ADDENDUM

TO THE

NAVAJO/GALLUP WATER SUPPLY PROJECT REPORT:

"CITY OF GALLUP: TRANSMISSION AND STORAGE FACILITIES"

provided by DePauli Engineering and Surveying Co.

December 2000// revised January 2002

supplemented by

"BUSINESS & RESIDENTIAL WATER USE" analysis, January 2002

pursuant to USDA/RBEG Grant to the City of Gallup

April 2, 2002

prepared by

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Overview

This addendum to the December 2000 draft and January 2002 revision of the "Transmission and Storage Facilities" report prepared by DePauli Engineering and Surveying Co. provides a summary and further articulation of the relationship between the water system analysis contained in that report and the business and industrial development plans of the City of Gallup. The addendum was prepared by the Northwest New Mexico Council of Governments in consultation with and on behalf of the City of Gallup.

The projected City population of about 47,000 at Year 2040 (a little more than double the current municipal population) presupposes three key factors: (a) consideration of an annual population growth curve figured at 1.82%; (b) the provision of adequate water supply to sustain both current and future population levels (i.e., in light of City projections that, in the absence of sustainable supplemental water supply, accessible groundwater supply will achieve sustained shortage status around the Year 2013); and (c) provision of adequate industry to employ local labor and drive a sustainable local economy.

The DePauli companion document, "Business and Residential Water Use—City of Gallup, New Mexico," was prepared in response to a request from the USDA Rural Development office to separate business and residential considerations within the water system study as initially reported by DePauli. The result is a one-of-a-kind analysis that provides (a) estimating guidelines with respect to water usage and wastewater contributions based on 52 examples of commercial and industrial users, which can be extrapolated to potential new developments, and (b) an actual breakdown of water usage for all existing businesses in the City. This document will serve as an invaluable tool for business developers seeking to site a business in any sector of the municipality.

The following narrative provides further discussion of water and wastewater usage unique to the business sector, as well as the applicability of the DePauli study to business development considerations in the City of Gallup.

Industrial Development Plans

With respect to the industrial development needs of the community, the City of Gallup has adopted a number of planning and policy instruments designed to motivate and guide the City's development. This has included, most recently, adoption of the Gallup Economic Development Plan conforming with the requirements of the State's *Local Economic Development Act*. The goal of this new plan is

> to augment and expand the economic base and employment opportunities in the Gallup trade area through the recruitment and growth of new business and industry compatible with the needs, characteristics and opportunities of the community.

The plan includes important assumptions and principles that support this goal, including:

- Growth implies an increase in economic activity, in employment and in the expansion of the local resource base; the new level of revenues will in turn help to finance enhancements to the community's quality of life, its health and educational services, its cultural amenities, and its infrastructure; . . .
- An enhanced local economy will provide more attraction and opportunity for local talent to remain in the community rather than leaving in search of "greener pastures"; it will also provide for better facilities, services and opportunities for all citizens across cultures and age groups; . . .
- Economic growth will bring its own new development, meaning new investors, new businesses, new opportunities for local employment and tax revenues; it will also increasingly link us with the global economy, which will increase our access to knowledge, technology and global markets.
- Local community capacity – infrastructural, educational, housing, political, professional, and environmental – is an essential foundation of sustainable development. The City will analyze and evaluate current resources and proactively seek out new revenues to support the development plan. It will invest in staffing and other measures to ensure proper planning and management of the growth and development process.

Aligned with these principles, the Gallup Economic Development Plan places a priority on marketing and recruitment, with the following goal:

> To establish and implement a sound, cohesive plan for marketing the community and recruiting new employers, including a site and building inventory, marketing materials for collaborative use by local agencies, and a package of incentives available to offer new businesses.

Tasks supportive of this goal are outlined to include:

1. Conduct and establish electronic documentation of an inventory of available sites and buildings for potential occupation by prospective industrial prospects.

2. Update, produce and disseminate by appropriate media, including Internet, marketing materials designed to attract interest by potential relocating employers.

3. Establish the City of Gallup business and industrial recruitment package, including those incentives available and authorized to be offered by the City to incoming employers.

