
5.0 Policy, Regulatory, & Plan Review

5.1 Summary

Several actions taken by the City and County during the past few years will help further well planned growth in the urban area. Among the most promising developments are the emergence of a regional discussion of the impacts of growth and desirable growth patterns, the introduction of planned growth as an issue in infrastructure planning, and a commitment by the City to follow the recommendations of the Transportation Evaluation Study and update the Comprehensive Plan. Adoption of more specific strategies or plans could exert more influence on the MRGCOG's metropolitan transportation planning process.

At the same time, the Extraterritorial Land Use Authority has reduced the City's control over development at the City's edges. The long-term impact of the Extraterritorial Land Use Authority remains to be seen, and the ability of the City and County to agree on growth policy is critical to successful long-term development in the extraterritorial zone. Individual decisions regarding major Planned Communities could open up an area perhaps double the anticipated land needs for the next 25 years. Through annexation and other controls, however, the City has an opportunity to affect the compatibility of these developments with planned growth strategies, such as promoting transit and mixed-use development. The phasing and timing of development in Westland, Quail Ranch, and Mesa del Sol will be critical to the City's ability to influence a Downtown renaissance, promote revitalization of existing neighborhoods, and manage its capital infrastructure during that time period.

5.2 Background and Overview

In this chapter, we review and evaluate plans and policies that affect or could affect the development of a City and County planned growth strategy. Because similar work was done for the Transportation Evaluation Study, this review addresses only those policies that have been adopted or set in motion by the City of Albuquerque or Bernalillo County since work was completed on the Transportation Evaluation Study.

5.2.1 Transportation Evaluation Study Summary

Begun in 1995, the Transportation Evaluation Study was designed to develop a clear, long-range vision for guiding growth in the Albuquerque Metropolitan Area. Its final report recommended a departure from the current trend of dispersed development on the City's fringe to a more compact urban form and a better integrated set of land use and transportation policies for the urban area. The four defining concepts of the Downtown Alternative are to (1) Revise the institutional framework to achieve the goals of the Comprehensive Plan and implement the Downtown Alternative vision; (2) Encourage a more efficient delivery of urban services by promoting a more compact urban form; (3) Promote higher density, mixed-use

patterns of development in major centers and corridors; and (4) Implement high occupancy, high capacity transportation improvements in major transportation corridors.

5.2.2 Growth Policy Framework (R-70)

In September 1998, the Albuquerque City Council unanimously approved Resolution 70, which adopted a growth policy framework for the City based on the Transportation Evaluation Study principles of a more compact urban form and network of corridors and centers. It called for the City to:

- Restructure its payments and financial incentives to support infill and development in centers and along major corridors as opposed to fringe development. Methods would include development impact fees, density bonuses, revenue bonds, and restructuring the City's Capital Improvements Program.
- Promote redevelopment of the Downtown Core by seeking to diversify the land use mix with public facilities, hotels, offices, retail locations, and higher density housing and to identify how to generate more activity and attract more private investment.
- Promote transit, decreased reliance on the automobile, and orderly compact growth by coordinating the timing of road and utility construction with planned growth in the Comprehensive Plan. In addition, increase the level of transit service, improve pedestrian mobility, and plan for high capacity corridors, giving Central Avenue and Coors Boulevard the highest priority.
- Encourage increased densities and mixed uses in major community activity centers and corridors, as well as incorporate Transportation Evaluation Study principles into design standards and long-range facility plans.
- Amend the Comprehensive Plan to serve as the single planning document to address area-wide growth management issues, including area-wide planning for facility systems and long-term capital improvements. All other plans and initiatives must be consistent with this.
- Work with other jurisdictions, particularly the MRGCOG, to reach a regional consensus on the nature and extent of urban growth.

A compromise was reached on an urban services area designation, obligating the City to "carefully consider" whether they were "beneficial to the quality of life in Albuquerque" and, if so, to determine the most appropriate service area. The Comprehensive Plan currently fails to provide detailed direction about where and when growth should occur. City staff has already begun revision of the Comprehensive Plan to ameliorate the deficiencies that have been identified in the current document.

A number of plans and policies have been adopted or contracted for since the policy evaluation was completed for the Transportation Evaluation Study. The following sections describe how these new documents, policies and regulations fit into an overall planned growth strategy for the urban area.

5.3 General Land Use and Planning Policies and Plans

5.3.1 Extraterritorial Land Use Authority

The Extraterritorial Land Use Authority, created by the 1998 legislature, is responsible for making land use decisions in the five-mile extraterritorial limits surrounding the City. This law gives the County a role in the annexation process and in controlling development at the edge of the City. The land use decisions made by the Extraterritorial Land Use Authority will have an impact on the demand for water service at the fringe of the City. Pertinent laws are described below.

- **State of New Mexico Laws 1998, Chapter 42 (House Bill 238)**

Effective in May, 1998, this law gave the power of zoning within the five-mile extraterritorial limits of the City of Albuquerque (and other cities with a population over 200,000 and within a class A county) to a newly created Extraterritorial Land Use Authority. Previously, subdivision applicants had to appear before both the respective City and County planning and legislative bodies. The Extraterritorial Land Use Authority is composed of four County Commissioners appointed by the Board of County Commissioners, and three City Councilors (or two City Councilors and the Mayor) appointed by the municipality.

The law also created the equivalent of the City and County planning commissions called the Extraterritorial Land Use Commission. It is composed of five appointed members of the County Planning Commission and five appointed members of the City Environmental Planning Commission.

The law also sets forth procedures governing annexation of territory contiguous to Albuquerque (and similar-class cities). Owners of a majority of the number of acres in contiguous territory may present a petition seeking annexation to the City Council. The County is granted the opportunity to review and comment on the petition. City Council by ordinance shall approve or disapprove the annexation after considering County comments.

- **Albuquerque/Bernalillo County Extraterritorial Subdivision Ordinance No. ELUA 1998-3**

This law took effect June 23, 1998. The ordinance is essentially the same as the County subdivision ordinance with the substitution of Extraterritorial Land Use Authority approval. Responsibility for review and approval of type-three subdivisions containing five lots or less and all type-five subdivisions is delegated to the County Development Review Authority. This body consists of two staff members from County zoning, building, and planning; two from public works; one from environmental health and the fire marshal's office; and others named by the County manager. The planning department director appoints the chair. Appeals are heard by the Extraterritorial Land Use Commission (see above).

This new process for setting policy and approving or disapproving development in the five-mile extraterritorial district outside the Albuquerque City limits will likely give greater weight to County policy due to the majority of County officials in the Extraterritorial Land Use Authority. This process reinforces the need for City/County cooperation and consensus in managing growth at the urban area fringe.

5.3.2 Focus 2050

In 1996, the MRGCOG launched a long-range regional planning process called Focus 2050. The process aims at building public consensus on how the metropolitan region should grow over the next 50 years, given that the population is projected to double. It includes an extensive public participation effort. Initial phases of the project led to a vision statement for the region and creation of four development scenarios that allocate projected increases in population and employment to different areas.

In general, the first two scenarios follow the current trend with some modifications:

- **Trend Dispersed Growth Scenario** continues the current pattern of urban build-out that rings the metropolitan area, concentrating in the West Mesa of Bernalillo County, Rio Rancho, Los Lunas, and Belen. New outer loop roads would serve this development, with one high capacity transit route slated to run from Belen to Downtown Albuquerque to the Jefferson corridor, across the river to Cottonwood Mall and north along NM 528. While remaining a significant employment center, Downtown would still lack substantial housing or resident-serving businesses. Rural residential development would displace existing irrigated agricultural lands, and a new road would extend from NM 14 to I-25 at Placitas.
- **Contiguous Mesa Expansion Scenario** would minimize additional disturbance of the Rio Grande Valley irrigated agricultural lands and the Bosque. It would allow development of identified major projects and other areas in contiguous areas in the region, particularly on the mesas. Development is targeted for areas on the fringe: North Albuquerque Acres, Atrisco Area, portions of land along Coors Blvd. and the Eubank area next to Kirtland Air Force Base. Paseo del Volcan would serve as the main new highway loop to the northwest, and high capacity transit would run from Belen to the Jefferson corridor.

The next two scenarios offer varying visions of more compact City growth:

- **Moderate Compact Infill and New Communities Scenario** would emphasize infill in existing communities through development of vacant and underutilized urban land as well as the development of clusters of satellite urban communities on the Bernalillo County West Mesa and Rio Rancho area, Mesa del Sol, and Valencia County East Mesa. New development would be channeled into centers and a few contiguous, mixed-use corridors. Major open space corridors would separate them. A cluster of rural communities would develop in Edgewood to the east. An alignment of Paseo del Volcan east of Double Eagle Airport would serve as the main new highway loop to the northwest, with a southwest loop serving satellites close to I-40 and a southeast loop serving Mesa del Sol. High

capacity transit would run from Belen to Downtown Albuquerque to the Jefferson Corridor, crossing the river along Paseo del Norte. Branches would loop through Rio Rancho to the west, east and south to the University of New Mexico Valencia Branch, and west across to the railroad alignment. A transit line would follow Central Avenue.

- **Compact Growth Scenario** would produce the most compact development of the four scenarios. It envisions a hierarchy of centers mainly in existing communities, including regional centers, subregional centers, neighborhood centers, and Main Streets where infill and redevelopment are focused. A limited amount of new urban land is located contiguous to existing communities. Very little rural subdivision expansion or new development in the Rio Grande Valley would occur. Albuquerque and Rio Rancho would serve as the main metropolitan centers with a limited number of mixed-use corridors targeted for significant new development. Typical density in centers and corridors would increase to eight dwelling units per acre for single family residential (compared with a current average of 5.7) and more than 30 dwelling units per acre for multifamily residential (compared with the current average of 21). High capacity transit would run from Belen to Downtown to the Jefferson Corridor, across the river along Paseo del Norte, with short east-west extension lines.

These last two scenarios are the most compatible with the planned alternatives analyzed in this Planned Growth Strategy, Part 1- Findings Report. They also received the highest rankings from the 164 participants who voted at the Future Scape Conferences.

A preferred regional plan addressing growth management, transportation, and water in the five-county area—Bernalillo, Sandoval, Valencia, Torrance, and Southern Santa Fe—was accepted by MRGCOG. Local governments can use the plan to help guide their own planning processes. In addition, MRGCOG may use the Focus 2050 preferred scenario to develop its long-range transportation plan and as a basis for Transportation Improvement Program funding criteria.

5.3.3 Sector Development Plans and Planned Community Plans

Even as these scenarios were being developed with public input, the City and County have given partial approval for new, legally defined Planned Communities on the West Side that impact the many choices presented by the above scenarios. Three major Planned Communities have reached various stages of government approval: Westland, Quail Ranch, and Mesa del Sol. In September 1998, the Mayor's office also signed a new option to sell 2,000 acres of City open space trade lands on the east side of the Manzano Mountains to a developer who plans an 800-residence community. The contract was signed at the same time that Bernalillo County indicated it wanted to purchase the former National Forest lands as open space.

- **Westland** is a Planned Community on 6,424 acres west of the Albuquerque City limits, north of I-40, south of Petroglyph National Park, and east of the proposed alignment for Paseo del Volcan. A Level A Master Plan for the project was approved by both the City and the County before the Extraterritorial Land

Use Authority law went into effect. The City also approved a pre-annexation and development agreement. At this writing, developers were seeking City annexation of 1,700 acres to start the first phase of the development. It is a mixed-use development projected to eventually house a population of 50,000 over the next 20–30 years. The original master plan proposed to obtain water service from Bernalillo County and to phase development from west to east, creating leapfrog sprawl. The original plan also was criticized for providing little guidance for the design of residential streets and subdivisions, which can have a significant affect on the feasibility of transit and transportation efficiency. Both City and County staff have expressed concerns about further large-scale development that is oriented toward and largely dependent upon the Interstate system, in this case I-40. To gain approval from the City, however, Westland developers agreed to phase development from east to west, which is more in keeping with a planned growth strategy. They also agreed that the method of supplying water to the area will not deplete the ground water nor impair the City's existing water rights. Several conditions for approval will help facilitate a planned growth strategy. These include that Atrisco Terrace remain as undeveloped open space regardless of ownership, that Westland agree to establish minimum densities within each residential zone, and that 20% of housing be affordable based on federal criteria. In addition, Westland is to encourage mixed-use housing and discourage power centers, standalone retail boxes, and general franchise design within the town center. Large community parking lots are to be shared with other users, such as government and churches.

- **Quail Ranch** is an approximately 6,700-acre unimproved parcel located in the unincorporated area of northwestern Bernalillo County north of Double Eagle Airport. The City of Albuquerque limits adjoin its southern boundary, but the current edge of development is approximately two miles away. The closest urban/suburban development is Ventana Ranch. Quail Ranch proposes a total buildout of 19,000 dwelling units over a 30–40 year period with concentrations high enough to support transit and extensive open space, parks, and trail networks. New Mexico Utilities, Inc. has agreed to provide water and wastewater services to the project. City public works department staff have argued, however, that New Mexico Utilities, Inc. lacks both the legal water rights and the physical water resources to meet the development's projected water demands. The City as well as Rio Rancho and Corrales have protested New Mexico Utilities, Inc.'s application to the New Mexico State Engineer to divert an additional 50,500 acre-feet of water (it currently can divert up to 10,000 acre feet). The protesting entities claim that ground water withdrawals of this magnitude would rapidly deplete local ground water resources and that exclusive reliance on ground water is contrary to the Albuquerque/ Bernalillo County Comprehensive Plan and to the City's adopted Water Resources Management Strategy. Based on its desire to gain control over the use of water resources in the metropolitan area, the City of Albuquerque is negotiating to acquire New Mexico Utilities, Inc. Last year the City initiated condemnation proceedings against the utility.

A joint City/County technical team created to review the project also raised serious questions about transportation access, solid waste management, and offsite infrastructure costs, among others. Despite these criticisms, Quail Ranch

won approval for its Level A Master Plan in December 1998 from the Extraterritorial Land Use Commission. The Extraterritorial Land Use Commission's parent body, the Extraterritorial Land Use Authority approved the Level A Master Plan with conditions in June 1999. That decision was appealed and upheld by the state District Court. Quail Ranch is anticipated to request approval for a Level B village plan for approximately 1,000 acres in its southeast corner.

- **Mesa del Sol** is a proposed Planned Community on 12,400 acres in the southeastern part of Albuquerque adjacent to I-25. The property is owned by the State of New Mexico in trust for the public schools. Mesa del Sol was annexed by the City of Albuquerque in 1993. In its pre-annexation agreement, the City promised to provide services to the area within a reasonable period of time. At a gross density of three dwelling units per acre, the master plan anticipates a population of 97,500 at maximum build out. It claims a potential for 80,000 people and an equal number of jobs before 2050. Under full development, the Community is projected to consume 26,961 acre-feet of water annually derived from surface water supplemented by ground water. The plans for this project propose a variety of water-saving methods and policies. Unlike the other two Planned Communities, Mesa del Sol still lacks a private developer. The City's Environmental Planning Commission approved the master plan in February 1999 subject to a number of conditions. The next step is negotiation of a Level A development agreement.

All of the MRGCOG regional land use scenarios account for Mesa del Sol development, although in different forms. All but the "Compact" scenario account for both the Westland and Quail Ranch Planned Communities in some form, and even the "Compact" scenario shows some development in the Westland vicinity. The urban area alternatives presented in this document also include some development in Planned Communities. What appears more critical to success of a planned growth strategy is the phasing, timing, financing, and design of development within these satellite communities. Development should be approved when justified by population growth so as not to impact the ability of the City and County to meet the needs of established neighborhoods. Design should facilitate use of transit and other transportation modes rather than reliance on automobiles.

5.4 Capital Improvements Programming

5.4.1 City of Albuquerque

Both the City of Albuquerque and Bernalillo County plan for long-range capital improvements. The City prepares a ten-year Decade Plan, updated biennially, which is adopted by City Council in odd-numbered years. General Obligation bonds to fund the projects are then placed on that year's election ballot. The latest plan was adopted for the years 1997-2006. City departments submitted over \$300 million in requests for the 1997 bonds, which covered public facilities, streets, drainage, and parks. Because the bond capacity was only \$86 million, many project requests were reduced or postponed.

A recent issues paper completed by City Council staff noted that the City of Albuquerque needs more than an estimated \$1 billion to rehabilitate streets, water, wastewater, drainage facilities, and parks. “Capital funds are inadequate to address this situation and, with regard to General Obligation bond funds, revenues have decreased significantly in real terms over the past 20 years.” The paper states that the Capital Improvements Program is not based on a broad assessment of infrastructure rehabilitation needs and fails to sufficiently prioritize spending for these projects. The City’s infrastructure, as a result, is deteriorating over time. The Albuquerque Department of Public Works, however, responded that the Capital Improvements Program cannot fund all needs and that those included in the budget have already been prioritized. The paper also found that the City failed to protect its fiscal position through linking infrastructure extension decisions and land use planning in a way that would maximize efficiencies in different systems. The City does not use a cost-benefit model when making decisions related to system expansions

5.4.2 Bernalillo County

Bernalillo County plans capital improvements for a six-year horizon, updated every two years to feed into its General Obligation bond cycle. Projects supporting planned growth in the November 1998 election included a 0.5 mil levy approved by voters to purchase open space, an increase in funding for bike trails, and funding for Paseo del Norte, Isleta, and Rio Bravo. Most transportation projects are tied into the Transportation Improvement Program developed by MRGCOG.

Projects that might be construed as preempting a planned growth strategy include park development in Mesa del Sol, which accelerates the extension of utilities and transportation improvements to this area, and construction of Paseo del Norte through the Petroglyph National Monument.

Bernalillo County has approved an impact fees ordinance for provision of park, open space, fire/EMS, roadway, and drainage facility costs generated by new development. The fees generated under this ordinance meet about 30% of the costs for open space (provided only in the extraterritorial jurisdiction) and about 75% of costs for the rest of the services.

5.5 Transportation Plans and Policies

5.5.1 Middle Rio Grande Council of Governments

The following transportation plans have been approved or are in the works since inception of the Transportation Evaluation Study.

- **2020 Metropolitan Transportation Plan** for the Albuquerque Metropolitan Planning Area, prepared by MRGCOG, was adopted by its policy board in September 1998. It provides a basis for programming projects in the upcoming revisions to the six-year Transportation Improvement Program. If implemented, the current Metropolitan Transportation Plan recommendations would in many cases support a planned growth strategy, but in other cases work against it. Development of the Metropolitan Transportation Plan, however, was constrained by federal law that mandates only those land use patterns, and population and

employment projections already adopted by local governments can be assumed for the 2020 plan. Recommendations more compatible with denser and more compact City growth could be considered for the 2025 Metropolitan Transportation Plan if such plans are adopted by local governments.

In the meantime, current recommendations would allow residents in the Albuquerque urban area to reduce their reliance on automobiles as the chief mode of travel by increasing bicycling, walking, carpooling, and using an expanded and improved transit system.

Among the objectives of the Metropolitan Transportation Plan are increasing modal alternatives, considering the urban form implication of growth trends, and increasing the balance between jobs and housing in areas. Another objective calls for reducing the growth rate of per capita vehicle miles of travel to follow—not exceed—the population growth rate and promote intermodal travel connections. The Metropolitan Transportation Plan includes a significantly expanded transit system for the metropolitan area, including more hours of bus service, decreased wait times, and expanded routes. It anticipates funding for ongoing operations and maintenance to come from a quarter-cent gross receipts tax proposed by the mayor of Albuquerque. It also assumes a 10% reduction in vehicle trips, presumably as a result of investments in alternative modes and the successful implementation of a compact urban form. This, however, is not explicit, nor is the feasibility of such trip reductions demonstrated.

The Metropolitan Transportation Plan proposes to manage congestion through use of intelligent transportation systems and small-scale improvements, such as upgrading signals or removing bottlenecks. It also proposes more travel demand management strategies such as expanded transit and subsidized transit passes, additional bikeway facilities, and parking incentives. Certain land use strategies are noted, but not recommended until adopted by local governments. An expanded transit system is a fundamental part of the 2020 Metropolitan Transportation Plan transportation system, including the Downtown Intermodal Center as well as two others in Uptown and on the West Side. Fourteen neighborhood bus centers are anticipated to be built, a number of park-and-ride centers, and 250 bus shelters. A fleet of 400 buses—75 of which will be paratransit—will be purchased.

On the other hand, the Metropolitan Transportation Plan does not at this time recommend new rail transportation or high occupancy vehicle lanes, pending more detailed feasibility studies. It notes instead that some controversial new roadways may be required to relieve congestion. It specifically recommends Unser between Paseo del Norte and Montañó, Gibson between Louisiana and Eubank, and Paseo del Norte between Coors and Unser (which has generated controversy because it passes through Petroglyph National Park). It also recommends reserving several corridors for future road expansion and access control. Included are Paseo del Volcan from I-40 to NM 44, which would effectively add a West Side loop road outside the City limits, and Paseo del Norte from Coors to Tramway. Paseo del Volcan is proposed along the west side

of the Westland Planned Community and near the southeastern corner of the Quail Ranch Planned Community.

- **Future Albuquerque Area Bikeways and Streets** maps a vision of roadway needs over the next 50 years. It contains corridors and facilities not yet studied or not proposed to be built in the next 10 or 20 years. It provides a comprehensive review of the entire transportation system for the Albuquerque Metropolitan Area and offers a tool for understanding the impact of individual changes. It is updated every six months, particularly to refine the bikeways master plan. It contains the same major loop roads noted above.
- **Transportation Improvement Program.** MRGCOG is now beginning to develop a new Transportation Improvement Program for 2000–2005. As the short-term implementation tool for the Metropolitan Transportation Plan, the Transportation Improvement Program programs financially constrained projects for the first three years and presents plans for the next three. This plan is required to obtain federal funds for transportation improvements. The current Transportation Improvement Program (1995–2001) contained a number of projects friendly to planned growth, such as the multimodal Alvarado Transportation Center in Downtown Albuquerque, regional land use planning, the regional transit study, and bike trails. Among planned projects are the right-of-way acquisition and design of Paseo del Volcan and extension of Paseo del Norte from Wyoming to Tennyson. It was criticized for not devoting more support to transit, ride sharing, bicycling, and pedestrian travel. The City/County Air Control Board in particular said that the bicycle program lacked direction and substance, that pedestrian travel was not addressed in a meaningful way, and that it missed an opportunity to immediately devote more resources to plan incentives for alternative transportation in Uptown.

5.5.2 Transportation Plans in Progress

- A **Regional Transit Authority Service Plan** was completed in 1998. It calls for an aggressive strategy for developing a public transportation system, based on creation of a Regional Transit Authority that would have taxing and bonding authority. Eligible voters within the proposed Regional Transit Authority service area would be asked to approve a half-cent gross receipts tax specifically earmarked for public transit. The service plan calls for improvements to the bus and bus facilities program and for a high capacity transit program. These recommendations would support a planned growth strategy. The New Mexico State Legislature has twice turned down requests by the City of Albuquerque for enabling legislation to set up the Regional Transit Authority. The next step is to seek approval of the Regional Transit Authority concept from the MRGCOG policy board, the Urban Transportation Planning Board.
- The **Long-Range Major Transportation Investment Study**, or Regional Major Investment Study, is one of two high capacity transportation studies expected to get underway soon. Outcomes of these studies could have far-reaching implications for planned growth. The Long Range Major Transportation Investment Study is funded by the federal government, the state, and local

governments, with the state as the lead agency. This study will evaluate different land use scenarios over a broad region and will identify necessary long-range, regional multimodal transportation improvements. Its geographic scope ranges from Belen to Española. The study will recommend the most feasible transportation investments—expanded or additional highways, bus, light rail, technological systems—for the most regionally important corridors. The Planned Growth Strategy project is expected to be an input into this study. The Long Range Major Transportation Investment Study will feed into or be developed simultaneously with the High Capacity Transportation system project described below.

- The **High Capacity Transportation System Project** focuses on the Albuquerque urban area. The High Capacity Transportation system will develop a high capacity transit plan—with an emphasis on light rail—for the next 25–30 years for the Albuquerque area. It will analyze potential corridors and select a locally preferred alternative for the first segment to be built. Such projects usually take eight to 10 years for completion; the first phase will require 18–24 months of planning.

