ARIZONA STATE UNIVERSITY

FLORENCE COPPER PROJECT

FLORENCE COPPER

Economic Impact Study

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EXECUTIVE SUMMARY

Copper has contributed to Arizona's prosperity for well over a century, as mining drew the first settlers to the Arizona Territory. Today, Arizona continues to hold a position as the leading copper producer among all states.

While Arizona's economy has grown and become more diverse, copper's share of overall employment has declined. Yet, according to U. S. Census data, compensation for copper industry workers is highest among all sectors in Arizona, some 44 percent greater than the state average. The demand for copper continues to increase to meet the needs of global and domestic markets, as advances in technology have fed a strong demand for copper for use in products ranging from cell phones to batteries to weapons of national defense.

Meanwhile, science has changed the nature of copper production to be more capital intensive and technologically oriented. The in-situ recovery process is yet another advance in copper recovery methods.

Curis Resources (Arizona) Inc., a subsidiary of Curis Resources Ltd. of Canada, is developing an in-situ copper recovery (ISCR) operation on a site north of the Gila River in Florence, Arizona. The Florence Copper property hosts a deposit that lies between 400 – 800 feet below the surface, with measured and indicated oxide mineral resources of 429.5 million tons grading 0.331% total copper (at a 0.05% total copper cutoff) and containing 2.84 billion pounds of copper.

Due to the presence of soluble copper oxide mineralization, extensively fractured bedrock, and groundwater conditions that allow for both copper recovery and groundwater protection, the Florence Copper Project site is considered to be highly amenable to in-situ copper recovery methods.

Implementation of Florence Copper operations will require initial capital investments of roughly $280 million. During full commercial production, the project will create hundreds of high-wage jobs and generate millions in annual revenues for local and state governments and businesses.

Implementation of Florence Copper operations will require initial capital investments of roughly $280 million. During full commercial production, the project will create hundreds of high-wage jobs and generate millions in annual revenues for local and

state governments and businesses. The economic benefits will accrue primarily within Florence and surrounding areas, Pinal County, and ultimately across the entire state.

The purpose of this report is to analyze the existing (baseline) socioeconomic conditions in Florence and assess the impact of the Florence Copper project on economic activity, as measured by additions to Gross State Product, employment, incomes, government revenues, and economic development in the region.

After operations begin, Florence Copper will create and support an annual average 681 direct and indirect jobs in Arizona and 408 will be in Pinal County. Mineral recovery jobs will only account for 18 percent, as most (four out of five) will be in other industries in the regional economy.

Total Personal Income generated over the life of the project will be $1.4 billion, with over $700 million going to Pinal County workers and business owners.

During the 28 years of the project, significant revenue will accrue to Arizona governments. There will be over $325 million of Arizona government combined state and local revenues and state land trust royalties created, with approximately $60 million accruing to the Town of Florence.

In the past 30 years, prisons have become a major growth industry for Florence. But incarceration as an economic driver is less reliable as corrections policy becomes increasingly subject to political forces, legislative actions and cycles in government budgets. Reversing trends of the past, the Arizona Department of Corrections reports that the state's prison population actually declined by 296 inmates in FY 2011. Additionally, other communities are becoming more competitive in their quest for an "equitable" distribution of new facilities across the state.

While the real estate boom during the last decade brought population growth and new housing to the Florence area, a "rooftops" strategy of economic development cannot be counted on as a foundation for growth, especially when the boom subsides. According to the 2010 Census, Florence has the highest proportion (36%) of vacant housing of any city or town in Maricopa, Pinal, or Pima Counties.

Population increases in the past decade have not been accompanied by proportionate gains in overall employment. Florence has approximately one fifth as many private jobs per 1,000 population as the Arizona average, while the average wage is 10 percent lower than the Arizona average. For sustainable long term development, Florence would benefit from an expansion of basic private industries that bring in outside dollars

and create additional local jobs. This analysis shows that the Florence Copper project represents such an opportunity.

1. Historical Background

Located along the banks of the Gila River, Florence is one of the oldest towns in the entire State of Arizona. The Town is characterized by a rich historical heritage.

Early Florence settlers were attracted by the opportunities for economic development in the region. The initial catalyst for growth was provided by the availability of water on a scale sufficient for profitable support of agriculture, and water resources are still abundant today.

However, agriculture was not the only important source of growth in the early history of Florence. Mining played an important role as well, with the Silver King mine in the late 1880s drawing in significant numbers of miners and new residents.

Copper production in Florence/Pinal County will benefit local businesses, and provide stable, well-paying, private sector jobs.

Indirect effects are also significant and will ripple out to enhance the local and state economies.

In 1909, Florence (the county seat of Pinal County) positioned itself to receive the State prison, which grew significantly with the closing of the Yuma territorial prison. Today, incarceration is the dominant base industry for the region, now the location of several local, county, state and federal prisons – both publically and privately operated. Prison activity is so intensive in the area that it is important to make a distinction between the institutionalized and non-institutionalized population in Florence in assessing socioeconomic conditions.

In the 2010 Census, the non-prison population in the Town of Florence was 7,836, an increase of 50 percent compared to the 2000 Census figure of 5,224. The 2010 non-prison population in the overall Florence zip code area was 15,910, an increase of 108 percent compared to 2000.

In addition to water, beautiful desert scenery, and an established specialization in incarceration facilities, Florence has an additional resource under the ground – copper. Copper production in Florence/Pinal County will benefit local businesses, and provide stable, well-paying, private sector jobs. Indirect effects are also significant and will ripple out to enhance the local and state economies.

Throughout its history, Florence residents have made the best of opportunities, be it access to water for agriculture, positioning the city to be the home of county government and state and federal prison operations, or welcoming real estate development. The Florence Copper project represents one more opportunity for the Town to continue along a path of growth and development.

2. Economic Base Analysis

Analysis of the industry and employment structure in the Florence area reveals that the Town and its surrounding regions are extremely dependent upon the prison industry, public investments in prisons, and county government for its principle economic revenue streams. The school district and county seat offices add additional public sector employment that is important to the region.

The primary metric examined in the economic base analysis is the location quotient (ratio of employment per person), which allows comparison of per capita employment by sector in Florence with comparable per capita employment in Arizona and the nation, as well as for a set of comparison towns. This metric is the standard tool used by economists to measure employment intensities or deficiencies by sector in various regional economies.

Total employment in the Florence zip codes is estimated to have been approximately 8,200 in 2009. Total employment per capita was 40 to 46 percent less than the national and state averages.

Despite its close proximity to the Phoenix metro area, Florence is a very rural community with agriculture playing an important part in the private sector employment base. Focusing on the non-institutionalized population exclusively, agricultural employment per capita is some 21-27 percent above the national and state averages.

The overall Florence economy has approximately one fifth as many private jobs per 1,000 residents as found in the overall Arizona economy (57.6 vs. 331.8). That is, employment per capita would have to increase five times to equal the state average.

Government employed approximately 6,100 in Florence in 2009, nearly 75 percent of the total (private plus public sector) employment. Government employment per 1,000 residents is 2.3 to 2.6 times higher than the national and state averages.

The overall Florence economy has approximately one fifth as many private jobs per 1,000 residents as found in the overall Arizona economy (57.6 vs. 331.8). That is, employment per capita would have to increase five times to equal the state average.

Compared to Florence, the Arizona economy has 22 times the proportion of manufacturing jobs, and 5 times the ratio of retail trade jobs. Although health care is growing in Florence, the ratio of such jobs is only 17 percent of the state level.

Due to an absence of higher paying jobs such as those found in manufacturing or health care, the average wage in Florence is 10 percent less than the Arizona figure, which in turn is 8 percent less than the national average.

Given very low location quotients in such sectors as retail trade and health care, the Town's retirement-age migrants and seasonal residents seemingly have a minimal impact on the Florence economy.

Total employment in Florence increased 32 percent between 2001 and 2009. However, since the population of Florence rose at a more rapid rate (55 percent), per capita employment fell 14 percent in this timeframe. Indeed, other than in the prison industry, Florence fell even further behind the State and the nation in most sectors of private sector activity.

Total employment in Florence increased 32 percent between 2001 and 2009. However, since the population of Florence rose at a more rapid rate (55 percent), per capita employment fell 14 percent in this time frame. Indeed, other than in the prison industry, Florence fell even further behind the State and the nation in most sectors of private economic activity.

A comparison of the Florence economy with a set of Arizona mining towns (Bagdad, Clifton-Safford, Globe-Miami, and Hayden-Kearny-Winkelman) shows Florence had the lowest overall employment per capita (location quotient), including or excluding the prison population and prison-related jobs.

Between 2001 and 2009, the employment per capita rose significantly in the mining sector in Bagdad, Clifton-Safford, Globe-Miami, and Hayden-Kearny-Winkelman.

In Florence, employment per capita declined during this period. However, government employment actually increased by 1,466 workers, which suggests Florence is less affected by market forces, as 2008 and 2009 were sharp recessionary years.

Overall, the correctional industry dominates the Florence economy, reflected primarily in the large employment base in the government sector (and in the facility support services industry where private sector prison operations are classified).

3. Socioeconomic Overview

According to the 2010 census, the population of Florence is 25,536, and the prison (group quarters) population is 17,700, or 69 percent of the total recorded population. Alternatively stated, less than one third of the Florence recorded population is accounted for by non-incarcerated persons (7,836).

The distribution of non-institutionalized persons in Florence is dominated by young school age children and relatively older adults. There is a distinct gap in the 20-24 age groups that are reported in the census when compared with younger and older populations. By contrast, in the state of Arizona, about the same number of persons comprises the 20-24 year old age group as in adjacent younger and older age ranges.

The age distribution figures help explain why Florence has a relatively low labor force participation rate. Considerable numbers of working age adults either migrate away from the area or are not attracted by current job opportunities.

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The prison industry offers a number of permanent jobs in the area and they are the types of jobs that are generally more stable during business cycle fluctuations. But the industry is neither large enough nor attractive enough to allow the city to retain its young adults in great numbers.

Real estate has increased in importance in recent years and continued real estate development likely will be an important component for the economy of Florence going forward when normal growth patterns return to Arizona.

At the same time, the recent sharp downturn underscores that the construction industry cannot be relied upon to deliver steady annual economic growth and revenues over long, sustained periods of time. Arizona has endured several real estate cycles over the years so the current cyclical downturn is not unique in this respect. However it is the longest and most severe downturn in the past 50 years in the State. According to the

2010 Census, Florence has a higher proportion of vacant housing (36%) than any other city or town in Maricopa, Pima, or Pinal Counties.

Analysis of the socioeconomic landscape of the Town data indicates that the standard of living in Florence is above average when compared with other Arizona cities chosen for comparison. At the same time, real incomes have been stagnant in the area for the better part of the last decade despite the surge in the prison population that has occurred. The data also suggests that the Town of Florence has fewer families, as a share of total families, with incomes below the poverty level. The stable prison employment base is no doubt a contributor in this regard.

An examination of fiscal capacity reveals that Florence has net assessed values that are moderately low compared with the size of its student population and therefore has high secondary property tax rates to provide adequate funding for schools.

Sales tax collections combined with state shared revenues provide a form of "bonus" funding for the Town with the distribution formula significantly boosted by the institutionalized population. The distribution formulas are simply the reflection of census counts and all persons, including those incarcerated, are included in the census counts, to the benefit of the Town.

4. Baseline Economic Analysis

In 2008 the Central Arizona Association of Governments (CAAG) commissioned an analysis of the demographic and economic implications for future growth in central Arizona with special emphasis on growth in Pinal County, including Florence and surrounding areas.

This initiative is the most extensive and recent study of its kind, but it is important to recognize that most of the analysis and projections were undertaken before it became evident that the effects of the recession of 2008 would linger for several years, delaying (if not weakening) many of the long term trends discussed in the reports. Arizona and the nation lost jobs for three consecutive years (2008 – 2010) and population growth for the state slowed from more than three percent in the boom years to only one percent in 2009.

The CAAG Pinal Projections Project employs modeling analysis that draws from some of the predictions of the development of the Sun Corridor – a projected growth region in Arizona where Pinal County is central.

The study is based on a comparison of "edge county" analysis of growth trajectories of originally undeveloped regions that bordered growing urban centers, in the same way Pinal County is currently situated in the Sun Corridor between metropolitan Phoenix and the greater Tucson area to the south.

In brief, the study predicts that as Pinal County matures over a long time period, employment growth will begin to increase at a faster pace than population growth, thereby raising per capita employment levels to those found in more developed areas within the next 30 years.

The Pinal Projection analysis is based on econometric models that extend recent trends in regional economic growth. These models are sophisticated and detailed.

With the exception of prison employment to support public and private prison populations, it is evident that the Florence area has no other base industries and clearly lacks diversity in the local economy.

However, the scenarios simulated depend crucially on the assumption that edge county growth in Pinal County will tend to mimic the growth trajectories that occurred in similarly situated edge counties historically.

As the full effects of the recession of 2008-2009 were not fully understood when the Pinal County Projection Project analysis was undertaken, it is now clear that the predicted 2020 numbers may not be realized until 2030 and the 2040 numbers will be similarly delayed. The pace of this resurgence will clearly depend on the ability of the region to attract and retain employment while maintaining the attractive amenities that have drawn people to Arizona for decades.

Even with significant increases in growth, the pathway to development has many challenges to overcome. The region is starting from a position of low commercial development overall and no strong private sector economic base industry to build on, other than very tentative projections of population overflows from nearby metropolitan areas.

With the exception of prison employment to support public and private prison populations, it is evident that the Florence area has no other base industries and clearly lacks diversity in the local economy. Excluding private sector prison employment, the data reveal only 914 nonagricultural private sector jobs in Florence. Traditional base

industry jobs such as manufacturing, mining, wholesale, transportation (and even including construction) combine to account for less than 1 percent of employment.

For sustainable long term growth, Florence would benefit from greater diversity of its economic base and development of private industries that bring in outside dollars to create additional local jobs.

5. Economic and Fiscal Impact

The dynamic economic impact analysis for this study uses an Arizona-specific verion of a computer-based model (REMI) developed by Regional Economic Models, Inc. The REMI model has been used and tested by national researchers for many years, over a wide range of projects. The model is well known in Arizona, where it has been in use since 2003 by various state agencies, universities, and private sector analysts.

The REMI software has been developed with dynamic capability for projections over a long term period. Other models provide a static, one-time impact. Since the Florence Copper project is expected to be productive over a period of many years, the REMI model was chosen for its ability to provide economic impact results year-by-year over that period.

To model the economic impact of the Florence Copper project, the effects were analyzed for three distinct phases.

The construction phase is three years in duration (2012-2014). Most of the expenditures and employment in this phase will be related to testing, analysis, and site preparation.

The operations phase is 19 years (2015-2033). This is the period of greatest economic impact, not only because of its duration, but because it includes peak employment, income and tax revenue generation.

The reclamation/closure phase extends six years, from 2034 – 2039. Mineral recovery employment at the site winds down, but economic activity continues due to reclamation and restoration of the site for future uses.

Economic Impact

Table A depicts the economic impact of the Florence Copper project on key measures of activity. The table shows annual average impact and total impact for each measure on Arizona and Pinal County over the full 28-year life of the project.

Gross State Product Total Impact

Florence Copper will add $2,245.1 million to Arizona Gross State Product over the life of the project.

Gross State Product produced in Pinal County will increase by $1,078.2 million over this period.

Table A
Florence Copper Project
Economic Impact Summary

Impact Locus	Total Impact	Annual Average Impact
Gross State Product		
Arizona	$2,245.1 mil	$80.2 mil
Pinal County	$1,078.2 mil	$38.5 mil
Employment		
Arizona	-	681
Pinal County	-	406
Personal Income		
Arizona	$1,463.7 mil	$52.3 mil
Pinal County	$709.0 mil	$25.3 mil

Note: dollar values are constant 2011 dollars. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.

Source: REMI model of Arizona and Pinal County economies

Gross State Product (GSP) represents new production, sometimes called "value added." GSP for Arizona and Pinal County contribute to the tally of Gross Domestic Product (GDP) for the nation, our measure of the country's annual output of goods and services. GSP is the most comprehensive indicator of economic performance for a state or region. The annual average addition to Arizona GSP over the entire project life is $80.2 million (in constant 2011 dollars). The annual average addition to GSP produced within Pinal County is $38.5 million.

Employment Impact

The Florence Copper project will create and support an annual average of 681 Arizona jobs over the duration of the three phases of activity.

The annual average employment within Pinal County from Florence Copper will be 406 jobs.

The job count includes the direct employment on site, jobs supported indirectly in firms or government agencies that supply goods and services to Florence Copper, as well as induced employment that stems from the expenditures of all these workers as consumers.

Approximately 170 jobs will be required at the Florence Copper site for mineral recovery during the operations phase. Over all project phases, more than 500 additional Arizona jobs supported each year will be in other industries in the overall general economy.

Personal Income Total Impact

Florence Copper will increase Personal Income in Arizona by $1,463.7 million over the life of the project.

Personal Income to residents of Pinal County will rise by $709.0 million over this period.

The components of Personal Income include wages and salaries of workers, and the contributions by employers to worker social security and benefit accounts. Proprietor's earnings by owners of small businesses also are included in Personal Income, as well as rental and interest income.

The annual average addition to Personal Income from the Florence Copper project is $52.3 million per year for Arizona and $25.3 million within Pinal County. These additions to aggregate personal income include the wages and salaries paid for the

newly created jobs as well as other income increases that accrue across the economy as the expansion of economic activity creates additional demands for products and services.

Impact by Project Phase

Table B illustrates how the economic impact on Arizona and Pinal County will vary during each of the three phases of the Florence Copper project.

Construction Phase

During the construction phase (2012 – 2014), Florence Copper will invest some $280 million in site preparation, development of infrastructure, engineering studies, testing and analysis, permits, and initial hiring and training of workers.

Table B
Economic Impact of Florence Copper Project By Phase

Impact Category	Construction Phase	Production Phase	Reclamation/ Closure Phase	Total Impact
	2012 - 2014	2015 - 2033	2034 - 2039	2012 - 2039
Gross State Product	**Gross State Product by Phase**			**GSP**
Arizona	$146.4	$1,772.4	$326.3	$2,245.1
Pinal County	$56.1	$833.5	$188.6	$1,078.2
Total Employment	**Annual Average Employment by Phase**			**Employment**
Arizona	585	787	392	681
Pinal County	285	453	316	406
Personal Income	**Personal Income by Phase**			**Personal Income**
Arizona	$87.9	$1,129.1	$246.7	$1,463.7
Pinal County	$33.8	$532.3	$142.9	$709.0

Note: dollar values are constant 2011 dollars. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.

Source: REMI Model of Arizona and Pinal Co. economies

These expenditures will increase Arizona GSP during the construction phase by $146.4 million, with $56.1 million of the new Gross State Product originating in Pinal County.

Arizona annual average employment created during this three year period will be 585 new jobs, with 285 in Pinal County.

The addition to Arizona Personal Income during the construction phase will be $87.9 million state-wide. In Pinal County, Personal Income received by residents will rise by $33.8 million.

Production Phase

The addition to Arizona Gross State Product from the production phase will be $1,772.4 million, accounting for 79 percent of the GSP impact over the entire project life. GSP originating within Pinal County will be $833.5 million. Annual average employment created during the production phase rises to 787 state-wide, and to 453 within Pinal County.

Cumulative Personal Income accruing to Arizona residents will exceed one billion dollars during the 19 year production phase. Personal Income will increase by $1,129.1 million across the state, and rise by $532.2 million in Pinal County.

Reclamation/Closure Phase

Although the production phase is expected to continue for nearly two decades, mineral recovery is a temporary land use for the site.

Following the completion of operations at the Florence Copper project, the site will be reclaimed and returned to productive use for residential development, agriculture, recreation or a combination of land uses.

Annual average employment created during the production phase rises to 787 state-wide, and to 453 within Pinal County.

Cumulative Personal Income accruing to Arizona residents will exceed one billion dollars during the 19 year production phase of the Florence Copper project.

Personal Income will increase by $1,129.1 million across the state, and rise by $532.2 million in Pinal County.

In the reclamation phase, the project still contributes a cumulative amount of $326.3 million to Arizona GSP and $188.6 million of new value added to GSP in Pinal County.

In the reclamation/closure phase, annual average Arizona employment becomes smaller by almost one half, to 392 Arizona jobs, but Pinal County jobs fall by a lesser proportion, to an average of 316 jobs over the six year period.

Annual Average Impact

Table C shows the annual average values of impact measures for each phase of the Florence Copper project. Annual average GSP increases in Arizona by $48.8 million in the construction phase and then nearly doubles during the 19-year production phase ($93.3 million annual average).

Table C
Annual Average Impact of Florence Copper Project By Phase

Impact Category	Construction Phase	Production Phase	Reclamation/ Closure Phase	Project Annual Avg. Impact
	2012 - 2014	2015 - 2033	2034 - 2039	2012 - 2039
Gross State Product	**Annual Average GSP by Phase**			**GSP**
Arizona	$48.8	$93.3	$54.4	$80.2
Pinal County	$18.7	$43.9	$31.5	$38.5
Total Employment	**Annual Average Employment by Phase**			
Arizona	585	787	392	681
Pinal County	285	453	316	406
Personal Income	**Annual Average Personal Income by Phase**			**Personal Income**
Arizona	$29.3	$59.4	$41.1	$52.3
Pinal County	$11.3	$28.0	$23.8	$25.3

Note: dollar values are constant 2011 dollars. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.

Source: REMI model of Arizona and Pinal County economies

Pinal County GSP more than doubles from the construction to the production phase, rising from an annual average GSP of $18.7 million to $43.9 million during each of the 19 years of the production phase. During the production phase, Pinal County GSP accounts for about 47 percent of new Arizona GSP created by the Florence Copper project.

The Florence Copper project will result in the payment of taxes and royalties to Arizona governments exceeding $325 million dollars. Over the life of the project, the Florence Copper project will contribute about $60 million dollars to Florence revenues.

Economic Impacts on the Town of Florence

The impact results on the Town of Florence will be proportional to the number of new workers that reside in the town. Estimates of this impact for a single production year were obtained using the annual model IMPLAN which is designed to allow impact analysis at the local level.

For an average production year, if all Florence Copper workers lived within the Florence zip code area, the project will create 170 direct Florence jobs plus an additional 84 indirect and induced jobs. The project will add $16.3 million in labor income to the Florence area. This new labor income captures the wages associated with the new jobs plus wage increments that accrue to existing Florence jobs as the new capital investment stimulates economic activity throughout the town.

Fiscal Estimates Including Royalty Payments

Table D depicts the individual income, sales and selective sales tax revenues from the Florence Copper project, estimated for the combined State and local levels and broken out for Florence only. These tax dollars represent the tax payments of Florence Copper as well as the tax dollars induced by the indirect economy activity that takes place as a result of the direct mineral recovery activities. The revenue simulations assume that the construction of the mine is completed in 2014 and production commences in 2014. The timing of the end of the construction phase and the beginning of the production phase would have little impact on the fiscal footprint of the mine.

Table D is based on tax rates that are currently in statute and operations data from the Florence Copper project economic analysis. Royalty payment obligations were

obtained with corroboration of the Arizona State Land Department. The Arizona Department of Revenue made available the appropriate methodology for the property tax calculations. Estimates were informed by access to budget planning statements compiled by Curis.

The initial estimates were based on the conservative assumption that the price of copper will be $2.50 in today's dollars over the life of the project. The calculations reflect the impending corporate tax rate reductions scheduled to begin in 2014. The estimates also assume that 100 percent of net income from the Florence Copper project will be taxable in Arizona and not be apportioned out of state to other states.

Table D shows that the Florence Copper project will result in the payment of taxes and royalties to Arizona governments exceeding $325 million dollars over the life of the project. During this time, the Florence Copper project will contribute about $60 million dollars to Florence revenues. The greatest tax revenues (about $300 million) are created during the production phase, when corporate taxes (including severance, property, corporate, and local mining taxes) are $132.8 million. The revenue projections are consistent with the estimates based on annual surveys of mining companies and from summary data available from the Arizona Taxpayers Association and the Arizona Department of Revenue. The impact on State and local governments will increase funding for public services, especially local school districts.

Table D also reveals that the fiscal impact of Florence Copper will clearly depend on the price of copper over the life of the project. The baseline estimates discussed above assume that the price of copper is $2.50 in inflation adjusted dollars over the life of the project. Simulations of revenue impact using $2.75, $3.00, and $3.50 are depicted in Table D for all state and local governments and for the Florence zip code.

The analysis reveals that state and local tax collections will range from $326.9 million at a price of $2.50 per pound to a sum of $456.1 million should copper average $3.50 per pound over the life of the project as property, income, severance and royalty payments rise accordingly. Revenues that will accrue to the Town of Florence will range from about $60 million in the baseline $2.50 per pound case up to $80 million should prices maintain a $3.50 per pound price level over the life of the project.

Table D
State and Local Fiscal Impact: Revenues Including Royalties

	Construction Phase	Production Phase	Reclamation/ Closure Phase	Cumulative Revenues
Combined State and Local*	**2012 - 2014**	**2015 - 2033**	**2034 – 2039**	**2012 - 2039**
Individual Income Tax	$1.6	$19.0	$2.6	$23.2
General Sales Tax	$5.9	$42.1	$5.9	$53.9
Selective Sales Tax	$1.6	$11.7	$1.7	$15.0
Adjusted Corporate Taxes @ $2.50/lb **	$7.5	$132.8	$0.7	$141.1
Royalties paid to the State Land Trust @ $2.50/lb	0	$93.7	0	$93.7
State and Local Totals @ $2.50/lb	$16.7	$299.3	$10.9	$326.9
Florence Only*				
Sales Tax	$3.3	$16.0	$2.5	$21.8
Adjusted Local Corporate Taxes @ $2.50/lb**	$2.6	$35.8	$0.0	$38.4
Florence Totals @ $2.50/lb	$5.9	$51.8	$2.5	$60.2
State and Local Totals @ $2.75/lb	$17.2	$319.0	$10.9	$347.2
State and Local Totals @ $3.00/lb	$18.5	$351.5	$10.9	$381.0
State and Local Totals @ $3.50/lb	$21.8	$423.4	$10.9	$456.1
Florence Totals @ $2.75/lb	$6.1	$56.6	$2.5	$65.2
Florence Totals @ $3.00/lb	$6.4	$61.4	$2.5	$70.3
Florence Totals @ $3.50/lb	$6.8	$71.0	$2.5	$80.3

* Values in Millions of 2011 Dollars

** Combined severance, property, corporate, and local mining tax based on confidential estimates

Source: Calculations based on preliminary economic assessment data from Curis Resources, Ltd., W.P Carey School of Business and REMI Model of Arizona and Pinal Co. economies

Impact Highlights

In summary, during the 28-year life of the project, Florence Copper will create significant economic benefits for Arizona and Pinal County.

Arizona Gross State Product will be enhanced by a cumulative value of $2,245.1 million, with $1,078.2 million originating in Pinal County, creating jobs and contributing to Personal Income.

Florence Copper will create and support an annual average 681 direct and indirect jobs in Arizona and 408 will be in Pinal County. Mineral recovery jobs will only account for 18 percent, as most (four out of five) will be in other industries in the regional economy.

