2009 Urban Growth Review

City of Modesto

Community & Economic Development Department
Planning Division

July 2009

Acknowledgements

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CITY OF MODESTO

2009 Urban Growth Policy Review

July 7, 2009

Community and Economic Development Department
Planning Division

Approved by Modesto City Council Resolution Numbers:
2009-302; 2009-303; 2009-304; 2009-305; 2009-306; 2009-307; 2009-308; 2009-309; 2009-310; 2009-311; 2009-312; 2009-313; 2009-314; 2009-315; 2009-316; 2009-317

The City Council accepted this Report on July 7, 2009, and authorized the following five Planning Areas for "Measure M" Advisory Vote: Kiernan Avenue Corridor Comprehensive Planning Districts, North McHenry Regional Commercial, Hetch-Hetchy Comprehensive Planning District, Northwest Portion of Roselle/Claribel Comprehensive Planning District ("Tivoli North"), and College West Planning Comprehensive District.

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EXECUTIVE SUMMARY

The Modesto Urban Area General Plan "Community Growth Strategy" calls for a review of the growth trends in the Modesto Urban Area on a periodic basis. As noted in the Community Growth Strategy, this periodic review should provide for the selection of potential areas to be served with urban infrastructure during the ensuing five years. In general, the maintenance of a five-year supply of available vacant and agricultural land served with urban infrastructure is desirable and urban growth should be directed as long as economically feasible to areas currently served with City services.

The 2009 Urban Growth Policy Review process began in January. The City Council's Economic Development Committee (EDC) provided oversight for the project through a series of public workshops. The following subject matter was discussed at the EDC workshops:

1. Preparation of an estimate of the land within the City limits now available for urban development (vacant land inventory);
2. Preparation of an estimate of the land needed for residential, commercial and industrial development in the next five and seven years to determine whether there is a deficit in the land available for development (absorption analyses);
3. Identification of alternatives for providing additional land for development, if additional land is needed;
4. Consideration of utilities and infrastructure needs; and
5. Evaluation of the opportunities for future economic development.

The previous Urban Growth Policy Review update was considered by the City Council in July 2003. City Council policy adopted as part of the 2001 Urban Growth Policy Review update provides for biennial review of Urban Growth Policy Review. The City Council did not direct staff to prepare an Urban Growth Policy Review in 2005 and 2007.

A. LAND USE INVENTORY

The Land Use Inventory provides an estimate of the amount of land within the City limits served with urban infrastructure and currently available for urban development. The 2009 land use inventory includes the Final Map inventory which was excluded in the 2003 inventory.

The existing land use inventory as of December 2008 is summarized in **Table ES1**. The land use inventory contains approximately 1,900 total acres. The largest category of land available in the Current Inventory (929 acres) is designated for residential uses.

Table ES1: Current Land Inventory Acreage within Incorporated Area, 2008

Land Use	Vacant	Underdeveloped	Subtotal	10% Reduction	Total
Residential	764	268	1,032	103	929
Commercial	191	94	285	29	256
Industrial	306	493	799	80	719
Totals	**1,261**	**855**	**2,116**	**212**	**1,904**

B. ABSORPTION ANALYSIS

Pursuant to the Policy to implement the Growth Management Act of 1995, an advisory election must be held before the City Council approves, authorizes or appropriates funds for sewer improvements. Pursuant to General Plan policy, the Urban Growth Policy Review update examines the inventory of vacant land to assure an adequate supply of land for anticipated future development. The projected market absorption rate for residential land is based on a five-year target inventory which provides for a five-year supply annually. While the actual inventory in 2008 is 929 acres of residential land, the five-year target inventory is 707 acres. The existing vacant residential land inventory is expected to provide a three-year supply of land for residential development, with a deficit occurring by 2012 as summarized in **Table ES2**, below.

Table ES2: Annual Acreage Demand on Residential Inventory

Year	Five-Year Target Residential Inventory (in acres)
2008 Current Inventory	**707**
2009 Year 1 Demand	**510**
2010 Year 2 Demand	**276**
2011 Year 3 Demand	**79**
2012 Year 4 Demand	**[-51]**
2013 Year 5 Demand	**[-365]**
2014 Year 6 Demand	**[-562]**
2015 Year 7 Demand	**[-305]**
2016 Year 8 Demand	**[-388]**

The City has placed a high priority on expanding the City's economic base and creating jobs in the community. In an effort to address economic development, staff met with local commercial real estate professionals on February 2, 2009, for the purpose of identifying the best potential sites for commercial and industrial (includes business park) development. The conclusion from that meeting is that the City of Modesto needs more commercial and industrial land inventory that is close to State Highway 99 and that is comprised of large tracts of land. In addition, it was generally agreed that more Regional Commercial land is needed on the east side of Modesto.

C. UNINCORPORATED ISLANDS:

Currently, there are six unincorporated County "islands" that have received a positive Measure M advisory vote. To date, only one of those areas has progressed toward annexation. The City is in the process of conducting research and preparing annexation application documents for the Shackelford neighborhood. The City should continue efforts with the County for annexations of the other five "island" areas.

The Modesto Citizens' Advisory Growth Management Act of 1995 ("Measure M") requires significant preparation in advance of scheduling advisory votes for the most substantial unincorporated island areas. In accordance with City policy, prior to scheduling the most substantial infill areas for an advisory vote, City and County officials should meet to discuss tax sharing agreements and other fiscal matters – primarily those related to utilities and infrastructure. The City should continue joint efforts with the County to quantify costs and prioritize areas for future Measure M vote only after identified infrastructure deficiencies and fiscal issues have been corrected.

D. RECOMMENDATION

The four areas recommended by the Economic and Development Committee for inclusion on the November 2009 ballot as the subject of Measure M advisory vote are: Kiernan Avenue Corridor, "Tivoli North", College West, and the North McHenry Regional Commercial area.

CITY OF MODESTO

2009 URBAN GROWTH POLICY REVIEW

I. INTRODUCTION

The 2009 Urban Growth Policy Review (Review) has been prepared pursuant to the City of Modesto Urban Area General Plan. The purpose of Urban Growth Review is to inventory Modesto's vacant residential, commercial and industrial land, to assist the City Council in determining the timing and direction of growth to those areas that can most feasibly be served with urban infrastructure. As an end result of this review, the City Council may determine which, if any, sewer trunk extensions as defined by the Modesto Citizens Advisory Growth Act of 1995 (Measure M), are needed, and schedule those areas for a public advisory election in November 2009. The primary purpose of the Review is to assure that there is an adequate inventory of vacant land served with urban infrastructure to accommodate anticipated economic development during the next five years as a minimum time frame. If there is not sufficient inventory, a deficit in the land needed is present and additional land should be added to the current inventory.

The City Council Economic Development Committee (EDC) held five public workshops concerning the 2009 Review: January 12, February 9, March 30, April 9, and April 30. At the fifth workshop, the EDC provided recommendations to the City Council regarding the need for new sewer trunk extensions and future growth considerations.

II. LAND USE INVENTORY

The current land use inventory includes vacant land and underdeveloped sites within the city limits that are feasibly available for current development. The methodology used for the land use inventory is based on the 2003 Review. The two main types of land identified in the inventory are "vacant" and "underdeveloped." Vacant land consists of land that is entirely undeveloped, land where the existing development is not expected to remain, or where the existing development occupies only a very small portion of the property. Underdeveloped land consists of partially developed parcels that have sufficient undeveloped area that could accommodate future development.

The 2003 Review excluded the residential Final Map inventory (undeveloped lots within recorded subdivision maps) based on the assumption that such properties would be rapidly absorbed through construction and sale of completed homes. However, this rapid absorption rate does not exist in the current market, so the 2009 Review includes the residential Final Map inventory in the vacant land acreage total.

The 2003 Review reduced the land use inventory totals by 10% on the basis that not all vacant land is available or appropriate for development. Obstacles to development of certain properties include poor accessibility, insufficient parcel size or shape and land owner preference. This same 10% reduction will be applied to the 2009 Review analysis.

The existing land use inventory as of December 2008 is summarized in **Table 1**. The land use inventory identifies approximately 1,900 total acres as vacant land within the incorporated area, with future development potential.

Table 1 Current Land Inventory Acreage within Incorporated Area, Dec 2008

Land Use	Vacant	Underdeveloped	Subtotal	10% Reduction	Total
Residential	764	268	1,032	103	929
Commercial	191	94	285	29	256
Industrial	306	493	799	80	719
Totals	**1,261**	**855**	**2,116**	**212**	**1,904**

A. Residential Inventory

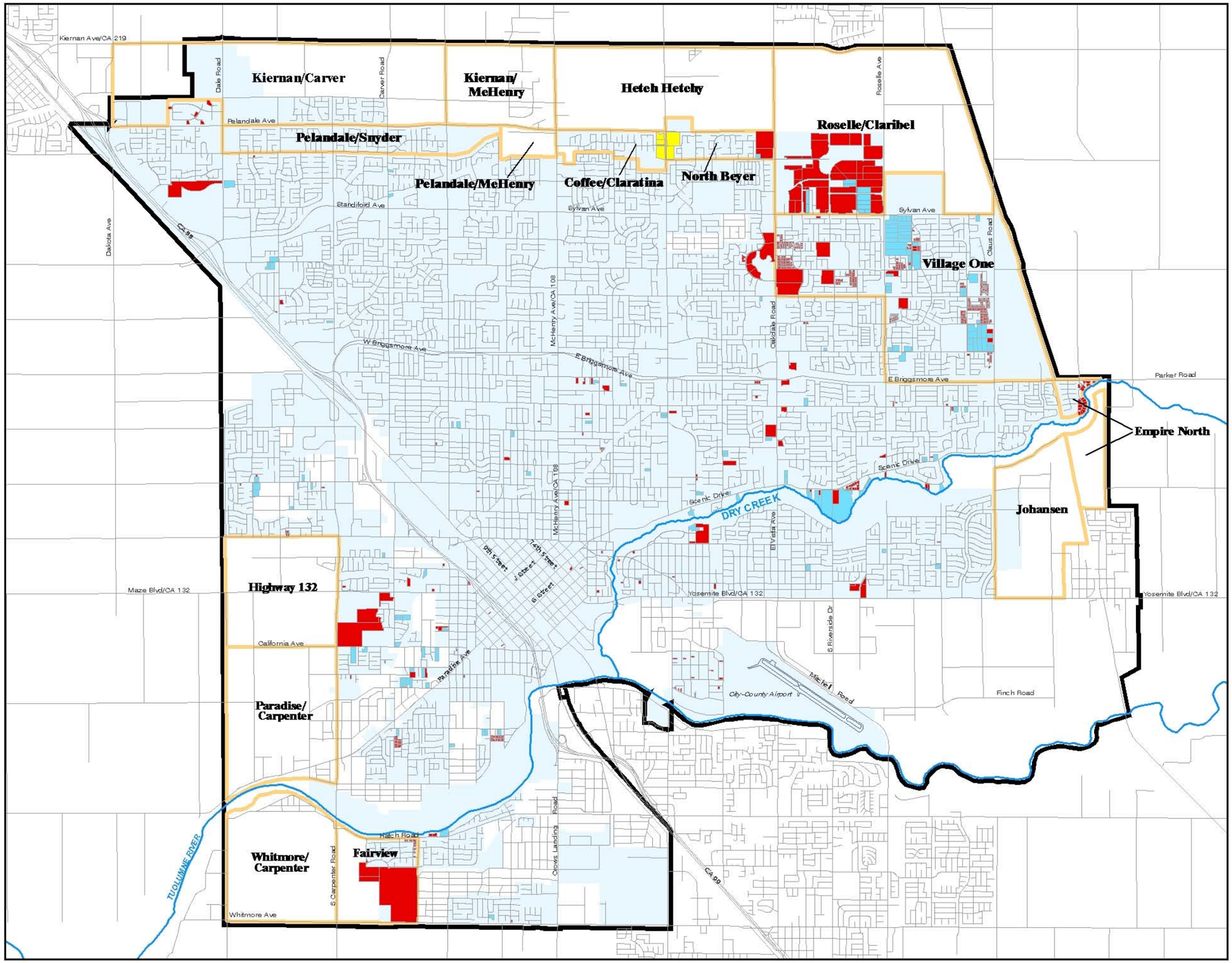
The residential inventory totals approximately 1,032 acres (see **Table 1**) within the city limits. Applying the ten (10%) percent inventory reduction, the adjusted total is 929 acres. **Figure 1** identifies the distribution of vacant residential sites within the incorporated area.

B. Industrial Inventory

The vacant land inventory identifies 799 acres of land designated by the Modesto General Plan for industrial (includes business park) development within the incorporated area. The inventory consists of approximately 306 acres of vacant industrial property, with 493 acres of underdeveloped property (**Table 1**). A 10% reduction factor is also applied to the industrial inventory yielding a total of 719 acres. **Figure 2** identifies the distribution of vacant industrial sites within the incorporated area. In the 2003 Review, **Figure 1** provided the vacant residential land inventory based on the area within the City limits, while, Figures 2 and 3 identified the commercial and industrial vacant land inventories, respectively, based on the Sphere of Influence boundary. The 2009 Review modifies Figures 2 and 3 to provide the inventory based on the incorporated area consistent with **Figure 1**.

C. Commercial Inventory

The vacant land inventory identifies a total of 256 total acres designated for commercial land use (**Table 1**). Underdeveloped commercial sites comprise 94 acres of the total inventory. **Figure 3** identifies the distribution of vacant commercial sites within the City.



City of Modesto

Figure No. 1

Total Vacant Residential Inventory within the Incorporated Area

LEGEND

- Vacant - 641 acres
- Mixed Uses - 25 acres
- Underdeveloped - 268 acres
- Tentative Maps - 48 acres
- Final Maps - 50 acres
- Comprehensive Planning District (C. P. D.)
- Modesto Sphere of Influence
- Modesto Incorporated Area

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City of Modesto C&ED

January 20, 2009

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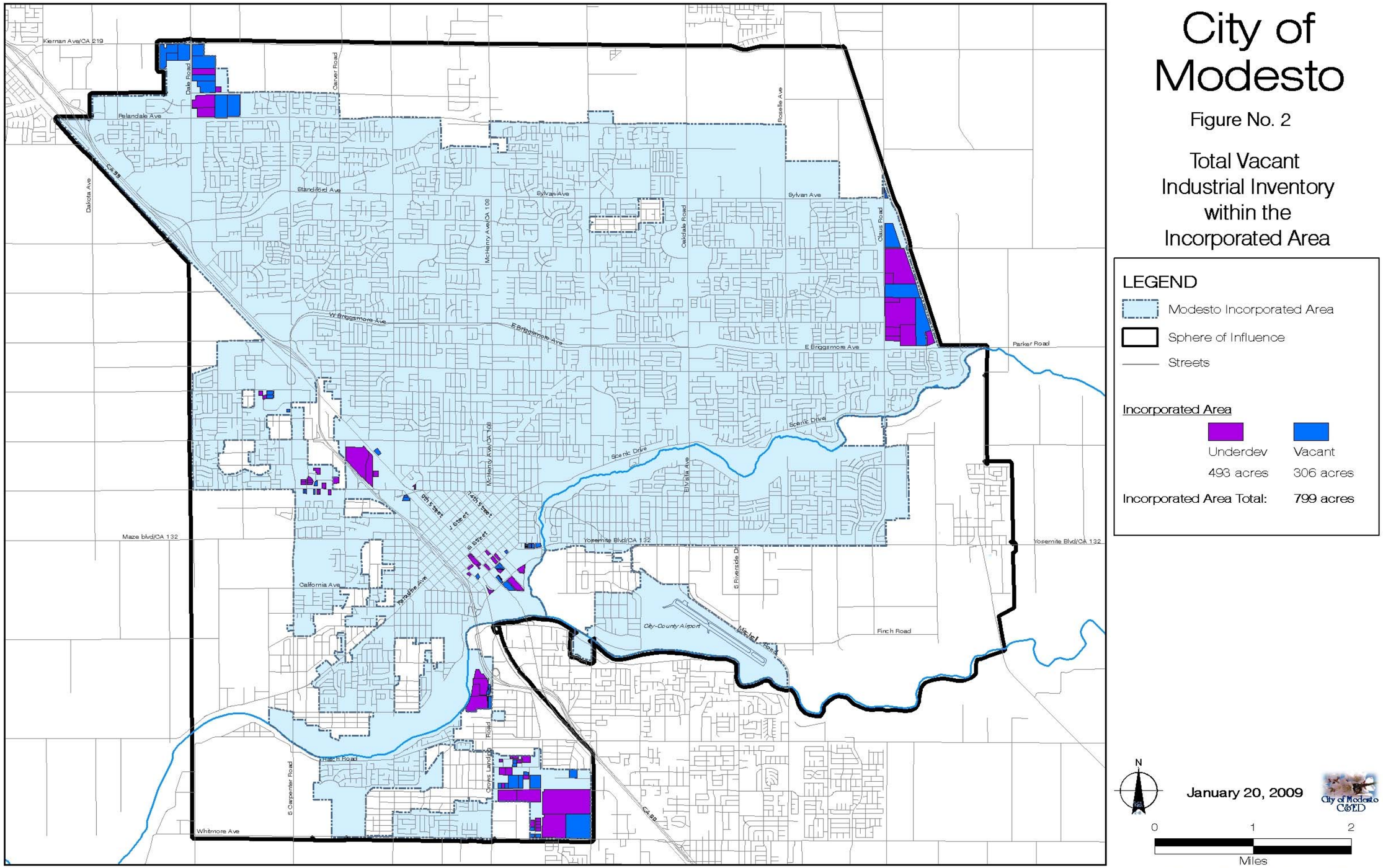
Figure 1 Total Vacant Residential Inventory within the Incorporated Area