   3.1 Target SIC codes specific to the Gallup area.
   3.2 When feasible and within the provisions of the New Mexico *Local Economic Development Act*, use public funds to assist in the recruitment of industry that would create jobs.
   3.3 Utilize area revolving loan funds for working capital, to be made available for various economic development projects as an incentive.
   3.4 Utilize state incentives available to enhance the development of business and/or industry and the creation of jobs.
   3.5 Utilize local, regional and state technical assistance programs to enhance the development, relocation or expansion of business/industry and the creation of jobs.
   3.6 Utilize resources available in the financing for the development, relocation or expansion of business/industry and the creation of jobs.
   3.7 Strategic marketing of existing real estate, including industrial parks, for appropriate business attraction.

4. Designate a Negotiation Team authorized to represent the City of Gallup in negotiations with business and industrial prospects utilizing as tools the provisions of this Economic Development Plan and the advice and recommendations of the Economic Project Review Committee.

5. Partner with and delegate to the McKinley Development Foundation those tasks required to establish, disseminate and implement this marketing and recruitment package and program.

6. Partner with and delegate to the Northwest New Mexico Council of Governments specific planning and statistical responsibilities commensurate with the Region I *Comprehensive Economic Development Strategy*.

In addition to various standard requirements, the plan moreover identifies entities and activities that would qualify for City incentives, as well as eligibility criteria for the selection of economic projects, and the types of local resources to be offered in support of new industrial development.

It should be noted that task item #1 in the above marketing/recruitment strategy refers to the need for "an inventory of available sites and buildings for potential occupation by prospective industrial prospects," thus implying that such an inventory is yet to be completed. In systematic, yet broad, terms, the City's recently completed Growth Management Master Plan (CSC Counts, September 1999) nevertheless provides the primary template to be used by the City to guide the spatial and land use elements of the community's economic development strategy. Appropriate excerpts are included here.

Good economic health is mandatory for the City to provide the various civic improvements enumerated in the community's vision. Recent major additions to the hospitality industry and regional shopping facilities exemplify the most profitable types of municipal economic development. Although these trends should certainly be encouraged to continue, a broader base (including housing and skilled job production) is essential so that Gallup can successfully sustain itself in the future.

The City's positioning for prolonged economic well-being depends on supporting its successful industries over the long term and continually attracting new ones with assurances that the positive business climate will remain a government priority. Employment generation, particularly in fields other than retail and service, is needed to secure the local economic base. Investment and reinvestment can be encouraged by all aspects of Master Plan implementation from relieving transportation congestion to improving housing choice. . . .

Gains in municipal revenue generation have improved Gallup's fiscal strength. Citizens note, with some urgency, the importance in using these gains to leverage local household income by attracting employers and fostering small-business development. Public investment to assure a continuing, stable economy (**such as securing water resources**) *[emphasis added]* is key to private sector investment confidence. . . .

Continue to explore water supply assurances. It is recognized that, in order to solicit future businesses or expand the existing establishments, there must be a reliable water supply available to satisfy future demand. ***Action:*** A review of the existing water usage among commercial and industrial customers would create a profile for future demands, based on growth projections. Conservation initiatives should be undertaken by the City to reduce existing business water users, together with an assessment of industrial water consumption estimates as a criterion of desirability. . . .

Industrial attraction. The City has undertaken a number of other projects aimed at encouraging industrial and commercial trade. Specifically, the City has plans for upgrading infrastructure in and access to the City Industrial Park located in the airport vicinity. Through a combination of local, State and Federal funds, major improvements are planned to provide utility services and infrastructure for prospective industrial park tenants. As of 1998, some $100,000 will have been spent on design and appropriate siting considerations. Another $5.5 million is sought for the project . . . [M]ajor improvements are being planned at the City's airport. Numerous different infrastructure upgrades and new construction are intended through the year 2002. Cumulatively, some $4.1 million is being sought for items ranging from the purchase of fire safety equipment to the construction of a new terminal building. As source of economic activity the City's airport serves both commuter passenger travel (America West Express) and such air freight carriers as Federal Express. . . .

