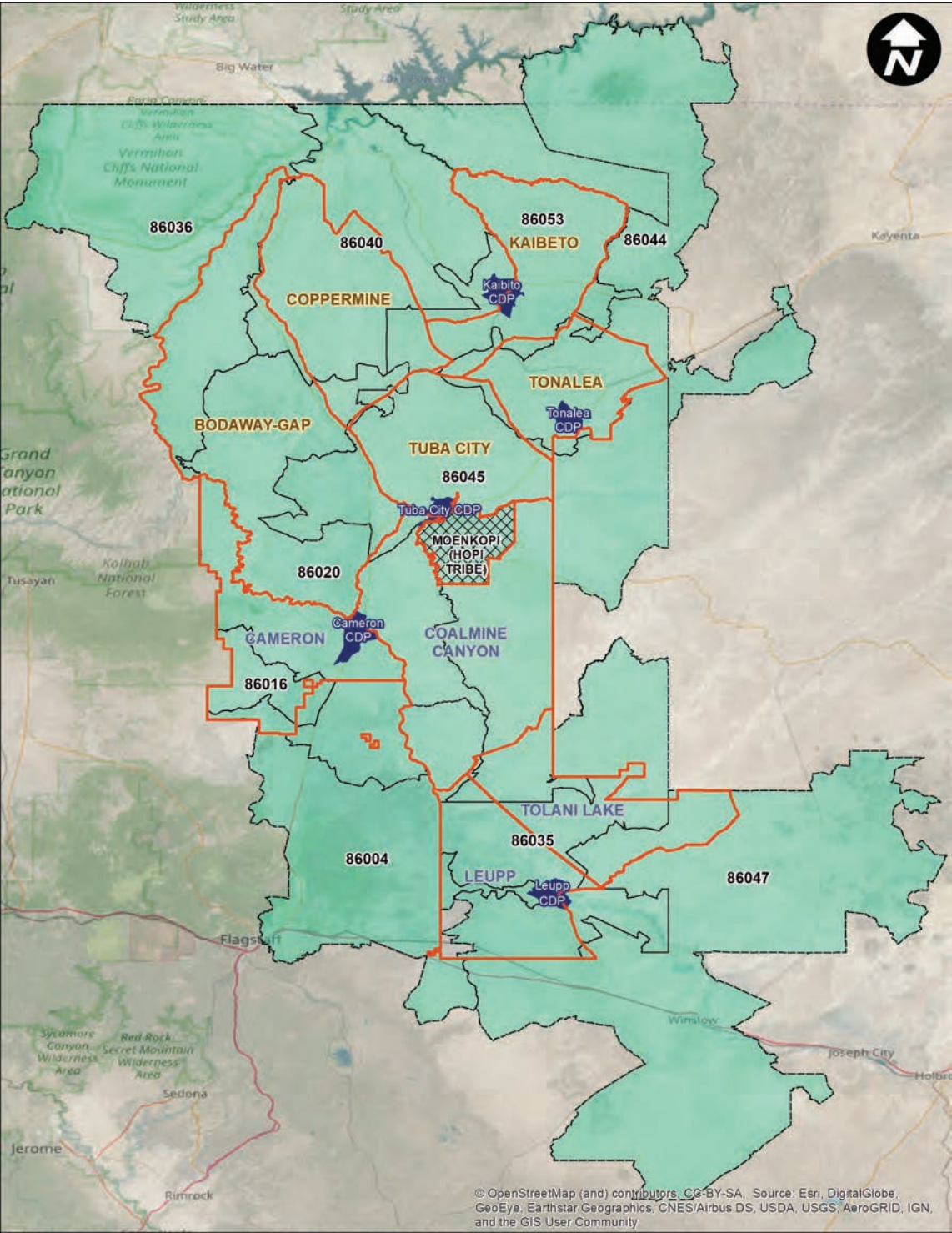
Source: Census OTM (OnTheMap); consulting team.

Another view of the economy within the FBFA region is shown in Table C-4, which is a summary of IMPLAN data by ZIP Codes that most closely correspond to the FBFA chapters (see Figure C-5 map). The IMPLAN data are proprietary to IMPLAN and were obtained by Navajo Nation Economic Development to supplement other economic data for the Nation. The table shows the number of employees, income earned by employees, and output (generally sales, or other measures of production) associated with each of the economic sectors listed, for each of the eight ZIP Codes shown. The last row of the table shows totals by ZIP Code for all of the sectors in that ZIP Code area together. *The relatively large numbers associated with some of the ZIP Codes are in the part due to the fact that these ZIP areas overlap into off-reservation areas (see map).*

Data entries only appear where an economic sector is present in a ZIP Code. The sectors are grouped in the table according to broader categories of functions to which they belong. For example, retail activities are grouped together and highlighted in green, along with the different types of restaurants. Note that IMPLAN sectors are unique to that system and do not match other, governmental, economic sector classifications such as NAICS.

C. Market Trade Area

Figure C-5. ZIP Codes within the FBFA Region



Sources: see map notes.

C. Market Trade Area

Table C-4. IMPLAN data by ZIP Codes within the FBFA Region

IMPLAN Sector/Zip Code Areas	Zip Code - 86016			Zip Code - 86020			Zip Code - 86035			Zip Code - 86040			Zip Code - 86044			Zip Code - 86045			Zip Code - 86047			Zip Code - 86053		
	Empl	Income	Output	Empl	Income	Output	Empl	Income	Output	Empl	Income	Output	Empl	Income	Output	Empl	Income	Output	Empl	Income	Output	Empl	Income	Output
Vegetable and melon farming													15	\$191,712	\$610,494							10	\$129,688	\$412,981
Beef cattle ranching and farming, including feedlots	6	\$26,620	\$231,156	87	\$392,037	\$3,404,294	50	\$227,478	\$1,975,331				164	\$740,513	\$6,430,334	171	\$774,393	\$6,724,532	233	\$968,994	\$22,584,324	111	\$500,936	\$4,349,932
Animal production, except cattle and poultry and eggs				18	\$279,733	\$649,728	10	\$162,314	\$377,003				34	\$528,385	\$1,227,264							23	\$357,437	\$830,208
Extraction of natural gas and crude petroleum																						5	\$4,702	\$317,092
Stone mining and quarrying	20	\$1,117,978	\$6,405,479																					
Construction of new single-family residential structures							6	\$269,747	\$770,315				13	\$599,020	\$1,710,617							8	\$362,012	\$1,033,796
Construction of other new residential structures													9	\$703,566	\$2,891,490							5	\$425,194	\$1,747,446
Retail - Food and beverage stores																						11	\$320,567	\$739,480
Retail - Gasoline stores	25	\$718,631	\$1,642,830	25	\$718,631	\$1,642,830							26	\$749,876	\$1,714,258									
Retail - Clothing and clothing accessories stores				16	\$397,256	\$1,309,429																		
Retail - General merchandise stores										175	\$4,540,046	\$12,375,607							265	\$7,355,587	\$19,323,902			
Retail - Misc. store retailers				198	\$5,262,571	\$8,932,680	83	\$2,215,037	\$3,759,800															
Rail transportation																			407	\$51,478,775	\$191,286,560			
Accounting, tax preparation, bookkeeping, and payroll svc.	38	\$1,239,295	\$2,383,089																					
Scientific research and development services	4	\$298,295	\$896,332																					
Elementary and secondary schools							61	\$1,707,940	\$2,685,929							144	\$4,000,478	\$6,291,203						
Outpatient care centers																			465	\$29,489,226	\$78,041,389			
Home health care services										175	\$5,856,860	\$7,114,311	34	\$1,125,692	\$1,367,375									
Hospitals																1,034	\$87,194,001	\$169,965,622	158	\$11,765,502	\$24,187,534			
Other amusement and recreation industries										277	\$8,336,206	\$21,388,008												
Full-service restaurants										293	\$8,043,956	\$15,730,497				114	\$3,120,732	\$6,102,801	272	\$5,538,433	\$12,684,178			
Limited-service restaurants										221	\$4,905,010	\$18,825,891				260	\$5,782,995	\$22,195,681	268	\$5,030,251	\$21,749,844			
All other food and drinking places										264	\$8,439,443	\$12,048,248												
Personal and household goods repair and maintenance										206	\$10,488,462	\$19,285,582												
Private households													8	\$142,257	\$142,257							5	\$85,972	\$85,972
Employment and payroll of state govt, non-education	6	\$359,409	\$413,965	17	\$1,007,181	\$1,160,065	18	\$1,080,316	\$1,244,303	249	\$14,570,690	\$16,782,440				137	\$8,003,118	\$9,217,948						
Employment and payroll of state govt, education	2	\$99,180	\$113,771	63	\$2,695,009	\$3,091,483	49	\$2,108,499	\$2,418,689	305	\$13,044,042	\$14,963,004	110	\$4,682,288	\$5,371,119	361	\$15,399,879	\$17,665,419				66	\$2,829,699	\$3,245,987
Employment and payroll of local govt, non-education	4	\$274,967	\$317,244	11	\$770,547	\$889,021	12	\$826,500	\$953,576							89	\$6,122,814	\$7,064,209	411	\$20,216,724	\$23,325,089			
Employment and payroll of local govt, education	3	\$177,726	\$205,016	75	\$4,829,309	\$5,570,868	58	\$3,778,314	\$4,358,489	361	\$23,374,205	\$26,963,406	129	\$8,390,403	\$9,678,782	426	\$27,595,736	\$31,833,170	457	\$25,180,025	\$29,046,516	78	\$5,070,664	\$5,849,285
Employment and payroll of federal govt, non-military	4	\$406,352	\$526,310	12	\$1,138,730	\$1,474,892	13	\$1,221,418	\$1,581,990							94	\$9,048,414	\$11,719,578	228	\$20,918,823	\$27,094,223			
ZIP Totals	112	\$4,718,453	\$13,135,192	522	\$17,491,004	\$28,125,290	360	\$13,597,563	\$20,125,425	2,526	\$101,598,920	\$165,476,994	542	\$17,853,712	\$31,143,990	2,830	\$167,042,560	\$288,780,163	3,164	\$177,942,340	\$449,323,559	322	\$10,086,871	\$18,612,179

Source: IMPLAN data received from Navajo Nation Economic Development.

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Potential employment effects in and near the FBFA from the closures of Navajo Generating Station (NGS) and the Kayenta Mine

The potential closure of the NGS and Kayenta Mine is an issue to be recognized in reviewing economic development options for the FBFA region. One set of indicators for the potential effects of these closures is shown in Table C-5 and the commentary below the table.

Table C-5. Number of workers living in and near the FBFA potentially affected by closure of NGS and the Kayenta Mine

Community/Chapter	Number of NGS employees in residence as of 2014	Number of Kayenta Mine employees in residence as of 2014
Page	294	12
Kaibeto	30	10
Tuba City	21	25
% of total facility workers in these 3 places	69%	11%

- With the closure of these two facilities, an estimated additional 560 tribal jobs would be lost across Navajo Nation.
- As noted elsewhere in this report, SRP is actively working with the Navajo Nation to explore alternative economic development options in order to mitigate effects of the closure. SRP also has a stated policy of retaining all NGS-impacted employees who wish to remain with the company.¹ This is likely to require some people to relocate, which could be a challenge for some of the Navajo Nation resident-workers.
- Because many Navajo and Hopi wage earners support extended, multigenerational families, the two closures would likely affect a substantially larger population than a similar off-reservation event in other parts of the US.
- With closures, local businesses in Page would suffer the loss of revenues tied to the annual maintenance overhauls at NGS. Because those overhauls are scheduled to coincide with the off-season for Page tourism, convenience retail, lodging, and eating and drinking establishments would be especially affected.²

One conclusion from the above is that the community of Page could be affected by both direct job losses and indirect losses due to a drop in visitation. This could mean that existing Page visitor-oriented businesses would have to reconfigure to become more competitive, which could affect opportunities for tourism development within the northern portion of the FBFA region, at least on a short-term basis.

¹ Phone discussion with Gretchen Kitchel, Salt River Project.

² Unless noted otherwise, table figures and statements, in some cases verbatim, are from *Navajo Generating Station-Kayenta Mine Complex Project, Draft Environmental Impact Statement*. September 2016.

C. Market Trade Area

Economic assets in the FBFA region

Table C-6 shows a number of “economic assets” in the region, by chapter. Some of these are also shown on the base maps prepared for this project. These economic assets can help leverage new development, either by enabling (as with certain types of infrastructure) or by helping to establish a presence that could encourage similar activity to cluster within the same general area. (For example, an existing hotel in a community would be a competing business for any new hotel planned for that community, but it could also be seen as a demonstration that a hotel could be viable in that location, especially if the existing hotel appears to be successful.)

Table C-6. Summary of Asset Types by FBFA Chapter

	Chapters								
Assets	Bodaway	Cameron	Coalmine	Coppermine	Kaibeto	Leupp	Tolani Lake	Tonalea	Tuba City
Tourism-related									
River Boat Tours (1)	I								
Helicopter Tours (1)	I								
Twin Arrows Casino						X			
Moenkopi (Hopi Tribe) Legacy Inn									I
Quality Inn Navajo Nation									X
Dine' Inn Motel									X
Grand Canyon Hotel at Cameron Trading Post		X							
Non-governmental employers									
TDI Manufacturing Plant (Tooh Dineh Industries)						X			
Infrastructure									
El Paso Natural Gas Plant									
BNSF Railroad						X			
Black Mesa and Lake Powell RR					X			X	
Electrical Substations		X							
Elect. Transmission Lines	X	X	X	X	X	X	X		X
Natural Gas Inter-Intrastate Pipelines		X	X	X		X		X	X

Table Legend: X = asset is in chapter; I = asset has indirect relationship to chapter

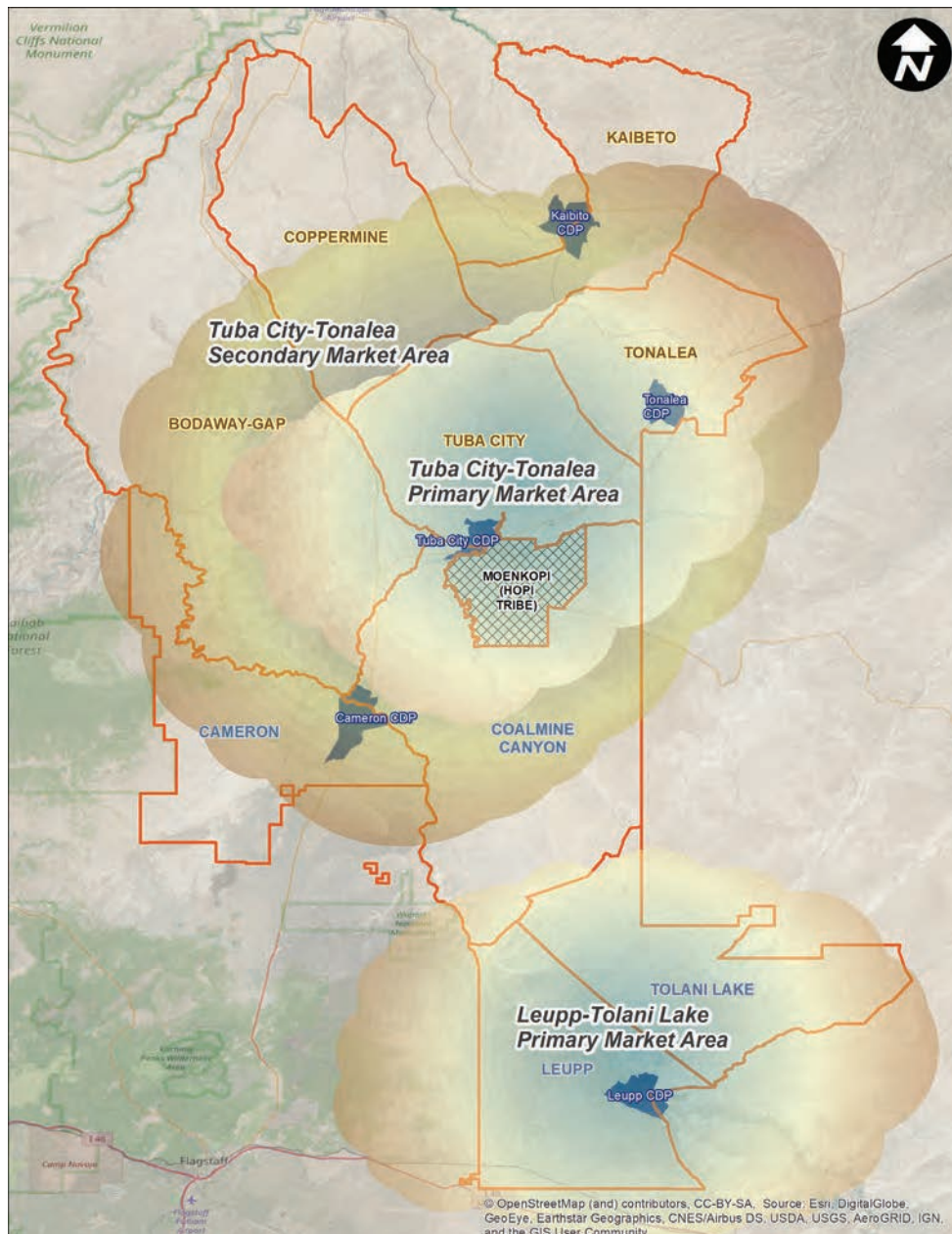
Notes: 1. See lists in text.

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Preliminary Market Trade Areas

Two “regional-level” demand/leakage analyses were applied to the FBFA region, one centered around Tuba City, and the other centered around Leupp. For each of the two focus communities, the other chapters were brought into the analysis through being included in one or the other secondary trade areas (Tolani Lake was included with Leupp). Figure C-6 provides a visual orientation of these two sets of primary and secondary trade areas.

Figure C-6. Local-serving retail/service trade area contexts



Source: consulting team.

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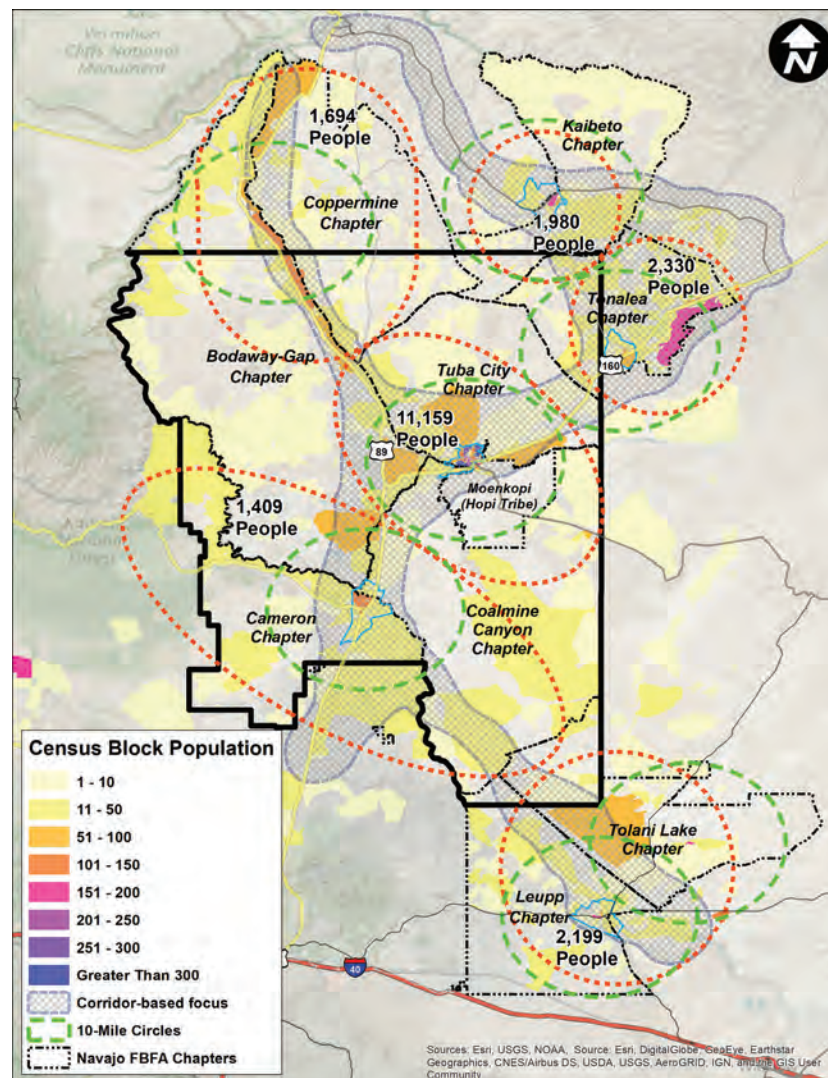
The results of the analyses involving these trade areas are summarized in Section D, the Consumer Analysis.

Subsequent to the analysis described above, subareas of the FBFA were analyzed for potential localized development, based on a combination of factors including:

- Populations identified through the use of Census block data.
- Indications of “development corridors” that follow the lines of existing and key proposed future roads, and settlement patterns.
- Various visitor attractions and potential tourism-development opportunity areas.

These subareas are shown on Figure C-7.

Figure C-7. Census Block Population by FBFA Subareas



Additional analyses were conducted for each of these subareas, incorporating information from the regional level trade area analyses described in a preceding material. The results of the analysis are shown in Section D, the Consumer Analysis.

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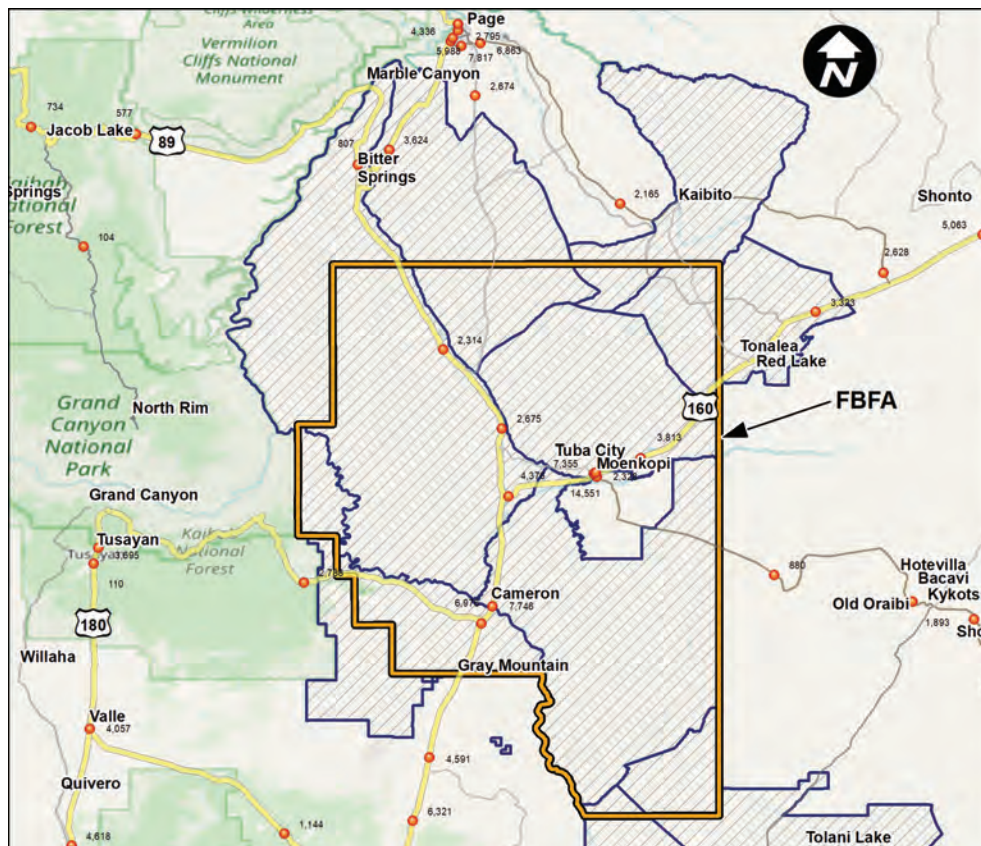
Vehicle Traffic Patterns

Figure C-8 shows Annual Average Daily Traffic (AADT) counts in and around the FBFA region. Outside of the communities, U.S. Highway 89 is the most heavily traveled roadway in the FBFA region, followed by 160 and State Highway 64 connecting to the Grand Canyon.

Grand Falls Highway

A new Scenic Byway, known as the Grand Falls Highway, is currently being proposed as a New Gateway to the Navajo Nation's Western Agency, which is located within the FBFA boundary and could highly impact the future economic conditions of the region. The new highway is proposed to begin at Twin Arrows off of the Interstate 40 and run north through Leupp and the Grand Falls area, on either Route 70 or Route 6910. The new highway will then continue to run north on Route 6730 parallel to the Little Colorado River and connecting at Cameron, AZ. The new Grand Falls Highway is envisioned to attract tourists to experience the Navajo Nation's Western Agency by connecting visitors through scenic locations, such as the Painted Desert, Grand Falls, Wupatki National Monument, Dook'o'oosłíid (San Francisco Peaks), Little Colorado River and the Grand Canyon.

Figure C-8. Traffic Counts in the FBFA and Surrounding Region



Source: Arizona Department of Transportation; consulting team

Tourist Attractions & Spending Patterns - Tourist Demand

Officially designated scenic roads in and around the region are shown on Figure C-10, including designated segments of historic Route 66.

Regional Attraction Visitations

Less Than 100,000	100,000 - 500,000	500,000 - 1,000,000	1,000,000 - 5,000,000	More Than 5,000,000
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Population by BG*

Less Than 500	500 - 1,000	1,000 - 1,500	1,500 - 2,000	2,000 - 2,500	2,500 - 3,000	3,000 - 3,500	3,500 - 4,000	4,000 - 4,500	4,500 - 5,000	More Than 5,000
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Legend

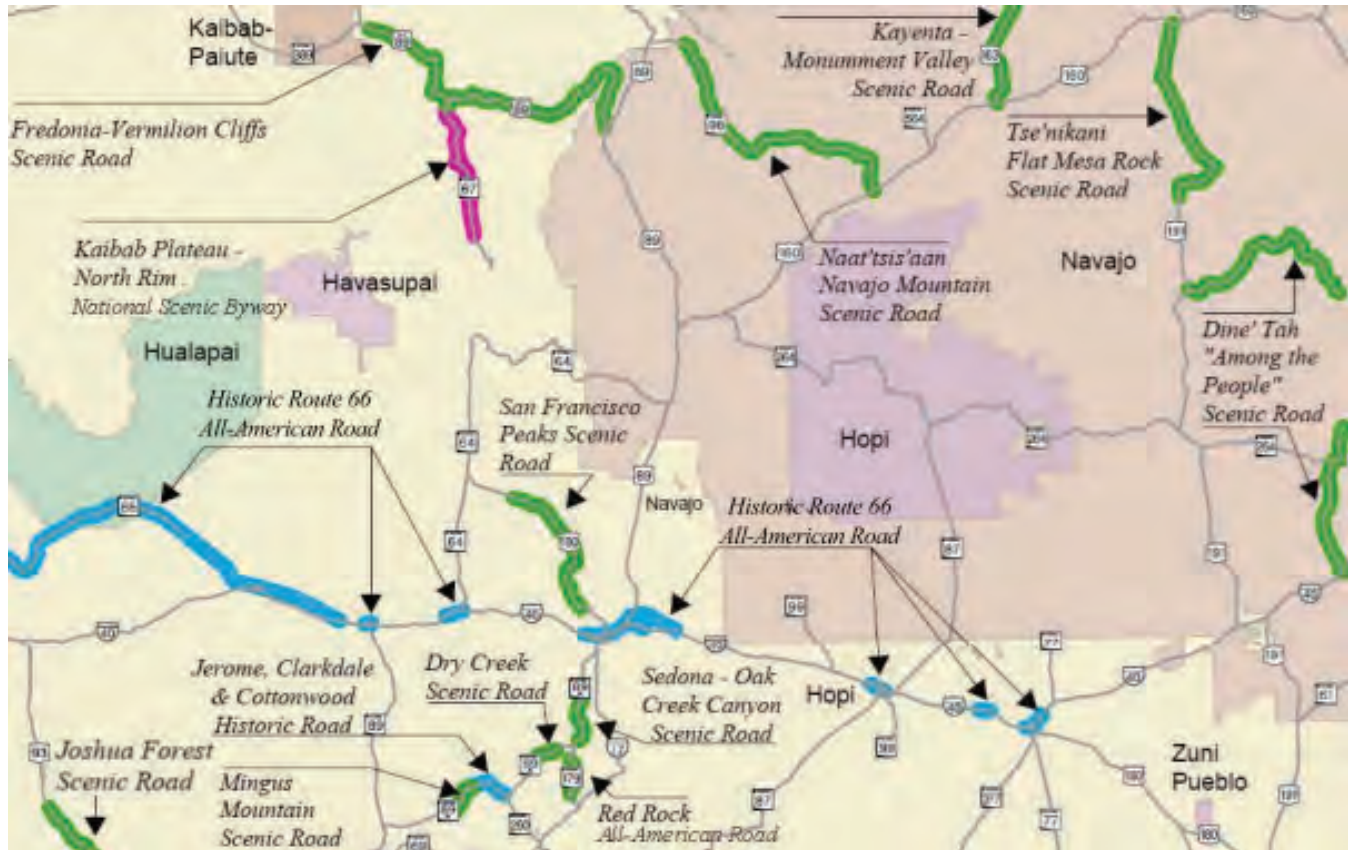
- Jobs
- FBFA IRMP Boundary
- FBFA Chapters

* US Census Bureau Designated Block Group

INDIGENOUS DESIGN STUDIO + ARCHITECTURE
FORMER BENNETT FREEZE AREA ECONOMIC & MARKET FEASIBILITY STUDY

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Figure C-10. Designated scenic roads and historic Route 66 segments



Source: Arizona Department of Transportation; consulting team.

Industrial-type uses and employment options in the FBFA (other than local-serving and tourism businesses)

Generating additional industrial or other employment activity within the FBFA will involve a combination of a) establishing available sites for such activity, and b) primarily, establishing sufficient strategic policies and supported initiatives to pave the way for this kind of employment activity (that is, employment in businesses other than those focused on local-serving retail and tourism, discussed elsewhere in this document). In this section, employment opportunities are addressed within the framework described below and detailed in the series of tables that follow.

- Types of industrial or other activity that would appear to be a natural fit for the FBFA region, many of which have been previously identified (in other studies) as potential opportunities, include the following:
 - Expansion/replication of electronics-related or other contract manufacturing facility (TDI) in Leupp.
 - Other technology-related industries, taking advantage of broadband infrastructure*
 - Clean energy development*
 - Health care on the Navajo Nation*
 - Support for biotech firms such as Axolotl Biologix
 - Tourism-supporting manufacturing, logistics, field services

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- Agriculture-related: food processing, exporting, logistics, enhanced garden farming,* and livestock management,*

* (The source of asterisk-marked material above is *Navajo Nation Economic Development Strategies for Areas Affected by Coal Mine Closure*, Prepared for the Navajo Nation Division of Economic Development by ETD, Inc. in collaboration with Economic Collaborative of Northern Arizona.)

- Characteristics of the FBFA region that can help leverage efforts to generate industrial activity, including conditions that are unique to the region.
- Strategic frameworks supportive of different types of activity, focusing primarily on strategic direction previously put forth for the FBFA.*
- Workforce education/training programs already available in the region that would be supportive of various employment activities. (In the Workforce lines of the tables below, selected educational programs are listed with their associated institutions of higher learning shown in the far-right column. CCC = Coconino Community College, Nav Tech = Navajo Technical University. Both Diné College and NAU have branch campuses in Tuba City.)
- Entrepreneurial opportunities related to these activities.

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Industrial or other employment activity	Expansion/replication of electronics-related or other contract manufacturing facility (TDI) in Leupp.
The opportunity	The existing TDI facility can be one source of information for how best to attempt to expand "contract manufacturing" (firms that can supply a variety of products that are generally components to manufactured goods produced by others) opportunities within the FBFA.
Characteristics of the FBFA region that can help leverage efforts to generate this, including unique conditions	The two overriding economic-distress conditions that apply to the FBFA: 1) The FBFA designation itself and years of postponed investment, and 2) Impending closure of the NGS and associated mines, together provide ample advantages for securing economic development grants/loans, which could be used to develop infrastructure for supporting industrial activity, for example development of small industrial parks or sites. (See the following section, "Leveraging assets and conditions to promote industrial-use siting in FBFA.")
Strategic framework supportive of this activity	(See technology-related industries table, below.)
Supportive workforce education/training programs already available in the region	(See technology-related industries table, below.)
Entrepreneurial opportunities related to these activities	Opportunities will be limited within this category of activity, although it is not unusual for machine shop-type activity, for example, to be undertaken by an individual entrepreneur.
Other relevant resources	

Industrial or other employment activity	Other technology-related industries, taking advantage of broadband infrastructure*		
The opportunity	Broadband connectivity is ultimately key for creating internet-based jobs, and such jobs can involve both technical and business activities.		
Characteristics of the FBFA region that can help leverage efforts to generate this, including unique conditions	Broadband has been expanding within the FBFA, with plans for continued broadband development.		
Strategic framework supportive of this activity*	<div>Goal 3: Expand Utility Infrastructure</div> <div>Goal 4: Enhance Information Technology</div>	<div>Expand fiber optic lines to provide broadband connections</div> <div>Create technology Jobs: in call centers and data centers; recognize role of IT in promoting e-commerce for Navajo micro- and other entrepreneurs</div>	
	Encouraging IT training, which involves hardware, software, and supporting infrastructure to manage and deliver information, can provide good employment opportunities for FBFA residents.		
Supportive workforce education/training programs already available in the region.	Computer Software Technology, Computer Technician	CCC	
	Network Engineering	CCC	
	Computer Applications	CCC	
	Digital Arts	Diné Col	
	Computer Technology & Information Systems	Diné Col	
	Applied Science - Logistics and Supply Chain Management	NAU	
	Science Communication	NAU	
	Interdisciplinary Studies - Technology Management 90-30	NAU	
	Computer Information Technology	NAU	
	Applied Science - Administration	NAU	
	Applied Science - Industrial Technology Management	NAU	
	Applied Science - Technology Management	NAU	
	Applied Computer Science	NAU	
	Computer Engineering	NAU	
	Computer Information Technology	NAU	
	Electrical Engineering	NAU	
	Mechanical Engineering	NAU	
	Information Systems	NAU	
	Computer Science	NAU	
	Data Science	NAU	
	Geographic Information Systems	NAU	
	Engineering - Computer Science and Engineering	NAU	
	Engineering - Electrical Engineering	NAU	
	Engineering - Mechanical Engineering	NAU	
	Geographical Information Technology	Nav Tech	
	Information Technology, Applied Computer Technology	Nav Tech	
	Entrepreneurial opportunities related to these activities	Entrepreneurial opportunities exist within this category in at least two broad areas: 1) for IT-trained people to provide technical support in a wide range of activities, across practically every type of business, and 2) as artists/artisans taking advantage of e-commerce to greatly expand their market penetration.	
Other relevant resources	An example of tribal e-commerce is http://BeyondBuckskin.com . This website is dedicated to advancing creative small businesses located throughout rural and urban communities by providing an online store where customers can connect with Native American artists.*		

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Industrial or other employment activity	Clean energy development*						
The opportunity	The Navajo Nation would appear to be an ideal environment in which to develop new forms of energy due to its vast open spaces and sparsely populated landscape. Although clean energy does not produce as many permanent jobs as fossil fuel energy production, the prospect still exists for the Navajo Nation to produce renewable energy for internal use and external sale.						
Characteristics of the FBFA region that can help leverage efforts to generate this, including unique conditions	If the objective is to promote renewable energy across the study area, access to the grid is important for renewable energy delivery. New energy projects can utilize 500 KV space on the transmission grid that will no longer be utilized by NGS.						
Strategic framework supportive of this activity*	The nation could decide to become an energy-independent entity. This could involve both large-scale and small-scale renewable energy installations, and it will be important in either case to provide a clear process for how renewable energy projects are approved and developed. (From Goal 3 in the ETD source document cited below.)						
Supportive workforce education/training programs already available in the region	<table> <tr> <td>Environmental Technology: Alternative Energy</td><td>CCC</td></tr> <tr> <td>Alternative Energy</td><td>CCC</td></tr> <tr> <td>Energy Systems</td><td>Nav Tech</td></tr> </table>	Environmental Technology: Alternative Energy	CCC	Alternative Energy	CCC	Energy Systems	Nav Tech
Environmental Technology: Alternative Energy	CCC						
Alternative Energy	CCC						
Energy Systems	Nav Tech						
Entrepreneurial opportunities related to these activities	Small-scale renewable energy projects can involve installation contractors knowledgeable in this field, plus a range of consulting expertise is generally required for both large-scale and small-scale projects.						
Other relevant resources	The pioneering nature of this industry means that there are numerous resources available.						

Industrial or other employment activity	Health Care on the Navajo Nation*																												
The opportunity	This sector will continue to expand as the Nation takes over more of its health care responsibilities. Education in the areas of nursing and medical technology will be critical to success.*																												
Characteristics of the FBFA region that can help leverage efforts to generate this, including unique conditions	On the Navajo Nation, the health care industry has had high employment growth compared to other industries.*																												
Strategic framework supportive of this activity	This activity is generally supported by strategies related to internalization of services to its populace by Navajo Nation.																												
Supportive workforce education/training programs already available in the region	<table> <tr> <td>Health Sciences - Allied Health</td><td>NAU</td></tr> <tr> <td>Health Sciences - Diagnostic Medical Imaging and Therapy</td><td>NAU</td></tr> <tr> <td>Health Sciences - Fitness Wellness</td><td>NAU</td></tr> <tr> <td>Health Sciences - Medical Assisting</td><td>NAU</td></tr> <tr> <td>Health Sciences - Nutrition and Foods</td><td>NAU</td></tr> <tr> <td>Health Sciences - Paramedic Care</td><td>NAU</td></tr> <tr> <td>Health Sciences - Physical Therapist Assisting</td><td>NAU</td></tr> <tr> <td>Health Sciences - Public Health</td><td>NAU</td></tr> <tr> <td>Health Sciences - Respiratory Care</td><td>NAU</td></tr> <tr> <td>Health Sciences - Surgical Technology</td><td>NAU</td></tr> <tr> <td>Psychological Sciences</td><td>NAU</td></tr> <tr> <td>Dental Hygiene</td><td>NAU</td></tr> <tr> <td>Nursing</td><td>NAU</td></tr> <tr> <td>Post-Master's Family Nurse Practitioner</td><td>NAU</td></tr> </table>	Health Sciences - Allied Health	NAU	Health Sciences - Diagnostic Medical Imaging and Therapy	NAU	Health Sciences - Fitness Wellness	NAU	Health Sciences - Medical Assisting	NAU	Health Sciences - Nutrition and Foods	NAU	Health Sciences - Paramedic Care	NAU	Health Sciences - Physical Therapist Assisting	NAU	Health Sciences - Public Health	NAU	Health Sciences - Respiratory Care	NAU	Health Sciences - Surgical Technology	NAU	Psychological Sciences	NAU	Dental Hygiene	NAU	Nursing	NAU	Post-Master's Family Nurse Practitioner	NAU
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Health Sciences - Surgical Technology	NAU																												
Psychological Sciences	NAU																												
Dental Hygiene	NAU																												
Nursing	NAU																												
Post-Master's Family Nurse Practitioner	NAU																												
Entrepreneurial opportunities related to these activities	Entrepreneurs could be involved in developing and operating care homes for the elderly as well as other categories of variously impaired clientele.																												
Other relevant resources																													

Industrial or other employment activity	Support for biotech firms, such as Phoenix-based Axolotl Biologix										
The opportunity	Biotech is a targeted and growing industry throughout Arizona, and is particularly attractive because of the relative high numbers of high-wage earners. Firms engaged in these kinds of activities can require outsource-able support activities, such as routine testing or processing, that can be located remotely, in part because transportation needs are generally minimal.										
Characteristics of the FBFA region that can help leverage efforts to generate this, including unique conditions	This activity would be supported by growth in healthcare activities, given the common occupational requirements.										
Strategic framework supportive of this activity	Promotion of healthcare activity would support this, and also strategies to diversify the economy into new fields.										
Supportive workforce education/training programs already available in the region	<table> <tr> <td>Biology</td><td>NAU</td></tr> <tr> <td>Biomedical Science</td><td>NAU</td></tr> <tr> <td>Health Sciences - Allied Health</td><td>NAU</td></tr> <tr> <td>Health Sciences - Surgical Technology</td><td>NAU</td></tr> <tr> <td>Microbiology</td><td>NAU</td></tr> </table>	Biology	NAU	Biomedical Science	NAU	Health Sciences - Allied Health	NAU	Health Sciences - Surgical Technology	NAU	Microbiology	NAU
Biology	NAU										
Biomedical Science	NAU										
Health Sciences - Allied Health	NAU										
Health Sciences - Surgical Technology	NAU										
Microbiology	NAU										

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Entrepreneurial opportunities related to these activities	These business activities do not necessarily require major capital investments, and could therefore be relatively affordable to entrepreneurs.
Other relevant resources	As an example of this kind of activity, <i>Axolotl Biologix</i> , Headquartered in Phoenix, is focused on human biologicals and biological-related products that will foster regeneration and healing for a wide range of conditions. Axolotl is currently negotiating partnerships with leading universities and research hospitals to find ways to improve current technologies and procedures to improve patients' quality of life. The company has established working relationships with some Arizona Native American communities. (Source is company website and discussions with company representatives.)

Industrial or other employment activity	Tourism-supporting manufacturing, logistics, field services	
The opportunity	High levels of tourism activity in and around the FBFA is described elsewhere in this document, along with the potential for expanding hospitality businesses in FBFA communities. With both the existing and expected expanding visitor visits, other tourism-related activities can be developed, including transport of tourists as guides (including river guides) or tour operators, providers of goods and services to hotels and restaurants, and the like.	
Characteristics of the FBFA region that can help leverage efforts to generate this, including unique conditions	Visitor attractions both within and near the FBFA include some sites that are unique and "world class." The Grand Circle tourism-promotion concept includes the FBFA.	
Strategic framework supportive of this activity*	Goal 1: Enhance Tourism	<ul style="list-style-type: none"> Integrate visitors into the Grand Circle travel patterns Develop a prepared workforce for the tourism industry Form cooperatives that support the region's tourism industry Expand cultural entertainment and artisan opportunities Expand arts and craft markets Expand hospitality training Create online application process for tour guide permits
Supportive workforce education/training programs already available in the region	<ul style="list-style-type: none"> Hotel and Restaurant Management and Services Hospitality Accounting Hospitality Event Management Hospitality Marketing and Sales Interior Design for Hotel and Restaurant Management Majors International Tourism Management Culinary Arts and Professional Baking 	<ul style="list-style-type: none"> CCC NAU NAU NAU NAU NAU Nav Tech
Entrepreneurial opportunities related to these activities	There are many types of opportunities for entrepreneurs in this category, including tour guides, service providers to the hospitality industry, and even production of hotel fixtures such as unique custom furnishings and decorative items. Opportunities for artisans to sell directly to tourists also apply to this category (and artisan sales are also discussed above in relation to e-commerce).	
Other relevant resources		

Industrial or other employment activity	Agriculture-related: food processing, exporting, logistics, enhanced garden farming,* and livestock management*	
The opportunity	<p>Food processing. Food processing can involve crops grown within the FBFA and also processing of livestock (see additional livestock discussion below).</p> <p>Exporting. There are many resources available to prospective exporters, some of which are identified in the Resources section.</p> <p>Logistics. Given the dispersed nature of agricultural activity within the FBFA, as elsewhere on the Navajo nation, there may be opportunities for moving these goods within a coordinated system that is also an operating business.</p> <p>Garden Farming. Garden farming is essentially the use of nearby land for garden food crops. By incorporating modern agricultural techniques, agriculture can become an export business to many through family farming. This may require investment in technology such as greenhouses that allow for broader growing seasons, protecting the land and crops from wind, and allowing for optimized water conservation. A High Tunnel Farming System, commonly called a "hoop house," is an increasingly popular conservation practice for smaller garden farming.*</p> <p>Livestock. Many Navajo families raise livestock to supplement their livelihood and to maintain their tradition. By forming livestock cooperatives, livestock producers can create better economic opportunities for one another.*</p>	
Characteristics of the FBFA region that can help leverage efforts to generate this, including unique conditions	<p>In 2016, the Navajo Nation Council appropriated almost \$250 million for various water projects across Navajo Nation to support economic development. Two of these projects directly affect the FBFA:</p> <ol style="list-style-type: none"> 1. Coppermine, Bodaway-Gap, Tuba City, and Cameron: Western Navajo Pipeline Phase 1 – LeChee-Coppermine Connection Feasibility Study (WMB) 2. Tuba City: Tuba City Wastewater Treatment Plant (NTUA); Pipeline Upgrades, and Well upgrades. 	

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Strategic framework supportive of this activity*	Goal 2: Expand Agriculture/ Modern Water Use	Introduce modern techniques Establish an agricultural cooperative and technical assistance
	Agro Ecology/Environmental Science	Diné Col
Supportive workforce education/training programs already available in the region	Irrigation Technician	Diné Col
Entrepreneurial opportunities related to these activities	Entrepreneurs in this category can be farmers, using either traditional or innovative approaches to crop selection and farming practices, and also service-providers to agricultural operations in which technology, for water management, more sustainable use of chemicals, etc. plays an increasing role.	
Other relevant resources	<p>Financial assistance for farming is available through the USDA's Environmental Quality Incentives Program (EQIP). By forming cooperative farming groups, products can find their way to on- and off-Navajo Nation markets.</p> <p>The Navajo Beef program is a notable example of a tribal livestock cooperative. "Navajo Beef" is a brand that began in 2013 under Labatt Food Service (Native News Online, 2017).</p> <p>Technical Assistance. There are many programs to provide technical assistance for Tribal Cooperatives or individuals. Two examples are:</p> <ol style="list-style-type: none"> 1. The U.S. Department of Agriculture offers a variety of programs and services that are available to tribal governments and organizations, and individual Native Americans and Alaskan Natives. See Catalog of Federal Domestic Assistance and search by agency for USDA at http://www.cfda.gov/index. 2. The Intertribal Agriculture Council (IAC) conducts a wide range of programs designed to further the goal of improving Indian agriculture. http://www.indianaglink.com.* <p>Trade-related programs:</p> <ol style="list-style-type: none"> 1. Established in 1978, the Western Trade Adjustment Assistance Center (Western TAAC) (http://wesrac.usc.edu/wtaac/) is supported by a US Department of Commerce grant to assist manufacturing, service, and agricultural firms that have been <i>import</i>-impacted as demonstrated by declining sales or production and decline or anticipated decline in employment levels. 2. The U.S. Department of Commerce Commercial Service has a network of export and industry specialists located in more than 100 U.S. cities and over 80 countries worldwide. These trade professionals provide counseling and a variety of products and services to assist small and mid-sized U.S. businesses export their products and services. https://2016.export.gov/eac/ 	

*The source of asterisk-marked material is *Navajo Nation Economic Development Strategies for Areas Affected by Coal Mine Closure*, Prepared for the Navajo Nation Division of Economic Development by ETD, Inc. in collaboration with Economic Collaborative of Northern Arizona, edited for this document.

C. Market Trade Area

Leveraging assets and conditions to promote industrial-use siting in FBFA

In addition to the characteristics of the FBFA region described in the preceding tables, which can help leverage efforts to expand employment opportunities within the region, the region has additional assets and other conditions that help make the region attractive for all forms of economic development. These include the following:

- Other general, previously recommended strategic guidance
- FBFA designation
- Closure of coal plants/mines and possible mitigation programs
- Opportunity Zones

Other general, previously recommended strategic guidance

In a preceding section of this document (“Industrial-type uses and employment options in the FBFA”) goals and strategies from a previous study were cited in connection with their relationship to a set of employment-use development options (*Navajo Nation Economic Development Strategies for Areas Affected by Coal Mine Closure*). Other strategies in that earlier report apply generally to economic development in the FBFA. These include:

Goals	Objectives
Goal 5: Enhance Navajo Government-Industry Collaboration	Create public-private partnerships (PPPs) (to expand infrastructure and create development incentives)
	Secure land and conduct necessary studies
Goal 8: Redevelopment of the workforce	Enhance workforce skills development
	Support business entrepreneurship programs

FBFA designation

By virtue of its designation and imposed a moratorium on development, the FBFA should be especially eligible for financial support from a variety of federal and other grant programs.

Closure of coal plants/mines and possible mitigation programs

These closures are discussed elsewhere in this document, and create another condition that should make the FBFA especially targeted for grant programs to relieve economic distress, such as those commonly administered by the U.S. Department of Commerce, Economic Development Administration.

C. Market Trade Area

Opportunity Zones

Opportunity Zones are discussed elsewhere in this document (Appendix A). Zones across the U.S. have been predesignated, and the FBFA is the only portion of the Navajo Nation so designated within Arizona.

Leveraging assets and conditions to expand employment opportunities (in the FBFA or elsewhere) for workers living in FBFA

In addition to the kind of employment opportunities discussed above in this section, plus employment related to retail and tourism-oriented development discussed elsewhere in this document, other conditions in the FBFA and elsewhere in Arizona could expand opportunities for employment by FBFA resident-workers. The same conditions described above that could encourage increased grant and other funding to flow to the FBFA could also result in investment in workforce development. In the energy field, utility companies are sensitive to employment losses expected with the closure of the Navajo Generating Station and associated mines. SRP is actively working with the Navajo Nation to explore alternative economic development options. SRP also has a stated policy of retaining all NGS-impacted employees who wish to remain with the company.³ This is likely to require some people to relocate, which could be a problem for some of the Navajo Nation resident-workers.

One project discussed as a possible new employment source for these displaced workers is the Big Chino Valley Pumped Storage Project near Prescott, proposed by ITC Grid Development (the parent company of Tucson Electric Power) and currently under review by ITC and various other parties. This project is, however, many years in the future if it is implemented. (Source is project profile flyer prepared by ITC.)

Occupations Related to Business Development Options

Appendix D shows the range of occupations associated with the various business sectors relevant to this report:

- Construction**
Nonresidential Building Construction
- Entertainment and Accommodation**
Scenic and Sightseeing Transportation, Land
Museums, Historical Sites, and Similar Institutions
Traveler Accommodation
- Manufacturing and Wholesale Distribution**
Fruit and Vegetable Preserving and Speciality
Food Manufacturing
Animal Slaughtering and Processing
Machine Shops
Farm Product Raw Material Merchant Wholesalers

- Retail**
Food and Beverage Stores
General Merchandise Stores
Food Services and Drinking Places
- Services**
Activities Related to Real Estate
Business Support Services
- Utilities**
Solar Electric Power Generation
Wind Electric Power Generation
Wireless Telecommunications Carriers (Except
Satellite)

³ Phone discussion with Gretchen Kitchel, Salt River Project.



D | Consumer Analysis



D. Consumer Analysis

Consumer Analysis

The Consumer Analysis was assessed for the FBFA region, which includes identifying market demand of local residents and tourism consumers in the area, Navajo dollar leakage to border towns, community meetings with the nine FBFA Chapters, conducting a community needs assessment, conducting a consumer needs assessment, and conducting a FBFA consumer survey.

Some key procedures and findings for this section include:

- Multiple methods of analyzing the relationship between consumer demand and supply indicated sizable trade leakage and that potential existed for business development throughout the region.
- Even if tourism development strategies focused only on capturing a portion of projected tourism growth in northern Arizona, thousands of square feet of tourist-serving development could take place in the region each year.