City of Modesto

Figure No. 2

Total Vacant Industrial Inventory within the Incorporated Area

LEGEND

- Modesto Incorporated Area
- Sphere of Influence
- Streets

Incorporated Area

	Underdev	Vacant
	493 acres	306 acres
Incorporated Area Total:		799 acres

N

January 20, 2009

City of Modesto C&ED

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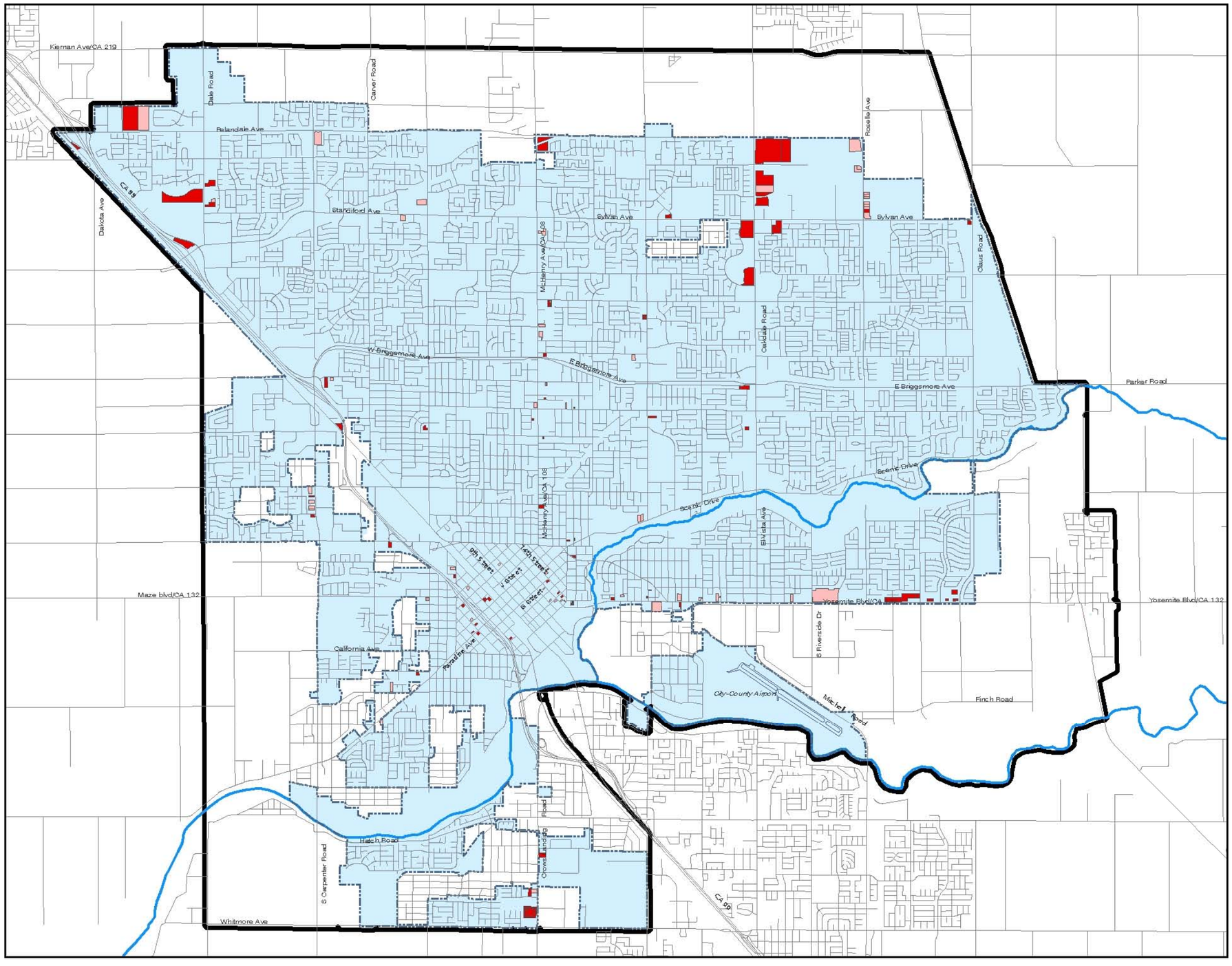
Figure 2 Total Vacant Industrial Inventory within the Incorporated Area

City of Modesto

Figure No. 3

Total Vacant Commercial Inventory within the Incorporated Area



LEGEND

- Modesto Incorporated Area
- Sphere of Influence
- Streets

Incorporated Area

	Underdev	Vacant
Total	94 acres	191 acres

Incorporated Area Total: 285 acres

N

January 20, 2009

City of Modesto C&ED

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Miles

2008 UGR Commercial in City 1-20-09.mxd 1:55,000

Figure 3 Total Vacant Commercial Inventory within the Incorporated Area

III. LAND ABSORPTION ANALYSIS

A. Residential Land Absorption

The vacant residential land absorption rate is an estimate based on average historical building activity. The average annual residential building permit count from 1970 to 2008 was 1,300 new units. The historical rate of residential land absorption has been used in past Reviews but is not applicable for the next few years because of the poor economic conditions. The residential growth rates are not likely to return to historic averages for several years.

The Construction Industry Research Board forecasts an increase in residential units of 1.7% from 2008 to 2009 in the San Joaquin Valley (see attached "Residential Permit Forecast State of California, By Region 2009" by Marketpointe Realty Advisors, October 2008). Calendar year 2008 yielded building permits issued for only 113 residential units. Using the forecast of 1.7% increase in residential units, the estimated increase would be 115 residential units in 2009. The 2009 Review forecasts that residential development will increase based on the previous two-year average of 355 units in 2010 and 2011 and increase based on the previous five-year average of 529 units in 2012 before returning to the historic average of 1,300 units in 2013 (**Table 2**, Column Two).

Table 2 Impact of Annual Acreage Demand on Residential Inventory

Year	Estimated Units (Developed)	Estimated Acres (Developed)	Running Total of Actual Inventory (In Acres)	Additional Inventory (In Acres)	Adjusted Running Total of Actual Inventory (In Acres)	Five-Year Target Inventory (In Acres)	Running Total of Five-Year Target Inventory (In Acres)	Adjusted Inventory Seven Years later if No Advisory Vote (In Acres – Seven Years to Add Inventory)	
								Actual	5-Yr Target
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10
2008	113	17	**929**		929	222	707		
2009 year 1	115	17	912		912	402	510	597	[-388]
2010 year 2	355	54	858		858	582	276		
2011 year 3	355	54	804		804	725	79	317	[-668]
2012 year 4	529	80	724	a 93	817	868	[-51]		
2013 year 5	1,300	197	527		620	985	[-365]		
2014 year 6	1,300	197	330		423	985	[-562]		
2015 year 7	1,300	197	133	b 454	680	985	[-305]		
2016 year 8	1,300	197	[-64]	c 114	597	985	[-388]		
2017 year 9	1,300	197	[-261]	d 57	457	985	[-528]		
2018 year 10	1,300	197	[-458]	e 57	317	985	[-668]		

a Woodglen and Pelandale-McHenry
b Johansen and Empire North
c Fairview
d Half of downtown residential redevelopment
e Half of downtown residential redevelopment

The residential unit count is converted into acres absorbed based on the density factor of 6.6 units per acre established by General Plan Policy. For example, the historic annual absorption rate is 197 acres - 1,300 units divided by 6.6 units per acre (**Table 2**, Column Three). Column Four in **Table 2** starts with actual residential inventory as of the end of 2008 with 929 acres. The running total of actual residential inventory in Column Four is determined by subtracting the estimated absorption for the following ten years provided in Column Three.

Inclusion of Areas with Complete Measure M Vote and Downtown

There are three notable differences from the 2003 Review regarding the residential land absorption analysis. The first difference is the inclusion of the five unincorporated areas with a completed Measure M advisory vote and potential residential development for the downtown area into the residential inventory. In regards to the five areas that have completed the advisory vote process, the 2009 Review assumes that the Woodglen and Pelandale-McHenry areas will add 93 acres of residential inventory by 2014. The Johansen and Empire North areas are assumed to add more residential inventory by 2015 and Fairview is assumed to add inventory by 2016 (**Table 2**, Column Five).

The addition to the residential inventory from these five unincorporated areas is based on an adjusted net acreage whereby school, park, and other public facility sites are excluded. Commercial and developed land is also excluded, and a 10% reduction of the subtotal is applied. Identifying the adjusted net residential land acreage for the five unincorporated areas is consistent with the methodology of identifying adjusted net residential land acreage within the city limits.

The Redevelopment Master Plan identifies 750 potential new residential units in and near the downtown area which is estimated to be equivalent to 114 acres (750 units @ 6.6 units per acre). The new downtown residential development will occur primarily through redevelopment so the addition of 114 acres is not actual vacant land inventory but an equivalent based on estimated units that can be absorbed in the downtown area. It is assumed the new downtown residential redevelopment will occur by 2018.

Processing Time Consideration

The second change from the 2003 Review is the consideration of the specific plan processing time which is the time it takes to add inventory. The estimated typical time to process a specific plan including the advisory vote to the completion of annexation is seven years. The actual processing time can be shorter or longer depending on the specific circumstances of each project. As a result, **Table 2** includes analysis for at least seven years. The analysis includes up to ten years because Column Six provides the adjusted actual residential inventory after including the five unincorporated areas and downtown identified in Column Five. It is assumed that it will take ten years to add all of this additional inventory.

Five-Year Target Inventory

The third change from the 2003 Review is a change in the absorption analysis to include the addition of the "Five-Year Target Inventory," that shows how much residential land inventory is needed to maintain a five year supply on an annual basis. The "Five-Year Target Inventory" would provide a sufficient inventory on an annual basis to reduce over-inflated land values. The historic five-year target inventory is 985 acres of vacant residential land which is the historic average annual demand of 197 acres times five. However, for the next four years, the five-year target inventory is less than the historic average of 985 acres because of reduced development demand in recent years (**Table 2**, Column Seven).

Previous Reviews were based on the analysis to maintain a five-year supply consistent with the General Plan Policy. The five-year supply period starts in 2009 and ends in 2013. In the scenario provided in **Table 2**, the current inventory would include sufficient land for residential development for a three-year period until 2011. A deficit of 51 acres of the five-year target inventory is estimated at year four in 2012. By 2013, the estimated deficit of the five-year target residential inventory would increase to 365 acres as shown in **Table 2**, Column Eight and highlighted in **Table 3**.

If there is no advisory vote in November 2009, it will take seven years starting in 2010 to add residential inventory. With the next advisory vote expected in 2011, and assuming an additional five years to process the specific plan and annexation, there would be 597 acres of actual residential inventory in 2016 as shown in **Table 2**, Column 9, but there would be a deficit of 388 acres for the five-year target residential inventory in 2016 as shown in Column Ten.

Table 3 Annual Acreage Demand on Residential Inventory

Year	Five-Year Target Residential Inventory (in acres)
2008 Inventory	**707**
2009 Year 1 Demand	**510**
2010 Year 2 Demand	**276**
2011 Year 3 Demand	**79**
2012 Year 4 Demand	**[-51]**
2013 Year 5 Demand	**[-365]**
2014 Year 6 Demand	**[-562]**
2015 Year 7 Demand	**[-305]**
2016 Year 8 Demand	**[-388]**

Regional Housing Needs Analysis
The City is in the process of updating the Urban Area General Plan Housing Element. Pursuant to State law, the deadline for submitting the Housing Element update to the State of California Department of Housing and Community Development (HCD) is August 31, 2009. In addition to local housing needs, every city and county has an obligation to address the housing needs of the entire region. The Regional Housing Needs Allocation (RHNA) identifies the allocation to cities and counties of their "fair share" of the region's housing needs as well as future projected housing needs by income group.

The Stanislaus Council of Governments (StanCOG) is tasked to develop a methodology for distributing the regional RHNA total among the nine cities and the County. The current RHNA covers a period of seven-and-a-half years, from January 2007 to July 2014. In September 2008, StanCOG completed the RHNA analysis, which established a total of 25,602 housing units for the region. Based on estimates and negotiations among the various local agencies, Modesto's fair share under the StanCOG plan is 11,130 new housing units for the seven-and-a-half-year period described above.

Table 4 Modesto's RHNA breakdown by income category (2007 – 2014)

Very Low	Low	Moderate	Above-Moderate	Total
2,596	1,818	2,145	4,571	**11,130**

Source: 2009 California Department of Finance

Income Categories:
2008 Family Median Income for Modesto - $55,000

Very Low Income:	*<50% of median*	*Up to $27,500*
Low Income:	*50% to 80% of median*	*$27,500 to $44,000*
Moderate Income:	*80% to 120% of median*	*$44,000 to $66,000*
Above Moderate Income:	*>120% of median*	*above $66,000*

Based on the residential vacant land inventory and absorption analyses described above, in conjunction with preliminary analyses conducted during work on the Housing Element update, staff believes that the City has adequate sites to fulfill its RHNA requirements. Staff will work closely with HCD to complete the Housing Element update, in order to verify that the strategies contained in the document are sound and the new Housing Element is ultimately certified by HCD. At the time this report was prepared, the Housing Element update was not yet developed to a point where specific programs and strategies could be confirmed.

B. Industrial and Commercial Land Absorption

The analysis for industrial and commercial property was determined through recent building permit activity. During the period 2000 to 2008, city records indicate an average of 22 acres of industrial land was developed per year. The land use inventory identifies 719 acres (includes 10% reduction to account for development obstacles) designated for Industrial (includes Business Park) uses within the City Limits at the end of 2008. During the same period between 2000 and 2008, city records indicate an average of 29 acres of commercial land developed on a yearly basis. The land use inventory shows 256 acres (includes 10% reduction) of commercial land within the City Limits in 2008. While this data appears to suggest there is adequate industrial and commercial inventory, the conclusion from the 2009 Review is that the City of Modesto does not have right type of inventory.

The City has placed a high priority on expanding the City's economic base and high-income job opportunities in the community. In the effort to address economic development, staff met with local commercial real estate professionals on February 2, 2009, for the purpose of identifying the best potential sites for commercial, industrial, and business park development. The resulting message from the meeting is that the City of Modesto needs more commercial and industrial inventory of land

that is close to State Highway 99, comprised of large tracts of land, and is readily served by infrastructure. Some Regional Commercial development is needed on the east side of the City of Modesto. Some of the areas that were identified as having the best potential for economic development are currently designated by the General Plan for residential land use (e.g. Kiernan/Carver and Kiernan/Carver North CPDs).

In order to build upon the ideas from the local commercial real estate professionals, the March 9, 2009, EDC workshop focused on a small-group exercise that led to a list of ideas regarding economic development. Generally speaking, there was consensus among EDC workshop participants, that the best areas to promote job creation and other economic benefits are along the north and northwest areas of Modesto's General Plan. Comments and discussions also confirmed that the City of Modesto lacks large parcels of Business Park land located close to major transportation corridors, and that additional Regional Commercial acreage is needed to serve both east Modesto and west Modesto along State Highway 99.

In order to promote economic development, the EDC recommended the preparation of a list of potential "follow-up" actions that would include possible land use changes to the General Plan, changes to the Sphere of Influence boundary, updates to the City of Modesto wastewater and water master plans, and preparation of the necessary environmental documents.

IV. LAND FOR POTENTIAL ADDITION TO THE INVENTORY

The previous Reviews provided a summary of acreage available in the unincorporated area, within the Sphere of Influence (SOI). The 2009 Review include four areas outside of the SOI. The CPDs, and acreage available within each land use designation, are identified in **Table 5**, below, and in **Figure 4**.