5.6 Utility Facility Plans

5.6.1 City of Albuquerque Water Utility

Several ongoing long-range planning efforts will guide the development of the City of Albuquerque water utility over the next 20 years. Two efforts currently underway and not described in the Transportation Evaluation Study are discussed below.

- **Long Range Water Service Plan.** The City is creating a strategic plan for the municipal water system. This process is evaluating issues related to the water utility, including the need for a regional system, annexation policies related to water service and the role of the water utility in growth planning. Decisions made during this effort could have an impact on planning for future growth. Early discussions indicate that the water utility does not see itself as a tool for growth management, but as implementing land use decisions. Interviews with other municipalities in the southwest and west indicate that water utilities do not typically establish a service area boundary. The plan will, however, determine the criteria for service extension decisions and defining such an area may be appropriate locally. The utility envisions its role as supporting growth policy established by the City and County and is looking to the revision of the Comprehensive Plan to provide the policy basis for growth management.

The relationship between this document and the revised Comprehensive Plan is particularly important. Planners for both efforts should assure that the final documents are connected.

- **Albuquerque Water Resource Management Strategy, Implementation Phase.** The Water Resources Management Strategy is designed to assure City of Albuquerque water customers a safe and sustainable water supply to 2060. The strategy establishes a shift away from taking more and more water from the aquifer, most of which is not replenished, to developing the City's existing

renewable surface water supplies and protecting the aquifer. The City in the Albuquerque Water Resource Management Strategy established a number of policies to reduce water use in the urban area and to reduce the City's reliance on ground water. The strategy includes a combination of conservation, use of surface water, and water reclamation and reuse. In the implementation phase, the City is identifying and acquiring sites and building facilities identified in the strategy. The City's focus on wise use of water is unique in the urban area. Other jurisdictions have not made the same commitment to resource management as a way to extend the Middle Rio Grande Basin's water supply into the future.

- **Water and Wastewater Utility Program Assessment** conducted by Parsons Engineering Science noted that overly large or redundant facilities increase both the capital and operating costs of water and wastewater service. It implied there are efficiency gains to be achieved by fully utilizing newly constructed water and wastewater capacity relatively quickly. This leads to a conclusion that growth planning should direct the orderly and integrated expansion of infrastructure system capacity. A cost-benefit analysis model also provided by Parsons found that costs to rate payers are not significantly affected by whether the City initially pays for new infrastructure or whether the developer finances the improvements and receives City reimbursement over time. The first example resulted in a present value loss of \$23 million to the City over 25 years, while the second was a present value loss of \$19.3 million-only a 2.8% improvement.

5.6.2 City of Albuquerque Wastewater Utility

The City of Albuquerque wastewater utility is also in the process of updating its long-range facility plan. The Wastewater Facility Plan will identify a planning area and projected growth, land use and wastewater flow demands through the year 2020. The scope of work for this effort recognizes that the provision of wastewater services is an essential component of comprehensive municipal planning, because it provides an effective basis for scheduling and prioritizing capital improvements and establishing financial strategies. Like the water utility, the wastewater utility intends to rely on the Comprehensive Plan and the official growth projections for guidance in setting priorities.

The Wastewater Facility Plan will include a system model that will allow testing of alternative growth and land use scenario impacts on the system.

5.6.3 Bernalillo County

Bernalillo County has completed studies of the feasibility of water systems in the East Mountain Area (1990) and the West Side (1997). Action on an extensive study of providing water and sewer service to the Westland Planned Community was precluded by the developer's decision to obtain service from the City. The County currently is constructing sewer service in the South Valley and would like to provide residents there with water. The Village of Tijeras is planning to extend its water system and sewer system, but its water comes from local wells.

5.6.4 Middle Rio Grande Conservancy District

The MRGCD owns a certain amount of water rights that it uses for irrigated agriculture and flood control. Faced with potentially losing some permitted rights as the number of irrigated acres decreases with City growth, it recently created a Water Bank to promote the beneficial use of water within Conservancy District boundaries. The Water Bank operates like a regular bank, except water rights, rather than money, are deposited and withdrawn. Its initial capital is the amount of water under the Conservancy's permitted water rights that the Board of Directors determines to be available to place in the bank. It also may deposit San Juan/Chama contract water into the bank. Borrowers may lease water rights, with preference being given to agricultural uses. Development of the bank has the potential to elevate the MRGCD to the position of a major water broker in the metropolitan area. It is unclear at this time, however, what impact this would have on a planned growth strategy.

Appendix A

Table A.1 Alternative Scenarios, Population, and Employment Projections

DASZ	Community Planning Area	1990		1995		Trend Scenario		Balanced Scenario		Downtown Scenario	
		Population	Employment	Population	Employment	Population	Employment	Population	Employment	Population	Employment
5001	Central ABQ	-	2,346	-	2,757	-	3,116	-	3,133	-	5,459
5002	Central ABQ	-	246	-	180	-	400	50	402	-	701
5003	Central ABQ	2	3,436	-	4,393	-	4,529	100	4,554	50	7,935
5004	Central ABQ	100	275	70	314	66	339	506	341	220	594
5005	Central ABQ	242	658	243	481	243	470	1,063	473	323	823
5006	Central ABQ	6	2,326	6	2,558	6	2,715	46	2,730	6	4,757
5007	Central ABQ	-	941	-	571	-	608	100	611	50	1,065
5008	Central ABQ	-	158	-	264	-	500	350	503	350	876
5009	Central ABQ	7	1,255	7	619	7	594	254	597	31	1,041
5011	Central ABQ	-	45	-	266	-	308	-	310	125	540
5012	Central ABQ	33	184	34	240	32	315	245	317	96	552
5101	Central ABQ	1,765	344	1,755	239	1,728	254	1,728	247	2,214	261
5102	Central ABQ	614	166	530	133	531	177	531	172	680	182
5103	Central ABQ	785	387	748	437	717	447	1,415	551	973	504
5111	Central ABQ	1,052	316	1,054	367	1,109	391	1,109	381	1,420	402
5112	Central ABQ	1,621	207	1,643	96	1,619	91	1,619	89	2,074	94
5121	Central ABQ	2,661	949	2,551	899	2,534	971	4,022	1,093	2,669	967
5131	Central ABQ	118	171	114	171	115	174	115	169	147	179
5132	Central ABQ	1,959	570	1,910	648	1,866	638	3,681	787	2,533	1,312
5141	Central ABQ	147	96	145	74	150	3	296	4	204	105
5142	Central ABQ	275	210	270	311	259	318	511	392	352	182
5143	Central ABQ	913	76	898	76	1,048	168	2,068	207	1,423	737
5162	Central ABQ	578	251	575	353	563	336	1,111	414	764	396
5163	Central ABQ	67	559	69	576	67	583	132	719	91	47
5171	Central ABQ	236	168	236	197	227	209	448	258	308	160
5172	Central ABQ	1,051	430	1,019	382	979	464	1,932	572	1,329	688
5173	Central ABQ	1,101	625	1,087	516	1,049	552	1,049	537	1,344	567
5231	Central ABQ	-	1,076	-	1,217	-	1,392	-	1,355	-	1,430
5232	Central ABQ	26	604	25	645	23	619	23	602	29	636
5241	Central ABQ	493	218	495	85	476	1,723	476	1,677	610	1,770
5242	Central ABQ	1,418	725	1,405	805	1,350	888	1,350	864	1,729	912
5261	Central ABQ	801	4,467	172	4,772	141	5,375	805	5,404	241	9,417
5271	Central ABQ	330	366	231	299	290	687	572	846	394	204
5272	Central ABQ	6	1,041	-	785	-	789	-	768	-	811
5273	Central ABQ	432	2,062	400	3,439	384	4,356	384	4,239	492	4,476
5301	Central ABQ	14	518	22	584	20	671	32	755	21	669
5311	Central ABQ	1,313	1,108	1,353	291	1,460	290	1,460	282	1,870	298
5312	Central ABQ	180	326	180	610	173	748	173	729	181	812
Subtotal	Central ABQ	20,346	29,906	19,247	31,650	19,232	37,208	29,756	38,084	25,343	52,561
7502	E Gateway	-	504	-	70	-	75	-	72	-	75
7521	E Gateway	1,356	279	1,356	391	1,337	420	1,337	401	1,338	421
7522	E Gateway	1,818	398	1,814	473	1,783	512	1,783	488	1,784	513
7531	E Gateway	1,909	285	1,914	445	1,883	582	1,883	555	1,884	583
7532	E Gateway	1,748	283	1,749	221	1,725	292	1,725	278	1,726	293
7534	E Gateway	3,123	40	3,150	37	3,115	225	3,115	215	3,116	226
7535	E Gateway	2,319	24	3,416	97	3,477	256	3,477	244	3,478	257
7541	E Gateway	3,806	123	3,870	152	3,858	172	3,858	164	3,860	172
7542	E Gateway	1,033	31	1,120	258	1,228	277	1,228	264	1,229	278
7551	E Gateway	807	60	805	106	788	245	788	234	788	246
7552	E Gateway	1,014	792	1,021	578	999	629	999	600	999	630
7553	E Gateway	2,368	279	2,368	711	2,354	890	2,354	849	2,355	892
7554	E Gateway	2,289	168	2,294	146	2,321	371	2,321	354	2,322	372
7561	E Gateway	-	747	-	1,035	128	1,454	128	1,387	128	1,457
7562	E Gateway	2,013	308	2,011	512	1,978	548	1,978	523	1,979	549
7571	E Gateway	1,312	548	1,309	1,185	1,284	1,332	1,284	1,270	1,285	1,335
7572	E Gateway	2,190	411	2,202	539	2,167	552	2,167	526	2,168	553
8251	E Gateway	346	480	338	657	330	783	330	747	330	785
8261	E Gateway	1,501	1,343	1,562	2,548	1,550	2,709	1,550	2,583	1,551	2,715
8262	E Gateway	1,938	210	1,968	180	1,956	274	1,956	261	1,957	275
8263	E Gateway	1,836	373	1,909	524	1,901	467	1,901	445	1,902	468
8271	E Gateway	578	332	584	682	571	1,586	571	1,512	571	1,590
8272	E Gateway	1,525	276	1,579	385	1,578	551	1,578	525	1,579	552
8273	E Gateway	615	575	900	1,003	902	1,835	902	1,750	902	1,839
8281	E Gateway	5,613	779	5,738	552	5,748	890	5,748	849	5,750	892
8282	E Gateway	1,354	545	1,655	705	1,656	845	1,656	806	1,657	847
8301	E Gateway	937	43	1,525	71	3,932	986	3,932	940	3,934	988
8311	E Gateway	3,152	154	3,653	210	4,114	531	4,114	506	4,116	532
8321	E Gateway	134	-	162	5	575	5	575	5	575	5
8322	E Gateway	35	-	35	-	89	-	89	-	89	-
Subtotal	E Gateway	48,669	10,390	52,007	14,478	55,327	20,294	55,327	19,353	55,352	20,340
3111	East Mountain	1,313	273	1,558	421	2,277	827	1,765	600	2,103	639
3121	East Mountain	269	72	459	113	2,318	387	1,797	282	2,140	299
3122	East Mountain	1,642	63	1,888	90	4,425	357	3,431	260	4,086	276
3131	East Mountain	1,624	84	1,877	168	3,114	554	2,414	403	2,876	428
3132	East Mountain	1,733	12	2,099	23	4,590	231	3,558	168	4,238	179
3142	East Mountain	851	37	848	89	1,074	93	833	68	992	72
3211	East Mountain	2,761	156	3,778	209	7,993	774	6,381	583	7,471	589
3221	East Mountain	1,249	287	1,596	413	2,588	812	2,066	612	2,419	617
3222	East Mountain	225	8	320	2	646	36	516	27	604	27
3301	East Mountain	813	16	968	25	1,173	68	937	51	1,096	52
Subtotal	East Mountain	12,480	1,008	15,391	1,553	30,198	4,139	23,698	3,054	28,025	3,178
1001	Far NW	1,102	84	1,208	62	1,812	86	1,090	67	996	62
1111	Far NW	-	-	-	-	4,216	2,702	-	-	-	-
1121	Far NW	-	10	-	24	-	2,822	-	2,154	-	24
1131	Far NW	97	-	94	-	688	1,266	414	966	94	-
1311	Far NW	-	-	-	-	10	-	6	-	-	-
1321	Far NW	-	-	9	-	58	50	35	38	9	-
Subtotal	NW Outside	1,199	94	1,311	86	6,784	6,926	1,545	3,225	1,099	86

Table A.1 Alternative Scenarios, Population, and Employment Projections

DASZ	Community Planning Area	1990		1995		Trend Scenario		Balanced Scenario		Downtown Scenario	
		Population	Employment	Population	Employment	Population	Employment	Population	Employment	Population	Employment
6406	West Side	318	-	406	4	1,701	1,388	1,305	1,310	1,859	1,209
6411	West Side	327	116	201	298	1,639	1,203	1,258	1,134	1,791	1,048
6412	West Side	1,326	475	1,676	862	2,587	2,135	1,985	2,013	2,827	1,860
6413	West Side	598	21	755	-	3,644	180	2,796	170	3,982	157
6414	West Side	118	519	255	438	1,691	1,537	1,297	1,449	1,848	1,339
6415	West Side	232	55	221	184	530	296	407	280	579	258
6416	West Side	138	86	177	71	324	1,007	249	949	354	877
6417	West Side	2	905	5	922	5	7,213	4	6,800	5	6,285
6418	West Side	-	182	183	292	2,091	923	1,604	870	2,285	804
6421	West Side	-	-	-	-	2,185	756	1,676	713	2,387	659
6422	West Side	-	-	-	-	1,532	-	921	-	-	-
6431	West Side	-	28	3	-	1,113	589	854	554	1,216	513
6432	West Side	2,616	115	2,492	164	3,078	392	2,361	371	3,363	342
6433	West Side	-	-	-	-	976	42	749	41	1,066	37
6434	West Side	-	-	-	-	1,302	3	783	2	-	-
6435	West Side	-	-	-	-	2,133	528	1,637	497	2,331	460
Subtotal	West Side	32,970	5,783	47,322	10,634	106,244	40,717	93,196	34,222	104,862	37,500
Total		480,577	244,307	520,201	302,702	673,734	455,182	673,735	455,183	673,731	455,184

Table A.5. Major Costs Project Inventory

WEST SIDE

REGION TOTAL COST	COST WITHOUT LONG-RANGE (LR) PROJECTS	BASIN	PROJECT DESCRIPTION	COST (x 1Mil\$)	LR	% PUB	% PRIV
NORTHWEST							
\$1,000,000	\$1,000,000	BLACK	TOTAL BLACK ARROYO WATERSHED TRTMT	1.000 1.000		100	0
\$2,150,000	\$150,000	BOCA NEGRA	TOTAL BOCA NEGRA DMF ESCARPMENT DRAINAGE	2.150 0.150 2.000	LR	60 100	40 0
\$580,000	\$580,000	CABEZON	TOTAL CABEZON CHAN MOD	0.580 0.580		100	0
\$7,692,000	\$2,982,000	CALABACILLAS - NORTH COORS	TOTAL PH II & III DROP STRUC CORRALES MAIN CANAL IMPRV PDN PONDING LA ORILLA PONDS CALAB-EAGLE RANCH BR EAGLE RANCH ROAD SD	7.692 4.710 0.500 1.456 0.246 0.250 0.530	LR	85 50 100 40 50 80	15 50 0 60 50 20
\$4,476,000	\$4,476,000	DOUBLE EAGLE II AIRPORT	TOTAL DOUBLE EAGLE II AIRPORT	4.476 4.476		50	50
\$17,320,000	\$1,320,000	LADERA - MIREHAVEN	TOTAL LADERA DAMS I-40 DMP SOUTHERN ESCARPMENT	17.320 1.320 10.000 6.000	LR LR	100 100 50	0 0 50
\$0	\$0	LADERA PLAYA	TOTAL playa; no major costs	0.000		0	0
\$2,500,000	\$500,000	MARIPOSA	TOTAL UNSER S OF PARADISE ESCARPMENT DRAINAGE	2.500 0.500 2.000	LR	70 50	30 50
\$2,722,000	\$2,722,000	NW MESA	TOTAL NW MESA DMP	2.722 2.722		70	30
\$22,513,000	\$15,513,000	PIEDRAS MARCADAS	TOTAL VENTANA OUTFALL & DAM PH I W DIVERSION TO CALAB PH II LYONS DIVERSION PHIII PARADISE BLVD SD PIEDRAS MARC DMP REVIS UNSER S OF PARADISE ESCARPMENT DRAINAGE BLACK RANCH (50% of \$2 mil Dam)	22.513 4.028 3.000 2.280 5.600 0.105 0.500 6.000 1.000	LR LR	60 100 100 100 100 100 50 70	40 0 0 0 0 0 50 30
\$6,000,000	\$0	RINCONADA 100	TOTAL ESCARPMENT DRAINAGE	6.000 6.000	LR	50	50
\$8,870,000	\$0	UPPER AMOLE	TOTAL AMOLE DAMS AMOLE DAMS ROW ACQ	8.870 7.650 1.220	LR LR	70 50	30 50
\$2,250,000	\$0	UPPER CALABACILLAS	TOTAL GRADE CONTROL STRUC; 5 @ \$.25 mil BLACK RANCH (50% of \$2 mil Dam)	2.250 1.250 1.000	LR LR	70 70	30 30
\$1,000,000	\$1,000,000	WEST BLUFF	TOTAL WEST BLUFF SD CONNECTIONS	1.000 1.000		80	20
\$7,885,000	\$7,885,000	WEST I40	TOTAL WEST I40 DMP ESTANCIA TO UNSER UNSER TO 98TH CONNECT LADERA TO WEST I40 DIV	7.885 0.200 2.600 2.405 2.680		100 100 100 85	0 0 0 15
\$9,385,000	\$9,385,000	WEST MESA DIVERSION	TOTAL WEST BLUFF DMP	9.385 9.385		80	20
SOUTHWEST							
\$24,754,000	\$22,754,000	AMOLE HUBBELL	TOTAL GUN CLUB RD DRN IMPRVMTS SNOW VISTA CHAN AMOLE DEL NORTE DIVERSION SAGE/TOWER RD POND BORREGA DIVERSION MOD AMOLE HUBBELL DMF BRIDGE ST, UNSER TO 98TH WESTGATE DAM OUTFALL	24.754 1.240 8.340 9.500 0.500 1.140 0.334 1.700 2.000	LR	100 90 100 70 50 100 80 100	0 10 0 30 50 50 20 0
\$7,000,000	\$7,000,000	AMOLE WESTGATE	TOTAL WESTGATE DAM - AMOLE ARROY	7.000 7.000		100	0
\$9,307,000	\$5,307,000	DON FELIPE-RAYMAC-MCCOY	TOTAL DON FELIPE WATERSHED DMP MCCOY CHANNELS MCCOY DAM PH II RAYMAC DMP MCCOY DMP DON FELIPE UPSTRM CHANS	9.307 0.200 4.436 0.271 0.200 0.200 4.000	LR	100 100 100 100 100 100	0 0 0 0 0 0
\$0	\$0	SW MESA	TOTAL Major incl as on-site ponding under Minor	0.000		0	0
VALLEY							
\$23,868,000	\$23,868,000	ISLETA	TOTAL SW VALLEY SD PROJECTS - ISLETA OSAGE/LA MEDIA	23.868 21.168 2.700		70 100	30 0
\$17,050,000	\$11,050,000	SW VALLEY	TOTAL GUN CLUB RD DRN IMPRVMTS SW VALLEY DRNG IMP SW VALLEY DMP PROJ ADOBE ACRES PHASE III SW VALLEY DAM OUTFALLS	17.050 1.350 3.200 4.500 2.000 6.000	LR	100 70 70 100 100	0 30 30 0 0
TOTAL WEST SIDE PROJECTS				178.322			

Table A.5. Major Costs Project Inventory

EAST SIDE

REGION TOTAL COST	COST WITHOUT LONG-RANGE (LR) PROJECTS	BASIN	PROJECT DESCRIPTION	COST (x 1Mi\$)	LR	% PUB	% PRIV
NORTHEAST							
\$26,386,000	\$21,386,000	FAR NE HEIGHTS	TOTAL	26.386			
			FAR NE HEIGHTS DMP	12.640		100	0
			N DOM BACA - WY TO BARSTOW	1.266		50	50
			N DOM BACA DAM SPILLWAY WIDENING	0.220		100	0
			N DOM BACA CHAN-L DAM TO WY	1.140		100	0
			N DOM BACA CHAN-DAM TO LOWELI	3.000	LR	100	0
			PDN IMPRVMTS E OF WYOMING	1.000		100	0
			PDN IMPRVMTS W OF WYOMING	0.500		100	0
			BACA ARROYO LINING I25 TO NDC	4.620		100	0
			S DOM BACA-HOLBROOK TO DAN	2.000	LR	50	50
\$100,000	\$100,000	FOOTHILLS	TOTAL	0.100			
			SANDIA FOOTHILLS WATERSHED TRTMT	0.100		100	0
\$20,260,000	\$11,780,000	LA CUEVA-CAMINO	TOTAL	20.260			
			CITICORP STORM DRAINAGE	0.500		80	20
			LA CUEVA/CAMINO AVULSIONS	5.640		100	0
			CAMINO HAMILTON DAM & LA CUEVA	6.000	LR	100	0
			LA CUEVA E OF LOUISIANA	2.480	LR	90	10
			N CAMINO - REACH 1, 2, 3	5.640		70	30
\$64,444,000	\$64,444,000	NE HEIGHTS	TOTAL	64.444			
			AMDS VOL II	19.534		100	0
			AMDS VOL III	44.910		100	0
\$480,000	\$480,000	SANDIA	TOTAL	0.480			
			N DIVERSION CHAN OUTLET MOD	0.480		100	0
SOUTHEAST							
\$6,000,000	\$0	MESA DEL SOL	TOTAL	6.000			
			MESA DEL SOL	6.000	LR	20	80
\$26,370,000	\$26,370,000	SE-NEAR HEIGHTS	TOTAL	26.370			
			AMDS VOL II	4.970		100	0
			AMDS VOL II RESTUDY	20.200		100	0
			GIBSON BLVD SDC TO YALE	1.200		100	0
\$8,973,000	\$8,973,000	SOUTH EUBANK	TOTAL	8.973			
			S EUBANK AREA	8.973		100	0
\$2,800,000	\$2,800,000	SOUTH I25-SUNPORT	TOTAL	2.800			
			SDC TRIB LINING I25 TO BRDWY	2.800		100	0
\$20,000,000	\$0	TIJERAS	TOTAL	20.000			
			TIJERAS ARROYO DMP	20.000	LR	100	0
VALLEY							
\$1,687,467	\$1,687,467	DOWNTOWN-OLD TOWN	TOTAL	1.687			
			ALAMEDA AND RIVERSIDE DS	1.687		100	0
\$4,500,000	\$4,500,000	NORTH I25	TOTAL	4.500			
			BIG I	2.000		100	0
			NDC ADD FREEBOARD PHASE II	2.500		100	0
\$21,487,467	\$21,487,467	NORTH VALLEY	TOTAL	21.487			
			N VALLEY DMP (SMITH, CONCEPTUAL)	19.800		100	0
			ALAMEDA AND RIVERSIDE DS	1.687		100	0
\$7,743,733	\$7,743,733	SE VALLEY	TOTAL	7.744			
			ALAMEDA AND RIVERSIDE DS	0.844		100	0
			SAN JOSE DRAIN IMPROVEMENTS	6.900		50	50
\$6,563,000	\$6,563,000	SOUTH BROADWAY	TOTAL	6.563			
			S BROADWAY SECTOR DMP	6.563		50	50
\$6,520,333	\$6,520,333	VALLEY	TOTAL	6.520			
			AMDS VOL I - VALLEY SD	0.611		100	0
			MENAU/MILDRED SD PROJECTS	3.800		100	0
			ALAMEDA AND RIVERSIDE DS	2.109		100	0
TOTAL EAST SIDE PROJECTS				224.315			

Table A.9. - Current Population and Employment Parallel Lines Cost Analysis by Scenario