D. Consumer Analysis

Analysis of consumer needs and market demand is approached in this study through the following analytical approaches:

- Identifying development opportunities by examining the relationship between the number of people in an area and the number of establishments of various business types in the same area.
- Applying a local-serving retail demand/leakage model to selected areas of the region, and using that information and map-based analyses to drill down to individual communities
- Examining the special category of tourism demand and tourism development potential.

Analysis procedures were supplemented by meetings with the nine chapters and a survey of residents.

Development Opportunities Indicated by the Relationship Between the Number of People in an Area Compared to the Number of Establishments of Various Business Types in the Same Area

Indicators of whether a particular type of business, for example an auto repair business, is likely to be needed in a community can be derived through the following direct process:

- Having a count of the number of businesses of any particular type within a community for which the population is known.
- Establishing the ratio of the population to the number of businesses of that type. In other words, if there are four auto repair shops serving a population of 10,000 people, the ratio is 2500 people to one shop.
- Comparing this ratio to some “reference area,” which is generally going to be a larger area and one in which, for most purposes, you would expect “average” or typical conditions to exist in terms of these ratios. So figures for the state of Texas are used in this analysis because Texas is a very populous state and is not dominated by large cities or small ones.⁴

The data system used to put together the figures for this analysis is Census Business Builder (CBB), a suite of online services from the US Census Bureau that provides selected demographic and economic data for a variety of individual business types, with the data available for states as well as relatively small geographic areas. Data sources integrated within the system include the following:

- Demographic, socioeconomic, and housing data from the American Community Survey
- Business data from the County Business Patterns,
- Non-employer Statistics,
- Economic Census, and
- Survey of Business Owners

The analysis was conducted for a number of business types that are representative of various sectors of the economy, and include businesses that are frequently sought by community members.⁵ These business types are shown in Table D-1 below, with those that appear to be underrepresented highlighted in the table. This indicated underrepresentation is shown in the far right-hand column of the table, which shows the potential number of additional establishments that the region could support.

⁴ National-level data are not available from the data source used in this analysis.

⁵ Laundromats, a frequently mentioned desired business type, present special analysis challenges because their need depends on details of both rental and owned property that are not readily determinable.

D. Consumer Analysis

Table D-1. Relationship Between the Number of People in an Area and Number of Establishments in the Same Area, for Selected Business Types

Business Type	FBFA	Larger Reference Area**		Additional Establishments FBFA Might Support
	# of Establishments*	Population/Establishment		
Accounting	0	19,630	606	31.4
Auto Repair	2	9,815	564	16.4
Beauty Salons	0	19,630	408	47.1
Convenience Stores	6	3,272	9,542	-0.7
Dentists	0	19,630	1,158	9.7
Doctors	0	19,630	709	26.7
Fast Food	6	3,272	1,158	1.8
Gas Stations	7	2,804	2,336	0.2
Insurance	0	19,630	755	25.0
Optometrists	0	19,630	9,286	1.1
Pharmacies	0	19,630	6,824	1.9
Restaurants	4	4,908	1,188	3.1
Used Car Dealers	4	19,630	1,579	11.4

*Based on inventories supplied by project participants and other sources.

**Texas is used because of its size and mix of city sizes.

There are certain limitations involved in using this type of analysis:

- No two businesses are the same. There are large establishments and small ones, within the same business type, and successful and struggling business establishments; but the system has no mechanism to account for these variations.
- The underlying data that identifies number of businesses by type, as used by the system, cannot be assumed to be 100% accurate.

Movie theaters

The demand/supply relationship for movie theaters, or cinemas, must be examined on a “persons per screen” basis, given that individual cinemas can vary considerably in the population they can serve, based on the number of screens in each establishment. The average persons per screen across the US is 8,093. With the population of the FBFA region just under 20,000, with no movie theaters at present, at least two new cinema screens, in theory, could be supported within the region.

The cinema business has become increasingly complicated with the advent of large screen televisions, movie streaming services, and the like. However, the movie business has survived market challenges in the past, including the emergence of television many years ago. Another important factor in the business is that much of the profit is realized through the in-house food and drink concessions.

D. Consumer Analysis

Local-Serving Retail Demand/Leakage Model

One approach to measuring retail demand and trade leakage involves the use of a proprietary model used by permission. The demand component of the model requires as input a compilation of per capita income and projected growth within defined primary and secondary trade areas, percent of income spent on retail, which varies by income level, and allocation of retail spending to 9 categories of goods. These data elements are based on public sources that include US Census Bureau data on population and income, and Consumer Spending Patterns reports produced by the US Bureau of Labor Statistics.

Results of the demand analysis are then compared to estimates of existing sales within the primary trade area, based on inventories of businesses and other data.

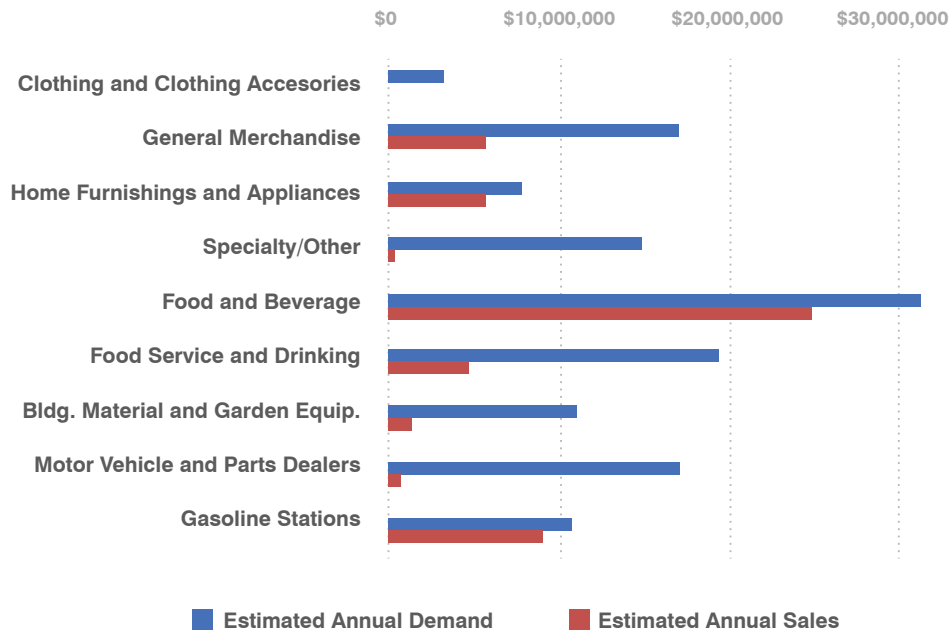
Two “regional level” demand/leakage analyses were applied to the FBFA region, one centered around Tuba City, and the other centered around Leupp.

Tuba City-centered area

The Figure D-1 chart summarizes the difference between demand (in dollars of consumer spending) predicted by the demand/leakage model and the estimates of existing sales in the Tuba City area, for each of the retail categories. As such, the chart is an indicator of both retail development potential and existing trade leakage.

D. Consumer Analysis

Figure D-1. Comparison of Estimated Retail Demand to Estimated Sales, FBFA Sub-Region Centered on Tuba City (\$ Millions)



Source: Census OTM (OnTheMap); consulting team.

In the chart, the gap between estimated sales and theoretical demand involves up to tens of millions of dollars for a number of the categories. This gap translates (as estimated within another segment of the model) to over 320,000 square feet of potential development opportunity for all retail categories combined, as shown, for the total in each category, in Table D-2 below. Figures can also be interpreted as a measure of retail leakage. The table reflects modest levels of projected growth (from official projections) within the primary and secondary trade areas used in the model.

Table D-2. Net Supportable Retail Space by Category, Tuba City-Centered Trade Area Expressed in Square Feet

Retail Category	Sales/Square Foot	2018	2021	2028
GAFO ¹	\$225	194,238	197,382	202,713
Food and Beverage	\$400	17,027	18,154	20,065
Food Services and Drinking	\$420	35,799	36,467	37,598
Bldg. Material, Garden Equip., etc.	\$290	33,998	34,542	35,465
Auto Parts ²	\$220	6,854	6,955	7,127
Services Space @10% of Total	N/A	28,106	28,655	29,584
GRAND TOTAL		322,877	329,110	339,678

1. GAFO = General Merchandise, Apparel, Furniture/Appliances, Other/Specialty

2. Assumes that automotive parts stores account for 9% of sales in overall Auto group category (based on CA statewide average as reported the SBOE).

Source: Consulting Team

D. Consumer Analysis

Although the model results indicate that retail leakage is high in the heart of the FBFA region, actual opportunities for development will depend on other factors besides what may be indicated as theoretically possible from a demand-supply point of view. Factors affecting the actual development potential include especially the following:

- The perceptions of available development locations, in relation to the business plan requirements, on the part of individual retailers, recognizing that individual retailers could range from being independent establishments to major national/international corporations.
- Development cost factors, including especially any need for infrastructure required to serve available development sites.

Leupp-Tolani Lake

For a similar modeling process applied to the Leupp-Tolani Lake region, existing sales levels were estimated to be virtually nonexistent for all categories except Gasoline Stations (not included in the table below) and, minimally, Food and Beverage. Net supportable retail space for the various categories, which is also a measure of retail leakage, is shown in Table D-3 below. As with the Tuba City-centered region, the table reflects modest levels of projected growth within the primary and secondary trade areas used in the model.

Table D-3. Net Supportable Retail Space by Category, Leupp-Tolani Lake Trade Area Expressed in Square Feet

Retail Category	Sales/Square Foot	2018	2021	2028
GAFO ¹	\$225	37,139	37,510	38,082
Food and Beverage	\$400	11,215	11,342	11,539
Food Services and Drinking	\$420	7,722	7,805	7,936
Bldg. Material, Garden Equip., etc.	\$290	6,018	6,079	6,174
Auto Parts ²	\$220	1,084	1,096	1,115
Services Space @10% of Total	N/A	6,318	6,383	6,485
GRAND TOTAL		69,496	70,215	71,331

1. GAFO = General Merchandise, Apparel, Furniture/Appliances, Other/Specialty

2. Assumes that automotive parts stores account for 9% of sales in overall Auto group category (based on CA statewide average as reported the SBOE).

Source: Consulting Team

D. Consumer Analysis

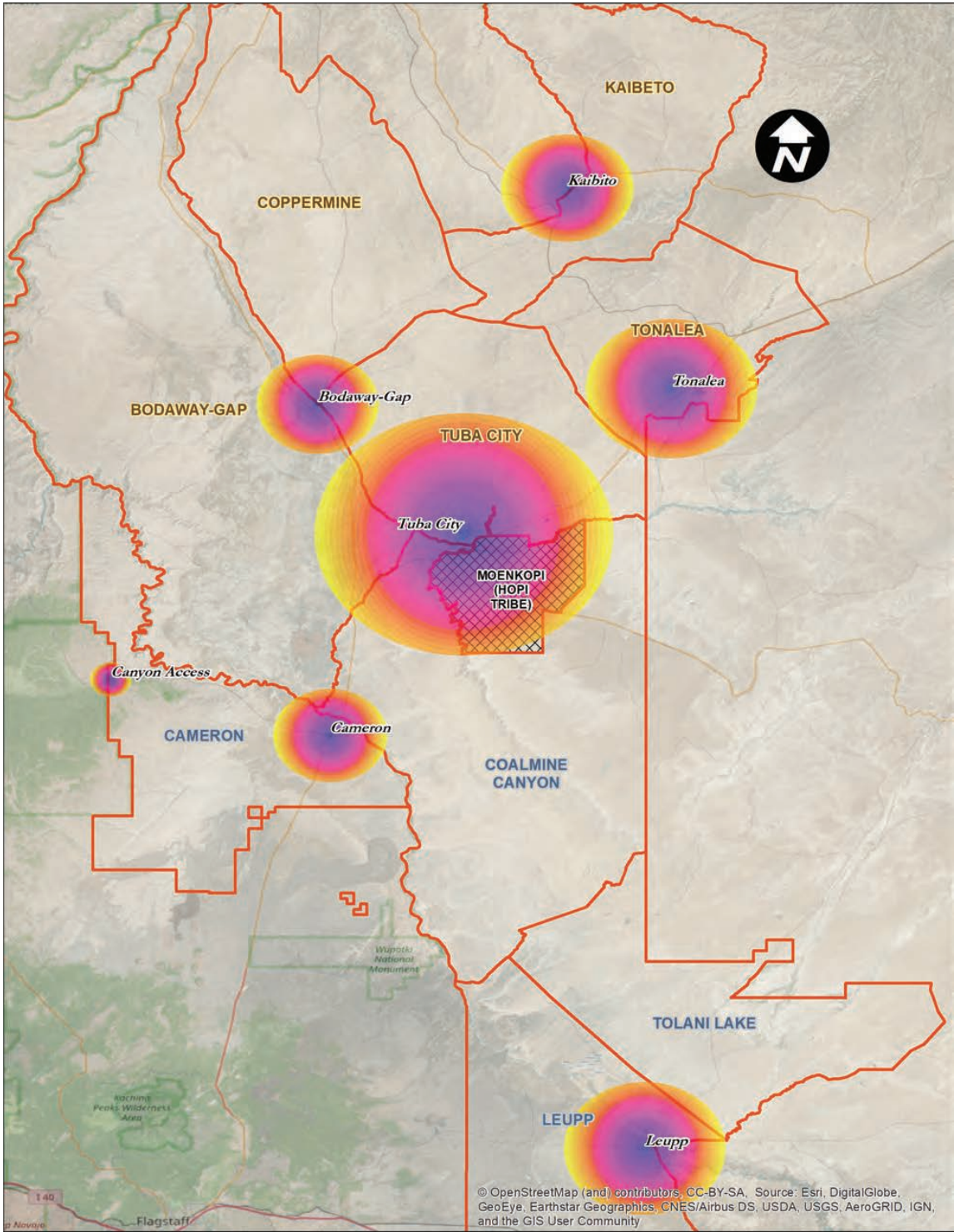
The Distribution of Local-Serving Development Potential within the FBFA Region

The supply-demand/leakage analysis processes described above provide indications of the types of retail stores that could be added to the FBFA region, within the general area of each of the two focus communities – Tuba City and Leupp. Additional analyses were performed to assess the “attraction strength” of the major communities. In this method, the mathematically derived principle of “interaction” was used as a measure of how each of the major FBFA communities related to all of the others. The mathematical expression for this process is simple: the population (in this case) of one place is multiplied by the population of another, and the result divided by the distance between them. This is the “interaction” of those two communities. So for a set of five communities, for example, each community would have five figures representing the interaction between that community and each of the others. The sum of those five would be the measure of the total interaction value of each place, individually, across the five-community region.

For the FBFA region, the resulting values were mapped in a way that demonstrated how the FBFA region communities compared to one another in this measure of “retail development appeal,” along with their locational relationships. Figure D-2 displays these results.

D. Consumer Analysis

Figure D-2. Relative Attractiveness of FBFA Region Communities for Local-Serving Retail Development



Source: consulting team.

D. Consumer Analysis

Table D-4 is derived from figures generated for Tables D-2 and D-3, Net Supportable Retail Space by Category, preceding. Those tables show shopping center space that could be supported by customers' sales in various categories of retail and services activities. The supportable space is converted to per-person factors and applied to populations in the sub-market areas listed on Table D-4 and also shown on Figure C-7. Note that these figures do not include the potential for tourism-based development.

The result of this exercise is an estimate of the square footage that could be supported within each sub-market area, for each of the categories of retail and services analyzed in the modeling process (and the figures in this more focused and conservative analysis differ somewhat from the broader-area analysis discussed in Tables D-2 and 3). The square footage figures are then translated to theoretical number of stores, based on different average store sizes for each category. Also for each store category, a range of averages was defined (from 1,000 square feet for a small restaurant to 40,000 square feet for a large general merchandise store) and different average sizes are applied to the sub-market areas according to their relative population size. For larger communities, larger average store sizes would apply, and likewise for smaller communities.

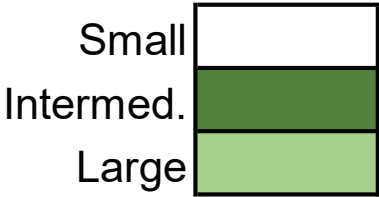
According to the sub-market area data on the table, each of the areas could support (a total of both new and existing space) at least 30,000 SF of development, up to over 200,000 SF and 76 stores in the Tuba City area. The "square feet supportable" column represents gross supportable area, including existing development, and the "number of stores less existing" column reflects the supportable area adjusted downward in cases where existing stores in the community fit the categories on the table. This results in a conservative estimate of the number of stores, because some of the existing establishments also serve the tourism market, and the table figures relate to local-community demand.

In addition to adjusting for existing stores, the supportable-area figures have been calibrated to be fairly conservative, because the modeling process also factors the development potential downward in recognition of the following two conditions: 1) there is an underlying level of essentially permanent trade leakage throughout the entire FBF a region, given that numerous categories of goods and store types (for example major department stores) are unlikely to ever be fully represented within the region, and 2) local residents cannot be expected to make full use of local shopping opportunities, given the attractiveness of alternatives in the border cities.

Table D-4. Sub-market areas - theoretical supportable store area and number of stores

	Cameron		Luepp		Tuba City (4)		Bodaway/Gap		Kaibeto		Tonalea	
Retail category/Area populations	1,409	No. of stores	2,199	No. of stores	11,159	No. of stores	1,694	No. of stores	1,980	No. of stores	2,330	No. of stores
	Sq. ft.	(3)	Sq. ft.	(3)	Sq. ft.	(3)	Sq. ft.	(3)	Sq. ft.	(3)	Sq. ft.	(3)
GAFO ¹	12,681	2.1	19,791	3.3	100,431	2.5	15,246	2.5	17,820	3.0	20,970	3.5
Food and Beverage	3,523	2.3	5,498	3.7	8,465	1.9	4,235	2.8	4,950	3.3	5,825	3.9
Food Services and Drinking	3,392	3.4	5,293	2.4	26,860	11.9	4,078	1.8	4,766	2.1	5,608	2.5
Bldg. Matrl., Garden Equip., etc.	2,291	0.8	3,575	1.2	18,140	1.8	2,754	0.9	3,219	1.1	3,788	1.3
Services category examples												
Beauty Salon	4,144	3.5	6,468	5.4	32,821	27.4	4,982	4.2	5,824	4.9	6,853	5.7
Physician	3,975	2.0	6,203	3.1	31,478	15.7	4,779	2.4	5,585	2.8	6,573	3.3
Insurance office	1,866	1.9	2,913	2.9	14,780	14.8	2,244	2.2	2,623	2.6	3,086	3.1
Totals	31,871	15.9	49,740	21.9	232,975	76.0	38,317	16.9	44,786	19.7	52,703	23.2

1. GAFO = General Merchandise, Apparel, Furniture/Appliances, Other/Specialty
2. Not recommended due to transition to driverless cars
3. "Small," "intermediate," or "large" footprint averages are used based on size of trade area.
(see highlight legend to right)
4. Some per-person demand factors adjusted for this area based on modeling of existing stores



Source: Consulting Team

D. Consumer Analysis

Tourism Development Potential

Currently, much of the business generated by the 8.1 million annual visitations to northern Arizona (AOT figures for 2016) is captured in the border communities, especially Flagstaff and Page. One way of looking at the potential for the FBFA region to expand its share of tourism business is through the analysis of tourism growth in northern Arizona.

The tourism demand model estimates the effects of increasing tourism activity, based on establishing a relationship between the volume of visitor spending in a region, the allocation of that spending to various categories of retail/service activities, and the projected growth rate of visitor volume and spending. The data are extracted from reports made available through the Arizona Office of Tourism, including: *Northern Region 2016 Year-End Data Review*, and *Arizona Travel Impacts, 1998-2016p*. In the model, spending figures are converted to the space required to accommodate the activity to which the spending is applied, which includes accommodations, food service (restaurants), food stores, other retail sales (including specialty goods), and gasoline sales. Space requirements are given in increments that are most commonly understood for the different categories of activities.

The tourism demand model focuses on the potential for capturing business activity associated with only the *projected growth* of tourism activity in northern Arizona (the Northern Region defined by the Arizona Office of Tourism (AOT) includes Coconino, Apache, and Navajo Counties, and it is these Northern Region figures that are generally used in the tourism demand model). In other words, the tourism demand model does not anticipate the FBFA region displacing existing businesses in other neighboring communities in order to achieve the results shown in the model.

The tourism demand model has the following components:

- Tourism expenditure data by the goods and services categories shown in the model (direct expenditure category) from publications produced by the Arizona Office of Tourism.
- An additional expenditure category (with adjustments to some of the related AOT figures) with figures based on the *2011 Navajo Nation Visitor Survey*.
- Translation of those expenditures by the IDS+A team into units of space represented by those expenditures. In other words, this is the total space (in square feet, number of hotel rooms, etc.) that would be required to serve the tourists who are spending these sums of money each year.
- An estimate of the rate of growth of tourism activity, and the annual change in space required to accommodate that growth increment. This estimate is based on recent trends as reported by the Arizona Office of Tourism.
- Lines highlighted within the table indicating what the FBFA region would be able to develop in the way of tourism-related business space, at the projected FBFA region capture rate shown.

D. Consumer Analysis

A key component of this model is the FBFA region capture rate. Intuitively, we can recognize that this number is neither 0% nor 100%. An approach to estimating this percentage, using the tools of regional science, involves using the principle of Interaction described in the local-serving retail demand section. The interaction model as applied to estimating the FBFA region capture rate involves the following processes:

- Assigning “population equivalent” numbers to the major tourism attractions around the region. (The intent in generating these numbers was not to establish precise mathematical relationships but to interpret visitation numbers to be somewhat proportional to population/employment figures in the FBFA region communities.)
- For the two border communities of Flagstaff and Page, and Tuba City (adding also the populations for Cameron and Tonalea), multiplying the community population by the population-equivalent numbers associated with the major attractions, and dividing that result by the distance between them. This process is repeated for each community in relation to each attraction.

The results of this analysis are shown on Table D-5, summarized on Table D-6, which shows the additional hotel rooms and space required to service the growth in tourism within the FBFA region if the projected capture rate is achieved, and visually presented on the Figure D-3 map, showing the extent to which tourists could theoretically interact with a specific attraction at each of three main communities within and adjacent to the FBFA region.⁶ The analysis results suggest that applying a 15% capture rate for new tourism activity to the FBFA region is reasonable.

.....
⁶ The analysis is based on a gravity-type model, using attraction attendance data and population data for the communities.

Table D-5. Tourism-Related Space Demand Model, 2016, for AOT Northern Region (Coconino, Navajo, and Apache Counties) and FBFA Region

			Space-generating factors/units							
Direct expenditure category		Annual visitor expenditures	Esti- mated hotel rooms	Number of gas stations if fuel sales/station average =	Assumed sales per SF		Existing space required in SF	Annual change if growth in tourism =	Demand over period of years =	Increments
				\$3,900,000				2.5%	5	
Lodging		\$546,000,000								
Lodging, factored for non-hotel expenditures		\$436,800,000	15,196					380	1,900	Rooms
Capture in FBFA, if at:	15%							57	285	Rooms
Restaurant food and beverage		\$422,000,000			\$350		1,205,714	30,143	150,714	Sq . ft.
Capture in FBFA, if at:	15%							4,521	22,607	Sq . ft.
Food stores		\$95,000,000			\$400		237,500	5,938	29,688	Sq . ft.
Capture in FBFA, if at:	15%							891	4,453	Sq . ft.
Transportation at destination		\$138,000,000								
Gasoline portion, estimated at:	60%	\$82,800,000		21				0.53	2.7	Gas stations
Capture in FBFA, if at:	15%							0.08	0.40	Gas stations
Retail purchases*		\$204,300,000			\$300		681,000	17,025	85,125	Sq . ft.
Capture in FBFA, if at:	15%							2,554	12,769	Sq . ft.
Retail purchases, arts & crafts in Navajoland*		\$42,005,952			\$300	**	140,020	3,500	17,502	Sq . ft.
Recreation/sightseeing/entertainment		\$215,000,000					(not allocated)			

* These entries are adjustments/additions to the AOT data based on information in 2011 Navajo Nation Visitor Survey.

** Many of these sales are occurring at open-air sites, but are converted to indoor "retail space" figures here for comparison purposes.

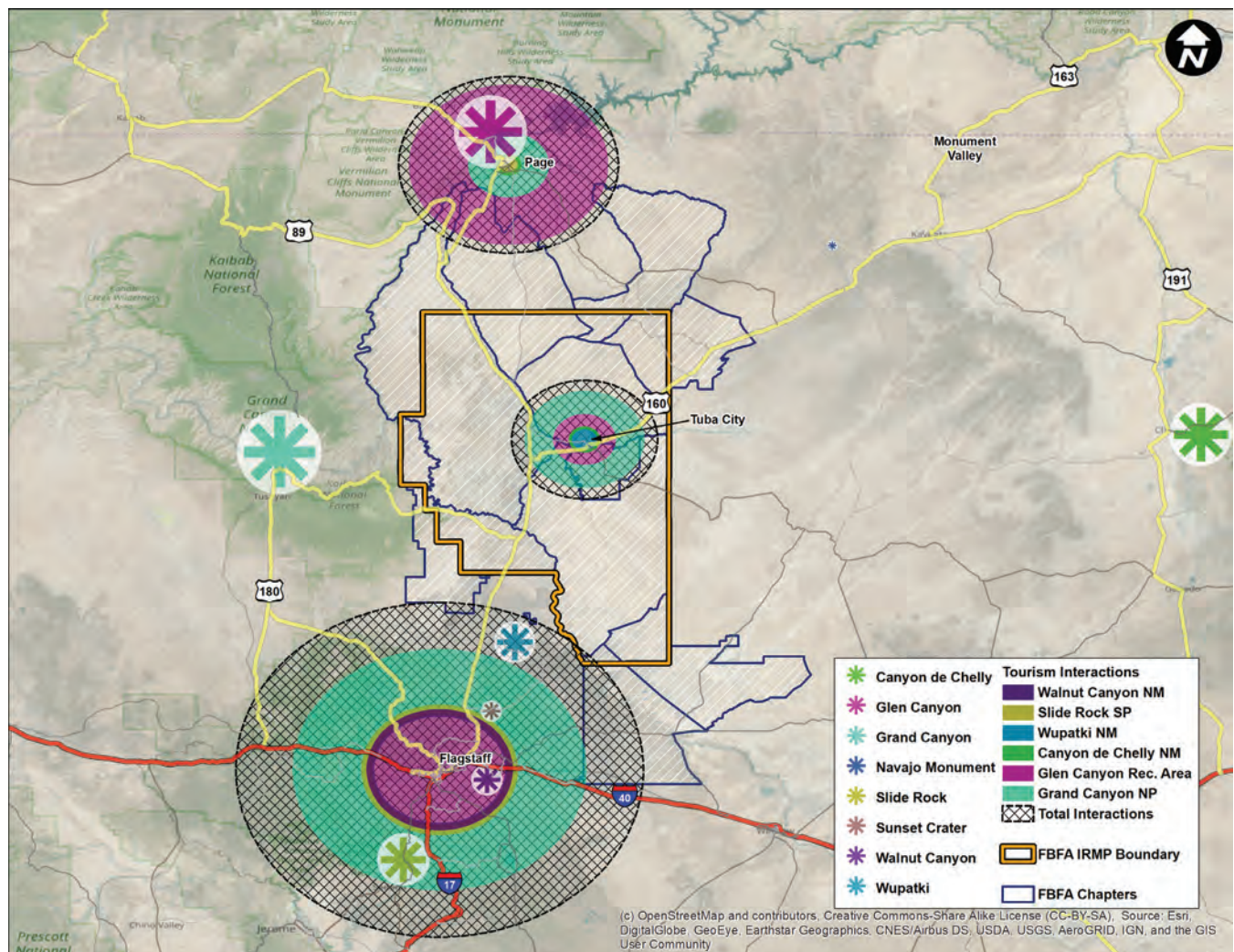
D. Consumer Analysis

Table D-6. Summary table of the results of the tourism demand modeling process

If the FBFA region can capture 15% of new development that is tied to just the annual growth in tourism, the region can develop, per year:

57	Hotel rooms
4,500	Square feet of restaurant space
900	Square feet of grocery store space
6,054	Square feet of retail space, including arts and crafts sales space

Figure D-3. FBFA Region Tourism interactions with key attractions in relation to community locations



Sources: consulting team; visitor attendance data from various sources.

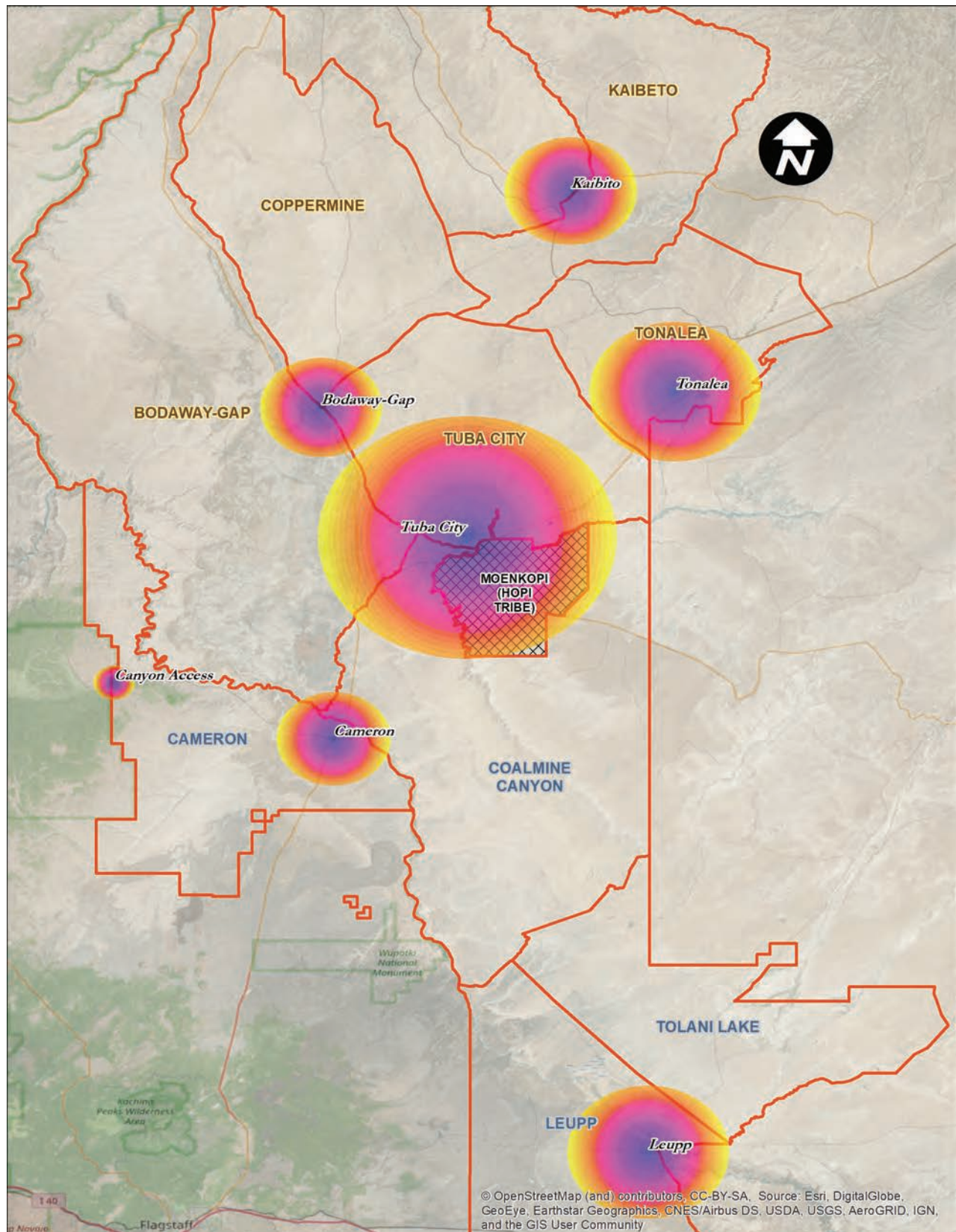
D. Consumer Analysis

Distribution of Tourism-Related Development Potential within the FBFA Region

Where is new visitor-related development that could occur in the FBFA region likely to go, among the FBFA communities? To address this question, the concept of “attraction strength” of the major communities, which was applied to the local-serving trade areas as described above, was adapted to provide additional insight into the visitor-related development potential of the region. Following this gravity-model approach, the mathematically derived principle of “interaction” was used as a measure of how each of the major FBFA communities related to a select group of major attractions. Instead of population, the “mass” of communities was measured in terms of employment (jobs in the community or the resident workforce, whichever was greater, based on the assumption that employment was a better representation (compared to population) of the capacity of the community to absorb this type of development). The results of the analysis were mapped in a way that demonstrated how the FBFA communities compared to one another in this measure of their theoretical ability to attract tourists, along with their locational relationships. Figure 13 displays these results, which by the nature of the analysis favors more-populated areas.

D. Consumer Analysis

Figure D-4. Relative Attractiveness of FBFA Region Communities for Tourism-Related Development



Source: consulting team.

D. Consumer Analysis



Community Meetings - Twin Arrows Casino and Hotel

Indigenous Design Studio + Architecture held a series of community meetings at the Twin Arrows Casino and Hotel in Flagstaff, Arizona on May 29th-30th and June 5th-6th with attendance from the Navajo Nation Division of Economic Development, Navajo Hopi Land Commission, and various chapter officials and members. The first set of two-day meetings (May 29th-30th) focused on the first four chapters; Cameron, Coalmine Canyon, Leupp, and Tolani Lake. The second set of two-day meetings (June 5th-6th) focused on the last five chapters; Bodaway-Gap, Coppermine, Kaibeto, Tonalea, and Tuba City.

Both sets of two-day meetings were separated into the following categories:

Day 1

Project Overview: A general introduction into the Feasibility Study and process and breakdown of project Scope of Work with scope definitions. An overview of all chapters involved and definition of chapter boundaries based on current maps provided by IDS+A.

D. Consumer Analysis

Economic Development 101: A introduction into economic development with a general definition of the topic and further expansion on the meaning of Tribal Economic Development Planning and its components. General examples included: Resorts and Casinos, Gas Stations, Tourism, Grocery and Agriculture.

Economic Development Sub-Region SWOT Analysis: An introduction of a SWOT Analysis and the process and importance to the overall project. SWOT is defined as; Strengths (culture), Weaknesses (border towns), Opportunities (tourism), Threats (jobs). Potential employment effect examples were provided.

Preliminary Research Observations: A general overview of research observations including: Market Trade Areas which consist of; traffic counts, ADOT Arizona scenic roads, NTUA broadband maps, primary and secondary trade areas, consumer analysis for residents, population density, consumer analysis, workforce distribution, competitive analysis, tourism market.

Exercise #1: What are your primary community facility and service needs?: A series of exercises with chapter officials and members that identified needs including: Non-commercial administrative offices, postal services, banking, etc. --Refer to Community Needs Assessments for community responses--

Exercise #2: What are your primary existing community facilities and services?: A series of exercises with chapter officials and members that identified needs including: Non-commercial administrative offices, postal services, banking, etc. --Refer to Community Needs Assessments for community responses--

Example #1: Multi-Purpose Facility: The Kayenta Chapter Multi-Purpose building was presented as an example of a potential multi-purpose facility

Example #2: Maintenance Cost: Example costs included: Building Maintenance (\$3.75); HVAC and Special Systems (\$3.00); Custodial (\$.50), all of which and with proper maintenance a building will span an average of 30 + years

Exercise #3: What are your primary commercial development and business needs?: A series of exercises with chapter officials and members that identified needs including: Laundromat, Restaurant, Grocers, etc. --Refer to Community Needs Assessments in the Appendix for community responses--

Exercise #4: What are your primary existing commercial development and businesses?: A series of exercises with chapter officials and members that identified needs including: Laundromat, Restaurant, Grocers, etc. --Refer to Community Needs Assessments in the Appendix for community responses--

Example #3: Regional Economic Development: A reference to the greater region within the Former Bennett Freeze Area

Exercise #5: Consumer Survey Input: Brainstorm Consumer Survey Questions?: A series of exercises with chapter officials and members that identified needs including: Identifying Shopping Patterns, Locally Shopping, Issues and Challenges, etc. --Refer to Community Needs Assessments in the Appendix for community responses--

Day 2

Capital Assets: A overview and series of workshops to identify capital assets. Eight forms of capital are described as: Individual Capital, Social Capital, Intellectual Capital, Built Capital, Natural Capital, Political Capital, Cultural Capital, and Financial Capital. Exercises were also conducted on each of these topics. --Refer to Community Needs Assessments in the Appendix for community responses--

Community Needs Assessments - Exercises #1 & #2

Identifying Future Community Facilities

HEALTH FACILITY POST OFFICE
SPORTS COMPLEX FAIRGROUNDS
MULTIPURPOSE
SENIOR CENTER
NURSING/EMT NURSING/EMT
FIRE DEPARTMENT

Identifying Existing and Future Businesses

STARBUCKS MASSAGE THERAPIST TRANSFER STATION/WASTE MGMT
AUTO REPAIR GROCERY
CAR WASH RESTAURANT WALMART
HEALTHY FOOD OPTIONS
SAMS CLUB/WHOLESALE
MOVIE THEATER **SHOPPING MALL**
CEREMONY FACILITY FARMERS MARKET CULTURAL CENTER/TOURISM

D. Consumer Analysis

Consumer Survey

Results of the Consumer Survey are summarized in the following materials.

TOTAL NUMBER OF SURVEYS

332

9 CHAPTERS

Bodaway-Gap

Cameron

Coalmine Canyon

Coppermine

Kaibeto

Leupp

Tolani Lake

Tonalea

Tuba City

A MAJORITY OF HOME OWNERSHIP IN THE FBFA REGION ARE

WOMEN

With the
Highest
Numbers
in these
Chapters

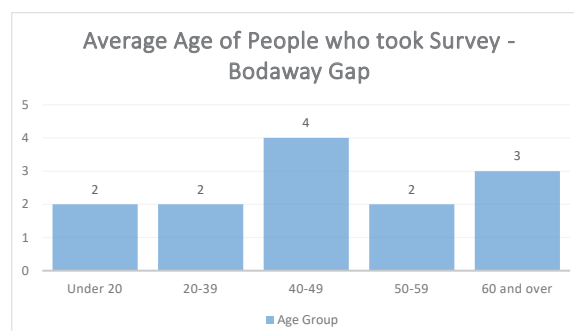
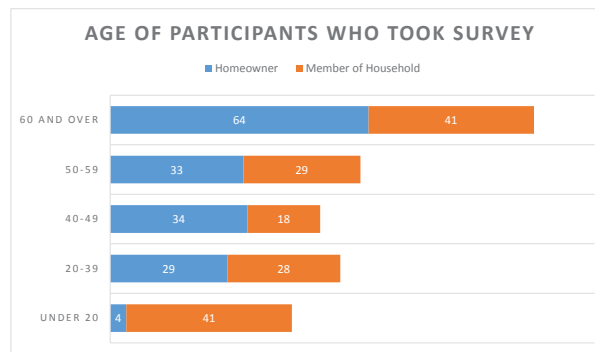
COALMINE CANYON COPPERMINE

A MAJORITY OF NAVAJO RESIDENTS IN THE FBFA DO THEIR SHOPPING IN

FLAGSTAFF & PAGE

Which Are the
Two Major
Border Towns
at the Edge of
the Navajo Nation

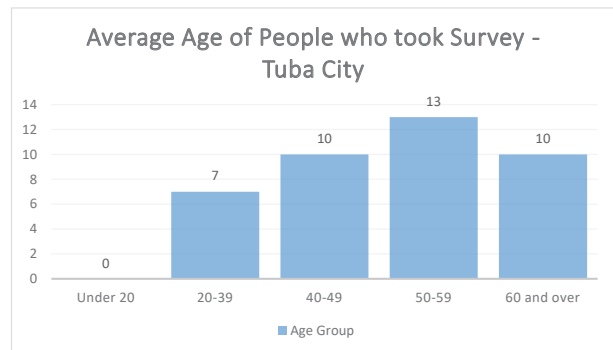
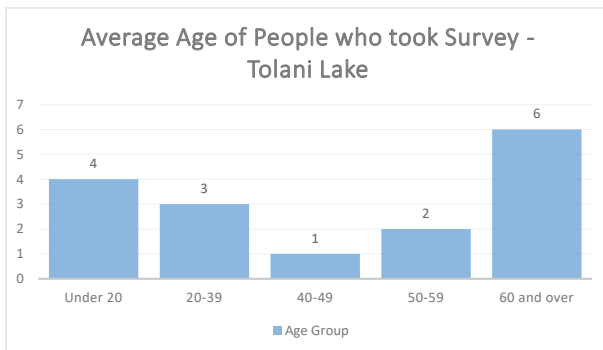
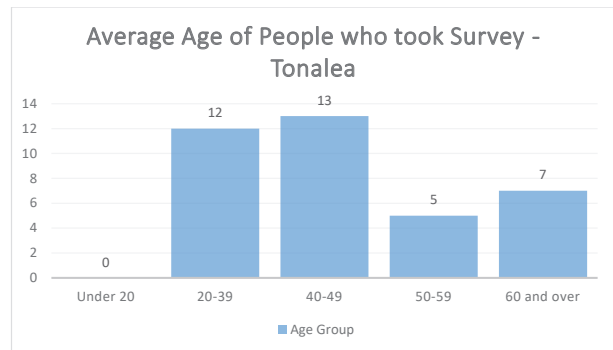
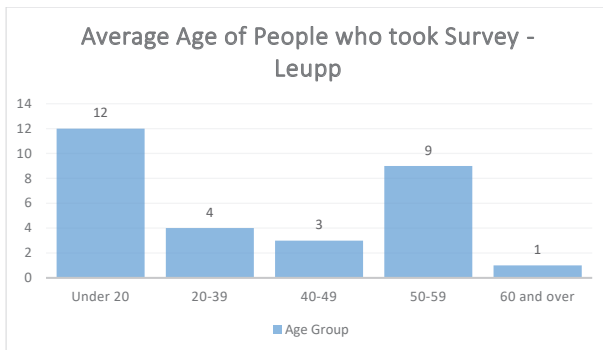
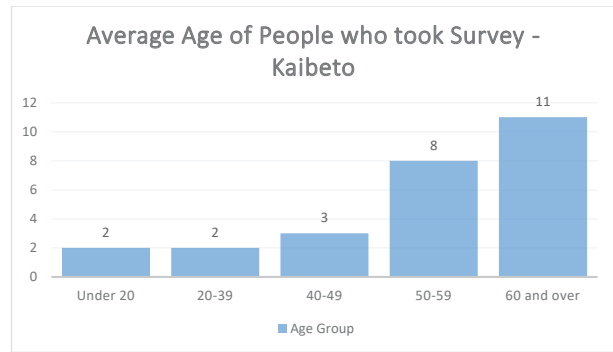
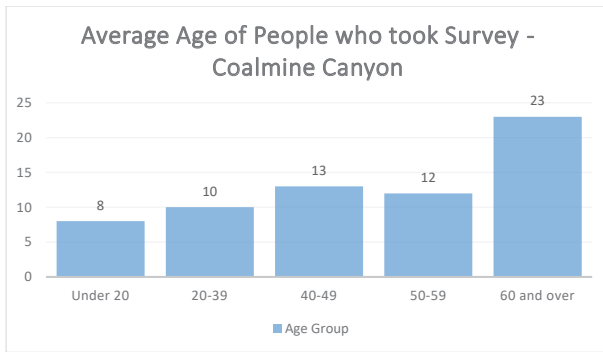
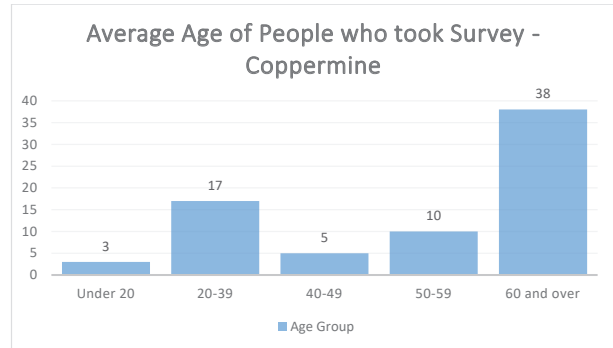
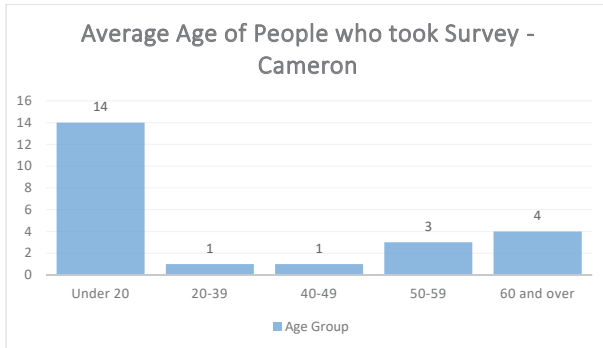
Figure D-4. Consumer Survey Data Results



D. Consumer Analysis

Consumer Survey Data Graphs

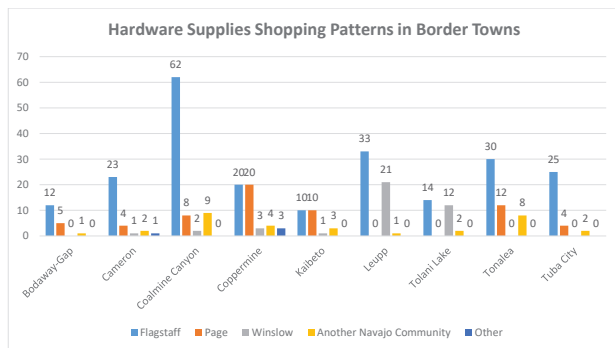
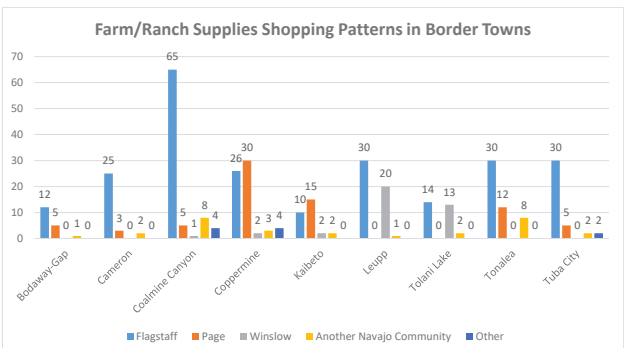
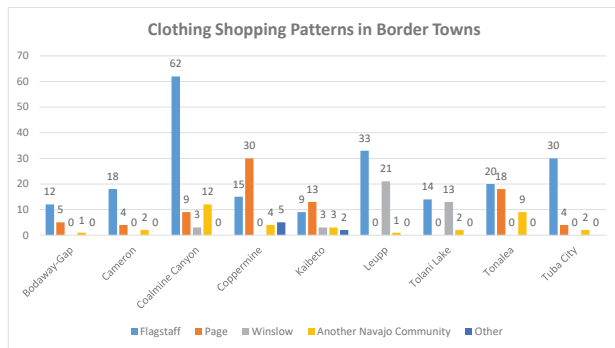
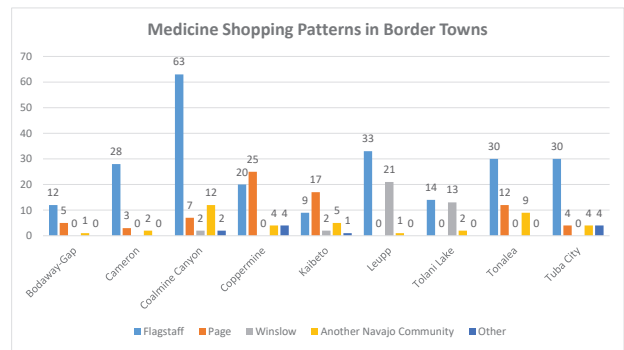
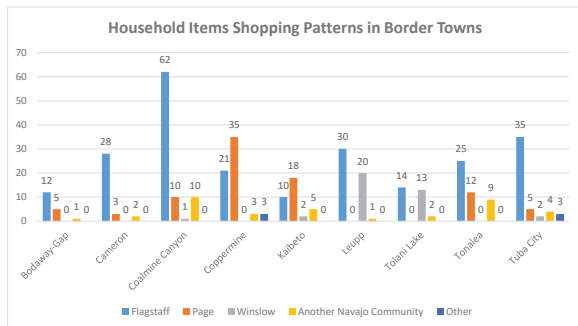
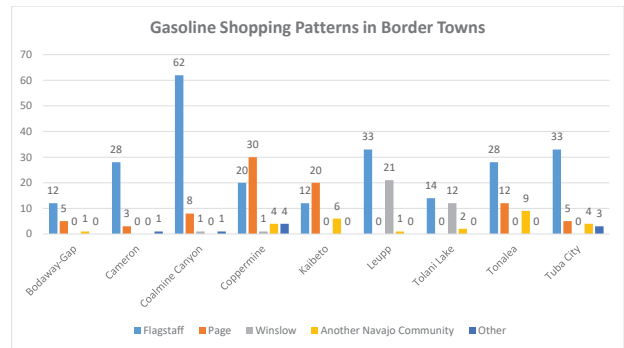
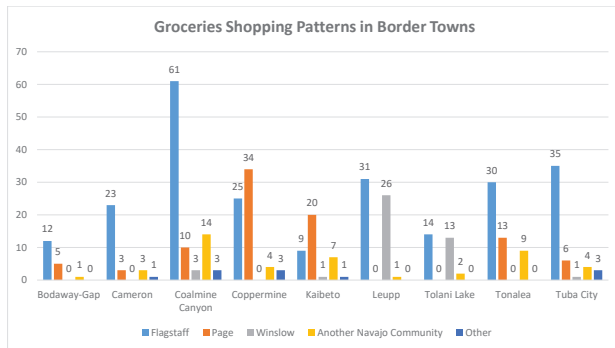
Figure D-4. Consumer Survey Data Results, Continued



D. Consumer Analysis

Consumer Survey Data Graphs

Figure D-4. Consumer Survey Data Results, Continued



A photograph of the Elephant's Feet rock formation in Tonalea, Arizona, during sunset. The two large rock pillars are silhouetted against a warm, golden sky. The text 'Competitive Analysis' is overlaid in white, with a large 'E' that incorporates a dotted line pointing to the rock formation.

E Competitive Analysis

E. Competitive Analysis



Canyon Padre Trading Post, Pre-Twin Arrows Trading Post, Flagstaff AZ, Route 66.



Twin Arrows Trading Post, Flagstaff AZ, Route 66.



Hopi House Trading Post 1941-70, Leupp AZ, Route 66.

E. Competitive Analysis

Competitive Analysis

The Competitive Analysis was assessed for the FBFA region, which includes a compiled list of existing businesses in the area.

Some key procedures and findings for this section include the fact that existing business development in the region is far below the available potential, but what does exist includes numerous establishments that serve tourists as well as the local population.