Total Personal Income generated over the life of the project will be $1.4 billion, with over $700 million going to Pinal County workers and business owners.

Over the 28 years of the project, significant revenue will accrue to Arizona governments. There will be over $325 million of Arizona government combined state and local revenues and state land trust royalties created, with approximately $60 million accruing to the Town of Florence, based on a copper price of $2.50/lb.

6. Workforce Analysis

At the time of statehood (1912), Arizona was the largest copper producer in the nation, accounting for more copper than all other states combined. Arizona's dominance continues today. According to the U.S. Geological Survey, 2010 copper output for the nation was 1.1 million tons, and more than 700,000 tons were produced by Arizona operations.

Pinal County copper operations have played an important role in the Arizona copper industry over this period, at times accounting for more than one third of Arizona copper output and employment.

According to figures compiled by the U. S. Census Bureau for 2010, compensation in copper mining is higher than for any other industry in Arizona. The overall average annual wage for all Arizona industries in 2010 was $54,716. Copper compensation was $78,961, some 44 percent greater than the state average for all industries.

The pay gap between industries such as copper or manufacturing, which serve external markets, and other industries which serve local markets illustrates the importance of basic industries to economic development. A "rooftops" strategy of growth, solely depending on jobs that serve local populations, creates much lower paying employment than industries such as copper and manufacturing, where compensation is set by national or global market forces.

According to figures compiled by the U. S. Census Bureau for 2010, compensation in copper mining is higher than for any other industry in Arizona. The overall average annual wage for all Arizona industries in 2010 was $54,716. Copper compensation was $78,961, some 44 percent greater than the state average for all industries.

Copper mining in Arizona is often associated with traditional operations, such as open pit or underground mining to extract and process copper. These extraction operations typically involve blasting deposits with explosives, and transporting the material in gigantic trucks or movers for further processing.

The Florence Copper project is different. In-situ copper recovery (ISCR), the method proposed for Florence, does not depend on blasting or movement and processing of large quantities of rock material. Instead, ISCR is based on the injection and recovery of a low pH solution into a soluble copper orebody, a process that yields a copper-rich solution that is pumped to surface and captured for further processing.

Because the planned in-situ copper recovery process is operationally and technologically different from more conventional mining practices typically employed in Arizona, the workforce occupational mix required for operating the Florence Copper project will be different as well. The comparison between the typical mineral development workforce and the Florence Copper project workforce is seen in Table E below.

Table E
Occupations in U. S. Mineral Mining Compared to Florence Copper Project Workforce

Category	U.S. Workforce Distribution	Florence Copper Workforce
All Occupations	100.0%	100.0%
Administration, Business Financial, Office	17.3	16.1
Scientific, Technical, Engineering	9.1	18.7
Operations, Extraction	51.3	26.7
Maintenance, Materials Equipment, Storage	22.3	38.5

Source: U. S. Bureau of Labor Statistics, National Employment Matrix, 2008 and Curis Resources, Ltd.

Nationally, more than 50 percent of mine workers in the United States are involved directly in extraction. The Florence Copper project will employ only one half this proportion. Instead, the in-situ process will require double the proportion of scientific and technical workers, more than half again as many materials and equipment workers, and just about the same proportion of administration workers, compared to national averages for mining operations.

Although Florence Copper pay scales are not yet set, it is likely that total wages and salaries paid will be greater than the typical mining operation, since there are twice as many high paid scientific workers and only one half as many extraction workers.

Florence Copper follows a local hire and procurement policy that gives priority selection to local workers and contractors, based on qualifications and merit. The availability of local workers with necessary skills and experience was evaluated by review of *Occupational Employment Statistics* for Pinal County, as compiled and published by the U. S. Bureau of Labor Statistics. This publication provides information on some 800 occupational categories within Pinal County, including the number of workers in 2010, and average and median wages.

A listing of 36 occupations required for the operation of the Florence Copper project was obtained from an operating analysis for the project prepared by M3 Engineering of Tucson, Arizona. Florence Copper requirements were compared to the number of Pinal County workers in those occupations as of 2010, to measure the existing labor pool available for local hire.

Florence Copper follows a local hire and procurement policy that gives priority selection to local workers and contractors, based on qualifications and merit.

The conclusion from the analysis is that two-thirds of the workforce occupations required for operation of the Florence Copper Project are likely to be available locally (Pinal County). Of the remaining one third, there are sizeable labor pools available in nearby Maricopa County for the more general category of occupations. In addition, workers can be attracted to the Florence Copper project through recruitment or developed locally through training programs.

Local Workforce Recruiting

The Florence Copper project has several advantages to rely upon to attract workers locally or from other regions, as operations commence. Of first priority would be the nature of the work, the compensation, and the benefits. The in-situ process is technologically advanced compared to traditional mining practices, and would likely be seen by most applicants as an opportunity for professional growth. The location of the Florence Copper project is another advantage, with access to a nearby large metropolitan area.

Workforce recruiting is supported by the State of Arizona primarily through the activities of the Arizona Commerce Authority and the Governor's Council on Workforce Policy. These resources are available to Florence Copper to assist in recruiting locally and, if necessary, across the state.

The newly structured Arizona Commerce Authority is charged with expanding Arizona business opportunities internationally and domestically. In addition, the Governor's Council on Workforce Policy has developed the Arizona Workforce Connection website as a source of information on recruiting and employment for businesses and job-seekers. In addition, the Arizona Workforce connection website also serves as a portal to the One-Stop Service Centers within each Arizona county. One-Stop Service Centers for local hiring are located in Casa Grande, with two locations in Coolidge and two in Apache Junction.

Local Workforce Training

It is expected that implementation of the Florence Copper local hiring policy will require development of training programs in partnership with local organizations and institutions.

An underlying demographic characteristic of Florence, as shown by analysis of population data, is a tendency of younger residents to leave seeking employment outside the area. Since Florence Copper will emphasize local hiring, opportunities will be created for young workers willing to participate in education and training leading to careers in mineral resource recovery.

An important local organization aimed at developing career paths for local high school students is the Central Arizona Valley Institute of Technology (CAVIT). CAVIT is a public school district that works in partnership with area high schools to prepare students for higher wage jobs while still in high school. Most CAVIT programs (such as in health care, fire science, and law enforcement) offer opportunities for high school students to enroll in courses offered by Central Arizona College, earning college credits while still in high school.

Following the structure of existing CAVIT programs at the high school level, a program could be developed in mineral recovery, combining internships with basic courses in geology, business, and environmental science at Central Arizona College.

Implementation of the Florence Copper local hiring policy will require development of training programs in partnership with local organizations and institutions.

A similar program had good success at Eastern Arizona College in partnership with Phelps Dodge Mining Co., and later with Freeport-McMoran Copper & Gold. Certification required completion of two complete semesters of training. Students also had the option to continue with a second year of course work to earn an associate degree in applied science.

For those Florence Copper occupations requiring a full four year college degree, programs related to mining and geology are available at both the University of Arizona and Arizona State University. An effective method of recruiting through these programs is internships that allow the intern and employer to determine suitability of a full time appointment.

Workforce Conclusions

The advance of technology has changed the nature of copper production, while at the same time it is technology that drives the demand for copper in numerous applications in industry and consumer products. With the rise in consumption by developing nations (China and India) copper demand today is affected significantly by world market conditions.

The Florence Copper project brings another advance to the industry with its application of in-situ process. Operations will employ a higher proportion of scientific and technical workers and only half as many extraction workers as a conventional mining operation.

The Florence Copper local hiring policy is intended to ensure that local people receive priority consideration for employment, based on qualifications and merit. Analysis of the Pinal County workforce indicates that two thirds of Florence Copper occupations can be staffed from the existing local labor pool. Other workers will be attracted as new residents to the area, drawing from the Greater Phoenix labor market or from across the state, relying on cooperation from organizations such as the Arizona Commerce Authority.

An underlying demographic characteristic of Florence, as shown by analysis of population data, is a tendency of younger residents to leave, seeking employment outside the area. Florence Copper will create opportunities for those young workers willing to participate in education and training leading to careers in mineral resource recovery. Implementation of the local hiring policy will stimulate development of training programs in partnership with local organizations and institutions, such as Arizona Central College, University of Arizona, Arizona State University and local school districts.

The result will be increased employment, incomes and overall economic diversity in the area. High wage jobs in a basic industry aimed at external markets will create strong demand for goods and services locally, supporting additional new local jobs in supplier and consumer industries.

1 HISTORICAL BACKGROUND

1.1 Early Development

Located along the banks of the Gila River, Florence is one of the oldest towns in the entire state of Arizona. The little settlement that grew into the Florence of today has a proud and historic past.

Early records indicate a general store and a post office in the late 1860s. But the first real growth spurt came from Levi Ruggles who arrived in the area a few years earlier.

Seeing the potential for using available Gila River water for agricultural development, Ruggles established a significant land claim in the area. In 1875 he transferred the title of his land claim to the town.

Some say the newly christened community was named after one of Ruggles' daughters. However, this is only one of several stories about how the town got its name, most involving daughters or sisters of various officials and influential residents at the time, having the name of "Florence."

While the source of the name of the town still remains a matter of frequent discussion, it is clear that the people who settled Florence were attracted by the opportunities for economic development in the region. The initial catalyst for development was provided by the availability of water on a significant scale for profitable support of agriculture.

The town's position as the seat of government for Pinal County dates back to the 1870s, as do numerous buildings listed on the historic registry. Most notable among these is the McFarland courthouse, named after Ernest W. McFarland, former U.S. Senator, Arizona Supreme Court Justice, and Governor. The designation followed McFarland's purchase of the building from Pinal County in 1974 and subsequent donation to the State.

Today the site is a state park and offers both a glimpse of Arizona history and a record of McFarland's public service contributions. A second courthouse in Florence dates from 1890. The unique downtown area has been designated as a National Historic District.

1.2 Early Sources of Growth

Agriculture was not the only important source of growth in the early history of Florence. Mining played a significant role as well, with the attraction of the Silver King mine in the late 1880s drawing in significant numbers of miners who frequented the bustling frontier town.

In 1909 the county seat of Pinal County positioned itself to receive the State prison which grew significantly with the closing of the Yuma territorial prison. Today, incarceration is a significant base industry for the region, now the location of nine prisons. Prisons provide a stable industry, less resistant to business cycles, and also linked to the long term population growth of Arizona. But with this apparent stability becomes dependence primarily on the government sector for an employment base.

Water played an important development role again in the history of the area when the Florence Diversion Dam was constructed approximately 12 miles upstream from the community. Named the Ashurst Hayden diversion Dam, the structure was dedicated in 1922. The dam helped stabilize the flow of water over the seasonal pattern of the Gila and led to the settlement of disputes over water allocations between the agricultural interests of the region and claims made by Native Americans.

Even more water security for the region was achieved following construction of the Coolidge Dam in 1930, at a site upstream from the Ashurst Hayden Dam. Today, the flow of the Gila River is entirely diverted for irrigation and except during flooding the visible river bed is dry. According to the Arizona Department of Environmental Quality, the importation of large quantities of irrigation water has helped to maintain significant supplies of groundwater at shallow depths, thus benefitting agricultural uses in the region.

Visitors to Florence are attracted by popular annual events, as well as the numerous old buildings and homes and the intrigue of visiting "The Cowboy Cradle of the Great Southwest." But there is little evidence that these attractions have resulted in significant growth in the hospitality industry employment base.

Today, agriculture, government and incarceration remain as solid anchors of the economic base of Florence. Meanwhile, the dynamic growth of the Phoenix metropolitan area has contributed to impacts on population and real estate development in the past decade.

1.3 Population

Analysis of the demographic trends in the region requires some careful accounting of the prison population. In most census records, all residents – including incarcerated residents – are tabulated. Table 1.1 depicts the historical trends in the Town of Florence since 1910, while noting the impact of the prison population in recent years.

Table 1.1: Population of Florence and Surrounding Area

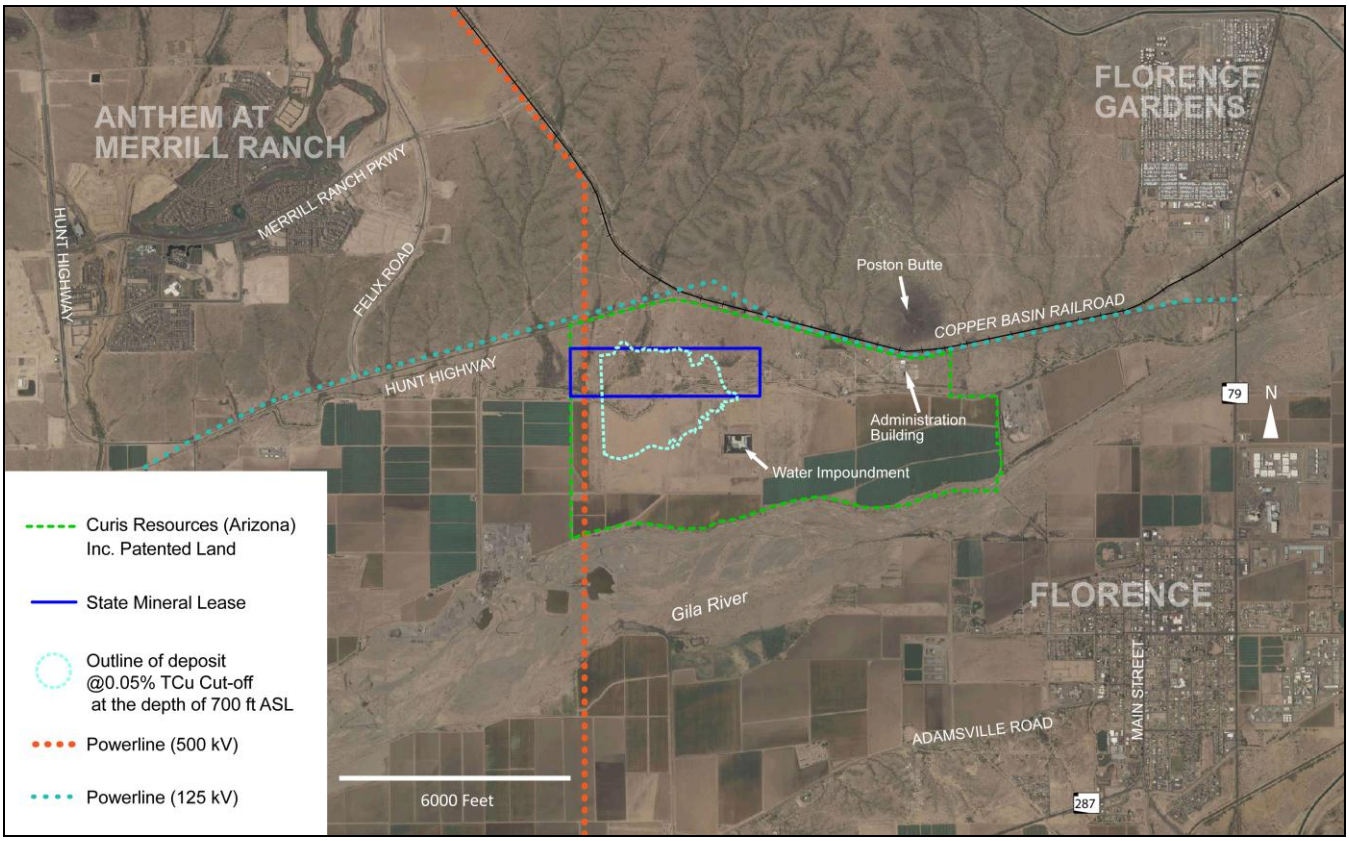
	Pinal County	Florence Town	Prison Population	Zip Code 85232/85132	Non-Prison Population in Zip Code
2010 *% Change*	375,770 *109.1%*	25,536 *49.7%*	17,700 *50.4%*	33,556 *73.1%*	15,856 *108.2%*
2000 *% Change*	179,727 54.4%	17,054 *127.1%*	11,772 *183.7%*	19,388 *95.1%*	7,616 *31,6%*
1990 *% Change*	116,379 *28.0%*	7,510 *121.5%*	4,150	9,938	5,788
1980 *% Change*	90,918 *33.9%*	3,391 *56.1%*			
1970 *% Change*	67,916 *8.4%*	2,173 *1.4%*			
1960 *% Change*	62,673 *45.1%*	2,143 *20.7%*			
1950 *% Change*	43,191 *49.8%*	1,776 *28.4%*			
1940 *% Change*	28,841 *30.6%*	1,383 *4.9%*			
1930 *% Change*	22,081 *36.9%*	1,318 *13.5%*			
1920 *% Change*	16,130 *78.3%*	1,161 *43.9%*			
1910	9,045	807			

Source: U.S. Department of Commerce, Census Bureau

The table includes the population figures for both the Town and for the surrounding area captured by the zip code statistics. The data demonstrate that growth in the

established Town boundaries lagged somewhat behind growth across Pinal County for much of the 20th century as new residential areas in Pinal County were developed. More recently growth in Florence surged at growth rates that outstripped growth in the County. However, as indicated in the table, much of the growth was attributable to rapid increases in the prison population. Growth in the non-incarcerated population in the city is comparable to historical rates with growth in the larger zip code region essentially matching that of the County, after removing the impact of the prison population. In the 2010 Census, the non-prison population within the two Zip Codes of the area (85132 and 85232) numbered 15,856, an increase of 108.2 percent compared to 2000. While the postal service has transitioned away from 85232, the census still shows population activity in 2010 so it is important to include both zip code categories for completeness.

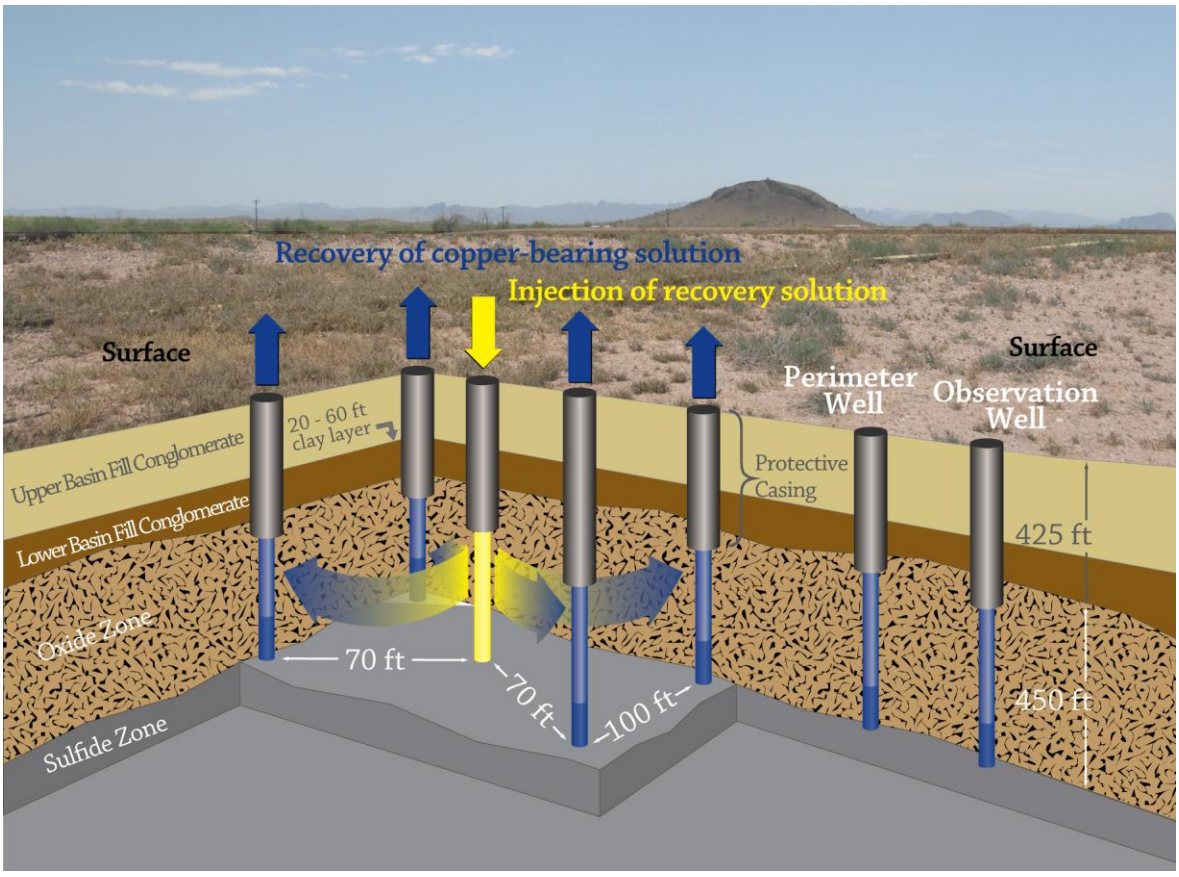
1.4 Florence Copper Project



Copper Recovery Site, Curis Resources (Arizona)

In addition to water, beautiful desert scenery, and an established specialization in incarceration facilities, Florence has an additional resource under the ground – copper. The Florence Copper property hosts a deposit that lies between 400 – 800 feet below the surface, with measured and indicated oxide mineral resources of 429.5 million tons grading 0.331% total copper (at a 0.05% total copper cutoff) and containing 2.84 billion pounds of copper.

Due to the presence of soluble copper oxide mineralization, extensively fractured bedrock, and groundwater conditions that allow for both copper recovery and groundwater protection, the Florence Copper project site is considered to be highly amenable to in-situ copper recovery methods, and has excellent potential to become a world-class ISCR operation. In-situ copper recovery involves the injection and recovery of a low pH, 99.7% water solution into the copper deposit, creating a copper rich solution that is then reclaimed and processed on the surface where the copper is extracted.



In-Situ Copper Recovery Process (ISCR)

The technology allows for the recovery of valuable copper minerals without traditional mining related land disturbances – such as open pits, waste rock facilities or tailings storage. In addition to minimizing land disturbance, ISCR presents a number of benefits over conventional mining practices. These include low energy and water use, little dust or noise generation and provision for a broad range of potential post-closure land use opportunities such as agriculture and housing.

A typical ISCR operation consists of a series of injection, recovery and monitoring wells penetrating a soluble copper deposit. A diluted, low pH solution similar in strength to lemon juice or household vinegar is pumped through perforations in the injection wells and into the copper mineralization. The solution passes through cracks in the lower portion of the deposit and dissolves the copper into the water based solution. This copper-rich solution is then pumped to the surface through recovery wells where it is sent to a solvent extraction/ electro winning (SX/EW) plant for the on-site manufacture of 99.999% pure copper cathode sheets.

The key to the successful execution of the ISCR process is maintaining "hydraulic control." A ring of four recovery wells surrounds each injection well, creating an inward hydraulic gradient that allows for the capture of copper bearing solution. Higher pumping rates in the recovery wells create an underground siphon effect which ensures that solution is recaptured and local groundwater resources are protected. Surrounding multiple and redundant monitoring wells further ensure that local groundwater quality is maintained.

Curis acquired the Florence Copper property in early 2010 and is working collaboratively with residents and officials from the Town of Florence, Pinal County and State and Federal agencies to develop a world-class ISCR project.

Mineral exploration at the site has been on-going since the 1960s, a time span of half a century. The land was initially the property of the American Smelting & Refining Company (ASARCO). Mineral interests were next acquired by Continental Oil Company (CONOCO). During the 1970s, Conoco removed some 50,000 tons of bulk ore samples for testing at a plant built on the site, but did not pursue extensive recovery of the copper deposits.

Conoco sold the property to Magma Copper Company in 1992, and subsequently the property was acquired by BHP Copper in 1996. During this period the property was the subject of extensive geological and metallurgical studies, including specific studies in the late 1990s on the feasibility of the ICSR process. However, commercial-scale mining activities on the site were not implemented.

BHP Copper divested the Florence Copper Project to Merrill Ranch Development in 2001, and Curis purchased surface and mineral rights to the site in 2009 and 2010 respectively.

In 2003 the Florence Copper project site private land was annexed by Florence and zoned as residential with a mining overlay. But the property's zoning was amended again in 2007 to remove the mining overlay and the private land does not currently allow for mineral development activity. Curis' initial development activities will focus on the 160-acre State Land area which covers roughly fifty percent of the copper deposit. This land is not subject to local town zoning restrictions and Curis currently holds a mineral lease for this area which allows for the extraction and processing of mineral ores.

Curis is confident that operations in Florence will allow for a "First Life" interim period of mineral development activity, followed by a "Second Life" that would allow for long term development consistent with the Merrill Ranch area as a Master Planned Community.

This economic impact study will focus only on the First Life mineral development activity. Implementation of ISCR operations at Florence will require initial capital investments of some $280 million, creating jobs as well as revenues to businesses and government. Ongoing operations will benefit local businesses as well as provide for stable, well-paying, private sector jobs. In addition, indirect effects would ripple out to enhance the entire regional economy. The following sections analyze these impacts on employment, incomes, government revenues, and economic development

2 THE ECONOMY OF FLORENCE AND COMPARISON AREAS

2.1 Data Sources and Methodology

The composition of the U.S. economy is most often described by industries. The hierarchical North American Industry Classification System (NAICS) divides the economy first into 20 sectors, which are subdivided into subsectors, industry groups, and specific industries. Sectors and industries are presented in this section of the study.

While an array of detailed economic indicators are available for the nation, fewer indicators with less industrial detail are available by state and county. Hardly any economic data are reported by community. A primary reason for the reduction in data availability as the geography becomes narrower is that federal law precludes the reporting of information that might be used to identify a specific company.

Information on 18 of the 20 main economic sectors is available by community from *County Business Patterns* (CBP), produced annually by the U. S. Census Bureau and providing data on each sector except agriculture and government. This source was selected since it features data down to the industry level, unlike most sources – such as the U.S. Bureau of Economic Analysis – that only goes down to the subsector level.

The Quarterly Census of Employment and Wages (QCEW) also extends' down to the industry level but withholds even more data than *County Business Patterns*. The QCEW provides no indication of the size of any withheld data. In contrast, the CBP provides a frequency distribution of establishment size with which to estimate the employment within the indicated range. These estimates are then controlled to the next higher figure available (e.g. for counties, estimates for the industries within an industry group are controlled to the actual industry group figure).

In the case of the zip codes used for the community base data in this study, the industry estimates were controlled to the zip code overall total employment. Information had to be separately collected for the agriculture sector and for the government sector. In all cases, the community figures by sector and by industry that are presented in this report are highly derived. The 2009 figures are compared to those for 2001 since the two years are comparable in terms of the economic cycle: both were recessionary years.

2.2 Nonfarm Private Sector

National and state economic data for the 18 sectors were obtained from the latest edition (2009 data released in 2011) of *County Business Patterns*. Data for sub county areas came from a companion product, *Zip Business Patterns*. One or more zip codes were combined to approximate the Florence area and each of the comparison areas. The Census Bureau uses administrative records to produce these datasets.

County Business Patterns and *Zip Business Patterns* provide data for sectors, subsectors, industry groups, and specific industries. Agricultural production employees, most government employees, railroad employees, self-employed individuals, and employees of private households are not included in either Census Bureau report. Thus, no data are reported for the government sector and only a small portion of the agriculture sector is included.