CURRENT-Parallel Lines Cost Analysis														
Basin	Sub-Basin	BASE Population	BASE Employment	Pipe Capacity (mgd)	Sub-Basin Demand (mgd)	Upgradient Demand (mgd)	Total Sub-Basin Demand (mgd)	Difference (Cap.-Tot. Dmd) (mgd)	Upgradient Sub-Basins	Current Flow (mgd)	Average Slope (%)	Pipe Diameter (in)	Pipe Length (ft)	Cost (\$)
Academy	AC-01	20682	21925	10.95	8.17	0	8.17	2.78			0.0057	0.0	11900	\$ -
Academy	AC-02	13938	5571	6.44	4.05	0	4.05	2.39						
Academy	AC-03	1862	14061	24.1	3.46	12.22	15.67	8.43	AC-01, AC-02					
Campus	CA-01	16565	9524	4.5	5.26	0	5.26	-0.76		0.76	0.0053	8.9	5900	\$ 393,312
Campus	CA-02	22328	14770	76.56	7.19	28.21	35.40	41.16	FH-03, FH-04, FH-05, NE-01, NE-02, NE-03, NE-04, NE-05, NE-06, SH-01					
Campus	CA-03	25283	17090	16.36	8.09	11.38	19.48	-3.12	CA-01, CA-04	3.12	0.002	18.1	1050	\$ 142,704
Campus	CA-04	8454	22112	65.82	6.13	43.22	49.34	16.48	AC-01, AC-02, AC-03, ED-01, NW-05, UP-01, UP-02, UP-03, UP-04, UP-05					
Campus	CA-05	6155	3757	25.9	2.23	0	2.23	23.67						
Campus	CA-06	3971	1545	3.98	1.32	0	1.32	2.66						
Coors	CO-01	11064	1162	9.76	2.66	3.85	6.50	3.26	NMU-03, WF-01, WF-04		0.0017	0.0	8200	\$ -
Coors	CO-02	10023	3023	25.61	2.83	8.72	11.55	14.06	CO-01, NMU-01, NMU-02, NMU-03, RV-01, RV-02, WF-01, WF-03, WF-04		0.0026	0.0	12900	\$ -
Coors	CO-03	12452	3383	30.24	3.36	11.55	14.91	15.33	CO-01, CO-02, NMU-01, NMU-02, NMU-03, RV-01, RV-02, WF-01, WF-03, WF-04		0.0015	0.0	12900	\$ -
Coors	CO-04	12752	1157	20.76	2.98	1.74	4.71	16.05	WF-02					
Coors	CO-05	10190	635	nda	2.38	0	2.38							
Edith	ED-01	1398	3399	43.56	1.18	42.03	43.22	0.34	AC-01, AC-02, AC-03, NW-05, UP-01, UP-02, UP-03, UP-04, UP-05		0.0045	0.0	8400	\$ -
Edith	ED-02	2955	1227	1.72	1.03	2.12	3.15	-1.43	NW-03, NW-04	1.43	0.0009	15.7	12800	\$ 1,508,073
Edith	ED-03	7811	1488	24.33	2.09	4.62	6.71	17.62	NW-01, NW-02					
Edith	ED-04	7023	840	3.39	1.80	0	1.80	1.59						
Edith	ED-05	3053	2154	1.44	1.26	0	1.26	0.18			0.0015	0.0	6100	\$ -
Edith	ED-06	8351	15717	16.37	4.94	12.92	17.86	-1.49	ED-02, ED-03, ED-04, ED-05, NW-01, NW-02, NW-03, NW-04	1.49	0.0008	16.3	4800	\$ 587,136
Edith	ED-07	1137	9932	48.77	2.50	80.55	83.06	-34.29	AC-01, AC-02, AC-03, CA-01, CA-03, CA-04, ED-01, ED-02, ED-03, ED-04, ED-05, ED-06, NW-01, NW-02, NW-03, NW-04, NW-05, UP-01, UP-02, UP-03, UP-04, UP-05	34.29	0.0069	35.3	8400	\$ 2,223,641
Edith	ED-08	1083	313	0.71	0.39	0	0.39	0.32						
Four Hills	FH-01	1354	77	4.9	0.40	0.00	0.40	4.50						
Four Hills	FH-02	3796	293	2.42	1.00	0	1.00	1.42						
Four Hills	FH-03	7251	2597	2.64	2.21	0	2.21	0.43						
Four Hills	FH-04	5862	2286	1.69	1.87	0	1.87	-0.18		0.18	0.005	5.2	5000	\$ 196,346
Four Hills	FH-05	315	574	71.19	0.26	28.58	28.85	42.34	FH-03, FH-04, NE-01, NE-02, NE-03, NE-04, NE-05, NE-06, NE-08, SH-01					
Four Hills	FH-06	5546	4142	61.28	2.19	36.04	38.22	23.06	CA-02, FH-03, FH-04, FH-05, NE-01, NE-02, NE-03, NE-04, NE-05, NE-06, NE-08, SH-01					
Isleta	IS-01	9551	1295	7.23	2.39	0.39	2.78	4.45	ED-08					
Isleta	IS-02	7456	1261	10.77	1.97	2.78	4.75	6.02	ED-08, IS-01					
Isleta	IS-03	9623	1782	27.41	2.50	21.39	23.90	3.51	CO-1, CO-2, CO-3, ED-8, IS-1, IS-2, NMU-1, NMU-2, NMU-3, RV-1, RV-2, WF-1, WF-2, WF-3, WF-4		0.0005	0.0	12500	\$ -
Isleta	IS-04	2413	560	0.76	0.76	0	0.76	0.00			0.0008	0.0	1400	\$ -
Kirtland	KI-01	11127	15715	9.01	5.43	1.40	6.83	2.18	FH-01, FH-02					
Kirtland	KI-02	1723	5989	51.83	1.81	45.45	47.26	4.57	CA-02, FH-01, FH-02, FH-03, FH-04, FH-05, FH-06, KI-01, KI-03, NE-01, NE-02, NE-03, NE-04, NE-05, NE-06, NE-08, SH-01		0.0077	0.0	5100	\$ -
Kirtland	KI-03	375	1015	83.04	0.39	39.62	40.02	43.02	CA-02, FH-01, FH-02, FH-03, FH-04, FH-05, FH-06, NE-01, NE-02, NE-03, NE-04, NE-05, NE-06, NE-08, SH-01					
Mesadelsol	ME-01	41	95	nda	0.05	0	0.05							
NM Utilities	NMU-01	1273	919	12.71	0.58	0	0.58	12.13						
NM Utilities	NMU-02	528	636	36.25	0.33	0.58	0.92	35.33	NMU-01					
NM Utilities	NMU-03	11543	2758	13.66	3.06	0.92	3.98	9.68	NMU-01, NMU-02					
Northeast	NE-01	19463	3028	5.17	4.57	0	4.57	0.60						
Northeast	NE-02	9399	3354	39.77	2.77	21.74	24.51	15.26	NE-01, NE-03, NE-04, NE-05, NE-06, NE-08, SH-01					
Northeast	NE-03	14814	3187	9.26	3.75	0	3.75	5.51						
Northeast	NE-04	20813	6043	3.45	5.36	0	5.36	-1.91		1.91	0.0027	14.3	15600	\$ 1,667,298
Northeast	NE-05	4192	1249	39.77	1.30	15.23	16.53	23.24	NE-03, NE-04, NE-06, SH-01					
Northeast	NE-06	23060	2971	15.44	5.20	1.55	6.75	8.69	NE-08, SH-01					
Northeast	NE-07	1704	398	nda	0.56	0	0.56							
Northeast	NE-08	2180	264	nda	0.64	0	0.64							
NW Valley	NW-01	9232	2284	11	2.53	2.09	4.62	6.38	NW-02					
NW Valley	NW-02	6193	3057	14.5	2.09	0	2.09	12.41						
NW Valley	NW-03	2793	2841	0.56	1.36	0	1.36	-0.80		0.80	0.0013	11.8	5700	\$ 504,140
NW Valley	NW-04	2142	848	1.23	0.77	0	0.77	0.46						
NW Valley	NW-05	8908	8925	2.14	3.77	0	3.77	-1.63		1.63	0.0081	10.9	9900	\$ 811,421

Table A.9. - Current Population and Employment Parallel Lines Cost Analysis by Scenario

CURRENT-Parallel Lines Cost Analysis														
Basin	Sub-Basin	BASE Population	BASE Employment	Pipe Capacity (mgd)	Sub-Basin Demand (mgd)	Upgradient Demand (mgd)	Total Sub-Basin Demand (mgd)	Difference (Cap.-Tot. Dmd) (mgd)	Upgradient Sub-Basins	Current Flow (mgd)	Average Slope (%)	Pipe Diameter (in)	Pipe Length (ft)	Cost (\$)
Riverview	RV-01	4618	221	6.38	1.16	0.99	2.15	4.23	NMU-01, NMU-02, RV-02					
Riverview	RV-02	174	19	nda	0.07	0	0.07							
Sandia Hts	SH-01	3388	300	nda	0.92	0	0.92							
Southeast	SE-01	755	812	nda	0.44	0	0.44							
Southeast	SE-02	931	742	51.83	0.46	47.40	47.86	3.97	CA-02, FH-01, FH-02, FH-03, FH-04, FH-05, FH-06, KI-01, KI-02, KI-03, NE-01, NE-02, NE-03, NE-04, NE-05, NE-06, NE-08, SH-01, TJ-01		0.0077	0.0	9900	\$ -
Southeast	SE-03	280	1461	77.89	0.48	1.99	2.48	75.41	TJ-02, TJ-03, TJ-04					
Southeast	SE-04	367	280	19.39	0.20	83.89	84.09	-64.70	AC-01, AC-02, AC-03, CA-01, CA-03, CA-04, ED-01, ED-02, ED-03, ED-04, ED-05, ED-06, ED-07, NW-01, NW-02, NW-03, NW-04, NW-05, TJ-05, UP-01, UP-02, UP-03, UP-04, UP-05	64.70	0.0006	70.8	11100	\$ 5,893,734
Tijeras	TJ-01	81	333	51.83	0.14	46.62	46.76	5.07	CA-02, FH-01, FH-02, FH-03, FH-04, FH-05, FH-06, KI-01, KI-02, KI-03, NE-01, NE-02, NE-03, NE-04, NE-05, NE-06, SH-01					
Tijeras	TJ-02	2	1361	6.58	0.39	0	0.39	6.19						
Tijeras	TJ-03	1	906	1.62	0.27	0	0.27	1.35						
Tijeras	TJ-04	2775	2733	57.61	1.33	0.00	1.33	56.28						
Tijeras	TJ-05	2365	932	78.22	0.84	83.06	83.89	-5.67	AC-01, AC-02, AC-03, CA-01, CA-03, CA-04, ED-01, ED-02, ED-03, ED-04, ED-05, ED-06, ED-07, NW-01, NW-02, NW-03, NW-04, NW-05, UP-01, UP-02, UP-03, UP-04, UP-05	5.67	0.0022	22.3	7200	\$ 1,202,551
Tijeras	TJ-06	804	185	3.63	0.29	0	0.29	3.34						
Uptown	UP-01	23649	12890	8.95	7.08	0	7.08	1.87						
Uptown	UP-02	1108	5721	22.1	1.63	19.44	21.07	1.03	AC-01, AC-02, AC-03, NW-05		0.0006	0.0	4500	\$ -
Uptown	UP-03	9848	17322	11.99	5.50	1.32	6.82	5.17	CA-06					
Uptown	UP-04	14291	8801	21.09	4.72	12.59	17.31	3.78	UP-01, UP-03					
Uptown	UP-05	6307	10847	42	3.66	38.37	42.03	-0.03	AC-01, AC-02, AC-03, NW-05, UP-01, UP-02, UP-03, UP-04	0.03	0.0011	3.6	4500	\$ 119,882
W Fringe	WF-01	2918	172	nda	0.78	0	0.78							
W Fringe	WF-02	6382	1179	8.61	1.74	0	1.74	6.87						
W Fringe	WF-03	215	0	nda	0.07	0	0.07							
W Fringe	WF-04	0	0	nda	0.00	0	0.00							
												TOTAL	\$ 15,250,237	

Table A.10. Capital Cost Analysis by Scenario

TREND SCENARIO																							
Capital Cost Analysis - 1998 Dollars																							
													CAPITAL 2020 NEEDS										
Basin	Sub-Basin	Trend	Trend	Trend	Trend	PERCENTAGE OF TOTAL			Vacant	Vacant Parcel	Percent of Vacant	Service	Parallel	Master Plan	Small Collection	Lift Station &	Treatment	Rehab./	Septic	Total Capital Costs By Coverage			
	Basin	Population	Employment	Population	Employment	In	In Srv.	Out Srv.	Parcel	Count with	Parcels Served	Lines	Lines	Sewer Lines	Lines	Odor Control	Plant	Replacement	Tank	Total	In	In Srv.	Out Srv.
		Increase	Increase	2020	2020	1960	Area	Area	Count	Sewer Connection	by Sewer	\$	\$	\$	\$	\$	\$	\$	\$	\$	1960	Area	Area
Southeast	SE-01	171	269	926	1081	0	100	0	Unserved Area			\$ 261,360	\$ 0	\$ 254,889	\$ 137,720	\$ 16,056	\$113,960	\$ 684,137	\$ 0	\$ 1,468,122	\$ 0	\$ 1,468,122	\$ 0
Southeast	SE-02	60	440	991	1182	0	100	0	44	5	11.4%	\$ 263,250	\$ 881,149	\$ 0	\$ 156,500	\$ 0	\$129,500	\$ 730,415	\$ 0	\$ 2,160,814	\$ 0	\$ 2,160,814	\$ 0
Southeast	SE-03	12	2684	292	4145	0	100	0	77	51	66.2%	\$ 540,741	\$ 0	\$ 0	\$ 843,848	\$ 0	\$698,264	\$ 760,103	\$ 0	\$ 2,842,956	\$ 0	\$ 2,842,956	\$ 0
Southeast	SE-04	206	368	573	648	0	100	0	54	0	0.0%	\$ 340,956	\$ 484,424	\$ 0	\$ 179,662	\$ 0	\$148,666	\$ 282,474	\$ 0	\$ 1,436,182	\$ 0	\$ 1,436,182	\$ 0
SOUTHEAST TOTAL		449	3761	2782	7056							\$ 1,406,307	\$ 1,365,573	\$ 254,889	\$ 1,317,730	\$ 16,056	\$ 1,090,390	\$ 2,457,129		\$ 7,908,073	\$ 0	\$ 7,908,073	\$ 0
Tijeras	TJ-01	1602	923	1683	1256	0	50	50	Unserved Area			\$ 1,499,850	\$ 0	\$ 373,253	\$ 790,325	\$ 23,512	\$653,975	\$ 180,748	\$ 0	\$ 3,521,663	\$ 0	\$ 1,760,832	\$ 1,760,832
Tijeras	TJ-02	23	1690	25	3051	0	100	0	18	0	0.0%	\$ 1,017,522	\$ 0	\$ 0	\$ 536,169	\$ 0	\$443,667	\$ 595,072	\$ 0	\$ 2,592,430	\$ 0	\$ 2,592,430	\$ 0
Tijeras	TJ-03	0	1106	1	2012	5	95	0	25	0	0.0%	\$ 656,964	\$ 0	\$ 0	\$ 346,178	\$ 0	\$286,454	\$ 395,987	\$ 0	\$ 1,685,583	\$ 84,279	\$ 1,601,304	\$ 0
Tijeras	TJ-04	71	2518	2846	5251	55	45	0	223	17	7.6%	\$ 1,420,630	\$ 0	\$ 0	\$ 810,357	\$ 0	\$670,551	\$ 2,404,738	\$ 0	\$ 5,306,275	\$ 2,918,451	\$ 2,387,824	\$ 0
Tijeras	TJ-05	158	65	2523	997	40	60	0	208	51	24.5%	\$ 99,983	\$ 751,429	\$ 0	\$ 0	\$ 0	\$57,757	\$ 1,439,437	\$ 0	\$ 2,348,607	\$ 939,443	\$ 1,409,164	\$ 0
Tijeras	TJ-06	145	-31	949	154	0	100	0	104	17	16.3%	\$ 56,647	\$ 0	\$ 0	\$ 35,682	\$ 0	\$29,526	\$ 431,788	\$ 0	\$ 553,643	\$ 0	\$ 553,643	\$ 0
TIJERAS TOTAL		1999	6271	8027	12721							\$ 4,751,596	\$ 751,429	\$ 373,253	\$ 2,518,711	\$ 23,512	\$ 2,141,930	\$ 5,447,770		\$ 16,008,201	\$ 3,942,173	\$ 10,305,196	\$ 1,760,832
Uptown	UP-01	-490	477	23159	13367	60	40	0	37	4	10.8%	- \$ 6,887	\$ 0	\$ 0	\$ 0	\$ 0	(\$3,367)	\$ 15,952,562	\$ 0	\$ 15,942,308	\$ 9,565,385	\$ 6,376,923	\$ 0
Uptown	UP-02	45	2066	1153	7787	40	60	0	32	4	12.5%	\$ 1,097,192	\$ 1,036,104	\$ 0	\$ 0	\$ 0	\$546,749	\$ 2,981,473	\$ 0	\$ 5,661,518	\$ 2,264,607	\$ 3,396,911	\$ 0
Uptown	UP-03	-317	5917	9531	23239	100	0	0	38	11	28.9%	\$ 2,363,495	\$ 0	\$ 0	\$ 0	\$ 0	\$1,450,400	\$ 11,862,150	\$ 0	\$ 15,676,045	\$ 15,676,045	\$ 0	\$ 0
Uptown	UP-04	57	1528	14348	10329	100	0	0	169	18	10.7%	\$ 841,213	\$ 0	\$ 0	\$ 0	\$ 0	\$410,515	\$ 10,081,736	\$ 0	\$ 11,333,464	\$ 11,333,464	\$ 0	\$ 0
Uptown	UP-05	-65	3055	6242	13902	100	0	0	109	36	33.0%	\$ 1,189,471	\$ 935,781	\$ 0	\$ 0	\$ 0	\$774,410	\$ 7,489,265	\$ 0	\$ 10,388,927	\$ 10,388,927	\$ 0	\$ 0
UPTOWN TOTAL		-770	13043	54433	68624							\$ 5,484,484	\$ 1,971,885	\$ 0	\$ 0	\$ 0	\$ 3,178,707	\$ 48,367,187		\$ 59,002,263	\$ 49,228,429	\$ 9,773,834	\$ 0
W Fringe	WF-01	8046	5831	10964	6003	0	0	100	Unserved Area			\$ 8,242,938	\$ 0	\$ 2,154,809	\$ 4,343,501	\$ 135,736	\$3,594,143	\$ 1,349,063	\$ 0	\$ 19,820,190	\$ 0	\$ 0	\$ 19,820,190
W Fringe	WF-02	21064	5554	27446	6733	0	5	95	Unserved Area			\$ 15,811,092	\$ 0	\$ 4,340,733	\$ 8,331,434	\$ 273,432	\$6,894,062	\$ 3,301,057	\$ 0	\$ 38,951,810	\$ 0	\$ 1,947,590	\$ 37,004,219
W Fringe	WF-03	7342	5966	7557	5966	0	5	95	Unserved Area			\$ 7,904,952	\$ 0	\$ 1,717,421	\$ 4,165,404	\$ 108,184	\$3,446,772	\$ 93,867	\$ 0	\$ 17,436,600	\$ 0	\$ 871,830	\$ 16,564,770
W Fringe	WF-04	2108	1351	2108	1351	0	0	100	Unserved Area			\$ 2,054,646	\$ 0	\$ 439,293	\$ 1,082,667	\$ 27,672	\$895,881	\$ 0	\$ 0	\$ 4,500,159	\$ 0	\$ 0	\$ 4,500,159
W FRINGE TOTAL		38560	18702	48075	20053							\$ 34,013,628	\$ 0	\$ 8,652,256	\$ 17,923,006	\$ 545,024	\$ 14,830,858	\$ 4,743,987		\$ 80,708,759	\$ 0	\$ 2,819,420	\$ 77,889,338
GRAND TOTAL		148545	150315	658395	454313							\$ 151,923,055	\$ 18,131,382	\$ 18,958,941	\$ 72,538,376	\$ 1,194,264	\$ 72,899,953	\$ 347,920,317	\$ 17,393,000	\$ 700,959,288	\$ 226,532,311	\$ 243,407,048	\$ 231,019,929