Diversification of the local economy is seen as imperative. Gallup must continue to broaden the economic variety of businesses and industries it hosts. In order to adaptively cope with sudden changes that may otherwise deeply impinge on the financial well-being of the larger community, there must be a diversity of enterprises generating revenues from independent sources. The alternative is a boom and bust scenario based on over-dependent economic specialization. Given the current conditions and prospective trends discussed in this section, the objectives recommended include giving equal attention to nurturing new neighborhood-related enterprises, attracting industrial and warehousing establishments to designated areas of the city, fostering the growth of regionally oriented commercial retail establishments and keeping an eye to the future of government-dependent jobs and income assistance.

Types of Business & Industry Targeted

The City of Gallup's Economic Development Plan does not articulate specific businesses and industries being targeted, nor specific criteria by which new business and industry proposals will be evaluated. However, the Targeted Industries Study for Northwest New Mexico (Covell & Associates, April 1994) continues to serve as the premier reference on those industries best suited to the area's profile, with the following target area preferences noted:

- avoid industries not likely to relocate
- target growth manufacturing industries within New Mexico
- take advantage of the industrial electric rates, which are the lowest in the general four corners region
- take advantage of competitive natural gas rates
- take advantage of competitive water rates
- avoid industries that need over 20,000 gallons per day of water.

Based on these factors, the following list of Primary SIC Codes was generated as the priorities for recruitment:

LIST OF PRIMARY SICS FOR NORTHWEST NEW MEXICO
[per Covell & Associates, 4/94]

SIC Code #	Industrial Category
3089	Plastic products
3679	Electronic components
3826	Analytical instruments
3827	Optical instruments & lenses
3944	Games, toys & children's vehicles
3951	Pens & mechanical pencils
7331	Direct mail advertising agencies
7374/7376	Data processing & network services
7375	Information retrieval services
737/481	Telemarketing

Again, built into these recommendations is the criterion that an industry not require quantities of water in excess of 20,000 gallons per day. According to DePauli's City of Gallup Wastewater Collection/Recycling Model Project—Interim Report (November 2001), referencing sample sites for the purpose of providing estimating guidelines, the only commercial entities using more than 20,000 gallons per day were a couple of laundromats, a mall complex (multiple commercial leases), and a strip mall/commercial plaza (multiple commercial leases). The next-highest commercial users tended to be public facilities such as schools and hospitals.

Gallup Water System Considerations

The Growth Management Master Plan strongly supports the City's need for additional water supply. The document notes the City's water usage studies, summarizing that the current rate of water consumption is a median 178 GPCD (gallons per capita daily), or 3.8 million GPD (gallons per day) overall. The annual total water pumped is about 1.5 billion gallons. In anticipation of population growth at no more than 2% annually, water usage will have increased to 1.6 billion gallons by the year 2005, reflecting annual increases of about 5 million gallons. The Plan goes on to emphasize:

> The fact that much of the water the City currently obtains from its wells comes from non-replenishing aquifers, the ability to extract enough water to meet current demand, let alone an increased future demand, is called seriously into question. **While conservation is obviously a wise policy, the finite nature of the City's water supply necessitates that other reliable sources of water be secured for the future.** *[emphasis included in original]*

On page 11 in the DePauli report, the engineers address at §G the criteria by which route locations are determined for routing of the water transmission line. This section includes the following criteria that are specifically related to future business and industrial development priorities:

(3) Proximity to land suitable for future growth – Routes were chosen across land with reasonable terrain and land status that may permit development in the future.

(4) Proximity to NTUA Systems – Routes were chosen that provided reasonable proximity to NTUA systems to facilitate tie-ins.

The attached Economic Development map from the Gallup Growth Management Master Plan identifies five land use corridors as a guide to the systematic development of commercial and industrial opportunities, along with associated development activities:

- Historic/Revitalization Areas
- Balanced Use Expansion Nodes
- Commercial Centers
- Infill Expansion
- Industrial Complex.