E. Competitive Analysis

The community outreach process and other research steps resulted in a compilation of the existing businesses in the FBFA, shown in Table E-1 below.⁷

Table E-1. Existing Business Inventory in FBFA Region

Name of Business	BUSINESS TYPE	BUSINESS LOCATION
Simpson Market	Convenience Store	Cameron, AZ
Burger King	Fast Food	Cameron, AZ
Chevron	Gas Station	Cameron, AZ
Conoco	Gas Station	Cameron, AZ
Shell	Gas Station/convenience store	Cameron, AZ
Navajo Trail Trading Post	General Retail	Cameron, AZ
Painted Desert Trading Post	General Retail	Cameron, AZ
McAlister Deli	Restaurant	Cameron, AZ
Blue Canyon Grill	Restaurant	Cameron, AZ
Cameron Trading Post and Restaurant	Restaurant/General Retail	Cameron, AZ
Mystic Canyon Gallery	Specialty	Cameron, AZ
Navajo Arts & Crafts	Specialty	Cameron, AZ
Speedy Truck Stop	Truck Stop	Cameron, AZ
Tire Shop	Automotive	Gap, AZ
Gap Express 525	Gas station/convenience store	Gap, AZ
Gap Trading Post	General Store	Gap, AZ
Laundromat (Little Comm)	Laundry	Gap, AZ
Kaibeto Market Gas Station	Gas station/convenience store	Kaibeto, AZ
Van's Trading Post	General Retail	Coalmine, AZ
Old Red Lake Trading Post	Convenience store	Tonalea, AZ
Tonalea General Store	Convenience store/Groceries	Tonalea, AZ
Barlow Towing and Auto Repair	Automotive	Tuba City, AZ
Draper Glass Co	Automotive/Home	Tuba City, AZ
Hogan Family Restaurant	Food/Dining	Tuba City, AZ
McDonalds	Food/Dining	Tuba City, AZ
KFC	Food/Dining	Tuba City, AZ
Taco Bell	Food/Dining	Tuba City, AZ

⁷ Some inconsistencies occur in the categorization of businesses by type, given that some establishments are combinations of functions, such as gas station and convenience store combined.

E. Competitive Analysis

Table E-2. Existing Business Inventory in FBFA Region by Type of Business

Name of Business	BUSINESS TYPE	BUSINESS LOCATION
Sonic Drive-In	Food/Dining	Tuba City, AZ
Subway	Food/Dining	Tuba City, AZ
Ferrellgas	Gas Station	Tuba City, AZ
Ferrellgas	Gas Station	Tuba City, AZ
Shell	Gas Station	Tuba City, AZ
Chevron	Gas Station	Tuba City, AZ
Tuba City Express	Gas Station	Tuba City, AZ
Bashas Supermarket	General Market/Grocery	Tuba City, AZ
Tuba City Trading Post	General Retail	Tuba City, AZ
Van's Trading CO	General Retail	Tuba City, AZ
Navajo Nation Shopping Center - Bashas	General Retail	Tuba City, AZ
True Value	Hardware/Retail	Tuba City, AZ
Focal Point Eyewear	Health	Tuba City, AZ
Westerners	Lumber/Construction	Tuba City, AZ
Shell - Pic-N-Run	Gas Station	Leupp, AZ

Another indicator of competitive facilities is shown (in a preceding section) in the Table E-2, Relationship Between the Number of People in an Area and Number of Establishments in the Same Area, for Selected Business Types. This information, reproduced from Table E-3 below, applies to the total FBFA area.

Table E-3. Existing Business Types in FBFA Region by Number of Establishments

Business Type	# OF ESTABLISHMENTS
Accounting	0
Auto Repair	2
Beauty Salons	0
Convenience Stores	6
Dentists	0
Doctors	0
Fast Food	6
Gas Stations	7
Insurance	0
Optometrists	0
Pharmacies	0
Restaurants	4
Used Car Dealers	0

E. Competitive Analysis

Competitive Tourism Environment

The competitive environment for tourism includes the following hotels within the FBFA region, also shown in a preceding section, Economic Assets in the FBFA Region. Other aspects of the competitive environment are shown below.

Hotel	CAMERON	LEUPP	TUBA CITY
Twin Arrows Casino		X	
Moenkopi (Hopi Tribe) Legacy Inn			(adjacent)
Quality Inn Navajo Nation			X
Dine' Inn Motel			X
Grand Canyon Hotel at Cameron Trading Post	X		

Rafting Companies⁸

The following river concessioners provide trips through the Grand Canyon, most starting at Lees Ferry and some extending to Diamond Creek (226 river miles). These companies offer a variety of trips lasting from 3 to 18 days, using a range of watercraft including large motorized rafts, oared rafts, paddle rafts, and dories. Wilderness River Adventures, specifically, also operates in Glen Canyon.

Aramark-Wilderness River Adventures
Arizona Raft Adventures, LLC
Arizona River Runners, Inc.
Canyon Explorations/Canyon Expeditions
Canyoneers, Inc.
Colorado River & Trail Expeditions, Inc.
Grand Canyon Discovery, LLC
Grand Canyon Dories
Grand Canyon Expeditions Company
Grand Canyon Raft Adventures
Grand Canyon Whitewater, LLC
Hatch River Expeditions, Inc.
O.A.R.S. Grand Canyon, Inc.
Outdoors Unlimited
Tour West, Inc.
Wilderness River Adventures
Western River Expeditions, Inc.

Antelope Canyon Area

Dixie Ellis' Lower Antelope Canyon Tours
Antelope Canyon Tours
Antelope Canyon Navajo Tours
Ken's Tours Lower Antelope Canyon
Antelope Slot Canyon Tours by Chief Tsosie
Adventurous Antelope Canyon
Antelope Canyon Boat Tours
Antelope Canyon X by Taadidiin Tours
Lake Powell Hidden Canyon Kayak
Horseshoe Bend Slot Canyon Tours

Aerial tours

The helicopter/airplane touring companies shown below are based at or operate out of the two recreational- support airports closest to the FBFA – Grand Canyon Airport South Rim, and Page Municipal Airport:

Papillion
Maverick Helicopters
Grand Canyon Helicopters (Page Area)
Grand Canyon Helicopters (Grand Canyon)
Westwind Air Service
Classic Helicopter Services

Source of list: company websites

Other

Bright Angel Bicycles, LLC

⁸ Source of List: National Park Service

E. Competitive Analysis

Tourist accommodation facilities in the Grand Canyon area, outside of the FBFA, are listed below:

Hotel	COMMUNITY
Best Western Premier Grand Canyon Squire Inn	Grand Canyon Village
The Grand Hotel at the Grand Canyon	Grand Canyon Village
Holiday Inn Express & Suites Grand Canyon	Grand Canyon Village
Red Feather Lodge	Grand Canyon Village
Canyon Plaza Hotel	Grand Canyon Village
7 Mile Lodge	Grand Canyon Village
Maswik Lodge	Grand Canyon Village
Bright Angel Lodge and Cabins	Grand Canyon Village
Kachina Lodge	Grand Canyon Village
Thunderbird Lodge	Grand Canyon Village
El Tovar Hotel	Grand Canyon Village
Yavapai Lodge	Grand Canyon Village
Grand Canyon Lodge - North Rim	North Rim
Phantom Ranch	Canyon base
Kaibab Lodge	Fredonia
Jacob Lake Inn	Fredonia

Source of list: company websites

Retail Leakage

Retail leakage is assessed in a preceding section of this report, through the Local-Serving Retail Demand/Leakage Model. Results of those modeling processes indicate that in the Leupp-Tolani Lake area, retail leakage is estimated at \$20 million, which is 10 times the estimated sales from existing establishments in the area. In the Tuba City-Tonalea area, leakage is estimated at \$92 million, about twice the level of sales from existing establishments in that area.



F Site Analysis



F. Site Analysis

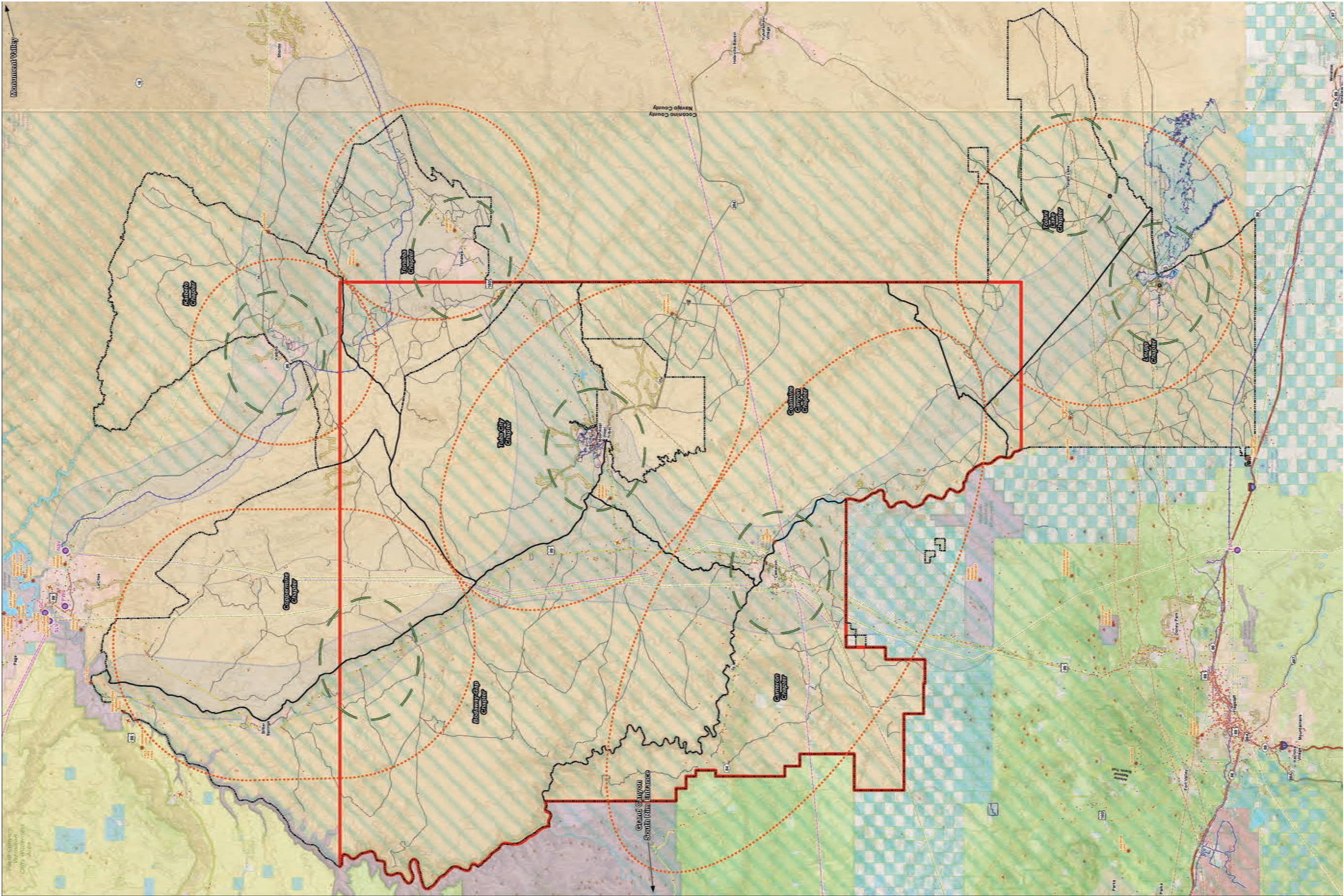
Site Analysis

The Site Analysis was assessed for the FBFA region, which includes a compiled FBFA Regional Base Map, primary and secondary development focus areas, site analysis considerations, introduction of the residual land value analysis concept, and chapter site visits.

The Site Analysis addresses “development focus areas” rather than specific development site locations. Three development-focus locations are defined for this study as the designated Primary Growth Area: Bodaway-Gap at the intersection of US Highway 89 and Indian Route 20 (the Gap), and the communities of Cameron and Tuba City. Other portions of the FBFA are designated the Secondary Growth Area. A series of checklist tables summarize the status of community-area conditions.

F. Site Analysis

Figure F-1. FBFA Regional Base Map



Source: See text, map legend, and Appendix B

F. Site Analysis

FBFA Regional Base Map

A FBFA regional base map that combined key data elements assembled for this project is shown on Figure F-1 on the preceding page, with the legend for the map on the following page. This map provided the basis for assessments of the overall FBFA region and also a base of information for the development-focus area maps also included in this section. This map includes information from the state, county, US Census, US Army Corps of Engineers, the Navajo Nation Land Department, and the Navajo Department of Transportation. Note that the map is inserted here for reference only and is intended to be used in a much larger format than is practical to display in this document.

Legend

	Navajo FBFA Chapters		Oil & Gas Parcels
	FBFA Boundary 2015		Conservation Easements
	Arizona Opportunity Zones		Uranium Areas
	Corridor		Abandoned Mines
	5-Mile Circles		Roads
	County		Rails
	Places		Western Electric Transmission Lines
	Sub-Market Areas		Transmission Lines
	Flood Hazard Areas		Natural Gas InterIntrastate Pipelines
	Private Land		Primary Overhead Electric Lines
	State Trust Land		Primary Underground Electric Lines
	BLM Land		Pressurized Water Mains
	Forest Service Land		Sewer Mains
	Indian Reservation Land		Gas Mains
	Military Land		Arizona National Scenic Trail
	City or County Park Land		Airports
	State Park Land		WIC Clinics
	Wildlife Refuge		Fire stations Arizona
	Other Land		Substations
	National Parks		Cell Towers
	Places		Water Wells
	Buildings		Attractions
	Area Hydrography		Hotels
	Broadband Utilities		

F. Site Analysis

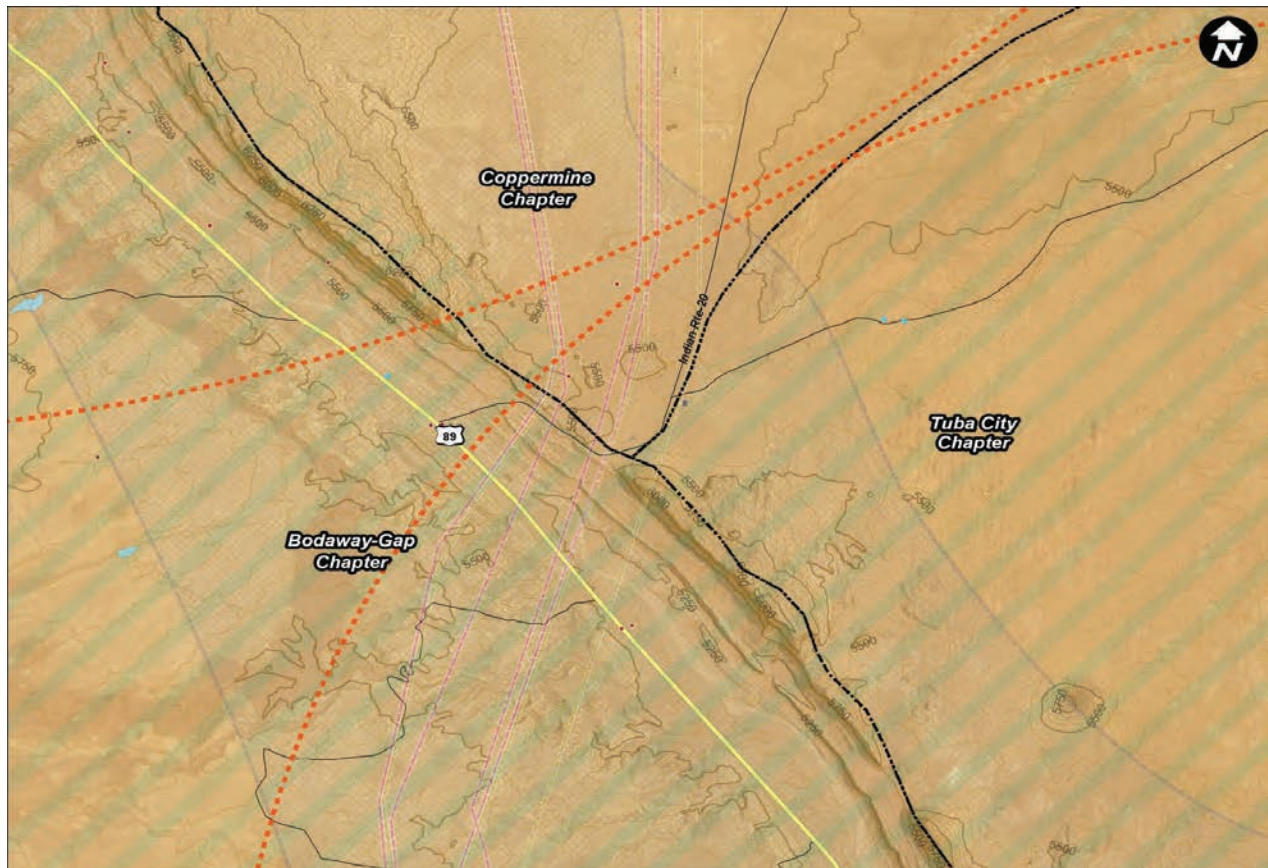
Feasible Project Sites – Primary & Secondary Growth Areas in the FBFA Region

Based on the information received from the Navajo Nation and the chapters, the Site Analysis addresses “development focus areas” rather than specific development site locations. Specific sites that had been discussed in prior processes could not be identified, and information about infrastructure, use commitments, and other aspects of site developability was also not available in sufficient detail to allow the Team to identify such sites independently. From a regional assessment, three development-focus locations are defined for this study as the designated Primary Growth Area: Bodaway-Gap at the intersection of US Highway 89 and Indian Route 20 (the Gap), and the communities of Cameron and Tuba City. Other portions of the FBFA are designated the Secondary Growth Area, which include Coalmine Canyon, Coppermine, Kabibeto, Leupp, Tolani Lake, and Tonalea. The Primary Growth Area was designated based on the following characteristics shared by the selected places:

- Located by major highway intersections that are heavily traveled and important for both local travel and tourists, including significant projects such as the new Indian Route 20 and the proposed Grand Falls Highway.
- Existing development in the area with potential for growth.
- Current and future projects have been proposed for locations within the area.
- Located within the FBFA boundary

The three development-focus areas are shown on the following series of maps. These maps are based on the Figure F-1 Regional Base Map Shown above, and the legend for that map applies to the focus area maps.

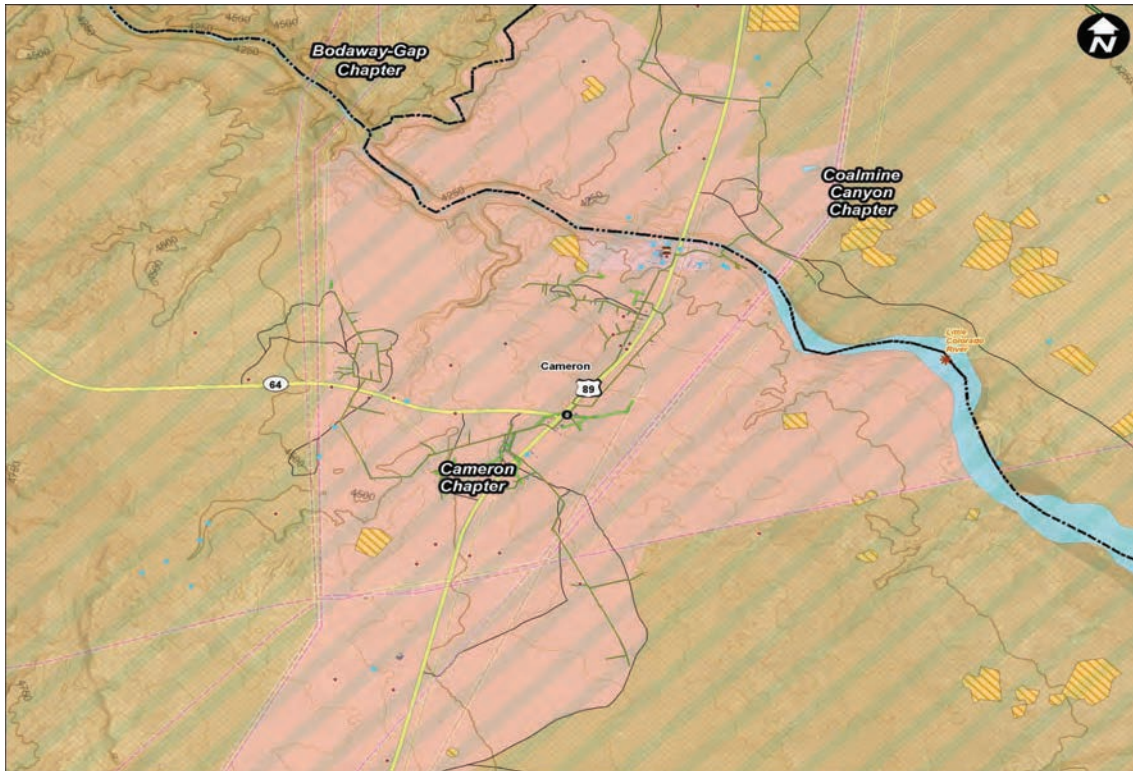
Figure F-2. Bodaway-Gap focus area



Source: See text, map legend, and Appendix B

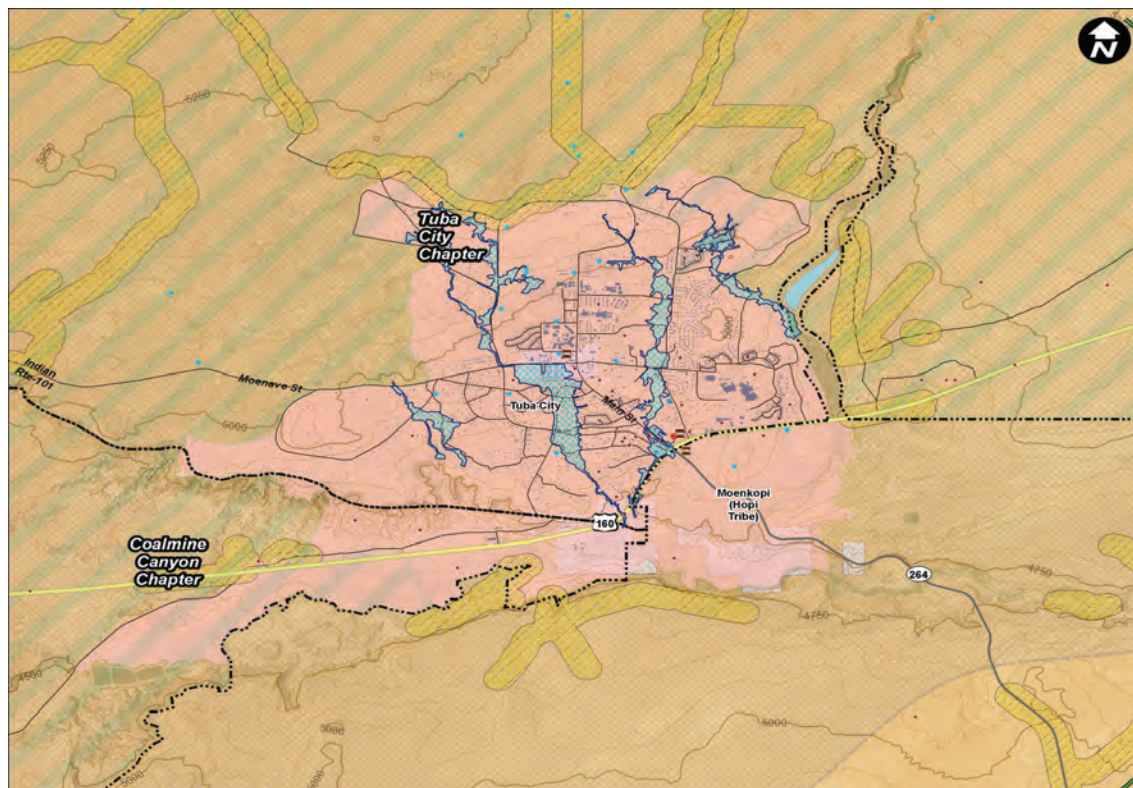
F. Site Analysis

Figure F-2. Cameron focus area



Source: See text, map legend, and Appendix B

Figure F-2. Tuba City focus area



Source: See text, map legend, and Appendix B

F. Site Analysis

Site Analysis Considerations

The series of checklist tables below summarize the status of a series of community-area conditions, for cases in which the information (Table F-1 and F-2) is available, for each of the three development focus areas. A similar separate table (F-2) addresses defining community area characteristics related to development conditions for the Secondary Growth Area in general. The list of conditions also serves as a checklist for information that will be required, whether currently known or not, for specific sites within each of these areas that are ultimately considered for development.

The table for each community area is followed by lists of related project information obtained from Navajo Nation Division of Economic Development, the current status of which would need to be independently verified.

Table F-1. Primary Growth Area Checklist

Community: Bodaway-Gap	General community-area conditions
Specific Area Plan	Yes, listed in their Community Land Use Plans (CLUP's) and DED Project Priority Listing.
Proximity to existing urban development	Community located within close proximity to the border town Page, AZ.
Fire/police/other emergency response availability	Community located in rural area with emergency response availability from Page and Tuba City, AZ.
Location relative to Opportunity Zone	Yes, located both in the FBFA and Opportunity Zone.
Location relative to local population base	Located within the center of the Bodaway-Gap community.
Accessibility to workforce	Low number of local resident workforce within community but close proximity to Page and Tuba City, AZ. May also reference Figure C-3: Resident Workers in the FBFA Region, 2015 in the study.
Location relative to tourism attractions/routes	Located off US Highway 89 in close proximity to Horseshoe Bend, Antelope Canyon, Lake Powell and Page, AZ.
Other potential tourism-location attributes	Grand Canyon, Monument Valley, Navajo Mountain, Glen Canyon, and the Grand Circle.
Overall site/area image	Potential rest area for tourists located off the US Highway 89 with beautiful canyon landscapes.
Roadway infrastructure	Located at major intersection at US Highway 89 and Indian Route 20. May also reference Figure C-8: Traffic Counts in the FBFA in the study.
Water infrastructure	No water infrastructure information received from the Navajo Tribal Utility Authority. Potential water infrastructure within the area.
Wastewater infrastructure	No wastewater infrastructure information received from the Navajo Tribal Utility Authority. Potential wastewater infrastructure within the area.
Broadband or other internet infrastructure	No broadband or other internet infrastructure information received from the Navajo Tribal Utility Authority. Potential broadband and/or other internet infrastructure.
Electrical and other energy infrastructure	No electrical and other energy infrastructure information received from the Navajo Tribal Utility Authority. Potential electrical and other energy infrastructure.
Other site conditions to be noted	Planned healthcare and housing development from the Indian Health Service at the highway intersection located within the Tuba City chapter boundary.

F. Site Analysis

Site Analysis Considerations

Project information obtained from Navajo Nation Division of Economic Development

PROJECT PRIORITIES				
Year	Task	Location	Project	Brief Description
1	Development	Bodaway/ Gap	Vendor Site Development	Develop a Vending Site for Local Vendors. Waterless Restroom, Pull Out Along Rte89/ Marble Canyon & Signage
1	Infrastructure	Bodaway/ Gap	Vendor Site Development	Marble Canyon/Big Cut; 2 Waterless Restrooms
2	Construction	Bodaway/ Gap	Antelope Trail	Vending Site Improvement & Construction
2	Infrastructure	Bodaway/ Gap	Cedar Ridge Business Site	Ethnographic Study-Historic, Building, & Infrastructure Design Construction

Chapter	Status	Acreage
Bodaway/Gap	Water & waste water lines and access road have been constructed with various outside grant funds.	4 acres
Bodaway/Gap	Previously a T.P. site, now vacant. Needs waste water disposal system (sewer lagoon.)	4 acres
Bodaway/Gap	Identified as Chapter property but there are some interest from business people.	12 acres
Bodaway/Gap	Barney Enterprise, LLC received Chapter resolution for a Laundromat but lacks land approval for an access road. Undeveloped.	3 acres
Bodaway/Gap	Land identified for gravel site, land survey, archaeological and environmental assessment completed but needs plans for a spring to get compliance determination from NN Fish & Wildlife.	50 acres
Bodaway/Gap	NN approved land withdrawal, needs master plan, engineering plan & design for infrastructure & construction of infrastructure.	100 acres

F. Site Analysis

Site Analysis Considerations

Community: Cameron	General community-area conditions
Specific Area Plan	Yes, listed in their Community Land Use Plans (CLUP's) and DED Project Priority Listing.
Proximity to existing urban development	Community located within close proximity to the border town Flagstaff, AZ.
Fire/police/other emergency response availability	Community located in rural area with emergency response availability from Flagstaff, AZ.
Location relative to Opportunity Zone	Yes, located both in the FBFA and Opportunity Zone.
Location relative to local population base [in FBFA]	Located within the center of the Cameron community.
Accessibility to workforce [in FBFA]	High number of local resident workforce within community but close proximity to Flagstaff, Tuba City and the Grand Canyon. May also reference Figure C-3: Resident Workers in the FBFA Region, 2015 in the study.
Location relative to tourism attractions/routes	Located off US Highway 89 in close proximity to the Grand Canyon, Cameron Trading Post, Flagstaff, AZ and the proposed Grand Falls Highway.
Other potential tourism-location attributes	The Grand Circle, Little Colorado River, Wupatki National Monument, Coconino National Forest, Sunset Crater and Grand Falls.
Overall site/area image	Located at a major cross intersection in route to Grand Canyon to the west; Page, AZ to the north; proposed Grand Falls Highway to the east; and Flagstaff, AZ to the south.
Roadway infrastructure	Located at major road intersection at US Highway 89 and State Highway 64. May also reference Figure C-8: Traffic Counts in the FBFA in the study.
Water infrastructure	No water infrastructure information received from the Navajo Tribal Utility Authority. Potential water infrastructure within the area.
Wastewater infrastructure	No wastewater infrastructure information received from the Navajo Tribal Utility Authority. Potential wastewater infrastructure within the area.
Broadband or other internet infrastructure	No broadband or other internet infrastructure information received from the Navajo Tribal Utility Authority. Potential broadband and/or other internet infrastructure.
Electrical and other energy infrastructure	No electrical and other energy infrastructure information received from the Navajo Tribal Utility Authority. Potential electrical and other energy infrastructure.
Other site conditions to be noted	A new Scenic Byway, known as the Grand Falls Highway, is currently being proposed as a New Gateway to the Navajo Nation's Western Agency, which is 50% located within the FBFA boundary and could highly impact the future economic conditions of the region.

F. Site Analysis

Site Analysis Considerations

Project information obtained from Navajo Nation Division of Economic Development

PROJECT PRIORITIES

Year	Task	Location	Project	Brief Description
1	Study	Cameron	Museum/ Cultural Center	Market Feasibility Study

UNDEVELOPED CHAPTER COMMERCIAL TRACTS

Chapter	Status	Acreage
Cameron	Chapter approved supporting resolution for land withdrawal. Contract for land survey is pending approval at NN Risk Management. Hotel Development being proposed by DED.	12 acres
Cameron	Chapter approved supporting resolution for land withdrawal. Contract for land survey is pending approval at NN Risk Management. Chapter is interested in a Visitor and Cultural Center.	40 acres

F. Site Analysis

Site Analysis Considerations

Community: Tuba City	General community-area conditions
Specific Area Plan	Yes, listed in their Community Land Use Plans (CLUP's) and DED Project Priority Listing.
Proximity to existing urban development	Yes, located in the middle of the border towns Page and Flagstaff, AZ
Fire/police/other emergency response availability	Community located in rural area with emergency response availability from the Tuba City Regional Healthcare.
Location relative to Opportunity Zone	Yes, located both in the FBFA and Opportunity Zone.
Location relative to local population base [in FBFA]	Located within the center of the Tuba City community.
Accessibility to workforce [in FBFA]	High number of local resident workforce within community but close proximity to Cameron and Kayenta, AZ. May also reference Figure C-3: Resident Workers in the FBFA Region, 2015 in the study.
Location relative to tourism attractions/routes	Located nearest US Highway 89 and US Highway 160 in close proximity and in route to Monument Valley in Kayenta, AZ, the Hopi Tribe and within the Grand Circle.
Other potential tourism-location attributes	Dinosaur Tracks, Coalmine Canyon, and Tuba City Fairgrounds.
Overall site/area image	Growing community with potential commercial development for both tourists and local residents, especially being located nearest the US Highway 89 and US Highway 160 in close proximity and in route to Monument Valley in Kayenta, AZ, the Hopi Tribe and within the Grand Circle.
Roadway infrastructure	Located near major road intersection at US Highway 89 and US Highway 160. May also reference Figure C-8: Traffic Counts in the FBFA in the study.
Water infrastructure	No water infrastructure information received from the Navajo Tribal Utility Authority. Potential water infrastructure within the area.
Wastewater infrastructure	No wastewater infrastructure information received from the Navajo Tribal Utility Authority. Potential wastewater infrastructure within the area.
Broadband or other internet infrastructure	No broadband or other internet infrastructure information received from the Navajo Tribal Utility Authority. Potential broadband and/or other internet infrastructure.
Electrical and other energy infrastructure	No electrical and other energy infrastructure information received from the Navajo Tribal Utility Authority. Potential electrical and other energy infrastructure.
Other site conditions to be noted	There are a number of fee simple lands located in and around the community. There are also a number of abandoned Indian Health Service buildings and housing located on the north side of the community potential for clean-up and re-use. The Tuba City Airport can benefit the chapters of Tuba City, Cameron, Coalmine Canyon, and Bodaway-Gap, and potentially be expanded in capacity and services.

F. Site Analysis

Residual Land Value Analysis

Project information obtained from Navajo Nation Division of Economic Development

PROJECT PRIORITIES

Year	Task	Location	Project	Brief Description
1	Infrastructure	Tuba City	Cavesa's Car Wash, Laundromat	Utilities, Earthwork & Access Road
1	Redevelop	Tuba City	Former Redd LeChee Site	Demolition & Clean Up, Redevelopment-Hotel
1	Study	Tuba City	Former Blue Sage Ventures, LLC	Appraisal, Land Survey, Development-Hotel
1	Clean Up	Tuba City	Former Ferrell Gas Site	Demolition & Site Clean Up
1	Infrastructure	Tuba City	Terraform Development - Apartments, Offices, Wellness Center, Restaurant	Infrastructure Development
1	Infrastructure	Tuba City	TC Auto Tec. (Barney Enterprises)	Parking Lot & Access Road
1	Infrastructure	Tuba City	Terraform Dev., LLC	Design, Construct, & Infrastructure
1	Infrastructure	Tuba City	Kerley Valley Commercial Site (25 Acres)	Infrastructure Design/Construction
1	Clean Up	Tuba City	Former Desert Memorial Funeral Home	Demolition and Site Clean Up
2	Construction	Tuba City	WRBDO Building Project	Construction
2	Development	Tuba City	Dinosaur Track	Development
2	Development	Tuba City/Gap	Northwest Corridor Development	C-Store & Motel Development

UNDEVELOPED CHAPTER COMMERCIAL TRACTS

Chapter	Status	Acreage
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F. Site Analysis

Site Analysis Considerations

Table F-2. Secondary Growth Area Checklist

Community	General community-area characteristics
Specific Area Plan	[Is there a plan that applies? Name of plan?]
Proximity to existing urban development	[How far is the nearest Navajo or border town community?]
Fire/police/other emergency response availability	[Where would these come from?]
Locations relative to Opportunity Zone	[Yes/no]
Locations relative to local population base (in FBFA)	[Proximity to existing urban development?]
Accessibility to workforce (in FBFA)	[Proximity to existing workforce?]
Location relative to tourism attractions/routes	[Closest to what attraction; What highway?]
Other potential tourism-location attributes	[Surrounding scenic areas? Sites that are under the radar for tourists?]
Overall site/area image	[What is appeal or negative influence when looking at overall area or certain areas?]
Roadway infrastructure	[Major highways or other main routes?]
Water infrastructure	[What do we know about, summarize, or we do not know]
Wastewater infrastructure	[What do we know about, summarize, or we do not know]
Broadband or other internet infrastructure	[What do we know about, summarize, or we do not know]
Electrical and other energy infrastructure	[What do we know about, summarize, or we do not know]
Other conditions to be noted	[What's important not covered above?]

F. Site Analysis

Residual Land Value Analysis

Project information obtained from Navajo Nation Division of Economic Development

PROJECT PRIORITIES

Year	Task	Location	Project	Brief Description
1	Infrastructure	Coalmine Canyon/ Tuba City	Kerley Valley Commercial Site	Site Work-Water/Sewer, Access Road, Drainage & Construction
1	Infrastructure	Leupp	Young Tours	Design & Construct Access Road
2	Development	Kaibeto	80 Acres Commercial Site	Development: Mix Commercial & Light Industrial
2	Infrastructure	Kaibeto	TB Tire Shop & Tour Business	Design, Construct Infrastructure & Access Road
2	Infrastructure	Kaibeto	8 & 10 Acres Commercial Site	Infrastructure, Access Roads & Parking Lot
2	Study	Leupp	Industrial Park	Master Plan, Lot Division & Utility Designation
2	Infrastructure	Tonalea	9 Acres Commercial Site	Utilities & Access Roads

UNDEVELOPED CHAPTER COMMERCIAL TRACTS

Chapter	Status	Acreage
Coalmine Canyon	Commercial site needs engineering plan & design for infrastructure and construction of the infrastructure.	13 acres
Coalmine Canyon	Light industrial site needs engineering plan & design for infrastructure and construction of the infrastructure. This site is lower than the community sewer lagoon so on-site waste disposal system will be required.	18 acres

F. Site Analysis

Site Analysis Considerations

Coalmine Canyon	Dinosaur Track tourism site. Land withdrawal completed. Meetings in process to put in a waterless restroom and additional tourism development.	4 acres
Coalmine Canyon	Commercial & Light Industrial Site. Land withdrawal completed. Engineering plan & design completed. Need funding for infrastructure development and groundwork.	27 acres
Kaibeto	Commercial & Light Industrial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Need infrastructure.	120 acres
Kaibeto	Commercial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Need infrastructure.	80 acres
Kaibeto	Commercial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Market Feasibility Study completed. Needs final engineering plan & design and construction of all infrastructure with access road.	10 acres
Kaibeto	Commercial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Market Feasibility Study completed. Needs final engineering plan, design and construction of all infrastructure with access road. There is a 3 acre Business Site Lease within the 8 acres.	8 acres
Kaibeto	Old Bennett's Corner, first original lease was terminated, 2nd lease was terminated again. There was in interest from another individual, Chapter approved resolution but client has not started working on the BSL.	3 acres
Tonalea	Commercial tract has an approved land withdrawal. Engineering plan & design are completed. Need funding for construction of infrastructure with access roads. Chapter has funding for Market Feasibility Study.	9 acres

INDUSTRIAL PARK

Project	Brief Description	Acres
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F. Site Analysis

Residual Land Value Analysis

The residual land value analysis is a recommended development-information concept that calculates the value of the land based on the building costs and other financial data. The concept “backs out” the costs associated with the land on which a building sits, based on the building and land costs being supported by one or more financially functional businesses. The concept may also be utilized when a specific site is not identified within a region, community and/or area. The analysis includes the following steps, all incorporated within a series of individual spreadsheet models for land-use types including a grocery store, small and larger hotels, a generic retail store, and a restaurant (in the Financial Analysis section below):

- The “bottom line” of a business operation (or more than one) is estimated through the business financial feasibility modeling process.
- The costs for a building occupied by that business are estimated based on industry standards, specific to a location or area where obtainable.
- The carrying costs for the building constructed (for example debt service and management costs) are compared to the business’ bottom line and factors that represent reasonable allocation of business proceeds to real estate rents (as a part of doing business). In this sense, the building is treated as a separate business that would have its own reasonable level of profitability.
- The theoretical “value” of the real estate (the building and land, as a separate business entity) can be estimated using another set of real estate-related industry standards, namely the capitalization rate applied to the net operating income of the building as a business.
- This value, minus the cost to build the building, equals the residual land value – or in other words the money that can be applied to the land, either in terms of its purchase price or the costs to make it developable through bringing infrastructure to the site (or both).
- The residual land value then is used as a benchmark against which any site-preparation infrastructure development costs, or other site-related costs or sales prices, are compared. If costs are in excess of what the supportable value is estimated to be in the model, the project is not feasible unless excess costs are covered by some other means.

Within the set of financial feasibility models prepared for the FBFA, the hotel model follows a different format from the land residual concept, given that the hotel is so integral to its physical structure. For the hotel, a reasonable allocation of land value as a proportion of total project investment, and a land rental amount based on that value, are incorporated into the model. The land rent represents a percent of total value (the rent amount can be thought of as a financial return to the value of land). The hotel model is similar to the other land residual models in that it incorporates “reasonable land value” assumptions, and thus is also independent of actual land prices/development costs.

The model frameworks have the advantage of recognizing the potential for site location options, within some defined area (x miles from a community center, etc.). The method is commonly used in situations where the cost to purchase or make land developable is a critical component of the feasibility of some real estate development project, and is therefore often applied to estimating the amount of a public subsidy to enable a development project to occur that would otherwise not be financially feasible (for example in a real estate redevelopment project in which a municipality has agreed to be a partner in order to help revitalize a distressed area).

F. Site Analysis

Chapter Site Visits

Indigenous Design Studio + Architecture conducted a series of Tour Visits with each of the nine Chapters during the week of October 16th-19th. The Visit consisted on meeting with Chapter Officials and giving a project update, discussing the data collected and getting feedback from each Chapter on what was presented but also on what status of development each Chapter is in.

Each day is separated into the following categories:

Day 1:

The start of the FBFA Chapters Tour began with Leupp and Tolani Lake Chapter, where we met with Chapter officials for a progress report meeting. Feedback discussed involved the current issues the Chapters were facing and feedback on the data presented.

Day 2:

Day 2 Chapters Tour Visit were with Tuba City, Coalmine Canyon, and Tonalea Chapters. Feedback included plans for each Chapter and some current events during the Visit that were beneficial to the data collection.

Day 3:

For Day 3 on the Chapters Tour Visit, we meet with Kaibeto and Coppermine Chapters. Feedback involved presentations of future plans in the Chapters and of the project.

Day 4:

One the final day of the Chapters Tour Visit, we met with Bodaway-Gap and Cameron Chapters. Feedback included the how tourism effected the economy in these two Chapters.

Local Attractions:

While on the Chapters Tour Visit, we also visited the local attractions in proximity of each site. This helped to show how tourism affected each Chapter, including traffic flow and what brought visitors to the Chapters.

The attractions included:

- Grand Canyon
- Monument Valley
- Horseshoe Bend
- Antelope Canyon
- Coalmine Canyon
- Square Butte

F. Site Analysis

Chapter Site Visits



A wide-angle photograph of the Grand Canyon at sunset. The sky is a deep orange with some clouds. The canyon walls are layered and rugged, with a prominent rim on the right. The foreground shows a rocky, uneven surface.

G | Community Analysis

Grand Canyon East Rim & Confluence, Grand Canyon, AZ - Bodaway-Gap Chapter

G. Community Analysis



G. Community Analysis

Community Analysis

The Community Analysis for the FBFA region consists of the following community development summary matrices.

Development options were identified for each of the three community development-focus areas.

G. Community Analysis

Community Summary Martices

The series of tables below summarize key market-related information pertaining to categories and types of development options (Table G-1 and G-2) for each of the three community development-focus areas. (See Table D-4, sub-market areas - theoretical supportable store area and number of stores, adjusted for existing.) Note that the tables below address small business opportunities as being integral to each of the use types (rather than a separate category).

Uses addressed in the tables include local-serving commercial, industrial, and tourism development.

Table G-1. Primary Growth Area Community Summary Matrix

Community: Bodaway-Gap		
Local-Serving Commercial Uses	Grocery-convenience store	Restaurant
Supportable area/number of establishments	(See note on competitive uses below)	(See discussion for this business type under the tourism table below; however, the population of Bodaway-Gap can by itself directly support at least one restaurant)
Small business applicability	Existing businesses are appropriately scaled for small business operations	
Why suitable for community	Route 20 is one of the more heavily traveled roads in the region that is not a major highway. Additional tourism development recommended for this area (below) could create additional demand for this type of use.	
Site selection guidance	Intersection of 89 and 20, where development exists, is likely to be the most developable location.	
Previous related project types identified	A healthcare facility is said to be planned for this location.	
Existing competitive or complementary uses	Existing uses at the site are likely to be adequately addressing the market as it exists at this time.	

Service-type uses also indicated as feasible: beauty salon, physician, and insurance office

Community: Bodaway-Gap		
Industrial Uses	Goods/service providers to hospitality businesses	Clean energy
Small business applicability	Ideal small business opportunities, given the range of sizes and investment amounts, etc., from small to larger.	Small businesses could be involved in providing services to installations.
Why suitable for community	Providers to the hospitality industry at this location could also reasonably serve hospitality businesses in Tuba City, the Grand Canyon, Cameron, and Page.	Existing powerline structure from NGS could be adapted to new installation.
Site selection guidance	Intersection of 89 and 20 is likely to be the most readily developable.	Remote siting.
Previous related project types identified		
Existing competitive or complementary uses	Existing stores could provide minimal additional market base.	

G. Community Analysis

Community: Bodaway-Gap		
Tourism	Hotel	Restaurant
Guidance on area/number of establishments	Small/budget or midsize hotel	A fast food or other restaurant type is potentially suitable
Small business applicability	Small businesses could be service providers to the hotel.	Small business operators could own/manage a restaurant of any appropriate size for the location, and a very small restaurant operation (even a food truck) could be part of the mix at this location
Why suitable for community	A hotel at this location would be an intervening opportunity for north-bound tourists prior to reaching Page, and would be closer to the Grand Canyon than Page or Flagstaff hotels.	The intersection of 89 and 20 is a natural stopping point for local and visitor travelers. A new hotel at this location would provide additional market support.
Site selection guidance	This scenic area is compromised somewhat by scattered existing development and power lines. If feasible from a utility-cost standpoint, a more “pristine” location, still as close as possible to the intersection, would be ideal.	Intersection of 89 and 20, where development exists, is likely to be the most cost-effectively developable location.
Previous related project types identified	A healthcare facility is said to be planned for this location, and would require some of the same support services as a hotel, namely food service and laundry service, for example.	Healthcare facility would provide additional market support.

Community: Cameron		
Local-Serving Commercial Uses	General merchandise store	Local-serving restaurant
Supportable area/number of establishments	Based on the demand analysis, demand is met to some degree by existing stores, recognizing that at least some of these (the trading posts) are likely to be serving the tourist market as well as the local population.	Based on the demand analysis, demand is largely met by existing establishments, which probably depend on travelers as well as some locals.
Small business applicability	Existing general stores would need to be assessed to estimate the range of general merchandise goods they offer, to identify potential gaps that might be filled by one or more small businesses.	(See tourism section for Cameron below)
Why suitable for community	Cameron has a modest population base, but it is easily accessible to and from the heart of the surrounding region. Existing general stores would need to be assessed in detail to estimate the extent to which they serve the local or tourist market.	The feasibility of a restaurant in Cameron would most likely depend on an expansion of tourism activity, and finding a niche that would also serve the local market that is not already being met
Site selection guidance	Existing development in Cameron is mostly focused in the area of the intersection of U.S. Highway 89 and Route 64 leading to the Grand Canyon, and is therefore likely to be the most cost-effective location for new development.	Restaurant siding in Cameron is probably more dependent on being close to the location of one or more new hotels than to existing development.
Previous related project types identified Existing competitive or complementary uses	Existing trading posts are located near the highway intersection and along Highway 89 near the Little Colorado River.	Fast food restaurant and restaurant inside existing trading post must be taken into consideration in terms of how completely these options serve the local market.

Service-type uses also indicated as feasible: beauty salon, physician, and insurance office

G. Community Analysis

Community: Cameron		
Industrial Uses	Goods/service providers to hospitality businesses	Touring companies or guide services
Small business applicability	Ideal small business opportunities, given the range of sizes and investment amounts, etc., from small to larger.	These could be very small guide-service operations or larger businesses involving buses and other services related to transporting tourists.
Why suitable for community	Providers to the hospitality industry at this location could also serve hospitality businesses in Tuba City, the Grand Canyon, and Flagstaff, and also along the Grand Falls Highway if/when built.	Cameron is well located with respect to various visitor attractions, especially the Little Colorado River and the Grand Canyon (as well as Wupatki and other lesser-known sites).
Site selection guidance	Intersection of 89 and 64 is likely to be the most readily developable.	If a formal site is needed, its location could be flexible and should not compete with sites requiring direct public access.
Previous related project types identified		
Existing competitive or complementary uses	Existing stores could provide minimal additional market base.	Existing touring companies that are concessionaires to the Grand Canyon National Park, and those associated with Antelope Canyon attractions, are shown elsewhere in this report (Competitive Analysis). A number of the Grand Canyon concessionaires are primarily in the business of river rafting, but coordination with the rafting and other services provided by any such groups would be important.

G. Community Analysis

Community: Cameron		
Tourism	Hotel	Restaurant
Guidance on area/number of establishments	A range of hotel types could potentially serve visitors from a Cameron location. For example, a hotel could be targeting the budget overnight traveler, and another travelers looking for a more immersive experience at a site along the Little Colorado or on the way to the Grand Canyon.	A restaurant in Cameron is more likely to be feasible with the development of one or more new hotels in the community, although a new restaurant could also offer different options from what already exist in the community to serve the local population.
Small business applicability	Small businesses could be service providers to the hotel.	Small business operators could own/manage a restaurant of any appropriate size for the community/visitors, including very small restaurant operations.
Why suitable for community	Cameron has three major assets that make it attractive for hospitality uses: 1) the intersection of US Highway 89 and Route 64, leading to the Grand Canyon, plus the potential for a new Grand Falls Highway to offer travelers an alternative route between the Grand Canyon and Interstate 40; 2) scenic locations along the Little Colorado River; and 3) being relatively close to both the Grand Canyon and Flagstaff, which can provide Canyon visitors with an alternative to Flagstaff.	Traffic from two directions, plus the potential for a future connection to the southeast by way of the Grand Falls Highway. One or more restaurants could support new hotels as they are developed in the community.
Site selection guidance	Budget hotels would likely be near the main highway intersection, and more scenic locations could be investigated for hotels that would offer a unique visitor experience, especially when compared to Flagstaff or Page.	Restaurants would tend to co-locate with hotels, unless some hotels are in locations too remote for accessibility on the part of a wide range of travelers (and locals).
Previous related project types identified	The proposed Grand Falls Highway would increase the potential for development in Cameron. Existing Cameron Trading Post RV Park is more likely to be a complementary rather than competitive use.	
Existing competitive or complementary uses	New project should differentiate from the existing Grand Canyon Hotel at Cameron Trading Post. Existing trading posts are complementary uses, and gas stations/convenience stores provide needed goods and services.	Existing fast food restaurant and restaurant inside trading post provide dining alternatives for travelers.

G. Community Analysis

Community: Tuba City		
Local-Serving Commercial Uses	General store	Local-serving restaurant
Supportable area/number of establishments	Based on the demand analysis, demand is not fully met by existing stores, recognizing also that the trading posts almost certainly serve the tourist market as well as the local population. The number of stores depends on store size, but even at 25,000 SF each, at least two additional stores could be supported.	Based on the demand analysis, demand is not fully met by existing establishments, which probably are also serving travelers as well as locals. Two additional moderately sized restaurants could theoretically be supported
Small business applicability	A detailed look at existing general stores could identify potential gaps that might be filled by one or more small businesses.	Small business operators could own/manage a restaurant of any appropriate size for the community, including very small restaurant operations, recognizing that the fast food segment may be fully covered already.
Why suitable for community	Because of its existing level of business and other development, plus its relatively central location to the FBFA, Tuba City is in some ways a natural location for additional local-serving business development. However, existing general stores would need to be assessed to estimate the extent to which they serve the local or tourist market, and the range of goods they have available. The detailed nature of existing businesses will affect the types and also business planning details of prospective new businesses. The existing sites or even existing buildings that are not fully utilized (or underutilized) at present may be available in the community. Locations along U.S. Highway 160 would generally be the most desirable, recognizing that part of the area near the intersection with Highway 264 is affected by floodplains.	The large population base at Tuba City would be able to support a wide range of restaurant types.
Site selection guidance		Existing buildings that are not fully utilized (or underutilized) at present may be available in the community.
Previous related project types identified		
Existing competitive or complementary uses		Fast-food restaurants are fairly well represented into the city already.

