

# 3 New Growth Areas and Infrastructure

The New Growth Areas and Infrastructure element builds on Turlock’s successful history of growth management and master planning, which has been a main contributor to the city’s enduring compact form, cohesive neighborhoods, and lack of “leap frog” development patterns. By formalizing the master planning process in the General Plan, as well as identifying the City’s infrastructure needs and priorities necessary to serve this new growth and maintain service to the existing urbanized area, Turlock is ensuring that this means of development continues in the future. Moreover, new standards and policies in this element identify important land use and urban design aspects of new developments so that future master plans help achieve the City’s overall goals of providing diverse, compact, walkable neighborhoods.

## 3.1 GROWTH STRATEGY

### BACKGROUND

Turlock has adopted a very wise growth management strategy, which has enabled the city to maintain fiscal stability, preserve farmland, and develop desirable new neighborhoods for its growing population. One logically sized growth area is selected at a time and a master plan is established for its development. Seventy percent of the master plan area must be issued building permits before the next can commence. Turlock has distinguished itself this way over the last planning period and wants to carry forward this successful method of growth and development over the next planning period. The strategy has resulted in attractive new neighborhoods, complete infrastructure, and well maintained new roads and public facilities. Area-wide plans must address land use, circulation, housing, open space, infrastructure, public facilities, and public services consistent with the General Plan.

This chapter summarizes the existing growth management and master planning strategy and adds some key new provisions, such as how to incorporate compact development types, how to achieve neighborhood commercial centers, and how to integrate the City’s parks plan into new residential areas.



This element guides the development of active, vibrant new neighborhoods to serve Turlock’s growing population.



Turlock's growth management strategy has produced a strong "edge" of urban development.

## TURLOCK'S GROWTH MANAGEMENT HISTORY

Turlock's rapid growth in the late 1980s led to concerns about adequacy of public facilities and impacts of expansion on agriculture, which in turn led to adoption of the Growth Management Program (GMP). Due to reduced demand for building permits as a result of the early 1990s recession, the GMP was rescinded by City Ordinance 914-CS on January 14, 1997 as part of the Zoning Ordinance Update.

In 1998, the City of Turlock adopted a Residential Annexation Policy that focuses annexations and growth to one quadrant of the city at one time (City Council Resolution No 98-036). New residential development was designated to occur first in the northwestern quadrant of the City. Focusing development in one area at a time has allowed for the timely and efficient construction of infrastructure and use of resources. Furthermore, in 1999, the City adopted a policy that requires area-wide planning in conjunction with future annexations (City Council Resolution No 99-021).

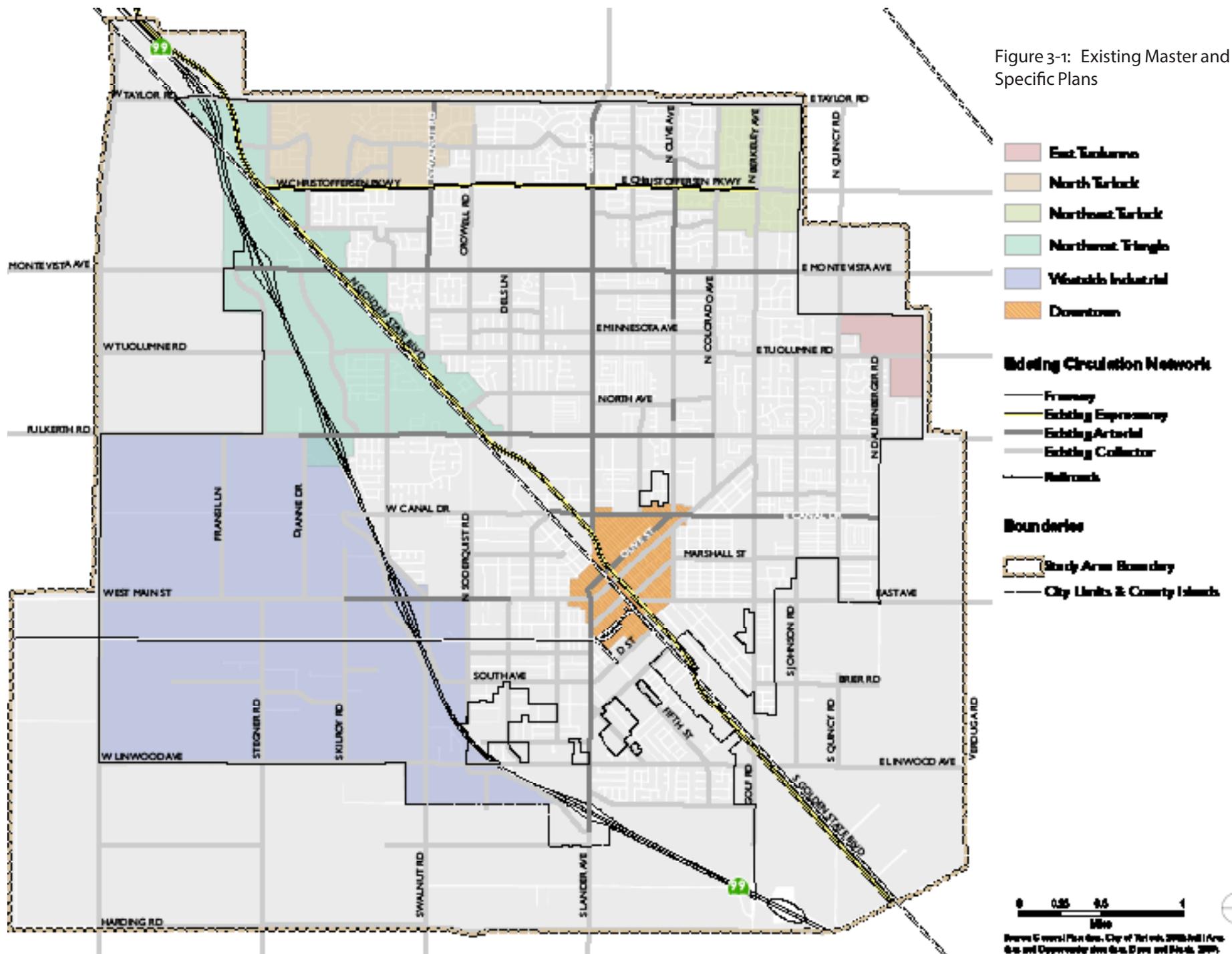
## Existing Master Plans and Specific Plans

In accordance with its growth management strategy, Turlock has adopted a number of Specific Plans and Master Plans following the adoption of the 1992 General Plan, which guide growth in the specified areas. Specific and Master Plans implement General Plan policies by analyzing the land use, circulation, public facilities, infrastructure, and financing issues of particular areas to evaluate their development potential, often prior to annexation by the City. The existing Specific and Master Plan policies are still in effect, and in some cases, the plan areas are still being built out. Figure 3-1 shows the areas where Master Plans and Specific Plans have been established.

### Northwest Triangle Specific Plan (1995, amended 2004)

New residential development was designated to occur first in the Northwest quadrant of the City, and the Northwest Triangle Specific Plan was adopted in 1995 to allow development in that area. The Northwest Triangle Specific Plan (NWTSP) covers an area of approximately 800 acres in the triangle created by Golden State Boulevard to the east, Highway 99 to the west, and Fulkerth Road to the south. Its four goals are to implement the General Plan; allow development to proceed without unnecessary delay (by facilitating the approval of subsequent development projects consistent with the Specific Plan policies); provide for efficient extension of services; and establish funding mechanisms for the improvements.

Figure 3-1: Existing Master and Specific Plans





Development in the North Turlock Master Plan includes linear parks, or ‘paseos,’ through the neighborhoods.

The plan covers land use and urban design; transportation and circulation; infrastructure (including sewer, water, storm drainage, and energy); public services; natural resources and public health; and implementation. A Master EIR was completed in conjunction with the Specific Plan.

Much of the NWTSP area has been built out. Low density residential and community commercial development dominates the southern part of the plan area. Highway-oriented commercial uses occupy the northern part of the plan area along Monte Vista Avenue. Some agricultural land still remains in the southwest area, along West Tuolumne Road. The Pedretti Park community ball fields are also in the plan area. Additionally, there are several other parcels adjacent to the plan area that were not included in the plan or annexed that could be included in the Specific Plan area, but this would necessitate an update to the Specific Plan and associated environmental documentation.

#### North Turlock Master Plan (2001)

The North Turlock Master Plan (NTMP), completed in 2001, guided development in the Northwest quadrant of the City. The NTMP plan area is just east of the NWTSP, bounded by Tegner Road to the west, Christofferson Parkway to the south, Crowell Road to the east, and Taylor Road and the Turlock Irrigation District Lateral 3 to the north. The plan area encompasses approximately 370 acres. At the time of the plan’s creation, the land under study was not yet annexed to the city.

The primary objective of the NTMP was to incorporate “smart growth” planning and design principles into the development of cohesive neighborhoods. The plan established a wide range of land uses, including low, medium, and high density residential, commercial, office, schools, and park sites. Furthermore, the residential, school, and open space areas were to be linked by a network of pedestrian and bike trails. As built, the neighborhoods in the NTMP include other “neo-traditional” design elements such as narrower streets, a diversity of housing types, homes oriented towards the street, and several streets with wide landscaped medians.

The NTMP plan area also includes Turlock’s second high school, John H. Pitman (the first high school to be built in Turlock since 1904), and the new Regional Sports Complex.

### Northeast Turlock Master Plan (2004)

The next master plan, the Northeast Turlock Master Plan (NETMP), focused on an area at the northeast corner of the City. Covering approximately 255 acres, the plan area is bounded on the north by Taylor Road and the Turlock Irrigation District Lateral 3; on the east by the rear parcel lines of the lots that front the east side of Berkeley Avenue; on the south by the midpoint between Christofferson Parkway and Monte Vista Avenue; and on the west by Colorado Avenue, with a rectangular “finger” that stretches along Christofferson Parkway to Olive Avenue. At the time of the plan’s creation, the subject area was not yet annexed to the city.

The NETMP pursued the goal of expanding carefully guided development (primarily residential) to the northeastern edge of Turlock and integrating it into the rest of the city. At the same time, the NETMP endeavored to create a well-defined “edge,” maintaining a clear separation between Turlock and the neighboring community of Denair. Nearly all of the land in the plan area prior to development was productive agriculture, but the area had been designated for growth in the General Plan.

As built, the NETMP area consists primarily of low density residential development, transitioning into very low density residential development toward the plan area’s eastern edge. A greenbelt buffer, creating a transition zone from urban to rural uses between Turlock and Denair, includes detention areas and a community trail.

### East Tuolumne Master Plan (2005)

The East Tuolumne Master Plan (ETMP) was adopted by the City in 2005. The plan area covers approximately 100 acres along East Tuolumne Road between North Quincy and North Waring Roads. The purpose of the ETMP is similar to the Northeast Turlock Master Plan—to create a smooth transition from urban to rural land uses along the City’s eastern border, while creating a distinct boundary between Turlock and Denair.

The plan calls for the development of very low density (generally less than three dwelling units per acre) single family homes, with some open space and trails. However, since the plan’s adoption, the market conditions in Turlock have not supported developing the land in this manner. The planning area remains largely agricultural with a few existing estate homes.



The Northeast Turlock Master Plan includes a well-designed buffer area between urban and agricultural uses, including landscaping, a multiuse trail, and a linear stormwater basin.

### Westside Industrial Specific Plan (2006)

The Westside Industrial Specific Plan (WISP) is the most recent of the City’s Specific Plans, and the first to focus exclusively on non-residential development. The Plan Area covers 2,615 acres, bounded by Fulkerth Road to the north, Highway 99 to the east, Linwood Avenue and Simmons Road to the south, and Washington Road to the west. The Plan Area, also referred to as the Turlock Regional Industrial Park or TRIP, is partially developed with industrial and commercial uses, and the majority of the site is currently used for agriculture.

The City prepared the plan in order to facilitate economic growth in the industrial sector, with an emphasis on agricultural products, food processing, and related businesses. Through development of the WISP, Turlock aims to implement the General Plan’s goal for a major industrial center in Turlock, simultaneously improving the jobs-housing balance in the area. The plan covers land use regulations, design guidelines, and phasing. Through the creation and nurturing of an ‘Agri-Science’ industry cluster, which would include biotech, life sciences, and agri-business, the WISP aims to create a “bridge” for Turlock’s current agriculture and manufacturing industries to transition to newer products and technologies.

## MEETING GROWTH PROJECTIONS

### Household Growth Projections

Section 2.3 of the Land Use and Economic Development Element (Chapter 2) establishes low and high range population growth estimates (Table 3-1).

The General Plan uses the low end of these projections as the target number of households to accommodate over the course of the planning period (through 2030). However, the City acknowledges that due to this current climate of slow growth and economic recovery, it is also possible that Turlock’s population will not even achieve this low end projection by 2030.

TABLE 3-1: PROJECTED ADDITIONAL HOUSING NEED	
	APPROXIMATE ADDITIONAL HOUSING UNITS NEEDED BY 2030
Low Range	12,000
High Range	18,000
Midpoint	15,000

Source: EPS, 2009

### Development Sites within City Limits

According to their General Plan Land Use designations, infill sites (those that are vacant or substantially underutilized) have a maximum capacity for approximately 5,000 new housing units. However, given site constraints, property owners' intentions, and other factors, it is likely that only a portion of these sites will actually develop over the next 20 years; an estimate is 60 percent (3,000 units). The remainder of the development needed to house Turlock's expected growth would be within new neighborhoods in master plan areas, several of which are outside of the current city limits. The phasing and capacity of these areas is described below.

### Growth Phasing and Development of Master Plan Areas

Total development permitted under the General Plan land use diagram accommodates a reasonable amount of growth given regional projections and current market conditions, and historical trends. In fact, there is substantial capacity for new residential development within city limits on infill parcels throughout Turlock as well as in partially built out master plan areas (specifically the Northeast Turlock Master Plan and the East Tuolumne Master Plan areas). In addition to these master plans, the General Plan defines three additional new master plan areas: Southeast 1 (also known as Morgan Ranch, and located within city limits), Southeast 2, and Southeast 3. Areas 2 and 3 are outside of city limits. Policy 3.1-p requires that 70 percent of the aggregate housing units in the Northeast Turlock Master Plan, the East Tuolumne Master Plan, and Southeast 1 (Morgan Ranch) must be issued building permits before annexation, master planning, and development of Southeast 2 may begin. Table 3-2 shows the development potential and cumulative development by area.

### PREZONING AND ANNEXATION

Turlock's current pre zoning and annexation ordinance allows the City to prezone unincorporated land adjacent to the city limits for the purposes of establishing the zoning that will apply in the event that the land is annexed to the City. The purposes are twofold:

1. To promote the orderly development and expansion to boundaries of the City and
2. To protect, preserve, and promote the quality of life in the City by establishing control over the quality, distribution, and rate of growth in the City of Turlock.



A substantial amount of development needed to support future growth can be accommodated on vacant and underdeveloped sites within city limits.

TABLE 3-2: RESIDENTIAL DEVELOPMENT POTENTIAL BY AREA				
AREA	HOUSING UNITS BY AREA	CUMULATIVE HOUSING UNITS	POPULATION BY AREA	CUMULATIVE POPULATION
Existing (2010)	24,400	24,400	70,000	70,000
Approved Projects	1,400	25,800	3,800	73,800
Infill	4,800	30,600	12,700	86,500
Southeast 1 (Morgan Ranch)	1,200	31,800	3,300	89,800
Southeast 2	2,000	33,800	5,500	95,300
Southeast 3	3,400	37,200	9,300	104,500
Total		37,200		104,500
Note: Totals may not sum due to rounding. Totals are an approximation and may not represent precise future buildout due to the range in allowable density for all land use types and master plan areas.				

Land to be rezoned (and subsequently annexed) must be adjacent to the current city limits, located within the primary sphere of influence, and be planned for development consistent with the designations in the General Plan. The proposed development must also show that it fully mitigates all potential impacts to the schools, public park and recreation facilities, public safety facilities, and infrastructure.

The ordinance also requires that proposed annexations be accompanied by an area-wide plan, which may be accomplished either by a Specific Plan (subject to State government code requirements) or a Master Plan, with requirements specified by the City. Master Plans must describe the location and development standards for land uses and intensities; roads, utilities, and other public infrastructure; and parks, schools, and other public space. It must include a phasing plan and identify means of financing public improvements. The plan must also identify and describe any mitigation measures needed to offset any environmental impacts, and finally discuss consistency of the proposed Master Plan with the General Plan (including the Housing Element).

The General Plan supports the continuation of Turlock’s rezoning, annexation, and master planning strategy. It has proven to be a successful tool for creating desirable new neighborhoods, ensuring that new development pays its way and does not strain the City fiscally, and allowing Turlock to become a growth management model for other Valley cities facing similarly rapid population growth. New policies in this section build on Turlock’s development strategy, strengthening it to ensure that new growth areas create complete neighborhoods with a mix of uses and a range of housing types to best serve the city’s current and future population.

## COUNTY ISLAND STRATEGY

Turlock has a number of unincorporated “County Islands,” areas of unincorporated county land that are surrounded by incorporated Turlock on all sides. The islands are a result of piecemeal annexation over the years and property owners’ interests and preferences. Generally, the county islands are not served by City infrastructure or services; some have no curb and gutter improvements and their roads are not maintained to City standards. Similarly, Stanislaus County is technically responsible for their public safety services.

Turlock has an interest in incorporating the county islands and bringing their public infrastructure up to City standards, as this would help ameliorate public health and safety concerns. However, willingness on the part of landowners and Stanislaus County is necessary for incorporation, as is funding for infrastructure upgrades. Turlock is in the process of negotiating a cost-sharing strategy with the County that would split the cost burden between the two jurisdictions. Some of the county islands and fringe communities are located within master plan areas. Master planning provides a funding mechanism for infrastructure improvements within these fringe communities. However, the Southern Peninsula Fringe Community ( F/G/H and I Streets ) is not currently located in a master plan area. The nearest master plan is Southeast 3 Master plan. To comply with SB 244 and LAFCO policy the boundaries for Southeast 3 Master Plan will need to be amended to incorporate this fringe community to ensure that an additional county island area is not created to comply with SB 244 and LAFCO policy. For the largest of the islands (the “Montana-West” area), incorporation would likely take place through a master planning process similar to that for other unincorporated areas outlined later in this chapter. The boundary of the Montana-West master plan area is shown on Figure 2-2. It is also designated as a master plan area similar to Southeast 1, Southeast 2, and Southeast 3, but is not subject to the phasing policy that restricts when master plan development may proceed; in other words, development of Montana-West could proceed at any time.

While a formal master planning process may not take place for incorporation of the smaller county islands, property owners seeking annexation must still demonstrate that they have a plan to finance the needed improvements to bring their properties up to City infrastructure standards. At the time that annexation is being considered, the City and property owners may



A number of county islands lack curb and gutter infrastructure. A financing plan for these and other infrastructure improvements is necessary for incorporation.

also reexamine the General Plan land uses designated on the properties and determine whether higher density/intensity uses are warranted or desirable, especially if increasing the intensity of development would improve the financial feasibility of incorporation.

The City’s overall strategy for County Island incorporation is described in Policy 3.1-m. The preliminary approach to the Montana-West area—treating it as a master plan area—is described in further detail in Section 3.2.

