

# GROWTH MANAGEMENT STRATEGY WATER & WASTEWATER PLAN

## Purpose

The Land Use Division of the Growth Management Department of Santa Fe County created a Growth Management Team to recommend strategies to the Board of County Commissioners for growth management for the County. The Growth Management Strategy will comprise subsets of issues related to growth, including roads, water, community services, and zoning. The Team has introduced the planning process and current conditions in presentations to the BCC.

Because water is such a critical issue for the County, especially as it relates to growth, the Growth Management Team was requested to present the water segment first. This Water Plan was designed as a component of the overall Growth Management Strategy. Therefore, the water planning strategies presented in this document were not derived independently, but in conjunction with the overall growth management strategies being developed by the Team.

## Previous Water Plans

### *County Water Utility Plan and Wastewater Utility Plan*

In 2007, the County Water Resources Department produced a water plan and wastewater plan. Both were specific to utility operations and planning, therefore did not address water planning as a component of an overall County growth management strategy. However, because the utility serves the growth areas of the El Centro GMA, those plans did presage the strategies presented for the El Centro GMA in this document.

In order to provide a consistent policy for water planning, the County Water and Wastewater Utility Plans will be revised as necessary to incorporate the direction as set forth by the approved water planning strategies in this Growth Management Strategy Water Plan.

### *40-Year Water Plan*

The County produced a 40-Year Water Plan in August 2002. The purpose of the plan was to demonstrate a strategy and use in order to secure its water rights portfolio. For counties and municipalities, a 40-year water plan fulfills the requirements of the Office of the State Engineer (OSE) to demonstrate that water rights are being acquired in order to be put to future beneficial use.

Much of the strategy in the 40-Year Water Plan is contained within the County Water Utility Plan, including diversification of both the County water rights and water supply portfolios, service to existing well owners who may have water quality issues, potential as a supplemental source of supply for other water systems, and movement toward reuse of treated effluent.

The 40-Year Water Plan was scheduled for revision every five years. In order to provide a consistent policy for water planning, the revision will incorporate the direction as set forth by the approved water planning strategies in this Growth Management Strategy Water Plan.

### Plan Approach

It is recognized that strategies for water and wastewater applicable to one area of the County will not be effective in other areas. For example, the Estancia GMA cannot be served by the County utility, therefore water and wastewater strategies must address the conditions specific to that area. The Growth Management Strategy has divided the County into four Growth Management Areas (GMA), and this plan follows that format. The four areas, from south to north, are: Estancia, Galisteo, El Centro, and El Norte.

For each area, a planning process was followed. A core group of the Team collectively worked through this process concentrating on water and wastewater issues for each GMA. The result of this process are Recommended Strategies applicable County-wide, and Recommended Priority Projects as pertains to water & wastewater.

The Planning Analysis consists of five steps:

1. Conduct a SWOT analysis, enumerating the Strengths, Weaknesses, Opportunities, and Threats for effective water and wastewater services.
2. Develop several strategic options, and outline the implications to the County for each option.
3. Select a Recommended Strategy from the options.
4. Define Obstacles to implementing the recommended strategy.
5. Suggest Specific Actions that the County can take to overcome the obstacles and begin to implement the recommended strategy.

The analysis was based on an examination of the current conditions, with preliminary broad decision points set out for each area. Current conditions included the potential for regionalization.

## **Current Conditions - Water**

### **Estancia Growth Management Area**

- ◆ One dominant (and one secondary) large system: Entranosa and Thunder Mountain in western part of planning area
- ◆ Mostly private wells throughout rest of planning area
- ◆ Few community systems
- ◆ REGIONALIZATION POTENTIAL: Entranosa for the western part of the planning area

### **Galisteo Growth Management Area**

- ◆ Mostly private wells
- ◆ A few community water systems having difficulties with supply
- ◆ REGIONALIZATION POTENTIAL: Low at this time, possible if County delivers supply to this planning area