Service-type uses also indicated as feasible: multiple beauty salons, physicians, and insurance offices.

Community: Tuba City				
Industrial Uses	Contract manufacturing or other technology - related industries	Support for biotech firms	Food processing, logistics, enhanced garden farming, etc.	Tourism-supporting manufacturing, logistics, field services
Small business applicability	Niche-market opportunities, such as a machine shop, for example, might become available for small businesses.	Could be a relatively small business operation.	Many opportunities exist in various aspects of food production and processing.	These could be very small guide-service operations or larger businesses involving transporting tourists.
Why suitable for community	Access to labor plus a wider range of complementary	(Same as for manufacturing)	Central location to the region, existing agricultural activity	Central location to the FBFA region, plus the potential
Site selection guidance	Broadband access will be important.	Broadband access will probably be important.	Some of these activities could be remote from the urban area of the community.	Could be relatively remote with respect to the urbanized area.
Previous related project types identified				
Existing competitive or complementary uses			Southwest Native Transport Inc. is an existing logistics firm.	Existing touring companies that operate in the region are shown in the Competitive Analysis section of this report.

G. Community Analysis

Community: Tuba City	
Tourism	(General comments)
Guidance on area/number of establishments	Existing hotel facilities in Tuba City and also adjacent Moenkopi might be fully covering the need for visitor accommodations in this relatively urbanized area of the FBFA.
Small business applicability	
Why suitable for community	Tuba City's function as an urban center in the FBFA region would tend to generate a certain amount of demand for hotel space. The desirability and feasibility of tourist accommodations in the community would need to be balanced carefully with the concept of providing hotels in the region more closely associated with undisturbed scenic attractions and locations on major tourism travel routes, including Cameron and Bodaway-Gap.
Site selection guidance	Tuba City's primary advantage for tourism development is the fact that existing urban goods and services available in the community provide some degree of convenience and cost advantage to other businesses, including tourism-serving businesses, locating there. Any new development in Tuba City, whether targeting locals or tourists, could be combined with streetscape or other efforts to make the community more attractive. Community enhancement may be more practical in Tuba City than other FBFA places because existing development in other communities is often dispersed.
Previous related project types identified	
Existing competitive or complementary uses	Quality Inn Navajo Nation, Gray Hills Inn, Moenkopi Legacy Inn and Suites (Moenkopi)

Table F-2. Secondary Growth Area Community Summary Matrix

Local-Serving Commercial Uses	General merchandise store	Grocery	Restaurants	Building material, hardware, etc.
Supportable area/number of establishments	Luepp and Kaibeto: up to three stores each; Tonalea: 1 to 2 stores	Luepp and Tonalea: up to 3-4 stores each; Kaibeto: 2 stores	Luepp, Tonalea, and Kaibeto: two restaurants each	The secondary growth area could support 1 to 2 additional stores
Small business applicability	At least some of these stores could be suitable for small business operations		Small business operators could own/manage a restaurant of any appropriate size for the community, including very small restaurant operations	Not likely to involve very small businesses
Why suitable for community	Market demand exists in communities, as shown above	Market demand exists in communities, as shown above	Local market demand plus potential to serve visitors	Market demand exists in communities, as shown above
Site selection guidance	Opportunities are most probable along major travel routes. In traffic-count order for these communities (high to low traffic): Tonalea, Kaibeto, Luepp. However a new Grand Falls Highway could considerably increase the prospects for Luepp. Luepp also has commuter and other traffic related to Dilkon.			
Previous related project types identified				
Existing competitive or complementary uses	Based on the community inventories, there is a gas station/convenience market in Luepp and in Tonalea, and a trading post in Kerley Valley and Tonalea.			

Service-type uses also indicated as feasible: multiple beauty salons, physicians, and insurance offices.

G. Community Analysis

Table F-2. Secondary Growth Area Community Summary Matrix, Continued

Industrial Uses	Luepp: Contract manufacturing or other technology-related industries	Tonalea and Kaibeto: Support for biotech firms	Luepp: Food processing, logistics, enhanced garden farming, etc.	Luepp, with Grand Falls Highway, and Kaibeto/Tonalea: Tourism-supporting manufacturing, logistics, field services	All areas: Clean energy, depending on siting feasibility.
Small business applicability	Niche-market opportunities, such as a machine shop, for example, might become available for small businesses.	Could be a relatively small business operation.	Many opportunities exist in various aspects of food production and processing.	These could be very small guide-service operations or larger businesses involving transporting tourists.	Small businesses could be involved in providing services to installations.
Why suitable for community	Luepp has complementary use.	Reasonable access to workforce	Existing agricultural activity is in the area.	Would have strong connection with Cameron/Grand Canyon.	Existing powerline structure from NGS and other sources could be adapted to new installation. Most accessible: Coppermine and (other powerline) Coalmine Canyon.
Site selection guidance	Broadband access will be important.	Broadband access will probably be important.	Some of these activities could be remote from the urban area of the community.	Could be relatively remote with respect to the urbanized area.	Remote siting.
Previous related project types identified					
Existing competitive or complementary uses	Tooh Dineh Industries in Luepp.			Existing touring companies that operate in the Antelope Canyon area are shown in the Competitive Analysis section of this report.	

G. Community Analysis

Table F-2. Secondary Growth Area Community Summary Matrix, Continued

Tourism	Hotel	Restaurant
Guidance on area/number of establishments	A range of hotel types could potentially serve visitors from different locations within the Secondary Growth Area. For example, a hotel could be targeting the budget overnight traveler, and another travelers looking for a more immersive experience at scenic sites.	(See discussion under Local-Serving Commercial Uses, above)
Small business applicability	Small businesses could be service providers to the hotel.	Small business operators could own/manage a restaurant of any appropriate size for the community, including very small restaurant operations.
Why suitable for community	Existing travel routes are one type of criteria. In traffic-count order for these communities (high to low traffic): Tonalea, Kaibeto, Luepp. However, a new Grand Falls Highway could considerably increase the prospects for Luepp, both in terms of overall tourism traffic and also access to Grand Falls as a possible development site.	Restaurant development can accompany hotel development and also be coordinated with local market demand, to serve both tourists and locals.
Site selection guidance	Budget hotels would likely be near the main highways, and more scenic locations could be investigated for hotels that would offer a unique visitor experience, especially when compared to Flagstaff or Page.	Ideal locations are those that can be readily accessible to both the local population and tourists.
Previous related project types identified		
Existing competitive or complementary uses	Existing trading posts in Tonalea and Kerley Valley are complementary uses, and gas stations/convenience stores in Tonalea and Luepp provide needed goods and services.	The Secondary Growth Area has few if any existing restaurants.

A photograph of a tall, layered rock formation in a desert canyon, with a large white 'H' and the text 'Financial Analysis' overlaid.

H | Financial Analysis



H. Financial Analysis

Financial Analysis

The Financial Analysis for the FBFA region consists of the following financial analysis models for a set of prototype business types and their associated building components.

Financial feasibility prototype models for application to development sites in the FBFA were prepared for the following uses:

- Small, Budget-Oriented Hotel
- Select-Service Hotel
- Grocery store
- Restaurant
- General (generic) retail

The structure of the models and model inputs reflect typical pro forma business-operation formats for the different uses modeled. The models provide a sense of the amount of investment required, for both business operations and buildings to accommodate the businesses.

H. Financial Analysis

Financial feasibility prototype models for application to development sites in the FBFA were prepared for the following uses:

- Small, Budget-Oriented Hotel
- Select-Service Hotel
- Grocery store
- Restaurant
- General (generic) retail

The structure of the models and model inputs came from a variety of sources (see References section), and the models reflect typical pro forma business-operation formats for the different uses modeled. The models provide a sense of the amount of investment required, for both business operations and buildings to accommodate the businesses. For a ten-year period, models show margins associated with operating the business and the underlying real estate, line-item costs, and other details. For a stabilized single year of operation the models show breakeven points, staffing, and Navajo Nation taxes generated. Tables summarizing the results of the financial analysis prepared for each of the four use types (for stabilized single year of operation) are shown below.

In addition to figures for net profits, the models show the Internal Rate of Return (IRR) for the amount of equity contributed to the business by the owners/investors. Equity contributions in these models include both the percentage of project costs that are not financed by lenders, plus inventory, operating capital, and other startup costs that the business owner is likely to incur. Although the IRR concept can be used in a number of different ways, as used in these models the cash flow upon which the IRR is based is structured as follows, which highlights the profitability measure that is likely to be of most interest to the entrepreneur:

- The total equity contribution occurs at the beginning of the cash flow period.
- This contribution (as a negative number) is then offset (assuming the numbers are positive) by annual profits after debt service, according to the cash flow model.
- While the cash flow models extend for only a ten-year period, the IRR calculations extend for 20 years, with the cash flows after year 10 simulated based on the model results. (Although the cash flow models include inflation, because this positively affects the bottom line of businesses that have fixed-rate financing, the effects of overall inflation are eliminated for the IRR calculation).

Summary tables (Tables H-1 through H-5) from the models are shown below. The complete models are shown in Appendix C .

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Table H-1. Summary Table - Small, Budget-Oriented Hotel

Summary Table - Small, Budget-Oriented Hotel		
Number of Units:	65	
Annual Occupancy (assumption for cash flow):	82%	
Average Daily Rate:	\$85.00	
Sales/revenue		
Rooms	\$1,653,633	
Other sources (concessions, etc.)	\$105,551	
Total revenues	\$1,759,184	
Operational expenses		
Rooms	\$413,408	
Other operations	\$75,997	
Total operational expenses	\$489,405	

Departmental Profit	\$1,269,779	
Total Undistributed Operating Expenses	\$453,869	
Gross Operating Profit	\$815,910	
Total Fixed Expenses	\$73,886	
Net Operating Income After Reserve	\$654,065	
Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*		On Equity amount
<i>Financing options:</i>		
Conventional with guaranty-1	13.98%	\$1,430,000
Conventional with guaranty-2	9.54%	\$1,787,500
Conventional with guaranty-3	7.69%	\$1,072,500
Breakeven revenue (middle scenario)	\$1,406,620	
Employment estimate	52	
Taxes paid to NN:		
Sales	\$105,551	
Lodging	\$140,735	
PIT	\$14,073	
Total structure/grounds hard and soft costs	\$7,150,000	
Implied theoretical land value	\$858,000	
Implied land value per acre (with land profit applied)	\$710,402	
Land value per SF of land	\$16.31	
* Periods past 10 years simulated to reflect ongoing, or cessation of, debt service		

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Table H-2. Summary Table - Select-Service Hotel

Summary Table - Select-Service Hotel		
Number of Units:	125	
Annual Occupancy (assumption for cash flow):	82%	
Average Daily Rate:	\$150.00	
Sales/revenue		
Rooms	\$5,611,875	
Food & beverage	\$1,924,071	
Other sources (concessions, etc.)	\$481,018	
Total revenues	\$8,016,964	
Operational expenses		
Rooms	\$1,402,969	
Food & beverage	\$1,346,850	
Other operations	\$346,333	
Total operational expenses	\$3,096,152	
Departmental Profit	\$4,920,813	
Total Undistributed Operating Expenses	\$2,068,377	
Gross Operating Profit	\$2,852,436	
Total Fixed Expenses	\$336,713	
Net Operating Income After Reserve	\$2,114,875	
Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*		Equity amount
<i>Financing options:</i>		
Conventional-1	7.86%	\$6,250,000
Conventional-2	6.67%	\$7,500,000
Conventional-3	5.56%	\$8,750,000
Breakeven revenue	\$6,481,951	
Employment estimate	150	
Taxes paid to NN:		
Sales	\$481,018	
Lodging	\$641,357	
PIT	\$64,136	
Total structure/grounds hard and soft costs	\$25,000,000	
Implied theoretical land value	\$3,000,000	
Implied land value per acre (with land profit applied)	\$1,263,417	
Land value per SF of land	\$29.00	
* Periods past 10 years simulated to reflect ongoing, or cessation of, debt service		

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Table H-3. Summary Table - Grocery

Summary Table - Grocery		
Operating business		
Sales/revenue	\$6,375,000	
Total Variable Costs	\$4,787,625	
Total Fixed Costs	\$1,488,031	
Net operating income	\$99,344	
Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*		Equity amount
<i>Financing options:</i>		
Scenario 1, SBA 504, w/ bank	13.9%	\$283,000
Scenario 2, USDA B&I	12.2%	\$319,500
Scenario 3, bank with guaranty	10.8%	\$356,000
Breakeven revenue	\$5,976,027	
Employment estimate	32	
Taxes paid to NN:		
Sales	\$382,500	
PIT	\$3,800	
Start-up costs	\$940,000	
Building as a business		
Total structure/grounds hard and soft costs	\$2,411,932	
Landlord's NOI	\$236,855	
Land Value per acre	\$291,779	
Land Value per SF of land	\$6.70	
* periods past 10 years simulated to reflect ongoing, or cessation of, debt service		

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Table H-4. Summary Table - Restaurant

Summary Table - Restaurant		
Operating business		
Sales/revenue	\$1,190,000	
Cost of sales	\$373,422	
Total Variable Costs	\$196,231	
Total Fixed Costs	\$536,259	
Net operating income	\$84,088	
Breakeven revenue	\$536,259	
Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*		Equity amount
<i>Financing options:</i>		
Scenario 1, SBA 504, w/ bank	24.3%	\$131,700
Scenario 2, USDA B&I	22.6%	\$146,050
Scenario 3, bank with guaranty	19.8%	\$160,400
Employment estimate:		
Staff employees	17	
Management/owner	3	
Taxes paid to NN:		
Sales	\$71,400	
PIT	\$5,400	
Start-up costs	\$390,000	
Building as a business		
Total structure/grounds hard and soft costs	\$950,455	
Landlord's NOI	\$90,002	
Land Value per acre	\$381,966	
Land Value per SF of land	\$8.77	
* periods past 10 years simulated to reflect ongoing, or cessation of, debt service		

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Table H-5. Summary Table - General Retail

Summary Table - General Retail		
Operating business		
Sales/revenue	\$750,000	
Total Variable Costs	\$517,500	
Total Fixed Costs	\$199,291	
Net operating income	\$33,209	
Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*		Equity amount
<i>Financing options:</i>		
Scenario 1, SBA 504, w/ bank	19.5%	\$93,100
Scenario 2, USDA B&I	17.7%	\$102,150
Scenario 3, bank with guaranty	13.3%	\$111,200
Breakeven revenue	\$642,873	
Employment		
Staff employees	4	
Management/owner	1	
Taxes paid to NN		
Sales	\$45,000	
PIT	\$2,400	
Start-up costs	\$256,000	
Building as a business		
Total structure/grounds hard and soft costs	\$406,455	
Landlord's NOI	\$41,254	
Land Value per acre	\$345,509	
Land Value per SF of land	\$7.93	
* periods past 10 years simulated to reflect ongoing, or cessation of, debt service		

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The financial models were prepared with the assumption that a number of alternative sites could at some point be identified as prospects for developing the various uses. For this reason, a “residual land value analysis” concept was incorporated into the business financial feasibility models, with the exception of the hotel model, as explained below. With this analysis framework, the business operation is analyzed separately from the “business” of developing and managing the building occupied by the operating business (retail store, etc.). This approach, described in the Site Analysis section above, is advantageous in that it sets a theoretical maximum price for, or cost to develop, the underlying land on which the building and business sit. It also mirrors the reality that business owners, particularly new business owners, are more likely to lease space from a landlord than to develop their own buildings, because by doing so they are able to focus their energies, resources, credit rating, etc. on the business operation exclusively. (The “building as a business” portion of the models treat the building as applicable only to the space requirements of the operational business being analyzed. However, the building costs and other details are based on the assumption that buildings are probably larger, multitenant spaces.)

Lending Programs

A lending program particularly applicable to Indian Country⁹ is the Indian Affairs Loan Guaranty Program, administered by the Department of the Interior Office of Indian Energy and Economic Development. As the name implies, this program guarantees loans made by commercial banks, and the loans are available to business entities, for-profit or otherwise. Tribes and tribal enterprises can have a higher maximum loan amount than individuals, who are limited to \$500,000. Terms can go to 30 years. Other programs that offer potential advantages for lending to Native Americans are included in Table H-6 on the following page.

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⁹ Source of this material is Federal Loan Programs for Economic and Community Development throughout Indian Country and Alaska. United States Department of Agriculture, Office of Tribal Relations. August, 2012, plus program-specific websites.

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Table H-6. Key Lending Programs Applicable in Indian Country

Agency	Program	Eligibility limits [entities and project types]	Loan amount limit range
DOI – Office of Indian Energy and Economic Development	Indian Affairs Loan Guaranty Program	Majority Indian-Owned (51%) Business Entities contributing to a reservation or BIA Service Area in a capacity of a for-profit or not-for-profit commercial venture	\$500,000 Individual limit; Higher limits for tribes, tribal enterprises and Indian-owned business entities based upon resources. Most recent guarantees average \$3 million.
SBA	7(a) Loan Guaranty Program	For-profit businesses as defined by SBA size standards with restrictions: 1. Acquiring land, purchase existing buildings, expanding or renovate buildings, or constructing new buildings 2. Acquiring and installing fixed assets, additional inventory, purchasing supplies and raw materials, purchasing a Business, starting a Business, Leasehold improvements, Term working capital 3. Certain conditions permit outstanding debts to be refinanced and may obtain revolving lines of credit and programs for Seasonal and Contract financing	Loan limit is \$5.0 million. SBA's limit to any one business is \$3.75 million. One business can have multiple loans guaranteed by SBA, but SBA portion cannot exceed \$3.75 million.
SBA	504 Loan Guaranty Program	For-profit businesses as defined by SBA size standards with restrictions: 1. Project financing for the acquisition of long-term fixed assets 2. Refinance long-term fixed asset debt under certain conditions 3. Working Capital under certain conditions 4. Reduce Energy Consumption or upgrade Renewable Energy Sources	\$5.0 Million is basic maximum; Manufacturing businesses and green businesses can be up to \$5.5 million.
SBA	SBA Express	Operating for-profit businesses as defined by SBA size standards with restrictions .. Used for working capital term loans, a line of credit, or commercial real estate term loans	\$350,000
SBA	Export Express	Operating businesses as defined by SBA standards with restrictions 1. Beginning or expanding export business	Limited To \$500,000 (including any outstanding SBA loans)
SBA	Community Advantage	Only businesses operating in an underserved area and meet the defined terms of SBA standards can apply for these loans. Loans can be used for purchasing equipment, real estate, refinance existing debt, or to use as working capital	Limited to \$350,000. Guaranty: 85% for loans of \$150,000 or less. 75% for loans over \$150,000
USDA Rural Development	Business and Industry (B&I) Guaranteed Loan Program	Individuals, partnerships, cooperatives, for-profit or nonprofit corporations, federally recognized tribal group, or public body. Individual borrowers must be citizens of the U.S. or reside in the U.S. after being legally admitted for permanent residence. Eligible business activities include manufacturing, wholesaling, retailing, providing services, and other activities that provide employment and improve the economic or environmental climate.	\$10 Million; exception may be granted by Administrator for up to \$25 Million.

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All programs require equity contributions, which can vary from a high of 20 percent to “reasonable” amounts determined case-by-case. New businesses will require more equity than existing, for some programs. Loan guarantee programs are limited to loan coverage percentages of 75 to 90 percent. SBA’s 7(a) program has lower percent limits as loan amounts increase (85% for amounts up to \$150,000 to 75% for amounts over). Terms of up to 30 years are available from some programs, and real estate loans typically can be at the upper end of the range of limits on length of loan. Other limits are intended to match the useful life of the object of the loan; so for example business equipment might be limited to 10 years. Most programs have fees of 2 to 3 percent.

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Project Analysis

I. Project Analysis



I. Project Analysis

Project Analysis

The Project Analysis for the FBFA region consists of the final project summary and recommendations based on the study.

The challenges to achieving successful property development in Indian Country, and the special problems associated with the FBFA, all suggest the need for an overriding strategic framework for development. First, the property development process can be formally established, and second, operational methods for implementing development plans need to be firmly in place for application throughout the region. While development for serving local populations must be very sensitive to local market conditions, the market for tourism projects is the entire region of visitor attractions, extending all across northern Arizona and into neighboring states as well.

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The need for extra measures in order to secure property development anywhere in Indian Country is well understood. Supply and demand market forces have no direct channel through which to operate, necessitating that other mechanisms are in place to identify potentially suitable properties, provide properties with necessary infrastructure, and bring all the parties to complete a project together: those who will be owners/managers of developed properties, business entrepreneurs, builders, investors and financiers, government grantors/lenders or other incentive program managers (including Opportunity Zone fund managers), workforce trainers and job-search coordinators, building tenants, and regulatory officials. These special mechanisms are all the more important in the FBFA, given the history of suppressed development in the area. Other particular challenges to property development in the region are also well understood: gaining a project's acceptance within the local community, securing unencumbered property upon which desired projects can be built, and providing for necessary infrastructure.

These challenges all suggest the need for an overriding strategic framework within which, first, the property development process can be formally established, and second, operational methods for implementing development plans are firmly in place to apply across the region. Within the strategic framework, the process and the operational systems are fully integrated. While this document is not a strategic plan for property development, the advantages of having some kind of comprehensive strategic approach to implement development concepts identified in this document can hardly be overstated.

Two broad categories of property development are discussed in this document: 1) development to provide space for local-serving businesses, and 2) development oriented to tourists and other highway travelers passing through the region. However, these two types are similar in a number of ways:

- In some cases, they will serve both markets. Restaurants oriented to travelers can also serve the local population, and vice versa. Travelers also need basic necessities such as groceries. Even hotels can serve the local population by providing meeting space for organizations and also facilitating the interactions of the local population with administrative, educational, health, and other officials across the Navajo Nation and from other places.
- All development requires infrastructure, and it is likely to be more cost-effective to serve multiple properties than a single use. This will not always be practical however because, for example, some hotels intended for extended stays or a resort-like experience will be in locations that are not readily accessible.
- Most projects require the same kinds of participating parties: investors/financers, tenant prospects, builders, etc. However, large-scale tourism projects are more likely to require outside investors and perhaps partnering business operators than local-serving projects.

The primary difference in the feasibility of local-serving versus tourism projects is that projects to serve the local population must be very sensitive to local market conditions: the number of households that can access businesses located at the project, and their incomes, and the extent, location, etc. of competing businesses and business locations. In this sense, the decision to develop a place for local-serving businesses in one location affects any other potential location within or close to the same market area, and opportunities actually need to be recalculated for every decision situation of this kind.

For tourism projects, the market is the entire region of visitor attractions, extending all across northern Arizona and into neighboring states as well (or one could think in terms of the Grand Circle). Well-traveled tourism routes can be advantageous, but visitors can also be attracted to out-of-the-way areas having special scenic and/or recreational opportunities. A decision to locate a tourism project in one part of the FBFA does not necessarily diminish the prospects for even a close-by location elsewhere

I. Project Analysis

in the region, and in fact such projects in proximity to one another may be mutually complementary, depending on the specifics of what is developed, why a location was selected, and similar considerations. In this sense, a strategic approach to tourism development would combine all these factors within a decision framework, which would be understood to be in need of repeated updating, as projects are implemented.

Development implementation options

The overall strategic framework established to implement projects in the FBFA could include establishing a “stable” of development resources, including interested parties for development partnering (financial, managerial, franchisor, or other), where such an approach would be desirable or otherwise necessary to secure financing and other details for an optimal project. For these prospective partners, and for other project participants, including especially investors/financers and entrepreneurs, as much certainty as possible as to where, when, and what type of development is expected to occur will be immensely valuable. However, in order to establish greater degrees of certainty, the following considerations will ideally be clarified:

- The probability of constructing the Grand Falls Highway, and a relative timeframe in which this could be expected.
- Confirmation of the presence of developable properties at recommended development focus areas, including availability and also some assessment of the feasibility of securing required infrastructure at the location. (Financial models prepared for this report use the “land value residual” approach to generate estimates of the amount of money that could theoretically be spent in securing properties and the infrastructure required to develop the projects, before such costs would need to be subsidized in order for the rest of the project to be feasible. These models can be adapted to specific development project conditions in order to refine these kinds of estimates, if necessary.)
- Any expressed interest in developing property and/or owning or managing specific business types at development focus areas within the FBFA, and specific resources (including business skills) such parties could bring to a project.
- Potential involvement of government grant/loan programs for infrastructure development and other potential implementation support (such as technical assistance, for example). In general, these programs will be more accessible to the extent program managers see a connection between funding requests and a strategic approach to development. (For the federal EDA programs, this generally also means integration with an EDA-sanctioned Comprehensive Economic Development Strategy (CEDS).
- Alignment with any available incentive programs, including Opportunity Zones, New Market Tax Credit (NMTC) programs, etc. These programs need to be coordinated with entities who are in a position to implement them, which would be Opportunity Zone fund managers with an interest in the FBFA region, and a CDFI for NMTC funds. While NMTC investments have predetermined limits, there are no limitations to the Opportunity Zone program, at least at this stage of its formulation. (However, Opportunity Zones exist in many desirable areas across the country, so the program will be very competitive from a location standpoint.)

This report does not specifically discuss the need to improve attraction sites to make them more appealing to visitors while also enhancing any hospitality business development that might occur at such sites. These improvements might include parking, interpretive materials, sidewalks and pathways, and most importantly areas for vendors to offer arts and crafts for sale. All such improvements should be incorporated into the overall strategic plan for development.

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Industrial or other employment-generating development is also less dependent on local market conditions, and such projects are therefore more “footloose” than local-serving businesses. Accessibility to a labor force is nevertheless a consideration; although industrial projects that are location-specific, such as a solar energy installation for example, will be sited based primarily on other considerations. The fact that tourism and industrial projects may be located outside of established communities underscores the need for the development strategy in the FBFA to include consideration of strategically located housing development.

Workforce readiness will need to be an integral part of project implementation. Occupations associated with project opportunities span many different categories. Industries relevant to development options are shown with their related occupations in Appendix D .

Project Prioritization

Within this document, primary and secondary development areas have been “conditionally” designated, based on what seemed to be the most obvious pathways to successful projects. However, other factors can significantly change the relative competitiveness of locations within the FBFA region, including, perhaps most importantly, the ability of individuals or groups to organize development-ready locations and/or other conditions. Other, larger-scale market conditions can also influence the relative desirability of locations. For example:

- The decision to build a Grand Falls Highway adds to the attractiveness of Cameron and also Luepp as locations, although even without this Cameron is the most likely location for initial successful tourism development.
- Bodaway-Gap tourism-development sites will need to be sensitive to market conditions in Page, where closure of the power plant will reduce the demand for hotel rooms in that community, forcing existing facilities there to become more competitive. On the other hand, Page could be positioned as a more desirable tourism destination in the absence of the power plant; although the water levels in Lake Powell will influence this.
- The Navajo Nation has the advantage of having numerous unique, scenic attractions within its own borders, especially compared to neighboring cities where tourism facilities are fairly well developed already. This advantage should be recognized as being not necessarily permanent. For example, the Grand Canyon itself could be more fully exploited as a site for additional hotel development. Although there are conservation and other heritage-preservation interests that would oppose such a thing, national and state political will and priorities can change quickly.

Table I-1 to the right summarizes employment and tax benefits from various types of development, per 1,000 square feet of building. The figures are based on financial models prepared for various business types for this project.

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Table I-1. Employment and tax benefits from selected development types

Business types, estimated results per 1,000 sq. ft. (2)	Employment estimate	Sales Tax	PIT	Hotel Occupancy
Grocery Store	2.1	\$25,500	\$253	
General Retail	2.0	\$18,000	\$960	
Restaurant	5.9	\$21,000	\$1,500	
Select-service hotel	3.1	\$10,021	\$1,336	\$13,362
Small, budget-oriented hotel	2.4	\$4,798	\$640	\$6,397

A photograph of a desert landscape in Marble Canyon, Arizona. The scene features a large, natural rock archway in the upper center, through which a bright blue sky with a few white clouds is visible. The canyon walls are composed of layered, light-colored sandstone. In the foreground, there is a sandy area with some sparse, dark green desert vegetation. The overall lighting is bright, suggesting a sunny day.

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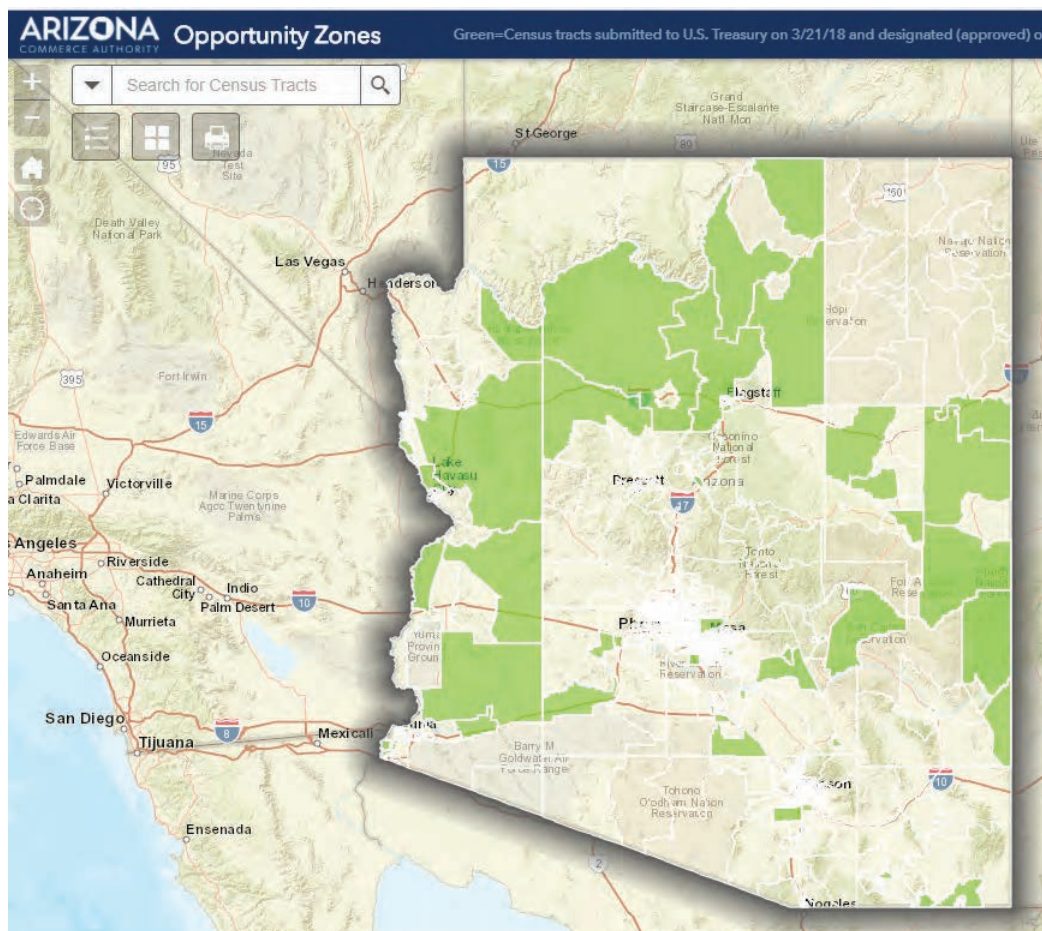
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Chapter Synopsis
Tuba City

Appendix A: Opportunity Zones in the FBFA region

As of the date this report is being prepared, the Opportunity Zone concept is still being developed through the various federal agencies involved in its implementation. The U.S. Treasury Department and IRS are scheduled to issue the final Opportunity Zone rules by the end of 2018. While the concept of the zones is fairly straightforward – investors are allowed to defer taxes on capital gains they have accrued – a number of investment structures will be required to institutionalize the program. Some commentators are predicting that the program will encourage new forms of collaboration, for example among state and local officials, and philanthropical organizations. Depending on a variety of factors, Opportunity Zones could turn out to be a major source of investment for distressed regions, but the program will be highly competitive given the large number of zones designated (approximately 8,700) and zone areas will most likely need to be thoughtfully and aggressively marketed.¹⁰

Arizona's designated Opportunity Zones are shown following map, taken from the Arizona Commerce Authority website. Tuba City, Bodaway-Gap, Kaibeto, Cameron, Coalmine Canyon, Leupp, and Tola-ni Lake have significant portions or are wholly within Opportunity Zones, along with other portions of Coconino County.



Source: Arizona ACA

¹⁰ Steven Bertoni, Forbes. "An Unlikely Group Of Billionaires And Politicians Has Created The Most Unbelievable Tax Break Ever," July 18, 2018. https://www.forbes.com/sites/forbesdigitalcovers/2018/07/17/an-unlikely-group-of-billionaires-and-politicians-has-created-the-most-unbelievable-tax-break-ever/?utm_source=nextdraft&utm_medium=email. Accessed July 23, 2018.

Appendix A: Opportunity Zones in the FBFA region

Arizona's Opportunity Zone nominations were submitted on March 21, 2018 and approved by the U.S. Treasury Department on April 9, 2018. With this program, investors who reinvest money in Opportunity Zone funds, using money that would otherwise be subject to capital gains taxes, will receive reductions on those capital gains taxes based on the years of their investment. (Note that much of the following material related to investment scenarios in Opportunity Zones is reproduced verbatim from the Arizona Commerce Authority website.)¹¹

Investments held 10 years: taxable amount of the capital gains reinvested is reduced by 15% and no tax is owed on appreciation. For example: \$100 of capital gains is reinvested into an Opportunity Zone fund and held for 10 years. Tax owed on the original \$100 is deferred until 2026, and taxable amount is reduced to \$85 (\$100 minus \$15). Investor will owe \$20 of tax on the original capital gains (23.8% of \$85). No tax is owed on Opportunity Zone investment's capital gain. Assuming a 7% annual growth rate, the after-tax value of the original \$100 investment is \$176 by 2028.

Investments held 7 years: taxable amount of the capital gains reinvested is reduced by 15%. For example: \$100 of capital gains is reinvested into an Opportunity Zone fund and held for 7 years, selling in 2025. Taxable amount is reduced to \$85 (\$100 minus \$15). Investor will owe \$20 of tax on the original capital gains (23.8% of \$85). Assuming a 7% annual growth rate, the investor will owe \$15 in tax (23.8% of \$61) on the Opportunity Zone investment's capital gain.

Investments held 5 years: taxable amount of the capital gains reinvested is reduced by 10%. For example: \$100 of capital gains is reinvested into an Opportunity Zone fund and held for 5 years, selling in 2023. Taxable amount is reduced to \$90 (\$100 minus \$10). Investor will owe \$21 in tax on the original capital gains (23.8% of \$90). Assuming a 7% annual growth rate, the investor will owe \$10 in tax (23.8% of \$40) on the Opportunity Zone investment's capital gain.

¹¹ <https://www.azcommerce.com/arizona-opportunity-zones/> ACA cites Economic Innovation Group, 2018 as their source for the investment scenarios.

Appendix B: Various Map Sources

1. Aerial Imagery – USDA NAIP Imagery
2. OSM – OpenStreetMap
3. Navajo FBFA Chapter Boundaries – Navajo Nation Land Department, Bureau of Indian Affairs
4. FBFA Boundary 2015 – Navajo Nation Land Department, BIA
5. Arizona Opportunity Zones – Arizona Department of Commerce
6. Corridor – McClure Consulting
7. 5-Mile Circles – McClure Consulting
8. County Boundaries – US Census – TIGER files
9. Places – US Census – TIGER files
10. Sub-Market Areas – McClure Consulting
11. Flood Hazard Areas – FEMA National Flood Hazard Database
12. Land Ownership – Arizona Bureau of Land Management, Arizona State Land Department, Arizona State Land Department Forestry Division, US Department of Transportation, US Department of the Interior, Bureau of Indian Affairs
 - a. State Trust Land
 - b. BLM Land
 - c. Forest Service Land
 - d. Indian Reservation Land
 - e. Military Land
 - f. City or County Park Land
 - g. State Park Land
 - h. Wildlife Refuge
 - i. Other Land
 - j. National Parks
13. Building Footprints – Maricopa County Association of Governments, Microsoft Bing
14. Area Hydrography – US Census – TIGER files
15. Broadband Utilities – National Telecommunications and Information Administration, Federal Communications Commission – National Broadband Map
16. Oil and Gas Parcels – Arizona State Land Department
17. Conservation Easements – US Endowment for Forestry and Communities – National Conservation Easement Database
18. Uranium Areas – Navajo Tribal Utility Authority
19. Abandoned Mines – Navajo Tribal Utility Authority
20. Roads – Navajo Department of Transportation, Bureau of Indian Affairs, US Department of Transportation
21. Rails – US Department of Transportation
22. Western Electric Transmission Lines – US Department of Energy, Western Area Power Administration
23. Transmission Lines – US Department of Energy, Western Area Power Administration
24. Natural Gas InterIntrastate Pipelines – US Department of Energy
25. Primary Overhead Electric Lines – Navajo Tribal Utility Authority
26. Primary Underground Electric Lines – Navajo Tribal Utility Authority
27. Pressurized Water Mains – Navajo Tribal Utility Authority
28. Sewer Mains – Navajo Tribal Utility Authority

J. Appendix

Appendix B: Various Map Sources

- 29. Gas Mains – Navajo Tribal Utility Authority
- 30. Arizona National Scenic Trails – Arizona Trail Association Board of Directors
- 31. Airports – US Department of Transportation
- 32. WIC Clinics – Arizona Department of Health Services
- 33. Fire Stations Arizona – Department of Homeland Security
- 34. Substations – Western Area Power Administration
- 35. Cell Towers – Wired Labs OpenCellID Project
- 36. Water Wells – Arizona Department of Water Resources
- 37. Attractions – McClure Consulting, OpenStreetMap
- 38. Hotels – McClure Consulting, OpenStreetMap

123 INDIGENOUS DESIGN STUDIO + ARCHITECTURE
FORMER BENNETT FREEZE AREA ECONOMIC & MARKET FEASIBILITY STUDY

INDIGENOUS DESIGN STUDIO + ARCHITECTURE
AREA ECONOMIC & MARKET FEASIBILITY STUDY

Appendix C: Land Use Financial Models

Grocery Model Assumed store size (square feet) Assumed annual sales/SF Annual inflation	15,000 \$425.00 2.0%	90%										
	Revenue/ cost categories	As % of Total Assets (2018)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	\$6,375,000	100%	\$5,737,500	\$6,502,500	\$6,632,550	\$6,765,201	\$6,900,505	\$7,038,515	\$7,179,285	\$7,322,871	\$7,469,329	\$7,618,715
	Percent of stabilized sales level											
Sales/revenue												
Variable costs												
Cost of Goods/Cost of Contracts	\$4,653,750	73.00%	\$4,188,375	\$4,746,825	\$4,841,762	\$4,938,597	\$5,037,369	\$5,138,116	\$5,240,878	\$5,345,696	\$5,452,610	\$5,561,662
Advertising	\$63,750	1.00%	\$57,375	\$65,025	\$66,326	\$67,652	\$69,005	\$70,385	\$71,793	\$73,229	\$74,693	\$76,187
Freight	\$25,500	0.40%	\$22,950	\$26,010	\$26,530	\$27,061	\$27,602	\$28,154	\$28,717	\$29,291	\$29,877	\$30,475
Other variable costs	\$12,750	0.20%	\$11,475	\$13,005	\$13,265	\$13,530	\$13,801	\$14,077	\$14,359	\$14,646	\$14,939	\$15,237
Licenses, etc.	\$31,875	0.50%	\$28,688	\$32,513	\$33,163	\$33,826	\$34,503	\$35,193	\$35,896	\$36,614	\$37,347	\$38,094
Total Variable Costs	\$4,787,625	75.10%	\$4,308,863	\$4,883,378	\$4,981,045	\$5,080,666	\$5,182,279	\$5,285,925	\$5,391,643	\$5,499,476	\$5,609,466	\$5,721,655
Fixed Cost Categories												
NN PIT	\$3,800	0.06%	\$3,420	\$3,876	\$3,954	\$4,033	\$4,113	\$4,196	\$4,279	\$4,365	\$4,452	\$4,541
Depreciation/Depletion	\$51,000	0.80%	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000
Insurance	\$31,875	0.50%	\$31,875	\$32,513	\$33,163	\$33,826	\$34,503	\$35,193	\$35,896	\$36,614	\$37,347	\$38,094
Salary, magnt	\$44,625	0.70%	\$44,625	\$45,518	\$46,428	\$47,356	\$48,304	\$49,270	\$50,255	\$51,260	\$52,285	\$53,331
Payroll	\$765,000	12.00%	\$765,000	\$780,300	\$795,906	\$811,824	\$828,061	\$844,622	\$861,514	\$878,745	\$896,319	\$914,246
Social Security/Medicare	\$61,936	0.97%	\$61,936	\$63,175	\$64,439	\$65,727	\$67,042	\$68,383	\$69,750	\$71,145	\$72,568	\$74,020
Workers' Comp	\$12,144	0.19%	\$12,144	\$12,387	\$12,635	\$12,888	\$13,145	\$13,408	\$13,677	\$13,950	\$14,229	\$14,514
Unempl. tax	\$4,463	0.07%	\$4,463	\$4,552	\$4,643	\$4,736	\$4,830	\$4,927	\$5,025	\$5,126	\$5,229	\$5,333
Employee benefits	\$70,125	1.10%	\$70,125	\$71,528	\$72,958	\$74,417	\$75,906	\$77,424	\$78,972	\$80,552	\$82,163	\$83,806
Legal/Professional	\$19,125	0.30%	\$19,125	\$19,508	\$19,898	\$20,296	\$20,702	\$21,116	\$21,538	\$21,969	\$22,408	\$22,856
Rent	\$245,438	3.85%	\$245,438	\$250,346	\$255,353	\$260,460	\$265,669	\$270,983	\$276,402	\$281,931	\$287,569	\$293,321
Repairs and Maintenance	\$25,500	0.40%	\$25,500	\$26,010	\$26,530	\$27,061	\$27,602	\$28,154	\$28,717	\$29,291	\$29,877	\$30,475
Utilities	\$57,375	0.90%	\$57,375	\$58,523	\$59,693	\$60,887	\$62,105	\$63,347	\$64,614	\$65,906	\$67,224	\$68,568
Other Fixed Costs	\$95,625	1.50%	\$95,625	\$97,538	\$99,488	\$101,478	\$103,508	\$105,578	\$107,689	\$109,843	\$112,040	\$114,281
Total Fixed Costs	\$1,488,031	23.3%	\$1,339,228	\$1,517,791	\$1,548,147	\$1,579,110	\$1,610,692	\$1,642,906	\$1,675,764	\$1,709,280	\$1,743,465	\$1,778,334
Net operating income	\$99,344	1.6%	\$89,410	\$101,331	\$103,358	\$105,425	\$107,533	\$109,684	\$111,878	\$114,115	\$116,398	\$118,726
EBITDA (removing costs for taxes, depreciation)	\$154,144	2.4%	\$138,730	\$157,227	\$160,372	\$163,579	\$166,851	\$170,188	\$173,592	\$177,063	\$180,605	\$184,217
Financing of business owner's investment												
Scenario 1: Debt service	\$68,193		\$68,193	\$68,193	\$68,193	\$68,193	\$68,193	\$68,193	\$68,193	\$68,193	\$68,193	\$68,193
Income net of debt service	\$31,151		\$21,217	\$33,138	\$35,165	\$37,232	\$39,341	\$41,491	\$43,685	\$45,922	\$48,205	\$50,533
Scenario 2: Debt service	\$68,600		\$68,600	\$68,600	\$68,600	\$68,600	\$68,600	\$68,600	\$68,600	\$68,600	\$68,600	\$68,600
Income net of debt service	\$30,744		\$20,810	\$32,731	\$34,758	\$36,825	\$38,934	\$41,084	\$43,278	\$45,515	\$47,798	\$50,126
Scenario 3: Debt service	\$80,653		\$80,653	\$80,653	\$80,653	\$80,653	\$80,653	\$80,653	\$80,653	\$80,653	\$80,653	\$80,653
Income net of debt service	\$18,691		\$8,757	\$20,678	\$22,705	\$24,772	\$26,880	\$29,031	\$31,225	\$33,462	\$35,745	\$38,073
Loan terms												
Scenario 1, SBA 504, w/ bank	Interest	6.0%	Term	Hard-cost investment amt.	Hard-cost equity contrib.	Amount financed, incl. fee	Equity amounts					
Scenario 2, USDA B&I		7.0%	15	\$730,000	10%	\$673,425	\$283,000					
Scenario 3, bank with guaranty		6.25%	10	\$730,000	20%	\$598,600	\$356,000					
1. Assumed that other start-up costs (initial inventory, etc.) are also owner's equity												
Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*												
Financing options:												
Scenario 1, SBA 504, w/ bank	IRR for equity		13.92%									
Scenario 2, USDA B&I			12.24%									
Scenario 3, bank			10.81%									
* periods past 10 years simulated to reflect ongoing, or cessation of, debt service												
Breakeven revenue [= fixed costs / 1-gross margin percentage]												
\$5,976,027												

Break-even revenue [= fixed costs / (1 - gross margin percentage)]
\$5,976,027

Appendix C: Land Use Financial Models

Restaurant Model	Percent of stabilized sales level											
	Annual	% of sales	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
REVENUES	Estimated food sales	\$86,700	71.00%	\$781,830	\$886,074	\$903,795	\$921,871	\$940,309	\$959,115	\$978,297	\$997,863	\$1,017,821
	Estimated beverage sales	\$321,300	27.00%	\$289,170	\$332,726	\$334,281	\$340,966	\$347,785	\$354,741	\$361,836	\$369,073	\$376,454
	Total sales	\$1,190,000	100.00%	\$1,071,000	\$1,218,800	\$1,238,076	\$1,262,838	\$1,288,094	\$1,313,856	\$1,340,133	\$1,366,936	\$1,394,275
	Food cost	\$366,071	24.09%	\$298,004	\$299,404	\$298,253	\$304,218	\$310,302	\$316,508	\$322,838	\$329,295	\$335,981
	Beverage cost	\$86,751	7.29%	\$78,076	\$88,486	\$90,256	\$92,061	\$93,902	\$95,780	\$97,694	\$99,650	\$101,643
	Cost of sales	\$452,822	31.38%	\$376,080	\$387,890	\$388,509	\$396,278	\$404,204	\$412,288	\$420,534	\$428,944	\$437,523
	Fixed operating costs	\$616,278	68.62%	\$794,920	\$849,358	\$849,568	\$866,559	\$883,890	\$901,568	\$919,591	\$937,951	\$956,751
	Gross profit	\$516,578		\$774,920	\$849,358	\$849,568	\$866,559	\$883,890	\$901,568	\$919,591	\$937,951	\$956,751
	Rent/occupancy	\$98,175	8.25%	\$98,175	\$100,139	\$102,141	\$104,184	\$106,268	\$108,393	\$110,561	\$112,772	\$115,028
	Utilities	\$35,700	3.00%	\$35,700	\$36,414	\$37,142	\$37,885	\$38,643	\$39,416	\$40,204	\$41,008	\$41,828
Telephone	\$2,975	0.25%	\$2,975	\$3,035	\$3,095	\$3,157	\$3,220	\$3,285	\$3,350	\$3,417	\$3,486	
Advertising	\$16,660	1.40%	\$16,660	\$16,993	\$17,333	\$17,680	\$18,033	\$18,394	\$18,762	\$19,137	\$19,520	
Insurance	\$4,998	0.42%	\$4,998	\$5,098	\$5,200	\$5,304	\$5,410	\$5,518	\$5,629	\$5,741	\$5,856	
Annual liquor license	\$3,451	0.29%	\$3,451	\$3,520	\$3,590	\$3,662	\$3,735	\$3,810	\$3,886	\$3,964	\$4,043	
NN PIT	\$5,400	0.45%	\$5,400	\$5,508	\$5,618	\$5,731	\$5,845	\$5,962	\$6,081	\$6,203	\$6,327	
Externimitor	\$1,835	0.15%	\$1,835	\$1,881	\$1,927	\$1,974	\$2,021	\$2,069	\$2,117	\$2,165	\$2,213	
Owner's salary	\$73,780	6.20%	\$73,780	\$76,236	\$78,761	\$81,296	\$83,849	\$86,418	\$88,994	\$91,578	\$94,169	
Manager	\$38,080	3.20%	\$38,080	\$38,842	\$39,618	\$40,411	\$41,219	\$42,043	\$42,884	\$43,742	\$44,617	
Kitchen and service staff wages, total	\$261,800	22.00%	\$261,800	\$267,036	\$272,377	\$277,824	\$283,381	\$289,048	\$294,829	\$300,726	\$306,740	
60% of kitchen and service wages (1)	\$157,080	13.20%	\$157,080	\$160,222	\$163,426	\$166,695	\$170,028	\$173,429	\$176,898	\$180,436	\$184,044	
Payroll and other taxes, staff + management												
Payroll taxes	\$24,990	2.10%	\$24,990	\$25,490	\$26,020	\$26,580	\$27,159	\$27,759	\$28,384	\$29,036	\$29,726	
Workers' compensation ins.	\$4,760	0.40%	\$4,760	\$4,855	\$4,952	\$5,051	\$5,152	\$5,255	\$5,361	\$5,468	\$5,577	
Unemployment ins.	\$2,975	0.25%	\$2,975	\$3,035	\$3,095	\$3,157	\$3,220	\$3,285	\$3,350	\$3,417	\$3,486	
Liquor license	\$3,451	0.29%	\$3,451	\$3,520	\$3,590	\$3,662	\$3,735	\$3,810	\$3,886	\$3,964	\$4,043	
Tenancy	\$1,835	0.15%	\$1,835	\$1,881	\$1,927	\$1,974	\$2,021	\$2,069	\$2,117	\$2,165	\$2,213	
Fixed cost total	\$536,259	45.06%	\$536,259	\$546,984	\$557,934	\$569,082	\$580,464	\$592,073	\$603,915	\$615,993	\$628,313	
VARIABLE OPERATING COSTS												
Repairs and maintenance	\$4,760	0.40%	\$4,760	\$4,855	\$4,952	\$5,051	\$5,152	\$5,255	\$5,361	\$5,468	\$5,577	
Water and sewer	\$3,570	0.30%	\$3,570	\$3,641	\$3,714	\$3,789	\$3,864	\$3,942	\$4,020	\$4,101	\$4,183	
Credit card charges	\$22,610	1.90%	\$22,610	\$23,062	\$23,523	\$23,994	\$24,474	\$24,963	\$25,463	\$25,972	\$26,491	
Cleaning supplies	\$11,900	1.00%	\$11,900	\$12,138	\$12,381	\$12,628	\$12,881	\$13,139	\$13,401	\$13,669	\$13,943	
Laundry	\$11,900	1.00%	\$11,900	\$12,138	\$12,381	\$12,628	\$12,881	\$13,139	\$13,401	\$13,669	\$13,943	
Paper supplies	\$4,760	0.40%	\$4,760	\$4,855	\$4,952	\$5,051	\$5,152	\$5,255	\$5,361	\$5,468	\$5,577	
Food and beverage replacement	\$4,760	0.40%	\$4,760	\$4,855	\$4,952	\$5,051	\$5,152	\$5,255	\$5,361	\$5,468	\$5,577	
Miscellaneous	\$4,760	0.40%	\$4,760	\$4,855	\$4,952	\$5,051	\$5,152	\$5,255	\$5,361	\$5,468	\$5,577	
40% of kitchen and service wages (1)	\$104,720	8.80%	\$104,720	\$106,814	\$108,951	\$111,130	\$113,352	\$115,619	\$117,932	\$120,290	\$122,696	
Payroll taxes	\$7,973	0.67%	\$7,973	\$8,132	\$8,295	\$8,461	\$8,630	\$8,803	\$8,979	\$9,158	\$9,342	
Workers' compensation ins.	\$1,666	0.14%	\$1,666	\$1,699	\$1,733	\$1,768	\$1,803	\$1,839	\$1,876	\$1,914	\$1,952	
Unemployment ins.	\$952	0.08%	\$952	\$971	\$990	\$1,010	\$1,030	\$1,051	\$1,072	\$1,094	\$1,115	
Social security and Medicare tip taxes	\$14,280	1.20%	\$14,280	\$14,566	\$14,857	\$15,154	\$15,457	\$15,766	\$16,082	\$16,403	\$16,731	
Variable costs total	\$196,231	16.45%	\$196,231	\$200,156	\$204,159	\$208,242	\$212,407	\$216,655	\$220,988	\$225,408	\$229,916	
Total fixed and variable costs	\$732,490	61.55%	\$732,490	\$747,140	\$752,403	\$758,046	\$764,871	\$771,883	\$779,033	\$786,229	\$793,514	
Operating profit before depreciation	\$453,810	7.07%	\$243,490	\$585,770	\$987,485	\$989,235	\$991,000	\$992,840	\$994,677	\$996,511	\$998,322	
Depreciation	\$14,280	1.20%	\$14,280	\$14,280	\$14,280	\$14,280	\$14,280	\$14,280	\$14,280	\$14,280	\$14,280	
Net income	\$69,808	5.87%	\$69,808	\$69,808	\$69,808	\$69,808	\$69,808	\$69,808	\$69,808	\$69,808	\$69,808	
1. Wages are allocated among fixed and Variable costs, reflecting effects on some staff due to fluctuating levels of business activity.												
Financing of business owner's investment												
Scenario 1: Debt service	\$26,810		\$26,810	\$26,810	\$26,810	\$26,810	\$26,810	\$26,810	\$26,810	\$26,810	\$26,810	
Income net of debt service	\$42,988		\$42,988	\$42,988	\$42,988	\$42,988	\$42,988	\$42,988	\$42,988	\$42,988	\$42,988	
Scenario 2: Debt service	\$26,970		\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	
Income net of debt service	\$42,838		\$42,838	\$42,838	\$42,838	\$42,838	\$42,838	\$42,838	\$42,838	\$42,838	\$42,838	
Scenario 3: Bank debt guaranty	\$26,970		\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	\$26,970	
Income net of debt service	\$38,099		\$38,099	\$38,099	\$38,099	\$38,099	\$38,099	\$38,099	\$38,099	\$38,099	\$38,099	
IRR for equity												
Scenario 1, SBA 504, w/ bank	24.31%											
Scenario 2, USDA B81	24.31%											
Scenario 3, bank with guaranty	24.31%											
* periods past 10 years simulated to reflect ongoing, or cessation of, debt service												
Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*												
Scenario 1, SBA 504, w/ bank	24.31%											
Scenario 2, USDA B81	24.31%											
Scenario 3, bank with guaranty	24.31%											
* periods past 10 years simulated to reflect ongoing, or cessation of, debt service												
Break even revenue = fixed costs / 1-gross margin percentage												
Scenario 1, SBA 504, w/ bank	\$536,259											
Scenario 2, USDA B81	\$536,259											
Scenario 3, bank with guaranty	\$536,259											

	Interest	Term	Initiation fee	Hard-cost investment amt.	Hard-cost equity contribution (%)	Amount financed, incl. fee	Equity amounts
Loan terms							
Scenario 1, SBA 504, w/ bank	6.0%	15	2.5%	\$181,000	10%	\$166,973	\$93,100
Scenario 2, USDA B&I	7.0%	15	2.5%	\$181,000	15%	\$157,696	\$102,150
Scenario 3, bank with guaranty	6.25%	10	2.5%	\$181,000	20%	\$148,420	\$111,200

Internal Rate of Return, for cash flow to equity holders, after debt service, 20 years*
Financing options:
IRR for equity

Scenario 1, SBA 504, w/ bank	19.47%
Scenario 2, USDA B&I	17.72%
Scenario 3, bank	13.31%

* periods past 10 years simulated to reflect ongoing, or cessation of, debt serviced

Appendix D: Occupations/Industry Matrices

The following tables provide a cross comparison between selected industries, and groupings of those industries compiled for this report, and the occupations associated with each individual industry within these groups. Each table represents a different group of industries that are related. Individual industry titles are provided below each table for reference. Listed below are each of the selected industries by their respective industry group.