Table A.10 Capital Cost Analysis by Scenario

BALANCED SCENARIO																							
Capital Cost Analysis - 1998 Dollars																							
Basin	Sub-Basin	Balanced Population	Balanced Employment	Balanced Population 2020	Balanced Employment 2020	PERCENTAGE OF TOTAL			Vacant Parcel Count	Vacant Parcel Sewer Connection	Percent of Vacant Parcels Served by Sewer	Service Lines \$	Parallel Lines \$	Master Plan Sewer Lines \$	Small Collection Lines \$	Lift Station & Odor Control \$	Treatment Plant \$	Rehab./ Replacement \$	Septic Tank \$	Total Capital Costs By Coverage			
						In 1960	In Srv. Area	Out Srv. Area												Total	In 1960	In Srv. Area	Out Srv. Area
Southeast	SE-01	171	102	926	914	0	100	0	Unservd Area		\$ 162,162	\$ 0	\$ 233,680	\$ 85,449	\$ 14,720	\$ 70,707	\$ 684,137		\$ 1,250,855	\$ 0	\$ 1,250,855	\$ 0	
Southeast	SE-02	60	244	991	986	0	100	0	44	5	11.4%	\$ 160,056	\$ 1,075,626	\$ 0	\$ 95,152	\$ 0	\$ 78,736	\$ 730,415		\$ 2,139,985	\$ 0	\$ 2,139,985	\$ 0
Southeast	SE-03	12	1993	292	3454	0	100	0	77	51	66.2%	\$ 402,146	\$ 0	\$ 0	\$ 627,565	\$ 0	\$ 519,295	\$ 760,103		\$ 2,309,109	\$ 0	\$ 2,309,109	\$ 0
Southeast	SE-04	206	350	573	630	0	100	0	54	0	0.0%	\$ 330,264	\$ 501,455	\$ 0	\$ 174,028	\$ 0	\$ 144,004	\$ 282,474		\$ 1,432,225	\$ 0	\$ 1,432,225	\$ 0
SOUTHEAST TOTAL		449	2689	2782	5984							\$ 1,054,628	\$ 1,577,081	\$ 233,680	\$ 982,194	\$ 14,720	\$ 812,742	\$ 2,457,129		\$ 7,132,173	\$ 0	\$ 7,132,173	\$ 0
Tijeras	TJ-01	2522	1407	2603	1740	0	50	50	Unservd Area		\$ 2,333,826	\$ 2,445,515	\$ 551,561	\$ 1,229,777	\$ 34,744	\$ 1,017,611	\$ 180,748		\$ 7,793,782	\$ 0	\$ 3,896,891	\$ 3,896,891	\$ 0
Tijeras	TJ-02	23	1326	25	2687	0	100	0	18	0	0.0%	\$ 801,306	\$ 0	\$ 0	\$ 422,237	\$ 0	\$ 349,391	\$ 595,072		\$ 2,168,006	\$ 0	\$ 2,168,006	\$ 0
Tijeras	TJ-03	0	915	1	1821	5	95	0	25	0	0.0%	\$ 543,510	\$ 0	\$ 0	\$ 286,395	\$ 0	\$ 236,985	\$ 395,987	\$ 73,144	\$ 1,462,877	\$ 73,144	\$ 1,389,733	\$ 0
Tijeras	TJ-04	71	2020	2846	4753	55	45	0	223	17	7.6%	\$ 1,147,368	\$ 0	\$ 0	\$ 654,483	\$ 0	\$ 541,569	\$ 2,404,738		\$ 4,748,158	\$ 2,611,487	\$ 2,136,671	\$ 0
Tijeras	TJ-05	164	90	2529	1022	40	60	0	208	51	24.5%	\$ 113,882	\$ 771,793	\$ 0	\$ 0	\$ 0	\$ 65,786	\$ 1,439,437		\$ 2,390,899	\$ 956,359	\$ 1,434,539	\$ 0
Tijeras	TJ-06	145	-35	949	150	0	100	0	104	17	16.3%	\$ 54,659	\$ 0	\$ 0	\$ 34,430	\$ 0	\$ 28,490	\$ 431,788		\$ 549,367	\$ 0	\$ 549,367	\$ 0
TIJERAS TOTAL		2925	5723	8953	12173							\$ 4,994,552	\$ 3,217,308	\$ 551,561	\$ 2,627,322	\$ 34,744	\$ 2,239,832	\$ 5,447,770		\$ 19,113,089	\$ 3,640,990	\$ 11,575,208	\$ 3,896,891
Uptown	UP-01	-522	-158	23127	12732	60	40	0	37	4	10.8%	- \$ 360,253	\$ 0	\$ 0	\$ 0	\$ 0	\$ 15,952,562	\$ 176,120	\$ 15,416,189	\$ 9,249,713	\$ 6,166,476	\$ 0	\$ 0
Uptown	UP-02	36	1017	1144	6738	40	60	0	32	4	12.5%	\$ 547,297	\$ 902,965	\$ 0	\$ 0	\$ 0	\$ 272,727	\$ 2,981,473		\$ 4,704,462	\$ 1,881,785	\$ 2,822,677	\$ 0
Uptown	UP-03	2683	5338	12531	22660	100	0	0	38	11	28.9%	\$ 3,385,284	\$ 0	\$ 0	\$ 0	\$ 0	\$ 2,077,439	\$ 11,862,150		\$ 17,324,873	\$ 17,324,873	\$ 0	\$ 0
Uptown	UP-04	384	1062	14675	9863	100	0	0	169	18	10.7%	\$ 767,441	\$ 0	\$ 0	\$ 0	\$ 0	\$ 374,514	\$ 10,081,736		\$ 11,223,691	\$ 11,223,691	\$ 0	\$ 0
Uptown	UP-05	-27	2443	6280	13290	100	0	0	109	36	33.0%	\$ 961,125	\$ 850,764	\$ 0	\$ 0	\$ 0	\$ 625,744	\$ 7,489,265		\$ 9,926,898	\$ 9,926,898	\$ 0	\$ 0
UPTOWN TOTAL		2554	9702	57757	65283							\$ 5,300,894	\$ 1,753,729	\$ 0	\$ 0	\$ 0	\$ 3,174,304	\$ 48,367,187		\$ 58,596,113	\$ 49,606,960	\$ 8,989,153	\$ 0
W Fringe	WF-01	5170	3377	8088	3549	0	0	100	Unservd Area		\$ 5,076,918	\$ 0	\$ 1,477,899	\$ 2,675,211	\$ 93,096	\$ 2,213,673	\$ 1,349,063		\$ 12,885,860	\$ 0	\$ 0	\$ 12,885,860	\$ 0
W Fringe	WF-02	14024	9633	20406	10812	0	5	95	Unservd Area		\$ 14,052,258	\$ 0	\$ 3,964,686	\$ 7,404,641	\$ 249,744	\$ 6,127,163	\$ 3,301,057		\$ 35,099,549	\$ 0	\$ 1,754,977	\$ 33,344,572	\$ 0
W Fringe	WF-03	7129	966	7344	966	0	5	95	Unservd Area		\$ 4,808,430	\$ 0	\$ 1,055,370	\$ 2,533,735	\$ 66,480	\$ 2,096,605	\$ 93,867		\$ 10,654,487	\$ 0	\$ 532,724	\$ 10,121,763	\$ 0
W Fringe	WF-04	0	0	0	0	0	0	100	Unservd Area		\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0		\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
W FRINGE TOTAL		26323	13976	35838	15327							\$ 23,937,606	\$ 0	\$ 6,497,955	\$ 12,613,587	\$ 409,320	\$ 10,437,441	\$ 4,743,987		\$ 58,639,896	\$ 0	\$ 2,287,702	\$ 56,352,194
GRAND TOTAL		147520	148723	657370	452721							\$ 152,884,241	\$ 17,695,305	\$ 18,165,826	\$ 66,976,053	\$ 1,144,304	\$ 74,186,665	\$ 347,920,317	\$ 9,808,000	\$ 688,780,712	\$ 257,043,854	\$ 229,819,314	\$ 201,917,543

Table A.10 Capital Cost Analysis by Scenario

DOWNTOWN SCENARIO																								
Capital Cost Analysis - 1998 Dollars																								
Basin	Sub-Basin	Downtown Population Increase	Downtown Employment Increase	Downtown Population 2020	Downtown Employment 2020	PERCENTAGE OF TOTAL					Vacant Parcel Count with Sewer Connection	Percent of Vacant Parcels Served by Sewer	Service Lines \$	Parallel Lines \$	Master Plan Sewer Lines \$	Small Collection Lines \$	Lift Station & Odor Control \$	Treatment Plant \$	Rehab./ Replacement \$	Septic Tank \$	Total Capital Costs By Coverage			
						In 1960	In Srv. Area	Out Srv. Area	Total	In 1960											In Srv. Area	Out Srv. Area		
																							In 1960	In Srv. Area
Southeast	SE-01	135	223	890	1035	0	100	0	Unservd Area		\$ 212,652	\$ 0	\$ 244,475	\$ 112,054	\$ 15,400	\$ 92,722	\$ 684,137		\$ 1,361,440	\$ 0	\$ 1,361,440	\$ 0		
Southeast	SE-02	60	400	991	1142	0	100	0	44	5	11.4%	\$ 242,190	\$ 832,182	\$ 0	\$ 143,980	\$ 0	\$ 119,140	\$ 730,415		\$ 2,067,907	\$ 0	\$ 2,067,907	\$ 0	
Southeast	SE-03	12	2541	292	4002	0	100	0	77	51	66.2%	\$ 512,059	\$ 0	\$ 0	\$ 799,089	\$ 0	\$ 661,227	\$ 760,103		\$ 2,732,478	\$ 0	\$ 2,732,478	\$ 0	
Southeast	SE-04	181	286	548	566	0	100	0	54	0	0.0%	\$ 277,398	\$ 680,316	\$ 0	\$ 146,171	\$ 0	\$ 120,953	\$ 282,474		\$ 1,507,312	\$ 0	\$ 1,507,312	\$ 0	
SOUTHEAST TOTAL		388	3450	2721	6745							\$ 1,244,299	\$ 1,512,498	\$ 244,475	\$ 1,201,294	\$ 15,400	\$ 994,042	\$ 2,457,129		\$ 7,669,136	\$ 0	\$ 7,669,136	\$ 0	
Tijeras	TJ-01	1403	256	1484	589	0	50	50	Unservd Area		\$ 985,446	\$ 1,725,173	\$ 263,271	\$ 519,267	\$ 16,584	\$ 429,681	\$ 180,748		\$ 4,120,170	\$ 0	\$ 2,060,085	\$ 2,060,085		
Tijeras	TJ-02	23	1604	25	2965	0	100	0	18	0	0.0%	\$ 966,438	\$ 0	\$ 0	\$ 509,251	\$ 0	\$ 421,393	\$ 595,072		\$ 2,492,154	\$ 0	\$ 2,492,154	\$ 0	
Tijeras	TJ-03	0	1053	1	1959	5	95	0	25	0	0.0%	\$ 625,482	\$ 0	\$ 0	\$ 329,589	\$ 0	\$ 272,727	\$ 395,987	\$ 81,189	\$ 1,542,596	\$ 1,542,596	\$ 0	\$ 0	
Tijeras	TJ-04	1267	2465	4042	5198	55	45	0	223	17	7.6%	\$ 2,047,814	\$ 0	\$ 0	\$ 1,168,116	\$ 0	\$ 966,588	\$ 2,404,738	\$ 3,622,990	\$ 2,964,265	\$ 2,964,265	\$ 0	\$ 0	
Tijeras	TJ-05	864	83	3229	1015	40	60	0	208	51	24.5%	\$ 424,593	\$ 969,373	\$ 0	\$ 0	\$ 0	\$ 245,273	\$ 1,439,437	\$ 1,231,470	\$ 1,847,206	\$ 1,847,206	\$ 0	\$ 0	
Tijeras	TJ-06	105	-50	909	135	0	100	0	104	17	16.3%	\$ 27,330	\$ 0	\$ 0	\$ 17,215	\$ 0	\$ 14,245	\$ 431,788	\$ 490,577	\$ 490,577	\$ 490,577	\$ 0	\$ 0	
TIJERAS TOTAL		3662	5411	9690	11861							\$ 5,077,102	\$ 2,694,546	\$ 263,271	\$ 2,543,438	\$ 16,584	\$ 2,349,907	\$ 5,447,770		\$ 18,392,618	\$ 4,935,650	\$ 11,396,883	\$ 2,060,085	
Uptown	UP-01	-442	742	23207	13632	60	40	0	37	4	10.8%	\$ 158,935	\$ 0	\$ 0	\$ 0	\$ 0	\$ 77,700	\$ 15,952,562	\$ 16,189,197	\$ 9,713,518	\$ 6,475,679	\$ 6,475,679	\$ 0	\$ 0
Uptown	UP-02	55	1716	1163	7437	40	60	0	32	4	12.5%	\$ 920,477	\$ 1,005,827	\$ 0	\$ 0	\$ 0	\$ 458,689	\$ 2,981,473	\$ 5,366,466	\$ 2,146,587	\$ 3,219,880	\$ 3,219,880	\$ 0	\$ 0
Uptown	UP-03	719	14536	10567	31858	100	0	0	38	11	28.9%	\$ 6,438,413	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,951,045	\$ 11,862,150	\$ 22,251,608	\$ 22,251,608	\$ 0	\$ 0	\$ 0	\$ 0
Uptown	UP-04	184	1550	14475	10351	100	0	0	169	18	10.7%	\$ 920,292	\$ 0	\$ 0	\$ 0	\$ 0	\$ 449,106	\$ 10,081,736	\$ 11,451,135	\$ 11,451,135	\$ 0	\$ 0	\$ 0	\$ 0
Uptown	UP-05	23	3502	6330	14349	100	0	0	109	36	33.0%	\$ 1,402,303	\$ 986,782	\$ 0	\$ 0	\$ 0	\$ 912,975	\$ 7,489,265	\$ 10,791,325	\$ 10,791,325	\$ 0	\$ 0	\$ 0	\$ 0
UPTOWN TOTAL		539	22046	55742	77627							\$ 9,840,421	\$ 1,992,609	\$ 0	\$ 0	\$ 0	\$ 5,849,515	\$ 48,367,187		\$ 66,049,731	\$ 56,354,173	\$ 9,695,559	\$ 0	
W Fringe	WF-01	4060	227	6978	399	0	0	100	Unservd Area		\$ 2,546,478	\$ 0	\$ 936,879	\$ 1,341,831	\$ 59,016	\$ 1,110,333	\$ 1,349,063		\$ 7,343,600	\$ 0	\$ 0	\$ 7,343,600		
W Fringe	WF-02	13498	3000	19880	4179	0	5	95	Unservd Area		\$ 9,799,812	\$ 0	\$ 3,055,493	\$ 5,163,874	\$ 192,472	\$ 4,272,982	\$ 3,301,057		\$ 25,785,690	\$ 0	\$ 1,289,284	\$ 24,496,405		
W Fringe	WF-03	2892	257	3107	257	0	5	95	Unservd Area		\$ 1,870,506	\$ 0	\$ 427,228	\$ 985,637	\$ 26,912	\$ 815,591	\$ 93,867		\$ 4,219,741	\$ 0	\$ 210,987	\$ 4,008,754		
W Fringe	WF-04	0	0	0	0	0	0	100	Unservd Area		\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0		\$ 0	\$ 0	\$ 0	\$ 0		
W FRINGE TOTAL		20450	3484	29965	4835							\$ 14,216,796	\$ 0	\$ 4,419,600	\$ 7,491,342	\$ 278,400	\$ 6,198,906	\$ 4,743,987		\$ 37,349,031	\$ 0	\$ 1,500,272	\$ 35,848,759	
GRAND TOTAL		147294	148899	657144	452897							\$ 146,023,138	\$ 16,199,844	\$ 13,364,845	\$ 60,329,185	\$ 841,880	\$ 73,020,906	\$ 347,920,317		\$ 671,959,116	\$ 258,551,285	\$ 241,727,811	\$ 171,680,020	

Table A.11. Annual Cost Analysis by Scenario

TREND SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
Basin	Sub-Basin	Trend	Trend	Trend	Trend	PERCENTAGE OF TOTAL			Septic Tank	Plant	ANNUAL OPERATION & MAINTENANCE NEEDS			Total Annual O&M Costs By Coverage			
		Population	Employment	Population	Employment	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Existing Lines	Parallel & New	Lift Stations	Total	In	In Srv.	Out Srv.
		Increase	Increase	2020	2020	1960	Area	Area	\$	\$	\$	\$	\$	1960	Area	Area	
Academy	AC-01	6633	21580	27315	43505	0	100	0	\$ 0	\$ 778,312	\$ 294,611	\$ 4,760	\$ 118,978	\$ 1,196,661	\$ 0	\$ 1,196,661	\$ 0
Academy	AC-02	840	613	14778	6184	0	100	0	\$ 0	\$ 230,372	\$ 87,202	\$ 0	\$ 35,216	\$ 352,790	\$ 0	\$ 352,790	\$ 0
Academy	AC-03	1542	9529	3404	23590	0	100	0	\$ 0	\$ 296,664	\$ 112,295	\$ 0	\$ 45,350	\$ 454,309	\$ 0	\$ 454,309	\$ 0
ACADEMY TOTAL		9015	31722	45497	73279				\$ 0	\$ 1,305,348	\$ 494,108	\$ 4,760	\$ 199,544	\$ 2,003,760	\$ 0	\$ 2,003,760	\$ 0
Campus	CA-01	-199	989	16366	10513	90	0	10	\$ 0	\$ 295,400	\$ 111,817	\$ 142	\$ 45,157	\$ 452,515	\$ 407,264	\$ 0	\$ 45,252
Campus	CA-02	-445	560	21883	15330	100	0	0	\$ 0	\$ 408,971	\$ 154,806	\$ 0	\$ 62,518	\$ 626,295	\$ 626,295	\$ 0	\$ 0
Campus	CA-03	-344	5787	24939	22877	85	0	15	\$ 0	\$ 525,498	\$ 198,915	\$ 76	\$ 80,331	\$ 804,819	\$ 684,096	\$ 0	\$ 120,723
Campus	CA-04	90	6428	8544	28540	100	0	0	\$ 0	\$ 407,553	\$ 154,269	\$ 0	\$ 62,301	\$ 624,124	\$ 624,124	\$ 0	\$ 0
Campus	CA-05	-103	521	6052	4278	100	0	0	\$ 0	\$ 113,527	\$ 42,973	\$ 0	\$ 17,354	\$ 173,854	\$ 173,854	\$ 0	\$ 0
Campus	CA-06	-24	674	3947	2219	90	10	0	\$ 0	\$ 67,764	\$ 25,651	\$ 0	\$ 10,359	\$ 103,774	\$ 93,396	\$ 10,377	\$ 0
CAMPUS TOTAL		-1025	14959	81731	83757				\$ 0	\$ 1,818,713	\$ 688,430	\$ 217	\$ 278,020	\$ 2,785,380	\$ 2,609,029	\$ 10,377	\$ 165,974
Coors	CO-01	868	249	11932	1411	0	100	0	\$ 0	\$ 146,640	\$ 55,507	\$ 3,280	\$ 22,416	\$ 227,843	\$ 0	\$ 227,843	\$ 0
Coors	CO-02	7731	5031	17754	8054	0	100	0	\$ 0	\$ 283,630	\$ 107,361	\$ 5,160	\$ 43,357	\$ 439,509	\$ 0	\$ 439,509	\$ 0
Coors	CO-03	1494	4161	13946	7544	65	35	0	\$ 0	\$ 236,175	\$ 89,398	\$ 5,160	\$ 36,103	\$ 366,837	\$ 238,444	\$ 128,393	\$ 0
Coors	CO-04	6617	1808	19369	2965	0	55	45	\$ 0	\$ 245,451	\$ 92,909	\$ 0	\$ 37,521	\$ 375,881	\$ 0	\$ 206,735	\$ 169,147
Coors	CO-05	2850	652	13040	1287	0	10	90	\$ 0	\$ 157,454	\$ 59,600	\$ 0	\$ 24,069	\$ 241,123	\$ 0	\$ 24,112	\$ 217,011
COORS TOTAL		19560	11901	76041	21261				\$ 0	\$ 1,069,349	\$ 404,776	\$ 13,600	\$ 163,467	\$ 1,651,193	\$ 238,444	\$ 1,026,591	\$ 386,158
East Mtn.	EM-01	14807	2586	30198	4139	0	0	100	\$ 1,373,480	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,373,480	\$ 0	\$ 0	\$ 1,373,480
EAST MTN. TOTAL		14807	2586	30198	4139				\$ 1,373,480	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,373,480	\$ 0	\$ 0	\$ 1,373,480
Edith	ED-01	-41	740	1357	4139	90	10	0	\$ 0	\$ 60,401	\$ 22,863	\$ 3,360	\$ 9,233	\$ 95,858	\$ 86,272	\$ 9,586	\$ 0
Edith	ED-02	-41	667	2914	1894	100	0	0	\$ 0	\$ 52,840	\$ 20,001	\$ 512	\$ 8,077	\$ 81,431	\$ 81,431	\$ 0	\$ 0
Edith	ED-03	219	535	8030	2023	90	10	0	\$ 0	\$ 110,482	\$ 41,820	\$ 0	\$ 16,889	\$ 169,192	\$ 152,273	\$ 16,919	\$ 0
Edith	ED-04	872	125	7895	965	75	25	0	\$ 0	\$ 97,371	\$ 36,858	\$ 0	\$ 14,885	\$ 149,114	\$ 111,835	\$ 37,278	\$ 0
Edith	ED-05	670	389	3723	2543	85	15	0	\$ 0	\$ 68,863	\$ 26,067	\$ 2,440	\$ 10,527	\$ 107,897	\$ 91,712	\$ 16,185	\$ 0
Edith	ED-06	-188	1572	8163	17289	95	5	0	\$ 0	\$ 279,717	\$ 105,880	\$ 576	\$ 42,759	\$ 428,933	\$ 407,487	\$ 21,447	\$ 0
Edith	ED-07	-28	1588	1109	11520	95	5	0	\$ 0	\$ 138,793	\$ 52,537	\$ 437	\$ 21,217	\$ 212,983	\$ 202,334	\$ 10,649	\$ 0
Edith	ED-08	250	188	1333	501	60	40	0	\$ 0	\$ 20,156	\$ 7,629	\$ 0	\$ 3,081	\$ 30,866	\$ 18,520	\$ 12,346	\$ 0
EDITH TOTAL		1713	5804	34524	40874				\$ 0	\$ 828,624	\$ 313,656	\$ 7,325	\$ 126,669	\$ 1,276,273	\$ 1,151,863	\$ 124,410	\$ 0
Four Hills	FH-01	1685	657	3039	734	0	100	0	\$ 0	\$ 41,465	\$ 15,696	\$ 0	\$ 6,339	\$ 63,500	\$ 0	\$ 63,500	\$ 0
Four Hills	FH-02	345	299	4141	592	45	55	0	\$ 0	\$ 52,016	\$ 19,689	\$ 0	\$ 7,951	\$ 79,656	\$ 35,845	\$ 43,811	\$ 0
Four Hills	FH-03	1	1748	7252	4345	90	10	0	\$ 0	\$ 127,451	\$ 48,244	\$ 0	\$ 19,483	\$ 195,178	\$ 175,660	\$ 19,518	\$ 0
Four Hills	FH-04	138	814	6000	3100	100	0	0	\$ 0	\$ 100,009	\$ 37,856	\$ 480	\$ 15,288	\$ 153,633	\$ 153,633	\$ 0	\$ 0
Four Hills	FH-05	-7	103	308	677	100	0	0	\$ 0	\$ 10,825	\$ 4,098	\$ 0	\$ 1,655	\$ 16,578	\$ 16,578	\$ 0	\$ 0
Four Hills	FH-06	-47	96	5499	4238	40	25	35	\$ 0	\$ 107,010	\$ 40,506	\$ 0	\$ 16,358	\$ 163,874	\$ 65,549	\$ 40,968	\$ 57,356
FOUR HILLS TOTAL		2115	3717	26239	13686				\$ 0	\$ 438,776	\$ 166,088	\$ 480	\$ 67,074	\$ 672,418	\$ 447,265	\$ 167,797	\$ 57,356