These development corridors are cross-referenced with the Gallup Water System in the following matrix *[NOTE: an additional development zone is included for the bordering Navajo communities in the Gallup extraterritorial area, pursuant to water distribution plans associated with the Navajo/Gallup Water Supply Project].* The figures are estimates, drawn from the DePauli wastewater system study and calculated to represent approximate water usage by development corridor. These numbers are then used to project 40-year demand by business and industry, utilizing growth and demand factors outlined in the Technical Memorandum of the *Navajo/Gallup Water Supply Project.*

DEVELOPMENT CORRIDORS	WATER PRESSURE ZONES	ASSOCIATED SEWER LATERALS	ESTIMATED CURRENT WATER USAGE (gallons per day [gpd], adapted from & cross-referenced with sewer flow analysis at a combined-average inverting factor of 1.11, per DePauli 01/2002)		
			Business	Residential	Total
Historic/Revitalization Areas	TradeMart Zone	OTS Lateral @ 7th Street	40,429	180,428	220,857
		2nd Street Lateral	97,024	357,676	454,700
		Cottage Hts Lateral & A-1 Interceptor	48,951	22,622	71,573
		East "Y" Lateral	9,089	48,344	57,433
		Culvert Lateral & A-2 Interceptor	13,084	17,700	23,209
		Ford Canyon Lateral & A-3 Interceptr	75,454	87,278	162,732
		Eilson Street Lateral	63,388	54,722	113,830
		Subtotal	347,419	768,770	1,116,189
Balanced Use Expansion Nodes	West Area/TradeMart Zone East Area/Country Club Zone	Verdi Lateral & A-4 Interceptor	43,640	113,044	156,684
		Mollica Lateral & A-5 Interceptor	31,702	117,411	149,113
		Boardman Lateral & A-6 Interceptor	125,909	24,871	150,780
		Williams St. Lateral & A-7 Interceptor	9,611	58,333	67,944
		Patton Lateral & A-8 Interceptor	41,534	248,087	289,621
		Indian Hills/Toltec & Turquoise Lateral	40,284	150,382	190,666
		I-40 Lift Station	1,868	62,153	64,021
		Sunnyside Lateral	2,056	18,556	20,612
		Railroad Yard Lateral	4,609	833	5,442
		Mentmore Lift Station	59,568	94,353	153,921
		Subtotal	360,781	888,023	1,248,804
Commercial Centers	Trade Mart Zone Cresto Zone Southland Zone	West Jefferson Lateral	107,502	0	107,502
		West 666 Lateral	68,100	0	68,100
Infill Expansion		10th Street Lateral	49,430	80,798	130,228
		Maloney Interceptor	58,028	288,633	346,661
		Subtotal	283,060	369,431	652,491
Industrial Complex	West and East Pump Stations Churchrock NTUA	West End Lateral	94,750	8,056	102,806
		Florence Lateral & Points West	36,333	41,756	78,089
		Marguerite Lateral	76,798	90,821	167,619
		Subtotal	207,881	140,633	348,514
Other Water Use—*calibrating to total water pumping figures*			156,600	278,400	435,000
Navajo/Extraterritorial Industrial Development	Manuelito/Spencer NTUA; Red Rock Chapter NTUA; Peretti Wash NTUA; Sundance NTUA; Churchrock NTUA				1,253,000

The Gallup Growth Management Master Plan projects "maximum" acreage for commercial and industrial usage to grow only 40 percent over the next 40 years (the planning horizon for the Navajo/Gallup Water Supply Project and the City's 40-Year Water Plan), i.e., from about 1,800 acres to about 2,500 acres. However, overall commercial and industrial development – along with proportionate water demand – is projected to increase in approximately the same rate as residential and other development over the next 40 years, i.e., an average of about 1.82 percent per year. For the Navajo Nation, the growth rate is 2.48%. Projections against the above estimates have not been done, but a factor (1.82% per annum for Gallup; 8.72% for Navajo communities, accounting for accelerated development based on new access to water supply) applied against these baseline numbers provides an approximation of water demand for each of these development sectors, totaling about 4,450 acre-feet per year, summarized as follows:

DEVELOPMENT CORRIDOR	ESTIMATED WATER DEMAND Business -- Year 2040 (gallons per day)
Historic/Revitalization Areas	601,035
Balanced Use Expansion Nodes	624,151
Commercial Centers	412,135
Infill Expansion	
Industrial Complex	489,694
Other Water Use	270,918
Navajo/Extraterritorial Industrial Development	1,574,269
TOTAL	**3,972,202** ***[~ 4,453 AF/year]***

The Gallup Master Plan's "Industrial Development Keys" include the following guidance:

> The *Land Development Standards* recommendations call for establishing a qualitative distinction among the City's heavier manufacturing and open land uses and categories of industrial use that may attract employers desiring a cleaner image. Commerce Park developments, for example, could locate in the West Gallup/Airport Gateway vicinity or larger campus developments in the City's Southern Sector.