Construction

236200	Nonresidential Building Construction
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Entertainment and Accommodation

487100	Scenic and Sightseeing Transportation, Land
712000	Museums, Historical Sites, and Similar Institutions
721100	Traveler Accommodation

Manufacturing and Wholesale Distribution

311400	Fruit and Vegetable Preserving and Speciality Food Manufacturing
311600	Animal Slaughtering and Processing
332710	Machine Shops
424500	Farm Product Raw Material Merchant Wholesalers

Retail

445000	Food and Beverage Stores
452000	General Merchandise Stores
722000	Food Services and Drinking Places

Services

531300	Activities Related to Real Estate
561400	Business Support Services

Utilities

221114	Solar Electric Power Generation
221115	Wind Electric Power Generation
517200	Wireless Telecommunications Carriers (Except Satellite)

Appendix D: Occupations/Industry Matrices

Construction Industry Group

Occ. Code	Occupation Title	Ind. 236200
11-1011	Chief executives	X
11-1021	General and operations managers	X
11-2021	Marketing managers	X
11-2022	Sales managers	X
11-2031	Public relations and fundraising managers	X
11-3011	Administrative services managers	X
11-3021	Computer and information systems managers	X
11-3031	Financial managers	X
11-3051	Industrial production managers	X
11-3061	Purchasing managers	X
11-3071	Transportation, storage, and distribution managers	X
11-3111	Compensation and benefits managers	X
11-3121	Human resources managers	X
11-3131	Training and development managers	X
11-9021	Construction managers	X

Appendix D: Occupations/Industry Matrices

Construction Industry Group

Occ. Code	Occupation Title	Ind. 236200
11-9041	Architectural and engineering managers	X
11-9141	Property, real estate, and community association managers	X
11-9199	Managers, all other	X
13-1023	Purchasing agents, except wholesale, retail, and farm products	X
13-1041	Compliance officers	X
13-1051	Cost estimators	X
13-1071	Human resources specialists	X
13-1075	Labor relations specialists	X
13-1081	Logisticians	X
13-1111	Management analysts	X
13-1141	Compensation, benefits, and job analysis specialists	X
13-1151	Training and development specialists	X
13-1161	Market research analysts and marketing specialists	X
13-1199	Business operations specialists, all other	X
13-2011	Accountants and auditors	X
13-2031	Budget analysts	X
13-2051	Financial analysts	X
13-2099	Financial specialists, all other	X
15-1121	Computer systems analysts	X
15-1122	Information security analysts	X
15-1131	Computer programmers	X
15-1132	Software developers, applications	X
15-1141	Database administrators	X
15-1142	Network and computer systems administrators	X
15-1143	Computer network architects	X
15-1151	Computer user support specialists	X
15-1152	Computer network support specialists	X
15-1199	Computer occupations, all other	X
17-1011	Architects, except landscape and naval	X
17-1022	Surveyors	X
17-2041	Chemical engineers	X
17-2051	Civil engineers	X
17-2071	Electrical engineers	X
17-2072	Electronics engineers, except computer	X
17-2081	Environmental engineers	X
17-2111	Health and safety engineers, except mining safety engineers and inspectors	X
17-2112	Industrial engineers	X
17-2141	Mechanical engineers	X
17-2171	Petroleum engineers	X
17-2199	Engineers, all other	X
17-3011	Architectural and civil drafters	X
17-3019	Drafters, all other	X
17-3022	Civil engineering technicians	X
17-3023	Electrical and electronics engineering technicians	X
17-3029	Engineering technicians, except drafters, all other	X
23-1011	Lawyers	X
23-2011	Paralegals and legal assistants	X
27-1024	Graphic designers	X

Appendix D: Occupations/Industry Matrices

Construction Industry Group

Occ. Code	Occupation Title	Ind. 236200
27-1025	Interior designers	X
27-3031	Public relations specialists	X
27-3042	Technical writers	X
29-9011	Occupational health and safety specialists	X
29-9012	Occupational health and safety technicians	X
33-9032	Security guards	X
33-9091	Crossing guards	X
37-1011	First-line supervisors of housekeeping and janitorial workers	X
37-2011	Janitors and cleaners, except maids and housekeeping cleaners	X
37-2019	Building cleaning workers, all other	X
37-3011	Landscaping and groundskeeping workers	X
41-1012	First-line supervisors of non-retail sales workers	X
41-2031	Retail salespersons	X
41-3099	Sales representatives, services, all other	X
41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	X
41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	X
41-9022	Real estate sales agents	X
43-1011	First-line supervisors of office and administrative support workers	X
43-2011	Switchboard operators, including answering service	X
43-3011	Bill and account collectors	X
43-3021	Billing and posting clerks	X
43-3031	Bookkeeping, accounting, and auditing clerks	X
43-3051	Payroll and timekeeping clerks	X
43-3061	Procurement clerks	X
43-4051	Customer service representatives	X
43-4071	File clerks	X
43-4161	Human resources assistants, except payroll and timekeeping	X
43-4171	Receptionists and information clerks	X
43-5021	Couriers and messengers	X
43-5032	Dispatchers, except police, fire, and ambulance	X
43-5061	Production, planning, and expediting clerks	X
43-5071	Shipping, receiving, and traffic clerks	X
43-5081	Stock clerks and order fillers	X
43-6011	Executive secretaries and executive administrative assistants	X
43-6014	Secretaries and administrative assistants, except legal, medical, and executive	X
43-9061	Office clerks, general	X
43-9199	Office and administrative support workers, all other	X
47-1011	First-line supervisors of construction trades and extraction workers	X
47-2011	Boilermakers	X
47-2021	Brickmasons and blockmasons	X
47-2022	Stonemasons	X
47-2031	Carpenters	X
47-2041	Carpet installers	X
47-2044	Tile and marble setters	X
47-2051	Cement masons and concrete finishers	X
47-2061	Construction laborers	X
47-2071	Paving, surfacing, and tamping equipment operators	X
47-2072	Pile-driver operators	X

J. Appendix

Appendix D: Occupations/Industry Matrices

Construction Industry Group

Occ. Code	Occupation Title	Ind. 236200
47-2073	Operating engineers and other construction equipment operators	X
47-2081	Drywall and ceiling tile installers	X
47-2082	Tapers	X
47-2111	Electricians	X
47-2121	Glaziers	X
47-2131	Insulation workers, floor, ceiling, and wall	X
47-2132	Insulation workers, mechanical	X
47-2141	Painters, construction and maintenance	X
47-2151	Pipelayers	X
47-2152	Plumbers, pipefitters, and steamfitters	X
47-2161	Plasterers and stucco masons	X
47-2171	Reinforcing iron and rebar workers	X
47-2181	Roofers	X
47-2211	Sheet metal workers	X
47-2221	Structural iron and steel workers	X
47-3011	Helpers--brickmasons, blockmasons, stonemasons, and tile and marble setters	X
47-3012	Helpers--carpenters	X
47-3013	Helpers--electricians	X
47-3014	Helpers--painters, paperhangers, plasterers, and stucco masons	X
47-3015	Helpers--pipelayers, plumbers, pipefitters, and steamfitters	X
47-3016	Helpers--roofers	X
47-3019	Helpers, construction trades, all other	X
47-4011	Construction and building inspectors	X
47-4031	Fence erectors	X
47-4041	Hazardous materials removal workers	X
47-4099	Construction and related workers, all other	X
49-1011	First-line supervisors of mechanics, installers, and repairers	X
49-3023	Automotive service technicians and mechanics	X
49-3031	Bus and truck mechanics and diesel engine specialists	X
49-3042	Mobile heavy equipment mechanics, except engines	X
49-9021	Heating, air conditioning, and refrigeration mechanics and installers	X
49-9041	Industrial machinery mechanics	X
49-9043	Maintenance workers, machinery	X
49-9044	Millwrights	X
49-9071	Maintenance and repair workers, general	X
49-9096	Riggers	X
49-9098	Helpers--installation, maintenance, and repair workers	X
49-9099	Installation, maintenance, and repair workers, all other	X
51-1011	First-line supervisors of production and operating workers	X
51-2041	Structural metal fabricators and fitters	X
51-2099	Assemblers and fabricators, all other	X
51-4041	Machinists	X
51-4121	Welders, cutters, solderers, and brazers	X
51-7011	Cabinetmakers and bench carpenters	X
51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	X
51-9023	Mixing and blending machine setters, operators, and tenders	X
51-9061	Inspectors, testers, sorters, samplers, and weighers	X
51-9198	Helpers--production workers	X

Appendix D: Occupations/Industry Matrices**Construction Industry Group**

Occ. Code	Occupation Title	Ind. 236200
53-1021	First-line supervisors of helpers, laborers, and material movers, hand	X
53-1031	First-line supervisors of transportation and material-moving machine and vehicle operators	X
53-2012	Commercial pilots	X
53-3032	Heavy and tractor-trailer truck drivers	X
53-3033	Light truck or delivery services drivers	X
53-7021	Crane and tower operators	X
53-7032	Excavating and loading machine and dragline operators	X
53-7051	Industrial truck and tractor operators	X
53-7062	Laborers and freight, stock, and material movers, hand	X

NAICS Industries

236200 Nonresidential Building Construction

Entertainment and Accommodation Industry Group

Occ. Code	Occupation Title	Ind. 487100	Ind. 712000	Ind. 721100
11-1011	Accountants and auditors		X	X
11-1021	Actors	X	X	X
11-2011	Administrative services managers		X	X
11-2021	Advertising and promotions managers		X	X
11-2022	Advertising sales agents		X	X
11-2031	Amusement and recreation attendants		X	X
11-3011	Animal trainers		X	X
11-3021	Anthropologists and archeologists		X	X
11-3031	Architectural and engineering managers		X	X
11-3061	Archivists			X
11-3071	Art directors			X
11-3121	Athletes and sports competitors		X	X
11-3131	Audio and video equipment technicians		X	X
11-9039	Audio-visual and multimedia collections specialists		X	
11-9041	Automotive and watercraft service attendants			X
11-9051	Automotive service technicians and mechanics		X	X
11-9071	Baggage porters and bellhops			X
11-9081	Bakers			X
11-9121	Bartenders		X	
11-9141	Bill and account collectors			X
11-9151	Billing and posting clerks		X	
11-9199	Biological scientists, all other		X	X
13-1022	Biological technicians		X	X
13-1023	Bookkeeping, accounting, and auditing clerks		X	X
13-1041	Building cleaning workers, all other			X
13-1071	Bus and truck mechanics and diesel engine specialists		X	X
13-1075	Bus drivers, transit and intercity			X
13-1111	Business operations specialists, all other		X	X
13-1121	Butchers and meat cutters		X	X
13-1131	Carpenters		X	
13-1141	Carpet installers		X	X
13-1151	Cashiers		X	X
13-1161	Chefs and head cooks	X	X	X

Appendix D: Occupations/Industry Matrices**Entertainment and Accommodation Industry Group**

Occ. Code	Occupation Title	Ind. 487100	Ind. 712000	Ind. 721100
13-1199	Chief executives		X	X
13-2011	Childcare workers		X	X
13-2051	Civil engineers		X	X
13-2099	Cleaners of vehicles and equipment			X
15-1121	Coaches and scouts		X	X
15-1131	Coin, vending, and amusement machine servicers and repairers		X	
15-1134	Combined food preparation and serving workers, including fast food		X	
15-1141	Commercial divers		X	X
15-1142	Community and social service specialists, all other		X	X
15-1143	Compensation, benefits, and job analysis specialists			X
15-1151	Compliance officers		X	X
15-1152	Computer and information systems managers		X	X
15-1199	Computer network architects			X
17-2051	Computer network support specialists			X
17-2141	Computer occupations, all other			X
17-2199	Computer operators			X
17-3023	Computer programmers			X
19-1013	Computer systems analysts		X	
19-1029	Computer user support specialists		X	
19-1031	Concierges		X	
19-2041	Conservation scientists		X	
19-3091	Construction laborers		X	
19-3093	Cooks, all other		X	
19-4021	Cooks, fast food		X	
19-4061	Cooks, institution and cafeteria		X	
19-4099	Cooks, restaurant		X	
21-1099	Cooks, short order		X	
23-1011	Cooling and freezing equipment operators and tenders		X	X
25-2011	Costume attendants		X	
25-3021	Counter and rental clerks		X	X
25-3099	Counter attendants, cafeteria, food concession, and coffee shop		X	
25-4011	Couriers and messengers		X	
25-4012	Craft artists		X	
25-4013	Credit authorizers, checkers, and clerks		X	
25-4021	Curators		X	
25-4031	Customer service representatives		X	
25-9011	Dancers		X	
25-9031	Data entry keyers		X	
25-9041	Database administrators		X	
25-9099	Demonstrators and product promoters		X	
27-1011	Dining room and cafeteria attendants and bartender helpers		X	
27-1012	Dishwashers		X	
27-1013	Dispatchers, except police, fire, and ambulance		X	
27-1014	Driver/sales workers		X	
27-1023	Editors			X
27-1024	Education administrators, all other		X	X
27-1025	Education, training, and library workers, all other			X
27-1026	Electrical and electronics engineering technicians		X	X

Appendix D: Occupations/Industry Matrices

Entertainment and Accommodation Industry Group

Occ. Code	Occupation Title	Ind. 487100	Ind. 712000	Ind. 721100
27-1027	Electrical and electronics repairers, commercial and industrial equipment		X	
27-2011	Electricians		X	X
27-2012	Emergency medical technicians and paramedics		X	X
27-2021	Engineers, all other			X
27-2022	Entertainers and performers, sports and related workers, all other			X
27-2023	Entertainment attendants and related workers, all other			X
27-2031	Environmental scientists and specialists, including health		X	
27-2099	Executive secretaries and executive administrative assistants		X	X
27-3031	Farmworkers and laborers, crop, nursery, and greenhouse	X	X	X
27-3041	Farmworkers, farm, ranch, and aquacultural animals		X	
27-3043	File clerks		X	
27-3091	Financial analysts		X	
27-3099	Financial managers		X	X
27-4011	Financial specialists, all other		X	X
27-4014	Fine artists, including painters, sculptors, and illustrators			X
27-4099	First-line supervisors of construction trades and extraction workers			X
29-1131	First-line supervisors of farming, fishing, and forestry workers		X	
29-1141	First-line supervisors of food preparation and serving workers			X
29-2041	First-line supervisors of helpers, laborers, and material movers, hand		X	X
29-2056	First-line supervisors of housekeeping and janitorial workers		X	
31-9011	First-line supervisors of landscaping, lawn service, and groundskeeping workers			X
31-9096	First-line supervisors of mechanics, installers, and repairers		X	
33-1099	First-line supervisors of non-retail sales workers		X	X
33-9021	First-line supervisors of office and administrative support workers			X
33-9031	First-line supervisors of personal service workers			X
33-9032	First-line supervisors of production and operating workers		X	X
33-9092	First-line supervisors of protective service workers, all other		X	X
33-9099	First-line supervisors of retail sales workers		X	X
35-1011	First-line supervisors of transportation and material-moving machine and vehicle operators		X	X
35-1012	Floral designers		X	X
35-2011	Food preparation and serving related workers, all other			X
35-2012	Food preparation workers		X	X
35-2014	Food servers, nonrestaurant		X	X
35-2015	Food service managers		X	X
35-2019	Forest and conservation workers			X
35-2021	Fundraisers	X	X	X
35-3011	Gaming and sports book writers and runners	X	X	X
35-3021	Gaming cage workers		X	X
35-3022	Gaming change persons and booth cashiers	X	X	X
35-3031	Gaming dealers	X	X	X
35-3041	Gaming managers		X	X
35-9011	Gaming service workers, all other		X	X
35-9021	Gaming supervisors		X	X
35-9031	Gaming surveillance officers and gaming investigators		X	X
35-9099	General and operations managers			X
37-1011	Graphic designers		X	X
37-1012	Grounds maintenance workers, all other		X	X
37-2011	Hairdressers, hairstylists, and cosmetologists	X	X	X

Appendix D: Occupations/Industry Matrices

Entertainment and Accommodation Industry Group

Occ. Code	Occupation Title	Ind. 487100	Ind. 712000	Ind. 721100
37-2012	Heating, air conditioning, and refrigeration mechanics and installers		X	X
37-2019	Heavy and tractor-trailer truck drivers			X
37-3011	Helpers--installation, maintenance, and repair workers		X	X
37-3019	Helpers--production workers		X	X
39-1011	Historians			X
39-1012	Hosts and hostesses, restaurant, lounge, and coffee shop			X
39-1021	Hotel, motel, and resort desk clerks	X	X	X
39-2011	Human resources assistants, except payroll and timekeeping		X	
39-2021	Human resources managers		X	X
39-3011	Human resources specialists			X
39-3012	Industrial machinery mechanics			X
39-3019	Industrial truck and tractor operators			X
39-3021	Information and record clerks, all other		X	
39-3031	Inspectors, testers, sorters, samplers, and weighers		X	X
39-3091	Installation, maintenance, and repair workers, all other		X	X
39-3092	Instructional coordinators		X	X
39-3093	Interior designers			X
39-3099	Interpreters and translators			X
39-5012	Janitors and cleaners, except maids and housekeeping cleaners			X
39-5092	Labor relations specialists			X
39-5094	Laborers and freight, stock, and material movers, hand			X
39-6011	Landscaping and groundskeeping workers			X
39-6012	Laundry and dry-cleaning workers		X	X
39-7011	Lawyers	X	X	X
39-7012	Librarians			X
39-9011	Library assistants, clerical		X	X
39-9032	Library technicians		X	
39-9099	Life, physical, and social science technicians, all other		X	X
41-1011	Lifeguards, ski patrol, and other recreational protective service workers		X	X
41-1012	Light truck or delivery services drivers		X	X
41-2011	Locker room, coatroom, and dressing room attendants	X	X	X
41-2012	Locksmiths and safe repairers			X
41-2021	Locomotive engineers		X	X
41-2031	Lodging managers	X	X	X
41-3011	Maids and housekeeping cleaners			X
41-3099	Mail clerks and mail machine operators, except postal service	X	X	X
41-4012	Maintenance and repair workers, general			X
41-9011	Maintenance workers, machinery			X
41-9022	Management analysts			X
41-9041	Managers, all other			X
41-9099	Manicurists and pedicurists			X
43-1011	Market research analysts and marketing specialists	X	X	X
43-2011	Marketing managers		X	X
43-2021	Massage therapists			X
43-3011	Material moving workers, all other			X
43-3021	Mechanical engineers			X
43-3031	Media and communication equipment workers, all other	X	X	X
43-3041	Media and communication workers, all other			X

Appendix D: Occupations/Industry Matrices

Entertainment and Accommodation Industry Group

Occ. Code	Occupation Title	Ind. 487100	Ind. 712000	Ind. 721100
43-3051	Meeting, convention, and event planners		X	X
43-3061	Merchandise displayers and window trimmers		X	X
43-4041	Mobile heavy equipment mechanics, except engines			X
43-4051	Motion picture projectionists	X	X	X
43-4071	Motor vehicle operators, all other			X
43-4081	Multimedia artists and animators		X	X
43-4121	Museum technicians and conservators		X	
43-4151	Natural sciences managers			X
43-4161	Network and computer systems administrators		X	X
43-4171	Nonfarm animal caretakers		X	X
43-4181	Office and administrative support workers, all other	X	X	X
43-4199	Office clerks, general		X	X
43-5021	Office machine operators, except computer			X
43-5032	Operating engineers and other construction equipment operators	X	X	X
43-5061	Order clerks		X	
43-5071	Outdoor power equipment and other small engine mechanics		X	
43-5081	Painters, construction and maintenance		X	X
43-6011	Parking lot attendants		X	X
43-6014	Payroll and timekeeping clerks	X	X	X
43-9011	Personal care and service workers, all other			X
43-9021	Plumbers, pipefitters, and steamfitters		X	
43-9051	Preschool teachers, except special education			X
43-9061	Pressers, textile, garment, and related materials	X	X	X
43-9071	Private detectives and investigators			X
43-9199	Procurement clerks		X	X
45-1011	Producers and directors		X	
45-2092	Production workers, all other		X	
45-2093	Production, planning, and expediting clerks		X	
45-4011	Property, real estate, and community association managers		X	
47-1011	Protective service workers, all other		X	X
47-2031	Public relations and fundraising managers		X	X
47-2041	Public relations specialists			X
47-2061	Purchasing agents, except wholesale, retail, and farm products			X
47-2073	Purchasing managers			X
47-2111	Railroad conductors and yardmasters		X	X
47-2141	Real estate sales agents		X	X
47-2152	Receptionists and information clerks		X	X
49-1011	Recreation workers	X	X	X
49-2094	Registered nurses			X
49-3023	Reservation and transportation ticket agents and travel clerks		X	X
49-3031	Retail salespersons	X		
49-3042	Sales and related workers, all other			X
49-3053	Sales managers			X
49-9021	Sales representatives, services, all other		X	X
49-9041	Sales representatives, wholesale and manufacturing, except technical and scientific products			X
49-9043	Secretaries and administrative assistants, except legal, medical, and executive			X
49-9071	Security guards	X	X	X
49-9091	Self-enrichment education teachers			X

Appendix D: Occupations/Industry Matrices**Entertainment and Accommodation Industry Group**

Occ. Code	Occupation Title	Ind. 487100	Ind. 712000	Ind. 721100
49-9092	Set and exhibit designers		X	
49-9094	Sewing machine operators			X
49-9098	Shipping, receiving, and traffic clerks	X	X	X
49-9099	Skincare specialists		X	X
51-1011	Slot supervisors			X
51-3011	Social and community service managers			X
51-3021	Social science research assistants			X
51-6011	Soil and plant scientists			X
51-6021	Sound engineering technicians			X
51-6031	Stationary engineers and boiler operators			X
51-6052	Stock clerks and order fillers			X
51-6093	Switchboard operators, including answering service			X
51-8021	Tailors, dressmakers, and custom sewers			X
51-9061	Taxi drivers and chauffeurs			X
51-9193	Teacher assistants			X
51-9198	Teachers and instructors, all other			X
51-9199	Telemarketers		X	X
53-1021	Telephone operators			X
53-1031	Tour guides and escorts	X		X
53-3021	Training and development managers	X		
53-3031	Training and development specialists			X
53-3032	Transportation attendants, except flight attendants			X
53-3033	Transportation workers, all other		X	X
53-3041	Transportation, storage, and distribution managers	X	X	X
53-3099	Travel guides			X
53-4011	Umpires, referees, and other sports officials	X		
53-4031	Upholsterers	X		
53-6021	Ushers, lobby attendants, and ticket takers		X	
53-6031	Veterinarians			X
53-6061	Veterinary assistants and laboratory animal caretakers	X		
53-6099	Veterinary technologists and technicians		X	
53-7051	Waiters and waitresses			X
53-7061	Web developers	X		
53-7062	Wholesale and retail buyers, except farm products		X	X
53-7199	Writers and authors			X

NAICS Industries

487100 Scenic and Sightseeing Transportation, Land
712000 Museums, Historical Sites, and Similar Institutions
721100 Traveler Accommodation

Manufacturing and Wholesale Distribution Industry Group

Occ. Code	Occupation Title	Ind. 311400	Ind. 311600	Ind. 332710	Ind. 424500
11-1011	Accountants and auditors	X	X	X	X
11-1021	Administrative services managers	X	X	X	X

Appendix D: Occupations/Industry Matrices**Manufacturing and Wholesale Distribution Industry Group**

Occ. Code	Occupation Title	Ind. 311400	Ind. 311600	Ind. 332710	Ind. 424500
11-2021	Agricultural and food science technicians	X	X	X	
11-2022	Agricultural equipment operators	X	X	X	X
11-3011	Agricultural inspectors	X	X	X	X
11-3021	Agricultural workers, all other	X	X	X	
11-3031	Animal breeders	X	X	X	X
11-3051	Architectural and engineering managers	X	X	X	X
11-3061	Assemblers and fabricators, all other	X	X	X	X
11-3071	Automotive and watercraft service attendants	X	X		X
11-3121	Automotive service technicians and mechanics	X	X	X	
11-9013	Bakers		X		X
11-9041	Billing and posting clerks	X		X	
11-9199	Biochemists and biophysicists	X	X	X	X
13-1021	Biological technicians	X	X		X
13-1023	Bookkeeping, accounting, and auditing clerks	X	X	X	X
13-1041	Bus and truck mechanics and diesel engine specialists	X	X	X	
13-1051	Business operations specialists, all other			X	
13-1071	Butchers and meat cutters	X	X	X	X
13-1074	Buyers and purchasing agents, farm products				X
13-1075	Cashiers	X			
13-1081	Chefs and head cooks	X	X	X	
13-1111	Chief executives	X	X		
13-1151	Cleaners of vehicles and equipment	X	X		
13-1161	Cleaning, washing, and metal pickling equipment operators and tenders	X	X	X	X
13-1199	Clergy	X	X	X	X
13-2011	Coating, painting, and spraying machine setters, operators, and tenders	X	X	X	X
13-2051	Combined food preparation and serving workers, including fast food	X			
15-1121	Compliance officers	X	X		
15-1131	Computer and information systems managers			X	
15-1132	Computer numerically controlled machine tool programmers, metal and plastic			X	
15-1142	Computer operators	X	X	X	
15-1151	Computer programmers	X	X	X	X
17-2071	Computer systems analysts			X	
17-2072	Computer user support specialists			X	
17-2112	Computer-controlled machine tool operators, metal and plastic	X	X	X	
17-2131	Conveyor operators and tenders			X	
17-2141	Cooks, all other	X		X	
17-2199	Cooks, institution and cafeteria			X	
17-3013	Cooks, restaurant			X	
17-3019	Cooling and freezing equipment operators and tenders			X	
17-3023	Cost estimators	X		X	
17-3026	Counter attendants, cafeteria, food concession, and coffee shop	X	X	X	
17-3027	Crushing, grinding, and polishing machine setters, operators, and tenders			X	
17-3029	Customer service representatives			X	
19-1012	Cutters and trimmers, hand	X	X		X
19-1013	Cutting and slicing machine setters, operators, and tenders				X

Appendix D: Occupations/Industry Matrices

Manufacturing and Wholesale Distribution Industry Group

Occ. Code	Occupation Title	Ind. 311400	Ind. 311600	Ind. 332710	Ind. 424500
19-1021	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic		X		
19-4011	Data entry keyers	X	X		X
19-4021	Demonstrators and product promoters	X			
19-4099	Dishwashers	X	X		
21-2011	Dispatchers, except police, fire, and ambulance		X		
27-1024	Drafters, all other	X			
27-3091	Drilling and boring machine tool setters, operators, and tenders, metal and plastic		X		
29-1141	Driver/sales workers		X		
29-2061	Electrical and electronic equipment assemblers		X		
29-9011	Electrical and electronics engineering technicians	X	X	X	
29-9012	Electrical and electronics repairers, commercial and industrial equipment	X	X		
33-9032	Electrical engineers	X	X		
35-1011	Electricians	X			
35-1012	Electromechanical equipment assemblers	X			
35-2012	Electronics engineers, except computer	X			
35-2014	Engine and other machine assemblers	X			
35-2019	Engineering technicians, except drafters, all other	X			
35-2021	Engineers, all other	X	X		
35-3021	Etchers and engravers	X	X		X
35-3022	Executive secretaries and executive administrative assistants	X			X
35-3031	Extruding and drawing machine setters, operators, and tenders, metal and plastic				X
35-9021	Extruding, forming, pressing, and compacting machine setters, operators, and tenders	X			
35-9099	Farm equipment mechanics and service technicians	X			
37-1011	Farm labor contractors	X	X		
37-2011	Farmers, ranchers, and other agricultural managers	X	X	X	X
37-3011	Farmworkers and laborers, crop, nursery, and greenhouse		X		X
37-3012	Farmworkers, farm, ranch, and aquacultural animals				X
39-2021	Financial analysts				X
41-1011	Financial managers		X		X
41-1012	First-line supervisors of construction trades and extraction workers	X	X	X	X
41-2011	First-line supervisors of farming, fishing, and forestry workers	X	X		X
41-2022	First-line supervisors of food preparation and serving workers			X	
41-2031	First-line supervisors of helpers, laborers, and material movers, hand	X	X		X
41-3031	First-line supervisors of housekeeping and janitorial workers				X
41-3099	First-line supervisors of mechanics, installers, and repairers			X	X
41-4011	First-line supervisors of non-retail sales workers			X	X
41-4012	First-line supervisors of office and administrative support workers	X	X	X	X
41-9011	First-line supervisors of production and operating workers	X			
41-9031	First-line supervisors of retail sales workers			X	
41-9099	First-line supervisors of transportation and material-moving machine and vehicle operators				X
43-1011	Food and tobacco roasting, baking, and drying machine operators and tenders	X	X	X	X
43-3021	Food batchmakers	X	X	X	X

Appendix D: Occupations/Industry Matrices**Manufacturing and Wholesale Distribution Industry Group**

Occ. Code	Occupation Title	Ind. 311400	Ind. 311600	Ind. 332710	Ind. 424500
43-3031	Food cooking machine operators and tenders	X	X	X	X
43-3051	Food preparation and serving related workers, all other	X	X	X	X
43-3061	Food preparation workers	X	X	X	
43-4051	Food processing workers, all other	X	X	X	X
43-4151	Food scientists and technologists	X	X	X	
43-4161	Forging machine setters, operators, and tenders, metal and plastic	X	X	X	
43-4171	Furnace, kiln, oven, drier, and kettle operators and tenders	X	X	X	X
43-5032	General and operations managers		X		X
43-5061	Graders and sorters, agricultural products	X	X	X	X
43-5071	Graphic designers	X	X	X	X
43-5081	Grinding and polishing workers, hand	X	X	X	X
43-5111	Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	X	X		X
43-6011	Hazardous materials removal workers	X	X	X	X
43-6014	Heat treating equipment setters, operators, and tenders, metal and plastic	X	X	X	X
43-9011	Heating, air conditioning, and refrigeration mechanics and installers		X		
43-9021	Heavy and tractor-trailer truck drivers		X	X	X
43-9061	Helpers--installation, maintenance, and repair workers	X	X	X	X
43-9199	Helpers--production workers			X	
45-1011	Human resources assistants, except payroll and timekeeping	X	X		X
45-2011	Human resources managers	X	X		X
45-2021	Human resources specialists		X		
45-2041	Industrial engineering technicians	X	X		X
45-2091	Industrial engineers	X	X		X
45-2092	Industrial machinery mechanics	X			X
45-2093	Industrial production managers		X		X
45-2099	Industrial truck and tractor operators	X	X		X
47-1011	Inspectors, testers, sorters, samplers, and weighers			X	
47-2111	Installation, maintenance, and repair workers, all other	X	X	X	
47-2141	Interpreters and translators		X		
47-2211	Janitors and cleaners, except maids and housekeeping cleaners			X	
47-4041	Labor relations specialists		X		
49-1011	Laborers and freight, stock, and material movers, hand	X	X	X	X
49-2094	Landscaping and groundskeeping workers	X	X		
49-3023	Lathe and turning machine tool setters, operators, and tenders, metal and plastic		X		X
49-3031	Laundry and dry-cleaning workers	X	X		X
49-3041	Layout workers, metal and plastic	X			X
49-3042	Licensed practical and licensed vocational nurses			X	
49-9021	Life, physical, and social science technicians, all other	X	X		
49-9041	Light truck or delivery services drivers	X	X	X	X
49-9043	Logisticians	X	X	X	
49-9044	Machine feeders and offbearers			X	X
49-9071	Machinists	X	X	X	X
49-9098	Maintenance and repair workers, general	X	X	X	
49-9099	Maintenance workers, machinery	X	X		
51-1011	Management analysts	X	X	X	X
51-2022	Managers, all other			X	

Appendix D: Occupations/Industry Matrices

Manufacturing and Wholesale Distribution Industry Group

Occ. Code	Occupation Title	Ind. 311400	Ind. 311600	Ind. 332710	Ind. 424500
51-2023	Market research analysts and marketing specialists			X	
51-2031	Marketing managers			X	
51-2041	Material moving workers, all other			X	
51-2092	Materials engineers	X	X	X	
51-2099	Meat, poultry, and fish cutters and trimmers		X	X	
51-3011	Mechanical drafters	X			
51-3021	Mechanical engineering technicians		X		
51-3022	Mechanical engineers		X		
51-3023	Metal workers and plastic workers, all other		X		
51-3091	Milling and planing machine setters, operators, and tenders, metal and plastic	X	X		
51-3092	Millwrights	X	X		X
51-3093	Mixing and blending machine setters, operators, and tenders	X	X		
51-3099	Mobile heavy equipment mechanics, except engines	X	X		
51-4011	Model makers, metal and plastic			X	
51-4012	Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic			X	
51-4021	Motor vehicle operators, all other			X	
51-4022	Multiple machine tool setters, operators, and tenders, metal and plastic			X	
51-4023	Network and computer systems administrators			X	
51-4031	Nonfarm animal caretakers			X	
51-4032	Occupational health and safety specialists			X	
51-4033	Occupational health and safety technicians		X	X	
51-4034	Office and administrative support workers, all other			X	
51-4035	Office clerks, general			X	
51-4041	Order clerks	X		X	
51-4061	Packaging and filling machine operators and tenders			X	
51-4072	Packers and packagers, hand			X	
51-4081	Painters, construction and maintenance			X	
51-4111	Paper goods machine setters, operators, and tenders			X	
51-4121	Parts salespersons		X	X	
51-4122	Payroll and timekeeping clerks			X	
51-4191	Pesticide handlers, sprayers, and applicators, vegetation			X	
51-4192	Plating and coating machine setters, operators, and tenders, metal and plastic			X	
51-4193	Procurement clerks			X	
51-4194	Production workers, all other		X	X	
51-4199	Production, planning, and expediting clerks			X	
51-6011	Purchasing agents, except wholesale, retail, and farm products		X		
51-8021	Purchasing managers	X	X		
51-8031	Receptionists and information clerks	X	X		
51-9012	Registered nurses	X	X		
51-9021	Retail salespersons	X	X	X	X
51-9022	Rolling machine setters, operators, and tenders, metal and plastic			X	
51-9023	Sales and related workers, all other	X	X		X
51-9031	Sales engineers		X		
51-9032	Sales managers	X	X		
51-9041	Sales representatives, services, all other	X	X	X	

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Appendix D: Occupations/Industry Matrices

Manufacturing and Wholesale Distribution Industry Group

Occ. Code	Occupation Title	Ind. 311400	Ind. 311600	Ind. 332710	Ind. 424500
51-9051	Sales representatives, wholesale and manufacturing, except technical and scientific products		X		
51-9061	Sales representatives, wholesale and manufacturing, technical and scientific products	X	X	X	X
51-9111	Secretaries and administrative assistants, except legal, medical, and executive	X	X	X	
51-9121	Securities, commodities, and financial services sales agents			X	
51-9192	Security guards	X	X	X	
51-9193	Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders	X	X		
51-9194	Sheet metal workers			X	
51-9196	Shipping, receiving, and traffic clerks		X		
51-9198	Slaughterers and meat packers	X	X	X	
51-9199	Software developers, applications	X	X	X	X
53-1021	Soil and plant scientists	X	X	X	X
53-1031	Stationary engineers and boiler operators	X	X	X	X
53-3031	Stock clerks and order fillers	X	X		X
53-3032	Structural metal fabricators and fitters	X	X	X	X
53-3033	Tank car, truck, and ship loaders	X	X	X	X
53-3041	Taxi drivers and chauffeurs		X		
53-3099	Team assemblers		X		
53-6031	Tool and die makers				X
53-7011	Tool grinders, filers, and sharpeners	X	X		X
53-7051	Training and development specialists	X	X		X
53-7061	Transportation, storage, and distribution managers	X	X	X	X
53-7062	Waiters and waitresses	X	X	X	X
53-7063	Water and wastewater treatment plant and system operators	X	X	X	X
53-7064	Weighers, measurers, checkers, and samplers, recordkeeping	X	X	X	X
53-7121	Welders, cutters, solderers, and brazers				X
53-7199	Welding, soldering, and brazing machine setters, operators, and tenders	X	X		X

NAICS Industries

311400	Fruit and Vegetable Preserving and Speciality Food Manufacturing
311600	Animal Slaughtering and Processing
332710	Machine Shops
424500	Farm Product Raw Material Merchant Wholesalers

Retail Industry Group

Occ. Code	Occupation Title	Ind. 445000	Ind. 452000	Ind. 722000
11-1011	Accountants and auditors	X		X
11-1021	Administrative services managers	X	X	X
11-2011	Advertising and promotions managers	X		X
11-2021	Aircraft cargo handling supervisors	X	X	
11-2022	Amusement and recreation attendants	X	X	X
11-3011	Assemblers and fabricators, all other	X	X	X
11-3021	Audio and video equipment technicians	X		
11-3031	Automotive and watercraft service attendants	X	X	X

Appendix D: Occupations/Industry Matrices

Retail Industry Group

Occ. Code	Occupation Title	Ind. 445000	Ind. 452000	Ind. 722000
11-3061	Automotive service technicians and mechanics	X	X	X
11-3071	Bakers	X	X	X
11-3121	Bartenders	X	X	X
11-3131	Bill and account collectors			X
11-9021	Billing and posting clerks		X	
11-9051	Bookkeeping, accounting, and auditing clerks	X		X
11-9199	Business operations specialists, all other	X	X	
13-1021	Butchers and meat cutters	X		
13-1022	Buyers and purchasing agents, farm products	X	X	X
13-1023	Carpenters	X	X	X
13-1041	Cashiers	X	X	X
13-1071	Chefs and head cooks	X	X	X
13-1081	Chief executives		X	
13-1111	Childcare workers	X	X	
13-1121	Cleaners of vehicles and equipment	X		X
13-1141	Coin, vending, and amusement machine servicers and repairers	X	X	
13-1151	Combined food preparation and serving workers, including fast food	X	X	X
13-1161	Compensation, benefits, and job analysis specialists	X	X	X
13-1199	Compliance officers	X	X	
13-2011	Computer and information systems managers	X	X	
13-2051	Computer network support specialists		X	
13-2099	Computer occupations, all other		X	
15-1131	Computer operators		X	
15-1134	Computer programmers	X		
15-1142	Computer user support specialists	X		X
15-1151	Concierges	X	X	
15-1152	Construction managers	X		X
15-1199	Cooks, all other	X		X
25-3021	Cooks, fast food	X		
27-1023	Cooks, institution and cafeteria	X	X	X
27-1024	Cooks, restaurant	X		X
27-1026	Cooks, short order	X	X	
27-1029	Counter and rental clerks	X		
27-2031	Counter attendants, cafeteria, food concession, and coffee shop			X
27-2042	Couriers and messengers			X
27-2099	Customer service representatives			X
27-3012	Cutting and slicing machine setters, operators, and tenders			X
27-3031	Dancers	X	X	X
27-4011	Data entry keyers			X
27-4014	Demonstrators and product promoters			X
27-4099	Designers, all other			X
29-1031	Dietetic technicians	X		X
29-1041	Dietitians and nutritionists		X	
29-1051	Dining room and cafeteria attendants and bartender helpers	X	X	
29-1171	Dishwashers		X	
29-2051	Dispatchers, except police, fire, and ambulance			X
29-2052	Driver/sales workers	X	X	
29-2081	Entertainers and performers, sports and related workers, all other		X	

Appendix D: Occupations/Industry Matrices

Retail Industry Group

Occ. Code	Occupation Title	Ind. 445000	Ind. 452000	Ind. 722000
29-2092	Entertainment attendants and related workers, all other		X	
31-9092	Executive secretaries and executive administrative assistants		X	
31-9095	Farmworkers and laborers, crop, nursery, and greenhouse	X	X	
31-9099	File clerks		X	X
33-1099	Financial analysts	X	X	X
33-9021	Financial clerks, all other		X	
33-9032	Financial managers	X	X	X
33-9099	Financial specialists, all other	X	X	
35-1011	First-line supervisors of farming, fishing, and forestry workers	X	X	X
35-1012	First-line supervisors of food preparation and serving workers	X	X	X
35-2011	First-line supervisors of helpers, laborers, and material movers, hand	X	X	X
35-2012	First-line supervisors of housekeeping and janitorial workers	X		X
35-2014	First-line supervisors of mechanics, installers, and repairers	X		X
35-2015	First-line supervisors of non-retail sales workers	X	X	X
35-2019	First-line supervisors of office and administrative support workers	X		X
35-2021	First-line supervisors of personal service workers	X	X	X
35-3011	First-line supervisors of production and operating workers	X		X
35-3021	First-line supervisors of protective service workers, all other	X	X	X
35-3022	First-line supervisors of retail sales workers	X	X	X
35-3031	First-line supervisors of transportation and material-moving machine and vehicle operators	X		X
35-3041	Floral designers	X		X
35-9011	Food and tobacco roasting, baking, and drying machine operators and tenders	X	X	X
35-9021	Food batchmakers	X	X	X
35-9031	Food cooking machine operators and tenders	X	X	X
35-9099	Food preparation and serving related workers, all other	X	X	X
37-1011	Food preparation workers	X		X
37-2011	Food processing workers, all other	X	X	X
37-2012	Food servers, nonrestaurant			X
37-3011	Food service managers	X		X
39-1021	General and operations managers	X	X	X
39-3031	Graders and sorters, agricultural products			X
39-3091	Graphic designers			X
39-3093	Hairdressers, hairstylists, and cosmetologists			X
39-3099	Healthcare support workers, all other	X		
39-5012	Hearing aid specialists	X	X	
39-5092	Heavy and tractor-trailer truck drivers		X	
39-5094	Helpers--production workers		X	
39-6012	Hosts and hostesses, restaurant, lounge, and coffee shop			X
39-9011	Human resources assistants, except payroll and timekeeping	X		
39-9099	Human resources managers	X	X	
41-1011	Human resources specialists	X	X	X
41-1012	Industrial truck and tractor operators	X		X
41-2011	Information and record clerks, all other	X	X	X
41-2021	Inspectors, testers, sorters, samplers, and weighers	X	X	X
41-2022	Installation, maintenance, and repair workers, all other		X	
41-2031	Janitors and cleaners, except maids and housekeeping cleaners	X	X	X
41-3099	Laborers and freight, stock, and material movers, hand	X	X	X
41-4012	Landscaping and groundskeeping workers	X		X

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Appendix D: Occupations/Industry Matrices

Retail Industry Group

Occ. Code	Occupation Title	Ind. 445000	Ind. 452000	Ind. 722000
41-9011	Laundry and dry-cleaning workers	X	X	X
41-9099	Light truck or delivery services drivers	X	X	X
43-1011	Locker room, coatroom, and dressing room attendants	X	X	X
43-2011	Logisticians		X	
43-3011	Maids and housekeeping cleaners	X		
43-3021	Maintenance and repair workers, general	X		X
43-3031	Maintenance workers, machinery	X	X	X
43-3051	Management analysts	X	X	X
43-3061	Managers, all other	X	X	
43-3099	Manicurists and pedicurists	X	X	
43-4051	Market research analysts and marketing specialists	X	X	X
43-4071	Marketing managers	X		
43-4151	Meat, poultry, and fish cutters and trimmers	X	X	X
43-4161	Media and communication equipment workers, all other	X	X	X
43-4171	Medical assistants	X	X	X
43-4199	Meeting, convention, and event planners	X	X	X
43-5021	Merchandise displayers and window trimmers			X
43-5032	Mobile heavy equipment mechanics, except engines		X	X
43-5061	Musicians and singers	X	X	X
43-5071	Network and computer systems administrators	X	X	X
43-5081	Nurse practitioners	X	X	X
43-5111	Office and administrative support workers, all other	X	X	X
43-6011	Office clerks, general	X	X	X
43-6014	Office machine operators, except computer	X	X	X
43-9011	Opticians, dispensing	X		
43-9021	Optometrists	X	X	
43-9061	Order clerks	X	X	X
43-9071	Outdoor power equipment and other small engine mechanics	X		
43-9199	Packaging and filling machine operators and tenders	X	X	X
45-1011	Packers and packagers, hand	X		
45-2041	Painting, coating, and decorating workers	X		
45-2092	Parking lot attendants	X		
47-2031	Parts salespersons			X
49-1011	Payroll and timekeeping clerks	X	X	X
49-2098	Personal care and service workers, all other		X	
49-3023	Pharmacists			X
49-3042	Pharmacy aides		X	
49-3053	Pharmacy technicians		X	
49-3093	Photographic process workers and processing machine operators		X	
49-9043	Private detectives and investigators	X		
49-9071	Procurement clerks	X	X	X
49-9091	Production workers, all other			X
49-9099	Production, planning, and expediting clerks		X	X
51-1011	Protective service workers, all other	X	X	X
51-2099	Public address system and other announcers		X	
51-3011	Public relations specialists	X	X	X
51-3021	Purchasing agents, except wholesale, retail, and farm products	X	X	X
51-3022	Purchasing managers	X	X	

Appendix D: Occupations/Industry Matrices**Manufacturing and Wholesale Distribution Industry Group**

Occ. Code	Occupation Title	Ind. 445000	Ind. 452000	Ind. 722000
51-3023	Receptionists and information clerks	X		
51-3091	Retail salespersons	X	X	X
51-3092	Sales and related workers, all other	X	X	X
51-3093	Sales managers	X		X
51-3099	Sales representatives, services, all other	X	X	
51-6011	Sales representatives, wholesale and manufacturing, except technical and scientific products	X		X
51-6052	Secretaries and administrative assistants, except legal, medical, and executive		X	
51-9012	Security and fire alarm systems installers			X
51-9032	Security guards	X		
51-9061	Self-enrichment education teachers	X		X
51-9111	Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders	X		
51-9123	Shipping, receiving, and traffic clerks	X		
51-9151	Skincare specialists	X	X	
51-9198	Slaughterers and meat packers	X	X	X
51-9199	Sound engineering technicians	X		
53-1011	Stock clerks and order fillers	X		
53-1021	Switchboard operators, including answering service	X	X	X
53-1031	Tailors, dressmakers, and custom sewers	X	X	X
53-3031	Taxi drivers and chauffeurs	X		X
53-3032	Tire repairers and changers	X	X	
53-3033	Training and development managers	X	X	X
53-3041	Training and development specialists	X		X
53-6021	Transportation, storage, and distribution managers	X		X
53-6031	Ushers, lobby attendants, and ticket takers	X	X	
53-7051	Waiters and waitresses	X	X	
53-7061	Web developers	X		
53-7062	Weighers, measurers, checkers, and samplers, recordkeeping	X	X	X
53-7064	Wholesale and retail buyers, except farm products	X	X	X

NAICS Industries

445000 Food and Beverage Stores

452000 General Merchandise Stores

722000 Food Services and Drinking Places

Services Industry Group

Occ. Code	Occupation Title	Ind. 531300	Ind. 561400
11-1011	Accountants and auditors	X	X
11-1021	Administrative services managers	X	X
11-2011	Advertising and promotions managers	X	X
11-2021	Advertising sales agents	X	X
11-2022	Amusement and recreation attendants	X	X
11-2031	Appraisers and assessors of real estate		X
11-3011	Architects, except landscape and naval	X	X
11-3021	Architectural and civil drafters	X	X
11-3031	Architectural and engineering managers	X	X
11-3061	Art directors	X	