Table A.11. Annual Cost Analysis by Scenario

TREND SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Trend	Trend	Trend	Trend	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Population	Employment	Population	Employment	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Maintenance	Lines Maint.	& Odor Control	Total	In	In Srv.	Out Srv.
		Increase	Increase	2020	2020	1960	Area	Area	\$	\$	\$	\$	\$		1960	Area	Area
Isleta	IS-01	321	521	9872	1816	50	50	0	\$ 0	\$ 128,451	\$ 48,622	\$ 0	\$ 19,636	\$ 196,709	\$ 98,355	\$ 98,355	\$ 0
Isleta	IS-02	368	444	7824	1705	0	100	0	\$ 0	\$ 104,724	\$ 39,641	\$ 0	\$ 16,009	\$ 160,373	\$ 0	\$ 160,373	\$ 0
Isleta	IS-03	639	626	10262	2408	0	100	0	\$ 0	\$ 139,243	\$ 52,707	\$ 5,000	\$ 21,286	\$ 218,236	\$ 0	\$ 218,236	\$ 0
Isleta	IS-04	17	44	2430	604	0	100	0	\$ 0	\$ 33,344	\$ 12,621	\$ 560	\$ 5,097	\$ 51,622	\$ 0	\$ 51,622	\$ 0
ISLETA TOTAL		1345	1635	30388	6533				\$ 0	\$ 405,762	\$ 153,591	\$ 5,560	\$ 62,027	\$ 626,940	\$ 98,355	\$ 528,586	\$ 0
Kirtland	KI-01	2021	36	13148	15751	0	5	95	\$ 0	\$ 317,600	\$ 120,220	\$ 0	\$ 48,550	\$ 486,370	\$ 0	\$ 24,319	\$ 462,052
Kirtland	KI-02	-51	259	1672	6248	0	5	95	\$ 0	\$ 87,041	\$ 32,947	\$ 2,040	\$ 13,306	\$ 135,334	\$ 0	\$ 6,767	\$ 128,567
Kirtland	KI-03	-9	-96	366	919	0	0	100	\$ 0	\$ 14,122	\$ 5,346	\$ 0	\$ 2,159	\$ 21,627	\$ 0	\$ 0	\$ 21,627
KIRTLAND TOTAL		1961	199	15186	22918				\$ 0	\$ 418,763	\$ 158,513	\$ 2,040	\$ 64,015	\$ 643,330	\$ 0	\$ 31,085	\$ 612,245
Mesadelsol	ME-01	10428	6992	10469	7087	0	4	96	\$ 0	\$ 192,940	\$ 73,033	\$ 7,440	\$ 29,494	\$ 302,907	\$ 0	\$ 12,116	\$ 290,791
MESADELSOL TOTAL		10428	6992	10469	7087				\$ 0	\$ 192,940	\$ 73,033	\$ 7,440	\$ 29,494	\$ 302,907	\$ 0	\$ 12,116	\$ 290,791
NM Utilities	NMU-01	1952	4112	3225	5031	0	0	100	\$ 0	\$ 90,733	\$ 34,345	\$ 0	\$ 13,870	\$ 138,948	\$ 0	\$ 0	\$ 138,948
NM Utilities	NMU-02	2734	3623	3262	4259	0	0	100	\$ 0	\$ 82,656	\$ 31,287	\$ 0	\$ 12,635	\$ 126,578	\$ 0	\$ 0	\$ 126,578
NM Utilities	NMU-03	23233	7014	34776	9772	0	20	80	\$ 0	\$ 489,583	\$ 185,320	\$ 0	\$ 74,841	\$ 749,743	\$ 0	\$ 149,949	\$ 599,794
NM UTILITIES TOTAL		27919	14749	41263	19062				\$ 0	\$ 662,972	\$ 250,952	\$ 0	\$ 101,346	\$ 1,015,270	\$ 0	\$ 149,949	\$ 865,321
Northeast	NE-01	81	870	19544	3898	50	50	0	\$ 0	\$ 257,628	\$ 97,519	\$ 0	\$ 39,383	\$ 394,529	\$ 197,264	\$ 197,264	\$ 0
Northeast	NE-02	-154	336	9245	3690	100	0	0	\$ 0	\$ 142,156	\$ 53,810	\$ 0	\$ 21,731	\$ 217,696	\$ 217,696	\$ 0	\$ 0
Northeast	NE-03	-115	987	14699	4174	70	25	5	\$ 0	\$ 207,414	\$ 78,512	\$ 0	\$ 31,707	\$ 317,633	\$ 222,343	\$ 79,408	\$ 15,882
Northeast	NE-04	1004	3145	21817	9188	65	30	5	\$ 0	\$ 340,745	\$ 128,981	\$ 749	\$ 52,088	\$ 522,563	\$ 339,666	\$ 156,769	\$ 26,128
Northeast	NE-05	-69	275	4123	1524	100	0	0	\$ 0	\$ 62,061	\$ 23,492	\$ 0	\$ 9,487	\$ 95,039	\$ 95,039	\$ 0	\$ 0
Northeast	NE-06	4388	1151	27448	4122	0	75	25	\$ 0	\$ 346,954	\$ 131,331	\$ 0	\$ 53,038	\$ 531,323	\$ 0	\$ 398,492	\$ 132,831
Northeast	NE-07	3747	373	5451	771	0	0	100	\$ 0	\$ 68,380	\$ 25,884	\$ 0	\$ 10,453	\$ 104,716	\$ 0	\$ 0	\$ 104,716
Northeast	NE-08	3572	163	5752	427	0	100	0	\$ 0	\$ 67,907	\$ 25,705	\$ 0	\$ 10,381	\$ 103,993	\$ 0	\$ 103,993	\$ 0
NORTHEAST TOTAL		12454	7300	108079	27794				\$ 0	\$ 1,493,244	\$ 565,232	\$ 749	\$ 228,267	\$ 2,287,491	\$ 1,072,008	\$ 935,926	\$ 279,557
NW Valley	NW-01	1960	691	11192	2975	5	95	0	\$ 0	\$ 155,695	\$ 58,935	\$ 0	\$ 23,801	\$ 238,431	\$ 11,922	\$ 226,509	\$ 0
NW Valley	NW-02	966	1722	7159	4779	0	95	5	\$ 0	\$ 131,199	\$ 49,662	\$ 0	\$ 20,056	\$ 200,917	\$ 0	\$ 190,871	\$ 10,046
NW Valley	NW-03	410	985	3203	3826	50	50	0	\$ 0	\$ 77,249	\$ 29,241	\$ 251	\$ 11,809	\$ 118,549	\$ 59,274	\$ 59,274	\$ 0
NW Valley	NW-04	55	161	2197	1009	60	40	0	\$ 0	\$ 35,234	\$ 13,337	\$ 0	\$ 5,386	\$ 53,957	\$ 32,374	\$ 21,583	\$ 0
NW Valley	NW-05	148	2671	9056	11596	100	0	0	\$ 0	\$ 226,965	\$ 85,912	\$ 396	\$ 34,695	\$ 347,969	\$ 347,969	\$ 0	\$ 0
NW VALLEY TOTAL		3539	6230	32807	24185				\$ 0	\$ 626,342	\$ 237,087	\$ 647	\$ 95,747	\$ 959,822	\$ 451,539	\$ 498,237	\$ 10,046
Riverview	RV-01	1107	350	5725	571	0	100	0	\$ 0	\$ 69,193	\$ 26,191	\$ 0	\$ 10,577	\$ 105,962	\$ 0	\$ 105,962	\$ 0
Riverview	RV-02	805	269	979	288	0	100	0	\$ 0	\$ 13,924	\$ 5,271	\$ 0	\$ 2,129	\$ 21,324	\$ 0	\$ 21,324	\$ 0
RIVERVIEW TOTAL		1912	619	6704	859				\$ 0	\$ 83,117	\$ 31,462	\$ 0	\$ 12,706	\$ 127,285	\$ 0	\$ 127,285	\$ 0
Sandia Hts	SH-01	2564	125	5952	425	0	0	100	\$ 0	\$ 70,083	\$ 26,528	\$ 0	\$ 10,713	\$ 107,325	\$ 0	\$ 0	\$ 107,325
SANDIA HTS TOTAL		2564	125	5952	425				\$ 0	\$ 70,083	\$ 26,528	\$ 0	\$ 10,713	\$ 107,325	\$ 0	\$ 0	\$ 107,325

Table A.11. Annual Cost Analysis by Scenario

TREND SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Trend Population	Trend Employment	Trend Population	Trend Employment	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Increase	Increase	2020	2020	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Maintenance	Lines Maint.	& Odor Control	Total	In	In Srv.	Out Srv.
						1960	Area	Area	\$	\$	\$	\$	\$		1960	Area	Area
Southeast	SE-01	171	269	926	1081	0	100	0	\$ 0	\$ 22,057	\$ 8,349	\$ 0	\$ 3,372	\$ 33,778	\$ 0	\$ 33,778	\$ 0
Southeast	SE-02	60	440	991	1182	0	100	0	\$ 0	\$ 23,881	\$ 9,040	\$ 3,960	\$ 3,651	\$ 40,532	\$ 0	\$ 40,532	\$ 0
Southeast	SE-03	12	2684	292	4145	0	100	0	\$ 0	\$ 48,763	\$ 18,458	\$ 0	\$ 7,454	\$ 74,675	\$ 0	\$ 74,675	\$ 0
Southeast	SE-04	206	368	573	648	0	100	0	\$ 0	\$ 13,419	\$ 5,079	\$ 355	\$ 2,051	\$ 20,905	\$ 0	\$ 20,905	\$ 0
SOUTHEAST TOTAL		449	3761	2782	7056				\$ 0	\$ 108,120	\$ 40,926	\$ 4,315	\$ 16,528	\$ 169,889	\$ 0	\$ 169,889	\$ 0
Tijeras	TJ-01	1602	923	1683	1256	0	50	50	\$ 0	\$ 32,300	\$ 12,226	\$ 0	\$ 4,938	\$ 49,463	\$ 0	\$ 24,732	\$ 24,732
Tijeras	TJ-02	23	1690	25	3051	0	100	0	\$ 0	\$ 33,805	\$ 12,796	\$ 0	\$ 5,168	\$ 51,769	\$ 0	\$ 51,769	\$ 0
Tijeras	TJ-03	0	1106	1	2012	5	95	0	\$ 0	\$ 22,123	\$ 8,374	\$ 0	\$ 3,382	\$ 33,879	\$ 1,694	\$ 32,185	\$ 0
Tijeras	TJ-04	71	2518	2846	5251	55	45	0	\$ 0	\$ 88,986	\$ 33,684	\$ 0	\$ 13,603	\$ 136,273	\$ 74,950	\$ 61,323	\$ 0
Tijeras	TJ-05	158	65	2523	997	40	60	0	\$ 0	\$ 38,685	\$ 14,643	\$ 1,094	\$ 5,914	\$ 60,336	\$ 24,134	\$ 36,202	\$ 0
Tijeras	TJ-06	145	-31	949	154	0	100	0	\$ 0	\$ 12,122	\$ 4,588	\$ 0	\$ 1,853	\$ 18,563	\$ 0	\$ 18,563	\$ 0
TIJERAS TOTAL		1999	6271	8027	12721				\$ 0	\$ 228,021	\$ 86,312	\$ 1,094	\$ 34,857	\$ 350,283	\$ 100,778	\$ 224,773	\$ 24,732
Uptown	UP-01	-490	477	23159	13367	60	40	0	\$ 0	\$ 401,421	\$ 151,948	\$ 0	\$ 61,364	\$ 614,733	\$ 368,840	\$ 245,893	\$ 0
Uptown	UP-02	45	2066	1153	7787	40	60	0	\$ 0	\$ 98,251	\$ 37,190	\$ 1,800	\$ 15,019	\$ 152,260	\$ 60,904	\$ 91,356	\$ 0
Uptown	UP-03	-317	5917	9531	23239	100	0	0	\$ 0	\$ 360,142	\$ 136,323	\$ 0	\$ 55,054	\$ 551,519	\$ 551,519	\$ 0	\$ 0
Uptown	UP-04	57	1528	14348	10329	100	0	0	\$ 0	\$ 271,200	\$ 102,656	\$ 0	\$ 41,457	\$ 415,314	\$ 415,314	\$ 0	\$ 0
Uptown	UP-05	-65	3055	6242	13902	100	0	0	\$ 0	\$ 221,383	\$ 83,799	\$ 1,602	\$ 33,842	\$ 340,626	\$ 340,626	\$ 0	\$ 0
UPTOWN TOTAL		-770	13043	54433	68624				\$ 0	\$ 1,352,396	\$ 511,917	\$ 3,402	\$ 206,736	\$ 2,074,451	\$ 1,737,202	\$ 337,249	\$ 0
W Fringe	WF-01	8046	5831	10964	6003	0	0	100	\$ 0	\$ 186,467	\$ 70,583	\$ 0	\$ 28,505	\$ 285,555	\$ 0	\$ 0	\$ 285,555
W Fringe	WF-02	21064	5554	27446	6733	0	5	95	\$ 0	\$ 375,627	\$ 142,185	\$ 0	\$ 57,421	\$ 575,233	\$ 0	\$ 28,762	\$ 546,471
W Fringe	WF-03	7342	5966	7557	5966	0	5	95	\$ 0	\$ 148,618	\$ 56,256	\$ 2,100	\$ 22,719	\$ 229,692	\$ 0	\$ 11,485	\$ 218,207
W Fringe	WF-04	2108	1351	2108	1351	0	0	100	\$ 0	\$ 38,014	\$ 14,389	\$ 13,200	\$ 5,811	\$ 71,415	\$ 0	\$ 0	\$ 71,415
W FRINGE TOTAL		38560	18702	48075	20053				\$ 0	\$ 748,727	\$ 283,412	\$ 15,300	\$ 114,455	\$ 1,161,894	\$ 0	\$ 40,246	\$ 1,121,648
GRAND TOTAL		148545	150315	658395	454313				\$ 1,373,480	\$ 11,851,297	\$ 4,486,023	\$ 66,929	\$ 1,811,663	\$ 19,589,393	\$ 7,906,483	\$ 6,388,278	\$ 5,294,633

Table A.11. Annual Cost Analysis by Scenario

BALANCED SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Balanced Population	Balanced Employment	Balanced Population	Balanced Employment	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Increase	Increase	2020	2020	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Maintenance	Lines Maint.	& Odor Control	Total	In	In Srv.	Out Srv.
						1960	Area	Area	\$	\$	\$	\$	\$		1960	Area	Area
Academy	AC-01	5886	16346	26568	38271	0	100	0	\$ 0	\$ 712,581	\$ 269,730	\$ 4,760	\$ 108,930	\$ 1,096,000	\$ 0	\$ 1,096,000	\$ 0
Academy	AC-02	393	177	14331	5748	0	100	0	\$ 0	\$ 220,668	\$ 83,529	\$ 0	\$ 33,733	\$ 337,930	\$ 0	\$ 337,930	\$ 0
Academy	AC-03	1267	6183	3129	20244	0	100	0	\$ 0	\$ 256,869	\$ 97,232	\$ 0	\$ 39,267	\$ 393,368	\$ 0	\$ 393,368	\$ 0
ACADEMY TOTAL		7546	22706	44028	64263				\$ 0	\$ 1,190,118	\$ 450,491	\$ 4,760	\$ 181,929	\$ 1,827,298	\$ 0	\$ 1,827,298	\$ 0
Campus	CA-01	466	694	17031	10218	90	0	10	\$ 0	\$ 299,467	\$ 113,356	\$ 189	\$ 45,778	\$ 458,789	\$ 412,911	\$ 0	\$ 45,879
Campus	CA-02	6252	5028	28580	19798	100	0	0	\$ 0	\$ 531,674	\$ 201,252	\$ 0	\$ 81,275	\$ 814,202	\$ 814,202	\$ 0	\$ 0
Campus	CA-03	2397	4255	27680	21345	85	0	15	\$ 0	\$ 538,785	\$ 203,944	\$ 84	\$ 82,362	\$ 825,175	\$ 701,399	\$ 0	\$ 123,776
Campus	CA-04	1426	5763	9880	27875	100	0	0	\$ 0	\$ 414,927	\$ 157,061	\$ 0	\$ 63,428	\$ 635,417	\$ 635,417	\$ 0	\$ 0
Campus	CA-05	-26	326	6129	4083	100	0	0	\$ 0	\$ 112,230	\$ 42,482	\$ 0	\$ 17,156	\$ 171,868	\$ 171,868	\$ 0	\$ 0
Campus	CA-06	-24	571	3947	2116	90	10	0	\$ 0	\$ 66,632	\$ 25,222	\$ 0	\$ 10,186	\$ 102,040	\$ 91,836	\$ 10,204	\$ 0
CAMPUS TOTAL		10491	16637	93247	85435				\$ 0	\$ 1,963,715	\$ 743,317	\$ 273	\$ 300,186	\$ 3,007,491	\$ 2,827,632	\$ 10,204	\$ 169,655
Coors	CO-01	478	248	11542	1410	0	100	0	\$ 0	\$ 142,342	\$ 53,880	\$ 3,280	\$ 21,759	\$ 221,262	\$ 0	\$ 221,262	\$ 0
Coors	CO-02	6601	4841	16624	7864	0	100	0	\$ 0	\$ 269,123	\$ 101,870	\$ 0	\$ 41,140	\$ 412,133	\$ 0	\$ 412,133	\$ 0
Coors	CO-03	1100	21123	13552	24506	65	35	0	\$ 0	\$ 418,257	\$ 158,321	\$ 5,160	\$ 63,937	\$ 645,676	\$ 419,689	\$ 225,987	\$ 0
Coors	CO-04	1920	1194	14672	2351	0	55	45	\$ 0	\$ 187,083	\$ 70,816	\$ 0	\$ 28,599	\$ 286,497	\$ 0	\$ 157,573	\$ 128,924
Coors	CO-05	1560	494	11750	1129	0	10	90	\$ 0	\$ 141,540	\$ 53,577	\$ 0	\$ 21,637	\$ 216,754	\$ 0	\$ 21,675	\$ 195,078
COORS TOTAL		11659	27900	68140	37260				\$ 0	\$ 1,158,346	\$ 438,464	\$ 8,440	\$ 177,072	\$ 1,782,322	\$ 419,689	\$ 1,038,631	\$ 324,002
East Mtn.	EM-01	8307	1501	23698	3054	0	0	100	\$ 1,070,080	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,070,080	\$ 0	\$ 0	\$ 1,070,080
EAST MTN. TOTAL		8307	1501	23698	3054				\$ 1,070,080	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,070,080	\$ 0	\$ 0	\$ 1,070,080
Edith	ED-01	187	640	1585	4039	90	10	0	\$ 0	\$ 61,808	\$ 23,396	\$ 3,360	\$ 9,448	\$ 98,012	\$ 88,211	\$ 9,801	\$ 0
Edith	ED-02	657	725	3612	1952	100	0	0	\$ 0	\$ 61,148	\$ 23,146	\$ 717	\$ 9,348	\$ 94,359	\$ 94,359	\$ 0	\$ 0
Edith	ED-03	926	531	8737	2019	90	10	0	\$ 0	\$ 118,208	\$ 44,745	\$ 0	\$ 18,070	\$ 181,023	\$ 162,921	\$ 18,102	\$ 0
Edith	ED-04	743	91	7766	931	75	25	0	\$ 0	\$ 95,580	\$ 36,180	\$ 0	\$ 14,611	\$ 146,371	\$ 109,778	\$ 36,593	\$ 0
Edith	ED-05	2522	750	5575	2904	85	15	0	\$ 0	\$ 93,184	\$ 35,273	\$ 2,440	\$ 14,245	\$ 145,142	\$ 123,370	\$ 21,771	\$ 0
Edith	ED-06	5724	1994	14075	17711	95	5	0	\$ 0	\$ 349,328	\$ 132,230	\$ 749	\$ 53,400	\$ 535,707	\$ 508,922	\$ 26,785	\$ 0
Edith	ED-07	2377	1673	3514	11605	95	5	0	\$ 0	\$ 166,158	\$ 62,895	\$ 437	\$ 25,400	\$ 254,890	\$ 242,145	\$ 12,744	\$ 0
Edith	ED-08	80	169	1163	482	60	40	0	\$ 0	\$ 18,079	\$ 6,843	\$ 0	\$ 2,764	\$ 27,685	\$ 16,611	\$ 11,074	\$ 0
EDITH TOTAL		13216	6573	46027	41643				\$ 0	\$ 963,493	\$ 364,707	\$ 7,702	\$ 147,286	\$ 1,483,189	\$ 1,346,317	\$ 136,871	\$ 0
Four Hills	FH-01	1685	623	3039	700	0	100	0	\$ 0	\$ 41,092	\$ 15,554	\$ 0	\$ 6,282	\$ 62,927	\$ 0	\$ 62,927	\$ 0
Four Hills	FH-02	346	272	4142	565	45	55	0	\$ 0	\$ 51,730	\$ 19,581	\$ 0	\$ 7,908	\$ 79,219	\$ 35,648	\$ 43,570	\$ 0
Four Hills	FH-03	1	1546	7252	4143	90	10	0	\$ 0	\$ 125,231	\$ 47,403	\$ 0	\$ 19,144	\$ 191,778	\$ 172,600	\$ 19,178	\$ 0
Four Hills	FH-04	138	672	6000	2958	100	0	0	\$ 0	\$ 98,448	\$ 37,265	\$ 420	\$ 15,049	\$ 151,183	\$ 151,183	\$ 0	\$ 0
Four Hills	FH-05	-7	72	308	646	100	0	0	\$ 0	\$ 10,484	\$ 3,969	\$ 0	\$ 1,603	\$ 16,056	\$ 16,056	\$ 0	\$ 0
Four Hills	FH-06	104	-77	5650	4065	40	25	35	\$ 0	\$ 106,768	\$ 40,414	\$ 0	\$ 16,321	\$ 163,503	\$ 65,401	\$ 40,876	\$ 57,226
FOUR HILLS TOTAL		2267	3108	26391	13077				\$ 0	\$ 433,753	\$ 164,187	\$ 420	\$ 66,306	\$ 664,666	\$ 440,889	\$ 166,551	\$ 57,226

Table A.11. Annual Cost Analysis by Scenario

BALANCED SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Balanced	Balanced	Balanced	Balanced	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Population	Employment	Population	Employment	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Maintenance	Lines Maint.	& Odor Control	Total	In	In Srv.	Out Srv.
		Increase	Increase	2020	2020	1960	Area	Area	\$	\$	\$	\$	\$	1960	Area	Area	
Isleta	IS-01	2526	1041	12077	2336	50	50	0	\$ 0	\$ 158,399	\$ 59,958	\$ 0	\$ 24,214	\$ 242,571	\$ 121,285	\$ 121,285	\$ 0
Isleta	IS-02	1683	828	9139	2089	0	100	0	\$ 0	\$ 123,396	\$ 46,708	\$ 0	\$ 18,863	\$ 188,967	\$ 0	\$ 188,967	\$ 0
Isleta	IS-03	-4	555	9619	2337	0	100	0	\$ 0	\$ 131,396	\$ 49,737	\$ 5,000	\$ 20,086	\$ 206,219	\$ 0	\$ 206,219	\$ 0
Isleta	IS-04	-135	26	2278	586	0	100	0	\$ 0	\$ 31,475	\$ 11,914	\$ 0	\$ 4,812	\$ 48,201	\$ 0	\$ 48,201	\$ 0
ISLETA TOTAL		4070	2450	33113	7348				\$ 0	\$ 444,666	\$ 168,318	\$ 5,000	\$ 67,974	\$ 685,959	\$ 121,285	\$ 564,673	\$ 0
Kirtland	KI-01	1644	-810	12771	14905	0	5	95	\$ 0	\$ 304,159	\$ 115,132	\$ 0	\$ 46,496	\$ 465,787	\$ 0	\$ 23,289	\$ 442,498
Kirtland	KI-02	-51	-234	1672	5755	0	5	95	\$ 0	\$ 81,623	\$ 30,896	\$ 2,040	\$ 12,477	\$ 127,036	\$ 0	\$ 6,352	\$ 120,685
Kirtland	KI-03	-9	-139	366	876	0	0	100	\$ 0	\$ 13,650	\$ 5,167	\$ 0	\$ 2,087	\$ 20,903	\$ 0	\$ 0	\$ 20,903
KIRTLAND TOTAL		1584	-1183	14809	21536				\$ 0	\$ 399,432	\$ 151,195	\$ 2,040	\$ 61,060	\$ 613,726	\$ 0	\$ 29,641	\$ 584,085
Mesadelsol	ME-01	18710	11614	18751	11709	0	4	96	\$ 0	\$ 334,755	\$ 126,714	\$ 7,440	\$ 51,173	\$ 520,082	\$ 0	\$ 20,803	\$ 499,279
MESADELSOL TOTAL		18710	11614	18751	11709				\$ 0	\$ 334,755	\$ 126,714	\$ 7,440	\$ 51,173	\$ 520,082	\$ 0	\$ 20,803	\$ 499,279
NM Utilities	NMU-01	1202	3823	2475	4742	0	0	100	\$ 0	\$ 79,315	\$ 30,023	\$ 0	\$ 12,125	\$ 121,462	\$ 0	\$ 0	\$ 121,462
NM Utilities	NMU-02	1975	3378	2503	4014	0	0	100	\$ 0	\$ 71,622	\$ 27,111	\$ 0	\$ 10,949	\$ 109,681	\$ 0	\$ 0	\$ 109,681
NM Utilities	NMU-03	15401	6348	26944	9106	0	20	80	\$ 0	\$ 396,190	\$ 149,968	\$ 0	\$ 60,564	\$ 606,722	\$ 0	\$ 121,344	\$ 485,377
NM UTILITIES TOTAL		18578	13549	31922	17862				\$ 0	\$ 547,126	\$ 207,101	\$ 0	\$ 83,637	\$ 837,865	\$ 0	\$ 121,344	\$ 716,520
Northeast	NE-01	81	690	19544	3718	50	50	0	\$ 0	\$ 255,649	\$ 96,770	\$ 0	\$ 39,080	\$ 391,499	\$ 195,750	\$ 195,750	\$ 0
Northeast	NE-02	-154	164	9245	3518	100	0	0	\$ 0	\$ 140,265	\$ 53,094	\$ 0	\$ 21,442	\$ 214,801	\$ 214,801	\$ 0	\$ 0
Northeast	NE-03	-115	794	14699	3981	70	25	5	\$ 0	\$ 205,293	\$ 77,709	\$ 0	\$ 31,382	\$ 314,384	\$ 220,069	\$ 78,596	\$ 15,719
Northeast	NE-04	1004	2721	21817	8764	65	30	5	\$ 0	\$ 336,085	\$ 127,217	\$ 686	\$ 51,376	\$ 515,365	\$ 334,987	\$ 154,609	\$ 25,768
Northeast	NE-05	-69	204	4123	1453	100	0	0	\$ 0	\$ 61,280	\$ 23,196	\$ 0	\$ 9,368	\$ 93,844	\$ 93,844	\$ 0	\$ 0
Northeast	NE-06	4125	945	27185	3916	0	75	25	\$ 0	\$ 341,800	\$ 129,380	\$ 0	\$ 52,250	\$ 523,430	\$ 0	\$ 392,572	\$ 130,857
Northeast	NE-07	3569	335	5273	733	0	0	100	\$ 0	\$ 66,006	\$ 24,985	\$ 0	\$ 10,090	\$ 101,081	\$ 0	\$ 0	\$ 101,081
Northeast	NE-08	3425	138	5605	402	0	100	0	\$ 0	\$ 66,017	\$ 24,989	\$ 0	\$ 10,092	\$ 101,098	\$ 0	\$ 101,098	\$ 0
NORTHEAST TOTAL		11866	5991	107491	26485				\$ 0	\$ 1,472,396	\$ 557,340	\$ 686	\$ 225,080	\$ 2,255,502	\$ 1,059,451	\$ 922,625	\$ 273,426
NW Valley	NW-01	1589	573	10821	2857	5	95	0	\$ 0	\$ 150,321	\$ 56,900	\$ 0	\$ 22,979	\$ 230,201	\$ 11,510	\$ 218,691	\$ 0
NW Valley	NW-02	626	1472	6819	4529	0	95	5	\$ 0	\$ 124,715	\$ 47,208	\$ 0	\$ 19,065	\$ 190,987	\$ 0	\$ 181,437	\$ 9,549
NW Valley	NW-03	534	809	3327	3650	50	50	0	\$ 0	\$ 76,677	\$ 29,024	\$ 251	\$ 11,721	\$ 117,674	\$ 58,837	\$ 58,837	\$ 0
NW Valley	NW-04	478	184	2620	1032	60	40	0	\$ 0	\$ 40,135	\$ 15,192	\$ 0	\$ 6,135	\$ 61,463	\$ 36,878	\$ 24,585	\$ 0
NW Valley	NW-05	148	2058	9056	10983	100	0	0	\$ 0	\$ 220,229	\$ 83,362	\$ 317	\$ 33,666	\$ 337,573	\$ 337,573	\$ 0	\$ 0
NW VALLEY TOTAL		3375	5096	32643	23051				\$ 0	\$ 612,077	\$ 231,687	\$ 568	\$ 93,566	\$ 937,898	\$ 444,798	\$ 483,550	\$ 9,549
Riverview	RV-01	536	333	5154	554	0	100	0	\$ 0	\$ 62,731	\$ 23,745	\$ 0	\$ 9,589	\$ 96,066	\$ 0	\$ 96,066	\$ 0
Riverview	RV-02	694	260	868	279	0	100	0	\$ 0	\$ 12,606	\$ 4,772	\$ 0	\$ 1,927	\$ 19,304	\$ 0	\$ 19,304	\$ 0
RIVERVIEW TOTAL		1230	593	6022	833				\$ 0	\$ 75,336	\$ 28,517	\$ 0	\$ 11,516	\$ 115,370	\$ 0	\$ 115,370	\$ 0
Sandia Hts	SH-01	2370	98	5758	398	0	0	100	\$ 0	\$ 67,654	\$ 25,609	\$ 0	\$ 10,342	\$ 103,605	\$ 0	\$ 0	\$ 103,605
SANDIA HTS TOTAL		2370	98	5758	398				\$ 0	\$ 67,654	\$ 25,609	\$ 0	\$ 10,342	\$ 103,605	\$ 0	\$ 0	\$ 103,605