The 2003 Review subtracted properties with "Williamson Act" contracts from the total acreage to arrive at an inventory with net acres. Land under Williamson Act contract is not factored in the 2009 Review for several reasons. While such contract restricts development on the affected parcel for a ten-year period, the land can still be developed if a penalty is paid and should be identified as inventory. The typical process time for a specific plan is estimated to be seven years including the Measure M advisory vote, preparation of the specific plan and the environmental document, and up to the point of annexation. It is further estimated to take from one to three years to get building permits issued. This time frame makes the Williamson Act contract less of a constraint as landowners can file for a notice of non-renewal around the time of advisory vote consideration and may avoid any penalty by the time a building permit is issued. Lastly, identifying the net acres becomes less reliable if there is the potential of land use changes for the purpose of economic development. Acreages are provided as gross numbers consistent with the General Plan. Areas that already have been identified in the inventory provided in Section II or Section III have been subtracted from the total acreages of each CPD.

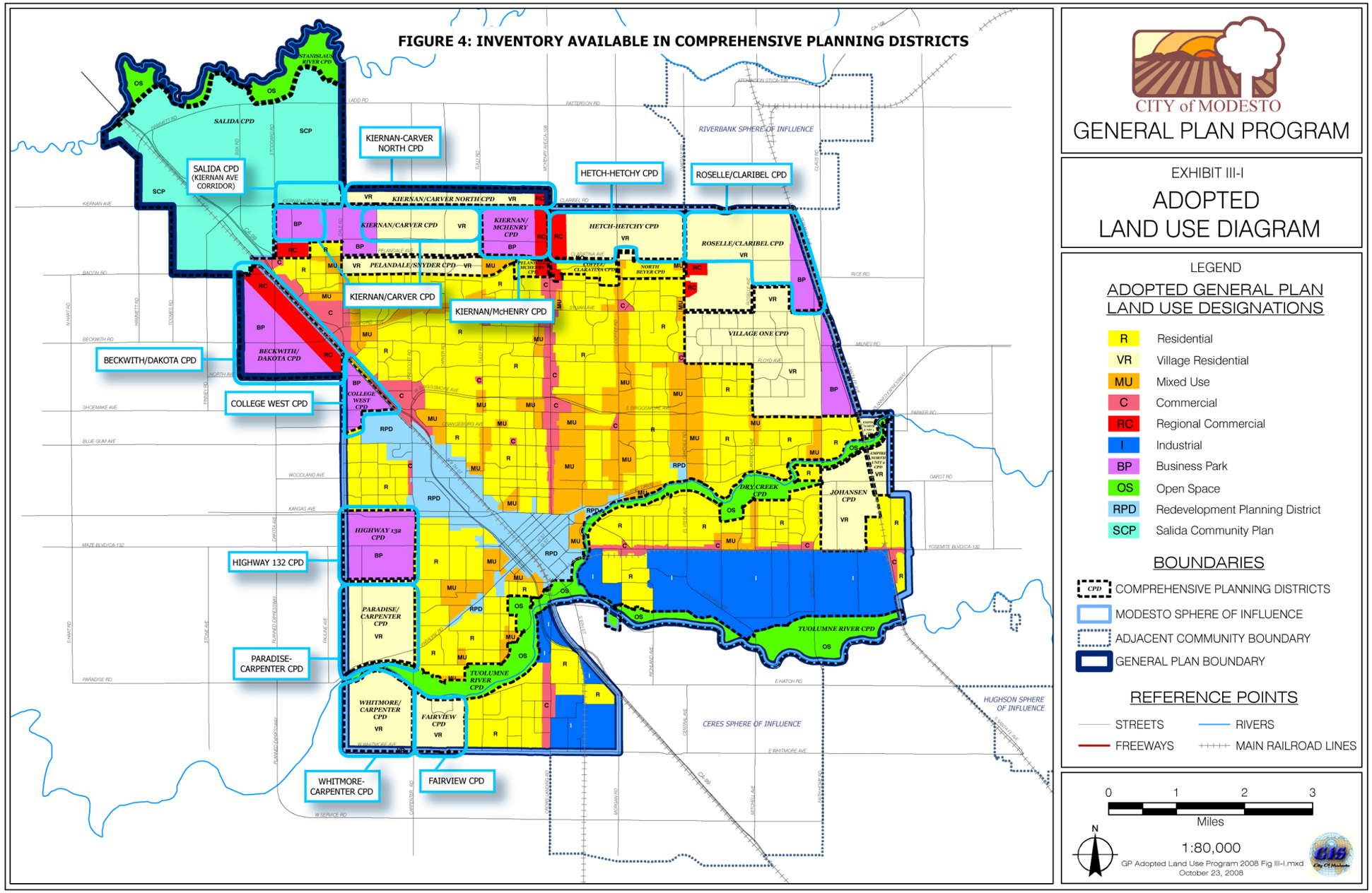


Figure 4 Inventory Available in Comprehensive Planning Districts

Table 5 Land Area Available in Comprehensive Planning Districts (Unincorporated)

CPD	Land Use designation(s)	Acres			Consideration for Land Use Change
		VR	RC	BP	
Beckwith/Dakota (Out of SOI)	Regional Commercial		350		No
	Business Park			690	No
College West	Business Park			230	No
Fairview 1,2	Village Residential		170		No
Highway 132	Business Park			660	Yes
Hetch-Hetchy	Village Residential	830			Yes
	Regional Commercial		130		Yes
Kiernan/Carver (Portion Out of SOI)	Village Residential 1	500			Yes
	Regional Commercial 1		0		No
	Business Park 1			2 70	Yes
	Business Park (Out of SOI)			2 230	No
Kiernan/Carver North (Out of SOI)	Village Residential	460			Yes
	Regional Commercial		30		No
Kiernan/McHenry 2	Regional Commercial		100		No
	Business Park			370	No
Paradise/Carpenter	Village Residential	810			No
Roselle/Claribel (Excludes Tivoli)	Village Residential 1	880			Yes
	Regional Commercial 1		0		Yes
	Business Park			260	Yes
Salida Portion of CPD (Out of SOI)	Business Park			320	No
Whitmore/Carpenter	Village Residential	690			No
Total		4,170	780	2,830	

1 Areas accounted for in the inventory have been subtracted
2 Areas with completed Measure M Advisory Vote but not in City Limits.

Table 5 identifies a total of 7,780 gross acres, of which 5,700 acres is within the SOI and 2,080 acres out of the SOI but within the General Plan area.

V. RECOMMENDATIONS FOR ADDITIONAL INVENTORY

The four areas recommended for inclusion on the November 2009 ballot as the subject of Measure M advisory vote are shown on **Figure 5** – Recommended Planning Areas for 2009 Measure M advisory Vote. The four areas are: Kiernan Avenue Corridor; Tivoli North; College West; and North McHenry Regional Commercial.

Areas targeted for future development require a lengthy period of time, before development can proceed. Annexation must be pursued, which can require substantial amount of time, with an uncertain outcome. The planning process calls for preparation of detailed, comprehensive plans, providing land use standards and urban design policies, infrastructure facility plans, implementation measures, and detailed financing mechanisms. Development will also be subject to environmental review requirements pursuant to California Environmental Quality Act.

A. Kiernan Avenue Corridor (Kiernan/Carver CPD, Kiernan/Carver North CPD, and Salida CPD)

The Kiernan Avenue Corridor consists of three different CPDs along the north and south sides of Kiernan Avenue between Stoddard Road and McHenry Avenue. The first area is the portion of Kiernan/Carver CPD that does not have a completed Measure M advisory vote including

approximately 500 acres of Village Residential land east of American Avenue. Most of the Kiernan/Carver CPD has a completed Measure M advisory vote. 570 acres of Business Park land an 80 acres of Regional Commercial land west of American Avenue have a completed Measure M advisory vote. Approximately 230 of the 570 acres of Business Park land located west of Kaiser Hospital have a completed Measure M advisory vote but are not within the SOI. Additionally, approximately 230 acres of Village Residential land south of Bangs Avenue have a completed Measure M advisory vote.

The second area is the entire Kiernan/Carver North CPD consisting of 460 acres of Village Residential designation and 30 acres of Regional Commercial designation. The third area is approximately 320 acres of the Salida CPD designated for Business Park development. The total area of the Kiernan Avenue Corridor in consideration for the 2009 Measure M ballot is approximately 1,310 acres.

The Kiernan Avenue Corridor area provides one of the best opportunities for economic development with large tracts of land for potential business park development close to State Highway 99. There will be future consideration to change some of the Village Residential designation to Business Park. (Refer to **Figure 6**). **Table 6** provides a summary of the main factors in the consideration of the Kiernan Avenue Corridor.

Table 6 Kiernan Avenue Corridor

Factors	Discussion
Infrastructure	The North (sewer) Trunk has been extended from the west to Carver Road partially through this CPD. Sewer cost is about $2.3 million for Kiernan/Carver CPD, plus may need additional downstream improvements. The sewer and water master plans need to be updated for areas north of Kiernan. Water and storm drainage improvements are needed. See **Appendix A** for more detailed discussion about infrastructure analysis
Traffic	Kiernan Avenue plus potential 99 interchange improvements are needed
Economic Benefit	Potential change for some of the area to Business Park and/or Regional Commercial land use
Owner Support	The extent of property owner interest is unknown
Soil Quality	Mostly prime farmland
Other	Area north of Kiernan is outside Sphere of Influence. Annexation is a logical extension of the City's boundaries

B. Tivoli North (Roselle/Claribel CPD)

The 480-acre "Tivoli North" area is located within the Roselle-Claribel CPD, east of Oakdale Road and north of the Tivoli Specific Plan area, within the SOI (see **Figure 7**). This area is a good candidate site to add vacant residential land inventory and to provide economic development. There is potential for Regional Commercial use along Oakdale Road. **Table 7** provides a summary of the main factors in the consideration of the Tivoli North area.

Table 7 Tivoli North

Factors	Discussion
Infrastructure	Extension of the Sonoma Trunk would serve this area. The estimated sewer cost is $1 million, but assumes $4.4 million sewer system upgrades provided by Tivoli, plus may need additional downstream improvements. Development of Tivoli North could help pay for the Tivoli sewer improvements. Water and storm drainage improvements are also needed
Traffic	Claribel Road and Claratina Avenue street improvements needed
Economic Benefit	Potential Regional Commercial along Oakdale Road
Owner Support	Many landowners have expressed interest
Soil Quality	Mostly non-prime farmland
Other	The entitlement team has a successful record. This area would provide residential land inventory and a logical extension of the City's boundaries

C. College West CPD

The College West CPD is located along the west side of State Highway 99, generally between the Standiford Avenue and Briggsmore Avenue interchanges, and covers approximately 230 acres (see **Figure 8**). This site is currently designated by the General Plan for Business Park land uses. Close proximity to the freeway and large tracts of land make this site a potentially good candidate for near-term economic development. **Table 8** provides a summary of the main factors in the consideration of the College West CPD.

Table 8 College West CPD

Factors	Discussion
Infrastructure	Sewer, water and storm drainage improvements would be needed. Downstream sewer improvements also may be required
Traffic	Upgrade of freeway interchanges presents a challenge. Shoemake Avenue and Morse Road street improvements would be needed
Economic Benefit	Business Park designation should provide economic benefit
Owner Support	Many landowners expressed interest
Soil Quality	Entire CPD is prime farmland
Other	Annexation is a logical extension of the City's boundaries

D. North McHenry Regional Commercial (west side Hetch-Hetchy CPD)

The commercial properties fronting along McHenry Avenue between Claribel Road on the north and Claratina Avenue on the south are largely developed – mostly with automobile dealerships. This 130-acre area, located in the western portion of the Hetch-Hetchy CPD, has been identified as a high priority economic development catalyst site (see **Figure 9**). The fact that this area is already developed means that it will begin to generate sales tax revenue for the City soon after annexation. This area would likely be annexed concurrently with the McHenry Kiernan CPD which also has Regional Commercial area on the west side of McHenry Avenue. **Table 9** provides a summary of the main factors in the consideration of the North McHenry Regional Commercial area.

Table 9 North McHenry Regional Commercial

Factors	Discussion
Infrastructure	Sewer costs would be a portion of the estimated $9.5 million for the entire CPD including extending sewer infrastructure through the east portion of the Kiernan/Carver CPD and Kiernan/McHenry CPD, plus may need additional downstream improvements
Traffic	Area is mostly developed
Economic Benefit	Near-term generation of sales tax revenue would occur
Owner Support	Level of property owner interest is unknown
Soil Quality	Not Applicable since the area is mostly developed
Other	Annexation of this area would be consistent with sewer service agreement and is a logical extension of the City's boundaries

E. Other Areas Considered for Measure M Vote

Three other areas were considered during the 2009 UGR process, but were not recommended for a Measure M advisory vote. These areas include the Beckwith / Dakota CPD, most of the Hetch-Hetchy CPD and the east side of the Roselle / Claribel CPD.

The Beckwith / Dakota CPD is located along the west side of State Highway 99, just south of Salida. This area provides potential for economic development including nearly 700 acres designated for Business Park land uses, and another 350 acres designated Regional Commercial.

The Hetch-Hetchy CPD is located along the south side of Claribel Avenue, between McHenry Avenue and Oakdale Road. The westernmost 130-acre portion of this CPD along McHenry Avenue, which is designated Regional Commercial, was recommended for Measure M advisory vote in 2009. The remaining area in the Hetch-Hetchy CPD was not recommended for the advisory vote.

The portion of the Roselle/Claribel CPD east of Roselle Avenue was not recommended for a Measure M advisory vote in 2009. This area includes approximately 400 acres of Village Residential land use designation and another 260 acres of Business Park land use designation, per the General Plan. These three areas would be likely candidates for the next Measure M advisory vote consideration.

F. Recommended "Follow-Up" Actions Intended to Promote Economic Development

As described in the sections above, a primary focus of the 2009 Review process has been economic development. One common theme discussed at the EDC workshops was that of particular General Plan land use designations for certain areas that may not develop in the near term due to unrealistic assumptions in prior General Plan efforts. All the areas described below could potentially benefit from changes to the City's General Plan, including amendments to the SOI and/or changes in land use designation as appropriate. Staff will prepare a work program, for review and approval by the Council, in order to initiate the work needed to accomplish the tasks described below.

Beckwith/Dakota CPD

The Beckwith/Dakota CPD is located outside the City's SOI. In order to promote future economic development, staff recommends that the City pursue a change to the SOI boundary to include this CPD. The existing General Plan land use designations consist of Regional Commercial (along the SR99 corridor) and Business Park. In order to facilitate development on more than 1,000 acres of this land, the City's utility master plans would need to be updated to address the Beckwith/Dakota CPD prior to completion of specific plan / EIR and annexation processes.

Kiernan/Carver, Kiernan/Carver North, and Salida CPDs

There have been discussions at prior Urban Growth Review workshops regarding the possibility of changing the General Plan land use classification to promote economic development in this area along the Kiernan Avenue corridor. A change to the SOI boundary, a General Plan amendment, a specific plan / EIR, and utility Master Plan updates would be necessary in order to follow through on these measures meant to promote economic development.

Hetch-Hetchy CPD

Although staff does not recommend this area to be considered for an advisory vote in 2009, there are actions to be taken that could help facilitate jobs and sales tax revenue in conjunction with future development. For example, significant portions of the approximately 830-acre Village Residential land use designation (along the Oakdale Road frontage, for instance) could be changed to Regional Commercial or another appropriate non-residential designation. Such a General Plan amendment could set the stage for future development that would result in enhanced revenue for the City.

Roselle/Claribel CPD ("Tivoli North")

The General Plan currently designates this entire area as Village Residential. However, there is significant opportunity to create enhanced economic development potential by re-designating some of the acreage to Regional Commercial. Properties along the Oakdale Road frontage are probably the best candidates for such a General Plan amendment, but other areas may be appropriate as well.

Roselle/Claribel CPD and Village One CPD Business Park triangles

The Business Park land use designation shown in the General Plan for these two CPDs has been in question for years as the Village One specific plan area has developed without any interest or activity focused on the Business Park area. There is general consensus that Business Park or similar development is not likely to locate on the east edge of town, and that these areas might be better served by an alternative land use designation.

Highway 132 CPD

As a result of discussions throughout the UGR process, consensus was reached that the existing General Plan land use designation of Business Park should be changed to Village Residential.