Appendix D: Occupations/Industry Matrices

Services Industry Group

Occ. Code	Occupation Title	Ind. 531300	Ind. 561400
11-3071	Audio and video equipment technicians		X
11-3121	Baggage porters and bellhops	X	X
11-3131	Bartenders	X	X
11-9021	Bill and account collectors	X	
11-9041	Billing and posting clerks	X	X
11-9081	Bookkeeping, accounting, and auditing clerks	X	
11-9111	Budget analysts		X
11-9141	Building cleaning workers, all other	X	
11-9151	Bus and truck mechanics and diesel engine specialists	X	
11-9199	Business operations specialists, all other	X	X
13-1022	Camera operators, television, video, and motion picture		X
13-1023	Carpenters	X	X
13-1031	Cashiers		X
13-1041	Chief executives	X	X
13-1051	Civil engineers	X	X
13-1071	Claims adjusters, examiners, and investigators	X	X
13-1081	Cleaners of vehicles and equipment		X
13-1111	Combined food preparation and serving workers, including fast food	X	X
13-1121	Commercial pilots	X	X
13-1131	Community and social service specialists, all other		X
13-1141	Compensation, benefits, and job analysis specialists	X	X
13-1151	Compliance officers	X	X
13-1161	Computer and information systems managers	X	X
13-1199	Computer hardware engineers	X	X
13-2011	Computer network architects	X	X
13-2021	Computer network support specialists	X	
13-2031	Computer occupations, all other	X	X
13-2041	Computer operators	X	X
13-2051	Computer programmers	X	X
13-2052	Computer systems analysts	X	
13-2061	Computer user support specialists		X
13-2071	Computer, automated teller, and office machine repairers		X
13-2072	Concierges	X	X
13-2099	Construction and building inspectors	X	X
15-1121	Construction laborers	X	X
15-1122	Construction managers	X	X
15-1131	Cooks, institution and cafeteria	X	X
15-1132	Cooks, restaurant	X	X
15-1133	Correspondence clerks	X	X
15-1134	Cost estimators	X	X
15-1141	Counter and rental clerks	X	X
15-1142	Counter attendants, cafeteria, food concession, and coffee shop	X	X
15-1143	Couriers and messengers	X	X
15-1151	Court reporters	X	X
15-1152	Credit analysts	X	
15-1199	Credit authorizers, checkers, and clerks	X	X
15-2031	Credit counselors	X	X
15-2041	Customer service representatives		X

Appendix D: Occupations/Industry Matrices**Services Industry Group**

Occ. Code	Occupation Title	Ind. 531300	Ind. 561400
17-1011	Data entry keyers	X	
17-1012	Database administrators	X	
17-2051	Demonstrators and product promoters	X	
17-2061	Desktop publishers		X
17-2072	Dining room and cafeteria attendants and bartender helpers		X
17-2112	Dishwashers		X
17-2141	Dispatchers, except police, fire, and ambulance	X	
17-3011	Driver/sales workers	X	
17-3023	Editors		X
21-1029	Electrical and electronics engineering technicians	X	
21-1093	Electrical and electronics repairers, commercial and industrial equipment	X	
21-1099	Electricians	X	
23-1011	Electronic home entertainment equipment installers and repairers	X	
23-2011	Electronics engineers, except computer	X	X
23-2091	Executive secretaries and executive administrative assistants		X
23-2093	File clerks	X	
23-2099	Financial analysts		X
27-1011	Financial clerks, all other		X
27-1014	Financial examiners		X
27-1024	Financial managers	X	X
27-1025	Financial specialists, all other	X	
27-2012	First-line supervisors of construction trades and extraction workers		X
27-3031	First-line supervisors of food preparation and serving workers	X	X
27-3041	First-line supervisors of helpers, laborers, and material movers, hand		X
27-3042	First-line supervisors of housekeeping and janitorial workers		X
27-3043	First-line supervisors of landscaping, lawn service, and groundskeeping workers		X
27-3091	First-line supervisors of mechanics, installers, and repairers		X
27-3099	First-line supervisors of non-retail sales workers		X
27-4011	First-line supervisors of office and administrative support workers		X
27-4031	First-line supervisors of personal service workers		X
29-1051	First-line supervisors of production and operating workers		X
29-1141	First-line supervisors of protective service workers, all other		X
29-2052	First-line supervisors of retail sales workers		X
29-2071	First-line supervisors of transportation and material-moving machine and vehicle operators		X
31-9094	Fitness trainers and aerobics instructors		X
33-1099	Food preparation workers	X	
33-9021	Food servers, nonrestaurant		X
33-9032	Fundraisers	X	X
33-9092	General and operations managers	X	
33-9099	Graphic designers	X	X
35-1012	Grounds maintenance workers, all other	X	
35-2012	Heating, air conditioning, and refrigeration mechanics and installers	X	
35-2014	Heavy and tractor-trailer truck drivers	X	
35-2021	Helpers--installation, maintenance, and repair workers	X	
35-3011	Helpers--production workers	X	
35-3021	Home appliance repairers	X	
35-3022	Hotel, motel, and resort desk clerks	X	
35-3031	Human resources assistants, except payroll and timekeeping	X	

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Appendix D: Occupations/Industry Matrices

Services Industry Group

Occ. Code	Occupation Title	Ind. 531300	Ind. 561400
35-3041	Human resources managers	X	
35-9011	Human resources specialists	X	
35-9021	Industrial engineers	X	
37-1011	Industrial machinery mechanics	X	
37-1012	Industrial truck and tractor operators	X	
37-2011	Information and record clerks, all other	X	X
37-2012	Information security analysts	X	
37-2019	Installation, maintenance, and repair workers, all other	X	
37-3011	Insurance claims and policy processing clerks	X	X
37-3012	Insurance sales agents	X	
37-3019	Interior designers	X	
39-1021	Interpreters and translators	X	
39-3031	Interviewers, except eligibility and loan	X	
39-3091	Janitors and cleaners, except maids and housekeeping cleaners	X	
39-6011	Laborers and freight, stock, and material movers, hand	X	
39-6012	Landscape architects	X	
39-9031	Landscaping and groundskeeping workers	X	
39-9032	Laundry and dry-cleaning workers	X	
39-9041	Lawyers	X	
39-9099	Legal secretaries	X	
41-1011	Legal support workers, all other	X	X
41-1012	Lifeguards, ski patrol, and other recreational protective service workers	X	X
41-2011	Light truck or delivery services drivers	X	X
41-2021	Loan interviewers and clerks	X	X
41-2031	Loan officers	X	X
41-3011	Lodging managers	X	
41-3021	Logisticians		X
41-3099	Maids and housekeeping cleaners	X	X
41-4012	Mail clerks and mail machine operators, except postal service		X
41-9011	Maintenance and repair workers, general		X
41-9021	Management analysts	X	
41-9022	Managers, all other	X	
41-9031	Market research analysts and marketing specialists		X
41-9041	Marketing managers		X
41-9099	Mechanical engineers	X	X
43-1011	Media and communication workers, all other	X	X
43-2011	Medical and health services managers	X	X
43-2021	Medical records and health information technicians		X
43-3011	Medical secretaries	X	X
43-3021	Medical transcriptionists	X	
43-3031	Meeting, convention, and event planners	X	X
43-3051	Motor vehicle operators, all other	X	X
43-3061	Multimedia artists and animators	X	X
43-3099	Network and computer systems administrators	X	X
43-4021	Office and administrative support workers, all other		X
43-4041	Office clerks, general		X
43-4051	Office machine operators, except computer	X	X
43-4071	Operations research analysts	X	X

Appendix D: Occupations/Industry Matrices**Services Industry Group**

Occ. Code	Occupation Title	Ind. 531300	Ind. 561400
43-4081	Order clerks	X	
43-4111	Packers and packagers, hand	X	X
43-4131	Painters, construction and maintenance	X	X
43-4151	Paralegals and legal assistants	X	X
43-4161	Parking lot attendants	X	X
43-4171	Payroll and timekeeping clerks	X	X
43-4181	Personal care and service workers, all other	X	X
43-4199	Personal financial advisors	X	X
43-5021	Pesticide handlers, sprayers, and applicators, vegetation	X	X
43-5031	Pharmacists		X
43-5032	Pharmacy technicians	X	X
43-5061	Photographic process workers and processing machine operators	X	X
43-5071	Plumbers, pipefitters, and steamfitters	X	X
43-5081	Police, fire, and ambulance dispatchers		X
43-5111	Prepress technicians and workers		X
43-6011	Print binding and finishing workers	X	X
43-6012	Printing press operators	X	X
43-6013	Private detectives and investigators		X
43-6014	Procurement clerks	X	X
43-9011	Producers and directors		X
43-9021	Production workers, all other	X	X
43-9022	Production, planning, and expediting clerks	X	X
43-9031	Property, real estate, and community association managers		X
43-9041	Protective service workers, all other		X
43-9051	Public relations and fundraising managers	X	X
43-9061	Public relations specialists	X	X
43-9071	Purchasing agents, except wholesale, retail, and farm products	X	X
43-9199	Purchasing managers	X	
47-1011	Radio, cellular, and tower equipment installers and repairs	X	
47-2031	Real estate brokers	X	
47-2061	Real estate sales agents	X	
47-2111	Receptionists and information clerks	X	
47-2141	Recreation workers	X	
47-2152	Registered nurses	X	
47-4011	Reservation and transportation ticket agents and travel clerks	X	
49-1011	Residential advisors	X	X
49-2011	Retail salespersons		X
49-2021	Sales and related workers, all other		X
49-2094	Sales engineers		X
49-2097	Sales managers		X
49-3031	Sales representatives, services, all other		X
49-9021	Sales representatives, wholesale and manufacturing, except technical and scientific products	X	
49-9031	Secretaries and administrative assistants, except legal, medical, and executive	X	
49-9041	Security guards		X
49-9071	Shipping, receiving, and traffic clerks	X	X
49-9098	Social and community service managers	X	
49-9099	Social and human service assistants	X	
51-1011	Social workers, all other	X	X

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Appendix D: Occupations/Industry Matrices

Services Industry Group

Occ. Code	Occupation Title	Ind. 531300	Ind. 561400
51-2092	Software developers, applications		X
51-5111	Software developers, systems software		X
51-5112	Stationary engineers and boiler operators		X
51-5113	Statisticians		X
51-6011	Stock clerks and order fillers	X	
51-8021	Switchboard operators, including answering service	X	
51-9151	Taxi drivers and chauffeurs		X
51-9198	Team assemblers		X
51-9199	Technical writers		X
53-1021	Telemarketers	X	X
53-1031	Telephone operators		X
53-2012	Title examiners, abstractors, and searchers	X	
53-3031	Training and development managers		X
53-3032	Training and development specialists		X
53-3033	Transportation, storage, and distribution managers	X	X
53-3041	Ushers, lobby attendants, and ticket takers	X	
53-3099	Waiters and waitresses		X
53-6021	Web developers	X	
53-7051	Weighers, measurers, checkers, and samplers, recordkeeping		X
53-7061	Wholesale and retail buyers, except farm products		X
53-7062	Word processors and typists	X	X
53-7064	Writers and authors		X

NAICS Industries

531300 Activities Related to Real Estate

561400 Business Support Services

Utility Industry Group

Occ. Code	Occupation Title	Ind. 221114	Ind. 221115	Ind. 517200
11-1011	Accountants and auditors			X
11-1021	Administrative services managers	X	X	X
11-2021	Architectural and engineering managers			X
11-2022	Bill and account collectors			X
11-3011	Billing and posting clerks			X
11-3021	Bookkeeping, accounting, and auditing clerks			X
11-3031	Business operations specialists, all other			X
11-3071	Chief executives			X
11-3121	Compensation, benefits, and job analysis specialists			X
11-3131	Compliance officers			X
11-9021	Computer and information systems managers	X	X	X
11-9041	Computer hardware engineers			X
11-9199	Computer network architects			X
13-1023	Computer network support specialists			X
13-1041	Computer occupations, all other			X
13-1051	Computer programmers			X
13-1071	Computer systems analysts			X
13-1081	Computer user support specialists			X
13-1111	Construction managers			X

Appendix D: Occupations/Industry Matrices**Utility Industry Group**

Occ. Code	Occupation Title	Ind. 221114	Ind. 221115	Ind. 517200
13-1141	Cost estimators			X
13-1151	Credit analysts			X
13-1161	Customer service representatives	X		X
13-1199	Database administrators	X		X
13-2011	Electrical and electronics engineering technicians	X	X	X
13-2041	Electrical and electronics repairers, commercial and industrial equipment			X
13-2051	Electrical and electronics repairers, powerhouse, substation, and relay			X
13-2099	Electrical engineers			X
15-1121	Electronic home entertainment equipment installers and repairers			X
15-1122	Electronics engineers, except computer			X
15-1131	Engineers, all other			X
15-1132	Executive secretaries and executive administrative assistants			X
15-1133	Financial analysts			X
15-1134	Financial managers			X
15-1141	Financial specialists, all other			X
15-1142	First-line supervisors of construction trades and extraction workers			X
15-1143	First-line supervisors of mechanics, installers, and repairers			X
15-1151	First-line supervisors of non-retail sales workers			X
15-1152	First-line supervisors of office and administrative support workers			X
15-1199	First-line supervisors of production and operating workers			X
15-2031	First-line supervisors of retail sales workers			X
17-2061	General and operations managers			X
17-2071	Helpers--installation, maintenance, and repair workers	X		X
17-2072	Human resources assistants, except payroll and timekeeping			X
17-2199	Human resources managers		X	
17-3023	Human resources specialists			X
23-1011	Information security analysts	X		
23-2011	Laborers and freight, stock, and material movers, hand			X
41-1011	Lawyers			X
41-1012	Logisticians			X
41-2031	Maintenance and repair workers, general			X
41-3099	Management analysts	X		X
41-4011	Managers, all other			X
41-4012	Market research analysts and marketing specialists	X		X
41-9031	Marketing managers			X
41-9041	Network and computer systems administrators			X
43-1011	Office clerks, general		X	X
43-2011	Operations research analysts			X
43-2021	Paralegals and legal assistants			X
43-3011	Power plant operators			X
43-3021	Production, planning, and expediting clerks			X
43-3031	Purchasing agents, except wholesale, retail, and farm products	X	X	X
43-4051	Radio, cellular, and tower equipment installers and repairs			X
43-4161	Retail salespersons			X
43-5061	Sales engineers			X
43-5071	Sales managers			X
43-5081	Sales representatives, services, all other			X
43-6011	Sales representatives, wholesale and manufacturing, except technical and scientific products			X

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Appendix D: Occupations/Industry Matrices

Utility Industry Group

Occ. Code	Occupation Title	Ind. 221114	Ind. 221115	Ind. 517200
43-6014	Sales representatives, wholesale and manufacturing, technical and scientific products		X	X
43-9061	Secretaries and administrative assistants, except legal, medical, and executive		X	X
47-1011	Shipping, receiving, and traffic clerks	X		
47-2231	Software developers, applications	X		
49-1011	Software developers, systems software		X	X
49-2021	Solar photovoltaic installers			X
49-2022	Stock clerks and order fillers			X
49-2094	Switchboard operators, including answering service			X
49-2095	Telecommunications equipment installers and repairers, except line installers	X	X	
49-2097	Telecommunications line installers and repairers			X
49-9052	Telemarketers			X
49-9071	Telephone operators	X		X
49-9081	Training and development managers		X	
49-9098	Training and development specialists			X
51-1011	Transportation, storage, and distribution managers		X	
51-8013	Web developers		X	
53-7062	Wind turbine service technicians			X

NAICS Industries

- 221114 Solar Electric Power Generation
- 221115 Wind Electric Power Generation
- 517200 Wireless Telecommunications Carriers (Except Satellite)

Appendix E: FBFA Project Priority List

**NAVAJO NATION DIVISION OF ECONOMIC DEVELOPMENT
FBFA PROJECTS FROM PROJECT PRIORITIZED LIST**

UNDEVELOPED CHAPTER COMMERCIAL TRACTS: WESTERN AGENCY

Chapter	Status	Acreage	Land Withdrawn	Legal Description	Infrastructure
1 Bodaway/Gap	Water & waste water lines and access road have been constructed with various outside grant funds.	4 acres			
2 Bodaway/Gap	Previously a T.P. site, now vacant. Needs waste water disposal system (sewer lagoon.)	4 acres			
3 Bodaway/Gap	Identified as Chapter property but there are some interest from business people.	12 acres			
4 Bodaway/Gap	Barney Enterprise, LLC received Chapter resolution for a Laundromat but lacks land approval for an access road. Undeveloped.	3 acres			
5 Bodaway/Gap	Land identified for gravel site, land survey, archaeological and environmental assessment completed but needs plans for a spring to get compliance determination from NN Fish & Wildlife.	50 acres			
6 Bodaway/Gap	NN approved land withdrawal, needs master plan, engineering plan & design for infrastructure & construction of infrastructure.	100 acres			
7 Cameron	Chapter approved supporting resolution for land withdrawal. Contract for land survey is pending approval at NN Risk Management. Hotel Development being proposed by DED.	12 acres			
8 Cameron	Chapter approved supporting resolution for land withdrawal. Contract for land survey is pending approval at NN Risk Management. Chapter is interested in a Visitor and Cultural Center.	40 acres			
9 Coalmine Canyon	Commercial site needs engineering plan & design for infrastructure and construction of the infrastructure.	13 acres			

Appendix E: FBFA Project Priority List

**NAVAJO NATION DIVISION OF ECONOMIC DEVELOPMENT
FBFA PROJECTS FROM PROJECT PRIORITIZED LIST**

10	Coalmine Canyon	Light industrial site needs engineering plan & design for infrastructure and construction of the infrastructure. This site is lower than the community sewer lagoon so on-site waste disposal system will be required.	18 acres			
11	Coalmine Canyon	Dinosaur Track tourism site. Land withdrawal completed. Meetings in process to put in a waterless restroom and additional tourism development.	4 acres			
12	Coalmine Canyon	Commercial & Light Industrial Site. Land withdrawal completed. Engineering plan & design completed. Need funding for infrastructure development and groundwork.	27 acres			
13	Kaibeto	Commercial & Light Industrial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Need infrastructure.	120 acres			
14	Kaibeto	Commercial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Need infrastructure.	80 acres			
15	Kaibeto	Commercial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Market Feasibility Study completed. Needs final engineering plan & design and construction of all infrastructure with access road.	10 acres			
16	Kaibeto	Commercial Site. Land withdrawal completed. Some engineering plan & design completed by Chapter. Market Feasibility Study completed. Needs final engineering plan, design and construction of all infrastructure with access road. There is a 3 acre Business Site Lease within the 8 acres.	8 acres			

Appendix E: FBFA Project Priority List

NAVAJO NATION DIVISION OF ECONOMIC DEVELOPMENT
FBFA PROJECTS FROM PROJECT PRIORITIZED LIST

17	Kaibeto	Old Bennett's Corner, first original lease was terminated, 2nd lease was terminated again. There was in interest from another individual, Chapter approved resolution but client has not started working on the BSL.	3 acres			
18	Tuba City (To'nanees-Dizi)	Former Davis Chevrolet business site. All infrastructure is available. USEPA completed its clean up of underground gasoline contamination. Khangura Development, LLC is interested in developing a Marriott Hotel.	3.5 acres			
19	Tuba City (To'nanees-Dizi)	Site was a home site lease and has been converted into a commercial site. Western RBDO working on land withdrawal.	2 acres			
20	Tonalea	Commercial tract has an approved land withdrawal. Engineering plan & design are completed. Need funding for construction of infrastructure with access roads. Chapter has funding for Market Feasibility Study.	9 acres			

Appendix E: FBFA Project Priority List

NAVAJO NATION DIVISION OF ECONOMIC DEVELOPMENT
FBFA PROJECTS FROM PROJECT PRIORITIZED LIST

INDUSTRIAL PARKS:

Project	Brief Description	Acres	Land Withdrawn	Legal Description	Infrastructure
1 Leupp Industrial Park	Ninety-nine (99) acres available for lease. Located 1 mile from the Highway 99 and adjacent to Navajo Route 15, just 20 miles north of Interstate 40 in Leupp, Arizona.	100 Acres			

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Appendix E: FBFA Project Priority List

NAVAJO NATION DIVISION OF ECONOMIC DEVELOPMENT FBFA PROJECTS FROM PROJECT PRIORITIZED LIST (YEAR 1 2)

PROJECT PRIORITY:

	Year	Task	Location	Project	Brief Description	Acres	Land Withdrawn	Legal Description	Infrastructure
1	1	Development	Bodaway/ Gap	Vendor Site Development	Develop a Vending Site for Local Vendors. Waterless Restroom, Pull Out Along Rte89/ Marble Canyon & Signage				
2	1	Infrastructure	Bodaway/ Gap	Vendor Site Development	Marble Canyon/Big Cut; 2 Waterless Restrooms				
3	1	Study	Cameron	Museum/ Cultural Center	Market Feasibility Study				
4	1	Infrastructure	Coalmine Canyon/ Tuba City	Kerley Valley Commercial Site	Site Work-Water/Sewer, Access Road, Drainage & Construction				
5	1	Infrastructure	Leupp	Young Tours	Design & Construct Access Road				
6	1	Infrastructure	Tuba City	Cavesa's Car Wash, Laundromat	Utilities, Earthwork & Access Road				
7	1	Redevelop	Tuba City	Former Redd LeChee Site	Demolition & Clean Up, Redevelopment-Hotel				
8	1	Study	Tuba City	Former Blue Sage Ventures, LLC	Appraisal, Land Survey, Development-Hotel				
9	1	Clean Up	Tuba City	Former Ferrell Gas Site	Demolition & Site Clean Up				
10	1	Infrastructure	Tuba City	Terraform Development - Apartments, Offices, Wellness Center, Restaurant	Infrastructure Development				
11	1	Infrastructure	Tuba City	TC Auto Tec. (Barney Enterprises)	Parking Lot & Access Road				
12	1	Infrastructure	Tuba City	Terraform Dev., LLC	Design, Construct, & Infrastructure				
13	1	Infrastructure	Tuba City	Kerley Valley Commercial Site (25 Acres)	Infrastructure Design/Construction				
14	1	Clean Up	Tuba City	Former Desert Memorial Funeral Home	Demolition and Site Clean Up				
15	2	Construction	Bodaway/ Gap	Antelope Trail	Vending Site Improvement & Construction				
16	2	Infrastructure	Bodaway/ Gap	Cedar Ridge Business Site	Ethnographic Study-Historic, Building, & Infrastructure Design Construction				
17	2	Development	Kaibeto	80 Acres Commercial Site	Development: Mix Commercial & Light Industrial				

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Appendix E: FBFA Project Priority List

NAVAJO NATION DIVISION OF ECONOMIC DEVELOPMENT FBFA PROJECTS FROM PROJECT PRIORITIZED LIST (YEAR 1 2)

Year	Task	Location	Project	Brief Description	Acres	Land Withdrawn	Legal Description	Infrastructure
18	2	Infrastructure	Kaibeto	TB Tire Shop & Tour Business	Design, Construct Infrastructure & Access Road			
19	2	Infrastructure	Kaibeto	8 & 10 Acres Commercial Site	Infrastructure, Access Roads & Parking Lot			
20	2	Study	Leupp	Industrial Park	Master Plan, Lot Division & Utility Designation			
21	2	Infrastructure	Tonalea	9 Acres Commercial Site	Utilities & Access Roads			
22	2	Construction	Tuba City	WRBDO Building Project	Construction			
23	2	Development	Tuba City	Dinosaur Track	Development			
24	2	Development	Tuba City/Gap	Northwest Corridor Development	C-Store & Motel Development			

Appendix F: Chapter Synopsis - Bodaway-Gap

December 2008 Bodaway-Gap Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

The purpose of the Comprehensive Land Use Plan (CLUP) is to present interconnecting issues that are facing the Bodaway-Gap Chapter (hereafter referred to as “the Chapter”). The CLUP gathers information that will help guide future development and policies on tribal land. With this information, the Chapter can make better future decisions concerning budgeting, capital improvements, and land use in order to reach the community’s goals and achieve its vision.

The CLUP is a collection of information from the Chapter, federal, state, and local governments that has been compiled into one document. The focus of the CLUP is providing for housing, coordinating infrastructure development, protecting open space, designating commercial areas, and prioritizing needed community facility improvements.

This plan includes an emphasis on projects needed for a recovery from the former Bennett Freeze. The CLUP uses a consensus-building process to facilitate present and future land use decisions. This process establishes a unified set of policies to guide future land use decisions regarding residential subdivision plans, capital improvement projects, recreation and infrastructure plans, zoning districts, and variance appeals.

About the Chapter:

The Chapter consists of six main communities, which are as follows; Navajo Springs, Bitter Springs, Cedar Ridge, the Gap, Hidden Springs, and the Junction. The majority of communities consist of housing developments, houses of worship, airstrip, basketball courts, and abandoned buildings. The community of the Gap has the most Chapter public facilities and services. Public facilities include the Chapter House, which is also used as the Senior Center, the Gap Preschool and Head Start, the Chapter Administrative offices, a solid waste transfer station, the Gap Trading Post, a gas station and service center, and Tsinaabaas Hibiitiin Grade School. A small cemetery is also located in the Gap.

The Chapter terrain is composed of deep canyons, open desert, and towering red rock cliffs. Elevations in the Chapter vary between 3,000 feet at the Colorado River to 7,000 feet atop the Echo Cliffs. The Chapter is surrounded by several tourist attractions: Lake Powell, Grand Canyon National Park, and Wupatki-Sunset Crater National Monument. The area is characterized by high elevation desert scrub and juniper woodlands. Ephemeral washes cross the Chapter, the three largest being Tanner Wash, Moenkopi Wash, and Hamblin Wash.

The Chapter is located within Land Management District 3 and is part of the Western Navajo Agency. The Chapter is composed of approximately 561,586 acres, 466,725 acres of which were part of the former Bennett Freeze, which is almost 83 percent of the Chapter land base. The following communities within the Chapter were affected by the former Bennett Freeze: Cedar Ridge, the Gap, Hidden Springs, the Junction (U.S. Highway 89 and U.S. Highway 160), a section of the Little Colorado River Valley Gorge, and the residents along the Colorado River.

Appendix G: Chapter Synopsis - Cameron

April 2006 Cameron Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

Cameron Chapter Community-Based Land Use Plan is to articulate the community's plan for the future. The process included community participation and engagement which included committee meetings, public meetings, newsletters, surveys, and public information distribution. The CLUPC document established the strengths of the community, which are the framework for future planning and development. Many of the strengths of the Chapter have been discussed during the CLUPC meetings. Some of the noted major strengths of the Chapter include availability of land for development along US Highway 89, 'Gateway to the Grand Canyon', and the natural beauty of the surrounding landscapes of the Chapter.

Cameron Chapter is located in the Western Navajo Agency and Coconino County along US Highway 89 about 52 north of Flagstaff, Arizona. AZ Highway 64 from the Grand Canyon also interests with US Highway 89 in the central part of the Chapter. The western boundary of the Navajo Nation is the western boundary of the Chapter. The western boundary also serves as the eastern boundary of the Grand Canyon National Park and the Kaibab National Forest, north of the San Francisco Peaks. The topography of the Chapter varies from the wooded slopes of Gray Mountain, which is a steep, monocline cut shallow canyons to the deep gorge of the Little Colorado River.

According to the Cameron Trading Post's self-published history, when Cameron was established, Navajo and Hopi locals visited to barter their wool, blankets, and livestock for dry goods. Cameron instigated tourism hospitality while still accommodating for the local community. The major attraction of Cameron is the Trading Post, which accommodates for both tourist and locals.

Vision:

The Chapter vision incorporates the community ideals and goals, discussed during public meetings and surveys collected. The Chapter also desires to have improved human service facilities development for seniors and youth in their community;

The Chapter should develop new and better housing and utilities, which will aid the establishment of economic development in designated corridors. The economic development will be implemented by working with economic development officials, utility providers, and others to further develop the selected sites for each land use improvement. Road and utility improvements should take place throughout the chapter, particular by providing electric and water service to additional customers. Certain more remote roads should be paved or otherwise improved.

In addition, programs will be developed to bring commercial and industrial businesses to the community and to provide community facilities. Within several years the new economic development will bring jobs that will be available to local residents. The economic development and community facilities areas will be designed and built in a manner that is compatible with the preservation of residential, range, agricultural and open space areas.

Appendix H: Chapter Synopsis - Coalmine Canyon

January 2017 Coalmine Canyon Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

Coalmine Canyon Chapter Community-Based Land Use Plan incorporates both traditions and customs of the past and connects them to community visions of the future. The document is the guiding principles for Chapters resolution for growth. This document moves the Coalmine Canyon Chapter closer to self-determination and self-sufficiency, allowing the Chapter to evaluate land use development while balancing the needs of cultural traditions and utilization of limited natural resources.

Coalmine Canyon Chapter is located in the southwest part of the Navajo Nation, approximately 17 miles from Tuba City along Highway 264 in North Central Arizona. The Chapter is also in the central eastern portion of Coconino County Arizona. Coalmine Canyon Chapter is situated in the portion of the Colorado Plateau to the east of the Grand Canyon National Monument. The Chapter House looks over the landscape, with views of the San Francisco Peaks and Navajo Mountain. Northeast of the Chapter House starts the ridge of the Coalmine Canyon, that consist of red and white layered spires that run for miles.

Originally, the first chapter was located in Coalmine Mesa, where the first cinderblock chapter house was constructed. However in 1974, the United States Congress passed the Navajo and Hopi Land Settlement Act of 1974 Law, which required the Chapter House and families of the Coalmine Mesa to relocate. Due to the relocation, the chapter house was renamed from Coalmine Mesa Chapter to Coalmine Canyon Chapter. This created psychological, sociological, and physiological impact on the Coalmine Canyon people, especially in the elders of the community, which restricted basic services to families in the area, creating conditions where houses becoming cover crowded increasing health and safety problems. Since the 'lift' of both the Bennett Freeze and of the Relocation, the community is set on rebuilding and healing, hoping to create a better quality of life.

Vision:

The Chapter builds on traditions, valuing the Blessing Way Ceremony as a foundation for the Chapter's vision, incorporating contemporary concepts. The vision is set to help current and future generations have foresight for appropriate planning that focuses on local empowerment and to decentralize government.

The vision is intended to rebuild the community and heal psychologically and sociologically. The Chapter envisions a community where its people can live and prosper in a safe and self-sustaining environment with a growing, balanced, and diversified economy that prudently utilizes its natural and cultural resources for a self-sustaining economy and a better quality of life to the community.

Mission:

The Chapter's mission is to provide a local land use guide for community growth and development so that families and businesses establishments can live in harmony with the natural, cultural and social characteristics of the surroundings within a sustainable economically progressive environment.

Appendix I: Chapter Synopsis - Coppermine

2017 Coppermine Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

The Coppermine Community developed and approved the initial Community Land Use Plan in 2004. The basis for the Plan is the Local Governance Act of 1998 adopted by the Navajo Nation. Each Chapter of the Navajo Nation worked toward completing the various elements required under the act. Under U.S. Department of Housing and Urban

Development (HUD), the Native American Housing Assistance and Self-Determination Act of 1996 (NAHASDA) provided a technical assistance grant to each chapter to work on and develop their Community Land Use Plan. This Community Land Use Plan partially fulfills the requirements towards developing a Comprehensive Land Use Plan at the local chapter level. It identifies existing and future needs, prioritizes and addresses development with available resources for a sustainable community.

The Coppermine Chapter received NAHASDA grant with the assistance of the Office of Navajo Government Development for land use planning and technical assistance. In November 2002, Coppermine Chapter passed a resolution establishing the Community Land Use Planning Committee (CLUPC). Originally, the CLUPC Plan of Operation called for a ten-member committee. This was revised prior to their first meeting; a five-member committee was established with a President, Vice-President, Secretary/Treasurer, Grazing Official and one at-large member.

The Community Land Use Plan is a long-range plan that will guide the Chapter in defining its growth and development for the next five to twenty years. The Plan is a policy tool for the Chapter to evaluate funding, budget decisions and recommendations for future growth. It is a living document designed to address the present and future needs of Coppermine Chapter.

Mission Statement:

To develop a comprehensive community plan that addresses community unmet needs, integrate human resources for long range community and economic development plans.

Vision Statement:

Coppermine Chapter envisions a sustainable community that ensures: enhancement of quality of life through socio-economic and infrastructure development; preservation of Dine culture; and conservation of natural resources while providing basic human services.

Appendix J: Chapter Synopsis - Kaibeto

Kaibeto Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis and Chapter Location:

The Kaibeto Community-Based Land Use Plan's purpose is to enact positively with the local government. It is an oral discussion about native community project scheduling and commitments. The Kaibeto Chapter Community Land Use Plan Committee (CLUPC) compose of five members with one from each area of the chapter's east, west, south and north locations central to Kaibeto. The community representatives are unified in the affairs of the chapter and are responsible in developing and support the CLUP and putting the developed policies into action. The CLUP's strategy is to offer leadership and reinforce the responsibilities of each CLUP committee member.

Kaibeto Chapter is located within northern Arizona and within Coconino County. The total area size is 237,300 acres and occupies the Western Agency of the Navajo Nation.

Vision:

The Kaibeto Vision Statement is to regulate and manage ideas. It's the plan in addressing the local Citizen Governance Community-based Land Use Plan.

Mission:

Our Mission is to increase individual's quantity and quality of life through health, mental, social, and economic services. It is to rightfully gain in finding our narrowed down character traits. Its granting influence of programs to facilitate in diminishing our Community's disorganized issue. It is to bring about positive changes for our new generations in their futurehuman resources.

Appendix K: Chapter Synopsis - Leupp

September 2008 Leupp Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

Leupp Chapter Community-Based Land Use Plan is to articulate the community's plan for the future. The focus of the CLUP is providing for housing, coordinating infrastructure development, protecting open space, designating commercial areas, and prioritizing needed community facility improvements. The CLUP presents interconnecting issues that are facing the Leupp Chapter, information that the chapter can use to create goals that can help to reach the community's vision.

Leupp Chapter is located in north central Arizona in the southwestern corner of the Navajo Nation and in the eastern portion of Coconino County. Tourist attractions include Canyon Diablo, located in the southern part of Leupp, five miles south of the Chapter House along the northern side of the railroad tracks; Grand Falls, located on the Little Colorado River, 10 miles northwest of the town of Leupp; and Old Leupp, located two miles east of the Leupp Chapter House.

Historically the Chapter followed traditional Navajo ways and began planning for land use by establishing water sources, establishing winter and summer camps for herd, and developing methods of sustaining the life and culture of the community. The Chapter was founded with a traditional Navajo vision of balance and harmony while thinking and planning for the future.

Vision:

The Chapter vision captures how Chapter members would like to see their community grow over the next 15 years. Long-term growth, the Chapter wants to maximize the benefits of modern opportunities, while still maintaining the integrity of their traditional Navajo culture. Community facilities and service are an important part of the community vision. The Chapter wants to improve education, including education facilities, create a multi-purpose building for recreational activities, and a community store to provide jobs and basic necessities to the community.

Majority of the residents lack basic amenities, the Chapter hopes to improve infrastructure for quality of life and safety for these residents. To provide for infrastructure, the Chapter want to provide sustainable energy sources to accommodate the off-the-grid utilities.

The Chapter wants to provide residents safe, durable and energy-efficient homes with access to infrastructure no matter if they live closer to community or in remote areas of the Chapter. The Chapter wants to provide housing options, while still providing independence and opportunities to their communities and when in need provide amenities such as medical care and elderly living facilities.

Mission:

The Chapter's mission is to provide a local land use guide for community growth and development so that families and business establishments can live in harmony with the natural, cultural and social characteristics of the surroundings in an economically progressive and environmentally sensitive environment.

Appendix L: Chapter Synopsis - Tolani Lake

2008 Tolani Lake Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

Tolani Lake Chapter Community-Based Land Use Plan is to present interconnecting issues that are facing the Tolani Lake Chapter. The CLUBC gathers information that will help guide future development and policies on the Chapter Land. The process included public meetings, surveys data gathering and community involvement. The process helped to provide input from the community as to what they want to see in their community and their needs and goals are.

Tolani Lake is located in the west southern region of the Navajo Nation and is part of the Western Navajo Agency, approximately 60 miles east of Flagstaff, Arizona. The Chapter is bordered by Leupp and Birdsprings to the south, Coalmine Canyon to the north, Teetsoh and Dilkon to the east, and the Hopi Reservation to the northeast. To the west is one of the four Navajo sacred mountains. The land consist of sand dunes, red mesas with valleys, hills, and arroyos.

Historically, the community part of the Chapter area was settled in the rich basin attracted to it for the farming. A trading post and day school were established before the Chapter House, where locals would met outdoors or by trees for shade. Soon after Sand Springs Farm was established in the area. After the Navajo-Hopi relocation, the Tolani Lake was reduced to almost half the size.

Vision:

The Chapter vision captures how Chapter members would like to see their community grow over the next 15 years. Long term goals include maximizing the benefits of modern opportunities but still maintaining traditional Navajo culture. The Chapter residents want to preserve their rural atmosphere but bring in modern amenities to all their residents:

Tolani Lake will ensure that all residents have homes in a safe, livable condition, including basic infrastructure such as electricity, telephone, and plumbing. Members of the Chapter will have access to shopping, health services, employment, education, and recreational opportunities to improve the quality of life for all the residents.

The Chapter wishes to provide for both young and older generations, with facilities such as senior centers, Head Starts, and community activities for social interactions to thrive. The Chapter wishes to provide education opportunities, to support working needs for professionals, ranchers, and laborers so that their community members don't have to go to the next town or city to complete the education they need.

Economic and industrial development is also an opportunity the Chapter wishes to encourage. The Chapter wants to provide adequate public safety, emergency facilities, and infrastructure, such as solid waste management and reliable road system that could be used in any weather are among the amenities wanted for the community for a better quality of life.

Mission:

The Chapter's mission is committing to protecting the Navajo cultural values and education the youth of their community. Strengthen and expanding their education opportunities and providing public services is the most effective, efficient, and productive way to deliver this mission.

Appendix M: Chapter Synopsis - Tonalea

2015 Tonalea Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

The public hearings were carried out to collect community input as part of a comprehensive planning in a grassroots approach. The first public hearing was held as a participatory planning session in 2007, and the second public hearing was a one-day follow-up land use mapping session with officials, staff, and community members which was held in the latter part of 2007. The first community public hearing focused on generating a practical vision, understanding the challenges to achieving the vision, creating strategic directions to address these challenges, and prioritizing projects for future action. The second community public hearing served as feedback from the first public hearing

All efforts to create the community land use plan, performed by the consultants ETD Environmental Consulting and WHPacific along with past Community Land Use Planning Committee (CLUPC) consisted of educating community members about the purposes and benefits of land use planning, how the plan would be developed, and the importance of having participation in the planning process.

The community public hearings described above were the starting point for producing the information needed to update the CLUPC. Public hearings were designed to serve the purpose of efficiently producing a community needs assessment, compiling ideas of future planning and zoning, and initializing the first land use map.

WHPacific, Inc. researched existing plans and ongoing project efforts at tribal and federal agencies and departments. Information was gathered by field teams using GPS to take data points at houses, roads, and other man-made features, and assess each feature's condition as very good, good, fair, poor, or very poor based on particular criteria. The overall goal of this planning effort was to demonstrate the method by which the chapter can update its own plan as needed. In particular, the community public hearings were a successful, interactive, and efficient way to generate information quickly that could be incorporated into the plan and translated into action by the chapter in the future.

Vision:

The traditional and cultural values, diversity, uniqueness, and language of the Navajo people have survived for many generations. We, therefore, strive to maintain and preserve these values as well as encourage, enhance progress and improvement to benefit the Tonalea community's future.

Mission:

The Tonalea Chapter is a land of endless beauty rich in culture. With a genuine sense of preserving the Dine' culture and enthusiasm we are committed to:

- Provide the Tonalea citizens with an accessible local form of government,
- Provide cost effective and efficient delivery of services,
- Challenge, recognize, and support the chapter employees because they affect these services,
- Protect, preserve, and care for our Mother Earth,
- Protect, preserve, and safeguard our precious resources.

Appendix N: Chapter Synopsis - Tuba City

2008 Tuba City Chapter Community-Based Land Use Plan
Report Prepared by: Indigenous Design Studio + Architecture, LLC

Synopsis:

The purpose of this Comprehensive Land Use Plan (CLUP) is to present interconnecting issues the Tuba City Chapter is facing (hereafter referred to as “the Chapter”). The CLUP gathers information that will help guide future development and policies on tribal land. With this information, the Chapter can make better future decisions concerning budgeting, capital improvements, and land use in order to reach the community’s goals and achieve its vision. The CLUP is a collection of information from the Chapter, federal, state, and local governments that has been compiled into one document. The focus of the CLUP is providing for housing, coordinating infrastructure development, protecting open space, designating commercial areas, and prioritizing needed community facility improvements. This plan includes an emphasis on projects needed for the recovery from the former Bennett Freeze. The CLUP uses a consensus-building process to facilitate present and future land use decisions. This process establishes a unified set of policies to guide future land use decisions regarding residential subdivision plans, capital improvement projects, recreation and infrastructure plans, zoning districts, and variance appeals.

Vision:

The To’Nanees’Dizi Chapter shall be a chapter with both an urban and rural diversity. The rural area will continue to accommodate farming and the traditional Navajo way of life. The administrative area will be a community which is home to commercial activity and denser residential development. The community will have an approval land use plan which identifies the road network and defines commercial and residential land uses. All residents of the chapter will have access to safe and affordable housing and all basic infrastructures.

Community Surveys

Documentation

Consumer Survey



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Household Consumer Survey, Adapted to FBFA:

CHAPTER AFFILIATION: _____

1. What are the **top three or four** goods and services that you wish were available in your community, but are not, so you have to travel some distance to find? (Please check **ONLY 3-4** top choices.)

- ☐ Gasoline
- ☐ Groceries
- ☐ Drugstore
- ☐ Household items
- ☐ Restaurant
- ☐ Laundromat
- ☐ Automobile parts and repair
- ☐ Health care/medical/dental
- ☐ Clothing/shoes
- ☐ Beauty/ barber shop
- ☐ Entertainment
- ☐ Banking
- ☐ Farm and ranch supplies
- ☐ Hardware supplies
- ☐ Other (please state if there is another category particularly important to you)

2. For things that you cannot satisfactorily obtain locally, where do you, mostly, travel to get them?

- ☐ Another Navajo community
- ☐ A Hopi community
- ☐ Page
- ☐ Flagstaff
- ☐ Winslow
- ☐ Other/border town (please state) _____

3. Which of the following are reasons that you travel beyond the nearest area to shop (Check all that apply)?

- ☐ Can't get items in nearest area
- ☐ Prices are lower
- ☐ Variety is better
- ☐ Quality is better
- ☐ Item is only available at other location
- ☐ Shopping options are convenient to workplace
- ☐ Remote shopping is part of a "getaway"
- ☐ Other (please state) _____

Consumer Survey



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4. If goods and services that you now travel outside of your nearest area to get were made available locally, which of the following statements represent how you would respond to this potential benefit? (Check all that apply, and comment if you wish.)

- ☐ I am committed to buying locally when it is possible and convenient to do so.
 - ☐ Comments _____
- ☐ I would be concerned about pricing, variety, and quality at local stores.
 - ☐ Comments _____
- ☐ If I am shopping in a larger, distant community for something I know I can only get there, I am likely to shop for other things as well, even if those things might be available in my immediate area.
 - ☐ Comments _____

5. How often, on average, do you eat out with your family?

- ☐ Once a month
- ☐ Two or three times a month
- ☐ Four or more times per month

6. What type of restaurant are you most likely to eat at with your family?

- ☐ Casual sit-down restaurant
- ☐ Fast-food restaurant
- ☐ Other (please state) _____

7. How often, on average, do you shop for groceries?

- ☐ Once a month
- ☐ Two or three times a month
- ☐ Four or more times per month

8. Where do you shop to buy the majority of the goods listed below? (Check those that apply.)

Goods & Services	Another Navajo community	A Hopi community	Page	Flagstaff	Winslow	Other/ border town (please state)
a. Groceries						
b. Household items						
c. Gasoline						
d. Drugstore, medicine						
e. Clothing, shoes						
f. Hardware supplies						
g. Farm/ranch supplies						

Consumer Survey



Indigenous Design Studio + Architecture, LLC

9. Have you or someone in your household indicated a desire to open a business if the opportunity were available and seemed potentially achievable?

- ☐ Yes
 - If yes, what type of business? _____
- ☐ No
- ☐ No, but would consider

10. Please provide the following information about you and your household:

I am:

- ☐ The head of this household
- ☐ The spouse of the head of this household
- ☐ A member of the household, not head of household

My gender:

- ☐ Male
- ☐ Female

My age:

- ☐ Under 20
- ☐ 20-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60 and over

There are a total of ____ [how many?] people in this household

In this household, ____ [how many?] people have regular, paying jobs

Community Meeting #1



Documentation

Community Meeting #1 - Documentation



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Community Meeting #1 - Documentation



Community Meeting #1 - Documentation - Four Chapters



Indigenous Design Studio + Architecture, LLC

Project Name: Former Bennett Freeze Area Economic & Market Feasibility Study
Project Number: 2018.006
Meeting: Kick-Off Meeting with Five Chapters – Coppermine, Kaibeto, Tonalea, Tuba City and Bodaway-Gap
Meeting Date: Monday, April 23, 2018
Meeting Time: 1:00 pm (MST) – 5:00 pm
Meeting Location: Twin Arrows Trucker's Lounge (Twin Arrows Casino) - AZ

AGENDA

- I. Welcome & Introductions
- II. Project Overview
- III. Scope of Work
- IV. Project Schedule
- V. Preliminary Research
- VI. Homework
- VII. Next Meeting
- VIII. Q & A
- IX. Adjourn

Community Meeting #1 - Documentation - Four Chapters



Indigenous Design Studio + Architecture, LLC

Homework for Nine FBFA Chapters:

- Recent Community Land Use Plans (CLUP's) and Maps
- Proposed Development Sites & Land Status of Sites
- Infrastructure (Water, Sewer, Electric, etc.) Maps
- Road/Circulation Maps
- Floodplain Zone Maps
- Any Future Plans for Development (i.e. housing, hospital, schools, offices, mobile home parks, etc.)
- Any other relevant information

**PLEASE BRING TO THE NEXT SCHEDULED MEETING
WITH YOUR CHAPTER. THANK YOU!**

P.O. Box 16657, Albuquerque, NM 87191 • Office: 505.226.2565 Fax: 505.226.2566

Community Meeting #1 - Documentation - Five Chapters



Indigenous Design Studio + Architecture, LLC

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Community Meeting #1 - Documentation - Five Chapters



Indigenous Design Studio + Architecture, LLC

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Community Meeting #1 - Documentation - Four Chapters

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> LCR 5 CHAPTERS MEETING PUBLIC SAFETY TRAINING ROOM TWIN ARROWS, LEUPP, ARIZONA APRIL 20, 2018 8:30 a.m. to 5:00 p.m. (MST) </div> </div>				
Name	Title	Organization	Phone	E-Mail
1. Bessie McCabe	Chpt. V-pres.	Tsidi Toi Chpt	480.469.9326	bessiejohn@yahoo.com
2. Margaret Joe	CLAD Chapter	Tolosa Lake Chapter	928.244-8710	MargieJoe@yahoo.com
3. Betty S. Bogg	Self Training	Tsidi Toi Chapter	928-326-6692	-
4. Eileen Hardy	Chapter Manager	Tsidi Toi Chapter	928-636-3244	e Hardy@navajochapters.org
5. Rena M. Edwards	Chapter Seal Treasurer	Tolosa Lake Chapter	928-401-9446	renaedwards@gmail.com
6. Alice W. Cogge	76 Chpt. 76+ Navajo & Navajo Services Training	Tolosa Lake Chapter	928-814-9697	nickhealax-19@yahoo.com
7. Evelyn Waller	Graphic Designer	NDST Dept. of Hwy Safety	505.371-8483	ewaller@navajo.gov
8. Margie Bogg	Senior Planner	Navajo DOT Planning	505.371-8382	mbogg@navajo.gov
9. Dan Teller, Jr.	Acting Field Supervisor	NDST- Road Dept.	(908) 206-7057	dteller@navajo.gov
10. Angela Cody	LDA-Phelps	Legislative Services	(928) 326-6919	acody@navajo-nsn.gov
11. Phillip Zahne	VP	Coalmine Canyon	928-380-1985	coalminers50n@yahoo
12. Emmett Kerley	VP	Cameron Chpt	928-221-2815	kerley.emmett@yahoo.com

Name	Title	Organization	Phone	E-Mail
13. Napam H. Tang	Principal Geologist	Navajo Dept. of Water Res.	928.724.4003	napamtang@navajo-nsn.gov
14. Mae Franklin	Cameron S/T	Cameron Chapter	928-606-6594	mhf Franklin@navajochapters.org
15. Jim W. Williams	Treas. Supv	Cochise County	708-689-8323	JimWilliams@cochise.co.gov
16. MORGAN YAZZIE	DGM 7-2	TEESD CHAPTER	928-613-8148	
17. Rachelle Nez	AMS	Cameron	928-679-2323	camerone@navajodot.gov
18. Milton Tso	Cameron Chpt	Cameron Chapter	928-896-4002	tsonmilton@yahoo.com
19. Verna Yazze	Birdspring Chpt.	Birdspring		vernazze@kutanalisco
20. Walter Phelps	Council Delegate	23rd NNC	505.906.1721	walterphelps@navajo-nsn.gov
21. Betty L. Z	CM	Leupp Chapter	928.686.3227	leupp@navajochapters.org
22. Kevin Brown	CSE	Leupp Canyon		
23. Allen Jones	DGC S-3	Grading Office	928-686-3227	leupp@navajochapters.org
24. Casey Francisco	Branch Manager	Branch of Nat. Res.	(928) 283-2252	caseyfrancisco@bia.gov
25. Tony Robbins	Branch Manager	Natural Resources	928.673.2252	tony.robbins@bia.gov
26. Miles Bogg	Triennial Trans Manager	Navajo County	928-313-0191	miles.bogg@navajocounty.gov
27. John Osgood	Public Works Dir	Navajo County	305-916-1055	john.osgood@navajocounty.gov
28. Glenn Kephart	NAVAJO Co.	Navajo County	480-784-2312	Glenn.Kephart@navajocounty.gov
29. Jim Hays	Nav. Cnty	Nav. County	928-309-5065	

J. Appendix

Community Meeting #1 - Documentation - Four Chapters

	Name	Title	Organization	Phone	E-Mail
30.	Ferdinand Notoh	Project Manager Specialist Chapter	HN Dept Agriculture	928-871-7453	Ferdinand.Notoh@Navajo.gov
31.	Dr. Freda	President	Coalmine Canyon	928-401-7597	freda108@gmail.com
32.	Nelson & Begay	Community member	Coalmine Canyon Chp.	928-401-7597	none
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43.					
44.					
45.					