Thus, commercial/industrial *versus* residential water usage may exceed the average "36:64" ratio in lands prioritized for industrial and commercial development, while ratios in other parts of Gallup and the outlying communities may be lower.

Two areas targeted as primary development areas of the Navajo Nation will be serviced by the Gallup water system: Manuelito and Churchrock. Manuelito is the second of seven sites indicated in the Navajo Nation I-40 Corridor Project study targeted for development. Each of the sites was selected for its potential in the area of industrial, commercial, or tourism. The Navajo Nation's plans for Manuelito center around a major theme promoting Gallup as the gateway community to the Navajo Nation. Manuelito Chapter has been designated as the site to house a major tourist facility that includes somewhat of a "dude ranch" theme. Based on current tourism figures, the Navajo Nation anticipates several hundred thousand tourists per year that will stop at this facility for needs ranging from weekly stays to purchase of a meal to use of a restroom. Current development plans target groundbreaking at Manuelito in the year 2003.

Another targeted area for large scale development is the Churchrock Industrial Park, directly east of Gallup. The Industrial Park has been experiencing slow growth over the past several years but has now been targeted for major development. Two industrial recruiters are working on bringing industry to the Park, along with the new emphasis from the Navajo Nation. The Churchrock Chapter that borders the industrial park has phased housing development plans to construct 200 units over the next 5 years in anticipation of supporting families that relocate to work at the Park. Additionally, the Northwest New Mexico Community Development Corporation (NWNMCDC) is working with the Navajo Nation, McKinley County, and the City of Gallup to design joint partnership efforts concentrating on industry development at Churchrock Industrial Park. The location of the park to the City of Gallup is ideal for industrial growth.

The NWNMCDC is also working with the Churchrock Chapter and Red Rock Park to develop up to 26 small business enterprises. Several of these businesses will be in the food service industry and will require a substantial level of water usage, while others are based on the artisan trade, which often requires an even higher level of water use.

Additional industry and tourism growth is taking place at Red Rock Park, within the City of Gallup. Along with the above Churchrock Chapter efforts, there is an expansive vision of development for Red Rock Park over the next decade. Up to 75 new camping/RV sites are designated, 50 with water/electric hook ups. The horse stables which can house up to 50 livestock, are being reopened and stocked year round. Lodging facilities are being repaired and will soon open to the public. Red Rock Park is also a potential site for a major county-wide tourist initiative in adventure sports.

The general business growth within the City of Gallup and the immediately surrounding county and Navajo areas mandates additional business growth to sustain the population. These industries include laundromats; child care; senior care; recreational areas; construction (building along with access roads); food service; and transportation. Each of these service industries will be encouraged to become established within the targeted development sites mentioned above.

The DePauli Transmission and Storage Facilities study provides for an adequate and efficient system for transmitting and delivering water supply to the bordering Navajo communities per the requirements of the Technical Memorandum and Bureau of Reclamation engineering plans of the *Navajo/Gallup Water Supply Project.*