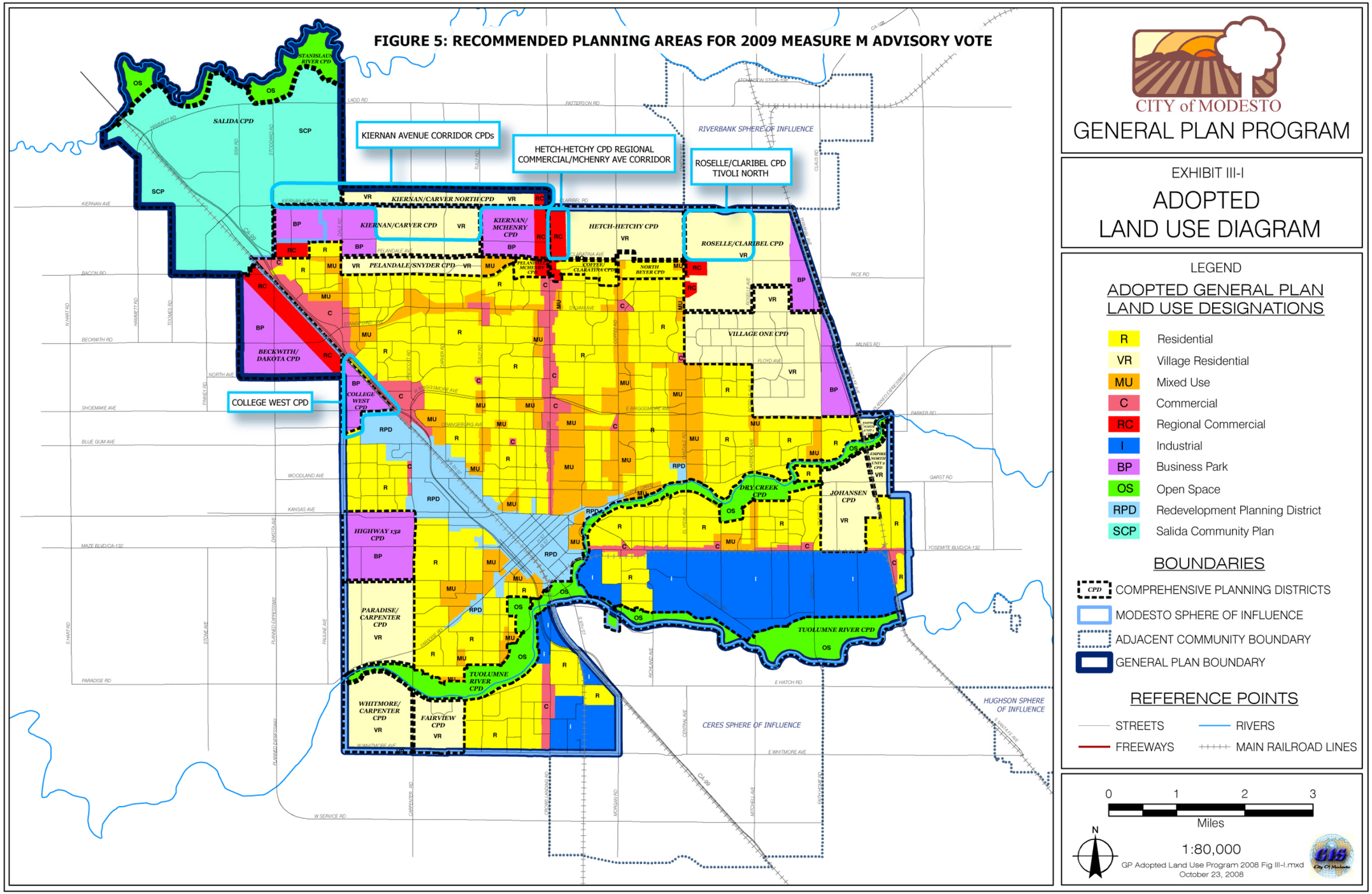


Figure 5 – Recommended Planning Areas for 2009 Measure M Advisory Vote

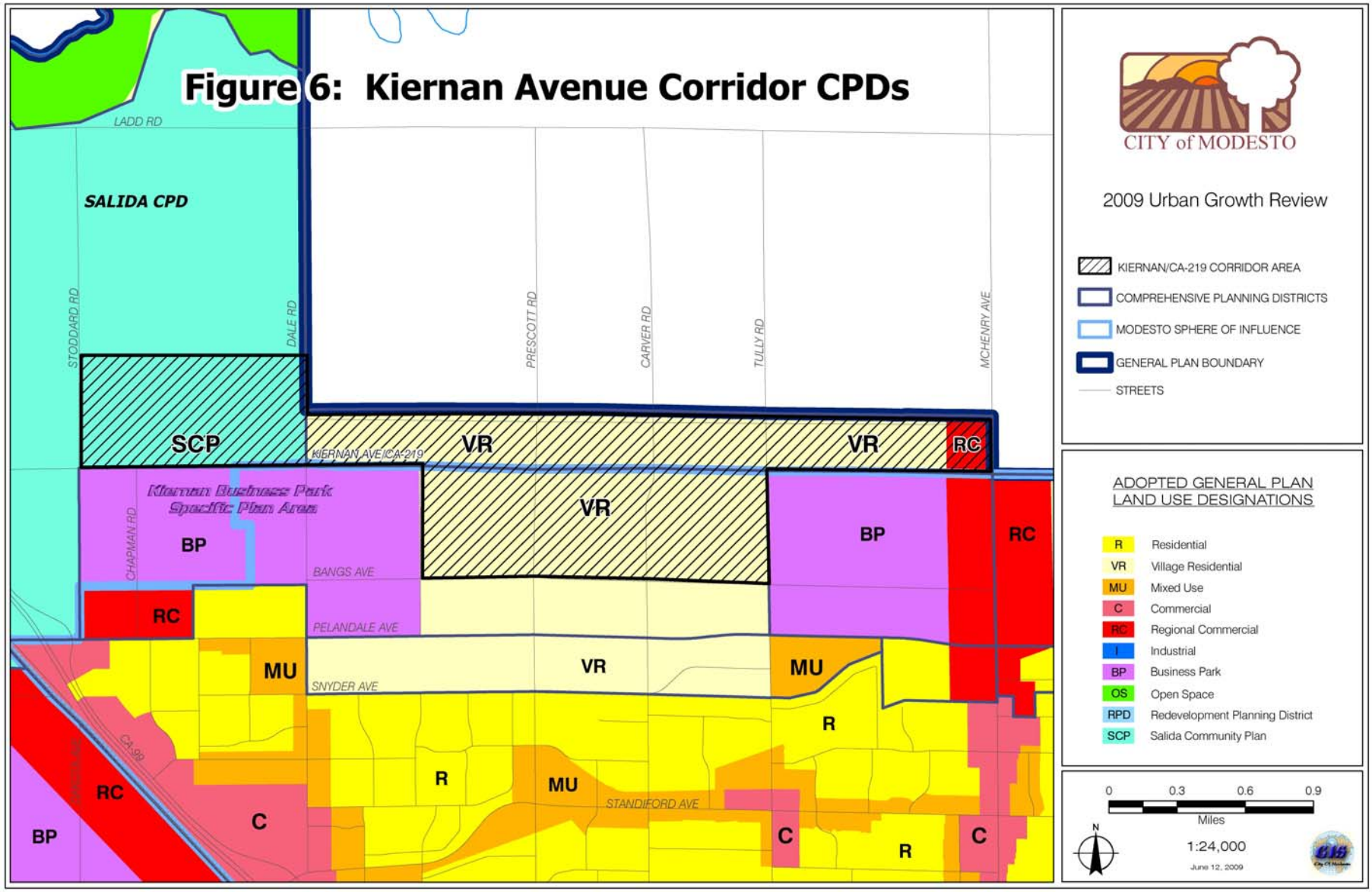


Figure 6 – Kiernan Avenue Corridor CPDs

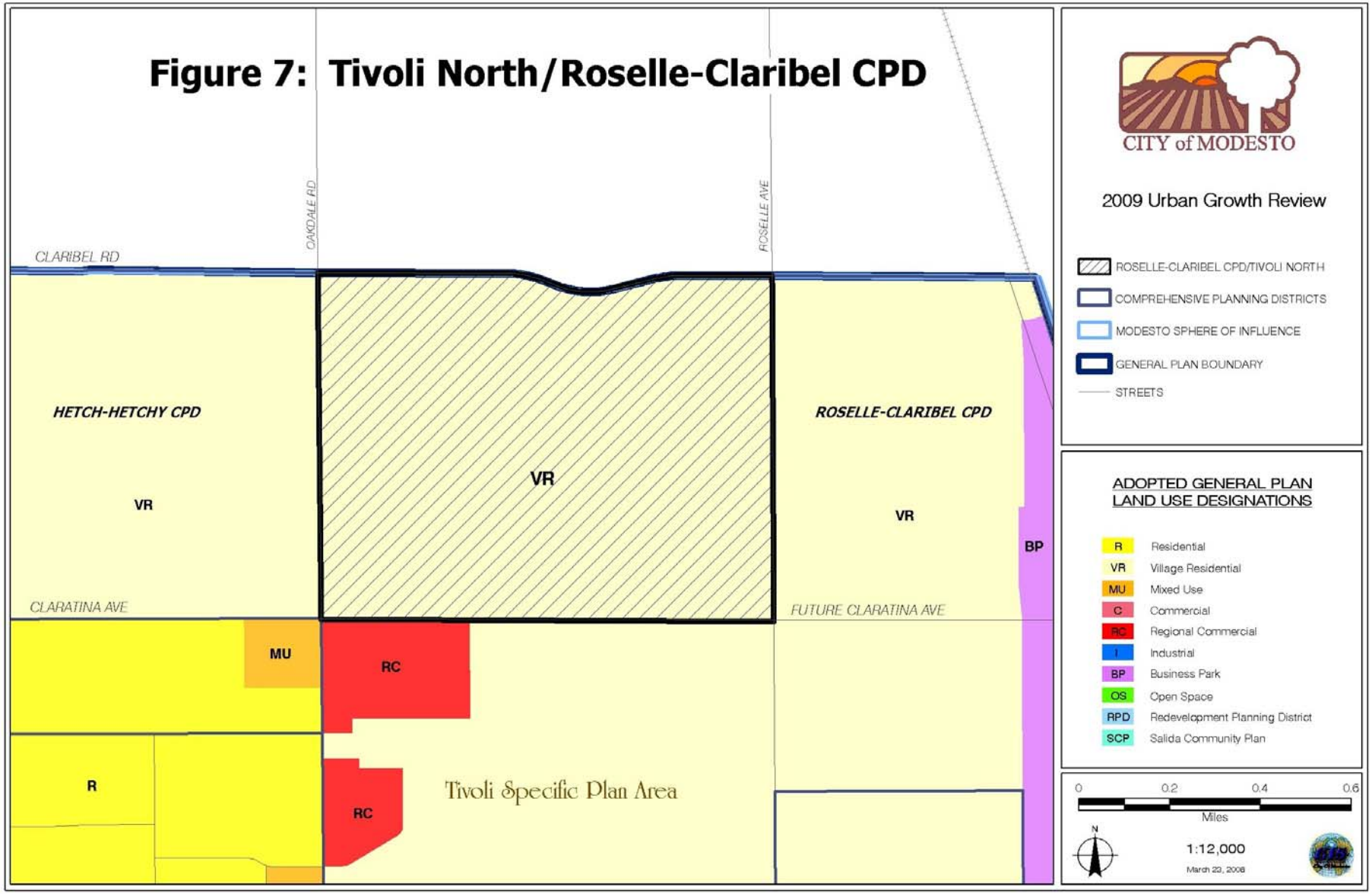


Figure 7 – Tivoli North

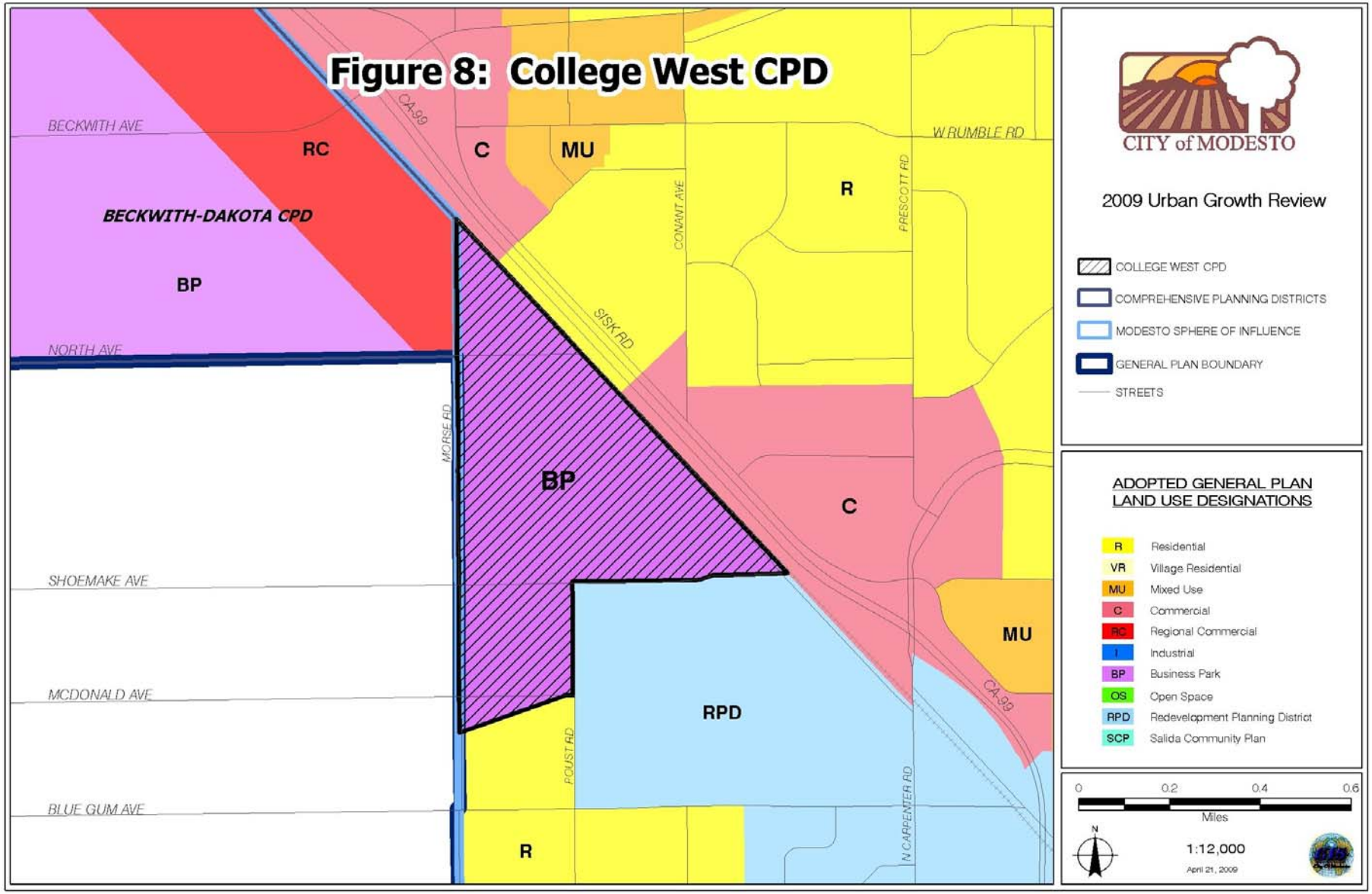


Figure 8 – College West

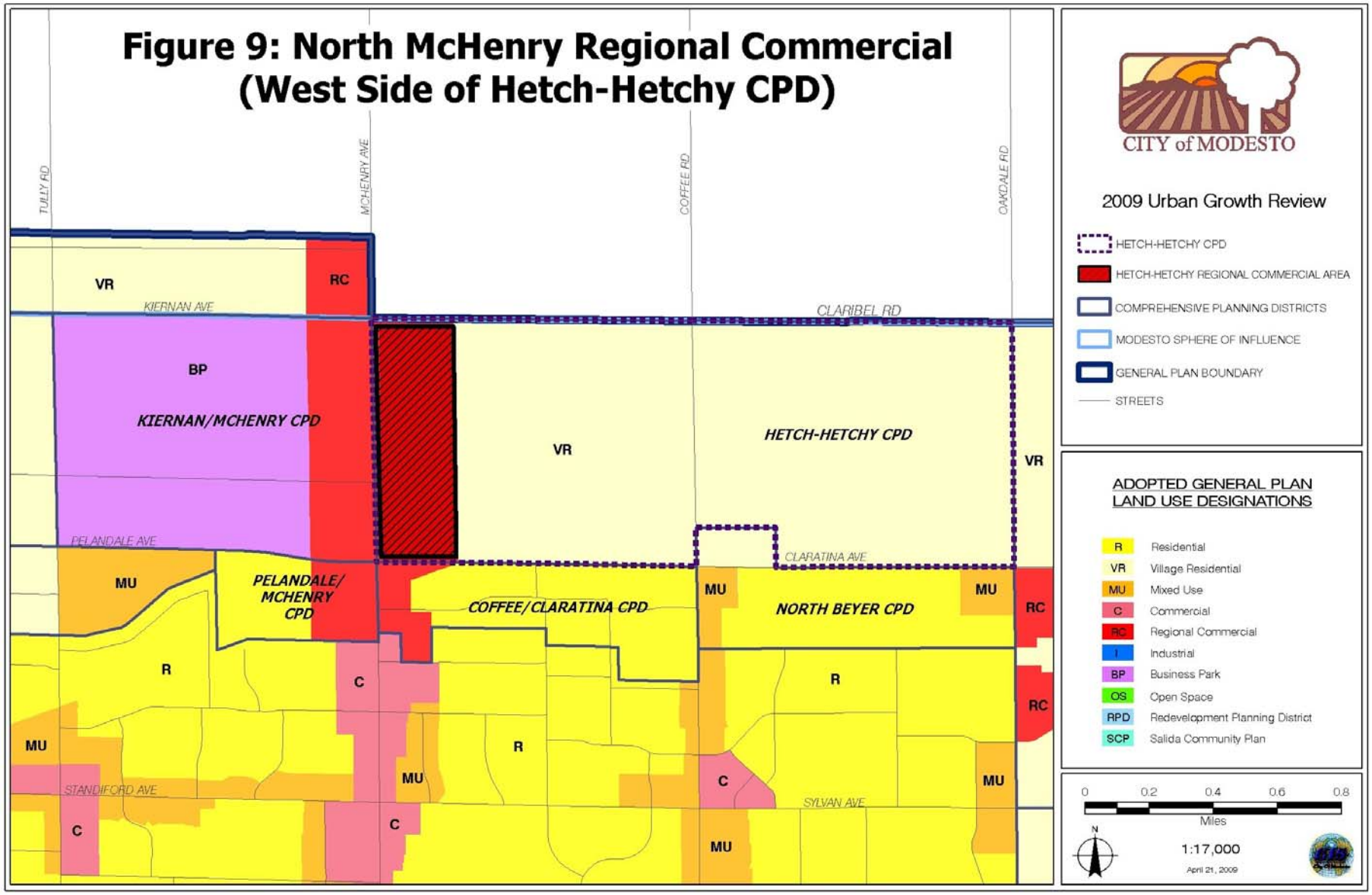


Figure 9 – North McHenry Regional Commercial

VI. UNINCORPORATED ISLAND AREAS

Currently, there are six unincorporated County "islands" that have received a positive Measure M vote. To date, one of those areas has progressed toward annexation. Staff is in the process of conducting research and preparing annexation documentation for the Shackelford neighborhood.