In *County Business Patterns*, the number of establishments (by employment size: 1 to 4, 5 to 9, 10 to 19, etc.) and employment are expressed as of mid-March by industrial category. Payroll is reported for the first quarter. An establishment is a physical location at which business is conducted; a company may consist of one or more establishments. When only a small number of establishments are present in an industrial category (particularly if one establishment within the category is dominant), the Census Bureau withholds the employment and payroll data to protect company confidentiality. Undisclosed data are most frequent at the industry level, but in less populous states and counties even sectoral data may be withheld.

In *Zip Business Patterns*, establishment data are reported as in *County Business Patterns*, but employment and payroll data are released *only* for the zip code total, and are withheld for some zip code totals. Thus, employment by sector and industry had to be estimated for Florence and each of the comparison areas.

These estimates were made using the establishment by employment-size class data for each industrial category for each zip code and average employment per establishment by employment-size class by sector for the state. After imputing these values, zip code data were aggregated as needed to the community level. The estimates by industrial category then were adjusted to add to the total employment of the community, though this step was not possible for communities for which zip code totals were withheld.

This methodology provides a best practice estimate. *County Business Patterns* is widely used in economic base studies because of its detailed data and the analysis of the missing data problems provides the most accurate measures of employment intensity

that are available. The approach is endorsed by the Arizona Department of Commerce – now the Arizona Commerce Authority.

Users are cautioned not to place undue importance on the change in establishments, employment, and payroll over time. Some of the apparent change in an industry in a community may be due, for example, to the Census Bureau correcting information regarding the industry or zip code in which an establishment operates. The Census Bureau does not revise earlier data to reflect such a correction.

2.3 Agriculture Data

Since *Zip Business Patterns* excludes agricultural production and includes only a small portion of the agricultural support and forestry, fishing and hunting components, these figures were not incorporated into this report. Instead, estimates of agriculture employment were made using two sets of data. Agriculture wage and salary employment at the *county* level is available for 2009 from the U.S. Department of Commerce's Bureau of Economic Analysis (BEA). It is the sum of the farm category and the forestry, fishing, and related activities category. Because of the federal government's disclosure restrictions, employment for the latter category was not provided by the BEA in two counties and had to be estimated.

The agriculture sector consists of the farm component, which in most counties accounts for more than two-thirds of the agriculture total, and agricultural support. In every county, the farm employment figure is available. In Graham and Greenlee counties (used to derive the estimate for Clifton-Safford in the mining town comparison analysis), the agricultural support figure had to be estimated.

The Pinal County totals of agriculture employment were allocated to zip codes based on zip code data available from the 2007 Census of Agriculture, produced by the U.S. Department of Agriculture (Economic censuses are produced every five years). The number of farms and ranches by value of agricultural products sold (less than $50,000; $50,000 to $249,999; and at least $250,000) by zip code is available from the census.

Various other data from the census also were examined. From these data, it appears that farms with sales of less than $50,000 do not employ workers except on an occasional basis and those farms with sales of between $50,000 and $250,000 employed on average only one worker.

Using this information and the zip code data on number of farms and volume of sales, farm worker employment by zip code was estimated. These estimates by zip code were tallied to the county level and controlled to the 2009 BEA county totals. The controlled zip code figures then were aggregated to the community level.

The BEA estimates of county employment in the forestry, fishing, and related activities category were allocated to zip codes based on the total number of farms with sales of at least $50,000. By community, this estimate was added to the estimated number of farm workers to reach an estimate of total agriculture employment. Data for 2001 were estimated in the same way as that for 2009, except that the estimates were based on the 2002 Census of Agriculture and were controlled to the 2001 BEA estimates.

2.4 Government Data

Government employment figures are not available at the community or zip code level from any source. Yet, government employs more than any of the other 19 economic sectors defined in the NAICS in many Arizona communities, including Florence.

Thus, for this report, primary data collection was undertaken — each government office that could be identified was contacted and asked for their employment. Some government offices chose not to provide such information; an estimate was made in such cases, based on data collected previously (if available). Due to unidentified government offices and incomplete/inaccurate data received from some offices, the government employment should be viewed as an estimate with the possibility that some government activities are not captured in the analysis. However, reported total employment figures are available so every attempt is made to account for all jobs and classify them correctly. Moreover, any errors in the analysis would be in not capturing all government employment.

Since these data were collected in 2011, but need to be expressed as of 2009 in order to be consistent with the *Zip Business Patterns* data, 2009 county totals provided by the BEA of federal, state, and local government employment were used to adjust the data collected or estimated by community.

2.5 Economic Base Methodology

An economic base study is a description of an economy's structure and composition. Regional economic theory states that a local economy is driven by economic activities that import money into the local area through the sales of goods and services to customers who do not live in the area. These "**basic**" or "**export**" activities involve sales

to nonlocal businesses and individuals. Mineral development, most types of manufacturing, most agriculture, and tourism are classic examples of basic activities.

In contrast, some economic activities primarily serve local residents. Retail trade and services such as health care are examples of largely non-basic, local-support activities, since most sales are to local residents. Similarly, most construction work is purchased by local residents and local businesses. While important components of a local economy, such largely non-basic activities do not directly bring external money into the community and thus do not drive the local economy. Base industry analysis helps dispel the notion that construction is the foundation for economic growth. Indeed, it is wealth generating basic industries that bring dollars into a region. Construction activities then naturally occur as the new employees of those base industries require places to live. The causation here is clear. Base industry development is an essential precursor to a sustained construction sector.

Many economic activities, such as wholesale trade and transportation, are a mixture of basic and non-basic components. If a community has a substantial number of tourists and/or seasonal residents, even retail trade and such services as health care have a basic component. A portion of the construction industry is basic if purchases are made by companies that sell to an external market and/or by individuals migrating to the area to take a job at a basic employer or to retire. Some federal government activities and certain other government activities can be considered to be basic in a community as in the state and private prison activities for Florence. However, most state and local government activities support the local community primarily with funds raised locally and thus do not qualify as basic activities because they don't result in injections of new dollars into the region.

Leading economic activities are identified in an economic base study, which compares economic activity in a local area to activity in broader areas; Arizona and the nation are used in this report. Economic activity can be measured by various

Base industry analysis helps dispel the notion that construction is the foundation for economic growth. Indeed, it is wealth generating basic industries that bring dollars into a region. Construction activities then naturally occur as the new employees of those base industries require places to live. The causation here is clear. Base industry development is an essential precursor to a sustained construction sector.

economic indicators; wage and salary employment is used in this report. Proprietors — those self employed — are not included.

Typically, an economic base study uses shares of total employment by sector/industry as its starting point, with the sectoral share in a local area divided by the share in a larger geographic area. The result is called a "**location quotient**" — a figure greater than 1 indicates that the sectoral share in the local area is greater than the national average.

The use of sectoral shares is unsatisfactory for small geographic areas. In communities with limited employment, use of sectoral shares will indicate that certain activities have location quotients greater than 1 when employment is relatively low (for example, when per capita employment is below the average of the larger geographic area). So, **per capita employment** is used as the basis for calculating the location quotients in this report.

Excess employment is of particular significance in basic industries. Basic industries with excess employment are the primary forces driving the local economy.

For 2009, the employment estimates are divided by the decennial census population counts as of April 1, 2010 for zip code tabulation areas. Other information from the decennial census — land area, seasonal housing units, and age distribution — also is used in this report. (However, for comparisons of the 2009 data to the 2001 data, estimates of the population in 2001 and 2009 were derived from the 2000 and 2010 census counts by simply adding the annual inter-decade average growth to 2000 to estimate 2001 and similarly subtracting the annual average from 2010 to get 2009.) No further precision is available from the Census for small areas at this time.

Per capita employment in Florence and each comparison community was separately compared to the national and Arizona per capita figures, with a location quotient calculated relative to the national average and to the Arizona average. Typically the results are similar, but in some industries the location quotients can be considerably different.

A location quotient of 1.32, for example, indicates that per capita employment in the local area is 32 percent *higher* than the national (or state) average, while a location quotient of 0.68 shows that per capita employment is 32 percent *less* than average.

When a location quotient is greater than 1, "extra" jobs are present in the local area. This "**excess employment**" is the difference between actual employment and the employment that would exist if employment per capita had equaled the national (or state) average.

Excess employment is of particular significance in basic industries. **Basic industries with excess employment are the primary forces driving the local economy.**

Excess employment can exist in local-support activities; and in some cases, the excess results from local purchasing preferences. For example, per capita sales of air conditioning units are above the national average in much of Arizona because of climatic conditions. In other cases, excess employment exists because some communities function as regional trade and service centers.

While sales to residents of neighboring communities might be considered to be basic in a particular community, such sales are not basic in the broader area and are not considered to be a driving economic activity in the same way as mineral development, for example.

In this report, industries with excess employment amounting to 1 percent or more of the non-agriculture private-sector total are listed for each community. A rough indication is given as to the degree to which the industry is basic.

Three special populations are identified in this report:

(1) Tourists: Spending by tourists has a basic effect on an economy. These expenditures occur across a large number of industries and sectors, most of which also serve local residents. An estimate by community of the number of tourists does not exist. In this report, per capita employment in the accommodation subsector in 2009 is used as a proxy.

(2) Seasonal residents: Those living in a community during only a portion of the year are not included in the population of the community. Thus, the effect of seasonal residents is the same as that of tourists. The number of seasonal residents is measured by the proportion of housing units counted in the 2010 census that were held for seasonal use.

(3) In-migrating retirees: Those moving into a community at retirement age have a basic impact on a community. Their spending derives from income earned elsewhere and thus represents an infusion of money into a community similar to that of tourists and seasonal residents. Like tourists and seasonal residents, the

spending of this group occurs across much of the economy and cannot be separated from that of other residents.

2.6 Economy of Florence (Zip Codes 85132 and 85232)

The correctional industry—including federal facilities, state-operated prisons, and private-sector prisons—dominated the Florence economy in 2009. By comparison, economic activity was limited in all of the other sectors. The economy expanded substantially between 2001 and 2009 as employment related to prisons increased. However, the gain in employment was less than the increase in population. Employment per capita declined and the overall location quotient fell. The composition of the economy hardly changed over the 2001-09 economic cycle.

Florence is now identified within zip code 85132. In 2009, the zip code numbers were transitioning from 85232 to 85132 and some historical figures were obtained from the older 85232 data. The 2010 decennial census counted 33,556 people living in the zip code; the land area totaled 604 square miles. Between 2000 and 2010, the population rose by 14,168 (73 percent).

Zip Code 85132

The 2010 population of Florence Town was 25,536. The town land area was 52 square miles, up from only 8 square miles in 2000. Nearly 70 percent of the town's residents were institutionalized in one of the prisons. Excluding those living in group quarters, the town population was 7,836 and the zip code population was 15,856. Between 2000

and 2010, both the prison population (all of whom are within town limits) and the town's household population rose 50 percent.

Two of three special populations have a strong presence in Florence. The share of seasonal use housing units in the town limits counted in the 2010 census was considerably higher than the national and state averages, though the percentage in the balance of the zip code was only average. Excluding the prison population, the share of the population of retirement age was nearly double the national and state averages in the town, though below average in the remainder of the zip code.

Much of the housing built within the town limits between 2000 and 2010 was to the northwest of the original town site and was predominantly occupied by retirees — some living year round and others seasonally.

In contrast, lodging facilities for overnight tourists were minimal in 2009. Even after excluding the prison population, employment in the accommodation subsector per 1,000 residents was only about one-fifth the national and state averages. Despite its historical significance and the McFarland State Park, tourism plays a limited role in the economy of Florence today.

2.7 Total Employment

Total employment in the Florence zip codes is estimated to have been approximately 8,200 in 2009. Total employment per capita was 40 to 46 percent less than the national and state averages.

Removing the prison population and its accompanying prison employment yields employment per capita numbers that are 33 to 40 percent less than the national and state averages.

2.8 Agriculture and Government

Agriculture largely is a basic activity that includes agricultural support activities as well as farming and ranching. Agriculture employment in the Florence zip code in 2009 is estimated to have been approximately 75. Agriculture employment per capita was about 40 percent less than the national and state averages but this is also skewed by the institutionalized population.

Focusing on the non-institutionalized population exclusively, the agricultural employment per capita is some 21-27 percent above the national and state averages.

Government employed approximately 6,100 in Florence in 2009, nearly 75 percent of the total employment. Government employment per 1,000 residents was 2.3 to 2.6 times higher than the national and state averages.

Government employed approximately 6,100 in Florence in 2009, nearly 75 percent of the total employment.

Excess employment was about 3,425 relative to the national per capita average and nearly 3,725 compared to the Arizona per capita average.

The excess government employment primarily results from the state prisons; the federal detention center also contributes. These are basic to the local economy. (The government employment count does not include workers at prisons run by private-sector companies.)

Florence is heavily reliant on government employment even after excluding those government workers employed in prisons and jails. Since Florence is the Pinal County seat, county government contributed to excess employment; and the Florence Unified School District is also major employer.

2.9 Non-agriculture Private Sector

Non-agriculture private sector employment in the Florence zip codes was 2,106 in 2009. Private employment per capita was 82 to 84 percent less than the national and state averages.

Florence area private employment per capita was 82 to 84 percent less than the national and state averages in 2009.

Employment estimates for 2009 for the broad sectors of the Florence economy are shown in Table 2.1. Administrative support provided the most private-sector employment (55 percent of the non-agriculture private sector total).

Per capita employment was above average in the administrative support sector (see the "location quotient" columns of the table). Administrative support employed approximately 50 to 125 more than if the sector's per capita employment had been equal to the average (see the "excess employment" columns of the table).

More detailed data show that only two industries provided excess employment of at least 20 in Florence, both of which are related to the state's correctional system and therefore have a significant basic component from the perspective of Florence.

Private prisons are counted in the facilities support services industry, part of the administrative support sector. The three facilities employed about 1,100 in 2009, nearly all of whom represent excess employment (see Table 2.2).

The food service contractors industry primarily serves the correctional facilities; its five establishments employed around 175, of whom nearly 125 were excess.

Even with the excess employment in the food service contractors industry, the location quotient in the accommodation and food services sector was only 0.33. The mineral development sector's location quotient was less than 0.3; the location quotient was 0.10 or less in the other 15 sectors analyzed for Florence.

If the prison population were excluded in calculating per capita employment, the location quotient still would be less than 0.25 in 16 sectors and excluding private sector prison employment the data reveal only 914 non-agriculture private sector jobs.

Florence has little per capita employment in the largely basic sectors of mineral development, manufacturing, wholesale trade, transportation and warehousing.

Therefore, Florence has little per capita employment in largely basic sectors such as mineral development, manufacturing, wholesale trade and transportation and warehousing.

Though the town has retirement-age migrants and seasonal residents, they have a relatively small impact on the Florence economy, given the very low location quotients in such sectors as retail trade and health care and social assistance.

Thus, the correctional industry dominates the Florence economy, reflected primarily in the excess employment in the government sector and in the facility support services industry.

Table 2.1: Wage and Salary Employment by Sector Florence (Zip Codes 85132 and 85232), 2009

			Relative to Nation		Relative to Arizona	
Sector	Number of Establishments	Employment	Location Quotient	Excess Employment	Location Quotient	Excess Employment
TOTAL	148	8,196	0.54	0	0.60	0
AGRICULTURE	10	76	0.57	0	0.60	0
GOVERNMENT	6	6,104	2.28	3,485	2.56	3,722
TOTAL, NONAGRICULTURE PRIVATE SECTOR	132	2,016	0.16	0	0.18	0
Mineral Development	3	17	0.26	0	0.27	0
Utilities	0	0	0.00	0	0.00	0
Construction	11	28	0.04	0	0.04	0
Manufacturing	3	16	0.01	0	0.02	0
Wholesale Trade	2	3	0.00	0	0.01	0
Retail Trade	17	133	0.08	0	0.08	0
Transportation and Warehousing	6	13	0.03	0	0.03	0
Information	1	2	0.01	0	0.01	0
Finance and Insurance	6	45	0.07	0	0.07	0
Real Estate and Rental and Leasing	6	18	0.08	0	0.08	0
Professional, Scientific and Technical Services	8	27	0.03	0	0.04	0
Management of Companies and Enterprises	0	0	0.00	0	0.00	0
Administrative Support & Waste Management Services	10	1,113	1.13	128	1.04	47
Educational Services	0	0	0.00	0	0.00	0
Health Care and Social Assistance	17	127	0.07	0	0.08	0
Arts, Entertainment and Recreation	4	22	0.10	0	0.09	0
Accommodation and Food Services	22	406	0.33	0	0.32	0
Other Services (except public administration)	16	46	0.08	0	0.10	0

Source: Nonagriculture private sector estimated from U.S. Department of Commerce, Census Bureau, and Zip Business Patterns 2009. Agricultural production employees, most government employees, railroad employees, self-employed individuals and employees of private households are not included in this data source. The agriculture and government sectors are estimated — see the introduction for details. The concept of establishment for agriculture and government differs from that used for the nonagriculture private sector.

Table 2.2: Non-Agriculture Private Sector Industries With Excess Wage and Salary Employment of at Least 20* Florence (Zip Codes 85132 and 85232), 2009

			Relative to Nation		Relative to Arizona	
Industry	**Number of Establishments**	**Employment**	**Location Quotient**	**Excess Employment**	**Location Quotient**	**Excess Employment**
Facilities support services - Including private prison activity	3	1,102	45.20	1,078	34.35	1,070
Food service contractors	5	176	3.20	121	3.22	121

** Relative to either the national or Arizona average*
Source: Estimated from U.S. Department of Commerce, Census Bureau, and Zip Business Patterns 2009.

Table 2.3: 2001--2009 Change In Employment of Workers In Wage and Salaried Positions by Sector Florence (Zip Codes 85132 and 85232)

			Relative to Nation		Relative to Arizona	
Sector	Number of Establishments	Employment	Location Quotient	Excess Employment	Location Quotient	Excess Employment
TOTAL	64	2,009	-0.05	0	-0.04	0
AGRICULTURE	-1	-19	-0.10	0	-0.05	0
GOVERNMENT	0	1,466	-0.37	574	-0.32	716
TOTAL, NONAGRICULTURE PRIVATE SECTOR	65	562	0.00	0	0.00	0
Mining	2	15	0.21	0	0.23	0
Utilities	0	0	0.00	0	0.00	0
Construction	5	14	0.02	0	0.02	0
Manufacturing	3	16	0.01	0	0.02	0
Wholesale Trade	0	-1	0.00	0	-0.01	0
Retail Trade	7	48	0.01	0	0.00	0
Transportation and Warehousing	6	13	0.03	0	0.03	0
Information	1	2	0.01	0	0.01	0
Finance and Insurance	3	10	-0.01	0	-0.01	0
Real Estate and Rental and Leasing	2	1	-0.03	0	-0.02	0
Professional, Scientific , Technical Services	7	21	0.02	0	0.03	0
Management of Companies & Enterprises	0	0	0.00	0	0.00	0
Administrative Support & Waste Management Services	2	91	-0.37	-197	-0.29	-199
Educational Services	0	0	0.00	0	0.00	0
Health Care and Social Assistance	14	100	0.04	0	0.05	0
Arts, Entertainment and Recreation	2	19	0.08	0	0.07	0
Accommodation and Food Services	9	224	0.09	0	0.10	0
Other Services (except public administration)	4	-11	-0.06	0	-0.07	0

Source: Nonagriculture private sector estimated from U.S. Department of Commerce, Census Bureau, Zip Business Patterns 2009 and 2001. Agricultural production employees, most government employees, railroad employees, self-employed individuals and employees of private households are not included in this data source. The agriculture and government sectors are estimated — see the introduction for details. The concept of establishment for agriculture and government differs from that used for the nonagriculture private sector.

2.10 Florence and Comparison Areas

In this section, the economy of Florence is compared to the economy of each of four areas that have had substantial copper mining operations for many years: Bagdad, Clifton-Safford, Globe-Miami, and Hayden-Kearny-Winkelman.

Bagdad began as a mining town and remains dependent on the copper mining operation at the Bagdad Mine. It is the least populous of the five areas, with a 2010 census population in the zip code of 2,219.

Clifton remains heavily dependent on the Morenci Mine, the largest in the state and regularly the source of about one half of Arizona copper production each year. Clifton also serves as the Greenlee County seat.

Safford was not originally a mining town — agriculture stimulated the settlement of the Safford area — but Safford has always served those living in the Clifton area as part of its role as a regional trade center. However, the new Safford Mine began operations outside Safford in 2007. Safford also is the Graham County seat. The number of residents in the Clifton-Safford area in 2010 was 25,899.

Globe and Miami both began as mining towns; Globe is the Gila County seat and Globe-Miami has taken on a role as a regional trade center. Though Globe no longer has any large active mines, the Pinto, Miami and Carlotta operations were significant employers in 2009 in the Miami area. The 2010 population of the Globe-Miami area was 17,865.

Hayden is the site of a smelter that processes ore from mines in the region. Kearny was built as housing for those working at the nearby mines and smelter. Miners also live in Winkelman. Like Bagdad, these communities remain dependent on the copper operations. Only 5,079 people live in the Hayden-Kearny-Winkelman area.

Florence, in contrast, does not have a history of mining. However, like the mining towns, Florence's economy also has been dominated by one activity: prisons. Florence differs from the other communities in another regard: during the height of the residential housing boom, population growth from the Phoenix urban area began to spill over into Florence's zip code (and town limits).

The Florence area is the most populous of the five areas with a surrounding zip code population in 2010 of 33,556. However, excluding prison inmates, the population was only 15,896 — in the middle of the five areas.

2.11 Overall Economic Activity

The estimate of total employment—the sum of all 20 sectors—in 2009 is shown at the top of Table 2.4. The overall location quotient exceeded 1 only in Bagdad, but excess employment was minimal in Bagdad. Florence had the lowest overall location quotient. (If prison employment is omitted from the total employment and prison inmates are

omitted from the population, the overall location quotient for Florence is only a little higher, still well below the figures in the other communities.)

The second section of Table 2.4 shows the same economic measures for the sum of the 18 non-agriculture private sectors—excluding the estimates of agriculture and government.

Bagdad again is the only area with a location quotient greater than 1; Florence's location quotient is very low, far less than in each of the other areas. (The location quotient for Florence is unchanged if prison inmates and private-sector prison employment is omitted.)

Employment in the mineral development sector is highlighted in the third section of Table 2.4. Other than in Florence, the sector's importance is readily seen, with location quotients far above 1 and considerable excess employment.

Table 2.4: Summary of Economic Base Measures 2009

	Florence	Bagdad	Clifton-Safford	Globe-Miami	Hayden-Kearny-Winkelman
TOTAL					
Employment	8,196	1,050	11,271	7,182	1,938
Location Quotient	0.54	1.04	0.96	0.89	0.84
Excess Employment	0	42	0	0	0
NONAGRICULTURE PRIVATE SECTOR TOTAL					
Employment	2,016	970	9,029	5,183	1,505
Location Quotient	0.16	1.18	0.94	0.78	0.80
Excess Employment	0	148	0	0	0
MINING					
Employment	17	822	3,958	1,482	931
Location Quotient	0.26	189.15	78.03	42.36	93.60
Excess Employment	0	818	3,907	1,447	921
COPPER MINING					
Employment	0	822	3,927	1,405	913
Location Quotient	0	10,017	4,100	2,127	4,861
Excess Employment	0	822	3,926	1,404	913
POPULATION (2010)	33,556	2,219	25,899	17,865	5,079

Note: location quotients are calculated relative to the national average
Source: Nonagriculture private sector estimated from U.S. Department of Commerce, Census Bureau, and Zip Business Patterns 2009. The total includes estimates of the agriculture and government sectors — see the introduction for details.

That this sector provides so much excess employment while no excess exists in the total of all sectors (except for the small amount in Bagdad) is an indication of just how little economic activity other than mining exists in these communities.

The last section of Table 2.4 provides the comparable figures just for the copper mining industry. Employment and excess employment hardly differ between the industry and the mining sector totals, but the location quotient is much higher for the industry.

An indication of the average payroll per employee in each community is shown in Table 2.5. The average in Florence was 10 percent less than the Arizona figure, which in turn was 8 percent less than the national average.

In general, payroll per employee in the copper mining industry is high; statewide, the metal mining average was $55,300 — 40 percent higher than the state average for all non-agriculture private sector employment. (Mining industry total compensation – which includes in addition the employer share of social security contributions and the value of benefits such as health insurance – is also significantly higher than average.)

The withholding of payroll data for some zip codes results in incomplete data in each community except Florence. The second line of the table provides the percentage of employment for which payroll data are available. All of the mines in the Miami area are included in the available payroll data; the Globe-Miami area's average payroll per employee is considerably higher than that of each of the other areas included in Table 2.5.

In contrast, the average for Clifton-Safford and for Hayden-Kearny-Winkelman is much below the state and national figures, but these figures are misleading since the mine and smelter are excluded from the payroll data for the Hayden-Kearny-Winkelman area and the Morenci Mine is excluded from the data for the Clifton-Safford area.

After adjusting for inflation, average payroll per employee did not change much between 2001 and 2009 in Arizona or the nation. In contrast, the averages rose considerably in Clifton-Safford, Globe-Miami, and Hayden-Kearny-Winkelman.

The percent change between 2001 and 2009 is shown for other selected indicators in Table 2.6. Population growth was by far the highest in Florence, reflecting both the expansion of the prison population and the spread of the Phoenix urbanized area into the zip code used for Florence.

Employment over the 2001-09 economic cycles was unchanged nationally and rose 9 percent in Arizona. This rate of growth was exceeded in Florence and in three of the

comparison areas, but employment dropped significantly in the Hayden-Kearny-Winkelman area.

Nationally and in Arizona, the population increased more than employment, causing per capita employment to fall. Employment growth was further below population growth in Florence and Hayden-Kearny-Winkelman, causing the overall location quotient to fall in each community. In contrast, employment growth — predominantly the result of expansions in copper mining — was much above population growth in the other mining communities; the overall location quotient rose substantially in each community.

2.12 Sectoral Economic Activity

A sectoral summary by community is shown in Table 2.7, using the location quotient as the indicator. In each community, the location quotient is low or very low in most sectors.

In Florence, the exceptions are government and administrative support; private prisons are included in the latter sector while the state prisons and the federal detention center account for the high figure in government.

In each of the other communities, the location quotient is very high for mining, but is above 1 only in a few other sectors. The location quotient is a little above 1 in government in each community except Bagdad. It also is generally above 1 in agriculture, but this sector's employment is limited.

In Clifton-Safford and Globe-Miami, the location quotient is a little above 1 in a few sectors due to each community's status as a regional trade center. In Hayden-Kearny-Winkelman, manufacturing's location quotient exceeds 1 due to the copper smelter.

Only a few economic activities provided a significant amount of excess employment across the comparison areas. In Florence, excess government employment — due to the state and federal prisons — amounted to 42 percent of total employment; the excess in private prisons accounted for another 13 percent of the total. In the other communities, copper mining was the primary source of excess employment, accounting for sizable shares of total employment: 13 percent in Hayden-Kearny-Winkelman, 20 percent in Globe-Miami, 35 percent in Clifton-Safford, and 78 percent in Bagdad. Excess copper smelting employment accounted for 4 percent of the total in Hayden-Kearny-Winkelman and excess government employment amounted to 6 percent of the total in Globe-Miami.