## POLICIES

### Guiding Policies

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- 3.1-a Proactively manage growth. Proactively manage and plan for growth in an orderly, sequential, and contiguous fashion.
- 3.1-b Minimize negative effects through use of fiscal and infrastructure tools. Plan and implement growth so as to minimize negative effects on existing homes and businesses within and outside the City. This shall include working with the County to establish fiscal and infrastructure tools to ensure that improvements to County roads and other infrastructure are being made as new development proceeds.
- 3.1-c Promote good design in new growth areas. Design new growth and development so that it is compact; preserves natural, environmental, and economic resources; and provides the efficient and timely delivery of infrastructure, public facilities, and services to new residents and businesses.
- 3.1-d Maintain fiscal stability. Ensure that costs associated with new growth do not exceed revenues, and the City’s fiscal stability is maintained.
- 3.1-e Continue prezoning. Continue to promote orderly expansion of the City’s boundaries through prezoning territory prior to annexation.
- 3.1-f Provide adequate public services. Ensure the adequacy and quality of public services and facilities for all residents.

- 3.1-g Master Plan Areas. Plan for growth in phases and discreet master plan areas, so that neighborhoods are fully planned and at least 70 percent of building permits issued prior to the construction of the next master plan area.
- 3.1-h Provide a range of housing types. Ensure a balance of housing types affordable to the complete range of income and age groups.
- See also policies in the Housing Element.

### Implementing Policies

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- 3.1-i Utilize Housing Element. Integrate Housing Element program components with growth policies.
- 3.1-j Capital improvement program review. Continue to annually review the City's Capital Improvement Program in order to increase capacity of needed public services in response to City growth.
- 3.1-k Northern boundary establishment. Maintain Taylor Road as the northernmost boundary of urban development. The exception to this policy is for the area along State Route 99 at the northwestern corner of the Study Area (south of the Keyes Community Plan boundary).
- 3.1-l Capital Facilities Fee program. Update the Capital Facilities Fee (CFF) to cover improvements and infrastructure that are used by residents and businesses citywide. The CFF shall include:
- Major new transportation infrastructure such as arterials, expressways, railroad and highway overcrossings, and interchanges
  - New bicycle lanes, traffic signals on existing streets and other operational improvements
  - New transit facilities and amenities
  - Downtown parking lots and structures
  - Regional rail facilities
  - Public landscaping
  - Park and ride facilities
  - Traffic calming strategies
  - Police and fire services

- General government services

The CFF shall not cover the costs of new collectors and local streets in new development areas, as these are to be funded through Master Plan fees. The CFF update shall also reflect the lower impacts of walkable neighborhoods within the city.

- 3.1-m Develop County Islands incorporation strategy. As development proposals for county island incorporation come forward, develop a financial plan with Stanislaus County to implement infrastructure improvements and any other requirements for annexation. The plan shall include a schedule and a priority list, focusing initial efforts on the Montana-West area, as a master plan. It is the City's preference that whole county islands incorporate at one time; however, individual project-level proposals shall also be considered if the applicant can prove ability to provide the required infrastructure improvements. Preparation of financial plans may also offer the opportunity to reexamine these parcels' General Plan land use designations, and consider increasing density/intensity if it facilitates the financial feasibility of incorporation.
- 3.1-n Continue rezoning and annexation. Continue to require that proposals for rezoning and annexation comply with the Residential Annexation Policy, Area-Wide Planning Policy, and the municipal code requirements relating to orderly and contiguous development, and public services and facilities. The policies under the City's Rezoning and Annexation ordinance shall be amended to reflect the new policies for master plans enumerated in Section 3.2.
- 3.1-o Update existing master and specific plans. For existing master and specific plans that are not yet fully built out, evaluate the current plans for consistency with the new land use designations and other policies outlined in this General Plan, and update as necessary. Where the land use diagram (Figure 2-2) proposes a higher intensity land use within the boundary of an existing master or specific plan, rezoning shall occur only after the specific or master plan is updated and adopted. In these cases, until such time that the specific or master plan is updated, the current zoning for the property shall remain in place. Changes in designation that result in equal or lower intensity may be processed as part of the Citywide rezone action required to implement the new General Plan. The Northwest Triangle Specific Plan and the East Tuolumne Master Plan are high priorities for evaluation and updating.

3.1-p Timing. A new master plan area may not proceed with planning, annexation and development until 70 percent of the building permits associated with the previous area have been issued. Prior to proceeding with the planning, annexation, and development of Master Plan Area Southeast 2, 70 percent of the building permits shall be issued for the Northeast Turlock Master Plan, East Tuolumne Master Plan, and Southeast 1 (Morgan Ranch), calculated on a cumulative basis.

### 3.2 LAND USE AND DESIGN OF NEW GROWTH AREAS

#### DESIGNATING NEIGHBORHOODS: A NEW GENERAL PLAN APPROACH

This General Plan introduces a new concept of designating residential neighborhoods. Rather than assigning specific land use designations to individual parcels (like the previous General Plan), this approach identifies future master plan areas for new residential neighborhoods. While the City has engaged in the master planning process for some time, this General Plan is the first to specify the locations, boundaries, and phasing of those master plans in the document. The mix of uses, types of development and average density are defined for each master plan area.

The plan specifies a mix of uses that each master plan area must include, but does not precisely dictate where each land use must go. For instance, a neighborhood type might be required to include certain minimum percentages of housing at different densities, a minimum percentage of park land, schools, and public space, and a percentage of commercial and/or office uses. When a master plan is prepared for the development of the neighborhood, it must conform to these specifications. Precise locations of each land use are to be determined during the master planning process. The General Plan includes illustrative examples of how the required neighborhood specifications could be achieved, in the next section.

Each of the areas is given a general designation of a residential density range. Residential density is not assigned on a parcel-specific basis. Rather, when the area is master planned and developed, the overall density and number of units in the master plan area would have to meet this target (or exceed it by up to 20 percent), and would include a mix of housing types. When the master plan is approved, zoning is also put in place to reflect the specific land uses at the same time.



Residential development in new master plan areas will incorporate a variety of housing types and densities.

## COMPACT NEIGHBORHOODS

The character of the residential neighborhoods proposed for development over this planning period is more compact than the type of development that Turlock has seen over the last 10 years. The proposed residential neighborhoods include a mix of traditional single family, small-lot single family, townhouses, and multifamily apartments or condominiums.

### Why Compact Neighborhoods?

Turlock will be trending towards more compact residential development for several reasons:

- *Changing demographics*, relating to an aging population, means that there will be greater demand for smaller housing types. The number of residents over the age of 60 is growing rapidly, more than any other age group. Turlock has built up its single family detached housing stock significantly, and the next planning period needs to provide smaller housing types needed by seniors and other small households such as singles, empty-nesters, and single parents.
- *State mandates for greenhouse gas emission reductions* mean that Turlock will have to explore ways to reduce its carbon footprint. Land use and transportation are the single most important factor in achieving this goal. More compact housing means that residents can travel more easily on foot or by bicycle, and make fewer, shorter car trips.
- *Conservation of agricultural land*. Higher density development results in less farmland converting to nonagricultural use, helping Turlock support its agricultural economic base and farmland that creates a greenbelt.

### Demographic Factors and Housing Types

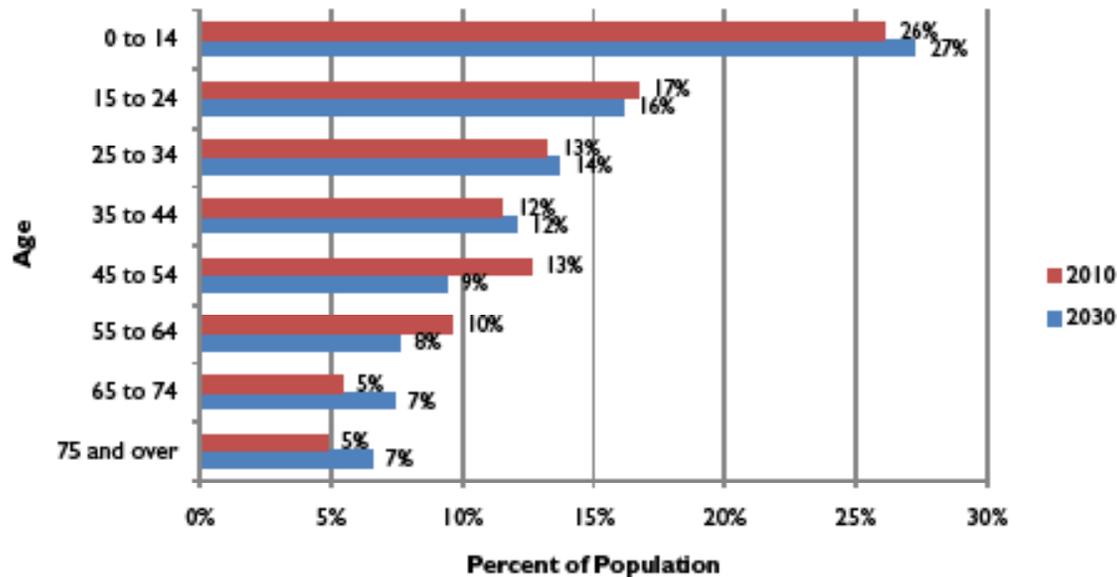
An important component of designing future neighborhoods is planning for an appropriate proportion of single family (very low, low and low-medium density) and multifamily (medium and high density) units. Estimating the number and percentage of these various unit types is driven by demographic trends and projections, by examining the average household sizes and age of householders in different unit types.

Demographic analysis (using Census and California Department of Finance data) shows that by 2030, Turlock's demographics will have shifted such that a greater percentage of the population

is over the age of 65, and the percentage of adults aged 45-64 will have fallen (Figure 3-3). These changes in the city’s age profile have implications for the type of housing that should be provided over the course of the General Plan buildout.

The data regarding housing type choices confirms what logic tells us. Young and small households often prefer multifamily units because of their affordability and their appropriateness for their household size and stage in life. Families and middle aged couples often prefer single family homes, which give them more space to raise children; at this stage in life, single family homes also become more affordable. Some families break up and need a smaller unit for their “new start” household. Finally, empty nesters, retirees, and elderly households often downsize to multifamily units again, due to a need for less space, a desire to reduce home maintenance responsibilities, lower incomes in retirement, and limitations on mobility. However, a significant percentage of seniors also choose to stay in single family homes they have purchased earlier and age in place.

Figure 3-2: Projected Population Age Cohorts, Turlock (2010 and 2030)



Source: California Department of Finance, 2008



Over the course of the General Plan buildout, an increasing proportion of Turlock’s population will be over the age of 65.

It is important to remember that existing conditions do not necessarily dictate future demand. It may be that some households reside in units that are unsuitable or are not their preference based on what is currently available, and that if given more options, they would choose a different housing arrangement. Therefore, broader trends in housing demand must also be considered when determining the future housing type mix.

In order to match Turlock's projected age demographics, just over half (54 percent) of the new development over the planning period should be single family detached units, and the remainder should be multifamily units. Adding this proportion of housing types would result in Turlock's entire housing stock reaching a split of 60 percent single family detached and 40 percent single family attached and multifamily. Currently, it is at 70 percent single family and 30 percent multifamily.

### Average Residential Densities across Master Plan Areas

The Master Plan Areas are each assigned a Residential Neighborhood designation, which sets the overall target residential density that the area must achieve. The housing mix for each master plan area must, while incorporating a range of housing types, achieve a minimum average density overall. Each neighborhood type also specifies a maximum average density. In each case, the maximum average density allowed is 20 percent higher than the minimum. If the developer of a master plan area wishes to build to a higher density than 20 percent above the minimum, then a General Plan amendment and an analysis of environmental impacts would be required.

The target density is specified for each master plan area or sub-section of a master plan area, and will be one of the following (Table 3-3):

- **Low Density Neighborhood:** Minimum average density of 5.0 units per gross acre; maximum average density of 6.0 units per gross acre;
- **Compact Mixed Use Neighborhood:** Minimum average density of 8.0 units per gross acre; maximum average density of 9.6 units per gross acre; and
- **Very Compact Mixed Use Neighborhood:** Minimum average density of 11.0 units per gross acre; maximum average density of 13.2 units per gross acre.

**TABLE 3-3: MINIMUM AND MAXIMUM AVERAGE DENSITIES IN NEW RESIDENTIAL NEIGHBORHOODS**

RESIDENTIAL NEIGHBORHOOD TYPE	MINIMUM AVERAGE DENSITY (GROSS DU/AC)	MAXIMUM AVERAGE DENSITY (GROSS DU/AC)
Low Density	5.0	6.0
Compact	8.0	9.6
Very Compact	11.0	13.2

In order to achieve the minimum average density, individual housing developments within the master plan area may be above or below that density. In other words, each master plan will likely include a full range of housing types, from single family detached to townhomes and multifamily condominiums and apartments. The mix of these housing types over the entire master plan area must achieve the target minimum density, on average.

Mixed Use Residential Neighborhoods also contain non-residential uses, generally consisting of a neighborhood center with neighborhood-serving commercial uses, a park, and a school. The neighborhood center should be walkable from the majority of households. Specific requirements for the mix of residential uses, non-residential uses, and other features of each Residential Neighborhood are found in Section 3.2.

### Neighborhood Center Land Use Classification

The Neighborhood Center classification designates mixed use areas outside of Downtown—new neighborhood centers designed as part of new master planned residential neighborhoods. Neighborhood Centers are intended to serve as multi-use anchors for neighborhoods, emphasizing pedestrian access and orientation. Sites designated NC are required to have ground-floor retail, restaurants, or service uses facing the street, with offices and/or housing either above or behind. Both vertical and horizontal mixed use developments are permitted. Buildings are required to be oriented towards the street and may be up to four stories tall. Residential uses may be built at densities ranging from 7.0 to 22.0 units per acre (gross), with an average of around 15.0. If the mix of uses on the site includes residential and commercial/office uses, these non-residential uses in



Neighborhood centers may include mixed use developments, with ground floor retail or office uses and housing above.

this classification shall generally be built to an FAR of 1.0, and up to 1.5 if two stories, in addition to the allowable residential density. Pedestrian linkages through the development to neighboring housing or other uses are encouraged; further design specifications and development standards are described in Chapter 6: City Design.

## POLICIES COMMON TO ALL MASTER PLAN AREAS

The General Plan Land Use Diagrams (Figure 2-2 and 2-3) delineate four master plan areas: three in the southeast and one centrally located in the city (the Montana-West county island area). Each master plan area will be planned and developed via an area plan (either a Master Plan or a Specific Plan), in accordance with the phasing schedule described above, that conforms to the requirements set forth in the City's Rezoning and Annexation ordinance and this section of the General Plan.

A number of planning and design features should be common to all of the new master plan areas, which are described in the policies below. Additional requirements pertain to some master plan areas individually, which are detailed in the subsequent section and depicted in Illustrative Master Plan Diagrams for each area. These are intended to provide guidance for the master planning process and to clearly state the City's intentions for these areas. Where the size, location, and/or configuration of a certain land use or feature is considered critical to the master plan area's design and function, it is included. However, in general, details such as park size, wet utility infrastructure sizing, and urban design criteria for new development in the master plan areas is not provided in this section. Rather, it is assumed that all new development will conform to the standards and policies set forth in other relevant sections of this document. Phasing of infrastructure improvements will be established in the master plan documents.

### Principal Master Plan Area Policies

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#### Size and Boundaries

- 3.2-a Master plan size. A new master or specific plan should be approximately 200 to 400 acres in size, and occupy a logical area, contiguous to the city limits.

However, one master plan area shown on Figure 2-3 is larger—Southeast 3—because it incorporates a large area of existing low density housing (rural “ranchettes”) and other existing commercial and industrial development.

- 3.2-b Rights of way within planning boundary. Rights of way, utilities, and agricultural buffers shall all be included within the master plan boundary.
- 3.2-c Urban/rural edge. Where master plan areas meet the edge of the study area boundary (outside of which land remains in agricultural use), deep landscaped setbacks and agricultural buffers shall be used to screen the edge of urban development. Acceptable buffer types and setback requirements are found in Section 6.1.

#### Land Uses, Intensities, and Mix

- 3.2-d Minimum average densities established for master plan areas. Each master plan, or portion of a master plan, must be built to achieve the minimum average residential density specified on the Land Use Diagram and may go up to an overall average density that is 20 percent higher. (If the developer of a master plan area wishes to build to a higher density than 20 percent above the minimum, then a General Plan amendment and an analysis of environmental impacts would be required.)The minimum density calculation does not apply to land that is to be used for public parks, schools, or other non-residential uses.
- 3.2-e Mix of housing types and densities required. Each area will have a required mix of housing types, including traditional single family, small-lot single family, townhouse, and apartments/condos. The housing mix must achieve the minimum average density specified for each master plan. Regardless of the minimum average density, every master plan must include a minimum of 15 percent multi-family units.
- 3.2-f Neighborhood centers required. A “neighborhood center” location shall be zoned and required, and will include a park, school, local-serving retail and/or office uses, and some upper-level or adjacent multifamily residential development. The zoning ordinance shall also be updated to reflect and allow this type of mixed use designation.

Appropriate non-residential land uses for neighborhood centers in residential areas include, but are not limited to, those in the following list. Drive-through establishments are strongly discouraged.

- Grocery and other convenience retail sales



Elementary schools serve as anchors for new neighborhoods. Schools are generally located adjacent to parks to facilitate sharing of facilities.

- Personal services
- Banks and financial institutions
- Restaurants, coffee shops, and cafes
- Upper level residential
- Business and professional offices
- Medical and dental offices
- Day care centers
- Community centers
- Cultural institutions (libraries, museums, theaters)
- Parks and schools

#### Schools, Parks, and Public Facilities

3.1-g Parks and trails provided in new neighborhoods. The master plan areas will include park sites, a pedestrian/bicycle network of trails, and a multi-use agricultural buffer along the edge (serving park, stormwater detention, trail, and buffer purposes). When a school is present, a neighborhood park shall be located adjacent to it whenever feasible. The minimum amount of gross land area in a master plan devoted to parks and public facilities shall be 10 percent, and should generally be higher.

Parks are to be provided according to the citywide size and distribution standards listed in Section 4.1.

3.2-h Schools in new neighborhoods. Neighborhoods shall include sufficient schools to support the residential population. Schools shall be located along local, collector, or arterial streets, but entrances may not be located on arterials.

Schools are to be provided according to the citywide size and distribution standards listed in Section 4.3.

In most cases, these will be elementary schools; however, given expected population growth, a new middle and high school will also be needed. The master plan areas in which these secondary schools belong are described in the subsequent sections. For some master plan areas, existing schools near new development have sufficient capacity to support the new population, and where that is the case, new schools will not be required.

3.2-i Dedication for public uses. Based on the proportional impacts of development on the demand for public services and facilities, a portion of any new residential neighborhood shall be conveyed

or voluntarily committed in fee simple title to the City for public uses, including but not limited to schools, libraries, and police and fire stations. These conveyances must be in a development agreement or other form approved by the City Attorney.

Land needs for these public uses shall be determined by the citywide standards and policies described in Section 4.2 (Community Facilities) and Section 10.4 (Public Safety).