### **El Centro Growth Management Area**

- ◆ Four dominant large systems: City of Santa Fe, Santa Fe County, Las Campanas, Eldorado Area Water & Sanitation District
- ◆ Securing of water supply: City, County
- ◆ Many private wells
- ◆ Several small community water systems, working independently but will consider supplemental supply from the County
- ◆ REGIONALIZATION POTENTIAL: Santa Fe County, City of Santa Fe

### **El Norte Growth Management Area**

- ◆ Many private wells
- ◆ Several small community water systems, working independently; most incapable of significant expansion
- ◆ Pojoaque/Tesuque/Nambe Valley: Future regional system; governed by Aamodt settlement
- ◆ REGIONALIZATION POTENTIAL: Española municipal system, alliance of smaller water systems

## **Current Conditions - Wastewater**

### **Estancia Growth Management Area**

- ◆ Mostly septic tanks
- ◆ REGIONALIZATION POTENTIAL: Edgewood municipal system

### **Galisteo Growth Management Area**

- ◆ Mostly septic tanks
- ◆ REGIONALIZATION POTENTIAL: Low at this time

### **El Centro Growth Management Area**

- ◆ Three dominant large systems: City of Santa Fe, Las Campanas, Rancho Viejo
- ◆ One small system with high growth potential: Santa Fe County
- ◆ Many septic tanks
- ◆ REGIONALIZATION POTENTIAL: Santa Fe County, City of Santa Fe, Eldorado Area Water & Sanitation District

### **El Norte Growth Management Area**

- ◆ Mostly septic tanks
- ◆ REGIONALIZATION POTENTIAL: Española municipal system, Santa Clara WWTP, Pojoaque Pueblo WWTP

## **Decision Paths**

### **Estancia Growth Management Area**

- County to support legislative or direct County funding of private or municipal systems
- Ordinances to promote centralized water & wastewater systems in new developments

### **Galisteo Growth Management Area**

- Ordinances to promote centralized water & wastewater systems in new developments
- County to support legislative or direct County funding of existing systems

### **El Centro Growth Management Area**

- County to pursue regionalization alone or with City of Santa Fe
- County to supplement smaller systems, or integrate them into County system
- Where to commit the 500 acre-feet per year water that can be purchased from the City of Santa Fe

El Norte Growth Management Area

- County support at legislature or direct County funding.
- Promote independent systems, consolidation, or integration into regional system.
- Single or multiple regional systems

Analysis

Estancia Growth Management Area

**1. SWOT**

- Strengths:
  1. Strong State Engineer process-wells
  2. Regional water planning group
  3. Waste water treatment plan to be built
  4. Regional water system in place
- Weaknesses:
  1. Scattered domestic wells
  2. No new water sources/closed basin
  3. Lack of community planning
  4. Remote and spread out - far from Santa Fe County infrastructure
- Opportunities:
  1. Define development strategy, it hasn't happened yet
  2. Collaboration in Regional Planning
- Threats:
  1. Contamination of aquifer-septic tanks & agricultural runoff
  2. Potential sprawling conditions: makes water systems costly to build/implement
  3. Piecemeal annexation
  4. Any large ranch can submit for development at any time

**2. Strategic Options and Implications:**

1. Redefine development patterns
  - a. Ordinances must be passed
  - b. Staff time for planning and implementation
2. Create regional water/waste water systems
  - a. Expensive – large area to be covered
  - b. Small population served

c. Who would operate – County staffing issues

**3. Recommended Strategy:**

1. Redefine development patterns

**4. Obstacles:**

1. Political - private property rights
2. Cross jurisdictional w/municipality (Edgewood)

**5. Actions:**

1. Secure generalized agreement w/Edgewood
2. Define staffing plan for implementation

Galisteo Growth Management Area

**1. SWOT**

- Strengths:
  1. Strong community planning process
  2. Large undeveloped tracts remain
  3. Ongoing preservation of open tracts
  4. Several community water systems
  5. Watershed Partnership
  6. Low growth projections
- Weaknesses:
  1. Water system infrastructure and operation problematical
  2. Water supply limited or localized
  3. Spread out so regional infrastructure potential limited
  4. No wastewater systems
- Opportunities:
  1. Improve water systems
  2. Collaboration with community planning groups and Watershed Partnership
  3. Within range of County utility
  4. Can define development strategy
  5. Preservation of large tracts and protection of riparian and recharge areas
- Threats:
  1. Any large ranch can submit for development at any time
  2. Limited protections from contamination, particularly from mining or oil & gas