Table 2.5: Payroll per Employee, Non-Agriculture Private Sector

	United States	Arizona	Florence	Bagdad	Clifton-Safford**	Globe-Miami	Hayden-Kearny-Winkelman**
2009	42,881	39,388	35,274	na	26,317	51,777	23,424
Percentage of Employment*	100	100	100		60	52	18
Real Percent Change, 2001-09	0	5	9		18	28	34

na: not available

**Payroll data are not available for several zip codes. This row provides the percentage of employment in each community for which payroll data are available*

***Payroll data for mineral recovery sector not included due to Federal disclosure restrictions*

Source: U.S. Department of Commerce, Census Bureau, Zip Business Patterns 2009 and 2001.

Table 2.6: Percent Change in Population and Employment 2001 -2009

	United States	Arizona	Florence	Bagdad	Clifton-Safford	Globe-Miami	Hayden-Kearny-Winkelman
Population	8%	19%	55%	12%	8%	-4%	-15%
Total							
Employment	0	9	32	40	27	17	-25
Per Capita Employment	-7	-8	-14	25	18	22	-11
Location Quotient*	x	-1	-7	35	26	30	-5
Non-agriculture Private Sector							
Employment	0	9	39	41	34	22	-29
Per Capita Employment	-8	-8	-10	26	24	28	-16
Location Quotient*	x	0	0	37	34	38	-9

**Calculated from the national per capita average*

Source: Nonagriculture private sector estimated from U.S. Department of Commerce, Census Bureau, Zip Business Patterns 2009 and 2001. The total includes estimates of the agriculture and government sectors — see the introduction for details.

Table 2.7: Location Quotients by Sector 2009

	Florence	Bagdad	Clifton-Safford	Globe-Miami	Hayden-Kearny-Winkelman
Mining	0.26	189.15	78.03	42.36	93.60
Agriculture	0.57	1.70	1.56	2.18	0.55
Manufacturing	0.01	0.00	0.22	0.04	1.61
Professional, Scientific, Tech Services	0.03	0.02	0.35	0.28	0.00
Transportation and Warehousing	0.03	0.07	0.32	0.98	0.00
Finance and Insurance	0.07	0.02	0.21	0.19	0.08
Information	0.01	0.00	0.35	0.25	0.52
Wholesale Trade	0.00	0.05	0.89	0.30	0.22
Management of Companies	0.00	0.00	0.07	0.00	0.00
Administrative Support	1.13	0.08	0.29	0.27	0.02
Arts, Entertainment and Recreation	0.10	0.00	0.17	0.10	0.03
Accommodation and Food Services	0.33	0.63	0.64	0.94	0.19
Government	2.28	0.37	1.01	1.29	1.04
Other Services	0.08	0.16	0.55	0.30	0.33
Utilities	0.00	0.00	0.35	0.89	0.00
Retail Trade	0.08	0.54	0.89	1.09	0.34
Real Estate and Rental and Leasing	0.08	0.00	0.32	0.48	0.00
Educational Services	0.00	0.00	0.18	0.52	0.00
Health Care and Social Assistance	0.07	0.16	1.07	0.85	0.20
Construction	0.04	0.05	0.47	0.70	0.00

Note: location quotients are calculated relative to the national average; sectors are presented in rough order of basic proportion
Source: Non-agriculture private sector estimated from U.S. Department of Commerce, Census Bureau, and Zip Business Patterns 2009. The agriculture sector is estimated – see Introduction for details.

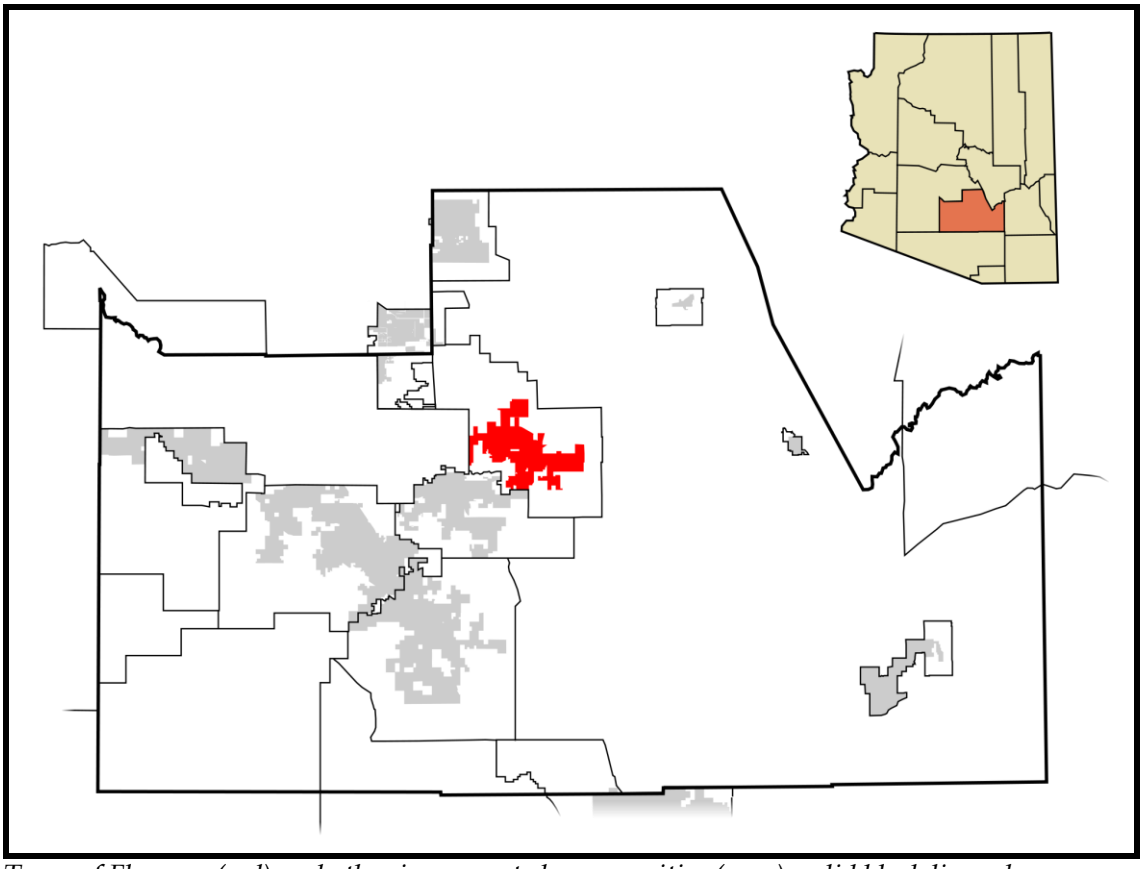
Between 2001 and 2009, the location quotient and excess employment rose significantly in the mining sector in Bagdad, Clifton-Safford, Globe-Miami, and Hayden-Kearny-Winkelman. In Florence, excess government employment increased even though the location quotient fell. Both the location quotient and excess employment dropped in the private-prison industry. In Hayden-Kearny-Winkelman, the location quotient and excess employment fell sharply in the copper smelting industry. Otherwise across the five communities, the few changes of any magnitude in the location quotient were in sectors with little employment.

3 SOCIOECONOMIC OVERVIEW

3.1 Geographic Setting

Florence is located in the central portion of Pinal County, Arizona, and is the county seat. The town sits on the banks of the dry Gila River. According to the United States Census Bureau, the town has a total area of 21.5 km sq (8.3 square miles), all land.

The surrounding zip code area is larger and the Florence planning area is still larger as depicted in the following illustration.



Town of Florence (red) and other incorporated communities (grey); solid black lines show planning areas for each community; inset is Pinal County
Source: Pinal County, 2009

A few miles north of historic Florence is Florence Gardens, a retirement community offering manufactured homes. To the northwest of downtown Florence is the newer mixed use community of Anthem.

Coolidge is 11 miles SW of the historic Florence town center. Casa Grande is about 30 miles WSW of town. The mining towns of Superior, Globe, Miami, Kearny, Ray and San Manuel are all about an hour or less from Florence.

The major metropolitan areas of Phoenix and Tucson are about an hour's drive with many of the larger southeast Valley cities considerably closer.

3.2 Florence: a Historic Arizona Town

Florence has the amenities of many small western towns. Florence is home to one of the 10 campuses of the Central Arizona College, it has the requisite offices of a County seat for Pinal County and local police and fire. The Florence Unified School District has 7 primary/middle schools and two high schools accommodating some 8,300 students in 2010. Kindergarten through eighth grade (K-8) schools are located in downtown Florence and Anthem in the Florence area; and in the Hunt Highway Area, K-8 schools are at Circle Cross Ranch, Skyline Ranch, Walker Butte, Magma Ranch, and Copper Basin. Florence High School serves the Florence area, and Poston Butte High School serves the Hunt Highway Area.

Public amenities include a visitor center, a municipal fitness center and community gym, two museums, one library, three parks, one swimming pool and separate facilities to accommodate various activities including swimming, tennis, softball and golf. There is public transportation for seniors offered by the Florence Senior Center.

Like many small towns, Florence operates local fire and police facilities to provide citizens with public safety services. The Arizona Tax Research Association reports that these activities are supported by $78,848,773 in net assessed property value.

There are three banks in town, six doctors including dental and vision services. There is a hotel with 30 rooms with basic facilities for conferencing.

Utilities are offered by Arizona Public Service (APS) and Southwest Gas (SWG). Water is provided by the Town and there are cable TV and internet providers available. Johnson Utilities provide water for the Florence residents living in the Anthem development. The rapidly growing Phoenix-Mesa Gateway airport is located 18 miles northwest of the Town.

As the Pinal County seat, Florence has closer access to a wider array of social services than any other Pinal County community.

The climate of Florence is similar to that of the desert cities of Pima, Pinal, and Maricopa counties with hot and dry conditions prevailing. Summer highs average more than 100 degrees from

June through September and annual rainfall is about 10 inches per annum. Winter highs are generally in the 70s providing a respite for desert dwellers who endure the summer months.

3.3 Non-Incarcerated Population

Florence population figures for 2010 are now available, based on census surveys in the spring of 2010, to provide a relatively up to date picture of the demographics of the community. The overall numbers are skewed by the institutionalized population that dominates the population of the area.

Quite clearly the only way to stem the tide of young adult migration out of Florence is to provide employment opportunities that allow and encourage them to stay.

The population of Florence Town according to the 2010 census is 25,536, and the prison population is 17,646, or 69 percent of the total recorded population. Alternatively stated, less than one third of the Florence recorded population is accounted for by non-incarcerated persons.

Tables 3.1 and 3.2 depict the age distribution of the non-incarcerated population in the city of Florence and surrounding zip code area. Table 3.1 reveals that the distribution of non-institutionalized males in Florence is dominated by young school age children and relatively older adults. There is a distinct gap in the number of males in the 20-24 age groups that are reported in the census when compared with younger and older populations.

In contrast, in the State of Arizona about the same number of males comprise the 20-24 year old age group as in younger and older age ranges. It is not unusual for young adults in smaller rural towns to seek employment and education opportunities elsewhere. Quite clearly the only way to stem the tide of young adult out migration out of Florence is to provide employment opportunities that allow and encourage them to stay.

Table 3.1: Age Distribution of Non-Incarcerated Males

	Florence town	Zip 85132
Total:	7,836	15,856
Male:	3,804	7,822
Under 5 years	229	635
5 to 9 years	252	662
10 to 14 years	251	628
15 to 17 years	157	326
18 and 19 years	83	186
20 years	25	53
21 years	33	56
22 to 24 years	68	190
25 to 29 years	157	432
30 to 34 years	166	476
35 to 39 years	217	520
40 to 44 years	180	455
45 to 49 years	194	454
50 to 54 years	216	429
55 to 59 years	237	444
60 and 61 years	109	184
62 to 64 years	208	327
65 and 66 years	158	226
67 to 69 years	191	275
70 to 74 years	277	383
75 to 79 years	205	246
80 to 84 years	127	157
85 years & over	64	78
Source: 2010 Census		

Table 3.2: Age Distribution of Non-Incarcerated Females

	Florence Town	Zip 85132
Total:	7,836	15,856
Female:	4,032	8,034
Under 5 years	235	599
5 to 9 years	224	616
10 to 14 years	229	580
15 to 17 years	124	289
18 and 19 years	78	160
20 years	34	75
21 years	31	62
22 to 24 years	101	229
25 to 29 years	163	483
30 to 34 years	169	486
35 to 39 years	214	522
40 to 44 years	201	462
45 to 49 years	211	460
50 to 54 years	257	503
55 to 59 years	300	534
60 and 61 years	137	195
62 to 64 years	234	339
65 and 66 years	169	256
67 to 69 years	217	304
70 to 74 years	273	363
75 to 79 years	191	230
80 to 84 years	137	165
85 years & over	103	122
Source: 2010 Census		

The numbers for females depicted in Table 3.2 are similar. There are high numbers of young people and elderly females in the non-incarcerated population figures.

The age distribution figures reveal why Florence has a relatively low labor force participation rate. Considerable numbers of working age adults either migrate away from the area or are not attracted by current job opportunities.

3.4 Florence Prison Industry

It is impossible to ignore the prison industry in any broad discussion of the Florence area. The industry offers a number of permanent jobs and they are the types of jobs that are generally immune from business cycle fluctuations. But any discussion of the population of the area needs to acknowledge that the population figures normally quoted by the census do include the prison populations. Any discussion of the city's roads, parks and other social infrastructure needs to be couched in the realization that 69% of the "residents" of Florence and its surrounding region are incarcerated. These "residents" make use of social infrastructure in ways that are very different from average citizens.

The main state prison complex in Florence is operated by the Department of Corrections (ADC). It dates from 1908 and was constructed using inmate labor to accommodate the closing of the territorial prison at Yuma. It has served to anchor a base employment industry for incarceration in Florence for over 100 years.

As of January 1, 2012, it currently houses 4,440 inmates. But it is not the only penal institution in the area. The Eyman complex opened in 1991 and it houses 4,961 as of the beginning of 2012.

Two Institutions under private contract with the ADC are located in Florence as well. According to the ADC website, "Arizona State Prison-Florence West is a minimum-custody private prison in Florence, under contract with the Arizona Department of Corrections to provide custody and treatment to 500 adult male inmates who have demonstrated a need for substance abuse treatment. The facility opened in October 1997, and is operated and managed by The GEO Group."

Also noted under the ADC roster of institutions, "The Central Arizona Correctional Facility is a medium-custody private prison in Florence, under contract with the Arizona Department of Corrections to provide custody and treatment to 1,280 adult male inmates who have demonstrated a need for sex inmate treatment. The facility opened in December 2006, and is operated and managed by The GEO Group."

An additional 1,500 inmates are housed in the Pinal County Jail facilities in Florence. Some 2,300 more inmates are housed at the Central Arizona Detention Center which is a Corrections Corporation of America (CCA) operated facility under contract with the federal government to accommodate U.S. Marshal's and Immigration Services.

CCA operates a second facility in the town, where federal inmates from other states are housed. The Florence Correctional Center houses an additional 1,824 inmates.

3.5 Real Estate in Florence

The housing stock in the Florence area represents a diverse mix that provides a range of choices and affordability for residents. Many homes date from the turn of the century, appealing to residents interested in historic properties.

The inventory of existing Florence homes has been augmented in recent years by new development in Anthem. The Anthem development has attracted those with jobs in the prison and other industries, as well as the rapidly growing retirement community.

Public records of home sales show median resale prices in 2011 down by just over 50 percent from peak values, and new home prices down by approximately 30 percent.

The master planned Anthem community is segmented into two distinct phases. A Pulte development, Parkside at Anthem's Merrill Ranch, is located approximately a nine mile drive northwest of the Florence Town Hall building.

The development is designed to attract families and equipped with attractive amenities that are intended to appeal to those in search of an active lifestyle with a skate park, rock climbing, a water park, a golf course, and even a "catch and release" fishing lake.

Table 3.3: Florence Real Estate Sales and Prices

	Resale Homes	Median Price	New Homes	Median Price
2004	10	$79,000	85	115,435
2005	40	126,500	95	151,015
2006	25	170,000	125	224,185
2007	45	170,000	255	174,670
2008	135	135,500	155	185,000
2009	205	76,500	125	125,990
2010	165	75,000	110	145,000
2011	180	81,665	30	154,595

Source: Realty Studies, ASU

Table 3.4: Florence and Zip 85132 Average Home Prices

	Zip 85132	Florence
2003	89,000	81,000
2004	102,000	184,000
2005	173,000	132,000
2006	192,000	163,000
2007	162,000	160,000
2008	132,000	135,000
2009	104,000	117,000
2010	81,000	95,000
2011	71,000	85,000

Source: Zillow.com

A parallel development, Sun City Anthem is designed as an active adult community. The amenities include access to the Merrill ranch facilities as well as a "Union Center" with emphasis on both wellness and higher learning with a variety of course offerings staffed by the ASU Lifelong Learning Academy.

The prospects of rapid population growth in Arizona fueled speculation in real estate, forcing prices up in the mid 2000s with a subsequent collapse in recent years. The Florence area was not immune to the real estate bubble. Table 3.3 depicts real estate prices in Florence accompanied by sales data obtained from ASU's Realty Studies group.

The ASU figures (based on public records of home sales) show median resale prices in 2011 down by just over 50 percent from peak values, and new home prices down by approximately 30 percent.

Another source for historical data on prices in Florence and the surrounding zip code that includes Anthem is Zillow.com. Table 3.4 depicts annual prices over the past decade from this source. The data pattern is very similar to that obtained from Realty Studies. The data reveal the dramatic acceleration in housing activity into the mid 2000s, the subsequent price appreciation followed by price adjustments. Prices for new and resale homes in Florence are comparable to where they were in the early 2000s. So by many measures, housing is once again affordable in the area.

Table 3.5: Residential Permits Florence

Year	Number	$ Value (000)
2004	99	2,246
2005	140	9,259
2006	543	51,794
2007	577	48,463
2008	556	52,107
2009	277	23,172
2010	232	19,688

Source: Realty Studies ASU

Table 3.6: Commercial Permits Florence

Year	Number	$ Value (000)
2004	9	611
2005	5	12,493
2006	19	11,569
2007	23	9,784
2008	36	1,459
2009	24	9,333
2010	11	724

Source: Realty Studies ASU

Another way to gauge real estate activity in the city is to measure the pace of building permits. Tables 3.5 to 3.8 depict building permit activity by residential, commercial, other and total permits including both numbers and value of the permitted structures. The data reveal the acceleration in real estate activity that characterized the past decade and also reveal the significant slowdown that occurred in the past several years.

The residential permit data (Table 3.5) show an increase in permits in 2007 to a level more than five times that of 2004. Value peaked in 2008 at $52 million. By 2010, residential permits were one half the 2008 level in number and value.

The commercial permit data (Table 3.6) reflect the need for commercial space that was generated by population and housing growth. Commercial permit value exceeded $30 million in the three year period 2005 – 2007, but declined to less than $1 million by 2010.

Real estate will be an important component of the economy of Florence in the coming decades if the urban growth from Phoenix continues to spill over into Pinal County. The pace of this growth will be governed by job opportunities. At the same time the recent sharp downturn reveals that the construction industry cannot be relied upon to deliver steady annual economic growth and revenues over long periods of time.

The "other" building permit category captures structures designed to accommodate hospitals, public projects, religion, and education (Table 3.7). The city of Florence has realized a significant amount of permitting activity in this area with a substantial amount of activity related to the prison presence.

Table 3.8 depicts the aggregate permitting figures for the city. It reveals that 2006 was the peak year for combined values of properties permitted in Florence. The pace of permitting activity has slowed especially in the residential and commercial sectors.

Real estate will be an important component of the economy of Florence in the coming decades if the urban growth from Phoenix continues to spill over into Pinal County. The pace of this growth will be governed by job opportunities. At the same time the recent sharp downturn reveals that the construction industry cannot be relied upon to deliver steady annual economic growth and revenues over long periods of time. Arizona has endured several real estate cycles over the years so the current cyclical downturn is not unique despite its severity and long duration.

Table 3.7: Other Permits Florence		
Year	Number	$ Value (000)
2004	56	6,743
2005	38	2,961
2006	76	55,281
2007	141	3,632
2008	294	7,628
2009	244	1,532
2010	244	15,954
Source: Realty Studies ASU		

Table 3.8: Total Permits Florence		
Year	Number	$ Value (000)
2004	165	11,600
2005	183	24,713
2006	638	118,644
2007	741	61,879
2008	886	61,194
2009	545	34,037
2010	487	36,366
Source: Realty Studies ASU		

3.6 Economic prosperity in Florence

Economists measure economic prosperity or standards of living by comparing incomes or GDP per capita or per household unit. For Florence we will concentrate on representative household earnings because prison populations skew the per capita figures.

Table 3.9 depicts the level of real (2009 dollars) household income for Florence in 2000 and 2009 from the Census Bureau's American Community Survey. We include several other towns in Arizona for comparison purposes. The data reveal that the standard of living in Florence is above average when compared with the other Arizona cities depicted in the table. At the same time real incomes have been stagnant in the area for the better part of the last decade despite the surge in the prison population that has occurred.

When compared with the rest of Arizona and the U.S., most of the small towns lag in household income with the exception of a few places with significant ongoing mining operations. The Census Bureau reports the percent of families that have incomes below the poverty level. Table 3.10 sets out these poverty level statistics for Florence, the comparison cities, Arizona and the U.S. Data from the 2000 decennial census are likely to be more reliable measures of poverty since the 2005-2009 data represent limited sampling in these small geographies. The data suggest that the Town of Florence has fewer families, as a share of total families, with incomes below the poverty level. The stable prison employment base is no doubt a contributor.

Table 3.9: Real Household Income (2009 Dollars)

	2000	2005-09
Safford	$37,777	$44,167
Clifton	$50,270	$49,257
Morenci	$58,134	$56,106
Globe	$41,785	$34,817
Miami	$34,362	$28,203
Casa Grande	$45,754	$43,741
Coolidge	$36,703	$37,729
Florence	**$45,956**	**$44,167**
Kearny	$50,421	$45,750
Bagdad	$53,188	$56,875
Hayden	$30,694	$27,716
Winkelman	$32,162	$28,333
Eloy	$33,505	$31,871
Arizona	$51,245	$50,296
US	$53,059	$51,425

Source: American Community Survey, census

Table 3.10: Poverty Levels In Arizona (Percent of Total Families)

	2000	2005-09
Safford	13.9	5.4
Clifton	8.1	9.2
Morenci	2.7	16.8
Globe	8.8	12.4
Miami	20.5	20.3
Casa Grande	12.4	15.0
Coolidge	20.9	16.3
Florence	**6.1**	**5.4**
Kearny	12.1	4.7
Bagdad	3.0	3.2
Hayden	20.1	18.8
Winkelman	20.0	4.9
Eloy	27.9	23.4
Arizona	9.9	10.5
US	9.2	9.9

Source: American Community Survey, census

3.7 Fiscal Capacity

One way to examine the fiscal capacity of a city or region is to measure the property tax base per enrolled student or per capita. Given the challenges of comparing Florence's population numbers with those of other cities we will focus on total net assessed property value per enrolled student and per number of schools and compare with a list of cities in Pinal County as well as several cities in Arizona where mining is important to the economy.

The data in Table 3.11 portray the net assessed values for the indicated school districts in 2010, normalized by the total number of schools in the district and total number of enrolled students in 2010. While property value capacity need not reflect the quality of the schools in the area, it does provide some indication of the ability of the town to fund needed school improvements if desired. Moreover, cities with high net assessed values can assign moderate to low tax rates while still providing a significant flow of dollars to K-12 education.

The numbers suggest that Florence has net assessed values that are moderately low compared with the size of its student population and therefore has high secondary property tax rates to provide adequate funding for schools.

The numbers suggest that Florence has net assessed values that are moderately low compared with the size of its student population and therefore has high secondary property tax rates to provide adequate funding for schools.

Additional capital investments such as the proposed Florence Copper Project add tax capacity to the local district and help to dampen assessment rates on existing properties.

As illustrated in Table 3.11, the investments that have occurred in mining towns across the State of Arizona have resulted in significant net assessed value expansion. This has resulted in substantially more property tax capacity for schools and lower assessment rates for existing property owners.

Other measures of fiscal capacity may be obtained from analyzing revenue numbers compiled by city in the Arizona Department of Revenue's Annual Report. Table 3.12 depicts sales tax revenue distributed based on distribution formulas for Florence and several communities. The areas selected for the comparison have populations similar to that of the Florence non-prison population. The comparison communities have a significant mining presence.

The table provides overall figures and amounts expressed on a per capita basis. We chose to normalize the figures using population figures from the zip code areas even though the distribution formulas for the sales and income taxes may be based on estimates of city populations.

We also included measures of the local sales tax base. Florence compares quite well on these measures and very well when one focuses exclusively on the non-institutionalized population. The sales tax base is clearly boosted by the presence of the prison employment base. It is also clear that some of the mining towns display relatively high sales tax bases as well, with some no doubt benefiting from the mining employment.

Table 3.11: Property Tax Value Capacities by Community

Community	School District(s)	Number of Schools	Total School Enrollment Fall 2010	Net Assessed Value School Dist	Net Assessed Value Per Student	Net Assessed Value Per School	School Secondary Rate
Bagdad	Bagdad Unified	2	434	89050517	$205,186	$44,525,259	$0.25
Clifton/Morenci	Clifton/Morenci Combined	5	1271	255483879	$201,010	$51,096,776	$0.0 - $0.42
Florence	**Florence Unified**	**12**	**8282**	**334329667**	**$40,368**	**$27,860,806**	**$3.37**
Globe/Miami	Globe Unified Miami Unified	8	3004	121036984	$40,292	$15,129,623	$0.88-$1.33
Hayden	Hayden/Winkelman Unified	3	378	19072386	$50,456	$6,357,462	$4.25
Kearny	Ray Unified	3	560	73277256	$130,852	$24,425,752	$0.82
Safford	Safford Unified	6	3178	125015825	$39,338	$20,835,971	$0.76
Casa Grande	Elem+Union	16	11,294	724205013	$64,123	$45,262,813	$0.91
Coolidge	Coolidge Unified	7	4132	236137706	$57,149	$33,733,958	$1.61
Eloy	Santa Cruz Valley Unified	4	1070	127558403	$119,213	$31,889,601	$0.95
San Manuel	Mammoth	4	1055	19984909	$18,943	$4,996,227	$0.00

Source: Arizona Tax Research Association and Arizona Department of Education

Table 3.122: Sales and Income Taxes in Florence and Comparison Areas

	Population	Shared Sales Taxes	Local Sales Taxes	Shared Income Tax	local sales tax rate	Shared Sales Taxes per capita	Local Sales Tax Base per capita	Shared Income Tax per capita
Clifton Area:								
Sum of Two Zip Codes 85533,85540	5,817	$190,509	$404,447	$335,171	3.00%	$33	$2,318	$58
Safford Area:								
Sum of Two Zip Codes 85546,85551	20,082	$686,888	$526,671	$1,208,474	2.50%	$34	$1,049	$60
FLORENCE								
Total, Including Prisons:								
85132	**33,556**	**$1,506,603**	**$3,670,203**	**$2,650,639**	**2.00%**	**$45**	**$5,469**	**$79**
Household Population Only:								
85132	**15,856**	**$1,506,603**	**$3,670,203**	**$2,650,639**	**2.00%**	**$95**	**$11,574**	**$167**
Globe Area:								
85501	13,345	$550,024	$3,475,454	$967,683	2.00%	$41	$13,022	$73
Miami Area:								
85539	4,520	$143,468	$326,834	$252,441	2.50%	$32	$2,892	$56
Hayden Area:								
85135	630	$65,460	$1,563,914	$193,666	3.00%	$104	$82,747	$307
Kearny Area:								
85137	2,329	$165,044	$391,677	$290,370	3.00%	$71	$5,606	$125
Winkelman Area:								
85192	2,120	$32,510	$101,017	$193,666	3.50%	$15	$1,361	$91

Source: Arizona Tax Research Association and Arizona Department of Education

3.8 Town Surveys:

The Town of Florence regularly conducts surveys of resident opinion and sentiment about the community, public services, and various issues of interest. The 2011 survey was sent to a random sample of 1,100 residents in March, and 486 surveys were returned. The average age of those responding was 66.5 years, with a range of 23 to 94. More than a third of those responding (38 percent) were seasonal residents, living in Florence for an average of 5.5 months per year. Nearly three-fourths of residents (72 percent) described Florence as a "good" or "excellent" place to live, and 82 percent felt "safe" or "very safe" in their neighborhoods. Similar high marks from respondents were recorded for "small town feel," "friendly people," and "historical character."