### Streets, Blocks, and Connectivity

- 3.2-j Consistency with General Plan circulation diagram. In order to ensure connectivity to the existing city, through new neighborhoods, and to the freeway, collector and arterial streets in master plan areas must be designed, and sufficient right-of-way reserved, to comply with the citywide circulation plan described in Chapter 5. Minor deviations may be approved provided that they have no negative impact on the overall circulation network.
- 3.2-k Maximum block sizes. Encourage a fine-grained street pattern, vehicular and pedestrian connectivity, and a human scale of development by requiring maximum block sizes, measured from street centerline to street centerline:
  - In low density residential areas, block length shall not exceed 660 feet.
  - In medium and high density residential areas, block length shall not exceed 500 feet, with the ideal block length around 300-400 feet.
- 3.2-l Limit Cul-de-sacs. Cul-de-sacs, hammerheads, or similar dead-end streets shall not make up more than 10 percent of the total length of all streets in a master plan area. Pedestrian connections through the ends of cul-de-sacs to adjacent through streets are encouraged, especially where such pathways would facilitate connections to parks or schools.
- 3.2-m Local street connections between neighborhoods. Where a new residential subdivision occurs adjacent to undeveloped land, which is planned to be developed as part of a master plan, stubs must be provided for future connections to the edge of the property line. Where street stubs exist on adjacent properties, new streets within a new subdivision shall connect to these stubs.
- 3.2-n Pedestrian and bicycle connections. Continuous and convenient pedestrian and bicycle connections shall be provided from every home in a master plan area to the nearest neighborhood center, school, and park. Pedestrian connections may be in the form of sidewalks, linear parks, or Class I multi-use trails. Bicycle connections may be in the form of Class I, Class II, or Class III bicycle facilities (refer to Section 5.3), and local streets.



Pedestrian and bicycle connections through neighborhoods improve access from homes to parks, schools, and other destinations.

3.2-0 Roadway cross sections in master plan areas. To improve the safety of pedestrian and bicycle travelers, the roadway typologies identified in the Active Transportation plan shall be required in new master plan areas.

## MASTER PLAN AREA: SOUTHEAST 1 (SE1 OR MORGAN RANCH)

### Overview

Southeast Area 1 is also known as Morgan Ranch. As of 2012, Morgan Ranch is in the entitlement process. Comprising approximately 170 acres, the roughly triangular area is bounded by Highway 99 to the south, Golf Road to the east, and Glenwood Avenue to the north. Morgan Ranch will be developed as a compact mixed use residential neighborhood, exhibiting somewhat higher overall densities than the city as a whole. Primary access to the neighborhood would be via Golf Road, Glenwood Avenue, and new east-west arterials and collectors.

Southeast Area 1 is designated on the General Plan Land Use Diagram as a Compact Residential Neighborhood, with a minimum average residential density of 8.0 dwelling units per acre and a maximum average density of 9.6 dwelling units per acre (gross).

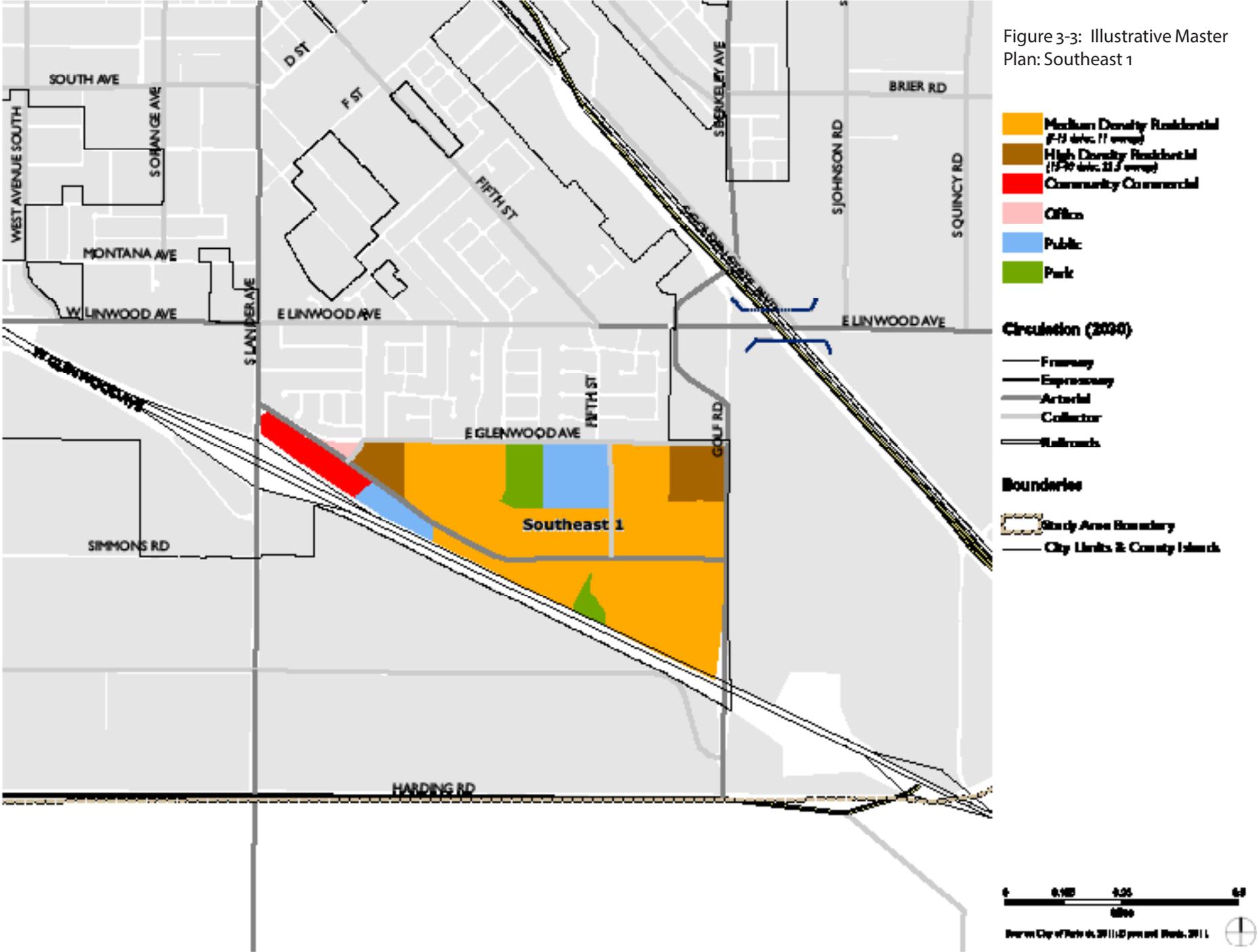
Approximately two-thirds (116 acres) of SE1 is to be developed with residential land uses. The balance will be a neighborhood park, an elementary school, limited office and heavy commercial, and a linear detention basin adjacent to the freeway.

Figure 3-3 shows an illustrative diagram of how the master plan area may be developed in accordance with these standards, including a potential distribution of land uses consistent with the land use designations described in Chapter 2. The following master plan development guidelines apply.

### Master Plan Guidelines

- The linear detention basin/landscaped buffer shall be parallel to Highway 99 on the north side.
- Community commercial uses shall be concentrated in the western corner of the area, adjacent to the freeway where Glenwood Avenue meets Lander Avenue.

Figure 3-3: Illustrative Master Plan: Southeast 1





Small neighborhood-serving commercial centers provide residents with easy access to daily goods and services close to home.

- High density residential shall be distributed in two clusters throughout the area, in the north-east corner (at Golf and Glenwood) and the west (where Glenwood meets the Morgan Ranch arterial).
- The neighborhood park and elementary school shall be adjacent to each other, centrally located in the new neighborhood.
- Office development shall be located adjacent to the community commercial and high density residential areas in the western corner of the area.
- Medium density residential shall occupy the remainder of the site.
- One of the main design considerations shall be the mitigation of noise and health risks associated with locating residential uses adjacent to Highway 99.

### Circulation Access and Major Improvements

- At minimum, Class II bicycle access is to be provided along the new Morgan Ranch Arterial, Golf Road, and the north/south collector between Glenwood Avenue and the Morgan Ranch Arterial.
- At minimum, marked Class III bicycle access is to be provided along Glenwood Avenue.
- The roadway network necessary to support development in the master plan area is shown in Figure 3-3 and Figure 5-2. Major roadway improvements associated with this master plan area include, but are not limited to, the Lander Avenue interchange improvements and the Morgan Ranch arterial.

### Special Considerations or Unique Circumstances

Morgan Ranch is already located within city limits; therefore, an annexation process is not necessary. Because of this circumstance, this area is included in Phase I of the growth management plan and will be able to develop in advance of other areas requiring annexation.

### MASTER PLAN AREA: SOUTHEAST 2 (SE2)

## Overview

Southeast Area 2 consists primarily of the two quarter sections (320 acres) located north of East Avenue, south of Hawkeye Avenue, and east of Daubenger Road. For the purposes of efficient infrastructure provision, the master plan area also includes another 24 acres of unincorporated land north of East Avenue, south of Marshall Street, and west of Quincy Road. SE 2 is to be developed as a new residential neighborhood, showcasing many aspects of neighborhood planning that this General Plan emphasizes:

- Compact residential development;
- A complete linear park system linking several neighborhood parks; and
- A mixed use neighborhood center with a school, park, higher density housing, and offices.

On the General Plan Land Use Diagram, the large contiguous section of SE2 (east of Daubenger) is designated as a Compact Residential Neighborhood, with a minimum gross density of 8.0 dwelling units per acre and a maximum density of 9.6 dwelling units per acre. The smaller area west of Quincy Road is designated as a Very Compact Residential Neighborhood, with a minimum gross density of 11.0 units per acre and a maximum density of 13.2 dwelling units per acre.

The majority of development in SE2 will be housing, with the balance consisting of parks (linear and neighborhood), a small mixed use neighborhood center emphasizing office uses, and an elementary school. While most neighborhood centers in master plan areas might have a predominance of retail uses, the center in SE 2 shall have more of an office focus so as not to compete with the neighborhood-serving retail located at the nearby Village Corner center.

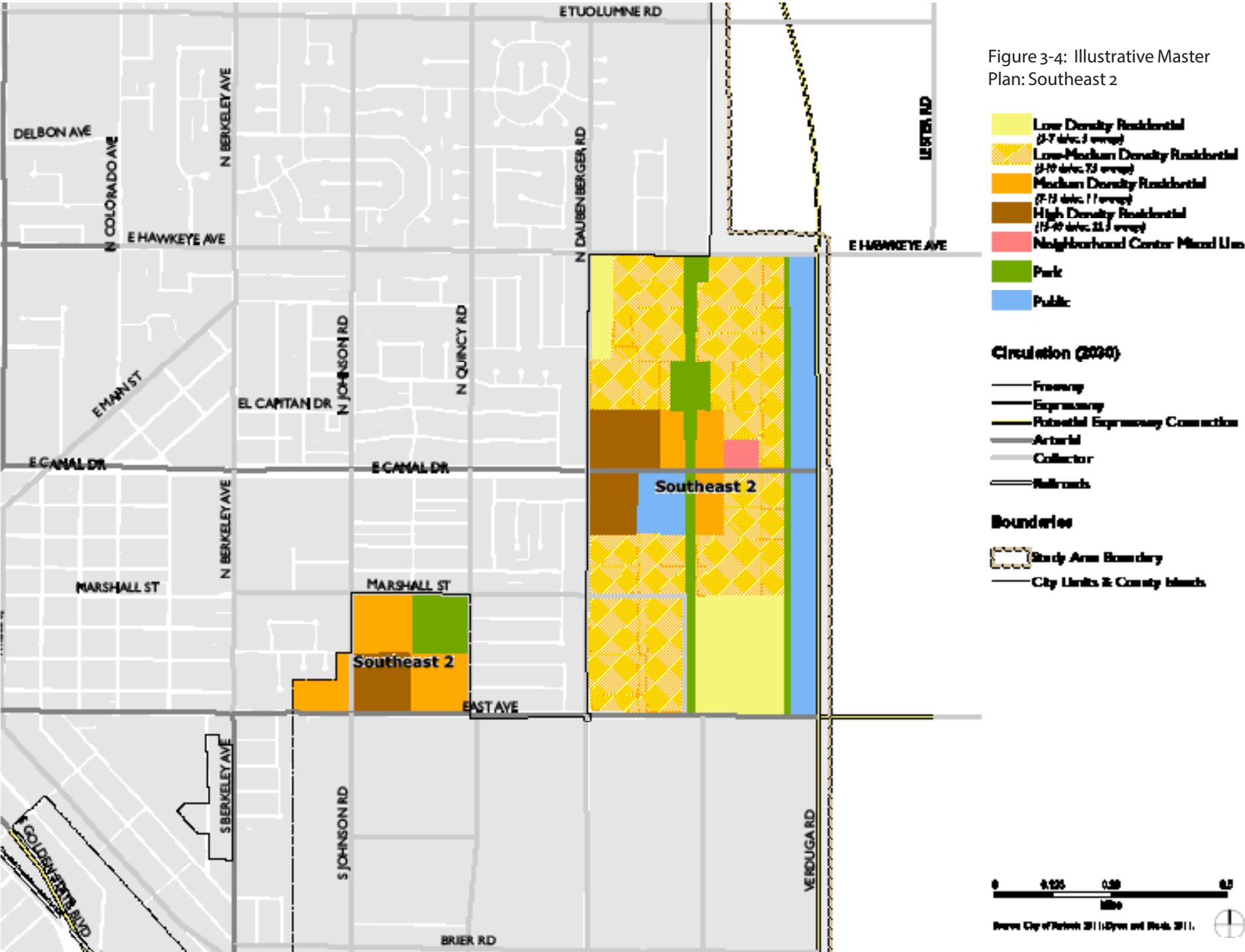
Figure 3-4 shows an illustrative diagram of how the master plan area may be developed in accordance with these standards, including a potential distribution of land uses consistent with the land use designations described in Chapter 2. The following master plan development guidelines apply.

## Master Plan Guidelines



Residential development will be separated from the new east side arterial by a linear park/greenway and multi-use path.

Figure 3-4: Illustrative Master Plan: Southeast 2



- Concentrations of medium and high density residential development are in the smaller, western portion of the master plan area, west of Quincy Road. Medium and high density housing shall also be located adjacent to the neighborhood center, school, and park, on both sides of Canal Drive. This concentrates the highest density of homes closest to Downtown.
- Connected linear park systems run north-south through the center of the larger master plan area and along the eastern border of the study area. The Class I multi-use trail also continues along the Canal Road extension (however, the canal itself may be put underground). If the canal is not put underground, the north-south linear park shall include a crossing over the canal to ensure connectivity of the park and trail system. Neighborhood parks are distributed throughout the area, walkable from the majority of households; one is adjacent to a new elementary school. The dimensions and sizes of the linear and neighborhood parks shall meet the standards set forth in Chapter 4: Parks, Schools, and Community Facilities.
- The only roadways permitted to cross the linear park system are Canal Drive, Hawkeye Avenue, and East Avenue. Pedestrian and bicycle crossings are permitted at any point, and a pedestrian/ bicycle crossing must be provided over the canal where it intersects the north-south linear park.
- The new neighborhood center is located in the central area of the master plan on Canal Drive, and consists of a park, school, and local-serving office and personal service uses. It is close to other stores and Turlock High School. The shopping center is approximately three to five acres.
- A range of low-medium density housing types, with an average density of around 7.5 units per acre, occupies the majority of the master plan area east of Daubenberger Road. Low density housing (average density around 5 units per acre) may be located in the northeast and southeast corners of the master plan area.
- The small sub-area of Southeast 2, roughly bounded by Marshall Street, North Quincy Road, East Avenue, and North Johnson Road, and including several additional parcels west of Johnson, shall have a mix of medium and high density residential development, with a neighborhood park occupying the southwest corner of Marshall and Quincy. The size of the park shall be developed in accordance with the standards in Chapter 4.

### Circulation Access and Major Improvements



Creation of a complete, vibrant new neighborhood center is an important anchor for the new master plan area, especially to complement the development of a new community park and high school.

- Class I bicycle access shall be provided through the linear park that runs north/south through the center of the master plan area, through greenbelt buffer along the east side, along Canal Drive, and between the linear park and the greenbelt buffer near the southernmost neighborhood park (see Figure 5-3).
- At minimum, Class II bicycle access is to be provided along Daubenberger Road, Verduga Road/new East Side Arterial, and East Avenue.
- The roadway network necessary to support development in the master plan area is shown in Figure 3-4 and Figure 5-2. Major roadway improvements associated with this master plan area include, but are not limited to, the extension of Canal Road east to Verduga Road and construction of the Northeast Expressway from East Avenue to Christofferson Parkway. The expressway alignment would be determined by a roadway circulation study (see section 5.2).

### MASTER PLAN AREA: SOUTHEAST 3 (SE3)

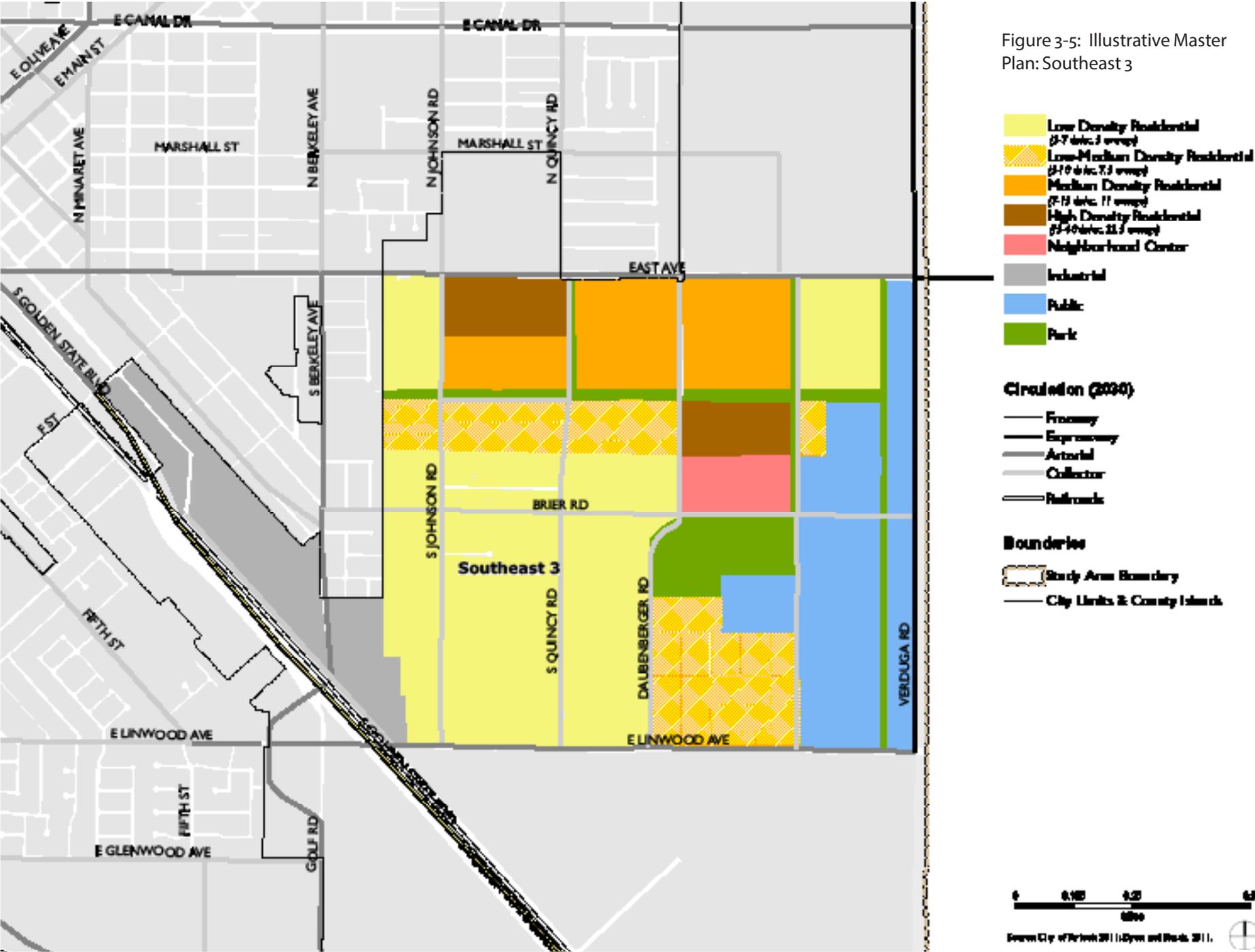
#### Overview

Master plan area Southeast 3 covers the most land and includes the greatest diversity of uses. Comprising almost 700 acres, it includes land for new residential neighborhoods, partially developed industrial areas along South Golden State Boulevard, and an area of rural “ranchettes” typical to the Valley. To comply with SB 244 and LAFCO policy the boundary for SE 3 will have to be amended to include the Southern Peninsula Fringe Community ( F, G, H, and I Streets ). SE3 shall also be the site of Turlock’s newest community park, providing a wide variety of recreational amenities to the southern and eastern portions of the city. This master plan area also includes a new middle and high school (sharing some facilities). The site, which will include sports fields and other amenities to be shared with the public, will occupy between 70 and 80 acres.