Table A.11. Annual Cost Analysis by Scenario

BALANCED SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Balanced Population	Balanced Employment	Balanced Population	Balanced Employment	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Increase	Increase	2020	2020	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Maintenance	Lines Maint.	& Odor Control	Total	In	In Srv.	Out Srv.
						1960	Area	Area	\$	\$	\$	\$	\$		1960	Area	Area
Southeast	SE-01	171	102	926	914	0	100	0	\$ 0	\$ 20,222	\$ 7,654	\$ 0	\$ 3,091	\$ 30,967	\$ 0	\$ 30,967	\$ 0
Southeast	SE-02	60	244	991	986	0	100	0	\$ 0	\$ 21,727	\$ 8,224	\$ 3,960	\$ 3,321	\$ 37,233	\$ 0	\$ 37,233	\$ 0
Southeast	SE-03	12	1993	292	3454	0	100	0	\$ 0	\$ 41,169	\$ 15,583	\$ 0	\$ 6,293	\$ 63,045	\$ 0	\$ 63,045	\$ 0
Southeast	SE-04	206	350	573	630	0	100	0	\$ 0	\$ 13,221	\$ 5,004	\$ 355	\$ 2,021	\$ 20,602	\$ 0	\$ 20,602	\$ 0
SOUTHEAST TOTAL		449	2689	2782	5984				\$ 0	\$ 96,338	\$ 36,467	\$ 4,315	\$ 14,727	\$ 151,847	\$ 0	\$ 151,847	\$ 0
Tijeras	TJ-01	2522	1407	2603	1740	0	50	50	\$ 0	\$ 47,730	\$ 18,067	\$ 0	\$ 7,296	\$ 73,093	\$ 0	\$ 36,546	\$ 36,546
Tijeras	TJ-02	23	1326	25	2687	0	100	0	\$ 0	\$ 29,805	\$ 11,282	\$ 0	\$ 4,556	\$ 45,643	\$ 0	\$ 45,643	\$ 0
Tijeras	TJ-03	0	915	1	1821	5	95	0	\$ 0	\$ 20,024	\$ 7,580	\$ 0	\$ 3,061	\$ 30,664	\$ 1,533	\$ 29,131	\$ 0
Tijeras	TJ-04	71	2020	2846	4753	55	45	0	\$ 0	\$ 83,513	\$ 31,612	\$ 0	\$ 12,766	\$ 127,891	\$ 70,340	\$ 57,551	\$ 0
Tijeras	TJ-05	164	90	2529	1022	40	60	0	\$ 0	\$ 39,025	\$ 14,772	\$ 1,123	\$ 5,966	\$ 60,887	\$ 24,355	\$ 36,532	\$ 0
Tijeras	TJ-06	145	-35	949	150	0	100	0	\$ 0	\$ 12,078	\$ 4,572	\$ 0	\$ 1,846	\$ 18,496	\$ 0	\$ 18,496	\$ 0
TIJERAS TOTAL		2925	5723	8953	12173				\$ 0	\$ 232,175	\$ 87,884	\$ 1,123	\$ 35,492	\$ 356,674	\$ 96,228	\$ 223,899	\$ 36,546
Uptown	UP-01	-522	-158	23127	12732	60	40	0	\$ 0	\$ 394,090	\$ 149,173	\$ 0	\$ 60,243	\$ 603,507	\$ 362,104	\$ 241,403	\$ 0
Uptown	UP-02	36	1017	1144	6738	40	60	0	\$ 0	\$ 86,623	\$ 32,789	\$ 1,800	\$ 13,242	\$ 134,454	\$ 53,782	\$ 80,672	\$ 0
Uptown	UP-03	2683	5338	12531	22660	100	0	0	\$ 0	\$ 386,749	\$ 146,395	\$ 0	\$ 59,121	\$ 592,265	\$ 592,265	\$ 0	\$ 0
Uptown	UP-04	384	1062	14675	9863	100	0	0	\$ 0	\$ 269,673	\$ 102,078	\$ 0	\$ 41,224	\$ 412,975	\$ 412,975	\$ 0	\$ 0
Uptown	UP-05	-27	2443	6280	13290	100	0	0	\$ 0	\$ 215,074	\$ 81,411	\$ 1,584	\$ 32,878	\$ 330,947	\$ 330,947	\$ 0	\$ 0
UPTOWN TOTAL		2554	9702	57757	65283				\$ 0	\$ 1,352,210	\$ 511,846	\$ 3,384	\$ 206,707	\$ 2,074,147	\$ 1,752,072	\$ 322,075	\$ 0
W Fringe	WF-01	5170	3377	8088	3549	0	0	100	\$ 0	\$ 127,891	\$ 48,410	\$ 0	\$ 19,550	\$ 195,851	\$ 0	\$ 0	\$ 195,851
W Fringe	WF-02	14024	9633	20406	10812	0	5	95	\$ 0	\$ 343,086	\$ 129,867	\$ 0	\$ 52,446	\$ 525,399	\$ 0	\$ 26,270	\$ 499,129
W Fringe	WF-03	7129	966	7344	966	0	5	95	\$ 0	\$ 91,327	\$ 34,570	\$ 2,100	\$ 13,961	\$ 141,957	\$ 0	\$ 7,098	\$ 134,859
W Fringe	WF-04	0	0	0	0	0	0	100	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
W FRINGE TOTAL		26323	13976	35838	15327				\$ 0	\$ 562,303	\$ 212,846	\$ 2,100	\$ 85,957	\$ 863,207	\$ 0	\$ 33,368	\$ 829,839
GRAND TOTAL		147520	148723	657370	452721				\$ 1,070,080	\$ 11,905,896	\$ 4,506,690	\$ 48,252	\$ 1,820,010	\$ 19,350,927	\$ 8,508,362	\$ 6,168,752	\$ 4,673,814

Table A.11. Annual Cost Analysis by Scenario

DOWNTOWN SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Downtown	Downtown	Downtown	Downtown	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Population	Employment	Population	Employment	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Maintenance	Lines Maint.	& Odor Control	Total	In	In Srv.	Out Srv.
		Increase	Increase	2020	2020	1960	Area	Area	\$	\$	\$	\$	\$	1960	Area	Area	
Academy	AC-01	8832	18510	29514	40435	0	100	0	\$ 0	\$ 768,740	\$ 290,988	\$ 4,760	\$ 117,514	\$ 1,182,002	\$ 0	\$ 1,182,002	\$ 0
Academy	AC-02	858	274	14796	5845	0	100	0	\$ 0	\$ 226,845	\$ 85,867	\$ 0	\$ 34,677	\$ 347,388	\$ 0	\$ 347,388	\$ 0
Academy	AC-03	1611	7843	3473	21904	0	100	0	\$ 0	\$ 278,893	\$ 105,568	\$ 0	\$ 42,633	\$ 427,095	\$ 0	\$ 427,095	\$ 0
ACADEMY TOTAL		11301	26627	47783	68184				\$ 0	\$ 1,274,477	\$ 482,423	\$ 4,760	\$ 194,825	\$ 1,956,485	\$ 0	\$ 1,956,485	\$ 0
Campus	CA-01	19	1007	16584	10531	90	0	10	\$ 0	\$ 297,994	\$ 112,798	\$ 189	\$ 45,553	\$ 456,534	\$ 410,881	\$ 0	\$ 45,653
Campus	CA-02	99	916	22427	15686	100	0	0	\$ 0	\$ 418,862	\$ 158,550	\$ 0	\$ 64,030	\$ 641,442	\$ 641,442	\$ 0	\$ 0
Campus	CA-03	2710	6606	27993	23696	85	0	15	\$ 0	\$ 568,062	\$ 215,026	\$ 105	\$ 86,838	\$ 870,031	\$ 739,526	\$ 0	\$ 130,505
Campus	CA-04	1307	8787	9761	30899	100	0	0	\$ 0	\$ 446,853	\$ 169,146	\$ 0	\$ 68,309	\$ 684,308	\$ 684,308	\$ 0	\$ 0
Campus	CA-05	-52	624	6103	4381	100	0	0	\$ 0	\$ 115,219	\$ 43,613	\$ 0	\$ 17,613	\$ 176,446	\$ 176,446	\$ 0	\$ 0
Campus	CA-06	-8	688	3963	2233	90	10	0	\$ 0	\$ 68,094	\$ 25,775	\$ 0	\$ 10,409	\$ 104,279	\$ 93,851	\$ 10,428	\$ 0
CAMPUS TOTAL		4075	18628	86831	87426				\$ 0	\$ 1,915,084	\$ 724,909	\$ 294	\$ 292,752	\$ 2,933,039	\$ 2,746,453	\$ 10,428	\$ 176,158
Coors	CO-01	-279	104	10785	1266	0	100	0	\$ 0	\$ 132,440	\$ 50,132	\$ 3,280	\$ 20,246	\$ 206,098	\$ 0	\$ 206,098	\$ 0
Coors	CO-02	8724	7995	18747	11018	0	100	0	\$ 0	\$ 327,117	\$ 123,822	\$ 0	\$ 50,005	\$ 500,945	\$ 0	\$ 500,945	\$ 0
Coors	CO-03	5293	4128	17745	7511	65	35	0	\$ 0	\$ 277,563	\$ 105,065	\$ 0	\$ 42,430	\$ 425,058	\$ 276,288	\$ 148,770	\$ 0
Coors	CO-04	5270	716	18022	1873	0	55	45	\$ 0	\$ 218,646	\$ 82,763	\$ 0	\$ 33,424	\$ 334,833	\$ 0	\$ 184,158	\$ 150,675
Coors	CO-05	1528	294	11718	929	0	10	90	\$ 0	\$ 138,991	\$ 52,612	\$ 0	\$ 21,247	\$ 212,849	\$ 0	\$ 21,285	\$ 191,564
COORS TOTAL		20536	13237	77017	22597				\$ 0	\$ 1,094,758	\$ 414,394	\$ 3,280	\$ 167,352	\$ 1,679,784	\$ 276,288	\$ 1,061,257	\$ 342,239
East Mtn.	EM-01	12634	1625	28025	3178	0	0	100	\$ 1,248,120	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,248,120	\$ 0	\$ 0	\$ 1,248,120
EAST MTN. TOTAL		12634	1625	28025	3178				\$ 1,248,120	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,248,120	\$ 0	\$ 0	\$ 1,248,120
Edith	ED-01	32	940	1430	4339	90	10	0	\$ 0	\$ 63,401	\$ 23,999	\$ 3,360	\$ 9,692	\$ 100,452	\$ 90,407	\$ 10,045	\$ 0
Edith	ED-02	4	697	2959	1924	100	0	0	\$ 0	\$ 53,664	\$ 20,313	\$ 563	\$ 8,203	\$ 82,744	\$ 82,744	\$ 0	\$ 0
Edith	ED-03	480	579	8291	2067	90	10	0	\$ 0	\$ 113,834	\$ 43,089	\$ 0	\$ 17,401	\$ 174,325	\$ 156,893	\$ 17,433	\$ 0
Edith	ED-04	1311	180	8334	1020	75	25	0	\$ 0	\$ 102,800	\$ 38,913	\$ 0	\$ 15,715	\$ 157,428	\$ 118,071	\$ 39,357	\$ 0
Edith	ED-05	1496	405	4549	2559	85	15	0	\$ 0	\$ 78,117	\$ 29,569	\$ 2,440	\$ 11,941	\$ 122,068	\$ 103,757	\$ 18,310	\$ 0
Edith	ED-06	1834	10733	10185	26450	95	5	0	\$ 0	\$ 402,619	\$ 152,402	\$ 787	\$ 61,547	\$ 617,354	\$ 586,487	\$ 30,868	\$ 0
Edith	ED-07	836	9097	1973	19029	95	5	0	\$ 0	\$ 230,812	\$ 87,368	\$ 571	\$ 35,283	\$ 354,035	\$ 336,333	\$ 17,702	\$ 0
Edith	ED-08	616	454	1699	767	60	40	0	\$ 0	\$ 27,101	\$ 10,259	\$ 0	\$ 4,143	\$ 41,503	\$ 24,902	\$ 16,601	\$ 0
EDITH TOTAL		6609	23085	39420	58155				\$ 0	\$ 1,072,349	\$ 405,912	\$ 7,722	\$ 163,926	\$ 1,649,909	\$ 1,499,593	\$ 150,315	\$ 0
Four Hills	FH-01	1687	659	3041	736	0	100	0	\$ 0	\$ 41,509	\$ 15,712	\$ 0	\$ 6,345	\$ 63,567	\$ 0	\$ 63,567	\$ 0
Four Hills	FH-02	347	301	4143	594	45	55	0	\$ 0	\$ 52,060	\$ 19,706	\$ 0	\$ 7,958	\$ 79,724	\$ 35,876	\$ 43,848	\$ 0
Four Hills	FH-03	4	1758	7255	4355	90	10	0	\$ 0	\$ 127,594	\$ 48,298	\$ 0	\$ 19,505	\$ 195,396	\$ 175,857	\$ 19,540	\$ 0
Four Hills	FH-04	141	821	6003	3107	100	0	0	\$ 0	\$ 100,119	\$ 37,898	\$ 480	\$ 15,305	\$ 153,801	\$ 153,801	\$ 0	\$ 0
Four Hills	FH-05	-7	105	308	679	100	0	0	\$ 0	\$ 10,847	\$ 4,106	\$ 0	\$ 1,658	\$ 16,611	\$ 16,611	\$ 0	\$ 0
Four Hills	FH-06	7	114	5553	4256	40	25	35	\$ 0	\$ 107,801	\$ 40,805	\$ 0	\$ 16,479	\$ 165,085	\$ 66,034	\$ 41,271	\$ 57,780
FOUR HILLS TOTAL		2179	3758	26303	13727				\$ 0	\$ 439,930	\$ 166,525	\$ 480	\$ 67,250	\$ 674,185	\$ 448,179	\$ 168,226	\$ 57,780

Table A.11. Annual Cost Analysis by Scenario

DOWNTOWN SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Downtown	Downtown	Downtown	Downtown	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Population	Employment	Population	Employment	In	In Srv.	Out Srv.	Annual Maint.	Oper./Maint	Maintenance	Lines Maint.	& Odor Control	Total	In	In Srv.	Out Srv.
		Increase	Increase	2020	2020	1960	Area	Area	\$	\$	\$	\$	\$	\$	1960	Area	Area
Isleta	IS-01	1619	617	11170	1912	50	50	0	\$ 0	\$ 143,771	\$ 54,421	\$ 0	\$ 21,978	\$ 220,170	\$ 110,085	\$ 110,085	\$ 0
Isleta	IS-02	142	221	7598	1482	0	100	0	\$ 0	\$ 99,789	\$ 37,773	\$ 0	\$ 15,254	\$ 152,816	\$ 0	\$ 152,816	\$ 0
Isleta	IS-03	142	299	9765	2081	0	100	0	\$ 0	\$ 130,188	\$ 49,279	\$ 5,000	\$ 19,901	\$ 204,368	\$ 0	\$ 204,368	\$ 0
Isleta	IS-04	-101	-38	2312	522	0	100	0	\$ 0	\$ 31,146	\$ 11,789	\$ 0	\$ 4,761	\$ 47,696	\$ 0	\$ 47,696	\$ 0
ISLETA TOTAL		1802	1099	30845	5997				\$ 0	\$ 404,894	\$ 153,263	\$ 5,000	\$ 61,895	\$ 625,051	\$ 110,085	\$ 514,966	\$ 0
Kirtland	KI-01	1965	-97	13092	15618	0	5	95	\$ 0	\$ 315,523	\$ 119,434	\$ 0	\$ 48,233	\$ 483,189	\$ 0	\$ 24,159	\$ 459,030
Kirtland	KI-02	-32	193	1691	6182	0	5	95	\$ 0	\$ 86,524	\$ 32,752	\$ 2,040	\$ 13,227	\$ 134,543	\$ 0	\$ 6,727	\$ 127,815
Kirtland	KI-03	-5	-96	370	919	0	0	100	\$ 0	\$ 14,166	\$ 5,362	\$ 0	\$ 2,166	\$ 21,694	\$ 0	\$ 0	\$ 21,694
KIRTLAND TOTAL		1928	0	15153	22719				\$ 0	\$ 416,213	\$ 157,548	\$ 2,040	\$ 63,625	\$ 639,426	\$ 0	\$ 30,887	\$ 608,539
Mesadelsol	ME-01	8630	1031	8671	1126	0	4	96	\$ 0	\$ 107,669	\$ 40,756	\$ 7,440	\$ 27,432	\$ 183,296	\$ 0	\$ 7,332	\$ 175,964
MESADELSOL TOTAL		8630	1031	8671	1126				\$ 0	\$ 107,669	\$ 40,756	\$ 7,440	\$ 27,432	\$ 183,296	\$ 0	\$ 7,332	\$ 175,964
NM Utilities	NMU-01	2251	3464	3524	4383	0	0	100	\$ 0	\$ 86,898	\$ 32,893	\$ 0	\$ 13,284	\$ 133,075	\$ 0	\$ 0	\$ 133,075
NM Utilities	NMU-02	3036	3075	3564	3711	0	0	100	\$ 0	\$ 79,952	\$ 30,264	\$ 0	\$ 12,222	\$ 122,438	\$ 0	\$ 0	\$ 122,438
NM Utilities	NMU-03	24429	6093	35972	8851	0	20	80	\$ 0	\$ 492,605	\$ 186,464	\$ 0	\$ 75,303	\$ 754,371	\$ 0	\$ 150,874	\$ 603,497
NM UTILITIES TOTAL		29716	12632	43060	16945				\$ 0	\$ 659,455	\$ 249,621	\$ 0	\$ 100,808	\$ 1,009,884	\$ 0	\$ 150,874	\$ 859,010
Northeast	NE-01	108	747	19571	3775	50	50	0	\$ 0	\$ 256,573	\$ 97,119	\$ 0	\$ 39,221	\$ 392,913	\$ 196,457	\$ 196,457	\$ 0
Northeast	NE-02	-139	348	9260	3702	100	0	0	\$ 0	\$ 142,452	\$ 53,922	\$ 0	\$ 21,776	\$ 218,150	\$ 218,150	\$ 0	\$ 0
Northeast	NE-03	-28	729	14786	3916	70	25	5	\$ 0	\$ 205,535	\$ 77,800	\$ 0	\$ 31,419	\$ 314,755	\$ 220,328	\$ 78,689	\$ 15,738
Northeast	NE-04	1131	2502	21944	8545	65	30	5	\$ 0	\$ 335,074	\$ 126,834	\$ 686	\$ 51,222	\$ 513,816	\$ 333,981	\$ 154,145	\$ 25,691
Northeast	NE-05	-52	284	4140	1533	100	0	0	\$ 0	\$ 62,346	\$ 23,600	\$ 0	\$ 9,531	\$ 95,477	\$ 95,477	\$ 0	\$ 0
Northeast	NE-06	4529	742	27589	3713	0	75	25	\$ 0	\$ 344,009	\$ 130,216	\$ 0	\$ 52,587	\$ 526,813	\$ 0	\$ 395,109	\$ 131,703
Northeast	NE-07	3751	268	5455	666	0	0	100	\$ 0	\$ 67,270	\$ 25,463	\$ 0	\$ 10,283	\$ 103,016	\$ 0	\$ 0	\$ 103,016
Northeast	NE-08	3583	125	5763	389	0	100	0	\$ 0	\$ 67,610	\$ 25,592	\$ 0	\$ 10,335	\$ 103,538	\$ 0	\$ 103,538	\$ 0
NORTHEAST TOTAL		12883	5745	108508	26239				\$ 0	\$ 1,480,870	\$ 560,548	\$ 686	\$ 226,375	\$ 2,268,478	\$ 1,064,392	\$ 927,938	\$ 276,148
NW Valley	NW-01	2143	462	11375	2746	5	95	0	\$ 0	\$ 155,190	\$ 58,743	\$ 0	\$ 23,723	\$ 237,656	\$ 11,883	\$ 225,774	\$ 0
NW Valley	NW-02	1039	1280	7232	4337	0	95	5	\$ 0	\$ 127,143	\$ 48,127	\$ 0	\$ 19,436	\$ 194,706	\$ 0	\$ 184,971	\$ 9,735
NW Valley	NW-03	525	939	3318	3780	50	50	0	\$ 0	\$ 78,007	\$ 29,528	\$ 274	\$ 11,925	\$ 119,733	\$ 59,866	\$ 59,866	\$ 0
NW Valley	NW-04	89	168	2231	1016	60	40	0	\$ 0	\$ 35,685	\$ 13,508	\$ 0	\$ 5,455	\$ 54,647	\$ 32,788	\$ 21,859	\$ 0
NW Valley	NW-05	42	3037	8950	11962	100	0	0	\$ 0	\$ 229,823	\$ 86,994	\$ 436	\$ 35,132	\$ 352,385	\$ 352,385	\$ 0	\$ 0
NW VALLEY TOTAL		3838	5886	33106	23841				\$ 0	\$ 625,848	\$ 236,900	\$ 709	\$ 95,671	\$ 959,127	\$ 456,922	\$ 492,470	\$ 9,735
Riverview	RV-01	2452	634	7070	855	0	100	0	\$ 0	\$ 87,096	\$ 32,968	\$ 0	\$ 13,314	\$ 133,378	\$ 0	\$ 133,378	\$ 0
Riverview	RV-02	1104	432	1278	451	0	100	0	\$ 0	\$ 19,002	\$ 7,193	\$ 0	\$ 2,905	\$ 29,099	\$ 0	\$ 29,099	\$ 0
RIVERVIEW TOTAL		3556	1066	8348	1306				\$ 0	\$ 106,097	\$ 40,161	\$ 0	\$ 16,219	\$ 162,477	\$ 0	\$ 162,477	\$ 0
Sandia Hts	SH-01	2568	89	5956	389	0	0	100	\$ 0	\$ 69,732	\$ 26,395	\$ 0	\$ 10,660	\$ 106,786	\$ 0	\$ 0	\$ 106,786
SANDIA HTS TOTAL		2568	89	5956	389				\$ 0	\$ 69,732	\$ 26,395	\$ 0	\$ 10,660	\$ 106,786	\$ 0	\$ 0	\$ 106,786