The Modesto Citizens' Advisory Growth Management Act of 1995 requires significant preparation in advance of scheduling advisory votes for the most substantial unincorporated island areas. In accordance with City policy, prior to scheduling the most substantial infill areas for an advisory vote, City and County officials should meet to discuss tax sharing agreements and other fiscal matters – primarily those related to utilities and infrastructure. The City should continue joint efforts with the County to quantify costs and prioritize areas for future Measure M advisory vote only after identified infrastructure deficiencies have been corrected.

The following recommendations would apply in accordance with the policy to implement the Modesto Citizen's Advisory Growth Management Act of 1995 (Measure M) adopted by City Council Resolution 98-411. Item 5 of the referenced Policy States as follows:

5. Sequencing of Measure M Votes for "Infill" Areas"

a. When: the most substantial Infill Areas will not be scheduled until negotiations with the County regarding fiscal issues are complete. There needs to be significant preparation in advance of scheduling Measure M votes for Infill Areas. A successful Measure M vote may lead to public expectations that annexation will immediately follow, with corresponding expectations that existing deficient infrastructure will be upgraded. Therefore, the fiscal impacts of serving unincorporated areas may vary from area to area, irrespective of whether the City/County property tax agreement is in effect for those areas. The impacts of tax increment financing through the Redevelopment Agency should also be examined.

b. Which Areas: The City will schedule a Comprehensive Measure "M" vote for the most substantial Infill Areas or logical groupings of such Areas. Since urban services are generally available or nearby in the Baseline Developed Area, and the "urban pattern" is fundamentally established, this approach provides significant time savings toward the ultimate annexation of all Infill Areas.

c. Infill Areas" which are not "substantial": The City Council, at its sole discretion, may determine that certain Infill areas are not "substantial" and therefore, would not need to be dependent on negotiations with the County.

Appendix B provides information concerning the unincorporated islands obtained from the 2003 Urban Growth Policy Review Report, including a map (**Figure B1**) describing the location of the unincorporated areas, population, land use, assessed valuation, number of parcels, and whether the area has been the subject to a Measure M advisory vote. **Table B2** (contained in the 2003 Review), has been updated by the Public Works Department, providing current cost data regarding infrastructure improvements required to improve each respective county island area to city standard.

VII. INFRASTRUCTURE CONSIDERATIONS

A. Wastewater:

The existing and planned sanitary sewer infrastructure poses a potentially significant constraint on the planned growth within the City of Modesto Urban Area. The City has identified and addressed these potential issues in the 2007 Wastewater Master Plan (WWMP) and WWMP Master EIR (March 2007), and recently updated WWMP Supplement (July 2008). These reports, prepared by Carollo Engineers, developed an overall wastewater system Capital Improvement Program (CIP) to address existing deficiencies and replacement needs.

The projects contained within the WWMP and WWMP Supplement CIP's provide capacity to meet the demands of projected growth through build-out of the current sphere of influence (SOI) which is projected to occur in the year 2030. The CIP includes the expansion and upgrade of both the Sutter Avenue Primary Treatment Facility (SAPTF, aka Primary Facility) and the Jennings Road Secondary Treatment Facility (JRSTF, aka Secondary Facility), improvements to the existing Primary Outfall that conveys flow from the primary facility to the secondary facility, construction of several new trunk sewers and implementation of various sanitary sewer collection system improvements

The City of Modesto currently provides both primary and secondary wastewater treatment. There is currently adequate primary and secondary treatment capacity. However, the City's seasonal secondary treated effluent disposal system depends on climatic conditions and river flows. Recently the City completed the Dissolved Air Flotation (DAF) project, which corrects existing disposal deficiencies, and is currently implementing the Phase 1A tertiary treatment project, which will provide some additional year-round disposal capacity for growth. However, the City recently received a new waste discharge permit with limits more restrictive than those previously indicated in the 2007 WWMP, and includes unprecedented limits for seasonal secondary effluent discharges into the San Joaquin River. Therefore, in order to meet these new discharge requirements, the City is planning to eliminate seasonal river discharges and replace with year-round discharge with tertiary treated wastewater (Phase 2). The Phase 2 treatment plant improvements are expected to be operational by 2013.

The Primary Outfall rehabilitation is expected to be completed by 2010. Depending on location, the existing sanitary sewer collection system, including sewer mains, trunks and lift stations, used to convey sanitary waste from areas throughout the City to the City's wastewater treatment facilities, lack sufficient capacity to meet the projected demand from new growth. In addition to capacity upgrades, there are sewer facilities within the City that may need major rehabilitation and increased redundancy and reliability, in order to accommodate new growth.

It should be noted that, with one exception, areas outside the current SOI were not included in the 2007 Wastewater Collection System Master Plan. The single exception is the western area of the Kiernan-Carver CPD bounded by Pelandale Ave on the south, Stoddard Rd on the west, the Kaiser Complex on the east and Kiernan Ave on the north. This area has been studied because it is part of a CPD which is mostly within the current SOI and also has a positive Measure M vote and, as such, sewer facilities have generally been planned and/or constructed to serve that area.

The Kiernan Avenue Corridor Area north of Kiernan Avenue and the Beckwith-Dakota CPD both are outside the existing SOI and were not included in the analysis of the 2007 WWMP and, as such, facilities to convey and treat wastewater generated by these areas have not been determined at this time on a city master plan level.

B. Water:

Water supply in the Modesto area originates from two sources; City operated wells and surface water provided by the Modesto Irrigation District (MID). City-owned wells extract groundwater and treat it as necessary to potable standards throughout the water service area. Surface water from the Modesto Reservoir is treated and piped to the City from the MID Treatment Plant. The MID Treatment Plant has been delivering surface water to the City of Modesto since its completion in 1995. With purchase of the former Del Este Water Company in the 1990's, the City also now operates the water systems of Salida, Empire and a portion of north Ceres as well as the isolated (outlying) water systems of Hickman, Del Rio, Grayson, the City of Waterford and, three small systems within the City of Turlock. These outlying water systems are supplied only by groundwater sources.

Water availability is a critical planning issue in the City and throughout California. Prior to the MID surface water supply, the City relied entirely on groundwater resources, which had resulted in a drawing down of groundwater levels over the years. Surface water supply from the MID Plant has allowed for groundwater levels to recover over time. However, groundwater levels started to trend toward reduction again in 2001 due to increases in demand from growth in the City. The MID Phase 2 Treatment Plant Expansion Project (currently under construction) is expected to be operational by 2010 which will double the surface water supply from 30 mgd to 60 mgd and will mitigate the existing increased demands on the groundwater resource. The additional surface water supply will allow the city to reduce its demand for groundwater resources, thus allowing groundwater levels to recover. However, the expected build-out demands of the city are expected to require additional sources of water supply in order to responsibly manage the groundwater supply. The City also must continually plan and mitigate for stricter government potable water quality regulations on groundwater resources.

The City is exploring and utilizing a variety of options to help reduce water consumption, increase water supply and increase efficiency of the water management system. Tertiary wastewater treatment (a water recycling resource potential), additional well construction, expansion of the MID Surface Water Treatment Plant (Phase 2), opportunities with the Turlock Irrigation District (TID) to participate in a surface water supply and delivery project, the on-going water metering implementation program, and conservation measures are all being considered and pursued by the City to ensure that sufficient water resources and services are available for existing needs and future developments. Updating the Water Master Plan, a five year document currently underway, is one means by which the City continues to review and plan for the existing and future water infrastructure needs as the City expands to an estimated build-out around the year 2030.

Amendments to California statutes in 2002 (SB 610) imposed additional water supply planning requirements on new developments mandating that all large developments (residential and commercial) show an assured water supply prior to project approval. The City also updated its Urban Water Management Plan in 2007 (required every five years) in an effort to continually plan and manage its water resources into the future. As part of that effort, the City continually looks for alternative and innovative methods of improving water service to existing and new developments. The city also participates in two groundwater basin management associations and recently adopted, in partner with those associations, two Groundwater Basin Management Plans in an effort to gain more knowledge about groundwater resources and to further efforts to more efficiently utilize and manage the groundwater supply on both a local and regional level.

Properties outside of the existing City limit and not currently served with City water may be eligible to connect to the municipal water system based on established criteria. In June of 1998, the City Council adopted Resolution No. 98-306, codifying the conditions that must be met for a property outside of the City limit to utilize Modesto water. In general, properties outside the City limit are evaluated for water service extensions based on their location relative to the Modesto Municipal Sewer District No. 1, the former Del Este service areas, and the Sphere of Influence (SOI). The policy provides that water service extensions may be approved by the City Manager on a case-by-case basis when the following conditions and criteria are met:

1) The development has been authorized by the appropriate land use agency (i.e. Stanislaus County, City of Waterford, etc).

2) The property is within the City's service areas (as defined and implied by the Policy).

3) City staff has completed an analysis of supply and infrastructure and determined that it is capable and reasonable for the City to extend the service based on a plan to pay for the extension costs and the quantity of water used.

The ability of properties to meet these conditions will affect their likelihood of receiving water service from the City.

Areas outside the existing SOI for the contiguous water system such as the Kiernan Avenue Corridor Area north of Kiernan Avenue and the Beckwith-Dakota CPD are not currently being analyzed in the Water System Engineer's Report or the Water System Master Plan (both currently underway) and, thus, facilities and water supplies to serve these areas have not been determined at this time on a city master plan level.

C. Storm Drainage:

Roughly one third of the City area does not have a positive storm drainage conveyance system and relies on the use of rockwells that attempt to percolate storm water runoff directly into the ground. The use of a rockwell storm drainage system is expensive because it is highly dependent on preventative maintenance in order to continually function properly. Though there are storm water quality benefits associated with the rockwells' capturing of "first flush" storm water from a surface water perspective, there are also groundwater quality concerns regarding percolated storm water runoff via these rockwells. Also, standing water that is prevalent on the surface after storms resulting from the use of a marginally effective rockwell system can have a significant detrimental effect on roadway pavement among other concerns. While a number of repairs and improvements have been made over the years, the overall system is still deficient in its ability to drain storm water runoff and minimize localized flooding in several areas of the City.

Areas of the City not served by rockwells have positive storm drainage conveyance systems (underground pipes), with discharges to the Tuolumne River, Dry Creek, terminal retention basins, and detention basins which discharge to irrigation facilities owned and operated by the Modesto Irrigation District (MID) and Turlock Irrigation District (TID). Some of these City positive storm drainage systems function well, and others require upgrades and retrofits in order to achieve the desired level of service.

In general, the existing storm drainage systems in the older parts of town have design and operational capacity constraints and the overall system is deficient in many areas (due in part to a lack of adequate stable funding available to perform necessary maintenance, repairs and improvements). Having a current and comprehensive Storm Drainage Master Plan (SDMP) is a critical step in identifying the improvements and funds necessary to improve and maintain the infrastructure system to meet level of service standards. The draft SDMP has been referenced in the 2009 Urban Growth Policy Review to identify the backbone infrastructure necessary to serve future watersheds within the existing build-out SOI area.

Areas outside the existing SOI such as the Kiernan Avenue Corridor Area north of Kiernan Avenue and the Beckwith-Dakota CPD are not being analyzed in the 2008 Draft Storm Drainage Master Plan and as such, storm drainage facilities to serve those areas have not been determined at this time on a city master plan level.

2009 Urban Growth Policy Review Update
Infrastructure Considerations

The following information describes infrastructure systems and associated cost estimates for individual Comprehensive Planning Districts (CPDs).

Beckwith-Dakota CPD

Wastewater:
The Beckwith-Dakota CPD (approximately 1,040 acres) is outside the existing SOI, for which sewer infrastructure needs have yet to be determined as this area is not included in the 2007 WWMP. This CPD, by virtue of location, would likely be served by extending a new sewer trunk from the existing West Sewer Trunk system. Capital improvements to extend sewer infrastructure to this area from existing sewer system infrastructure has not been specifically identified on a city master plan level at this time as to location, pipe size, possible other facilities and cost.

Available pipe capacity in the West Sewer Trunk system to serve this area above and beyond already planned demands for build-out of the current SOI would be dependant on the outcome of several alternative scenarios the city is currently conducting for the severely constrained Emerald Sewer Trunk. Results from analysis of these scenarios would determine if and how much 'excess' capacity in the West Sewer Trunk is available to serve future growth potential areas that are currently outside the existing SOI. If it is determined that sufficient 'excess' capacity in the West Sewer Trunk would not be available to serve this CPD, then capital improvement projects would need to be identified to provide additional capacity for an expanded SOI area.

Storm Drainage:
There is currently no storm drainage infrastructure in the Beckwith-Dakota CPD area nor has this area been master planned as part of the 2008 Draft Storm Drainage Master Plan. This CPD area would require master planning to determine the essential infrastructure needs such as number and size of basins, amount and sizing of major conveyance pipes and discharge locations to existing MID facilities. This CPD would need to have its own storm drainage system to serve its CPD area. The existing City storm drainage systems are not available to be extended or expanded to serve this CPD. The existing MID Lateral 7 Canal traverses the Beckwith-Dakota CPD, however, available discharge opportunities to the MID Lateral 7 Canal would need to be determined for this CPD and permitted by MID.

Water:
The City currently does not provide water service to the Beckwith-Dakota CPD. This CPD would be considered for water service as future planning occurs. The future water infrastructure needs to serve this CPD area have not been master planned on any level at this time. This CPD is not within the SOI or the Modesto Water Service Area or under any specific water service agreements thus the necessary infrastructure to serve this CPD are not known at this time.

In general, extensions of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses would be necessary. Other facilities such as a tank, transmission mains, and/or expansion of other City water facilities including possible connections across Highway 99 would need to be determined through a master plan update or more focused study for the CPD. Infrastructure phasing needs to serve this CPD would also depend on development phasing and demands of other CPDs.

New groundwater wells or surface water supply (via transmission main) might be needed to serve expected demands of this CPD. For the existing SOI area, the city expects the need for additional water supplies to serve the planned future build-out demands. Additional water demands from outside the existing SOI would generally expand the city's total build-out demand, which would require additional water supplies. The City's long-term water planning effort is tasked with assuring that sufficient water supplies would be available to serve future demand needs. The city is pursuing installation of water meters and additional conservation measures that could reduce consumption demands and is also looking at additional surface water supplies, recycled water uses and other alternatives to serve the city's existing and build-out water needs.

College West CPD

Wastewater:

The College West CPD will be served by the West Sewer Trunk. Since the West Sewer Trunk crosses this CPD, the Wastewater Collection System Master Plan does not identify any sewer extension necessary to serve the CPD. However, like other CPDs utilizing the West Sewer Trunk, downstream improvements of the West Trunk are necessary before the College West CPD can be developed to build-out potential. Improvements necessary for West Sewer Trunk have been outlined in the 2007 WWCSMP. It should also be noted that the Cheyenne & Dutch Hollow Lift Station Rehabilitation will not be necessary since this improvement is not downstream of College West CPD.