Survey results revealed several areas of concern by residents. "Job opportunities" were rated "excellent" or "good" by only 11 percent of those responding, while 31 percent felt such opportunities were "poor" or "very poor." Asked about community growth, 27 percent felt growth rates were "poor" or "very poor" while 21 percent believed growth was "excellent" or "good." Nearly one out of three (31 percent) stated that taxes were a "moderate" or "major" problem.

One of the very weakest aspects of the Florence lifestyle seems to be the availability of shopping opportunities. Only 6 percent responded that such opportunities were "excellent" or "good," while three out of four (76 percent) reported such opportunities as "poor" or "very poor." A broad interpretation of these responses suggests that Florence is viewed as a good, safe, friendly place to live, but improvement is needed in economic factors such as jobs, taxes, and overall commercial development.

The citizen survey included a section on "policy opinions," that asked about the Florence Copper project: "Should the Town allow Curis Resources LTD to open and operate a Copper Mine Operation on Hunt Highway?" The "yes" answer was the most frequent opinion reported, accounting for 39 percent of all responses. An additional 32 percent of the population had a "no" response, while 28 percent were "not sure." Of those that held a specific opinion, 54 percent responded "yes" and 46 percent responded "no."

The Florence Copper project is expected to have a favorable impact on these economic factors that are currently somewhat lower rated by Florence residents, including jobs and economic growth. The project will provide an initial period of construction jobs, followed by jobs related to the operation of the project that will have the higher pay scales seen in mining-related jobs in other Arizona communities. The project will also enhance tax revenues available to the Town.

The next section of this study will provide baseline data on the economy of Florence and the region. The projected economic landscape without the Florence Copper project must be understood to establish a frame of reference and context for analysis of the beneficial impacts from the mineral recovery activity, including new jobs, incomes, and tax revenues that would not otherwise exist.

4 BASELINE GROWTH

To evaluate the economic impact of Florence Copper on employment, income and other activity, it is necessary to develop a comparison scenario for the economy without the Florence Copper operations. Such a "baseline scenario" describes the current status quo economy and lays out the expected growth over time, typically dependent on an extrapolation of historical growth trends.

As shown earlier in this report (*Section 2: Economic Base Analysis*), the correctional industry dominates the Florence economy, which has a large employment base in the government sector and in those industries related to private prison operations.

In this section, the baseline (current) make-up of the Florence economy is analyzed and the industrial composition is compared to the overall Arizona economy. The analysis shows that incarceration workers account for nearly one half of all Florence jobs, while traditional basic industry jobs such as mining or manufacturing combine to account for less than one percent of employment.

To date, most employment growth in Pinal County has been linked to housing development, mainly for residents who commute to jobs in the adjacent larger metropolitan area. Moreover, population increase alone cannot sustain the overall economy in perpetuity. Population growth spurs "people serving" jobs that recirculate existing dollars within the region, but these jobs do not bring in outside dollars to make the economy grow.

The forward-looking baseline projections for the Florence area and Pinal County are drawn from a comprehensive study commissioned by the Central Arizona Association of Governments (the *Pinal Projection Study*). The CAAG report uses an "edge county" model to project Pinal County growth along a development path observed in other counties adjacent to large metropolitan areas similar to the Phoenix metro.

The basic dynamic of the edge county projection approach is that, as the economy matures, basic employment and non-basic employment grow more rapidly than population. Employment to population ratios rise as the county becomes less a "bedroom community." However, the CAAG report finds that, "none of this has happened in Pinal County."

To date most employment growth in Pinal County has been linked to housing development, mainly for residents who commute to jobs in the adjacent larger metropolitan area. Moreover, population increase alone cannot sustain the overall economy in perpetuity. Population growth spurs "people serving" jobs that recirculate existing dollars within the region, but these jobs do not bring in outside dollars to make the economy grow.

In recent years, basic employment in Pinal County has actually declined. The production and sale of goods (and services) from basic industries creates net new income and new outside dollars that flow into the region in return. For sustained economic growth, the region needs these basic industries such as mining and manufacturing, where goods are produced for sale outside the region, to other states or other countries.

4.1 Baseline Industry Composition

Table 4.1 shows current employment in Florence by industry. There are 8,196 Florence jobs (2009 data). Of these, 3,865 are related to public or private prisons. In percentage terms, 47 percent of Florence jobs are prison jobs.

The analysis shows that incarceration workers account for nearly one half of all Florence jobs, while traditional basic industry jobs such as mining or manufacturing combine to account for less than one percent of employment.

Currently there are 9 correction facilities in Florence, including 7 public operations and two private prisons. The combined facilities account for a prison population of 17,646 (2010) and a workforce of 3,865 employees. Of these, 1,102 work for private prisons and 2,763 are employed by government facilities.

There are 914 private non-prison jobs identified in the table. The largest category is accommodation and food service jobs (406), and it is likely that many of these food service jobs are also related to Florence prisons. The non-prison private jobs make up 11 percent of all Florence jobs.

Traditional basic industry jobs (that bring in outside dollars), such as mining, manufacturing, wholesale, and transportation, and even including construction, combine to account for 77 jobs, or less than one percent (0.9%) of Florence employment.

Comparison of the current baseline economy of Florence with the overall Arizona economy is shown by the ratio of employment per 1,000 residents for each industry. The Arizona economy has approximately 5 times as many private (non-prison) jobs per 1,000 residents as Florence (331.8 vs. 57.6). Florence only has about two-thirds as many total (government + private) non-prison jobs as Arizona state-wide employment (273.1 per thousand for Florence vs. 406.6 for Arizona).

While the Arizona economy shows the greatest employment ratios in retail (4.95 jobs per 1,000) and health care (47.3), the Florence economy is heavily reliant on government and prison employment, compared to the rest of Arizona.

Florence has three times as many government (non-prison) jobs per 1,000 residents as the state average (210.7 vs. 71.0) and there are 243.8 private and government prison jobs per 1,000 in Florence

The Arizona economy has 22 times the proportion of manufacturing jobs, and 5 times the ratio of retail trade jobs. Although health care is growing in Florence, the ratio of such jobs is only 17 percent of the state level.

Traditional basic industry jobs (that bring in outside dollars), such as mining, manufacturing, wholesale, transportation, and even including construction, combine to account for 77 jobs, or less than one percent (0.9%) of Florence employment.

It is evident from Table 4.1 that incarceration is the only basic industry in Florence and the economy lacks diversity.

In the past 30 years, prisons have become a growth industry, as the number of Arizona inmates has increased five times faster than population. The number has been essentially stable since 2009, although Arizona has the highest proportion (1 out of 159 persons) of incarceration in the West.

Correction now takes over 10 percent of the state budget, and it is likely that cost issues could slow further expansion. For sustainable long term growth, Florence needs to expand basic private industries that bring in outside dollars and create additional local jobs.

Table 4.1: Baseline Employment Composition in Florence: 2009

Sector	Florence Jobs	Employment per 1000 Non-Prison Residents	
PRIVATE NON-PRISON JOBS		Florence	Arizona
Mining*	17	1.1	1.9
Utilities	0	0.0	1.8
Construction*	28	1.8	23.0
Manufacturing*	16	1.0	22.8
Wholesale Trade*	3	0.2	14.8
Retail Trade	133	8.4	49.5
Transportation and Warehousing*	13	0.8	12.2
Information	2	0.1	8.1
Finance and Insurance	45	2.8	20.6
Real Estate and Rental and Leasing	18	1.1	6.8
Professional, Scientific ,Technical	27	1.7	18.8
Mgmt. of Companies and Enterprises	0	0.0	6.5
Admin. Support & Waste Management	11	0.7	31.8
Educational Services	0	0.0	7.8
Health Care and Social Assistance	127	8.0	47.3
Arts, Entertainment and Recreation	22	1.4	7.0
Accommodation and Food Services	406	25.6	37.9
Other Services	46	2.9	13.2
PRIVATE NON-PRISON JOBS	914	57.6	331.8
AGRICULTURE	76	4.8	3.8
GOVERNMENT NON-PRISON JOBS	3,341	210.7	71.0
TOTAL NON PRISON JOBS	4,331	273.1	406.6
PRIVATE PRISON JOBS	1,102	69.5	
GOVERNMENT PRISON JOBS	2,763	174.3	
TOTAL PRISON JOBS	3,865	243.8	
ALL JOBS	8,196	516.9**	

*These industries are often basic industries, depending on whether customers are local or external to the region

**Calculation based on ratio of all Florence jobs to non-prison population of 15,856

Source: U.S. Department of Commerce, Census Bureau, and Zip Business Patterns 2009.

Staffing plans for the Florence Copper project call for approximately 170 direct jobs on site. These new jobs would increase private sector jobs from 914 to 1,084, an increase of 18 percent in the current baseline. In addition, secondary jobs resulting from expansion of economic activity would number in the hundreds (as set out in Section 5 below).

4.2 Baseline Projections

In 2008 the Central Arizona Association of Governments (CAAG) commissioned economists from the State's universities and from Phoenix-based *Applied Economics* to conduct an extensive analysis of the demographic and economic implications for long-term growth in central Arizona with special emphasis on growth in Pinal County, including Florence and surrounding areas.

A number of white papers and reports were produced, collectively termed the "Pinal County Projection Study." The documents are available as internet downloads from the CAAG Planning Department website (caagcentral.org). It is important to recognize that most of the analysis and projections were undertaken before it became evident that the effects of the recent recession would linger for several years, delaying (if not weakening) many of the long term trends discussed in the reports.

The recession dealt a significant blow to Arizona's economy, reversing years of employment expansion. While the national economy lost 6 percent of jobs between 2008-2010, Arizona lost 11 percent of all jobs over the same period. By this standard, the effect of the recession on Arizona was nearly twice as severe as the average state.

By industry, job losses were sharpest in construction. From the employment peak in June 2006 of 247,500 jobs, construction in Arizona declined to 112,600 jobs by June of 2011, a decrease of 54 percent. The CAAG report did not incorporate the depth or duration of the current economic slump. Although the recession will alter the near term growth rates projected by the CAAG studies, the projection scenarios over the longer term are still useful because they provide the best available basis for discussion of the growth path for the region in the decades ahead.

4.3 Sun Corridor Growth

According to the CAAG studies, by 2050 Arizona will experience significant growth in the Sun Corridor. This region includes the Prescott area (north of Phoenix) and stretches south-southeast to envelop all of the Phoenix metro area, south through Pinal County to Tucson and then southeast to the U.S.-Mexico border.

The Sun Corridor is one of 11 geographies identified by futurists as capturing the majority of growth in the United States in the next 50 years. (See "The Rise of the Megapolitans," *Planning*, January 2007, Vol. 73, Robert Lang and Arthur Nelson.)

There is considerable debate about the precise geographies identified in the analysis, the extent of growth that will take place, and the timing of the growth predictions. The projections are based on continuation of trends in employment and population growth that have persisted for several decades.

The basic assumption underlying the CAAG analysis is this: lured by opportunities to live in a pleasant climate with beautiful vistas, abundant economic opportunity, and affordable land, people will continue to migrate to Arizona as they have in the past.

Indeed, for the past five decades, Arizona has ranked among the states with the fastest growing populations. During the 2000 – 2005 periods before the recession, Arizona ranked second (behind Florida) in the number of domestic migrants attracted, with 391,911. Arizona's net new migration exceeded that of Texas and North Carolina, often regarded as leading growth states. Contrary to conventional wisdom, most of these newcomers were job-seekers, rather than retirees, attracted by employment opportunities in Arizona.

The Sun Corridor region has absorbed most of these new residents - people who have come mainly for economic reasons, as well as to enjoy the environment, the lifestyle, and the wide open spaces of Arizona.

Impediments to a continuation of robust population growth include problems of water availability in a desert environment, stresses from impending climate change that could exacerbate the trend toward urban heat island formation, and the lack of base industries essential to sustaining high levels of growth over the longer term.

Optimists argue that the evidence of the last 50 years in Phoenix and Tucson illustrates that growth will continue in the State and that the Sun Corridor is the next logical phase for the growth cycle.

Realistically, water will constrain growth in some parts of Arizona and perhaps in some parts of the Sun Corridor. But water is abundant in Pinal County. While the majority of water is used in agriculture today, as demands for residential and commercial use increase, based on history it is likely that water rights will be sold to development interests who will build the housing and related infrastructure to support the impending growth.

4.4 Sustainable Growth

Apart from environmental concerns, issues of employment and sources of new jobs are high on the list of factors that could affect long term growth.

Some might argue that growth is a self-sustaining process, since many newcomers bring a lifetime accumulation of wealth to Arizona with a plan to spend it during their retirement years, infusing new purchasing power into the economy.

However, statistical studies of state to state migration show that the dominant demographic profile of those relocating typically describes persons between 20 and 40 years of age, and their purpose for moving is to seek employment.

Based on population estimates for 2009, the working age population of Pinal County (25 – 64 years) was 181,000, approximately three times as large as the population over 65 (62,000).

While population growth creates a modest employment base of construction to serve new residents, along with more retail and service jobs, population increase alone cannot sustain the overall economy in perpetuity. Population growth spurs "people serving" jobs that re-circulate existing dollars within the region, but these jobs do not bring in outside dollars to make the economy grow.

For sustained economic growth, the region needs basic industries where goods are produced for sale outside the region, to other states or other countries. The production and sale of goods (and services) from basic industries creates net new income and new outside dollars that flow into the region in return.

In addition to manufacturing, Arizona's leading basic industries that bring in outside dollars include agriculture, tourism and mineral development.

An example of the importance of basic industries is found within Arizona. The highest per capita personal income in the state (2008) is not in heavily urbanized Maricopa County, but in Greenlee County, where copper mining, a basic industry, accounts for a significant portion of employment.

For those who are most skeptical of the picture painted by Sun Corridor proponents, a major issue is concern about the origin of future basic industry jobs to provide a foundation for growth. The magnitude of industrial basic industries has been a persistent challenge for Arizona, and is one of several reasons why state per capita income perpetually lags the national figure.

Although the state is important as a center for high technology industry, employment in this key basic sector has declined in recent years. The aerospace sector has benefited from significant ongoing investments from the U.S. Department of Defense and the semi-conductor industry have established a strong presence in Arizona too. Both industries create much higher than average wages and contribute importantly to Arizona Gross State Product.

But employment in Arizona manufacturing decreased by thirty percent (a loss of 62,000 jobs) between 2000 and 2010, continuing a trend that started in the late 1990s. Arizona manufacturing employment is now lower than at any time in the past 30 years, as a result of cost-cutting and global competition.

Arizona agriculture is an important producer of such crops as cotton, lettuce, lemons and melons. But due to mechanization, less than one percent of the state's employment is in agriculture, and most of that is seasonal in nature. As an industry, tourism does not produce high-wage jobs, and that industry is also seasonal.

Arizona mining produces output for national and global markets, and mining jobs offer pay that is much higher than average. Not all areas of the state have access to mineral resources, but the Florence Copper project represents an economic opportunity for bringing basic industry to Florence and Pinal County.

4.5 Pinal County: An "Edge County?"

Economists who authored the Pinal Projections Study noted that Pinal County is best described as an "edge county." An edge country borders a growing large metropolitan region. The analysts studied the historical growth trajectories of a set of "edge counties" nationwide to seek insights into potential growth patterns in Pinal County.

For the Pinal Projections study the regions analyzed were Denver, Orlando, Atlanta, Dallas and Los Angeles to provide a comparison with the metropolitan expansion expected to eventually take place in the Sun Corridor.

The comparison "edge counties" selected were Collin County Texas, Denton County Texas, Cobb County Georgia, DeKalb County Georgia, Gwinnett County Georgia, Adams County Colorado, Arapahoe County Colorado, Seminole County Florida, San Bernardino County California and Riverside County California.

While the similarity between a future Pinal County and the historical growth of these identified comparison counties may be questioned, the point of the analysis is to compare trends so as to understand the pace of growth that might be expected with the impending in-fill of the Sun Corridor.

Case study edge county evidence suggests basic and non-basic employment growth usually follows population growth for several years. Basic employment growth is enough to maintain a more or less constant basic employment-to-population ratio. Non-basic employment growth drives the total employment-to-population ratio higher. As the population grows, the source of growth in employment is because of non-basic employment growth. None of this has happened in Pinal County.

It is also important to underscore that most of the comparison counties are not edge counties today. Over the past several decades they experienced growth and urban expansions that made them very much a part of their metropolitan region. It is the trajectory of the historical growth that transformed them from edge counties to what they are today that can inform predictions of growth in Pinal County going forward.

For perspective, reports from the Pinal Projection Project clearly reveal that Maricopa, Pima and Pinal Counties have all displayed rapid population growth since 1970.

Maricopa grew the fastest and had the larger base at the outset so it has seen most of the population gains. Employment growth in the tri-county region has been rapid as well, growing at a slightly faster pace overall – fueled by a 500% increase in employment growth in Maricopa County.

The comparison "edge counties" grew even faster. In five of the ten, population grew at a 400% clip over the period and employment growth was 500% or higher in seven of the ten comparison edge counties. The trends forthcoming from the analysis of the edge counties are clear: as the core metropolitan areas grew, the dynamics of their expansions began to force urban development outward and their surrounding edge counties grew even faster.

Importantly, employment growth in these counties outstripped population growth, resulting in rising employment to population ratios. Both basic and non-basic employment increased, but non-basic employment increased faster, due to the expansion of service industries to support the growing population.

However, employment growth in Pinal County has not tended to follow the typical "edge county" expansion path. Non-basic employment has not responded strongly to population increases, and basic employment has declined, unlike the documented edge county growth patterns.

The employment growth process as observed by the researchers for the Pinal Projection Project is as described here:

"**Case study edge county evidence suggests basic and non-basic employment growth usually follows population growth for several years. Basic employment growth is enough to maintain a more or less constant basic employment-to-population ratio. Non-basic employment growth drives the total employment-to-population ratio higher. As the population grows, the source of growth in employment is because of non-basic employment growth. None of this has happened in Pinal County.**" (*Pinal Projections Study, Employment & Population Lag and Factors Affecting Growth,* Applied Economics, CAAG, pg. 13, 2008).

The historical relationships among population, employment, and basic employment in Pinal County are set out in Table 4.2. Non-basic employment growth has not surged ahead of population growth, and fell to only 10.8 percent in the 1995-2000 time periods.

In 1970 – 1975, population growth, overall employment, and basic employment all grew by more than 20 percent. But for the next ten years (1975 – 1985) employment lagged behind population, and basic employment declined. The increase in non-basic

Overall, basic employment and total employment have lagged behind population growth in Pinal County for some time.

Table 4.2: Population and Basic Employment Growth in Pinal County

Years	Population Growth	Employment Growth	Basic Employ. Growth	Non Basic Employ. Growth
1970 - 1975	22.19%	21.04%	27.40%	15.05%
1975 - 1980	8.49%	1.43%	-15.57%	19.18%
1980 - 1985	13.54%	5.57%	-18.24%	23.17%
1985 - 1990	12.76%	23.45%	19.46%	25.40%
1990 - 1995	25.32%	21.35%	11.16%	26.12%
1995 - 2000	23.22%	-0.38%	-27.52%	10.80%

Source: *Pinal Projections Study, Employment &Population Lag And Factors Affecting Growth,* Applied Economics, CAAG, pg. 13, 2008

employment over this period was due to gains in service jobs as population grew. The decade 1990 – 2000 brought particularly strong population growth. In just five years (1990-1995), the population of the county grew by more than 25 percent. But employment again grew by less than population in that period. Only in 1985 – 1990 did employment grow faster than population. Overall, basic employment and total employment have lagged behind population growth in Pinal County for some time.

The explanation for the decline in basic employment lies in the fluctuations in three traditional basic industries: agriculture, manufacturing, and mining, according to the Pinal Projections Study. Over the entire period, agriculture's share of employment in Pinal County fluctuated little. In 1995, agriculture accounted for one percent of all jobs, the same as thirty years earlier. Manufacturing's share of employment rose from 11.5 percent in 1970 to 18.6 percent in 1995, and then declined to 14.9 percent by 2000.

The largest change was in mining. In the 1970's, mining in Pinal County accounted for over 40 percent of employment. By 2000, mining's share was 3.6 percent. Meanwhile, service employment increased from 10 percent of jobs in 1980 to 36.7 percent by 2000. While employment in Pinal County has grown, basic employment sectors have

decreased in importance. An increase in mining employment would represent a reversal of this decline, as noted above.

4.6 Employment/Population Ratio

An increasing employment to population ratio is an indication that an edge county is maturing and transforming into a sustaining economy in its own right.

But as shown in the tables below, **Pinal County employment to population ratios have actually declined in recent years, even as the neighboring Greater Phoenix metro economy has expanded. Further, as will be shown later, employment to population ratios in Florence are even lower, approximately one half the level of the Sun Corridor as a whole, due to the absence of strong basic industries.**

4.7 Pinal Projection Scenarios

Three distinct scenarios were developed from the analysis undertaken in the CAAG projections project – an optimistic, pessimistic, and baseline look at the future of Pinal County and its sub-regions. The effects of the 2008 recession were not fully understood by the time the work was completed, so the analysis does not incorporate the current slowdown explicitly.

The discussion below will focus on the "most likely" or baseline scenario since it was deemed most appropriate for the very long-term projections of the study, extending to 2040. Table 4.3 provides estimates of the pace of growth for Pinal County out to 2040 based on analyses of edge county expansions that have taken place historically across the country. The 2005 and 2010 numbers will be revised as the census provides updates on the intervening decennial census years.

Interestingly, the reported 2010 U.S. Census population number for Pinal County is 375,770, over thirty thousand more than in the scenario provided below. Updates for employment that would be consistent with the *Applied Economics* methodology are unavailable but it is already clear that the employment projections are too high and especially the rapid growth projected from 2010 to 2015 is too optimistic because of the effects of the weak Arizona and national economies.

The table confirms that, in the past, the county wide employment to population ratio has not followed the pattern expected in the "edge county" scenario of growth. Rather than increasing as the overall Metro Phoenix economy expanded, the 1995 Pinal County per capita employment ratio (31.5%) fell after 1995, and by 2005 was only 21.9 percent.

Table 4.3: Baseline Socioeconomic Projections for Pinal County

Year	Total Population	Total Employment	Employment Per Capita	Employment by Land Use					Construction Employment
				Office	Industrial	Retail	Public	Other	
1990	116,379	30,850	26.5%	4,190	3,588	10,243	10,774	976	317
1995	133,229	41,945	31.5%	4,940	4,218	12,138	14,353	3,544	1,381
2000	179,727	48,038	26.7%	5,333	4,633	12,794	15,804	5,303	2,191
2005	256,404	56,196	21.9%	5,840	5,253	14,071	17,162	5,642	5,344
2010	346,177	63,116	18.2%	6,641	5,991	16,346	18,007	6,168	5,507
2015	441,893	108,229	24.5%	11,271	10,809	29,376	22,675	13,731	10,626
2020	607,482	169,877	28.0%	18,319	17,660	50,051	30,308	21,590	15,604
2025	826,187	235,777	28.5%	29,551	23,995	75,650	40,608	25,086	17,870
2030	1,083,016	324,454	30.0%	46,030	30,128	108,502	55,323	30,729	22,648
2035	1,384,820	441,054	31.8%	69,925	36,138	155,650	73,926	36,900	27,564
2040	1,713,885	575,019	33.6%	103,348	44,567	202,937	96,594	43,173	31,549

Source: Applied Economics & Central Arizona Association of Governments, Pinal Projections Study, 2009

For comparison, in Arizona 406 persons per one thousand were employed (2009), resulting in an employment per capita percentage figure of 40.6 percent. The corresponding national figure is 45.4 percent.

For the year 2005, according to the U. S. Bureau of Labor Statistics, Phoenix led all large metro areas in rate of growth, and added over 100,000 jobs. While Pinal County also added population and jobs, the "edge county" growth effects that should have led to increases in employment per capita seemingly did not come into play.

Pinal County employment per capita has been declining in recent years as population growth in the newly developed areas outstripped employment opportunities. **In short, population growth is not sufficient to create corresponding employment growth when basic industries such as manufacturing or mineral extraction are declining.**

In a maturing and transforming edge county, employment eventually begins to rise at a faster clip than population as infill occurs and increasing urbanization begins to attract new firms and expanded job opportunities.

The underlying theory of the CAAG projections is that the dynamics that spurred expansion of edge counties in the 70s, 80s and 90s elsewhere will begin to emerge in Pinal County over the next several decades.

However, as indicated above, the process has not yet begun. **It is possible that theories of growth that anticipate job creation in lock step with more "rooftops" could be valid in the very long run, but in the next 10 to 20 years, there is an apparent need in Pinal County and Florence to encourage employment, especially basic employment that brings in outside dollars to the region.**

The CAAG projections show the employment population ratio begins to increase in 2015, rising to 24.5. However, due to the recession, it seems likely this increase will be delayed, perhaps many years.

At minimum, it is unlikely construction employment in Pinal County in 2015 will be some 50% higher than it was in 2005, as depicted in the scenario outlined in 4.3, based on what we now know about the depth of the real estate cycle.

By 2025, the CAAG baseline projections show employment is finally beginning to increase more rapidly than population, as the ratio rises to 28.5 percent. By 2030, two decades from now, the ratio is 30, still only 75 percent of the current (2009) Arizona ratio.

As a historical comparison, the Pinal County employment to population ratio of 31.8 projected by 2035 will be larger than it has ever been. But compared to the nation as a whole, the employment to population ratio of 31.8 is approximately the same as the national figure in 1980, some 50 years earlier.