**2. Strategic Options and Implications:**

1. Improve water systems and develop wastewater systems within existing communities
  - a. Expensive, or staff time to support other funding requests
  - b. Need agreements with systems
  - c. Small systems cannot always effectively operate
2. Preserve large tracts
  - a. Must purchase land or create conservation agreements
3. Redefine development patterns
  - a. Ordinances must be passed
  - b. Staff time for planning and implementation

**3. Recommended Strategy:**

1. Concentrate growth into existing traditional and contemporary communities by improving their water systems and developing wastewater systems, with concomitant preservation of open tracts

**4. Obstacles:**

1. Political-private property rights
2. Expensive
3. Developing agreements with communities and water systems
4. Local resistance to WWTP
5. Limited water sources

**5. Actions:**

1. Secure funding to improve water systems and develop wastewater systems
2. Develop ordinances for preservation and protection of open tracts

*El Centro Growth Management Area*

**1. SWOT**

- Strengths:
  1. Existing regional (or potentially regional) water & wastewater systems
  2. Strong government oversight
  3. Several viable community water systems
  4. Easy to extend County infrastructure
  5. BDD project
  6. Good water supply in basin

- Weaknesses:
  1. Wastewater systems not fully developed
  2. Current growth patterns not ideal in much of GMA
  3. County has placed requirements for areas to hook to County system (e.g., La Cienega) without the available water supply
  4. City/County/MDWA disagreements
  5. Limit to County authority
  
- Opportunities:
  1. Easy to serve large population
  2. Annexation of Las Soleras by the City of Santa Fe will free up additional substantial water supply for County utility
  
- Threats:
  1. Uncooperative annexation by City of Santa Fe
  2. More demand for water than is available, even with BDD
  3. Over-drilling by domestic wells and development systems
  4. Over-commitment of available water supplies by County

## **2. Strategic Options and Implications:**

1. Utilize BDD water supply for County utility to serve El Centro growth areas
  - a. Water supply unavailable for other uses
2. Use utility to take everyone off wells
  - a. Water supply unavailable for new growth
  - b. New developments will drill their own wells
3. Incorporate some or all of small community water systems into County system
  - a. Need agreements
  - b. May need to purchase or condemn
4. Supplement small systems with water supply, allowing them to operate independently
  - a. May allow continuation of marginal systems
  - b. Allows for competing systems
  - c. Need agreements
5. Incorporate existing wastewater systems into County regional system, and expand County system to take residents off septic tanks
  - a. May need to purchase or condemn
  - b. Need to fund hookups to make palatable to some residents
6. Support improvements and expansion of existing wastewater systems, allowing them to operate independently
  - a. Funding sources unknown

b. Creates competing systems

**3. Recommended Strategy:**

1. Utilize BDD water supply for County utility to serve El Centro growth areas
2. Incorporate existing wastewater systems into County regional system, and expand County system to take residents off septic tanks.
3. Looking to the future, examine new water supplies beyond BDD, including importation of water from other areas.