Storm Drainage:

Currently, the College West CPD area mostly consists of agricultural land use and there is no positive drainage serving the area. Storm water is mostly drained by use of rockwells. The College West CPD has been studied in the 2008 Storm Drainage Master Plan as Sub-basin 1 of Watershed B. The storm water runoff from this area will be conveyed via an extension of a box culvert under Highway 99 to Detention Basin No. 8, from where flows will be pumped into MID Lateral No. 3.

Water:

The City currently does not provide water service to this incorporated CPD. This CPD would be considered for water service as future development planning occurs. The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Future wells, tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the College West portion of future build-out, which would be dependant upon specifics of the land uses being planned and the timing of College West development with the other CPD areas.

Fairview CPD

Wastewater:

The Fairview CPD comprises 370 acres and will be served by the Ustick Sewer Trunk (aka South Trunk). Based on a flow monitoring program for a draft master utilities plan completed November 2003, the existing flows use approximately 50% of the capacity of the 12" pipe. The study showed that approximately 100 acres of residential area could be developed in the Fairview CPD without exceeding the capacity of the existing 12" pipe. However, as the CPD completely develops, the 12" pipe will become surcharged (flows exceed pipe capacity) and potential overflow problems could occur. Therefore, approximately 2,100 feet of 12" diameter pipe in Ustick Road from Imperial to Whitmore Avenue will need to be upsized to a 24" diameter (U-1) to increase the capacity and to prevent future possible overflows due to future development within the Fairview CPD and Whitmore / Carpenter CPD areas. The total cost of upsizing the 12" pipe for capacity is $1.06 million.

The Wastewater Master Plan also specifies new Ustick sub-trunks extending westward and the construction of a Whitmore / Carpenter Sewer Lift Station. Details of sewer extension to serve the Fairview CPD have been outlined below:

1 1,445-feet of 24-inch diameter pipe in Whitmore Avenue running from Ustick Road to the proposed sewer lift station at Yuma Avenue

2 Due to the invert elevation of the existing 12-inch diameter trunk in Ustick Road and the relatively flat topography of Tributary Area 10, a new sewer lift station with a firm capacity of 3.1 mgd is needed to serve the two CPD areas. The proposed location of this sewer lift station is near the intersection of Whitmore Avenue and Yuma Avenue (LS No.62)

3 3,429-feet of 21-inch diameter pipe extending from the proposed sewer lift stations to Carpenter Road

The total cost of extending sewer to the Fairview CPD is $ 5.83 million, which is to be shared between the Fairview CPD (370 acres) and the Whitmore / Carpenter CPD (690 acres). Based on the total areas of the two CPDs, the fair share cost of the extension required by Fairview is $1.89 million.

Storm Drainage:

The Fairview CPD area currently has storm drainage facilities in the northeast portion of the watershed that discharge to the Tuolumne River. The 2008 Storm Drainage Master Plan studied the Fairview CPD area as within Sub-basin 50 (northern portion) and Sub-basin 51 (southern portion).

The northern area of the Fairview CPD will consist of approximately 4,350 feet of storm drain pipe ranging from 42" – 78" in diameter. Storm water runoff flows will be conveyed into Detention Basin No. 20, from which storm water will be pumped to the Tuolumne River via proposed 30" diameter pipe.

The southern are of the Fairview CPD will consist of approximately 2,450 feet of pipe ranging from 30" – 42" in diameter. The storm water runoff flows will be conveyed into Detention Basin 21 and then will be pumped into the TID Lateral No. 1.

Water:

The City currently does not provide water service to the undeveloped areas nor the unincorporated areas of the Fairview CPD. The non-served areas if this CPD would be considered for water service as future development planning occurs. The future water infrastructure needs to serve the undeveloped portions of the Fairview CPD area have been planned in some detail through the existing yet now idle FMP/IFP process for that CPD. In general expected improvements for any near term development would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Brining the existing Galas Well (Well 66) on-line and possibly a new water storage tank would also be required and possibly a new water well or other source of water depending on the amount of new development.

Otherwise, future wells, other tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the undeveloped areas of the Fairview CPD, which would be dependant upon specifics of the land uses being planned and the timing of Fairview CPD development with the other CPD areas.

Hetch-Hetchy CPD

Wastewater:

Sewer service to the 960 acre Hetch-Hetchy CPD will be provided by the North Trunk Extension, which will consist of 30", 24", and 18" pipes in Bangs Avenue. The 2007 Wastewater Collection System Master Plan (WWCSMP) also proposes an alternative to route sewer flows south into the Rumble Trunk. However, due to the Hetch-Hetchy Aqueduct, the latter alignment would require installation of several lift stations or sewer siphons to convey flows across or under the Aqueduct. The Rumble Trunk collection system would also likely require pipe size increases in order to carry any future sewer flows from the Hetch-Hetchy CPD. Due to the increased cost of routing sewer south of Pelandale Avenue, the North Trunk Extension is the preferred alternative.

The total cost of extending the North Trunk from the present terminus in Bangs at Carver Rd to east of Coffee Road is estimated at $9.45 million. It should be noted that the cost of sewer extension not only includes the length of sewer pipe to the CPD, but also the extension required within the CPD itself.

Sewer flows are then routed from the North Trunk into the West Trunk and downstream into the SAPTF. Due to the described sewer routing, downstream improvements for the West Trunk are necessary before the Hetch-Hetchy CPD can be developed. Further details on the downstream improvements required for West Sewer Trunk have been outlined in the 2007 WWWCSMP.

Storm Drainage:

The 2008 Storm Drainage Master Plan (Draft) studies the Hetch-Hetchy CPD and Coffee/Claratina CPD collectively. The Hetch-Hetchy Aqueduct (Aqueduct) divides the Hetch-Hetchy CPD diagonally from the southwest corner to the northeastern corner of the CPD area. Sub-basins 92 and 93 are on the north side of the Aqueduct and Sub-basin 87 is on the south side.

The northern area above the Aqueduct (sub-basins 92 and 93) will consist of approximately 12,100 LF of 30" – 66" diameter pipes. These two sub-basins will contain runoff in their respective future detention basins (No. 14 and No. 15). Storm water runoff from future developments in these areas are planned to eventually discharge into MID Lateral No. 6.

The southern portion of the Hetch-Hetchy CPD (sub-basin 87) will consist of approximately 8,500 LF of pipe with diameter ranging from 30" – 66". Storm water runoff from future development will be detained in proposed future Detention Basin No. 16, and will then be routed into the future Detention Basin No. 15. Eventually, storm water from this sub-basin is planned to discharge from a detention basin into MID Lateral No. 6.

Water:

With the exception of some current developed areas along the east side of McHenry Ave, the city does not provide water service to the Hetch-Hetchy CPD area. The City does have an agreement (North McHenry Corridor Area Tax Sharing Agreement) in place with the County to serve development within the agreement area. The Agreement area spans both sides of McHenry Ave, the east side being within the Hetch-Hetchy CPD area. Water service for future development within this area falls under the provisions of the agreement, which are not discussed here, and essentially state that the City will provide water service within the limits that available supply and distribution infrastructure can provide.

The remaining area of the CPD outside the Agreement area is considered undeveloped and not currently served with city water and would be considered for water service as future development planning occurs. The future water infrastructure needs to serve this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Future wells, tanks and other supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the Hetch-Hetchy portion of future build-out, which would be dependant upon specifics of the land uses being planned and the timing of Hetch-Hetchy development with the other CPD areas.

Highway 132 CPD

Wastewater:

The 660-acre Highway 132 CPD will be served by the West Sewer Trunk. The extension to serve the Highway 132 CPD will comprise of approximately 4,150 feet of 15" diameter pipe (W-4) in Kansas Ave, from West of Carpenter Road to Mercy Avenue. In addition, a 15" diameter pipe (W-5) is to be extended in California Avenue, from Ohio Avenue to Grimes Avenue. The Highway 132 CPD and Paradise / Carpenter CPD will also share approximately 2,400 feet of 15" diameter pipe extending from east of Ohio Avenue to Grimes Avenue (W-8). For simplicity, it has been assumed that the two CPD areas will share the cost of the latter extension equally. The approximate total cost of sewer extension, including the pipe cost shared with Paradise / Carpenter CPD is $3.27 million.

The existing residentially developed County area located south of Elm Ave and west of Carpenter Rd and known as "Elm West" is not currently served by the City of Modesto sewer system. Any future consideration of serving this developed area with sewer by the City would need to be addressed during the development of a specific plan for the Highway 132

CPD or as part of any future annexation of this area. However, upgrading a septic system to a positive gravity system would result in additional and as yet undetermined costs for installing new piping system infrastructure and connection to the existing City sewer system.

Storm Drainage:

The Highway 132 CPD was not distinctively studied in the 2008 Storm Drainage Master Plan, therefore, detailed information regarding specific storm drainage infrastructure cannot be provided. The Highway 132 CPD contains Sub-basin 23 (per Storm Drainage Master Plan), which will contain approximately 3,600 LF of 66" diameter pipe and roughly 2,200 LF of open channel extension. Storm water runoff flows are to be detained in proposed Detention Basin No. 6 and then pumped into MID Lateral No. 4.

Apart from Sub-basin 23, the Highway 132 CPD is also to share storm drainage infrastructure with the Paradise / Carpenter CPD in Sub-basin 25. A summary of sub-basin 25 has been provided in the Paradise / Carpenter CPD section.

Water:

The City currently does not provide water service to the Highway 132 CPD with the exception of the Elm West Neighborhood. The non-served areas if this CPD would be considered for water service as future development planning occurs. The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. The West Water Storage Tank to serve City-wide storage needs is to be located off of Elm Ave just west of Rosemore Ave and is expected to be constructed this year.

Future wells, other tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the undeveloped areas of the Highway 132 CPD, which would be dependant upon specifics of the land uses being planned and the timing of Highway 132 CPD development with the other CPD areas.

Johansen-Empire North CPD

Wastewater:

The 2007 Wastewater Collection System Master Plan does not propose any sewer extensions to serve the Empire North and Johansen CPD (aka Johansen/Empire North CPD). The Johansen/Empire North CPD will be served by an extension of the 33" diameter Yosemite Blvd sewer trunk from its current terminus at the intersection of Claus Road and Yosemite Boulevard to Frazine Road. An extension of sewer main northward in Frazine Road would also be required to serve the Empire North CPD.

The required trunk sizes to serve this CPD are dependant upon various factors, including the build-out demands of the CPD and pipe sizes have not be determined at this time. Although the actual required size of the Yosemite Trunk extension to serve this CPD would likely be less than the current 33" diameter trunk, the total cost for extending 2,800 feet of 33" sewer trunk is approximately $2.57 million (approximately $2.0 million for a 27" pipe and $1.6 million for a 24" pipe).

The cost to extend sewer in Frazine Rd. to serve the Johansen/Empire North CPD has not been calculated at this time since the actual size and length of trunk has not been determined, although a rough estimate would likely be in the range of $1 to $1.5 million for up to 4,000 feet of 18" to 24" diameter pipe. More precise infrastructure needs and costs would need to be defined through the Specific Plan and Facility Master Plan process.

Storm Drainage:

There is currently no storm drainage infrastructure in the Johansen/Empire North CPD area. Based on the 2008 Draft Storm Drainage Master Plan, the Johansen/Empire North CPD has two watershed areas consisting of a total of five sub-basins. The Johansen area (Watershed O) includes Sub-basins 30, 96 and 97 and the Empire North area (Watershed L) includes Sub-basins 94 and 95. Watersheds O and L are separated by the BNSF Railroad Tracks.

Approximately 7,700 feet of 30" – 66" trunk lines are proposed for Sub-basins 30 and 96 to route storm water runoff to a proposed Detention Basin 22 within the Johansen area. Storm water will then be pumped into the existing Encina Storm Drain pipe which has a discharge to Dry Creek. The northern watershed of the Johansen area (Sub-basin 97) will drain into proposed Detention Basin No. 11 via approximately 1,400 feet of 36" – 48" diameter pipes and a proposed discharge to Dry Creek.

The 2008 Draft Storm Drainage Master Plan does not specifically include proposed storm drain facilities within Sub-basins 94 and 95. It is not certain at this time if the storm drainage improvements proposed for Sub-basin 7, which is the lower part of Watershed L and includes the community of Empire on the east side of the BNSF Tracks, is sized for storm water flows from Sub-basins 94 and 95. Due to the physical entities which separate the Empire North area Sub-basins 94 and 95 from the Johansen area, development of the Johansen/Empire North Specific Plan and Facility Master Plan would likely be required to determine the best method for providing storm drainage facilities for these two sub-basins.

Water:

The City currently provides water service to some developed areas within the Johansen / Empire North CPD, specifically the residential parcels north of the Tuolumne River. The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific plan land uses.

Future wells, tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined as necessary to serve the Johansen / Empire North CPD through the FMP/IFP process for this CPD and would be dependant upon specifics of the land uses being planned and the timing of the Johansen / Empire North CPD development with the other CPD areas.

Kiernan Avenue Corridor Area CPDs

Wastewater:

Areas north of Kiernan Avenue (approximately 810 acres) within the Kiernan Avenue Corridor Area are outside the current SOI, for which sewer infrastructure needs have yet to be determined as this area is not included in the 2007 WWMP. Areas south of Kiernan Avenue within the Kiernan Avenue Corridor Area have been analyzed in the 2007 WWMP and infrastructure is described under the Kiernan-Carver CPD.

The Kiernan Avenue Corridor Area north of Kiernan Avenue, by virtue of location, would likely need to be served by extending new sewer trunks and/or subtrunks from the existing North Sewer Trunk or Dale Sewer Trunk, which both convey wastewater to the Primary Treatment Plant via the extensive West Sewer Trunk system. Capital improvements to extend sewer infrastructure to this area from the existing sewer system have not been specifically identified on a city master plan level at this time as to location, size, connection points, constraints, other infrastructure needs and cost. Existing preliminary information indicates the North Trunk likely has sufficient pipe capacity above the planned buildout demands of the existing SOI to also serve this area, however, an update to the 2007 WWMP and a more focused analysis is necessary to confirm the needs for this area and downstream impacts of serving areas north of Kiernan Avenue.

Available pipe capacity of the West Sewer Trunk system to serve this area above and beyond planned demands for build-out of the existing SOI would be dependant on the outcome of several alternative scenarios the city is currently conducting for the severely constrained Emerald Sewer Trunk. Results from analysis of these scenarios would determine if and how much 'excess' capacity in the West Trunk, particularly in the alignments south of the Woodland Sewer Lift Station, is available to serve future growth potential areas that are currently outside the existing SOI. If it is determined that sufficient 'excess' capacity in the West Sewer Trunk would not be available to serve the area north of Kiernan Avenue then capital improvement projects would need to be identified to provide additional capacity for an expanded SOI area.

Existing preliminary information indicates the West Sewer Trunk alignments north of Highway 99 may have sufficient capacity at build-out of the existing SOI to also serve the area north of Kiernan Avenue (under the assumed business park land uses). However, an update of the 2007 WWMP and additional focused analysis is required to identify any capital improvement projects to the West Sewer Trunk that would be necessary to serve planned demands of an expanded SOI area.

Storm Drainage:

There is currently no storm drainage infrastructure in the Kiernan Avenue Corridor Area. Although areas south of Kiernan Avenue have been studied in the Draft Storm Drain Master Plan, the area north of Kiernan Avenue has not been studied. The area south of Kiernan Ave within the Kiernan Avenue Corridor Area are discussed under the Kiernan-Carver and Kiernan-McHenry CPDs

The area north of Kiernan Avenue would require master planning to determine the essential infrastructure needs such as number and size of basins, amount and sizing of major conveyance pipes and discharge locations to existing MID facilities or the like. As is required of each CPD and due to the influence of the Kiernan Avenue ROW, the area north of Kiernan Avenue would likely need to plan its own storm drainage system to serve area north of Kiernan Avenue. However, through the master planning process and more detailed facility design efforts there may be opportunities to share some facilities with the Kiernan-Carver and Kiernan-McHenry CPDs such as discharge infrastructure.

The Kiernan Avenue Corridor Area north of Kiernan Avenue is not contiguous to the existing MID Lateral 6 Canal although the eastern area is close to the MID Main Canal. Discharge opportunities to either the MID Main Canal or via upsizing of other proposed infrastructure to the MID Lateral 6 or possibly a combination of both would need to be determined and planned for the area north of Kiernan Avenue.

Water:

The City currently does not provide water north of Kiernan Avenue (outside of Salida) nor has this area been studied as part of the Water Master Plan or Water System Engineer's Report (currently in progress) and therefore, the water facilities required to serve this area have not been determined at this time. The areas south of Kiernan Avenue within the Kiernan Avenue Corridor Area have been studied and are discussed under the Kiernan-Carver CPD.