A close review of the projections in Table 4.3 is a reminder that impressive growth of population does not necessarily indicate increasing prosperity.

In Table 4.3, Pinal County population increases from 116,379 in 1990 to 607,482 in 2020, a fivefold gain. Employment rises as well, from 30,850 to 169,877, a relatively large increase. But even with these gains, the ratio of jobs to resident population is only 28 percent, leaving a major portion of the work force either unemployed or forced to travel to other parts of the region for work.

In addition, in assessing these trends it is reasonable to contemplate whether the demographic and economic dynamics that fueled growth around urban centers in the past will still prevail going forward.

Interestingly, the CAAG projections foresee relatively rapid expansions in industrial and commercial office employment opportunities for the County. No particular industry or commercial activity is identified. This projection is based upon the historical trends that were observed in edge county case studies, rather than on the resources, amenities, and any impediments to growth that actually exist in Pinal County. In neighboring metro Phoenix, commercial vacancy rates were above 25 percent in 2010 and are projected to remain above 20 percent through 2013 (*CB Richard Ellis*, 2011).

4.8 Pinal County Conclusions

According to U.S. Census population statistics, Arizona has been among the leading growth states for decades. The basic amenities that attract new residents (such as an agreeable climate and affordable housing) are unlikely to change in the future. As job opportunities improve, in-migration is expected to increase in the next few years.

The CAAG population projections (Table 4.3) imply a five-fold increase in Pinal County population between 2010 and 2040 (from 346,000 to 1.7 million). Employment will increase by nine times, from 63,000 in 2010 to 575,000 in 2040. These projected employment gains are based on the edge county growth model, which depends on employment starting to grow more rapidly than population, as has been seen in other edge counties that grow as core metro markets extend into nearby regions.

The indicator of this type of mature growth is a rise in the employment to population ratio. To date, this ratio has actually declined in Pinal County, because population growth has not been accompanied by new employers and expanded job opportunities.

"Rooftops" and more people have not translated automatically into increasing rates of job creation in Pinal County.

In the edge counties studied for the Pinal Projections Project, the basic industries that bring in outside dollars remained essentially stable, providing a foundation for the regional economy.

Pinal County has a deficiency in basic industries, which is one reason the employment to population ratio has not increased.

Pinal County must have programs and policies to expand basic industries, otherwise job creation will lag behind population growth for years, and the CAAG projections based on edge county theory will not become reality.

"Rooftops" and more people have not translated automatically into increasing rates of job creation in Pinal County.

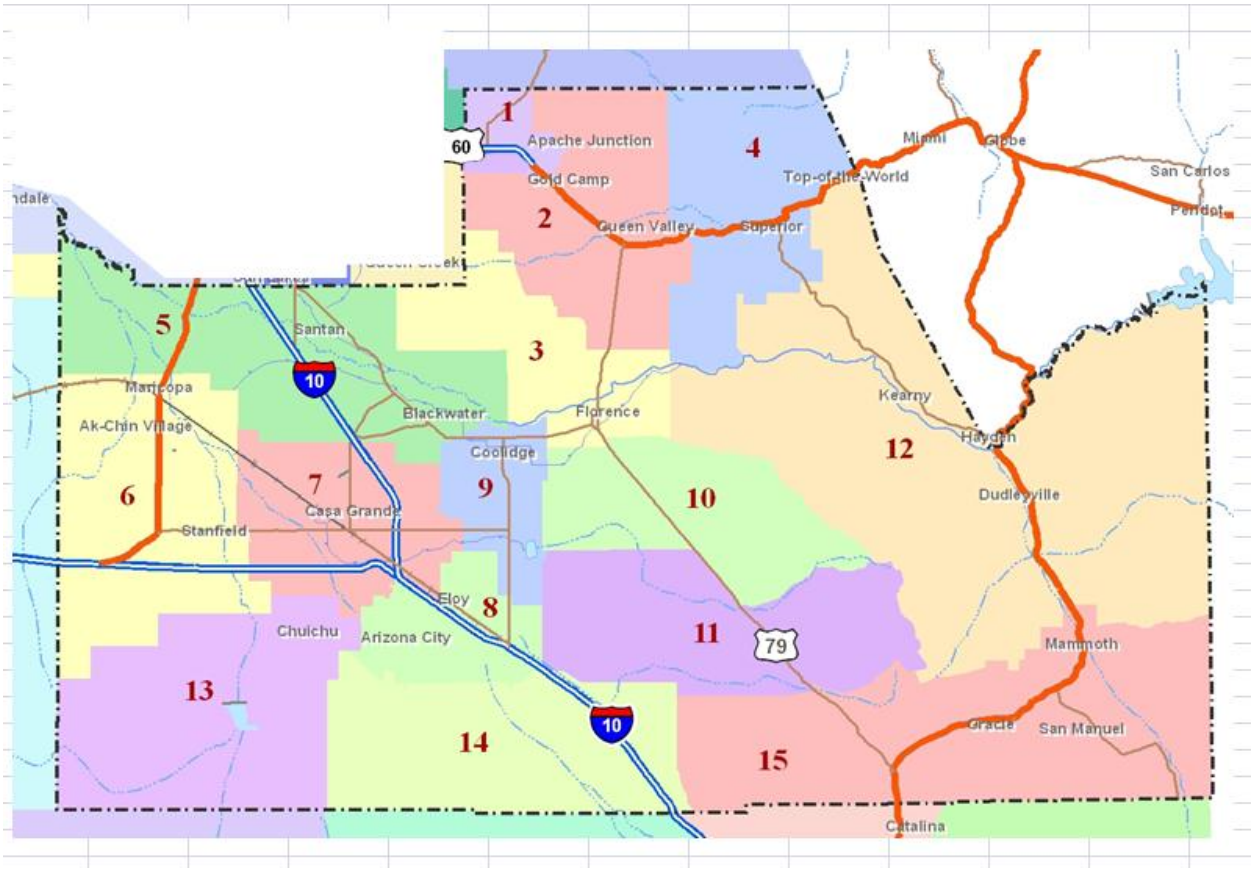
4.9 Sub County Areas

The research agenda for the CAAG Pinal Project included analysis of 15 sub county areas that the research team identified through an aggregation of census tracts that was tailored specifically to the project.

The sub county areas are depicted in the accompanying Figure 1. Florence is located in Pinal sub-county Market Area 3 that also includes the San Tan Valley region and the Johnson Ranch communities. Growth in this region will be primarily dictated by expansion from the Maricopa County East Valley region through Queen Creek and further southeast.

Table 4.4 depicts historical and expected future population growth in the Florence sub-county Market Area 3 along with the other sub county regions in Pinal County based on the Projections of the CAAG Pinal Project research team. Although unlikely at this time, the table predicts significant population growth in the Florence region with population increasing 400% from 2010 to 2040 in a fashion much like that observed in the national edge counties historically. Less certain is where the majority of the growth will occur.

4.10 Figure 1 Pinal County Market Areas (Florence/San Tan Designated As Market Area 3)



Source: Pinal Projections Study, Central Arizona Association of Governments, Applied Economics, Arizona State University, University of Arizona, 2009.

Following the logic of the edge county analysis, **it is likely that growth in sub-county Market Area 3 will first take place in the most northwestern part of the region and then migrate southeast as urban sprawl consumes the region. This suggests the San Tan Valley region will likely experience more growth in the earlier periods than will Florence.**

Table 4.5 shows the baseline employment projections for the Sun Corridor and the Florence/San Tan and the other market areas of the Pinal County portion. Employment in the Sun Corridor is projected essentially to double between 2010 and 2035, rising from 2.2 million to a level of 4.3 million over the 25 year period.

Table 4.4: Baseline Population Projections for Pinal County Market Areas

Area/Market Area		1990	2000	2010	2015	2020	2030	2040
Sun Corridor		2,905,360	4,095,634	5,323,346	5,970,277	6,739,559	8,368,459	10,088,087
Pinal County								
1	Apache Junction	23,897	45,567	62,494	71,797	84,670	117,801	126,316
2	Superstition Vistas	1,751	2,240	5,055	7,776	11,579	58,130	166,709
3	**Florence/San Tan***	**11,474**	**24,398**	**79,459***	**101,744**	**141,564**	**223,901**	**313,578**
4	Superior	3,102	3,382	3,745	4,254	5,160	7,664	10,602
5	Gila River	6,772	8,591	8,939	9,956	10,452	10,452	10,452
6	Maricopa/Stanfield	5,634	8,546	45,637	60,842	97,186	169,148	247,651
7	Casa Grande	25,783	35,167	63,832	83,125	112,833	210,070	354,044
8	Eloy	9,322	15,154	22,272	31,251	45,911	107,943	202,774
9	Coolidge	10,698	12,128	19,615	25,418	38,282	71,093	115,378
10	East Coolidge	925	1,655	2,311	3,302	4,940	11,237	19,786
11	East Eloy	137	186	369	1,040	2,309	7,368	14,165
12	Mountain	5,405	5,408	5,007	5,237	5,721	6,786	8,096
13	SW Pinal County	730	741	798	890	940	942	942
14	Picacho/Red Rock	937	1,398	2,393	5,179	9,825	27,913	51,103
15	SE Pinal County	9,812	15,166	24,250	30,083	36,110	52,566	72,290
TOTAL		116,379	179,727	346,177	441,893	607,482	1,083,016	1,713,885
Pinal County Share		4.01%	4.39%	6.50%	7.40%	9.01%	12.94%	16.99%

*Note: Actual population from 2010 is San Tan Valley 81,321 and Florence Town 7,836 (non-incarcerated)

Source: Applied Economics, CAAG *Pinal Projections Study*, October 2, 2009.

Table 4.5: Baseline Employment Projections for Pinal County Market Areas

Area/Market Area	1990	2000	2010	2015	2020	2030	2035	2040
Sun Corridor	1,306,037	1,954,917	2,198,145	2,622,542	3,037,369	3,848,577	4,281,746	4,773,601
Pinal County								
1 Apache Junction	4,864	6,911	10,052	15,964	22,462	36,391	42,270	47,541
2 Superstition Vistas	363	739	963	2,271	3,607	17,094	29,180	45,804
3 Florence/San Tan	**4,627**	**7,683**	**11,501**	**21,770**	**36,105**	**66,496**	**89,615**	**115,715**
4 Superior	217	370	488	915	1,362	2,259	2,695	3,142
5 Gila River	1,461	2,879	3,143	4,029	4,695	5,728	6,129	6,573
6 Maricopa/Stanfield	1,157	3,642	6,152	12,591	24,133	49,958	65,868	84,684
7 Casa Grande	12,451	16,620	18,457	23,790	33,270	64,276	88,275	116,411
8 Eloy	1,607	2,717	3,469	8,909	14,685	31,742	46,019	62,965
9 Coolidge	2,249	3,131	3,760	5,387	10,119	18,776	29,016	40,626
10 East Coolidge	67	115	212	704	1,287	2,837	4,571	6,420
11 East Eloy	0	1	41	324	724	1,935	2,625	3,549
12 Mountain	738	1,130	1,273	1,660	2,030	2,575	2,829	3,136
13 SW Pinal County	24	39	76	186	246	315	339	363
14 Picacho/Red Rock	350	555	799	1,358	2,366	6,017	10,453	13,623
15 SE Pinal County	673	1,505	2,728	8,368	12,787	18,057	21,169	24,469
TOTAL	30,850	48,038	63,116	108,229	169,877	324,454	441,054	575,019
Pinal County Share	2.36%	2.46%	2.87%	4.13%	5.59%	8.43%	10.30%	12.05%

Source: Applied Economics, CAAG *Pinal Projections Study*, October, 2009.

The Pinal County share of overall Sun Corridor employment increases steadily over time. In 2010, Pinal County accounts for about 3 percent of Sun Corridor employment. By the end of the projection period, the share has increased four times, to 12 percent.

Employment growth is predicted to accelerate in Pinal County and this is especially true in the Florence region where employment is projected to surge tenfold from 2010 to 2040.

The CAAG projections for employment to population ratios are shown in Table 4.6. The ratios for the Sun Corridor increase steadily after 2010, and provide a standard for comparison with the various sub Market Areas of Pinal County.

Two conclusions about the Florence sub Market Area may be drawn from Table 4.6. The first is that the employment to population ratio is expected to increase over the years ahead. This is a positive interpretation, for it indicates that the economy will begin to develop based on factors other than rooftops or population inflows.

The second conclusion is that although job creation begins to exceed the pace of population growth, the Florence region employment to population ratio remains very small over the decades ahead. This conclusion is less positive for the future economic development of the market area.

This small ratio means workers must travel to jobs outside the area, incomes and standard of living may be affected by absence of employment opportunities, and there is limited growth in basic industries which typically pay higher wages and expand unrelated to population changes.

4.11 Implications for Florence

The Pinal Projection analysis is based on econometric models that extend recent trends in regional economic growth. These models are sophisticated and detailed. But the scenarios simulated depend crucially on the assumption that edge county growth in Pinal County will tend to mimic the growth trajectories that occurred in similarly situated edge counties historically.

There may be reason to believe that the economic dynamics and demographic momentum that fueled growth in edge county expansions in the 70s-90s

The pace of growth in Florence and Pinal County depends crucially on the availability of quality employment, especially base industry employment in the region.

might not reoccur in the next few decades and hence growth will be slower.

Arguably the ways and means in which people work, commute, and shop are very different now than in the past. Moreover, the events of the 2008 recession suggest that the trends in hiring and staffing today are very different than they have been historically and that the productivity gains that have been realized by businesses imply that they simply need fewer workers to produce the same output.

None of these issues implies that the basic trends set forth by the Pinal Project research team are incorrect, but they do suggest that the timing of the growth acceleration phase may be altered significantly from the renderings depicted in their analyses. Hence the 2020 numbers may not be realized until 2030 and the 2040 numbers similarly delayed.

These issues also underscore that the pace of growth in Florence and Pinal County depends crucially on the availability of quality employment, especially base industry employment in the region. The modeling scenarios implicity presume that employment opportunities present themselves, without impediment, as urban expansion occurs – just as they have in the economic expansions of edge counties historically. But recent history suggests that businesses are simply not as willing to expand employment rolls as they have been historically. Hence, economic development policy needs to be directed to any and all opportunities to foster job creation.

It may be unlikely that Florence itself will experience a 400% overall increase in population from 2010 to 2040. First, more than half of the current population is institutionalized so the pace of institutionalized population growth will not be dependent upon any dynamics forthcoming from edge county expansion. Second, Florence is on the far southeast edge of sub Market Area 3 and may not experience the effects of edge county expansion as early as will areas of the region further to the southwest. And finally, the impact of the great recession has clearly delayed the onset of the rapid growth scenarios.

The pace of this resurgence will clearly depend on the ability of the region to attract and retain employment possibilities while maintaining the attractive amenities that have drawn people for decades.

Table 4.6: Baseline Employment to Population Ratios for Pinal County Market Areas

Area/Market Area		1990	2000	2010	2015	2020	2030	2040
Sun Corridor		0.450	0.477	0.404	0.418	0.421	0.429	0.439
Pinal County								
1	Apache Junction	0.204	0.152	0.161	0.222	0.265	0.309	0.376
2	Superstition Vistas	0.207	0.330	0.191	0.292	0.311	0.294	0.275
3	**Florence/San Tan**	**0.403**	**0.315**	**0.145**	**0.214**	**0.255**	**0.297**	**0.369**
4	Superior	0.070	0.109	0.130	0.215	0.264	0.295	0.296
5	Gila River	0.216	0.335	0.352	0.405	0.449	0.548	0.629
6	Maricopa/Stanfield	0.205	0.426	0.135	0.207	0.248	0.295	0.342
7	Casa Grande	0.483	0.473	0.289	0.286	0.295	0.306	0.329
8	Eloy	0.172	0.179	0.156	0.285	0.320	0.294	0.311
9	Coolidge	0.210	0.258	0.192	0.212	0.264	0.264	0.352
10	East Coolidge	0.073	0.069	0.092	0.213	0.261	0.252	0.324
11	East Eloy	0.001	0.008	0.111	0.312	0.314	0.263	0.251
12	Mountain	0.137	0.209	0.254	0.317	0.355	0.379	0.387
13	SW Pinal County	0.033	0.052	0.095	0.209	0.261	0.334	0.385
14	Picacho/Red Rock	0.374	0.397	0.334	0.262	0.241	0.216	0.267
15	SE Pinal County	0.069	0.099	0.113	0.278	0.354	0.344	0.338
	PINAL TOTAL	0.265	0.267	0.182	0.245	0.280	0.300	0.336

Source: Applied Economics, CAAG *Pinal Projections Study*, October, 2009.

5 ECONOMIC AND FISCAL IMPACT

When a business decides to locate in Arizona there is a resulting increase in capital expenditures. For example, new buildings are constructed and/or old buildings remodeled. Also, industry specific expenditures may be required to ensure new or refurbished facilities are "fit-for-purpose."

These initial expenditures create and support jobs in various industries, such as construction, as well as stimulating employment growth in other sectors of the local economy, e.g. finance, real estate, and government.

Coupled with initial capital investments new jobs are created as businesses hire workers and begin operations. In addition to immediate construction jobs, subsequent employment typically continues during the life of the business. Further capital investment follows as the business grows.

The aforementioned steps describe the *direct* impacts on the Arizona economy from a new business locating its operations in the state.

Direct impacts are generally readily identified and measured. As a part of the process for establishing operations in Florence, Curis Resources has calculated these direct effects for the Florence Copper project.

In addition to direct economic impacts from new business growth, second order expenditures and jobs are created as a result of the initial "injection" of capital and hiring of new workers. These *indirect* impacts represent additional economic wealth created in the supply chain (businesses providing services in support of the new business); and through the rise in personal income from new employees.

For example, a driller hired at the Florence Copper project would represent a direct job. The income that this employee receives and in turn spends in the local economy creates revenues/income for a multitude of different businesses downstream.

However, these rounds of expenditures are not self-perpetuating or indefinite. Instead, these expenditures become smaller as more of the initial income/expenditure "leaks" out of the local economy (leakage may be due to purchases outside the region or additions to savings that are withdrawn from the spending stream).

Within the field of regional economic analysis, the cumulative impacts of these rounds of expenditures are known as "ripple" or "multiplier" effects. Importantly, a single multiplier does not exist for every conceivable economic scenario. In fact, due to the

inter-connected nature of the Arizona economy and its connections to the rest of the U.S. (and world) the eventual ripple effects depend on numerous factors.

Critically, it is the size of the initial direct impact, the geography where it occurs (which county), and in which sector of the economy (manufacturing, mining, finance, etc.) that shapes a project's economic importance to Arizona.

To measure cumulative effects, it is necessary to estimate how many years of annual direct impacts will continue, the so-called life-of-project.

But to fully understand the total impact that a new business will have on the Arizona economy is more complex than a simple extrapolation of a series of annual direct impacts.

As such, the methodology utilized to study the potential economic impacts of the Florence Copper project (as set out and followed below) has its basis in the pioneer work of Wassily Leontief, who was awarded the Nobel Prize in 1973 for development of input-output analysis as a means to understanding the workings of the interconnected sectors of the economy.

Leontief's methodology was soon extended from the national macro economy to the study of inter-industry relationships underlying regional economic growth and development by scholars such as Walter Isard (*Methods of Regional Analysis: An Introduction to Regional Science*, New York, Technology Press of MIT) and William Miernyk (*Regional Analysis and Regional Policy*, Cambridge, Oelgeschlager, Gunn & Hain).

5.1 Study Method and Scenario

Below is a brief description of the study method adopted and scenario examined to estimate the impact of a new business beginning operations in Arizona.

This study makes use of an Arizona-specific version of the REMI regional input-output forecasting model, updated at the Seidman Research Institute, to produce numeric estimates of the impact on the Arizona economy of a new economic activity in Arizona.

The REMI model was developed by Regional Economic Models, Inc. The REMI model has certain unique features that made it an excellent choice for analysis of the Florence Copper project.

Unlike most other models, the REMI software has been developed with dynamic capability for projections over a long term period. Other models provide a static, one-time impact. Since the Florence Copper project is expected to be productive over a period of several decades, the REMI model was chosen for its ability to provide economic impact results year-by-year over that period.

Further, the REMI model is widely considered as the most powerful regional economic impact tool available to researchers. It incorporates not only advanced input-output estimation, but also includes general equilibrium, econometric, and economic geography features.

General equilibrium refers to the ability of the model to incorporate in-migration to a region, for example, in response to expanded economic activity. Econometric techniques are used to estimate underlying relationships between industries, rather than simple ratio coefficients found in less complex impact models. The economic geography equations in the model account for transportation costs, industry clustering, and labor market conditions, features not found in other models.

The REMI model has been used and tested by national researchers for many years, over a wide range of projects, and the model is well known in Arizona, where it has been in use since 2003. Arizona public sector users of the REMI model include the Arizona Department of Commerce, the Arizona Joint Legislative Budget Committee, the Arizona Department of Housing, and Arizona State University.

The REMI model is especially useful when examining the economic impact associated with businesses expanding or relocating to a particular region, state or country. Through its dynamic modeling, REMI assists with fully demonstrating how the economic impact of a business will vary as it moves from the establishment/ construction to operations phase, as well as how estimates may vary through time within a particular phase of the project.

The estimated impacts are the difference between the baseline economy and the baseline economy augmented with the new enterprise. The simulations are designed in the current application to measure the Arizona economy over the production life of the Florence Copper project with and without the project in place. The changes in key measures of economic activity are known as the economic impacts.

Using a county level model enables a more detailed disaggregation of results, such that economic impacts that "leak" into other counties of Arizona are also estimated.

Finally, given its overall flexibility, REMI allows a host of different scenarios – different businesses and/or different construction and operations phases – to be examined while at the same time providing estimates that are consistent across project phases.

The method for estimating the economic impact involves four fundamental steps:

1. Preparation of a baseline forecast for the state economy

This baseline scenario provides a forecast of the future path of the Arizona economy based on a combination of the extrapolation of historic economic conditions and a forecast of relevant national economic variables (this is often referred to as the Business as Usual (BAU) case).

2. Development of a policy scenario

This policy scenario describes the *direct* impacts that a new business locating in Arizona will generate. The inputs in terms of planned direct hiring and planned purchases of supplies were provided by Florence Copper.

3. Preparation of a forecast based on the policy scenario

This alternative forecast provides a simulation of the future path of the state and regional economy, incorporating the effects (or impacts) of the changes specified in the policy scenario.

4. Comparison of the baseline and policy scenario forecasts

The differences between the future values of each variable in the forecast results provide numeric estimates of the impacts that a new business beginning operations in Arizona would have on the economy, relative to the baseline.

5.2 Caveats in Input-Output Modeling

The results of REMI or any economic impact model should be interpreted with care and with attention to factors outside the scope of the model. The Florence Copper project capital investment will take place in Pinal County, which is far less developed today than its neighboring counties, Maricopa and Pima. REMI is based on establishing a baseline growth trajectory for the State and will implicitly assume that all segments of the State will grow commensurately. Hence the model, a priori, does not incorporate the significant economic development throughout Pinal County that is likely to occur due to spillover from the Greater Phoenix area, as addressed in earlier sections in this report. This may lead to predictions of leakages, out of Pinal County, to other counties that may not actually (or reasonably be expected to) occur. The REMI impact results

would tend to be somewhat smaller due to this effect. For example, a significant share of the predicted induced effects will be in retail transactions. REMI understands that retail establishments today are disproportionately located in Maricopa County so that growth in capital and income in Pinal today results in higher retail transactions in Maricopa County simply because fewer retail establishments are located in Pinal.

Simulation results in the future maintain this tendency, but if population growth trajectories predicted by the Central Arizona Association of Governments (CAAG) are realized, retail establishments will grow faster in Pinal County than in the rest of the State and more of the Florence Copper economic activity actually will be retained in closer proximity to Florence. At the same time, if growth in Pinal County falls short of estimates, the impact of the direct jobs associated with the Florence Copper project may be even more important for the area.

REMI uses reported census data to estimate fiscal impact of a particular capital investment and formulates projections of new taxes paid based upon the new income created and employment dollars injected into the economy as described above in the REMI methodology discussion.

In the case of a new mineral recovery operation, this approach will not fully recognize the disproportionate contributions that the mining industry makes to Arizona. The actual tax obligations that will be paid directly by Florence Copper will depend on the net revenue produced by copper operations. Since it is impossible for a general economic model like REMI to capture all the nuances of the Arizona tax code – especially the taxes assigned to the mining industry and royalties paid for the extraction of minerals on state trust land, we examine fiscal impacts of the Florence Copper project in a separate analysis in the concluding section below. Considerations for recent tax rate changes, e.g. the significant corporate tax rate reductions incorporated in the recently passed Arizona jobs bill, are also considered in the analysis.

5.3 Simulation Results

To model the economic impact of the Florence Copper project, the effects were broken down into three distinct phases. These are (1) the construction phase, (2) the operations phase and (3) the reclamation / closure phase. The timelines for these phases were provided by Florence Copper.

The construction phase is approximately three years in duration, 2012 – 2014. During this time there will also be initial hiring and training of personnel for the later

operations phase, but most of the expenditures and employment will be related to construction of required infrastructure, testing, analysis, and site preparation.

The operations phase extends for a 19 year period, 2015 – 2033. This is the period of greatest economic impact, not only because of its duration, but because it includes the peak employment, income and tax revenue generation periods.

The reclamation/closure phase extends from 2034 – 2039. Mineral recovery employment at the site winds down, but economic activity continues due to reclamation and restoration of the site for future uses.

An important feature of the REMI approach, not available in less complex impact models, is that the REMI impacts include estimates of ongoing economic activity created during the operations phase. As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

Using REMI, the results shown below incorporate the direct economic impacts associated with the establishment and operations of the Florence Copper project as well as the potential indirect impacts that occur due to the increased economic activity associated with the newly established business. Again, it is important to note that all figures presented below are relative to the alternative baseline forecast of no significant copper mining operations in Florence. For instance, if gross state product is estimated to be "x" dollars higher than the baseline case, this does not mean it is x dollars higher than what gross state product is today but it is x dollars higher than what gross state product is forecast to be in that given year if the new business had not located in Arizona.

The fundamental inputs for the simulation in the Florence Copper case include detailed annual expenses for all three phases of the project, including: labor and purchases; estimated operating revenue; and estimates

As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

for employee deployment by type of occupational category. The confidential data are not reproduced in this report but are comparable, in terms of orders of magnitude, to the overall employment and capital investment numbers as shown on the Florence Copper website (www.florencecopper.com).

5.4 Economic Impact Summary

The following tables depict the economic impact of the Florence Copper project on key measures of activity. Table 5.1 is an overall summary, showing annual average impact and total impact on Arizona and Pinal County over the full life of the project.

Table 5.1: Florence Copper Project Economic Impact Summary

Impact Focus	Total Impact	Annual Average Impact
Gross State Product		
Arizona	$2,245.1 mil	$80.2 mil
Pinal County	$1,078.2 mil	$38.5 mil
Employment		
Arizona	-	681
Pinal County	-	406
Personal Income		
Arizona	$1,463.7 mil	$52.3 mil
Pinal County	$709.0 mil	$25.3 mil

Note: dollar values are constant 2011 dollars. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.