Table A.11. Annual Cost Analysis by Scenario

DOWNTOWN SCENARIO																	
Annual Operation and Maintenance Cost Analysis - 1998 Dollars																	
ANNUAL OPERATION & MAINTENANCE NEEDS																	
Basin	Sub-Basin	Downtown Population	Downtown Employment	Downtown Population	Downtown Employment	PERCENTAGE OF TOTAL			Septic Tank	Plant	Existing Lines	Parallel & New	Lift Stations	Total Annual O&M Costs By Coverage			
		Increase	Increase	2020	2020	In 1960	In Srv. Area	Out Srv. Area	Annual Maint. \$	Oper./Maint \$	Maintenance \$	Lines Maint. \$	& Odor Control \$	Total	In 1960	In Srv. Area	Out Srv. Area
Southeast	SE-01	135	223	890	1035	0	100	0	\$ 0	\$ 21,156	\$ 8,008	\$ 0	\$ 3,234	\$ 32,398	\$ 0	\$ 32,398	\$ 0
Southeast	SE-02	60	400	991	1142	0	100	0	\$ 0	\$ 23,442	\$ 8,873	\$ 3,960	\$ 3,583	\$ 39,858	\$ 0	\$ 39,858	\$ 0
Southeast	SE-03	12	2541	292	4002	0	100	0	\$ 0	\$ 47,191	\$ 17,863	\$ 0	\$ 7,214	\$ 72,268	\$ 0	\$ 72,268	\$ 0
Southeast	SE-04	181	286	548	566	0	100	0	\$ 0	\$ 12,243	\$ 4,634	\$ 444	\$ 1,872	\$ 19,193	\$ 0	\$ 19,193	\$ 0
SOUTHEAST TOTAL		388	3450	2721	6745				\$ 0	\$ 104,031	\$ 39,379	\$ 4,404	\$ 15,903	\$ 163,717	\$ 0	\$ 163,717	\$ 0
Tijeras	TJ-01	1403	256	1484	589	0	50	50	\$ 0	\$ 22,782	\$ 8,624	\$ 9,600	\$ 3,483	\$ 44,489	\$ 0	\$ 22,244	\$ 22,244
Tijeras	TJ-02	23	1604	25	2965	0	100	0	\$ 0	\$ 32,860	\$ 12,438	\$ 0	\$ 5,023	\$ 50,322	\$ 0	\$ 50,322	\$ 0
Tijeras	TJ-03	0	1053	1	1959	5	95	0	\$ 0	\$ 21,540	\$ 8,154	\$ 0	\$ 3,293	\$ 32,987	\$ 1,649	\$ 31,337	\$ 0
Tijeras	TJ-04	1267	2465	4042	5198	55	45	0	\$ 0	\$ 101,548	\$ 38,438	\$ 0	\$ 15,523	\$ 155,509	\$ 85,530	\$ 69,979	\$ 0
Tijeras	TJ-05	864	83	3229	1015	40	60	0	\$ 0	\$ 46,642	\$ 17,655	\$ 1,296	\$ 7,130	\$ 72,723	\$ 29,089	\$ 43,634	\$ 0
Tijeras	TJ-06	105	-50	909	135	0	100	0	\$ 0	\$ 11,474	\$ 4,343	\$ 0	\$ 1,754	\$ 17,571	\$ 0	\$ 17,571	\$ 0
TIJERAS TOTAL		3662	5411	9690	11861				\$ 0	\$ 236,845	\$ 89,652	\$ 10,896	\$ 36,206	\$ 373,599	\$ 116,268	\$ 235,087	\$ 22,244
Uptown	UP-01	-442	742	23207	13632	60	40	0	\$ 0	\$ 404,861	\$ 153,250	\$ 0	\$ 61,890	\$ 620,000	\$ 372,000	\$ 248,000	\$ 0
Uptown	UP-02	55	1716	1163	7437	40	60	0	\$ 0	\$ 94,514	\$ 35,776	\$ 1,800	\$ 14,448	\$ 146,538	\$ 58,615	\$ 87,923	\$ 0
Uptown	UP-03	719	14536	10567	31858	100	0	0	\$ 0	\$ 466,251	\$ 176,488	\$ 0	\$ 71,274	\$ 714,013	\$ 714,013	\$ 0	\$ 0
Uptown	UP-04	184	1550	14475	10351	100	0	0	\$ 0	\$ 272,838	\$ 103,276	\$ 0	\$ 41,708	\$ 417,822	\$ 417,822	\$ 0	\$ 0
Uptown	UP-05	23	3502	6330	14349	100	0	0	\$ 0	\$ 227,262	\$ 86,025	\$ 1,602	\$ 34,741	\$ 349,630	\$ 349,630	\$ 0	\$ 0
UPTOWN TOTAL		539	22046	55742	77627				\$ 0	\$ 1,465,725	\$ 554,815	\$ 3,402	\$ 224,060	\$ 2,248,002	\$ 1,912,079	\$ 335,923	\$ 0
W Fringe	WF-01	4060	227	6978	399	0	0	100	\$ 0	\$ 81,073	\$ 30,688	\$ 0	\$ 12,393	\$ 124,155	\$ 0	\$ 0	\$ 124,155
W Fringe	WF-02	13498	3000	19880	4179	0	5	95	\$ 0	\$ 264,408	\$ 100,085	\$ 0	\$ 40,419	\$ 404,913	\$ 0	\$ 20,246	\$ 384,667
W Fringe	WF-03	2892	257	3107	257	0	5	95	\$ 0	\$ 36,970	\$ 13,994	\$ 2,100	\$ 5,652	\$ 58,716	\$ 0	\$ 2,936	\$ 55,780
W Fringe	WF-04	0	0	0	0	0	0	100	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
W FRINGE TOTAL		20450	3484	29965	4835				\$ 0	\$ 382,452	\$ 144,768	\$ 2,100	\$ 58,464	\$ 587,784	\$ 0	\$ 23,181	\$ 564,603
GRAND TOTAL		147294	148899	657144	452897				\$ 1,248,120	\$ 11,856,430	\$ 4,487,966	\$ 53,213	\$ 1,823,420	\$ 19,469,149	\$ 8,630,261	\$ 6,391,561	\$ 4,447,327

Table A.13 New Construction Costs for Major Roads

From	Roadway	From	To	Description	Year of Improvement (1)	Cost of Improvement	Trend	Downtown	Balanced	Trend	Downtown	Balanced	Location			Trend			Downtown			Balanced		
													1960	WSA	Outside WSA	1960	WSA	Outside WSA	1960	WSA	Outside WSA	1960	WSA	Outside WSA
MTP	98th Street	Sage	Rio Bravo	2 new lanes	2020	\$2,000,000	X	X	X	\$2,000,000	\$2,000,000	\$2,000,000	50%	50%	\$0	\$1,000,000	\$1,000,000	\$0	\$1,000,000	\$1,000,000	\$0	\$1,000,000	\$1,000,000	
MTP	Alameda	Barstow	Eubank	2 new lanes	2020	\$7,500,000	X	X	X	\$7,500,000	\$7,500,000	\$7,500,000	40%	60%	\$0	\$3,000,000	\$4,500,000	\$0	\$3,000,000	\$4,500,000	\$0	\$3,000,000	\$4,500,000	
MTP	Gibson	Louisiana	Eubank	4 new lanes	2020	\$27,600,000	X	X	X	\$27,600,000	\$27,600,000	\$27,600,000	50%	50%	\$0	\$13,800,000	\$13,800,000	\$0	\$13,800,000	\$13,800,000	\$0	\$13,800,000	\$13,800,000	
MTP	Ladera	Unser	98th Street	2 new lanes	2000	\$12,000,000	X	X	X	\$12,000,000	\$12,000,000	\$12,000,000	60%	40%	\$0	\$7,200,000	\$4,800,000	\$0	\$7,200,000	\$4,800,000	\$0	\$7,200,000	\$4,800,000	
MTP	McMahon	Golf Course	Unser	2 new lanes	2000	\$14,200,000	X	X	X	\$14,200,000	\$14,200,000	\$14,200,000	100%		\$0	\$0	\$14,200,000	\$0	\$0	\$14,200,000	\$0	\$0	\$14,200,000	
MTP	McMahon	Unser	Rainbow	4 new lanes	2005	\$12,000,000	X	X	X	\$12,000,000	\$12,000,000	\$12,000,000	100%		\$0	\$0	\$12,000,000	\$0	\$0	\$12,000,000	\$0	\$0	\$12,000,000	
MTP	Mesa del Sol Parkway	NM 47	University	4 new lanes	2020	\$20,000,000	X	X	X	\$20,000,000	\$20,000,000	\$20,000,000	100%		\$0	\$0	\$20,000,000	\$0	\$0	\$20,000,000	\$0	\$0	\$20,000,000	
MTP	Rio Bravo	Paseo del Volcan	Coors	2 new lanes	2000	\$10,000,000	X	X	X	\$10,000,000	\$10,000,000	\$10,000,000	100%		\$0	\$0	\$10,000,000	\$0	\$0	\$10,000,000	\$0	\$0	\$10,000,000	
MTP	Unser	Atrisco	Rainbow	4 new lanes	2010	\$6,000,000	X	X	X	\$6,000,000	\$6,000,000	\$6,000,000	100%		\$0	\$0	\$6,000,000	\$0	\$0	\$6,000,000	\$0	\$0	\$6,000,000	
MTP	Unser	Paseo del Norte	Paradise	4 new lanes	2010	\$6,000,000	X	X	X	\$6,000,000	\$6,000,000	\$6,000,000	100%		\$0	\$0	\$6,000,000	\$0	\$0	\$6,000,000	\$0	\$0	\$6,000,000	
MTP	Unser	Rainbow	Paseo del Norte	4 new lanes	2010	\$6,500,000	X	X	X	\$6,500,000	\$6,500,000	\$6,500,000	100%		\$0	\$0	\$6,500,000	\$0	\$0	\$6,500,000	\$0	\$0	\$6,500,000	
MTP	Unser	Arenal	Rio Bravo	4 new lanes	2020	\$8,000,000	X	X	X	\$8,000,000	\$8,000,000	\$8,000,000	50%	50%	\$0	\$4,000,000	\$4,000,000	\$0	\$4,000,000	\$4,000,000	\$0	\$4,000,000	\$4,000,000	
MTP	Westside	Golf Course	NM 528	4 new lanes	2000	\$5,000,000	X	X	X	\$5,000,000	\$5,000,000	\$5,000,000	100%		\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000	
MTP	Westside	Unser	Golf Course	4 new lanes	2005	\$5,000,000	X	X	X	\$5,000,000	\$5,000,000	\$5,000,000	100%		\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000	\$0	\$0	\$5,000,000	
Total of costs common to all three scenarios						\$141,800,000				\$141,800,000	\$141,800,000	\$141,800,000			\$0	\$29,000,000	\$112,800,000	\$0	\$29,000,000	\$112,800,000	\$0	\$29,000,000	\$112,800,000	
Network Opt.	University	Rio Bravo	Los Picaros	2 new lanes	2010	\$2,930,000	X	X		\$2,930,000	\$2,930,000	\$0	50%	50%	\$0	\$1,465,000	\$1,465,000	\$0	\$1,465,000	\$1,465,000	\$0	\$0	\$0	
Network Opt.	University	Los Picaros	Mesa del Sol Parkway	4 new lanes	2010	\$855,000	X	X		\$855,000	\$855,000	\$0	50%	50%	\$0	\$427,500	\$427,500	\$0	\$427,500	\$427,500	\$0	\$0	\$0	
MTP	Los Picaros (3)	Broadway	University	2 new lanes	2020	\$1,000,000	X	(2)	X	\$1,000,000	\$0	\$1,000,000	50%	50%	\$0	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$500,000	\$500,000	
MTP	Paseo del Norte	Golf Course	Rainbow	4 new lanes	2010	\$13,500,000	X	X	X	\$13,500,000	\$13,500,000	\$13,500,000	100%		\$0	\$0	\$13,500,000	\$0	\$0	\$13,500,000	\$0	\$0	\$13,500,000	
MTP	Rainbow	Irving	McMahon	4 new lanes	2005	\$3,000,000	X	(2)	(2)	\$3,000,000	\$0	\$0	100%		\$0	\$0	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0	
MTP	Rainbow	Paseo del Norte	Irving	4 new lanes	2000	\$3,000,000	X	(2)	(2)	\$3,000,000	\$0	\$0	100%		\$0	\$0	\$3,000,000	\$0	\$0	\$0	\$0	\$0	\$0	
MTP	Rainbow	Unser	Paseo del Norte	4 new lanes	2020	\$5,000,000	X	(2)	(2)	\$5,000,000	\$0	\$0	100%		\$0	\$0	\$5,000,000	\$0	\$0	\$0	\$0	\$0	\$0	
MTP	University	Rio Bravo	Mesa del Sol Parkway	4 new lanes	2020	\$4,000,000	(2)	(2)	X	\$0	\$0	\$4,000,000	50%	50%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000,000	\$2,000,000	
Total of costs different among scenarios						\$33,285,000				\$29,285,000	\$17,285,000	\$18,500,000			\$0	\$2,392,500	\$26,892,500	\$0	\$1,892,500	\$15,392,500	\$0	\$2,500,000	\$16,000,000	
TOTALS										\$171,085,000	\$159,085,000	\$160,300,000			\$0	\$31,392,500	\$139,692,500	\$0	\$30,892,500	\$128,192,500	\$0	\$31,500,000	\$128,800,000	
Arterial Total										\$170,085,000	\$159,085,000	\$159,300,000			\$0	\$30,892,500	\$139,192,500	\$0	\$30,892,500	\$128,192,500	\$0	\$31,000,000	\$128,300,000	
Collector Total										\$1,000,000	\$0	\$1,000,000			\$0	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$500,000	\$500,000	
Public Total (4)										\$102,251,000	\$95,451,000	\$95,780,000			\$0	\$18,635,500	\$83,615,500	\$0	\$18,535,500	\$76,915,500	\$0	\$18,700,000	\$77,080,000	
Private Total (4)										\$68,834,000	\$63,634,000	\$64,520,000			\$0	\$12,757,000	\$56,077,000	\$0	\$12,357,000	\$51,277,000	\$0	\$12,800,000	\$51,720,000	

Notes

- (1) No year of improvement is given in the Network Optimization Summary. The year 2010 is assumed.
- (2) The MTP shows the improvement in this scenario; it was removed according to the Network Optimization Summary.
- (3) This roadway is a collector. All other roadways listed are arterials.
- (4) Roadway costs allocated as follows: arterials 60% public/40%private, collectors 20% public/80% private, per City of Albuquerque

Table A.14 New Construction Costs for Minor Roads

Table with columns for GENERAL LOCATION, LOCATION, #ADDP JOBS, #ADDP DUs, ADP EMP. MILLES (2), COST EMP. ROADS (4), ADP RESID MILLES (3), ADP RESID ROADS (4), TOTAL LOCAL ROADS COST, COST PER LOCATION, #ADDP JOBS, #ADDP DUs, ADP EMP. MILLES (2), COST EMP. ROADS (4), ADP RESID MILLES (3), ADP RESID ROADS (4), TOTAL LOCAL ROADS COST, COST PER LOCATION, #ADDP JOBS, #ADDP DUs, ADP EMP. MILLES (2), COST EMP. ROADS (4), ADP RESID MILLES (3), ADP RESID ROADS (4), TOTAL LOCAL ROADS COST, COST PER LOCATION.

Table A.15 2020 MTP Roadway Rehabilitation and Reconstruction Projects

Project Name	2000-2005 Total	2006-2010 Total	2011-2015 Total	2016-2020 Total	Total	Location			Cost by Location			
						1960	WSA	Outside WSA	1960	WSA	Outside WSA	
Rehabilitation												
Rehabilitating City streets to "good" condition (1)					\$102,773,440	67%	33%		\$68,515,627	\$34,257,813	\$0	
Additional Roadway Rehabilitation Projects	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$20,000,000	34%	33%	33%	\$6,800,000	\$6,600,000	\$6,600,000	
Alameda (NM 528), Coors to Coors Bypass		\$1,620,000			\$1,620,000			100%	\$0	\$0	\$1,620,000	
Broadway, Rio Bravo to Gibson	\$2,000,000				\$2,000,000	2%	98%		\$40,000	\$1,960,000	\$0	
Coors, Gun Club to Pajarito Road			\$2,650,000		\$2,650,000		47%	53%	\$0	\$1,245,500	\$1,404,500	
Coors north to Alameda	\$1,530,000				\$1,530,000		50%	50%	\$0	\$765,000	\$765,000	
Coors, Armijo Lane to Alameda		\$2,750,000			\$2,750,000			100%	\$0	\$0	\$2,750,000	
Coors, Irving to Coors Bypass					\$0			100%	\$0	\$0	\$0	
Coors, Pajarito to Rio Bravo		\$2,000,000			\$2,000,000		67%	33%	\$0	\$1,340,000	\$660,000	
Coors, Rio Bravo to Edwardo	\$1,500,000				\$1,500,000		100%		\$0	\$1,500,000	\$0	
Edith, Osuna to County Line		\$1,000,000			\$1,000,000		80%	20%	\$0	\$800,000	\$200,000	
Eubank, Modesto to Paseo del Norte		\$5,000,000			\$5,000,000			100%	\$0	\$0	\$5,000,000	
I-25 bridge over Rio Grande		\$4,000,000			\$4,000,000			100%	\$0	\$0	\$4,000,000	
I-25 frontage road bridges		\$800,000			\$800,000	75%	25%		\$600,000	\$200,000	\$0	
I-25 frontage road northbound, Comanche to Paseo del Norte		\$615,000			\$615,000	35%	65%		\$215,250	\$399,750	\$0	
I-25 frontage road northbound, Menaul to Comanche	\$500,000				\$500,000	100%			\$500,000	\$0	\$0	
I-25 frontage road northbound, Paseo del Norte to MPO boundary		\$540,000			\$540,000		75%	25%	\$0	\$405,000	\$135,000	
I-25 frontage road southbound, Comanche to Paseo del Norte	\$1,142,500				\$1,142,500	35%	65%		\$399,875	\$742,625	\$0	
I-25 frontage road southbound, Menaul to Comanche		\$540,000			\$540,000	100%			\$540,000	\$0	\$0	
I-25 lanes northbound and southbound, Comanche to Paseo del Norte			\$9,000,000		\$9,000,000	35%	65%		\$3,150,000	\$5,850,000	\$0	
I-25 lanes northbound and southbound, Gibson to Sunport	\$5,000,000				\$5,000,000	2%	98%		\$100,000	\$4,900,000	\$0	
I-25 lanes northbound and southbound, Los Picaros to Rio Bravo rehab.	\$3,000,000				\$3,000,000		100%		\$0	\$3,000,000	\$0	
I-25 lanes northbound and southbound, MPO boundary to South Broadway			\$3,000,000		\$3,000,000			100%	\$0	\$0	\$3,000,000	
I-25 lanes northbound, Broadway to Los Picaros rehab.	\$3,000,000				\$3,000,000		100%		\$0	\$3,000,000	\$0	
I-25 lanes southbound, Broadway to Los Picaros rehab.	\$3,000,000				\$3,000,000		100%		\$0	\$3,000,000	\$0	
I-25 lanes southbound, Lomas to Sunport				\$2,500,000	\$2,500,000	75%	25%		\$1,875,000	\$625,000	\$0	
I-25/I-40 Interchange Joint Repair			\$5,000,000		\$5,000,000	100%			\$5,000,000	\$0	\$0	
I-25/Sunport ramps				\$1,000,000	\$1,000,000		100%		\$0	\$1,000,000	\$0	
I-40, Coors to Sixth Joint Maintenance		\$3,000,000			\$3,000,000	70%	30%		\$2,100,000	\$900,000	\$0	
I-40/Juan Tabo Joint Maintenance		\$150,000			\$150,000	100%			\$150,000	\$0	\$0	
I-40/Louisiana Joint Maintenance				\$500,000	\$500,000	100%			\$500,000	\$0	\$0	
I-40/San Pedro			\$1,500,000		\$1,500,000	100%			\$1,500,000	\$0	\$0	
I-40/Wyoming Joint Maintenance				\$500,000	\$500,000	100%			\$500,000	\$0	\$0	
Isleta, Rio Bravo to Bridge	\$16,000,000				\$16,000,000		100%		\$0	\$16,000,000	\$0	
La Orilla, Coors to City Limit				\$500,000	\$500,000		100%		\$0	\$500,000	\$0	
Malpais, Isleta to Coors	\$1,500,000				\$1,500,000			100%	\$0	\$0	\$1,500,000	
Modesto, Eubank to Tramway		\$3,000,000			\$3,000,000			100%	\$0	\$0	\$3,000,000	
NM 313 north of Roy Avenue		\$650,000			\$650,000		100%		\$0	\$650,000	\$0	
NM 47, MPO Boundary to south City Boundary rehab.		\$4,000,000			\$4,000,000	80%	20%		\$0	\$3,200,000	\$800,000	
Paradise, Golf Course to La Paz	\$1,500,000				\$1,500,000			100%	\$0	\$0	\$1,500,000	
Paradise, Universe to La Paz				\$1,000,000	\$1,000,000			100%	\$0	\$0	\$1,000,000	
Paseo del Norte, Coors to Jefferson			\$9,000,000		\$9,000,000		99%	1%	\$0	\$8,910,000	\$90,000	
Paseo del Norte, I-25 to Tramway		\$2,500,000	\$2,500,000	\$5,000,000	\$10,000,000	50%	50%		\$0	\$5,000,000	\$5,000,000	
Rio Grande Blvd.	\$1,000,000				\$1,000,000	100%			\$1,000,000	\$0	\$0	
Sage, Coors to Unser		\$1,500,000			\$1,500,000		100%		\$0	\$1,500,000	\$0	
Sage, Unser to 86th		\$1,000,000			\$1,000,000		100%		\$0	\$1,000,000	\$0	
Second, Paseo del Norte to Fourth		\$4,500,000			\$4,500,000		100%		\$0	\$4,500,000	\$0	
Tramway, Central to Comanche				\$10,000,000	\$10,000,000	100%			\$10,000,000	\$0	\$0	
Tramway Road, I-25 to Tramway			\$2,500,000		\$2,500,000		33%	67%	\$0	\$825,000	\$1,675,000	
Unser, Dellyne to County Line			\$2,000,000		\$2,000,000		25%	75%	\$0	\$500,000	\$1,500,000	
Reconstruction												
Additional Roadway Reconstruction Projects	\$47,500,000	\$47,500,000	\$47,500,000	\$47,500,000	\$190,000,000	34%	33%	33%	\$64,600,000	\$62,700,000	\$62,700,000	
Alameda/Edith and roadway reconstruction		\$4,110,000			\$4,110,000		100%		\$0	\$4,110,000	\$0	
Alameda, Second to Fourth	\$1,500,000				\$1,500,000		100%		\$0	\$1,500,000	\$0	
Central, Paseo del Volcan to 106th			\$1,680,000		\$1,680,000			100%	\$0	\$0	\$1,680,000	
Coors, St. Joseph's to Irving	\$8,850,000				\$8,850,000		90%	10%	\$0	\$7,965,000	\$885,000	
Coors, St. Joseph's to Paseo del Norte	\$2,400,000				\$2,400,000		100%		\$0	\$2,400,000	\$0	
Fourth Street, north of Ortega to south of Mullen	\$8,000,000	\$4,000,000			\$12,000,000		100%		\$0	\$12,000,000	\$0	
Gibson, Jackson to University	\$14,000,000				\$14,000,000	100%			\$14,000,000	\$0	\$0	
I-25 lanes northbound and southbound, Rio Bravo to Sunport	\$18,000,000				\$18,000,000		100%		\$0	\$18,000,000	\$0	
I-25 lanes northbound and southbound, San Antonio to Alameda prelim. eng.			\$125,000		\$125,000		100%		\$0	\$125,000	\$0	
I-25 lanes northbound, Broadway to Los Picaros				\$18,000,000	\$18,000,000		100%		\$0	\$18,000,000	\$0	
I-25 lanes southbound, Broadway to Los Picaros				\$18,000,000	\$18,000,000		100%		\$0	\$18,000,000	\$0	
I-25 ramps southbound, Stadium to Lomas		\$6,270,000			\$6,270,000	100%			\$6,270,000	\$0	\$0	
I-25/Los Picaros			\$5,000,000		\$5,000,000		100%		\$0	\$5,000,000	\$0	
I-25/San Mateo/Osuna				\$8,000,000	\$8,000,000		100%		\$0	\$8,000,000	\$0	
I-40 lanes eastbound, Carlisle to San Pedro	\$13,000,000				\$13,000,000	100%			\$13,000,000	\$0	\$0	
I-40 lanes eastbound, Juan Tabo to Wyoming	\$12,000,000				\$12,000,000	100%			\$12,000,000	\$0	\$0	
I-40 lanes eastbound, San Pedro to Wyoming		\$17,000,000			\$17,000,000	100%			\$17,000,000	\$0	\$0	
I-40 lanes westbound, Eubank to Tramway	\$12,000,000				\$12,000,000	100%			\$12,000,000	\$0	\$0	
I-40 lanes westbound, Wyoming to Eubank	\$7,000,000				\$7,000,000	100%			\$7,000,000	\$0	\$0	
I-40 lanes westbound, Wyoming to San Pedro		\$17,000,000			\$17,000,000	100%			\$17,000,000	\$0	\$0	
I-40/Carlisle	\$11,000,000				\$11,000,000	100%			\$11,000,000	\$0	\$0	
I-40/Louisiana	\$14,000,000				\$14,000,000	100%			\$14,000,000	\$0	\$0	
I-40/Pennsylvania and Wasington	\$5,000,000				\$5,000,000	100%			\$5,000,000	\$0	\$0	
I-40/San Mateo	\$9,000,000				\$9,000,000	100%			\$9,000,000	\$0	\$0	
NM47, south City Boundary to MPO Boundary				\$20,000,000	\$20,000,000		80%	20%	\$0	\$16,000,000	\$4,000,000	
Roy (NM 556) bridge over AT&SF Railroad		\$800,000			\$800,000		100%		\$0	\$800,000	\$0	
Roy (NM 556) bridge over Edith		\$800,000			\$800,000		100%		\$0	\$800,000	\$0	
Roy (NM 556), I-25 to Fourth Street	\$5,500,000				\$5,500,000		100%		\$0	\$5,500,000	\$0	
Second and Fourth Intersection Realignment	\$1,500,000				\$1,500,000		100%		\$0	\$1,500,000	\$0	
Unser, Dellyne to County Line	\$10,000,000				\$10,000,000	25%		75%	\$0	\$2,500,000	\$7,500,000	
					\$ 724,295,940.00				TOTALS	\$305,355,752	\$299,975,688	\$118,964,500

(1) An assumption was made that 2/3rds of the streets needing rehabilitation to "good" standards are in the 1960 City Limits, and the remainder are in the Water Service Area.