Development of this master plan area will lead to an improved railroad at-grade crossing at the historically problematic Golf Road/Berkeley Avenue intersection as well as a new railroad overcrossing at Linwood Avenue just to the south.

As shown on the General Plan Land Use Diagram, SE3 is given several land use designations. On both sides of South Golden State Boulevard and the railroad, the area is designated for non-residential uses only (industrial). Between Brier Road and Linwood Avenue, and west of

Figure 3-5: Illustrative Master Plan: Southeast 3





Medium density housing types, such as townhomes, will help establish a “critical mass” of residents in the new neighborhood.

Daubenberger Road, the area is designated as a Low Density Residential Neighborhood with a minimum gross residential density of 5.0 units per acre. This is where existing “ranchette” properties are located. The remainder of the master plan, primarily north of Brier Road and south of East Avenue, is designated as Very Compact Residential Neighborhood, with a minimum gross density of 11.0 units per acre overall.

Land uses in SE 3 shall include the full range of housing types, from low density ranch-style homes in the ranchette area to high density apartments to support Downtown. A neighborhood center will include neighborhood-serving retail, an elementary and middle school, and a community park.

Figure 3-5 shows an illustrative diagram of how the master plan area may be developed in accordance with these standards, including a potential distribution of land uses consistent with the land use designations described in Chapter 2. It should be noted that SE 3 also includes a small area outside the current city limits, south of the existing Turlock Regional Water Quality Control Facility (RWQCF) (shown on Figure 2-3), to construct public infrastructure improvements that will be needed to accommodate cumulative growth within this master plan area. This area shall be developed only for the purpose of improving the storm drainage/retention system and may not be used for any other public use. The following master plan development guidelines apply.

### Master Plan Guidelines

- Low-medium, medium, and high density housing shall be located along East Avenue and along the northern side of the mixed use neighborhood center.
- Housing density shall gradually decrease as it moves south toward Brier Road.
- Low density residential is located primarily south of Brier Road and west of Daubenberger Road.
- A neighborhood center, consisting of neighborhood-serving retail and housing, is located north of Brier Road, just east of Daubenberger Road. The neighborhood center, including retail, housing, and other uses, shall be approximately 40 acres.
- An elementary and middle school shall be located immediately east or west of the neighborhood center, near the community park.

- A new high school is to be located in the southeast corner of the master plan area, adjacent to and east of the new community park and north of Linwood Avenue. It is to be separated from the new east side expressway by a greenway buffer, which may be used by the school for joint open space use purposes. Automobile access directly from the expressway to the high school shall not be permitted.
- A community park is included, at a minimum size of 30 acres (not including storm drainage area). It is the southern terminus of the north/south linear park system that runs through SE 2 and 3. It may include a lake (that also serves as storm drainage) on up to an additional 12.5 acres.
- A linear park and multiuse trail system runs north from the community park and east-west, connecting the schools and park in the east to higher density housing to the west. The linear park must be continuous and connected both east-west and north-south. Brier Road and East Avenue may cross the linear park. Industrial land uses are located on both sides of South Golden State Boulevard, north of Linwood Avenue.

### Circulation Access and Major Improvements

- Class I bicycle access shall be provided along all linear parks and greenbelt buffers, along the perimeter of the new community park, along the north side of the new middle/high school campus, and south from the community park to Linwood Avenue.
- At minimum, Class II bicycle access shall be provided along Daubenberger Road, Linwood Avenue, Verduga Road/new East Side arterial, Johnson Road, East Avenue, and Berkeley Avenue.
- The roadway network necessary to support development in the master plan area is shown in figures 3-5 and 5-2. Major roadway improvements include, but are not limited to, the Linwood overcrossing and improvements of various county roads to City collector standard.

## MASTER PLAN AREA: MONTANA-WEST (COUNTY ISLAND)

### Overview

“Montana-West” is an area encompassing three of Turlock’s seven unincorporated County Islands, including the largest one, comprising approximately 50 acres. It is roughly bounded by Montana Avenue to the south, State Route 99 and Soderquist Road to the west, South Avenue to the north, and Orange Street to the east. Low density residential development is the predominant land use, with a significant number of vacant and/or underutilized parcels.

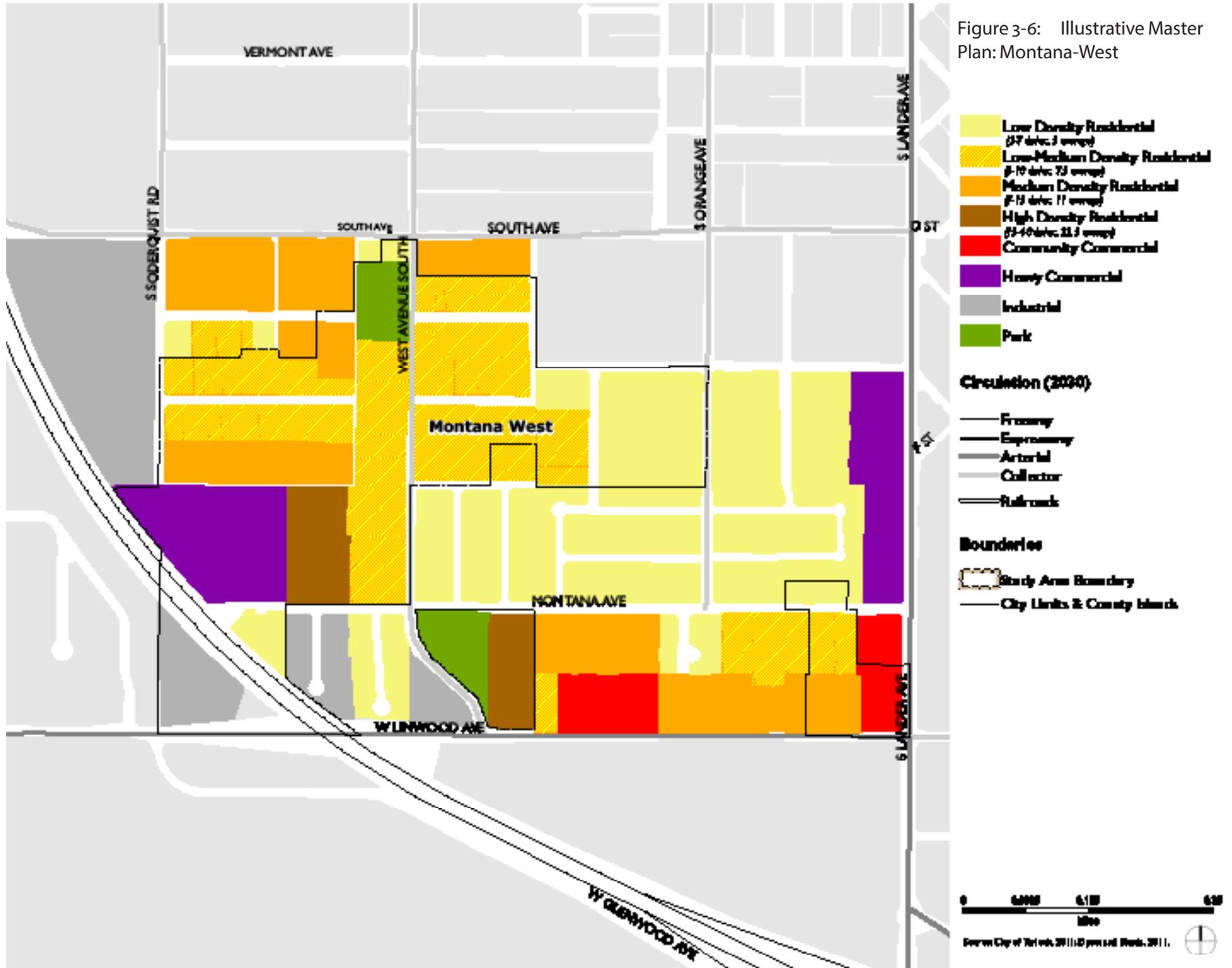
The lot sizes, development density, and parcelization pattern create a significant opportunity for introduction of new streets and parcel subdivisions on a lot-by-lot basis. The street plan concept would provide an attractive neighborhood street network, adding value and allowing owners to subdivide. The new streets would allow the area to avoid an overabundance of “flag lots” and overuse of existing, substandard streets, while creating a new neighborhood feel. Subdivision of large lots would create opportunities for a denser, more connected neighborhood while retaining the area’s single family character. Improvements to the street and infrastructure system would be financed by the subdivision process. Overall, over 180 new single family lots could be created.

### Master Planning and Timing of Development

Incorporation and improvement of all County Islands is a high priority for the City of Turlock. From a phasing perspective, these areas are treated as “infill” and therefore may fully develop at any time. Pursuant to Policy 3.1-m, a strategic plan for the annexation and improvements of the County Islands will be prepared, with the Montana-West area as a high priority for development. The plan will include a financial strategy for bringing infrastructure in the area up to City standards. In order to arrive at an appropriate fee per unit, overall density in the master plan area would likely have to be increased from its current state. The strategic plan will evaluate whether this could be accomplished via the illustrative lotting plan presented in the General Plan appendix, which would retain the predominantly single family nature of the area, or whether residential density would be further increased to accommodate medium and or high density development on certain larger parcels.

The master planning, annexation, and further development of this area may proceed at any time during General Plan buildout and is not subject to the master plan phasing policy. Figure 3-6 illustrates land uses for Montana-West, which reflect the existing single family nature of the area and show where higher density development could be accommodated. A conceptual street network and lotting plan for the Montana-West area is included as Appendix A; this is intended to inform the preparation of a more detailed master plan in the future.

Figure 3-6: Illustrative Master Plan: Montana-West



## Circulation Access and Major Improvements

- The master plan area is already served by marked Class III bicycle access along Orange Avenue. At minimum, new Class II bicycle access shall be provided along Soderquist Road, West Avenue South, South Avenue, Linwood Avenue, and Orange Avenue between .
- There are no major roadway improvements specifically associated with the Montana West master plan area. However, some improvements beyond those listed in the other master plan area descriptions will be needed to support buildout of infill areas citywide, and overall growth as the master plans develop. These include improvements to the Fulkerth Road interchange and the Main Street interchange.

### 3.3 INFRASTRUCTURE

This section discusses the planning, provision, and maintenance of City infrastructure including: potable water, sanitary sewers, wastewater treatment, storm drainage, and solid waste. As required by State law, this section also addresses water conservation, water recycling, and solid waste recycling. The goal of planning for public infrastructure is to ensure the provision of adequate facilities to serve new development under the General Plan while maintaining service standards for existing development.

Water and wastewater utilities require substantial financial investment for both construction and maintenance; therefore, the provision of such infrastructure is a major factor in the amount, type, and location of growth that the community can anticipate. Consistent with the General Plan land uses, infrastructure must be sized and planned according to reasonable anticipated growth rates.

It is important that the City's water, wastewater, and stormwater systems be viewed and planned as interrelated systems. For example, potable water used in homes and businesses becomes wastewater that must be conveyed by the sanitary sewer system and treated at the Turlock Regional Water Quality Control Facility. Some of the highly treated effluent is used for landscape irrigation and for cooling a power plant, which reduces the water demands placed upon the aquifer. Also, stormwater recharges the groundwater, which is then used for potable water supply.

## WATER SUPPLIES, DEMANDS, AND DISTRIBUTION

The City's water supplies, demands, and distribution system are discussed below. Turlock's existing potable water infrastructure is shown on Figure 3-7.

### Water Supplies

The City of Turlock has several existing water supplies, including:

- Groundwater for potable water uses;
- Groundwater for nonpotable uses;
- Recycled water for nonpotable uses; and
- Stormwater runoff for landscape irrigation.

Additionally, as a member of the Stanislaus Regional Water Authority (SRWA), the City is actively developing a future surface water supply from the Turlock Irrigation District (TID) for potable water uses.

### Groundwater Supplies

The California Department of Water Resources (DWR) delineates groundwater basins throughout California through its publication "California's Groundwater Bulletin 118." The City of Turlock is located in the Turlock Subbasin of the San Joaquin Groundwater Basin.

The Turlock Subbasin lies on the eastern side of California's San Joaquin Valley, and encompasses portions of both Stanislaus and Merced counties. The groundwater system is bounded by the Tuolumne River on the north, the Merced River on the south, and the San Joaquin River on the west. The eastern boundary of the system is the western extent of the outcrop of crystalline basement rock in the foothills of the Sierra Nevada. Land uses in the Turlock Subbasin are diverse and include agriculture, urban, and commercial or industrial uses distributed in a mosaic throughout the region.

The Turlock Subbasin underlies an area of approximately 347,000 acres, with irrigated crops (245,000 acres), native vegetation (69,000 acres), and urban development (20,000 acres) as the predominant land uses. The general trend in land use throughout the Subbasin has been an increase in urbanization from less than 4,000 acres in 1952 to approximately 20,000 acres in

2006. The majority of this urbanization has occurred within the cities and unincorporated urban areas within the Turlock Irrigation District boundary.

There are three interconnected bodies of groundwater in the Turlock Subbasin—the unconfined/semi-confined aquifer, which is fresh water in the alluvium above the E-clay,<sup>1</sup> the confined aquifer contained in the alluvium beneath the E-clay, and saline groundwater in the older marine sediments and rocks beneath the fresh water.

Groundwater levels fluctuate with seasonal rainfall, withdrawal and recharge. Rainfall in the Turlock Subbasin Area averages about 12 inches per year, much less than the annual groundwater extraction and evapotranspiration. Inflows to the Turlock Subbasin result primarily from the deep percolation of agricultural and landscape irrigation water and the infiltration of precipitation. According to the Turlock Groundwater Management Plan (2007), the estimated average total inflow for 1997-2006 was 519,000 acre-feet per year. Approximately 72 percent of this inflow occurs on 245,000 irrigated acres of cropland within the Subbasin. The use of groundwater by the City and for adjacent agricultural purposes has resulted in periods of lowered groundwater levels near Turlock. Since the mid-1990s, the groundwater levels near the City have fallen by about 15 feet.

Most of the groundwater recharge comes from surface application of water in the form of agricultural irrigation. Landscape irrigation, precipitation and septic tank seepage account for a smaller share of the recharge.

Groundwater levels have been declining since the mid-1990s. In 2008, the Turlock Groundwater Basin Association published “Assessment of Future Groundwater Impacts Due to Assumed Water-Use Changes Turlock Groundwater Basin.” The Assessment was essentially a “water budget study” that analyzed past trends in land use and groundwater use and extrapolated those trends into the future to assess the impact of land use changes on groundwater supplies. The groundwater contour maps used in the water budget study indicated that estimated volume of groundwater in storage decreased by approximately 21,500 acre-feet per year between 1997 and 2006. Unfortunately, recent reductions in the California Department of Water Resources (DWR) monitoring network have introduced uncertainty in the measurement of groundwater

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<sup>1</sup> The E-clay, also known as the Corcoran clay, is a blue to gray silt/clay layer which occurs in the middle of the older alluvium throughout the Study Area.

levels, which translates into uncertainty in storage estimates. Therefore, the magnitude and direction of changes in groundwater storage cannot be fully characterized through an analysis based solely on the groundwater contours.

The estimated reduction in storage between 2002 and 2006 suggests that the Subbasin may no longer be in the equilibrium state that existed in the 1990s. Most likely, increased urbanization within the western part of the Turlock Subbasin and expanded agricultural irrigation with groundwater within the eastern part have resulted in this slight long-term downward trend in groundwater levels. Although water use within the basin has been increasing, hydrodynamic adjustments within the basin have been nearly keeping up with the changing water use. The principal hydrodynamic adjustment has been an increase in the recharge of the groundwater from the Tuolumne and Merced Rivers. Correspondingly, groundwater levels have not shown any significant temporal trend.

Due to the regional nature of the groundwater aquifer system, actions within the City area alone are not sufficient to curtail the decline in groundwater levels. Since the mid-1990s, groundwater levels near the City have fallen by about 15 feet, due primarily to increased agricultural acreage and increased urbanization.

All of the City's current potable water supply comes from groundwater. In 2010, the City had 23 potable water wells that provide a maximum water supply of about 50 mgd<sup>2</sup>. A new well (Well No. 40) went on line in early 2011. These wells draw water from a deep aquifer, and have casing depths ranging from about 200 to 580 feet. These wells have capacities of 650 to 2,800 gallons per minute (gpm). The City also has two storage tanks, each with a storage capacity of one million gallons.

The City used about 21,800 acre-feet of groundwater in 2010, and the expected use in 2011 is 20,600 acre-feet. In recent years the City's use of potable groundwater has decreased due to a greater use of nonpotable water for landscape irrigation, potable water conservation efforts, installation of water meters, and the initiation of water meter based billing. However, as the City grows in the future, this recent downward trend in water use will be reversed and the City will begin to use more water.



Turlock's potable water supply comes entirely from groundwater. One of the city's newest wells was constructed in 2007 near the northeast greenbelt.

<sup>2</sup> Municipal Service Review for the City of Turlock Sphere of Influence, Proposed Amendment for the Westside Industrial Specific Plan, July 2007, Prepared for the Stanislaus County Local Area Formation Commission by The City of Turlock Planning Division.



Irrigation of landscaping is an excellent use for recycled water, decreasing potable water demand. The City plans to increase its use of recycled water.

The City also uses shallow groundwater for irrigation of some landscape areas such as the Northeast Greenbelt. The quality of this shallow groundwater is not suitable as a source of potable water, but is adequate for landscape watering. Also, dry weather run-off is collected in detention basins and reused for landscape irrigation. These landscape irrigation water systems are completely separate from the City's potable water distribution system. This matching of available water supplies to specific uses based on the water quality of the supply is a very innovative and creative approach that is not yet widely used by other cities.

### Groundwater Quality

Protecting water quality is as important to maintaining the local groundwater supply as sustaining groundwater recharge. As water travels through the ground or over the surface of the land, it dissolves naturally occurring minerals and, in some cases radioactive material, and it can pick up contaminants from animals or from human activity. In the Planning Area, contaminants that may be present in groundwater include: salinity, nitrates, iron, manganese, boron, arsenic, radionuclides, bacteria, pesticides, and trichloroethylene.