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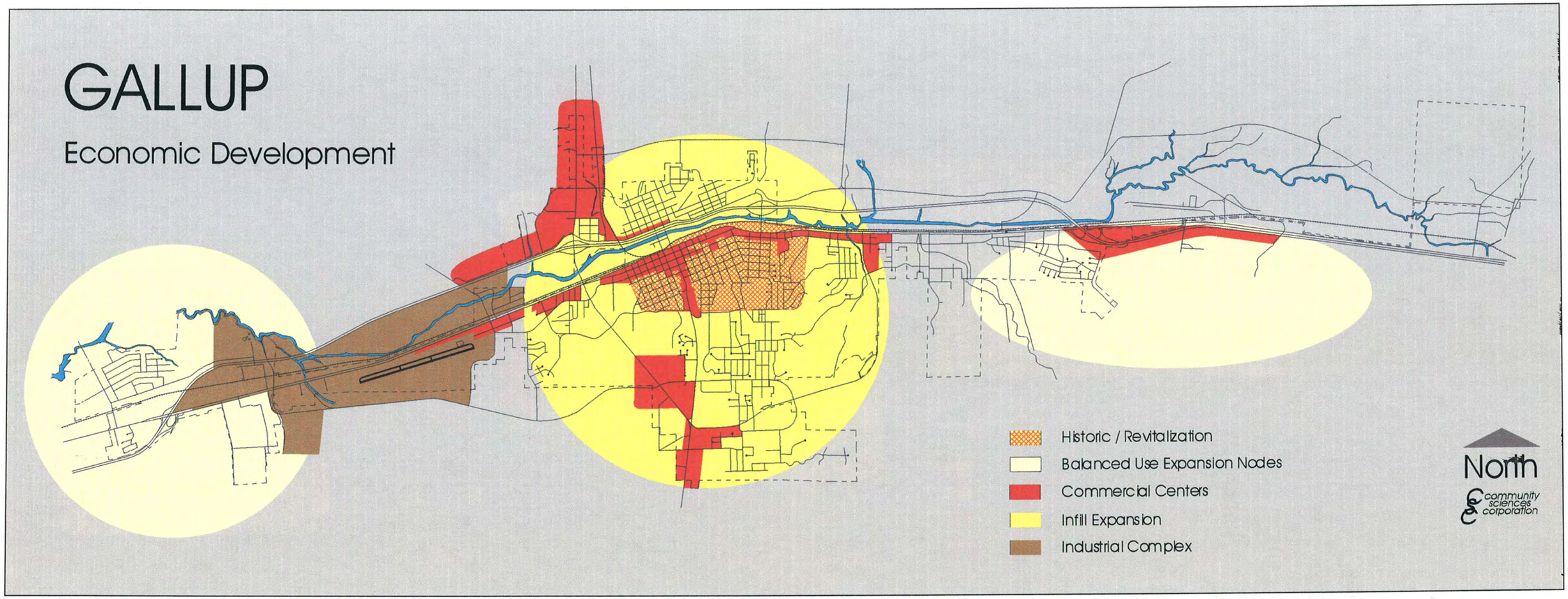
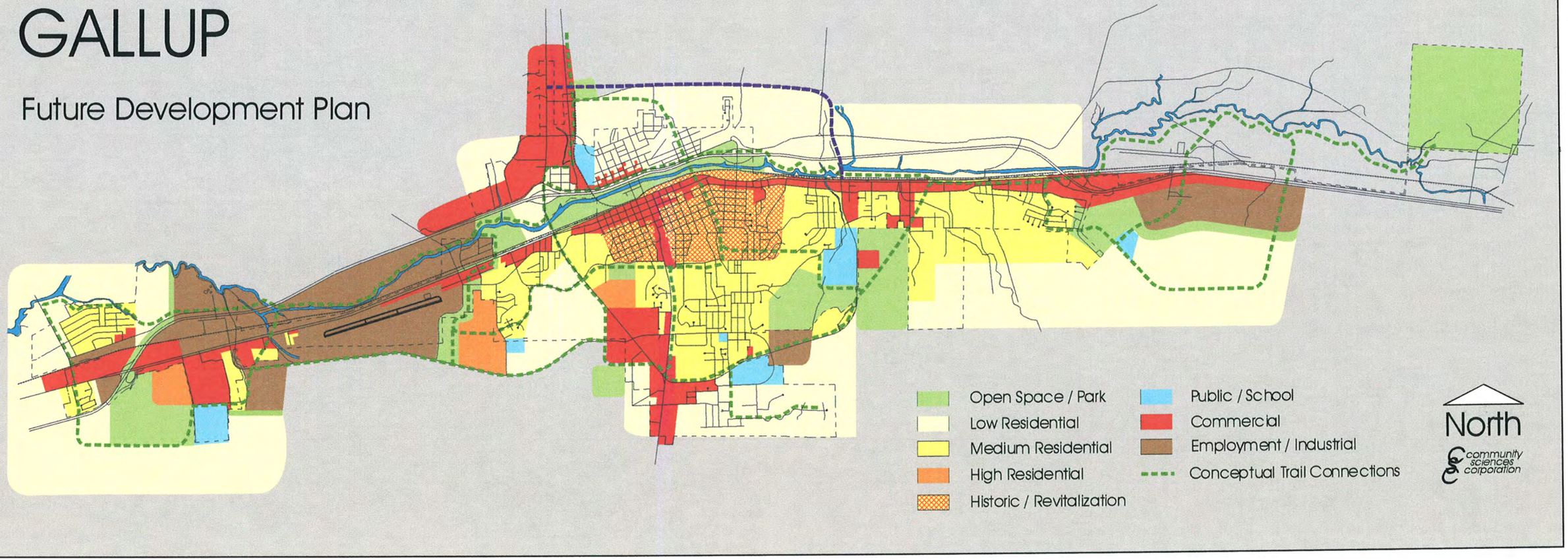
GALLUP