**4. Obstacles:**

1. Competing demand for the available water from small systems
2. View of public that County is promoting new development
3. Resistance by existing systems to incorporating into regional system
4. Inefficient service areas by City and County
5. Public resistance to giving up private wells and septic tanks

**5. Actions:**

1. Work out annexation agreement with City of Santa Fe
2. Define water and wastewater service areas and policy for County, and work out agreement with City on service areas
3. Develop ordinances to deal with development and water supply outside service areas
4. Develop utility staffing and rate plans in anticipation of expansion of County utility and takeover of existing systems

*El Norte Growth Management Area*

**1. SWOT**

- Strengths:
  1. Existing community water systems, with several more being developed
  2. Proximity to potential regional water & wastewater systems
  3. Aamodt settlement developing regional water system and resolving water rights issues
- Weaknesses:
  1. Many domestic wells and septic tanks in crowded conditions
  2. Several competing jurisdictions
  3. Aamodt does not include wastewater

- Opportunities:
  1. Collaboration with acequia, land grant, and community associations
  2. Española Basin Regional Issues Forum (EBRIF) as a communications and cooperation tool
- Threats:
  1. Limited County control on Aamodt
  2. Competition between entities and population segments
  3. Failure of Aamodt settlement

**2. Strategic Options and Implications:**

1. Promote development of regional water & wastewater systems
  - a. Must get agreements with large systems, small systems and communities
  - b. Funding mechanism must be developed
  - c. Need agreements for operations
2. Help Aamodt succeed
  - a. Funding is still an unknown
  - b. Need direction if settlement is not completed
3. Promote development of small community water & wastewater systems
  - a. Creates competing systems
  - b. Need funding mechanism
  - c. Need agreements for operations – large burden if County agrees to operate and maintain

**3. Recommended Strategy:**

1. Develop regional water & wastewater systems (including Aamodt)
2. Support and encourage alliances of smaller community water systems

**4. Obstacles:**

1. Cross-jurisdictional differences
2. Cost and funding
3. Competition and disagreements

**5. Actions:**

1. Develop inter-jurisdictional agreements
2. Efficient funding of connections to existing regional supplies and WWTP
3. Continue to participate in and promote the Aamodt settlement

## **RECOMMENDED STRATEGIES**

From the analysis, two themes emerged that are applicable County-wide:

- ◆ Regionalization and consolidation are better than smaller, competing systems. When many entities compete for limited funding, most projects receive less than the amount needed to complete any project. Competition for limited water sources taxes the aquifer and damages its long-term viability. Smaller systems do not have the financial or managerial resources to operate and maintain the system adequately. Larger systems, including the County, have the ability to provide water resources, can develop new sources, and have the operational capability to maintain the system. When feasible, consolidation of smaller systems into regional systems, or expansion of regional systems into areas not currently served, is the best strategy for providing water and wastewater service. Where less feasible, creation of alliances amongst several smaller systems would enable them to manage and operate effectively.
- ◆ The County should take the initiative to redefine development patterns to be more compatible with its vision for growth. Currently, zoning and development is pegged to water availability, without full acknowledgement of the other factors that can create developments that will tax County resources in the future. The County should create Code requirements and Ordinances to formulate growth patterns that are compatible with County resources and development vision.

## **RECOMMENDED STRATEGIC PRIORITIES**

### **BUCKMAN DIRECT DIVERSION**

The Buckman Direct Diversion Project is the largest, most ambitious water project the County has ever undertaken, and entails significant cross-jurisdictional agreements with the City of Santa Fe and Las Campanas. BDD will provide the largest water supply to the County utility, and enable water service to the largest population. As such, Santa Fe County should devote its largest share of resources, both financial and staffing, to BDD. Because the County utility will serve the highest growth areas, giving the largest return on investment, BDD water should be dedicated to the County utility to serve designated growth areas and County commitments within the El Centro GMA. Already submitted master plans for new developments could encompass the entire 1700 acre-feet per year (afy) of water available from BDD.

County commitments are those areas that the County has already designated as preferable to being served on the County utility. They include those areas where

the County has passed an Ordinance or Resolution requiring residents on wells to hook to the County system when it becomes available (e.g., La Cienega; the Community College District), and those systems that need assistance (e.g., Cañoncito). The County should also initiate discussions and negotiations with other systems, to prepare for supplemental water supplies if they become available in the future (e.g., expansion of the diversion capability of BDD; importation of water from other projects).