Nitrate is the most commonly occurring contaminant in the area. It has been introduced into groundwater from fertilizers, septic systems, and possibly livestock. The City routinely monitors the quality of the water supply to ensure that the water meets all Federal and State drinking water standards. The City monitors the concentrations of arsenic, lead, copper, nitrate, and many other potential contaminants. Recent water testing found that the City's water supply met all drinking water standards, except that one of the wells slightly exceeds the arsenic limit and one well exceeds the drinking water standard for nitrate; both wells are no longer online. The City is currently evaluating treatment and funding opportunities to reduce the level of contaminants in the water produced by these two wells.

Without the surface water project as a long term water supply, increased use of the groundwater is likely to ultimately result in deterioration of groundwater quality, and thus the need for well-head treatment and possibly abandonment of wells.

### Recycled Water

In the summer of 2006, the Turlock Regional Water Quality Control Facility (TRWQCF) was upgraded to provide disinfected, tertiary effluent. This highly treated water complies with the

State of California water recycling criteria (Title 22) for unrestricted reuse. However, even with this high level of treatment, the effluent cannot be used for human consumption. The average dry weather flow to the TRWQCF is about 12 million gallons per day (mgd). The TRWQCF also treats 1 mgd of partially treated flow from the City of Ceres. Up to 2 mgd of tertiary effluent is available for cooling water at the Walnut Energy Center Power Plant. The City Council has a goal of increasing the use of recycled water, and the City has constructed the infrastructure to allow for the irrigation of the Pedretti Sports Complex with recycled water.

### Surface Water Project

As a member of the SRWA, the City of Turlock is pursuing the development of a Regional Surface Water Supply Project (RSWSP) that would supply treated Tuolumne River water from the Turlock Irrigation District (TID). The RSWSP has formally created a Joint Powers Authority (JPA), the SRWA, consisting of the cities of Turlock, Modesto, and Ceres. The SRWA will pursue funding for various phases of the project. The SRWA is developing an agreement with TID for the provision of the drinking water. Extensive planning and environmental work has been performed for the RSWSP, and TID completed an EIR on the project in 2006. A supplemental EIR is now being prepared to update some aspects of the environmental assessment that may have changed in the intervening years.

By being a member of the JPA, Turlock continues to be committed to the project. The RSWSP would initially provide up to 16,800 acre-feet per year (15 million gallons per day, mgd) of potable water to the City of Turlock, but could ultimately provide up to 22,400 acre-feet per year (20 mgd). The RSWSP facilities would include a surface water treatment plant and water transmission mains. The total cost of the RSWSP is estimated to be in the range of \$180 million to \$200 million. The City of Turlock's share of this cost is estimated to be about \$65 million. The City would also have to construct a water storage reservoir (an enclosed water tank), a booster pump station and water distribution pipelines at a cost of about \$20 million. This potential surface water supply would provide over half of the City's future water needs.

### Water Conservation

Prompted by the prolonged drought of 1987 to 1992 and previous water shortages, the City passed a Water Conservation and Education Ordinance in March 1991. The ordinance aims to accomplish conservation through restricting the times of outdoor residential water use. This program

was quite successful in the latter stages of the drought. However, residential per capita water usage increased dramatically after the end of the drought in the mid-1990s.

Similarly, in 2007-09, the State of California experienced drought conditions. In response to the drought and due to the pending implementation of meter-based water billing, per capita water use declined significantly in the years 2008-10.

In more recent years, the City also conserves potable water from the deep aquifer by using recycled water for landscape irrigation and for power plant cooling. The City also uses shallow groundwater (non-potable water) and stormwater runoff for landscape irrigation, which further conserves potable water.

Senate Bill X7-7 (SB 7) was enacted in November 2009 as part of the Urban Water Management Planning Act. SB 7 requires water suppliers to increase water conservation efforts. The legislation sets an overall goal of reducing urban per capita demand by 20 percent by the year 2020.

The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881) requires cities and counties to adopt landscape water conservation ordinances by January 1, 2010. In accordance with this law, the State Department of Water Resources prepared the Model Water Efficient Landscape Ordinance. If a local agency (like the City of Turlock) had not adopted its own ordinance by January 1, 2010, the State's Model Water Efficient Landscape Ordinance became effective within the jurisdiction of the Agency on January 1, 2010. The State's Model Water Efficient Landscape Ordinance is in effect in the City of Turlock.

### Distribution

The City's water is distributed through over 250 miles of water pipelines ranging in size from 6 to 16 inches in diameter. The City currently has plans for expansion of the distribution system for the growth of the City both with and without the RSWSP. Figure 3-7 shows the City's existing potable water infrastructure. Figure 3-8 shows the proposed water infrastructure needed to support buildout of the General Plan and the backbone infrastructure needed for the RSWSP.

The major potable water infrastructure needed includes the water supply from the RSWSP, a water storage reservoir, a booster pump station, transmission mains, connections to the existing

Figure 3-7: Existing Potable Water Infrastructure

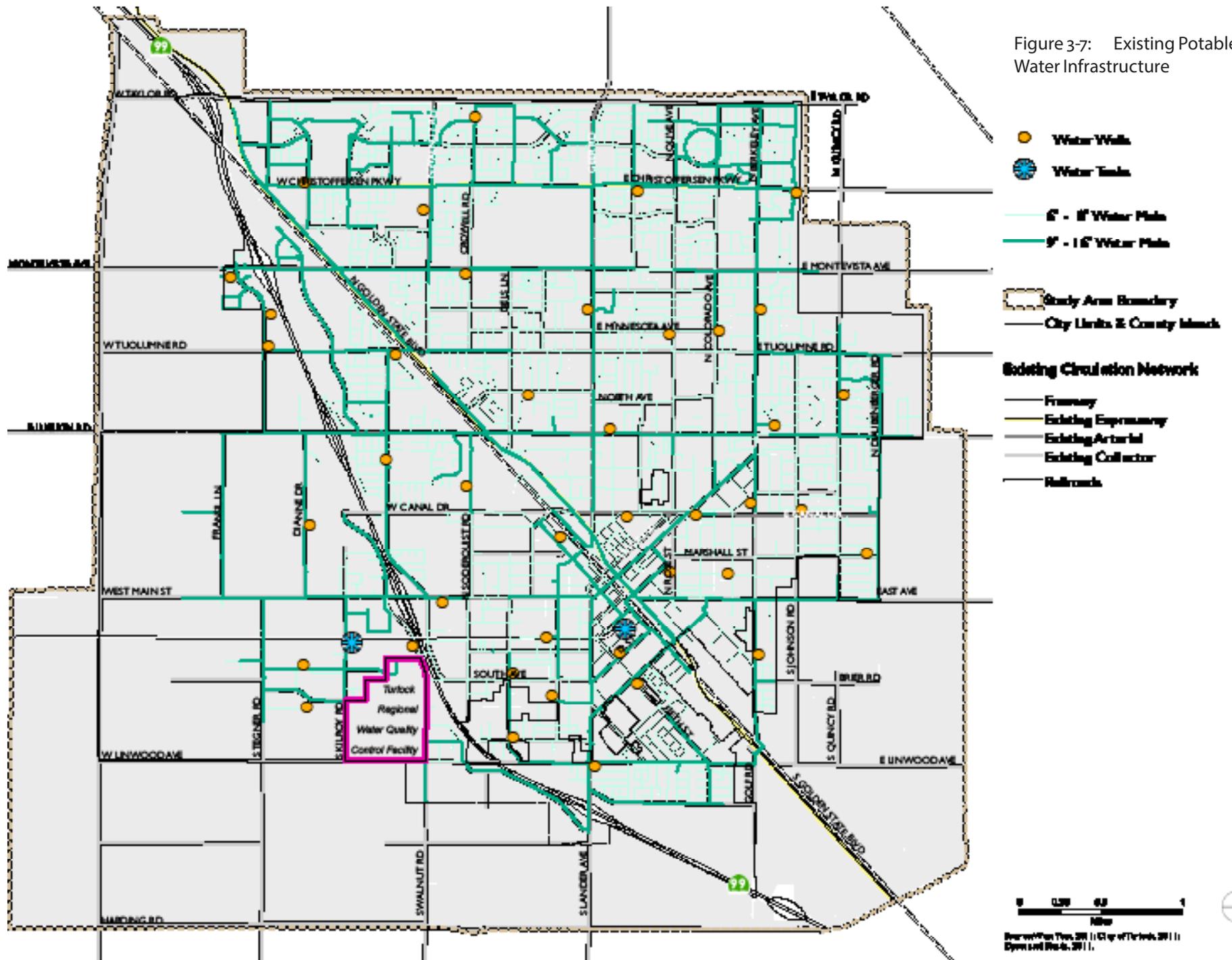
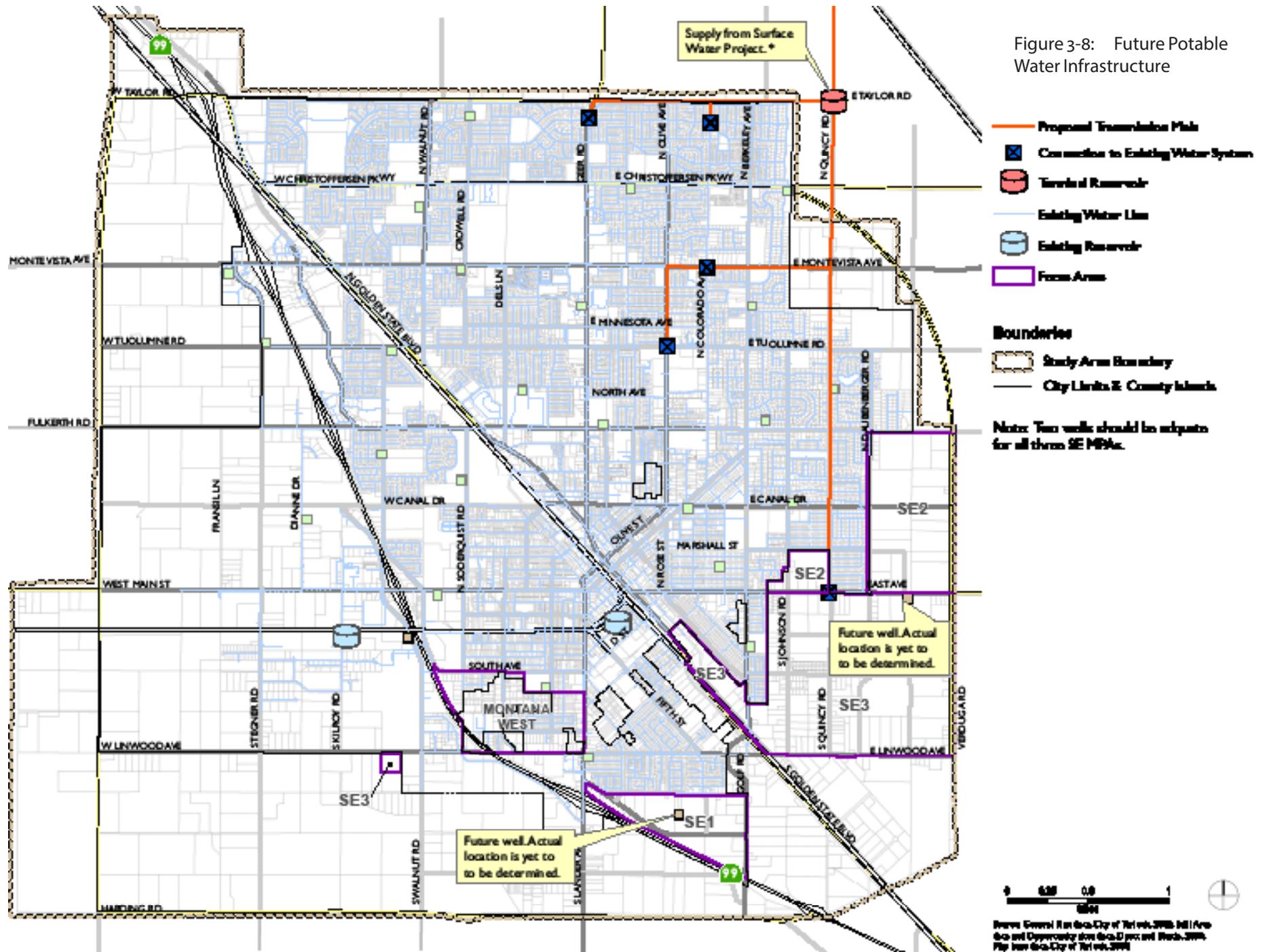


Figure 3-8: Future Potable Water Infrastructure



- Proposed Transmission Main
  - X Connection to Existing Water System
  - Terminal Reservoir
  - Existing Water Line
  - Existing Reservoir
  - Focus Area
- Boundaries**
- Study Area Boundary
  - City Limits & County Islands

Note: Two wells should be adequate for all three SE MPAs.



Drawn: General Plan for the City of Turlock, 2016. Hill & Knowlton  
 Date: 08/20/16  
 Project: General Plan for the City of Turlock, 2016

water distribution system, one new well in the northwest master plan area, and two new wells in the southeast master plan areas.

### Conclusion – Supply and Demand

In the past, the City has pumped as much groundwater as needed by its residents and businesses; consequently the City’s available supply has matched its demands. As noted above, the groundwater levels have fallen about 15 feet in the last 10 to 15 years. The decline in groundwater levels has raised concerns about the sustainability of the groundwater resource to meet future water demands. City Staff have estimated that the groundwater basin can sustain an annual water demand of about 24,550 acre-feet per year. At this usage, in drought years, however, pumping this amount of groundwater will cause groundwater levels under the City to decline.

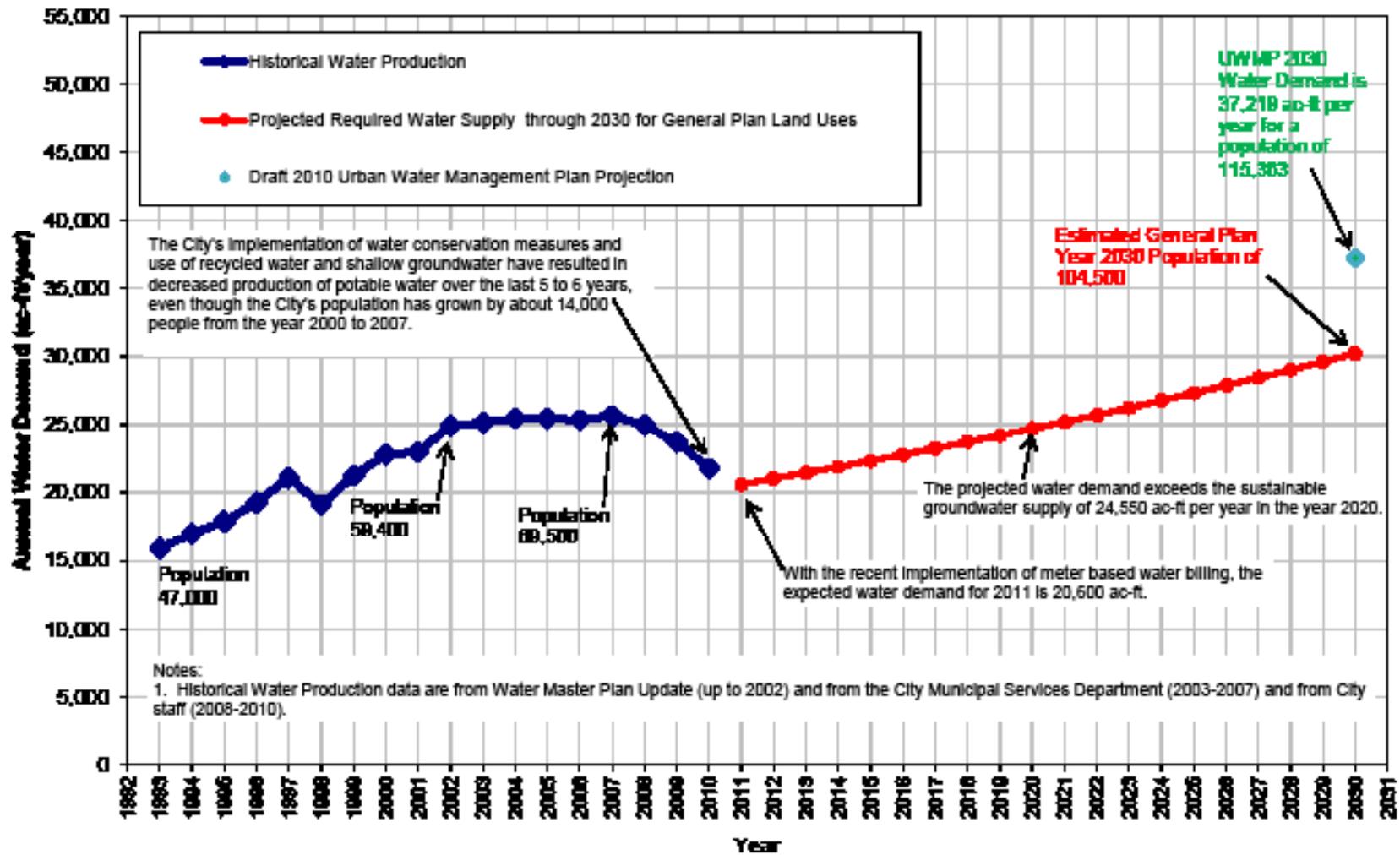
In 2010, the City’s wells produced about 21,770 acre-feet of water. The estimated water demand for 2011 is 20,600 acre-feet per year. As the City grows toward buildout of this General Plan, the water production will have to increase to supply the needs of the new residents and businesses. The expected increase in annual water demands are shown on Figure 3-9, and includes demands from three primary areas:

- New growth in master plan areas: 5,100 acre-feet per year
- Infill of the existing city (including development by 2030 of about 24 percent of the currently undeveloped TRIP): 4,500 acre-feet per year

The City wide water demand in the year 2030 shown on Figure 3-14 is lower than the year 2030 water demand from the City’s Draft 2010 Urban Water Management Plan (UWMP) because the Draft UWMP was prepared using a land use plan that had a larger area of future growth than the land use plan that was adopted in this General Plan. Similarly, the year 2030 population used in the Draft UWMP was 115,363, whereas the 2030 population for this General Plan is 104,500.

These increases in water demands will lead to a total water demand in the year 2030 of approximately 30,200 acre-feet per year. This demand exceeds the estimated sustainable groundwater

Figure 3-9: Historical and Projected Potable Water Demand



supply of 24,550 acre-feet per year. If the water demands increase at about 1.0 percent per year (as shown in Figure 3-9), then the sustainable groundwater supply will be exceeded in the year 2020.

With the RSWSP, the City could still use groundwater, but at a sustainable amount. With the RSWSP providing a long term supply of 17,000 to 22,000 acre-feet per year (15 to 20 mgd), the City would have a total sustainable water supply of 41,550 to 46,500 acre-feet per year. This water supply would meet and exceed the demands estimated for the year 2030 of 30,200 acre-feet per year. When the TRIP is fully developed, the citywide buildout water demand is estimated to be 34,500 acre-feet per year, which could safely be supplied by the combined use of groundwater and surface water.

### WASTEWATER COLLECTION AND TREATMENT SYSTEM

The wastewater collection system generally flows from the northeast to the southwest to the Turlock Regional Water Quality Control Facility (RWQCF), where the wastewater is treated and then discharged to the Harding Drain. The existing sanitary sewer system is shown on Figure 3-10. In the future, it is planned that treated effluent will be pumped farther west and discharged directly to the San Joaquin River. The sanitary sewer system consists of about 220 miles of sewer pipes ranging in diameter from six inches to 48 inches, and 20 pump stations.