Source: REMI model of Arizona and Pinal County economies

5.5 Gross State Product Impact

Florence Copper will add $2,245.1 million to Arizona Gross State Product over the 28 year life of the project.

Gross State Product produced in Pinal County will increase by $1,078.2 million over this period.

Gross State Product (GSP) represents new production, sometimes called "value added." GSP for Arizona and Pinal County contribute to the tally of Gross Domestic Product (GDP) for the nation, our measure of the country's annual output of goods and services. GSP is the most comprehensive indicator of economic performance for a state or region.

The annual average addition to Arizona GSP over the entire project life is $80.2 million (in constant 2011 dollars). The annual average addition to GSP produced within Pinal County is $38.5 million.

5.6 Employment Impact

The Florence Copper project will create and support an annual average of 681 Arizona jobs over the duration of the three phases of activity.

The annual average employment within Pinal County from Florence Copper will be 406 jobs.

The job count includes the direct employment on site, jobs supported in businesses or government agencies that supply goods and services to Florence Copper, as well as induced employment that stems from the expenditures of all these workers as consumers. Approximately 170 jobs will be required at the Florence Copper site for mineral recovery during the operations phase. Over all project phases, more than 500 additional Arizona jobs supported each year will be in other industries in the overall general economy.

5.7 Personal Income

Florence Copper will increase Personal Income in Arizona by $1,463.7 million over the life of the project.

Personal Income to residents of Pinal County will rise by $709.0 million over this period.

The components of Personal Income include wages and salaries of workers, and the contributions by employers to worker social security and benefit accounts. Proprietor's

earnings by owners of small businesses also are included in Personal Income, as well as rental and interest income.

The annual average addition to Personal Income from the Florence Copper project is $52.3 million per year for Arizona and $25.3 million within Pinal County. These additions to aggregate personal income include the wages and salaries paid to the newly created jobs as well as any salary appreciation that accrues across the economy as the induced economic activity creates additional demands for products and services.

5.8 Impact by Project Phase

The economic impact on Arizona and Pinal County will vary during each of the three phases of the Florence Copper project (Table 5.2).

5.9 Construction Phase

The construction phase extends over a three year period from 2012 – 2014. During this time, Florence Copper will invest some $280 million in site preparation, development of ISCR infrastructure, engineering studies, testing and analysis, permits, and initial hiring and training of workers.

The Florence Copper expenditures will increase Arizona GSP during the construction phase by $146.4 million, with $56.1 million of the new Gross State Product originating in Pinal County.

Arizona annual average employment created during this three year period will be 585 new jobs, with 285 in Pinal County.

The addition to Arizona Personal Income during the construction phase will be $87.9 million state-wide. In Pinal County, Personal Income received by residents will rise by $33.8 million.

5.10 Production Phase

The production phase is the Florence Copper phase with the longest duration (2015 – 2033) and the

Annual average employment created during the production phase rises to 787 state-wide, and to 453 within Pinal County.

Cumulative Personal Income accruing to Arizona residents will exceed one billion dollars during the 19 year production phase of the Florence Copper project. Personal Income will increase by $1,129.1 million across the state, and rise by $532.2 million in Pinal County.

greatest economic impact. The addition to Arizona Gross State Product from the production phase will be $1,772.4 million, accounting for 79 percent of the GSP impact over the entire project life. GSP originating within Pinal County will be $833.5 million.

Annual average employment created during the production phase rises to 787 state-wide, and to 453 within Pinal County. Cumulative Personal Income accruing to Arizona residents will exceed one billion dollars during the 19 year production phase of the Florence Copper project. Personal Income will increase by $1,129.1 million across the state, and rise by $532.2 million in Pinal County.

Table 5.2: Economic Impact of Florence Copper Project By Phase

Impact Category	Construction Phase	Production Phase	Reclamation/ Closure Phase	Total Impact
	2012 – 2014	2015 - 2033	2034 - 2039	2012 - 2039
Gross State Product	**Gross State Product by Phase**			**GSP**
Arizona	$146.4	$1,772.4	$326.3	$2,245.1
Pinal County	$56.1	$833.5	$188.6	$1,078.2
Total Employment	**Annual Average Employment by Phase**			**Employment**
Arizona	585	787	392	681
Pinal County	285	453	316	406
Personal Income	**Personal Income by Phase**			**Personal Income**
Arizona	$87.9	$1,129.1	$246.7	$1,463.7
Pinal County	$33.8	$532.3	$142.9	$709.0

Note: dollar values are constant 2011 dollars. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.

Source: REMI model of Arizona and Pinal County economies

5.11 Reclamation/Closure Phase

Although the production phase is expected to continue for nearly two decades, mineral recovery is a temporary land use for the site. Following the completion of ISCR operations at the Florence Copper project, the site will be reclaimed and returned to productive use for residential development, agriculture, recreation or a combination of land uses. Reclamation and closure activities at the Florence Copper project are planned to be progressive, such that some portions of the ISCR production area will be fully reclaimed while others are still in production. Following the completion of all mineral recovery operations, project buildings, facilities and infrastructure will be removed.

The closure phase of the project is six years (2034– 2039). It is important to note that activity in the overall economy created by the Florence Copper project continues to support jobs not only on the project site, but in the region. For example, additional retail and service firms drawn to the area are projected to continue even as copper production declines.

In the reclamation phase, the project still contributes a cumulative amount of $326.3 million to Arizona GSP and $188.6 million of new value added to GSP in Pinal County.

In the reclamation/closure phase, annual average Arizona employment becomes smaller by almost one half, to 392 Arizona jobs, but Pinal County jobs fall by a lesser proportion, to an average of 316 jobs over the six year period.

5.12 Annual Average Impact

The annual average values of impact measures for each phase of the Florence Copper project are set out in Table 5.3. Annual average GSP increases in Arizona by $48.8 million in the construction phase and then nearly doubles during the 19-year production phase ($93.3 million annual average.)

Pinal County GSP more than doubles from the construction to the production phase, rising from an annual average GSP of $18.7 million to $43.9 million during each of the 19 years of the production phase. During the production phase, Pinal County GSP accounts for about 47 percent of new Arizona GSP created by the Florence Copper project. Arizona and Pinal County average annual increases in Personal Income also are greatest in the production phase, and decrease during the reclamation/closure phase as output and employment decline.

Table 5.3: Annual Average Impact of Florence Copper Project By Phase

Impact Category	Construction Phase	Production Phase	Reclamation/ Closure Phase	Project Annual Avg. Impact
	2012 – 2014	2015 - 2033	2034 - 2039	2012 - 2039
Gross State Product	**Annual Average GSP by Phase**			**GSP**
Arizona	$48.8	$93.3	$54.4	$80.2
Pinal County	$18.7	$43.9	$31.5	$38.5
Total Employment	**Annual Average Employment by Phase**			
Arizona	585	787	392	681
Pinal County	285	453	316	406
Personal Income	**Annual Average Personal Income by Phase**			**Personal Income**
Arizona	$29.3	$59.4	$41.1	$52.3
Pinal County	$11.3	$28.0	$23.8	$25.3

Note: dollar values are constant 2011 dollars. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.

Source: REMI model of Arizona and Pinal County economies

5.13 Employment by Industry

The economic development created by the Florence Copper project initially starts with new direct jobs in mineral recovery, but the project ultimately contributes to overall employment gains across the entire economy. The annual average Arizona employment by industry resulting from the project for each phase is shown in Table 5.4.

In the construction phase, it is not a surprise that a considerable number of jobs will be generated each year in the construction industry (63), but even more jobs will be created in professional, technical and administrative services, due to testing, analysis, and other such outlays in the early stages of development.

Table 5.4: Annual Employment Impact by Phase and Industry in Arizona

	Construction Phase	Production Phase	Reclamation/ Closure Phase	Average Employment
Industry	**2012 - 2014**	**2015 - 2033**	**2034 - 2039**	**2012 - 2039**
Mining	23	153	79	123
Utilities	1	5	1	4
Construction	63	76	7	60
Manufacturing	50	16	3	17
Wholesale Trade	26	23	11	21
Retail Trade	48	66	45	59
Transportation, Warehousing	12	14	3	11
Information	6	6	3	5
Finance and Insurance	23	27	8	22
Real Estate, Rental, Leasing	23	37	21	32
Professional ,Technical Services	106	81	35	74
Management of Companies	3	10	2	8
Admin. and Waste Services	49	34	13	31
Educational Services	4	11	9	10
Health Care and Social Assistance	30	53	45	49
Arts, Entertainment, Recreation	7	11	8	10
Accommodation , Food Services	23	41	33	37
Other Services	36	31	14	28
Government	51	92	54	79
Total By Project Phase	585	787	392	681

Source: REMI Model of Arizona economy

As workers spend their earned incomes, additional jobs are created in retail, health care, finance, and other industries of the general economy. Mineral recovery employment increases sharply in the production phase, but jobs in other industries also show a rise, including retail trade, real estate, food services, health care and government.

During the reclamation phase, in addition to mining, the largest sources of employment are government (54 jobs), retail (45 jobs) and health care (45 jobs). These jobs continue even as mineral recovery winds down, because they are now supported by an overall larger economy whose growth was stimulated initially by the Florence Copper project.

Employment creation shown in Table 5.4 is widely diversified beyond the mineral recovery industry and across the 28 year life of the project. Moreover, the new job creation is not dominated by growth in retail, trade and construction – the sectors that have seen the most job creation historically in Arizona.

The industry distribution in Table 5.4 clearly shows how the Florence Copper project will help bring diversity to the mix of jobs across the State. During the production phase, annual average jobs due to the presence of the project are 787. Of these, 634 (four out of five or 81%) are in industries other than mining. This ratio is particularly significant for economic development, as it shows the job-creating effects of a basic industry that brings in external dollars.

During the production phase, annual average jobs due to the presence of the project are 787. Of these, 634 (four out of five or 81%) are in industries other than mining. This ratio is particularly significant for economic development, as it shows the job-creating effects of a basic industry that brings in external dollars.

A comparison of these employment impacts with Table 4.6 in the baseline growth section (Section 4) above reveals that jobs in the mining sector increase approximately 10 fold. Assuming considerable portions of the new professional and technical employment can be retained in the area, employment in these sectors surges by a factor of 3 or 4 during the life of the project.

5.14 Economic Impacts on the Town of Florence

The dynamic economic impact model REMI is designed to estimate economic impacts at the state and county levels over a period of several years. Conceptually a considerable portion of the positive economic impact for Pinal County will accrue to the town of Florence where the direct employment opportunities will be created. Estimating the full economic impact of the Florence Copper project on the Town of Florence and its immediate geography (e.g. surrounding zip code) is challenged by the fact that it is not yet known how many of the new workers will reside in the town and regardless of residency, how many of the new workers will spend dollars on goods and services within Florence.

It is reasonable to expect that the impact results on the Town will be proportional to the number of workers that reside in the Town. Estimates of this impact can be obtained from analyzing the economic impact of a single production year on the zip code containing Florence using the annual model IMPLAN which is designed to allow impact analysis at the zip code level. Maximum impact would be felt if all 161 new Florence Copper workers lived in the town. If only one half lived in the Town, impacts would be reduced in proportion.

IMPLAN, maintained and licensed by the Minnesota IMPLAN Group, Inc. (MIG), is used regularly by regional analysts to estimate economic impacts of new businesses and policy changes at the local level. IMPLAN data and accounts closely follow the conventions and format used by the U. S. Bureau of Economic Analysis in the Regional Input Output Analysis System (RIMS). IMPLAN provides a point-in-time "snap shot" of economic impact, typically for one year, rather than the dynamic multi-year impacts available from the REMI model. However, the benefit from IMPLAN is that the model can be applied to zip code data, as in the current study of the Florence area.

In an average year, the Florence Copper project will potentially create 170 direct jobs and 84 indirect and induced jobs in the Florence area, while adding $16.3 million to income of workers.

IMPLAN analysis indicates that, for an average production year, if all Florence Copper workers lived within the Florence zip code area, the Florence Copper project will create 170 direct Florence jobs plus an additional 84 indirect and induced jobs all within the confines of zip codes 85232 and 85132 (we include both because the census assigns economic activity to both in the base data used by IMPLAN). In addition, using IMPLAN's measures of labor income we find that the Florence Copper project will add $16.3 million in labor income to the geography encompassed by the Florence zip codes. This new labor income captures the wages associated with the new jobs plus wage increments that accrue to existing Florence jobs as the new capital investment stimulates economic activity throughout the town.

While the local impacts are substantial it is likely that IMPLAN actually under-estimates the economic impacts that will accrue to Florence during an average production year since IMPLAN's model for the town is based upon what the town looks like today. As Florence grows, more retail and service establishments will be created and more of the consumer spending activity will likely be retained within the local area.

5.15 Fiscal Estimates with the Inclusion of Royalty Payments

In assessing the total fiscal impact of the Florence Copper project it is important to look beyond the results estimated by REMI. Though useful for some of the revenue implications, overall REMI estimates of fiscal impact are incomplete based on several important aspects. REMI employs census data in compiling fiscal estimates – using ratios of capital investments with reported aggregate revenue streams. But these estimates are based on aggregate data that is skewed by the fact that many companies can take advantage of Arizona's liberal state tax apportionment laws and only a small portion of the State's total capital investments result in payments of severance taxes and royalties.

Independent analysis of the Florence Copper project conducted by the W.P. Carey School suggests that while REMI captures property and general sales tax payments associated with the Curis capital investment, it does not adequately capture Curis' corporate income tax, severance tax and the company's substantial royalty payment obligations that exist for the Florence Copper project. Hence we have chosen not to report the REMI estimated revenues, but have estimated the revenue impact in an independent analysis by W.P. Carey economists. This analysis is informed by updated knowledge of the current and future Arizona tax code, analysis of financial data obtained directly from Curis, and partially from the results of REMI and IMPLAN output.

Using an analysis of financial data on operations received from the Florence Copper project preliminary economic analysis, combined with an analysis that properly accounts for the tax rates that are currently in statute, with corroboration of royalty payment obligations from the Arizona State Land Department, and with corroboration from the Arizona Department of Revenue regarding appropriate methodology for property tax calculations, the fiscal impacts were estimated for the combined State and local levels as shown in Table 5.5. The estimates were formulated under the conservative assumption that the price of copper will be $2.50 in today's dollars over the life of the project. In assessing the fiscal impact we assume the construction phase ends and production begins sometime in the year 2014. Slight changes in the end date for construction and beginning of production would have small impacts on estimates.

The table depicts the individual income, sales and selective sales tax estimates projected by the modeling process. These tax dollars represent the combined tax payments of Florence Copper as well as the tax dollars induced by the indirect economic activity that

Table 5.5: State and Local Fiscal Impact: Revenues Including Royalties

Adjusted Estimates	Construction Phase	Production Phase	Reclamation/ Closure Phase	Cumulative Revenues
Tax Category*	**2012 - 2014**	**2015 - 2033**	**2034 – 2039**	**2012 - 2039**
Individual Income Tax	$1.6	$19.0	$2.6	$23.2
General Sales Tax	$5.9	$42.1	$5.9	$53.9
Selective Sales Tax	$1.6	$11.7	$1.7	$15.0
Adjusted Corporate Taxes @ $2.50/lb **	$7.6	$132.8	$0.7	$141.1
Royalties paid to the State Land Trust @ $2.50/lb	0	$93.7	0	$93.7
State and Local Revenue & Royalty Totals @ $2.50/lb	$16.7	$299.3	$10.9	$326.9
State and Local Revenue & Royalty Totals @ $2.75/lb	$17.2	$319.0	$10.9	$347.2
State and Local Revenue & Royalty Totals @ $3.00/lb	$18.5	$351.5	$10.9	$381.0
State and Local Revenue & Royalty Totals @ $3.50/lb	$21.8	$423.4	$10.9	$456.1

*Values in Millions of 2011 Dollars
**Combined severance, property, corporate, and local mining tax based on confidential estimates
Source: Calculations based on preliminary economic assessment data from Curis Resources, Ltd., W.P. Carey School of Business and REMI Model of Arizona and Pinal Co. economies

takes place as a result of the direct mineral recovery activities. The greatest tax revenues ($299.3 million) are created during the production phase. During that period, state corporate taxes (including severance, property, corporate, and local mining taxes) are $132.8 million. The estimates reflect the impending state corporate tax rate reductions scheduled to begin in 2014 as the copper operations begin ramping up. The estimates also assume that 100 percent of net income from the Florence Copper project will be taxable in Arizona and not be apportioned out of state to other states.

The adjusted fiscal estimates in Table 5.5 show that the Florence Copper project will result in the payment of taxes and royalties to Arizona governments exceeding $325

million dollars over the life of the project. The revenue projections are consistent with the estimates based on annual surveys of mining companies and from summary data available from the Arizona Taxpayers Association and the Arizona Department of Revenue.

Table 5.5 also reveals that the fiscal impact of the project will clearly depend on the price of copper over the life of the project. The baseline estimates discussed above assume that the price of copper is $2.50 in inflation adjusted dollars over the life of the mine. Simulations of revenue impact using $2.75, $3.00, and $3.50 are depicted in Table 5.5 for all state and local governments. The analysis reveals that state and local tax collections will range from $326.9 million at a price of $2.50 per pound to a sum of $456.1 million should copper average $3.50 per pound over the life of the mine as property, income, severance and royalty payments rise accordingly.

As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

The local community and Pinal County will benefit from portions of the sales, income, and severance tax collections, while significant shares of the property and local mining taxes will directly benefit local taxing jurisdictions. As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

Arizona's state and local governments have experienced substantial revenue declines over the past several years. Quite clearly the revenue impact of any single capital investment like the Florence Copper project cannot make up for the revenue erosion that has taken place. However, the simulations in this section reveal that considerable tax revenue will accrue in association with this capital investment and it will be realized following a period of considerable revenue shortfalls. The impact that it will have on both State and local governments will be important and will result in much needed funding for local public services, especially local school districts.

5.16 Fiscal Impact on the Town of Florence

The revenue estimates discussed above pertain to the dollars that will accrue to state and local coffers as a result of the Florence Copper project. Tracking those dollars that will accrue to the Town of Florence can be accomplished using estimates from the IMPLAN zip code model and from company supplied estimates of local and town property and mining taxes. This analysis reveals that over the life of the project, the Florence Copper project will contribute about $60 million dollars to town coffers as a new taxpayer.

Table 5.6 also reveals that the fiscal impact on Florence will depend upon the price that copper maintains over the life of the project. Revenues that will accrue to the Town of Florence will range from about $60 million in the baseline $2.50 per pound case up to $80 million should prices maintain a $3.50 per pound price level over the life of the project.

These estimates understate the actual estimates of revenue to the town for several reasons. The IMPLAN model is based on the economic size of Florence today and as retail establishments grow over time, the town will be able to retain a greater share of the expenditures induced by the Florence Copper project. Moreover, the project will generate hundreds of millions of dollars for State and County governments and an even greater sum for the Federal Government. The town receives block grant dollar distributions from the State and Federal government based on population counts and is, of course, home to the County seat for Pinal County. So it is likely some amount of the revenues produced at other government levels will ultimately return to Florence.

Table 5.6: Florence Local Fiscal Impact: Revenues

Adjusted Estimates	Construction Phase	Production Phase	Reclamation/ Closure Phase	Cumulative Revenues
Tax Category*	**2012 - 2014**	**2015 - 2033**	**2034 - 2039**	**2012 - 2039**
Sales Tax	$3.3	$16.0	$2.5	$21.8
Adjusted Local Corporate Taxes @ $2.50/lb**	$2.6	$35.8	$0.0	$38.4
Florence Totals @ $2.50/lb	$5.9	$51.8	$2.5	$60.2
Florence Totals @ $2.75/lb	$6.1	$56.6	$2.5	$65.2
Florence Totals @ $3.00/lb	$6.4	$61.4	$2.5	$70.3
Florence Totals @ $3.50/lb	$6.8	$71.0	$2.5	$80.3

*Values in Millions of 2011 Dollars
**Combined local property, and local mining tax based on confidential estimates
Source: Calculations based on preliminary economic assessment data from Curis Resources, Ltd., W.P. Carey School of Business, IMPLAN Model of Florence and encompassing zip code area.

5.17 Overall Economic Impacts

During the 28-year life of the project, Florence Copper will create significant economic benefits for Arizona and Pinal County. Arizona Gross State Product will be enhanced by a cumulative value of $2,245.1 million, with $1,078.2 million originating in Pinal County, creating jobs and contributing to Personal Income.

Florence Copper will create and support an annual average 681 direct and indirect jobs in Arizona and 408 will be in Pinal County. Mineral recovery jobs will only account for 18 percent, as most (four out of five) will be in other industries in the regional economy.

Total Personal Income generated over the life of the project will be $1.4 billion, with over $700 million going to Pinal County workers and business owners. Over the 28 years of the project, significant revenue will accrue to Arizona governments. There will be over $325 million of Arizona government combined state and local revenues and state land trust royalties created, with approximately $60 million accruing to the Town of Florence.

6 WORKFORCE ANALYSIS

A qualified workforce is essential to successful operation of any enterprise. The conclusion from the analysis below is that two-thirds of the workforce occupations required for operation of the Florence Copper project are likely to be available locally (Pinal County). Of the remaining one third, there are sizeable labor pools available in the state for the more general category of occupations. Implementation of the Florence Copper local hiring policy will stimulate development of training programs in partnership with local organizations and institutions, such as Arizona Central College, University of Arizona, Arizona State University and local school districts.

6.1 Historical Background

Mineral recovery, specifically copper mining in Arizona and the U.S. Southwest, is of inestimable significance historically, and continues to be vital in our modern technological economy. Copper mining is a basic, traditional and essential Arizona industry. Without it, Arizona would be significantly less prosperous today.

Archeologists have determined that mining in the region began many hundreds of years ago, as Native Americans extracted minerals from surface pockets to fashion tools, weapons and adornments. New World explorers and prospectors discovered significant copper deposits in what is now Arizona.

Arizona's first mining company of record was established in 1854. By the mid-1860s, when Arizona's initial territorial government was created, one out of every four residents in the new territory was in the workforce as either a miner or a prospector.

By 1910, Arizona was the largest copper producing state in the nation, accounting for more copper production than all other states combined. Arizona's dominance in copper production continues today. A century later, according to the U.S. Geological Survey, 2010 copper output for the nation was 1.1 million tons, and more than 700,000 tons were produced by Arizona operations. The value of this Arizona production was $6 billion.

Over the past 50 years, copper production in the state has typically ranged between 700,000 and 1,000,000 metric tons annually. Copper production peaked in 1997, exceeding 1.2 million metric tons (U.S. Geological Survey, *Minerals Yearbook: Copper*, 2000).

6.2 Arizona Mining Workforce

While annual copper production and output have fluctuated due to cycles in price and demand, the size of the mining workforce in the state has trended downward, primarily due to labor-saving technological advancements in the extraction process.

Mining employment in Arizona peaked in the 1970s at more than 25,000 workers (Figure 1). The low point for employment was 8,400 in 2003. Since 2005, mining employment in the state has averaged 11,000 workers (source: *U.S. Bureau of Economic Analysis*; the BEA figure includes workers for mining firms, as well as self-employed workers and proprietors of small firms).

6.3 Pinal County Mining Employment

Pinal County mines have played an important role in the Arizona copper industry for the past 100 years.

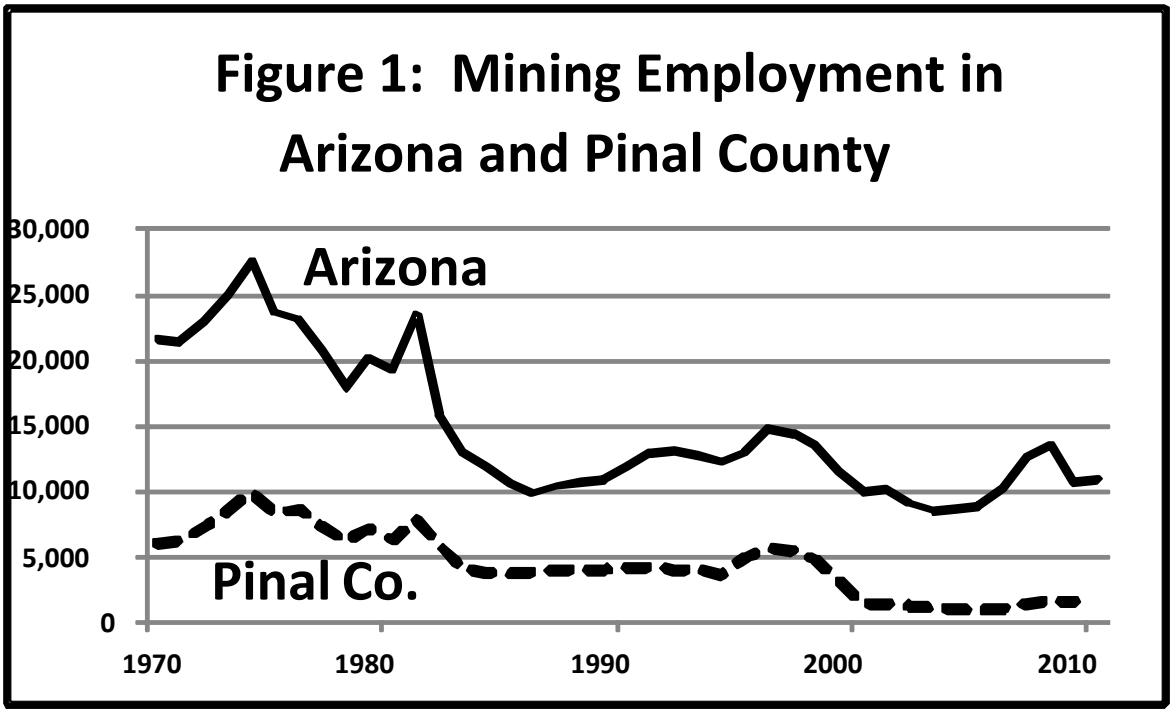
The Ray mine opened in 1912 with more than 1,500 workers and only fell below 1,000 workers after the start of the Great Depression. The Ray mine still employs several hundred workers today. Other important Pinal County mines include the Magma mine (opened in 1913) and the San Manuel mine, which employed more than 3,000 workers from the mid-1970s to the 1990s.

Mining employment in Pinal County followed the same growth pattern as in Arizona over the past 50 years (see Figure 1). Pinal County mining peaked at 9,800 in 1974. At this time, mining in the county accounted for just over one third of all mining jobs in the state (Figure 2).