Community Meeting #1 - Documentation - Five Chapters

<u>NAME + CHAPTER:</u>	<u>EMAIL:</u>	<u>PHONE:</u>
NHLCO	patsgyazzie@navajo-nsn.gov	928-871-6441
Roylertia Begay Coppermine	roylertiab@yahoo.com coppermine@navajochapters.org	(928) 707-9015
Wilbert Goy	goy-wil@yahoo.com	928.871.6441
Tony Perry	tperrynded12@gmail.com	928.871-6504
Victor Pascual	VPASCUAL@IDS-A.COM	(505) 226-2565
Charlotte P. Begay	cpbegay@hotmail.com marketing@ids-a.com	(505) 226-2565
Tamarah Begay	tbegay@ids-a.com	(505) 226-2565
Daniel Keams ^{Tonalea}	keamsdaniel6310@gmail.com	(978) 606-8363
KIM KANUHO	KKanaho@fourthworld.org Cand.	(480) 209-7892

Community Meeting #1 - Documentation

<u>NAME + CHAPTER:</u>	<u>EMAIL:</u>	<u>PHONE:</u>
NHLCO	patsgyazzie@navajo-nsn.gov	928-871-6441
Roylertia Begay Coppermine	roylertia@yahoo.com coppermine@navajochapters.org	(928) 707-9015
Wilbert Goy	goy-wil@yahoo.com	928.871.6441
Tony Perry	tperrynded12@gmail.com	928.871-6504
Victor Pascual	VPASUAL@IDS-A.COM	(505) 226-2565
Charlotte P. Begay	cpbegay@hotmail.com marketing@ids-a.com	(505) 226-2565
Tamarah Begay	tbegay@ids-a.com	(505) 226-2565
Daniel Keems ^{Tonalea}	keemsdaniel6310@gmail.com	(978) 606-8363
KIM KANUHO	KKanaho@fourthworldbldg.com	(480) 209-7892

Community Meeting #1 - Documentation - Four Chapters



Indigenous Design Studio + Architecture, LLC

Meeting Minutes

Project Name: Economic and Market Feasibility Study Former Bennet Freeze Area
Project Number: 2018.006
Phase: Kick-Off Meeting
Meeting Date: Friday, April 20, 2018
Meeting Time: 11:00am (MST) - 2:00pm
Meeting Location: Twin Arrows Casino, Flagstaff, AZ
Attendance: Tony Pery (Division of Economic Development), Walter Phelps (NN Council Delegate), Tamarah Begay (IDS+A), Kim Kanuho (IDS+A), Joe McClure (Regional Economics), Victor Pascual (IDS+A), Sinclair Norris (IDS+A), Charlotte Begay (IDS+A)

Prepared by: Sinclair Norris

Discussion Items

Introduction

- Began with passing out food. Picked-up sandwiches with chips and chewy bars.
- Introduction of the group. Having difficulties starting up presentation, while we were setting up, Charlotte introduce the firm and each of us introduce ourselves individually.
- Introduce Tony Pery, from the management team, explaining the interface with the Navajo Land Commission.
- Overview of the project the sub-divisions of how we would discuss the topics at hand:
 - a. Navajo Development
 - b. Project Objective
 - c. FBFA Overviews
 - d. Market Trade Area
 - e. Competitive Analysis
 - f. Financial Analysis
 - g. Scope of Work
 - h. Project Schedule
 - i. Next Meeting

Navajo Development

- Tamarah- explained how the project would encourage the bringing together of community.
- Economic Zones- announced in December. Kim explained that we were one of the selected zones. Possibility of having tourism in the area to help the community thrive.
- Tamarah assigned HW, to help form community involvement and to also help they understand IDS+A scope of work.

Project Objective

- Tamarah explained that we would be assisting their communities with what's naturally occurring.
- Kim emphasized what the studies are and describe the data collection process.
- Charlotte and Tamarah gave an example: a trip to Mexico for a wedding. They compared how Mexico is very similar to Navajo, a major difference is their economical stance, and where they have a lot more tourism, but that is also where Navajo can thrive.
- Tamarah- brings up that they would know their communities the best.

Community Meeting #1 - Documentation - Four Chapters

Indigenous Design Studio + Architecture, LLC

- Tamarah assigned homework: to bring youth of communities into the project and as a part of the project. This would be to bring it to a personal level

FBFA Overviews

- Compared to the Bennett Freeze to Mexico, Mexico being the set goal of economic growth.
- Navajo Mine- will be closing soon, questions of how this would affect families.
- 2009- Bennett Freeze has been lifted- officially by Obama. Went through districts of the FBFA.
- Bird springs will be included in the project.
- Chapter boundaries- questioned a lot during the presentation. Encouraged to be treated lightly.
- Kim- pointed out that they are here to also either update or create a census boundary.
- A chapter representative explained what the boundaries are and how they would help us with our jobs. Advised to treat it as a Regional Planning data. Explained why they go by chapters and the external district boundaries line- and how this was the only approved one.
- Jesse Thompson from the Navajo County, a supervisor for district 2, came in and gave an introduction. Thompson can be contacted to get road counts.
- Charlotte- emphasized that we were willing to work with terms, such as regents and districts.

Market Trade Area

- By district- looking at market demand

Competitive Analysis

- It would be a comparison to bigger Navajo cities, such as Flagstaff and Paige.

Financial Analysis

- Chapter representatives questioned where the burden will fall. Wants better investment by the Navajo Nation. Also questions leadership and leadership changes that will happen soon. What the big plan is (mostly directed at Walter).
- Walter- addresses that question, saying IDA+A will be helping us to grow.
- Charlotte redirected the attention to the project at hand, giving an example of what youths, and they want the old Navajo mine to be made into.

Scope of Work

- Kim assures that chapter resources would be added to the data report.
- A comment is brought up that NTUA has a large amount of data that is not being shared. Another explaining that a lot of agencies don't work together that needs to be unified.

Project Schedule

- Tamarah- gives a brief overview of schedule, indicating that it should be complete by the beginning of September.
- A comment was brought up about travel expense, which led to the issues of participation. A lot of the members of the chapter wanted to have IDS+A go to each chapter and have the meetings there, which would have to follow a strict schedule, to make it to each chapter on time for their set meeting.
- Kim encourage each chapter to share their chapter plan.

Next Meeting

- Kim- Came up with the idea of doing the first five chapters (Cameron, Bodaway Gap, Caolmine, Tolani Lake, Bird Springs) on May 29-30th and the remaining four chapters (Tuba City, Leupp, Coppermine, and Tonalea) on June 5-6th, both meetings would be held at Twin Arrows Casino again.
- Tamarah- readjusted the dates that worked best for each chapter and gave then the dates for the next meeting.

Adjourn

Next Meeting

Tuesday, May 29, 2018

Community Meeting #1 - Documentation - Four Chapters



Indigenous Design Studio + Architecture, LLC

Attachments

Sign-in Sheet

Agenda

This report is deemed to be a true and accurate account of this meeting, unless written notification to the contrary is received within four (4) working days of the date of issue of this report.

Community Meeting #1 - Documentation - Five Chapters



Indigenous Design Studio + Architecture, LLC

Meeting Minutes

Project Name: Economic and Market Feasibility Study Former Bennet Freeze Area
Project Number: 2018.006
Phase: Kick-Off Meeting
Meeting Date: Monday, April 23, 2018
Meeting Time: 2:00pm (MST) - 4:00pm
Meeting Location: Twin Arrows Casino, Flagstaff, AZ
Attendance: Tony Perry (Division of Economic Development), Wilbert Goy (NHLCO), Tamarah Begay (IDS+A), Kim Kanuho (IDS+A), Victor Pascual (IDS+A), Charlotte Begay (IDS+A), Patsy Yazzie (NHLCO), Royelntia Begay (Coppermine Chapter), Daniel Keams (Tonalea Chapter)

Prepared by: Victor Pascual

Discussion Items

General Introductions of IDS+A team and current attendees.

- Kim Kanuho begins general overview of the project and general discussion points listed below :
 - a. Project Objective
 - b. Project Overview
 - c. FBFA Chapters
 - d. Scope of Work
 - e. Project Schedule
 - f. Preliminary Research
 - g. Homework
 - h. Meeting Schedule

Project Objective

- Tamarah/Kim- explained the overall general goal of the project and purpose of the work with regards to the current status of the Former Bennett Freeze Area.
- Kim – General explanation of Former Bennett Freeze Area.

Project Overview

- General explanation of FBFA history and context.
- Kim briefly mentions and reiterates that chapters want to be referred to as "Districts", not chapters.

FBFA Chapters

- Kim delivered brief overview of all chapters on the list and present local chapter population.
- Royelntia confirmed that Coppermine chapter and Bodaway-Gap does have a larger population than what is listed within presentation – IDS+A made note of change to Coppermine population data.

Scope of Work

- Kim provided general overview of project approach and process: 1.) Project Kickoff, Data Collection & Assessments, 2.) Market Trade, Consumer Demand and Competitive Analysis, 3.) Site Analysis, Financial Analysis, Project Analysis & Community Analysis, 4.) Final Market and Economic Feasibility Study.

Community Meeting #1 - Documentation

Indigenous Design Studio + Architecture, LLC

Preliminary Research

- Kim provides general overview of research for general area within the FBFA with introduction of primary assets including list of geodata for the region.

Project Schedule

- Kim provides general overview of project schedule and next meeting dates
- Request from attendees to receive a copy of the PowerPoint presentation

General Questions and Comments

- Tamarah reminds chapter attendees about homework needed (attached to the back-end of the agenda).
- Comment from Royelntia, that Coppermine and Bodaway-Gap have 2008 Land Use Plan and chapter is in process of updating plan.
- Tamarah – reminder for chapter representatives to coordinate with IDS+A.
- Royelntia – what is the budget for each chapter?
- Wilbert Goy – Responded with budget process for each chapter and where budget was spent on architecture firms to provide feasibility study, response in Navajo, *please reference audio recording at the link listed at the bottom of this document.*
- Daniel Keams – mentioned general data collection efforts of previous feasibility study done with previous planner on 10 homes project. They have data at their chapters. Questioning, what will happen after data is collected? How will IDS+A work with chapters? Is there funding available? 10 homes projected was to be completed by December (year N/A). Briefly mentions that sessions were done previously and can provide data. Charlotte Begay response in Navajo, *please reference audio recording at the link listed at the bottom of this document.*
- Tony Perry – reiterates role of IDS+A and funding process. Feasibility study must happen first. However, general confusion on how funding will work. Royelntia and Daniel Keams have same questions and are seeking immediate answers.
- Daniel Keams – briefly mentions that community members have a difficult time talking about development goals. Would like to have copies of PowerPoint and doesn't have an email or computer access. IDS+A handed printed copy of PowerPoint presentation to Daniel, but will also send out finalized version of presentation to the rest of the group at the email addresses they provided on the sign-in sheet.
- Royelntia – Is there \$100k available for each chapter? Wilber Goy references process and escrow funds. More general response in Navajo, *please reference audio recording at the link listed at the bottom of this document.* Also mentions how all planners were eliminated for all chapters. The chapters have been on their own when it comes to economic development planning.
- Royelntia – general confusion about chapter boundaries for FBFA region. She mentioned that parts of her chapter falls within FBFA boundaries, while other parts don't, thus leaving confusion about what chapter members benefit from feasibility study and economic development.
- Tony Perry – mentioned that a majority of the chapters fall outside of the FBFA zone. Made a reference to the 2008 FBFA Recovery Plan and will provide to IDS+A team.
- Royelntia – references planning process, but also acknowledges that chapter is stuck on moving forward and needs clarity on boundary. References lack of infrastructure. Also mentions that they need help with their CLUP.
- Daniel Keams – general question about BIA land lease, where do they end and where do chapters begin? How can they have access to land? Can Tonalea claim part of BIA land? The BIA school is nearby, can they access their land? Will there be a new survey boundary produced?
- Kim - General confusion about FBFA boundary understood and resolved and will inform next set of meetings.

Next Meeting

- Kim – The next set of meetings will be held in two two-day events with the first five chapters (Cameron, Bodaway-Gap, Coalmine, Tolani Lake, Bird Springs) on May 29-30th and the remaining four chapters (Tuba City, Leupp, Coppermine, and Tonalea) on June 5-6th, both meetings would be held at Twin Arrows Casino.
- Adjourn

Next Meeting

Tuesday, May 29-30, 2018

Attachments

Sign-in Sheet
Agenda

Digital Attachments

Audio recording of general discussion can be downloaded at the link below:

<https://www.dropbox.com/s/r1ulmp42ypw3qws/Former%20Bennett%20Freeze%20Meeting%200424.m4a?dl=0>

This report is deemed to be a true and accurate account of this meeting, unless written notification to the contrary is received within four (4) working days of the date of issue of this report.

Community Meeting #2

Documentation

Community Meeting #2 - Documentation



Community Meeting #2 - Documentation



Community Meeting #2 - Documentation - Four Chapters - Day 1



Indigenous Design Studio + Architecture, LLC

Project Name: Former Bennett Freeze Area Economic & Market Feasibility Study
Project Number: 2018.006
Meeting: Community Meeting with Four Chapters – Cameron, Coalmine Canyon, Leupp and Tolani Lake
Meeting Date: Tuesday-Wednesday, May 29-30, 2018
Meeting Time: 8:00 am – 5:00 pm (MST)
Meeting Location: Twin Arrows Casino and Resort- AZ

AGENDA

Day 1: Tuesday, May 29, 2018

- I. Welcome & Introductions
- II. Project Overview
- III. Economic Development 101
- IV. Economic Development Sub-Region SWOT Analysis
- V. Lunch (On Your Own)
- VI. Preliminary Research Observations
 - a. Market Trade Area
 - b. Consumer Analysis
 - c. The Tourism Market
 - d. Competitive Analysis
 - e. Exercises
- VII. Q & A
- VIII. Adjourn

P.O. Box 16657, Albuquerque, NM 87191 • Office: 505.226.2565 Fax: 505.226.2566

Community Meeting #2 - Documentation - Four Chapters - Day 2



Indigenous Design Studio + Architecture, LLC

AGENDA

Day 2: Wednesday, May 30, 2018

- IX. Vision Statement
- X. Community Site Analysis
- XI. Homework Checklist
- XII. Q & A
- XIII. Adjourn

Homework for Nine FBFA Chapters:

- Recent Community Land Use Plans (CLUP's) and Maps
- Proposed Development Sites & Land Status of Sites
- Infrastructure (Water, Sewer, Electric, etc.) Maps
- Road/Circulation Maps
- Floodplain Zone Maps
- Any Future Plans for Development (i.e. housing, hospital, schools, offices, mobile home parks, etc.)
- Any other relevant information

**PLEASE REMEMBER TO BRING YOUR CHAPTERS
HOMEWORK ITEMS TO THIS MEETING. THANK YOU!**

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Community Meeting #2 - Documentation - Five Chapters - Day 1



Indigenous Design Studio + Architecture, LLC

Project Name: Former Bennett Freeze Area Economic & Market Feasibility Study
Project Number: 2018.006
Meeting: Community Meeting with Five Chapters – Coppermine, Kaibeto, Tonalea, Tuba City and Bodaway-Gap
Meeting Date: Tuesday-Wednesday, June 5-6, 2018
Meeting Time: 8:00 am – 5:00 pm (MST)
Meeting Location: Twin Arrows Casino and Resort - AZ

AGENDA

Day 1: Tuesday, June 5, 2018

- I. Welcome & Introductions
- II. Project Overview
- III. Economic Development 101
- IV. Economic Development Sub-Region SWOT Analysis
- V. Lunch (On Your Own)
- VI. Preliminary Research Observations
 - a. Market Trade Area + Exercises
 - b. Consumer Analysis + Exercises
 - c. The Tourism Market
 - d. Competitive Analysis
 - e. Exercises
- VII. Q & A
- VIII. Adjourn

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Community Meeting #2 - Documentation - Five Chapters - Day 2



Indigenous Design Studio + Architecture, LLC

AGENDA

Day 2: Wednesday, June 6, 2018

- IX. Capital Assets
- X. Vision Statement
- XI. Community Site Analysis
- XII. Homework Checklist
- XIII. Q & A
- XIV. Adjourn

Homework for Nine FBFA Chapters:

- Recent Community Land Use Plans (CLUP's) and Maps
- Proposed Development Sites & Land Status of Sites
- Infrastructure (Water, Sewer, Electric, etc.) Maps
- Road/Circulation Maps
- Floodplain Zone Maps
- Any Future Plans for Development (i.e. housing, hospital, schools, offices, mobile home parks, etc.)
- Any other relevant information

**PLEASE REMEMBER TO BRING YOUR CHAPTER'S
HOMEWORK ITEMS TO THIS MEETING. THANK YOU!**

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Community Meeting #2 - Documentation - Four Chapters

FOUR CHAPTERS MEETING DAY 1 SIGN-IN SHEET				
Project: 2018.006 FBFA Economic & Market Feasibility Study		Date: Tuesday, May 29, 2018		
Location: Flagstaff, AZ		Place/Room: Twin Arrows Casino and Resort		
Name	Chapter	Phone	Email	Initials
Angela Cody	LDA - Phelps	(928) 826-6919	acody@navajo-nsn.gov	AC
Leland Dayzie	Tolani Lake	928-686-3286	l/dayzie@navajochapters.org	LD
Phillip Zahne	Coalmine Cyn	928/380-1956	coalmine50@yahoo.com	
Milton Tso	Cameron Ctr	928-679-2323	tsomilton@yahoo.com	MT
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Rochelle Nez	Cameron	928 679 2323	rlnz@navajochapters.org	RN
For Williams	Cameron	918 679-2323	Cameron@navajochapters.org	
Al Thomas	Tolani Lake	928-205-7239	althomas7@gmail.com	A
Dolly Lane	Western Regional Business Development	928-283-3014	dj_lane@hotmail.com	DL
Walter Phelps	23rd NNC	505 906-1721	walterphelps@navajo-nsn.gov	WP
Tommy	DED	(928) 871-6504	tommyundled@gmail.com	T
Elaine Young	DED - SBDD	928, 871, 6704	eyoung@navajo-nsn.gov	
Marian Bowman	Coalmine Cyn	928-205-5834	marian.bowman@navajochapters.org	

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Charlotte Begay	IDS+A			CPB
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Betty A Tso	Leupp	928 686 3227	tso.bettie@yahoo.com	
Veronica Benally	NHLCO	(928) 871-6441	vbenally@navajochapters.org	WB
Tamara Begay	IDS+A	505.226.2505	tbegay@ids-a.com	TB

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J. Appendix

Community Meeting #2 - Documentation - Four Chapters

FOUR CHAPTERS MEETING DAY 2 SIGN-IN SHEET				
Project: 2018.006 FBFA Economic & Market Feasibility Study		Date: Wednesday, May 30, 2018		
Location: Flagstaff, AZ		Place/Room: Twin Arrows Casino and Resort		
Name	Chapter	Phone	Email	Initials
Al Thomas	Tolani Lake	928-205-7237	althomas7@gmail.com	AT
Philip Zane	Coalmine Cyn	928/580-1955	coalminer501@yahoo	PZ
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Butterfly	Leupp	928 686 3227	tsobette@yahoo.com	BT

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Leiland Duzie TLE 928-401-6167 Lkdlayzie@navajochapters.org

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Community Meeting #2 - Documentation - Five Chapters

FIVE CHAPTERS MEETING DAY 1 SIGN-IN SHEET				
Project: 2018.006 FBFA Economic & Market Feasibility Study		Date: Tuesday, June 5, 2018		
Location: Flagstaff, AZ		Place/Room: Twin Arrows Casino and Resort		
Name	Chapter	Phone	Email	Initials
Joe McClure	IDS + A Team	602-840-3699	jmcclure@jmcclure.com	JM
Gwen Ward	TC chapter	(928) 280-3432	wardengwen@hotmail.com	GW
* Helen M. Makney	Tonalea	928 255 1574		H.M.
* Mary Babbitt-Maloney	Tonalea Chapter	928 640 7484	Mary Babbitt Maloney@aol.com	MB
Gloria H. Babbitt	Tonalea Chapter			
Wara White	IDS + A Team	928-871-6504	wwhite@nddemail.com	WW
VALERIE FOWLER	COPPERMINE	928 607 9545	vfowler@frontier.com	VF
Floyd Stevens	Coppermine	928-614-0118	yazhistevens@hotmail.com	FS
CINDA LONG	Coppermine	928 606 7892	ssisy.long1953@gmail.com	CL
Katie John	Bozway	(928) 283-3491	adminasst.gap@navajochapters	KJ
Leonard Sloan	Bozway	(928) 280-3420		LS
Franklin Fowler	K'ai bi'to	(928) 673-5852	fr.fowler@outlook.com	FF
* Charlene Maruyama	TNDLG	(928) 283-5200	cjmaruyama@yahoo.com	CM

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Name	Chapter	Phone	Email	Initials
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Kimberly Kesoli	Distict 1	928 429 1408	kgkesoli@navajo-nsn.gov	KK
Elan Gong	DED-5600	928 871 6204	egong@navajobusiness.com	EG
VICTOR PASUAL	IDS + A	505-254-2265	vpasual@IDS-A.com	VP

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Community Meeting #2 - Documentation - Five Chapters

Name	Chapter	Phone	Email	Initials
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Ukine Kanuho	1051A	480-269-7892	kkanuho@ids-a.com	UK
Roylenticia Begay	Coppermine	928-707-9015	roylenticiab@yahoo.com	RB

FIVE CHAPTERS MEETING DAY 2 SIGN-IN SHEET				
Project:	2018.006 FBFA Economic & Market Feasibility Study		Date:	Wednesday, June 6, 2018
Location:	Flagstaff, AZ		Place/Room:	Twin Arrows Casino and Resort
Name	Chapter	Phone	Email	Initials
Gwen Ward	Tuba City	(928)280-3482	wardengwen@hotmail.com	GW
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Charlene Manygoats	TNDLG	(928)283-5200	cjmanygoats@yahoo.com	CM
Franklin Fowler	K'ai Biit'o	928-673-5852	fr.fowler@outlook.com	FF
Katie John	Bodaway/Knap	928-283-2411	adminasst.gapenavajochapters.org	KJ
Marlinda Witenek	Tonalea School	(928)283-3430	m.witenek@navajochapters.org	MW
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Name	Chapter	Phone	Email	Initials
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Patsy Yazzie	NHLCO	928-286-7756	patsy.yazzie@navajo.nsh.gov	PY
Elin Young	DEF-SBPA	928-871-6704	eyoung@navajobusiness.com	EY
Debra Bernally	Coppermine	928-640-3532	icheese_3@yahoo.com	DB
Herman Lane	Bodaway	928-600-3338	h2oedger@yahoo.com	HL

Community Meeting #2 - Documentation - Four Chapters - Day 1



Indigenous Design Studio + Architecture, LLC

Meeting Minutes

Project Name: Economic and Market Feasibility Study Former Bennett Freeze Area
Project Number: 2018.006
Phase: Community Meeting #2 w/ Four Chapters – Day 1
Meeting Date: Tuesday May 29, 2018
Meeting Time: 8:00am (MST) - 5:00pm
Meeting Location: Twin Arrows Resort & Casino, Twin Arrows, AZ

Attendance: **IDS+A Team**

Tamarah Begay (IDS+A), Kim Kanuho (IDS+A), Joe McClure (Regional Economist), Sinclair Norris (IDS+A), Charlotte Begay (IDS+A), Wenona Benally (NHLCO), Tony Perry (NDED), Elaine Young (DED), Dolly Lane (Western Regional Business Department), Wilbert Goy (NHLCO) and Honorable Walter Phelps (NN Council Delegate).

FBFA Four Chapters

Angela Cody (LDA/Leupp), Leland Dayzie (Tolani Lake), Philip Zahne (Coalmine), Milton Tso (Cameron), Harland Weibert (Cameron), Rachelle Nez (Cameron), Nez Williams (Cameron), Al Thomas (Tolani Lake), Marian Bowman (Coalmine), Mai Franklin (Cameron), and Betty Tso (Leupp).

Prepared by: Sinclair Norris



Community Meeting #2 - Documentation - Four Chapters - Day 1

Indigenous Design Studio + Architecture, LLC

Summary

As a summary to the Community Meeting #2 with Four Chapters conducted on Tuesday, May 29, 2018 from 8 a.m. to 5 p.m. at Twin Arrows, AZ, please see the following discussion and feedback received from the Four FBFA Chapters.

Introduction

- We began the meeting with a prayer in Navajo.
- Tamarah- Introduce the Project Team and Management Team.
- Tamarah – Review the overall Project Overview, Objective, and Schedule
- Tamarah – Review the Agenda and Discussion Items for the next two days.
 - a. Project Overview
 - b. Economic Development 101
 - c. Economic Development FBFA Sub-Region SWOT Analysis
 - d. Preliminary Research Observations
 - i. Market & Trade Area + Exercises
 - ii. Consumer Analysis + Exercises
 - iii. The Tourism Market
 - iv. Competitive Analysis
 - v. Exercises
 - e. Exercises
 - f. Questions and Answers
 - g. Adjourn

Project Overview

- Tamarah presented and explained the overview of the 9 FBFA Chapters Sub-Region and defined the economic area.
- Kim reviewed the district boundaries, also referenced where naturally growing areas are, locations pointed out on second slide of maps.
- Kim- Went over the chapter profiles, where she did note that we would be adding more information as we move forward with the project.
- Kim describes scope of work, defining each term. Then went over the next phase, with a slide of the project schedule.
- Kim- Briefly went over the reference slide, where we have been getting data from.

Economic Development 101

- Kim described Economic Development with different type definitions to help the chapters get a better understanding of the broad definition and components of economic development.
- A question was asked- with all the definitions stated, "Are we describing it more from the governmental view rather than a community view?"
- Kim addressed the question, stated that the nine chapters need to think bigger and regionally.
- Charlotte emphasized that they would need to define economic development for themselves.
- Kim- Started the first activity by asking the group what they thought "Economic Development Is?" and "What is means to them?"
- Kim- asked them to write down what they think economic development is on the post and to bring it up on the post it board.

Community Meeting #2 - Documentation - Four Chapters - Day 1



Indigenous Design Studio + Architecture, LLC

- PLEASE REFERENCE WHAT IS ECONOMIC DEVELOPMENT FEEDBACK AT END OF THIS DOCUMENT.
- An issue was brought up after the first activity, in regards to growth, "how can they be independent from central government?" They can dream big but a lot of people in the communities don't trust what's happening in Window Rock.
- An example is used of the Cameron Chapter. Cameron has these ideas and opportunities, but Central government always answers negatively.
- Kim addressed the issue and explained that Chapters are creating solutions at the local level, some chapters adopt LLC's, create townships, becoming certified and collaborate to go after funding.
- Kim- got the group back to topic, talked about economic development planning, What the workforce consist of in each communities, Who are the economic drivers?
- Kim asked to think back 30 years ago, what was the state of the chapter? How have the Chapters evolved, if they see more infrastructure now, how are the chapter's today, are they breaking new ground?
- Kim went over how nation building, planning and economic development all go hand and hand and there is a balance. Explained why community and economic development are important to Tribes.
- Kim gave another example of the California Tribes, and how they oversee the development of their land, farms, agriculture, etc.
- Break (15 minutes)

Economic Development Sub-Region SWOT Analysis

- Kim presented and explained the definition of what a SWOT Analysis is and asked the FBFA Chapters to think about the FBFA's Sub-Region's Strengths, Weaknesses and Opportunities.
- PLEASE REFERENCE EXERCISE FEEDBACK AT END OF THIS DOCUMENT.
- Kim reviewed the data collected from the loss of the NGS Employment and the Kayenta Mine Employment

Preliminary Research Observations

- Joe presented detailed maps collected so far, in the Preliminary Research Observation Slide. Clarified that the chapters see Tuba City as a secondary instead of a primary market.
- A question was asked verifying if we were Tuba City as a local trade area.
- Kim- answered yes that Tuba City is a natural growth area for the FBFA. Tuba City is also a primary growth area in the Western Agency due to the population, businesses and tourists coming in and out of the area. Visitors and consumers from Hopi could also contribute to Tuba City being a growth area.
- A comment was brought up that Tuba City didn't really experience the Freeze, not as much as the other 8 chapters did. They had development occurring and were able to expand.
- Highway 89 was brought up and how there is a lot of deeded land along the roadway, which contributed to economic development in Tuba City.
- Kim asked what taxes the Cameron Hotel pays and Milton answered the questions, stating that the hotel only pays taxes to the state/county. Philip also mentioned that the Trading Post in Cameron only pays state taxes as well.
- Someone mentioned that there is development in Tuba City, but it doesn't happen on the Navajo side, it is run by state and company franchises.

Community Meeting #2 - Documentation - Four Chapters - Day 1

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- Joe goes over the Highlights from the 2011 Navajo Nation Visitor Survey Final Report slide.
- The group had issues with the statistics from this slide, and questioned that most of their visitors weren't from Germany.
- Kim- Emphasize this data is an example from the Arizona Department of Tourism, and is a projection.
- Kim- emphasized that this would be something we have never done before, it would be creating a regional framework and process for the FBFA and the Navajo Nation.
- Kim- asked if there were any hotels on FBFA. The only hotel on FBFA is in Cameron.
- The group talked about how Tuba and Kayenta are on deeded land, and so the hotels and most businesses there aren't on FBFA, and don't belong to Navajo.
- It was addressed that in Tuba City, there are so many different types of land use.
- Kim- mentioned that we are regional data from the border towns, tourism surveys but not so much data internally from the residents and at the Chapter level. So we will have to begin thinking about creating our own data, both regionally and at the community level.

Exercises

- Kim began going over the questions in the exercises.

Exercise #1

- Kim poses the question: What are your primary community facility and service needs? (Non-commercial: administrative offices, postal services, banking, etc.)
- PLEASE REFERENCE EXERCISE FEEDBACK AT END OF THIS DOCUMENT.

Exercise #2

- Kim - What are your primary existing community facility and service needs? (Non-commercial: administrative offices, postal services, banking, etc.)
- PLEASE REFERENCE EXERCISE FEEDBACK AT END OF THIS DOCUMENT.

Exercise #3

- Kim poses the question: What are your primary commercial development and business needs? (Laundromat, restaurant, grocers, etc.)
- Tamarah provided an example of the Kayenta Multi-Purpose Building, showing a breakdown of maintenance costs, explaining how much it would take to maintain a building, and considerations to keep in mind after completion of development.
- PLEASE REFERENCE EXERCISE FEEDBACK AT END OF THIS DOCUMENT.

Exercise #4

- Kim poses the question: What are your primary commercial development and business needs? (Laundromat, restaurant, grocers, etc.)
- Kim- went over Regional Economic Development example, how productive would it be to develop a hotel in all 9 chapters, and it would be more beneficial to come together, communicate and strategize as a group on future development to benefit the region. Ex. Some chapters are collaborating to apply for funding and are gaining a better understanding of the other chapters but also thinking more regionally.
- PLEASE REFERENCE EXERCISE FEEDBACK AT END OF THIS DOCUMENT.

Community Meeting #2 - Documentation - Four Chapters - Day 1



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Exercise #5

- Kim poses the question: Consumer Survey Input: Brainstorm Consumer Survey Questions? (What are your local shopping patterns, what would make you shop locally, are there any issues and challenges, etc.)
- Kim brings up the draft survey that they want to distribute out to the chapters and ask what would be the best way of going about that.
- Charlotte adds to that, with an example of the Winslow diabetes program- how a survey was done at the Leupp Chapter.
- **PLEASE REFERENCE EXERCISE FEEDBACK AT END OF THIS DOCUMENT.**

Questions and Answers

- Tony- Concluded that the meeting and the community take-away is key and this is a process we needed to go through together with all nine chapters to begin talking and thinking at the regional level. Their part is to make sure that strategic economic growth happens, but the 9 FBFA chapters are the ones that have to take the lead.

Adjourn

Next Meeting

Wednesday May 30, 2018

Attachments

Sign-in Sheet

Agenda

PowerPoint Presentation

What is Economic Development Feedback

SWOT Analysis Feedback

Exercises #1-5 Feedback

This report is deemed to be a true and accurate account of this meeting, unless written notification to the contrary is received within four (4) working days of the date of issue of this report.

Community Meeting #2 - Documentation - Four Chapters - Day 1

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EXERCISE FEEDBACK:

What is Economic Development? Exercise Feedback:

Growth
More Jobs
Mall
Tax Base
Workforce Development
Strengthen Policy Independence
Self-Sustaining

- Family, independence, money cycling to benefit all community, locally and as a Nation.

Jobs

- Local businesses
- High paying jobs ex. Media, attorney's, engineers, etc.
- Small business development

Development of Navajo-owned businesses

- Hotels
- Camping Store
- B+B
- Motel

Development of business plan
Written plans and policies

Movie Theaters
Horseback tours
Infrastructure Development
New business owners
Income (money)
Access to resources that are closer to home
Access to basic services and supplies closer to home
Access to infrastructure

- Telecommunication infrastructures

Robust School Facilities for families

- Head start
- Daycare
- K-12
- 12 plus + over

The ability and resources of how to start business
Planning + Tech Assistance
Activities supporting well-being
Sustainability development
Tax for local government
Chapter Certification

Community Meeting #2 - Documentation - Four Chapters - Day 1



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**Economic Development FBFA Sub-Region
SWOT ANALYSIS Exercise Feedback:**

SWOT Analysis – Strengths

- Community/People
- Tourism
- Agriculture – Medicinal marijuana, farming, livestock and dry land farm
- Language
- Education
- Culture
- Water – Little Colorado River (LCR) unused water
- Power Lines
- Alternative Energy – Wind, solar, renewable
- Natural Gas
- Natural Scenery - Grand Circle, Grand Canyon Zion/Arches
- Land
- Retirees
- Young People
- Leadership
- Business People
- Pipelines – Coal slurry
- Casino
- Labor Force
- Human Resource
- Tourist Traffic
- Highway 89
- “West Gateway to Navajo Nation Grand Canyon”
- “The Front Door to the Grand Canyon”
- Vendors - Independent businesses
- Arts and Crafts
- Dinosaur Track/ Bones
- History
- Archaeological sites

Community Meeting #2 - Documentation - Four Chapters - Day 1

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SWOT Analysis – Weaknesses

- Infrastructure – Lack of Roads
- Affordable Rentals – Commercial Business
- Housing
- Daycare
- Medical
- Emergency Services
- Law Enforcement
- People/Community
- Grazing Permit Holders
- Afraid of Growth
- Jobs – Lack of Quality Jobs with Good Income
- Lack of Small Business and Support
- Resources and Technical Assistance
- Planning
- Funding
- Support Small Business
 - Navajo Nation
 - Payment
 - Process/Bad Reputation
- Politics/Bureaucracy
- Business Regulations
- Licensed and Certification
 - Off Navajo Nation vs on Navajo Nation
- Jurisdiction Issue
 - Lack of Boundaries
- Limited Staff
- Tax- Navajo Nation, State, Federal
- Bank
 - No Assets to Lend
 - No Mortgages
 - Small business capital money
 - No land value
 - Lease business site lease, ex. St. Michaels
- Land
 - Developable land
 - Federal Trust land processes
 - Federal/BIA
 - State
 - Private
- Environment
- Abandoned Uranium Mines
- Location – Lack of Opportunities
- Finance Own Infrastructure
- Incubator – Electric Car
- Lack of Internet/Broadband/Wireless
- Lack of Business Development
- Education
- Collateral/Assets
- Business Loans
- Frontier
 - Capacity
- Monopolize Companies
- Communication
- Plans – Ideas
- Public Bathrooms

Community Meeting #2 - Documentation - Four Chapters - Day 1



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SWOT Analysis – Opportunities

- Business Site Leases as Collateral
- Wireless/Broad Band Expansion
 - More Cell Towers
 - Google
 - Landline
- Technology
- Grand Circle
- Bus Tour ex. Hawaii
- Tourism
 - Plans/Ideas ex. Tourism Conference
 - Seasonal
- Agriculture
- Hospitality
- Camping/RV Parks
- People/Community
- Advertisement/Promoting
- Marketing ex. Antelope Canyon and Sedona
- Eco Tourism
 - Bed & Breakfast
 - Hiking
 - Campgrounds
- Housing
 - Apartments
 - Employment housing
 - Condos
 - Retirement housing
- Free Trade Zone
 - Exports
 - Tax Exports
- Manufacturing goods and services
- Opportunity Zone Designation – Prioritized Funding
- Livestock
 - Cattle/organic beef production
 - Grass feed production for sheep/cattle
- Target Local Economy
- Slaughter House Facility - Ex. Sanders, Farmington, Colorado, and Cortez
- Portable John Businesses

Community Meeting #2 - Documentation - Four Chapters - Day 1

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SWOT Analysis – Threats

- Government
- Drought
- Failure/Closure of NGS/SRP Kayenta Mines
- Lack of Jobs/Employment
- Advertisement in Marketing
- Change in Leadership
- EPA Regulations/BIA
- All Government Processes and Regulations
- Red Tape
- Gamble of Starting a Business
- Environmental Threats
 - Seasonal
- Hopi Development
 - Hotels
 - Restaurants
- Funding
- Federal Government Administration
- Restaurant Chains Franchise
 - McDonald's, Burger King, etc.
 - Competition for our small local businesses
- Navajo Nation-Owned Governmental Regulations
- Grazing Permit Holders
- Climate Change
- Time
- Other Tribes
- Jurisdictional Issues
- Lack of Collateral
 - Access to Capital from Banks
- Brain Drain

Community Meeting #2 - Documentation - Four Chapters - Day 1



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Exercise #1: What are your primary community facility and service needs?

(I.e. Non-Commercial such as Administrative Offices, Postal Services, Banking, etc.)

- Fire Department
- Emergency Services
- Youth Services/after school programs
- Recycle Centers
- Waste Management Centers
- Banks
- Grocery Stores/Laundromat
- Clinics
- Dental
- Flower Shops
- Theaters
- Postal Services
- Coffee Shop
- Incubators Spaces
- Copy Centers/Office Supplies
- Parks
- Small Vending Locations
- Commercial Buildings with Immediate Services
- One-Stop Shops
- Travel Centers – Showers
- Cultural Center/Visitor Center
- Cellular One
- Day Care
- Navajo Immersion School
- Social Service Building (Rehab AA/ Dialysis)
- Nursing Home/ Assistant Living

Exercise #2: What are your primary existing community facilities and services?

(I.e. Non-Commercial such as Administrative Offices, Postal Services, Banking, etc.)

- Chapter House
- Post Office
- NHA Housing
- Dental Facility
- Clinic
- Workforce Development
- Schools (K-12)
- Childcare Center
- Churches
- Flea Market
- Gymnasium
- Multi-purpose Building
- Farmland
- Cemeteries
- Airport
- NTUA offices
- Tribal offices/programs
- DES offices/ NN offices
- Cellular services and towers
- Tolani Lake Enterprise

Community Meeting #2 - Documentation - Four Chapters - Day 1

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Exercise #3: What are your primary commercial development and business needs?
(I.e. Laundromat, Restaurant, Grocers, etc.)

- Laundromat
- Grocers
- Restaurants
- Hotels
- Feed Store
- Water Refill Stations
- Gas Stations
- Event Center
- One-stop shop
- Casino
- Outdoor Camping Store
- KOA/Camping Ground
- Hardware store
- Incubator space
- Food vendor spaces

Exercise #4: What are your primary existing commercial development and businesses?
(I.e. Laundromat, Restaurant, Grocers, etc.)

- Restaurants
- Gas Stations
- Arts and Craft Store
- RV Park
- Fast Food
- Camp Ground (in Cameron/ Tuba City)
- Trading Posts
- Travel Center
- Road Side Vendors

Exercise #5: Consumer Survey Input: Brainstorm Consumer Survey Questions?
(I.e. what are your Shopping Patterns, What would make you Shop Locally, Issues and Challenges, etc.)

- More Options
- Lower Prices
- Retail Competitions (ex. AutoZone, O-Riley's, etc.)
- Cleaner Bathrooms
- Entertainment
- Restaurant/Bars
- Theater
- To Getaway
- Selection
- Less Taxes
- Customer Service
- Store Hours
- Daylight Savings Time

Shopping Patterns: What do you go to border towns for?

- Walmart
- Home depot
- Auto Part Store
- Car Dealership
- Hair/Nail Salons
- Pawn Shop
- T&R
- Hospitals/Clinic
- Restaurants
- Nursing Home
- Schools
- Banks
- Entertainment/Concerts
- FedEx/Mail
- Office Supplies
- Groceries
- Tire Shop/Car Repairs
- Fast Food
- Sam's Club
- Whole Foods/Sprouts

Issues and Challenges: What are some existing issues and challenges?

Community Meeting #2 - Documentation - Four Chapters - Day 1



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- Public Transportation
- Unemployment
- Gas Prices
- Roads
- Disabilities
- Airport to Import/Export Goods/Services
- Distance of Travel
- Weather
- No Child Care
- Trains- Import/Export of Goods/Services
- Transit
- Other Tribal competitors – travel center, hotel, restaurant, cultural center, etc.

Community Meeting #2 - Documentation - Four Chapters - Day 2



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Meeting Minutes

Project Name: Economic and Market Feasibility Study Former Bennett Freeze Area
Project Number: 2018.006
Phase: Four Chapters Meeting Day 2
Meeting Date: Wednesday, May 30, 2018
Meeting Time: 8:00am (MST) - 1:00pm
Meeting Location: Twin Arrows Casino, Flagstaff, AZ

Attendance: **IDS+A Team**
Tamarah Begay (IDS+A), Kim Kanuho (IDS+A), Joe McClure (Regional Economics), Sinclair Norris (IDS+A), Charlotte Begay (IDS+A), Tony Pery (Division of Economic Development), Elaine Young (NNDDED), Wenona Benally (NHLCO), Wilbert Goy (NHLCO)

FBFA Four Chapters
Angela Cody (LDA/Leupp), Leland Dayzie (Tolani Lake), Philip Zahne (Coalmine), Al Thomas (Tolani Lake), Dolly Lane (Western Regional Business Department), Marian Bowman (Coalmine), Betty Tso (Leupp), Walter Phelps (NN Council Delegate)

Prepared by: Sinclair Norris



Community Meeting #2 - Documentation - Four Chapters - Day 2

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Summary

As a summary to the Community Meeting #2 with Four Chapters conducted on Wednesday, May 30, 2018 from 8 a.m. to 1 p.m. at Twin Arrows, AZ, please see the following discussion and feedback received from the Four FBFA Chapters.

Discussion Items

Introduction

- Kim introduced today's meeting, along with the agenda.
- Kim overview of the project the sub-divisions of how we would discuss the topics at hand:
 - a. Survey Distribution
 - b. Project Overview
 - c. Capital Assets
 - d. Project Vision Statement
 - e. HW Checklist
 - f. Questions

Survey Distribution

- Charlotte emphasized Capital Assets in Navajo that we really need the group to get those surveys out, once the final draft was ready. Charlotte also addressed the representatives of the chapters present, how they can help to get that to their people.
- Kim posed a question: "what would be the easiest way to get those distributed and the easiest way to get them collected?"
- Response from various chapters:
 - Distribute at a Fair with the offering of free food
 - Educational events
 - Basketball game
 - Chapter meeting
 - At the entrance of a Walmart or grocery store
 - Suggested to coordinate with events going on at Tuba City
- Dolly suggested that her staff could help assist that. They could help with printing and collection. Send them out during the next chapter meeting and put it on the agenda.
- Representatives of each chapter gave their next chapter meeting dates and time.
- Kim reiterated the process would need to be collaborated so she could have it done yearly or it could be repeated at a different time.
- Each chapter suggested who to send the draft for distribution.
- RBDO- Could be sent to Toni and Elaine.

Project Overview

- Kim presented and explained that we added Capital Assists workshop to the agenda and why we felt it would help with the project.

Capital Assets

- Kim presented general diagram of "8 Forms of Capital", giving the general overview of each category.
- Individual Capital- PLEASE REFERENCE CAPITAL ASSETS FEEDBACK AT END OF THIS DOCUMENT
- Social Capital- PLEASE REFERENCE CAPITAL ASSETS FEEDBACK AT END OF THIS DOCUMENT
- Intellectual Capital- PLEASE REFERENCE CAPITAL ASSETS FEEDBACK AT END OF THIS DOCUMENT

Community Meeting #2 - Documentation - Four Chapters - Day 2



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- Break (15 minutes)
- Built Capital- PLEASE REFERENCE CAPITAL ASSETS FEEDBACK AT END OF THIS DOCUMENT
- Political Capital- PLEASE REFERENCE CAPITAL ASSETS FEEDBACK AT END OF THIS DOCUMENT
- Cultural Capital- PLEASE REFERENCE CAPITAL ASSETS FEEDBACK AT END OF THIS DOCUMENT
- Financial Capital- PLEASE REFERENCE CAPITAL ASSETS FEEDBACK AT END OF THIS DOCUMENT

Project Vision Statement

- Kim mentions what we want our outcomes to be in regards to the vision statement

Community Site Analysis: Homework Updates – Cameron Chapter

- Kim/Tamarah- conducted general review with each chapter

Community Site Analysis: Homework Updates – Coalmine Canyon Chapter

- Kim/Tamarah- conducted general review with each chapter

Community Site Analysis: Homework Updates – Leupp Chapter

- Kim/Tamarah- conducted general review with each chapter

Community Site Analysis: Homework Updates – Tolani Lake Chapter

- Kim/Tamarah- conducted general review with each chapter

Questions

- A number of questions and comments were brought up addressed to when the next community meeting was and where it would be held.
- Kim addressed that question, saying they would look into it. We would have to get with Management and see when the best time to schedule one would be.
- Kim addressed that the chapters who didn't bring their HW items email to us as soon as they could.
- Tamarah/Kim- concluded the meeting.

Next Meeting

- TBA

Adjourn

Attachments

Sign-in Sheet

Agenda

Capital Assets Workshop Results

This report is deemed to be a true and accurate account of this meeting, unless written notification to the contrary is received within four (4) working days of the date of issue of this report.

Community Meeting #2 - Documentation - Four Chapters - Day 2

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Exercise Feedback:

Built Capital

What development and infrastructure exists? (Buildings, water, electric, sewer, etc.

Water line	NTUA Transmission transfer station –
- Leupp – Tolani Lake	Casino
- Leupp – Dilkon	Fire/ Police station Building – Twin Arrows
Natural Gasoline – Trans Western El Paso	Leupp Farms
Byway Road – from Leupp – Cameron	Beaver Farms
Multipurpose Building – Tolani Lake	Water/Electric/Sewer
Abandoned Black Mesa Pipeline	3 Phase Power 1 line

Cultural Capital

What unique cultural attributes exist in the community? (Language, culture, teachings, food, art, spiritual, health, etc.)

Language	- Silversmiths
Culture	- Crafts
Shoe games	- Singers
Winter stories	Gospel music groups
Seasonal Ceremonies	Bead workers
Revival camps- churches	Pow-wow
Health Care Activities	Bazaars
School Activities	Flea Market
- Fitness	Song & dance
- Culture	Sacred Site – issue until fish and gaming
Arts and Crafts	come in for specific site
- Painters	

Financial Capital

What are the community's financial reserves, cash flows, investments?

Coconino County – Road Services	NHA – Housing
Navajo County – Road services, senior	N. Dot –
services,	Economic Development
Apache County – Maintaining school bus	No Investment
routes, flood control	No Loans
Navajo Nation – Operating funding,	Hotel – Tuba City
administration Staff	

Community Meeting #2 - Documentation - Four Chapters - Day 2



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Individual Capital

What do individuals in the community know how to do? (Farmers, leaders, engineers, construction, welding, entrepreneurs, etc.)

Ranger	Weavers
Policeman	Lawyers/Attorney General
Educators/ Teachers/ Professors	Nurses
Farmers/Ranchers	Bus Drivers
Cowgirls/Cowboys	Accountants/Auditor
Welder	Engineers (Mechanical, Construction, Civil)
Retirees	World Champion Team ropers
Construction Workers/ Project Man.	Architects
Artists	Butchers
Electricians	NAC Roadmen/ medicine men and women/
Entrepreneur	traditional practitioners
Silversmith	

Intellectual Capital

How good are community members at collaborating to identify opportunities and solve problems? (Chapter leaders, CLUP's, Grazing Boards, etc.)

Attorney General – Ethel Branch	Candidate - Navajo Nation President – Tom
Deputy Executive Director – Perry Rights	Chee
Council Delegate – Leupp – Walter Phelps	Leonard Chee – Former Council Delegate
Miss Navajo – Allison Shirley	

Natural Capital

What natural resources exist that can be utilized/developed? (Land, rivers, forests, destinations?)

Grand Falls	Dinosaur Track
Rock Climbing Sites	Petrified Forrest
Coalmine Canyon/Blue Canyon	Painted Desert
Historical Sites/ Pioneer Trials	Colorado River Gorge – Cameron
Little Colorado River	Black Mesa – Water shed

Community Meeting #2 - Documentation - Four Chapters - Day 2

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Political Capital

*How knowledgeable are community leaders about the political processes? How effective are they?
(Chapter, Navajo Nation, County, State, Federal, etc.)*

Chapter Administration –
Communicate/Collaborate (ex. Veterans
cemetery/projects)
Nina Fowler – Coconino County Rep.
Community Development Dept.
Parks and Rec – Leupp
Limited knowledge of Leaders/ Experience
Perry Riggs – Deputy Executive Director
NN White House Director
Jim Harts – Coconino County
Supervisor Jesse Thompson – Navajo
County
- Host meetings

No funding from counties
- Only certain services +projects
- Assist with response to crisis
- Does not come down to our land
Lee Jack – Navajo County (eastern) council
delegate
Navajo funding for senior centers
School bus route – selected within county
Coconino County
Apache County
Schools/Universities
- Research
- ASU, NAU, U of A

Social Capital

*What organizations and events bring people together in the community? (Chapter house, schools,
churches, ceremonies, celebrations, powwows, rodeos, etc.)*

Just Move-It Run
Flea Market
Post Office
Casino – Leupp
Bingo
Yei Bei cheii
Grand Falls – National Park – Tolani Lake
Coalmine Canyon Park
Cameron Park
Organize Bike Rides
Canyon Diablo – Leupp

Senior Citizen Center
HW/learning center- Chapter house
Youth and Tutoring (Leupp)
School Playgrounds/Basketball
Work Place
Miss Navajo – Tolani Lake
Jackpot Roping
Revival Camps – Church
Corrals/ Livestock – Branding/butcher
Song and dance – Traditional
Horse Races

Community Meeting #2 - Documentation - Five Chapters - Day 1



Indigenous Design Studio + Architecture, LLC

Meeting Minutes

Project Name: Economic and Market Feasibility Study Former Bennett Freeze Area
Project Number: 2018.006
Phase: Community Meeting #2 w/ Five Chapters – Day 1
Meeting Date: Tuesday, June 5, 2018
Meeting Time: 8:00am (MST) - 5:00pm
Meeting Location: Twin Arrows Casino, Flagstaff, AZ

Attendance: **IDS+A Team**

Tamarah Begay (IDS+A), Kim Kanuho (IDS+A), Victor Pascual (IDS+A), Joe McClure (IDS+A), Elaine Young (DED-SBDD), Wava White (NNDED), Wenona Benally (NHLCO), Patsy Yazzie (NHLCO)

FBFA Five Chapters

Gwen Ward (Tonalea), Helen M. Maloney (Tonalea), Mary Babbitt-Maloney (Tonalea), Gloria H. Babbitt (Tonalea), Valerie Fowler (Coppermine), Floyd Stevens (Coppermine), Linda Long (Coppermine), Katie John (Bodaway), Leonard Sloan (Bodaway), Franklin Fowler (Kaibeto), Charlene Manygoats (TNDLG), Joetta Goldtooth (TND), Lavonna Begay (Tonalea), Danielle Begay (Tonalea), Calvin G. Begay (Coppermine), Priscilla Mann (Kaibeto), Lola Smith (Coppermine), Vicki R. Kee (Tonalea), Marlinda Whiterock (Tonalea), Joann Secody (Kaibeto), Mellie Acothley (Tonalea), Raymond D. Yellowman (Bodaway/Gap), Kimberly Kescoli (District 1), and Roylentie Begay (Coppermine).

Prepared by: Victor Pascual



Community Meeting #2 - Documentation - Five Chapters - Day 1

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Summary

As a summary to the Community Meeting #2 with Five Chapters conducted on Tuesday, June 5, 2018 from 8 a.m. to 5 p.m. at Twin Arrows, AZ, please see the following discussion and feedback received from the Five FBFA Chapters.

Discussion Items

General Introductions of IDS+A team and current attendees.