The proposed sewer system to serve the southeast master plan areas is shown on Figure 3-11. The proposed sewer system includes a connection to the Monte Vista Avenue sewer to redirect flow from Denair out of this sewer and into a new trunk sewer. The proposed sewer system collects all of the flow from the southeast master plan areas, and no existing sewers are needed to serve the southeast master plan areas.

The current average dry weather flow to the RWQCF is about 12 mgd. This includes flow from Turlock, Keyes and Denair. The RWQCF also treats 1 mgd of partially treated wastewater from Ceres, and the flow from Ceres is expected to increase to 2 mgd in the future. With the construction of improvements planned in the *Water Quality Control Facilities Improvement, Turlock Capacity Assessment* (March 2007 hereafter called the Capacity Assessment), the RWQCF could treat a flow of about 20 mgd. Thus, the proposed improvements would provide capacity for about a 50 percent increase in the flow to the plant. The past and previously projected future flows to



Tertiary Filters at the RWQCF help treat the water to a very high level, allowing it to be used in the community for landscape irrigation, for agricultural irrigation, for cooling water, or other nonpotable uses.

Figure 3-10: Existing Wastewater Infrastructure

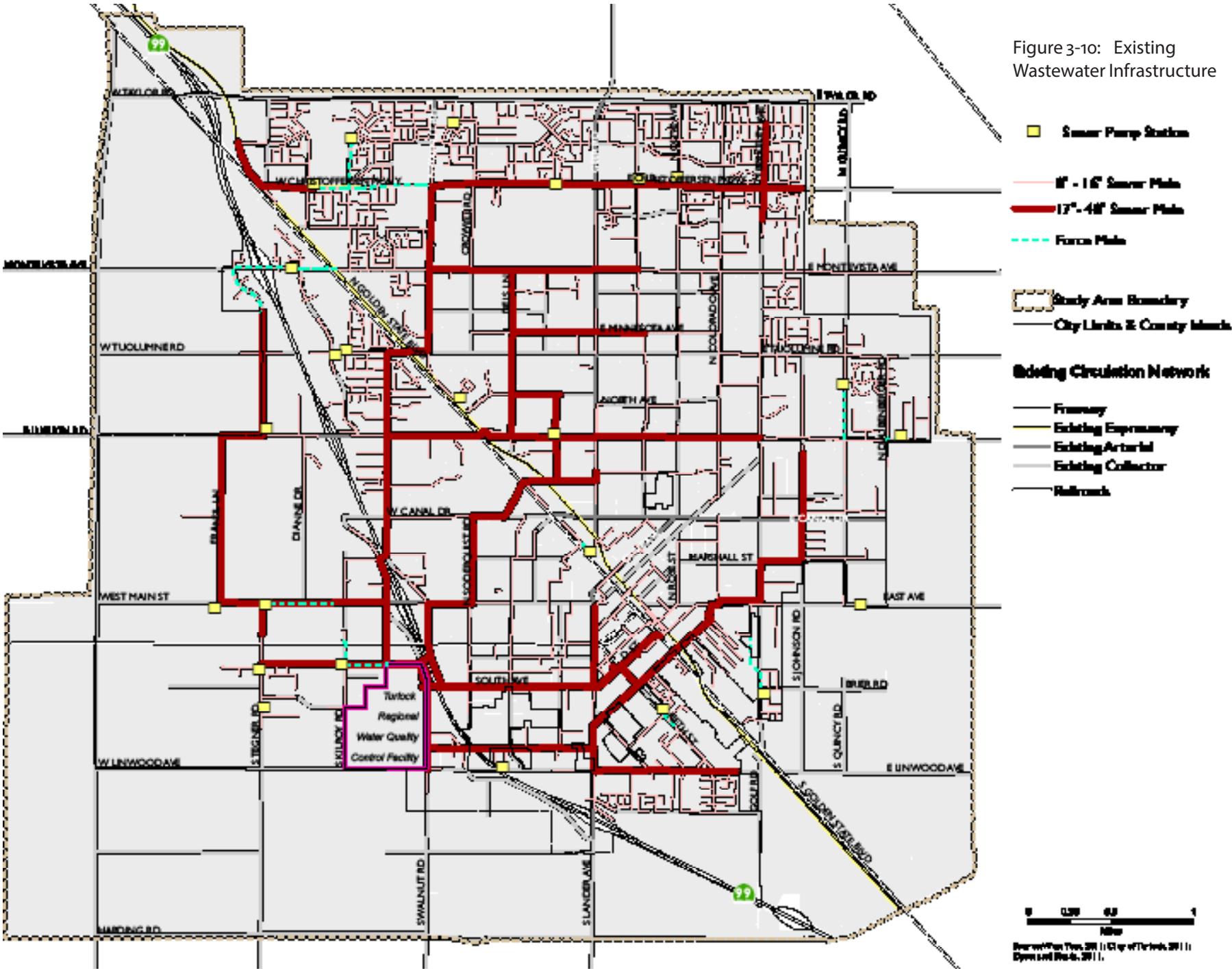
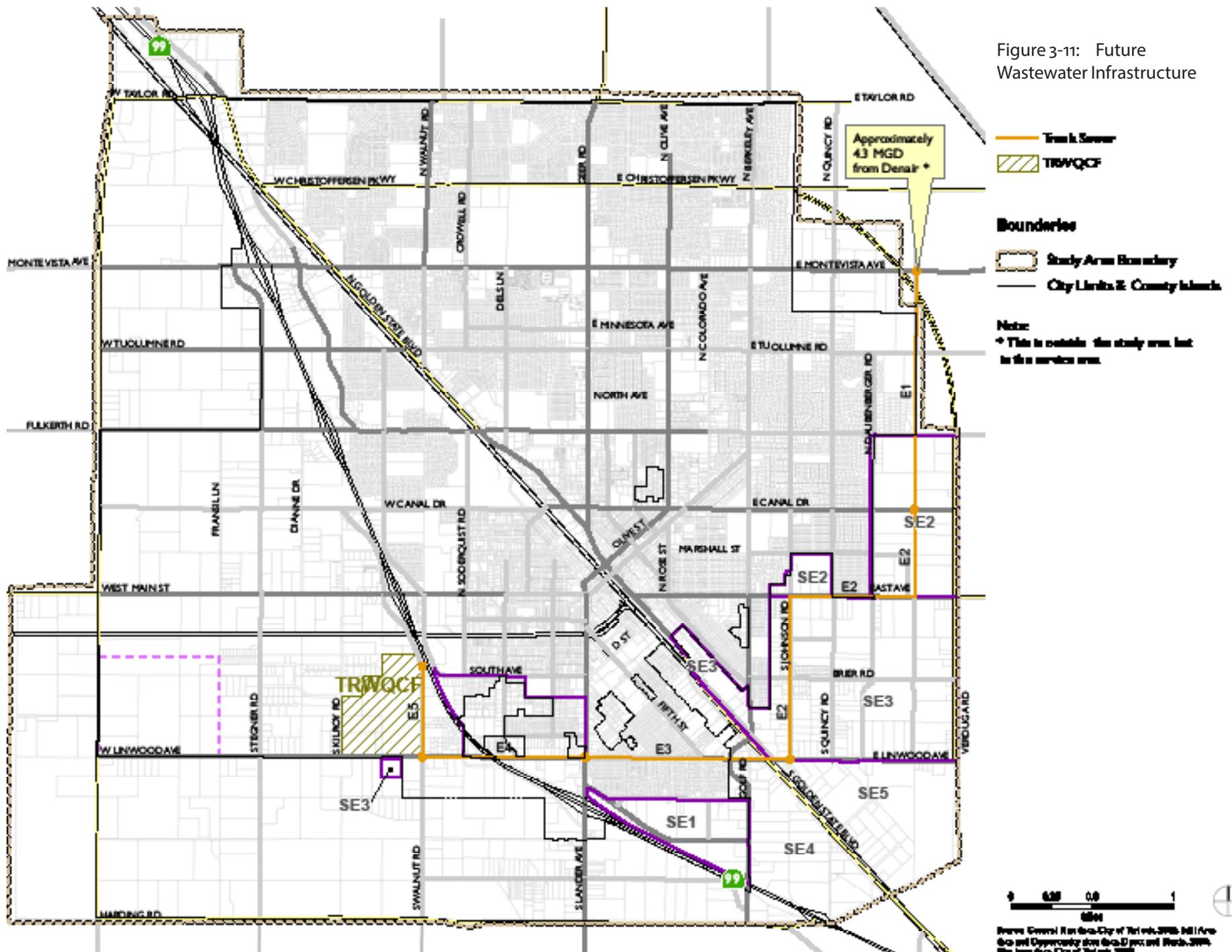


Figure 3-11: Future Wastewater Infrastructure



the RWQCF are shown with the green lines on Figure 3-12 (including the flow from Ceres). The previous projection of flow in the Capacity Assessment resulted in an ADWF of 23.0 mgd in the year 2030 (the light green line on Figure 3-12).

Based on the land uses included in this General Plan update, the expected increase in annual wastewater flows are shown on Figure 3-12, and includes flows from three primary areas:

- New growth areas in the Southeast: 2.30 mgd
- Infill of the existing city (including development by 2030 of about 24 percent of the currently undeveloped TRIP Area): 2.32 mgd

These increases in wastewater flows total 4.62 mgd and lead to a total ADWF wastewater flow in the year 2030 of 21.6 mgd. When the TRIP is fully developed, the citywide buildout ADWF is estimated to be 24.3 mgd.

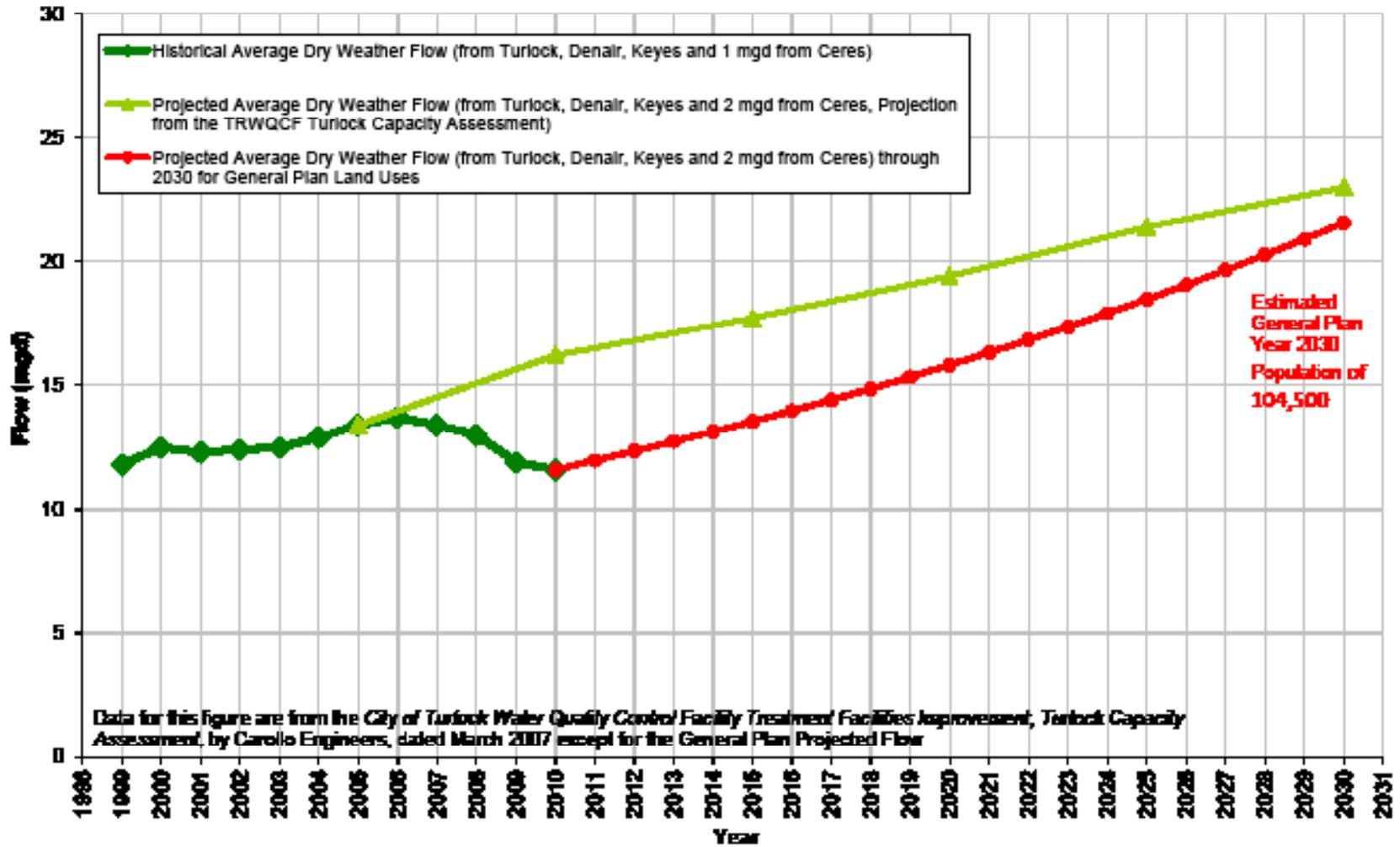
The estimated ADWF for the new General Plan land uses account for the projected increased population of the City and the anticipated increase in the ratio of jobs to population. The previous wastewater flow projection in the Capacity Assessment was based only on increased population, and did not account for the various land use types in this General Plan.

The existing treatment plant with currently planned improvements will provide an ADWF capacity of 20 mgd and will only occupy about 60 acres of the 140 acre wastewater treatment plant site. Consequently, there is adequate room to expand the plant to provide the required year 2030 ADWF flow of 21.6 mgd and the ultimate buildout capacity of 24.3 mgd.

This preliminary projection of wastewater flow should be verified through preparation of master plans for the sanitary sewer system and the wastewater treatment plant.

In early 2006, an upgrade to the RWQCF was completed that included the installation of tertiary filters to produce highly treated wastewater, termed disinfected tertiary effluent. The tertiary effluent from the RWQCF meets the legal requirements for unrestricted reuse. However, even with this high level of treatment, the effluent cannot be used for human consumption. When this highly treated water is put to use, it is called recycled water. Currently, up to two mgd of recycled water is used for cooling water at the Walnut Energy Center Power Plant, a 250 Megawatt power plant owned and operated by the Turlock Irrigation District. The City Council has a goal of

Figure 3-12: Historic and Projected Wastewater Flows





The RWQCF, last upgraded in 2006, treats wastewater from Turlock and the neighboring communities of Keyes and Denair.

increasing the use of recycled water, and the City intends to irrigate the Pedretti Sports Complex with recycled water in the future. Additionally, recycled water pipelines (purple pipe) have been installed in a number of newer developments and park sites for future use of recycled water for landscape irrigation.

A new NPDES discharge permit for the RWQCF and a related Time Schedule Order (Permit and TSO) were adopted by the Central Valley Regional Water Quality Control Board on January 28, 2010. The Permit and TSO:

- Allow for a future change in the point of discharge from Harding Drain to the San Joaquin River, near Harding Road. Once the river discharge is initiated, brief discharges to Harding Drain would be allowed only in the event of a power failure. Discharge to the river is expected to begin in 2012 or 2013.
- Establish a required schedule for compliance with a new effluent limit for electrical conductivity (EC), a measure of salinity. The schedule includes source control measures in the near-term, and by 2022, full compliance with the new EC limitation in most years.
- Establish a January 1, 2015 deadline for compliance with new effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, silver, and aluminum.

Additional upgrades at the RWQCF may be required to comply with the new effluent limitations.<sup>3</sup>

## STORMWATER

There are no natural defined streams in the Planning Area. Three open irrigation canals, TID Laterals 3, 4, and 5, pass through the Planning Area from east to west, spaced apart by two and a half miles. There are also several local detention basins distributed throughout the City, which capture runoff during stormwater events and then discharge it to the canals. Part of the eastern area of the City drains directly to Lateral 4. Use of the canals for stormwater disposal, allowed

<sup>3</sup> California Regional Water Quality Control Board, Central Valley Region; Order No. R5-2010-0002, NPDES No. CA0078948; Waste Discharge Requirements for the City of Turlock Water Quality Control Facility; and Time Schedule Order No. R5-2010-0003; January 28, 2010.

through agreements with TID, is not always reliable because the laterals are also used to convey irrigation water or may be out of service for maintenance.

The City currently protects surface water quality by requiring the implementation of Best Management Practices (BMPs) during the construction of new development projects and requires projects to comply with post-construction BMPs, as identified in the City’s NPDES Phase 2 Storm Water Management Plan. Surface water quality is also protected by complying with the current State of California Construction General Permit Order 2009-0009-DWQ.

The City’s existing storm drain system is shown on Figure 3-13. The City’s existing storm water system includes about 130 miles of storm drain collection/conveyance piping, with sizes ranging from 6 to 60-inches in diameter; 49 pump stations, several detention basins, and use of the TID open channels.

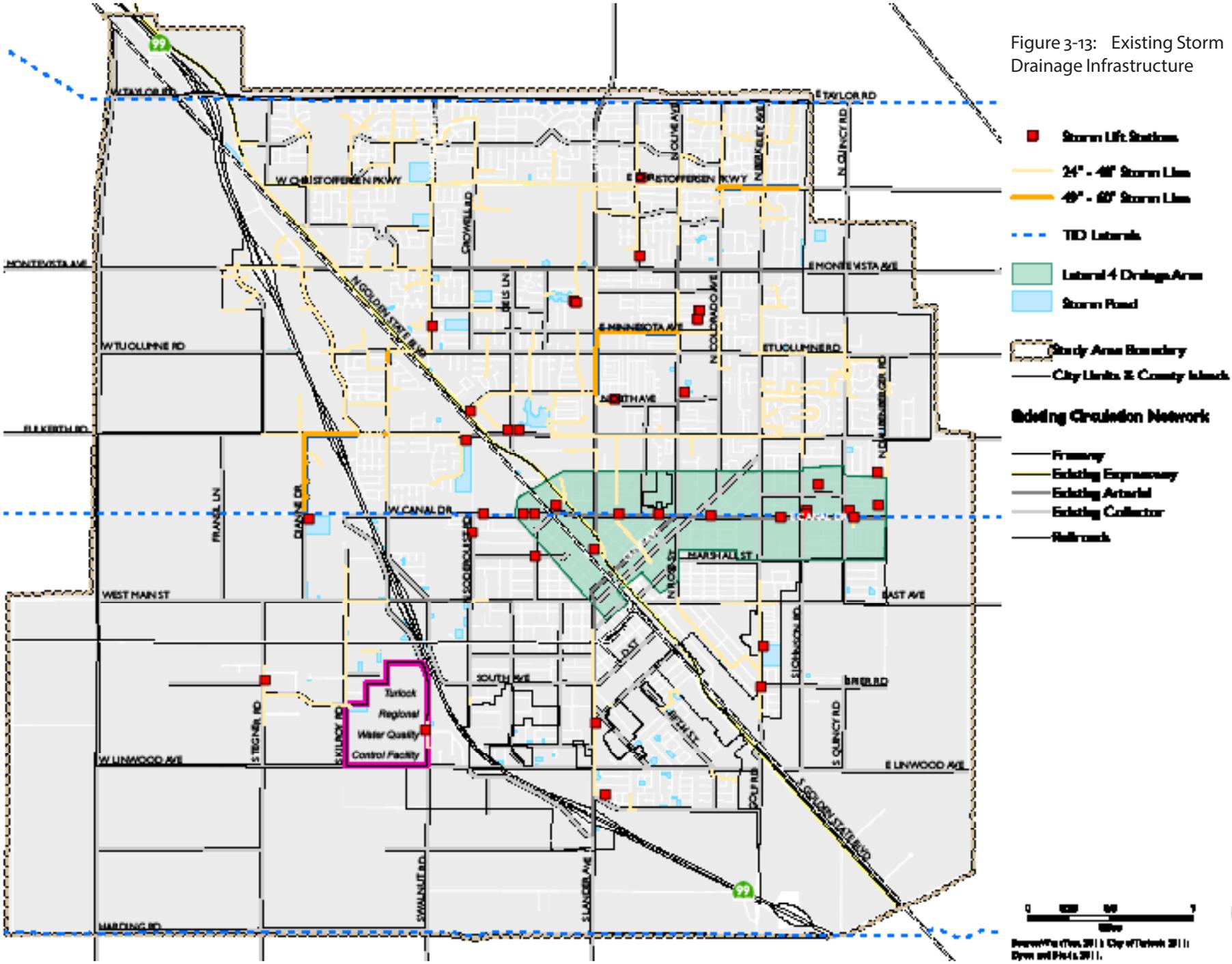
Currently, most of Turlock’s stormwater drains to detention basins located throughout the City. Because groundwater levels are close to the ground surface, these basins are relatively shallow and it is necessary to pump runoff into many of the basins during storm events. After the storm passes, runoff is drained or pumped back into the trunk storm drain system and flows to the southwest corner of the City to a large stormwater basin near the TRWQCF, where it is either pumped into TID Lateral 4 or the Harding Drain. To avoid overloading the trunk storm drains, it is necessary to drain several of the detention basins in the north part of town sequentially, starting with the more downstream basins and progressing to the more upstream basins. This approach of using detention basins with sequential draining of the basins can continue to be used to provide stormwater storage and disposal as the City grows to buildout of the 2030 General Plan. The required future detention basins and trunk lines needed to drain the basins have been preliminarily located and sized and are shown on Figure 3-14.