In general, extensions of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses would be expected to convey water to areas north of Kiernan Avenue. However, other potential facilities such as a tank, transmission mains, and/or expansion of other City water facilities would need to be determined through a master plan update or specifically focused study for this area. Infrastructure phasing needs to serve this area would also depend on development phasing and demands of other CPDs.

New groundwater wells and/or surface water supply (via transmission main) might be needed to serve expected demands of the area north of Kiernan Avenue. For the existing SOI area, the city expects the need for additional water supplies to serve expected future build-out demands. Additional water demands from outside the current SOI would generally increase the city's total build-out demand which would require additional water supplies. The City's long-term water planning effort is tasked with assuring that sufficient water supplies are available to serve future demand needs. The city is pursuing installation of water meters and additional conservation measures that could reduce consumption demands and is also looking at additional surface water supplies, recycled water uses and other alternatives to serve the city's existing and build-out water needs.

Kiernan-Carver CPD

Wastewater:

The Kiernan-Carver CPD will be served by the existing North Sewer and the Dale Sewer Trunks. While a majority of the Kiernan-Carver CPD is within the City of Modesto SOI, the northwestern portion west of the Kaiser Campus and north of the MID Lateral No. 6 is outside the current SOI. Information regarding the sewer infrastructure for the Kiernan-Carver CPD outside the SOI is discussed in this section since it was included in the Wastewater Collection System Master Plan study area.

The Kiernan-Carver CPD is the most downstream CPD served by the existing North Sewer Trunk and therefore has less cost associated with an extension when compared to the Kiernan-McHenry or Hetch-Hetchy CPDs. A 30" diameter extension to Tully Road will be required as the CPD develops. The approximate cost for this extension is $2.31 million.

The western area of the Kiernan Carver CPD (west of the Kaiser Facility) will be served by the extension of Dale Ave/Healthcare Way Trunk (Dale Rd and Healthcare Way), which will consist of 12 to 30" pipes. Approximately 2,700 feet of the Dale Trunk (30" and 27") has already been extended for the portion of Kiernan Carver CPD that lies within the City of Modesto Sphere of Influence (SOI). The 27-inch Healthcare Way pipe has also been constructed. This area will require further sewer line extensions and construction of a future Chapman Road Lift Station to be fully served. The total cost of remaining infrastructure to serve the western portion of Kiernan Carver CPD (including gravity pipes, force mains and lift station) is $ 3.11 million.

Storm Drainage:

There are currently no storm drainage utilities within the undeveloped areas of the Kiernan / Carver CPD Watershed. The Kiernan / Carver CPD was studied in the 2008 Storm Drainage Master Plan under sub-basins 54, 55, 56, 102 and 103 of which only sub-basins 56, 102 and 103 have any existing or proposed storm drainage infrastructure.

Sub-basin 103 is mostly developed with commercial uses and has a positive storm drainage system in place, which discharges to the MID Lateral No. 6 from the Chapman storm basin. Future development within sub-basin 103 will require an increase in size (expand capacity) of the Chapman storm water basin in order to be served.

The developed portion of sub-basin 102 (Kaiser Complex) has a storm drainage system, however, the remaining undeveloped portions north of the Kaiser Complex will required additional privately owned and maintained facilities to serve that area.

The Storm Drainage Master Plan identifies sub-basin 56 as needing approximately 11,400 LF of 30" – 78" pipe to convey storm water runoff into proposed Detention Basin No. 18. A proposed new pump lift station will then discharge storm water into the MID Lateral No. 6. Sub-basins 55 and 54 are part of the Kiernan Business Park East and South Specific Plans, respectively. These two sub-basin areas are proposed to have separate storm drainage storage basins and will share a discharge lift facility to the MID Lateral No. 6.

Water:

The City currently provides water service to the incorporated developed areas within the Kiernan-Carver CPD. The incorporated yet undeveloped area east of Dale Rd and north of Bangs Ave, which is part of the Kiernan Business Park East Specific Plan, is currently not served.

The remaining unincorporated areas of the Kiernan-Carver CPD are also not served with city water and would be considered for water service as future development planning occurs. The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Future wells, tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the Kiernan-Carver portion of future build-out, which would be dependant upon specifics of the land uses being planned and the timing of Kiernan-Carver development with the other CPD areas.

Kiernan-McHenry CPD

Wastewater:

The 470-acre Kiernan-McHenry CPD will be served by the North Trunk Extension. The 30" and 24" diameter sewer pipes are planned to be extended from the current terminus in Bangs Avenue at Carver Rd east to McHenry Avenue (the eastern limit of this CPD). According to the WWCSMP, the total estimated cost of this extension will be $7.23 million. Some developed industrial and commercial areas east of the old railroad tracks have an existing sewer collection system consisting of "dry pipes", which are expected to be connected to the future North Sewer Trunk Extension when it is extended to McHenry Ave.

As previously stated for the Hetch-Hetchy CPD, the North Sewer Trunk flows will be routed into the West Trunk and downstream into the SAPTF. Due to the described sewer routing, downstream improvements for the West Trunk are necessary before the Kiernan-McHenry CPD can be developed. Further details on the downstream improvements required for West Sewer Trunk have been outlined in the 2007 WWCSMP.

Storm Drainage:

There is currently no storm drainage infrastructure in the Kiernan-McHenry CPD west of the old railroad tracks. East of the old railroad tracks, some commercial and industrial developed areas have existing positive storm water conveyance and storage facilities. The Kiernan-McHenry CPD is under study in the 2008 Storm Drainage Master Plan (Draft) and is identified as sub-basin 90, which has been proposed to attenuate runoff flows into future Detention Basin No. 17. From this proposed basin, flows are planned to be discharged into MID Lateral No. 6. Total proposed backbone storm drainage infrastructure in the Kiernan-McHenry CPD will consist of approximately 6,800 LF of 42" – 72" diameter pipes.

Water:

The City currently provides water service to some existing commercial/industrial developed areas in the eastern half of this CPD. This served area essentially includes the developed portion of the North McHenry Corridor Tax Sharing Agreement Area west of McHenry Ave. The Agreement area spans both sides of McHenry Ave, the west side being within the Kiernan-McHenry CPD area. Water service for future development within this area falls under the provisions of the agreement, which are not discussed here, and essentially state that the City will provide water service within the limits that available supply and distribution infrastructure can provide.

The remaining area of the CPD outside the Agreement area is considered undeveloped and not currently served with city water and would be considered for water service as future development planning occurs. The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Future wells, tanks and other supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the Kiernan-McHenry portion of future build-out, which would be dependant upon specifics of the land uses being planned and the timing of Kiernan-McHenry development with the other CPD areas.

Paradise-Carpenter CPD

Wastewater:

The 810-acre Paradise / Carpenter CPD will be served by the West Sewer Trunk via four proposed sub-trunks. The existing County rural developments within this CPD (west of Carpenter Road) are not being served by the City of Modesto sewer system. Details from the 2007 Wastewater Collection System Master Plan regarding the sewer extensions to the Paradise / Carpenter CPD have been summarized below:

1 2,643-feet of 15-inch diameter pipe running west in California Avenue from Ohio Avenue to Grimes Avenue (W-6)

2 2,190-feet of 15-inch diameter pipe in Vineyard Haven running north from Paradise Road to its terminus (W-7).

3 2,395-feet of 15-inch diameter pipe in California Avenue running from east of Ohio Avenue to Grimes Avenue (W-8). This cost will be shared with Highway 132 CPD. Therefore, only half the extension cost will be included in the sewer cost total for Paradise/ Carpenter CPD.

4 2,395-feet of 15-inch diameter pipe in Lynn Avenue running from Dunning Lane to Beverly Drive (W-9).

The approximate total cost for the sewer extensions described above (including half the cost of sewer extension shared by Highway 132 CPD) is $ 3.31 million.

Storm Drainage:

There is currently no storm drainage infrastructure in the Paradise / Carpenter CPD area. The 2008 Storm Drainage Master Plan studied the Paradise / Carpenter CPD as Sub-basin 25, which has been proposed to drain to proposed Detention Basin No. 19. Runoff flows will eventually be routed to MID Lateral No. 5. The storm drainage infrastructure will consist of approximately 13,600 LF of 42" – 78" diameter pipes and a lift station for discharge into the MID Lateral No. 4. It should be noted that a portion of this infrastructure will also be shared with the Highway 132 CPD.

The southern area of the Paradise / Carpenter CPD, near the Tuolumne River area will also be served by approximately 5,200 LF of 30" – 48" diameter pipes and approximately 4,100 LF of parallel 78" diameter pipes. Drainage flows will then be discharged into Dry Creek via a 9 cfs lift station.

Water:

The City currently provides water service to most but not all of the developed parcels within the Paradise / Carpenter CPD. The non-served areas if this CPD would be considered for water service as future development planning occurs. The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Future wells, tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the undeveloped areas of the Paradise / Carpenter CPD, which would be dependant upon specifics of the land uses being planned and the timing of Paradise / Carpenter CPD development with the other CPD areas. Current infrastructure needs required to adequately serve the existing customers within this CPD would be more clearly defined in the Draft Water System Master Plan Engineer's Report.

Roselle-Claribel CPD

Wastewater:

In 2001, 480 acres of the 1,620-acre Roselle-Claribel CPD received a positive Measure "M" vote for annexation into the City. This CPD will be served by the Sonoma and Lakewood Sewer Trunks from which flows are pumped into the River Trunk through the Scenic Sewer Lift Station. From the River Trunk flows are conveyed through the Beard Industrial Park area across the Beard Brook siphon crossing to the Sutter Avenue Primary Treatment Facility (SAPTF).

Currently, the Sonoma Sewer Trunk is stubbed and plugged at the intersection of Wood Sorrel Drive and Sylvan Avenue. The extension of this sewer trunk to serve the Roselle-Claribel CPD will consist of the following alignments:

1. 1,400 feet of 14" diameter force main from existing terminus of the Sonoma Trunk to the proposed Sylvan Ave Sewer Lift Station at Aria Way.

2. 1,500 feet of 27" diameter pipe from the proposed Sylvan Ave Sewer Lift Station north to proposed Bridgewood Way.

3. 2,800 feet of 24" diameter pipe from proposed Bridgewood Way to the northern boundary of Tivoli Specific Plan Area.

4. 2,400 feet of 18" diameter pipe to serve the roughly 470-acre area north of the Tivoli Specific Plan.

5. A new sewer lift station at the intersection of Sylvan Ave-Aria Way.

Construction of the Sylvan Avenue Lift Station is necessary to serve the roughly western 950 acres of Roselle-Claribel CPD, which includes the roughly 480-acre annexed Tivoli Specific Plan Area. Total cost of the sewer lift station has been approximated at $1.85 million (Tivoli Specific Plan Infrastructure Finance Plan, May 2008).

The total cost of the extension of the Sonoma Trunk and the Sylvan Avenue sewer lift station is $5.41 million. More detailed information on the required sewer system improvements for the Tivoli area are provided in the Final Tivoli Specific Plan, Facility Master Plan and Infrastructure Finance Plan (May 2008).

The eastern side of the Roselle-Claribel CPD (east of Roselle Ave) will be served by an extension of the Lakewood Sewer Trunk. The Lakewood Sewer Trunk currently is stubbed and plugged at the intersection of Sylvan Ave and Litt Rd. Details regarding the extension of this sewer trunk have been outlined below:

1. 4,000 feet of 21" diameter pipe extending from the current Sylvan Avenue stub to roughly just south of Plainview Road

2. 4,400 feet of 18" diameter pipe extending from just south of Plainview Road to the terminus in the Roselle-Claribel CPD

A new downstream Beard Brook Sewer Siphon consisting of approximately 1,800 feet of 48" pipe at a total cost of $6.20 million is also required to reliably serve the build-out sewer demands of the Roselle-Claribel CPD and other future build-out demands of upstream growth.

The total cost of extension of the Lakewood Sewer Trunk to serve the Roselle-Claribel CPD is $3.74 million. Total combined cost of extending the Sonoma and Lakewood Sewer Trunks to serve the Roselle-Claribel CPD (including Sylvan Avenue Sewer Lift Station) is $9.16 million not including cost of the Beard Brook Siphon.

Storm Drainage:

There is no existing positive storm drainage infrastructure within the Roselle-Claribel CPD area. The two small existing developed residential areas along Jeffery Drive and Lydia Lane are currently served by rockwells. The Roselle-Claribel CPD will consist of Watershed 98, also known as Tivoli Specific Plan Area, and Watershed 88 (the remainder of the Roselle-Claribel CPD).

Per the Draft 2008 Storm Drainage Master Plan, Watershed 88, which contains almost ¾ of the Roselle-Claribel CPD area, will be routed to a future Detention Basin No. 12 through approximately 28,400 feet of 24" – 72" diameter pipe. Watershed 88 will be proposed to discharge to the MID Lateral No. 6.

Storm water runoff flows from development within the Tivoli Specific Plan Area (Watershed 98) will be conveyed through a combination of secondary storm water basins and one primary storm water basin with a discharge to the MID Lateral No. 6 via a new lift station and force main. The Tivoli Specific Plan Area Facility Master Plan and Infrastructure Finance Plan details the required infrastructure and costs required to serve sub-basin 98.

Water:

The City currently provides water service to some developed areas within the Roselle-Claribel CPD, specifically the residential parcels along Jeffrey Dr, and Lydia Ln and some commercial parcels along Sylvan Ave and Oakdale Rd. These are all within the larger Tivoli Specific Plan area, which has an adopted FMP/IFP and is in the City limits. Infrastructure requirements to serve water to the future Tivoli Specific Plan area developments are detailed in the Tivoli FMP/IFP and generally consist of two new water wells, extension of the city's water grid system of 12 and 16 inch water mains and the necessary smaller distribution pipes.

The unincorporated areas of the Roselle-Claribel CPD (outside the Tivoli SP area) are not served with city water and would be considered for water service as future development planning occurs. The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Future wells, tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined as necessary to serve the Roselle-Claribel CPD through the FMP/IFP process for this CPD and would be dependant upon specifics of the land uses being planned and the timing of the Roselle-Claribel CPD development with the other CPD areas.

Whitmore-Carpenter CPD

Wastewater:

The 690-acre Whitmore / Carpenter CPD will be served by the Ustick Sewer Trunk (aka South Trunk). Approximately 2,100 feet of 12" diameter pipe in Ustick Road from Imperial to Whitmore Avenue will need to be upsized to 24" diameter to increase capacity and prevent future possible overflows due to future development in the Fairview CPD and Whitmore / Carpenter CPD areas. Therefore, this replacement has to be done before the Whitmore / Carpenter CPD can begin to develop. Furthermore, a subtrunk has to be extended westward that will serve the Fairview and the Whitmore / Carpenter CPDs. As described in the Fairview CPD section, the total cost of the upsizing and the extension will be $5.83 million. Prorating this cost based on the areas of the Whitmore / Carpenter and the Fairview CPD, a total cost of $3.53 million should be allocated to the Whitmore / Carpenter CPD.

Apart from the cost to extend sewer to the Whitmore / Carpenter CPD, the Wastewater Collection System Master Plan has specified that approximately 5,700 feet of 18" diameter pipe to be extended from Carpenter Road to the terminus within the Whitmore / Carpenter CPD. The cost of this extension is $2.31 million. Therefore, the total cost for extending sewer to the Whitmore / Carpenter CPD is $7.72 million. The total cost allocated to the Whitmore / Carpenter CPD is approximately $5.83 million.

The existing developed County area (Riverdale) along Hatch Rd. in the northern portion of the Whitmore/Carpenter CPD is currently not served by the City of Modesto sewer system. The sewer for this area consists of individual septic tank systems. Any future consideration of serving this developed area with sewer by the City of Modesto would need to be addressed during the development of a specific plan for the Whitmore/Carpenter CPD or as part of any future annexation of this area. However, upgrading a septic system to a positive gravity system would result in additional and as yet undetermined costs for installing new piping system infrastructure and connection to the existing City Sewer System.

Storm Drainage:

The Whitmore / Carpenter CPD area encompasses Watershed G, Sub-basin 27 of the 2008 Draft Storm Drainage Master Plan. The current land use for this area is mainly agricultural with a small residential development (Riverdale) in the northern portion adjacent to the Tuolumne River. There are no storm water conveyance or disposal facilities currently serving this watershed.

The storm water runoff from Whitmore /Carpenter CPD will be routed to proposed Detention Basin No. 3 via approximately 10,300 feet of 24" – 72" diameter pipes. This includes approximately 450 feet of 24" diameter force main that will convey storm water from Detention Basin No. 3 to the discharge point at the Tuolumne River.

Water:

The City currently does not provide water service to the Whitmore / Carpenter CPD area with the exception of a single emergency metered connection to the Riverdale area. The Riverdale community consists of approximately 170 County residential developed lots located in an area west of Carpenter Rd, south of the Tuolumne River and north of Hatch Rd. The Riverdale water system has a functional well and distribution system, which is not owned or operated by the City of Modesto. On occasion, the Riverdale water system needs to be supplemented with Modesto-supplied water through the emergency connection to maintain water pressures for the community due to power outages and other intermittent water distribution disruptions.