- Kim Kanuho begins general overview of the project and general discussion points listed below:
 - a. Project Objective
 - b. Economic Development 101
 - c. Economic Development Sub-Region SWOT Analysis
 - d. Preliminary Research Observations
 - e. Project Schedule
 - f. Preliminary Research
 - i. Market & Trade Area + Exercises
 - ii. Consumer Analysis + Exercises
 - iii. The Tourism Market
 - iv. Competitive Analysis
 - v. Exercises
 - g. Q&A
 - h. Adjourn

Project Objective

- Kim explained and introduced the overall general goal of the project.
- Kim outlined the goals for day one and importance of the feasibility study. Kim also provided a brief overview of the FBFA and referenced the chapters involved for both days.
- Kim also provided a brief overview of chapter populations with a map outlining each chapter.
- Kim reviewed IDS+A approach, process and introduced: Project Kickoff, Data Collection & Assessment; Market Trade, Consumer Demand & Competitive Analysis; Site Analysis, Financial Analysis, Project Analysis & Community Analysis; Final Market and Economic Feasibility Study.
- Kim presented a general overview of the project schedule and outlined critical milestones for each task.

Economic Development 101

- Kim – *What is Economic Development? What does it mean to you?*
- Various Chapters: "It could mean many things!", "Jobs!", "Workforce", "Healthy Communities"
- Kim presented this statement: *"Economic development can be defined as a program, group of policies, or set of activities that seeks to improve the economic well-being and quality of life for a community by creating and/or retaining jobs that facilitate growth and provide a stable tax base. Economic development can also be defined as a process that influences the growth and restructuring of an economy to enhance the economic well-being of a community."*
- Kim mentioned that Economic Development Planning is a process that guides the re-organization and growth of an economy to improve the economic well-being of a region, community and in this case, a tribal-nation.
- Kim describes the Tribal Economic Development Wheel: Nation Building, Planning, Economic Development and the balance of the three components in relation to Tribal Nations.
- Economic Development Components: Job Creation; Job Retention and Workforce Development; Small and Local Business Development; Education and Overall Quality of Life.
- Economic Development Component examples: Resorts and Casinos, Gas Stations, Tourism, Grocery, Agriculture.

Community Meeting #2 - Documentation - Five Chapters - Day 1



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- Response from various chapters: "Build a casino and resort at Antelope Canyon near Page, AZ"
 - Build a Walmart
 - Tonalea – Build a place to hang out
 - We need nursing homes
 - We need better schools
 - We need a grocery store
 - Hotel and casino resort
- Kim poses the question – How do we self-sustain ourselves? Nation building includes strengthening our policies and finding balance in economies? We don't need just jobs, but a way to retain employees through training and opportunities. Let's look at Twin Arrows as an example and why this place is successful at retaining its employees. What does it take for a place like Twin Arrows to be successful and self-sustaining?
- Kim responds to the conversation on "Quality of Life" and how it can be achieved through a successful economic development plan. Kim also states how self-sustainability reinforces tribal sovereignty and leadership and could potentially inspire Navajo communities to move beyond "typical" American prototypes for economic development and be uniquely Navajo and culturally specific. The general idea behind this discussion is to reinforce the idea of self-sustainability and why this is critical for chapters and their involvement. The hands-on work and involvement is critical for absolute success.
- Tamarah references her experience traveling through Venice, Italy. She mentions the story of a pop-up business idea that introduces payable restrooms for the average tourist. Due the density of the daily tourist in Venice, safe and clean public restrooms are difficult to access, however not without a fee. Charging for restroom usage in density-rich areas where services are limited, could potentially generate revenue through tourism on Navajo Nation. Tamarah pitched her idea and strategy to all five chapters.

Economic Development Sub-Region SWOT Analysis

- Kim presented and explained the definition of a SWOT Analysis and asked the FBFA Chapters to define the FBFA's Sub-Region's Strengths, Weaknesses, Opportunities and Threats.
- **PLEASE REFERENCE SWOT ANALYSIS EXERCISE FEEDBACK AT END OF THIS DOCUMENT**
- Potential Employment Effects: Kim references lists from the presentation that focus on the closure of the Navajo Generating Station and its impact on the following communities: Page, Kaibeto, and Tuba City. This closure could have a potential impact on the FBFA and the chapters. An estimated 560 jobs would be lost because of the closure. Page would share larger losses in local business, however without tourism, which would serve as a primary industry.
- Comments from Various FBFA Chapters:
 - First initial impressions from all chapters: there is a general lack of motivation and the feeling is "uninspired" and "negative". General chapter concerns about process "they've done this before"
 - How can chapters be more inspired about process and "doing the work"?
 - Kim – general explanation of why this process is critical and why IDSA is doing this again – 10 year period of outdated information, need new data.
 - Despite general feelings of crowd participation, all chapters agreed to build on list and provide thorough and comprehensive listings.

Community Meeting #2 - Documentation - Five Chapters - Day 1

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Preliminary Research Observations

- Joe provided a general overview of all data that encompasses the FBFA and chapters.
- Market Trade Areas – Primary and secondary market trade areas for proposed development. Additionally, historic, current and projected economic factors and trends (population, income level and source, existing employers, potential labor force and housing availability); Vehicle traffic counts, traffic patterns; Tourist attractions and spending patterns; Service needs (post offices, banking, laundromat, restaurant, grocers, etc) and feasible project sites. Is there a map of workers living on the rez? Joe presented data on high amounts of Asians visiting areas like Page, AZ and the Grand Canyon and acknowledges shifting demographics and international interests of Native American cultural and people.
- Joe presented a detailed map of NTUA Broadband expansion plan with phases for Fiber installation beginning from eastern to western Navajo Nation. Date of map is unknown.
- Joe presented a detailed map of the primary and secondary trade areas: Consisting of major centers including – Tuba City/Tonalea Primary Market and Leupp/Tolani Lake Primary Market Areas.
- Joe posed a question about Consumer Analysis – “Is there a difference between Tourism and Consumers”, the tourist are the consumers, but some consumers are not tourists, but residents of the FBFA. Joe presents Population Density map with color that shows areas of density and areas of isolation. Could this also reference lack of general services and utilities in these areas?
- Joe presented general data of jobs located within the FBFA area. Please refer to PowerPoint Presentation on page 50 for a detailed breakdown of all services found within the FBFA.
- Joe references the 2011 Navajo Nation Visitor Survey to present detailed numbers: 57% of visitors had not visited Navajo Nation previously. 41% of visitors from Las Vegas. 1/3 of visitors from Germany.
- Lastly, Joe presented general numbers/data regarding the economic potential of developing the FBFA region in areas that support tourism and meet the need of local residents within the FBFA boundary.

Exercise #1

- Kim poses the question: What are your primary community facility and service needs? (non-commercial: administrative offices, postal services, banking, etc)
- Tamarah provided a brief example of a multipurpose facility and referenced the Kayenta Multi-Purpose center.
- PLEASE REFERENCE EXERCISES AT END OF THIS DOCUMENT

Exercise #2

- Kim poses the question: What are your primary existing community facilities and services? (non-commercial: administrative offices, postal services, banking, etc)
- Tamarah provided a brief example of typical maintenance costs for a multipurpose building similar to Kayenta Chapter Multi-Purpose building. The general cost per square foot is \$3.75, but with additional items such as HVAC and Special Systems maintenance along with custodial costs, totals out to \$7.25.
- PLEASE REFERENCE EXERCISES AT END OF THIS DOCUMENT

Exercise #3

- Kim poses the question: What are your primary commercial development and business needs? (laundromat, restaurant, grocers, etc)
- Kim provided a map outlining all area chapters affected by the FBFA – Regional Economic Development
- PLEASE REFERENCE EXERCISES AT END OF THIS DOCUMENT

Community Meeting #2 - Documentation - Five Chapters - Day 1



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Exercise #4

- Kim poses a question: What are your primary existing commercial development and businesses? (laundromat, restaurant, grocers, etc)
- PLEASE REFERENCE EXERCISES AT END OF THIS DOCUMENT

Exercise #5

- Kim presents the Consumer Survey Input: Brainstorm Consumer Survey Questions? (What are your local shopping patterns, what would make you shop locally, are there any issues and challenges, etc)
- PLEASE REFERENCE EXERCISES AT END OF THIS DOCUMENT

General Questions and Comments

- There is a general concern over who can participate (the entire chapter or just the area of the chapter that falls within the FBFA) does the FBFA include all chapters? Or just the FBFA boundary within the chapter?
- Wenona Benally with Navajo-Hopi Land Commission (NHLC) clarified that this project only focuses on communities within the boundary within the FBFA—not the entire chapter. The Chapters respond with a general push-back and concern, however, Wenona reminded chapters of history of the FBFA and impact on residents living within the FBFA prior to the lifting the BFA. The clarification with all five chapters has been confirmed. However, clarification with four chapters remains unknown.
- There is a question regarding the coordination with the survey inquiries. Some chapters are available to submit up to 100 surveys, while other chapters can only submit up to 20 surveys.

Adjourn

Next Meeting

- Wednesday – 8:00am – Same room
- Adjourn

Attachments

- Sign-in Sheet
- Agenda
- PowerPoint Presentation
- What is Economic Development Feedback
- SWOT Analysis Feedback
- Exercises #1-5

This report is deemed to be a true and accurate account of this meeting, unless written notification to the contrary is received within four (4) working days of the date of issue of this report.

Community Meeting #2 - Documentation - Five Chapters - Day 1

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Exercise Feedback:

What is Economic Development?

- Growth and Sustainability
- Developing an Environment that creates Jobs and an Economic Base for a Community
- Define District Boundary
- Education, Internet, Schools
- Short Distance to Stores
- Hospitals and Fire Stations
- District Boundary Dispute & Resolution
- Jobs
- To Bring in Businesses and Employment
- Place to Hang Out and Spend Money
- Better Schools
- Revenue
- Nursing Home
- Fast Food
- Costco
- No Border Town
- Wal-Mart
- More Jobs
- Jobs + Growth
- Tourism Centers
- Coming Up With a Plan
- Growth! Progress!
- Farming, Planting & Livestock
- Build Casino & Resort at Antelope Canyon
- Beautify Our Communities
- Jobs for Local Community
- Capitalize on Resources

Community Meeting #2 - Documentation - Five Chapters - Day 1



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SWOT Analysis – Strength

- Traditional food
- Filming/commercial
- Cultural Center
- Landscape – Natural beauty of the land
- Dinosaur Track/Bones
- Four Corners Monument
- History
- Sacred sites/cultural sites
- Anasazi ruins
- Land open space
- Tourism
- People-culture

- Language
- Resiliency 40 years 150 years
- Navajo Code Talkers
- Arts and crafts/pottery weaving/silversmith
- Traditional clothing/painters
- Traditional beliefs/ceremony
- Grand Canyon
- Lifted FBFA
- Youth/potential
- Farming/Agriculture
- Elk/Wildlife
- Traditional Beliefs/NN Fair/Tuba city fair

SWOT Analysis – Opportunity

- Air BNB
- Outhouses (mobile app)
- Regional planning
- Marketing
- External funds/grants/loans
- Embrace tourism/economic development
- Campgrounds/RVs/hiking trail/horseback

- Resorts and spas
- Grand circle (tourism)
- Extreme sports
- Rodeo
- Conference Room
- Highway development
- Bring back traditional values
- Technology
- Educated youth/embrace/participant

SWOT Analysis - Threats

- Community safety
- Drugs/alcohol/loitering
- Human trafficking
- Environment waste/trash
- Traffic/pollution
- Junk food/health
- Climate change/drought

- Industrial development & treats
- Limited resources human
- Education of community
- Lack of tech assistance
- No support of community ideas
- Natural environment/plants/wildfire
- Radiation/uranium clean up
- Wildfire

Community Meeting #2 - Documentation - Five Chapters - Day 1

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- Lack of police enforcement
- Lack of emergency services
- Crime
- Emergency response
- Lack of trust in local government
- Land locked/infrastructure
- Land users
- Overgrazing
- Waiving rights
- Other tribes
- Homelessness
- No feedback or updates from NN and Economic Development
- Lack of scholarship funding for youth
- Revise strict regulations/requirements
- Culture shock
- Lack of finalized home site leases
- Streamline process – home site
- Hitchhikers
- Thieves/burglars
- Streamline business site lease
- Lack of communication with leaders
- Loss of culture and traditional teachings
- Safety with citizens
- Enforcement of laws
- Elderly taking advantage of (ex. new vehicles)
- Predatory lending (ex. Lenders)
- Land Approval – “NIMBY”
- Red tape
- Lack of education of tech
- Interference of outside entity
- District and boundaries
- Closure of NGS/BMM
- Lack of jobs
- Lack of housing
- Educational funding/scholarship/ NN chapter

SWOT Analysis – Weaknesses

- Drugs/Alcohol
- Walmart/Dollar Store
- No clean restrooms
- Lack of Infrastructure – unpaved roads/toll roads
- Lack of technology – no internet
- No Broadband/cell towers
- No econ. development
- Car rentals
- Horse rental
- Past leadership – no plans
- Unreliable, unknowledgeable, only stipend
- Land & boundary dispute
- Nonsupport from NN leaders in w/r/funding
- Having done these type of studies
- Turn against us
- Un-motivated
- Lack of regional unity
- No approach to regional planning
- Who’s the leader?
- Senior citizen services
- All of NN frustrated
- Chapter follow of polices & procedures
- Lack of medical attention
- Lack of funding
- Lack of building development
- Lack of rural addressing

Community Meeting #2 - Documentation - Five Chapters - Day 1



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Exercise #1: What are your primary community facility and service needs?
(i.e. Non-Commercial such as Administrative Offices, Postal Services, Banking, etc.)

- Multipurpose
- Sports Complex
- Tonelea Chapter
- Fairgrounds
- Senior center
- Nursing/EMT
- Head start/free school
- Fire department
- Swimming pool
- Employee housing
- Health facility
- Post office
- Veterans
- Recreation
- Banks
- Libraries
- Schools
- Vet Schools/Clinic
- Youth facility (Boys & Girls Club)
- Human Cancer center
- Auction house
- Livestock
- Museum
- Equestrian
- Wellness center
- Behavior health/rehab
- Assisted living
- Safety
- Hospice
- Cemetery
- Waste management
- Water treatment
- FBFA housing authority
- FBFA City Center
- Conference building
- Water facility
- Treatment plant
- Water collection
- One stop shop
- Ceremony facility/grounds (ex. Winslow)
- Trade schools/technical school
- Community garden/ herbs/spices/fruit/veg
- Youth summer camps/sheep camp
- Sheep butcher/bread making
- Food bank

Community Meeting #2 - Documentation - Five Chapters - Day 1

Indigenous Design Studio + Architecture, LLC

Exercise #2: What are your primary existing community facilities and services?
(i.e. Non-Commercial such as Administrative Offices, Postal Services, Banking, etc.)

- Chapter house
- Senior center
- Water livestock/windmill
- Post office
- Elementary
- BIA schools
- Churches
- High school/middle school/elementary
- Tuba City Regional Health/hospital
- Head start
- Existing facility needs upgrade and renovation
- Medical mobile units/Tuba City - Dental/Mammogram
- Dialysis center
- Cancer center
- Non-Emergency transport
- DMV- Tuba City
- Transfer stations – Tuba City
- Banks
- Trading posts
- Public library
- Tribal programs & administration buildings
- Transit bus
- Community Centers
- NTUA
- APS
- NHA
- Department of Corrections
- Work Force
- Child support
- Flea market
- Boys and Girls Club
- Airports

Community Meeting #2 - Documentation - Five Chapters - Day 1



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Exercise #3: What are your primary commercial development and business needs?

(i.e. Laundromat, Restaurant, Grocers, etc.)

- Healthy food options
- Car wash
- Restaurant
- Sam's Club/wholesale/bulk
- Hair salon/nails
- Home Depot/Lowes (hardware)
- Movie theater
- Whole Foods
- Walmart
- Massage therapists
- Mail/shopping/retail
- Transfer station – waste management – recycle
- Agriculture regional
- Electronic store/best buy/apple
- Auto repair
- Portrait studio
- Culture center
- Walgreens
- Grocery Store
- Farmers market
- Western store
- Bead store
- Ceremony facility
- RV park
- TV stations
- Meat manufacturing
- Sheep skin store
- Radio station
- Hobby Lobby
- Fabric store
- Joanne Begay
- Bakery
- Starbucks
- Steak House
- Tech/trade schools
- IKEA
- Diamonds
- Chinese food
- Athletic store
- Outlet
- Thrift Stores/Goodwill
- Wells Fargo
- Safeway
- Wool store
- Book store/comics
- Golf course
- Amusement parks

Community Meeting #2 - Documentation - Five Chapters - Day 1

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Exercise #4: What are your primary existing commercial development and businesses?

(i.e. Laundromat, Restaurant, Grocers, etc.)

- True Value
- Bashes
- KFC
- AutoZone
- Taco Bell
- McDonald's
- Hogan Rest
- Chiro
- Denny's
- Sonic
- Subway
- Little Casers
- Chinese Restaurant
- Quality Inn
- Dollar General
- Pizza Edge
- Shell
- Burger King
- Choice Wireless/Cellular
- Family Dollar
- Tuba City
- Fabric Plus
- Car Wash
- China Star
- Movie Theater
- Laundromat
- Western Feed Stores
- Gas stations
- Mortuary
- Churches Chicken
- H&R Block
- Tire Shop
- Sacred Peaks
- Auto Repair
- Dish Network
- Kaibeto Market
- Shush Dine Echo Retreat
- Flea market
- Trading post
- Dinosaur Tracks

Community Meeting #2 - Documentation - Five Chapters - Day 1



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Exercise #5: Consumer Survey Input: Brainstorm Consumer Survey Questions?
(i.e. What are your Shopping Patterns, What would make you Shop Locally, Issues and Challenges, etc.)

- Lower prices
- Lower sales tax
- Lower fuel costs /gas/fuel
- Variety
- Quality
- Availability
- Freshness
- Bulk options
- Customer service
- Good food ex. ice cream

Shopping Patterns: What do you go to border towns for?

Issues and Challenges

- Rodeo/fair grounds
- Vendor
- JHE enterprise
- VETs
- APS
- NTUA
- Tonalea
- General Store
- Museum
- Shed store
- Trailer courts
- Coffee shop
- Internet cafe

Community Meeting #2 - Documentation - Five Chapters - Day 2



Indigenous Design Studio + Architecture, LLC

Meeting Minutes

Project Name: Economic and Market Feasibility Study Former Bennet Freeze Area
Project Number: 2018.006
Phase: Community Meeting #2 w/ Five Chapters – Day 2
Meeting Date: Wednesday, June 6, 2018
Meeting Time: 8:00am (MST) - 2:00pm
Meeting Location: Twin Arrows Casino, Flagstaff, AZ

Attendance: **IDS+A Team**
Tamarah Begay (IDS+A), Kim Kanuho (IDS+A), Victor Pascual (IDS+A), Joe McClure (IDS+A), Elaine Young (NNDED), Patsy Yazzie (NHLCO)

FBFA Five Chapters

Gwen Ward (Tonalea), Helen M. Maloney (Tonalea), Valerie Fowler (Coppermine), Floyd Stevens (Coppermine), Linda Long (Coppermine), Katie John (Bodaway), Leonard Sloan (Bodaway), Franklin Fowler (Kaibeto), Charlene Manygoats (TNDLG), Joetta Goldtooth (TND), Lavonna Begay (Tonalea), Danielle Begay (Tonalea), Calvin G. Begay (Coppermine), Priscilla Mann (Kaibeto), Lola Smith (Coppermine), Vicki R. Kee (Tonalea), Marlinda Whiterock (Tonalea), Joann Secody (Kaibeto), Mellie Acothley (Tonalea), Raymond D. Yellowman (Bodaway/Gap), Kimberly Kescoli (District 1), Elaine Young (DED-SBDD), Royletia Begay (Coppermine), Sid Whitehair (Coppermine), Daniel Keams (Tonalea), Floyd Stevens (Coppermine), Debra Benally (Coppermine), Herman Lane (Bodaway)

Prepared by: Victor Pascual



Community Meeting #2 - Documentation - Five Chapters - Day 2

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Summary

As a summary to the Community Meeting #2 with Five Chapters, this is second half and Day 2 conducted on Wednesday, June 6, 2018 from 8 a.m. to 1 p.m. at Twin Arrows, AZ, please see the following discussion and feedback received from the Five FBFA Chapters.

Discussion Items: Capital Assets

- Kim begins with a general overview of participatory research and general purpose of this process and how it will help IDS+A with the Feasibility Study.
- Kim presented a general diagram of "8 Forms of Capital" beginning with: Individual Capital, Social Capital, Intellectual Capital, Built Capital, Natural Capital, Political Capital, Cultural Capital, Financial Capital, and Community Wealth.
- Kim then explains the process for gathering information and makes a reference to the previous exercises including the SWOT Analysis.
- **PLEASE REFERENCE EXERCISE FEEDBACK AT END OF THIS DOCUMENT**
- Kim provides a general review of all and any last assets critical to planning process. No further items were added to the lists.

Project Vision Statement: Definition and Example

- Tamarah – This has already been completed and not important for this session. The selected statement is: *"To Empower the FBFA Chapters to increase their capacities to accomplish their economic development initiatives collaboratively and regionally".*

Community Site Analysis: Homework Updates – Coppermine Chapter

- Kim – Conducted general review with each chapter

Community Site Analysis: Homework Updates – Bodaway-Gap Chapter

- Kim – Conducted general review with each chapter

Community Site Analysis: Homework Updates – Kaibeto Chapter

- Kim – Conducted general review with each chapter

Community Site Analysis: Homework Updates – Tonalea Chapter

- Kim – Conducted general review with each chapter

Community Site Analysis: Homework Updates – Tuba City Chapter

- Kim – Conducted general review with each chapter

General Questions and Comments

- General final questions included inquiries about requesting sign-in sheets and PowerPoint presentation.

Adjourn

Next Meeting

- TBA

J. Appendix

Community Meeting #2 - Documentation - Five Chapters - Day 2



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Attachments

- Sign-in Sheet
- Agenda
- PowerPoint Presentation
- Capital Assets Workshop Results

This report is deemed to be a true and accurate account of this meeting, unless written notification to the contrary is received within four (4) working days of the date of issue of this report.

Community Meeting #2 - Documentation - Five Chapters - Day 2

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Capital Assets – Individual Capital

What do individuals in the community know how to do? (Farmers, leaders, engineers, construction, welding, entrepreneurs, etc.)

- Engineers
- Massage therapists
- M.D.
- Doctors/PhD
- Lawyers
- Sheep herders/culture
- Ranchers
- Musicians/artists
- Teachers
- Rug weavers
- White horn
- Carpenters/welders
- Plumbers/pipe fixers
- Electricians
- Planners
- Coaches
- Historical knowledge
- Cooks
- Business owners
- Traditional medicine healers
- Police/EMT
- Veterans
- Leaders
- Fire fighters
- Volunteers
- Pastor
- Chapter officials/staff
- Youth
- Farmers
- Butchers
- Mechanics

Capital Assets - Social Capital

What organizations and events bring people together in the community? (Chapter house, schools, churches, ceremonies, celebrations, powwows, rodeos, etc.)

- Chapter house/chapter meeting
- School
- Churches/revival
- Song and dance
- Powwow
- Western NN Fair
- Just Move It – Annual Marathon
- Horseback riding
- Trail hikers
- Tourism
- Rodeo
- Seasonal community events
- Easter
- 4th of July
- Bazaar
- Honor Rider
- Basketball
- All sports
- Community awareness, walks
- Family reunion
- Birthday Dinner
- Graduation
- Weddings/Navajo
- Squaw Dance ceremonies
- Yei Bei Chei
- Branding cattle
- Friday Flea Markets/Indian Markets
- Post Office
- Bashes
- Funeral
- Laundromat
- Meeting/workshops/conf.
- Country dances/Stateline/aces wild
- Bingo + Card games
- Casino

Community Meeting #2 - Documentation - Five Chapters - Day 2



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Capital Assets - Intellectual Capital

How good are community members at collaborating to identify opportunities and solve problems? (Chapter leaders, CLUP's, Grazing Boards, etc.)

Chapter leaders
Committees

- Lup
- Grazing
- School board
- Senior center council
- Head start council
- FBFA
- Rural Addressing
- Housing discretion
- Antelope Canyon
- The vendors
- Economic development
- Health community
- Boards

- Boys & Girls Clubs
- CERT – Community emergency response team
- Planning and zoning
- Student council
- ROTC
- National Honor Council
- Rodeo
- Future Farmer
- 4H
- NN Fair Comm. Western NN
- Miss Navajo
- Princesses
- Indian Market

Capital Assets - Built Capital

What development and infrastructure exists? (Buildings, water, electric, sewer, etc.)

- Waterline
- Western Navajo Pipeline (Regional/Page/Mark Maryboy/Brown & Caldwell)
- Lechee to Leupp
- Electric power line extension
- Koko Waterline – Kaibeto – Coppermine – Bodaway
- NTUA
- APS
- Frontier
- Cellular one
- Choice wireless
- (AT&T) Cell Towers
- Proposed solar farm – Cameron
- Fiber optics
- Bodaway Bridge
- Cameron Bridge (Colorado)
- Navajo Bridge (Marble Canyon)
- Federal bldgs. (Social Security)
- Post office
- Chapter House
- BIA Bldgs.
- Tribal Admin bldgs.

Community Meeting #2 - Documentation - Five Chapters - Day 2

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- State & county buildings
- NHA housing bldgs. (NHA, BIA schools, ONHR Relocation)

Capital Assets - Political Capital

How knowledgeable are community leaders about the political processes? How effective are they? (Chapter, Navajo Nation, County, State, Federal, etc.)

- Lene Fowler – Coconino County Supervisor
- Otto Tso – Council Delegate
- Louise Yellowman – Former Coconino County Supervisor
- Touchone Slim – Council delegate
- NN Council Delegate
- Chapter officials (managers)
- Chapter administrators
- Council Delegates
- John McCain
- Obama
- CHR
- Jamescita Peshlakai – AZ State representative LD7

Capital Assets - Cultural Capital

What unique cultural attributes exist in the community? (Language, culture, teachings, food, art, spiritual, health, etc.)

- Medicine men and women/ Healer traditional – Medicine man association
- Navajo Culture language teaching food shoe games
- Churches
- Shoe games
- ABDN
- NAC (NACNA)
- Mormons – LDS
- Christians

Capital Assets - Financial Capital

What are the community's financial reserves, cash flows, investments?

- Junk Food sales tax
- Sales tax (gas)
- Business lease Tax
- NN Gen. Fund (scholarships, summer employment, housing)
- Indian Market
- Grants (CD BG.)
- Siihasin
- USDA
- Supplemental funds NN
- County funds
- Casino NNGE
- Hotel occupation tax

Community Meeting #2 - Documentation - Five Chapters - Day 2



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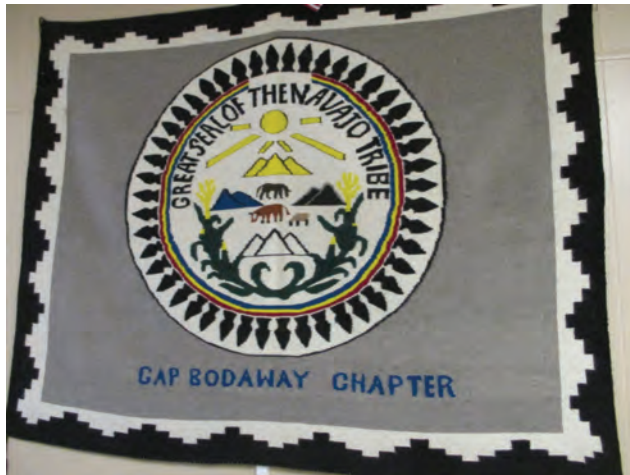
- NGS – Scholarships
- Peabody Coal
- Executive Branch – Community Division – Chapters
- Chapter House admin costs

Chapter Site Visits

Documentation

J. Appendix

Chapter Site Visits - Documentation



Chapter Site Visits - Documentation



J. Appendix

Chapter Site Visits - Documentation

To'Nanees'Dizi Local Government
SIGN - IN SHEET

Date October 17, 2018

Meeting Called by FBFA Chapter Tours - Tuba City

Purpose Kim Karubio - Indigenous Design

	Print Name	Signature	Title	Chapter/Program	Contact Info.
16.	Charlotte Wangpoots	<i>[Signature]</i>	Acting Exec. Mgr	TNOLG	(478) 283-5200
17.	Gwen Ward	<i>[Signature]</i>	Senior Office Specialist	Tuba City	(928) 283-3287
18.	Sinclair Norris	<i>[Signature]</i>	Intern Architect	IDSA	(535) 220-2525
19.	Kim Karubio	<i>[Signature]</i>	Planner	IDSA	480 209 7892
20.	Alesha Sloan	<i>[Signature]</i>	Planner	TNDLG	(602) 432-1024
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Date: 10/17/2018

Chapter/Location: Tonala Chapter

☐ Telephone ☐ Office Visit ☐ Other

☐ E-mail ☒ Field Visit

Meeting Time	Travel Time
<u>2:15pm</u>	
Begin Time:	<u>2:15pm</u>
End Time:	<u>3:30pm</u>
Total Hours:	

1. Marilinda Whitenok, CM
2. Sinclair Norils, intern architect
3. Katrina Attkin, Office Asst.
4. Kim Kaneko, Planner, ISA
5. Nicki P. Ker, DCM/TCUPC

6. _____
7. _____
8. _____
9. _____
10. _____

- ☐ Chapter Resolutions
- ☐ Development of FMS
- ☐ Internal Policies & Procedures
- ☐ Community Complaints
- ☒ Other *FBFA Site Visit*

☐ Agenda

☐ Sign In Sheet

- Contract extended
- Identify Local Attractions
- Draft report by Thanksgiving - w/ base maps
- Final report by December or January 2019

Primary Growth Areas
Secondary Growth Areas > Regional Areas of Economic Development

Provide breakdown of financial projection
Revenues are produced from tourism and local residents

Chapter Site Visits - Documentation

NOTES

FBFA is within an Economic Development Zone
Look into federal grants to include all 9 FBFA chapters (opportunity)
Will take photos in potential economic development areas.

Vicki - BIA is working on Environmental Assessment in FBFA for
Economic Development

Summary of each chapter site visit by the end of October
Draft report will be submitted by Thanksgiving.

Prepared by (Name & Title) _____

Chapter Site Visits - Documentation

INDEGENOUS DESIGN STUDIO & ARCHITECTURE /
COPPERMINE CHAPTER
 COMMUNITY LAND-USE PLANNING COMMITTEE
 SIGN IN SHEET

DATE: <u>October 18, 2018</u>	
Regular CLUPC Meeting	
Special CLUPC Meeting	

1	<u>[Signature]</u> CLUPC President	26	
2	CLUPC Vice President	27	
3	CLUPC Secretary	28	
4	CLUPC Member	29	
5	<u>R. Biggs</u> CLUPC Member	30	
6	<u>Floyd Stevenson, Consultant</u>	31	
7	<u>Abriel Jones</u>	32	
8	<u>Sinclair Norms, IDSA intern architect</u>	33	
9	<u>Kim Kanceles, Planner, IDSA</u>	34	
10	<u>Lola Smith</u>	35	
11		36	
12		37	
13		38	
14		39	
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		50	

J. Appendix

Chapter Site Visits - Documentation

BODAWAY/GAP CHAPTER DAILY VISITORS											
DATE	TIME	NAME	HO REG. VOTER YES/NO	PAN. COPIES, FACILITY USAGE & MENTAL	ASSISTANCE & SCHOLARSHIPS	EMPLOYMENT & COMMUNITY SERVICE	GREASING/ASHING	HOUSING	VISIT OFFICIAL	COMMENTS	
9/5	10/11	Cherish Hardy								info	
9:28am	10/12	Dwaine S. Tsingine								Facility usage	
9:30	10/32	Leonard Sloan								Chapter Business	
9:40	10/10/18	Margo B. Begay, NDOT								Paul's Meeting	
10:03		Sarah Slim								Facility Usage form	
10/16	12:25	Thomp Stevens	✓							Copy road in for WNA NDOT note	
10/17	0853	Leonard Sloan								Chapter Business	
10/17	11:19am	Ruby Begay								Residency paper	
10/17	2:35	Louise Bennett						x		Info	
10/17	2:50	Jamie Edvin							x		
10/18	4:16	Bonnie Zilmer								Chapter Business	
10-19	0822	Leonard Sloan								Chapter Business	
10-19	8:30	Kira Kanaho							x	FBFA meeting	
10/19	8:30	Sinclair Noring							x	FBFA meeting	

Chapter Site Visits - Documentation



Indigenous Design Studio + Architecture, LLC

Meeting Minutes

Project Name: Economic and Market Feasibility Study Former Bennett Freeze Area
Project Number: 2018.006
Phase: Chapter Site Visits
Meeting Date: Tuesday, October 16 – Friday, October 19, 2018
Meeting Location: Leupp Chapter, Tolani Lake Chapter, Tuba City Chapter, Coalmine Canyon Chapter, Tonalea Chapter, Kaibeto Chapter, Coppermine Chapter, Bodaway-Gap Chapter, and Cameron Chapter.

Attendance: **IDS+A Team**
Kim Kanuho (Project Manager), Sinclair Norris (IDS+A)

FBFA Nine Chapters

Betty Tso (Leupp), Al Thomas (Tolani Lake), Charlene Manygoats (Tuba City Chapter), Gwen Ward (Tuba City Chapter), Alesha Sloan (Tuba City Chapter), Dorothy Dale (Coalmine Canyon Chapter), Philip Zahne (Coalmine Canyon Chapter), Marlinda Whiterock (Tonalea), Vicky Kee (Tonalea), Burnette Welch (Kaibeto), Floyd Stevens (Coppermine), Alferd Rory (Coppermine), Linda Rory (Coppermine), Lola Smith (Coppermine), Roylenticia Begay (Coppermine), Leonard Sloan (Bodaway-Gap), Katie John (Bodaway-Gap), Leland Jones (Cameron)

Prepared by: Sinclair Norris



Chapter Site Visits - Documentation

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Introduction

On the week of October 16 – 19, 2018 the IDS+A team organized Chapter Site Visits with each of the nine FBFA Chapters to conduct a Site Analysis of the Communities and Regions within the Former Bennett Freeze Area (FBFA). These Chapter Site Visits would be performed as an extended version of the original Scope of Work. The site visits included the following chapters: Leupp, Tolani Lake, Tuba City, Coalmine Canyon, Tonalea, Kaibeto, Coppermine, Bodaway-Gap, and Cameron. In this document are the following: site visits overview, discussions with chapters, comments and feedback received during the Chapters Site Visits.

FBFA Chapter Site Visits:

1. Objective: To conduct a Site Analysis of the nine Chapter Communities and Region in the FBFA.
2. The meeting included the following:
 - o Meeting with the Chapter Managers, CSC Coordinators, and/or Designated Representative.
 - o Site Analysis of the Community and Region.
 - o Site Photos.

Day 1 Summary

The IDS+A team commenced the Chapter Site Visits, beginning with Leupp. Betty Tso, Chapter Manager, and several chapter members were available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

At the conclusion of the first meeting, a trip to the Grand Falls was scheduled, however, weather conditions prohibited the visit. Next up, the team traveled to Tolani Lake, where a meeting was scheduled with Al Thomas, Chapter President. Al was the only chapter official member available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

This concludes Day 1 of the Chapter Site Visits.

Leupp Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- The chapter presented their Community Land Use Plan and discussed future projects regarding market feasibility.
- Leupp Chapter stated that it has the potential to grow and accommodate economic development, however not without the construction and opening of the Grand Falls Highway.
- Through Feasibility Study research, it's discovered that Shell gas station monopolizes the local fuel economy, therefore creating a non-competitive environment for fair fuel pricing. Kim explained that though this is a threat, it could also be an opportunity for Navajo Nation to provide another gas station.
- Kim presented and discussed Primary and Secondary growth areas within the region and the different types of business that could work in the region, including a financial model for the different business types. Kim also explained that there may be potential for a grocery store in the Leupp area.
- Betty provided general comments regarding Infrastructure including:
 - A. Leupp has a lack of infrastructure, and wishes to do an infrastructure feasibility study.
 - B. For instance, the gasoline would benefit greatly, as they tend to refill their propane tank 3 times a winter.

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- Kim explained and confirmed that the FBFA falls within an opportunity zone and applying for grant funding at a regional level could assist with obtaining infrastructure for the FBFA.
- Betty stated the need for project development outside the FBFA, however the Feasibility Study focuses within the boundary only. A majority of chapter communities fall outside of the FBFA boundary.
- Kim presented IDS+A 6 CEO project in detail, to better understand the benefits of regional economic development.
- Kim presented the project list from Navajo Nation and the various Chapters that have multiple projects listed.
- Betty referenced that Leupp Chapter has officially started a resolution for a land withdrawal.
- Kim referenced the proximity of Leupp to I-40 and the advantages for potential development, due to the large amount of highway traffic.
- Meeting adjourned.



Tolani Lake Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- Kim presented and discussed Primary and Secondary growth areas within the region and the different types of business that could work in the region, including a financial model for the different business types.

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- Kim referenced inconsistencies between official Navajo Nation documents and the Chapter CLUP. A recommendation from IDS+A concluded that the Chapter should prioritize the completion of the CLUP document.
- Kim stated the information gathering process from NTUA and NN-DOT is still underway. Critical information from these sources will help to further explain examples like the development of the Grand Falls Highway.
- Al thoroughly explained the challenges of focusing on economic development due to their limits on their status—being an un-certified chapter.
- Kim stated the importance of this opportunity and the potential for the Chapter to develop their own border town.
- Kim explained and confirmed that the FBFA falls within an opportunity zone and applying for grant funding at a regional level could assist with obtaining infrastructure for the FBFA.
- Al provided general comments regarding the progress report and recommended a final presentation accompany the final document, Kim replied that the suggestion will be given to the NHLHC and NNDED, which they will confirm next steps.
- Al inquired about the WHPacific content information – “Will this be included into the final document?”
- Kim responded with clarity and stated that some information will be referenced from the WHPacific report.
- Meeting adjourned.



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Day 2 Summary

On Day 2, IDS+A met with Tuba City Chapter officials and members including: Alesha Sloan (Planner), Gwen Ward (Senior Office Specialist) and Charlene Manygoats (Chapter Manager) all of who, were available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

Next up, the team traveled to Coalmine Canyon, where a meeting was scheduled with Dorothy Dale (Chapter Manager) and Philip Zahne (Chapter Vice President) who were available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Additional photos included a local site attraction at the Coalmine Canyon viewpoint. Listed below are detailed notes from the meeting.

Lastly, IDS+A met with Tonalea Chapter Officials including: Marlinda Whiterock (Chapter Manager), Vicky Kee (Grazing Official) and Katrina Attikai (Office Assistant) who were available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

After the meeting, the IDS+A team visited Monument Valley and local tourist sites for further regional site analysis and documentation.

This concludes Day 2 of the Chapter Site Visits.

Tuba City Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- General discussions included the possibility of having a final meeting that would get all the chapters together.
- Kim presented and defined the Primary and Secondary growth area, with goals of creating a list of the business that would succeed within the growth areas. Kim explains that Tuba City is a primary growth area.
- Kim references the real-estate approach as a model for economic development. Recommendations for businesses for each growth area were provided, such as a hotel. Metrics will be developed after each model to measure successes of each effort.
- Kim provided examples for the models of economic development within the Navajo Nation and the important components such as the Grand Falls Highway.
- Kim discussed the presence of non-native business on deeded land and how they are both threats and opportunities.
- Gwen stated that several chapters don't fall within the FBFA boundary and asked how they would impact Primary and Secondary growth areas.

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- Charlene explained that Tuba City is targeting a few places for development, for example, Main St. and the Fair Grounds, and their proximity to major areas of potential economic development. However, Tuba City is not zoned for developments.
- Charlene mentions the possibility of Marriot/Fairfield's development presence in Tuba City. Seasonal workforces is critical for economic development, which the Chapter is anticipating.
- Charlene stated that Tuba City faces plenty of development potential, included the arrival of a Planet Fitness on Main St.
- Kim explained the benefits of thinking regionally, a better possibility of getting grants and funding. How Tuba is the central of the FBFA, could possibly be the central region for the 9 Chapters.
- Meeting adjourned.



Coalmine Canyon Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- Kim explained the Primary and Secondary Growth areas how Coalmine Canyon is a secondary growth area. Kim stated that list of business will be made for each growth area and a financial analysis will be provided from that list.
- Kim explained the real-estate approach, that it will be up to the communities to locate potential areas for development.
- Kim explained that Grand Falls Highway would impact Coalmine Canyon's growth in a positive way.
- Kim stated two types of income; tourism and community. Kim explains the effects on how we recommend the type of business we select for each growth area.

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- Kim explained the opportunities and threats of non-native businesses on deeded land.
- Philip explained that HWY 264 became the secondary Highway with the environmental damages to HWY 89. Philip stated there is a lack of emergency access, which would also effect Hopi tribal members.
- Kim explained that Navajo Nation and the Chapter CLUPs projects aren't matching up and, so IDS+A will be providing recommendations for priority projects in the final document.
- Philip mentioned the possible issues of Regionalizing with the 9 chapters, how the Chapters aren't aligned politically. Philip recommended that policies need to be changed to benefit the whole region. (Navajo Nation governmental policies).
- Kim explained that with the recommendations in the final document, Navajo Nations and the 9 Chapters have possibilities for changing policies and for pushing for economic development.
- Philip mentioned the Tribal Transportation Improvement Program.
- Meeting adjourned.



Tonalea Chapter

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- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- Marlinda briefly mentioned that there is no economic development happening within Tonalea to-date.
- Kim presented the Primary and Secondary Growth Areas and IDS+A's real-estate approach to the type of businesses recommendations that will be provided for each growth area.
- Kim discussed the current economy and the two types of money circulating in the region; which are from tourism and the local residents of the community, all of which, could be available for Tonalea.
- Kim mentioned the Grand Falls Highway and its potential for economic development for Tonalea and the FBFA region.
- Kim explained that FBFA boundary is an opportunity zone with the possibility of receiving grants and funding for infrastructure.
- Marlinda commented on the lack of infrastructure in proximity to major highways surrounding Tonalea. She also references Tonalea's project list and prioritizes the rebuild of the chapter house. She also mentioned a future economic site—a 9.2 acres recently withdrawn near Cow Springs.
- Meeting adjourned.

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Day 3 Summary

On day 3, IDS+A arrived at Kaibeto Chapter and met with Chapter Officials including: Burnadette Welch (Chapter Member) of whom were available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

Secondly, IDS+A met with Coppermine Chapter officials and members including: Royletia Begay (Sr. Office Specialist), and Lola Smith (Chapter Vice President) all of who, were available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

Then concluded Day 3 with several visits to tourist attractions including: Antelope Canyon, Horseshoe Bend and wrapping up the day in Tuba City.

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Kaibeto Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- Burnadette mentioned that Tuba City employed residents from the other Chapters during the **Western Navajo Nation** Fair to meet the demand for their event. Kim referenced the economic corridors on the FBFA Base Map and mentioned the Grand Falls Highway, with its potential impact on economic development.
- Kim explained the Primary and Secondary Growth areas and Kaibeto is a secondary growth area. Kim stated that list of business will be made for each growth area and a financial analysis will be provided from that list.
- Mentioned development in Kaibeto – a 100 acre corridor is zoned for commercial development. Current status is unknown.
- Kim explained that the FBFA is in an economic opportunity zone and regional thinking will help make the Chapter knowledgeable for funding and grants.
- Kim provided updates for the upcoming schedule with a possibility for a final, however confirmation pending.
- Kim briefly explained two types of income; tourism and local residents from the community.
- Burnadette mentioned a local hiking trail is underway in collaboration with the Community Health Improvement Planning.
- Kim explained that Navajo Nation and the Chapter CLUPs projects aren't matching up and, and IDS+A will be referring priority projects in the final document.
- Burnadette discussed concerns about the project, such as being labeled primary and secondary, and its emphasis on which chapters will be prioritized.
- Burnadette mentioned that the CHIP group meets every month with the possibility of CHIP and CLUP working together for health and infrastructure development.
- Meeting adjourned.

Coppermine Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- Kim explained the Primary and Secondary Growth areas how Coppermine is a secondary growth area. Kim stated that list of businesses will be made for each growth area and a financial analysis will be provided from that list.
- General Chapter concerns included: Coppermine does not fall within the FBFA boundary. Where do they fit into the general narrative? However, Navajo/Hopi Land Commission mentioned that entire chapter will be included in the Study.
- Kim explained that the FBFA is an opportunity zone, giving the Chapter the possibility to apply for funding, grants for infrastructure.
- Kim referenced the Economic corridors on the FBFA Base Map and mentioned the Grand Falls Highway, with its potential impact on economic development.
- Also discussed, is that NN DOT discovered that N 20 consist of a higher traffic volume than HW 89, where BIA has jurisdiction of N 20.

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- Kim explained that from the primary and secondary growth areas, the final document will have a list of businesses that would work in each growth areas. The document will also have financial analysis for that list as well.
- Kim discussed the current economy and the two type of money circulating in the region; which are from tourism and the local residents of the community also discussing the different type of businesses viable in each growth area.
- Kim mentions that with regionalization, policies need to be changed to benefit all the communities.
- Chapter members conclude that the construction of a clinic has begun. –Further information unavailable--
- Coppermine referenced poor infrastructure, making it difficult for potential development.
- Coppermine would like to include final surveys to their most recently updated CLUP document.
- Coppermine would like to request a final copy of the Feasibility Study. Confirmation is needed on delivery.
- Chapter member mentioned possible development including: Agricultural Farms and BNB's, laundromat, resort, solar plant, etc.
- Shush Dine, is the only business in operation within the Chapter.



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Day 4 Summary

On day 4, IDS+A arrived at Bodaway-Gap and met with Officials including: Leonard Sloan (Chapter Vice President), and Jadi Habitiin-Enterprise member, of whom were available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

Lastly, IDS+A arrived at Cameron and met with Officials including: Leland Jones (Chapter CLUPC member) who was available for team introductions, a project debrief, a short discussion regarding the Feasibility Study, and group photos. Listed below are detailed notes from the meeting.

Upon visiting the last chapter, IDS+A traveled to Grand Canyon and visited the Navajo Point attraction after which, the team concluded the FBFA Chapter Site Visits and traveled back to Albuquerque, NM.

Bodaway-Gap Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- Kim explained the Primary and Secondary Growth areas how Coalmine Canyon is a secondary growth area. Kim stated that list of businesses will be made for each growth area and a financial analysis will be provided from that list.
- Leonard mentioned that Bodaway-Gap does indeed have 100 acres at junction 160 and 89 zoned for economic development.
- Kim explained that Navajo Nation and the Chapter CLUPs projects aren't matching up and, so IDS+A will be referring priority projects in the final document.
- Leonard mentioned that Bodaway-Gap is still trying to get homesite leases and is currently having issues due to restricted areas from floodplain areas.
- Discussions included possible economic development including: Coffee shop, Gas Station, Laundromat, Lagoon, Police Facility, etc.
- The chapter stated that there are issues around the chapter involved travelers speeding and, causing accidents. A reference to highway infrastructure is requested.
- Kim discussed how the FBFA is in an economic opportunity zone with the possibility of applying for funding and grants if the chapters think and act regionally.
- Leonard mentioned a trend of outsiders willing to help the community—an example being: Kee Yazzie offering to do renovations on housing. Leonard mentioned the possibility of moving economic development toward Cedar Ridge/Bitter Springs area and lastly mentioned that majority of the road side vendors are managed by Jadi Habitiin Enterprise
- Bodaway-Gap Chapter currently has no street names.
- Kim discussed the rea-estate approach that we are taking and how this also would benefit if they chapters worked on a regional level.
- Leonard mentioned political disputes between chapter members and potential conflict, as noted, this would be a challenge.
- Leonard inquired about the details regarding the official FBFA boundary line. –No comments or responses were noted--
- Meeting Adjourned.

Chapter Site Visits - Documentation



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Cameron Chapter

- The IDS+A team presented a project debrief with a current status of the Feasibility Study – in addition to the goals and objectives of the Chapter Site Visits.
- Kim explained the Primary and Secondary Growth areas how Cameron is a primary growth area. Kim stated that list of business will be made for each growth area and a financial analysis will be provided from that list. Kim also discussed the real-estate approach, how thinking regionally would benefit this approach.
- Kim mentioned Grand Falls Highway and its impact on the community in response to economic development.
- Kim discussed deeded land issues, the opportunities and threats that are associated with it.
- Development: Hotel by Speedy's gas station. BnB going toward Grand Canyon and proposed development including a Cultural Center.
- Cameron Chapter is not certified and is in the process of applying.
- Bus Tours – located out of Las Vegas, Los Angeles, and San Francisco. They go through the Grand Circle, usually go through the southern rim and make their way through Monument Valley. Booking are done ahead of time, usually planned years in advance.
- Note: Adding Grand Circle to the Base Map.



K References

FBFA Reference List

Report Prepared by: Indigenous Design Studio + Architecture, LLC

(Note that additional reference material is cited within the report for tabulated and other data.)

Reference	Source Cited
General Reference	Navajo Nation Visitor Survey – 2011
General Reference	Navajo Generating Station & Kayenta Mine An Economic Impact Study for the Navajo Nation – 2017
General Reference	Navajo Nation Comprehensive Economic Development Strategy – 2018
General Reference	Former Bennett Freeze Area Integrated Resource Management Plan – 2016
General Reference	Former Bennett Freeze Area Recovery Plan - 2008
General Reference	Navajo Nation Reinvented Economic Impact and Strategies for Areas Affected Coal Mine Closures – 2017
Chapter Data Links	https://docs.google.com/spreadsheets/d/12eYfOTJvDkWI-2w5vvoizUHKfC7dJOjK-BWET8xGSjU/pub?output=html
Bodaway-Gap Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfMkHmNFRLVTh4R28/view
Cameron Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfDlOWEhCeGM2VFk/view
Cameron Chapter CLUP Link	https://drive.google.com/drive/folders/0B5cATnP5VZgHWE5IU3ZXdzFtc0k
Coalmine Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfUm5YRWIYV2dLMjg/view
Coppermine Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67Yfckt4RjRzRzVIYnc/view
Kaibeto Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfRjBwbG1UdkxXazA/view
Leupp Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfUTcxbjVnTGxrMXc/view
Leupp Chapter CLUP Link	https://drive.google.com/drive/folders/0B5cATnP5VZgHUFdmdm0xaTNEbXc
Tolani Lake Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfQzRocHViSVhIZ2s/view
Tolani Lake Chapter CLUP Link	https://drive.google.com/file/d/0B5cATnP5VZgHREFTBtk3UVFqT28/view
Tonalea Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfNzVIN0hRMTFPN1U/view
Tuba City Chapter Census	https://drive.google.com/file/d/0B9Ys0__F67YfMndXNmVWXI1ZjA/view
Tuba City Chapter CLUP Link	https://drive.google.com/drive/folders/0B5cATnP5VZgHRVR6TnNXWjFxFu0U
NDot Road Maps	http://www.navajodot.org/Western_Agency_.aspx
EDT Inc. Navajo Nation Reinvented Economic Impacts and Strategies for Areas Affected Coal Mine Closure	https://drive.google.com/file/d/1JZeSxdvQchLI25SWqcNk0Ac0kUFquDKH/view
GIS Chapter Boundary Link	http://www.arcgis.com/home/webmap/viewer.html?webmap=bf6431393b6d4e369dcb3c8bc204aedf&extent=-112.7702,35.0013,-108.7135,36.9044
Arizona Employment Map	https://geo.azmag.gov/maps/azemployment/



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