Part of the eastern area of the City flows directly to Lateral 4 without first being stored in detention basins. Use of the TID laterals for stormwater disposal is allowed through agreements with TID. However, this does not always provide reliable disposal of the stormwater because sometimes the TID laterals are also being used to convey irrigation water or the laterals are out of service for maintenance by TID staff. To eliminate this problem, the runoff from this area should be diverted into a more reliable stormwater disposal system, and the future trunk lines shown on Figure 3-14 are sized to also convey the runoff from some of the area that currently flows to Lateral 4.



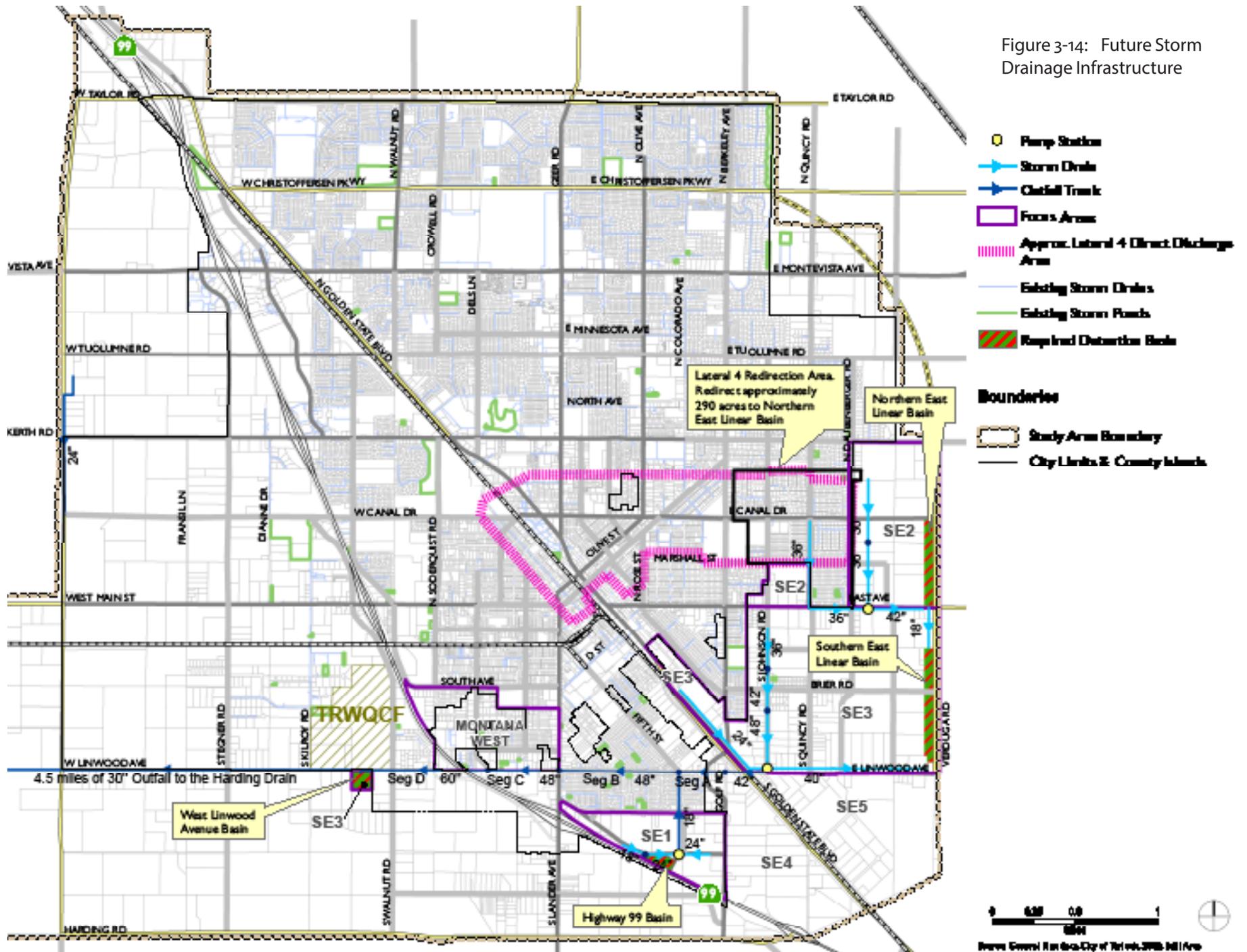
There are no natural defined streams in the Planning Area. Three open irrigation canals, TID Laterals 3, 4, and 5, pass through the Planning Area from east to west, spaced apart by two and a half miles.

Figure 3-13: Existing Storm Drainage Infrastructure



Prepared for the City of Turlock 2011  
 Dym and Ploetz 2011.

Figure 3-14: Future Storm Drainage Infrastructure





Detention basins are distributed throughout the City, capturing runoff during stormwater events. Some of these detention basins also serve as City parks.

Many of the City's detention basins are used for both stormwater detention and as recreational open space. This joint use of stormwater basins provides numerous sports and recreational facilities for City residents.

The existing stormwater system has generally protected the City from flooding. However, minor street flooding occurs in certain areas of the City approximately once per year or every couple of years. This flooding typically occurs when two large storms occur back to back, and the City's basins have not fully drained from the first storm when the second storm hits. This type of minor street flooding for short time durations in large storm events does not warrant the construction of a major storm drain project to eliminate the flooding. Indeed, due to Turlock's flat topography, the streets are designed to store storm water temporarily until capacity becomes available in the storm drain system.

## SOLID WASTE MANAGEMENT AND RECYCLING

### Solid Waste

The City contracts with a franchise hauler to collect garbage and recyclables at curbside. Garbage is taken to the transfer station on Walnut Road, and from there hauled to the Fink Road landfill near Crows Landing, or to the waste-to-energy facility adjacent to the landfill. The waste-to-energy facility reduces the volume of waste going into the landfill by about 90 percent. According to the Stanislaus County Department of Public Works, the landfill — the only one operating in Stanislaus County — has capacity until 2017 for garbage and 2023 for the waste-to-energy ash. The total landfill capacity is 6.8 million tons. The County has plans for further expansion.

In accordance with Public Resources Code Section 41000 *et seq.*, a goal of 50 percent waste stream diversion through reduction and recycling has been established. In May 1992, the City's franchise waste hauler implemented a dramatic new program to reduce Turlock's waste stream. Instead of voluntary separation by the resident, the program provides three separate bins to each home throughout the City. The largest of these is a 90-gallon container reserved exclusively for compostable green waste. Next is a 65-gallon container for all recyclable materials, which are separated by the refuse company after pick-up. Finally, each household is limited to one 32-gallon container for non-recyclable household wastes.

## Source Reduction and Recycling

Public Resources Code Sections 41000 and 41300 *et seq.* require each city and county in the State to prepare a Source Reduction and Recycling Element (SRRE) to meet waste diversion reduction goals of 25 percent by 1995 and 50 percent by 2000.

Turlock's SRRE was adopted by the City Council in 1994. The SRRE was later reviewed and approved by the California Integrated Waste Management Board (CIWMB) in 1995. The SRRE includes source reduction, including recycling and composting activities for solid waste generated within the City.

The study also details means of reducing commercial and industrial sources of solid waste. Funding and public information components are also included.

Waste diversion in Turlock has been steadily improving. The amount of waste diverted in the City of Turlock was 40 percent in 1997 and 47 percent in 2000. In 2001, the Regional Solid Waste Planning Agency (RSWPA) was formed including Stanislaus County and the eight cities within the county. The RSWPA's current target is 6.3 pounds of non-diverted waste per person per day (50 percent diversion equivalent). In 2009, the Agency's jurisdiction achieved 3.3 pounds of non-diverted waste per person per day, or a 72 percent diversion equivalent.

## POLICIES

### Guiding Policies

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- 3.3-a Protect Water Quality and Supply. Continue efforts to safeguard the quality and availability of Turlock's water supply.
- 3.3-b Use Groundwater at a Sustainable Rate. Undertake steps to ensure the use of groundwater does not exceed the sustainable supply by verifying the estimated sustainable supply of 24,550 acre-feet per year and limiting groundwater use to the sustainable supply.

Aquifer depletion is a valley-wide problem. Use of groundwater for potable water and agricultural irrigation is the prime reason for the declining groundwater levels. The City has little control over the use of groundwater for agricultural irrigation. Recent drought years have also been a contributing factor.

- 3.3-c Sustainable water supply. Ensure that a new system for potable water provision, either through implementation of the Regional Surface Water Supply Project or other means, is in place by the time that Turlock's projected annual potable water demand exceeds the sustainable annual groundwater supply level of 24,550 acre-feet, estimated to occur in 2020.
- 3.3-d Meet projected needs. Promote the orderly and efficient expansion of public utilities and the storm drainage system to adequately meet projected needs, comply with current and future regulations, and maintain public health, safety, and welfare.
- 3.3-e Coordinate infrastructure provision with growth. Coordinate capital improvements planning, design, and construction for all municipal service infrastructure with the direction, extent, and timing of growth.
- 3.3-f Utility Rates. Continue to establish water and wastewater rates that are sufficient to operate, maintain, and upgrade (for current and future regulatory requirements) the City's water, wastewater, and stormwater infrastructure.
- 3.3-g Development Impact Fees. Continue to equitably distribute costs associated with serving new development through the Development Impact Fee program.
- 3.3-h Meet State waste reduction goals. Reduce the generation of solid and hazardous waste and promote recycling in order to achieve the State's solid waste management goals

### Implementing Policies

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#### Potable Water

- 3.3-i Water System Master Plan. As needed, update the City's water master plan to estimate future water demands, identify an adequate supply of water to meet future demands, and identify how best to treat the water supply.
- 3.3-j Pursue Surface Water and Other Alternative Water Supply Sources. Continue to pursue the use of treated surface water as a long term supply for municipal use, and evaluate other future water supply alternatives, including verifying the future water demands and evaluating the water supply strategies and funding strategies discussed above. (See conclusions in the section: Conclusions - Supply and Demand, under Water Demands, Supplies, and Distribution.) The SWP or some other methods should supply about 17,000 to 22,000 acre-feet per year of the City's estimated 2030 water demand of 30,200 acre-feet per year, and the ultimate General Plan buildout demand of 34,500 acre-feet per year. Surface water supplies (or other sources) will probably be needed by about the year 2020. Develop a new water supply project prior to construction of new development that

generates a City-wide water demand above 24,550 acre feet per year from City wells, estimated to be the sustainable yield from the aquifer.

- 3.3-k Rate and Fee Studies. Supplement the water system master plan with rate and fee studies to ensure adequate funds are collected through the City's water rates and development impact fees. Implement rate and fee increases as needed.
- 3.3-l Infrastructure Construction. Design and construct water system infrastructure as needed to meet current and future water demands and system requirements.
- 3.3-m Conservation. Continue to implement the comprehensive water conservation program for both new development and existing residences and businesses. Revise and improve the program as needed. Continue water conservation efforts, including the watering schedule, monitoring by Municipal Services staff, and advisory notices to households and businesses in violation of water conservation standards. Continue to reduce per capita consumption through ongoing education and outreach efforts.
- 3.3-n Recycled Water. Continue and expand the use of recycled water from the Turlock Regional Water Quality Control Facility for non-potable purposes, including power plant cooling, landscape irrigation, agricultural irrigation, and other uses. Plan, design, and construct infrastructure needed to increase the use of recycled water.
- 3.3-o Optimize Groundwater Recharge. Establish requirements for appropriate BMPs in site planning of new development, so that natural drainage systems or groundwater recharge features are incorporated into developments. Participate in regional efforts to protect groundwater supplies and optimize groundwater recharge on a basin-wide basis.
- 3.3-p Groundwater Related Coordination. Support and cooperate with Regional (Turlock Groundwater Basin Management Association), County and State programs to protect valuable groundwater resources and facilitate groundwater recharge.
- 3.3-q Reuse of Stormwater. Continue to expand the use of storm water collected in detention basins for irrigation of public parks, street trees, and landscaping.

#### Wastewater Systems

- 3.3-r Sanitary Sewer Master Plan. Prepare and update as needed a sanitary sewer master plan to identify future wastewater flows and plan for an adequate wastewater collection system.

- 3.3-s Wastewater Treatment Plant Master Plan. Update as needed the wastewater treatment plant master plan to identify future wastewater flows and plan for adequate wastewater treatment and disposal to comply with current and future regulations.
- 3.3-t Recycled Water Master Plan. Prepare and update as needed a recycled water master plan to facilitate the increased use of recycled water. Uses of recycled water to be evaluated should include uses within the City, agriculture irrigation, and other uses.
- 3.3-u Rate and Fee Studies. Supplement the wastewater system master plans with rate and fee studies to ensure adequate funds are collected through the City's wastewater rates and development impact fees. Implement rate and fee increases as needed.
- 3.3-v Infrastructure Construction. Design and construct wastewater system infrastructure as needed to safely convey, treat and recycle, and dispose of current and future wastewater flows and achieve future regulatory and system requirements.

#### Stormwater

- 3.3-w Stormwater Master Plan. Update as needed the stormwater master plan to identify future stormwater flows and plan for an adequate stormwater conveyance, storage, and disposal system. The stormwater master plan should include measures to eliminate and prevent flooding and to protect stormwater quality.
- 3.3-x Rate and Fee Studies. Supplement the stormwater master plan with rate and fee studies to ensure adequate funds are collected through the City's stormwater rates and development impact fees. Implement rate and fee increases as needed.
- 3.3-y Infrastructure Construction. Design and construct stormwater system infrastructure as needed to safely convey, detain, and dispose of current and future stormwater flows, protect water quality, and meet regulatory requirements.
- 3.3-z Detention Basin Locations. Develop new detention basins to be compatible with adopted land use plans, such as within agricultural buffer strips, parks, or in dedicated detention basin sites. Only a fraction (not over 25 to 30 percent) of any park should be used for detention basins.
- 3.3-aa Detention Basin to Serve New Growth. The land designated for the West Linwood Detention Basin, located south of the RWQCF and mapped as part of SE 3, shall be annexed and developed as a basin in conjunction with the annexation and master planning of the SE 3 area. This area is to be annexed and developed as a detention basin only and not for other public use.

- 3.3-ab Detention Basin Joint Uses. Where feasible, allow joint uses within the detention basins such as recreational open space, parks, and athletic fields.
- 3.3-ac TID Canals. Work toward the goal of eliminating discharge of stormwater into the TID canals.
- 3.3-ad Fencing around and near basins. Fencing is not to be used around basins in dual-use areas. Fencing may be used around equipment needed for basin operation, such as pumps. In these cases, it should be of a decorative material that also discourages graffiti (such as wrought iron), screened, and landscaped. In cases where fencing around basins is necessary (for basins where there is no dual use functionality, such as adjacent to the RWQCF), the fencing should be designed to ensure safety and enhance the overall aesthetic value of the detention basin site.
- 3.3-ae Low Impact Development (LID) and Water Quality Best Management Practices (WQBMPs). Require implementation of LID techniques and WQBMPs in new development projects and public works projects. Examples of these are use of porous pavement and pervious concrete, water quality swales, and rain gardens.  
  
Policies in Section 6.4, Sustainable Site Planning, provide more detail on the use of porous materials and other Low Impact Development Best Management Practices.
- 3.3-af Encourage Use of Less Toxic Agricultural Chemicals. In cooperation with the Stanislaus County Agricultural Center, provide education and incentives to encourage the use of less toxic forms of pesticides, insecticides, herbicides, or other chemical substances by households and farmers.
- 3.3-ag Minimize Industrial Contamination. Work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated and monitored to ensure compliance with stormwater regulations.

#### Waste Management and Recycling

- 3.3-ah Reduce Solid Waste. Maintain the City's long-standing commitment to innovative solutions that reduce solid waste and increase diversion rates. Continue to expand diversion opportunities to ensure that the City, through participation in the Stanislaus County Regional Solid Waste Planning Agency, continues to surpass State targets for solid waste reduction.
- 3.3-ai Construction and Demolition Waste. Adopt a construction and demolition waste recycling ordinance which will require that, except in unusual circumstances, all construction, demolition and renovation projects meeting a certain size or dollar value, to divert from the waste stream 100%

of all Portland cement concrete and asphalt concrete and an average of at least fifty percent of all remaining debris from construction, demolition and renovation projects.

- 3.3-aj Implement Measures. Implement measures specified in the Source Reduction and Recycling Element.
- 3.3-ak Landfill capacity. Work with Stanislaus County to ensure the availability of adequate landfill capacity for Turlock's solid waste.
- 3.3-al Green waste program. Continue to encourage the use of the City's green waste program to reduce waste sent to landfills. Consider adding additional types of green waste products to the program, such as food waste, as it becomes feasible.

## 3.4 DISADVANTAGED UNINCORPORATED COMMUNITIES ANALYSIS

### BACKGROUND

Senate Bill 244 (Wolk) requires cities to review and update the Land Use Element of their General Plan to include identification and analysis of disadvantaged unincorporated communities (DUCs) within their jurisdiction and within their sphere of influence. SB 244 defines a DUC as a place that meets the following criteria:

- A community containing 10 or more dwelling units in close proximity to one another.
- Is an area either within a city's Sphere of Influence (SOI), is an island within a city boundary, or is geographically isolated and has existed for more than 50 years.
- Has a median household income that is 80 percent or less than the statewide median household income.

For each identified community, the General Plan must address the water services, storm drain, sewer services, and structural fire protections needs or deficiencies. An analysis of a benefit assessment district or other financing alternatives that could make the extension of services to the identified communities financially feasible must also be included.