The future water infrastructure needs to serve the undeveloped portions of this CPD area have not been planned in detail at this time but in general would require the extension of the city water grid system consisting of 12 and 16 inch water mains and the necessary smaller distribution pipes as determined by future street alignments and specific land uses. Future wells, tanks and other water supply and distribution infrastructure as required and shown in the Draft Water System Master Plan Engineer's Report to serve build-out of the city would be determined through the FMP/IFP process as necessary to serve the undeveloped areas of the Whitmore / Carpenter CPD, which would be dependant upon specifics of the land uses being planned and the timing of the Whitmore / Carpenter CPD development with the other CPD areas.

APPENDIX B

UNINCORPORATED "ISLAND" REPORT

As part of the 2009 Modesto Urban Growth review update, City departments reviewed the county "island" areas to determine public service needs and the level of fiscal impact from extending city services to these areas. Figure B1 identifies the location of each county island area. This map identifies 26 "islands" totaling 2,700 acres with a total population of 21,145. According to city GIS data, within the 26 areas, there are 5,251 parcels with a total assessed valuation of approximately $550 million (Table B3).

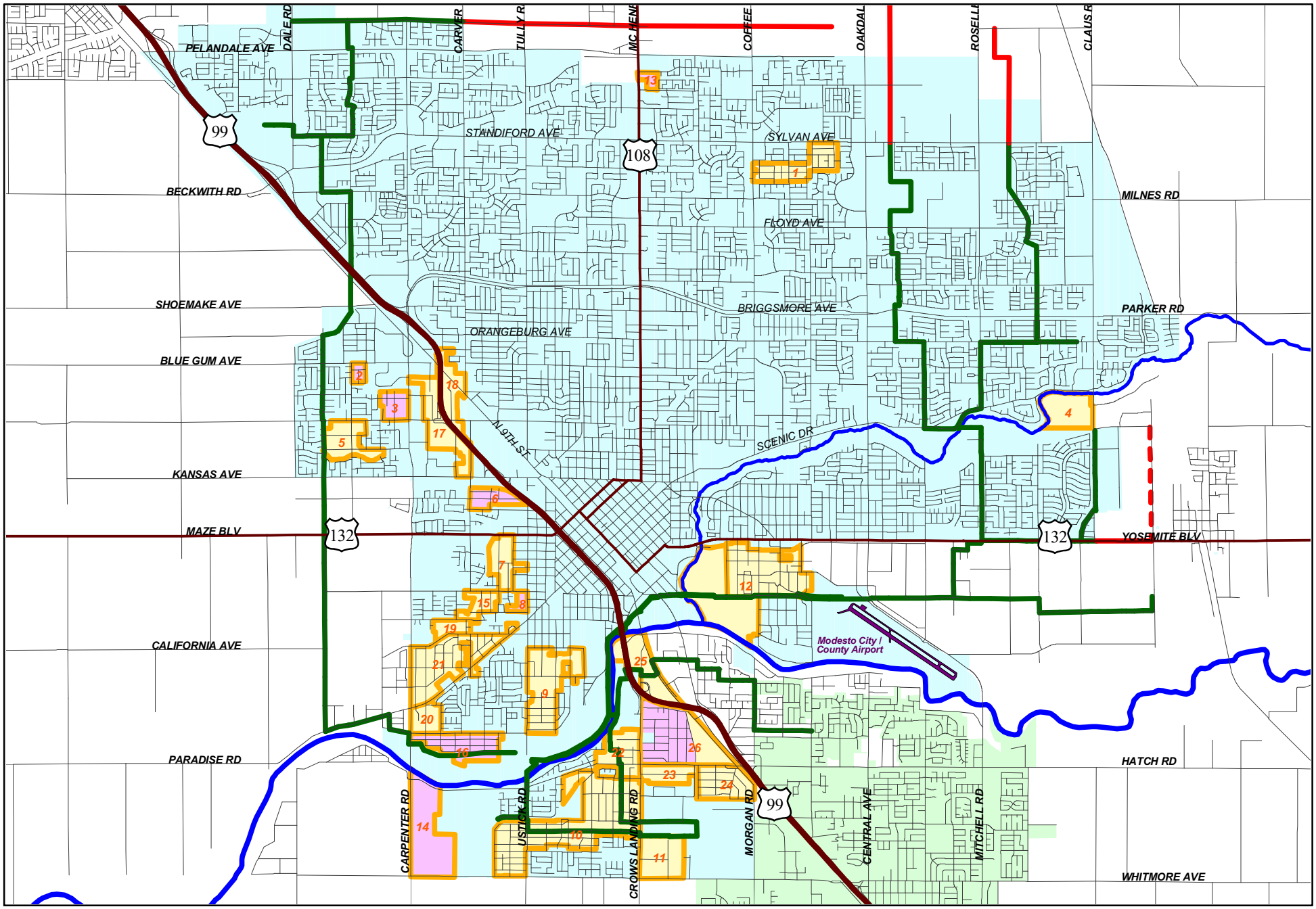
Table B1 represents cost figures associated with extending city services to the county island areas. The service cost report was completed for Parks, Recreation & Neighborhoods, Police, Fire, and Community Development. Table B2 provides a breakdown of infrastructure costs for each island area, updated by City Public Works staff for the 2009 Urban Growth Review Report.

Table B1: Fiscal Impacts by Annexation of Unincorporated Island Areas:

DEPARTMENT	PROGRAM	COST
Recreation & Neighborhoods		
Park Development:	42 additional acres of neighborhood park land (six seven-acre parks) and 21 acres of community park	Neighborhood Parks $2.7 million Community Park $11.0 million
Recreation Services:	After-school services & summer program at each of the six parks	$15,000/year per park site plus $2,000 per park site for start-up costs. Additional staff at $34,000/year plus $2,000 start-up cost.
Code Enforcement	One additional code enforcement officer	$55,000 per year plus start-up costs at $20,000
Building Inspection/Housing Rehabilitation	One additional building inspector	$64,000 per year
Federal Housing & Urban Development funding	Community Block Grant and HOME funds would likely increase	No specific cost factor identified
Youth Scholarship Funding	Increased use of Youth Scholarship program funds	$50,000 annually
Neighborhood Revitalization/Improvement	Service to provide direct link to information on Modesto by two interns	$20,000 annually (short term cost – on 1 – 2 years.
	Sub-Totals	**Start-up Cost: $36,000** **Annual Cost: $328,000** **New Parks: $13,700,000**
POLICE SERVICES	Personnel total	$5,091,450
	Vehicles and equipment total	$724,500
	Sub-Total	**$5,815,950**
FIRE SERVICES	Nine additional positions; $286,000 currently received to provide emergency response services to the Industrial Fire District will be eliminated.	$1,014,000
	Sub-Total	**$1,014,000**
COMMUNITY AND ECONOMIC DEVELOPMENT	Three additional positions at a total annual cost of $150,000 each.	$450,000
	Sub-Total	**$450,000**
OPERATIONS & MAINTENANCE	$750 per year per dwelling unit of additional cost. This is for police, fire, parks, trees, public works operational units that are general fund supported.	$5,250,000 annual cost for service
	Sub-Total	**$5,250,000**
ENGINEERING (Refer to Table A-2 for Details)	***Sub-Totals Follow in Chart***	
	TOTAL	**$12,857,950** ***(1)***

(1) Total represents annual operating costs, and does not include $13.7M for new park facilities or $36K start-up costs for park facilities.

FIGURE B-1



0.5 0 0.5 1 Miles

June 16, 2009

N W E S

City of Modesto

Unincorporated Islands

Unincorporated Islands	Sewer Trunks
No Annexation	Developer Proposed
Measure M Vote Received	Existing
	Proposed

Estimate for County Island Improvements
Updated: January-09
SF ENR CCI = 9,769.42

2009 URBAN GROWTH POLICY REVIEW

COUNTY ISLAND IMPROVEMENTS - SUMMARY SPREADHSEET

Area	Storm Collection	Sanitary Sewer	Water Line	Curb & Gutter	Sidewalk	Streetlights	Signs & Striping	AC Overlay	Manholes	Total Budget (25% cont., 25% eng.)	Total Budget[1] w/o Road Work	Area (ac)
1	$ 239	$ 1,661,750	$ -	$ -	$ 1,207,500	$ 297,000	$ 6,118	$ 1,061,407	$ 176,300	$ 6,891,117	$ 5,223,108	89.4
2	$ 487,550	$ 569,250	$ -	$ 26,400	$ 253,125	$ 120,000	$ 1,900	$ 329,630	$ 64,500	$ 2,894,304	$ 2,376,289	13.3
3	$ 891,520	$ 737,150	$ 405,900	$ 277,200	$ 364,500	$ 150,000	$ 2,436	$ 422,585	$ 81,700	$ 5,207,798	$ 4,543,703	38.4
4	Single Family Residence-No development											83.1
5	$ 1,504,440	$ 989,000	$ 1,364,000	$ 603,240	$ 930,000	$ 277,500	$ 4,712	$ 817,481	$ 98,900	$ 10,295,740	$ 9,011,063	77.4
6	$ 529,340	$ 698,050	$ -	$ 225,060	$ 399,000	$ 202,500	$ 2,352	$ 408,081	$ 77,400	$ 3,971,537	$ 3,330,234	42.4
7	$ 682,570	$ 765,900	$ -	$ 392,700	$ 277,650	$ 195,000	$ 3,082	$ 534,659	$ 81,700	$ 4,583,220	$ 3,743,000	61.7
8	$ 222,880	$ 241,500	$ 184,800	$ 30,360	$ 78,750	$ 67,500	$ 798	$ 138,444	$ 34,400	$ 1,561,613	$ 1,344,047	13.7
9	$ 2,089,500	$ 2,289,650	$ -	$ 1,236,510	$ 1,420,125	$ 510,000	$ 8,284	$ 1,437,185	$ 232,200	$ 14,411,647	$ 12,153,102	153.9
10	$ 2,813,860	Complete	$ -	$ 3,540,240	$ 3,865,500	$ 1,290,000	$ 21,542	$ 3,737,341	$ -	$ 23,857,005	$ 17,983,750	354.6
11	$ 3,214,640	$ 115,000	$ -	$ 275,880	$ 313,500	$ 70,200	$ 1,655	$ 275,570	$ 12,900	$ 6,686,477	$ 6,253,313	112.4
12	$ 2,841,720	$ 2,998,050		$ 1,734,810	$ 1,987,875	$ 660,000	$ 10,803	$ 1,874,274	$ 322,500	$ 19,421,926	$ 16,476,492	387.4
13	Mobile Home Park											12.7
14	Faiview SP Area											171.9
15	$ 431,830	$ 140,300	$ -	$ 244,200	$ 300,000	$ 165,000	$ 1,870	$ 324,356	$ 17,200	$ 2,538,680	$ 2,028,953	37.7
16	$ 1,546,230	Complete	$ -	$ 968,550	$ 1,141,875	$ 382,500	$ 6,517	$ 1,130,630	$ 180,600	$ 8,370,159	$ 6,593,367	96.8
17	$ 1,755,180	$ 892,400	$ 352,000	$ 465,960	$ 612,375	$ 330,000	$ 4,419	$ 766,719	$ 98,900	$ 8,246,801	$ 7,041,898	106
18	$ 1,281,560	$ 569,250	$ 891,000	$ 227,700	$ 675,000	$ 202,500	$ 3,762	$ 652,667	$ 64,500	$ 7,137,404	$ 6,111,734	71.7
19	$ 195,020	$ 523,250	$ -	$ 118,470	$ 99,750	$ 75,000	$ 1,011	$ 175,363	$ 55,900	$ 1,943,381	$ 1,667,797	29.1
20	$ 891,520	$ 1,224,750	$ -	$ 475,500	$ 706,875	$ 240,000	$ 4,047	$ 702,111	$ 137,600	$ 6,847,505	$ 5,744,133	42.7
21	$ 1,978,060	$ 4,301,000	$ -	$ 2,347,950	$ 2,626,875	$ 922,500	$ 15,128	$ 2,637,037	$ 447,200	$ 23,868,359	$ 19,724,352	173.7
22	$ 668,640	$ 611,800	$ 148,500	$ 531,300	$ 570,750	$ 195,000	$ 2,892	$ 501,696	$ 68,800	$ 5,155,278	$ 4,366,859	81.3
23	$ 640,780	$ 816,500	$ 275,000	$ 229,350	$ 275,625	$ 165,000	$ 2,356	$ 408,741	$ 86,000	$ 4,530,237	$ 3,887,898	51.3
24	$ -	$ 1,673,350	$ 1,472,900	$ 704,220	$ 869,625	$ 307,500	$ 5,088	$ 882,748	$ 167,700	$ 9,504,893	$ 8,117,648	86.1
25	$ 2,974,400	$ 772,800	$ 603,000	$ 474,210	$ 538,875	$ 172,500	$ 2,898	$ 473,678	$ 77,400	$ 9,515,250	$ 8,770,602	104
26 [2]	Complete	Complete	$ -	Complete	Complete	Complete	Complete	Complete	Complete	$ -	$ -	208.3
Subtotal	$ 27,641,479	$ 22,590,700	$ 5,697,100	$ 15,129,810	$ 19,515,150	$ 6,997,200	$ 113,670	$ 19,692,404	$ 2,584,300	$ 187,440,332	$ 156,493,343	

NOTE

1. ROAD WORK COST INCLUDES "AC OVERLAY" AND "SIGN & STRIPING" COSTS.
2. SHACKELFORD AREA IS COMPLETE. THE REMAINING AREA TO THE EAST IS NOT COMPLETE.

APPENDIX B

TABLE B-3

City of Modesto

Unicorporated Island Report

Island #	Total Acres	Population 2000	General Plan Designation Acreage											Assessed Valuation	Number of Parcels	Measure M Vote
			Totals								Vacant					
			C	I	MU	OS	R	RC	RPD	VR	R	C	I			
1	89.4	795			9.7		79.7				0.2			$ 24,172,710	275	No
2	13.3	167					13.2		0.1					$ 3,605,159	55	Yes
3	38.4	205	10.3				28.1		0.1					$ 6,385,829	81	Yes
4	83.1	1				1.8	81.3							$ 1,500,395	2	No
5	77.4	157					77.4							$ 8,713,472	68	No
6	42.8	419					0.5		42.3					$ 9,225,006	125	Yes
7	61.7	527					61.7				1.5			$ 8,424,046	120	No
8	13.7	96			13.6		0.1							$ 1,799,800	23	Yes
9	153.9	2076			3.1	0.0	150.8							$ 24,894,800	381	No
10	354.6	4761	43.1				310.7			0.8	45.0	4.1		$ 72,531,832	1,200	No
11	112.4	6	0.03	112.3									33.2	$ 10,613,780	19	No
12	387.4	1660	0.6	197.0		4.9	184.6		0.3				44.4	$ 302,456,581	546	No
13	12.7	398						12.7						$ 1,642,564	1	Yes
14	171.9	14				2.3	4.9			161.9	17.6	19.6		$ 1,311,650	13	Yes
15	37.7	204			37.4		0.3							$ 6,178,340	99	No
16	96.8	1459			22.4	6.4	68.0			0.0				$ 16,877,878	334	Yes
17	106.0	17					0.0		105.9					$ 27,375,214	73	No
18	71.7	31			0.0		1.6		70.0				0.4	$ 11,529,822	35	No
19	29.1	133			11.3		17.8							$ 3,308,082	39	No
20	42.7	682					42.6			0.2				$ 5,841,200	76	No
21	173.7	1942			20.4		136.3		16.9	0.1		0.8		$ 41,081,315	560	No
22	81.3	412	34.8	0.0		0.7	45.7				1.9	5.2		$ 10,409,446	125	No
23	51.3	302	6.5	4.1			40.6							$ 6,608,140	85	No
24	86.1	1349		0.4			85.2						0.01	$ 18,499,611	329	No
25	104.0	1065		87.9		6.8	0.3						5.3	$ 7,275,019	50	No
26	208.3	2047	0.6	56.5			144.5						0.7	$ 30,252,289	503	Partial
Totals	**2,701.1**	**20,925**	**95.8**	**458.3**	**117.9**	**23.0**	**1575.8**	**12.7**	**235.6**	**163.1**	**66.3**	**29.7**	**84.1**	**$ 662,513,980**	**5,217**	

Data Sources:

Population figures obtained from the 2000 Census, Tiger Files / P.L. 94-171

Assessed Valuation information obtained from the Stanislaus County Assessors Office, 2002 Assessment Roll (updated valuation data expected in July 2009)

General Plan data obtained from the City of Modesto Urban Area General Plan, Land Use Diagram

Notes:

All data compled utilizing GIS technology.

May 2, 2003