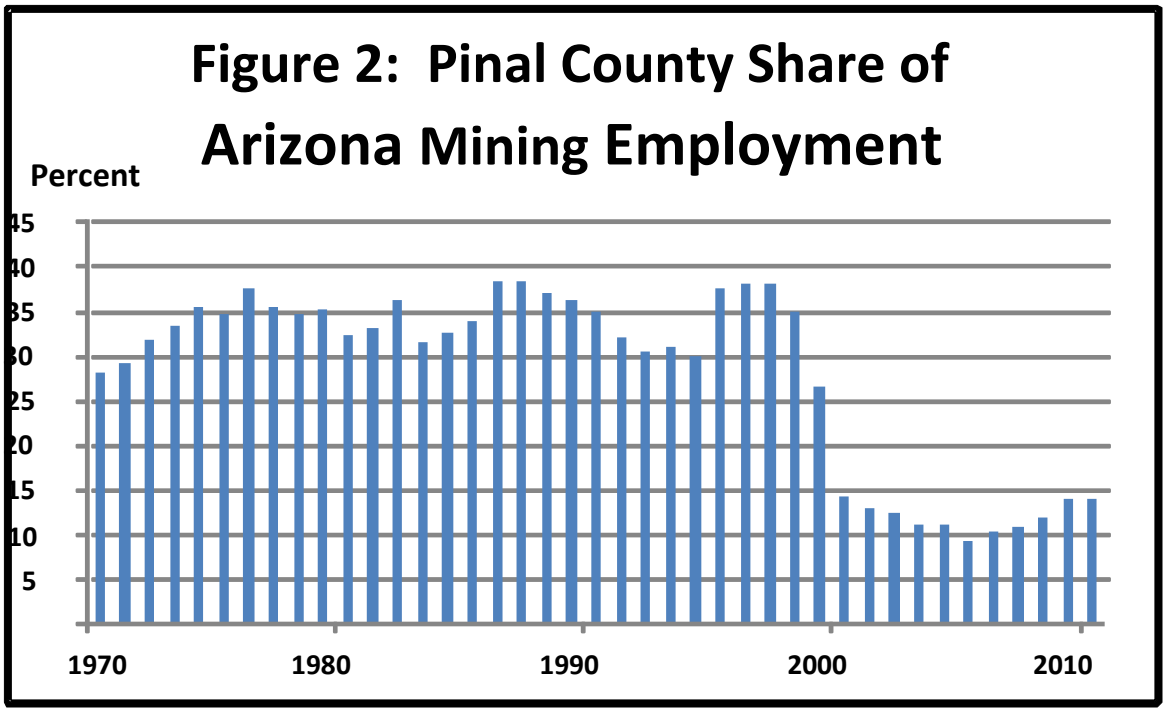
Pinal County's greatest share of Arizona mining employment came in 1996 and 1997, as copper production was at its all-time high in the state. In both years, Pinal County mining employment made up 38 percent of overall state mining employment.

Pinal County's current share has increased gradually over time from a low of 9.4 percent in 2005, the weakest year for mining jobs as a percentage of all Arizona mine employment. Current employment in mining in the county is now up by 80 percent from the 2005 low of 836 mining workers.

As of 2010, there were approximately 1,500 workers in the mining industry in Pinal County, accounting for about 14 percent of the state total.



Source: *U.S. Bureau of Economic Analysis*



Source: *U.S. Bureau of Economic Analysis*

6.4 The 2008-2009 Recession

Despite the worst economic recession since the Great Depression, copper employment in Arizona has remained relatively stable in recent years. This is important to note because overall non-agricultural payroll employment in the state decreased by some 300,000 jobs from 2007 to 2010.

In fact, employment in copper mining actually rose during the first year of the national recession, 2008, as global copper prices increased and production followed suit. Employment declined in the next year, then recovered in 2011 (Table 6.1). Compared to October of 2010, payroll employment in Arizona copper firms was greater in October of 2011 by seven percent. Overall Arizona employment during the same period was up by only two percent.

Table 6.1: Arizona Copper Employment

Year	Employment
2006	7,200
2007*	8,700
2008	10,700
2009	8,500
2010	8,600
2011**	9,200

Source: *U.S. Bureau of Labor Statistics*; figures are for payroll employment and do not include proprietors or self employed.
*U.S. recession began Dec. 2007
**Employment October, 2011

The relative stability of copper employment as compared to other industries can be explained by copper's role as a basic requirement for modern industry, not only domestically but globally.

As the housing bubble deflated, Arizona construction employment decreased by 134,000 jobs between the summer of 2006 and mid-2011, a decline of more than 50 percent. The contraction was due to a complete collapse of demand in the face of rising unemployment, falling home prices, and tighter credit in Arizona. In contrast, long term demand for copper has continued to increase. Copper is needed as a basic component to support new technological products and the

services they provide. From electric wiring to car batteries to high technology applications, including solar energy, massive amounts of copper are consumed annually.

With the rise in consumption by developing nations (China and India) copper demand today is affected significantly by world market conditions. Emerging economies have grown substantially in the last two decades; demand has skyrocketed and supply in many traditional markets, e.g. Chile, has fallen. Copper inventories remain stubbornly low. As a result, copper employment is relatively stable and, as shown below, compensation in the industry is well above average.

6.5 Compensation by Industry

According to figures compiled by the U. S. Census Bureau for 2010, compensation in copper mining in Arizona is higher than for any other industry.

The overall average compensation for all Arizona industries in 2010 was $54,716. Copper industry compensation was $78,961, some 44 percent greater than the state average for all other industries.

Table 6.2: Arizona Compensation: 2010

Sector	Compensation
Copper	**$78,961**
Arizona Average	*54,716*
Manufacturing	76,612
Government	63,319
Health Care	50,506
Finance	43,912
Construction	39,441
Retail	29,913

Source: *U.S. Census 2010*

According to the U. S. Census Bureau the overall average compensation for all Arizona industries in 2010 was $54,716. Copper industry compensation was $78,961, some 44 percent greater than the state average for all other industries.

Compensation is defined to include not only wages paid to workers, but also contributions by employers to pensions and other benefits, as well as employer social security contributions.

Average copper industry workforce compensation is 56 percent greater than health care, twice as large as construction, and more than two and one half times larger than retail compensation.

The pay gap between industries such as copper or manufacturing, which serve external markets and other industries which serve local markets, again helps to illustrate the importance of basic industries to economic development. A "rooftops" strategy of growth, solely depending on jobs that serve local populations, creates much lower paying employment than industries such as copper and manufacturing, where compensation is set by national or global market forces, as noted above.

A "rooftops" strategy of growth, solely depending on jobs that serve local populations, creates much lower paying employment than industries such as copper and manufacturing, where compensation is set by national or global market forces, as noted above.

6.6 Types of Mining Jobs

Copper mining in Arizona is often associated with traditional operations, such as open pit or underground mining to extract and process copper. These extraction operations typically involve blasting deposits with explosives, and transporting the material in gigantic trucks or movers for further processing. Because copper mineralization is highly diffused throughout deposit formations, a massive amount of rock must be processed to obtain even a small amount of copper from open pit mining.

The Florence Copper Project is different. The in-situ copper recovery (ISCR) method proposed for Florence does not depend on blasting or movement and processing of large quantities of rock material. Instead, the ISCR is based on the injection and recovery of a low pH solution into a soluble copper deposit, a process that yields a copper-rich solution that is pumped to surface and captured for further processing.

The design of in-situ well fields calls for a ring of four recovery wells surrounding each injection well, creating a hydrologic flow that allows for full recapture of all solution. Observation and monitoring wells are also employed to ensure that surrounding groundwater resources are not affected. Once recovered, copper bearing solution is

sent to a solvent extraction/electro winning (or SX/EW) plant for the on-site manufacture of 99.999% pure copper cathode sheets.

As such, the Florence Copper project will not feature a large open pit, waste rock piles, tailings impoundments or other large surface features. It will function with a well-field, solution storage tanks, an SX/EW plant and associated administration, transport, and power infrastructure.

Because the planned ISCR process is operationally and technologically different from more conventional mining practices found in Arizona, the workforce occupational mix required for operating the Florence Copper project will be different as well. The comparison between the typical mineral development workforce and the Florence Copper project workforce is set out in Table 6.3.

Table 6.3: Occupations in U. S. Mineral Mining Compared To Florence Copper Project Workforce

Category	U.S. Workforce Distribution	Florence Copper Project Workforce
All Occupations	100.0%	100.0%
Administration, Business Financial, Office	17.3	16.1
Scientific, Technical, Engineering	9.1	18.7
Operations, Extraction	51.3	26.7
Maintenance, Materials Equipment, Storage	22.3	38.5

Source: U.S. Bureau of Labor Statistics, National Employment Matrix, 2008 Curis Resources, Ltd.

Florence Copper Project proposes minimal disturbance to the surface or aesthetics of the land during extraction. Nationally, based primarily on conventional mining practices, about one half of mineral mine workers in the United States are involved directly in extraction. The remainder is distributed over other types of occupations, such as administration and maintenance. Conventional mining also employs scientific and technical workers.

For example, geologists are required to identify deposits, mining engineers are needed to design the structure of the mine itself, industrial engineers oversee operations for maximum productivity, and mechanical engineers are needed to keep facilities functioning properly.

The Florence Copper in-situ process will require a higher proportion of scientific and technical workers than the national average for mineral extraction. Conversely, the Florence Copper project will be characterized by a much lower proportion of operations and extractions workers.

The Florence Copper in-situ process will require an even higher proportion of scientific and technical workers than the national average for mineral extraction. Conversely, the Florence Copper project will be characterized by a much lower proportion of operations and extractions workers.

Nationally, fewer than 10 percent of mine employees are in scientific, technical, or engineering occupations. The Florence Copper Project will have a workforce made up of 18.7 percent of workers with these qualifications, double the national proportion.

Operations and extractions workers will make up 26.7 percent of the Florence Copper Project workforce. This share is only about one half as many operations or extraction workers as found in conventional mining operations at the national level.

However, the administration and business support proportions are very similar for a typical mine and the Florence Copper project. These jobs include accountants, buyers, clerks, and their managers and supervisors.

The maintenance and equipment category is larger for the Florence Copper project, with 38.5 percent of the workforce in these occupations. Unlike a conventional mine,

a majority of the workers at the Florence site must be skilled in technical fields, such as maintenance of advanced electronic equipment and chemical materials storage.

In summary, the Florence Copper project workforce will emphasize technical knowledge, equipment maintenance, and materials, as compared to conventional mining which emphasizes lower-skilled extractions occupations and handling of less refined materials and products.

The difference between the in-situ occupational mix and conventional mining operations has implications for worker wages and, by extension, the overall economic benefits of the Florence Copper project.

Scientific and technical occupations have higher pay rates than lower-skilled extraction jobs. As an example, consider pay for environmental engineers compared to extraction workers, as categorized in the Occupational Employment Statistics of the U. S. Bureau of Labor Statistics. The hourly pay for mine extraction workers is $20.14 and for environmental engineers it is $34.98, some 70 percent greater (excluding benefits).

Although Florence Copper pay scales are not yet set, it is likely that total wages and salaries paid will be greater than the typical mining operation, since there are twice as many (high paid) scientific workers and only one half as many extraction workers.

6.7 Local Hiring Policy

Curis Resources (Arizona) Inc., the proponent of Florence Copper, mandates a hiring and procurement policy for the company, contractors, and consultants. Details of the policy are as follows:

- Ensure that local people receive priority consideration for employment, based on qualifications and merit;
- Ensure that local companies (contractors, suppliers and consultants) receive priority consideration for contract opportunities, based on qualifications and merit;
- Where possible, provide or facilitate access to training to ensure that local residents gain the skills and qualifications necessary for employment; and
- Where possible, assist local companies to identify future contract opportunities and to build the capacity necessary to benefit from these opportunities.

Florence Copper emphasizes that the first consideration for awarding new employment and contract opportunities will always be qualifications and merit. Among qualified candidates and companies, preference will be given to those in closest proximity to Curis' operations.

To evaluate the potential for filling positions with qualified applicants from the local workforce, a listing of typical occupations expected to be required was obtained from Florence Copper. These occupations were developed by M3 Engineering of Tucson, Arizona, under contract with Curis Resources. In all, 36 broad categories of occupations were identified.

The listing of potential Florence Copper project occupations is shown in Table 6.4. Occupations are typical but the list is not necessarily complete or fully representative of occupations once future operations are underway.

The availability of local workers with necessary skills and experience was evaluated by review of Occupational Employment Statistics for Pinal County, as compiled and published by the U. S. Bureau of Labor Statistics. This publication provides information on some 800 occupational categories within Pinal County, including number of workers in 2010, and average and median wages.

Table 6.4 lists 26 of the occupations required for operation of the Florence Copper Project. These 26 occupations met a cut-off criterion of more than 20 Pinal County workers in this occupation local labor pool as of 2010. The labor pool figures indicate how many such workers are already in the county that might be interested in relocating or commuting to Florence to a new job at the Florence Copper site.

Importantly, unemployment in Pinal County averaged 11 percent for calendar year 2011, so some of these workers will be immediately available due to weakness in the local labor market.

Workers in Table 6.4 are arranged in order of the greatest number by occupational category. For example, in Pinal County there are 960 mechanics, 920 warehousemen, 560 administrative assistants, 270 security guards, and, further down the list, 40 human resources (HR) managers, all occupations required for Florence Copper.

It is likely that many of the workers listed in Table 6.4 are employed at one of the Florence correctional facilities, since correctional jobs account for 47 percent of the overall total of 8,136 current jobs in the Town of Florence.

Table 6.4: Local Workforce Availability for Typical Florence Copper Project Positions

Florence Copper Position	Pinal Co. Labor Pool	OES Code	OES Occupational Definition
Mechanic/Welder	960	49-9071	Maintenance and Repair Workers
Warehouseman	920	53-7062	Laborers and Material Movers
Operations Manager	570	11-1021	General and Operations Managers
Administrative Assistant	560	43-6014	Secretaries and Admin. Assistants
Accounts Payable	420	43-3031	Accounting Clerks
Supervisor	390	51-1011	Supervisors of Production Workers
Laborer	300	47-2061	Construction Laborers
Security Guard	270	33-9032	Security Guards
Senior Accountant	240	13-2011	Accountants and Auditors
Shift Supervisor	210	49-1011	Supervisors of Mechanics, Installers
Admin. Manager	180	11-3011	Administrative Services Managers
Superintendent	130	47-1011	Supervisors of Extraction Workers
Electrician/ Instrumentation	130	47-2111	Electricians
Water Treatment Operator	100	51-8031	Water Plant Operators
IT Technician	100	15-1799	Computer Occupations
Payroll Accountant	80	43-3051	Payroll and Timekeeping Clerks
Maintenance Planner	70	43-5061	Production, Planning Clerks
Purchasing Manager	70	11-3061	Purchasing Managers
Mechanic Helper	60	49-9098	Helpers--Installation, Repair
HR Manager	40	11-3121	Human Resources Managers
Pipe Fitter	40	47-2152	Plumbers, Pipefitters,
Technical Manager	30	11-9041	Engineering Managers
Project Engineer	30	17-2151	Mining Engineers
Surveyor/Technician	26	17-1022	Surveyors
SX/EW Helper	22	47-5081	Helpers--Extraction Workers
Community Affairs Manager	22	11-2031	Public Relations Managers

Sources: Sample position categories provided by Florence Copper; Pinal County employment by occupation from U.S. Bureau of Labor Statistics, *Occupational Employment Statistics* (OES), 2010.

Where the analysis found 100 or more workers available within Pinal County, it appeared evident that there was a sufficient quantity of potential workers in those occupations to readily fulfill the local hiring policy requirement.

The first 15 occupations listed in Table 6.4 have a labor pool of 100 or more workers. Therefore, just over 40 percent of Florence Copper occupations met this sufficient standard, mostly workers in basic operations and office positions.

Florence Copper employment in these 15 occupations is projected at 81 workers, according to the preliminary staffing analysis from M3 Engineering. This would account for slightly less than one half of the projected Florence Copper total employment of 170. Meanwhile, the sum of Pinal County workers by occupations in the first 15 categories listed is 5,830. Therefore, the labor pool is significantly large to suggest that attracting workers would be quite feasible.

Table 6.5: Workforce "Gap" Occupations - Restricted Local Labor Pool

Florence Copper Position	Pinal Co. Labor Pool	OES Code	Maricopa Co. Labor Pool	Arizona Labor Pool
Purchasing Assistant	20	43-3061	620	1,130
Warehouse Manager	20	11-3071	1,450	2,020
Environmental Engineer	20	17-2081	520	750
Metallurgist	20	17-2131	650	770
SX /EW Operator	18	47-5049	NA	130
Cathode Handling	12	47-5099	NA	88
Safety Specialist	10	29-9011	390	680
Geologist	5	19-2042	165	770
Safety Manager	4	11-9161	96	150
Wellfield/Pump Operator	4	53-7072	117	170

Sources: Sample position categories provided by Florence Copper; Arizona, Maricopa Co. and Pinal Co. employment from U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES), 2010.

The analysis found between 21 and 99 workers in Pinal County for 11 additional occupations in Table 6.4. This quantity appeared "limited," but it is still likely that many of the positions could be filled locally.

Where the analysis found 20 or fewer workers in Pinal County, those occupations appeared to be "restricted," creating a gap between supply and demand. Local hiring, while still certainly feasible, is somewhat less likely than in the other categories. There were 10 occupations in this category.

These 10 occupations were broken out in Table 6.5 to show the size of the labor pool in Maricopa County and Arizona. If the gap could not be closed from Pinal County workers, the next alternative would be to attract workforce participants from other counties or the state labor pool, if available.

For several of the occupations seen as restricted for local hire, a much larger labor pool of workers with similar qualifications is available in neighboring Maricopa County, due to its sizeable workforce and population. An example is warehouse manager, with 20 workers listed by the Bureau of Labor Statistics in Pinal County. In Maricopa County, there are 1,450 warehouse managers. It is not known how many reside in the Southeast part of the County and would be willing to commute immediately to the Florence area or to relocate to Florence.

Those occupations associated specifically with mineral extraction activity may not be found in any significant numbers in Maricopa County, due to an absence of established copper mining in the county.

The SX/EW operator position is not even listed by the Bureau of Labor Statistics as an occupation in Maricopa County, nor is an occupation consistent specifically with cathode ray handling. But statewide, there are 130 SX/EW operators that could enter the Florence Copper project workforce. While there is a gap between local demand and supply, there are workers available across the state.

The conclusion from the above analysis is that two-thirds of the workforce occupations required for operation of the Florence Copper Project are likely to be available locally (Pinal County). Of the remaining one third, there are sizeable labor pools available in nearby Maricopa County for the more general category of occupations.

For a few occupations requiring specialized skills in mineral recovery, there is a gap between supply and demand. Workers in somewhat shorter supply must be attracted from Pinal County mine sites, or other mine operations elsewhere in the state, but probably not from Maricopa County. Alternatively, workers (particularly those from the local area) could be trained in the skills required for the Florence Copper project positions.

6.8 Florence Advantages

The Florence Copper project has several advantages to rely upon to attract workers as operations commence.

Of first priority would be the nature of the work, the compensation, and the benefits. The in-situ process is technologically advanced compared to conventional mining, and could be seen by many applicants as preferable to work in an open pit environment. Scientific and technical workers in particular could enhance their professional qualifications through involvement in the in-situ process. Again, over 18 percent of Florence Copper occupations are in this category, a percent twice that of conventional mining.

Arizona mineral producers tend to offer competitive compensation packages, which is attractive to persons working in other industries. As shown in Table 6.3, 16.1 percent of positions are administrative in nature, and a background in mining is not a strict necessity.

The Town of Florence and its location within the Greater Phoenix metropolitan area is another advantage. Mineral operations must locate where the ore deposits are found, and these are not usually near major metropolitan areas. Workers at the Florence Copper project would have access to the small-town amenities of Florence as well as medical, educational, and commercial services in the Phoenix area with a shorter commute vs. most other mining sites in the region.

Although high unemployment rates in recent years have increased the supply of available workers, the slow economy has also resulted in falling home prices and weak housing markets. Excellent housing is available in Florence, but workers that wish to relocate to Florence may be unable to do so immediately because they cannot sell their existing homes. This may represent a challenge, at least in the near term.

6.9 Workforce Recruiting

Recruiting of workers today has rapidly become more internet-based. Postings on web sites are now as important as more traditional methods of publicizing position openings, such as newspapers and trade publications. Florence Copper positions should be listed on the Curis website directly, as well as sites such as the following:

Careerbuilding.com

Findtherightjob.com

Greenjobsearch.com

Indeed.com

Jobing.com

Jobsonline.net

Monstor.com

Simplyhired.com

High unemployment rates have made "job fairs" very popular. In the job fair setting, several employers combine to meet and interview potential applicants. These events, if publicized in advance, typically draw large numbers of applicants. Position postings, job fairs, and other activities related to workforce development and recruiting are supported by a number of government programs in Arizona.

The State of Arizona provides workforce support to businesses and employers primarily through the activities of the Arizona Commerce Authority and the Governor's Council on Workforce Policy.

The newly structured Arizona Commerce Authority is charged with expanding Arizona business opportunities internationally and domestically. The Business Development group of the Arizona Commerce Authority has specific responsibility for supporting growth of Arizona businesses. The Workforce Services group offers assistance in recruiting and workforce training with services including customized training and various incentive programs such as tax credits and outright grants for training for new jobs.

Detailed information on Authority programs is available by contacting the Arizona Commerce Authority at 602-845-1200 or visiting their offices at 333 N. Central Avenue, Suite 1900, in Phoenix, Arizona (website: http://www.azcommerce.com/).

The Governor's Council on Workforce Policy has developed the Arizona Workforce Connection website (http://www.arizonaworkforceconnection.com) as a source of information on recruiting and employment for businesses and job-seekers. Topics covered include educational and government programs, human resources contacts, legal and labor relations information, various incentive programs, and many other elements of the Arizona workforce environment.

The Arizona Workforce connection website also serves as a portal to the One-Stop Service Centers located within each Arizona County. These centers support business development by providing employee recruiting, screening, and training programs. Services to job seekers include job listings, career counseling, resume development and job training. The intent is to streamline the recruiting and job placement function for both business and workers. Pinal County One-Stop Service Centers are located in Casa Grande (520-425-3101), two locations in Coolidge (520-723-5351 and 520-426-4444), and two locations in Apache Junction (520-293-1919 and 520-982-7261).

6.10 Local Workforce Training

While internet postings, newspaper ads, and vacancy listings will attract qualified applicants from neighboring counties and the state, Florence Copper has a policy to hire qualified local workers from Pinal County and the immediate Florence area. The Pinal county workforce averaged 128,000 during 2011, according to the *Arizona Workforce Employment Report* of the Arizona Department of Administration. Florence labor force numbers are not yet available from the 2010 Census, but were estimated to be 3,628 in 2008 by economic development officials in Pinal County. Unlike communities in the Eastern section of Pinal County, the Florence area does not have a large local employment base in mineral recovery. Therefore, implementation of the local hiring policy will require development of training programs in partnership with local organizations and institutions.

An underlying demographic characteristic of Florence, as shown by analysis of population data, is a tendency of younger residents to leave seeking employment outside the area. Since Florence Copper will emphasize local hiring, opportunities will

be created for young workers willing to participate in education and training leading to careers in mineral resource recovery.

An important local organization aimed at developing career paths for local high school students is the Central Arizona Valley Institute of Technology (CAVIT). CAVIT is a public school district that works in partnership with area high schools including

1. Casa Grande Union High School
2. Coolidge High School
3. Florence High School
4. Maricopa High School
5. Poston Butte High School
6. Santa Cruz Valley Union High School
7. San Tan Foothills High School
8. Vista Grande High School

CAVIT, supported by Florence and Pinal County taxpayers via property tax assessments, aims to work with 11th and 12th grade students to prepare them for higher wage jobs while still in high school. Most CAVIT programs (such as in health care, fire science, and law enforcement) offer opportunities for high school students to enroll in courses offered by Central Arizona College, earning college credits while still in high school. Following the structure of existing CAVIT programs at the high school level, a program could be developed in mineral recovery, combining internships with basic courses in geology, business, and environmental science at Central Arizona College. High school graduates would be candidates for immediate employment at Florence Copper, or would be prepared for further education at Central Arizona College.

Degree fields currently offered that would provide appropriate training for Florence Copper employment include accounting, business, computer information, operating engineering, and plumbing trades. Recommended course work would include selections from geology, environmental science, electronics, technology, welding and civil technology, all currently offered by Central Arizona College. Florence Copper

internships and partial or complete scholarships to particularly capable candidates would provide an effective incentive for applicants.

A similar program had good success at Eastern Arizona College in partnership with Phelps Dodge Mining Co., and later with Freeport-McMoran Copper & Gold. Beginning in 2006, Eastern Arizona College offered three mining related occupation tracks – diesel technician, electrical and instrumentation technician, and industrial plan technician. Certification required completion of two complete semesters of training. Students also had the option to continue with a second year of course work to earn an associate degree in applied science.

Students accepted into the program were provided scholarships covering tuition, fees and books, from the mining partner. A paid internship at Safford or Morenci mine was included as a component of the program. Enrollment peaked in 2007, with 44 students graduating from the training and moving into full time positions at the Safford or Morenci mines. The program was discontinued after the conclusion of the class finishing in 2010.

For those Florence Copper occupations requiring a full four year college degree, programs related to mining and geology are available at both the University of Arizona and Arizona State University. An effective method of recruiting through these programs is internships that allow the intern and employer to determine suitability of a full time appointment.

6.11 Workforce Summary

Copper has been important to Arizona's economy for well over a century, as mining drew the first settlers to the Arizona Territory. And still today, Arizona holds a position as the leading copper producer among all states.

The advance of technology has changed the nature of copper production, while at the same time it is technology that drives the demand for copper in numerous applications in industry and consumer products. With the rise in consumption by developing nations (China and India) copper demand today is affected significantly by world market conditions. Emerging economies have grown substantially in the last two decades; demand has skyrocketed and supply in many traditional markets, e.g. Chile, has fallen. Copper inventories remain stubbornly low. As a result, copper employment is relatively stable and compensation in the industry is well above average.

The Florence Copper project brings another advance to the industry with the in-situ process. Operations will employ a higher proportion of scientific and technical workers and only half as many extraction workers as a conventional recovery process. Nationally, fewer than 10 percent of mine employees are in scientific, technical, or engineering occupations. The Florence Copper project will have a workforce made up of 18.7 percent of workers with these qualifications, double the national proportion.

The Florence Copper local hiring policy is intended to ensure that local people receive priority consideration for employment, based on qualifications and merit. Analysis of the Pinal County workforce indicates that two thirds of Florence Copper occupations can be staffed from the existing local labor pool. Other workers will be attracted as new residents to the area, drawing from the Greater Phoenix labor market or from across the state, relying on cooperation from organizations such as the Arizona Commerce Authority.

An underlying demographic characteristic of Florence, as shown by analysis of population data, is a tendency of younger residents to leave seeking employment outside the area. Florence Copper will create opportunities for those young workers willing to participate in education and training leading to careers in mineral resource recovery. Implementation of the local hiring policy will stimulate development of training programs in partnership with local organizations and institutions, such as Arizona Central College, University of Arizona, Arizona State University and local school districts.

Implementation of the local hiring policy will stimulate development of training programs in partnership with local organizations and institutions, such as Arizona Central College, University of Arizona, Arizona State University and local school districts.

The result will be to increase employment, incomes and overall economic diversity in the area. High wage jobs in a basic industry aimed at external markets will create strong demand for goods and services locally, supporting additional new local jobs in supplier and consumer industries.