The City of Turlock has four County island areas and three “fringe” communities. The services in these areas are provided in a variety of ways, each area is discussed in further detail below.

### Water Services

Water is provided to these areas through the City of Turlock water system, the Del Este Water system owned by the City of Modesto, or by private wells. To extend water services to the areas currently on private wells, new water lines would have to be connected to existing water lines and installed in the streets. Individual properties would then have to hook up to the new water lines to provide water services to their parcels.

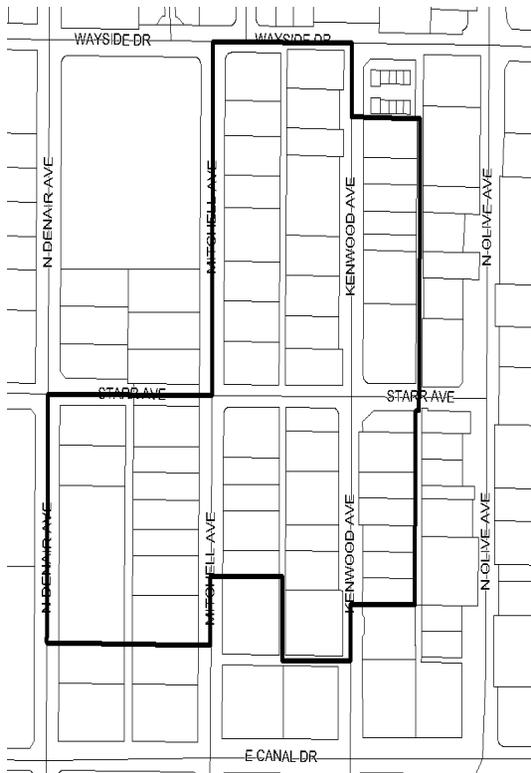
There are currently no deficiencies in water services in any of these areas. The only potential deficiency would be if a private well failed. If a well fails, the well would have to be repaired or, if there are existing City of Turlock water lines in the area, the property could apply to connect to the City of Turlock water system. If there is no City of Turlock water infrastructure in the area, the extension of the lines would have to be approved by LAFCO and would be done at the applicant’s expense. The USDA has a Section 504 Home Repair Loan program which provides loans to very-low-income homeowners to repair, improve, modernize or remove health and safety hazards from their homes.

### Sewer Services

Sewer Services are provided to these areas by the City of Turlock sewer system or by individual septic systems. To extend City of Turlock sewer services to areas, where it is not currently available, new sewer lines would have to be installed in all of the streets and connected into the existing sewer services. Sewer lift stations may have to be installed in areas to ensure the proper flow of the sewer lines. There are currently no sewer service deficiencies in these areas.

### Storm Drain Services

Storm services are provided through a variety of dry wells, catch basins and City storm lines. To extend storm drain services, storm drain lines and drainage inlets would have to be installed in all of the streets. Curb and gutter would also have to be installed in areas that did not have it to direct the storm water to the storm inlets. There is no known significant flooding issues in any of these areas; therefore, there are no storm drain service deficiencies.



### Fire Services

Fire Services for all of the areas are provided by Turlock Rural Fire Department. In accordance with the mutual aid agreement in place with Turlock Rural Fire Department, the City of Turlock Fire Department will respond to calls within these areas as well. Some of the areas do not meet the City of Turlock standard for spacing of fire hydrants. City standards would require fire hydrants at all street corners and a minimum spacing distance of 500 feet apart from each other or 300 feet apart from each other at dead end areas. In areas where fire hydrants are not available, a water tender truck would be used to get water to the area in the event of a fire. There are no deficiencies in the Fire Services currently being provided in these areas.

### COUNTY ISLANDS

County Islands are areas of unincorporated county land surrounded by incorporated Turlock on all sides. These islands are a result of piecemeal annexation over the years. There are four County Island areas in the City of Turlock containing a total of 245 parcels and approximately 138 acres. An analysis of the water, sewer, storm drain and fire services for each island area is provided below.

#### Kenwood - Starr Island

The Kenwood-Starr County Island consists of approximately 51 parcels totaling 12.4 acres.

**Water Services:** The area is served by City of Turlock water by six inch water lines which are available in all of the streets. There are no deficiencies in water services.

**Sewer Services:** The area is served with City of Turlock sewer services by six inch sewer lines available in all of the streets. There are no deficiencies in sewer services.

**Storm Drain Services:** The area is not connected to the City of Turlock storm system. City of Turlock storm lines and curb and gutter would have to be installed in all of the streets to make City of Turlock storm services available in this area. The area has catch basins and down wells serving portions of the island. These storm drain services were considered adequate to serve the area by the County when these parcels were developed; therefore, there are no storm drain service deficiencies in this area.

**Fire Services:** Fire Services for the area are provided by Turlock Rural Fire Department and the City of Turlock Fire Department in accordance with a current mutual aid agreement. The area does not meet the City Standard for fire hydrants; however, if water is not available in an area, a water tender truck would be used to provide water to fight a fire. There are no fire service deficiencies in this area.

### Bothun - Berkeley Island

The Bothun-Berkeley County Island contains 18 parcels totaling approximately 10 acres.

**Water Services:** The area is primarily served by the City of Turlock by a six inch water line in Bothun Road and an eight inch line in Berkeley Avenue. Ten of the parcels at the southern portion of the island along Bothun Road are served by City of Modesto through the old Del Este water system. There are no deficiencies in water services in this area.

**Sewer Services:** There is a City of Turlock eight inch sewer line in the northern half of the island in Bothun Road. The sewer line would have to be extended to the lower portion of the island to be available to the other properties in the area. Properties not currently connected to the City sewer system are on private septic systems. There are no deficiencies in sewer services in this area.

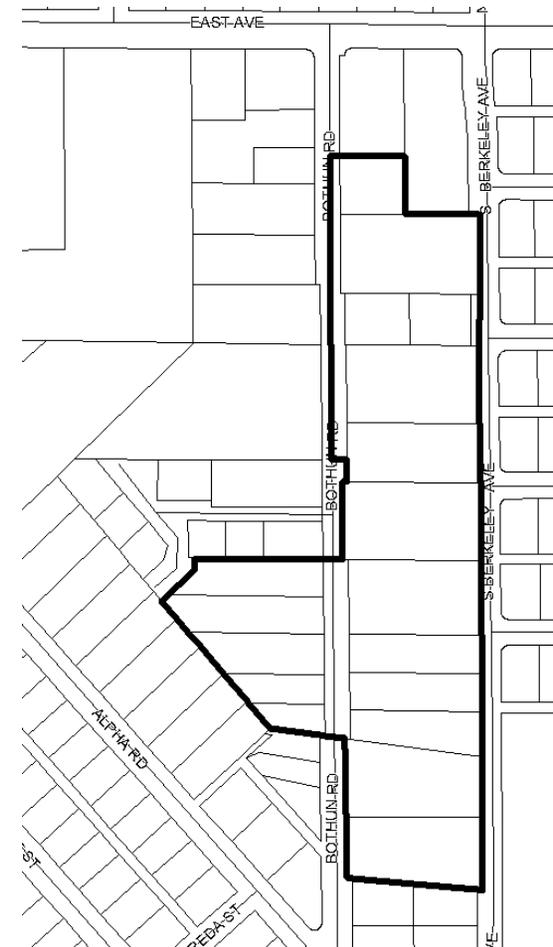
**Storm Drain Services:** City of Turlock storm lines are available in the area with a fifteen inch storm line in Bothun Road and a forty-two inch line in Berkeley Avenue. There are no storm drain service deficiencies in the area.

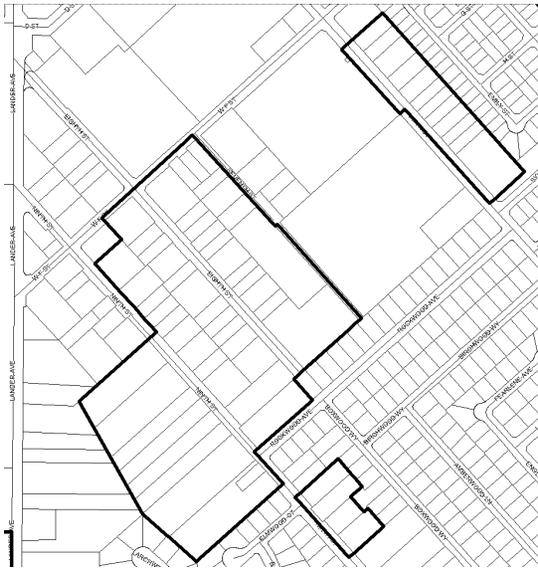
**Fire Services:** Fire Services for the area are provided by Turlock Rural Fire Department and the City of Turlock Fire Department in accordance with a current mutual aid agreement. Portions of the island have access to fire hydrants but the area does not meet the City Standard for fire hydrants in the area. If water is not available, a water tender truck would be used to provide water to fight a fire. There are no fire service deficiencies in this area.

### Downtown South Island

The Downtown South Area is comprised of three separate County islands with a total of 65 parcels totaling approximately 33 acres.

**Water Services:** Water is provided to the parcels in this area through a combination of the City of Turlock water system and private wells. City of Turlock water is available to forty-one of the





parcels in the island. There are no water lines available to the parcels that front onto Seventh and Eighth Streets. There are no water service deficiencies in this area.

**Sewer Services:** Sewer services are provided through a combination of City sewer services and private septic tanks. Sewer services are available to forty of the parcels in the island areas. There are no sewer lines available to the parcels fronting Fifth Street, Seventh Street and the southeastern half of Eighth Street. There are no sewer deficiencies in this area.

**Storm Drain Services:** There are no formal storm drain services in these areas but given the large amount of permeable surface area, and a lack of significant flooding there are no identified deficiencies in this area.

**Fire Services:** Fire Services for the area are provided by Turlock Rural Fire Department and the City of Turlock Fire Department in accordance with a current mutual aid agreement. Portions of the island have access to fire hydrants but the area does not meet the City Standard for fire hydrants. If water is not available in an area, a water tender truck would be used to provide water to fight a fire. There are no fire service deficiencies in this area.

### FUTURE MASTER PLAN AREAS

The Montana West County island area and the two of the three fringe communities are located in areas designated for future master planning by the City of Turlock. Three of the County islands are planned to be incorporated into the Montana-West Master Plan, identified as its own master plan area in Chapter 3. Two of the “fringe” communities are within the Southeast 3 Master Plan area. One of the fringe communities is not currently identified as being located within a master plan area; however, due to State law and the new SB 244 requirements, this area will have to be incorporated into the master plan area designated as Southeast 3 because it is adjacent to the boundary that has been identified in the land use diagram (Figure 2-2). These areas will be master planned prior to annexation. The Master Plans will include a detailed analysis of all of the infrastructure needs of the area and will develop a financing plan for these improvements. These areas are focus areas for future potable water, wastewater, and storm drainage infrastructure (see Section 3.3, Infrastructure).

### Montana - West County Island

Montana-West is made up of three individual County islands with 111 parcels totaling approximately 82 acres. The master planning approach was selected for this area due to the development potential. The area consists of relatively large agricultural lots that have development potential. Master planning this area offers a larger range of financing options that will make it more feasible to annex this large territory.

**Water Services:** Water is provided through a combination of the City of Turlock water system and private wells. City of Turlock water lines are not available to parcels fronting Williams Avenue, Parnell Avenue, Martinez Street and Mae Street. There are no water deficiencies in this area.

**Sewer Services:** City of Turlock sewer is available in Montana Avenue and Linwood Avenue but the majority of the parcels in this area are on private septic systems for sewer services. There are no sewer deficiencies in this area.

**Storm Drain Services:** There are no storm drain services in this area. Given the large amount of impervious area and the lack of known significant flooding issues in this island, there are no storm drain service deficiencies.

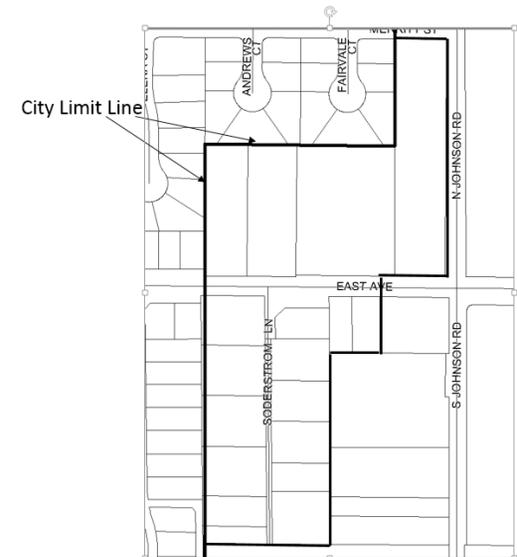
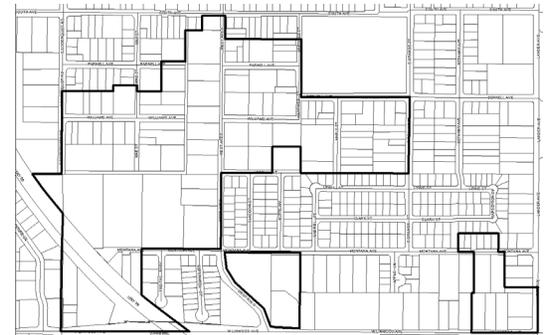
**Fire Services:** Fire Services for the area are provided by Turlock Rural Fire Department and the City of Turlock Fire Department in accordance with the current mutual aid agreement. The area does not meet the City Standard for fire hydrants, if water is not available in an area a water tender truck would be used to provide water to fight a fire. There are no fire service deficiencies in this area.

### Soderstrom Lane/East Avenue Fringe Community

The Soderstrom Lane and East Avenue Fringe Community is made up of 18 parcels totaling approximately 11.21 acres.

**Water Services:** There is a twelve inch City of Turlock water line in East Avenue, there are no City of Turlock water lines in Soderstrom Lane, these parcels are on private wells. There are no water deficiencies in this area.

**Sewer Services:** There are no City of Turlock sewer services in this area, the parcels are on private septic systems. There are no sewer deficiencies in this area.



**Storm Drain Services:** There are no storm drain services in this area. Given the large amount of impervious area and the lack of known significant flooding issues there are no storm drain service deficiencies in this Fringe Community.

**Fire Services:** Fire Services for the area are provided by Turlock Rural Fire Department and the City of Turlock Fire Department in accordance with a current mutual aid agreement. There are no fire hydrants in the area. A water tender truck would be used to provide water to fight a fire. There are no fire service deficiencies in this area.

### Brier Road Fringe Community

The Brier Road Fringe Community is made up of 68 parcels totaling approximately 23 acres.

**Water Services:** The parcels along Brier Road and Evelle Lane are connected to the Del Este Water System owned by the City of Modesto. The other parcels in the area are on private well systems. There are no water service deficiencies in this area.

**Sewer Services:** There are no City of Turlock sewer services in this area. All of the parcels in this area are on private septic systems. There are no sewer service deficiencies in this area.

**Storm Drain Services:** There are no City of Turlock storm drain services in this area. The subdivision along Brier Road and Evelle Lane drains to catch basins that are connected to a 12 inch storm line that drains to a 0.278 acre storm basin owned by Stanislaus County.

The subdivision along Leerae Court drains to a down well located at the end of the Court. The other parcels do not have storm drain services but, due to the amount of impervious area and the lack of known flooding issues in this area, there are no storm drain service deficiencies in this Fringe Community.

**Fire Services:** Fire Services for the area are provided by Turlock Rural Fire Department and the City of Turlock Fire Department in accordance with a current mutual aid agreement. There are fire hydrants on Brier Road, Evelle Lane, Quincy Road and South Johnson to service the subdivision in that area. There are no other fire hydrants in this Community. A water tender truck would be used to provide water to fight a fire. There are no fire service deficiencies in this area.

### Southern Peninsula Fringe Community (F, G, H, and I Streets)



This area is made up of 61 parcels totaling approximately 14.52 acres. This area is not currently included in the Southeast 3 Master Plan area, but to comply with SB244, this area will have to be included in the Southeast 3 Master Plan area. In addition, Policy 2.9-i requires that the City comply with LAFCO policies for changes in the Sphere of Influence and annexations. This policy would require that this fringe community be considered for annexation at the time that the application for Southeast 3 Master Plan area is submitted to LAFCO for review and approval.

**Water Services:** City of Turlock water services are available to all of the parcels in this community, therefore, there are no deficiencies in water services.

**Sewer Services:** City of Turlock sewer services are available in F Street, South First Street, and a portion of H Street. The other parcels in the area are on private septic systems. There are no sewer service deficiencies in this area.

**Storm Drain Services:** There are no City of Turlock storm drain services in this area. There are no storm drain service deficiencies in this area.

**Fire Services:** Fire Services for the area are provided by Turlock Rural Fire Department and the City of Turlock Fire Department in accordance with a current mutual aid agreement. There are fire hydrants throughout this area. There are no fire deficiencies in this area.



## FINANCING

### City/County Financing

The City plans to work with Stanislaus County to develop an infrastructure financing plan for the needed infrastructure improvements for the County island areas, including the Montana-West future master plan area. This plan will look at ways the City and County can jointly finance the infrastructure improvements through the use of Community Development Block Grant (CDBG) monies, General Fund and any other available funding. The County could use CDBG money to help fund infrastructure improvements in the area. The City cannot use CDBG funding until the areas have been annexed into limit, after annexation the City would be able to use CDBG monies to help fund the utility connections.

### Private Development

If development occurs in any portion of the County islands, the developer would be responsible for extending the needed service to the area. There is the potential for combined financing between a developer financing or installing a portion of the infrastructure and the City and Stanislaus County funding the infrastructure improvements to the other portions of the County island not being developed.

The City could work to partner with a developer to develop affordable, transit-oriented housing in a County island area and could apply to use Affordable Housing and Sustainable Communities (AHSC) funding to help finance the infrastructure improvements.

### Grants and Loans

If an individual property owner has a well fail and needs financial assistance the USDA has a Section 504 Home Repair Loan program which provides loans to very-low-income homeowners to repair, improve, modernize or remove health and safety hazards from their homes.

The City could also look into the California Infrastructure and Economic Development Bank (I-Bank) created in 1994 to finance public infrastructure and private development that promote a healthy climate for jobs, contribute to a strong economy, and improve the quality of life in California communities. The I-Bank is located within the Governor's Office of Business and Economic Development and is governed by a five-member Board of Directors. The I-Bank has broad authority to issue tax-exempt and taxable revenue bonds, provide financing to public agencies, provide credit enhancements, acquire or lease facilities, and leverage State and Federal funds. The I-Bank's current programs include the Infrastructure State Revolving Fund (ISRF) Program, 501 (c)(3) Revenue Bond Program and Governmental Bond Program. Staff will continue to look into these programs and any other programs through the I-Bank to determine whether any of these areas could qualify for these funding options.

### Master Plan Fee Programs

The infrastructure improvements for the DUCs within future Master Plan areas will be planned in the Master Plan documents. As part of the master planning process, fee programs will be established to fund the necessary improvements. In these areas, the infrastructure will be extended as development occurs. The developers will either install the necessary infrastructure or will pay development impact fees to pay their fair share of the infrastructure costs. New

residential development in these areas would annex into the Community Facilities District (CFD) to help fund the City of Turlock Fire services. A new fire station is planned in the Master Plan Three area. This new fire station will be funded through the Capital Facility Fee Program (CFF). As development occurs in the new Master Plan areas the CFF will be charged to ensure the new development is paying for the new services it needs.