Economic Development



GALLUP

Future Development Plan



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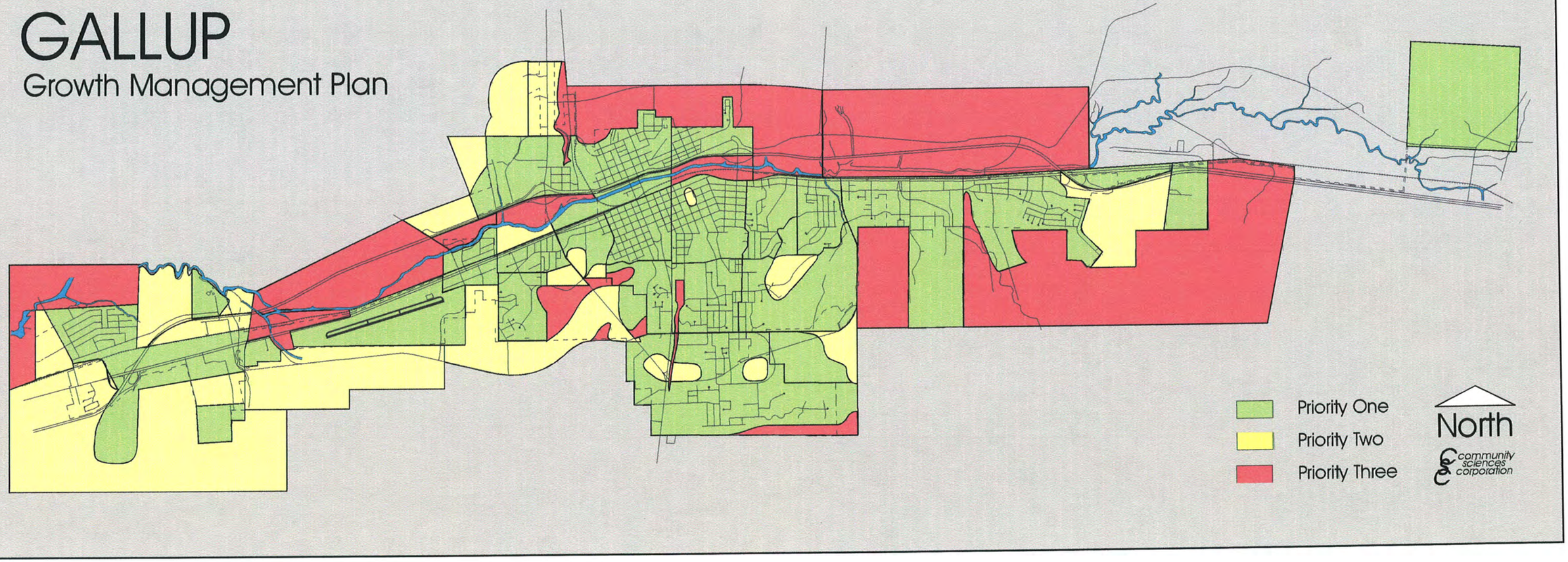
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