The County must make a decision on the commitment of 500 afy of water that the County may purchase, in perpetuity, from the City of Santa Fe. This is a water supply that is in addition to the 1700 afy from BDD. However, the County has not yet ensured a reliable drought backup supply to equate to the BDD supply. If the 500 afy is dedicated to new growth, taking residents off wells, or supplementing existing small systems, the County may not be able to supply its full commitments during drought years, when the BDD supply is curtailed. If the 500 afy is dedicated strictly to drought relief, the County may be in a position of having an available water supply that is not being utilized. An effective strategy, then, would be to set aside the 500 afy as drought relief while continuing to work on the well program, and investigating additional water sources. If new sources become available that could create a reliable drought backup (e.g., an expansion of the well program for a complete conjunctive use strategy), then the 500 afy could be dedicated to other uses.

The County should also take the opportunity that BDD presents as a joint project, to engage in discussion with the City of Santa Fe to resolve water and wastewater service outside the City limits, and negotiate service to areas with a high potential to be annexed.

### AAMODT

The Aamodt settlement will resolve the long-standing and antagonistic water dispute in the Pojoaque Valley. It remains unknown whether the settlement will succeed, but the County should proceed with a full commitment to the process and settlement. Because the County has accepted responsibility for operating the County portion of the system, commitments of funding and staffing should be set aside early. In addition, the County utility should develop rate and staffing plans in preparation for operation of the system.

In conjunction with the Aamodt water settlement, the County should continue to proceed with development of the Pojoaque Pueblo WWTP, to plan for infrastructure and eventual operation, in order to hook up County residents currently on septic tanks.

### Regionalization of Wastewater – El Centro GMA

Most new large-scale development has occurred utilizing collective wastewater systems. The unfortunate downside is that there are now several competing wastewater systems in the El Centro GMA, including those operated by the County and the City of Santa Fe. Such competition diminishes the County's ability to utilize treated effluent effectively, and to plan service area expansion. The County should initiate acquisition, through negotiation and agreement, of all wastewater systems operated outside the City limits, engage in discussions with the City to resolve service areas, and form agreements with all new developments specifying the criteria by which the County will acquire new systems as they are built.

### Regional wastewater for northern El Norte GMA

While the northern part of Santa Fe County has numerous small communities in rugged topography, there exists two large WWTP that could be utilized as regional wastewater systems. The County should promote the construction of infrastructure to hook up residents currently on septic tanks. After construction, operation and maintenance of the system would be the responsibility of the WWTP operator, relieving the County of ongoing operational expenses. The County should partner with Santa Clara Pueblo, the City of Espanola, Rio Arriba County, and the communities, to jointly seek funding.

### Regional water and wastewater for Estancia GMA

Because the large water systems in the Estancia GMA are private, there is little opportunity for funding or partnerships for the County. However, the County can encourage, through the development permit process, new large developments to hook into the water systems, preventing the creation of competing water systems, or the proliferation of shared wells.

The only viable potential for regional wastewater is the new WWTP to be constructed by the City of Edgewood. Similarly to the project strategy proposed for northern El Norte GMA, the County should partner with the City of Edgewood to construct infrastructure to hook up County residents to the Edgewood system, then turn over operation and maintenance to Edgewood.

Seek new water supplies

It is apparent that, over a 20-year timeframe, all of the BDD water will be utilized. The County should embark on a mid- to long-term strategy of developing additional water supplies, including importation of water. A reasonable strategy for the short-term is for the County to always remain amenable to proposals on water supplies, with the preference for the County to potentially become a customer of the water supplier, but minimizing the role of the County in developing or constructing the water supply project.

In the mid-term, if water supplies have not materialized, and projections continue to suggest that the County will exhaust its supply, then the County should seek its own projects for new water supplies. This may involve negotiation with agricultural interests for acquisition of water rights and supplies, and development of a project for water delivery. Such projects should be considered on a ten-year timeframe for completion.