Table A.16 Metropolitan Transportation Plan Estimated Roadway Costs

Type of Roadway	Roadway	From	To	Description	Length (miles)	Total Cost	Cost per Mile
Interstate	I-25	Gibson	Rio Bravo	4 lanes to 6 lanes	2.721	\$5,000,000	\$1,837,560
Limited Access	Coors	PDN	St. Joseph	4 lanes to 6 lanes	4.359	\$4,650,000	\$1,066,758
Limited Access/ Principal Arterial	Coors	Pajarito	Central	4 lanes to 6 lanes	6.753	\$13,000,000	\$1,925,070
Limited Access	Gibson	Eubank	Juan Tabo	2 lanes to 4 lanes	1	no cost provided	
Limited Access	PDN	Eubank	Tramway	2 lanes to 4 lanes	1.5	\$6,000,000	\$4,000,000
Limited Access	Unser	Central	Sage	2 lanes to 4 lanes	1.385	\$13,000,000	\$9,386,282
Limited Access	Unser	Irving	Westside	2 lanes to 4 lanes	1.187	\$3,000,000	\$2,527,380
Limited Access	Unser	Paradise	Irving	2 lanes to 4 lanes	0.5	\$2,600,000	\$5,200,000
Limited Access	Unser	Sage	Arenal	2 lanes to 4 lanes	0.3	no cost provided	
Limited Access	PDN	Wyoming	Eubank	2 lanes to 6 lanes	2	\$9,000,000	\$4,500,000
Limited Access	PDV	I-40	County Line	2 new lanes	11.17	\$14,000,000	\$1,253,357
Limited Access	Rio Bravo	PDV	Coors	2 new lanes	4.4	\$10,000,000	\$2,272,727
Limited Access	Gibson	Louisiana	Eubank	4 new lanes	2	\$27,600,000	\$13,800,000
Limited Access	PDN	Golf Course	Rainbow	4 new lanes	3.179	\$13,500,000	\$4,246,618
Limited Access	Unser	PDN	Paradise	4 new lanes	1.353	\$6,000,000	\$4,434,590
Limited Access	Unser	Rainbow	PDN	4 new lanes	1.08	\$6,500,000	\$6,018,519
Limited Access	Unser	Arenal	Rio Bravo	4 new lanes	2	\$8,000,000	\$4,000,000
Principal Arterial	2nd	I-40	North City Limits	4 lanes to 6 lanes	2.82	\$30,000,000	\$10,638,298
Principal Arterial	Eubank	PDN	San Rafael	2 lanes to 4 lanes	0.742	\$5,000,000	\$6,738,544
Principal Arterial	Isleta	Rio Bravo	Arenal	2 lanes to 4 lanes	1.954	\$3,000,000	\$1,535,312
Principal Arterial	McMahon	Golf Course	Unser	2 lanes to 4 lanes	1.336	\$1,500,000	\$1,122,754
Principal Arterial	98th	Sage	Rio Bravo	2 new lanes	2	\$2,000,000	\$1,000,000
Principal Arterial	Alameda	Barstow	Eubank	2 new lanes	1.5	\$7,500,000	\$5,000,000
Principal Arterial	McMahon	Golf Course	Unser	2 new lanes	1.43	\$14,200,000	\$9,930,070
Principal Arterial	McMahon	Unser	Rainbow	2 new lanes	2.24	\$12,000,000	\$5,357,143
Principal Arterial	Rainbow	Irving	McMahon	4 new lanes	1.082	\$3,000,000	\$2,772,643
Principal Arterial	Rainbow	PDN	Irving	4 new lanes	1.04	\$3,000,000	\$2,884,615
Principal Arterial	Rainbow	Unser	PDN	4 new lanes	1.77	\$5,000,000	\$2,824,859
Principal Arterial	Mesa del Sol Parkway	NM 47	University	4 new lanes	2.39	\$20,000,000	\$8,368,201
Minor Arterial	Edith	Candelaria	Montaño	2 lanes to 4 lanes	1.435	\$6,000,000	\$4,181,185
Minor Arterial	Golf Course	Westside	PDN	2 lanes to 4 lanes	2.968	\$5,250,000	\$1,768,868
Minor Arterial	Griegos	Edith	I-25	2 lanes to 4 lanes	0.693	\$2,000,000	\$2,886,003
Minor Arterial	Irving	Chantilly	Unser	2 lanes to 4 lanes	2.028	\$12,000,000	\$5,917,160
Minor Arterial	Paradise	Golf Course	Eagle Ranch	2 lanes to 4 lanes	0.742	\$1,500,000	\$2,021,563
Minor Arterial	University	Sunport	Rio Bravo	2 lanes to 4 lanes	2.2	\$2,300,000	\$1,045,455
Minor Arterial	Eagle Ranch	Paradise	PDN	2 lanes to 4 lanes	0.198	\$1,500,000	\$7,575,758

Type of Roadway	Roadway	From	To	Description	Length (miles)	Total Cost	Cost per Mile
Minor Arterial	Ladera	Unser	98th	2 new lanes	1.5	\$12,000,000	\$8,000,000
Minor Arterial	University	Rio Bravo	Mesa del Sol Parkway	4 new lanes	2.7	\$4,000,000	\$1,481,481
Minor Arterial	Westside	Golf Course	NM 528	4 new lanes	0.828	\$5,000,000	\$6,038,647
Minor Arterial	Westside	Unser	Golf Course	4 new lanes	1.1	\$5,000,000	\$4,545,455
Collector Streets	Arenal	Isleta	Coors	2 lanes to 4 lanes	1.88	\$4,000,000	\$2,127,660
Collector Streets	Los Picaros	Broadway	University	2 new lanes	1.739	\$1,000,000	\$575,043

Table A.17 Assumptions Made to Determine Cost Estimate

Type of roadway	Roadway	From	To	Description	Length (miles)	Assumption	Cost per mile	Additional Costs	Total Cost
Limited Access	Coors	PDN	Coors Bypass	6 lanes to 8 lanes	1.014	used Coors from PDN to St. Joseph cost per mile (from MTP)	\$1,066,758		\$1,081,693
Principal Arterial	Alameda	Rio Grande (river)	2nd Street	4 lanes to 6 lanes	1.657	used Isleta from Rio Bravo to Arenal cost per mile (from MTP)	\$1,535,312		\$2,544,012
Collector Street	Eagle Ranch	Paradise	Irving	2 lanes to 4 lanes	0.594	used Arenal from Isleta to Coors cost per mile (from MTP)	\$2,127,660		\$1,263,830
				Rio Grande/Unser Intersection		intersection improvements		\$100,000	\$100,000
Limited Access	Unser	Paradise	Westside	4 lanes to 6 lanes	1.657	used Unser from Irving to Westside cost per mile (from MTP)	\$2,527,380		\$4,187,869
Limited Access	Unser	Western Trail	Dellyne	4 lanes to 6 lanes	0.96	used Coors from PDN to St. Joseph cost per mile (from MTP)	\$1,066,758		\$1,024,088
Minor Arterial	Montano	Coors	4th Street	2 lanes to 4 lanes	2.746	lanes already built; minor striping needed to convert from 2 lanes to 4 lanes *		\$70,000	\$70,000
				I-40/Coors Interchange		WB to SB ramp		\$500,000	\$500,000
				I-40/Unser Interchange		WB offramp		\$500,000	\$500,000
				I-40/Unser Interchange		EB offramp and onramp		\$500,000	\$500,000
				I-40/Unser Interchange		overpass		\$1,500,000	\$1,500,000
				I-40/98th Street Interchange		WB offramp		\$500,000	\$500,000
				I-40/98th Street Interchange		overpass		\$1,500,000	\$1,500,000
				I-40/PDV Interchange		WB offramp		\$500,000	\$500,000
				I-40/PDV Interchange		overpass		\$1,500,000	\$1,500,000
Limited Access	Unser	I-40	Central	4 lanes to 6 lanes	1.262	used Unser from Central to Sage cost per mile (from MTP)	\$9,386,281		\$11,845,487
Collector Street	Tingley			2 lanes to 4 lanes	1.95	used Arenal from Isleta to Coors cost per mile (from MTP)	\$2,127,660		\$4,148,937
				Alcalde/Tingley Intersection		signalization		\$75,000	\$75,000
Collector Street	Alcalde			2 lanes to 4 lanes	0.322	used Arenal from Isleta to Coors cost per mile (from MTP)	\$2,127,660		\$685,107
Limited Access	Rio Bravo	Isleta	Broadway	4 lanes to 6 lanes	2.028	used Coors from Parajito to Central cost per mile (from MTP) plus \$3 million for the bridge (engineering judgment)	\$1,925,070	\$3,000,000	\$6,904,042
Limited Access	Rio Bravo	Isleta	I-25	4 lanes to 6 lanes	2.523	used Coors from Parajito to Central cost per mile (from MTP) plus \$3 million for the bridge (engineering judgment)	\$1,925,070	\$3,000,000	\$7,856,952
Interstate	I-25	Rio Grande (river)	Rio Bravo	4 lanes to 6 lanes	6	used I-25 from Gibson to Rio Bravo cost per mile (from MTP) plus \$6 million for two bridges (engineering judgment)	\$1,837,560	\$6,000,000	\$17,025,360
				I-25/Isleta Interchange		SB offramp		\$500,000	\$500,000
Minor Arterial	San Antonio (Ellison)	Jefferson	I-25	2 lanes to 4 lanes	0.445	used Edith from Candelaria to Montano cost per mile	\$418,185		\$186,092
Principal Arterial	Isleta	Gun Club	Bridge	4 lanes to 2 lanes	4.477	take cost out of County scenario of Isleta from Rio Bravo to Arenal			\$0
Minor Arterial	University	Rio Bravo	Los Picaros	4 lanes to 2 lanes		see breakdown below; also take cost out of the Trend and TES scenarios of University from Rio Bravo to Mesa del Sol Pkwy.			\$0
				University	1.275	Assumed that \$4 million cost of University from Rio Bravo to Mesa del Sol Pkwy. included \$2.5 million bridge (eng. judgment).	\$337,424	\$2,500,000	\$2,930,215
						Calculated that 4 lane road in this area costs \$645,000 by taking 43% of \$4 million minus \$2.5 million.			\$0
						Assumed a 2 lane road would be 2/3 of the cost of that 4 lane road plus the cost of the bridge.			\$0
						This should be used for the Trend and TES scenarios only.			\$0
				University	1.425	Assumed that \$4 million cost of University from Rio Bravo to Mesa del Sol Pkwy. included \$2.5 million bridge (eng. judgment).	\$600,000		\$855,000
						Calculated that 4 lane road in this area costs \$855,000 by taking 57% of \$4 million minus \$2.5 million.			\$0
						This should be used for the Trend and TES scenarios only.			\$0
				I-40/Eubank Interchange		EB offramp		\$500,000	\$500,000
				I-40/Wyoming Interchange		EB offramp		\$500,000	\$500,000
Principal Arterial	Central/Louisiana	Gold/copper to Uptown		HOV lane		see breakdown below			\$0
			Louisiana	HOV lane	4.601	assumed lanes were there and that they would only need striping *		\$120,000	\$120,000
			Louisiana	HOV lane	1.929	assumed lanes were there and that they would only need striping *		\$50,000	\$50,000
Principal Arterial	Uptown Boulevard	@ Americas Parkway	(loop road)	HOV lane	1.5	assumed lanes were there and that they would only need striping *		\$40,000	\$40,000
				Montano/4th Street		grade separation		\$20,000,000	\$20,000,000
Minor Arterial	4th Street	I-40	Alameda	HOV lane	6	assumed lanes were there and that they would only need striping *		\$160,000	\$160,000
Collector Street	PDN	Rainbow	Black Ranch	2 new lanes	3	used 98th from Sage to Rio Bravo cost per mile (from MTP)	\$1,000,000		\$3,000,000
Limited Access	Gibson	Eubank	Juan Tabo	2 lanes to 4 lanes	1	used Coors from PDN to St. Joseph cost per mile (from MTP)	\$1,067,758		\$1,067,758
Limited Access	Unser	Sage	Arenal	2 lanes to 4 lanes	0.3	used Unser from Central to Sage cost per mile (from MTP)	\$9,386,281		\$2,815,884
									\$0

* striping calculated from NMSHTD 4* striping per foot=\$2.00/ft x 2 lanes x 5280 ft/mile = \$25,000/mile

Notes

1. This \$2 million figure is used as the basis for all operation and maintenance calculations in this section. Hydrology staff from the City, however, have independently estimated that annual operation and maintenance costs could exceed \$3 million.
2. HERS, which was developed for the FHWA for national level analysis, performs benefit-cost analysis for highway widening, and pavement and alignment improvements, or any combination thereof.
3. Cal-B/C is the California Department of Transportation model that varies vehicle operating costs according to speed for the existing and proposed facilities, and provides separate estimates for autos and trucks.
4. STEAM, which was developed for FHWA for corridor analysis, employs separate vehicle operating cost estimates for fuel and non-fuel components.
5. RailDEC was developed for FTA to forecast changes on the highway adjacent to the new or improved rail facility.
6. Rail-B/C is the California Department of Transportation model that is used to estimate the vehicle operating cost savings of a rail investment parallel to an existing highway facility.
7. StratBENCOST is designed for rapid analysis and comparison of a number of projects; the objective is to allow planners to select the most promising projects for more detailed analysis. It is being updated under NCHRP Project 2-18(4) (Development and Demonstration of StratBENCOST Procedure).

References

Bibliography

Albuquerque/Bernalillo County. *Comprehensive Plan*. 1988.

———. *Ground-Water Protection Policy and Action Plan*. January 1995.

Albuquerque Metropolitan Arroyo Flood Control Authority. *AMAFCA Memo – Project Schedule (with project summaries)*. July 15, 1997.

Apogee Research, Inc. *The Cost of Transportation: Final Report*. Conservation Law Foundation. March 1994.

Avid Engineering and Parsons Brinckerhoff. *Regional Transit Authority, Service Plan for the Middle Rio Grande Valley*. June 1998.

Bernalillo County. *Capital Improvements Plans. Open Space Impact Fees, Park Impact Fees*. Effective January 1, 1996.

Burchell, Robert, et al. *The Cost of Sprawl – Revisited, TCRP Report 39*. Transportation Research Board. 1998.

City of Albuquerque. *City Council Services Staff. Discussion Paper: Urban Growth Management in Albuquerque*. March 10, 1998.

———. *Public Works Department, Utilities Planning Division. Wastewater Master Plan 1990–2030*. October 1990.

———. *Public Works Department, Hydrology Division. Albuquerque Area Wide Storm Drainage Projects*. January 1997.

———. *Capital Improvements Program. Decade Plan 1997–2006 Approved Program*. March 1997.

———. *Public Works Department, Water Resources. City of Albuquerque Water Resources Management Strategy*. May 1997.

———. *Transit Department. High Capacity Transportation System (Light Rail) Project Update*. October 1998.

City of Albuquerque, Bernalillo County, Avid Engineering, Inc., Parsons Brinckerhoff. *Regional Transit Authority Service Plan for the Middle Rio Grande Region*. June 1998.

City of Albuquerque, Boyle Engineering Corporation, Amy Vickers & Associates, Inc., and Raftelis Environmental Consulting Group, Inc. Water Conservation Rates and Strategy Analysis – Component C – Long Term Strategy Technical Supplement. March 1995.

County of Bernalillo. Notification of Decision. Bernalillo County Planning Commission. March 6, 1997.

Delucchi, Mark. *The Annualized Social Cost of Motor Vehicle Use in the United States*, Reports 1 through 20. University of California at Davis. June 1997.

Kulash, Walter, J. Anglin, and D. Marks. *Traditional Neighborhood Development: Will the Traffic Work?* Real Estate Research Consultants, Washington, D.C. 1990.

Leedshill-Herkenhoff, Inc. Bernalillo County West Mesa Water and Sewer Utility Development, Volume I Summary Report. September 1997.

Litman, Todd. *Transportation Cost Analysis: Techniques, Estimates and Implications*. Victoria Transport Policy Institute. February 1995.

Middle Rio Grande Council of Governments. 1996 Transportation Program, Program Year October 1, 1995 to September 30, 1996, SPR-259. July 11, 1996.

———. Future Albuquerque Area Bikeways and Streets SPR-268. March 12, 1998.

———. Focus 2050 Screen Scenarios Report: Methodology, Assumptions and Evaluation Criteria, Draft. August 12, 1998.

———. 2020 Metropolitan Transportation Plan Conformity Analysis for Air Quality for the Albuquerque Metropolitan Planning Area. September 10, 1998.

———. 2020 Metropolitan Transportation Plan for the Albuquerque Metropolitan Planning Area. September 10, 1998.

Molzen-Corbin & Associates, Lee Wilson & Associates. Bernalillo County East Mountain Area Water System Feasibility Study Draft Final Report. November 1990.

Parsons Brinckerhoff. Albuquerque Transportation Evaluation Study Appendix. February 1996.

———. *The Cost of Travel in Boulder*. City of Boulder Colorado. July 1996.

———. Comparison of Trend Alternatives and Alternative Future Place Image Concept (TES Alternative). March 1997.

———. *LUTRAQ – Making the Connections: Technical Report Volume 8*. 1000 Friends of Oregon. 1997.

———. *Transportation-Related Impacts of Alternative Future Place Image*. 1997.

———. *The Full Social Costs of Alternative Land Use Patterns: Theory, Data, Methods and Recommendations*. Federal Highway Administration, Washington, DC. April 1998.

Parsons Engineering Science, Inc. City of Albuquerque Water and Wastewater Utility Program Assessment. March 1997.

State Land Office, Santa Fe. Mesa del Sol Level A Community Master Plan. 1997.

Laws, Regulations, and Rules

Albuquerque/Bernalillo County. Extraterritorial Subdivision Ordinance No. ELUA 1998-3. Effective June 23, 1998.

Bernalillo County. Impact Fees Ordinance. Effective January 1, 1996.

Laws 1998, ch. 42, 2nd Session, 43rd Legislature, State of New Mexico.

Middle Rio Grande Conservancy District. Rule No. 23 Water Bank Rules. December 15, 1995.

Middle Rio Grande Council of Governments. Focus 2050 FAQs about the Screen Scenarios.

Maps Created for the Planned Growth Study

The following maps have been created for the Planned Growth Strategy and are available through the City of Albuquerque, Council Services:

Public Facilities

Water line data (includes type, diameter, installation date)

Wastewater line data (includes type, diameter, installation date)

Storm line data (includes material & installation date)

Street data (includes street condition, number of lanes, lane miles)

Parks (includes development status, renovation priority, acreage, jurisdiction)

Public community facilities (libraries, community & senior centers, pools, administrative)

Public safety facilities (fire stations, police stations, command stations, substations, mini-stations)

Public Schools, Private & Parochial Schools
Transit routes (all-day and express) & Trolley routes

Planning Information

Land Use information by acreage and category (includes vacant land as a separate category)

Zoning information by acreage and category

Comprehensive Plan designations

Recent New Construction Residential Building Permits and Subdivision Activity (1994–1997)

City Annexation History overlaid with 1997 New Construction Building Permits

Council of Governments Population Growth Forecast for the Year 2020

Subareas Master Plan for developing urban area of North Albuquerque Acres

Location of Recent Industrial Revenue Bonds in Albuquerque

Capital Facilities Projects 1995–2008

City Water Capital Projects (categorized by growth, deficiency, & rehabilitation)

City Wastewater Capital Projects (categorized by growth, deficiency, & rehabilitation)

City Hydrology Capital Projects (categorized by growth, deficiency, & rehabilitation)

City Street Capital Projects (categorized by growth, deficiency, & rehabilitation)

AMAFCA Drainage Projects (categorized by growth, deficiency, & rehabilitation)

NM State Highway Projects (categorized by growth, deficiency, & rehabilitation)

NM Utilities existing & proposed Well Sites

NM Utilities service area & proposed expanded franchise area

Westland property, proposed well sites and project boundary

Existing and planned capital infrastructure for water, wastewater, storm, and streets

Percentage of *developed* land served by water lines by water trunk and zone

Percentage of *undeveloped* land served by water lines by water trunk and zone

Water pressure zones served by capital projects from 1995–2008

Wastewater basins served by capital projects from 1995–2008

Hydrology basins served by capital projects from 1995–2008

Location of street capital projects from 1995–2008

Location of City & AMAFCA hydrology capital projects

City Public Works capital projects (1995–2008) overlaid onto categorized vacant land use

Street Conditions Map for the City maintained streets

Street Sections & Intersections Currently Over-Capacity

Main & service water line breaks for 1996–97

Distribution of concrete, clay, & PVC Sewer Lines

Natural Resource and Administrative Inventory

Administrative

City jurisdiction

City water and wastewater service areas

Corrales, Los Ranchos, & Paradise Hills jurisdiction

Five-mile Extra-Territorial Boundary

1960 City Boundary

Neighborhood Associations

City & County Fire Zones

City Police Beats

Indian Reservations

National Parks, Monuments & Forest Boundaries

Data Analysis SubZones (DASZ) zones

Middle Rio Grande Council Districts

Pocket of Poverty

Enterprise & Metropolitan Redevelopment Zones

Natural Resources

Flood Plains & Drainage Courses

Soil Types

Open Space

Ground water zones

Ground water contamination sites

City water pumps stations & wells

Proposed open space acquisition

Agricultural land

Subareas Master Plan Boundaries for North Albuquerque Acres